



East Renfrewshire Local Development Plan

L O C A L
D E V E L O P M E N T
P L A N

Supplementary Planning Guidance: Barrhead South Master Plan - June 2015



Barrhead South SPG

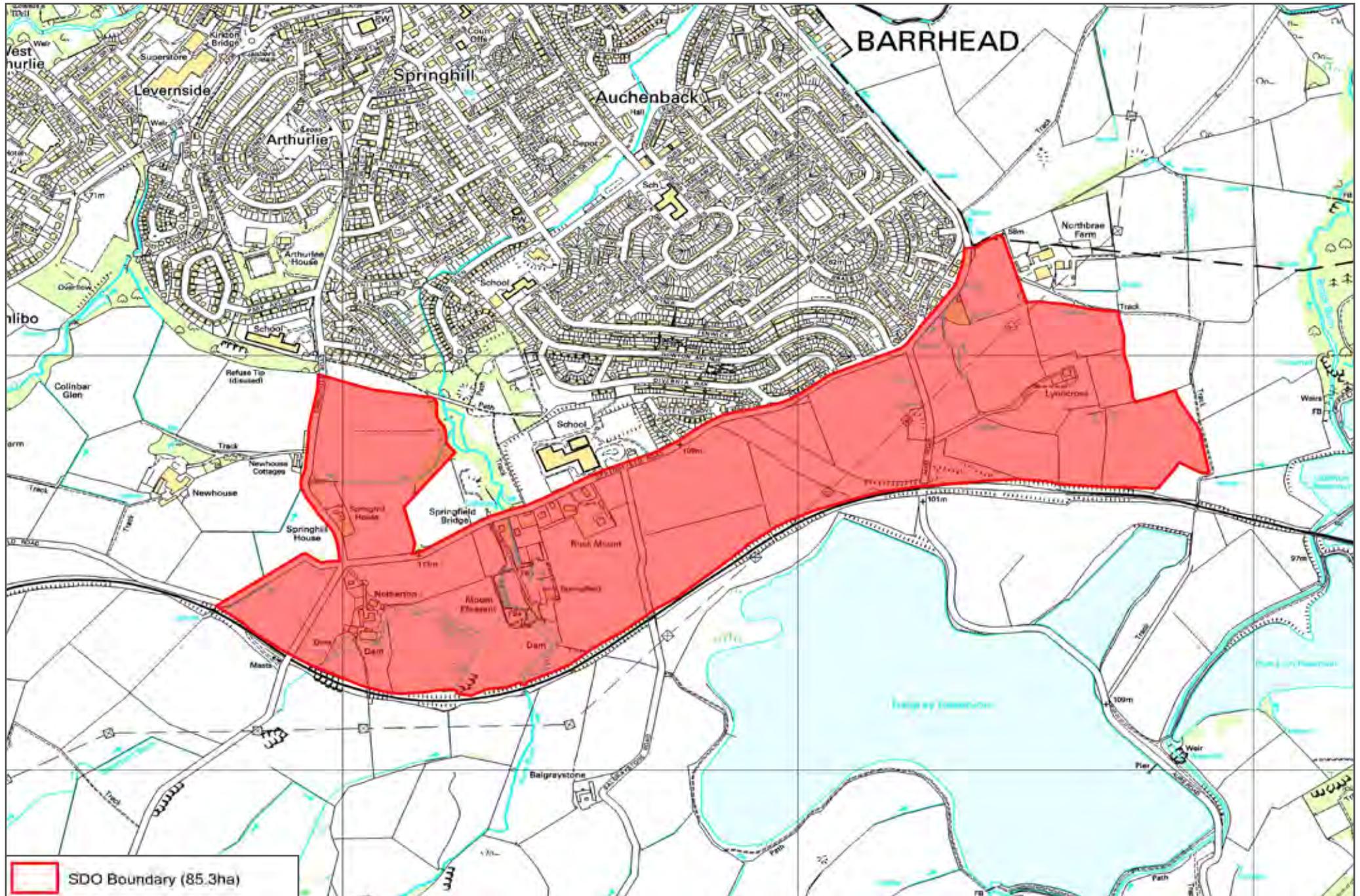


This Document Was prepared by Geddes Consulting on behalf of: East Renfrewshire Council, Avant Homes, Miller Homes and Wallace Land.
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Introduction

Barrhead South Strategic Development Opportunity (Barrhead South) is located within the defined M77 corridor (Policy M2 of the Local Development Plan) which includes Dams to Darnley Country Park.

This site is a fundamental part of the Council's M77 Strategic Development Opportunity where the Council supports planned growth at the M77 as defined on the Proposals Map in accordance with Policy M1 and Policies M2.1 and M2.2 of the Local Development Plan.

Barrhead South is one of three Strategic Development Opportunities (SDOs) promoted by the Council in its Local Development Plan

The Council has already approved a Development Framework (January 2014) for Barrhead South. This sets out the development principles for Barrhead South (Policy M2.2) including the provision of a new Rail Station and links between Barrhead and the Dams to Darnley Country Park. Other master plans have been approved for the other two SDOs.

Each of these SDOs will be subject to Supplementary Planning Guidance (SPG). Individual approaches have been promoted by the Council through each of its SPG to deliver the master planning requirements in each of these SDOs.

This SPG provides information to assist the delivery of a coherent masterplan in Barrhead South and is the next stage in the masterplanning process for Barrhead South.

This SPG sets out the masterplanning principles which should be followed at the more detailed design stage which will follow at the stage of securing planning permission.

This Supplementary Planning Guidance (SPG) has been prepared under Section 22 of the Town and Country Planning (Scotland) Act 1997 as amended by the Planning etc. Scotland Act 2006 and forms part of the Proposed Local Development Plan.

The Local Development Plan reflects the need to achieve a sustainable pattern of development, as set out under Strategic Policy 1: Development Strategy.

Major areas for change have been identified to deliver the Council's long term vision and development strategy with development and delivery controlled through a master planning approach as set out under Policy M1: Master Plans. This SPG forms part of a suite of complimentary master plans.

The SPG has been subject to consultation with key stakeholders and agencies such as SNH, SEPA, Scottish Water, Glasgow Clyde Valley Green Network, and others.

It has also involved discussions with the service departments in East Renfrewshire Council.



The masterplanning guidance in this SPG complements and applies the Supplementary Planning Guidance: Masterplanning and Roads to the specifics of the site, its surroundings and requirements at Barrhead South.

This SPG provides a comprehensive set of illustrative guidance about specifications and their application across the site for the following topics:

- Land Use and Built Form
- Delivering the Access Arrangements
- Delivering the Movement Hierarchy
- Sustainable Transport within this Movement Hierarchy
- Integrating with our Neighbours in Barrhead
- Ensuring Landscape Fit with the surrounding Landscape
- Delivering the Green Space Infrastructure
- Greenspace Links within Barrhead
- Providing Play in the Green Network
- Incorporating Sustainable Urban Drainage Systems
- Design Guidance
- Management and Maintenance

These principles and guidance will ensure that areas within Barrhead South can be developed independently in the knowledge that connections can be made; specifications will be common and the desired infrastructure requirements across Barrhead South will be fully integrated.

Design solutions are illustrated to show examples of appropriate treatment taking account of the known technical requirements.

This SPG is the outcome of a comprehensive technical appraisal undertaken for the site. It includes the following assessments:

- Topographical Survey;
- Flood Risk Assessment;
- Ground Investigation Study;
- Ecological Assessment;
- Strategic Transport Assessment;
- Landscape and Visual Impact Assessment;
- Drainage Impact Assessment;
- Water Impact Assessment

These assessments are available for reference in the Barrhead South Technical Appraisal Report.

These assessments have updated the preliminary work done to help prepare the Development Framework for Barrhead South.

Consequently, the Development Framework has been updated to reflect the more detailed information available from these assessments as well as this SPG.

This updated Development Framework has been used to illustrate the design solutions in this SPG.

As well as the Council, the following members of the project team have helped prepare this SPG:

Geddes Consulting	Masterplanning, Landscape Appraisal and Greenspace Infrastructure
T Lawrie & Partners	Engineering
Atkins	Transport
GUARD	Cultural Heritage
JDC	Ecology
KAYA Consulting	Flood Risk Assessment

Its preparation is a collaboration between East Renfrewshire Council, Avant Homes, Miller Homes, and Wallace Land Investment and Management (Wallace Land) who have land interests within the site allocated as Barrhead South.



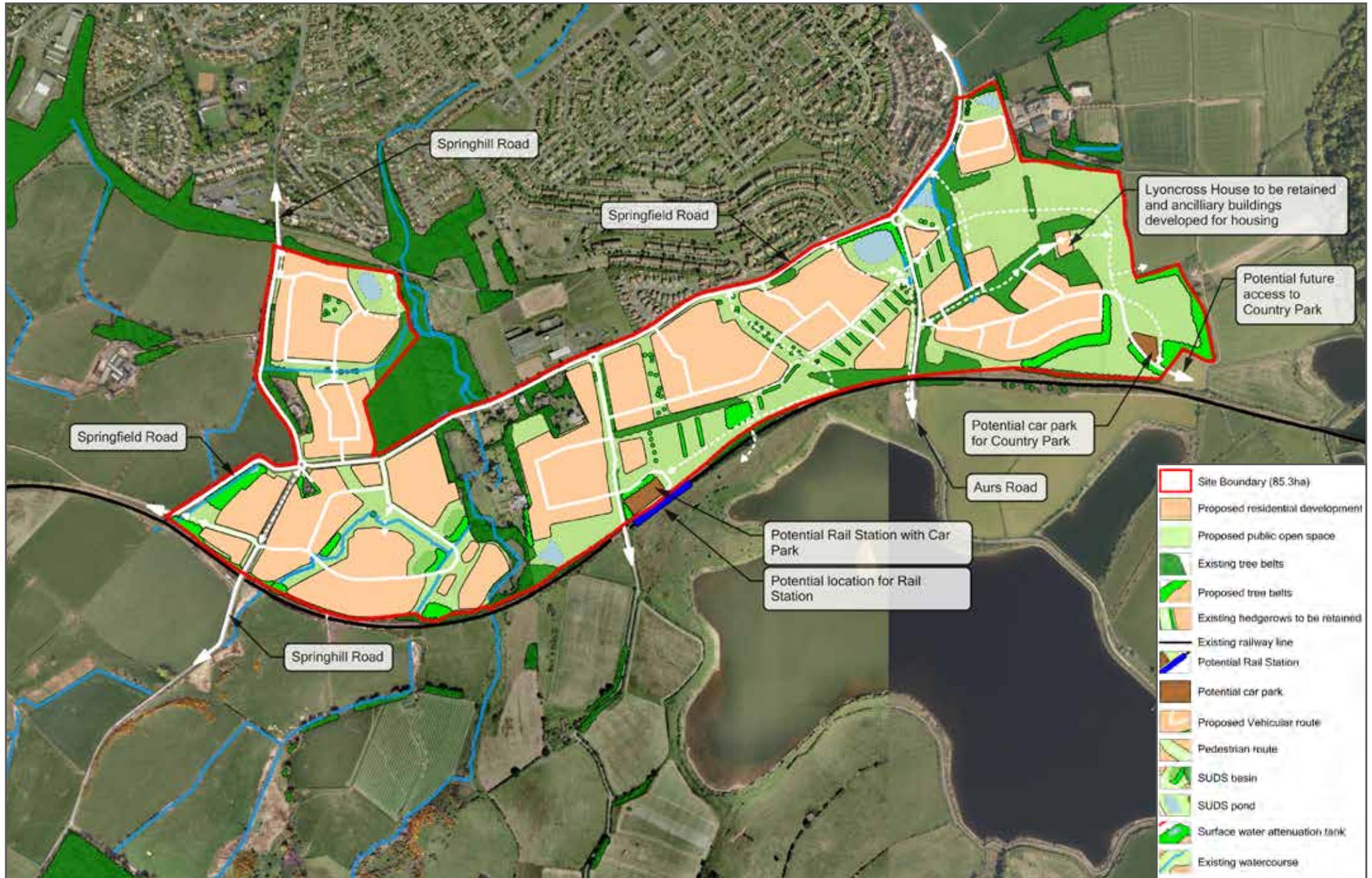
View from Springfield Road looking north over Miller Homes site.





Design Principles

- 1.1 Principles
- 1.2 Land Use and Built Form
- 1.3 Sustainable Transport
- 1.4 Access
- 1.5 Movement Hierarchy
- 1.6 Engineering and Infrastructure
- 1.7 Sustainable Urban Drainage System
- 1.8 Greenspace Strategy
- 1.9 Greenspace for People
- 1.10 Landscape Fit
- 1.11 Biodiversity
- 1.12 Development Framework



1.1 Principles

The approach being taken to deliver Barrhead South provides a strong foundation for the delivery of sustainable growth in Barrhead.

The site's design principles are based on the vision and proposals established in the Barrhead South Development Framework.

The principles established in planning guidance at both national and local levels underpins these proposals.

Informing these principles is the detailed analysis of the physical characteristics of the site and its context. Details of this further information can be found in the supporting Technical Appraisal Report.

The design principles described in the following sections, are as follows:

- Land Use and Built Form
- Access
- Sustainable Transport
- Movement Hierarchy
- Engineering and Infrastructure
- Sustainable Urban Drainage System
- Greenspace Strategy
- Greenspace for People
- Landscape Fit
- Biodiversity
- Development Framework



An example of new homes and streets



1.2 Land Use and Built Form

Residential development forms the majority of the land use in Barrhead South.

The proposals for Barrhead South reflect a residential character along with opportunities for the creation of a greenspace network including play facilities.

Additional land uses supporting a new community at Barrhead South include the potential for a new Rail Station with associated parking, live-work units, and community facilities. The proposed locations are illustrated on the plan opposite.

The location of the land uses across Barrhead South respond to the opportunities and constraints which influence the site.

Proposals will accord with *Designing Places* and *Designing Streets*.

Designing Streets describes the need for the creation of a positive sense of place which encompasses a number of aspects.

These are most notably:

- Local Distinctiveness;
- Visual Quality; and
- Potential to encourage Social and Economic Activity within a pedestrian priority environment.

Local Distinctiveness

Consideration of the connections between the existing and proposed urban form identifies the routes and spaces required to establish a distinctive sense of place.

The proposed urban form provides local distinctiveness through the creation of new neighbourhoods within a strong greenspace network.

The new homes will come forward in a phased approach delivered by a range of house builders.

The new neighbourhoods created in this process will be distinctive in their design character whilst maintaining an underlying consistency through the guidance provided in this SPG.

Visual Quality

The urban form incorporates measures to provide the necessary visual quality.

The definition of neighbourhoods, spaces and their uses will have a positive effect in the creation of a safe, pleasant, welcoming and accessible place.

The urban form and landscape proposals have been shaped in response to both views into and out of the site ensuring an appropriate landscape fit with its surrounding context.

The use of a consistent pallet of materials and finishes is advocated by this SPG to ensure visual continuity throughout Barrhead South.

In creating distinctive places, a variety of design responses will be welcome particularly in the detailing and design of new homes in due course.

The design guidance in this SPG is not prescriptive and allows considerable flexibility in the range of design responses to create distinctive places.

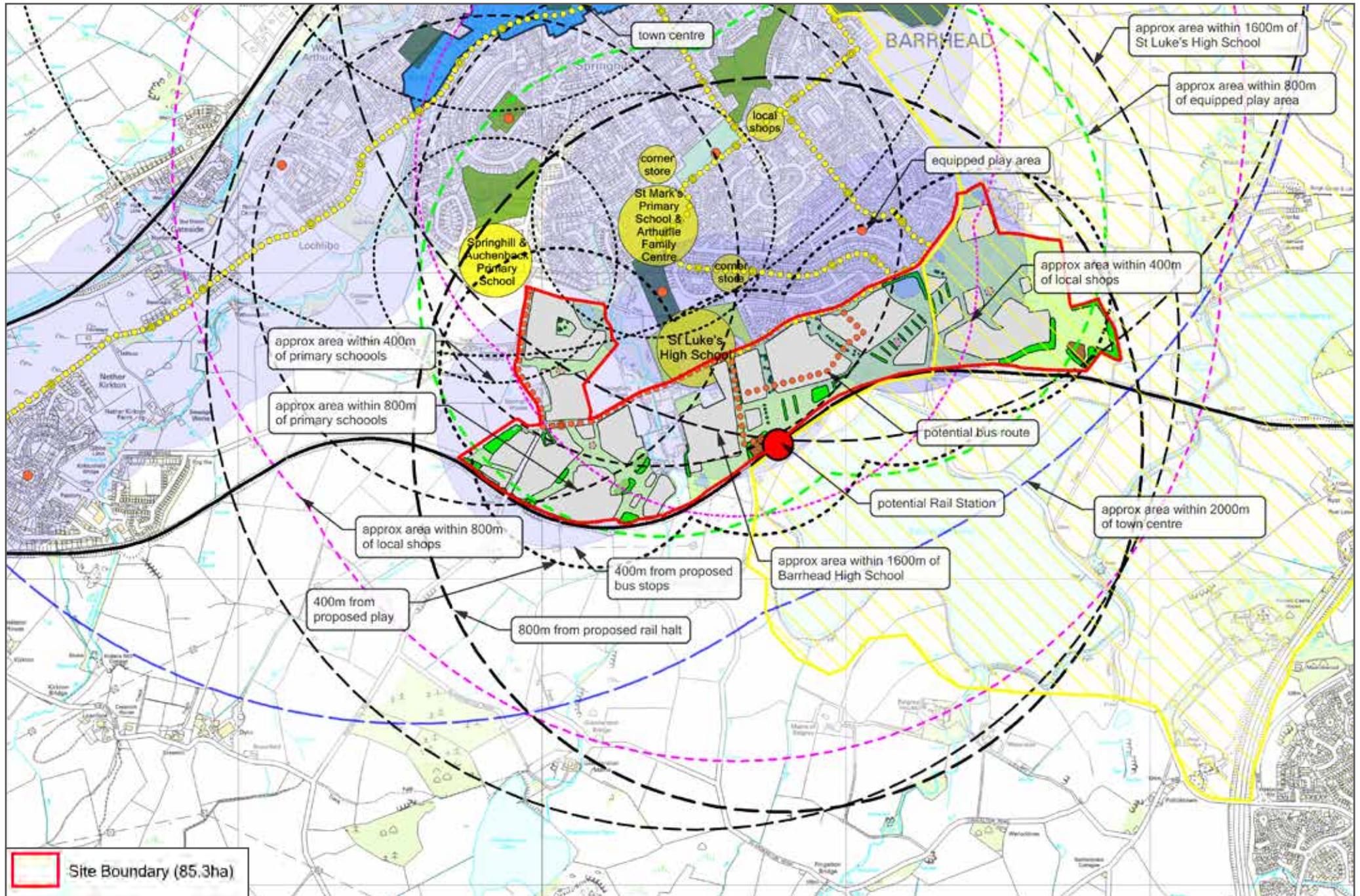
Potential to Encourage Sustainable Social and Economic Activity

The establishment of the new Rail Station provides the greatest opportunity to generate the potential for further economic activity in Barrhead South as well as being a hub for future social activity.

The potential for a local shop at Springfield Road is also recognised.

Social and economic activity is supported by a permeable network of streets and spaces. This permeable network encourages the potential for the establishment of these local amenities, small scale employment use and support for local services and community functions.

The following sections provide guidance on how these qualities can be achieved.



1.3 Sustainable Transport

The incorporation of sustainable transport measures will ensure Barrhead South is accessible from the wider area and integrated into its local context.

SPP17 *Planning for Transport*, describes the prioritisation modes of personal travel according to the following:

1. Walking;
2. Cycling;
3. Public Transport; and
4. Motorised modes.

In addition to providing for these modes of transport, accessibility is an important relevant consideration.

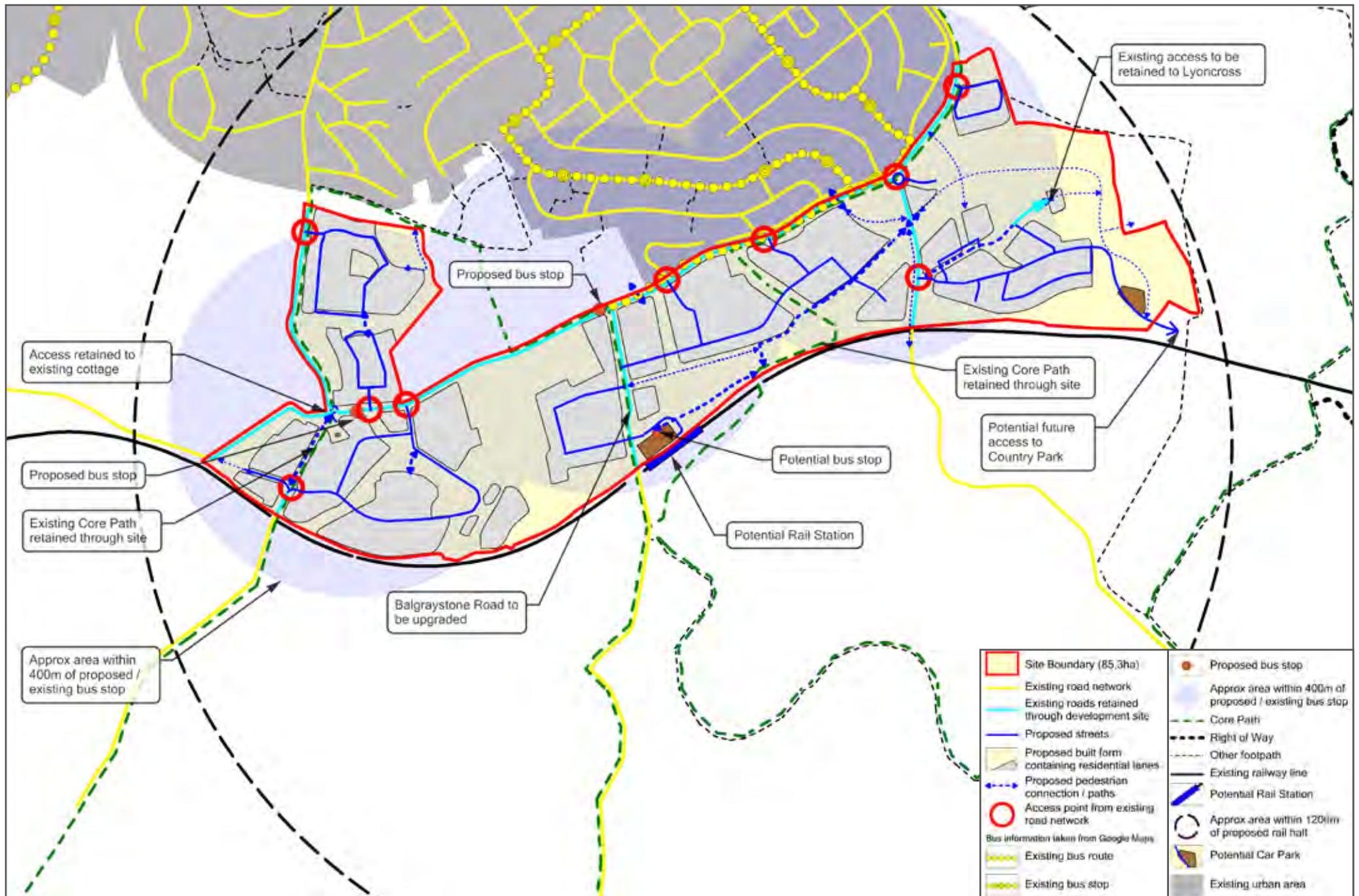
A comprehensive path network is proposed and with the specific aim of significantly improving connections between Barrhead and the Dams to Darnley Country Park through Barrhead South. Barrhead South is set to have a new Rail Station and this will form a new transport hub. This transport hub will be connected to a new bus route from Springfield Road.

A range of local amenities, employment and services are accessible by sustainable modes of transport.

The plan opposite illustrates that local amenities and wider employment and services are accessible by sustainable modes of transport from the site.



Glasgow to Neilston Rail Line



1.4 Access

Good street design can promote a better quality of living for everyone. This statement in *Designing Streets* illustrates a key principle of this proposal. It focuses on creating places in which people want to live.

The delivery of safe and convenient access to the site will support the success of Barrhead South as a new urban expansion. Access points will act as the gateways to a network of clearly defined new streets and spaces.

These access proposals maximise integration and connectivity with the existing network of routes adjacent to and within the site. Particular attention needs to be made to connecting the existing urban area through Barrhead South into the Dams to Darnley Country Park.

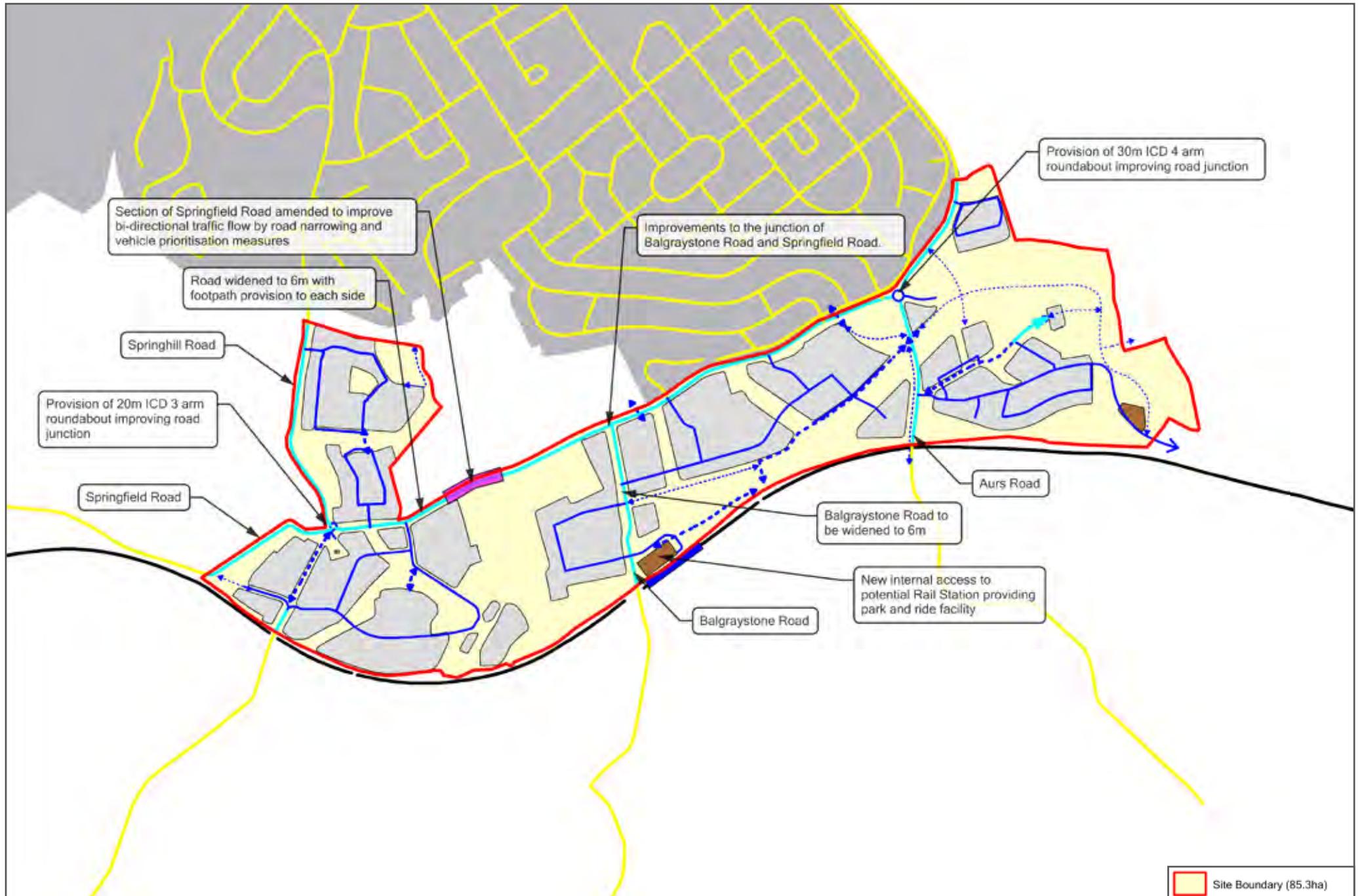
Streets will be formed to promote a positive sense of place:

- creating local distinctiveness;
- establishing visual quality;
- enhancing the potential to encourage social and economic activity; and
- creating a pedestrian priority within the hierarchy of Primary Streets, Neighbourhood Streets, Lanes and footpaths.

The access strategy adopted ensures that the development of each of the four land ownership areas is realisable as stand alone developments.



Springfield Road



Existing Road Network and Mitigation

To the north-west, the development site is bounded by Springhill Road, which has a rural character and is lined with existing trees. It is subject to national speed limit, with no street lighting and only a narrow footway on its eastern side.

The existing narrow footway is removed from this section to allow carriageway widening, and a new shared use footpath/ cycle path will be provided within the development site.

To the south-west, Springfield Road has a narrow carriageway (around 4m) and has a rural character. No amendments are proposed for this section of road.

The existing junction between Springhill Road and Springfield Road is currently complex and substandard. This junction will be improved to form a new 3-arm roundabout with a 20m Inscribed Circle Diameter (ICD).

Access to the private cottage to the south of the junction will be maintained via its existing track.

To the south of this junction Springhill Road will be subject to a Redetermination Order to remove vehicular traffic but maintain a route for pedestrians, cyclists and emergency services. This section of Springhill Road may also provide local access to new homes.

Vehicular traffic travelling along Springhill Road to/from the south of the rail line will be re-routed through the proposed development site to connect with Springfield Road further to the east.

Springfield Road is a single carriageway road which runs through the western section of the development site and forms the northern boundary of the central section of the site.

To the west of Aurs Burn, the road has a rural character, with a narrow carriageway, no centre line markings, no footway and no street lighting. Where possible the carriageway along this stretch will be widened to a consistent width of 6m with 2m footways

Where Springfield Road crosses the Aurs Burn the carriageway width is limited 4.9m wide between the stone walls of the bridge.

In order to manage the carriageway width constraints along this section of Springfield Road, it is proposed that two road narrowings or pinch-points will be created to formalise a priority-working arrangement.

There are a small number of residential properties on the south side of Springfield Road which take direct access from the highway. The carriageway along this stretch will be widened to a consistent width of 6m with 2m footway.

Balgraystone Road runs north-south through the centre of the development site. It has a rural character with no street lighting or footway provision and is subject to national speed limit.

Balgraystone Road currently meets Springfield Road opposite St Luke's High School at a 3-arm priority junction. This junction will be upgraded to a 3-arm roundabout with a 20m ICD.

Balgraystone Road will be re-aligned slightly to the west and the carriageway widened to 6m, with footways to both sides.

Balgraystone Road will provide access, via new internal roads to the proposed new Rail Station.

To the east of the High School, Springfield Road has a footway along the northern side is lit and has a 30mph speed limit.

The carriageway width along this stretch will remain in its current form with the addition of a footway to its southern side.

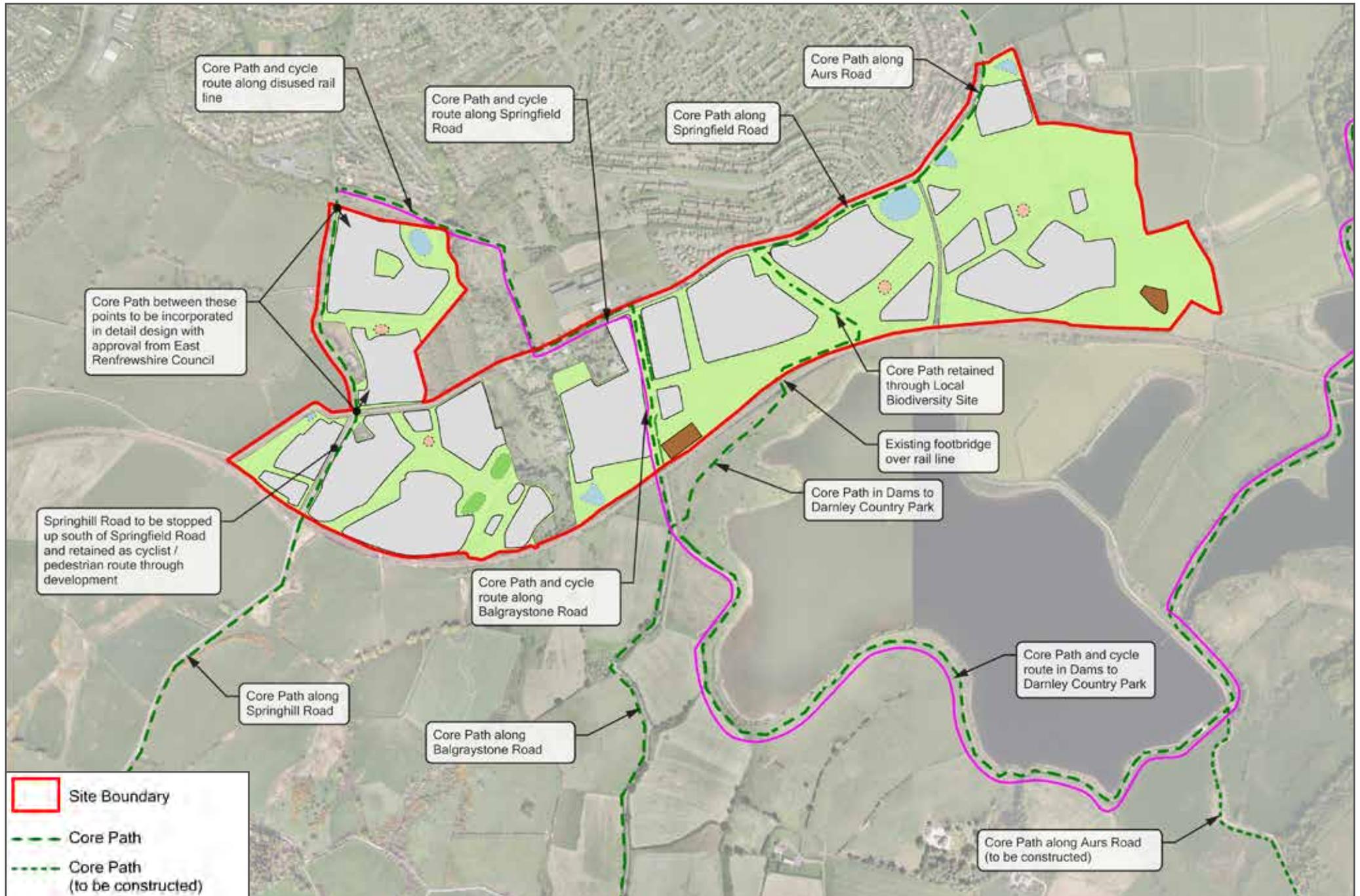
A series of access junctions and crossing points will be formed along its length and will act as disruptive break points to reduce traffic speeds.

Aurs Road is a single carriageway which runs north-south through the eastern section of the site. This road is currently subject to national speed limit, is unlit and has no pedestrian provision.

At the junction of Aurs Road meets / Springfield Road, the speed restriction changes to a 30mph.

Aurs Road currently meets Springfield Road at a 3-arm priority junction. This junction will be upgraded to a 4-arm roundabout with a 30m ICD.

This roundabout will also provide access into the development site via the new arm of the junction.



Walking and Cycling

A number of existing routes for pedestrians and cyclists cross through Barrhead South incorporating both on- and off-road provision. Some of these are designated Core Paths.

The existing path network will be incorporated and provide connections between Barrhead and the Dams to Darnley County Park.

The existing routes for pedestrians and cyclists will be maintained, with additional improvements enhancing the quality of the local path network.

These route improvements include new footways alongside the carriageway, new shared-use Core Paths, and cross-country paths along the Greenspace Links.

The new paths will be designed to be barrier free.

Three new signalised crossings are proposed and these will facilitate the crossing of Springfield Road and Aurs Road for pedestrians and cyclists.

The urban form of the new development will ensure permeability through the development, to encourage movement on foot and by bicycle. This will provide access to areas of open space, local facilities and amenities including schools.

Many of the internal routes within the development will be designed for shared use, with appropriate surfacing to minimise vehicle speeds and make these routes attractive for pedestrians and cyclists.

Public transport

A central location for the Rail Station has been identified and safeguarded within the site.

When fully built-out, all of the Barrhead South site will be within approximately 15 minute walking distance of the new Rail Station. It will act as a new multi-modal local transport hub, incorporating a Park and Ride facility, opportunities for bus turning and stopping, a taxi rank and cycle parking facilities.

Existing bus services are operated by private bus companies with route planning and operational decisions based on commercial viability.

The road network has been designed to enable bus access on appropriate routes through the site.

This includes sufficient carriageway width and the provision of bus stop infrastructure on routes where buses are likely to operate in future.

Travel Plans

A Travel Plan Framework is presented in the Strategic Transport Assessment, which outlines the suggested management, implementation, and monitoring regime for potential travel plan measures.

It is anticipated that the individual developments will promote their own residential Travel Plans which will meet the requirements of the overarching Barrhead South Travel Plan Framework.

These individual Travel Plans will describe the specific measures to encourage the use of sustainable travel modes by future residents of Barrhead South community.

The measures may include a range of activities including publicity, advice and marketing techniques to encourage sustainable travel behaviour.



1.5 Movement Hierarchy

Movement Hierarchy

A clear network of routes and spaces is proposed within the development. These will recognise the principles of good street design contained within *Designing Streets*.

The key elements of the proposed hierarchy are:

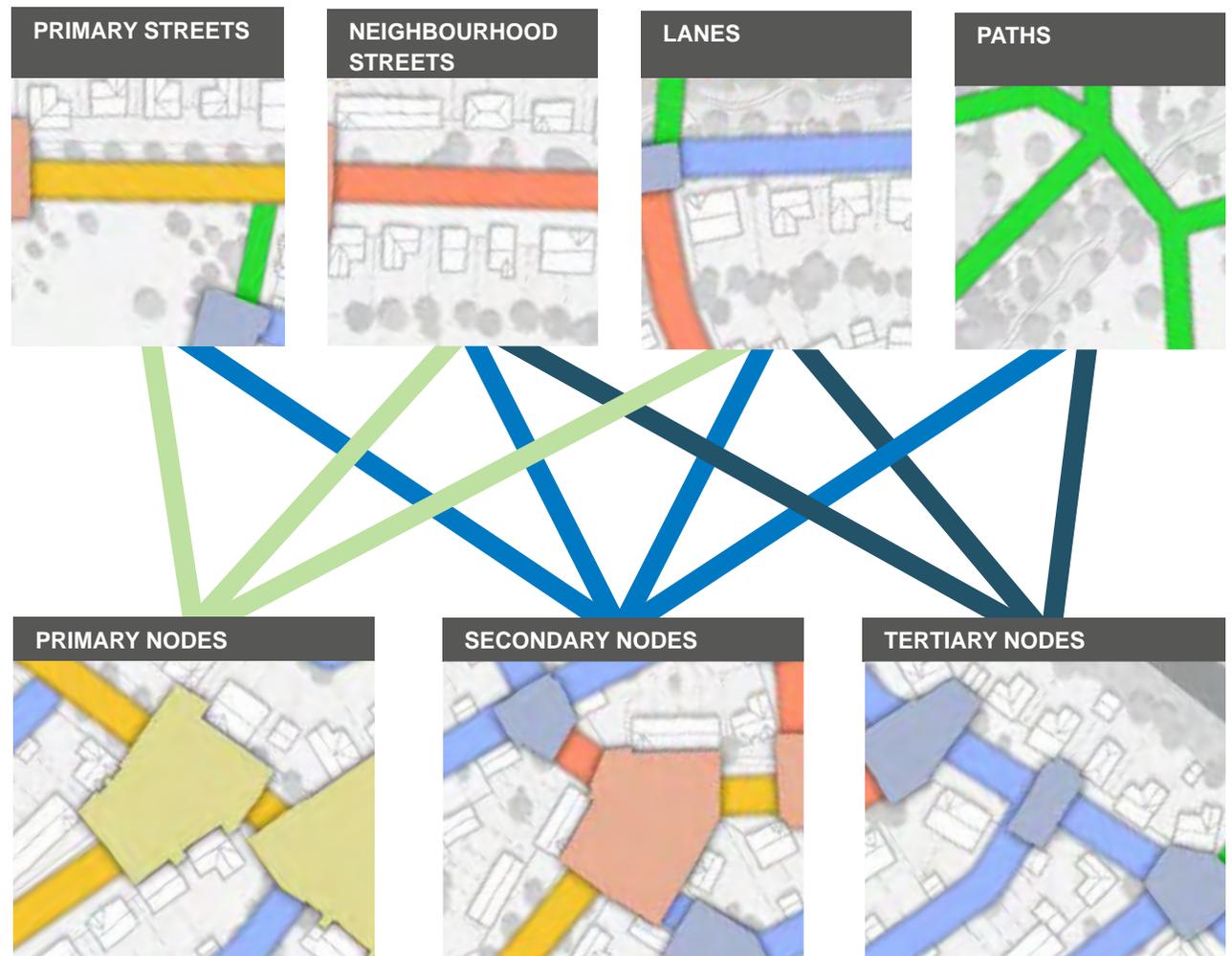
- Primary Streets
- Neighbourhood Streets
- Lanes, and
- Paths

The diagram to the right illustrates one way in which the interrelationship between the principal hierarchy of routes and the hierarchy of nodes can form an integrated network of streets and spaces.

This system illustrates the principle and should not inhibit where necessary a lower order route from connecting to a higher order node.

The movement hierarchy has been designed to prioritise pedestrian and cycle movement, both through the development and connecting to the wider area.

Internal routes through the site will provide a welcoming, distinctive, safe and pleasant residential environment. These will be easy to move around and will provide choice to residents in the route and mode of travel around the development.





1.6 Engineering & Infrastructure

Ground engineering & level changes

Desk top studies have indicated that the presence of shallow rock in some areas of the site is likely. The location and depth of rock head will be assessed and taken account of at the detailed layout stage.

It is proposed to minimise excavation and achieve a cut/fill balance across the site. A number of areas within the development boundary are in excess of 8% grade - the maximum permitted for residential roads, and regrade across these areas would be proposed to relax gradients to appropriate development parameters.

Foul Drainage

An assessment of existing Scottish Water record plans indicate no existing apparatus within the site boundary with the nearest infrastructure shown within the eastern area of Springfield Road and further north west on Springhill Road.

Foul drainage discharge will be by way of new gravity sewers within Springfield Road and Springhill Road. A foul pumping station may be required to drain the south west of the site.

Confirmation with respect to the existing network capacity and the extent of any augmentation works required to facilitate the development will be confirmed by Scottish Water informed by the Drainage Impact Assessment.

Scottish Power (SP)

SP Energy Networks records indicate a 33kV cable running the length of Springfield Road, on the northern kerbline and also south along Balgraystone Road. A smaller 11kV overhead cable is indicated traversing north from Netherton through the west of the site.

Supply to the development will, most likely, be taken from the 33kV cable linked to a number of new sub-stations.

Scotia Gas Networks (SGN)

Limited record information provided by SGN indicates the presence of a 125mm diameter PE main within Springfield Road.

It is unlikely this will provide sufficient capacity for the development and service will require to be extended to larger apparatus lying to the north.

Water

The nearest apparatus to the site is a 250mm diameter water main running along the north of Springfield Road. This main extends west, just past St Luke High School, where it reduces down to 200mm and then 100mm in diameter. A small unsized main also extends north from Netherton Cottages within the site boundary at the west.

Supply to the proposed development site will, most likely, be from the 250mm diameter main however confirmation will be gained by way of Water Impact Assessment at the appropriate time.

Telecoms

British Telecom indicates a number of existing apparatus which will be suitable to provide service to the development.

Broadband

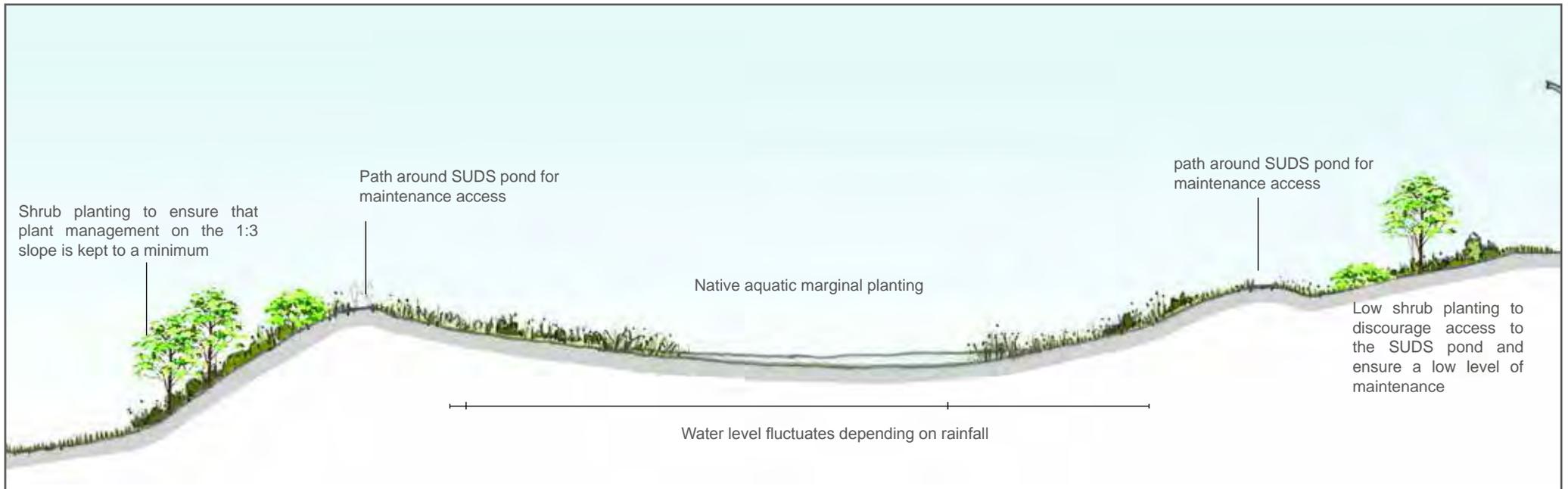
There is an aspiration for broadband to be provided within all new developments in East Renfrewshire Council. Discussions with service providers should be undertaken at design stage and provision taken account of infrastructure designs.

Consultation

The provision of statutory or other services laid underground constitutes a basic element of development design. The Statutory Undertakers, require to be consulted during preparation of future design briefing. Their requirements will be coordinated and a balance struck between their needs and other design objectives.



Illustrative SUDS Pond



28 Indicative SUDS Pond

1.7 Sustainable Urban Drainage Systems

The SUDS Strategy considers the requirements of the Council, Scottish Water and SEPA with respect to quantity and quality of the resultant flows. As required by these organisations, the following considerations will be incorporated:

1. The 1 in 30 year post development storm event shall be attenuated to a 1 in 200 year greenfield release.
2. The difference between the 1 in 30 year and 1 in 200 year (plus 10% uplift for climate change) is to be accommodated within the site with no detriment to properties within or outwith the application site.
3. Where flooding is indicated to occur under critical storm events, the finished floor levels of dwellings adjacent must be a minimum of 300mm above predicted levels.
4. The site should ensure the development can be accessed and egressed by emergency vehicles during flood events in accordance with Scottish Planning Policy (SPP).

Assessment of the site topography indicates that detention facilities such as SUDS ponds and basins, together with underground storage facilities will be required to accommodate the site catchment. These will discharge to the existing watercourses at appropriate locations via suitably designed flow control devices.

Detention facilities located throughout the site will drain to the burns within or adjacent to the site via new outfall pipes.

SUDS ponds and basins will be designed to meet Scottish Water requirements. Whilst their primary function is with regards to the drainage strategy the SUDS ponds and basins will have an important role in the delivering the design principles of the site.

Their design and location will take account of these principles and they will only be fenced where necessary to meet Scottish Water requirements.

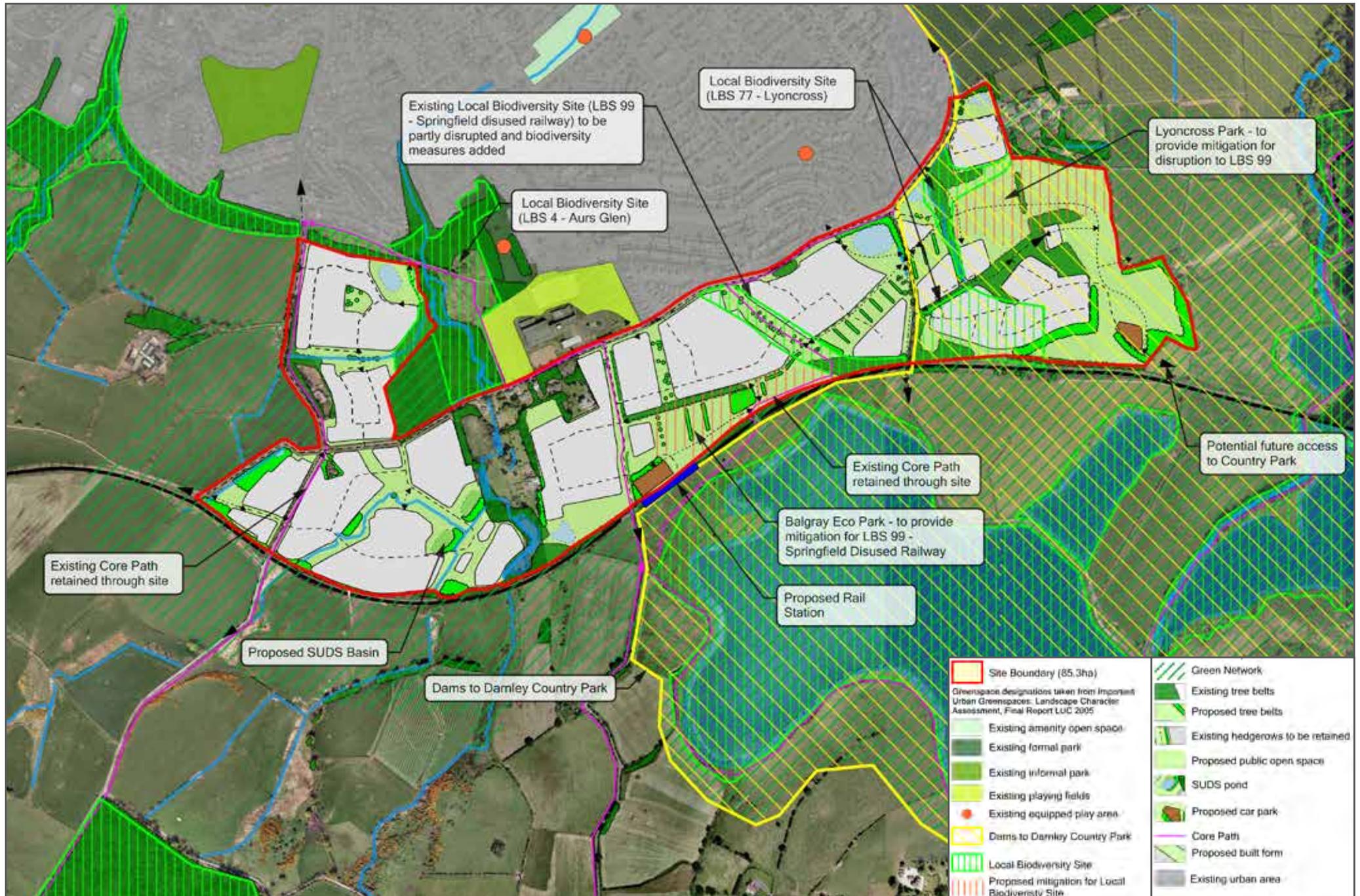
If so, fencing can be located on the inside line of the access ways and planted to aid the visual and biodiversity value of these facilities by minimising disturbance.

The finalisation of this SUDS strategy will be carried out in consultation with the Council and Scottish Water, together with SEPA. All proposals will meet *Sewers for Scotland 2* requirements.

The drainage infrastructure will be designed in a manner that will allow adoption management by either the Council or Scottish Water.



Indicative example of SUDS Pond with ecological value



1.8 Greenspace Strategy

The proposal for Barrhead South will create a sensitive extension to Barrhead with an attractive transition between the town and country.

The proposals will be integrated with the wider green space network including the Dams to Darnley Country Park.

The greenspace proposals for this development are in accord with the requirements of East Renfrewshire LDP Policy D7: *Green Infrastructure and Open Space Provision within New Development*.

These also accord with the requirements set out in Supplementary Planning Guidance: *Green Network and Environmental Management*.

The greenspace network integrates provision for biodiversity through the inclusion of woodland, field boundaries hedgerows, and SUDS features.

The greenspace provision within each of the four land owners' development areas will individually meet the Council's requirements in terms of qualitative and quantitative greenspace provision.

Open space is provided as a series of corridors through the development creating a multi-purpose green network.

The greenspace network provides leisure opportunities within areas of biodiversity interest. These will function as wildlife corridors between the established green network.

The core and local path networks are maintained and an enhanced provision for public access is provided within new greenspaces and streetscape. All greenspace elements will be fully accessible.

Identity

Opportunities to retain and enhance the existing identity of the site have been incorporated into the greenspace strategy.

The visual effects of development have been mitigated by the greenspace strategy with areas of public open space and biodiversity habitat created to mitigate views into the site, where required.

Public open space has been located to take advantage of views out to the surrounding landscape. Views across the Country Park to the south and to the north to Glasgow and the Campsie Fells have been incorporated.

This strategy will form a well integrated place with a strong landscape setting.

Within the site, a pallet of planting species will ensure landscape continuity throughout the area.

Native species characteristic of the surrounding area such as Hawthorn or Blackthorn will be used to create species rich hedges. This will create a visual link with the surrounding landscape and its existing character.

The Landscape Framework

Barrhead South is set in a predominantly rural landscape of woodland, fields and burns forming a strong landscape structure.

The landscape and greenspace framework delivers a co-ordinated green space strategy integrated with the existing context.

The landscape framework consists of seven elements:

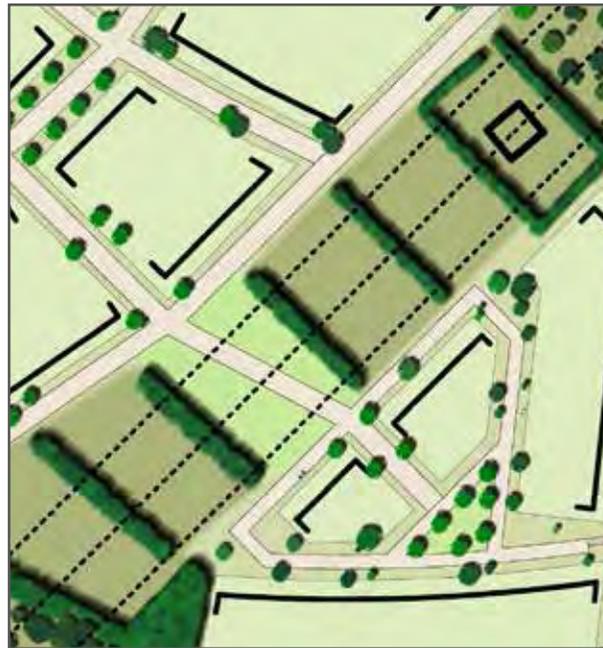
- Amenity Open Space
- Green Routes
- Green Links
- Grassland & Meadows
- Street Planting
- Recreational Parkland
- Wetlands

Public open space is provided as a series of corridors through the development creating a multi-purpose green network integrating leisure opportunities within areas of biodiversity interest.

Existing landscape features will be retained where possible and enhanced through additional planting. This will form a network of connected habitats linking with the wider ecological habitats and corridors.

Improvements to the natural integrity of the site will include greenspace, woodland and other habitat resource creation.

Positive environmental management will create a framework for the creation of safe and sustainable new neighbourhoods in Barrhead South.



Amenity Open Space

The amenity open space forms the principle greenspace structure. These spaces will provide outdoor recreational areas with open views. They will establish a network of safe and legible spaces with areas of enhanced ecological value.

Green Routes

Green Routes are people focussed spaces providing connectivity through the site.

Green Links

Green Links will provide a combined environment for people, biodiversity, amenity and SUDS. These will link larger green elements of the site, creating an integrated habitat network.



Grassland & Meadows

The semi natural character of existing areas of grassland will be retained in specific locations.

The key functions of grasslands and meadows are for both amenity and biodiversity value.

These areas will maintain and extend existing habitats and wildlife corridors, offering habitats for refuge and foraging.

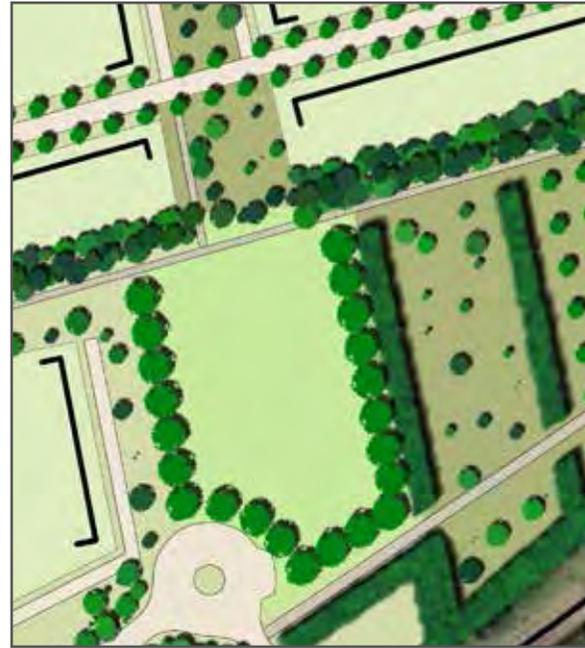


Street Planting

Semi mature standard trees will be provided along Primary and Neighbourhood Streets as agreed with the Council.

On Primary Streets, the formality of linear street tree planting of a single species per street will define the hierarchy for streets and their character.

In Neighbourhood Streets, street planting will be less formal incorporating a variety of species in groups or clusters.



Recreational Parkland

Areas of recreational open space will incorporate amenity grass, existing mature trees, new trees and native feature planting.

The ornamental species will be used for aesthetic value, providing a contrast to the strong native element to planting across the rest of Barrhead South.



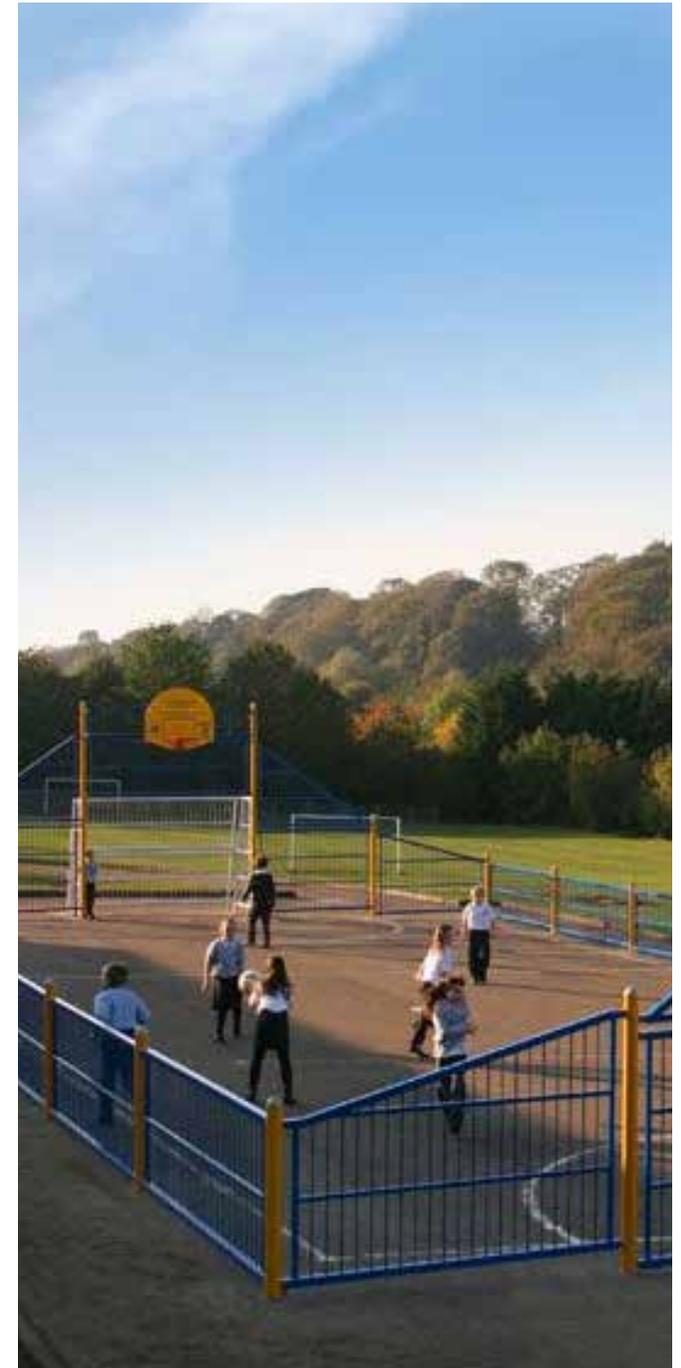
Wetlands

SUDS measures such as ponds, basins and swales are an integral element of the landscape framework.

As well as providing the surface water drainage for the site, these provide opportunities for enhanced ecological value.



34 An example of a Local Equipped Area for Play (LEAP)



A typical example of a Multi Use Games Area (MUGA)

Current Application of the Standards

The National Playing Field Association (NPFA) *Six Acre Standard* is the most widely used standard for play provision.

The NPFA standard sets quantitative guidelines for the provision of play facilities in new developments by population. It sets a minimum standard for outdoor playing space of 2.4ha (6 acres) for 1,000 people.

This is sub-divided into:

- 1.6ha (4 acres) per 1,000 population of outdoor sport; and
- 0.8ha (2 acres) per 1,000 population for children's play

Designated areas are custom designed for any new development and the amount of space required will depend on the design and layout of the development,

The NPFA accessibility criteria (walking times) and the detailed criteria relating to Local Areas of Play (LAPs), Local Equipped Areas of Play (LEAPs) and Neighbourhood Equipped Areas of Play (NEAPs) have been taken into account.

Sports, Play and Recreation

Barrhead South will promote healthy lifestyles, play provision and outdoor recreation for all ages and abilities, promoting social interaction.

The provision of informal play space will be phased as the development progresses throughout the site.

Sports, play and recreation facilities will be incorporated within the greenspace network, at locations overlooked by housing.

The overall requirement is defined in the table below.

Type of play space	Minimum size of facility (excluding buffer zone)	Threshold population	m ² per person	m ² /dwelling size (no. rooms)			
				3	4	5/6	7+
1 x Youth/Adult	0.81 ha/ 8,094m ²	470	17.0	24	29	41	49
1 x LAP	100m ²	62	1.6	2	3	4	5
1 x LEAP	400m ²	124	3.2	4	5	8	9
1 x NEAP	1,000m ²	1,000	1.0	1	2	2	3
1 x Casual Play Space			1.0	1	2	2	3

This distribution will have regard for the need for all households to be within 240m of a Local Equipped Area for Play (LEAP).

The requirement for equipment normally provided as part of a NEAP will be provided individually or as groups within informal play corridors. Local Areas of Play (LAP) will also be incorporated within these corridors.

A new MUGA is to be provided within the centre of Barrhead South in line with guidance stipulated within the Council's *Green Network and Environmental Management* SPG.

Indicative locations are highlighted in the Development Framework for these facilities - Refer to Section 2.10.

The exact siting of and specification of equipment for play spaces will be determined at the detailed design stage.



1.9 Greenspace for People

Greenspace for People is focussed on the development of greenspaces specifically for use by the community.

Members of both the existing and new community will be encouraged to actively participate within Barrhead South through provision of accessible usable community spaces.

These community greenspaces also deliver the aims of the Glasgow and Clyde Valley Green Network Partnership. Its objectives are to establish community interaction and social wellbeing:

- Use of open space and greenspace to improve the image and landscape quality of the area.
- Establish links with schools and ensure involvement of children in design and establishment of allotments
- Improvement of the biodiversity value of greenspace within the neighbourhood.
- Contribute to development of effective ecosystems.
- Provides relatively low maintenance areas of community space

The principles include:

- Establish principle of no physical internal boundaries to maximise social interaction.
- Develop links with Health Strategy Shop provision.
- Provide approximately 125-250m² area of land per allotment for private use.
- Establish an appropriate treatment for the external allotment boundary of a quality appearance, secure height and requiring low maintenance.
- Establish support system for allotment users to assist with horticultural issues.
- Encourage interaction with Barrhead High School and link with other community initiatives.
- Provide facility building to allow water supply and potentially storage of equipment.
- Establish offset from boundaries to avoid anti social behaviour issues.
- Provide low maintenance hard wearing path surfaces which are fit for purpose and create the divisions between the allotments.
- Ensure accessibility of routes through care to meet DDA standards

This type of community spaces would help create a sense of ownership of the area and encourage continued management and maintenance from the community.

There is potential to establish community greenspaces centrally within the landscape framework close to the Rail Station near to the Country Park, as illustrated in the plan opposite.

This potential resource will evolve and develop over time through liaison with the local community by the Council.

This resource could include a forest school or community woodland, community allotments, and a community orchard. These resources would complement and enhance the Dams to Darnley Country Park and consideration could be given to the extension of the County Park boundaries to incorporate this resource if it was realised.

The area for Greenspace for People (community greenspace) has been structured so that it can be divided into a number of elements. Mixed hedges can be used to define these elements with visual containment and will act as a windbreak to the prevailing south westerly winds, creating shelter.

The provision of this community greenspace fulfills one of the key aims for *Green Networks in Scotland*.



38 Existing trees along side Springhill Road

1.10 Landscape Fit

Views

The development framework has been designed to integrate with the surrounding landscape.

A Landscape and Visual Impact Assessment (LVIA) has been undertaken. This confirmed the locations of four areas of visual sensitivity within the site: Lyoncross East, Lyoncross North, Springhill Road West and Balgraystone.

Proposed built development needs to provide primary mitigation in these areas to maintain landscape fit with the surrounding countryside.

Transition from Rural to Settlement

A smooth transition from rural to urban character will be achieved through the creation of the greenspace framework.

The aim of the strategy is to prevent an abrupt change from built form to rural surroundings, by integrating some rural features into the development where possible and allowing some urban features to integrate with the surrounding rural character.

This will be achieved through retention of existing elements of the landscape within the development. Where possible this will include hedgerows, tree belts and changes in topography.

Where there are breaks in the vegetative form through the site, new planting will be established in addition to existing vegetation to allow an integration of the existing rural character into the settlement.

Boundaries

While screening of development may be appropriate in some locations, it is not intended that development be completely screened from the surrounding areas.

A strategy is therefore proposed which combines strong boundaries which provide screening, with more open edges to allow integration between the two characters - both visually and physically.

Areas where screening is considered appropriate are described in the accompanying Technical Appraisal Report.

This identifies four areas of key sensitivity: Lyoncross East, Lyoncross North, Springhill Road West and Balgraystone.

Screening should be used along the outer boundaries in these locations to provide screening of the proposed development in order to help maintain the existing character, particularly from the Country Park and areas of Green Belt to the west.

Where appropriate, proposed built development will not be screened from the surrounding landscape to allow integration with the surrounding area.

Integrating Existing Vegetation

Existing vegetation will be integrated into the proposed greenspace framework throughout the development.

Use of existing landscape features will be used as a basis for augmentation and enhancement. Additional planting of native trees and shrubs will improve biodiversity value and help to establish these areas as green corridors.

1.11 Biodiversity

Integrated Habitat Networks

Barrhead South is bounded by a rural landscape with tree-lined roads, woods, hedgerows, grasslands (former fields) and burns forming the key landscape features of the site.

The proposed development seeks to respond to the existing natural resource through retention, enhancement and creation of habitats and public open spaces.

This will be delivered by establishing a diverse and connected array of habitats across the site, linked to the wider ecological corridors and habitats in the surrounding area

Areas of existing habitat value including woodland, tree lines, hedgerows and grasslands (wet and dry) will be retained where possible.

Alongside existing habitat, it is proposed to add newly planted areas of trees that will form mixed native woodland, together with new hedging.

In addition to engineered SUDS solutions, new wetland features will be established as ecologically designed SUDS ponds and basins.

Biodiversity Design Principles

The principles that would apply to the creation of habitats within the greenspace framework is as follows:

- Developments at Barrhead South should aim to incorporate features of existing ecological value on or adjacent to the site and where possible enhance existing features. This applies to flora and fauna. Three bat roosts have been identified. A small roost on Springfield Road can be retained simply by retaining the copse of trees. This will be the same approach for a small roost in the tree line east of Balgray Road. At Springhill House, the roost would be lost but there is an opportunity to replace it in the form of bat boxes as a minimum measure. There are other options which could be considered such as inbuilt bat boxes to new buildings, or a purpose built bat house or wall. The most suitable option needs to be selected at detail design stage, taking into consideration such issues as long term management and prevention of damage. A fourth small tree roost outside of the site north of Springfield Road will not be affected.
- All new grasslands will use a species-rich seed mix as standard.
- Wherever amenity grassland is not required, grassland will be managed as wildflower meadow, including creation of new meadow, possibly over areas of bare ground.
- Specifically identified meadow areas will be

managed with greater butterfly orchid as a priority.

- Non-native invasive species will be eradicated from the site. Japanese Knotweed is present at several locations in and adjacent to the site, Giant Hogweed at Springhill House and Himalayan Balsam north of Lyoncross.
- Any area that is desirable as woodland will be planted, monitored and managed to create woodland layers, ie ground, understorey and canopy.
- Woodland edges would have a scrub component blending out to grassland, with scrub managed to avoid encroachment into the grassland where the grassland is the desired habitat.
- Hedgerows will be mixed hedgerow wherever possible managed for a dense base.
- Dead wood will be left in hedge, scrub or woodland, wherever possible.
- SUDS ponds or basins and their marginal and land zones will be designed ecologically wherever possible and where this does not affect the SUDS function.
- Swales will be seeded to achieve the greatest diversity in the sward relative to the management required.

The adoption of these principles will help maximise biodiversity of flora and fauna within Barrhead South.

Woodland blocks, shelterbelts and hedges

Retained woodland with extended planting along the boundaries, managed to create a graduating woodland edge out to diverse grassland will help provide a strong green network and enhanced wildlife corridors, complementing the Local Biodiversity Sites (LBS) already present.

Planting of good standard trees along streets and the greenspace network will help to increase the foraging and nesting opportunities for a range of bird species.

The well designed distribution of the new woodlands will enhance existing ecological corridors.

As this planting matures to woodland, the various stages of growth will be of positive benefit to a range of species within the site, both as a source of foraging and as enhancement to the wildlife corridor element mentioned above, making connection to the wider landscape.

Grasslands

Areas of grassland within the site provide habitats and foraging for a range of species.

The plant assemblage associated with neutral and marshy grassland includes the Local Biodiversity Action Plan species - Greater Butterfly Orchid.

Some areas of land containing Orchid will be developed. However, Orchids in these areas may be transplanted to other areas of the site and can act as a resource to provide the means to extend the Greater Butterfly Orchid population to the wider landscape. Other areas of Orchids will be retained

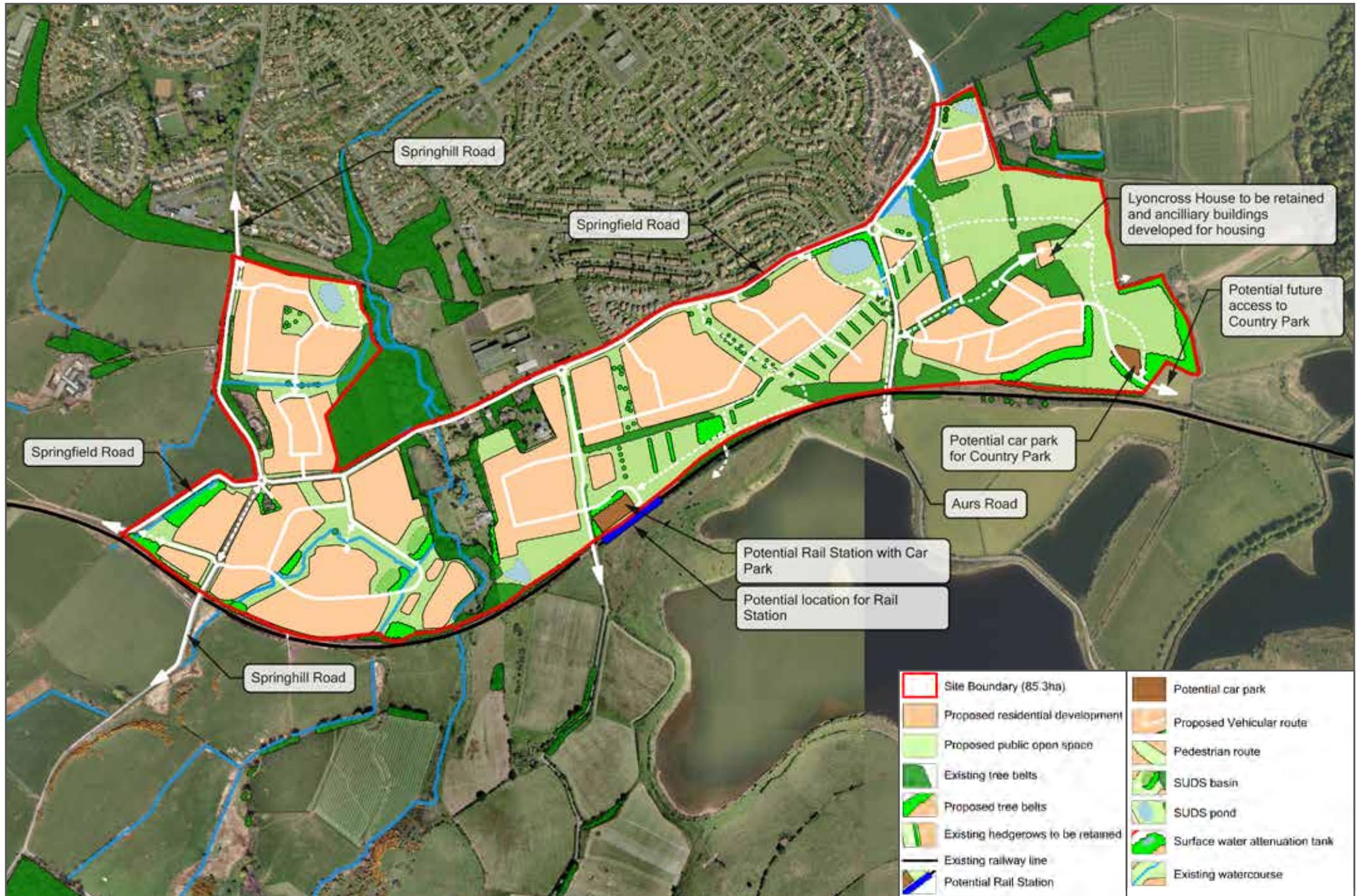
Wildflower meadows and suitable scrub and shrub planting will provide a semi natural buffer to the SUDS areas and LBS corridors, providing foraging areas and protection from disturbance for a range of species.

An area of unimproved natural grassland to the south of Lyoncross will in the main be lost to development. In mitigation an area of marshy grassland to the north of Lyoncross will be maintained and enhanced.

Incorporating existing ecological features

Design of all developments at Barrheard South will aim to incorporate features of existing ecological value on or adjacent to the site as discussed above, and wherever possible to enhance existing features. This applies to both flora and fauna.

Where it is impossible to avoid direct impacts to a feature of ecological value, mitigation should be considered as set out in this SPG.



1.12 Development Framework

The Development Framework agreed by the Council for Barrhead South has been updated to reflect the further technical appraisals which have been carried out.

The updated Development Framework demonstrates how the development principles in this SPG form a place that matches the Council's vision for Barrhead South.

The Development Framework forms an attractive and logical extension to the southern edge of Barrhead.

New homes will be set in an attractive new streetscape incorporating guidance promoted in *Designing Streets* as Government policy.

The provision of a mixture of house types, parking solutions and the integration of greenspaces will create a varied character in new neighbourhoods.

The urban form provides a permeable layout promoting pedestrian and cycle movement over the car.

The movement hierarchy around the site will provide priority for pedestrians and cyclists over the car with good connections and permeability.

Primary Streets will be tree-lined enhancing their gateway function, creating a welcoming character into Barrhead and Barrhead South. A number of Primary Nodes at key junctions will enhance this gateway function.

The provision of an integrated path network, additional bus stops on Springfield Road and the safeguarding for a potential connection with the Rail Station will encourage the use of sustainable modes of transport.

The potential for linking the bus route to the proposed Rail Station will further enhance the sustainability of this location.

The proposal incorporates a network of paths along green spaces and streets through the site. This ensures the creation of an attractive environment and promotes access to outdoor recreational space.

All routes and areas of open space within the development will be overlooked through passive surveillance.

The greenspace, SUDS strategy and structure planting provides an appropriate transition between the edge of the town and the countryside to the south, east and west.

The main greenspace features of the development are integrated throughout the site. These connect to the existing greenspace network surrounding the site.

These greenspace proposals have been designed to enhance biodiversity through the inclusion of native planting and where possible by maintaining existing planting.

Existing mature trees and hedgerows will be retained where possible. Additional trees and planting are included throughout the development area.

Future detailed proposals for both infrastructure and development will comply with national and local design guidance and policy together with this SPG.





Masterplanning Guidance

- 2.1 Masterplanning Guidance
- 2.2 Built Form and Land Use
- 2.3 Delivering the Access Arrangements
- 2.4 Delivering the Movement Hierarchy
- 2.5 Sustainable Transport within this Movement Hierarchy
- 2.6 Integrating with our Neighbours in Barrhead
- 2.7 Ensuring Landscape Fit with the surrounding Countryside
- 2.8 Delivering the Green Space Infrastructure
- 2.9 Greenspace Links
- 2.10 Providing Play in the Green Network
- 2.11 Incorporating Sustainable Urban Drainage Systems
- 2.12 Design Guidance for Infrastructure
- 2.13 Management and Maintenance
- 2.14 Collaborating to Deliver Barrhead South



2.1 Masterplanning Guidance

Chapter 1 has explained the masterplanning and design principles to be adopted in Barrhead South.

These principles will guide the development of distinctive neighbourhoods across Barrhead South.

This masterplanning guidance has been prepared to ensure that these distinctive neighbourhoods form a cohesive place which will be an enjoyable place to live.

It will ensure that the future development and construction respects the opportunities presented and responds in an appropriate manner.

The following sections provide the Masterplanning guidance to be considered through the design of development proposals.

These are:

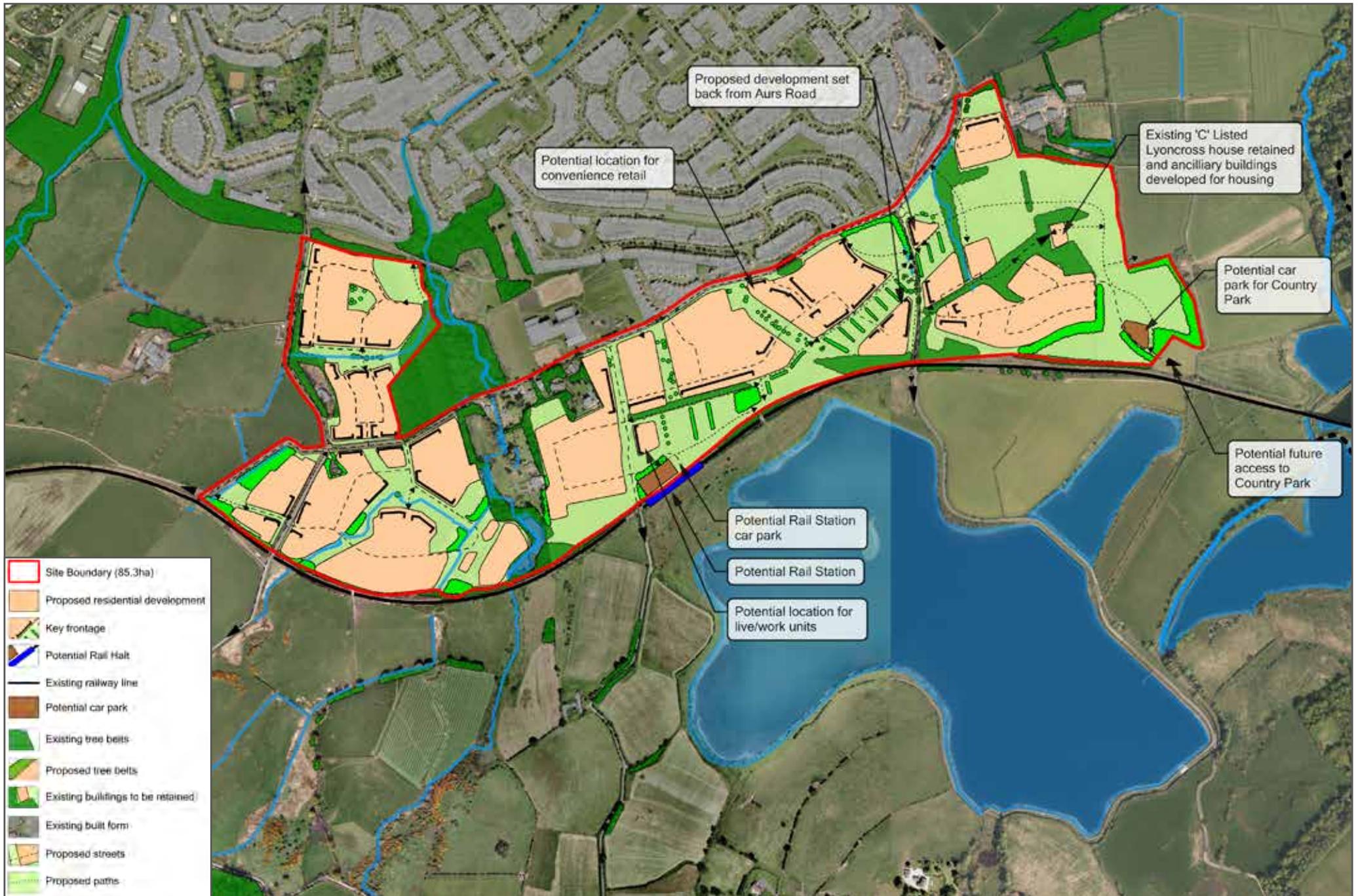
- 2.2 Built Form and Land Use
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- 2.11 Incorporating Sustainable Urban Drainage Systems
- 2.12 Design Guidance for Infrastructure
- 2.13 Management and Maintenance

Each section identifies the location, the general approach which needs to be considered in design proposals and the general specification to be adopted – the what, where, and how.

These proposals will ensure consistency in the overall masterplanning approach for the developers and house builders to follow.

They safeguard and enable the means for connectivity of infrastructure across Barrhead South especially when sites are being constructed on an independent basis.

They facilitate integration across the whole of Barrhead South establishing the greenspace network, streetscapes and path networks which help foster community cohesion and wellbeing.



2.2 Built Form and Land Use

These proposals demonstrate that the development has the capacity to deliver approximately 1,023 new homes within the vision of a sustainable and accessible urban quarter.

The final capacity of Barrhead South will depend on the final choice of house types and plot size. For the purposes of this SPG, a nominal density of 25 homes per hectare (net) is assumed.

Built Form

The built form responds to the location of the site and its surroundings.

Proposals will accord with *Designing Places* and *Designing Streets*. The Development Framework illustrates how a clear hierarchy of streets and spaces can be established.

A series of development areas have been established across the site and these are illustrated in the Development Framework opposite. These areas have been established in response to the site opportunities and constraints.

Within the site, a network of green spaces and streets will provide the accessibility required to allow the proposed residential development to function successfully as socially active areas.

In response to the overhead 133kV power cable, a significant greenspace area has been created from

the required standoff with the opportunity to develop Greenspaces for People.

The urban form created should be distinctive providing landmarks and views that aid orientation.

In specific areas, the visual sensitivity of the site has limited the extent of development, with primary mitigation measures incorporated into the site.

This includes screening with structure planting to form an appropriate visual relationship to the surrounding context. This has limited the area for development in some areas of the site.

There is a need for a comprehensive cut and fill exercise across the site. The aim is to maintain a materials balance within the overall site. All of the proposed development areas are viable locations for development.

Scale and Massing

The scale and massing of development should be composed to provide articulation of the built form.

The majority of development will be of two storeys with opportunities for some three storeys adjacent to Primary and Secondary Nodes as one possible solution to help define the urban form.

At nodes, buildings should address both streets and place making to aid orientation. This could be

achieved through the use of feature elevations or the positioning of buildings.

Block structure

Development should be laid out in a clear street pattern forming blocks which clearly define public and private space.

The layout of internal streets should be designed in response to the features and characteristics of the site and surroundings. Building lines should be consistent along each street.

Elevations

The built form has been developed to overlook the public realm, and provide clear delineation of public and private space. Active frontages to all streets and public spaces are encouraged. Fronts and sides of buildings facing the street should provide interest and detail on these facades.

A building's principle public façade should include a clear, legible main entrance with windows/ fenestration that ensure the main public facade overlooks public space and provides passive surveillance of street activity.

Blank featureless elevations and facades lacking windows that are visible from the public realm should be avoided wherever possible.

Public Realm

Public realm must positively contribute to safe public use and provide ease of movement. The infrastructure in the public realm should incorporate a common palette of materials and detailing- refer to Section 2.12.

At the design stage, proposals for public realm need to take account of future maintenance needs and responsibilities - refer to Section 2.13.

New open spaces should be:

- designed to encourage activity with paths, benches and opportunities for play - public access may not be appropriate for some areas where habitat is important;
- located so they connect with existing routes and green networks;
- wherever possible overlooked by buildings and streets and easily accessible to all;
- easy to move around with well defined routes, and;
- designed to be fully accessible and DDA compliant.

A network of green spaces connecting to the surrounding countryside ensures the site is fully integrated into its context.

Spaces that are difficult to view and maintain should be avoided.

Within the public realm, private car parking should be secondary to pedestrian access and movement.

New Homes

The table opposite highlights the estimated housing capacities for the four development areas.

The site extends to over 85ha with the net area of development within the site being circa 40.9ha. Within the site, a variety of densities, property types and tenure can be provided to deliver a range of homes.

New homes will front onto public spaces and streets creating a safe and active place and positive and appropriate edges to the development.

In the new Primary Streets and along Springfield Road, housing will front onto these streets with direct access where possible.

Along Aurs Road and Springhill Road, new homes will be set back from the existing hedgerows. These may be enhanced, ensuring the existing character of the approach into Barrhead is maintained.

Frontages are provided along proposed routes and spaces. Houses will only back onto contained boundaries, such as against the existing homes, woodland, landscaped edges and field boundaries. Extended fence lines bounding path networks will not be acceptable.

The location of the site on the countryside edge, there is an opportunity to orientate homes to utilise this site asset. Views across areas of public greenspace and countryside will be a key feature of these properties.

The density of development across the site is expected to vary, providing the opportunity to deliver a range of densities. The primary and secondary nodes provide opportunities to further define the streetscape.

The arrangement of house types may create formal and more informal spaces to correspond to the proposed hierarchy of streets and spaces.

Lyon Cross House will be restored and integrated into the Barrhead South development with additional new homes forming a small group of 'steading' homes.

New Homes (Affordable)

The tenure split between market homes for sale and affordable homes is detailed in the table below.

The Council's affordable housing policy is detailed within Proposed Policy SG5 of the Proposed Local Development Plan (December 2012) and its supporting SPG on affordable housing. These documents, along with the Council's Local Housing Strategy and the Strategic Housing Need and Demand Assessment provide the guidance for the scale and tenure of the affordable housing to be provided at Barrhead South.

One of the regeneration requirements of Barrhead is to increase tenure choice; accordingly, the Council is seeking a balanced mix of affordable homes across the whole of the tenure range – social rented; intermediate homes for sale; and entry level homes for sale. This will help retain and attract first time buyers, young professionals and families essential to East Renfrewshire's prosperity.

The 25% policy requirement will be split as follows: 8% of the total site capacity will be for social rented and intermediate (unsubsidised) for sale homes, with intermediate (subsidised) sales prices of circa £90,000 (2013 values). The split between these categories is envisaged to be 50:50 in numbers subject to the availability of funding from Scottish Government. These homes will be subsidised and will not contribute to development contributions.

8.5% of the total site capacity will be smaller entry level homes for sale around 800sqft in size. These homes are unsubsidised and will be defined as affordable homes for planning policy purposes.

The remainder of the affordable housing requirement (8.5%) will be exercised as commuted payments. In line with the Proposed Affordable Housing SPG, the final commuted payment required will be valued by the District Valuer. An initial valuation indicates that the value of the commuted payments will be no more than £10,000 for each serviced plot.

The payment of the commuted payment will be programmed over the site's development period. The phasing will be agreed and detailed within the necessary legal agreement.

Locations for these affordable homes will be determined at detailed planning application stage. Where possible the programming of these affordable homes for each development area will follow the delivery of an initial phase of private homes for sale.

New Homes (Private for Sale)

Private homes will be delivered by a number of house builders throughout the period of the development with potentially up to four builders on site concurrently.

This number of house builders helps provide a variety of house types and through the layout of plot arrangements, they will help deliver distinctiveness to the development areas.

Live/work Homes

Some of the houses adjacent to the new Rail Station may incorporate the opportunity for home working. These live/work homes provide flexible employment opportunities within an area of the site that will be highly accessible to public transport.

Land Use: Other

The inclusion of neighbourhood scale retail provision, convenience shopping to serve the local catchment will be encouraged within Barrhead South. A suitable location has been identified centrally on Springfield Road that would serve both new and existing communities. Another possible location for retail provision would be in close proximity to the Rail Station.

Housing Tenure within each development area	Miller Homes	Wallace Land	Avant Homes	Council	Total
Site Capacity	150	303	182	388	1023
Balance of Private Homes (including entry level homes for sale)	138	279	167	357	941
Social Rent / Intermediate (8%)	12	24	15	31	82
Entry Level for Sale (8.5 %)	13	26	15	33	87
Total on site affordable homes	25	50	30	64	169



- Site Boundary
- Access point from existing road network
- Pedestrian crossing / access point
- Improvements to existing road junction

2.3 Delivering the Access Arrangements

Delivering the Access Arrangements

Access into Barrhead South will be provided from the existing road network, connecting to the proposed internal street network.

In addition to a number of new junctions and pedestrian access points, road mitigation will also be required in a number of locations.

This includes improvements to existing road junctions, the widening of existing roads and the provision of pedestrian crossing points.

The plan opposite illustrates the location of proposed access points and includes improvements required to existing roads and junctions as well as proposals for pedestrian crossing points.

The access points / junctions are as follows:

1. Access from Springhill Road (Miller Homes Land)
2. Junction between Springhill Road and Springfield Road
3. Access from Springfield Road (Miller Homes land)
4. Access from Springfield Road (Wallace Land land)
5. Access from Springhill Road (Wallace Land land)
6. Junction between Springfield Road and Balgraystone Road
7. Access from Springfield Road near Springfield Grove (ERC land)
8. Access from Springfield Road (ERC land)
9. Junction between Springfield Road / Aurs Road
10. Access from Aurs Road (Avant Homes land)
11. Junction between Aurs Road / access to Lyon-cross House
12. Pedestrian crossing to Aurs Road
13. Pedestrian crossing point at Springfield Road
14. Pedestrian crossing point at Springfield Road at St Luke's
15. Improvements to Springfield Road

The proposed access points have been located in accordance with the requirements of the *Design Manual for Roads and Bridges, Designing Streets* and the Council's design standards

The access and road mitigation strategy for Barrhead South allows each of the separate land owner parcels to be brought forward independently of one another.

Any changes to this proposed access strategy must not compromise the development of any of the other development areas and modifications will be required to be agreed with the Council.

This section illustrates the location and type of access provided for vehicles. Pedestrian and cycle access is described in Section 2.5.



1. Access from Springhill Road

A new 3 arm priority junction will be formed on the east side of Springhill Road providing vehicle and pedestrian access to the northern portion of the Miller Homes site.

The proposed arrangement for this priority junction is illustrated on the plan opposite.

This new priority junction has been located to provide an optimal balance between achieving sufficient visibility and retaining hedgerow and existing mature trees along Springhill Road.

At this location Springhill Road is 5.4m wide, no change to this is proposed. The new access road into the Miller Homes Site will be 6m wide.

The new junction will enable visibility splays of at least 4.5mx90m to be achieved (East Renfrewshire Council design standards for 30mph roads).

The junction will connect to Springhill Road at existing line and level and rise slightly into the site, prior to falling away from the existing road levels.

A remote 3m wide shared footpath/cycle path will be provided on the east side of Springhill Road. This will allow for the retention of the existing hedgerow and mature trees where possible.

This shared path will connect with the existing path network, including the east-west footpath which runs to the north of the site. It will cross the mouth of the new priority junction on a raised table to provide a level connection for pedestrians and cyclists.

Further information on the proposed walking / cycling routes is included in Section 2.6.



Access Point 1 - Location Plan



Existing view looking north along Springhill Road



2. Junction between Springhill Road and Springfield Road

The existing junction between Springhill Road and Springfield Road is currently complex and substandard. This junction will therefore be altered significantly from the current 5-arm priority junction to a new 3-arm roundabout. The proposed arrangement for this roundabout is illustrated on the plan opposite.

Springfield Road is 6m wide to the east of the junction and 4m wide to the west of the junction, while Springhill Road to the north of the junction is 6m wide.

The proposed roundabout will have a 20m ICD and will be compliant with East Renfrewshire Council design standards. It will incorporate a solid centre circle and a surrounding central overrun area to accommodate large vehicles.

To the south of this junction, Springhill Road will be subject to a Redetermination Order. Vehicular traffic travelling along Springhill Road to/from the south of the rail line will be re-routed through the proposed development site to connect with Springfield Road further to the east.

Access to the private cottage to the south of the junction will be maintained via its existing 4m-wide track, which will be re-aligned at its northern end to join Springhill Road to the west of the new roundabout.

This junction will form a key gateway for the development site and mark a change in the appearance of Springfield Road.

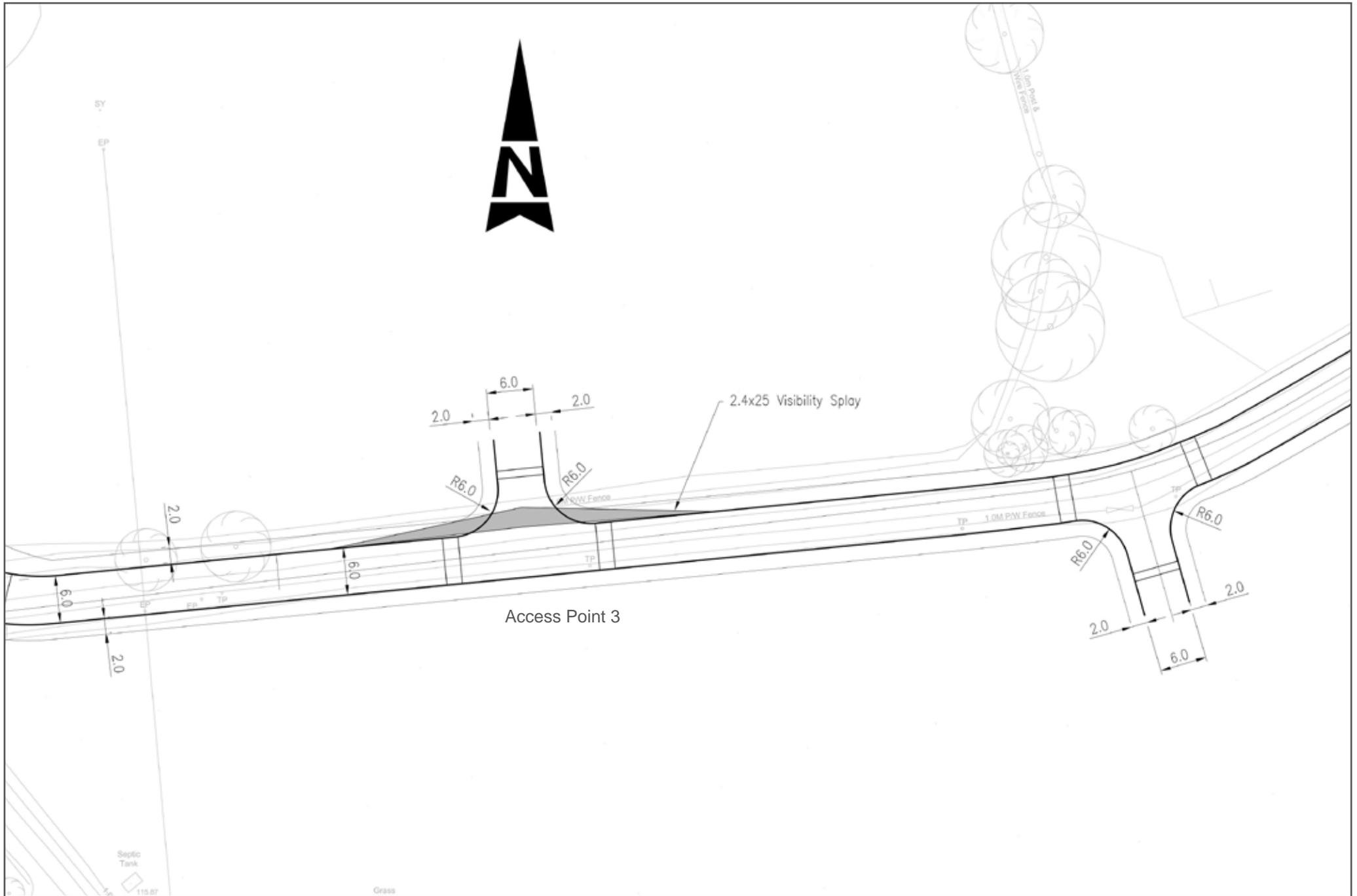
The new roundabout will help to encourage reductions in vehicle speeds and will be of a similar design to the proposed roundabout at the northern end of Balgraystone Road in order to provide some consistency of features along Springfield Road.



Access Point 2 - Location Plan



Existing junction between Springhill Road and Springfield Road



3. Access from Springfield Road

A new 3 arm priority junction will be formed on the north side of Springfield Road providing vehicle and pedestrian access to the southern portion of the Miller Homes site.

The proposed arrangement for this priority junction is illustrated on the plan opposite.

This new priority junction has been located on a straight section of Springfield Road to enable sufficient visibility to be achieved, with visibility splays of at least 2.4mx25m realised from the new minor arm (*Designing Streets* guidance for 20mph roads).

The junction will connect to Springfield Road at existing line and level and fall into the site at approximately 1 in 20, with the site continuing to fall away from the existing road levels in a northwards direction at approximately the same gradient.

Springfield Road will be widened to 6m along this stretch and the proposed new access road will also be 6m wide.

It is proposed that this junction is formed of a full raised table with appropriate surfacing to encourage reductions in vehicle speeds and provide an opportunity for a level connection across the junction for pedestrians.

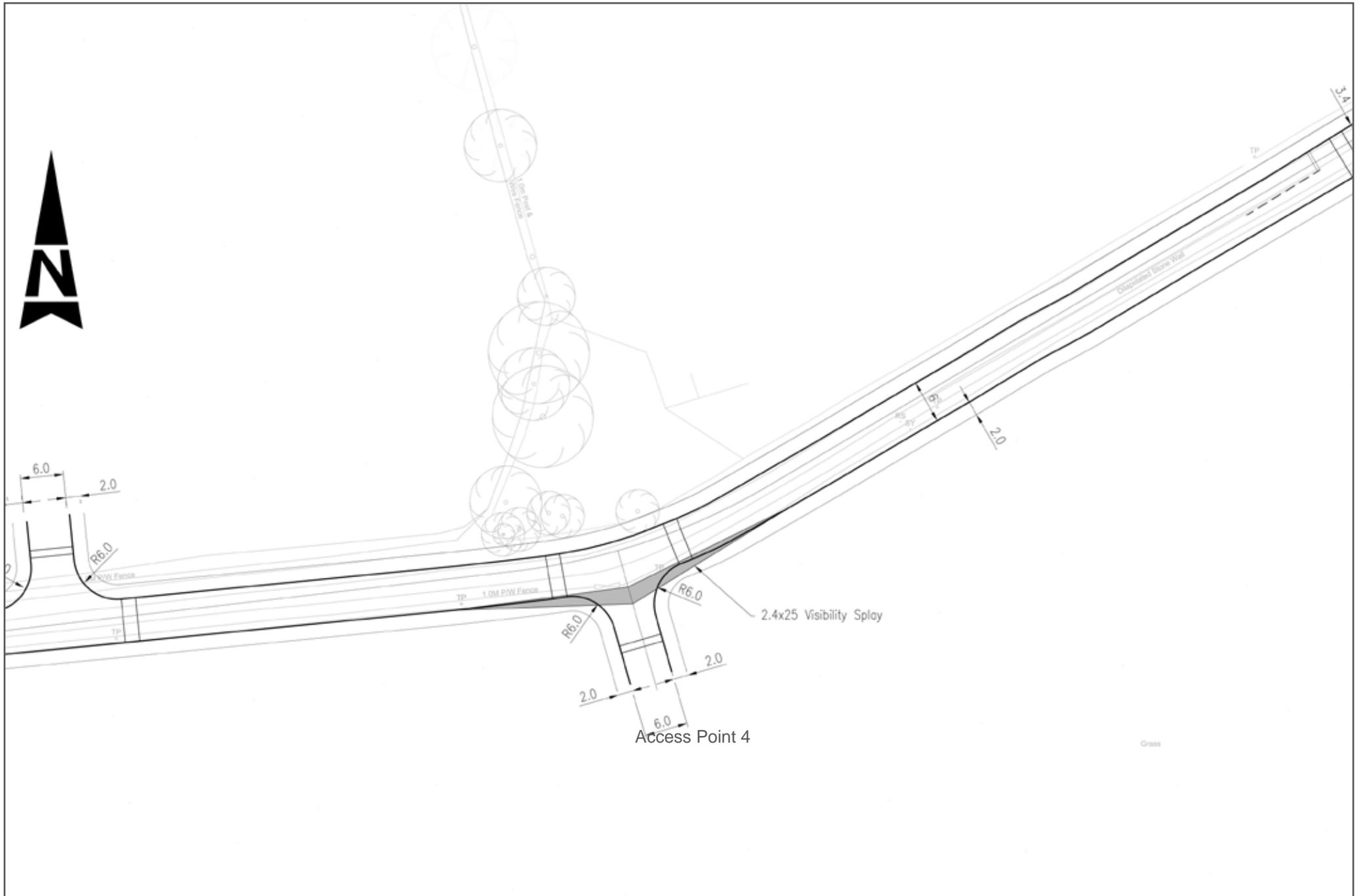
2m wide footpaths will be provided around both sides of the priority junction and along the new access road into the development site, offering pedestrian connections to the new footpaths along both sides of Springfield Road.



Access Point 3 - Location Plan



View looking west along Springfield Road



4. Access from Springfield Road

A new 3 arm priority junction will be formed on the south side of Springfield Road providing vehicle and pedestrian access to the eastern portion of the Wallace Land site.

It will also provide the connection to Springfield Road for re-routed vehicular traffic travelling through the proposed development site from Springhill Road south of the rail line in due course.

The proposed arrangement for this priority junction is illustrated on the plan opposite.

This new priority junction has been located on the outside of a gentle bend on Springfield Road to enable sufficient visibility to be achieved, with visibility splays of at least 2.4mx25m realised from the new minor arm (*Designing Streets* guidance for 20mph roads).

The junction will connect to Springfield Road at existing line and level and rise into the site, prior to falling or rising to suit the existing ground levels and proposed platform levels.

Springfield Road will be widened to 6m along this stretch and the proposed new access road will also be 6m wide.

It is proposed that this junction is formed as a full raised table with appropriate surfacing to encourage reductions in vehicle speeds and provide an opportunity for a level connection across the junction for pedestrians.

2m wide footpaths will be provided around both sides of the priority junction and along the new access road into the development site, offering pedestrian connections to the new footpaths along both sides of Springfield Road.



Access Point 4 - Location Plan



View looking west along Springfield Road

5. Access from Springhill Road

A new 3 arm priority junction will be formed on Springhill Road providing vehicle and pedestrian access to the western and southern portions of the Wallace Land site.

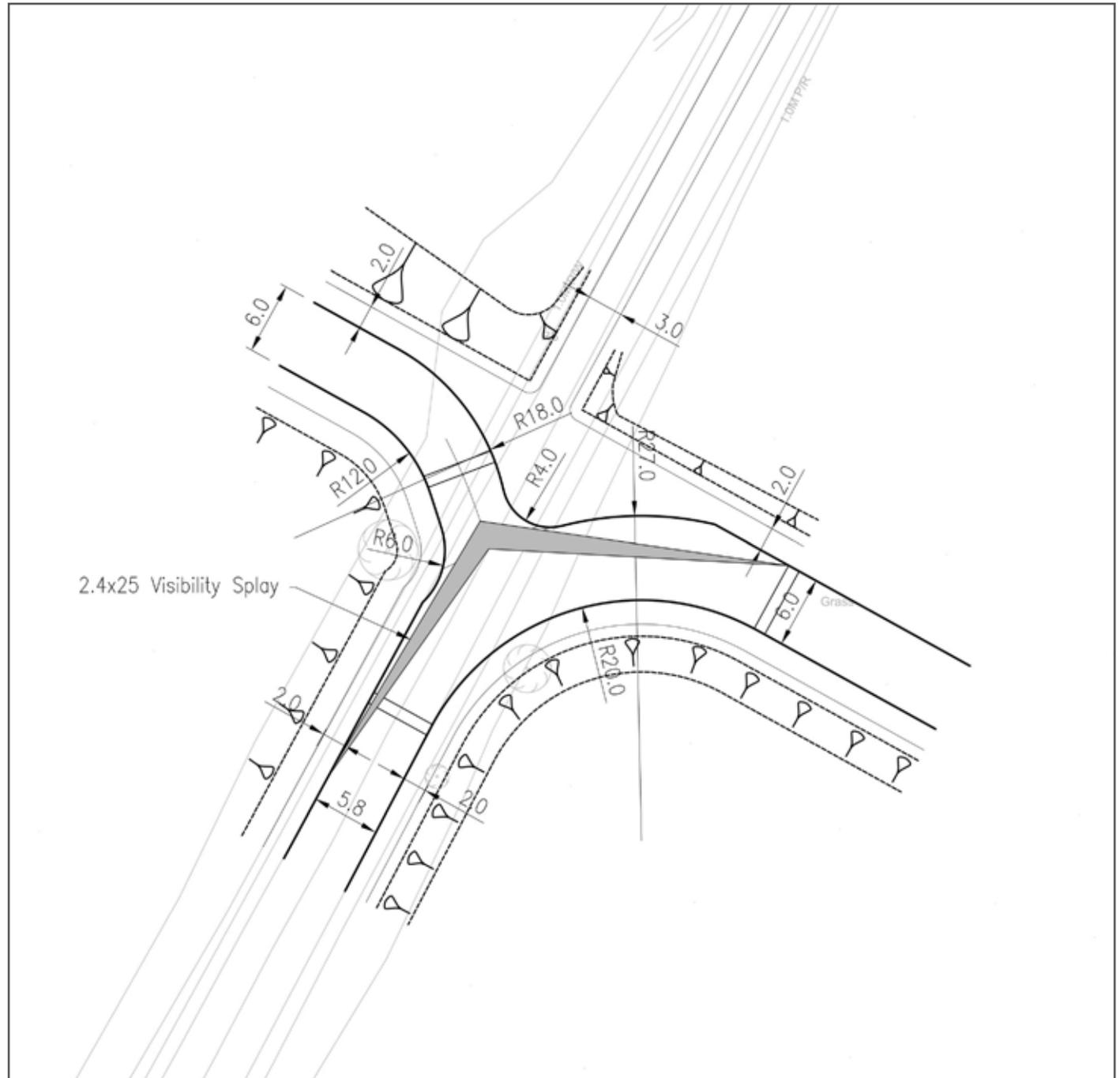
It will also provide the start of the new route for vehicular traffic travelling along Springhill Road through the Wallace Land site to connect with Springfield Road at Access Point 4.

The proposed arrangement for this priority junction is illustrated on the plan opposite.

To the north of this new priority junction, Springhill Road will be subject to a Redetermination Order to remove vehicular traffic but maintain a route for pedestrians and cyclists. To the south of the junction, Springhill Road is 5.8m wide and both new access roads into the development site will be 6m wide.

Traffic travelling to/from the south and east will have priority at new junction, with the new access road into the development to the west becoming the minor arm of the priority junction.

The junction will connect to Springhill Road at existing line and level and fall east and west into the site to bring the road onto existing ground levels. It will then rise and fall generally in line with the topography.



This arrangement will enable sufficient visibility to be achieved, with visibility splays of at least 2.4mx25m realised from the new minor arm (*Designing Streets* guidance for 20mph roads).

It is proposed that this junction is formed as a full raised table with appropriate surfacing to encourage reductions in vehicle speeds and provide an opportunity for a level connection across the junction for pedestrians.

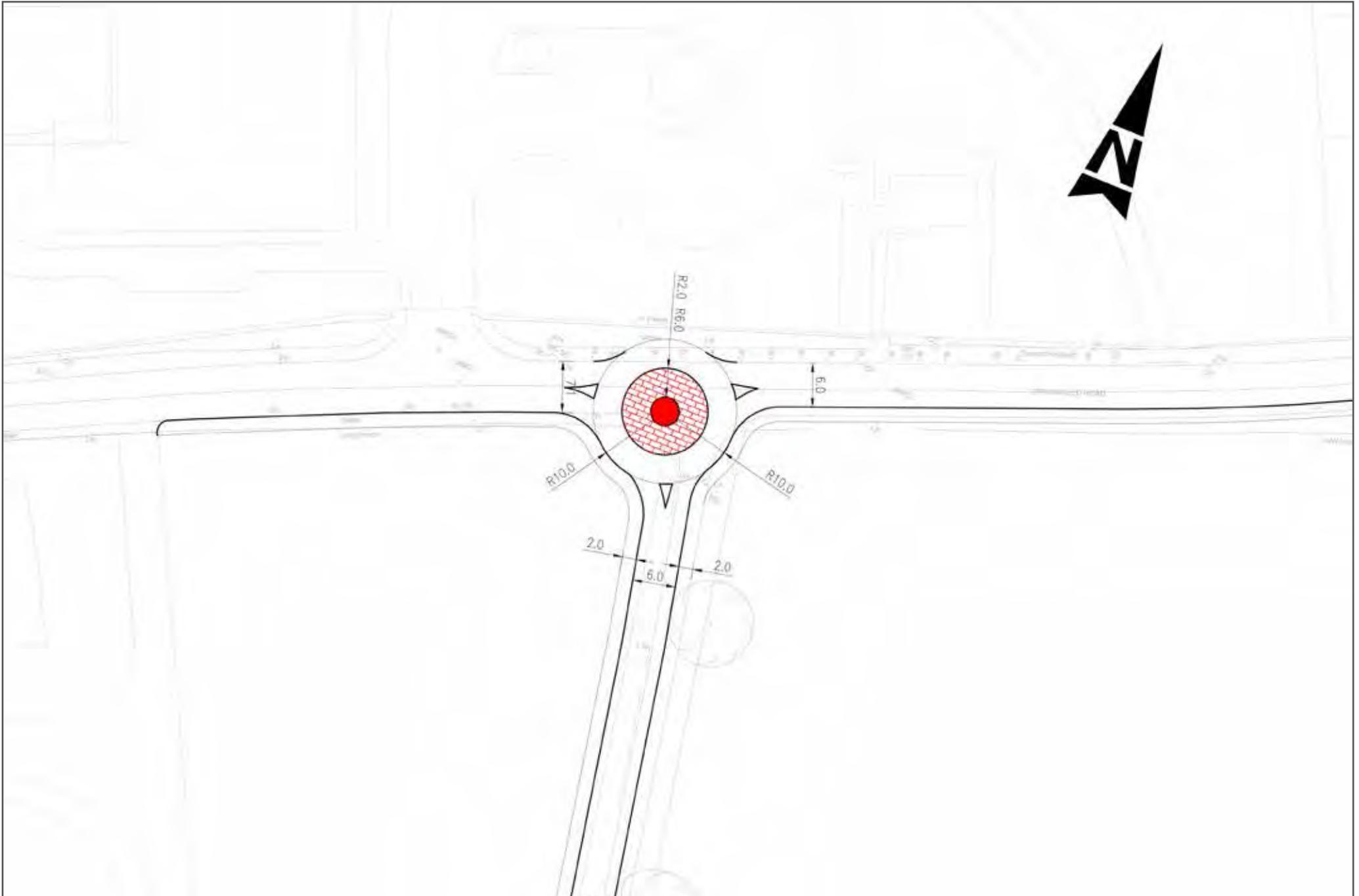
2m wide footpaths will be provided around both sides of the priority junction and along the new access road into the development site, offering pedestrian connections to the new footpaths along both sides of Springfield Road.



Access Point 5 - Location Plan



View looking south along Springhill Road



6. Upgraded Junction at Springfield Road / Balgraystone Road

It is proposed that the existing junction between Springfield Road and Balgraystone Road will be upgraded from the current 3 arm priority junction to a 3 arm roundabout.

This new roundabout has been located on a straight section of Springfield Road, slightly to the west of the existing priority junction.

This slight shift in location is to enable the widening and re-alignment of Balgraystone Road whilst retaining the hedgerow, trees and other existing vegetation along the eastern edge of Balgraystone Road.

The roundabout will provide access, via Balgraystone Road, to the western portion of the East Renfrewshire Council development site, as well as to the proposed new Rail Station and to the Dams to Darnley Country Park. It will also provide the opportunity for a 4th arm taking access to the school.

The roundabout will have a 20m Inscribed Circle Diameter (ICD) and will be compliant with East Renfrewshire Council design standards.

It will incorporate a solid centre circle and a surrounding central overrun area to accommodate large vehicles, in particular buses serving the proposed Rail Station.

2m wide footpaths will be provided around both sides of the Balgraystone Road arm and along both sides of the re-aligned Balgraystone Road.

This will offer pedestrian connections to the rest of the development site and to the existing community of Barrhead.



Access Point 6 - Location Plan



Existing junction between Balgraystone Road and Springfield Road



7. Access from Springfield Road

The existing 3 arm priority junction between Springfield Road and Springfield Grove will be altered to create a 4 arm priority crossroad junction.

The new southern arm on this junction will provide vehicle and pedestrian access to the central portion of the East Renfrewshire Council development site. The proposed arrangement for this priority junction is illustrated on the plan opposite.

This access point to the new development has been positioned to provide alignment with the existing access road to the housing on Springfield Grove to the north of Springfield Road.

This will enable the new development to integrate with the existing urban form and established community of Barrhead.

The junction is located on a straight section of Springfield Road which enables sufficient visibility to be achieved, with visibility splays of at least 2.4mx25m realised from the new minor arm (*Designing Streets* guidance for 20mph roads).

Springfield Road will be narrowed to 6m along this stretch and the proposed new access road will also be 6m wide.

It is proposed that this junction is formed of a full raised table across all 4 arms with appropriate surfacing to encourage reductions in vehicle speeds and provide an opportunity for a level connection across the junction for pedestrians.

2m wide footpaths will be provided around both sides of the new arm of the junction and along the new access road into the development site, offering pedestrian connections to the footpaths along both sides of Springfield Road.



Access Point 7 - Location Plan



View looking east along Springfield Road near Springfield Grove

8. Access from Springfield Road

A new 3 arm priority junction will be formed on the south side of Springfield Road providing vehicle and pedestrian access to the eastern portion of the East Renfrewshire Council development site.

The proposed arrangement for this priority junction is illustrated on the plan opposite.

This new priority junction has been located on the outside of a gentle bend on Springfield Road to provide optimal balance between achieving sufficient visibility and retaining a small copse of existing mature trees on Springhill Road.

The new junction will enable visibility splays of at least 2.4mx25m to be realised from the new minor arm (*Designing Streets* guidance for 20mph roads).

The junction will connect to Springfield Road at existing line and level and rise into the site, prior to falling or rising to suit the existing ground levels and proposed platform levels.

Springfield Road will be narrowed to 6m along this stretch and the proposed new access road will also be 6m wide.

It is proposed that this junction is formed of a full raised table with appropriate surfacing to encourage reductions in vehicle speeds and provide an opportunity for a level connection across the junction for pedestrians.

2m wide footpaths will be provided around both sides of the priority junction and along the new access road into the development site, offering pedestrian connections to the footpaths along Springfield Road.



Access Point 8 - Location Plan



View looking east along Springfield Road near Maple Drive



9. Upgraded junction at Springfield Road / Aurs Road

It is proposed that the existing junction between Springfield Road and Aurs Road will be upgraded from the current 3 arm priority junction to a 4 arm roundabout.

The proposed arrangement for the new roundabout is illustrated on the plan opposite.

This new roundabout has been located on the site of the existing junction to minimise the impact on the surrounding area, including nearby roads and existing vegetation, and to reduce the quantity of earthworks required.

The roundabout will have a 30m Inscribed Circle Diameter (ICD) and will be compliant with East Renfrewshire Council design standards. It will be capable of being negotiated by large vehicles including buses using the junction.

The junction currently features street lighting and is subject to a 30mph speed limit, both of which will be maintained.

The roundabout will provide access to the central portion of the Avant Homes site via the new arm of the junction.

The proposed new access road will be 6m wide with 2m footpaths provided along both sides and around both sides of the new arm of the roundabout.

In addition, 2m footpaths will also be provided round the new roundabout providing connections to new footpaths along the east side of Aurs Road and to existing footpaths alongside Oakbank Drive.

Dropped kerb crossings will be provided at all arms of the roundabout to facilitate pedestrian movement. These footpaths and crossings will offer pedestrian connections to the rest of the development site and to the existing community of Barrhead.



Access Point 9 - Location Plan



Existing junction between Aurs Road and Springfield Road

10. Access from Aurs Road

A new 3 arm priority junction will be formed on the east side of Aurs Road providing vehicle and pedestrian access to the northern portion of the Avant Homes site.

The proposed arrangement for this priority junction is illustrated on the plan opposite.

This new priority junction has been located on the outside of a bend to provide optimal balance between achieving sufficient visibility and retaining as many existing mature trees as possible along Aurs Road.

At this location, Aurs Road is 7.3m wide, features street lighting and is subject to a 30mph speed limit.

The junction will connect to Aurs Road at existing line and level and rise into the site, to suit proposed platform levels.

The new junction will enable visibility splays of at least 4.5mx90m to be achieved (East Renfrewshire Council design standards for 30mph roads).

The proposed new access road will be 6m wide, with 2m wide footpaths around both sides of the upgraded priority junction and along the new access road into the development site.

A raised table across the mouth of the new priority junction will provide a level crossing for pedestrians and offer connection to the new footpath along the eastern side of Aurs Road.



Access Point 10 - Location Plan



View looking north east along Aurs Road

11. Upgraded junction at Aurs Road / Access to Lyoncross House

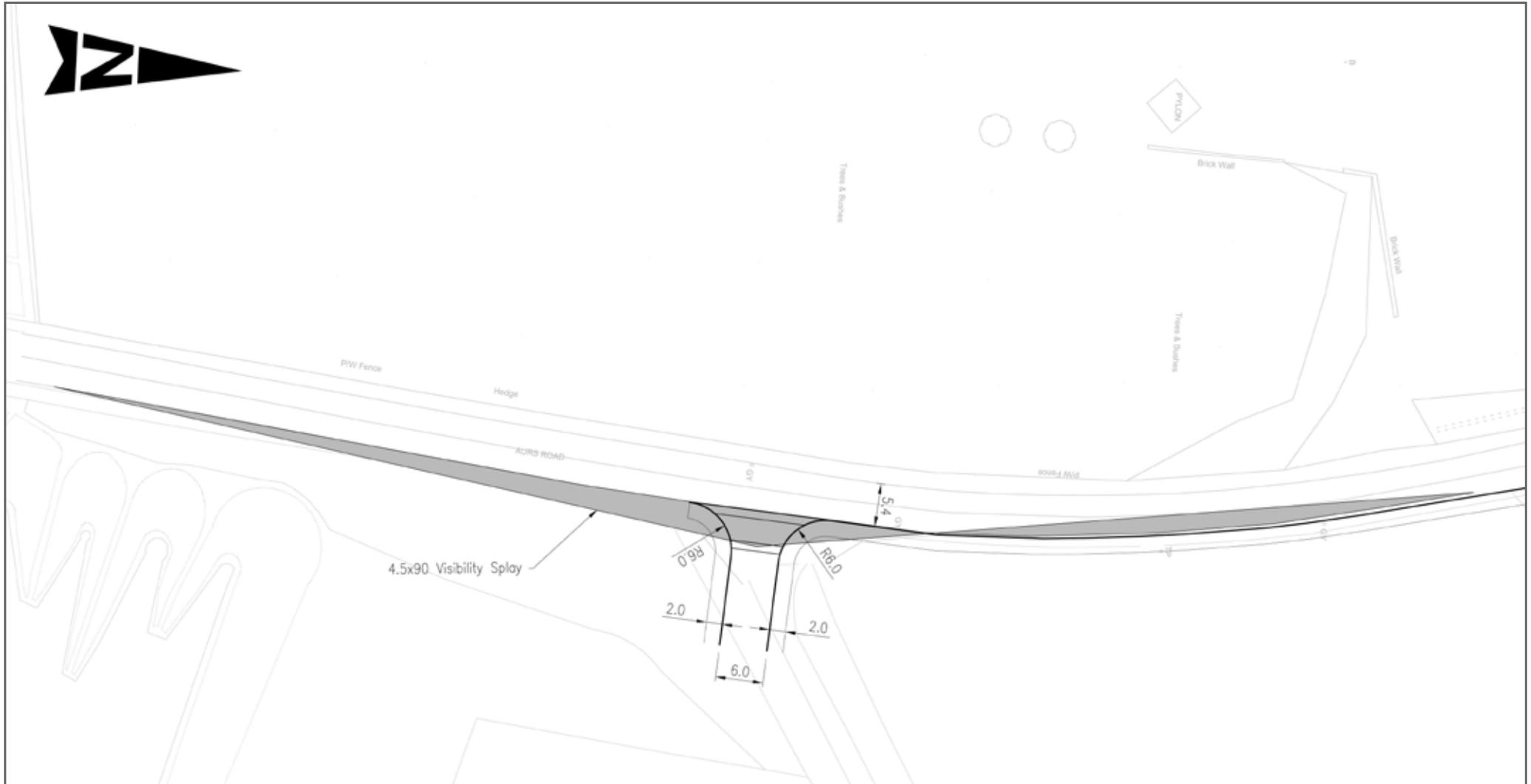
It is proposed that the existing 3 arm priority junction on Aurs Road, which currently provides access to Lyoncross House, will be upgraded to a sufficient standard to provide vehicle and pedestrian access to the southern portion of the Avant Homes site.

The proposed arrangement for the upgraded priority junction is illustrated below.

This upgraded priority junction is located on the outside of a gentle bend, on the same site as the existing junction, to provide optimal balance between achieving sufficient visibility and retaining as much mature vegetation as possible along Aurs Road.

Levels will remain as existing, with any impacts to be minimal to provide improved carriageway line and levels where appropriate.

The junction will be realigned so that the minor arm of the junction will join Aurs Road at a perpendicular angle to improve visibility and ease vehicle manoeuvres.



The junction upgrade will enable visibility splays of at least 4.5mx90m to be achieved (East Renfrewshire Council design standards for 30mph roads).

At the location of this priority junction, Aurs Road is 5.4m wide and the proposed new access road will be 6m wide.

2m wide footpaths will be provided around both sides of the upgraded priority junction and along the new access road into the development site.

A raised table across the mouth of the priority junction will provide a level crossing for pedestrians and offer connection to the new footpath along the eastern side of Aurs Road to the north.

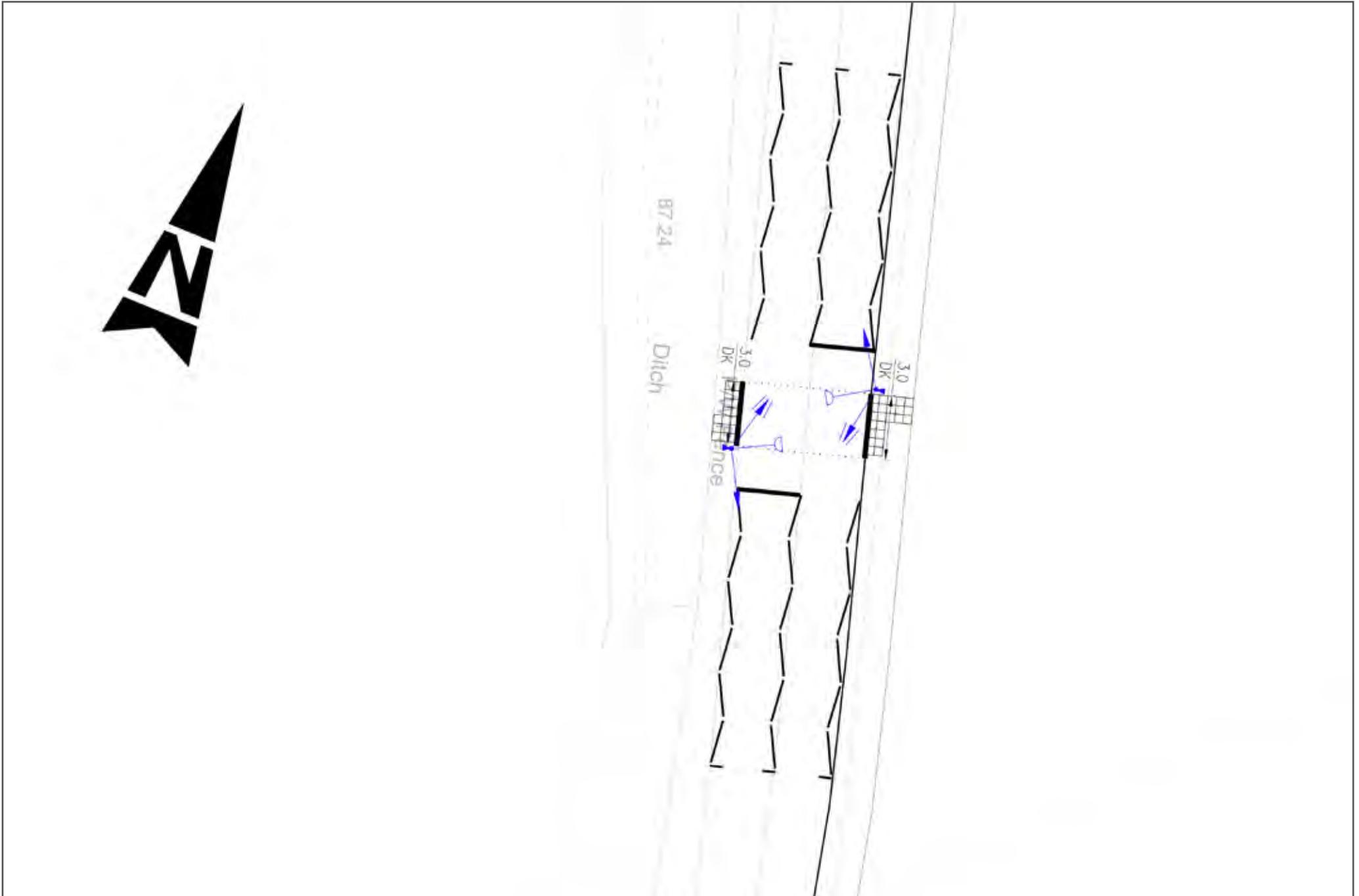
As well as providing access to the southern portion of the Avant Homes development site, this new access road will provide a new route to Lyoncross House and to the Dams to Darnley County Park.



Access Point 11 - Location Plan



Existing junction between Aurs Road and access to Lyoncross House



12. Pedestrian crossing on Aurs Road

A new signalised pedestrian crossing point will be formed on Aurs Road. This will facilitate safe crossing of this busy road by users of the new path network through Barrhead South.

The proposed arrangement for this crossing point is illustrated on the plan opposite.

This crossing point has been sited on a straight section of Aurs Road to provide good visibility. It will be formed of a 3m wide dropped kerb crossing, incorporating push-buttons for pedestrians to activate the signals.

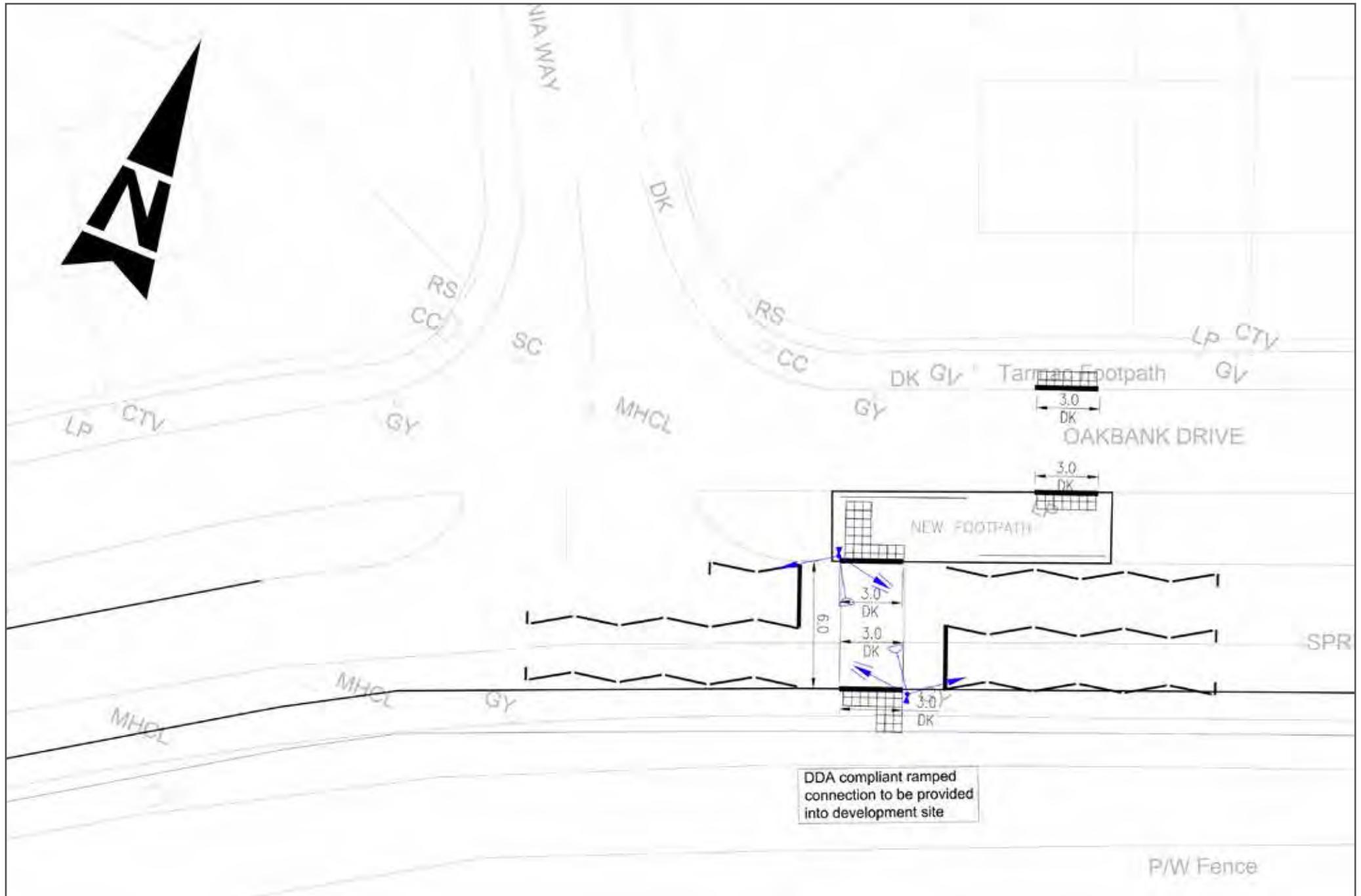
There will also be a new footpath along the eastern side of Aurs Road providing north-south pedestrian movements along Aurs Road from this crossing point.



Access Point 12 - Location Plan



Existing Aurs Road



13. Pedestrian crossing on Springfield Road

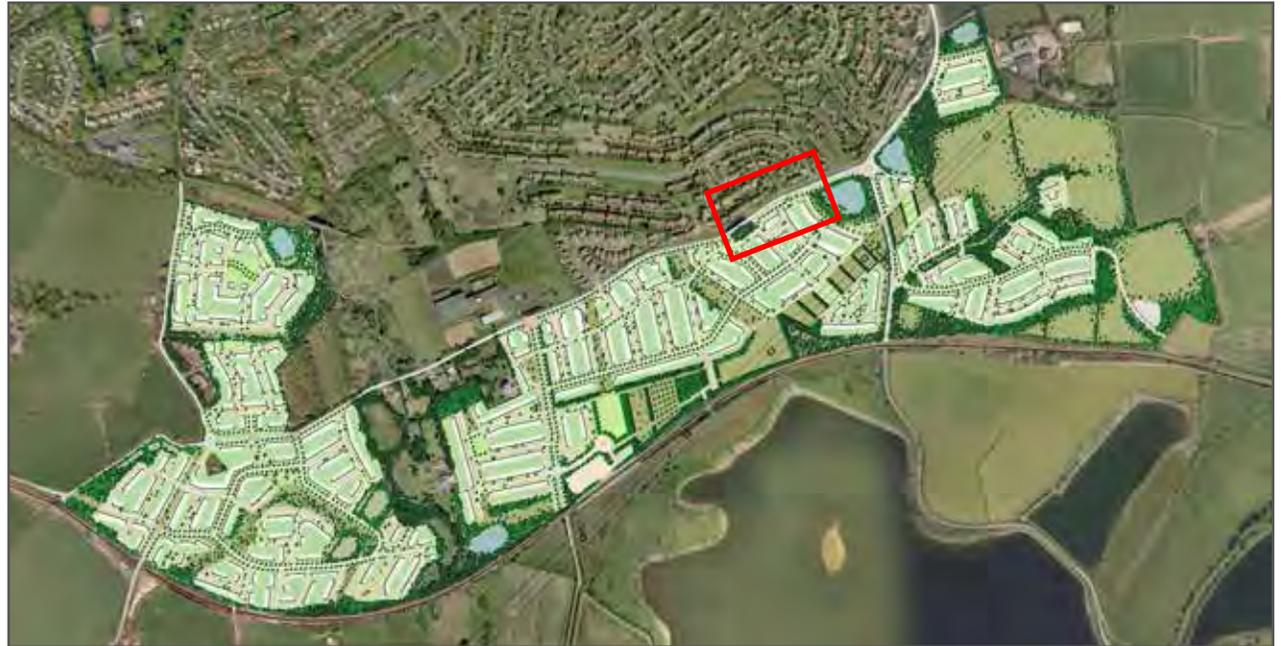
A new signalised pedestrian crossing point will be formed on Springfield Road. This will allow safe crossing by users of the new path network in Barrhead South.

The proposed arrangement for this crossing point is illustrated on the plan opposite.

This crossing point has been sited on a relatively straight section of Springfield Road to provide good visibility. It will be formed of a 3m wide dropped kerb crossing, incorporating push-buttons for pedestrians to activate the signals.

On the south side of the new crossing, a DDA compliant ramp will be provided to connect with the path network within Barrhead South.

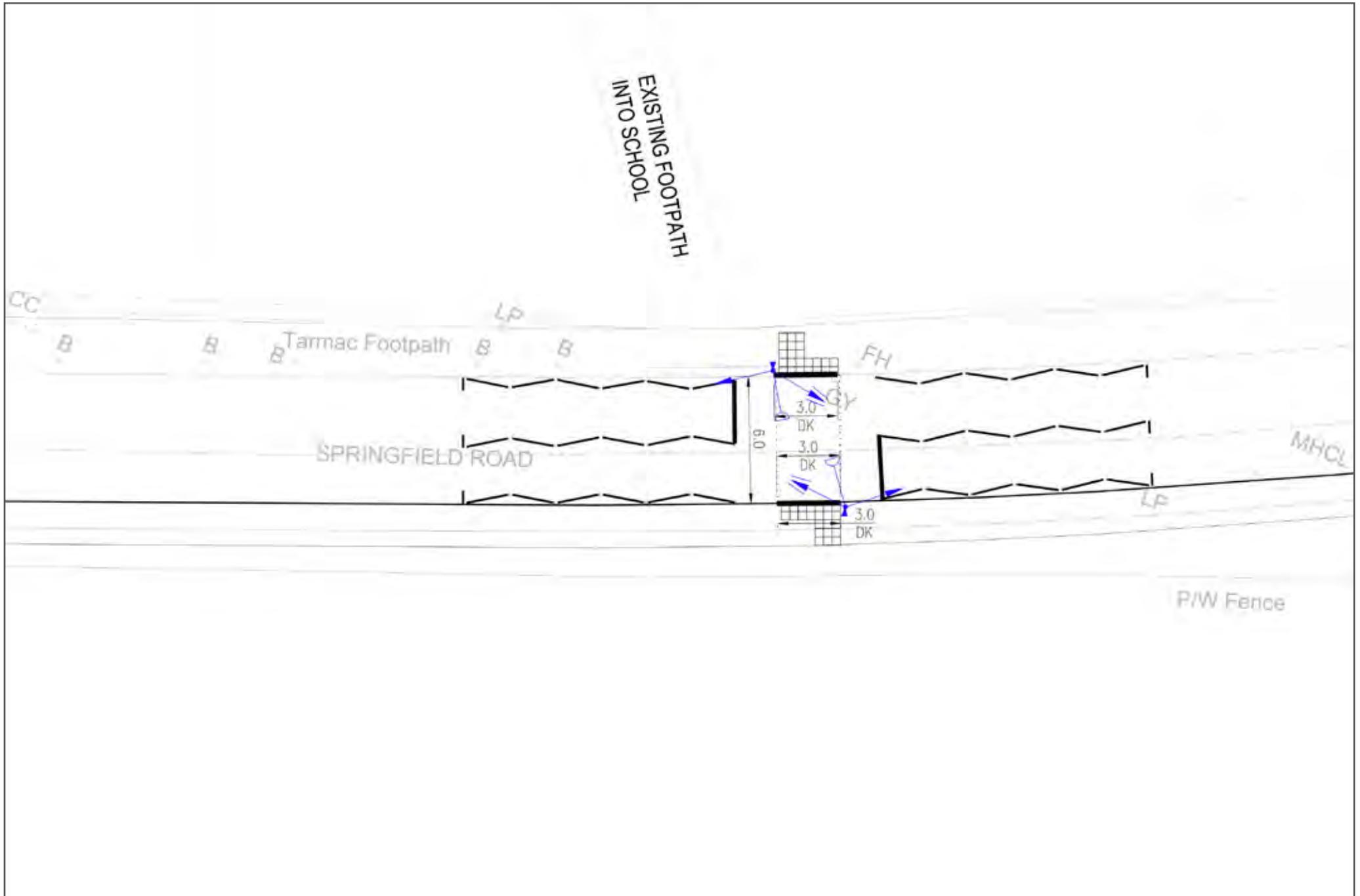
On the north side of this new crossing, offset dropped kerbs will be provided to offer a level connection across Oakbank Drive.



Access Point 13 - Location Plan



Existing Springfield Road / Oakbank Drive



14. Pedestrian crossing on Springfield Road

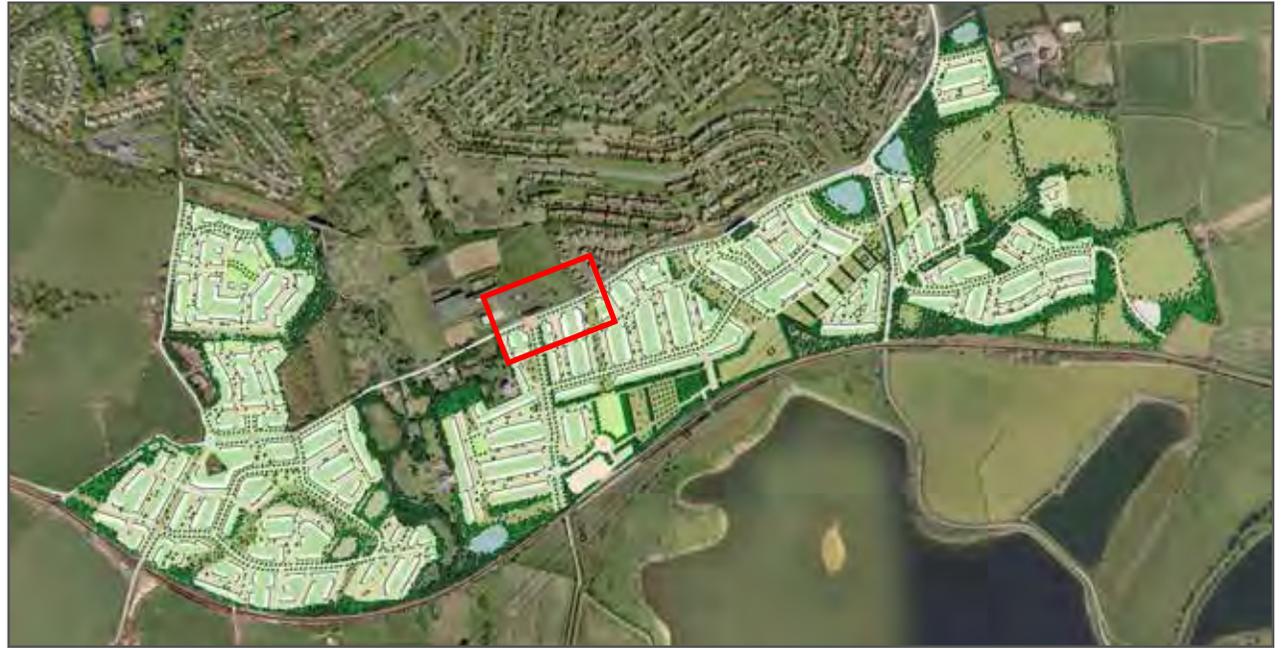
A new signalised pedestrian crossing point will be formed on Springfield Road to facilitate safer crossing to St Luke's High School which is located to the north of Springfield Road.

The proposed arrangement for this crossing point is illustrated on the plan opposite.

This crossing point has been sited on a straight section of Springfield Road to provide good visibility and is adjacent to the pedestrian access gate to the school to optimise pedestrian routing.

It will be formed of a 3m-wide dropped kerb crossing, incorporating push-buttons for pedestrians to activate the signals.

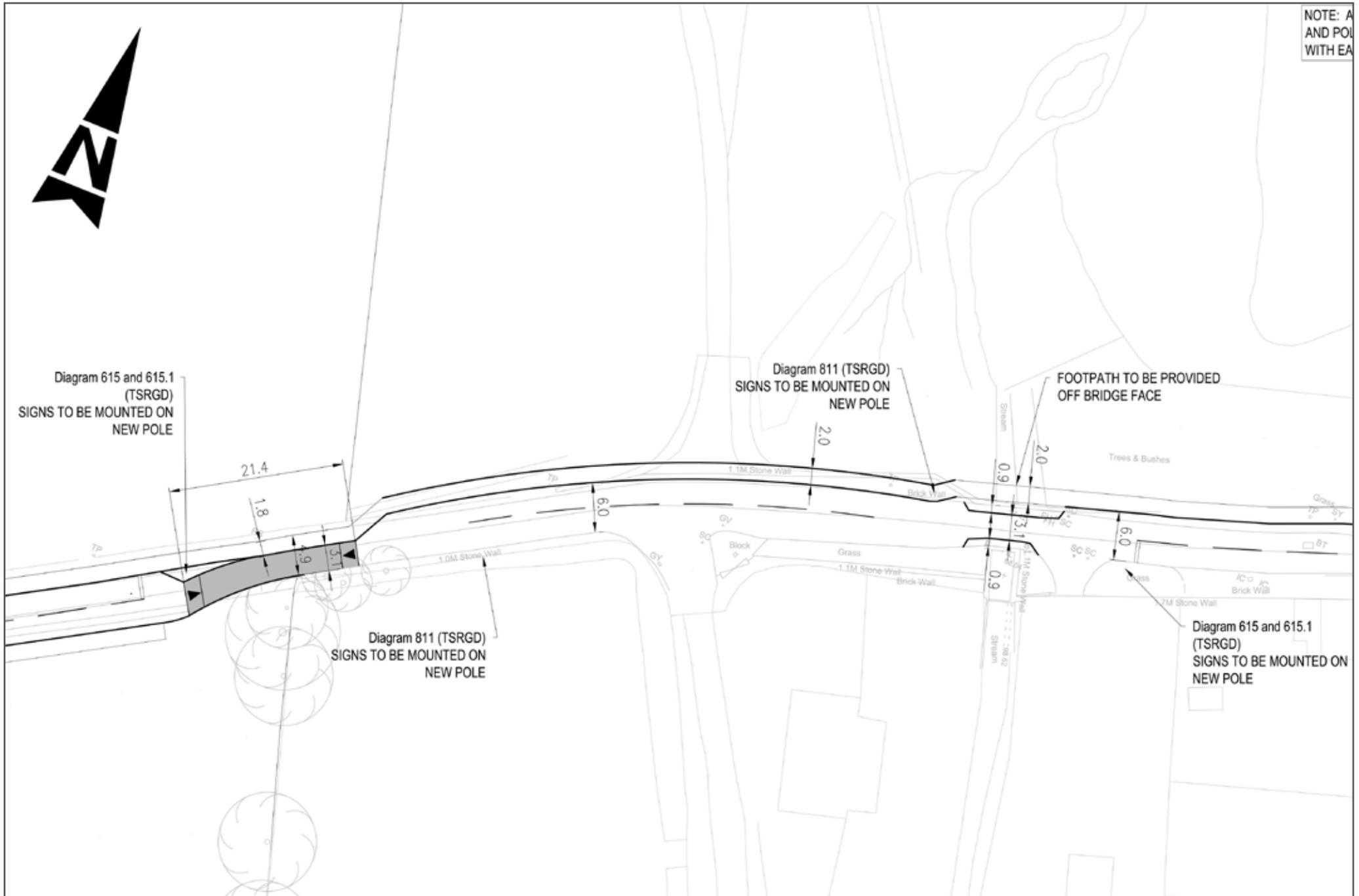
There will also be a new footway along the southern side of Springfield Road, to accompany existing footways along the northern side and maximise east-west movements along Springfield Road



Access Point 14 - Location Plan



Existing Springfield Road at St Luke's



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15. Improvements to Springfield Road

The mid-section of Springfield Road, between the Miller Homes/Wallace Land developments in the west and the ERC land at the centre of Barrhead South, will retain a slightly different character from the rest of the new street.

There are a number of existing private residential properties which take direct access along the southern side of Springfield Road and these access points will be unaffected by the road improvement proposals.

In order to manage vehicle speeds and address the carriageway width constraints along this section of Springfield Road, two road narrowings or pinch-points will be created with formalised priority-working arrangement. The proposed arrangement for this solution is illustrated on the plan opposite.

The western pinch-point will include the formation of a raised table over the one-way section of carriageway to reinforce reduced speeds at this location.

The eastern pinch-point will be located over the existing narrow road bridge which crosses the Aurs Burn at this location.

Between these two road narrowings, the carriageway will be widened to 6m. Appropriate signage will be utilised at both pinch-points to give clarity to the new formalised priority-working.



Access Point 15 - Location Plan



Existing Springfield Road at pinch point



2.4 Delivering the Movement Hierarchy

The indicative movement hierarchy for Barrhead South provides a permeable network of routes connecting to the existing urban form.

Measures that can be incorporated into the design to achieve positive pedestrian friendly streets have been drawn from *Designing Streets*, these include:

- Edge markings that visually narrow the road;
- Buildings in close proximity to the streets;
- Reduced carriageway width;
- Physical features in the carriageway;
- Features associated with potential activity in, or close to, the carriageway, such as pedestrian refuges;
- On street parking
- Landscape measures to reduce forward visibility.

Passive surveillance will provide a safe and welcoming environment. Routes and spaces will be overlooked by adjacent users, providing a pleasant residential environment.

Streets

Four types of route are proposed:

- Primary Streets
- Neighbourhood Streets
- Shared Surface Lanes
- Paths

This street hierarchy aids legibility and helps create a sense of place. Within this street hierarchy, pedestrian / cycle movement is prioritised whilst providing access for a range of modes of transport.

Traffic speeds will be controlled through passive design features:

- Applying urban design principles
- Varying engineering alignments and varying carriageway widths
- Creating gateways with trees, artworks and buildings
- Using low shrubs and hedges delineating carriageway boundaries
- Adjusting surface materials and edge restraints reducing apparent carriageway widths

Streets will be designed to make exceeding the speed limit difficult. The path network provides safe pedestrian and cycle routes linking nodes of activity.

Nodes

A hierarchy of junctions is illustrated on the plan opposite, and comprise:

- Primary Nodes
- Secondary Nodes
- Tertiary Nodes

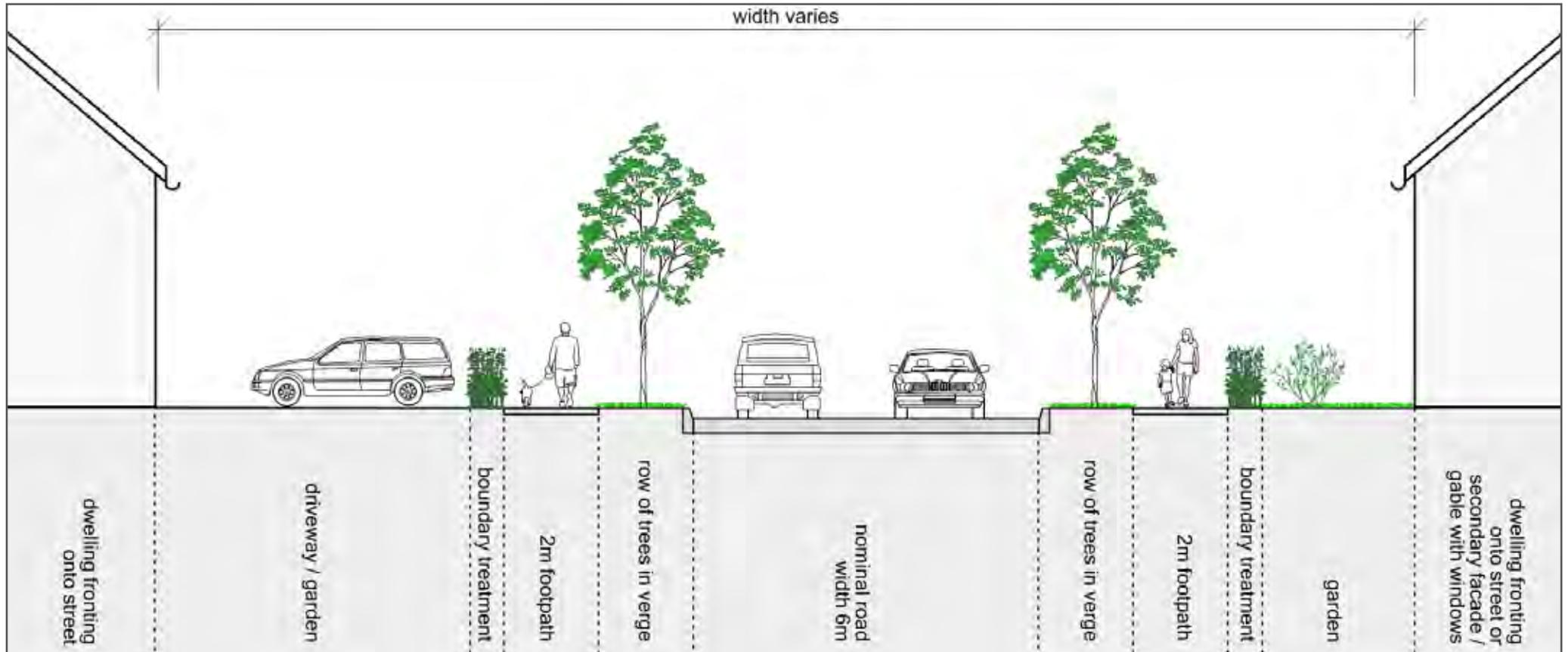
Primary Nodes will act as gateway spaces at key junctions and at the edges of the area. These will form key linking spaces between the new and existing communities.

Secondary Nodes provide a wayfinding function within the street hierarchy. These junctions will have a definable identity, marking points along routes.

Tertiary Nodes form more localised junctions within the network of routes. These will incorporate materials and details from the surrounding streetscape.

Junctions should be designed to reduce speeds. Minimum visibility splays at junctions should be achieved. Landscape treatment, boundaries or buildings close to the carriageway can be used to have a direct traffic calming effect.

The materials and design features to be incorporated are described further in Section 2.12.



Illustrative section through Typical Primary Street

Primary Streets

Both existing road network and new primary streets will be treated in a similar manner with the exception of Aurs Road which provides a more strategic transport role.

The Primary Streets will provide the principle vehicular routes into the site. They will form a transition between the existing road network and Neighbourhood Streets.

The indicative locations of Primary Streets are shown on the adjacent plan. Greater definition of their location will be provided through future detailed design stages.

Primary Streets will be the principle routes for vehicular access and should be capable of accommodating a bus route if required.

The carriageway width will be a minimum of 6.0m with a 100mm PC kerb. 2m wide footpaths will be provided to each side of the carriageway.

Further information on the location of the proposed bus route is contained within section 2.4

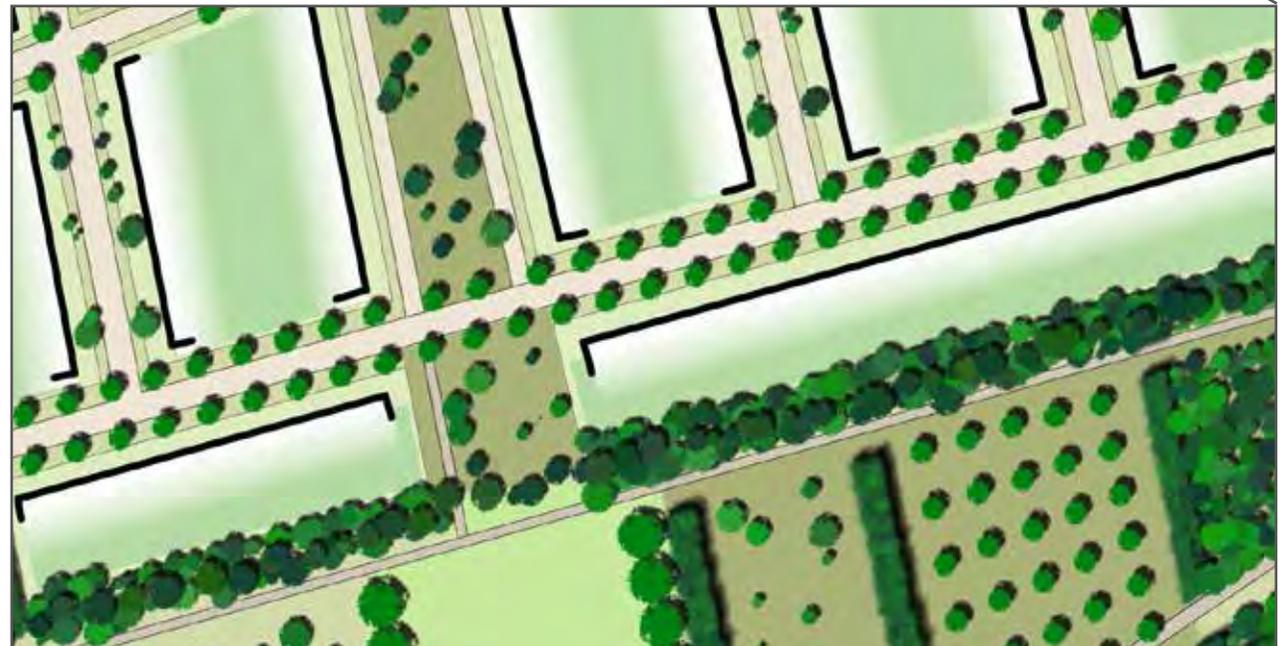
Footpaths and formal tree planting on these streets will create attractive tree-lined routes, improving the amenity for pedestrians and cyclists. Boundary treatments to be walls/dwarf/hedgerows.

Primary Streets will have active frontages with the main entrance facade of properties facing the street. Where a property is gable on to a Primary Street, this should be a house type where this is also the primary frontage and entrance to the property. Building scale, height and form should be used to define these streets.

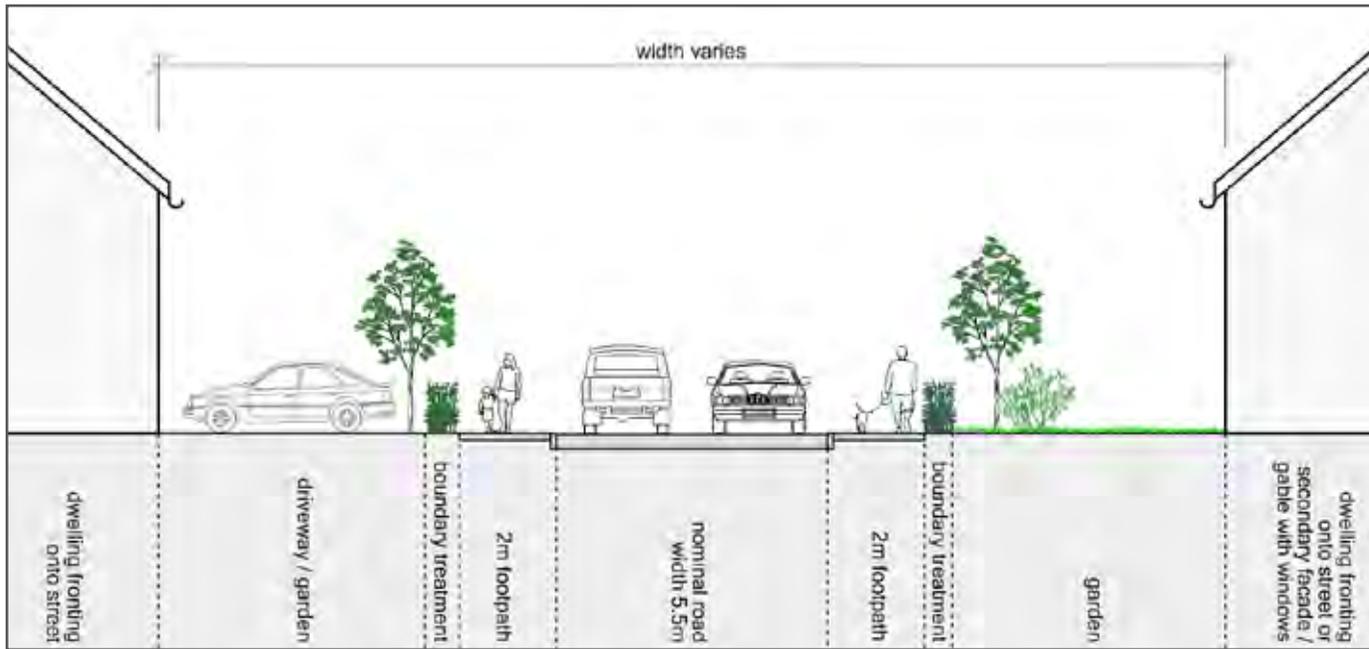
For further detail on the treatment of Springhill Road, Springfield Road, Balgraystone Road and Aurs Road refer to section 2.6.



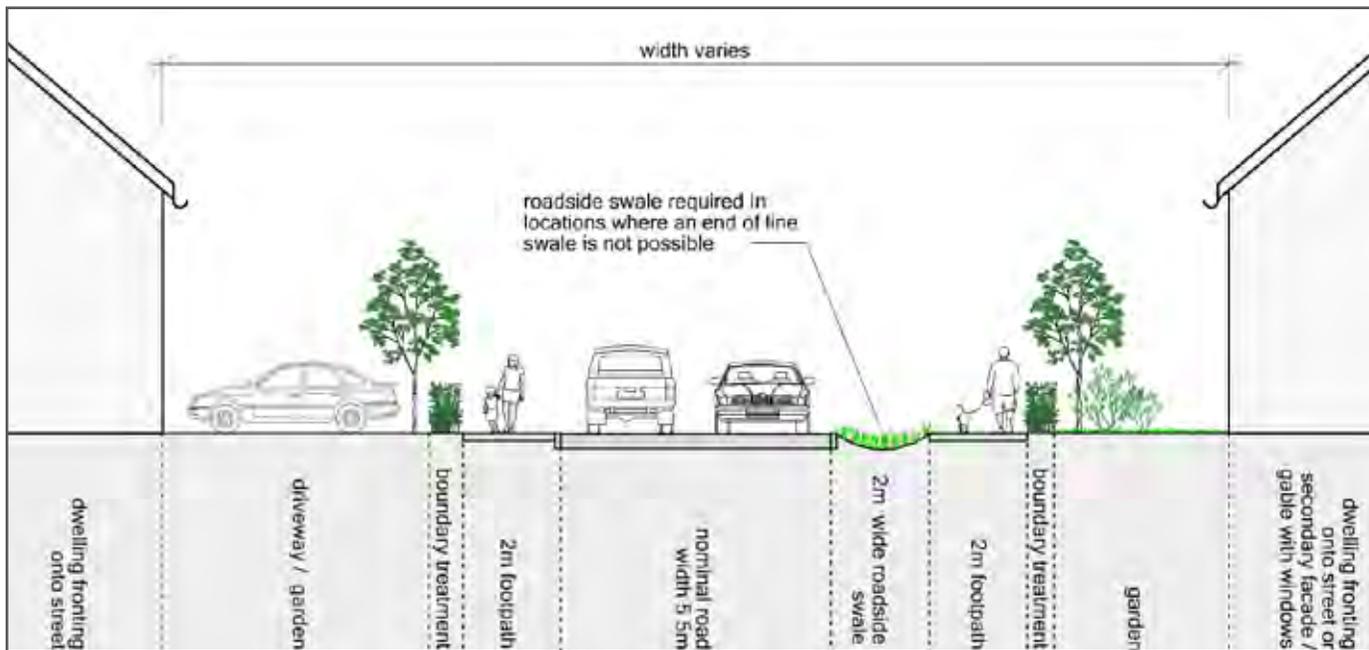
Indicative Location of Primary Streets



Typical Primary Street



Illustrative section through Typical Neighbourhood Street



88 Illustrative section through Typical Neighbourhood Street with Swale

Neighbourhood Streets

Neighbourhood Streets will provide a secondary level of access within the site. They will link the existing road network and new primary streets to the shared surface Lanes.

The indicative locations of Neighbourhood Streets are illustrated on the adjacent plan. The location of this street type will be determined through future detailed design stages.

The carriageway of Neighbourhood Streets will generally be 5.5m wide with a nominal 15mm PC kerb. 2m footpaths to either side and may vary in overall width and detail depending on its immediate context.

It is envisaged that short sections of these streets can also incorporate areas of shared surfaces to minimise traffic speeds.

In some locations, swales may be incorporated if required. These should be located between the carriageway and the footpath on one side only.

Direct vehicle access for vehicles to private homes will be encouraged from Neighbourhood Streets to reduce traffic speeds.

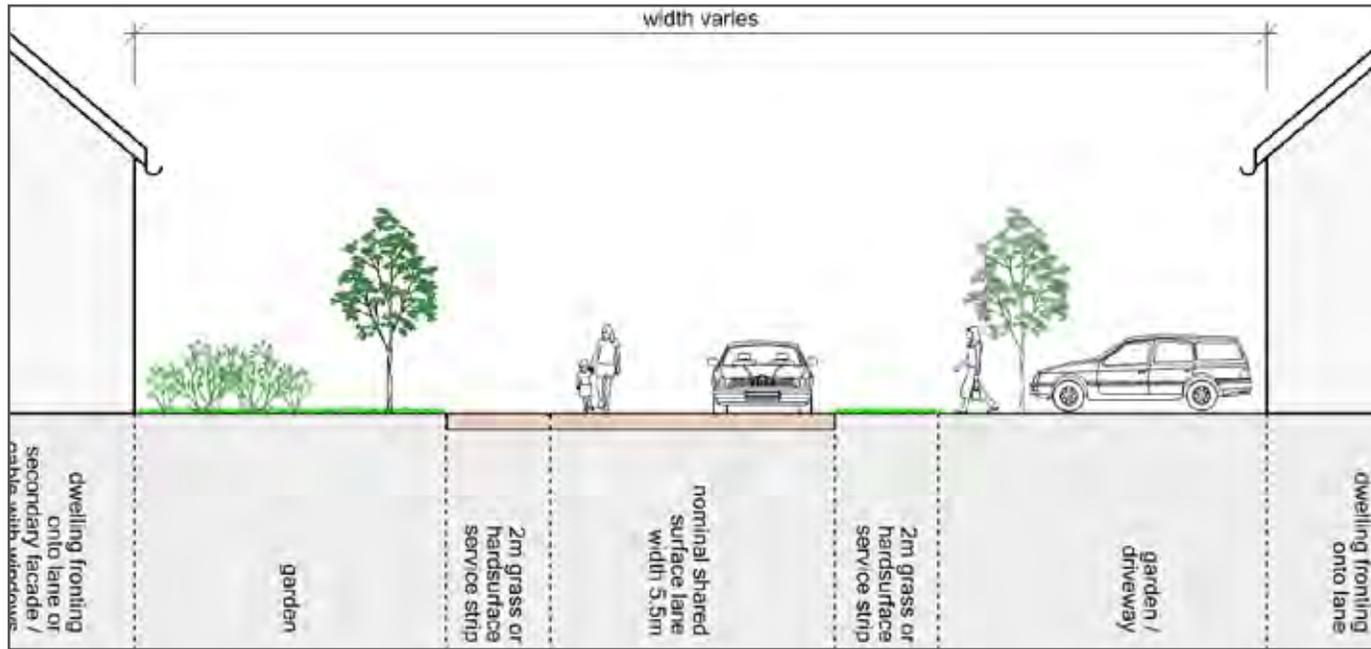
Boundary treatments are to be incorporated between front gardens and the footpath to provide clear delineation between public and private space.



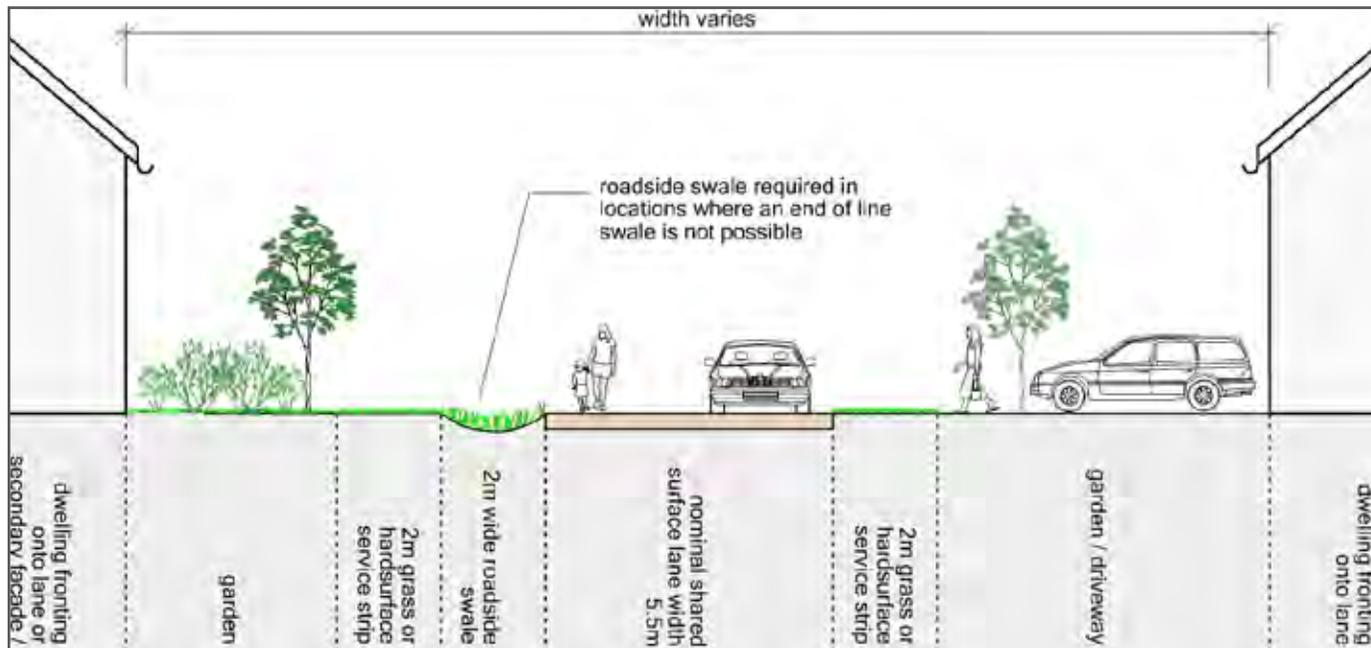
Indicative Location of Neighbourhood Streets



Typical Neighbourhood Street



Illustrative section through typical Lane



90 Illustrative section through Typical Lane with Swale

Lanes

Lanes will provide a shared surface prioritising pedestrians over vehicles. Lanes will be designed to reduce traffic speeds through the positioning of buildings and landscaping.

These form a series of informal shared surface routes, creating an attractive residential environment.

The indicative location of Lanes are illustrated on the plan opposite. The locations of this street type will be determined at detailed design stage.

The carriageway width will be nominally 5.5m, reducing down to 3.7m for short sections. A 2m wide service strip will be incorporated along both sides of the carriageway.

In some locations, swales may be required. These will be incorporated along one side of the carriageway.

Direct vehicle access for vehicles to private homes will be encouraged from lanes to reduce traffic speeds.

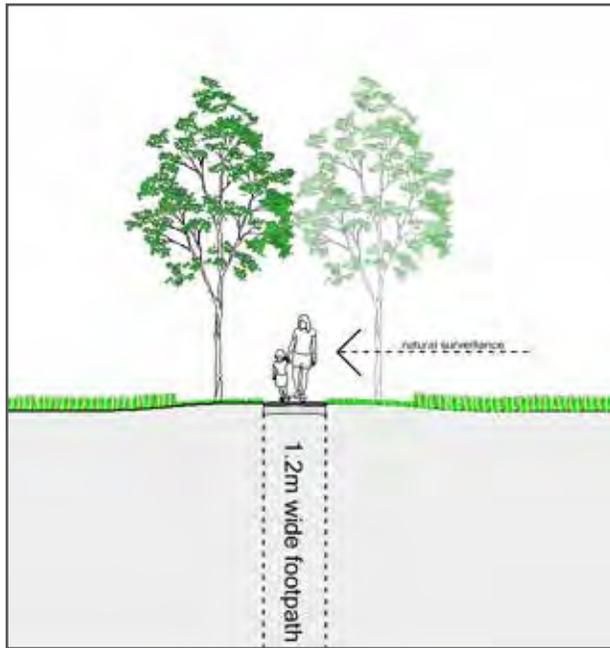
Wherever possible, the forward movement of service vehicles should be provided.



Indicative Location of Lanes

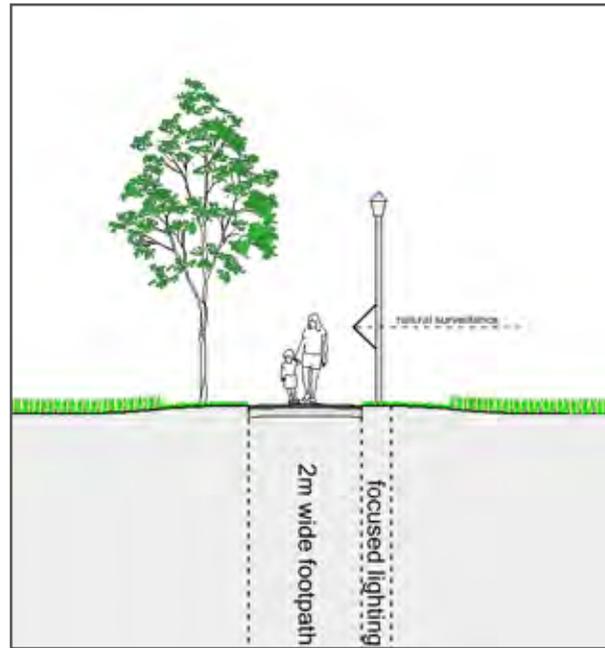


Typical Lane



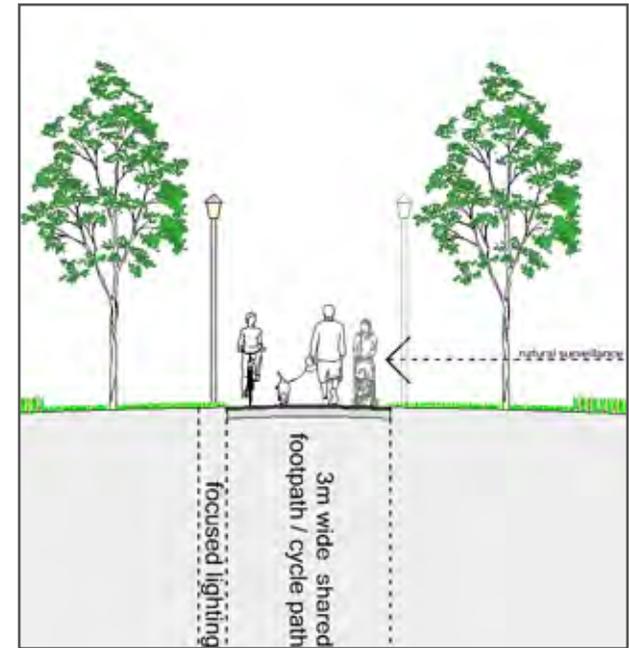
Illustrative section through typical 1.2m wide footpath

A minimum 1.2m wide unlit footpath will form minor, less direct routes through the greenspace network.



Illustrative section through typical 2.0m wide footpath

A minimum 2m wide lit footpath will form key routes through the proposed greenspace network. Lighting will be provided only where appropriate.



Illustrative section through typical shared footpath / cycle path

A minimum 3m wide lit shared footpath and cycle path will be located along the route of existing Core Paths and the connections to D2D. Lighting will be provided only where appropriate.

Paths

Paths will provide connections to all areas of the site including residential areas, the greenspace network and to the surrounding countryside.

Paths are described in two categories:

- Footpaths alongside streets (including shared surface areas), and
- Remote Paths

The indicative location of both Paths are illustrated on the adjacent plans. The location of these Paths will be determined at detail design stage.

The provision of Paths throughout the site will provide permeability for pedestrians and cyclists.

Paths are to be convenient, direct and provide pedestrians with a choice of routes with maximum gradients ensuring accessibility for all.

Footpaths alongside streets have been described in the sections above.

Three types of Remote Path are proposed. These path types are illustrated opposite. The choice of Remote Path depends upon their location within the hierarchy of routes.

Wherever possible, homes should overlook these routes to provide passive surveillance.

Rear gardens adjacent to Paths will not be acceptable.

The existing Core Paths through the site are to be retained although some deviations would be permissible. Connectivity through Barrhead South to the Country Park will be improved.



Indicative Location of Footpaths alongside streets



Indicative location of Remote Paths



Primary Node

Primary Nodes are located at the key access points and junctions within Barrhead South and form gateways to the new neighbourhoods.

Primary Nodes offer memorable points of entry and exit. They have an important place making and civic functions and contribute to safe access and mobility.

They have also been located within the site at the intersection points of the Primary Streets.

The indicative location of Primary Nodes are illustrated on the adjacent plans. The location of these nodes will be determined at detail design stage.

Vehicular and pedestrian surfaces will be similar in level with a nominal 15mm kerb and 2m footpaths provided to the edges of these spaces.

These nodal points will slow vehicle speeds entering the development and provide junctions between Primary Streets and act as transition spaces to Neighbourhood Streets.

The overall form and detail will vary depending on their immediate context. *Designing Streets* details a number of measures that can be incorporated into their design to achieve traffic calmed streets.

At Barrhead South, design details could include;

- Edge markings that visually narrow the road;
- Buildings in close proximity to the streets;
- Reduced carriageway width at the junction with Neighbourhood Streets;
- Landscaping to road verges and appropriate boundary treatments including hedges, walls and changes in surface materials.
- Linked building forms of larger massing.

These will be designed to deliver safe, pleasant, and distinctive spaces.



Indicative Location of Primary Nodes



Typical Primary Node



Secondary Node

Secondary Nodes are located within residential areas across the site, providing a sense of place and definition. They will define junctions on the Primary Streets and act as transitions to shared surface Lanes.

Where Secondary Nodes are located adjacent to a public open space or equipped play area, they will create a focus for the surrounding neighbourhood.

Secondary Nodes will be accessible to both pedestrians and vehicles forming shared surface spaces in the main.

The minimal use of street signage, road markings and other traffic management features aims to maximise priority of pedestrians over motor vehicles, encouraging drivers to travel more slowly.

Use of tree planting within Secondary Nodes will soften these spaces, encouraging the definition of the uniqueness of each space and the development of a sense of place.

Street trees at Secondary Nodes will provide a visual link between the Primary Streets and Lanes.



Indicative Location of Secondary Nodes



Typical Secondary Node



Tertiary Node

Tertiary Nodes will form the majority of junctions within Barrhead South. They will be located at the minor access points and junctions within Barrhead South.

Tertiary Nodes form more localised junctions at the intersection of Lanes, incorporating materials and details from the surrounding streetscape. Level surfaces will be utilised to establish Nodes.

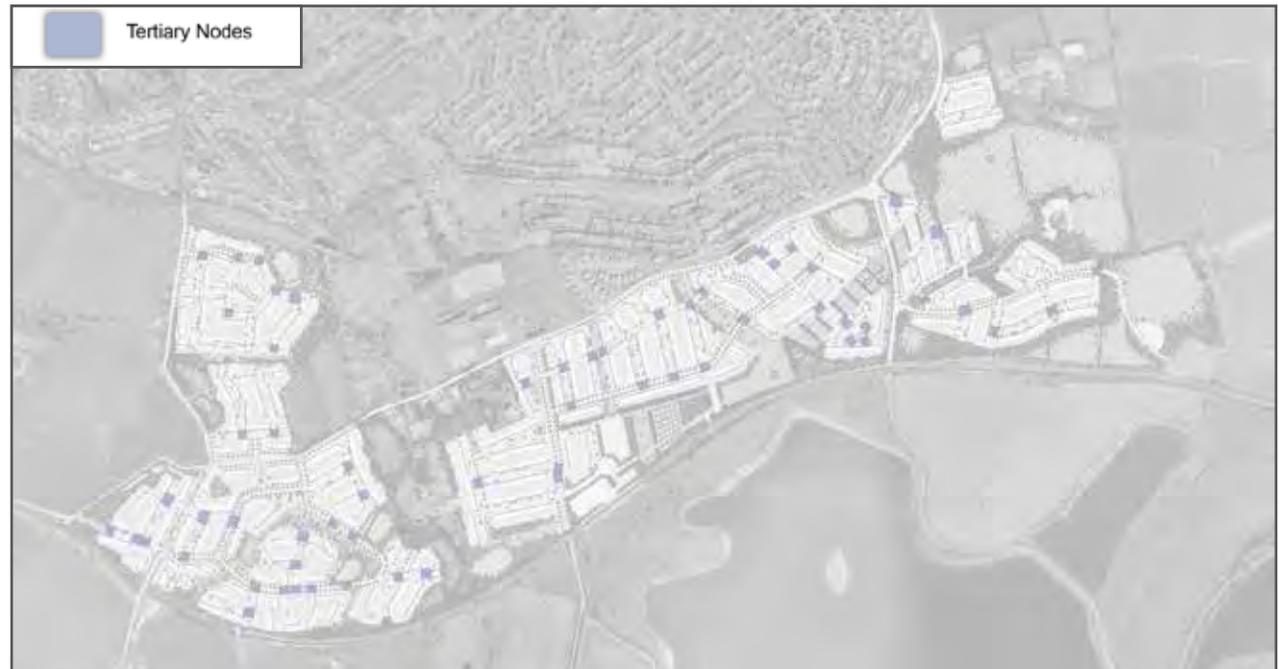
A Tertiary Node does not require the same level of definition as that of other Nodes. The place making qualities of each Node (junction) should be considered individually.

This can be achieved through measures such as landscape treatment, introducing boundaries or the close proximity of buildings to junctions.

The indicative location of Tertiary Nodes are illustrated on the adjacent plan. The location of these Nodes will be determined at detail design stage.

These Nodes will be shared surfaces, considering the needs of the pedestrian and contributing to reducing vehicle speeds and assist navigation and permeability through the site.

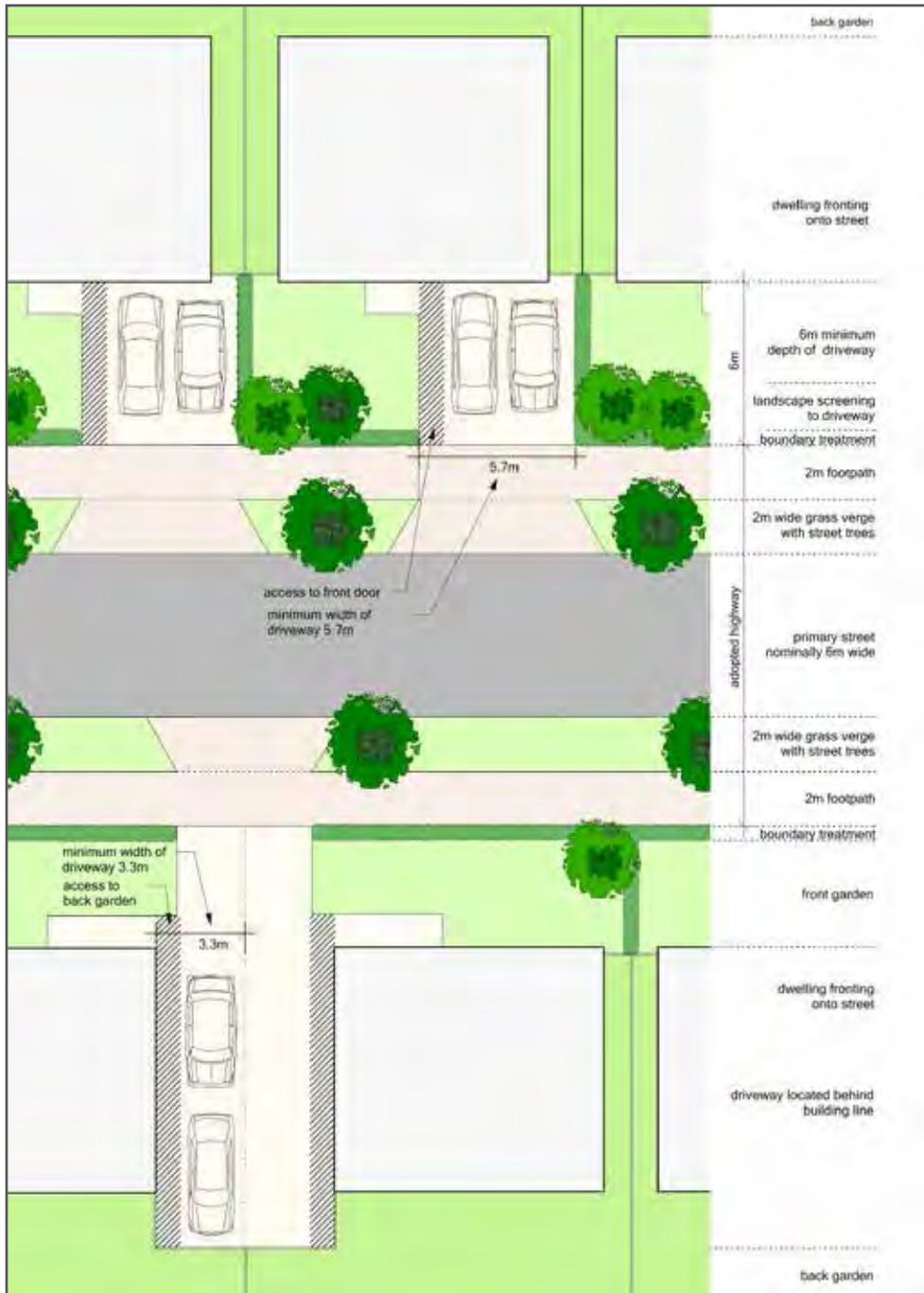
These will be designed to deliver safe, pleasant, and distinctive spaces.



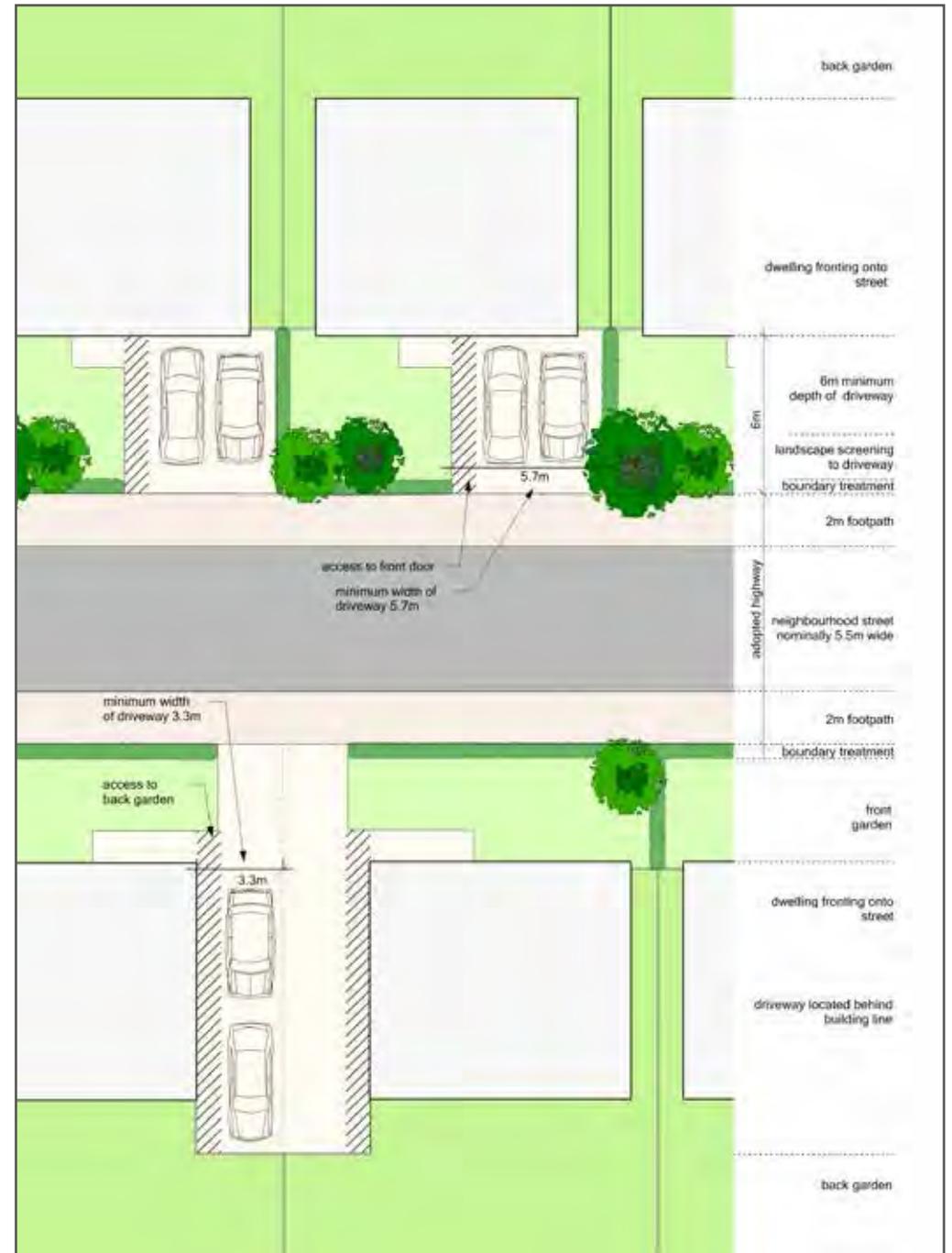
Indicative Location of Secondary Nodes



Typical Tertiary Node



100 Illustrative Primary Street - On Plot Parking



Illustrative Neighbourhood Street - On Plot Parking

Car Parking

Car parking should be considered at the outset as an integral part of the design.

Car parking is to be provided in a two forms:

- On-street, and
- Off-street, including within the curtilage of the dwelling or in rear courtyards.

This is in accordance with *Designing Streets* and provides flexibility and minimises visual impact.

In the preparation of detailed design proposals, the strategy for car parking should be discussed with the Council at an early stage.

On-street Parking

On-street parking offers a number of advantages. It can provide parking for residents and visitors efficiently. It also adds activity to the street and is generally overlooked.

Designing Streets advocates a more informal approach to on street parking arrangements, such as the subtle widening of the width of a street to incorporate parking or by using end on or angled parking within a square.

On-street parking can be visually dominant and can impede the social function of shared spaces if it is excessively dominant.

Therefore, on-street parking should not dominate the public realm. This can be achieved through breaking up the visual impact of on-street car parking by limiting it to smaller groups of up to five spaces.

Tree and shrub planting adjacent to areas of on street parking should be incorporated to soften the visual effects of car parking and discourage inappropriate parking.

Any areas of street planting proposed should be durable and easily maintained. Its function an element of public realm should be clearly articulated.

An appropriate level of allocated and unallocated car parking is to be provided in accordance with the Council's guidance for residential developments.

Off-street Parking

Off-street parking within the curtilage of dwellings should be secondary to pedestrian access and movement.

The appropriate form of parking arrangement should be agreed with the Council in advance of detail design proposals being prepared.

Parking can be located behind the line of the primary facade of the plot, away from the public realm frontage.

If parking is to be provided to the front of plots, it should be designed so that it does not dominate the streetscape.

Rear parking courts may be appropriate in some locations and these should be lit wherever possible.

Designing Streets states that rear parking courts should be limited to no more than 10 parking spaces or courtyard layout should be broken up.

Consideration should be given to natural surveillance, with adjacent dwellings overlooking or accessed from these spaces.

All boundaries in shared parking areas should be durable and robust and should be maintained under common factoring arrangements.

Services Located in Primary Streets and Neighbourhood Streets

All mains and services serving more than one property should be located in land which is both publicly maintained and readily accessible.

Primary Streets and Neighbourhood Streets will provide routes for underground services.

Services in the carriageway

Foul and surface water sewers will normally be placed under the carriageway. The depth, clearance and relative position of sewers should be considered and discussed with Scottish Water at an early stage in the design process. Efforts should be made to minimise the need for future road closures during sewer inspections or maintenance.

This early consultation with Scottish Water regarding their provision, in accordance with the Sewerage (Scotland) Act 1968 should include surface water sewers for the drainage of roofs and paved areas within the curtilage of premises, and the foul water drainage system.

All services other than sewers, and occasionally water mains, should be grouped in service strips located within the limits of the footpaths, verges and adoptable footpaths with a minimum of service connections across the carriageway.

Services in Service Strips

The width of a service strip will depend on the number and type of premises served.

For up to two hundred dwellings, all domestic services (gas, electricity, lighting, water and telephones) will normally be accommodated in a 2m wide reservation.

Service Strip Remote from Carriageway

Where service strips are not located adjacent to carriageways, their width must allow for access by mechanical plant and/or vehicles for maintenance or repair.

In all cases, there must be a permanent and continuous demarcation of the boundary between the service strip and any adjacent private property [e.g. by a fence, wall or concrete edge kerbing).

Special arrangements will require to be made where a footpath is less than 2m wide and local widening in excess of 2m may be necessary to accommodate access chambers or where roads have tight bends.

Services Crossing under Carriageway

Where service strips or branch connections cross the carriageway, cabled services should be individually ducted at increased depths in accordance with the requirements of the Statutory Undertakers as directed by the Council.

Crossings of narrow residential roads should be located at passing places to minimise disruption to traffic flow during maintenance/repair works.

Street furniture and Lighting Columns

All street furniture should normally be located at the rear of footpaths or recessed behind them and no furniture or structures should obstruct any road junction sight line.

No services other than road lighting cables should be located within 0.5m of the rear of the footpath to allow for lighting columns and joint pillars or other street furniture.

Maintenance and Emergency Access

Ready access must be available at all times to all parts of service routes for maintenance and in cases of emergency.

Lorry access will be needed to some places such as manholes, electricity sub-stations, telecom junction boxes and gas governor house installations; and the Statutory Undertakers requirements for such facilities should be ascertained at an early stage.

Service chamber covers should be positioned so as to minimise disruptions to vehicle and pedestrian access when service maintenance is being carried out, whilst ensuring that access to services will not itself be obstructed by parked vehicles.

Special consideration in this respect will be necessary where services run beneath or adjacent to single lane carriageways and parking bays.

Hydrants

The position of all hydrants should be agreed with the Commander of Strathclyde Fire and Rescue and Scottish Water.

Hydrants should not be located where vehicles are likely to park.

Consultation with Statutory Undertakers.

Consultation with each Statutory Undertaker is required at the earliest possible stage.

In any development, the depth, clearance and relative position of each service will require to be decided by the Statutory Undertakers and the method of laying cables and pipes left to their discretion.

Services in Shared Surfaces Lanes

In shared surface layouts, all services should be located in land eligible for adoption by East Renfrewshire Council.

Shared Surface roads should generally have a 2m contiguous service strip which is delineated by means of a flush kerb.

Where a service strip must underlie a Shared Surface road, under no circumstances should any service chamber cover be located within the 3.5m wide running width of the shared surface unless an alternative vehicular access is provided.

Service chamber covers should preferably be located in the service strip but may also be located within parking areas or widened areas within the total road width, by agreement with the Statutory Undertakers.

In parking courts, a service strip should be maintained although this will be in private control and therefore a wayleave agreement will be required.

Street furniture and Lighting Columns

All street furniture should normally be located at the rear of footpaths or recessed behind them.

No furniture or structures should obstruct any road junction sight line.

No services other than road lighting cables should be located within 0.5m of the rear of the footpath to allow for lighting columns and joint pillars or other street furniture.

Service Strip Remote from Carriageway

Where service strips are not located adjacent to carriageways, their width must allow for access by mechanical plant and/or vehicles for maintenance or repair.

In all cases, there must be a permanent and continuous demarcation of the boundary between the service strip and any adjacent private property [e.g. by a fence, wall or concrete edge kerbing].

Special arrangements will require to be made where a footpath is less than 2m wide and local widening in excess of 2m may be necessary to accommodate access chambers or where roads have tight bends.

Maintenance and Emergency Access

Ready access must be available at all times to all parts of service routes for maintenance and in cases of emergency.

Lorry access will be needed to some places such as manholes, electricity sub-stations, telecom junction boxes and gas governor house installations; and the Statutory Undertakers requirements for such facilities should be ascertained at an early stage.

They should be positioned so as to minimise disruptions to vehicle and pedestrian access when service maintenance is being carried out, whilst ensuring that access to services will not itself be obstructed by parked vehicles.

Special consideration in this respect will be necessary where services run beneath or adjacent to single lane carriageways and parking bays.

Hydrants

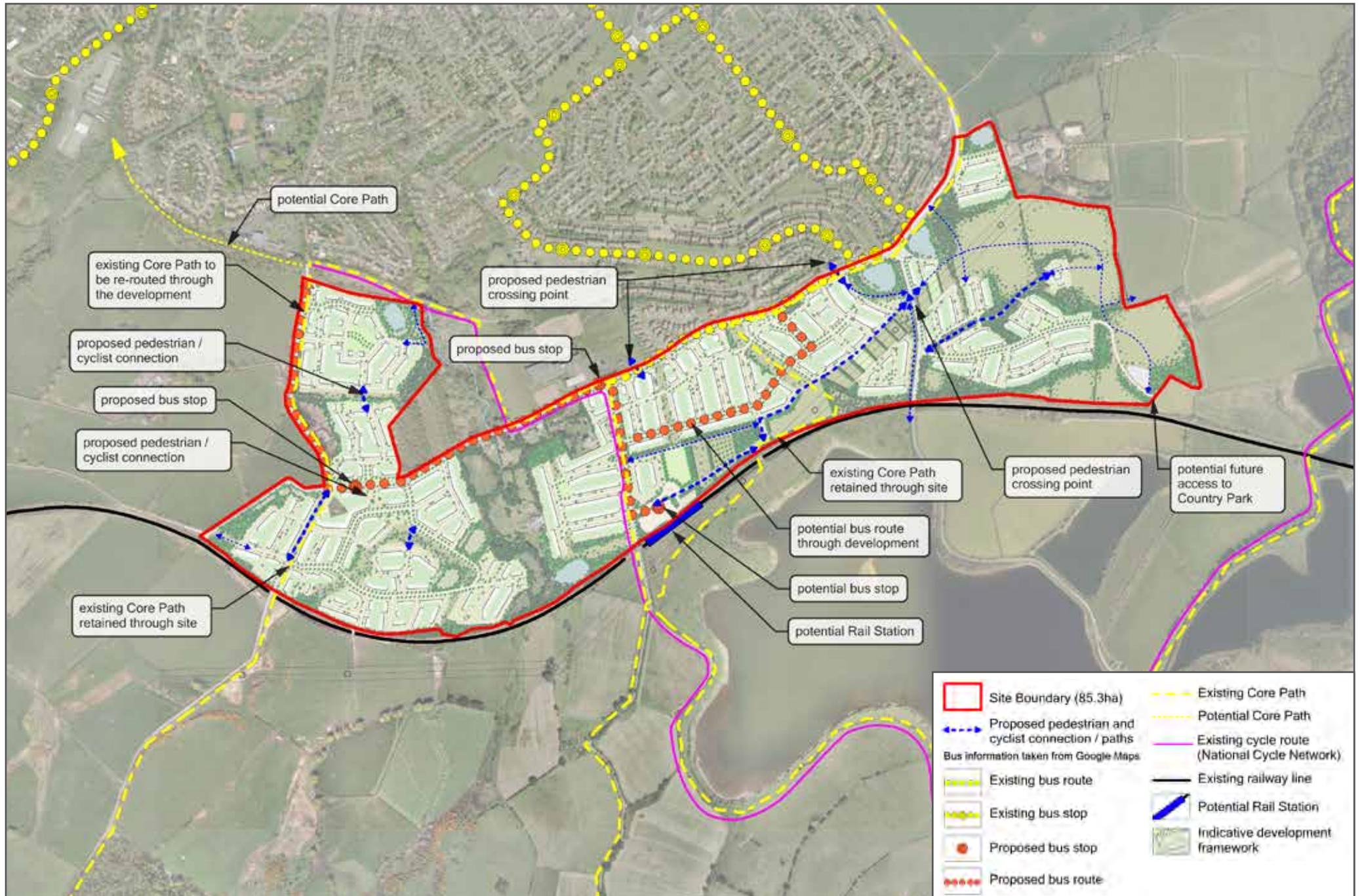
The position of all hydrants should be agreed with the Commander of Strathclyde Fire and Rescue and Scottish Water.

Hydrants should not be located where vehicles are likely to park.

Services Crossing under Carriageway

Where service strips or branch connections cross the carriageway, cabled services should be individually ducted at increased depths in accordance with the requirements of the Statutory Undertakers as directed by the Council.

Crossings of narrow, shared surface Lanes should be located at passing places to minimise disruption to traffic flow during maintenance/repair works.



2.5 Sustainable Transport within this Movement Hierarchy

The hierarchy of Primary Streets, Neighbourhood Streets, Lanes and Paths will provide easy access for a range of transport modes.

The proposed street hierarchy will aid legibility and help create a sense of place and facilitate the movement of all transport modes across the site.

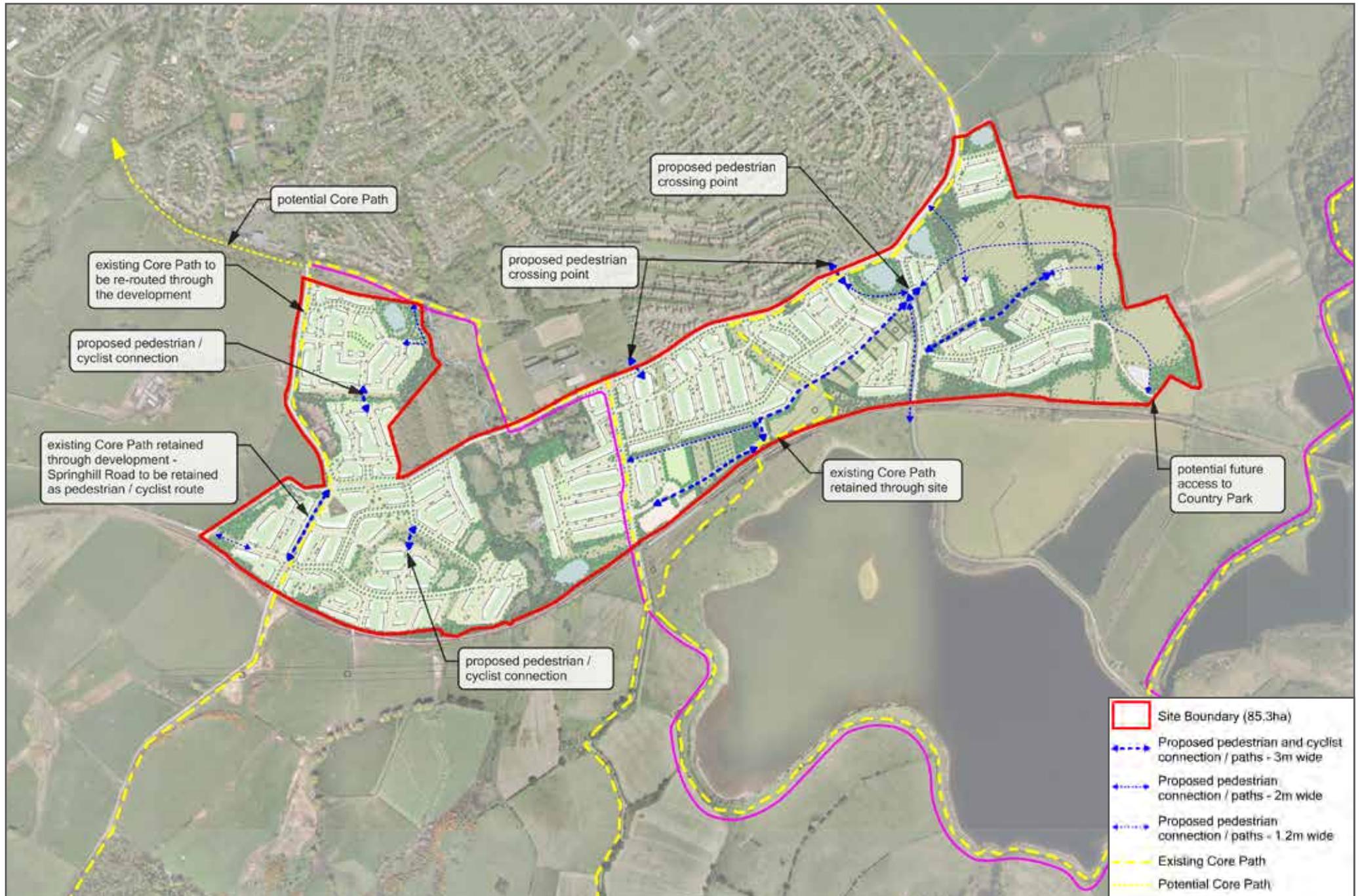
There are three modes of sustainable transport included within the proposals for Barrhead:

- Pedestrian / Cyclists
- Public Transport
- Rail Station

The Primary Streets form the principle routes for vehicular traffic through the site. These Streets will be capable of accommodating bus routes ensuring that the entire site is within 400m of a bus stop.

Within residential areas, all Neighbourhood Streets, Lanes and Paths will be designed to promote pedestrian and cyclists over vehicular movement, encouraging inclusivity, sustainability and adaptability of the development.

Remote footpaths will be designed to encourage residents to use them for cycling / jogging / walking / recreational activities.



Pedestrian / Cyclists

The urban form will encourage and facilitate pedestrian and cycle movement through the development.

The development's movement hierarchy will be designed in accordance with *Designing Streets*. These proposals encourage the prioritisation of pedestrian movement.

The master planning principles have embedded a permeable path network which connects into the existing urban form and provide:

- Safe streets for children
- Safe routes to schools
- Pleasant walking and cycling routes
- Low traffic speeds
- High amenity

Pedestrian access to Barrhead South is relatively well catered through the provision of a number of existing footpaths and there is an opportunity to enhance the existing path network.

These opportunities for improvements include:

- Provision of a footpath / cycle connection, across the watercourse on Miller Homes site, to enhance connectivity and cohesion. This should be sufficiently wide to enable access by emergency vehicles if required.
- Provision of a footpath / cycle connection, to the north east corner of the Miller Homes site,
- Provision of a pedestrian link to the north east boundary of Wallace Land's site to link into an existing footpath/ cycle path providing access onwards to Barrhead town centre and St Luke's High School.
- Extension of the current footpath on the north side of Springfield Road to the junction with Springhill Road.
- Provision of two pedestrian / cycle crossing points at junction locations on Springfield Road that will enable access into the existing Barrhead urban area.
- Provision of a signalised pedestrian and cycle crossing across Springfield Road.
- Provision of a signalised pedestrian and cycle crossing on Aurs Road.
- Promotion of a pedestrian and cycle route extending the core path to the north of the Miller Homes site.
- Improving connectivity through Barrhead South to the County Park.
- Easily accessible and desirable routes to the Rail Station.

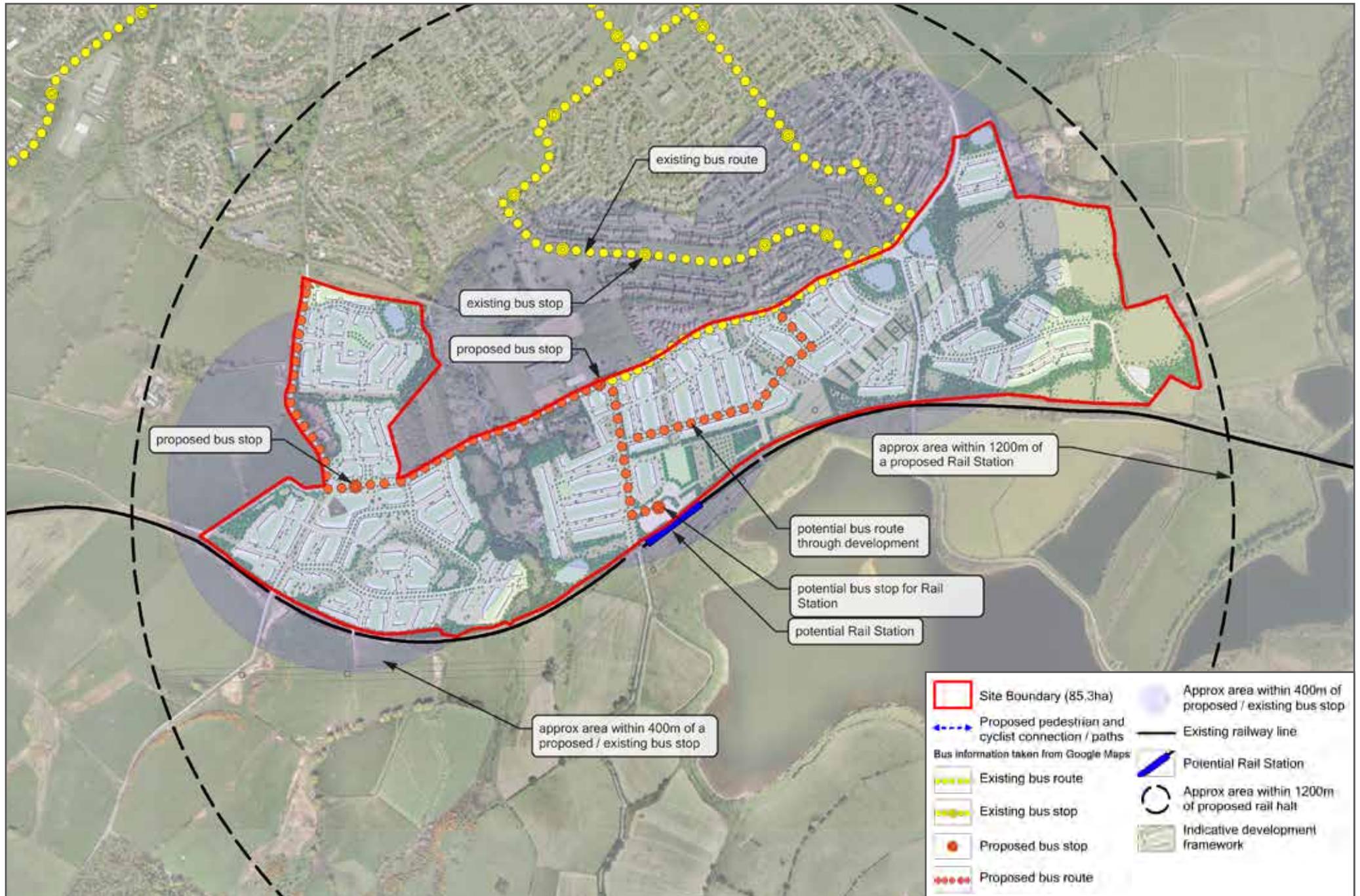
The routes of proposed paths can deliver appropriate gradients which are compliant with DDA requirements.

Cycle storage in the form of lockers will be provided at the Rail Station.

Overall the path network and routes proposed will integrate the existing urban area with Barrhead South and the Country Park.

Signage for all routes will need to be consistent with the *Barrhead Smarter Choices Strategy*.

Routes to the wider countryside and Country Park should be sufficiently wide to enable access by emergency vehicles if required.



Public Transport

To support travel by sustainable travel modes, an appropriate route for bus services will be provided through the site with appropriate locations for bus stops identified in the following locations:

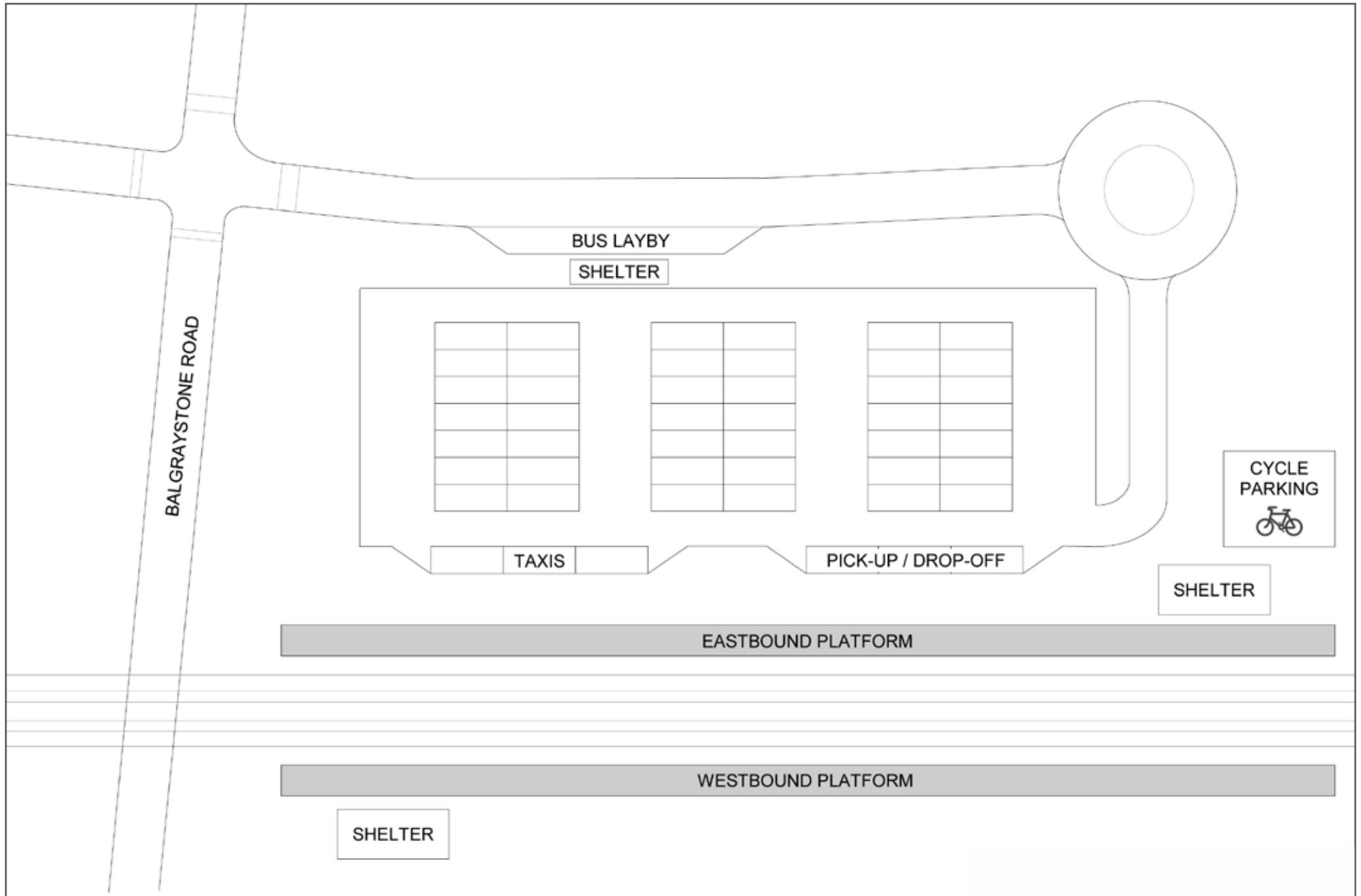
- A bus stop including shelter and flag to be located on both sides of Springfield Road, near to the Balgraystone Road / Springfield Road junction; and
- A bus stop including shelter and flag to be located on both sides of Springfield Road, located between the proposed vehicular access to the northwest portion of the site and the junction of Springfield Road / Springhill Road.

In addition, a bus stop will be located at the Rail Station. Facilities in this location will allow busses to terminate at this location, integrating with the local rail timetable.

The provision of these additional bus stops enables the majority of the development site to be within the recommended 400m walking catchment of a bus stop and therefore in compliance with current guidelines.



Bus Stop



Rail Station

The provision of a potential new Rail Station may form part of the sustainable transport strategy for the site and is a key priority for the Council.

An appropriate site has been identified and safeguarded within this Development Framework.

The internal road layout to the Rail Station has been designed to enable access by buses to this transport potential hub.

The detail design of the Rail Station would be required to incorporate the following;

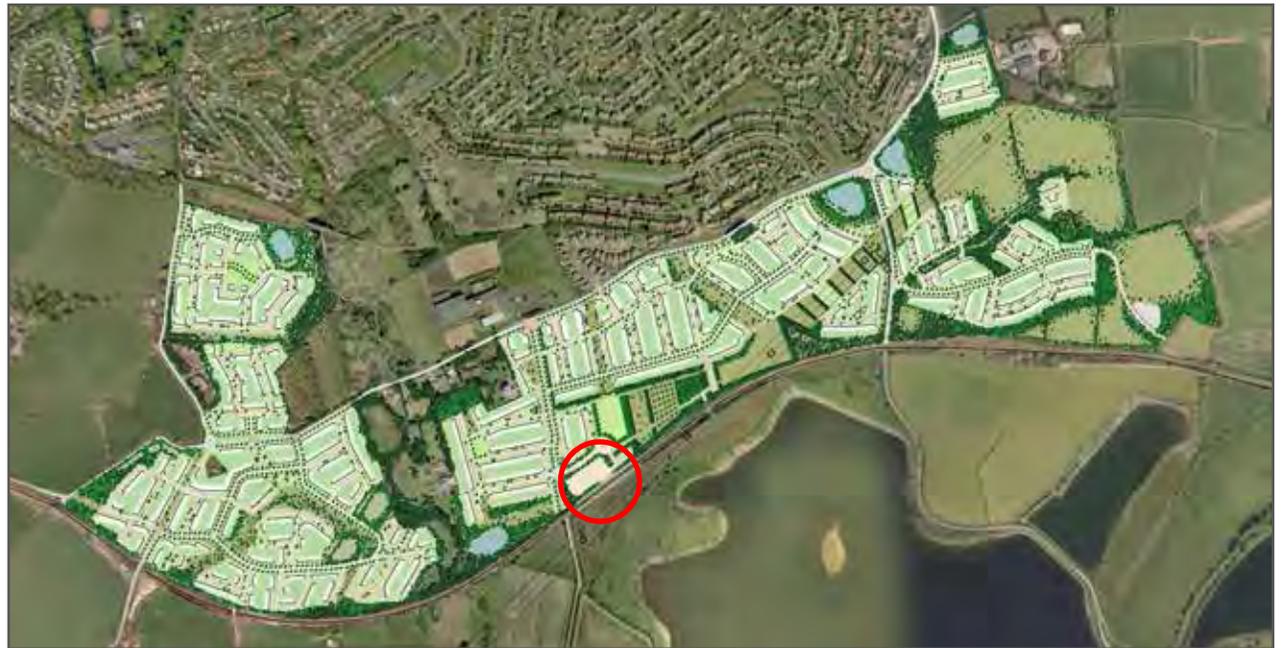
- Provision of safe pedestrian access to and from the Rail Station with measures designed in place to reduce conflict with vehicular users, and
- A legible wayfinding system which links the Rail Station into the wider development.

The Rail Station may be a twin platform access through the existing underbridge, with each platform having its own shelter.

The Rail Station could have parking for 80 spaces together with drop off facilities.

A taxi rank and cycle parking facilities including lockers would be provided.

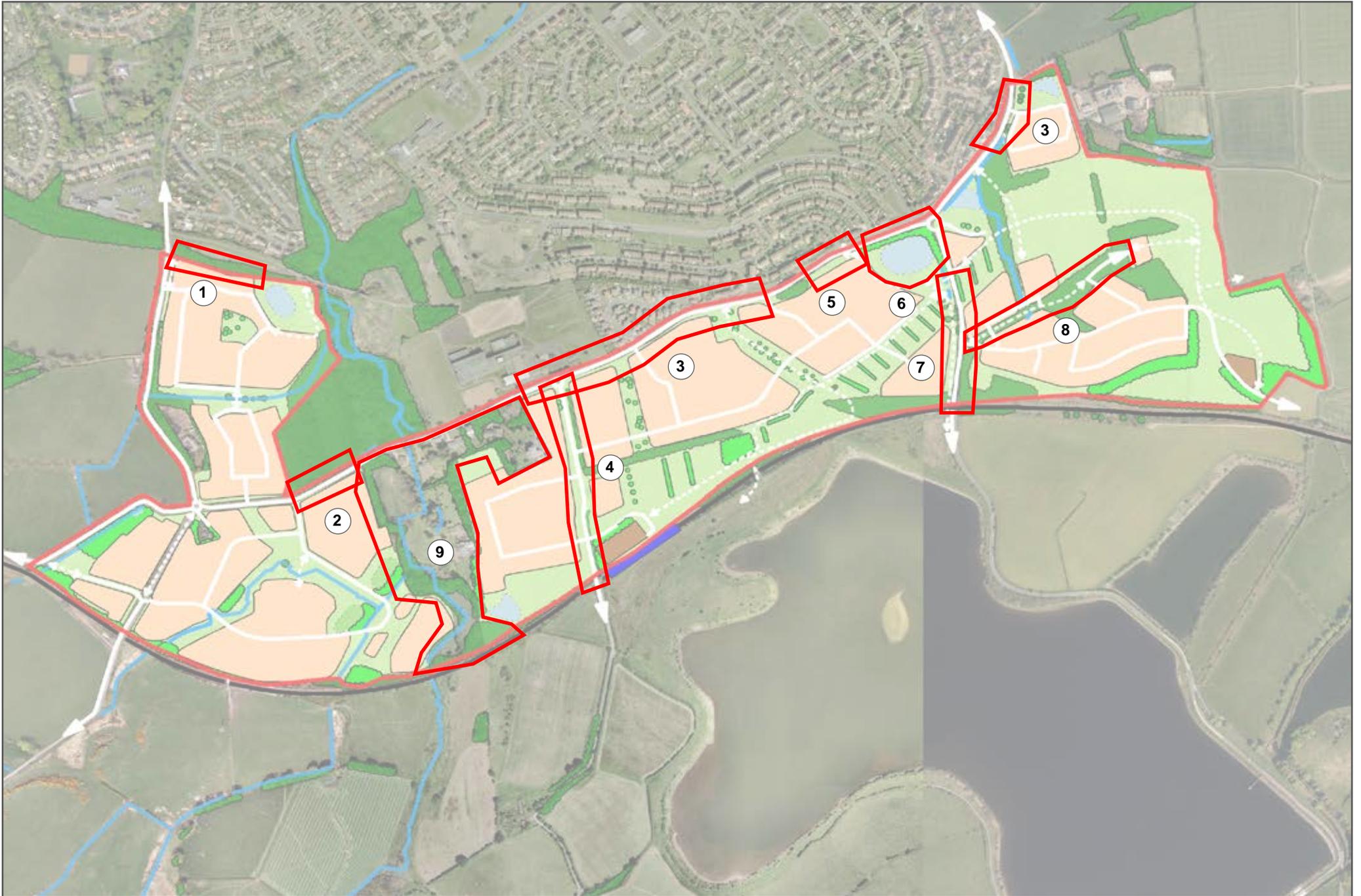
Access by bus would be via a turning circle and a bus layby acting as a terminus is provided.



Indicative Location of Rail Station



Typical Rail Station



2.6 Integrating with our Neighbours in Barrhead

Integration

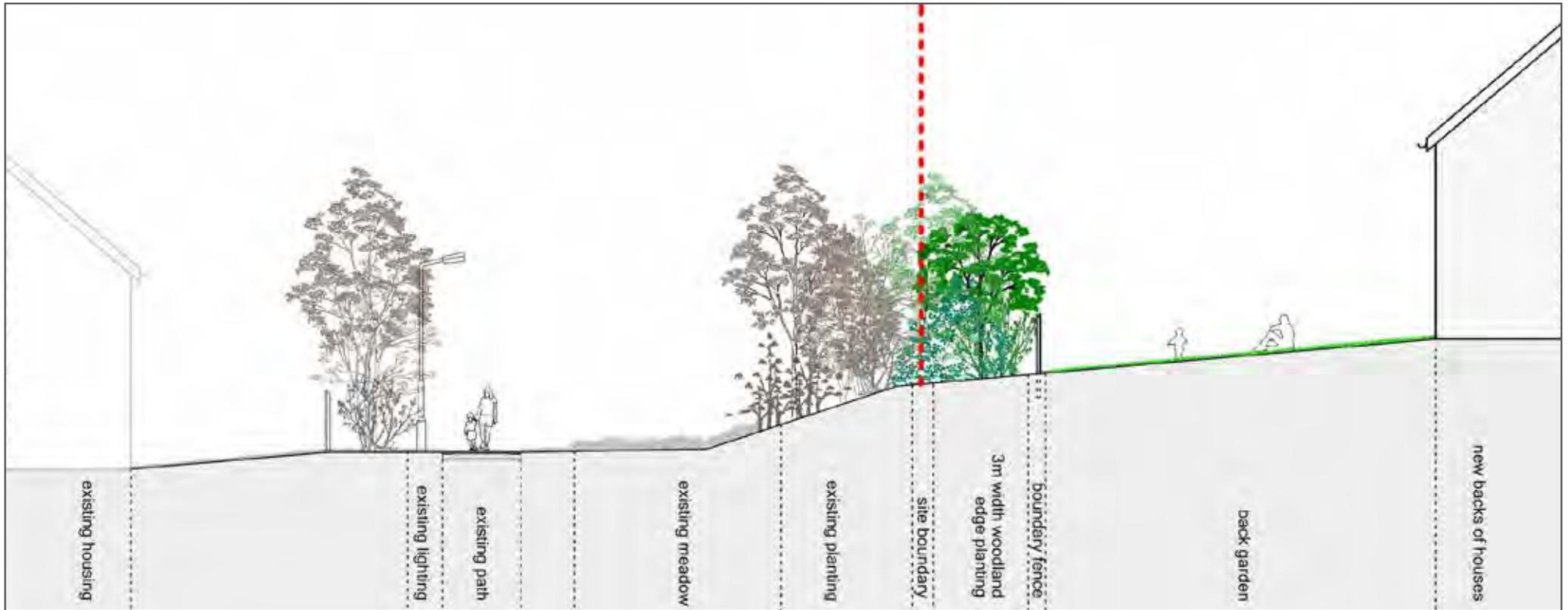
Integrating both existing and new areas of Barrhead South will require careful consideration of the key links which will join the two areas.

The existing road and path network will be the principle links in achieving this.

Nine areas have been identified which require further consideration and these are at the following locations:

1. Existing Footpath / Northern Site Boundary
2. Springfield Road - West
3. Springfield Road - Central and Aurs Road - North
4. Balgraystone Road
5. Springfield Road - East
6. SUDS pond to north of Aurs Road
7. Aurs Road
8. Private Drive to Lyoncross House
9. Neighbours within Barrhead South

This following section illustrates how the new development should integrate with the existing settlement at these locations.



Indicative section through Existing Path / Northern Site Boundary

1. Existing Footpath / Northern Site Boundary

The existing Core Path B7 follows the route of a former rail line to the north of the Miller Homes site.

This route forms part of the National Cycle Network and provides a link to the existing areas to the west of Barrhead, St Lukes High School, Barrhead Primary School and play areas at Divernia Way.

The path is set within a wide landscape corridor beyond the boundary of the SDO. The landscape treatment within this corridor is currently predominantly meadow grass with informal tree planting along the site boundary. The site is located at the top of an embankment to the south of this corridor.

The existing planting along this boundary could be augmented with a minimum of 3m of native woodland edge species planting. This will enhance the biodiversity of this corridor and provide a sensitive solution to the landscape character of the path.

Any further embankment necessary to create development platforms should also be planted with the same woodland edge species.

New housing should back onto this woodland boundary with a minimum 10m back garden depth.

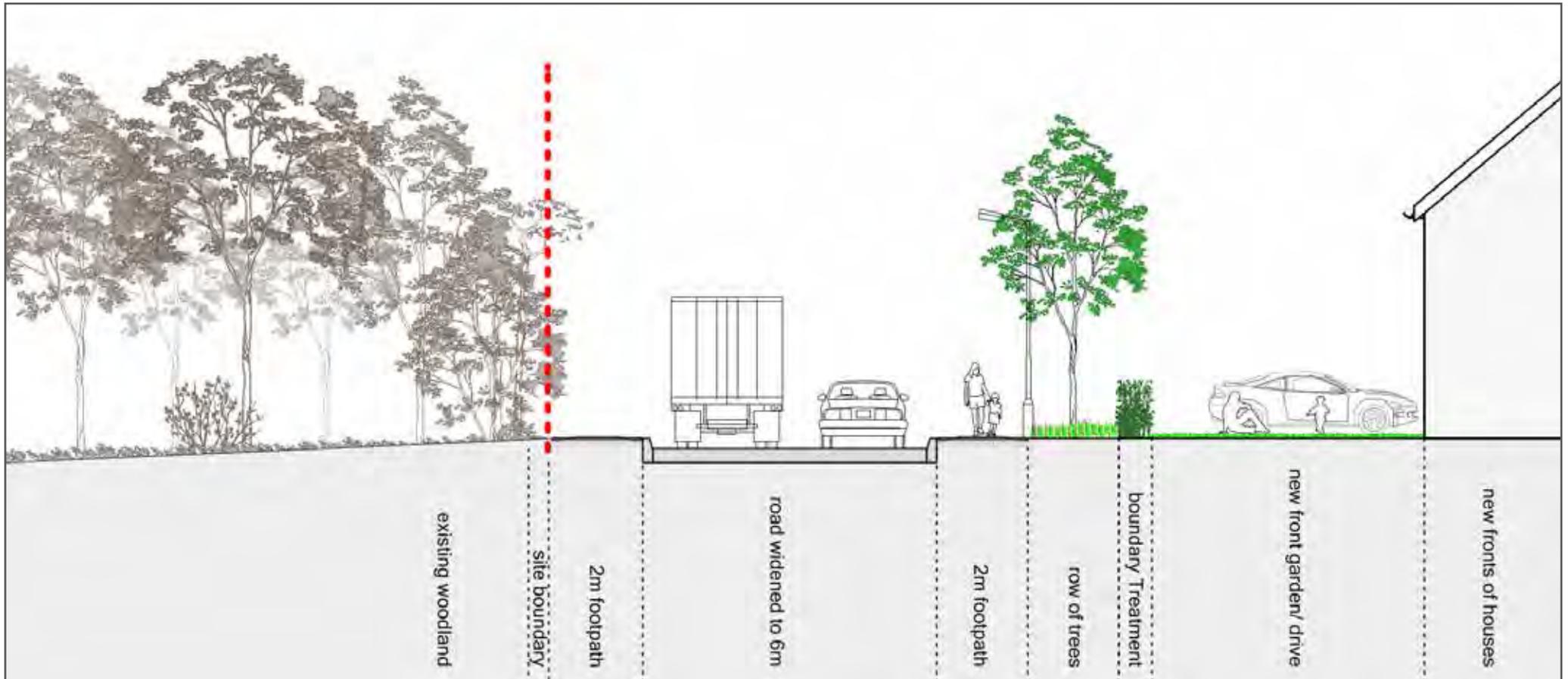
It is envisaged that the proposed development levels along this northern boundary will be for the most part within 0-1.5m of the existing top of embankment levels.



Extract from Indicative Development Framework



Existing view east along path to north of site boundary



Indicative section through Springfield Road - West

2. Springfield Road - West

The existing route of Springfield Road defines the northern extent of the Wallace Land site.

This route forms part of the network of Primary Streets and provides the only link east to west through Barrhead South.

This route currently has a limited carriageway width and no footpath provision. The carriageway width will require widening to 6m with new 2m footpath provision to either side. New homes could have direct access to Springfield Road.

It is envisaged that the proposed levels along this section would tie in with the existing carriageway levels.

A small section of embankment may be required at the north-east corner where the land falls away and this would be contained within the plot gardens.

The existing hedgerow will be removed along much of the southern side of this section of Springfield Road.

The existing hedgerow and plantation woodland on the north of the road will be retained to provide continuity of the existing wildlife corridor.

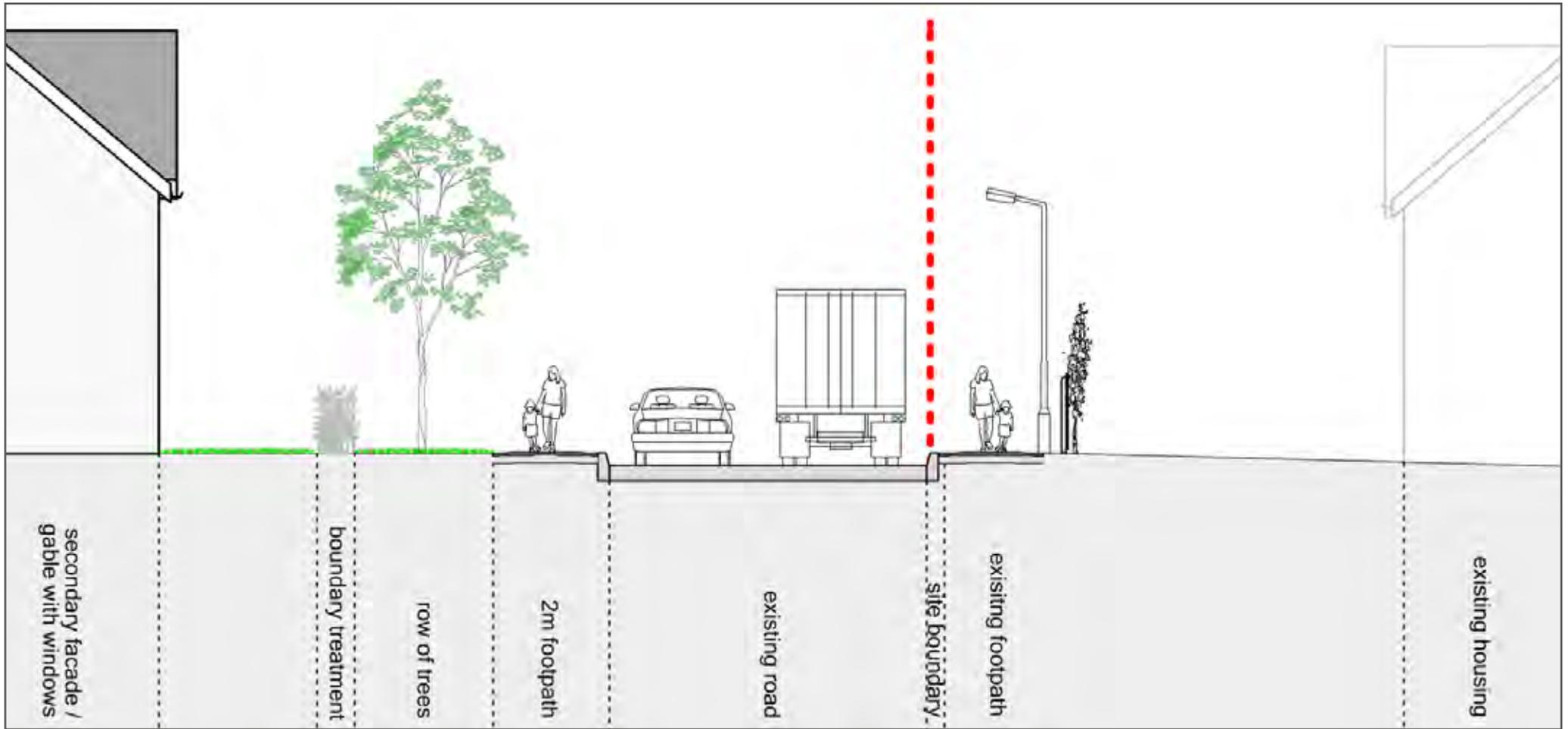
The hedgerow along the southern side of Springfield Road is a strong habitat connector. Some of this hedgerow will be lost and if significant, habitat compensation would be required elsewhere within this site.



Extract from Indicative Development Framework



Existing view northeast along Springfield Road



Indicative section through Springfield Road - Central

3. Springfield Road - Central

The existing route of Springfield Road defines the northern extent of the north of the East Renfrewshire Council site.

This route forms part of the network of Primary Streets and provides the only link east to west through Barrhead South.

Development along the south of this section of Springfield Road provides the opportunity to improve the residential amenity of the road. This route currently has a footpath along its northern side.

Springfield Road will be narrowed to 6m along this stretch. 2m wide footpaths will be provided to both sides of Springfield Road. New homes will have direct access to Springfield Road.

It is envisaged that the proposed levels along this section will tie in with the existing carriageway levels.

Any level difference required between the frontage of Springfield Road and the site roads will be taken up within the gardens of the plots fronting these roads.

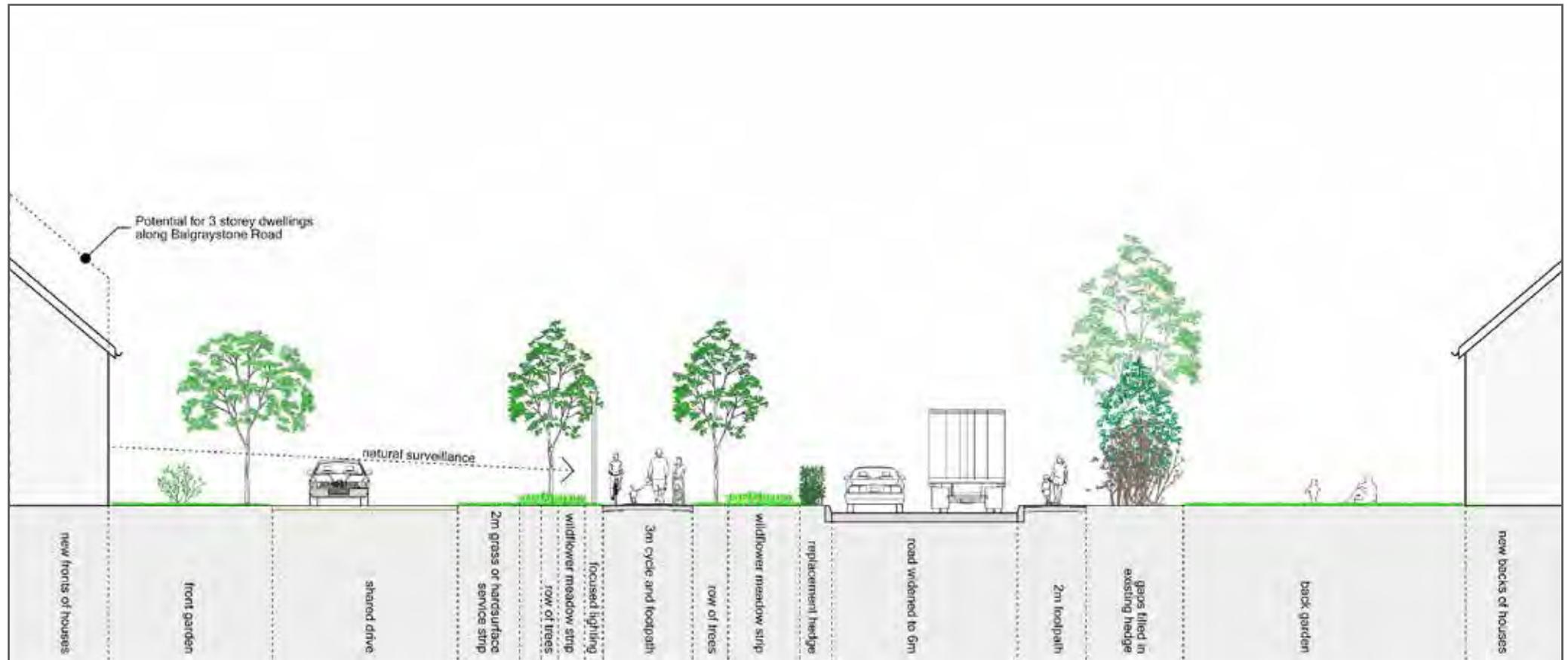
The hedgerow along Springfield Road is a strong habitat connector. Some of this hedgerow will be lost and if significant, habitat compensation would be required elsewhere within this site.



Extract from Indicative Development Framework



Existing view west along Springfield Road



Indicative section through Balgraystone Road

4. Balgraystone Road

The existing route of Balgraystone Road provides a direct link between Barrhead and the Dams to Darnley Country Park. The road is currently the route of Core Path D7 and a National Cycle Route.

This route will form part of the network of Primary Streets and provides a key link north south through Barrhead South. It will provide access to the Rail Station and should be designed to be safe and well lit.

New homes should overlook this route to provide passive surveillance. There is an opportunity for some new homes to be three storeys along this route to provide a place making function.

Elsewhere gables of homes facing Balgraystone Road should incorporate windows to ensure the creation of a safe, attractive and welcoming residential street.

Balgraystone Road currently has a limited carriageway width and no footpath provision and requires widening to 6m.

Road widening should be carried out to the west of the road, to enable the retention of as much of the existing hedgerow along the east of the road.

The existing carriageway gradient is generally satisfactory. There is a short section that may require regrading, and agreement with the Council should be sought if a 8% gradient cannot be achieved.

A remote path is to be formed to the west of the widened road, set in a green corridor to provide an enhanced pedestrian/cycleway link to the Country Park.

This green corridor could incorporate tree planting, meadow grassland and a 3m wide shared pedestrian and cycle path.

As this route will form green corridor, it should vary in width. In some locations, adjacent properties can be set back to the west and provide wider pocket spaces along the route.

The existing hedgerow on the east of Balgraystone Road is a good mixed hedgerow with trees. This hedgerow provides a wildlife corridor for shelter and movement of birds, small mammals, and invertebrates. This encourages foraging and the commuting of bats.

This hedgerow should be retained and enhanced to form a strong habitat with enhancement for biodiversity.

A small pipistrelle bat roost is located in the trees on the east of this route on the green spine. The roost will not be impacted.

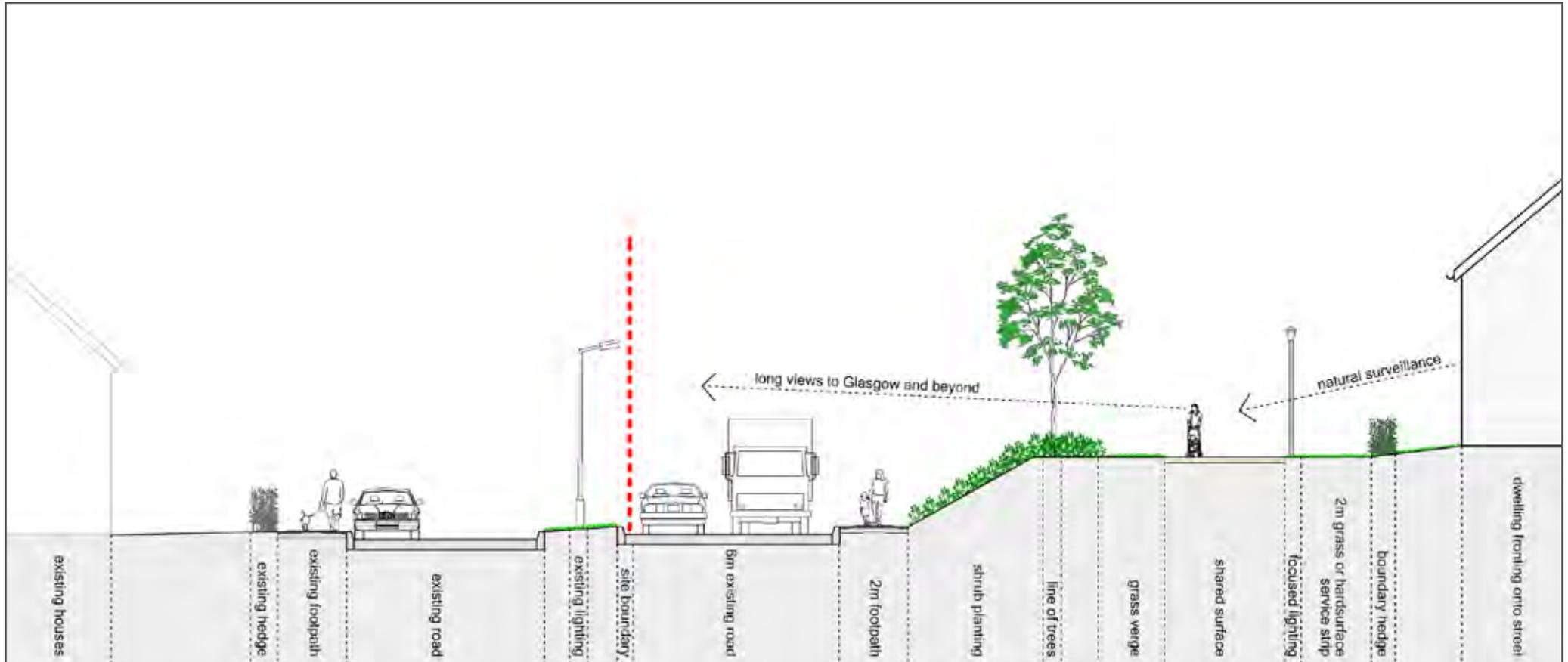
The existing hedgerow will provide screening to the rear boundary of properties to the east of Balgraystone Road.



Extract from Indicative Development Framework



Existing view north along northern section of Balgraystone Road



Indicative section through Springfield Road - East

5. Springfield Road - East

The existing route of Springfield Road defines the northern extent of the East Renfrewshire Council site.

This route forms part of the network of Primary Streets and provides the only link east to west through Barrhead South. This route currently has footpath provision to its northern side.

The top of the embankment adjacent to Springfield Road which designates the site edge to the north is approximately 2-2.5m above Springfield Road.

This existing level differences will require the provision of a DDA compliant pedestrian link between levels. The pedestrian links should take account of desire lines between the north and south of Springfield Road.

Springfield Road will be narrowed to 6m along this stretch and 2m wide footpaths will be provided along both sides of Springfield Road.

A new shared surface will form a new route at top of the higher level. A positive frontage should be provided along this visually prominent edge of the development.

Homes presenting gables to Springfield Road should incorporate windows to ensure the creation of a safe, attractive and welcoming residential street.

The existing copse of trees on Springfield Road should be retained. will be retained. A small pipistrelle bat roost is present in these trees.

Low level shrub planting along the slope between Springfield Road and new development is required. This will help soften the appearance of the new development. The planting should be low enough to enable the long views to Glasgow to be retained.



Extract from Indicative Development Framework



Existing view northeast along Springfield Road



Indicative section through Aurs Road SUDS Pond

6. Aurs Road SUDS Pond

The existing routes of Springfield Road and Aurs Road define the north eastern extent of the East Renfrewshire Council site. These routes form part of the network of Primary Streets and provide vehicular access into Barrhead South.

The junction of Springfield Road and Aurs Road requires a new 4 arm roundabout.

A new SUDS pond is to be provided to the south west of this new junction arrangement. The land form required for the SUDS pond will create a large slope behind it.

The SUDS pond, slope and edge of the built development will form a major visual gateway to Barrhead South and needs to be designed to provide a welcoming feature.

New homes should front on to this space behind a formal line of trees at the top of the slope. A footpath link or shared surface street is required along this edge. This link will provide a connection between Springfield Road, Aurs Road and onward to the Dams to Darnley Country Park.

Panoramic views to the north over Barrhead and countryside to Glasgow will be available from this new street.

This area currently provides an active route for bats.

New landscaping and SUDS pond should incorporate proposals for bats foraging, habitats for birds, and an assemblage of plant and faunal species associated with pond habitats.

The slope behind the SUDS pond should grade out from the pond through marginal planting to meadow, shrub, and with trees set back. Landscape proposals should encourage biodiversity as well as visual amenity.



Extract from Indicative Development Framework



Existing view from site over Springfield Road towards Glasgow



Indicative section through Aurs Road - South

7. Aurs Road - South

The existing route of Aurs Road provides a direct link between Barrhead and the Dams to Darnley Country Park.

This route forms part of the network of Primary Streets and provides a key link north south through Barrhead South.

Housing adjacent to Aurs Road should face the street to ensure the creation of a safe, attractive and welcoming residential environment.

This will be enhanced through the provision of a new pedestrian footpath alongside Aurs Road. New housing should front onto this footpath with development set back from Aurs road to enable space for the 3m wide remote footpath to be formed.

Existing hedgerows and trees along both sides of the road should be retained wherever possible, and enhanced with supplementary tree planting.

The established hedgerows and trees along Aurs Road currently provides an active area for bats foraging and commuting from the north.

This is also a strong wildlife corridor link to the habitats along the railway and the southern edge of the site, and further south to Balgray Reservoir.

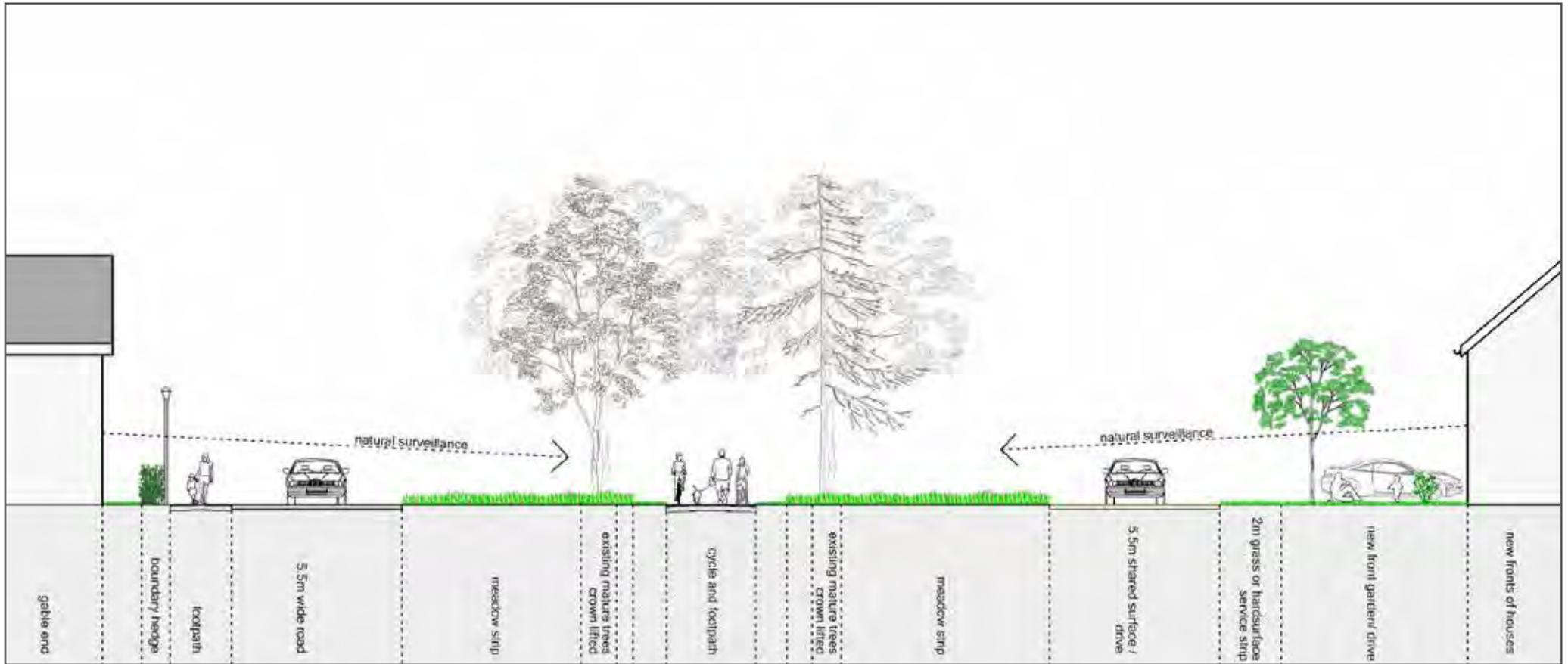
The existing trees and meadow to the east of Aurs Road and to the south of the Lyoncross Avenue are to be retained and enhanced as a biodiversity area.



Extract from Indicative Development Framework



Existing view looking north along Aurs Road



Indicative section through Lyoncross Avenue

8. Lyoncross Avenue

Lyoncross Avenue forms the access to Lyoncross House. This is formed by mature trees in a verge either side of a single track, private road.

This access route to Lyoncross is a mature tree lined avenue actively used by bats for foraging and commuting, and many of the trees are suitable for roosting bats.

Lyoncross House will be restored and integrated into the Barrhead South development to form a small group of 'steading' homes.

In due course, vehicular access to Lyoncross House will be taken from the northern end of the avenue via the internal road network serving the new residential area.

New homes to either side of the Avenue should front onto this space to provide passive surveillance. The avenue provides an opportunity to integrate a desirable route for pedestrian cycle access with green play provision.

The Avenue is to be maintained, with any management of the existing trees carried out necessary to ensure safety to pedestrians. Any construction should take accord of root protection zones as according to BS 5837:2012 *Trees in relation to Construction*.

It is envisaged that the levels in the vicinity of Lyoncross Avenue will be generally in line with the existing ground levels.

Although some minor tree, hedge and scrub loss will be required along the Avenue, the general integrity of the wildlife corridor should be maintained.

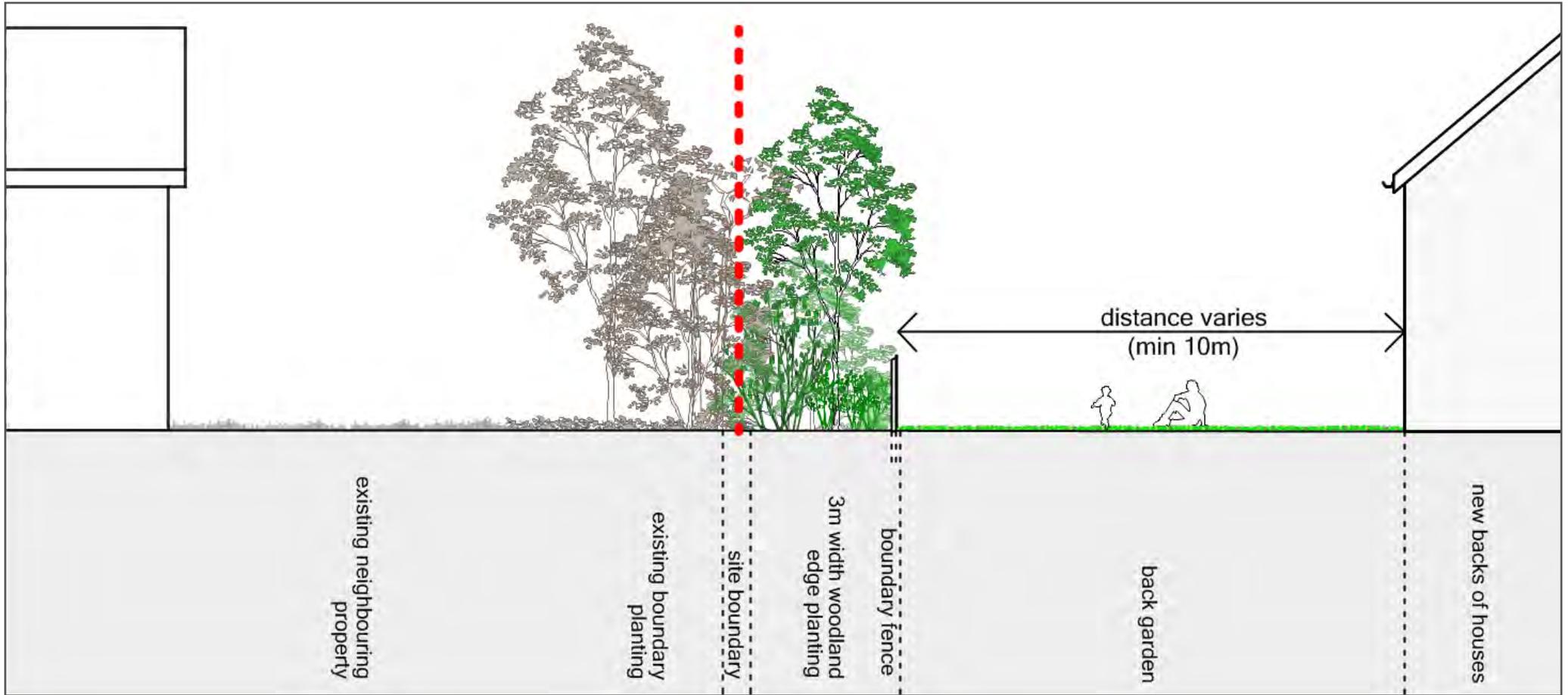
Pre-start checks will be needed for bats and nesting birds on any trees identified for felling. No bat roosts are currently present, but suitable trees could be used at any time.



Extract from Indicative Development Framework



Lyoncross Avenue from Aurs Road



Indicative section through boundary to neighbouring property

9. Neighbours within Barrhead South

The existing properties within the boundary of the SDO are generally surrounded by a strong landscape edge to the site.

This is made up of native and ornamental species, and currently provides habitat and foraging for biodiversity as well as visual screening and shelter to the properties behind.

A minimum 3m wildlife corridor and additional screen should be planted against the edge of this area to enhance the biodiversity and visual screening. Tree and shrub species should be native and of local provenance.

Any non developable areas adjacent to this area should be planted with native woodland edge species.

Rear gardens with a minimum of 10m depth should abut this biodiversity corridor.

Creating an enhanced ecological buffer around this area will increase biodiversity potential, attracting more birds, bats, small mammals and invertebrates to this area. This enhanced buffer also provides the potential for greater shelter and forage potential for species such as fox, roe deer and hedgehog.

With the provision of nearby SUDS basins, this part of the site can develop into a species rich biodiversity resource along this southern part of the Aurs Burn.



Extract from Indicative Development Framework



Neighbouring Springfield House viewed from the site



2.7 Ensuring Landscape Fit with the surrounding Countryside

Development at Barrhead South needs to integrate with the surrounding countryside to provide an appropriate transition from the settlement to the rural surroundings.

The Landscape and Visual Impact Assessment highlighted particular sensitivities of development to the surrounding countryside and to the Dams to Darnley Country Park.

These areas are highlighted as 1 to 7 (as highlighted on the adjacent plan) as follows:

1. Springhill Road to the countryside
2. Springfield Road (west) to the countryside
3. Railway on embankment to the south
4. The Green Spine to the rail line to the Country Park
5. Lyoncross to the rail line and the Country Park
6. Lyoncross to the east and the Country Park
7. Lyoncross to the countryside to the north

The ecological appraisal highlights that the existing site has key landscape components which contribute to the site's identity on the urban fringe.

These are the extensive grasslands with hedgerow and tree edges and associated scrub and woodland blocks, and in particular the presence of the three Local Biodiversity Sites.

The grasslands are mainly former fields now overgrown (still grazed to the west), with areas of more interest in the east where marshy and unimproved neutral grasslands provide greater plant diversity.

The associated fauna is typical of these habitats, with bats a key component, otters nearby, and the site is home to fox, roe deer, hedgehog and other small mammals, and a bird and invertebrate assemblage typical of these habitats. Barn owls forage over the longer grasslands.

Interestingly, badgers are not a feature of this area.

This may be historical persecution, or just a simple empty zone in the badger landscape of the wider region.

Opportunities to retain and enhance the existing identity of the site have been considered.

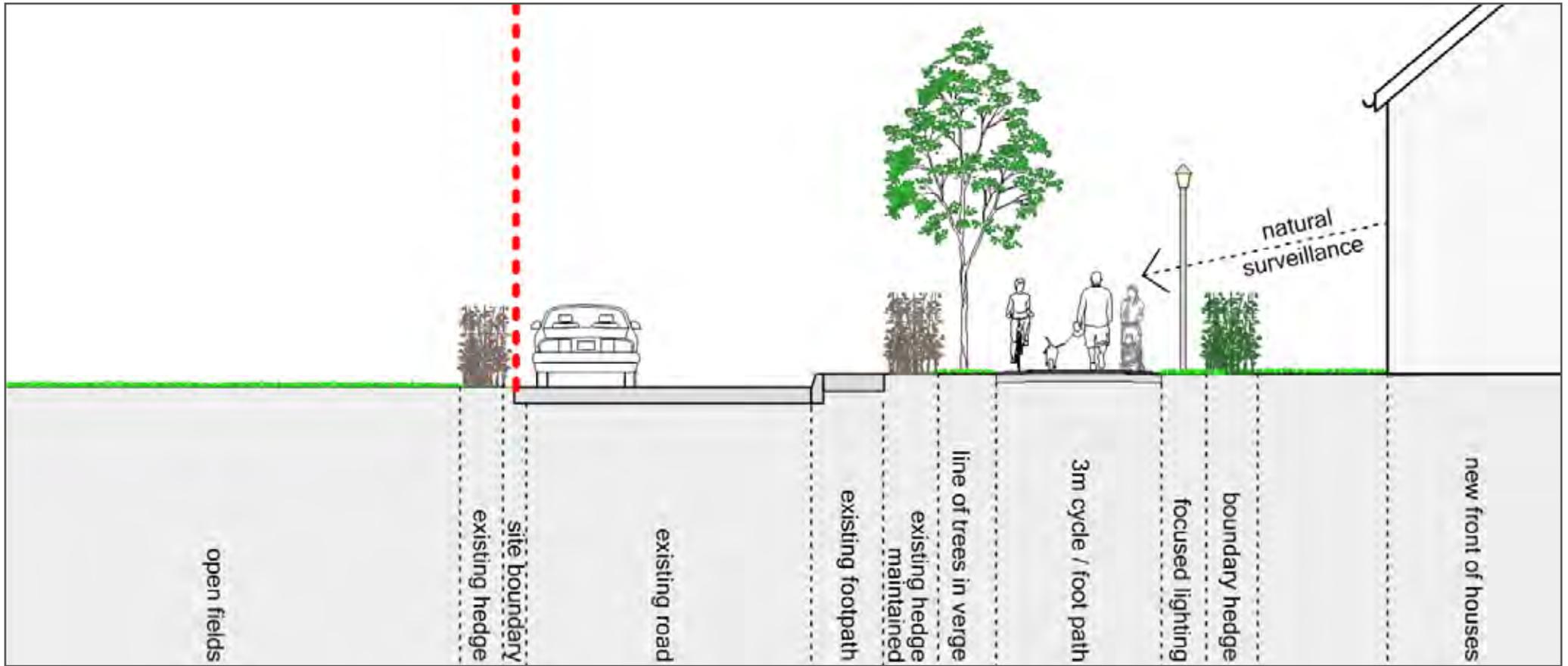
The retention and enhancement of existing broadleaf woodland, much of the hedgerow, the more diverse grassland swards, and the three Local Biodiversity Sites, has informed the design of the fit with the surrounding landscape.

In addition, consideration has been given to the opportunity to introduce new habitat in the form of wetland (ponds, basins and swales), and to increase the diversity of the site overall by supplementary planting of trees, hedgerow, and edge habitats.

Barrhead South has an important role in improving links from Barrhead to the Dams to Darnley Country Park. Improved access between these areas is a key consideration.

The landscape strategy will provide a transition from the built environment to the rural nature of the Country Park.

A key objective of the proposed planting strategy is to provide mitigation associated with visual effects of development adjacent to the Country Park.



Indicative section through Springhill Road

1. Springhill Road to the countryside

Springfield Road is currently the route of a Core Path and will form part of the network of primary streets and provides a key link north-south to Barrhead South.

At this location Springhill Road is 5.4m wide. A new remote 3m wide shared footpath/cycle path will be provided on the east side of Springhill Road to allow for the retention of the existing hedgerow and mature trees where possible.

The path should be lit, and be overlooked with either fronts of houses or gable ends with windows to ensure passive surveillance. This will also provide a safe link to Springhill Primary School and the cycle path to the north of the site.

The western boundary levels of this area will tie in with the existing levels along Springhill Road. Towards the north, the site levels will be raised to approximately 1.5-2m above the adjacent road levels to provide suitable platform levels.

Springhill Road provides good connectivity for wildlife and bats in particular. In the area of Springhill House, bats forage along the road between the two lines of trees, and these trees are suitable for roosting bats.

As much continuity of this hedge and tree line as possible could be retained, particularly the mature trees. Confirmation of the presence of bats and nesting birds is required if trees are identified for felling.

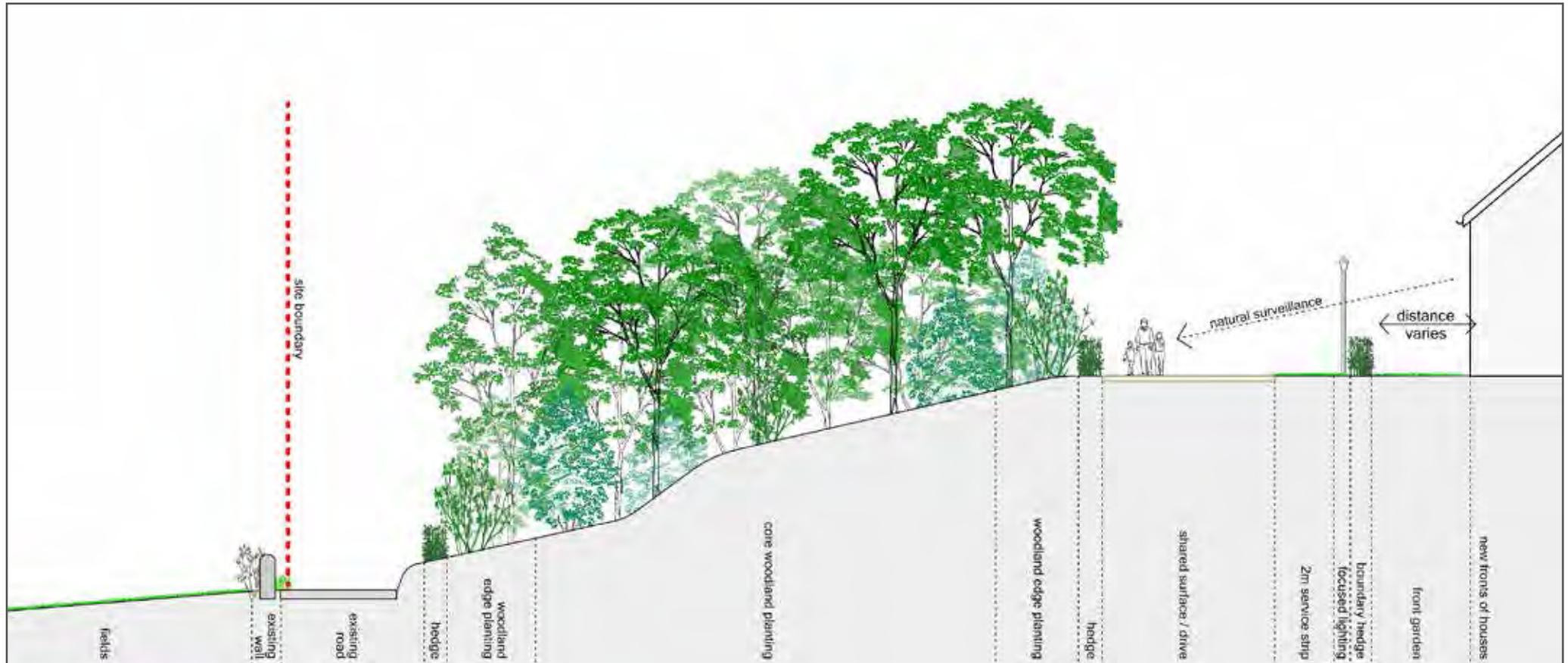
Formal tree planting should be aligned with the inside of the hedge to form a transition from the built edge of the development to the countryside.



Extract from Indicative Development Framework



Existing view north along northern section of Springhill Road



Indicative section through Springfield Road - West

2. Springfield Road - West

This western edge of the development is highlighted in the Landscape and Visual Impact Assessment as being sensitive from the wider countryside to the west.

The western edge of this area is formed by a scarp slope, dipping to the west. This boundary forms the transition from new built development to the open countryside to the west.

Primary mitigation acting as a visual barrier should be planted along this built edge of the development to mitigate visual intrusion associated with the development.

The barrier will be form an area of native woodland creating a wildlife corridor along this south-west edge of the site.

The barrier needs to be wide enough to provide visual screening throughout the whole year. This should be achieved with the use of mixed native woodland species which include limited use of evergreens.

In due course, this will extend the foraging and commuting routes, providing shelter for a range of faunal species. It will be managed for wildlife and the development of a robust woodland structure.

As this area will help mitigate and supplement the potential loss of habitat and foraging associated with the overall development footprint.

The built form should be set back from the escarpment edge to the east. This will further mitigate visual impact. The built form should front out to the west.

It is envisaged that the western boundary levels of the site will generally tie in with the existing levels along the top of the embankment, and proposed levels will remain close to existing levels.

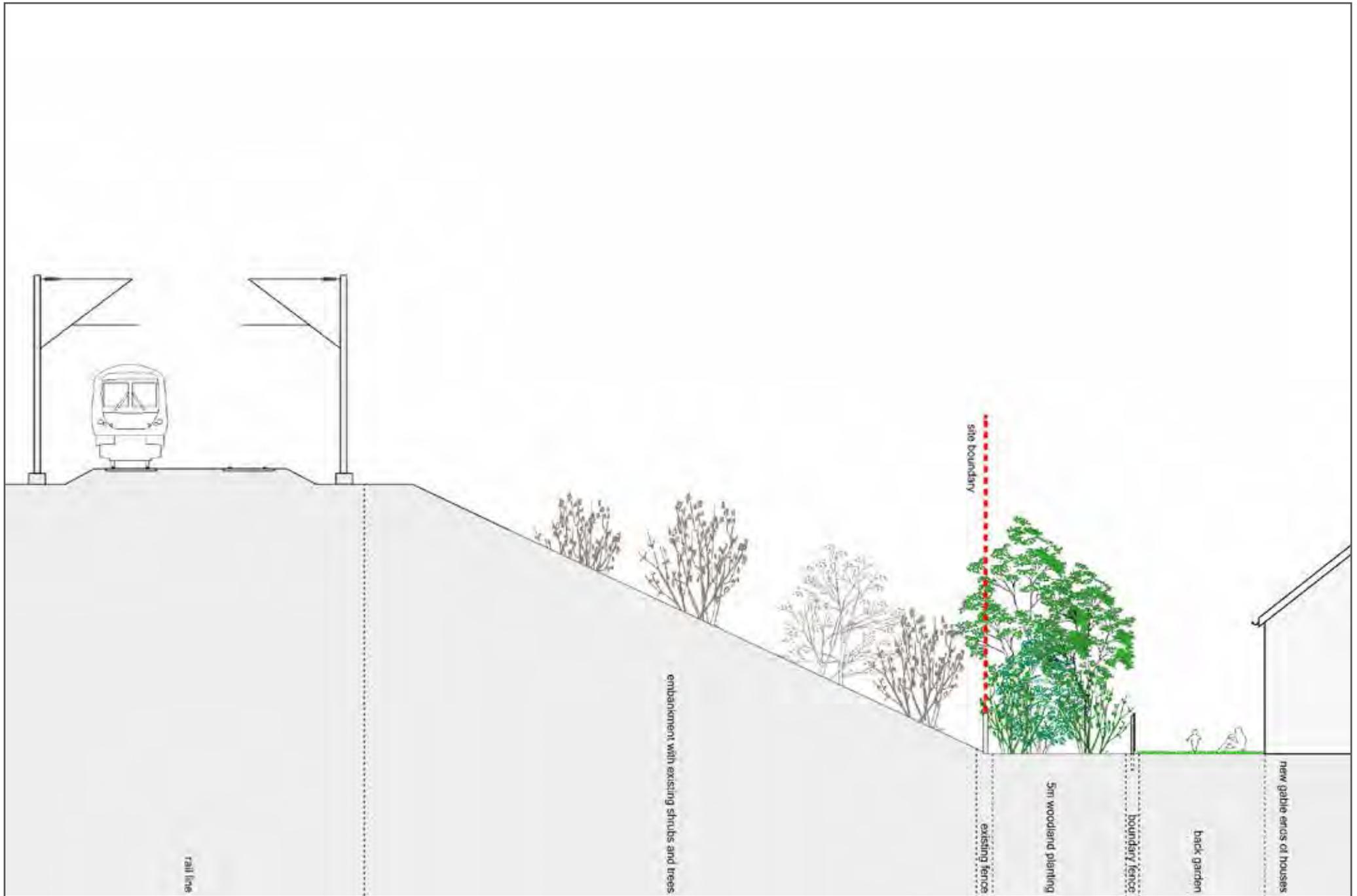
This area will need to incorporate SUDS attenuation and treatment. It is envisaged that this will be provided as an underground attenuation tank, with two treatment swales - one prior and one post the attenuation tank.



Extract from Indicative Development Framework



Existing view northeast along Springfield Road



138 Indicative section through Rail Line - Embankment

3. Rail Line - Embankment

The rail line forms a strong boundary to the south of the site. The rail line varies along the length of the site from being in cutting, fill and at grade.

Where the rail line is in embankment a minimum 5m width planted buffer should be planted using tall native species, including limited use of evergreen species.

The width of this buffer may require to be adjusted following a noise assessment if required. Further definition of requirements for any acoustic mitigation should be confirmed at the detail design stage.

The railway line already acts as a wildlife corridor, and additional planting to create the buffer will strengthen this element along the southern edge.

Back gardens and gable ends should abut the planting to form an enclosed biodiversity corridor.

It is envisaged that the southern boundary levels of the site will tie in with the existing levels along the railway embankment.

Any requirements for earthworks to remove ridges or fill depressions to suit platform levels will be undertaken within the site development areas.

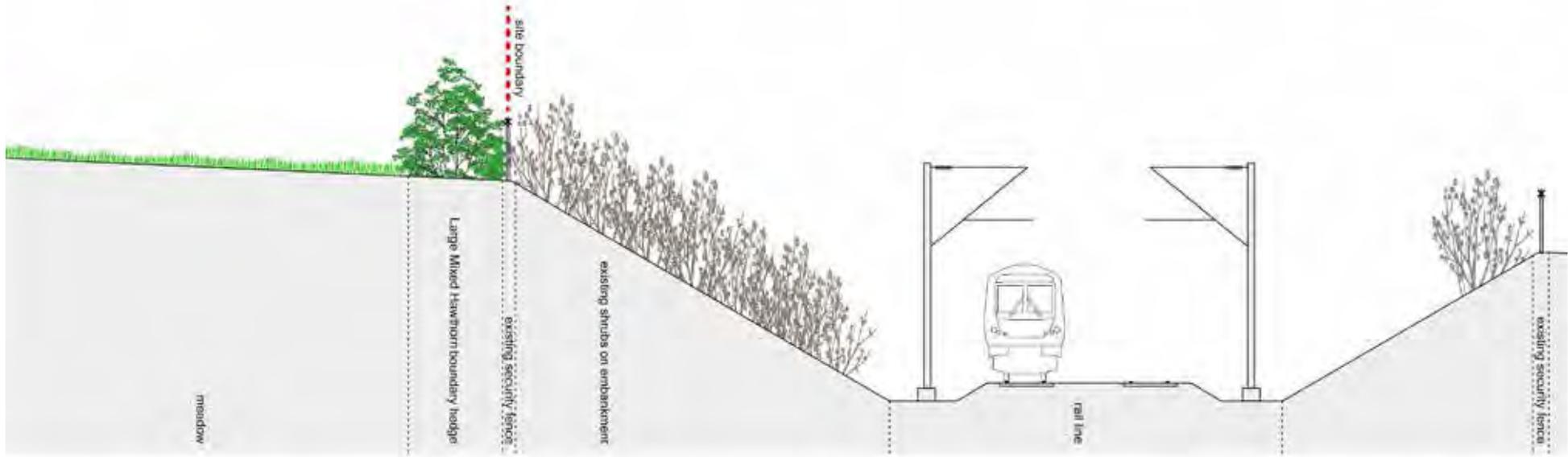
The area adjacent to Springhill Road will be raised to allow appropriate frontage access to Springhill Road.



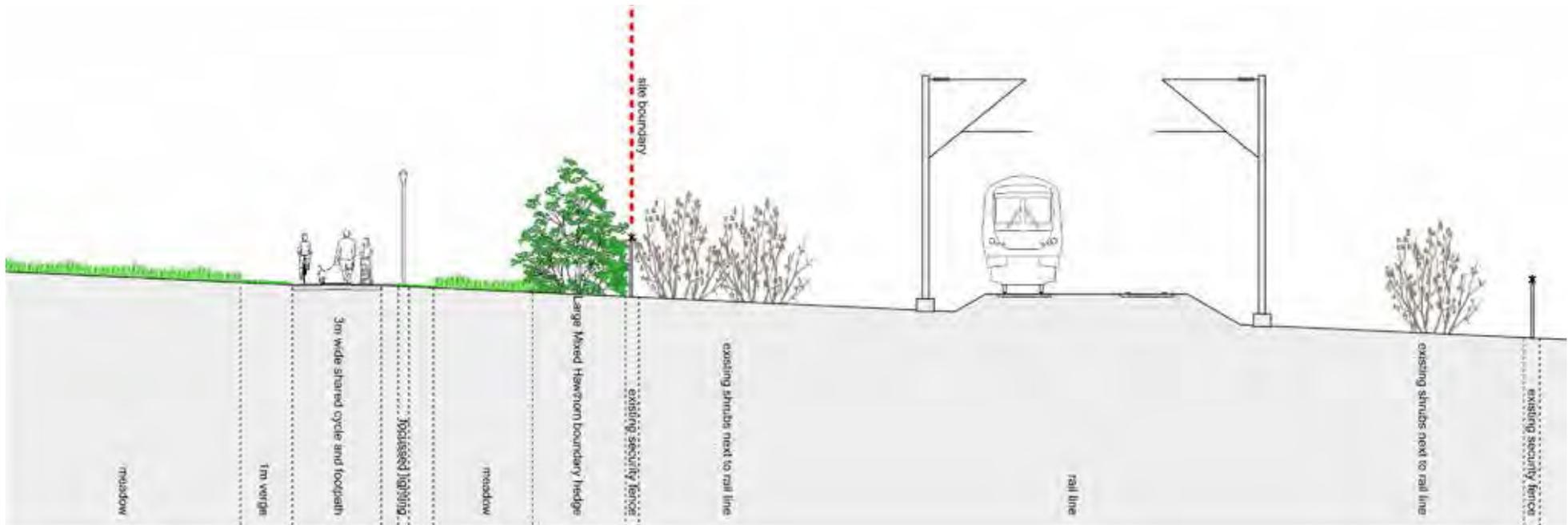
Extract from Indicative Development Framework



Existing view northeast along foot of railway embankment



Indicative section through Green Spine - Rail Line in cutting



140 Indicative section through Green Spine - Rail Line at grade

4. Green Spine - Rail Line

This boundary forms the transition from the main open space within the new development to the Dams to Darnley Country Park to the south. It has been identified in the Landscape and Visual Impact Assessment as requiring primary mitigation to reduce visual intrusion into the Country Park.

The rail line along this section is roughly at grade towards the south west and as the ground rises towards the north east the rail line is in cutting.

It is envisaged that the southern boundary levels of the site will tie in with the existing levels along the railway embankment.

Any requirements for earthworks to remove ridges or fill depressions to suit platform levels will be undertaken within the site development areas. The Rail Station area will need careful consideration to ensure that adequate provision for levels to the parking and railway platform levels can be provided.

The current boundary between Network Rail land and the site is partly formed by unsightly pallisade fencing, with the remainder being agricultural post and wire fencing. Part of this boundary is situated under 132kV power lines so any proposals and work within this vicinity should be approved by Scottish Power Energy Networks.

A dense, continuous 5m width mixed hawthorn hedge with minimal 20% holly hedge should be planted along the length of this boundary to enhance both the visual screening of the fencing and rail line and the biodiversity opportunities along this corridor. The strip of ground between the boundary fence and the rail tracks has mostly self regenerated with native shrubs forming a dense visual screen and biodiversity corridor.

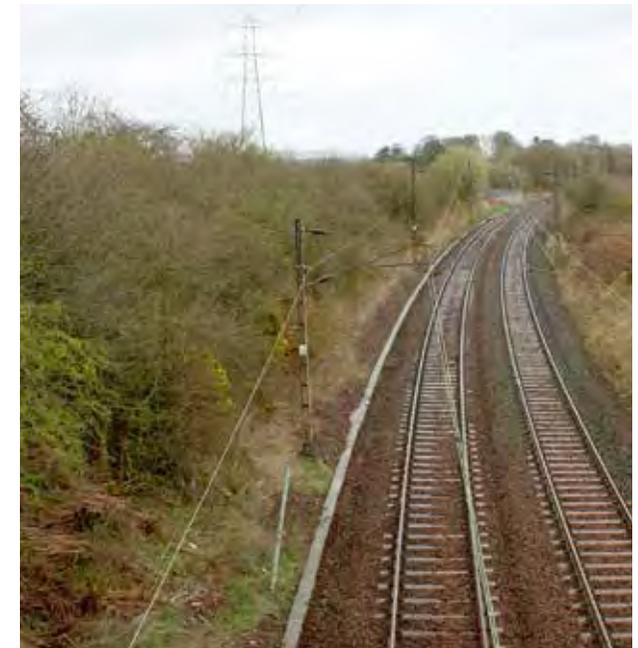
A core path crosses over the rail line in the centre of this section forming a pedestrian connection to Dams to Darnley Country Park.



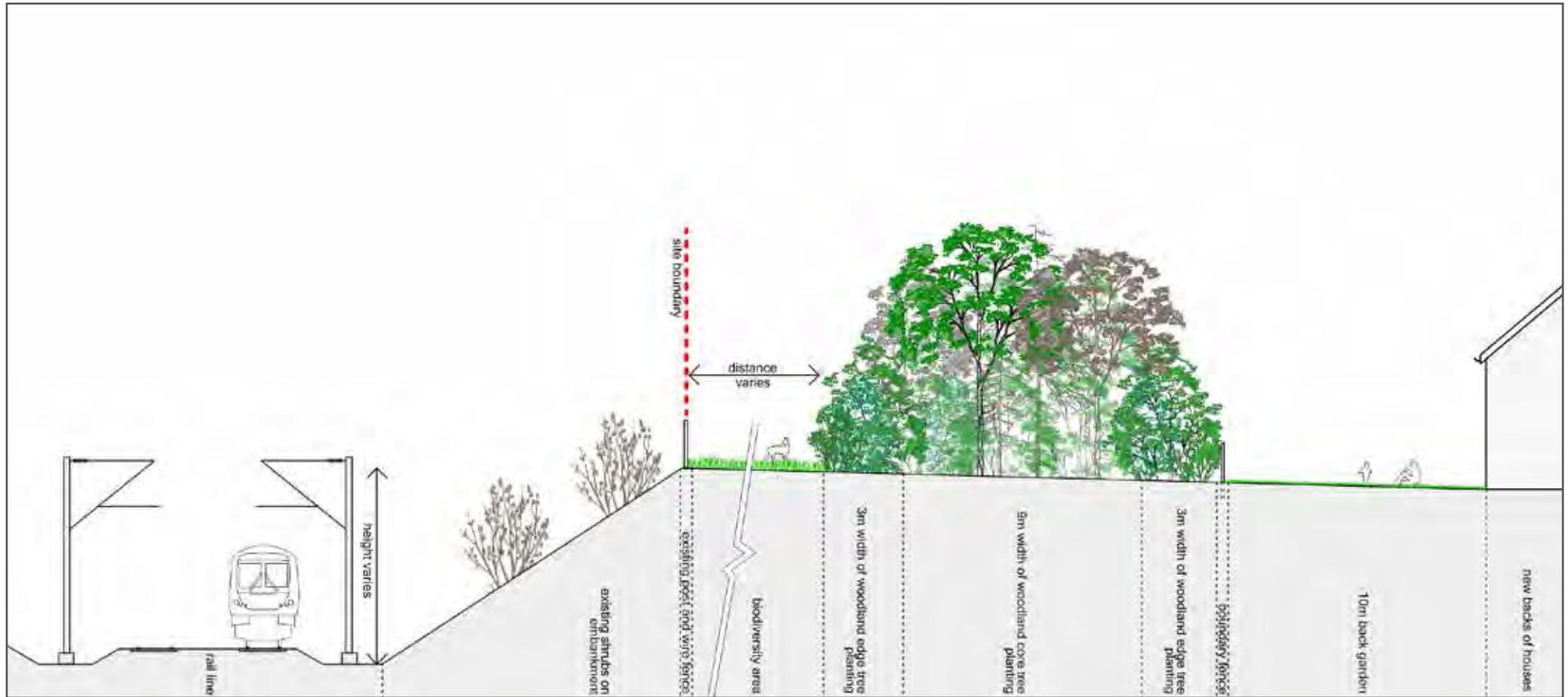
Extract from Indicative Development Framework



Existing Pallisade fencing as boundary to site



Rail line in cutting with dense native shrubs



Indicative section through transition from built development to rail cutting and countryside to south

5. Lyoncross - countryside to the south

This boundary forms the transition from new built development to the Dams to Darnley Country Park to the south.

It has been identified in the Landscape and Visual Impact Assessment as requiring primary mitigation in order to minimise visual intrusion into the Country Park.

This edge is characterised by being visually permeable to the countryside, and slopes gently to the north.

Based on the findings of the Landscape and Visual Impact Assessment, a visual buffer should be planted along this built edge of the development.

It is important to maintain the unimproved neutral grassland component in this area, which is a diverse grassland than elsewhere. As such, existing woodland and scrub planting will be sufficient to provide the visual screening. This however needs to be managed to prevent scrub encroachment onto the retained neutral grassland

This buffer needs to be wide enough to provide visual screening throughout the whole year. It should include a mix of native woodland species which include limited use of evergreens.

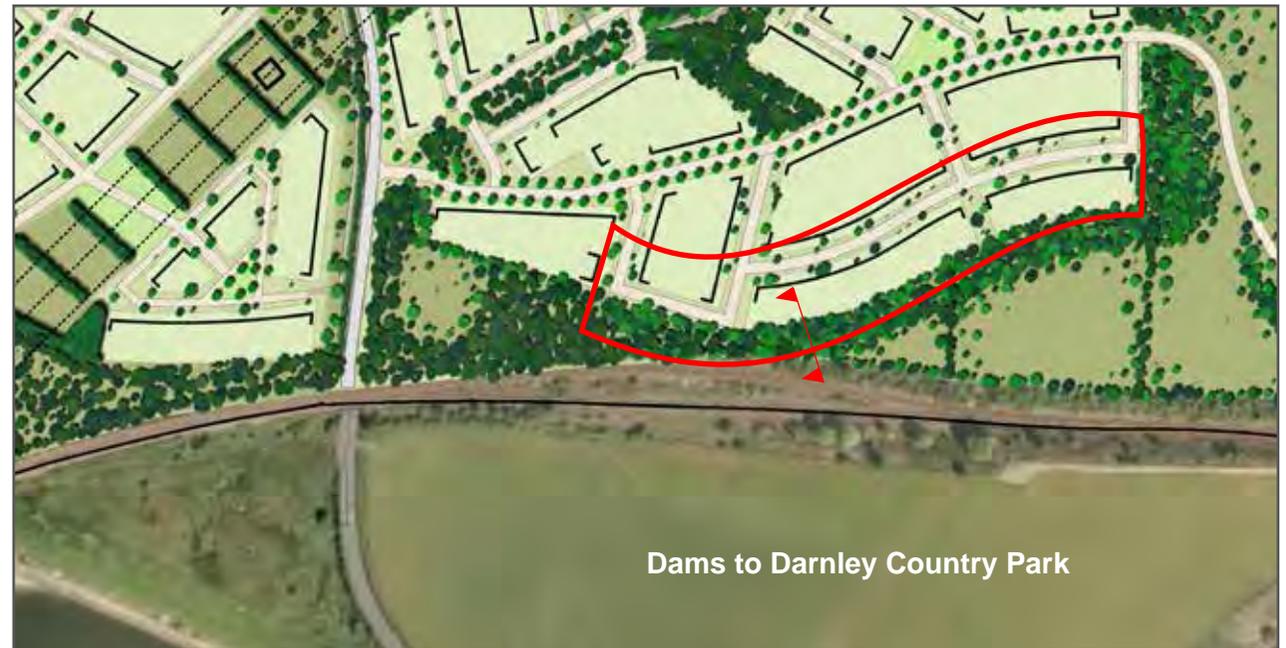
This element will become an important ecological link, and as such specification of the woodland edge treatment needs to provide habitat creation and foraging opportunities.

This will help mitigate and supplement the potential loss of habitat and foraging associated with the development footprint.

It will be important to maintain the unimproved neutral grassland component in this area, which provides an association of species not recorded elsewhere.

It is envisaged that the southern boundary levels of the site will tie in with the existing levels along the railway embankment.

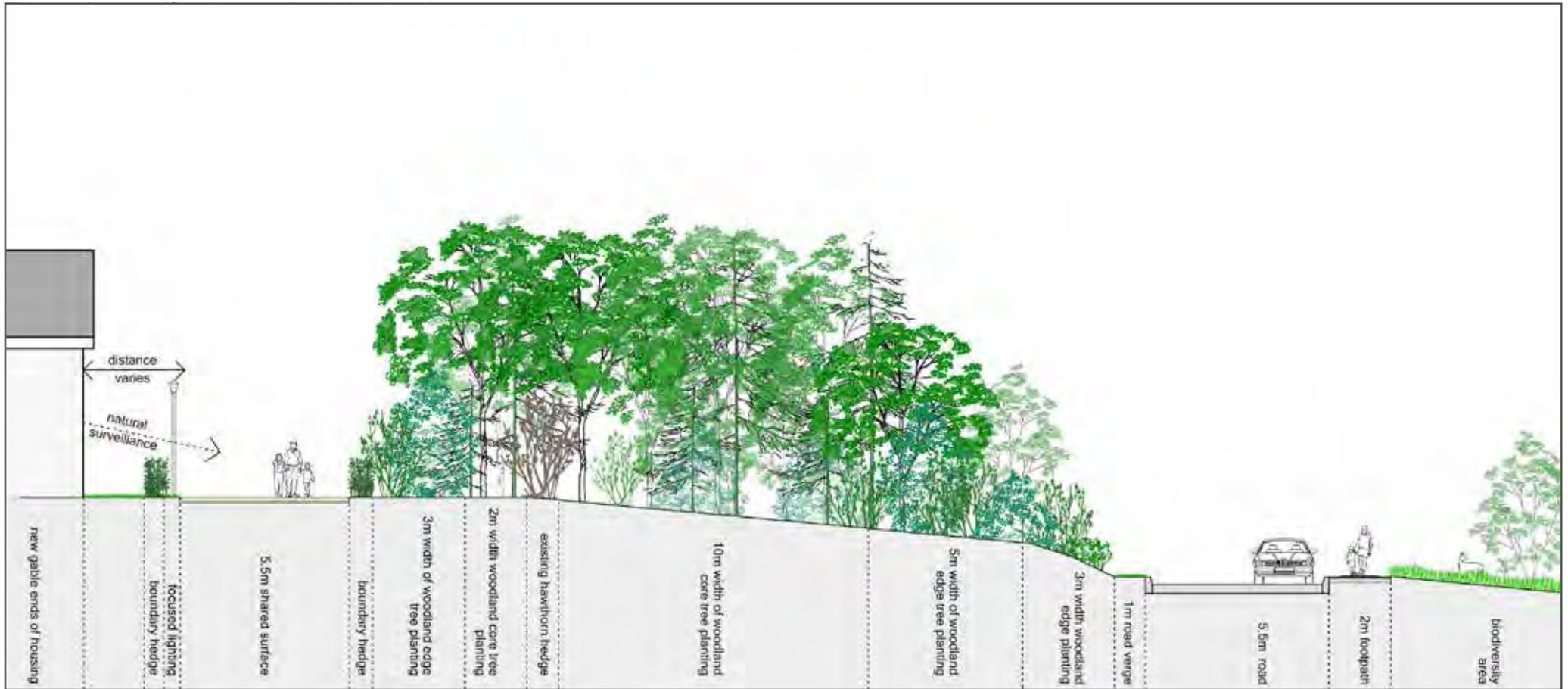
Any requirements for earthworks to remove ridges or fill depressions to suit platform levels will be undertaken within the site.



Extract from Indicative Development Framework



Existing edge of site to railway cutting to the south



Indicative section through transition from built development to Dams to Darnley Country Park

6. Lyoncross - Dams to Darnley

This boundary forms the transition from new built development to the Dams to Darnley Country Park to the east. It has been identified in the Landscape and Visual Impact Assessment as requiring primary mitigation to minimise visual intrusion into the Country Park.

An existing mature hedge exists at this point along the ridgeline. This needs to be augmented with additional tree and shrub planting to be an effective visual buffer between housing and the Country Park.

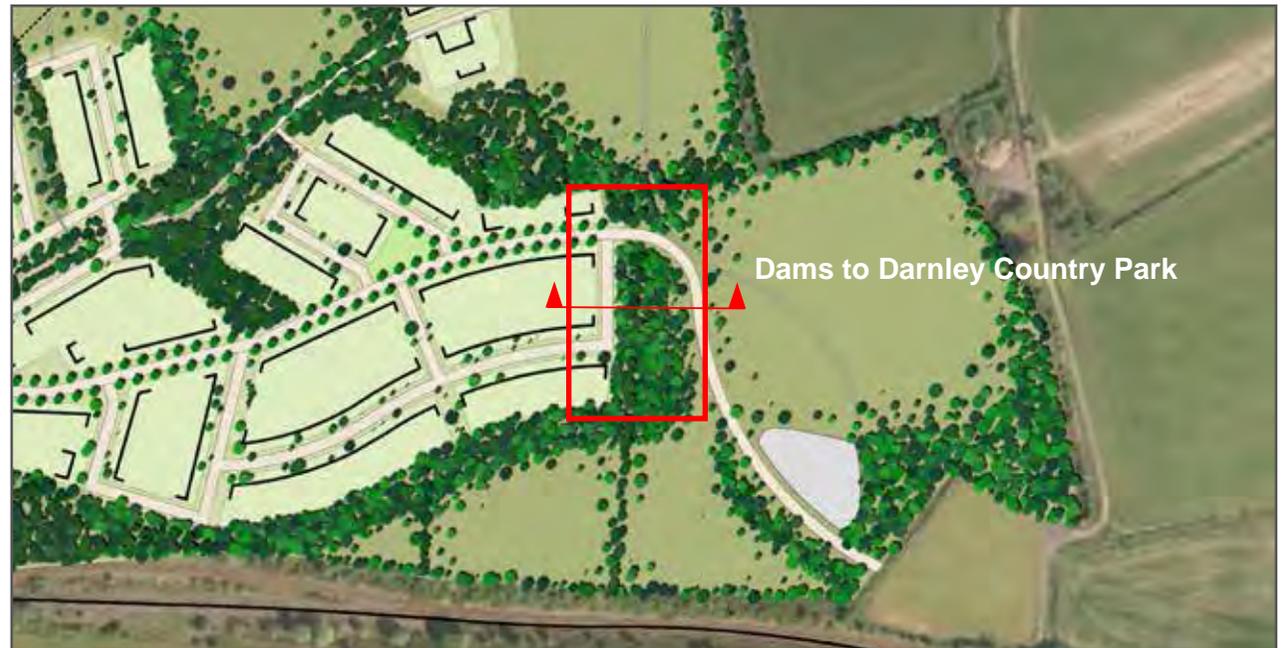
The buffer needs to be wide enough to provide visual screening throughout the whole year, and should be planted with mixed native woodland species which include evergreens.

This element will become an important ecological link, and as such specification of the woodland edge treatment needs to provide habitat creation and foraging opportunities. This will help mitigate and supplement the potential loss of habitat and foraging associated with the development footprint.

The eastern boundary levels of the site will tie in with the existing levels along the proposed Dams to Darnley Country Park. The design of the development and buffer will allow for vehicle and pedestrian access through it into the Dams to Darnley Country Park.

Any requirements for earthworks to suit platform levels will be undertaken within the development area. Road gradients will be provided at a maximum of 8% to meet standard housing road requirements.

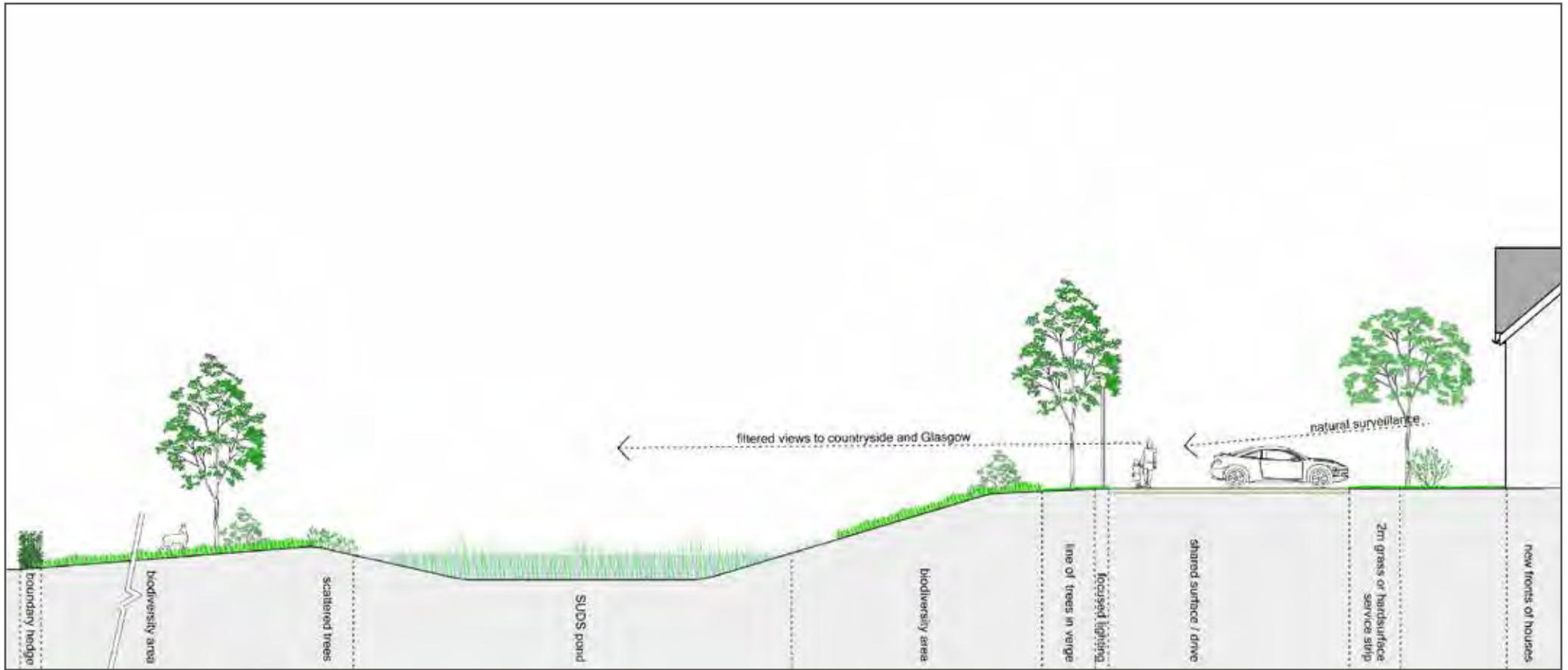
Where the Dams to Darnley Country Park access and parking require treatment and attenuation, it is envisaged that these will have a separate treatment and attenuation via roadside swales.



Extract from Indicative Development Framework



Existing hedge along ridgeline



Indicative section through Neighbouring Property

7. Lyoncross - North

This boundary is identified in the Landscape and Visual Impact Assessment as being visually sensitive from the north, both from the approach from the north along Aurs Road, and across the open landscape to the north.

In response to this, the built form needs to present a positive frontage along this edge, with a clear pedestrian connection maintained along the route.

Loss of hedgerow should be avoided if possible. Where removal is required this should be compensated for by additional tree/hedgerow planting. This should form a boundary around the corner of the site to create the wildlife corridor.

Trees should not be planted immediately adjacent to the SUDS pond to avoid excessive shading

Planting around the SUDS pond should enhance biodiversity and allow filtered views between the development and the countryside to the north.



Extract from Indicative Development Framework



Existing views to the countryside to the north of the site



2.8 Delivering the Greenspace Infrastructure

The Central Scotland Green Network (CSGN) and East Renfrewshire Council have joined partnership to improve the social, physical, cultural and environmental well-being of East Renfrewshire.

The CSGN is Europe's largest greenspace initiative which seeks to transform Central Scotland into a place where the environment adds value to the economy and where people's lives are enriched by its quality.

East Renfrewshire Council has also pledged to embed the CSGN in all of its policies, strategies and plans and develop and enhance partnership work to realise the CSGN. A number of projects in East Renfrewshire have already benefited from support through the CSGN Development Fund.

The green space network for Barrhead South has been designed as an interlinked network of various habitats and species and urban and rural green spaces to each other.

Embedded within the strategy is the objective to offer a wide range of social, health, economic and environmental benefits which realise the vision of the (CSGN); *'by 2050, Central Scotland has been transformed into a place where the environment adds value to the economy and where people's lives are enriched by its quality.'*

When considering green space needs and opportunities as part of a wider green infrastructure strategy, the design for Barrhead South has sought to utilise existing landscape assets in order to provide the framework for environmentally sustainable development.

By embedding relevant aspects of the green infrastructure strategy outlined within the SPG into Local Plans and Neighbourhood Plans, East Renfrewshire Council can deliver a strategic approach to green infrastructure for Barrhead South which helps to ensure high quality; multi-functional green space is integrated with the new development proposed for Barrhead South.

The greenspace infrastructure for Barrhead South is designed to strengthen and provide structure to the urban form and also accommodate multi-functional components.

To deliver the green infrastructure for Barrhead South, four principles have been adopted:

1. Community involvement and Partnership working – Engage with and empower local communities to become actively involved in the management of the Barrhead South green spaces.
2. Lifelong learning – Provide a varied programme of events and activities and volunteer opportunities at Barrhead South which raise awareness of

green spaces and environmental issues through promotion, education and lifelong learning.

3. Equalities – Ensure that green spaces provide a variety of leisure, recreation and play opportunities which are accessible to everyone in the Barrhead community.
4. Funding – Given the current economic climate, seek to identify new mechanisms for funding open space improvements by:
 - Maximising external funding for greenspaces
 - Identifying income sources which do not deter use of green spaces
 - Where capacity exists within the service, seek to generate income to support the service delivery, and reduce the cost of the service.
 - Use development contributions for green space improvements.
 - Prioritise adopting new open spaces to increase revenue to increase grounds maintenance quality.

By working in partnership with biodiversity, Local Nature Partnerships, woodland authorities and grant award bodies, East Renfrewshire Council can draw upon a range of advice and funding to deliver multiple Green Infrastructure benefits as a single package or alternatively each greenspace can be planned to deliver the benefits that are most needed in a phased manner as funding is realised.

The proposed greenspace framework is illustrated in the plan opposite.



2.9 Greenspace Links

This section illustrates the proposed treatment of a number of important greenspace links within Barrhead South.

These links include existing woodlands, grasslands and burns which pass through Barrhead South and will form the major features within the greenspace network.

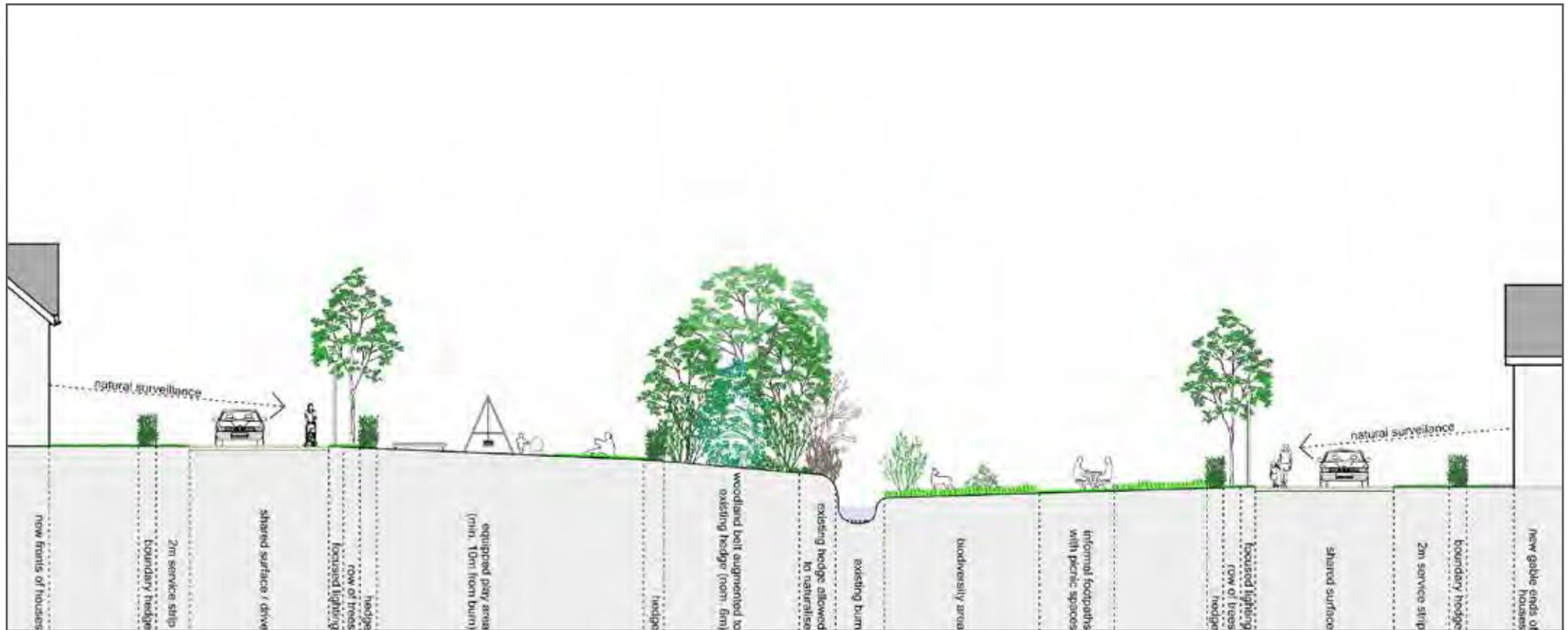
These areas are:

1. Springhill Burn
2. Spierston Burn
3. Green Corridor
4. Existing Shelter Belt at Green Spin
5. Former Rail Line
6. Green Spine under Pylon Line
7. Dams to Darnley Meadows

These greenspace links are illustrated in the plan opposite.

It should be noted that the Former Rail Line is a Local Biodiversity Site (LBS).

Reference should be made to Section 1.9 - Greenspace for People for the potential to develop community greenspace in Areas 4 and 6.



Indicative section through Springhill Burn

1. Springhill Burn

Springhill Burn runs along the edge of a long established field boundary in the centre of the Miller Homes site.

The burn corridor is an important ecological link across this section of the site, connecting existing mature trees to the west around Springhill House with an established woodland plantation and riparian corridor to the east.

This corridor should incorporate formal open space and play facilities as a focal point linking the northern and southern areas of the Miller Homes site.

The burn corridor should also incorporate biodiversity planting to strengthen the ecological link. The hedge and trees to the south of the burn should be retained and augmented with additional woodland edge species planting at a nominal 6m width.

The incorporation of wildflower meadow will provide habitat for biodiversity, and informal recreation opportunities.

A path with a bridge over the burn will provide a north-south predestine route. The bridge and path should be capable of accommodating emergency vehicles. It will provide an alternative route for the core path, which currently runs along Springhill Road.

The Springhill Burn has been subject to grazing along banks, and has some alteration for crossing points, affecting banks and channel.

The burn corridor will be managed to restore damaged bank sections, ensure that it is clear of non-native invasive species. It will be allowed to regenerate a more diverse sward.

This will be monitored throughout the construction period and management actions applied as necessary to ensure a natural burn corridor is established.

This may entail some scarification of bank sides and reseedling, depending on the species mix that returns.

The meadow amenity space to the south will be separated from the burn by native buffer tree planting.

Developers carrying out works in or adjacent to water in the burn will be aware of General Binding Rules (GBRs) under the Water Environment (Controlled Activities) (Scotland) Regulations 2005 (as amended) – CAR.



Extract from Indicative Development Framework



Springhill Burn looking west, showing existing hedge and trees growing on the south side



Indicative section through Spierston Burn

2. Spierston Burn

Spierston Burn and its tributary connect the ecological corridor along side the rail line to the wide and established woodland and burn corridor along Aurs Burn and around Springfield House.

The Spierston Burn is currently heavily grazed, frequently cleared, and of low ecological value.

An existing man made pond is of low value and will be removed.

The burn corridor will form a link in the greenspace framework running through this part of the site. It will provide both amenity for residents and habitat and foraging for biodiversity.

Formal play provision should be located within this burn corridor and centrally in the Wallace Land site.

The SUDS basins will be integral to the areas of openspace forming the burn corridor. These will be seeded appropriately for damp conditions and will create a wetter grassland.

Where the burn is crossed by access routes, the culverts will ensure free flow of water and will use soft engineering on either side.

Tree planting along the burn will be kept back from the burn sides to prevent over shading and to create shelter for species such as birds and small mammals.

Shrub planting and areas of grassland may be incorporated alongside the burn.

The banks of the burn will be allowed to regenerate naturally. Monitoring of this process and associated maintenance will ensure non-native species are removed. If necessary, additional seeding will be applied.

A buffer strip of a minimum of 6m (measured from the top of the bank) on either side of the watercourse should be retained, in accord with SEPA's guidance.

Developers carrying out works in or adjacent to water in the burn will be aware of General Binding Rules (GBRs) under the Water Environment (Controlled Activities) (Scotland) Regulations 2005 (as amended) – CAR.



Extract from Indicative Development Framework



Spierston Burn looking south towards rail line embankment



Indicative section through green corridor to railway line

3. Green Corridor

This central landscape area serves to provide both a buffer to the elevated rail line to the south, and continuity in the greenspace network. It links an existing established woodland and burn corridor to the new greenspaces in the east.

It is intended that this area will develop into a woodland block with a central meadow zone.

This green corridor will be planted and designed for use by wildlife and human access.

A woodland strip to the south of this corridor serves as an acoustic and visual buffer to passing trains and greatly enhances the biodiversity corridor of the rail embankment.

This woodland strip should contain woodland edge species planting and woodland core species planting to provide a minimum of 20m depth of woodland.

A further woodland margin adjacent to the rear gardens of new homes creates a visual buffer to the rear gardens of properties and should be planted with woodland edge species to a minimum depth of 5m.

Housing at the western end of this area should provide natural surveillance with windows overlooking the space.

Trees and scrub will be planted to the density required for screening and managed at edges to permit the development of the internal meadow zone.



Extract from Indicative Development Framework



View looking east along northern side of rail line



Indicative section through the existing shelter belt at the green spine

4. Existing Shelter Belt at Green Spine

This existing shelter belt is an important landscape feature, and marks the ridgeline between the north and south areas of the central part of the site.

The shelter belt also marks the highest point of the visually sensitive area of the site from the Dams to Darnley Country Park to the south, as identified in the LVIA.

It is of mixed species and in varying condition, but provides valuable existing character and biodiversity links within the site.

The existing shelter belt will be retained and supplemented with planting to widen the belt. This will also retain and protect the small pipistrelle bat roost present in trees on the west end.

The shelter belt will include additional large tree and shrub planting, and it will be managed to create a woodland structure from ground layer to canopy.

This will establish a shelter belt for a range of flora and fauna creating a more effective biodiversity link across the middle of the site.

It will be managed at its southern edge to incorporate longer grasslands grading out to a narrow amenity mown strip along the pedestrian access route. The edges to grasslands will be planted with a species rich mix.

This widened shelter belt will also create a stronger visual buffer between the development and the Country Park. Houses will back onto this shelter belt. It will have a footpath along its southern edge linking east to west. This will provide good views across the Green Spine and out to the wider countryside and Country Park.

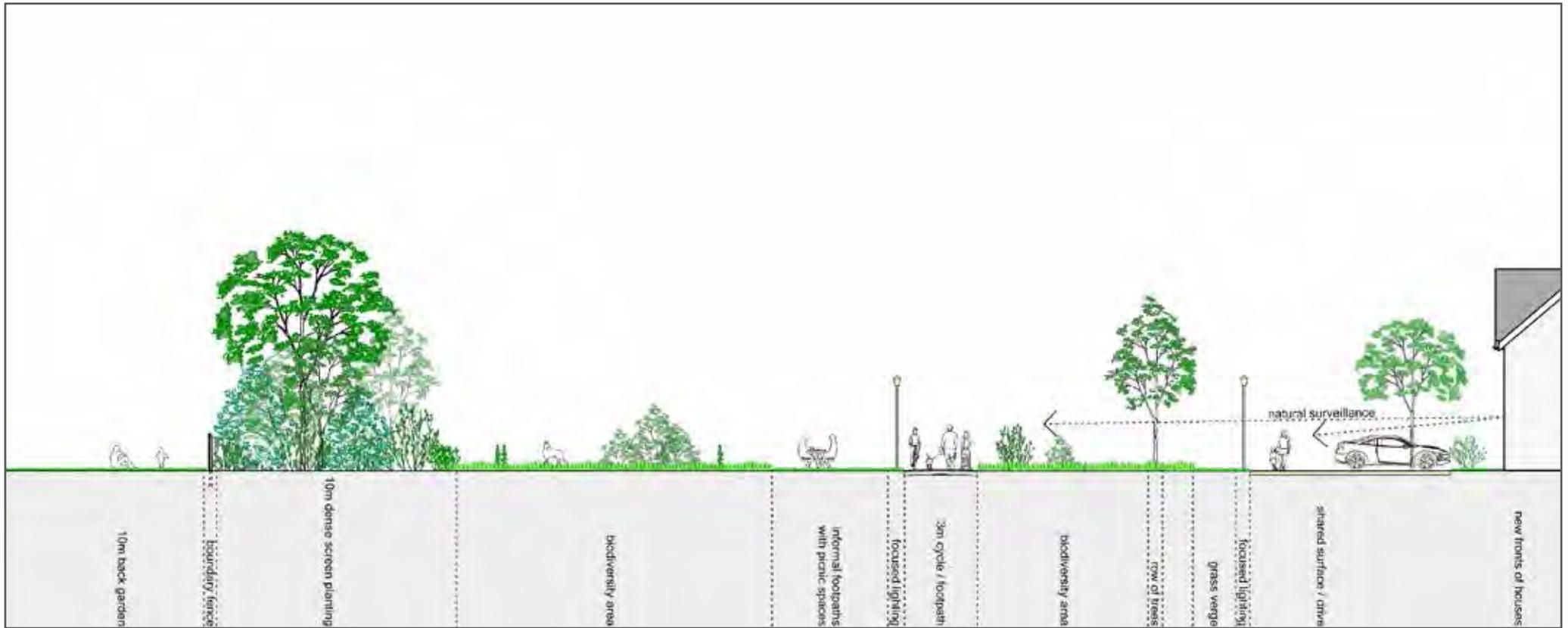
Reference should be made to Section 1.9 - Greenspace for People for the potential to develop community greenspace adjacent to this Area.



Extract from Indicative Development Framework



Existing shelterbelt from the south, looking east



Indicative section through the former rail line

5. Former Rail Line (LBS)

The former rail line running across the site is a designated Local Biodiversity Site (99). It is used regularly by existing Barrhead residents for recreation and dog walking.

This corridor needs to be treated as an important green connection from Barrhead into Barrhead South and on to the Dams to Darnley Country Park. The corridor should be planted and maintained as both an ecological link and amenity area.

The majority of the LBS will be retained although subject to access routes bisecting it and some loss of vegetation at its edges to accommodate a shared surface lane.

Ongoing management to remove Japanese Knotweed within the LBS is required.

Informal planting will assist the creation of landscape buffers. The LBS will incorporate a shared footpath connecting Springfield Road and the Green Spine.

A few spikes of Greater Butterfly Orchid are present on the LBS. The greater number lie in fields either side of the LBS. The main resource is in the field off the south-west corner of the LBS. This field will be retained as wildflower meadow specifically for the re-establishment of this Orchid.

All new homes close to the footpath running through this area should front onto the space. Any backs of houses should have a woodland edge species tree buffer to the outside edge of the garden boundary fence.

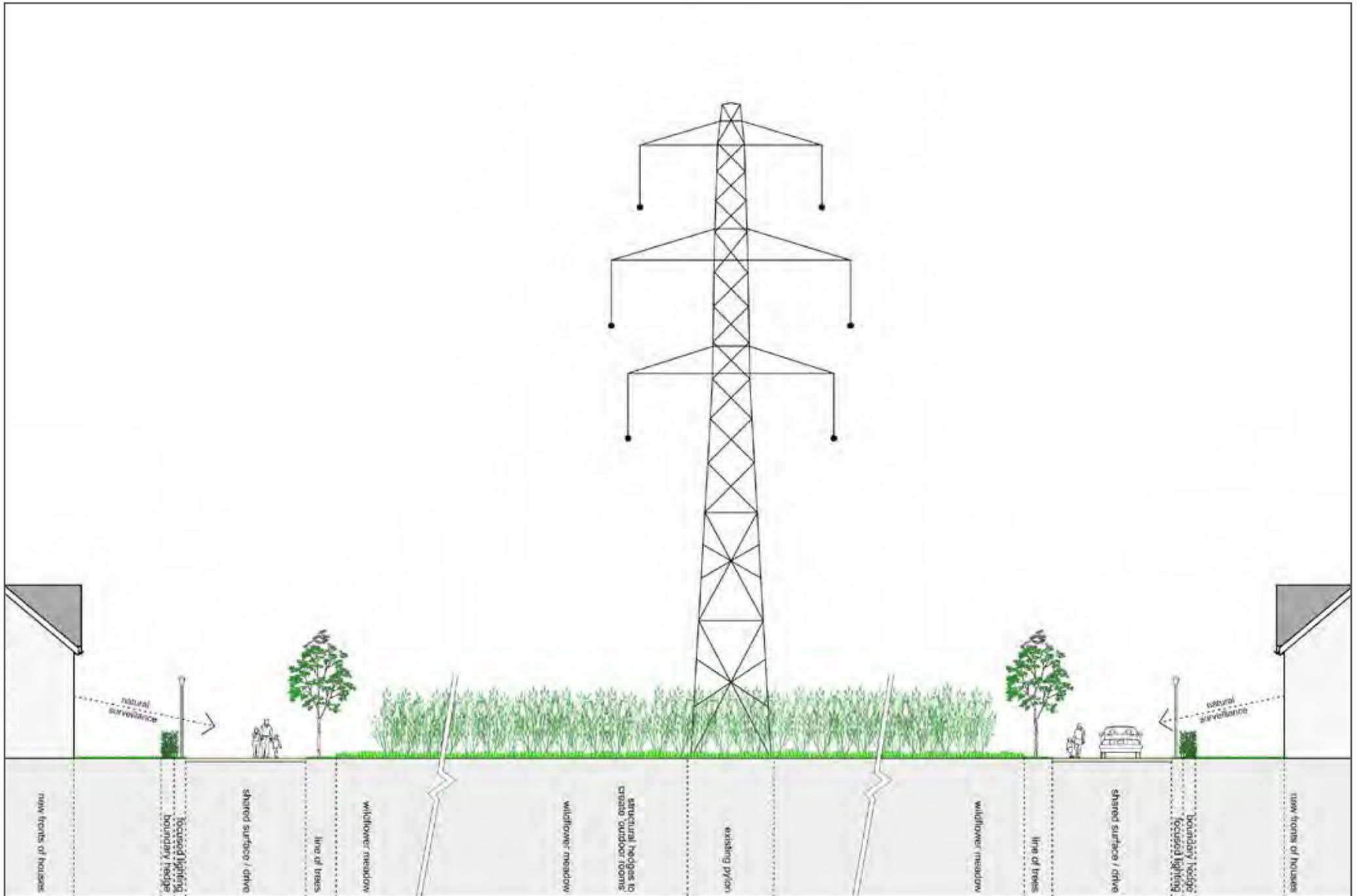
All areas along this route should have passive surveillance from fronts or gables of houses.



Extract from Indicative Development Framework



Existing footpath running through Local Biodiversity Site 99, looking north west



162 Indicative section through the green spine

6. Green Spine

The Green Spine is the core public greenspace area providing community areas for recreation and amenity, with opportunities to create spaces for Greenspace for People, and improve biodiversity.

The objectives for the Green Spine are:

- Provide recreational open space and visual amenity within an ecological setting
- Provide opportunities for a sustainable landscape through native species selection
- Establish a safe, overlooked traffic free movement corridor for pedestrians and cyclists
- Define character and quality through bold landscape features within a 15-25m wide space
- Create a strong vista through the site

The landscape components necessary to deliver these objectives are:

- Semi mature tree and distinctive shrub planting which link with palette of planting materials proposed at key community spaces to improve pedestrian scale
- Formal Parterre structure created through the use of Blackthorn hedge planting
- Allow the potential for a community orchard or growing spaces to be delivered by the Council in consultation with the local community.
- Wildflower seeding to key recreational areas including species rich grassland sward and meadow management.
- Innovative play space areas with landscape mounding to provide enclosure to areas of play
- Pocket parks providing play facilities

These landscape elements will be considered at the detail design stage in consultation with the local community.

Reference should be made to Section 1.9 - Greenspace for People for the potential to link into the community greenspace adjacent to this Area



Green Spine



Existing view north east within ERC land



164 Indicative section through Dams to Darnley Meadows

7. Dams to Darnley Meadows

The eastern end of the site is set within the Dams to Darnley Country Park.

The fields within this area are currently classified as wet and dry grasslands and are set within the policy planting associated with Lyoncross House.

The fields have been grazed until recently which has maintained the grasslands and kept natural regeneration at bay.

Ecologically, these areas are useful as grasslands, and so careful management is needed to retain their current habitat without grazing.

To enhance the biodiversity and amenity value, these meadows should have a variety of habitats around each edge. Any woodland or shelter belt should have a 3m native woodland shrub species edge planted along the edge of it.

The meadow from this edge should grade down in height away from the woodland edge. This can be achieved by different mowing regimes.

This variety of species and heights allows a wider variety of habitats and foraging opportunities.



Extract from Indicative Development Framework



View east along northern boundary of grasslands



2.10 Providing Play in the Green Network

Strategy for Play

The aim in Barrhead South is to provide a mix of informal and formal play provision throughout the Green Network. This will include corridors of play within which exploratory play and play equipment will be provided.

The objectives for this innovative play provision is:

- To promote an innovative approaches to play provision in terms of facilities, locations, design and management.
- To promote healthy lifestyles and access to nature, and
- To support community involvement.

Informal Areas for Play provide facility to encourage more natural play with grassed mounding, logs for bug hunting and the use of only very simple equipment to encourage imaginative play.

Design principles will include the following:

- Provide for a wide range of play experiences and age groups, changes in level, informal play pieces, climbing boulders, trim trails, stepping stones and climbing, swinging apparatus, outdoor exercise equipment.
- Accessible for all.
- Meet community needs.
- Allow children of different ages to play together.
- Build in opportunities to experience risk and

challenge.

- Allow for change and evolution.
- Provide space and facilities for informal sport or recreation activity and make use of natural elements.

Within this Green Network, these corridors of play meet the normal requirements for both Local Areas for Play (LAP) and Neighbourhood Equipped Areas for Play (NEAP).

In addition, formal areas of play will be established within the Green Network. This will include nine Local Equipped Areas for Play (LEAP). These LEAPs are distributed throughout Barrhead South to ensure that children are not required to cross a Primary Street to walk to their nearest LEAP.

In addition, a Multi User Games Area (MUGA) is provided in a central location in Barrhead South for older children.

Local Equipped Areas for Play (LEAPs)

Local Equipped Areas for Play (LEAP) with a minimum area of 400m² and aimed at children between 4 and 8 years old would be more regularly accessed and ideally located within 5 minutes' walk from home.

These play areas should generally have a catchment area of 240m radius. LEAPs generally form traditional play facilities and those proposed at Barrhead South should be innovative in design and encourage learning by play.

Design principles will include the following:

- A minimum of 5 pieces of play equipment including one multi climber.
- Play equipment should stimulate and develop: Balancing, Rocking, Climbing, Sliding as well as Social Play.
- Provision of seating for parents and carers and a litter bin.
- The entrances should have a barrier to limit the speeds at which children enter and leave the space.
- The play area should be located alongside a well-used footpath and be overlooked by houses allowing for passive surveillance.
- There should be a minimum buffer zone 10m deep from the play area to the nearest dwelling and a distance of 20m from the play area to the nearest habitable room in a dwelling.
- Buffer zones could be incorporated to include planting to introduce children to natural forms, colour and scents.

Requirements for fencing and barrier limiting child speed need to be agreed with the Council.



An example of landscape features within play provision



168 An example of play provision

Design Requirements

The siting of play space/facilities (whether that is in equipped areas or informal areas of play) is an integral part of the greenspace framework and an integral part of the delivery of the housing developments.

Developers should ensure that play spaces are completed within the same timescale as housing.

A range of play space/facilities will be acceptable and encouraged whether in formalised equipped areas or through use of space created by land forming.

In meeting the needs for play provision, early consultation is expected with the Council to help inform a brief as part of a planning application. This will ensure that the proposals are in accordance with the Council's play strategy.

Equipped areas of play should be located and designed so as to minimise disturbance to nearby dwellings.

Landscaping

Detail design proposals should ensure landscaping is integrated into the design of new play areas.

Tree planting for shade, and low maintenance shrub and hedge planting of native species should be included.

The planting scheme should have regard to children's safety, including planting of non-poisonous plant species and plants free of spikes and thorns.

The planting scheme should consider the overall security of the site, allowing unobstructed views into the site and restricting potential hiding places.

Opportunities should be sought to protect, enhance and create wildlife habitats, enhancing biodiversity and providing opportunities for education.

Equipment, Signage and Furniture.

Robust and vandal resistant equipment, signage and furniture should be incorporated. This must comply with relevant British Standards.

The choice of play equipment should encourage active and creative play.

Accessibility

Where fences are required, access gates and footpaths should be designed to allow access by all.

Provision for secure bicycle parking should be incorporated in the form of Sheffield bicycle stands or similar.

Routes and movement

The location of equipped play areas should carefully consider its accessibility, taking into account the need to cross Primary Streets.

Locations of play spaces should be separated from areas of high vehicles movements and accessible directly from pedestrian routes.

Management and maintenance

Effective management and maintenance of play provision will help to ensure the success of these facilities.

Developers will be required to agree a management and maintenance scheme with East Renfrewshire Council. The scheme should provide for the maintenance of the play facilities to an agreed standard or the transfer of the facilities to East Renfrewshire Council for it to manage with an agreed maintenance sum.

The scheme should ensure adequate upkeep, inspection, repairs and refurbishment.

Safe and Secure

All main footpaths and public space, including play areas, will be overlooked by houses. This use of passive surveillance will create a safer environment and therefore encourage increased use of the space



2.11 Incorporating Sustainable Urban Drainage Systems within Greenspace Infrastructure

There are five SUDS ponds and two SUDS basins with a series of Swales located throughout the site, linked to the proposed meadow / biodiversity areas and burn corridors.

Both engineered basins and ecological SUDS ponds will be formed. Where possible, these will be planted to maximise biodiversity value, providing opportunities for wildlife in terms of foraging and shelter. These are located within the green network, allowing connectivity throughout the site.

The primary consideration on site is pollution from roads, footpaths and car parking areas. In accordance with SEPA, Scottish Water and the Council's requirements, such areas generally require two levels of treatment.

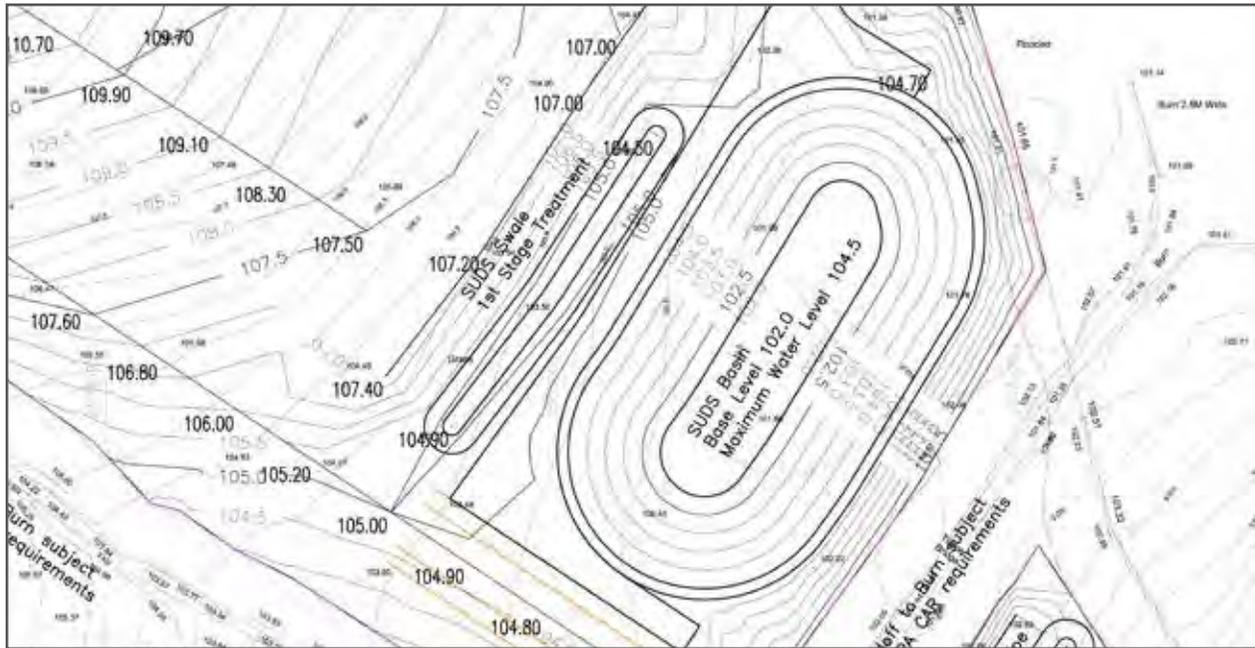
The treatment proposed is to comprise end of line Swales or Swales/filter trenches running immediately adjacent to the carriageway and footpaths. SUDS ponds or basins are designed in accordance with Sewers for Scotland 2.

This system will ensure that the existing hydrology of the site and the ecology of water courses is maintained and enhanced.

The SUDS ponds and basins are all located within the burn corridor greenspace. These will be planted to contribute to biodiversity objectives.



Example of Detention Basin



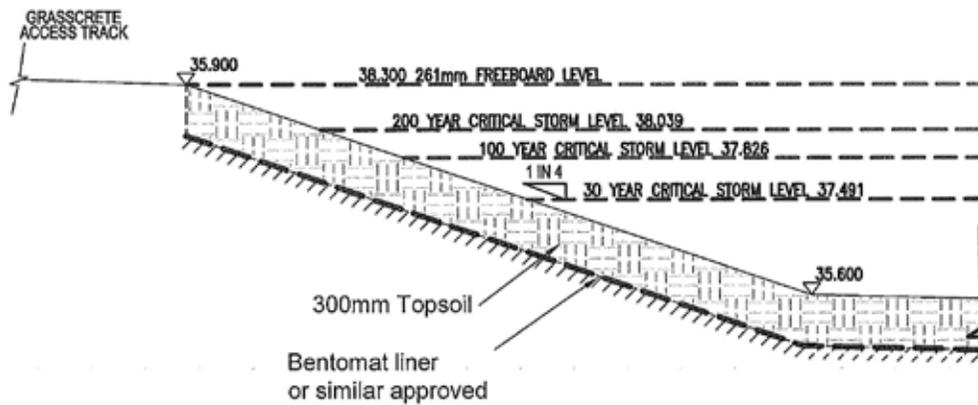
SUDS Basin

SUDS Basins are to be provided for attenuation and treatment where topography and adjacent burn levels do not allow for the additional depths required for a Pond to be provided.

Basins are designed in accordance with Sewers for Scotland 2 to meet Scottish Water requirements.

They are designed to cater for a 200 year storm event, which is based in part on Council flood requirements.

Access is provided via a 3.5m access track, which requires access to either the development network or existing road network access. In general, they are surrounded by a fence for safety reasons.



NOTE:
IMPERMEABLE MEMBRANE SPECIFICATION TO BE VERIFIED IN ACCORDANCE WITH SITE CONDITIONS.

SUDS Detention Pond

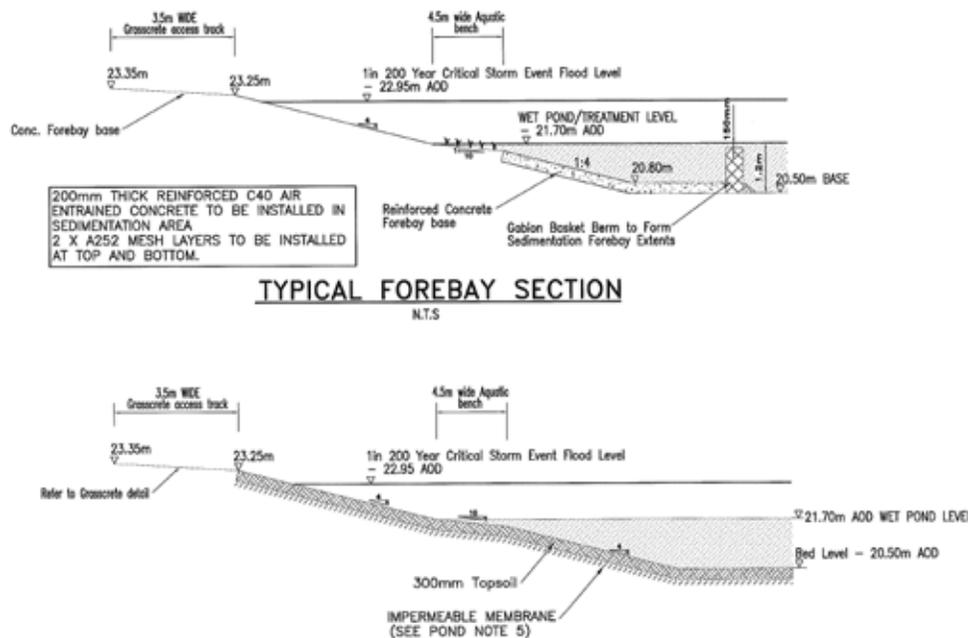
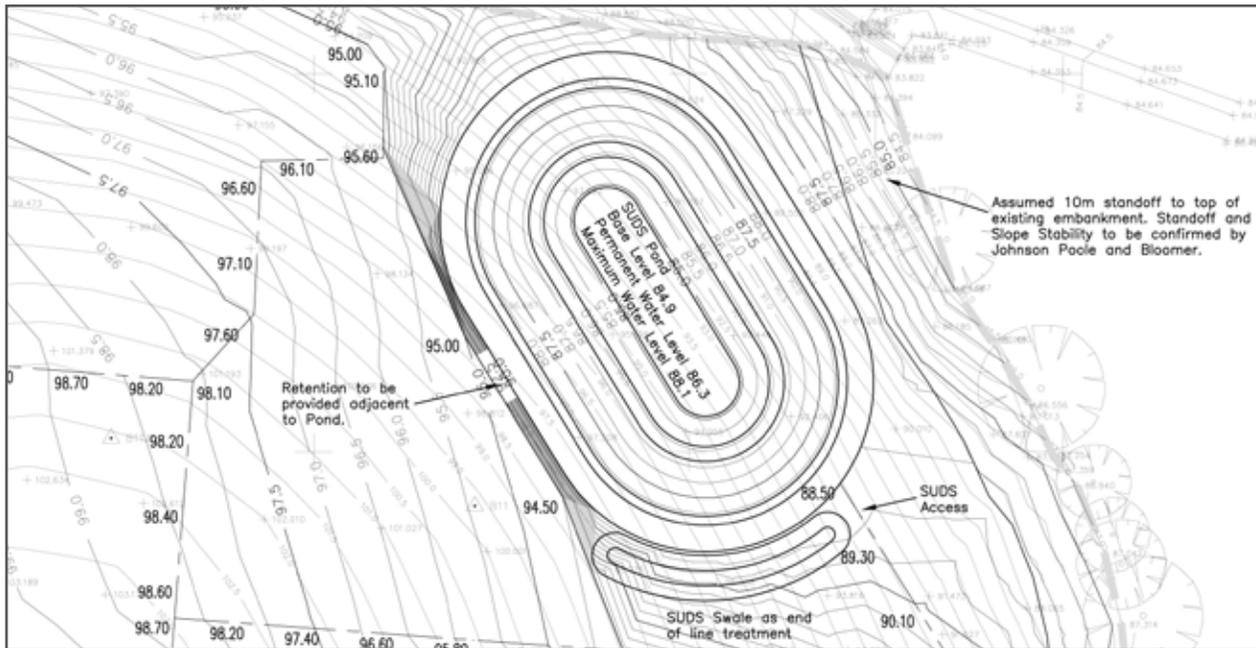
SUDS Ponds are to be provided for attenuation and treatment where topography allows for the additional depth required for outflows to be provided.

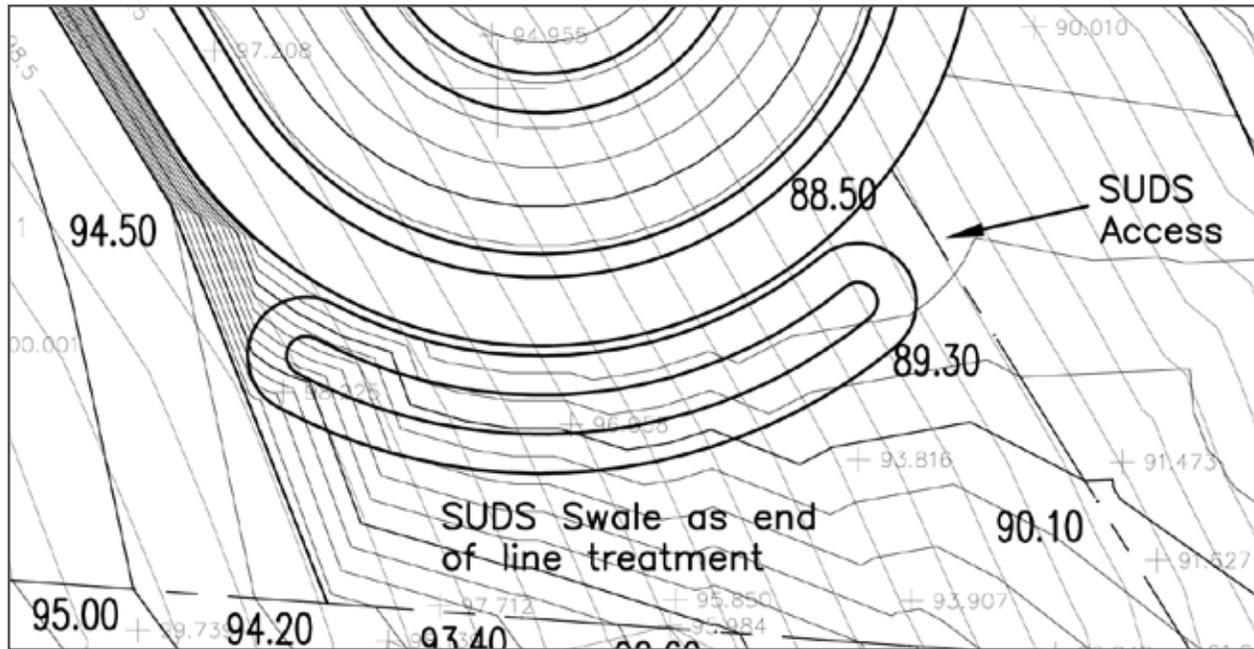
Ponds are the preferred option due to their environmental benefit in comparison to Basins, as they provide permanent shallow and deep water areas that increase the biodiversity elements available.

Ponds are designed in accordance with Sewers for Scotland 2 to meet Scottish Water requirements. They are designed to cater for a 200 year storm event, which is based in part on Council flood requirements.

Access is provided via a 3.5m access track, which requires access to either the development network or existing road network access.

In general, they are surrounded by a fence for safety reasons. Wherever possible, this should be located on the inside of the access track and planted for visual and biodiversity reasons.





End of Line Swale

Surface water treatment via end of line swales are to be located adjacent to Basins and Ponds and upstream of underground attenuation facilities where the topography allows for the additional levels required in their provision.

These are generally 2m wide channels with 0.5m depth, subject to flow requirements.

Drainage is collected via standard gullies and gravity drainage networks prior to discharging via a headwall into the grass swale.

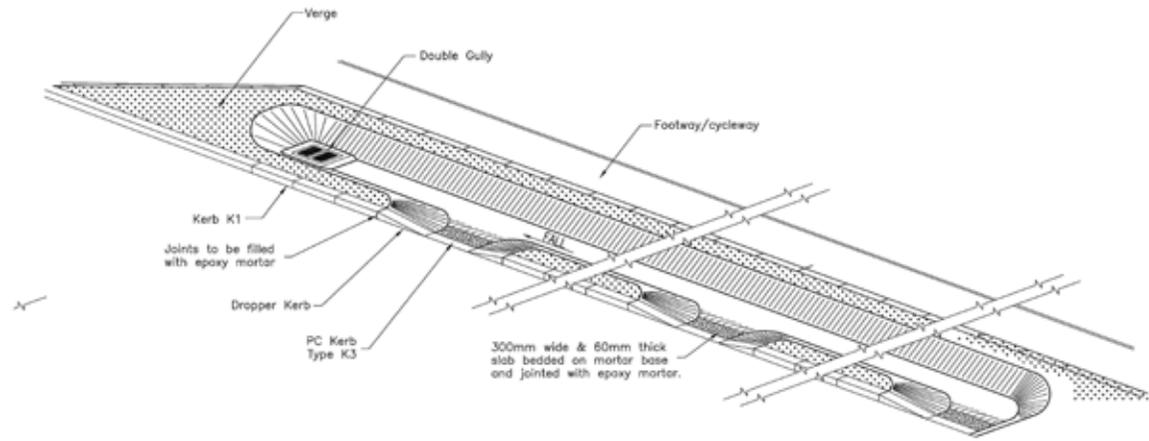
This then flows for a minimum of 30m to the far end of the swale, where it is collected via a manhole with grated cover or headwall as appropriate, prior to discharging into the SUDS attenuation and treatment Pond or Basin or underground attenuation storage as appropriate.

Roadside Swale

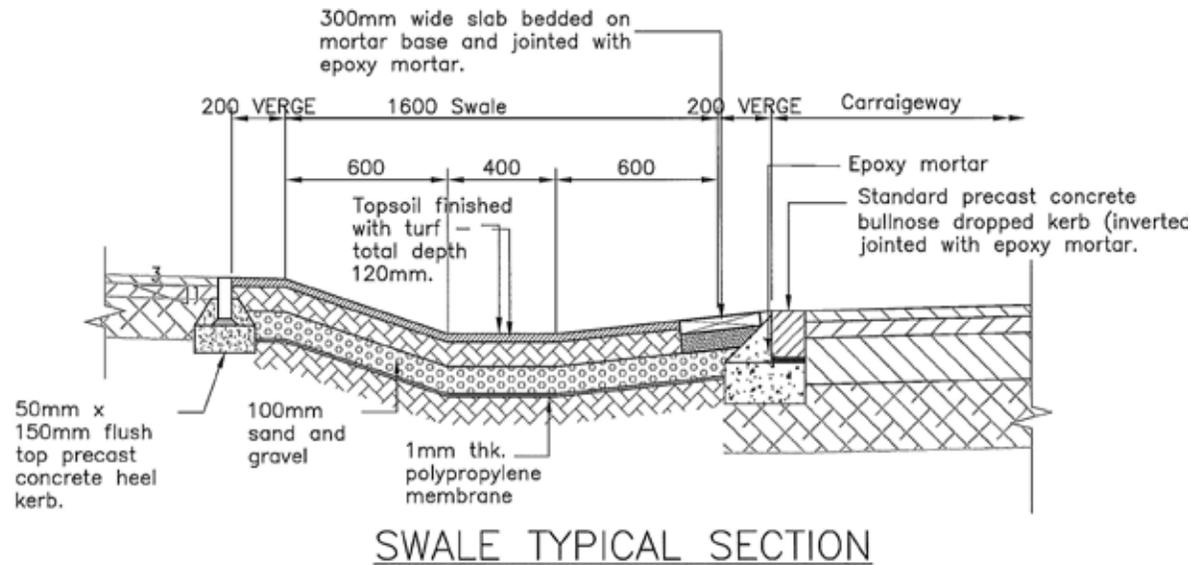
Typical roadside swales are to be located throughout the development areas where topography does not allow for end of line swales to be provided.

These cater for first stage roadside treatment and are generally provided with crossfall carriageways to minimise the impact on the development.

Swales are provided at appropriate locations with over the edge drainage via flush drop kerb entry points, prior to treatment along the swale and discharge into the drainage network via gullies located at low points and end of line locations within the swale.



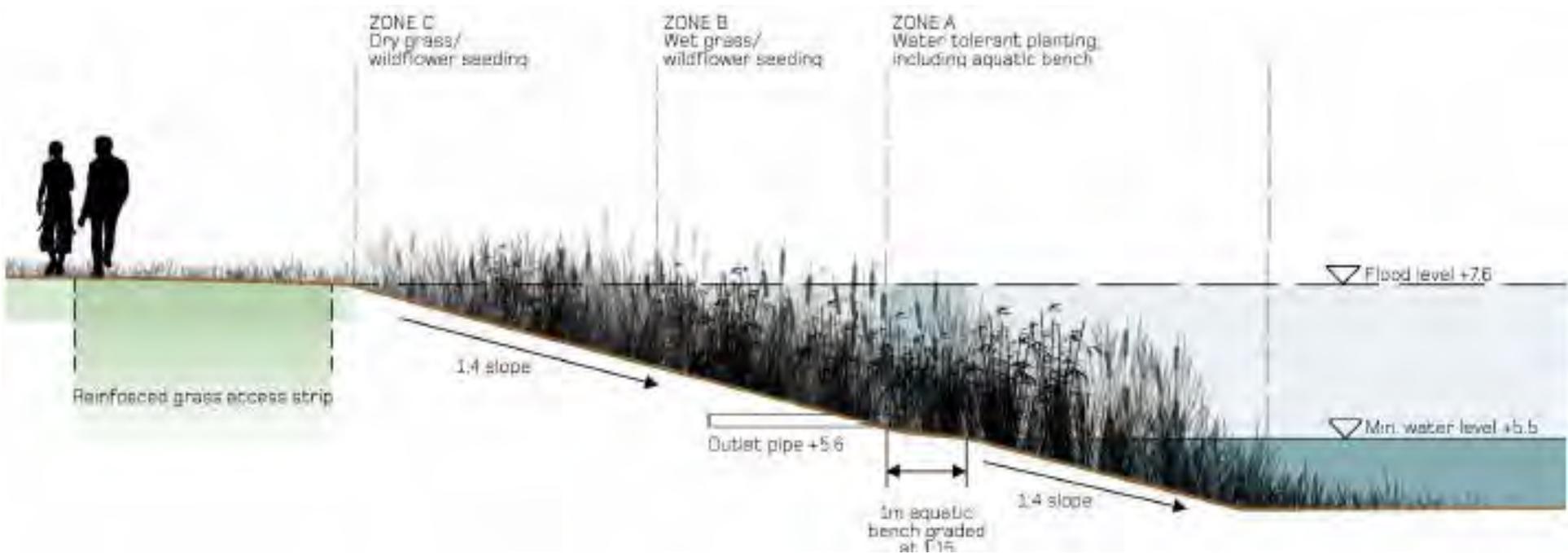
TYPICAL DETAIL AT SWALE INLET



SWALE TYPICAL SECTION



Pond Precedent Images



Wetlands

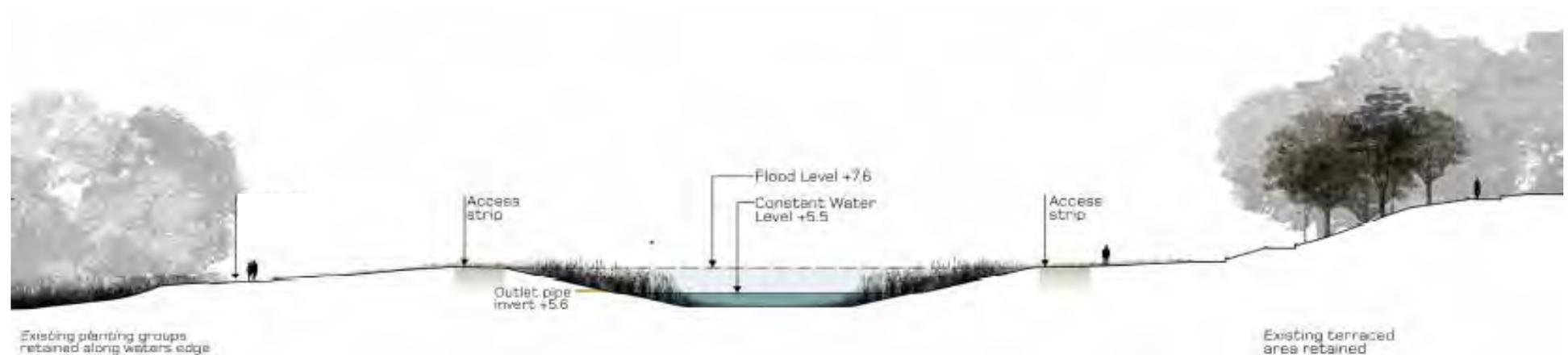
Where agreed with Scottish Water, the SUDS Ponds and Basins can be enhanced to improve their ecological value.

Open water can be designed to allow public access with minimum risk without the need for fencing.

These more ecological SUDS Ponds and Basins can be designed within the context of the overall landscape plan to reinforce local landscape character and work with existing hydrology and habitats.

The key measure is to reduce the slope of the Pond and to introduce an aquatic margin through a break in slope.

Measures can also be introduced to the end of line swales to improve water retention and encourage a more wetland habitat.



2.12 Design Guidance for Infrastructure

This section provides guidance on the pallet of materials, finishes required by East Renfrewshire Council for the establishment of the infrastructure necessary to deliver the streetscape and movement hierarchy in Barrhead South along with the landscape proposals for the greenspace network.

Its aim is to achieve a consistency in the design of the infrastructure for new neighbourhood at Barrhead South.

The design guidance sets the context for detailed design development by providing guidance about the palette of materials to be used within Barrhead South.

The specification for the final choice of materials will be confirmed through the detailed design stage in consultation with East Renfrewshire Council.

Developers should consider the following:

- Choice of materials should reflect the hierarchy of streets and the public realm.
- Ensure that new surfaces including footpaths, carriageways and kerbs are consistently applied, avoiding discordant colours and meaningless patterns.
- Ensure that tactile paving integrates with the surrounding paving.
- Ensure that the choice of colours and materials harmonise with that of the overall streetscape.
- Delineate boundaries and highlight particular features.
- Neatly incorporate street furniture, drainage gullies and channels, avoiding awkward junctions and cuts.

Paving materials must be robust in order to reduce the maintenance requirements.

The hard landscape strategy will create a legible and uncluttered public realm and establish a consistent design for Barrhead South.

The following outlines a specification for a pallet of materials for the following infrastructure:

- Primary Streets
- Neighbourhood Streets
- Lanes
- Primary Nodes
- Secondary Nodes
- Tertiary Nodes

General guidance is also provided on street furniture and boundary treatments.

Specifications for landscape planting and proposals for the following is also provided:

- Primary Streetscape
- Neighbourhood Streetscape
- Lanes streetscape
- Woodland structure
- Feature Trees
- SUDS ponds and swales

Early consultation with the Council about the palette of materials is recommended.

PRIMARY STREETS TECHNICAL STANDARDS	
Road Type	Standard / Proposal to be Applied
Design Speed	30kph to 50kph (20mph to 30mph)
Traffic Calming	Speed to be controlled by use of horizontal alignment / features. Raised junctions may be considered in certain circumstances.
Carriageway Width	6.00m to 7.3m wide, depending upon usage.
Maximum Gradient	Longitudinal gradient maximum 8% and in exceptional circumstances, gradients over this maximum will need to be agreed with the Council.
Minimum Gradient	Absolute minimum of 1%
Minimum Horizontal Curve Radius	A minimum radius is not specified. The designer shall ensure with swept path analysis that a 16.5 metre long articulated vehicle, a rigid goods vehicle and a public service vehicle can safely negotiate the proposed layout. Curve widening to be incorporated as required.
Minimum Sight Stopping Distance	In accordance with <i>Designing Streets</i> guidance, governed by design speed above.
Vehicular Frontage Access	No: on Aurs Road or on Springfield Road from Aurs Road to Balgraystone Road Yes: on all others
Shared User Footway / Cycleway	3m wide shared cycle / footway with at least a 2m wide verge between cycle footway and carriageway, or 2m wide shared cycle / footway with at least a 2m wide verge between cycle footway and carriageway.
Minimum Junction Spacing on Primary Road	Aurs Road: Staggered junctions spacing should be no less than 40m and the consecutive junctions spacing should be no less than 80m.
Corner Radius	≥ 6 metres
Visibility Splay Minimum	In accordance with <i>Designing Streets</i> guidance, governed by design speed above.

PRIMARY STREETS DESIGN GUIDE		
Surface Type	Materials Options	Description
Running Surface	Rolled Asphalt surfacing	Asphalt surfacing to majority of road surface.
Kerbs	Standard pc kerbs with 110mm Upstand kerb	Standard precast grey concrete kerbs is advocated. Kerbs to comply with BS EN 1340
	Proprietary concrete kerb with 15mm Upstand kerb	The use of standard precast grey concrete kerbs is advocated as an edge restraint to pedestrian surfaces. Kerbs to comply with BS EN 1340 Lay straight or curved to a radius, avoid small cuts- minimum length 350mm Note: Specifications for Adoptable areas of surfacing to comply with design and construction standards set out by East Renfrewshire Council
Pedestrian Surface	Rolled Asphalt surfacing	A high quality flexible surface such as rolled asphalt with coloured chips to match nodes

PRIMARY STREETS DESIGN GUIDE		
Road Signage	Road Signage	Road signage kept to a minimum, to ensure that the street design remains uncluttered where possible such signage will be incorporated into street furniture.
Lighting	Street lighting	<p>8m Conical Aluminium</p> <p>The lanterns must meet East Renfrewshire Council's current specification and minimum lighting performance requirements and are subject to approval of East Renfrewshire Council's Lighting Co-ordinator.</p> <p>On footpaths (where there is no access for maintenance vehicles) 5m conical raise and lower columns. The street lighting shall be planned as an integral part of the street layout design, rather than at the end of the design process. The design of the adjoining landscaping, in particularly any trees planting which is to take place, should take account of the impact it may have on the effectiveness and maintenance of the street lighting.</p>
	Feature lighting to key buildings & features	Where required recessed floodlights will generally set within lighting cages and will be sited outwith adoptable areas.
Street Furniture	Metal & timber seats/ benches	<p>Benches to be used with arm rests and back. Stainless steel frame and timber seat/ back to combine comfort and durability. Use FSC accredited hardwood such as European Oak and finish with a protective coating. Non-certified hardwoods are not permitted.</p> <p>Height 450mm. Typically use a classic style, incorporating 4 legs with concealed ground fixings. Subject to approval of East Renfrewshire Council's Lighting Co-ordinator.</p> <p>In some areas outwith the primary and secondary nodes, a dark painted finish may be preferred to stainless steel.</p>
	Litter bins	<p>Where required these should be 100L recycled plastic litter bin in black colour, with cigarette stubber and wide aperture. Recessive style with rounded/ conical lid, simple style without gold motifs. Use polyethylene or galvanised steel liner.</p> <p>This is an indicative and innovative ways could be explore at detailed design stage for treatment of litter bins.</p>

NEIGHBOURHOOD STREETS TECHNICAL STANDARDS	
Road Type	Standard / Proposal to be Applied
Design Speed	32kph (20mph)
Traffic Calming	Required – The design of the street will incorporate horizontal features and junction spacing to influence driver speeds to remain below 32kph (20mph). The use of vertical features as traffic calming will be limited.
Carriageway Width	Generally 5.5m wide, however narrower sections of streets, a minimum of 3.7m, will be acceptable over short lengths. Wider roads will be acceptable in order to accommodate on street parking.
Maximum Gradient	Longitudinal gradient maximum 8% and in exceptional circumstances, gradients over this maximum will need to be agreed with the Council.
Minimum Gradient	Absolute minimum of 1%
Minimum Horizontal Curve Radius	A minimum radius is not specified. The designer shall ensure with swept paths analysis that a refuse vehicle can safely negotiate the proposed layout.
Minimum Sight Stopping Distance	In accordance with <i>Designing Streets</i> guidance, governed by design speed above.
Vehicular Frontage Access	Yes
Shared User Footway / Cycleway	2m wide footway minimum
Minimum Junction Spacing on Primary Road	The minimum junction spacing shall be based on stopping sight distances detailed in <i>Designing Streets</i> : therefore staggered junctions spacing is 25m and consecutive junction spacing is 40m.
Corner Radius	≥ 4 metres
Visibility Splay Minimum	In accordance with <i>Designing Streets</i> guidance, governed by design speed above.

NEIGHBOURHOOD STREETS DESIGN GUIDE

Surface Type	Materials Options	Description
Running Surface	Rolled Asphalt surfacing	A high quality flexible surface such as rolled asphalt
Kerbs	Standard kerb with 15mm upstand	Standard precast grey concrete kerbs is advocated. Kerbs to comply with BS EN 1340
Pedestrian Surface	Rolled Asphalt surfacing	A high quality flexible surface such as rolled asphalt with coloured chips to match nodes

NEIGHBOURHOOD STREETS DESIGN GUIDE		
Lighting	Street Lighting	<p>6m Conical Aluminium</p> <p>The lanterns must meet East Renfrewshire Council's current specification and minimum lighting performance requirements and are subject to the approval of East Renfrewshire Council's Lighting Coordinator.</p> <p>The design and location of trees will be subject to the design and location of the street lighting. 5m conical raise and lower columns on footpaths where there is no access for maintenance vehicles.</p> <p>The street lighting shall be planned as an integral part of the street layout design, rather than at the end of the design process. The design of the adjoining landscaping, particularly any trees planting which is to take place, should take account of the impact it may have on the effectiveness and maintenance of the street lighting.</p>
Street Furniture	Metal and timber seats / benches	<p>Benches to be used with arm rests and back. Stainless steel frame and timber seat/ back to combine comfort and durability. Use FSC accredited hardwood such as European Oak and finish with a protective coating. Non-certified hardwoods are not permitted.</p> <p>Height 450mm. Typically use a classic style, incorporating 4 legs with concealed ground fixings. Subject to approval of East Renfrewshire Council's Lighting Co-ordinator.</p> <p>In some areas outwith the primary and secondary nodes, a dark painted finish may be preferred to stainless steel.</p> <p>In some areas outwith Primary Nodes, a dark painted finish may be preferred to stainless steel.</p>
	Litter bins	<p>Where required these should be 100L recycled plastic litter bin in black colour, with cigarette stubber and wide aperture. Recessive style with rounded/ conical lid, simple style without gold motifs. Use polyethylene or galvanised steel liner.</p> <p>This is an indicative and innovative ways could be explore at detailed design stage for treatment of litter bins.</p>
Sustainable street features		<p>Sustainable street features may be incorporated into the street furniture design where appropriate and viable.</p>

LANES TECHNICAL STANDARDS	
Road Type	Standard / Proposal to be Applied
Design Speed	16kph (10mph)
Traffic Calming	Required – The design of the street will incorporate horizontal features and junction spacing to influence driver speeds to remain below 16kph (10mph). The use of vertical features as traffic calming will be limited.
Carriageway Width	Generally 5.5m wide with localized narrowing to 3.7m permitted.
Maximum Gradient	Longitudinal gradient maximum 8% and in exceptional circumstances, gradients over this maximum will need to be agreed with the Council.
Minimum Gradient	Absolute minimum of 1%
Minimum Horizontal Curve Radius	A minimum radius is not specified. The designer shall ensure with swept paths analysis that a refuse vehicle can safely negotiate the proposed layout.
Minimum Sight Stopping Distance	In accordance with <i>Designing Streets</i> guidance, governed by design speed above.
Vehicular Frontage Access	Yes
Shared User Footway / Cycleway	2m wide footway minimum where footways provided – or verge of shared surface.
Minimum Junction Spacing on Primary Road	The minimum junction spacing for Lanes should be 25m. The provision of crossroad junctions may be considered on Lanes.
Corner Radius	≥ 3 metres
Visibility Splay Minimum	In accordance with <i>Designing Streets</i> guidance, governed by design speed above.

LANES DESIGN GUIDE		
Surface Type	Materials Options	Description
Surface	Rolled Asphalt surfacing	A high quality flexible surface such as rolled asphalt with coloured or limestone chips to match nodes
	Proprietary concrete blocks with natural stone aggregate	New setts with a smooth finish, typically silver grey in colour. Lay in half-lap pattern or match traditional setted road surface style. Construction depth to accommodate vehicle loading requirements and construction standards set out by East Renfrewshire Council.
Lighting	Street Lighting	<p>6m Conical Aluminium</p> <p>The lanterns must meet East Renfrewshire Council's current specification and minimum lighting performance requirements and are subject to the approval of East Renfrewshire Council's Lighting Coordinator.</p> <p>The design and location of trees will be subject to the design and location of the street lighting. 5m conical raise and lower columns on footpaths where there is no access for maintenance vehicle.</p> <p>The street lighting shall be planned as an integral part of the street layout design, rather than at the end of the design process. The design of the adjoining landscaping, particularly any trees planting which is to take place, should take account of the impact it may have on the effectiveness and maintenance of the street lighting.</p>
Street Furniture	Metal and timber seats / benches	<p>Benches to be used with arm rests and back. Stainless steel frame and timber seat/ back to combine comfort and durability. Use FSC accredited hardwood such as European Oak and finish with a protective coating. Non-certified hardwoods are not permitted.</p> <p>Height 450mm. Typically use a classic style, incorporating 4 legs with concealed ground fixings. Subject to approval of East Renfrewshire Council's Lighting Co-ordinator.</p> <p>In some areas outwith the primary and secondary nodes, a dark painted finish may be preferred to stainless steel.</p> <p>In some areas outwith Primary Nodes, a dark painted finish may be preferred to stainless steel.</p>
	Tree Grilles	Galvanised steel frame and cast iron grille with non-slip finish. Powder coated finish in gun-metal grey colour. Typically 1200x1200mm in size. Aperture minimum 600mm diameter. Use of a resin bound gravel recommended under the tree grille to prevent build up of salt and debris. Lighting features may be incorporated into tree grilles where appropriate.
Sustainable street features		Sustainable street features may be incorporated into the above street furniture where appropriate and viable.

PATHS DESIGN GUIDE		
Pedestrian Surface	Flexible surfacing e.g. rolled asphalt to pedestrian footpaths within residential areas.	A high quality flexible surface such as rolled asphalt with coloured chips
	Hard binding gravel for pedestrian footpaths through Biodiversity corridors	Within the less formal biodiversity corridors it is preferred that the wearing surface reflects the more rural setting. Caledonian path gravel or similar, graded in size from 4mm to dust . Compacted thickness: 75mm
Kerbs	Standard precast flat top kerbs laid flush	The use of standard precast grey concrete kerbs is advocated as an edge restraint to pedestrian surfaces. Kerbs to comply with BS EN 1340.
Safety Surface to Informal play areas, LAPs & NEAPs.	Loose fill safety surfacing to play areas	<ul style="list-style-type: none"> • Play grade Bark • Depth:- 100mm • to meet the requirements of BS EN 1176 and BS EN 1177

PRIMARY NODES DESIGN GUIDE		
Surface Type	Materials Options	Description
Running Surface	Rolled Asphalt surfacing	A high quality flexible surface such as rolled asphalt with coloured or limestone chips
Kerbs	Standard PC kerbs with 15mm Upstand kerb	The use of standard precast grey concrete kerbs is advocated as an edge restraint to pedestrian surfaces. Kerbs to comply with BS EN 1340 Lay straight or curved to a radius, avoid small cuts- minimum length 350mm Note: Specifications for Adoptable areas of surfacing to comply with design and construction standards set out by East Renfrewshire Council
Pedestrian Surface	Rolled Asphalt surfacing	A high quality flexible surface such as rolled asphalt with or without coloured chips is often the most appropriate solution for areas of low or medium usage.

SECONDARY NODES DESIGN GUIDE		
Surface Type	Materials Options	Description
Running Surface	Rolled Asphalt surfacing	A high quality flexible surface such as rolled asphalt with coloured or limestone chips
Kerbs	Standard pc kerbs with 110mm Upstand kerb	The use of standard precast grey concrete kerbs is advocated as an edge restraint to pedestrian surfaces. Kerbs to comply with BS EN 1340. Lay straight or curved to a radius, avoid small cuts- minimum length 350mm Note: Specifications for Adoptable areas of surfacing to comply with design and construction standards set out by East Renfrewshire Council
Pedestrian Surface	Rolled Asphalt surfacing	A high quality flexible surface such as rolled asphalt with coloured chips

TERTIARY NODES DESIGN GUIDE

Surface Type	Materials Options	Description
Running Surface	Rolled Asphalt surfacing	A high quality flexible surface such as rolled asphalt with coloured or limestone chips
Kerbs	Standard pc flat top pin kerbs laid flush	The use of standard precast grey concrete kerbs is advocated as an edge restraint to pedestrian surfaces. Kerbs to comply with BS EN 1340.
Pedestrian Surface	Rolled Asphalt surfacing	A high quality flexible surface such as rolled asphalt with coloured chips

Street Furniture

Elements of street furniture found in the urban realm include seating, litter bins and signage.

These items will be used to support the activities that occur in Barrhead South without dominating the urban realm with unnecessary clutter.

A pallet of standard objects will be agreed with the Council in advance of the first phase of development.

This includes a consistent pallet of signage throughout the development including at entrances and pathways. The design of this could be informed by the signage within the Country Park and should be appropriate to its setting in both material and design.

Bespoke items may be incorporated in specific locations to aid wayfinding.

Bollards will be kept to a minimum and where required they may be movable to allow emergency and service vehicles access.

The requirement for litter bins, their size and frequency will be assessed during the preparation of detail design proposals.

The choice of Street Furniture will be consistent and be integral to the overall design by responding to and complementing the landscape and urban realm.

The intention is to provide a range of seating opportunities, from informal seating edges and stone blocks for perching through to more traditional benches with backs and arms rests.

To achieve this goal three categories of seating are proposed:

- Traditional Seating
- Multi-Functional Seating
- Informal Seating

Traditional seating, will be situated in sunny and sheltered locations in areas of built development. Arm rests and seat backs will make these seats comfortable and accessible to all users.

Multi-functional seating will use the opportunities provided by elements in greenspace network, whose primary function is other than seating to provide short stay seating.

Informal seating is proposed as an intervention at strategic locations.

Where possible all street furniture will be restricted to within hard surfaces in order to reduce the maintenance burden.

Boundaries

The design and detailing of boundary treatments should provide important features in the street scape and have a unifying effect which provide defensible space that create clear definition of public, and private space.

The means of enclosure at the front of the plot shall normally consist of one of the following:

- A dwarf wall to a height of 1m,
- A dwarf wall with railings to 1m,
- A low wall with hedges, or
- Hedging

The requirement for a dwarf wall will be standard for all corner plot developments.

The means of enclosure between streets/lanes and private rear/side garden areas, should normally consist of a 1.8m high wall with a finish consistent with that of the adjacent homes.

The means of enclosure between public greenspace and private rear/side garden areas, should normally consist of a 1.8m timber fence with screen planting to public side. This condition should only be incorporated in limited locations.

The means of enclosure between private garden areas should normally consist of timber fencing or a wall to a height of 1.8m at the rear of the plot up to 4m beyond the rear elevation of new homes.

Beyond 4m from the rear elevation of new homes can be reduced to a height of 1.2m with a visually permeable fence type above.

Planting

The proposed hierarchy of tree, hedgerow, shrub, grass and riparian planting will complement the architectural character of Barrhead South.

The planting will also sensitively respond to the existing planting within the site to increase biodiversity and seasonal interest. This will assimilate the development into its contextual environment and enhance the overall setting.

The planting palette should be selected for its suitability to the prevailing micro climate and the surrounding built form.

The selection of tree and shrub planting will refer to local sources and be selected for their form, overall size and suitability for an urban situation.

Generally, tree planting is to be located to avoid disturbing lighting, signage, key important views and services.

Species

Planting species should be native where possible and appropriate.

Shrub/ herbaceous species are to be native where possible and appropriate, or if not then attract wildlife and offer amenity value.

Appropriate non-natives can be used for ornamental setting providing year round interest.

In some areas it may also be necessary to select non native species that are robust enough to withstand the urban setting.

An indicative list of species appropriate for use within Barrhead South are listed in the following pages.

Height

Tree planting should provide shelter and add an intermediate scale to the appropriate spaces and streets. For safety and security purposes, tree planting should have 2m clear stem.

Selected shrub planting should be no greater than 90cm height to allow views across planted areas. Planting should incorporate a mix of evergreen and deciduous species, with ground covers, mid height species and feature species.

Maintenance

All planting should also be relatively low maintenance.

Maintenance should ensure that planting is kept within the height specified to ensure natural surveillance.

Content/ condition of existing planting

The extent, location and type of existing planting should be assessed in relation to the proposed development proposals.

Any works to existing tree planting should follow BS 3998.

Replacement of failed tree planting should follow the landscape strategy proposals, should be replaced with an appropriate size and should be undertaken within the next available planting season.

Tree removal

Where tree removal is required, appointed contractors should take note of BS 3998 and should follow recommendations by an appointed arboriculturalists.

Tree retention

Where trees/ hedges are retained adjacent to construction works, they should be sufficiently protected in line with BS 5837 and any appointed arboriculturalists's recommendations.

Details for calculating root protection areas and recommended root protection during construction should be provided as part of detailed applications.

Topsoil/Use of soil within construction sites

Topsoil to conform to BS3882 'premium grade', graded, cultivated, stone-picked and fertilised.

Minimum topsoil depths:

- 150mm to grassed areas
- 1200mm depth to tree areas
- 350mm depth to shrub planted areas

Reference should be made to the DEFRA code of practice for sustainable use of soil on construction sites. www.defra.gov.uk

Grass areas

All amenity grasslands should use a species rich mix, these are widely available from suppliers of Scottish seed mixes.

Wildflower areas

Wildflower mix will include perennials and annuals selected from the native species suitable for use for ecological landscaping purposes.

Wildflower areas to be seeded at rate of 5g/m2 or as per recommendations from supplier (dependent of particular mix chosen).

Planting Notes

Tree and shrub planting should be selected for a variety of conditions, i.e. light/ shade, wet/ dry/ exposed sheltered conditions.

All planting needs to be appropriate for conditions in order to thrive and be successful. The planting indicated in the following section needs to be selected for each space by their preferred conditions.

The species list is not exhaustive- it is intended to establish an indicative palette which may be adapted to suit the needs of specific development proposals.

PRIMARY STREETSCAPE PLANTING

Trees



Primary Streetscape

Semi-mature tree planting for use along primary access routes and within nodes. Maximum mature canopy width 5m. Use only root-balled or container grown specimens and plant as a minimum 18-20cm girth size with a 2.2m clear stem. Plant in an urban style within defined avenues and in single species groups. Care should be taken in the selection of species to ensure columnar growth, relatively small leaf size and relatively disease / aphid free. They should also be a hardy species, tolerant of urban conditions such as salt spray.

Typical tree planting species could include:

1. Quercus Robur 'Fastigiata'
2. Acer campestre 'Streetwise'
3. Acer campestre 'Elsrijk'
4. Pyrus calleryana 'Chanticleer'
5. Tilia cordata 'Greenspire'
6. Carpinus betulus 'Fastigiata'

Primary street trees to be appropriately secured.

PRIMARY STREETSCAPE PLANTING

Hedging & Bulb Planting



Hedging

Hedging is to be used as boundary features within residential areas to create an appropriate streetscape. 1.1m high hedging is proposed with a maximum hedge width of 600mm. Planted in a double staggered row with a timber post and wire fence running centrally and providing initial support.

Typical species could include:

- Fagus sylvatica
- Crataegus monogyna
- Carpinus betulus

Alternatively for additional site biodiversity a mixed native hedge incorporating:-

- hawthorn Crataegus monogyna
- holly Ilex aquifolium
- blackthorn Prunus spinosa
- rose Rosa canina, R. tomentosa, R. sherardii
- gorse Ulex europaeus
- bramble Rubus fruticosus



Bulb Planting to mown road corridors and verges

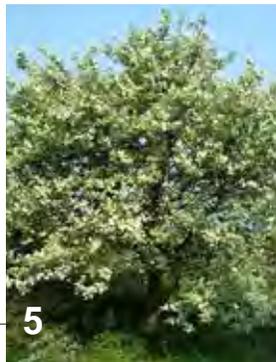
Where proposed, each species of bulb should be planted at average 20 bulbs / m², ie. total density of bulbs will be 60 / m². Density varies from centre to edge of drifts 30 to 10 per square metre per species. Drifts to naturalise under trees and in grass. Bulbs shall be viable, free of pests and diseases, and of certified nursery production. Bulbs dug from the wild will not be accepted. Bulbs to be planted at same time as grass seeding.

Typical species include:

- Scilla nutans
- Galanthus nivalis
- Narcissus 'King Alfred' division 1a

NEIGHBOURHOOD STREETScape PLANTING

Trees



Neighbourhood Streets

Semi mature tree planting to be used in Neighbourhood Streets

Planted for interest and ecological value.

Plant in groups of single species planted together, typically in groups of 3 or 5.

Neighbourhood trees will be lighter in character to the Primary Street trees and generally be of a smaller scale. Flowering trees and species which produce berries or provide autumn leaf colour will provide interest and variation.

Typical tree planting species could include:

1. Acer rubrum
2. Betula pendula
3. Malus tschonoskii
4. Prunus calleryana 'Chanticleer'
5. Sorbus aria
6. Sorbus aucuparia

Neighbourhood street trees to be appropriately secured.

NEIGHBOURHOOD STREETSCAPE PLANTING

Hedging & Shrub Planting



Hedging

Hedging is to be used as boundary features within residential areas to create an appropriate streetscape.

1.1m high hedging is proposed with a maximum hedge width of 600mm.

Planted in a double staggered row with a timber post and wire fence running centrally and providing initial support.

Typical species could include:

- Fagus sylvatica
- Crataegus monogyna
- Carpinus betulus

Alternatively for additional site biodiversity a mixed native hedge incorporating:-

- hawthorn Crataegus monogyna
- holly Ilex aquifolium
- blackthorn Prunus spinosa
- rose Rosa canina, R. tomentosa, R. sherardii
- gorse Ulex europaeus
- bramble Rubus fruticosus



Shrub Planting to Neighbourhood Streets

Ornamental ground cover planting for use within soft landscape areas, secondary spaces and car parking areas or under trees to allow views through.

Matt-forming species should be selected reaching a maximum height of 400mm. Plant as a container grown plant of minimum 3L pot size in a minimum density of 7 per m2.

Typical species could include:

- Vinca minor
- Hedera helix

LANES STREETSCAPE PLANTING

Trees



Lanes Planting

Semi mature tree planting to be used in lanes.

Tree planting associated with lanes is designed to soften the scale of the built form and add seasonal interest and character to the lanes.

Tree planting should be informal in arrangement and positioned in small clusters of 1, 3 or 5 trees and cross reference select species from the Neighbourhood Streets palette in order to avoid an abrupt change in character between the two.

Typical tree planting species could include:

1. Malus tschonoskii
2. Sorbus aria
3. Sorbus aucuparia.

Trees to be appropriately secured.

LANES STREETSCAPE PLANTING

Hedging & Shrub Planting



Hedging

Hedging is to be used as boundary features within residential areas to create an appropriate streetscape.

1.1m high hedging is proposed with a maximum hedge width of 600mm.

Planted in a double staggered row with a timber post and wire fence running centrally and providing initial support.

Typical species could include:

- Fagus sylvatica
- Crataegus monogyna
- Carpinus betulus

Alternatively for additional site biodiversity a mixed native hedge incorporating:-

- hawthorn Crataegus monogyna
- holly Ilex aquifolium
- blackthorn Prunus spinosa
- rose Rosa canina, R. tomentosa, R. sherardii
- gorse Ulex europaeus
- bramble Rubus fruticosus



Shrub Planting to Lanes

Ornamental shrub planting for use within secondary spaces and car parking areas. Species should be selected for colour, flower or seasonal interest with a maximum mature height of 1.5m.

Blocks of single species groups should be planted for impact.

Typically plant as bare root specimens, minimum 40-60cm height or container grown specimens with 3L pot size.

Plant in a minimum density of 5 per m2.

Typical species could include:

- Prunus laurocerasus 'Otto Luyken'
- Skimmia japonica
- Viburnum davidii



WOODLAND STRUCTURE PLANTING

Trees



Woodland Structure Planting

Areas of woodland planting will mitigate visual effects of development, create shelter, and add habitat features. It will consist of small trees (45cm - 60cm ht) planted at 1.25 per metre. This planting will consist of mixed deciduous species with the long-term intention of creating an appropriate mix which replicates the natural vegetation of the region.

5-10% of this mix is to be feathered trees to give variety in height and form whilst the woodland develops. Additional species will be planted in the under storey and at the edge of the plantation.

Where good quality existing trees occur they will be integrated into woodland structure blocks.

Woodland core tree planting

Whips to be planted at 1.5m spacing in informal single species blocks of 5. Percentages of species to be agreed.

Indicative species could include:

1. Yew (*Taxus baccata*)
2. Aspen (*Populus tremula*)
3. Holly (*Illex aquifolium*)
4. Scots pine (*Pinus sylvestris*)
5. Sessile Oak (*Quercus petraea*)
6. Hazel (*Corylus avellana*)

Trees to be appropriately secured.

WOODLAND STRUCTURE PLANTING

Trees



Woodland edge tree planting

Trees planted at 1.5m centres in single species blocks of 5. Percentages of species to be agreed.

Indicative species to include:

1. Rowan (*Sorbus aucuparia*)
2. Wild cherry (*Prunus avium*)
3. Crab apple (*Malus sylvestris*)
4. Hazel (*Corylus avellana*)
5. Downy birch (*Betula pubescens*)

Trees to be appropriately secured.



Woodland edge shrub planting

To be planted at 1m centres in single species blocks of 5. Percentages of species to be agreed.

Indicative species could include:

6. Hawthorn (*Crataegus monogyna*)
7. Blackthorn (*Prunus spinosa*)
8. Guelder Rose (*Viburnum opulus*)
9. Elder (*Sambucus nigra*)
10. Dogwood (*Cornus sanguinea*)
11. Burnet Rose (*Rosa pimpinellifolia*)
12. Broom (*Cytisus scoparius*)



FEATURE TREE PLANTING

Trees



Feature Tree Planting

Feature tree planting is proposed within the biodiversity corridors to supplement retained existing tree planting and help create structure and enclosure/exposure and additionally accentuate key vistas and create points of reference along the informal footpath network. The structure of feature tree planting will vary from formal tree planting at key footpath intersections to informal random groupings of trees that relate closely to the semi natural landscape character beyond the development boundary.

Typical tree planting species could include:

- | | |
|----------------------|---------------------------|
| 1. Alder | <i>Alnus glutinosa</i> |
| 2. silver birch | <i>Betula pendula</i> |
| 3. downy birch | <i>Betula pubescens</i> |
| 4. hazel | <i>Corylus avellana</i> |
| 5. ash | <i>Fraxinus excelsior</i> |
| 6. holly | <i>Ilex aquifolium</i> |
| 7. crab apple | <i>Malus sylvestris</i> |
| 8. Scots pine | <i>Pinus sylvestris</i> |
| 9. Aspen | <i>Populus tremula</i> |
| 10. gean | <i>Prunus avium</i> |
| 11. bird cherry | <i>Prunus padus</i> |
| 12. sessile oak | <i>Quercus petraea</i> |
| 13. pedunculate oak | <i>Quercus robur</i> |
| 14. goat willow | <i>Salix caprea</i> |
| 15. elder | <i>Sambucus nigra</i> |
| 16. common whitebeam | <i>Sorbus aria</i> |
| 17. rowan | <i>Sorbus aucuparia</i> |
| 18. guelder-rose | <i>Viburnum opulus</i> |

Trees to be appropriately secured.

SUS POND & SWALE PLANTING

SUDS Planting



Zone A: Water tolerant plants, including Aquatic Bench

- Alisma plantago – aquatica
- Butomus umbellatus
- Iris pseudacorus
- Lysimachia thyrsoiflora
- Lythrum salicaria
- Mentha aquatica

- Phragmites australis
- Ranunculus lingua

Zone B:

- Wet grass/ wildflower seeding
- Grade RE3 Water Meadow Mix

Zone C:

- Dry grass/ wildflower seeding
- Grade RE2 Lowland Meadow Mix

Swales:

Planting will consist of a standard wildflower meadow mix. The dominant species establishing from this mix will vary depending on the construction of the swale at any given point, ie for permeability or flow. Any area that will be kept tightly mown will still use a species rich grassland mix in order to introduce greater diversity to the sward

2.13 Management and Maintenance

A landscape and habitat management and maintenance plan will be required after approval of detailed designs.

This will ensure that the integrity of the landscape and ecology design is sustained.

In this context, the landscape and habitat management and maintenance plan will be used to establish minimum standards to be achieved. This then establishes a 'benchmark' system which is capable of adjustment and fine tuning in order to achieve the required objectives and standards.

Ecological Objectives

Species specific management requirements will be set out to meet the following ecological benefits.

- To achieve high ecology value in both biodiversity terms and human amenity – Bringing for example the benefits of bird song, butterflies and the restorative effects of natural environments to residents and visitors of Barrhead South, and
- To build on success – Improving the access and enjoyment of the beauty and biodiversity of the site, safe efficient access for leisure, cycling and to pedestrian routes.

Broad Objectives of Maintenance/Management

The headline objectives of the management and maintenance strategy will form the brief for the landscape and habitat management and maintenance plan.

This will:

- Support and enhance the development of a sustainable community
- Allow the continued enjoyment of all the public spaces through the area, support community involvement, activity and ownership.
- Achieve and maintain a high standard of repair functionality.
- Monitor and fine tune maintenance response through reviews of the management plan, maintaining records of management activities, in consultation with East Renfrewshire Council, in relation to departure from the landscape strategy and
- Comply with all legal obligations.

Maintenance Responsibilities

The principles of open space management are based on a tiered approach.

This assigns responsibilities according to area, with

- 'First Tier' applying to the main greenspace network for which responsibility will be shared over the entire residential development and exceptions to this such as road verges and SUDS, and
- 'Second Tier' areas which are the internal landscaping within each development parcel, responsibility for which would be shared only with other properties within that land parcel.

This two tier approach will need to be included in future legal arrangements for factoring.

Management Arrangements

Long term sustainable management of the green infrastructure should be implemented using best practice and should consider schemes such as the following.

Funding will be secured to provide a robust management regime where:

- New or improved green spaces are 'factored' transferring maintenance responsibility or even ownership to a third party which is then funded by an annual charge on residents, or
- Improvement projects are designed and delivered to enable the local community to share in some of the maintenance or management responsibilities via a community stewardship scheme.
- A community stewardship scheme may provide an opportunity to promote the future management of appropriate areas by the Council through the transfer of land and provision of a maintenance & management bond.

Environmental Management

The intention is to reduce, wherever possible, the impact that invasive management techniques cause on the environment, by timing certain activities such as heavy pruning outside of bird nesting periods, or pond clearance over winter, to cause as little disturbance as possible to the natural development of habitats and species.

In many cases, the habitats will require only minimal

management, for example, single annual cut for meadows, scrub removal over grassland habitats which will only be every few years, on going monitoring and removal of non-native invasives.

The phasing of such works would also consider the provision of islands of safety for any species temporarily displaced during these times.

The individual methods and operation of management should be considered to reduce the impact to the environment, such as avoiding indiscriminate pesticide spraying of block planting, by encouraging local identification and treatment of pests and biological controls, using native species (preferably with a local provenance) in landscape planting.

SUDS Adoption

An agreement in principle with Scottish Water to adopt the SUDS will be sought. This is provided through approval in principle of the SUDS proposals.

Roads Adoption

The maintenance of landscaped verges alongside adoptable roads within the Barrhead South, including the first stage of SUDS treatment and attenuation, are the responsibility of the Council's Roads Department.

The landscape proposed must reflect the Council's Roads Department requirements, and maintenance requirements for this are to be determined by the Roads Department.

Social and Education

Where possible, management undertaken in conjunction with the local residents and or community groups will be encouraged.

Monitoring

Close monitoring of environmental indicators such as water quality, species identification etc will provide a clearer view of the actual performance of the landscape and will form a closer indicator of possible changes in management focus.

These indicators can be judged as to their significance such as a traffic light system risk register.

Green, amber and red indicators as to the significance of impact which will be linked to a response timetable such as, green reviewed on a five yearly basis, amber yearly updates and closer monitoring over this time and finally red indicators which require an immediate response.

2.14 Collaborating to Deliver Barrhead South

Infrastructure & Development Contributions

The Local Development Plan makes it clear that this strategic development opportunity will have to ensure delivery of key infrastructure that will be required to support development and ensure the development delivers significant environmental, social and economic benefits to the wider community.

The preparation of the development framework and subsequently this master plan, has allowed a staged assessment of the infrastructure and development contribution requirements arising from the development to be carried out. This has been done in consultation with the land owners and developers with the following key infrastructure requirements that development contributions will contribute to, being identified: -

- Education – Provision of a new pre-five educational facility will be required as an early priority. Capacity within other schools can be managed subject to appropriate development contributions
- Sustainable Transport Strategy
 - The provision of a new Rail Station has been identified as a key part of the sustainable transport strategy for the area. Land has been allocated within the Council owned section of the site which is the most appropriate location in terms of place making and technical delivery of the station.

A rail patronage study has been carried out that demonstrates the viability of the new Rail Station and identifies a possible opening year of 2021/22. The transport agencies have been supportive of the new Rail Station and the design will now progress through Network Rails Governance for Railway Investment Projects (GRIP) process.
- Potential for a subsidised bus route through the site following completion of a certain number of homes. Further assessment is required with SPT to ascertain whether this route extension will require subsidy and this will be undertaken at the detailed application stage.
- Path Networks – New and improved path networks connecting the site and the new Rail Station to neighbouring communities, services in Barrhead and the Dams to Darnley Country Park are required.
- Improved access arrangements (pedestrian and vehicular) to St Lukes High School have been identified as a requirement to remove possible conflict at Springfield Rd and ensure that the development provides safe routes to school.
- Springfield Road to Neilston – The site will increase traffic flows on this road which has existing road safety issues. A contribution may be required to design options to address these issues. This will be determined at detailed application stage.

- Dams to Darnley Country Park (D2D) – Enhancements to the Country Park are considered an appropriate method of mitigating the loss of some Green Belt land. It is a major leisure facility adjacent to the site and indeed within which a section of the release is located. The development of this site and improved facilities within the Park will make the Park more accessible to the residents of the site and the residents of Barrhead. Enhancements identified through the D2D Management Plan and this SPG that deliver the required mitigation for loss of land in the Green Belt are:
 - Visitor facilities including an environmental education base and visitor centre, incorporating community and countryside ranger space.
 - Access improvements including the provision of car parking at the eastern edge of the site and associated with proposed visitor facilities.
 - New and enhanced path network within and to D2D, including access provision between the site and the existing D2D network, the erection of a boardwalk along the eastern side of Balgray Reservoir, footpath provision under the railway line at Aurs Road.
 - Additional management resources sufficient to support proposed D2D enhancements, including a new countryside ranger post and additional maintenance sums.
 - Infrastructure improvements including servicing and Aurs Road straightening / improvements.
- Community Facilities – Due to the proposed enhancement / provision of new facilities within D2D, to which the development will contribute, the provision of onsite facilities has not been considered necessary. Similarly it is considered appropriate that contributions to mitigate the impact of increased residents on existing facilities will not be required subject to the delivery of the D2D facilities.
- Sports Facilities – The provision of new facilities on site has not been considered necessary however contributions to mitigate the impact of increased residents on existing facilities will be required. This contribution will be calculated using the Development Contributions Supplementary Planning Guidance.
- Parks & Open Space - The provision of facilities and green network on site as demonstrated in the master plan complies with the requirements of the LDP and the Green Network Supplementary Planning Guidance. Contributions to mitigate the impact of increased residents on existing facilities will not be required due to the proposed enhancement of access to and facilities within the D2D to which the development will contribute.

The above listed infrastructure requirements are based upon the implementation of the master plan as envisaged in this Supplementary Planning Guidance.

It is acknowledged that should there be a significant departure from the development principles and design guidance detailed in this document then the key infrastructure requirements identified would have to be reviewed to take account of this.

Place to Grow

The priority objective of the Councils Economic Strategy 'Place to Grow' is to create a vibrant and sustainable local economy.

A development of this scale will generate significant inward investment during its construction stage creating an opportunity to support a dynamic and competitive local economy providing local jobs and creating further inward investment opportunities.

The Council has committed to a Community Benefits Policy which is applicable to Council contracts and transactions and will be used to maximise employment opportunities, work experience and training opportunities for local residents (both in the construction and end-use phases) and sub-contracting and supply chain opportunities for local SMEs and social enterprises. It is envisaged that developers will engage positively with the Council to deliver community benefits of a type and scale similar to which the Council has committed to.

Through the Place to Grow strategy the Council offers comprehensive business support with a full recruitment service, training opportunities, funding and grant access and procurement support.

Support is also provided to local individuals to develop their skills to match specific opportunities. Developers are encouraged to engage with the Place to Grow strategy at the earliest stage to maximise the community benefits to be realised by the strategy.

Maintaining a viable development

The cost of the development contributions is set by the impacts arising from the development and the cost of mitigation required.

These are set by the policy requirements in the Local Development Plan, the Councils Development Contributions supplementary guidance together with this master plan supplementary guidance subject to compliance with the five tests in Circular 3/2012.

The Council recognises that the overall cost of the development contributions could impact on the development's viability and has sought to introduce flexibility to manage both overall viability and development cash flow requirements.

On the basis of an initial viability assessment of the development framework and master plan the maximum development contribution including funding of commuted payments for affordable housing that the development can sustain whilst remaining commercially viable is £10,000 per private home.

The indicative apportionment of the cost of planning obligations across each land holding is as detailed in the table below (to be updated).

The development contributions will be secured through an appropriate legal agreement with payment of funds based on housing completions and funds transferred to the Council on an agreed phased basis.

This approach allows the Council to prioritise its own capital investment programme for Barrhead South and seek additional funding sources to supplement the development contributions.

The Council will be able to use the programmed receipt of development contributions to investigate front funding initiatives should it wish.

Housing Tenure within each development area	Miller Homes	Wallace Land	Avant Homes	Council	Total
Site Capacity	150	303	182	388	1023
Balance of Private Homes (including entry level homes for sale)	138	279	167	357	941
Social Rent / Intermediate (8%)	12	24	15	31	82
Payment for Planning Obligations	£1,380,000	£2,790,000	£1,670,000	£3,570,000	£9,410,000



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ਜੇ ਤੁਸੀਂ ਇਸ ਲੀਫਲੈਟ ਵਿਚ ਦਿੱਤੀ ਜਾਣਕਾਰੀ ਦਾ ਅਨੁਵਾਦ ਚਾਹੁੰਦੇ ਹੋ ਇਥੇ ਸੰਪਰਕ ਕਰੋ।

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