ARCADIS Design & Consultancy for natural and built assets

PEEL Land & Property

Wigan Council

South Hindley, Masterplan

Design and Access Statement
March 2018

Document Control

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Report No	UA007602-ARC-UE31-DAS-01
Date	March 2018

Doc Version	Comment	Date	Author	Checker / Approver
01	Draft Internal Issue, Issued for Comment	March 2017	AC	AZ
02	Issue to GVA for Review	Nov 2017	AC	AZ
03	Final Issue for Client Review	Dec 2017	AC	AZ
04	Final Issue for Submission	March 2018	AC	AZ

Contents

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1.0 Introduction

1.1 Purpose of this Document

The Design & Access Statement has been prepared by Arcadis Consulting (UK) Ltd in support of an outline planning application by Peel Land & Property and Wigan Council as part of the strategic allocated site at South Hindley. This document is intended to reflect the overall rationale behind the development.

The vision at South Hindley is to deliver a high quality residential led mixed use development set within a strong open space framework helping form a new urban extension with a unique sense of place. The proposals capitalise on South Hindley's existing features and assets, and uses these to inform the potential for future development.

This high quality sustainable urban extension will provide new family homes and future opportunities for employment, creating a place for people to live, work and enjoy. The development will provide a strong landscape framework which incorporates existing site features, and will deliver much needed new 'Homes' and job opportunities which will be of a high design standard that is well integrated with its surrounding. The development will deliver a new road through the site, to alleviate heavy traffic congestion through Hindley, provide new areas of designated open space for recreation, sports, and play, and be well connected with adjacent areas, with access for walking and cycling, providing good connections to the countryside to the south and west as part of Wigan's wider Greenheart countryside park.

This Design & Access Statement utilises drawings and examples to demonstrate the rationale. Best practice design principles have also been adopted and incorporated into the design process, to ensure that the masterplan and associated documents will produce a place which is appropriate for its physical, social and economic context.

1.2 The Application

An outline planning application for a residential led development is proposed, which will deliver up to 2000 family homes, 12 ha of new employment, approximately 40ha of public open space and sports pitches, and associated new infrastructure with improved east west connectivity (as part of Wigan Council's Future Transport Strategy), helping to remediate and regenerate an area of brownfield land.

Figure 1: Aerial view illustrating the site location and application boundary

1.3 Design and Access Statement Requirements

The purpose of this Design & Access Statement is to illustrate clearly the design concepts and principles which have been applied to the development through the use of drawings, images and explanatory text. This Design & Access Statement includes an analysis of the immediate site characteristics and its wider context, including the physical, social and economic characteristics of the area. Relevant planning policies at a national, regional and local level are discussed, as well as how these policies have been considered.

This Design & Access Statement follows Government Guidance and includes the following information:

- Use – the proposed uses for the development;
- Amount – the amount of development, the number of proposed residential units, and employment;
- Layout & Scale – an indicative layout which identifies where uses are located within the site, and the sizes of buildings proposed (building heights, the width and length of the proposed buildings);
- Access – accessibility for all (inclusive design) including consideration for pedestrians, cyclists, equestrians and vehicles, and connections to the existing network, as well as movement hierarchy;
- Appearance – the design of the buildings and spaces which relate to its visual quality; and
- Landscaping – the treatment of both private and public spaces.

The statement also looks at how planning policy and the character of the surroundings in terms of landscape, buildings, open spaces, movement network and historic environment, has informed the development and how the development responds to its setting. A robust sustainable drainage strategy has been developed, which provides drainage features to protect against flooding which also maintain and enhance wildlife habitats and provide natural green corridors.

A brief statement of consultation containing a summary of pre-application discussions is also included. A detailed Community Consultation Strategy report is submitted separately as part of the application.

1.4 Site Location

The site is situated between Manchester to the east and Liverpool to the west, with the towns of Warrington to the south, and Wigan to the North. The site is well served by the existing road network from the A578 Leigh Road to the east, and the A58 Liverpool Road to the west, with access to the A577 Atherton Road along Park Road.

At a more local level, the site is located to the south of Hindley town centre, and lies on the southern periphery of the connected settlements of Hindley, and Hindley Green. To the south west of the site, Low Hall Nature Reserve is present. The southern boundary of the site abuts the greenbelt, with an area of Greenbelt located within its western extent, adjacent to Low Hall Nature Reserve.

The site area is approximately 121.7 hectares (ha) in total, distributed between land owners Wigan Council (52.7ha [43%]) Peel Investments* (44.1ha [36%]), with the remainder being owned by several 3rd parties.

The site is linear in its form and located along the southern urban edge of Hindley, and Hindley Green, bounded by a former railway line to the south. It is a combination of brownfield land containing previous coal workings, contaminated land and mine shafts, and agricultural land and perceived open space, consisting of a series of woodland, scrub and trees, grassland, marshy grassland and swamp, dry heath / acid grassland, with a number of hedgerows, watercourses and ponds. The site is intersected by a series of formal and informal footpath networks that provide connectivity to the greenbelt and Wigan's Greenheart to the south, and the residential areas to the north. The network of footpaths provides amenity and recreation for the local community. Ground levels within the site are relatively gently sloping, with the highest ground (>51m) located in the east, sloping to the lowest ground (32m) in south and west.

*including land with Peel Investments Land Option

1.0 Introduction

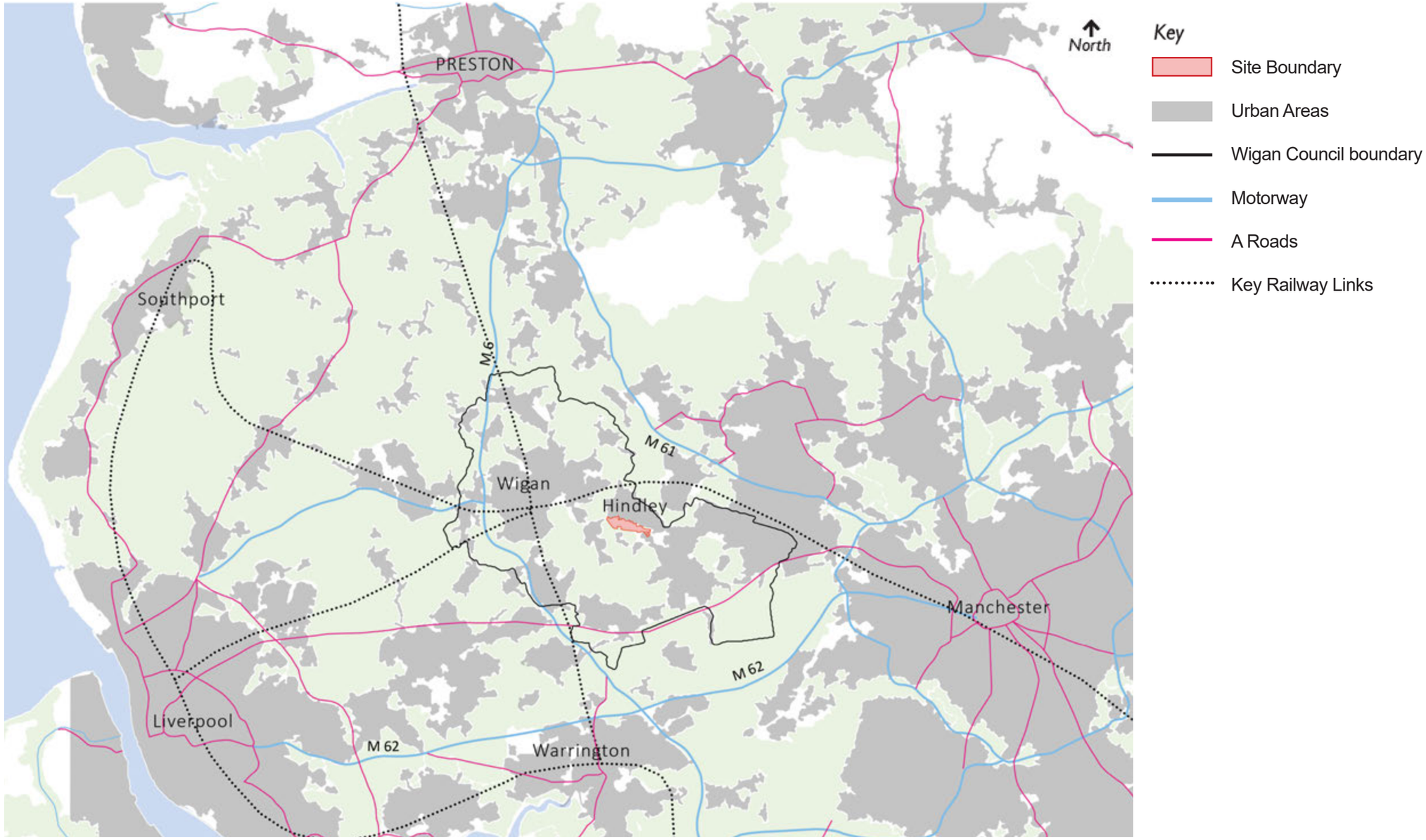


Figure 2 - Wigan Regional Context

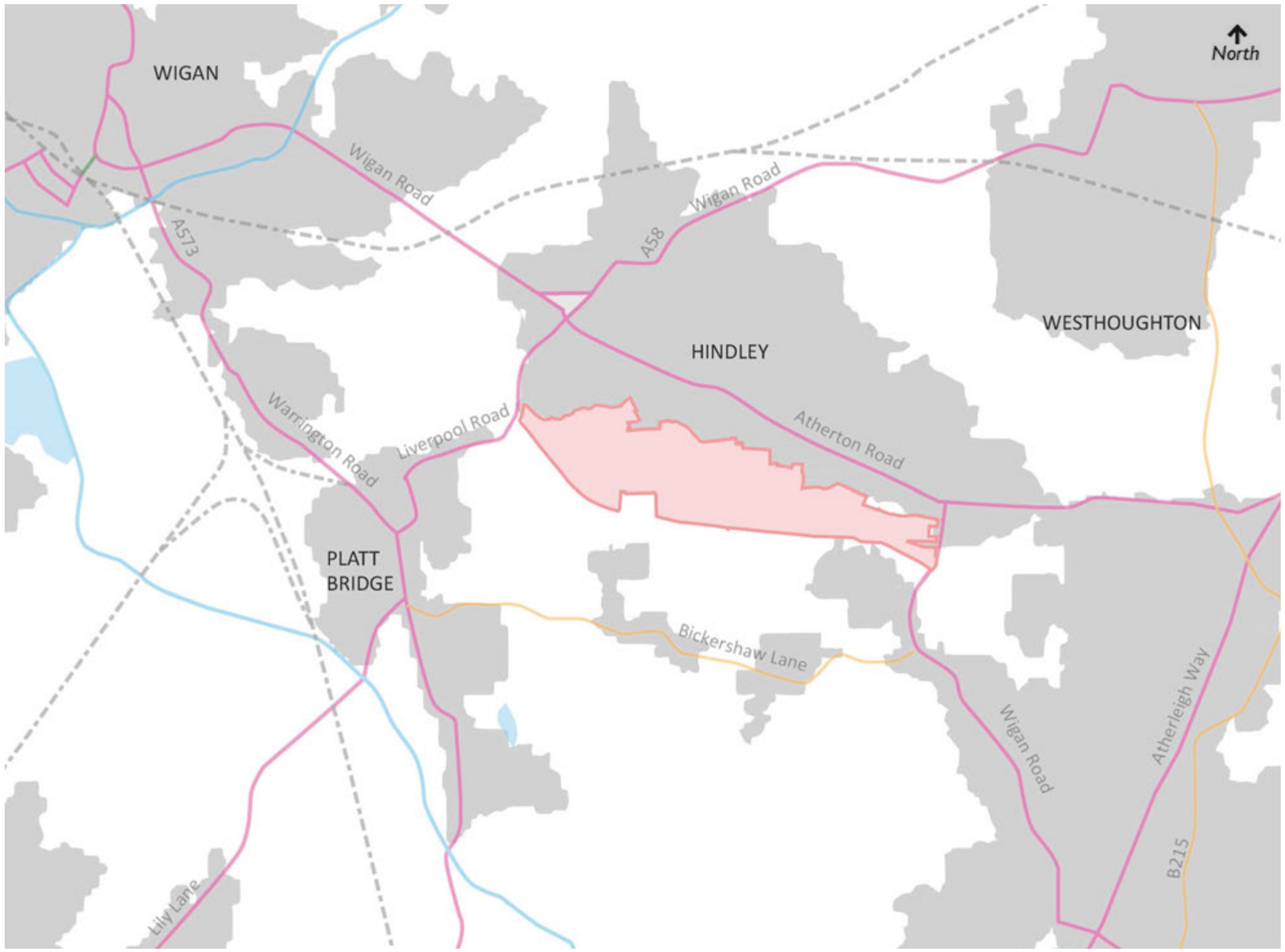


Figure 3 - South Hindley Development Local Context

2.0 Understanding the Place, & Contextual Analysis

2.1 Planning Context

A Planning Statement has been prepared in support of this application and is submitted separately. Specific reference to this document should be made for detailed information relating to the planning background of the site. The following paragraphs provide a brief outline of the Planning history and discuss the relevant Policies, and Documents prepared by the Local Planning Authority and National Planning Guidance, specifically relating to principles of best practice design.

2.1.1 Planning Policy

Wigan Council has had the South Hindley site earmarked and safeguarded for housing since 2006 and within the Strategic Housing Land Availability Assessment (SHLAA) since 2009. Furthermore the Wigan Council Core Strategy adopted in September 2013 identified the site as a "broad location" for new development as it is centrally located within the east – west core.

The site has subsequently been included as a development site in the draft Allocations & Development Management Local Plan which is currently under preparation. The Local Plan will contain detailed policies and plans for the period to 2026 in line with the strategic policies in the Local Plan Core Strategy and more up-to-date evidence.

2.1.2 National Planning Policy

National planning policy is set out in the National Planning Policy Framework (NPPF), March 2012. At the heart of the NPPF is a presumption in favour of sustainable development. There are three dimensions to sustainable development: economic, social and environmental. In order to deliver sustainable development the following principles are relevant to the purposes of this assessment:

- *Promoting sustainable transport*

The principle is to exploit opportunities for the use of sustainable transport modes for the movement of goods or people, through prioritising pedestrian and cycle movements, and having access to high quality public transport facilities, create safe and secure layouts which minimise conflicts between traffic and cyclists or pedestrians. Were possible within large-scale developments, key facilities such as primary schools and local shops should be located within walking distance of most properties.

- *Requiring good design*

Good design is a key aspect of sustainable development, is indivisible from good planning, and should contribute positively to making places better for people. The principle is therefore to optimise the potential of the site to accommodate development, and to create and sustain an appropriate mix of uses.

- *Promoting healthy communities*

Promotion, protection and enhancement of Public Rights of Way (PRoW) and access, and states that opportunities to provide better facilities for users, for example by adding links to existing rights of way networks including National Trails should be promoted.

- *Protecting Greenbelt Land*

The fundamental aim of Green Belt policy is to prevent urban sprawl by keeping land permanently open; the essential characteristics of Green Belts are their openness and their permanence. Once Green Belts have been defined, local planning authorities should plan positively to enhance the beneficial use of the Green Belt, such as looking for opportunities to provide access; to provide opportunities for outdoor sport and recreation; to retain and enhance landscapes, visual amenity and biodiversity; or to improve damaged and derelict land.

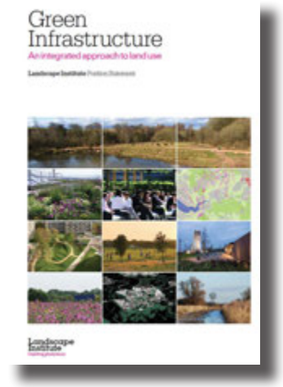
- *Conserving the natural environment*

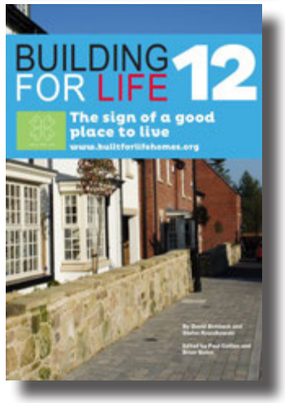
Conserving and enhancing the natural environment It states that the planning system should contribute to and enhance the natural and local environment by protecting and enhancing valued landscapes, with local plans allocating land with the least environmental amenity value. In addition, the NPPF states that the re-use of land that has been previously developed (brownfield land) is promoted, provided that it is not of high environmental value.

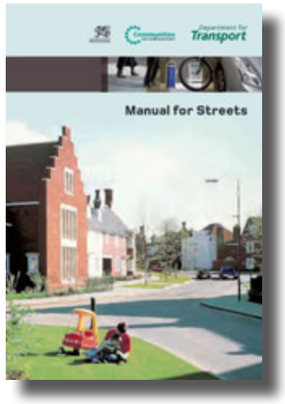
2.1.3 National Design Guidance

The following best practice guidance and publications have been considered as part of the masterplanning process for South Hindley:

- The Urban Design Compendium, Homes and Communities Agency, August 2000;
- Manual for Streets, Department for Transport, 2007;
- Manual for Streets 2, Chartered Institution of Highways & Transportation, Sept 2010;
- Secured By Design, Homes 2016, Official Police Security Initiative, Feb 2016;
- Building for Life 12 , Building for Life Partnership (CABE at Design Council, Design for Homes and Home Builders Federation), 2012;
- Green Infrastructure, An integrated approach to land use, Landscape Institute, March 2013;
- Planning for a Healthy Environment – Good Practice Guidance for Green Infrastructure and Biodiversity, Town & Country Planning Association & The Wildlife Trusts, July 2012;
- 'Nature Nearby' Accessible Natural Greenspace Guidance, Natural England, Mar 2010;
- Start with the Park, CABE Space, 2005;
- Better Streets, Better Places Delivering Sustainable Residential Environments, Department for Transport, 2003;
- Publications from the Department of Education on school provision and design i.e. BB99;
- Planning for Sport Forward Planning, Sport England, July 2014;
- Natural Turf for Sport Design Guidance Note, Sport England, May 2011;
- The Principles of Inclusive Design, CABE, 2006; and
- CIRIA Report C697 SuD'S Manual.

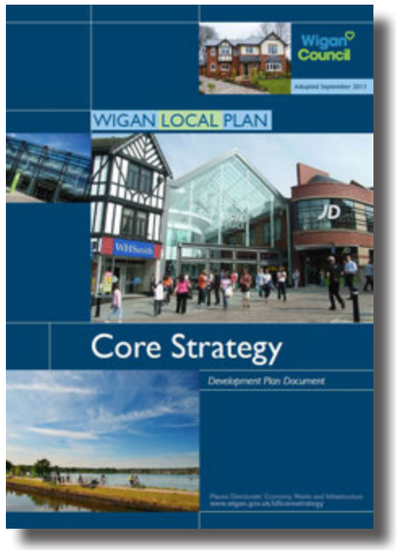


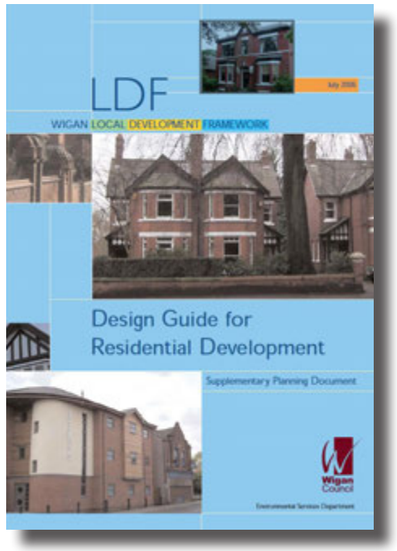




2.1.4 Local Planning Policy

The following local planning policies have been considered





Wigan Council, Adopted Core Strategy, Sept 2013:

- Policy SD 1 Presumption in Favour of Sustainable Development
- Policy SP 1Spatial Strategy for Wigan Borough
- Policy SP 4 Broad Locations for New Development

"South Hindley - Housing and employment development with approximately 1,000 dwellings up to 2026. A through-road from the A578 Leigh Road to the A58 Liverpool Road will be required and a substantial proportion of the site will be required for strategic green infrastructure, including the retention and improvement of existing facilities, notably Leyland Park and adjacent playing pitches, and the provision of links to Greenheart. The development will need to be effectively integrated with the existing town of Hindley."

- Policy CP 1 Health and Well-being Policy
- Policy CP2 Open Space, Sport and Recreation
- Policy CP3 Community Facilities
- Policy CP 6 Housing
- Policy CP7 - Accessibility
- Policy CP 8 Greenbelt and Safeguarded Land
- Policy CP 9 Strategic Landscape and Green Infrastructure
- Policy CP 10 Design
- Policy CP11 Historic Environment
- Policy CP 12 Wildlife habitats and species
- Policy CP 13 Low-carbon development
- Policy CP 14 Waste
- Policy CP 15 Minerals
- Policy CP 16 Flooding
- Policy CP 17 Environmental Protection
- Policy CP 18 Developer contributions

Wigan Council, Wigan Allocations and Development Management Local Plan: Initial Draft Plan, October 2015

- Policy SR 1 Provision and Protection of Open Space, Sport and Recreation
- Policy SR 2 Open Space Requirements for New Housing Developments
- Policy EM 1 Employment Land
- Policy H1 Housing
- Policy H2 Providing an Appropriate Mix of Housing
- Policy MS 1 South of Hindley

"Land south of Hindley, between the Blackberry Drive estate and Leigh Road and to the north of the former railway route, as shown on the Policies Map, will be developed as a high quality, sustainable extension to the town, including:

1. *Approximately 2,000 homes, of which around 750 homes are anticipated to be built by 2026.*
2. *A minimum of 12 hectares of new employment development.*
3. *A new road through the site to connect the A58 Liverpool Road and the A578 Leigh Road at its junction with the North Leigh development site.*
4. *The retention and improvement of a substantial amount of green infrastructure."*

- Policy A2 Proposed Road Schemes and Connections
- Policy A4 Parking in New Development
- Policy A5 Accessibility to public transport in new developments
- Policy GB 1 Design in the greenbelt
- Policy EN 1 Wildlife Corridors
- Policy EN 2 Sustainable drainage systems (SuD'S)

Other Supporting Local Planning Policy:

- Wigan Council, Wigan Borough Open Space, Sport and Recreation Provision and Needs Assessment, October 2015;
- Wigan Council, Affordable Housing SPD, Oct 2013;
- Wigan Council, Affordable Housing Provision – Guidance for Developers, August 2012;
- Wigan Council, Wigan Strategic Housing Land Availability Assessment 2016 Update, SHLAA 0002;
- Greater Manchester's third Local Transport Plan 20111/12 - 2015/16, GMCA/ Transport for Greater Manchester;
- Wigan Council, Wigan Borough on the Move, Transport Strategy and Action Plan;
- Wigan Council, Wigan Local Development Framework Core Strategy, Infrastructure Delivery Plan, Infrastructure Needs Assessment, August 2011;
- Wigan Council, Wigan Replacement Unitary Development Plan, Remaining Policies, April 2006;
- Wigan Council Rights of Way Improvement Plan, Final ROWIP, 2007;
- Wigan Council, Strategic Housing Market Assessment, Draft for Consultation, October 2015;
- Wigan Council, Wigan Statement of Community Involvement, November 2015;
- Wigan Council, Vision for 2026, Wigan Housing Strategy, Wigan Council;
- Wigan Council, Design Guide for Residential Development SPD, July 2006;
- Wigan Council, Open Space in New Housing SPD, Oct 2013;
- Wigan Council, Access for All SPD, Sept 2006; and
- Wigan Council, Landscape Design SPD, Oct 2005.

2.0 Understanding the Place, & Contextual Analysis

2.2 Historic Growth of Hindley and Hindley Green

Figures 4-11 below indicate the historical growth of Hindley, and Hindley Green along the A577 Atherton Road, and the surrounding areas, within the late 19th century and early 20th century. From the 1950's growth moved southwards. The diagrams also indicate the presence of railway line, historic land use and buildings within the site itself, all the way through to the present 21st Century.

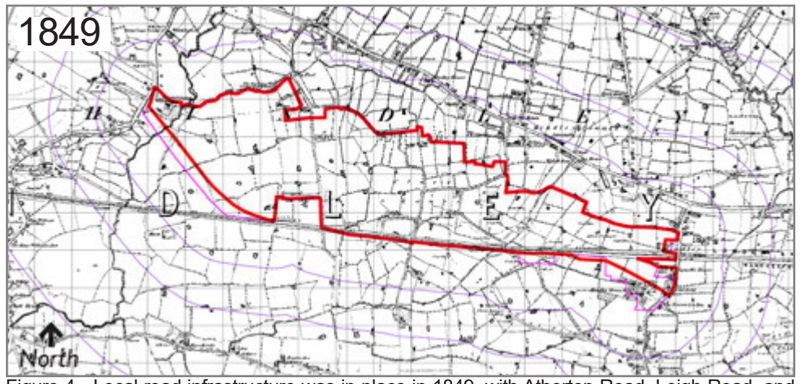


Figure 4 - Local road infrastructure was in place in 1849, with Atherton Road, Leigh Road, and Liverpool Road, distinguishable features. The railway line located on the southern boundary of the site is also visible, together with Hindley Station located at the junction of Leigh Road to the eastern boundary of the site. Residential development is sporadic along the linear road network. A number of coal pits are located within the site boundary by 1849, but the primary land use relates to agriculture.

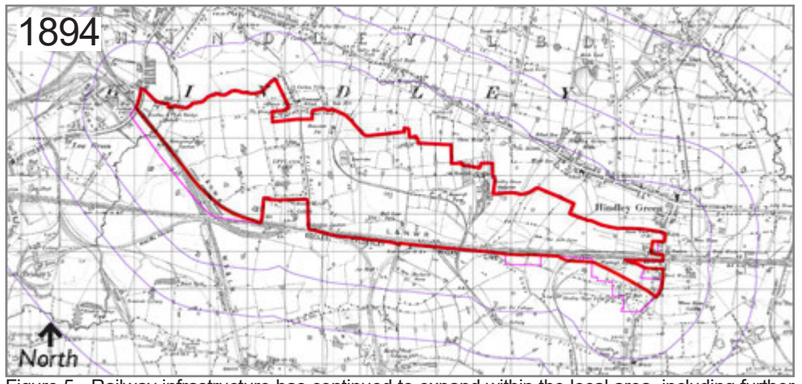


Figure 5 - Railway infrastructure has continued to expand within the local area, including further national networks and mineral lines associated with the coal mining operations located within the South Hindley site. Hindley Green is more developed around the junction of Leigh Road, & Atherton Road, together with further development along Atherton Road. Leyland Park is now present along with the Grammar School to the north adjacent to Park Road. Agricultural land uses continue around the coal mining operations.

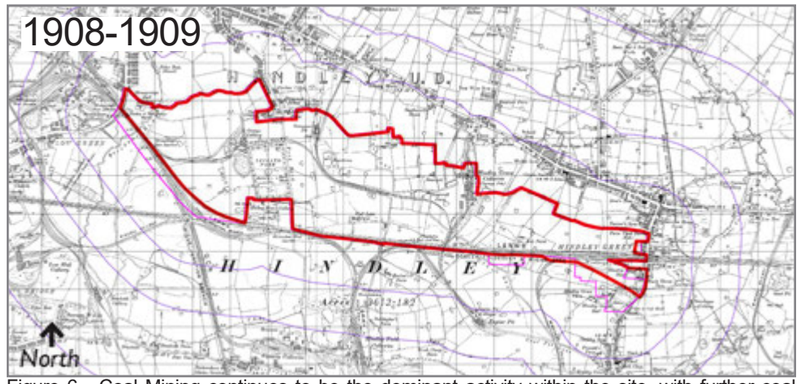


Figure 6 - Coal Mining continues to be the dominant activity within the site, with further coal pits, and rail mineral lines becoming apparent. Leyland Park, is now bounded on its northern periphery by a mineral line and the spoil heap to the west of the Park is present. Further residential development is apparent along the primary road networks, with further secondary link and residential streets now becoming evident, especially around the centres of Hindley in the north west, and Hindley Green in the north east.

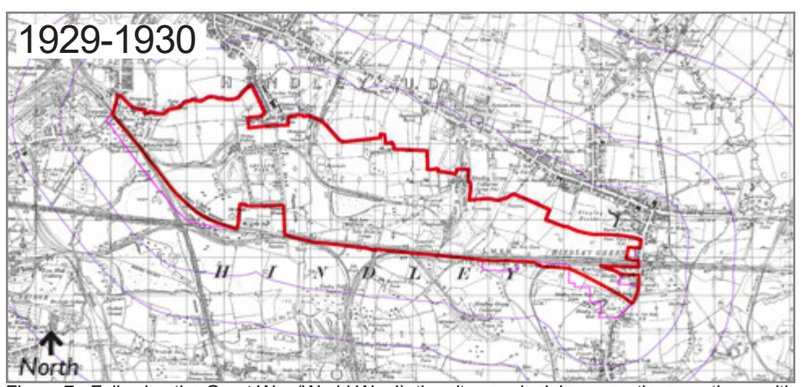


Figure 7 - Following the Great War (World War I), the sites coal mining operations continue, with the spoil heaps adjacent to Leyland Park, and Close Lane, becoming increasingly prominent features within the landscape. Infill post war residential development to the north of the site is occurring along Atherton Road. Leyland Park has increased in size with the land immediately east now noted as playing fields.

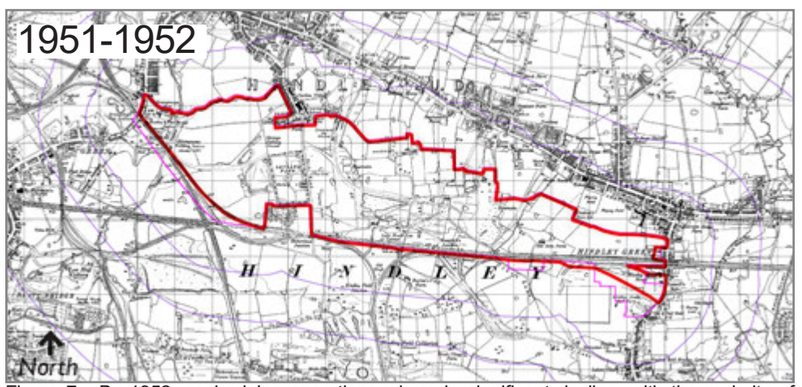


Figure 7 - By 1952, coal mining operations where in significant decline, with the majority of mineral lines, now only present as disused routes, however the Eccles Tyldesley & Wigan railway line is still present on the southern site boundary. The Turner Brothers Factory to the south east of the site is now present. To the north linear residential development along Atherton Road has continued, with further infill and urban edge development occurring around the centres of Hindley and Hindley Green.

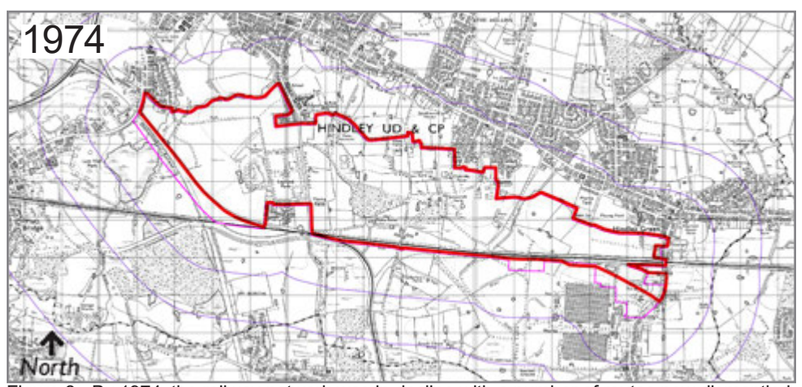


Figure 8 - By 1974, the railway network was in decline with a number of routes now dismantled, and the coal mining now complete, with only remnant features, namely spoil mounds. The Turner Brothers Factory has expanded, along with further residential development expansion around Atherton Road, with Maple Avenue, and Richmond Avenue now abutting the development site, just north of Close House Farm. Residential properties to the south of Leyland Park are now present. Hindley HM Prison is now present to the south.

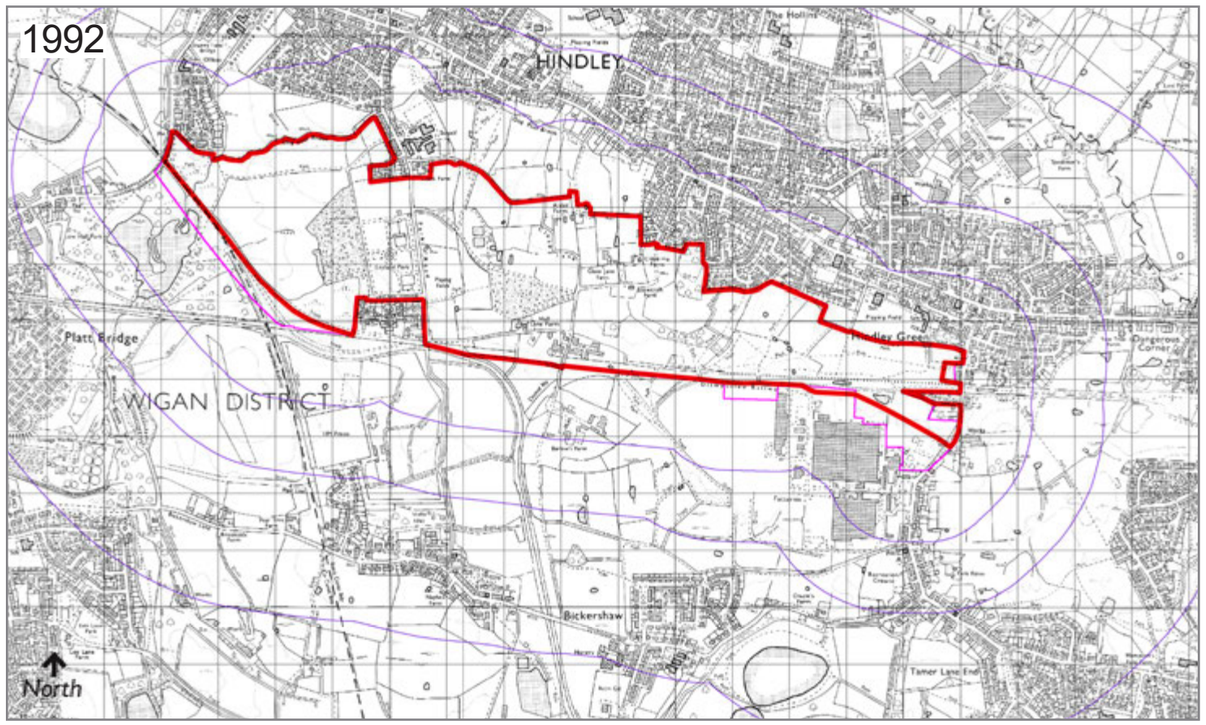


Figure 9

By 1992, further residential development around Hindley Green has occurred, with more of the north eastern site being bounded by housing. The residential areas south of Hindley have also continued to expand south towards the site, around Lord Street. A number of the dismantled mineral railway lines now form part of the informal footway network within the site. The Eccles Tyldesley & Wigan railway line, has now been dismantled. Low Hall Park is now an establish nature park located on the south western boundary of the site.

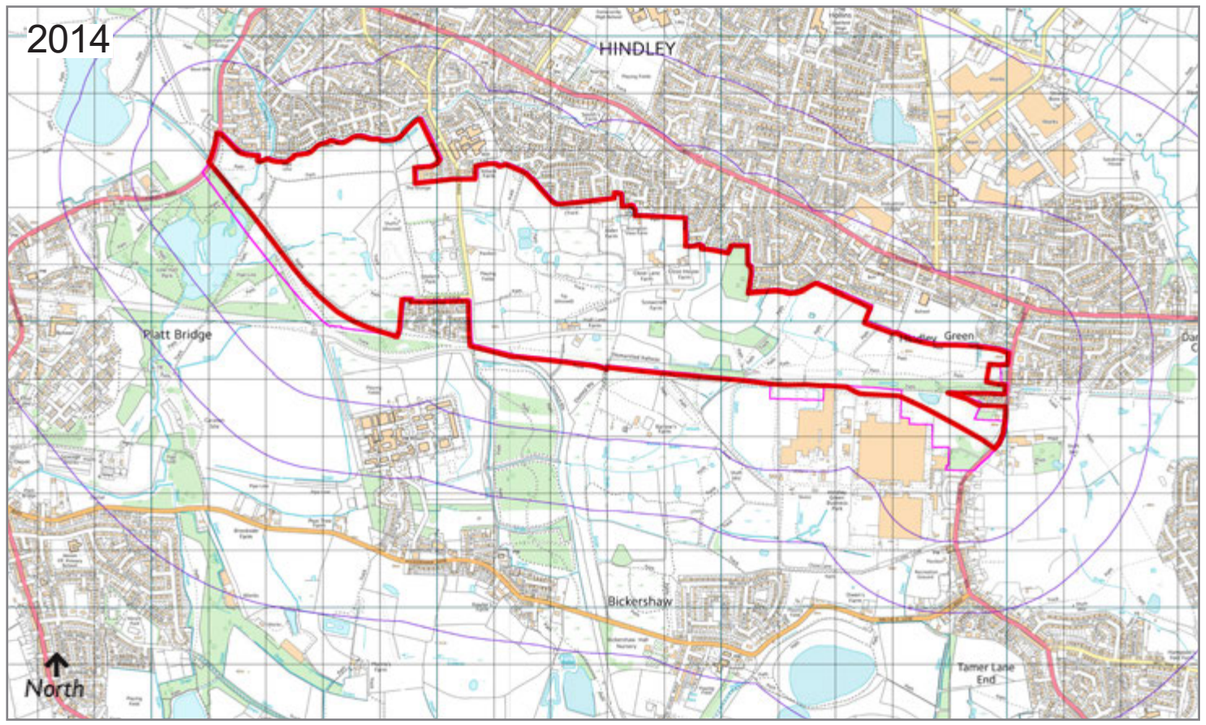


Figure 10

By 2014, the site has returned to its pre-coal mining state. A number of features still remain; however, the site is now a combination of agricultural and equestrian / grazing land. The Farms present prior to the coal mining activities remain. Development has consolidated along the northern site boundary, with the residential infill, and urban extension development associated with Hindley and Hindley Green now abutting the northern boundary of the site. No development has occurred within the site. Self-established vegetation is now a noticeable feature, which partly masks the coal mining heritage. The spoil heaps present from these activities still form prominent features.

2.0 Understanding the Place, & Contextual Analysis

2.3 Previous Land Use at South Hindley and Coal Mining Heritage

The mining history of the site has been researched (as part of a desk top study), from the available historical Ordnance Survey maps of the site. The summary of the site's mining history described here is likely to be incomplete as there are no readily available historical maps pre dating 1849 (Coal mining beneath similar sites in Yorkshire, indicate that shallow underground mining could have taken place from the 13th century onwards.)

The earliest OS historical maps of the eastern part of the site (1849) indicates at least 11 coal pits and ten collieries across the central and eastern parts of the site. By 1894 these are no longer indicated. The Hindley Green Collieries is now indicated in the mid- eastern part of the site. The Hindley Green Collieries appears to have operated until circa 1938. Subsequent maps (>1951) don't indicate the Collieries and associated structure.

The earliest records pertaining to mining beneath the western part of the site are from the 1894 map that indicates the Hussey House Colliery some 30m to 100m south of the site in the vicinity of Leyland Park and Grammar Pit in the northern central part of the site. The maps appear to show four shafts associated with the Hussey House Colliery. By 1909 the Hussey House Colliery is indicated as disused and the Grange Colliery is indicated in the mid-western part of the site associated with two shafts. By 1929 the Grammar Pit is indicated as disused while the Grange Colliery appears to have operated until the early to mid-1930s.

Much of the site has been subjected to coal mining in the past. Much of the southern, central and eastern parts of the site have been subject to shallow coal mining (within 30m of ground level) while the northern, north-central and western parts of the site have experienced deep mining in the past.

The Coal Authority Records indicate 41 shafts and one adit are present on the site. The locations of these shafts are indicated on figure 10. Only six shafts are indicated as having undergone some form of treatment.

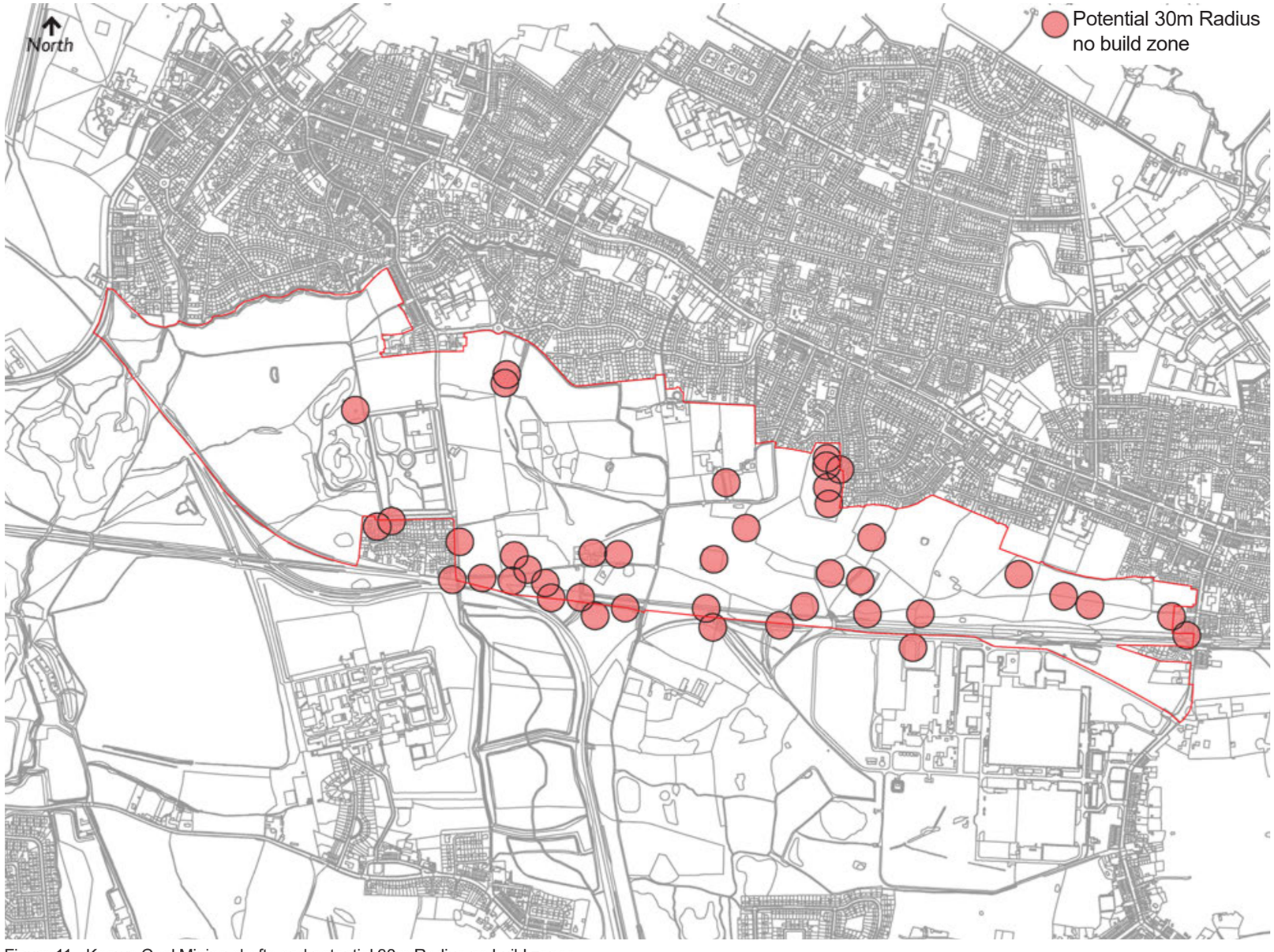


Figure 11 - Known Coal Mining shafts and potential 30m Radius no build zones

2.4 Surrounding Urban Form and Typology

Figure 12 and the previous historic mapping illustrate the existing urban form within the wider sites context. The area to the north is largely characterised by a dense urban grain of small scale buildings, indicating the high proportion of residential usage. These are typically detached and semi-detached properties, with some terraced properties. The urban edge on the sites northern boundary largely backs onto the site, however a small number of properties along Canning Drive and Blackberry Drive front Dog Pool Brook and the site. The proposed development would serve to further extend the urban grain in a southerly direction, and this would front the dismantled railway line / future Greenway and Greenbelt to the south.

The present site is also largely devoid of urban form, with only a handful of properties present, including Close Lane Farm, Close House Farm, Alder Farm, Rivington View Farm, Sowcroft Farm, and Hall Lane Farm.

To the east/north-east of the site on the periphery of Hindley Green centre, which lies at the junction of Atherton Road, and Leigh Road. Likewise, to the north west Hindley town centre is present. These areas contain more historic development and there are distinct pockets of an historic grid network of streets. These areas contrast with the more modern housing developments to the immediate north of the site boundary, which have a much less clearly defined urban grain due to dwellings laid out largely in cul-de-sac arrangements.

In addition, small pockets of larger scale buildings punctuate the urban grain along Atherton Road, indicating retail/commercial uses. Industrial land use is present to the south east of the sites boundary, these associated with the Hindley Green Business Park, which currently house PPG Industries. The land immediately south of the site is within Greenbelt and is therefore largely devoid of urban form, with only a small number of farmstead buildings present.

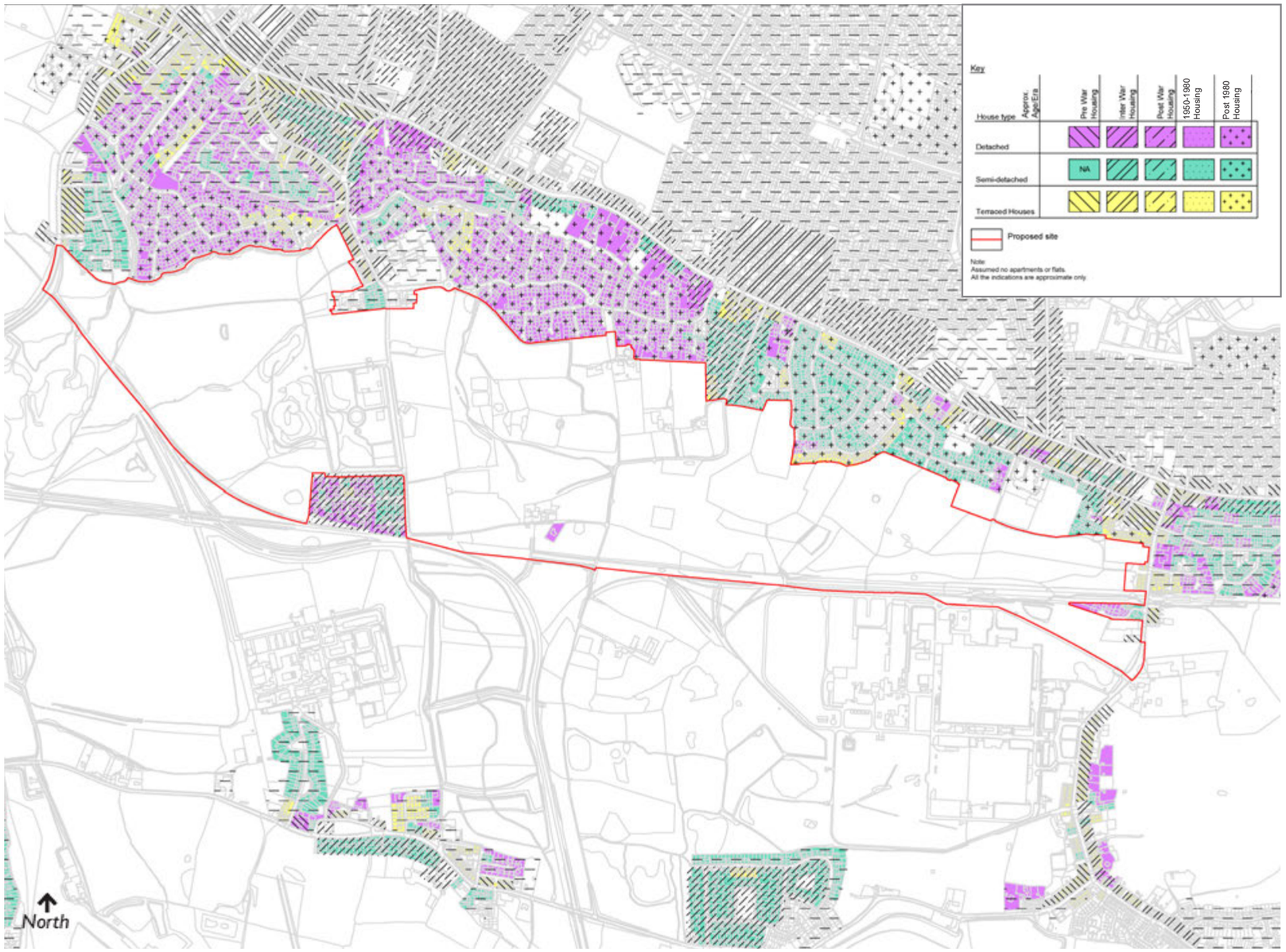


Figure 12 - Surrounding Urban Typology and Approximate Age

2.0 Understanding the Place, & Contextual Analysis

2.5 Surrounding Open Spaces

The South Hindley site is well served by a number of existing designated and non designated open spaces as shown in Figure 14. These provide a for a variety of functions, and include parks, informal and formal recreation, and sports facilities.

The natural and semi natural open space provision is particularly rich, with Amberswood Nature Reserve located immediately west of Liverpool Road, Low Hall Park Nature Reserve located immediately west of the site boundary, and Victoria Fields Nature Reserve located to the south of the site

The site itself currently forms a large informal and non designated area of green open space with currently benefits from public access. The site is largely used by local residents for informal recreation and dog-walking. In addition the site contains approximately 21.5 ha of designated open space. This includes:

- Children and Young People: (0.27ha) Youth Play Area and Neighbourhood Equipped Play Area, located within Leyland Park;
- Natural and Semi Natural Green Space: (3.8ha) Sowcroft Farm SBI, and other areas (excluding existing woodland and hedgerow);
- Parks and Gardens: (4.39ha) Leyland Township Park;
- Outdoor Sports Facilities: (5.54ha) located to the west of the South Hindley site including (0.14ha Tennis Courts @ Leyland Park, 1.9ha Football Pitches @ Leyland Park, 2.5ha Football Pitches Hindley Juniors FC, & 1ha Football Pitch @ the previous Grammar School site); and
- Green Corridor: 7.5ha aspirational Green Corridor (recreational route) along previous rail corridor to the south of the site.

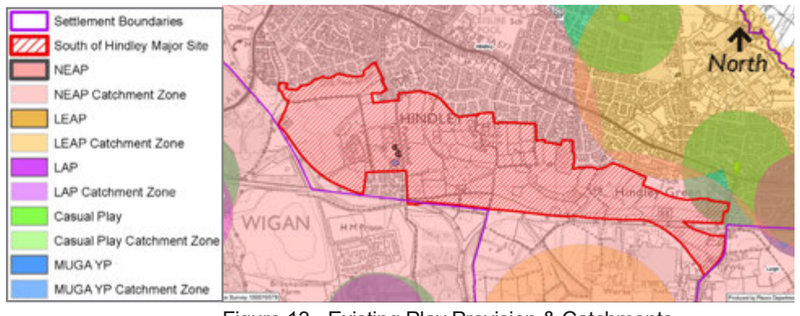


Figure 13 - Existing Play Provision & Catchments

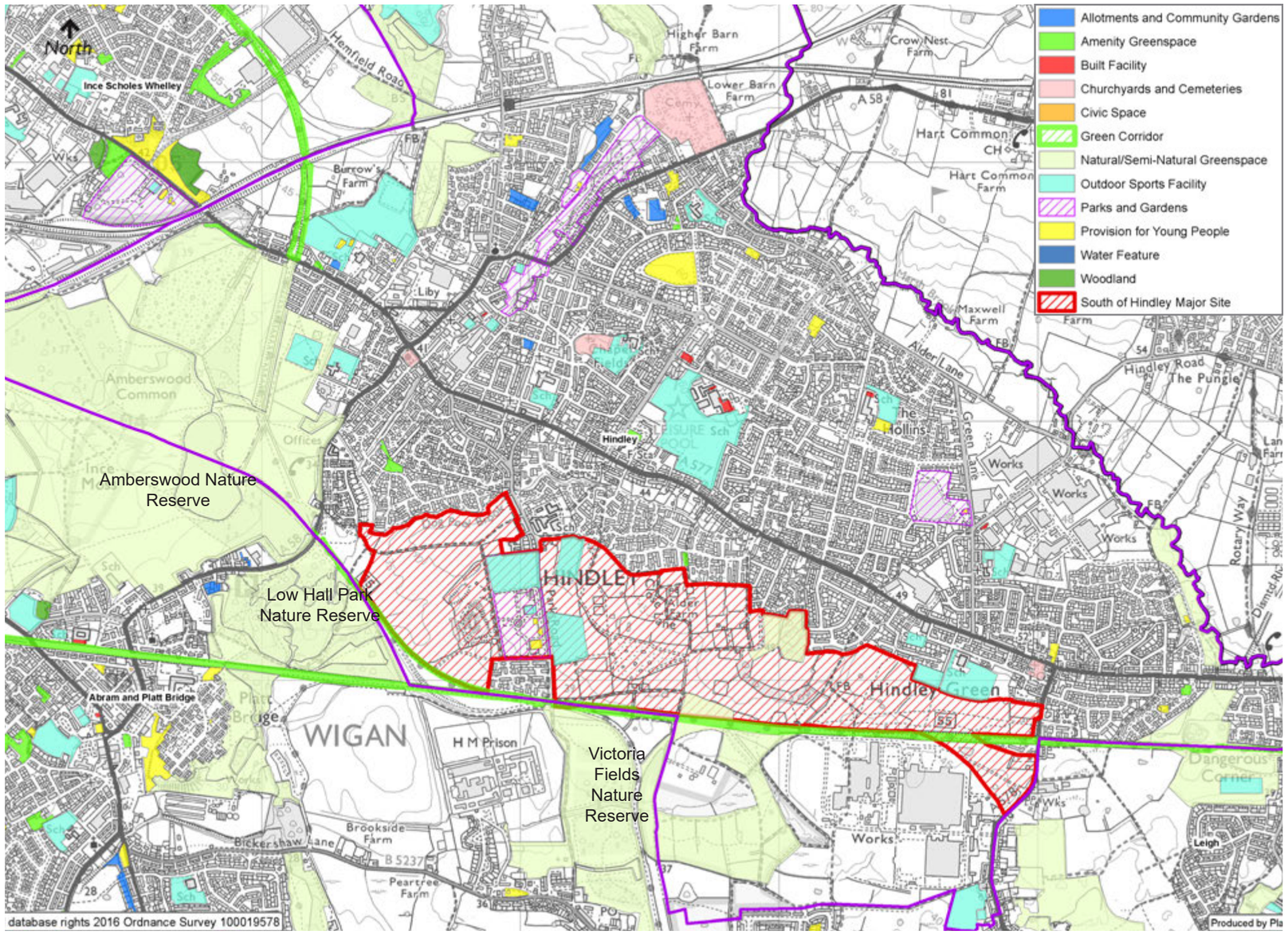


Figure 14 - Existing Designated Open Spaces

2.6 Local Facilities

Figure 15 demonstrates the quantity and range of social infrastructure which is present within the immediate vicinity of the site.

Key

- Site boundary

TRANSPORT
- Bus route
- Public Right of Way
- Concessionary footpaths
- Bus stop

EDUCATION
- Primary school
- Secondary school
- College
- Other eduction

HEALTHCARE
- GP surgery
- Dental surgery
- Nursing / care home
- Pharmacy

COMMUNITY SERVICES
- Post office
- Library
- Community centre
- Places of worship

RETAIL
- Local food store
- Supermarket
- Petrol station

LEISURE
- Golf course
- Sports pitch / facilities
- Restaurant / public house

URBAN INFRASTRUCTURE
- Employment area
- Residential area
- School grounds

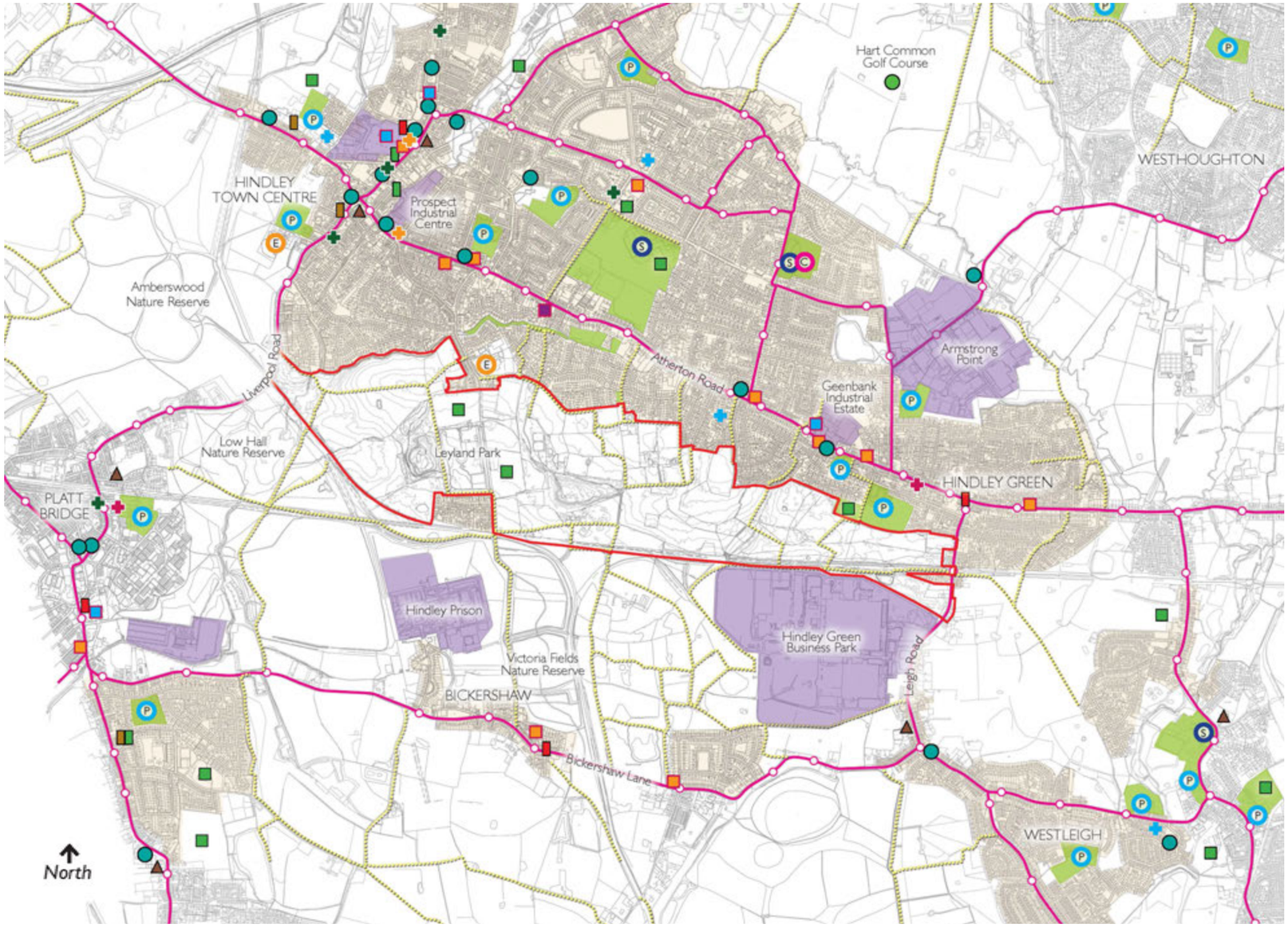


Figure 15- Local Facilities and Social Infrastructure

2.0 Understanding the Place, & Contextual Analysis

2.7 Surrounding Character

Figure 16 identifies the defined character areas referring to both local planning policy, and land use. This demonstrates the following:

- Greenbelt;

The areas south, and south west of the site are designated as Greenbelt, which are largely defunct of built form;

- Employment Areas;

Hindley Green Business Park is located to the south west of the site, which is characterised by large scale development that is clearly distinct from the surrounding fine urban grain;

- Residential Areas;

The areas immediately north of the site are defined as residential urban areas, which have a dense urban grain of small scale buildings;

- Safeguarded Land;

The land within the site boundary is defined as both safeguarded land for future development, and as a series of individual landscape character areas (see below), due to the current green character;

- Defined Local Landscape Character Areas;

the land within the site boundary contains two primary landscape character types as defined by the Wigan Council Landscape Character Assessment. These are Type 5, Degraded and Restored Landscapes, and Type 1, Undulating Enclosed Farmland. More detail of these is provided in chapter 3.1.

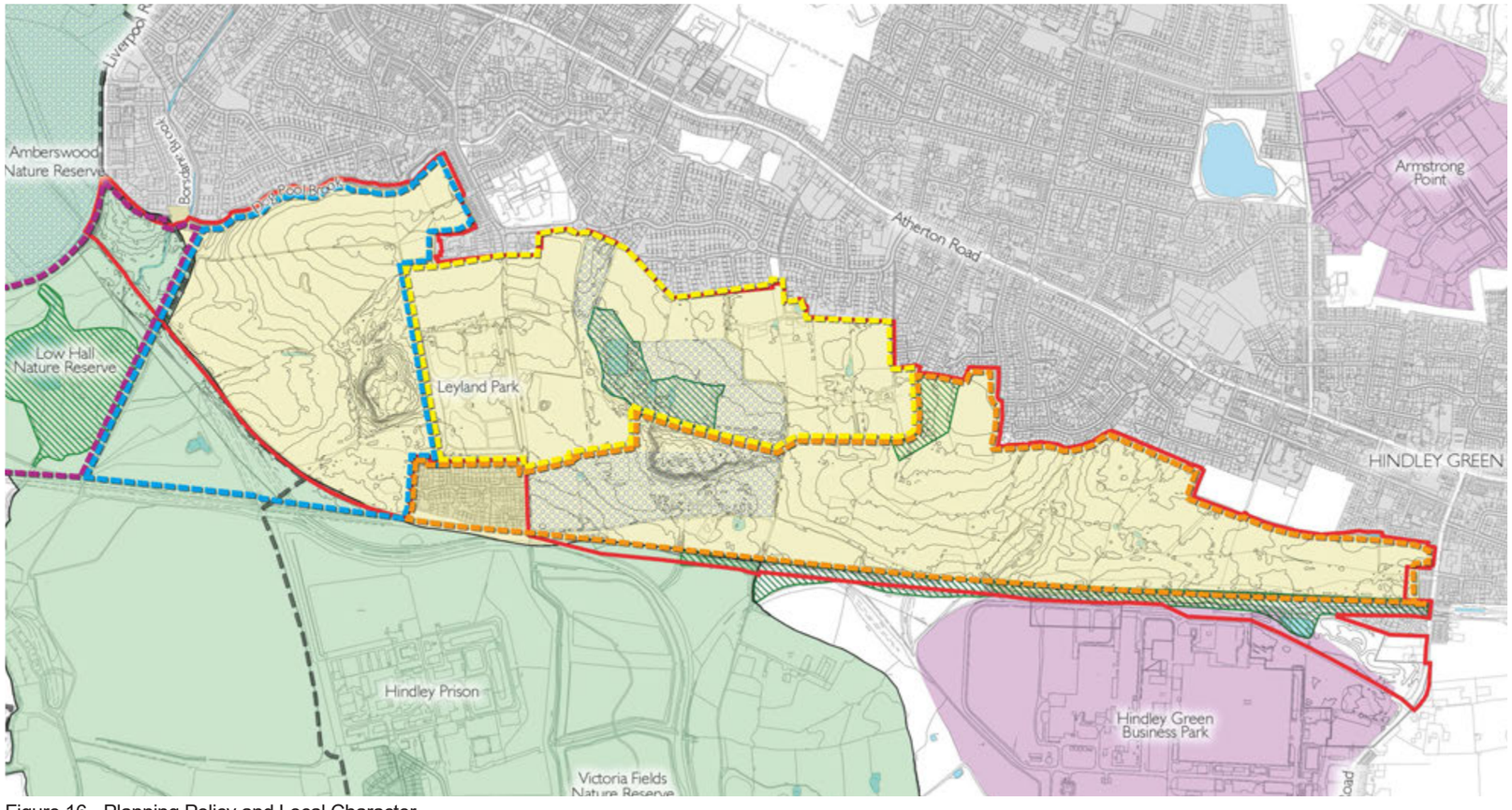


Figure 16 - Planning Policy and Local Character

2.8 Wigan Future Transport Network Strategy

Wigan Council are looking to deliver an important east west road network. Part of this aspirational link identified passes through the South Hindley site. The link will deliver

"*A new road through the site to connect the A58 Liverpool Road and the A578 Leigh Road at its junction with the North Leigh development site".*

This proposal forms part of a series of interlinked roads which are detailed within the adopted Wigan Borough Future Transport Strategy. Other sections of the road as shown on Figure 18 include:

1. The M58 / M6 Smithy Brook Road on Pemberton Business Park;
2. The A49 link road which will open up the Westwood site for new housing and employment;
3. The Ince Link connecting the A49 link to the Phoenix Way link;
4. The Phoenix Way to Seaman Way link;
5. The Amberswood Link which will take the road from Seaman Way to Liverpool Road, Hindley;
6. The South Hindley development, which will connect the A58 Liverpool Road and the A578 Leigh Road (identified along the dismantled railway line) ;
7. The North Leigh development site link road which connects the A578 Leigh Road to Atherton Way.

The overall route will eventually link the M58/M6 at Orrell through to Atherleigh Way in the east of the Borough, and beyond to the M61 junction Chequerbent. The strategy aims to provide a modern transport infrastructure which includes improvements to roads, footpaths, cycle tracks and public transport and in doing so, improve the economic and employment prospects of the boroughs residents.

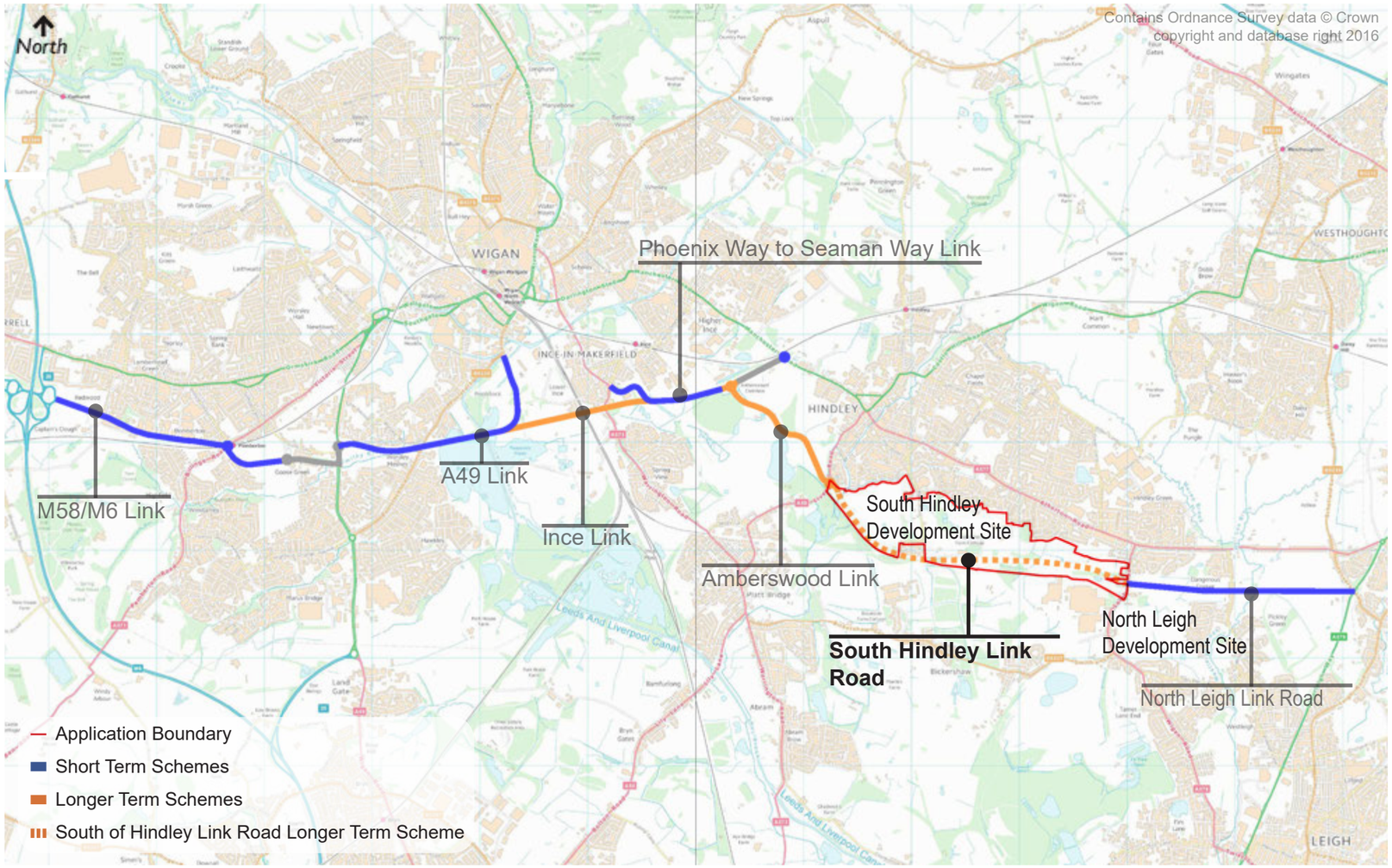


Figure 17 - Wigan Future Transport Network Strategy

3.0 Site Analysis

3.1 Site Character

As identified in section 2 the site is bounded by a range of urban form. This includes a mix of typologies and aged residential properties to the north, and the Hindley Green employment area to the south east. To the south, south west, and west, the site is bounded by greenbelt, and a number of nature conservation areas.

The site itself is predominately brownfield land which has been impacted by historic land uses. As defined by the Wigan Council Landscape Character Assessment, the landscape includes the following character types and areas:

Type 5, Degraded and Restored Landscapes

i. Low Hall Park; a locally designated recreational open space and Local Nature Reserve containing a substantial area of mining subsidence in the valley of the Borsdane Brook;

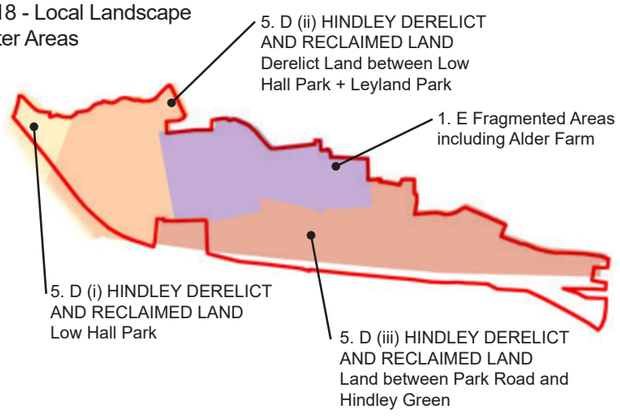
ii. Derelict land between Low Hall Park and Leyland Park; an area of derelict land, containing re-graded colliery spoil mounds, and roughly reclaimed land which is slowly being recolonized by coarse grasslands and pioneer tree species; and

iii. Degraded Land between Park Road and Hindley Green; low lying land influenced by a series of low banked, bare colliery spoil heaps, interspersed with areas of reclaimed rough grassland and woodland.

Type 1, Undulating Enclosed Farmland

Area 1E; Fragmented Areas Including Alder Farm (Hindley); a low lying area east of Wigan, containing a number of separated blocks which are often fringed by development, however they retain a form of agricultural character.

Figure 18 - Local Landscape Character Areas



3.2 Site Constraints

3.2.1 Topography

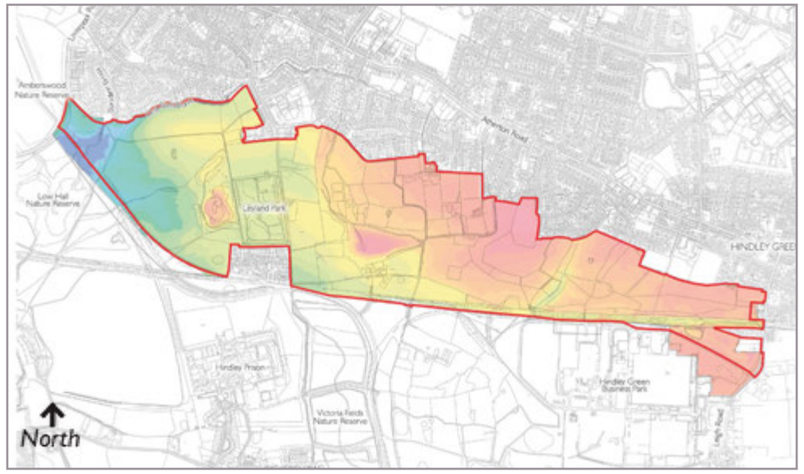
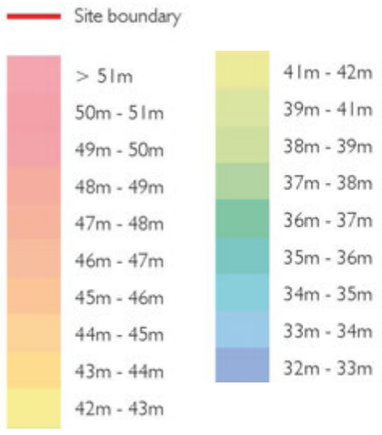


Figure 19 - Site Topography

Localised ground levels within the site vary considerably and Figure 19 identifies that the site generally falls from east to west and from north to south. The land-form of the site varies in height by around 20m. The lowest point is in the far west corner where Dog Pool Brook and Borsdane Brook converge (32m AOD) and the highest natural area is around Sowcroft Farm (50m AOD).



The spoil heaps present within the site (a remnant of the previous coal mining heritage) create local prominent features, with the spoil heap north of Hall Lane Farm reaching a height of 51m AOD.

3.2.2 Ground Conditions

A desk top Land Quality Statement was prepared in 2015 to help inform the masterplanning process. The purpose of the reporting was to determine the potential sources of contamination, exposure pathways and receptors. The assessment was undertaken by reviewing readily available information including very limited site investigation information provided by the Wigan Council / Peel Investments North.

The site is mostly undeveloped (1950s onwards) however extensive mineral extraction took place on site from the 1890s (as described in Section 2.3) along with the development of numerous railways leaving a legacy of potentially contaminated material across the site. The site is underlain by Coal Measures which have potential to produce large quantities of ground gas, migration and accumulation of these gases could be increased by the presence of mine shafts, faults, broken ground caused by collapse abandoned workings, disturbance of the superficial deposits and by the construction of utilities. Other historical on site and off site industrial uses may have further increased the potential for contaminated material to be present on site. The potential receptors on site at risk from these potential hazards are considered to be human health, controlled waters and property as summarised below:

- Risk to Human Health

Contaminants within the Made Ground and introduced to the near surface by historical activities may be mobilised during construction works. The risk to human health from potential contaminants within the Made Ground (colliery spoil) and the near surface on site is considered to be moderate. Remediation and mitigation measures are likely to be required during development.

In addition potential sources of ground gases (coal measures, coal workings) may pose a risk to human health and on site users. The risk to human health from ground gases is considered to be moderate and gas protection measures will be necessary in any buildings.

- Risk to Groundwater and Surface Water

Previous investigations have identified Glacial Till however there remains a potential risk to the Secondary A aquifer (Coal Measures) due to the presence of mineshafts and broken ground due to collapse of abandoned workings. Significant shallow groundwater is not expected to be present on site although

a number of perched water tables have been identified within the Made Ground and sandy/stony horizons in the superficial Glacial Till in previous investigations. The risk to the aquifer is considered to be low to moderate and will require investigation.

Surface run off and migration of potential contaminants in the shallow groundwater may affect on site and off site surface waters. The potential risks are likely to increase during construction. The overall risk is considered to be moderate.

- Risk to Buildings and Services

The review of historical and environmental information has identified potential sources of contamination that may pose a risk to buildings and services. Potential risks to buildings and services due to direct contact with the ground are likely to be mitigated during design of buried concrete.

The Coal Measures and historical colliery spoil have been identified as potential sources of ground gases which may pose a risk to buildings on site. Potential risks to buildings and services due to accumulation of gas is likely to be mitigated through design of appropriate gas protection measures.

An intrusive site investigation is recommended to investigate the ground conditions on site in particular the distribution of made ground. There is expected to be a significant thickness of potentially contaminated Made Ground across the site. Samples of Made Ground and natural strata should be collected for soil and leachate analysis and concrete classification to determine the risk to human health and buildings across the site.

Groundwater and gas monitoring is recommended to assess groundwater regimes across the site and the potential risks to controlled waters, human health and property from gas and vapour.

Following the ground investigation and risk assessment, a remediation strategy should be produced to identify remediation objectives, options appraisal, material and environmental management measures, mitigation measures and verification requirement.

A summary of the location of the potential constraints and the potential sensitive land uses are provided in the Figure 20 from the Geo Environmental Report.

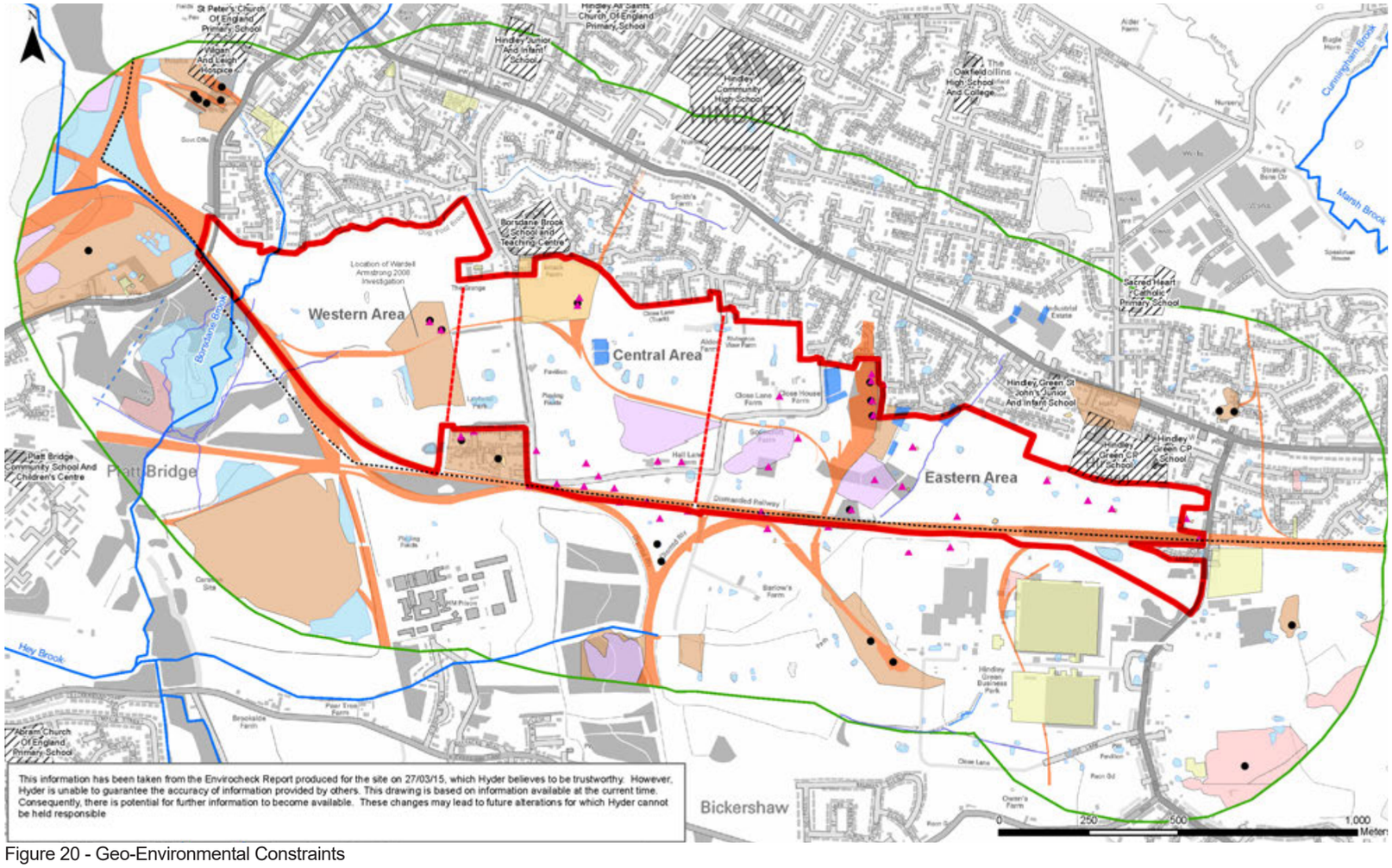


Figure 20 - Geo-Environmental Constraints

3.0 Site Analysis

3.2.3 Flooding

Arcadis has undertaken a flood risk assessment in order to inform an outline planning application for residential led, mixed use development. The proposed development has a mixed flood risk vulnerability classification, ranging from 'Water Compatible' to 'More Vulnerable' in accordance with NPPF guidance. The lifetime of development would be at least 100 years.

The application site is allocated within the Local Plan Core Strategy and accords with the key principals of the NPPF Sequential Test, which steers new development to the lowest areas of flood risk. Flood risk from all sources has been assessed with the following conclusions:

- Fluvial (Figure 21)

The majority of the site currently lies in EA Flood Zone 1, with flooding chance of less than 1 in 1000 annual probability. To the east of the site there are limited extents of Flood Zone 2 and 3 associated with the Borsdane Brook main river;

- Groundwater

The site does not have a historic risk of groundwater flooding; the development proposals are not likely to include any subterranean elements;

- Surface water (Figure 22)

Minimal localised flood risk is identified on site;

- Artificial and Sewer

There are localised sewer flooding events caused by drain and gully blockages, these are not considered to present a major hazard. The development proposals will discharge directly to existing watercourses. No flood risk associated with artificial sources including reservoirs;

Therefore it is concluded that considering the available information the risk of flooding to the application site would be low, in the presence of a considered surface water strategy.

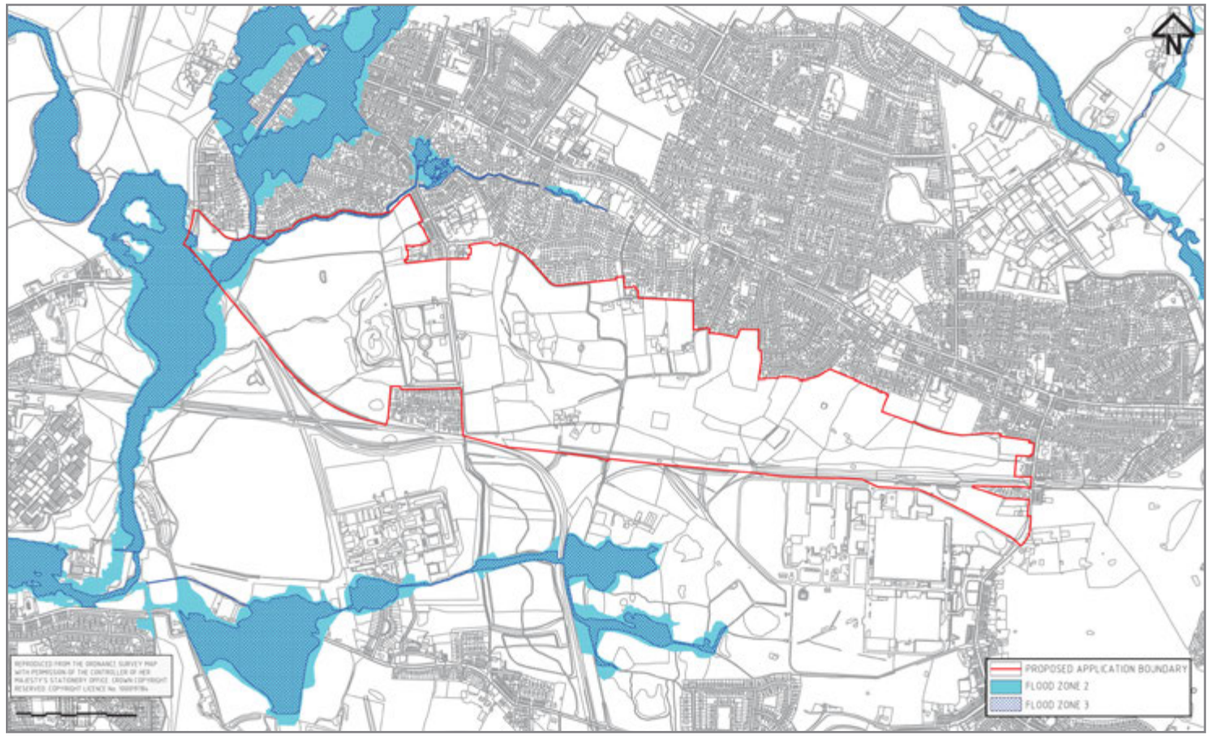


Figure 21 - EA Flood Map for Planning © EA, 2017

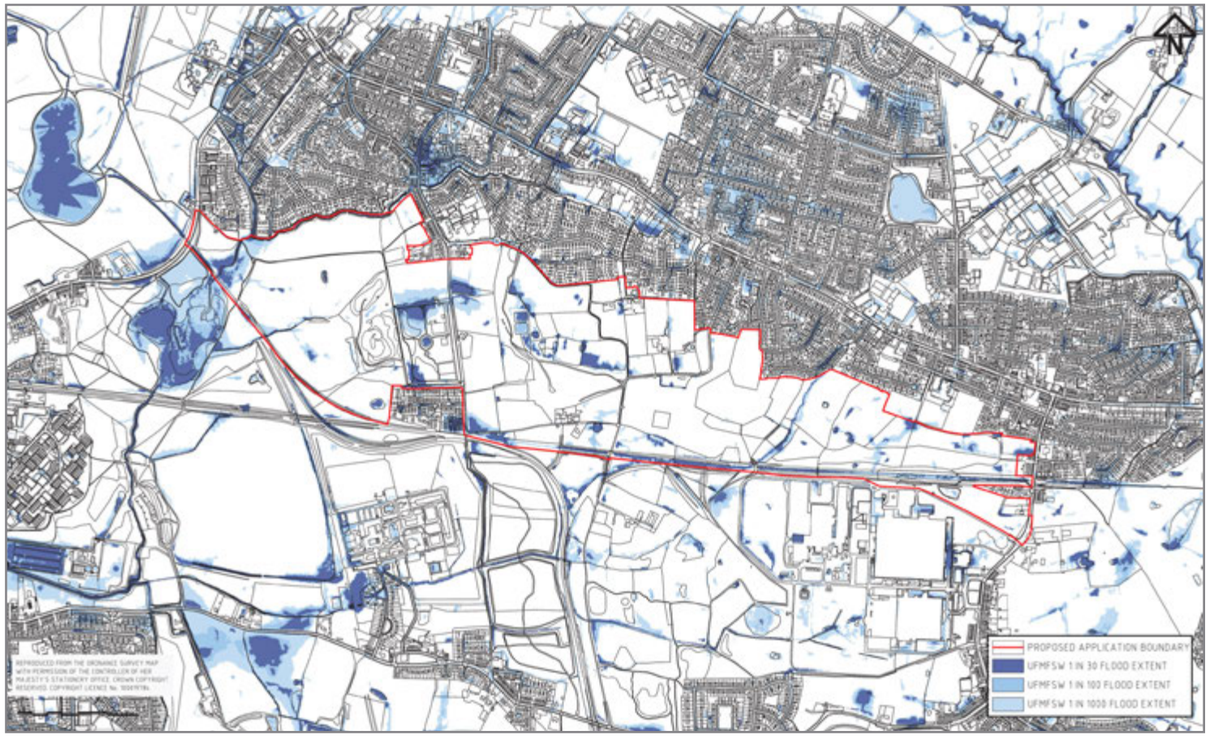


Figure 22 - Risk of Flooding from Surface Water © EA, 2017.

3.2.4 Access and Connectivity

As identified on Figure 23, access to the site is currently available via vehicle from the northern boundary of the site at Park Road (C), and Maple Avenue (F). These roads serve the existing residential properties which are located within or adjacent to the application boundary.

Furthermore, and as identified in section 2.8 the site as part of the 'Wigan Future Transport Network Strategy' new access positions have been identified at the A58 Liverpool Road (A), and A578 Leigh Road (I). There is also an existing roundabout located at the Junction of Close Lane / Glossop Way (D) that could also provide vehicular access.

As identified on Figure 23, the following vehicular access positions could provide further access into the site:

- Ⓑ - Scope for entrance off Park Road;
- Ⓔ - Scope for entrance via Askwith Road;
- Ⓖ - Scope for entrance via Oak Avenue; and
- Ⓗ - Scope for entrance off Edgeworth Road.

In addition the site is also served by a number of Public Rights of Way (PRoW), which dissect the site in a general north / south directions, together with a number of incidental concessionary footpaths. The development proposals will either incorporate or redirect PRoW and enhance pedestrian connections.

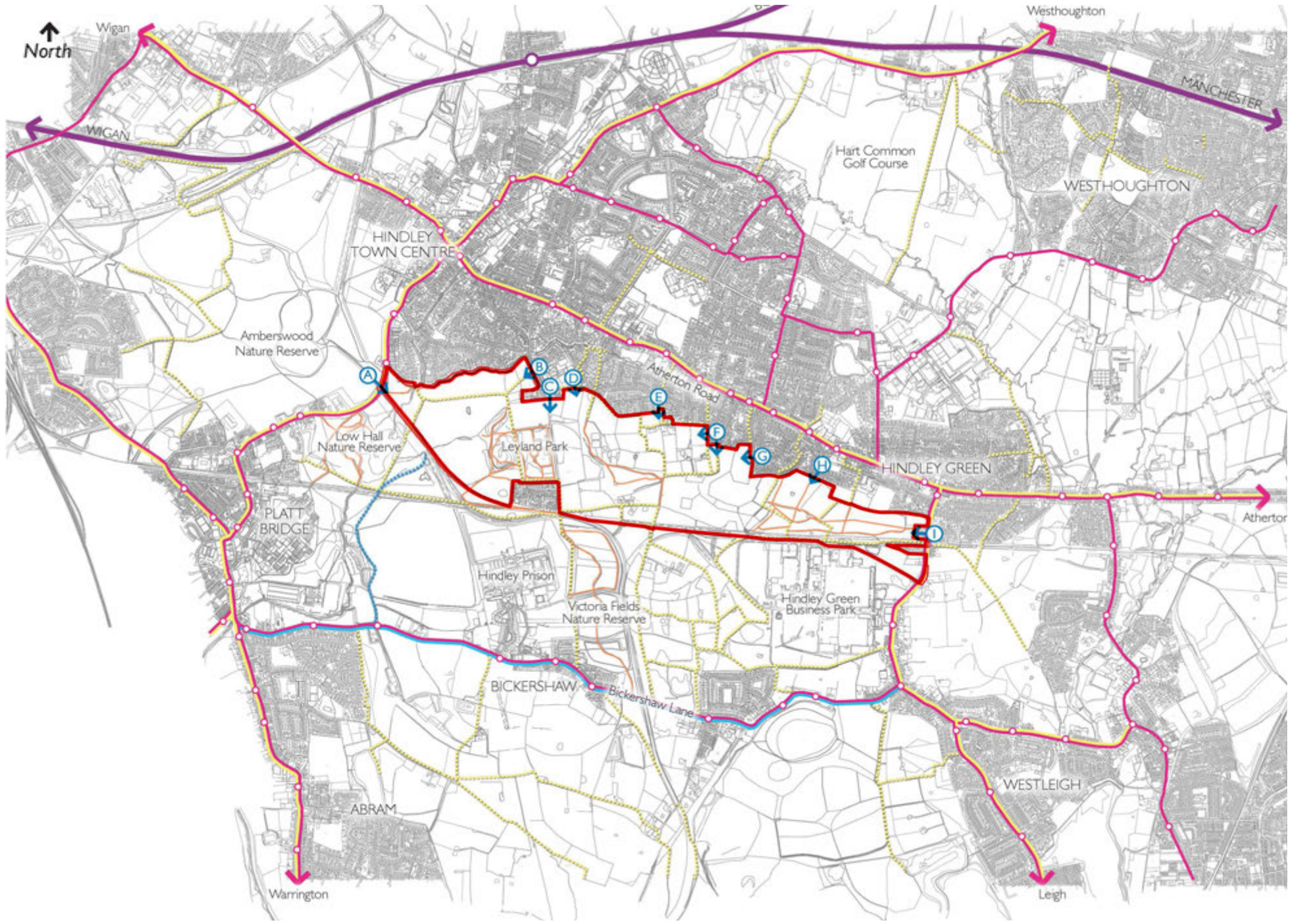


Figure 23 - Access & Circulation

3.0 Site Analysis

3.2.5 Ecology

A number of ecological features were identified during the desk study and extended Phase 1 habitat survey (undertaken during June 2013) , and these have been summarised and categorised by their level of risk and illustrated on the Ecological Constraints Plan (Figure 23) .

High constraints

Features which are identified as a high constraint should be retained wherever possible as these are either sites of recognised ecological value, or where the presence of European protected species has been confirmed.

The most valuable features/ habitats within the site are those areas designated as SBIs: 'Reservoirs east of Leyland Park' and 'Field by Sowcroft Farm'. The conservation value of the 'Reservoirs east of Leyland Park' SBI is particularly high due to the presence of water voles in the ponds. Three further SBIs located adjacent to the site ('Low Hall Park', 'Platt Bridge Heath' and 'Disused Railway at Hindley Green' {now removed as an SBI]) have also been included as high constraints, and wherever possible, an area of green space should be left between the SBI and any built development to provide an appropriate buffer, to protect these sites of nature conservation value.

The seven water bodies on site identified as great crested newt breeding sites, have been marked as high constraints, due to the fact that European protected species receive the highest level of species protection. A 50m buffer of terrestrial habitat around each of the water bodies has been marked as high constraint however, a distance of 250m from a breeding pond is the generally accepted distance of high value terrestrial habitat.

Moderate constraints

Several areas of habitat have been identified as moderate constraint (orange) because they represent examples of habitats of principal importance, as listed on Section 41 of the NERC Act (2006). These are the two small areas of wet woodland, the area of dry heath/ acid grassland mosaic on the coal spoil tip, all of the hedgerows, and the remaining ponds on site, including those former ponds that have silted up and become swamp. These habitats are of intrinsic conservation value, but are also likely to support associated species such as nesting birds, foraging/ commuting bats and breeding amphibians.

The Borsdane Brook and the Dog Pool Brook are also marked as moderate constraint, partly due to their intrinsic conservation value, but also due to their potential to support water voles. Leyland Park due its value for foraging bats, is also identified as a moderate constraint.

Low constraints

Other areas of habitat have been marked as low constraint (yellow) on the constraints plan since, although they are not recognised as nature conservation priorities, they are still of some conservation value. These include the areas of planted woodland, rough grassland, marshy grassland and swamp. Such areas may, for example, provide nesting habitat for birds, foraging/ commuting habitat for bats, or foraging and places of shelter for amphibians.

Negligible constraints

Due to the generally low levels of bat activity, the site is considered to be of limited value for foraging bats. The remainder of the site has been marked as being of a negligible constraint (uncoloured).

Invasive plant species

The invasive plant species identified across the site have also been added to the Ecological Constraints Plan as black cross-hatching. Japanese Knotweed was present in numerous places across the site. Indian Balsam was present on the floodplain of the Borsdane Brook and in the rough grassland to the west of Leyland Park. Scattered Rhododendron was also present in the rough grassland to the west of Leyland Park. Nuttall's Waterweed was identified in one of the fishing ponds in 'Reservoirs east of Leyland Park' SBI.

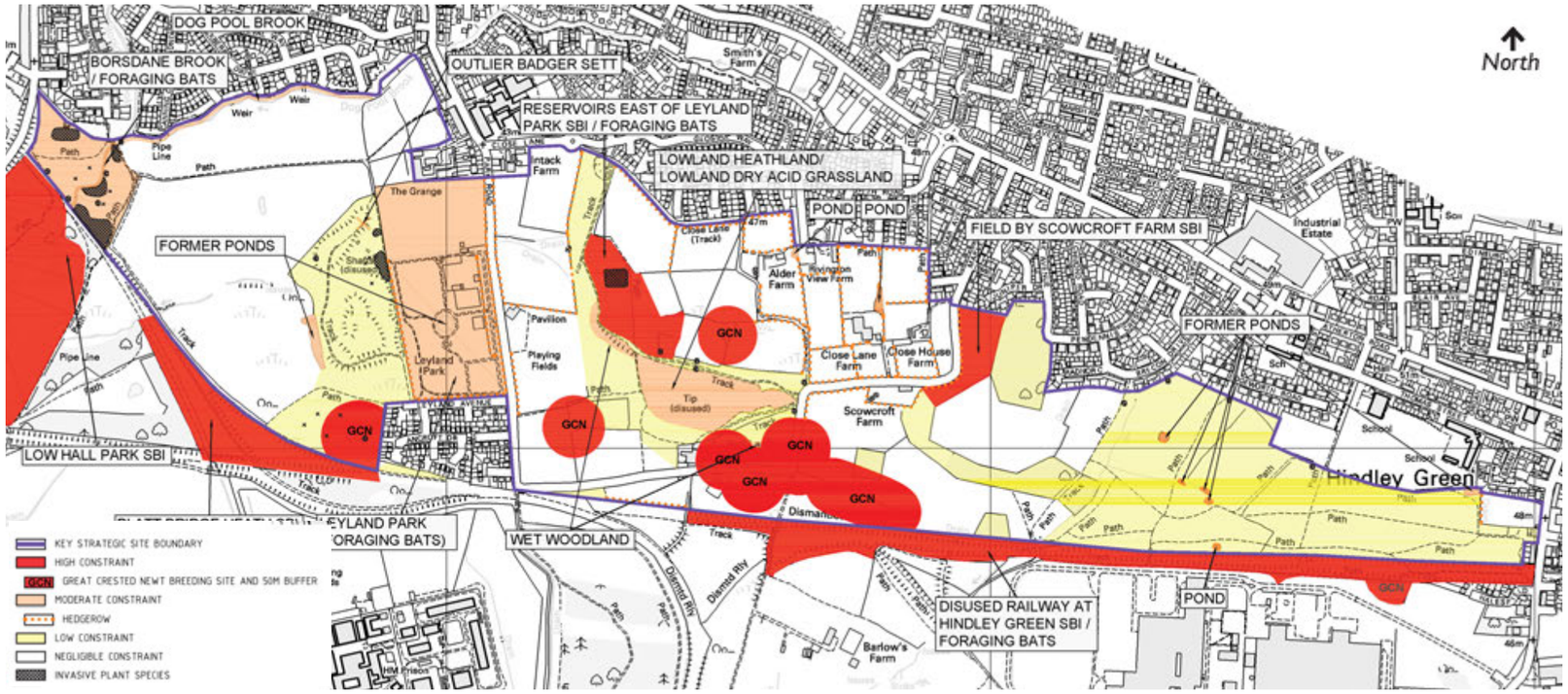


Figure 23 -Ecological Constraints.

3.2.6 Existing Open Space

As identified and described in section 2.5 the existing site has 21.5 ha of designated open space which include a range of typologies.

3.2.7 Third Party Landowners

The application site land ownership predominately falls with Wigan Council (circa 47%) and Peel Investments North (circa 32%*), however there are a number of 3rd party land owners, which make up the remainder of the site ownership, as shown in Figure 24.

**with land options*

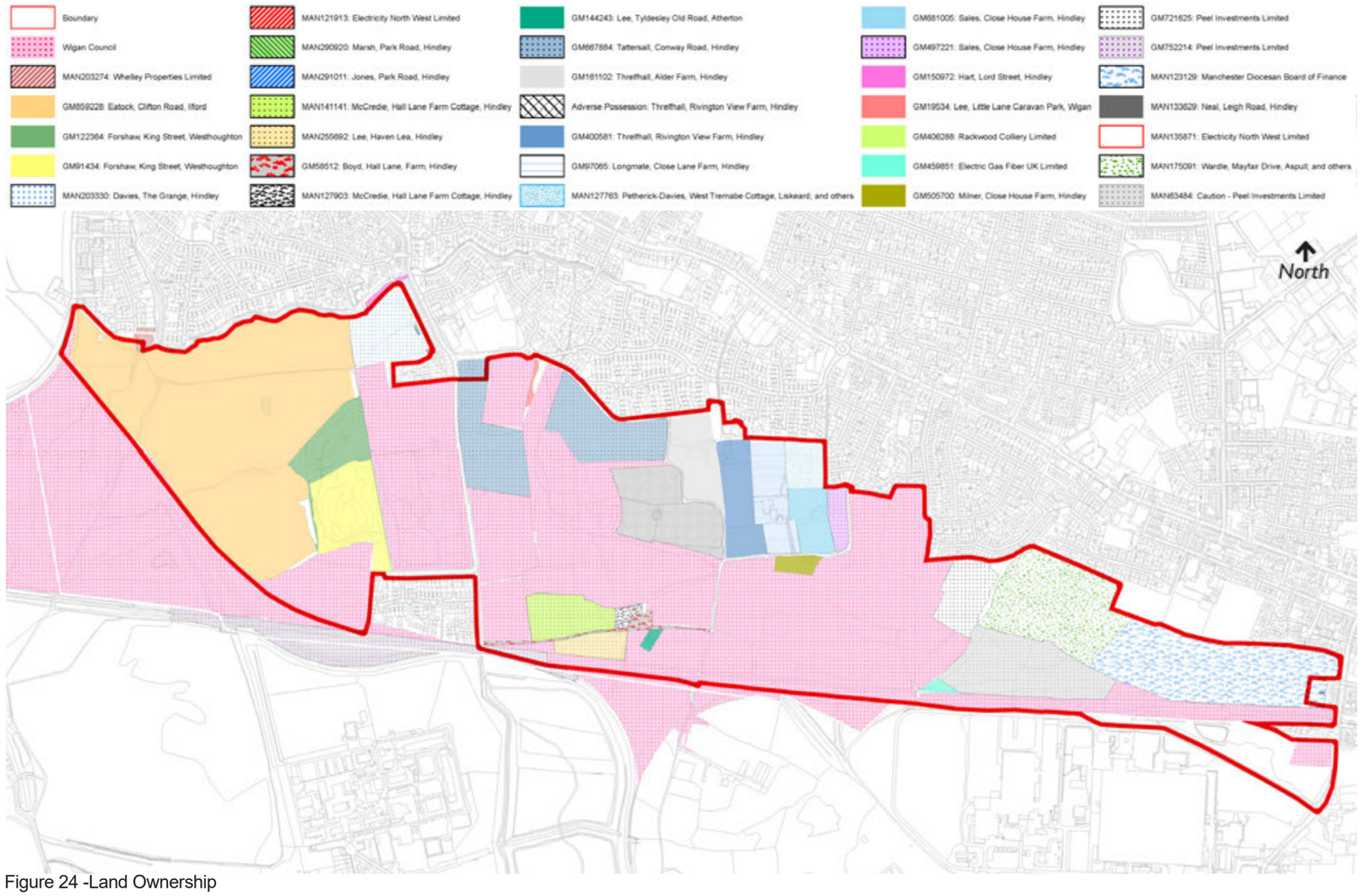


Figure 24 -Land Ownership

3.3 Site Opportunities

The site constraints have highlighted several opportunities that could help to shape and inform the new development proposals, these are described below:

- There are opportunities to improve and enhance existing pedestrian connections from the Hindley and Hindley Green to the Wigan Greenheart with a series of green routes that follow a landscape hierarchy.
- Promote new development overlooking pedestrian and cycle links to provide natural surveillance and improve the safety and security within amenity areas.
- Opportunity to enhance connectivity to local green open spaces, Hindley Green football pitch, Leyland Park, Low Hall Nature Reserve and Wigan Greenheart.
- Potential to improve or provide new public open spaces, parks and play areas with enhanced ecological value forming a dual function.
- Enhanced connectivity including a new strategic highway.
- Create a sustainable development with enhanced connectivity to local bus routes and pedestrian connections to local facilities.
- To support the local economy with sustainable development within walking distance of community facilities increasing footfall to the high street.

4.0 Design Evolution and Spatial Jigsaw

4.1 Land Use Zoning

To inform the masterplans land use zoning a spatial analysis exercise was undertaken to identify priorities considering the findings from the site analysis stage. Figure 26 demonstrates the spatial analysis of the South Hindley site (calculations were based on a total site area of 129.5ha). This considered all the spatial constraints, identified such as mining and land ownership, as well as established masterplan requirements. At this stage this considered the following requirements:

- Proposed Residential Areas - 70ha (28 units / ha)
- Proposed Employment Areas - 5ha*
- Proposed Infrastructure (East West Link Road) - 10ha
- Proposed Open Space – 5ha (25 sqm per dwelling)
- Retained Open Space – 10ha (Leyland Park, Hindley Juniors, and Sport Pitches)
- Proposed Primary School – 3ha
- Retail / Local Centre – 1ha

**The requirement for Employment land at 5ha is a smaller provision than identified within Wigan's Local Plan. A 12ha area defined as employment is required.*

The spatial requirements together with the considerations of the site constraints and opportunities resulted in a initial preferred land use zoning being established (Figure 25), with a series of options explored in relation to the different methods of integrating the strategic highway alignment through the development site. The land use zoning options are represented in Figures 27-31.

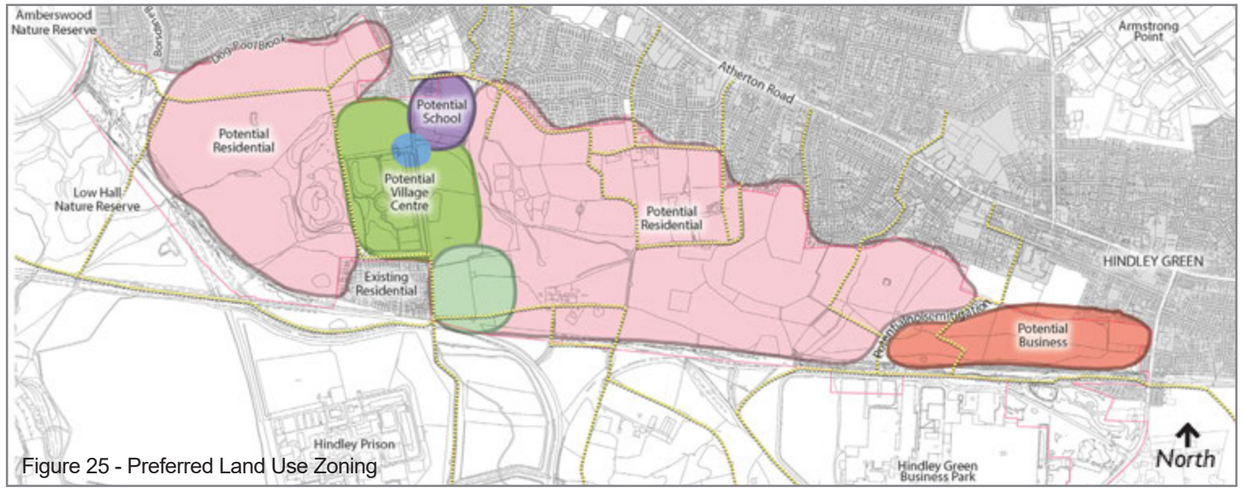


Figure 25 - Preferred Land Use Zoning

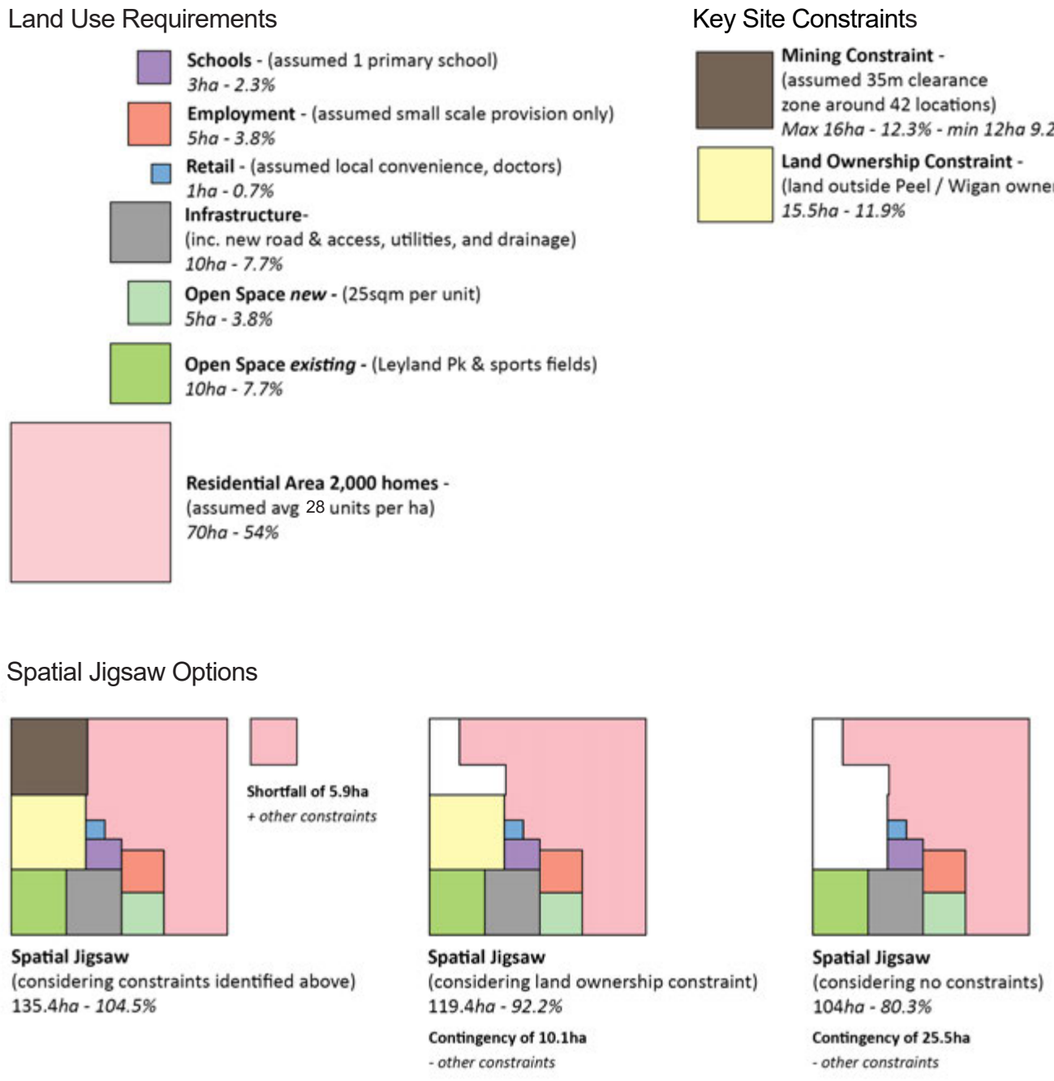


Figure 26 - Spatial Analysis

4.1.1 Strategic Route Alignment

The Figures below show masterplan configurations that were considered during the development process. The initial preferred land use configuration shown in Figure 26 was utilised for all options. The location of the strategic route presented the opportunity to inform the masterplan and define the sense of place within South Hindley. The Future Transport Strategy previously identified the route along the dismantled rail line to the southern boundary of the site.

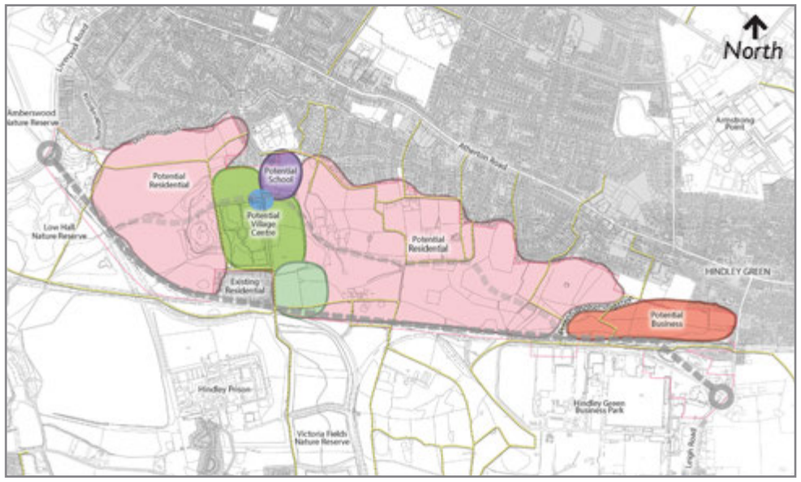


Figure 27 - Option A - Strategic route alignment along the former rail route with potential internal spine road alignment (following historic routes).

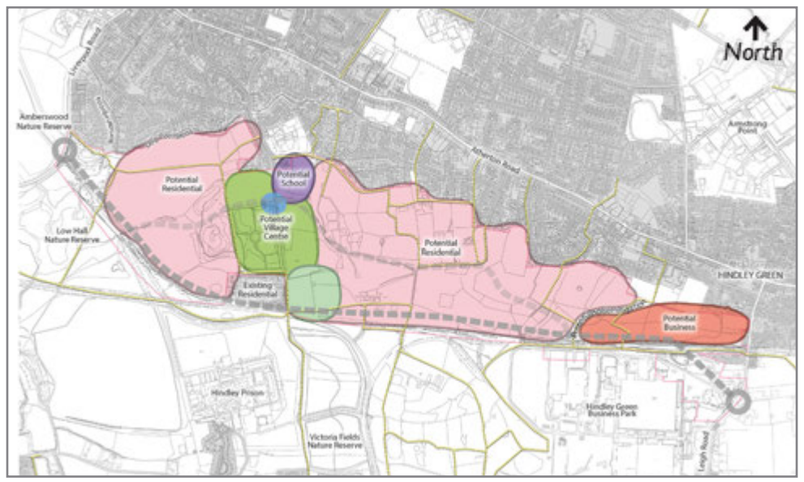


Figure 28 - Option B - Strategic route alignment to the north of the former rail route with potential internal spine road alignment (following historic routes).

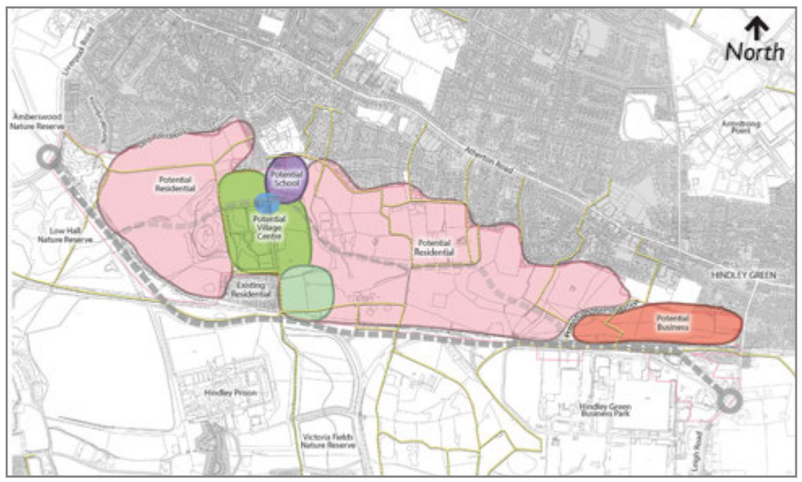


Figure 29 - Option C - Strategic route alignment to the south of the former rail route (within Greenbelt) with potential internal spine road alignment (following historic routes).

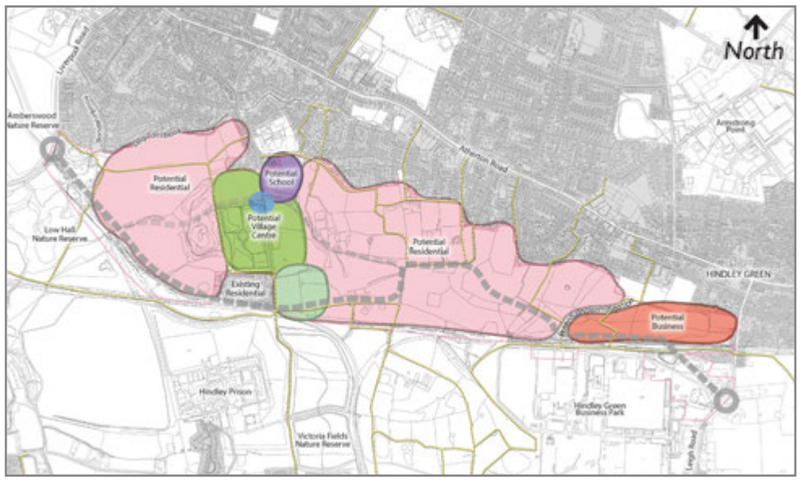


Figure 30 - Option D - Link road alignment through eastern residential area and to along the rail line to the west with potential internal spine road alignment (following historic routes).

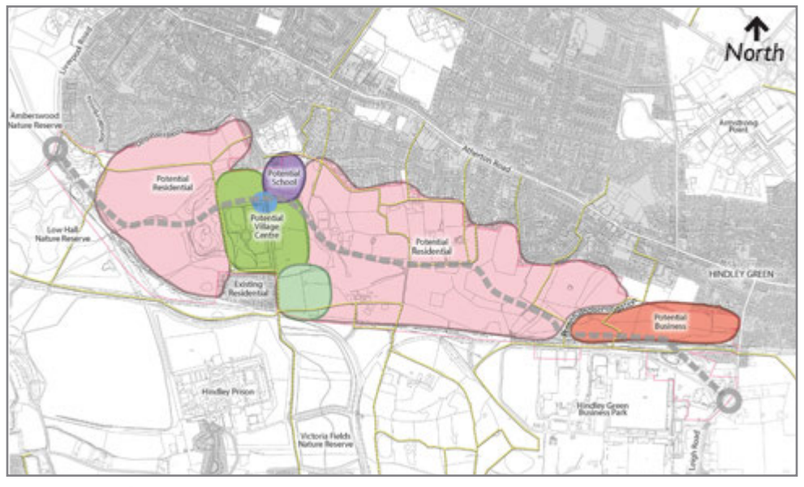


Figure 31 - Option E - Link road alignment through east and west residential areas (following historic routes).

The Future Transport Strategy (Option A) potentially presented a number of disadvantages, including:

- Deliverability; the width of former railway may not be wide enough for route, together with potential engineering issues due to part presence on embankment and cutting;
- Ecological / Biodiversity Loss: Potential for major loss of trees along the former rail route, containing a number of ecological constraints namely Great Crested Newt's and Bats;
- Design Speed: With the alignment fixed, there would be reduced opportunity to design in speed restraint through alignment causing potential further severance issues to the greenbelt, open spaces, and PRoW networks to the south;
- Impact of Existing Residents: Route close to existing residential area south of Leyland Park, resulting in issues with noise, air quality etc.; and
- Sustainable modes of transport: A reduced ability for the route to serve as a public transport route, 1. located further away from the existing community and proposed new dwellings within South Hindley, 2. impact on the aspirational Sustrans route.

4.0 Design Evolution and Spatial Jigsaw

4.1.1 Strategic Route Alignment contd...

Figure 32 demonstrates the preferred Strategic Route alignment, and the adjacent table demonstrates the advantages and disadvantages of this location.

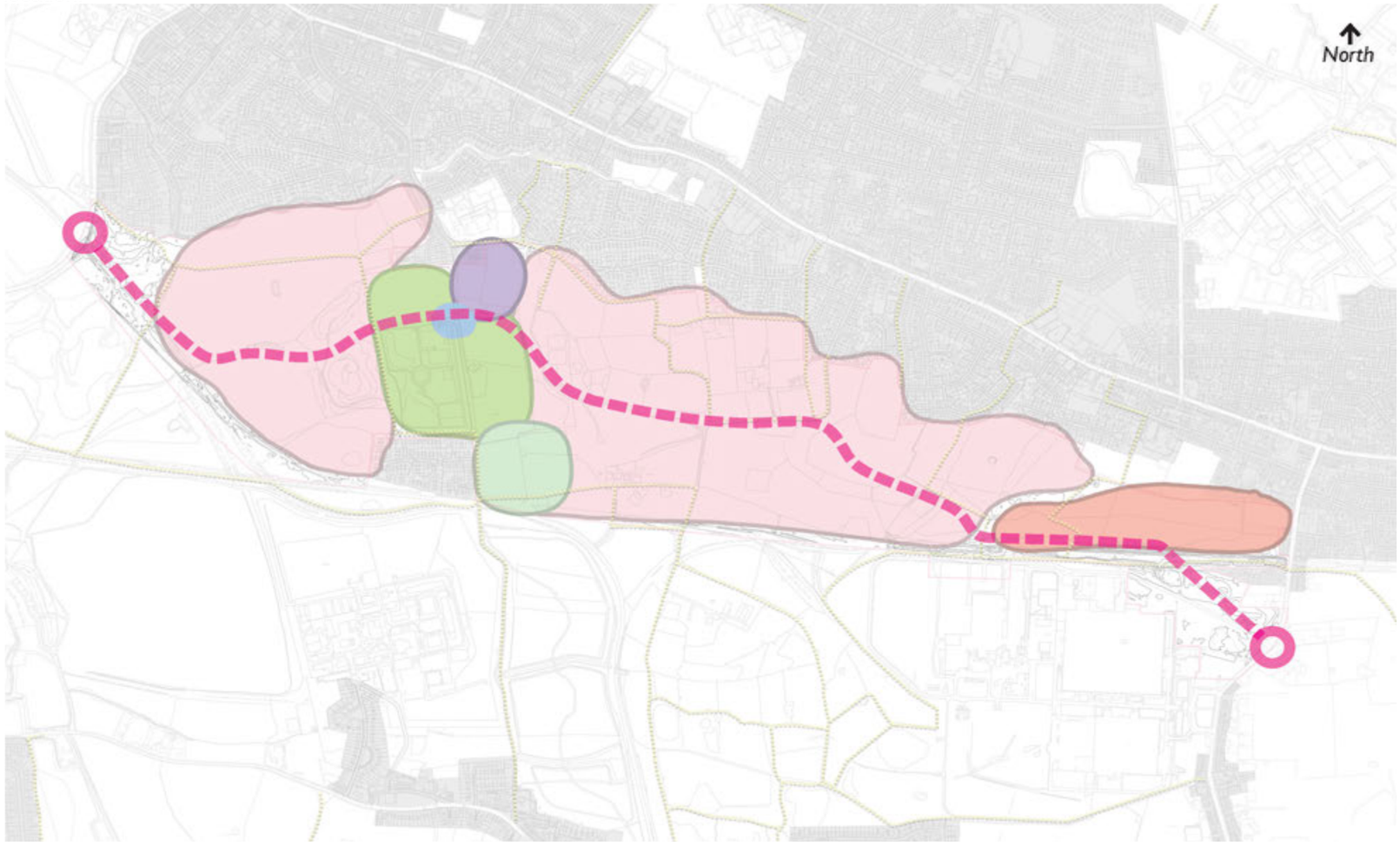


Figure 32 - Option E - Link road alignment through east and west residential areas (following historic routes).

Advantages	Disadvantages
Strong connection with potential village centre.	Aspirational Sustrans route along the rail line separated from Hindley by link road.
Route within site area.	Route follows part of the existing minor vehicular route through development.
Opportunity to use railway as a recreational route (Sustrans 55).	Severance of development into two areas (north and south of link road) as a result of location. This results in the need for careful consideration of the roads design principles and its interface with surrounding development, along with the identification of a sufficient quantity of pedestrian crossings.
Flexibility regarding width of route, helping to define placemaking and enhancing the character along the link road.	
Existing trees and land form of railway (south of the site) retained.	
Engineering issues related to cutting/embankment of railway reduced.	Reduced land available for development as link road located within application boundary.
Flexibility with alignment, therefore opportunity to design in speed restraint through alignment.	
Route further away from existing residential area south of Leyland Park, reducing issues with noise, and air quality.	Potentially increased number of junctions /crossings on the link road potentially resulting in increased journey times.
Potential to help define the route within an urban setting.	

4.1.2 Landscape Framework and Green Infrastructure

A key principle for the South Hindley site is the establishment of a strong landscape framework, due in part to the presence of a green belt adjacent to the sites southern edge, existing site features, and the present ecological value. These factors promote the need to reinforce its green character, and create a strong character that responds to its contextual setting.

The greenspace network reinforces the existing public routes (including PRoW) to create a strong open space framework, grouping spaces into larger multifunctional spaces, strengthening north-south greenway links between Hindley and the aspirational east west Sustrans corridor and the greenspace/ nature reserves to the south.

The site at South Hindley contains approximately 19.3ha of existing open space (for full breakdown refer to Chapter 2.5 and Figure 14).

The current adopted policy RIE Open Space in New Housing Development, and the accompanying SPD (2005), a requirement of 25m² per unit is required for all new residential developments. 2,000 residential units at Hindley South results in a requirement of 5.0ha of New Open Space provision.

The Wigan Borough Open Space, Sport and Recreation Provision and Needs Assessment (2015) provides an overview of existing provision within the Hindley area, and concludes that there is generally sufficient provision of formal and informal open space in Hindley with large areas of parkland and a local nature reserves characterising the open space. With reference to the defined typologies within the assessment the following was concluded:

- Parks and gardens

Leyland Park, to the East of the settlement scored highly for both quality and value

- Amenity Green Space

There is a need to increase the quality and value of the existing amenity green space and to provide good links to existing open space from new developments.

- Natural and Semi-Natural Green Space

The western side of the settlement is within the Greenheart area. The majority of natural and semi-natural green space falls to the north, south, and western boundaries of the settlement with no provision in the centre or the east of the town. There is sufficient provision in the urban areas from parks and gardens and other green spaces however.

- Green Corridors

Five green corridors, these sites complement the Greenheart area and local areas of natural and semi-natural green space.

- Allotments and Community Gardens

Five allotment sites and community gardens within Hindley, there is a need to better manage the allotment sites in Hindley and presents an opportunity to replace the existing sites with more efficient and better maintained allotment sites.

- Provision for Children and Young People

Eight unequipped play areas and 8 equipped play areas including a range of local and neighbourhood play. Leyland Park provides for both older and younger children with a toddler and junior play area, a Multi-Use Games Area (MUGA), trim trail, and aerial runway. This site benefited from investment during 2013-2014. There is a gap in play provision to the east of the borough. The deficit can be addressed by requesting on site provision for any new developments in this area.

- Civic Spaces Provision

The lack of civic spaces in Hindley presents an opportunity to improve the social and cultural offering in the settlement through future development and urban design.

- Outdoor Sports Provision

There is provision for a wide range of outdoor sports in Hindley.

New Open Space / Green Infrastructure Requirements at South Hindley

The open space strategy and masterplan considers the findings of the Open Space, Sport and Recreation Provision and Needs Assessment, together with adopted policy R1E:

(A) Existing Defined Quantum (WC Open Space Audit): 19.3ha

(B) Policy R1E required quantum (25sqm per dwelling); 5.0ha

Policy Compliant Open Space Quantum (A + B) : 24.3ha

Proposed Green Infrastructure / Open Space Design

Along with consideration of requirements set out above the Green Infrastructure & Open Space design has been developed around three key principles. These are:

- Grouping of large open space to provide multifunctional opportunities;
- Strengthened east-west link through the Sustrans Green Corridor; with
- North-south links through the masterplan to connect existing community to new open space and promote access to Greenway and green belt beyond & adjacent Local Nature Reserves.

Figures 33-39 set out the principles, with the key concept grouping the open space provision around the defined centre of Leyland Park, thus creating a strong central green hub within the masterplan.

4.0 Design Evolution and Spatial Jigsaw

Figure 33 - Site Specific Landscape Character

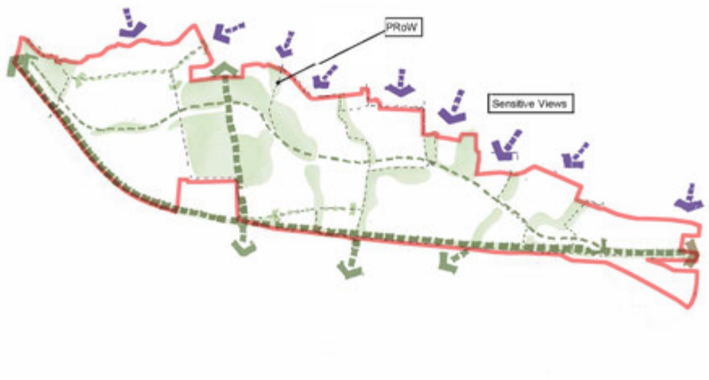


Figure 34 - Existing PRoW & Sensitive Views

Figure 35 - Existing Contours

Figure 36 - Existing Hedgerows

Figure 37 - Existing Woodland

Figure 38 - Existing Water bodies

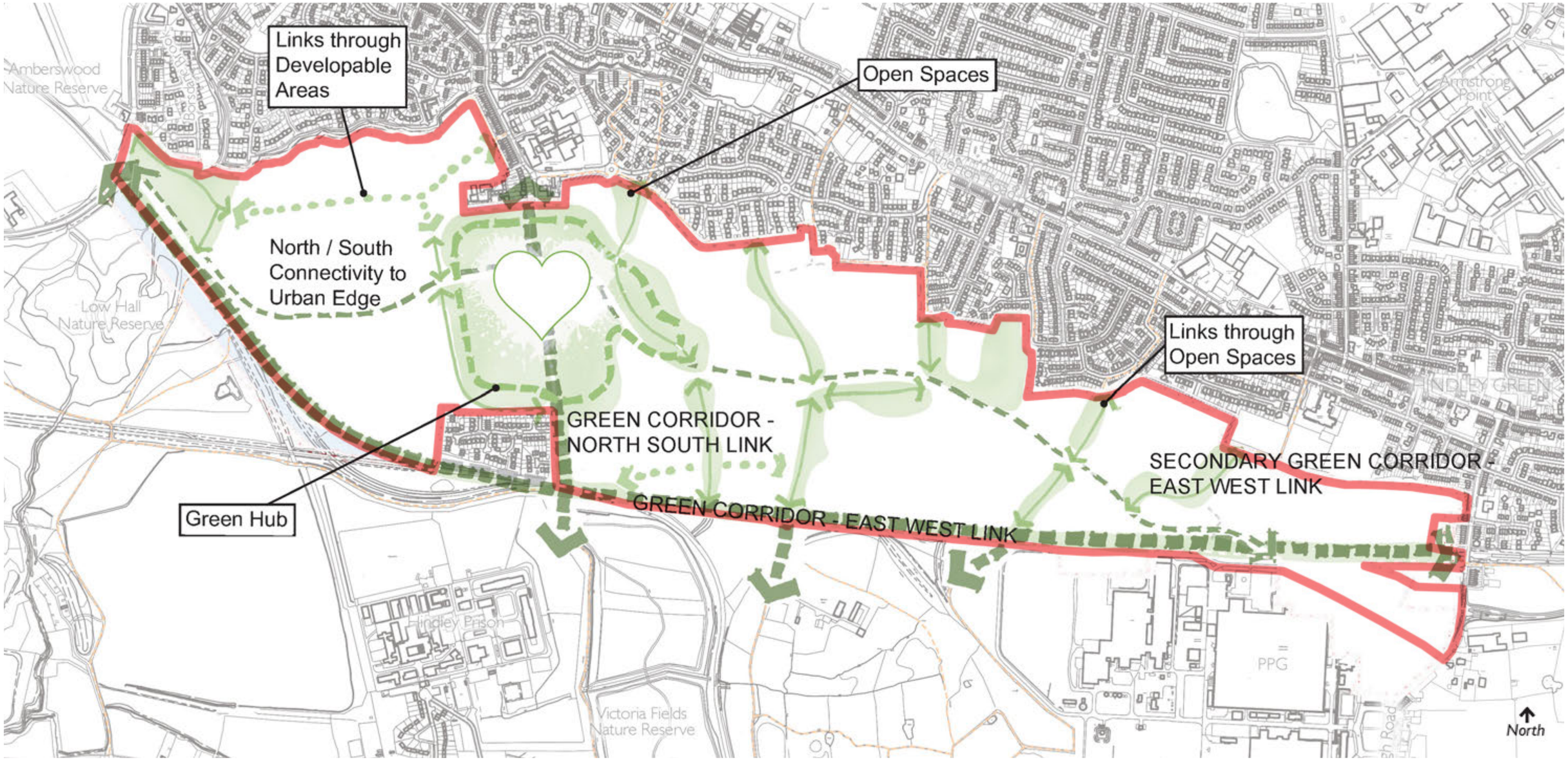


Figure 39 - Green Infrastructure Concept Diagram

4.0 Design Evolution and Spatial Jigsaw

4.2 Sketch Masterplan

The emerging sketch masterplan layout took into consideration the existing South Hindley site features including open spaces (Leyland Park, Hindley Juniors Sports Pitches), the public footpath network, historic site routes, field patterns, and landscape features to help further inform the potential for development and placemaking. This design progression can be seen in Figure 40. Other key considerations and design principles were included in the design progression:

- the relationship with existing properties along the northern edge of the site boundary. Here a 20m offset has been achieved between identified sensitive receptors to the northern development edge;
- the creation of a local centre - positioned around Leyland Park, and existing sport fields with the proposed school and potential retail site forming the core of the masterplan;
- the positioning of the strategic route (see section 4.1.1) - this forms an integral part of the masterplan and will be designed as a tree lined boulevard and green corridor. The position also allows for the creation of a series of green spaces to its periphery, together with a variety of treatments of the built from. This will help create a variety of character identities along the network, promoting and reinforcing the sense of place and thus creating an attractive route through the site for road users, cyclists and pedestrians. Development cell connections to the strategic route are minimised and development fronting the road will be designed to be accessed from within the cell. This position also allows for the creation of a sustainable route along the former railway line.; and
- a strong landscape framework (see section 4.1.2).

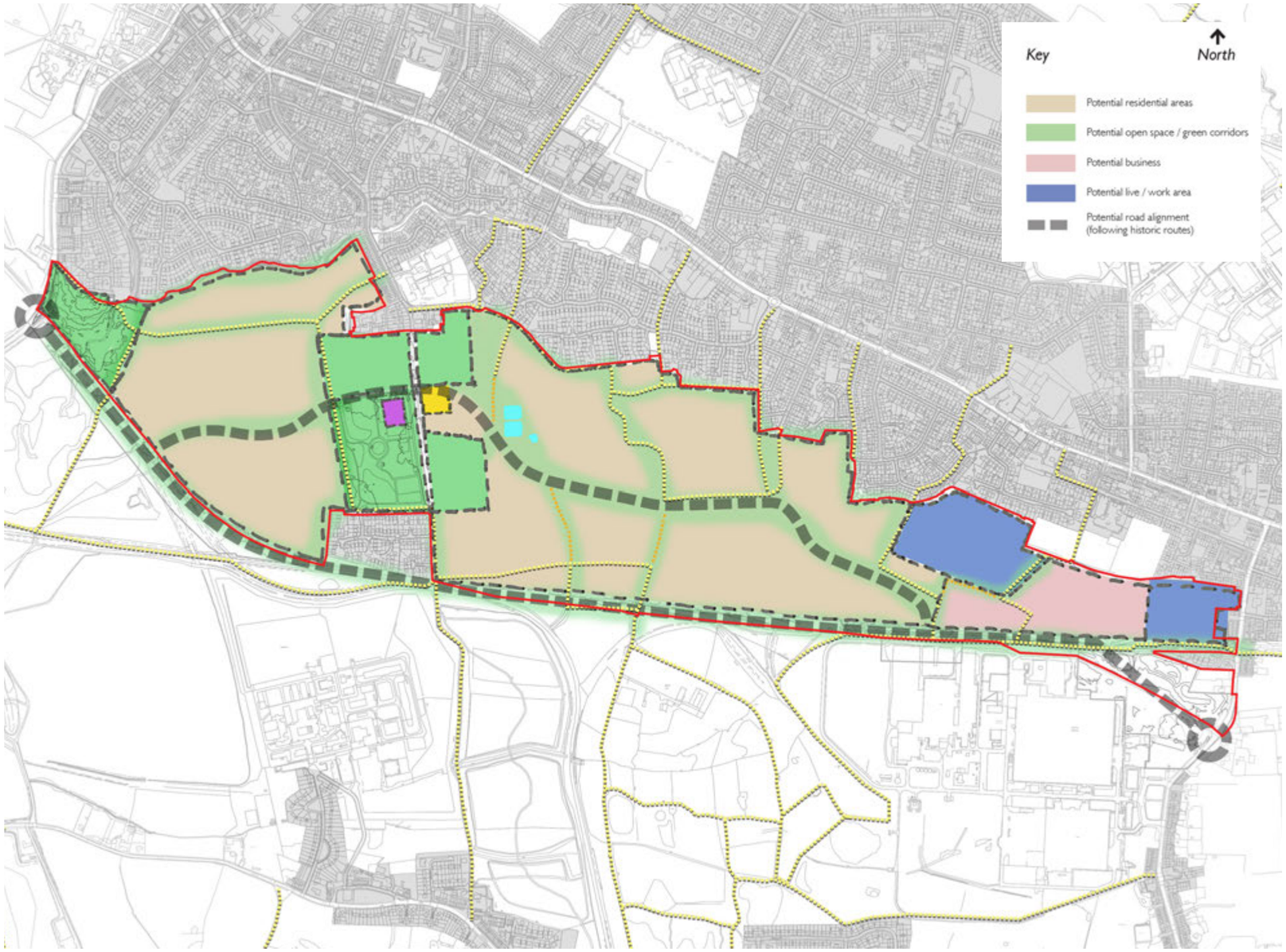


Figure 40 - Sketch Masterplan

4.2.1 Emerging Development Parcels

The emerging sketch masterplan promotes a layout containing 10 development parcels (22 sub areas), each providing between 34 – 361 units, at an average development density of 36.72 units per hectare, thus achieving the requirement for 2000 units. Figure 41 shows the emerging development parcels and the corresponding measurements for each land use typology. The built residential areas are totalled with their corresponding densities per hectare, providing an estimate of the number of units that can be accommodated on that development parcel. As noted previously the provision for Employment has been increased to meet the 12ha requirement as identified within Wigan's Local Plan.

EMPLOYMENT

12.00ha

Residential areas: 53.35 ha

Total units - 2000
Total occupants - 4600

OPEN SPACE

Existing outdoor sport

Existing formal open space

SUSTRANS corridor

Green space network

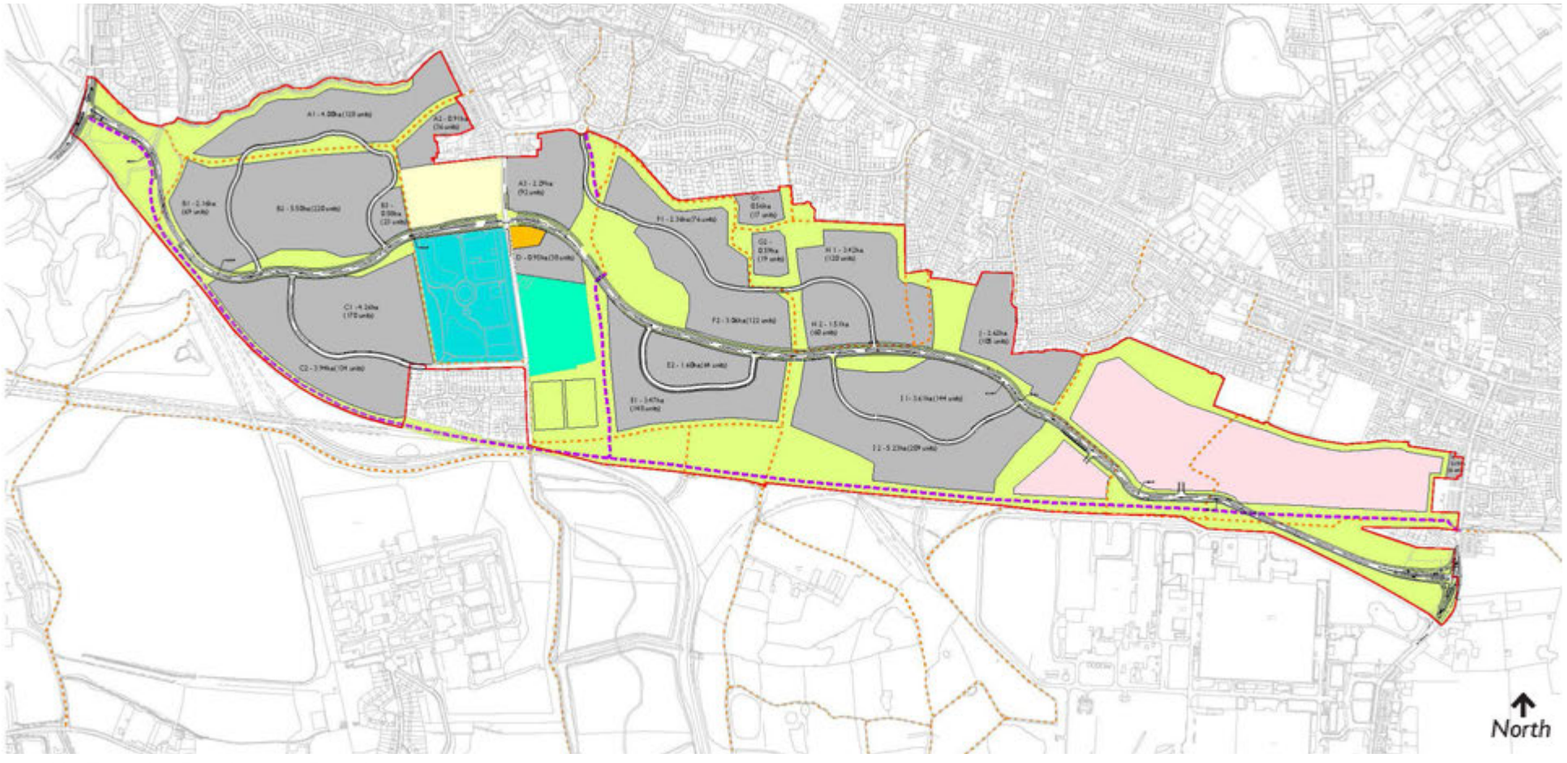


Figure 41 - Emerging Development Parcels

Residential Development Parcels Schedule

	Sub area	Total area	density (d/ha)	units
A1	*4*		*32*	*128*
A2	*0.91*		*40*	*36*
A3	*2.29*		*40*	*92*
A		**7.2**	*Average 35.56*	**256**
B1	*2.16*		*32*	*69*
B2	*5.5*		*40*	*220*
B3	*0.58*		*40*	*23*
B		**8.24**	*Average 37.90*	**312**
C1	*4.26*		*40*	*170*
C2	*3.94*		*34*	*134*
C		**8.2**	*Average 37.12*	**304**
D		**0.95**	*40.00*	**38**
E1	*3.67*		*40*	*147*
E2	*1.6*		*40*	*64*
E		**5.27**	*Average 40.00*	**211**
F1	*2.36*		*32*	*76*
F2	*3.06*		*40*	*122*
F		**5.42**	*Average 36.52*	**198**
G1	*0.56*		*30*	*17*
G2	*0.59*		*32*	*19*
G		**1.15**	*Average 31.03*	**36**
H1	*3.42*		*35*	*120*
H2	*1.51*		*40*	*60*
H		**4.93**	*Average 36.53*	**180**
I1	*3.61*		*40*	*144*
I2	*5.23*		*40*	*209*
I		**8.84**	*Average 40.00*	**354**
J		**2.62**	*40.00*	**105**
K		**0.15**	*40.00*	**6**
TOTAL		**52.97**	***Average 37.75***	**2000**

4.0 Design Evolution and Spatial Jigsaw

4.2.2 Emerging Development Parcels
(with 3rd Party Land discounted)

A key constraint identified during the site analysis was the presence of 3rd party land within the site area. As part of the requirement to deliver a robust masterplan a scenario in which the 3rd Party land was discounted from the masterplan was developed to consider potential implications on the delivery of 2,000 units (see Figure 42)

This resulted in the reduction of land available for residential development (approximately 14ha), and considering the retention of the same density (36.72 units per ha) a total of 1,575 units could be delivered, resulting in a loss of 425 units on the site. In addition, there would have been impacts on the strategic route alignment, and open space provision.

This strategy was discounted as it was agreed that the development of the masterplan should take a holistic view of the whole site, and exclude constraints identified with land ownership.

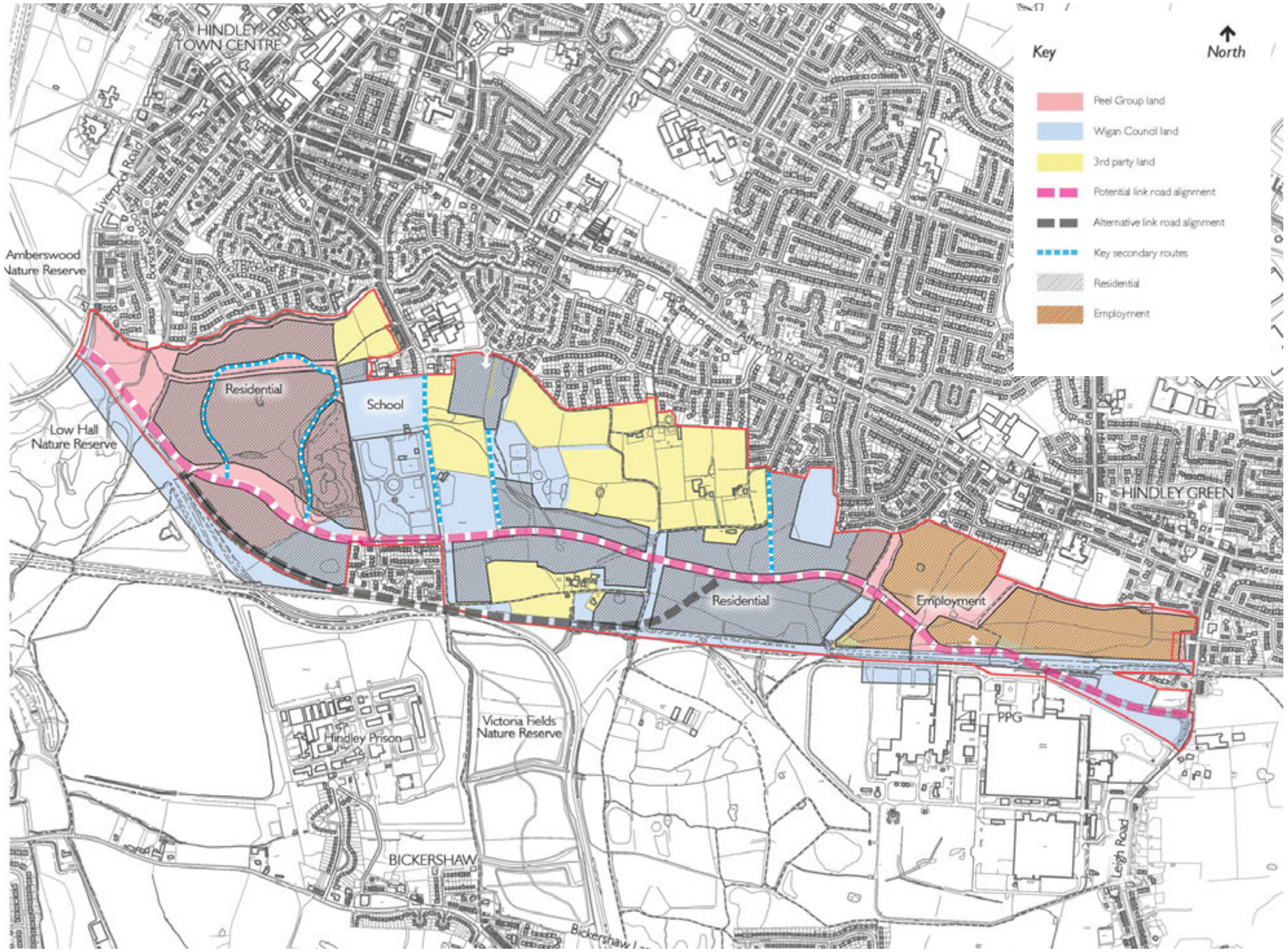


Figure 42 - Emerging Development Parcels (with 3rd Party Land discounted)

4.3 Masterplan Options

As part of the design evolution of the masterplan a number of options were developed exploring the potential land use zoning across the site. These four options are set out below:

4.3.1 Option A

This option considered the relocation of the sports pitches located to the north of Leyland Park to provide a facility located adjacent to the employment land, which serves as multifunctional area creating both a buffer between existing residential properties and the employment area.

This was also positioned adjacent to existing provision located outside the development site, and as such could warrant the inclusion of changing facilities and car parking thus helping define its function within the local community. This would also help balance the deficit of sports provision identified in the east, (however would have removed existing provision from the west which is currently partially utilised by Hindley Juniors).

The design could have also benefited from the potential sharing of car parking facilities due to the adjacency to the employment area which would experience different usage needs. The relocation allowed for the release of more marketable developable land located within and around the defined local centre, and Leyland Park. (Figure 43).

Figure 43 - Illustrative Masterplan Option A

4.0 Design Evolution and Spatial Jigsaw

4.3.2 Option B

This option considered the retention of the sports pitches located to the north of Leyland Park with an increased area of residential development parcels in the east. This created the potential to relocate the strategic route and locate the employment area solely along its northern edge, however this resulted in the employment areas increasing its proximity to the existing residential edge. (Figure 44).

4.3.3 Option C

This option considered the relocation of Hindley Juniors FC, including the pitches, club house and parking facilities. These would have been relocated to the Village Green area, and would have also required the removal of development parcel K2 (1.36ha / 57 units). The presence of the Football Club in the east adjacent to public facilities would have enabled the potential for sharing facilities for both public and private usage. In addition, the land at the existing Football Club site could have provided a strong defining edge to Leyland Park, which is defined as a township park. Here the opportunity for 2.7ha of developable land could have provided 100 extra residential units.

Figure 44 - Illustrative Masterplan Option B

4.3.4 Option D

This option considers additional housing in the Wigan Greenbelt adjacent to Liverpool Road, which has been noted as an area for potential development within the draft Greater Manchester Spatial Framework 2016.

A developable area of 0.72 ha is possible located outside the floodplain noted previously, and this could provide an additional 30 units. This potential for development would enhance the potential for an active frontage along Liverpool Road, however, the public footpath along the northern boundary would potentially have to be redirected along the link road. Also the existing track and pumping station may need to be removed or relocated. (Figure 45).

Figure 45 - Illustrative Masterplan Option D

4.0 Design Evolution and Spatial Jigsaw

4.3.5 Agreed Preferred Layout (Pre-Consultation)

Masterplan Option A, was considered the best solution facilitating the land around Leyland Park to be developed to create a well defined the local centre and sense of place around Leyland Park (Figure 43).

The vision for the South Hindley masterplan is to:

"Provide a high quality sustainable urban extension at South Hindley which provides new family homes and future opportunities for employment, creating a place for people to live, work and enjoy."

Design Principles

The development will provide a strong landscape framework which incorporates existing site features, and will:

- provide much needed new 'Homes' and job opportunities;
- deliver a new road through the site, to alleviate heavy traffic congestion through Hindley;
- provide new areas for sport and play;
- regenerate and improve Leyland Park and integrate the park with the development through new and inclusive access routes;
- be well connected with adjacent areas, including for walking and cycling, and opportunities to use public transport;
- provide good connections and accessibility to the countryside to the south and west as part of the wider Greenheart countryside park;
- provide attractive sustainable drainage features to protect against flooding maintain and enhance wildlife habitats and provide natural green corridors between them; and
- be of a high standard of design that is well integrated with its surroundings.

Key Design Features

The emerging illustrative masterplan has the following key design features:

- *Approximately 50ha of residential land providing approximately 2000 new residential properties including a range of house types and sizes;*
- *Provision of approximately 40ha of public Open Space, providing a range of natural and semi natural spaces, play facilities, amenity areas, and sports pitches to provide for the existing and new local community;*
- *Creation of a new strategic Highway boulevard through the development providing a new shared footway and cycleway, sustainable drainage and tree avenues;*
- *Provision of a new local centre incorporating a new primary school, and flexible provision for new retail, doctor facility, and / or other community facilities as required by the local community;*
- *Noise and visual buffer between existing residential edge of Hindley and the existing and proposed employment areas; and*
- *Approximately 12ha of new employment land providing future employment opportunities for the local community.*

Figure 46 - Preferred Illustrative Plot Masterplan

4.0 Design Evolution and Spatial Jigsaw

4.4 Public Consultation Summary

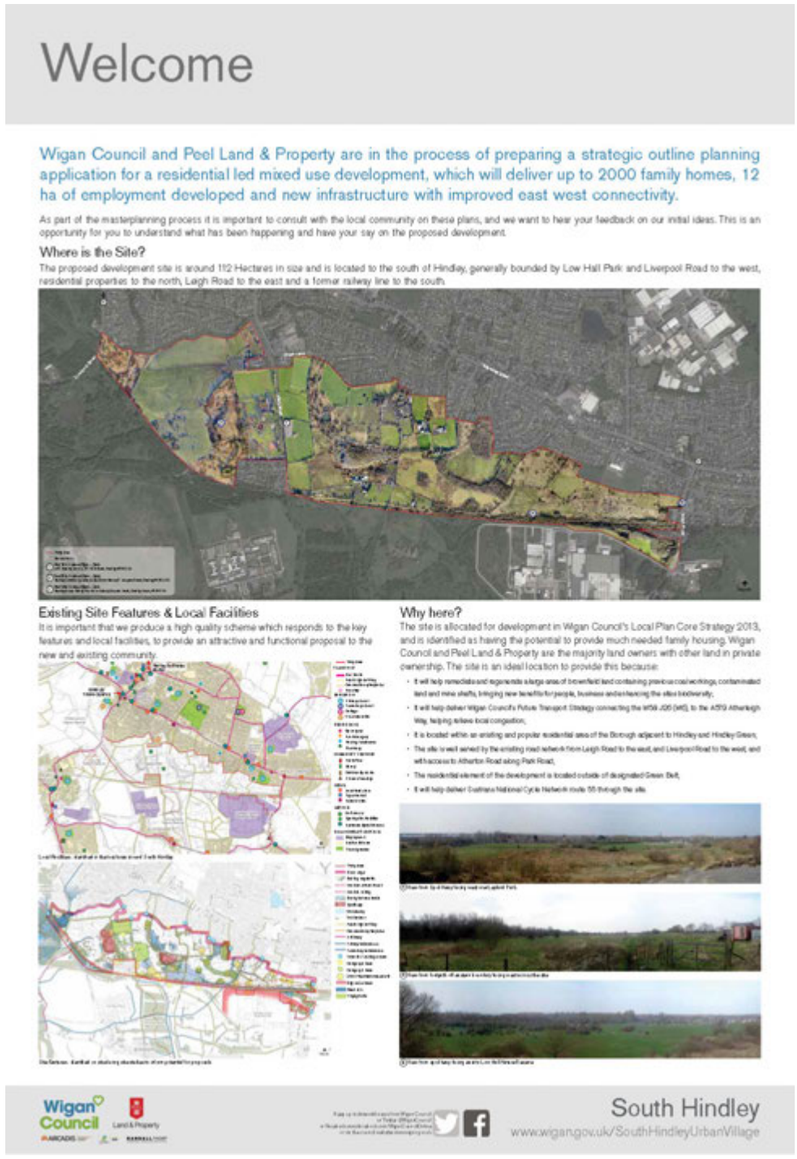
During October 2016, a public consultation engagement exercise was organised to support the development of proposals with the key aim of seeking feedback on the indicative proposals prior to the development and submission of a planning application in 2017. Three public exhibition events were held at different venues within accessible locations across / or near to the development site.

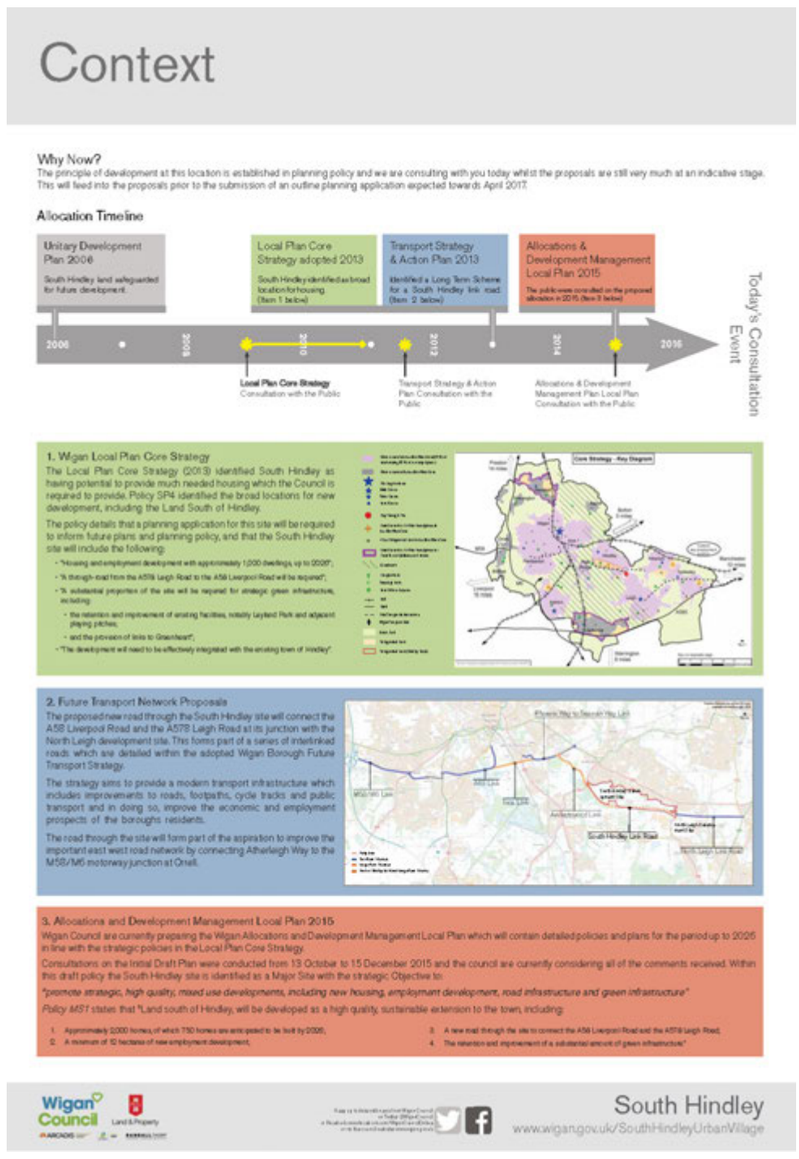
These events were supported by a leaflet drop and poster advertisement within the local area during a two-week window prior to the events (led by Wigan Council). In addition, the exhibition material was available online for a period of 4 weeks commencing on the 19th October, and ending on the 18th November 2016.

A number of the client and design team members were available at the three events, each being briefed prior to ensure consistency in approach and responses. The exhibition material on display at the events was jointly agreed by the client team, and delivered within a tight time scale.

The consultation with the local community is considered to be at the heart of the design and planning process, and was undertaken to engage with the community so that the views of Hindley and the surrounding areas residents are taken into consideration, leading to the delivery of proposals that address the needs, aspirations, and concerns of local people. At the stage of consultation, the plans were purposely at an indicative stage to ensure engagement with local community could help inform these prior to an outline planning application. This was with the aim that once consultation took place and the outcomes reviewed, the findings where appropriate would be fed into the masterplan and used to finalize our proposals for South Hindley.

Five exhibition boards were prepared for the exhibition, and a supporting Questionnaire was developed as a mechanism for the public to provide feedback.





Proposal

Design Principles and Vision

In accordance with the adopted local plan for Wigan, our vision for the site is to:

provide a high quality sustainable urban extension at South Hindley which provides new family homes and future opportunities for employment, creating a place for people to live, work and enjoy.

The development will provide a strong landscape framework which incorporates existing site features, and will:

- provide much needed new 'Homes' and job opportunities;
- deliver a new road through the site, to alleviate heavy traffic congestion through Hindley;
- provide new areas for sport and play;
- regenerate and improve Leyland Park and integrate the park with the development through new and inclusive access routes;
- be well connected with adjacent areas, including for walking and cycling, and opportunities to use public transport;
- provide good connections and accessibility to the countryside to the south and west as part of the wider Greenheart countryside park;
- provide attractive sustainable drainage features to protect against flooding maintain and enhance wildlife habitats and provide natural green corridors between them;
- be of a high standard of design that is well integrated with its surroundings.

Design Evolution

Proposed Land Use Analysis

Total Site Area = 112ha

Key Design Features

The emerging illustrative masterplan has the following key design features:

- Approximately 50ha of residential land providing approximately 2000 new residential properties including a range of house types and sizes;
- Provision of approximately 40ha of public Open Space, providing a range of natural and semi natural spaces, play facilities, amenity areas, and sports pitches to provide for the existing and new local community;
- Creation of a new strategic Highway boulevard through the development providing a new shared footway and cycleway, sustainable drainage and tree avenues;
- Provision of a new local centre incorporating a new primary school, and flexible provision for new retail, doctor facility, and / or other community facilities as required by the local community;
- Noise and visual buffer between existing residential edge of Hindley and the existing and proposed employment areas; and
- Approximately 12ha of new employment land providing future employment opportunities for the local community.

Benefits

The South Hindley proposals will deliver a high quality residential led mixed use development set within a strong open space framework helping form a new urban extension with a unique sense of place. The indicative masterplan capitalises on South Hindley's existing features and assets, and uses these to inform the potential for future development.

Technical Considerations

Flood Risk & Drainage

There are two Ditches located within the study area, and a number of drains and small water bodies. The Environment Agency indicates that the eastern edge of the study area is located in Flood Zone 2/3. Sustainable drainage techniques will be employed across the site to maintain current flow routes and ensure no risk of flooding. A Flood Risk Assessment and Drainage Strategy are currently being developed and will be submitted as part of the planning application.

Ecology

A series of ecological surveys of the site have been undertaken. These have concluded that the site contains two Sites of Biological Importance, great crested newts, ponds, former ponds which are now swamp, hedgerows, bat activity at Leyland Park, two Ditches, and 'feathland / wet grassland habitats. The proposals aim to retain existing habitats identified, and mitigate against loss through translocation within the green infrastructure proposals where this is not possible.

Traffic, Transport, and Movement

A full assessment of the traffic and transport impact of the development is being undertaken and will be submitted as part of the planning application. This concludes that the development will be primarily served by access off Liverpool & Leigh Road, as part of the future network strategy proposals, with secondary access along Park Road.

Existing Open Space

The majority of the site is in private ownership and is not publicly accessible, however the development site contains a number of existing open spaces including, Leyland Township Park, outdoor Sports Facilities (including public football pitches, and the Hindley Juniors Football Club). These elements together with several designated Public Rights of Way which cross the site are important considerations and will be retained to help with placemaking.

Previous Coal Mining and Ground Contamination

A initial desk based study has indicated the presence of 43 mine shafts on the site. The location of these is known and was used to inform the development of the indicative proposals. Following the submission of the planning application further intrusive site investigation will be required to confirm current findings prior to development coming forward.

Placemaking

Improved Access and Enhanced Connectivity

A new strategic highway will provide a new link road which will help reduce traffic congestion on Atherton Road, and serve the new development and surrounding communities. A corridor incorporating the new highway with tree avenues, shared cycle and footway, and attractive sustainable drainage swales will provide a strong sense of place and inform the character of the wider development. The proposed strategic boulevard will help deliver part of Wigan Borough Council's Future Transport Strategy.

The South Hindley proposals will retain and improve existing public rights of way and incidental footway linkages through the site. This will provide the opportunity for enhancements to key routes, along with the creation of a new recreational green corridor along the old rail route which forms an important setting to the adjacent green belt.

New and Enhanced Open Space and Sports

The open space strategy will provide a well connected network of multifunctional green infrastructure which will strengthen east-west links through the development and retain the north-south links to connect the existing community to the newly created open spaces with easy access to the Sustrans recreational route. Approximately 19ha of new publicly accessible open space will be provided in addition to 21ha of existing open space, with new natural and semi natural spaces, play facilities, amenity areas, sports pitches, providing for the existing and new local community. As part of our proposals we will:

- Retain existing high quality site features, where possible;
- Contribute to future enhancements of Leyland Park;
- Retain Hindley Juniors Football Club facilities;
- Provide new sports fields, increasing accessibility of facilities for the local population;

New Community Facilities

The proposals will include provision for a new primary school, located within the heart of the proposed development. A new local services centre at the heart of the development with good connections to the existing community, will be able to deliver a number of community benefits including the potential for:

-a new local shop; - a new doctor's surgery; - a new community centre.

New facilities will benefit the existing residential area of Leyland Avenue and residents south of Atherton Road as well as new residents from the proposal.

Economic Benefits

The proposed development will create jobs over the construction period and also once the development is complete. The 12ha of employment land will provide space for existing and new businesses to locate in Wigan, providing jobs both directly and indirectly through supply chains.

Residential development also has many economic benefits, including:

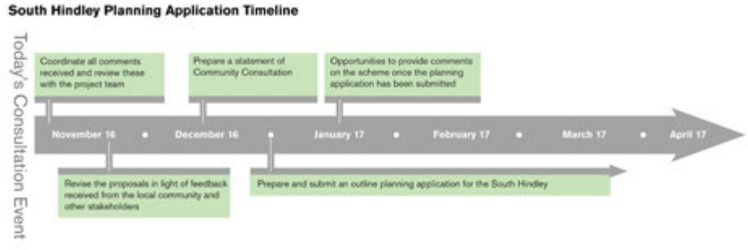
- Additional spend in the local area associated with new residents, helping support businesses;
- Additional Council Tax revenue for the Council to reinvest into the area;
- Additional number of employed people in the area, which supports the local economy;
- New and improved pedestrian and cycling links connecting the new development to the town centre and surrounding areas which will provide alternate sustainable methods of transport reducing the reliance on car journeys.

Flood Risk and Land Remediation

The proposed development will remediate this former coal mining site. The proposals will help to fund this remediation, and mitigate future risks associated with the coal mining shafts present on site. In addition the proposal will use sustainable drainage techniques to maintain current flow routes and ensure no risk of flooding on, or off site.

Next Steps

South Hindley Planning Application Timeline



Once you have had the opportunity to look at our draft proposals, if you have any questions or wish to comment please do talk to us or fill in one of the feedback forms

Your views are important to help us develop our scheme and are very much appreciated. All comments will be reviewed and will help shape the outline plans that will be submitted as part of the outline planning application next year.

Be part of shaping the South Hindley proposals by letting us know your views by:

1. Completing a feedback form available at the exhibition today; or
2. Alternatively visit ***www.wigan.gov.uk/SouthHindleyUrbanVillage*** & complete a feedback form by 18.11.16

Thank You

4.0 Design Evolution and Spatial Jigsaw

4.4.1 Consultation Feedback

The exhibition events were well attended with around 400 people attending across the three events. A number of discussions took place with the public and key themes which emerged included:

- Traffic Congestion – rat runs along Close Lane / Park Road, and connection to wider network;
- Buried Asbestos;
- Bridleways; new routes / retention of existing;
- 3rd Party landowner concerns – not supporting / working with them;
- Ecological impacts;
- Perceived loss of open space;
- Employment (Industrial) land use.

In addition, Wigan Council compiled all responses received from the questionnaires submitted during the events and via the online form available. 304 responses in total were received, of which 33 were considered invalid. Grouping the feedback into the various themes the following was concluded:

- Provision of New Housing – General consensus against provision of new housing (>50% of responses);
- Access and Connectivity – Support for provision of the strategic route, but against provision of a improved Sustrans corridor;
- Open Space and Sports Pitches – Support for increased provision of open space, (but no to new allotments), with agreement for improvement to Leyland Park. Mixed views on provision of additional sports pitches and new play facilities; and
- Community Facilities – Lack of support for a new local centre and primary school.

In summary, there was a 3:1 ratio of the public being against / for the development, with the largest concerns relating to the loss of perceived open space, highway congestion, and potential issues with asbestos present on the land. A full account of the feedback can be found in the Statement of Community Involvement.

Feedback from Interested Parties

In addition to feedback for the general public specific feedback was received from the following interested parties:

- Mr & Mrs Tattersall - Intack Farm; request to relocate the school from their land, and replace with residential land;
- Brian Lee - Haven Lea, Close Lane; request to remove property from masterplan / development;
- Hindley Juniors Football Club; request to meet the club aspirations for provision of additional facilities surrounding their current site, and include within the masterplan. Indicative Proposals include for the creation of 2 9v9 pitches to the south of the present facilities and for a further 2 full-sized pitches on land at the north and south of the site.
- Mike Fishwick Open Space Officer at Wigan Council; The current masterplan (which has been consulted on) includes provision for 1 additional pitch plus relocation / retention of existing facilities, and a new pitch within the proposed Primary School. Previous analysis within the Councils Open Space team identified a low provision of sports pitches in the east, and a requirement for 2 pitches on site (school field and one new pitch). Discussions with Mike Fishwick (Wigan Council) have concluded that the additional 1 pitch could be provided through a commuted sum of monies provided an All-weather Grass Pitch (AGP) off site.

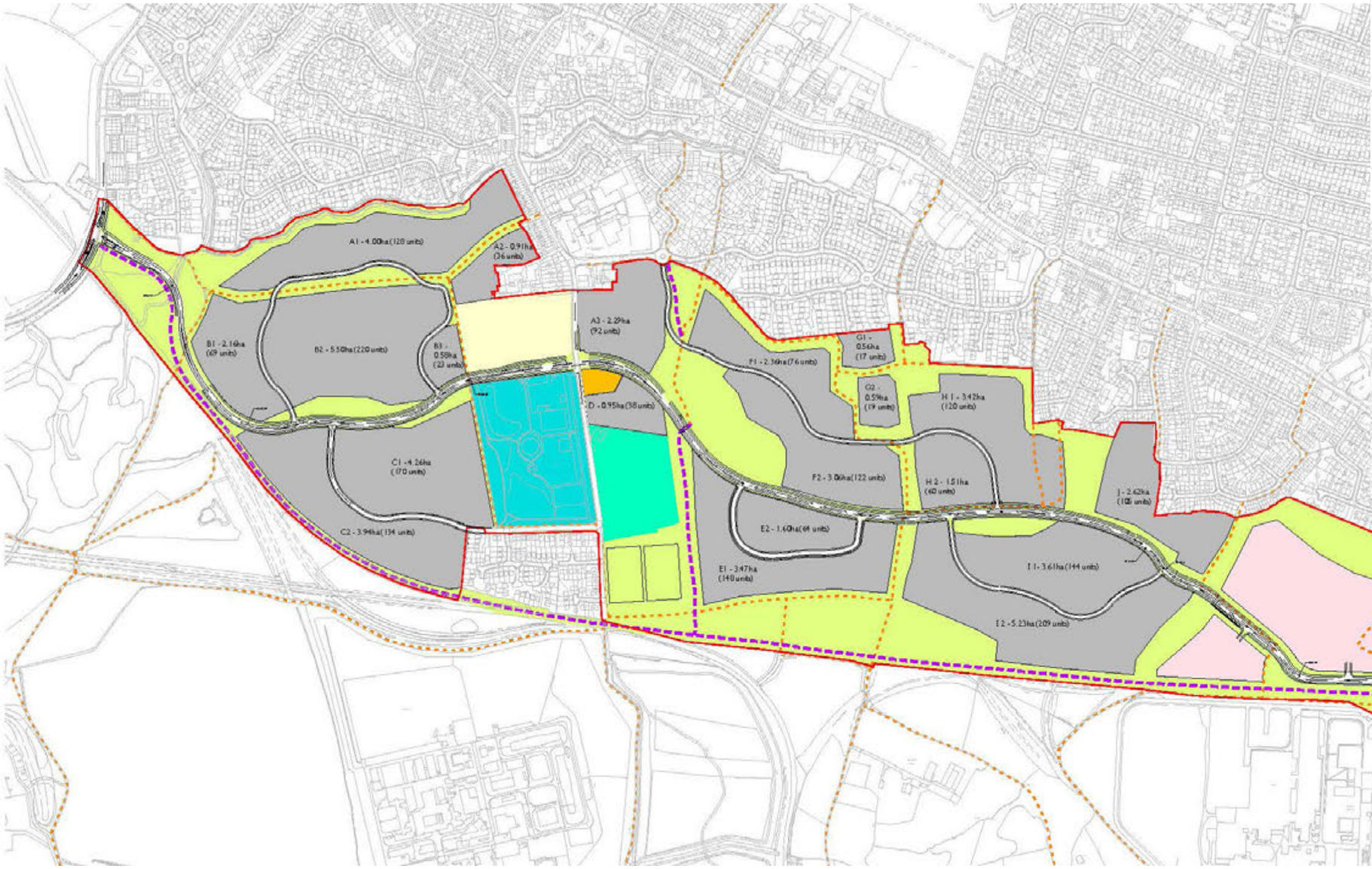
The following masterplan updates have been undertaken (Figure 47):

- Relocation of two public accessible pitches (relocated from Leyland Park) to south of Hindley Juniors Football Club from proposed location in the east. This will partially meet the requirements prescribed from Hindley Juniors FC and help reinforce the green heart / centre of the development;
- Relocation of a green wedge through the centre of site to locate existing properties within larger development parcel. The green wedge will function as a buffer against football pitches;
- Retain 1 pitch (relocated from Leyland Park) in the east (next to existing pitch outside site area), which will help provide a buffer to existing residential properties and meet the deficit of sport pitches identified in this locality;
- Omit the additional pitch provided on site (village green) on the assumption that the masterplan will provide a commuted sum for improving off site provision. This will help meet Wigan Councils aspirations for increased provision within the wider area. The land within the masterplan will be designated as a larger residential plot, and offset the loss of residential plots to the south of Hindley Juniors FC;
- Reconfigure employment areas, and green buffer to take account of the previous (increase quantum against PPG);
- Update development boundaries to reflect increased flood Zone 3 extents;
- Identify the recreational route along the former railway line and a further north south link. This will be described as a multi-user (bridleway) route to allow pedestrian, , and equestrian use, including the Sustrans route; and
- Relocation of the School site following consultation with the HCA regarding potential acquisition of the Intack Farm site, and the need to utilise this land for starter homes.

As such any loss of residential quantum of land will be accounted for by a slight increase in the development density which will be identified in appropriate development parcels across the site.

Figure 47 - Illustrative Masterplan following Consultation

4.0 Design Evolution and Spatial Jigsaw



	Sub area	Total area	density (d/ha)	units
A1	*4*		*32*	*128*
A2	*0.91*		*40*	*36*
A3	*2.29*		*40*	*92*
A		**7.2**	*Average 35.56*	**256**
B1	*2.16*		*32*	*69*
B2	*5.5*		*40*	*220*
B3	*0.58*		*40*	*23*
B		**8.24**	*Average 37.90*	**312**
C1	*4.26*		*40*	*170*
C2	*3.94*		*34*	*134*
C		**8.2**	*Average 37.12*	**304**
D		**0.95**	*40.00*	**38**
E1	*3.67*		*40*	*147*
E2	*1.6*		*40*	*64*
E		**5.27**	*Average 40.00*	**211**
F1	*2.36*		*32*	*76*
F2	*3.06*		*40*	*122*
F		**5.42**	*Average 36.52*	**198**
G1	*0.56*		*30*	*17*
G2	*0.59*		*32*	*19*
G		**1.15**	*Average 31.03*	**36**
H1	*3.42*		*35*	*120*
H2	*1.51*		*40*	*60*
H		**4.93**	*Average 36.53*	**180**
I1	*3.61*		*40*	*144*
I2	*5.23*		*40*	*209*
I		**8.84**	*Average 40.00*	**354**
J		**2.62**	*40.00*	**105**
K		**0.15**	*40.00*	**6**
TOTAL		**52.97**	*Average 37.75*	**2000**

Figure 48 - Development Areas Masterplan following Consultation

Figure 49 - Green Infrastructure Typologies following Consultation

5.0 The Masterplan Solution

5.1 Design Principles & Key Features

5.1.1 Layout / Structure

The layout and urban structure should help define a distinct character and identity for the site. The area immediately to the north of the site, is of a suburban character, and therefore provides limited design influences on the development of the site. Our townscape analysis notes that within the wider Hindley and Hindley Green area development in the area historically took the form of ribbon development along linear highways which provided connections between places. As industry expanded so settlements grew at intersections of highways as well as in the form of estates particularly as rows of terraced houses, initially followed more recently by suburban modern 20th century development on the southern edge of the settlement.

The South Hindley development references the sites heritage to define the layout of the development cells at a macro scale and the urban grain at a micro scale. Designs will define a new community and 'sense of place'. Building layout (and style), hard and soft landscape, highway design and use of materials should all work together within individual development cells and must take account of adjacent development and site features. Completed schemes should create identifiable spaces with local character and distinctiveness, that when combined create a strong overriding character for South Hindley.

5.1.2 Frontage

Building blocks should enclose streets and spaces with active frontage where possible. Blocks should define a clear hierarchy of street enclosures taken from the building line, as well as strong definition between public and private space. There are particular areas of the site which require a higher level of active frontage than others, for example, the new strategic route through the centre of the development, should be dominated by active frontage, whilst some of the connecting 'residential roads' could contain side elevations and boundaries. Simple, clean lines and treatments must be balanced with designs that provide interest and variety, in order to create buildings that have a welcoming character, rather than bland, featureless anonymity. Recesses and setbacks should be considered to create interest to frontages.

5.1.3 Urban Design

Strong perimeter blocks should be created, and where possible parking should be provided to the frontage or the side of units. However, within particularly sensitive areas, such as along the strategic route and adjacent to some parts of the green space network, parking may be required to the rear of the development blocks. In these circumstances, parking should be provided in mews type courtyards, with sufficient observation and overlooking provided by mews properties positioned at the rear of the block. The creation of parking areas at the rear of properties or those associated with apartment buildings, should consider security requirements either through natural surveillance / overlooking or secured / gated areas.

A number of buildings especially those located along the strategic route, should provide visual focal points to define the public and urban realm, and help improve legibility throughout the development. Definition of key buildings could be achieved either through scale, or by its overall building design.

5.2 Vision

The vision for the South Hindley masterplan is to:

"Provide a high quality sustainable urban extension at South Hindley which provides new family homes and future opportunities for employment, creating a place for people to live, work and enjoy."

5.0 The Masterplan Solution

Figure 50 - Indicative Block Masterplan Layout

5.3 Development Parameters

5.3.1 Amount

The development is a total of 112.7 hectares to include a maximum of 2,000 residential units. The illustrative masterplan allows for a variety of housing typologies to accommodate family housing consisting of 2, 3, 4 and 5 bedroom homes with some apartments. The masterplan includes for 12 hectares of employment.

5.3.2 Use Mix

The majority of the residential blocks (use class C3) should include a mix of mews / terraced housing, semi-detached and detached, with apartments , and town-houses used in key locations to provide the increases in scale and definition suggested above. The masterplan benefits from the creation of a new local centre in the heart of the development providing opportunity for local retail shop for residents within 10 minute walking distance from the majority of the masterplan development. Those residential parcels to the east which fall outside of the 10 minute walk-ability benefit from existing facilities located along Atherton Road.

To the east the proposed employment zone (12ha) will include a mix of business offices, general industry, and storage and distribution (uses classes B1a, B1c, B2, and B8). In addition a local centre and primary school are proposed in the centre of the development (Use classes A1-5, D1, & D2).

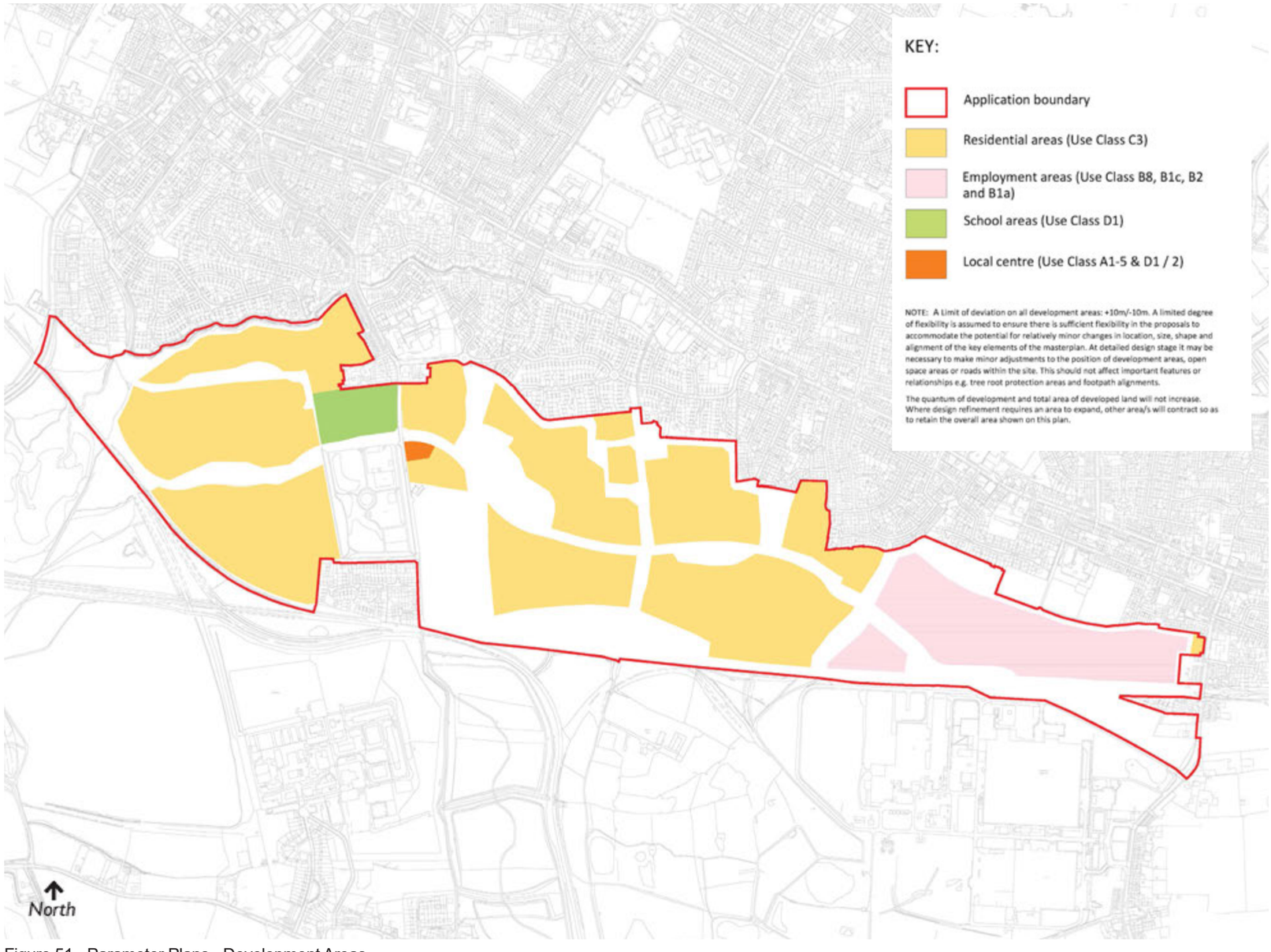


Figure 51 - Parameter Plans - Development Areas

5.0 The Masterplan Solution

5.3.3 Density

The average density of residential properties within the development is up to 37.75 dwellings per hectare however this will vary according to the location and position within the site, with the density increasing along the strategic route. In total 53.35 hectares of residential development is proposed.

5.3.4 Scale and Massing

In terms of the overall scale and massing for the site. The majority of residential buildings should be 2 storey, with buildings rising to 2.5-3 storeys along the strategic route, and along primary residential roads, and around important open spaces; thus providing definition, and forming visual markers to assist in orientation. The residential buildings adjacent to the existing residential areas should be 2 storey in height, in order to minimise the impact of any proposed development.

The employment zone will contain larger scale buildings, typically 3 storey in height, and this will need sympathetic treatment in those areas close to the existing residential community through appropriate buffer treatment.

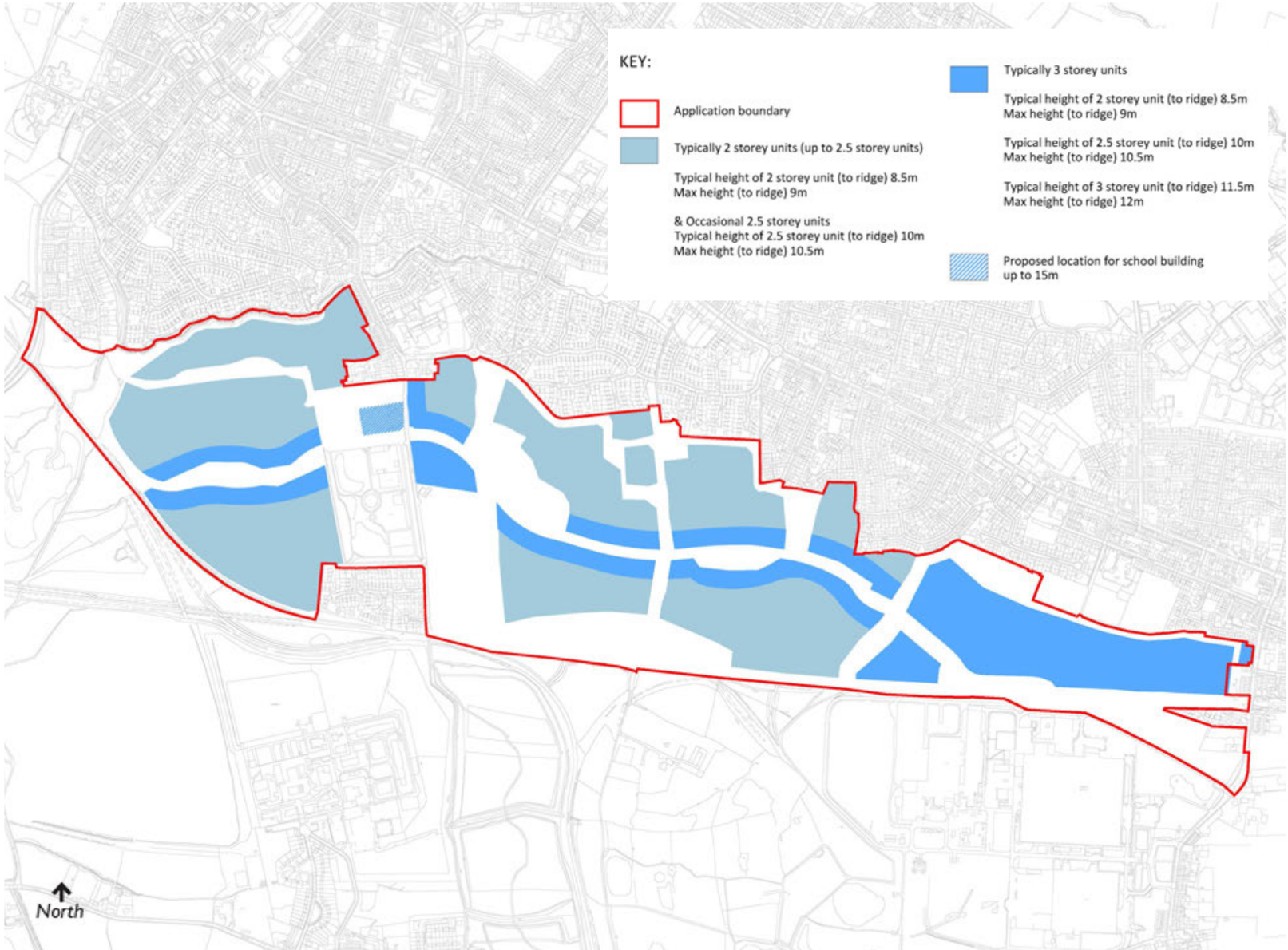


Figure 52 - Parameter Plans - Building Heights

5.3.5 Access

The masterplan includes a new strategic route which will connect to Liverpool Road in the west and Leigh Road in the east. Eventually these connections will link to the Future Transport Strategy Network being delivered by Wigan Council. In addition to these two primary junctions, two further secondary junctions will be provided, firstly where the strategic route crosses Park Road, at the proposed heart of development, containing the primary school and local centre, and a further connection at the existing roundabout on Close Lane. In additional a range of foot-ways, and recreational routes are provided. For more detail please see section 5.5 Movement Framework.

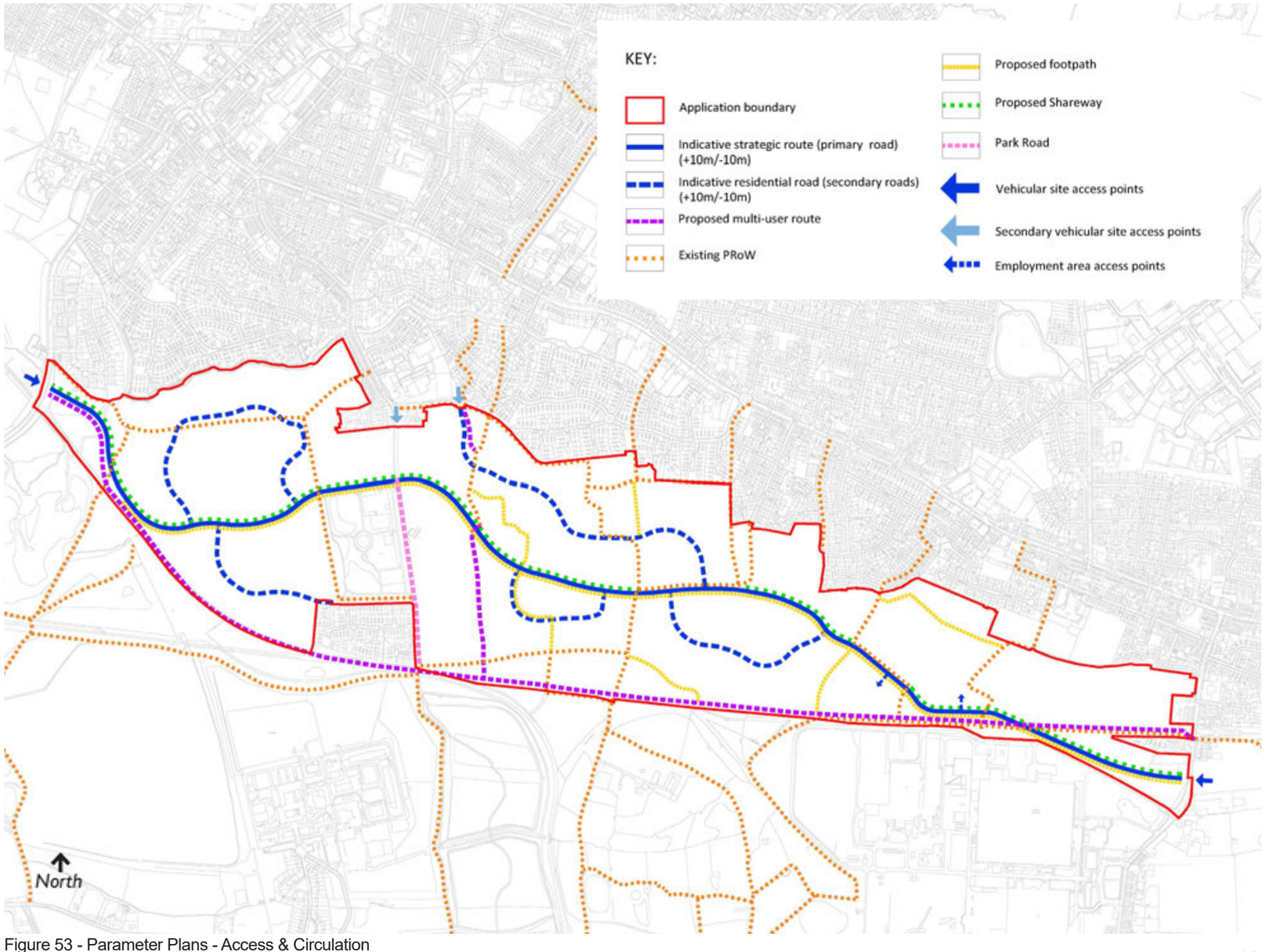


Figure 53 - Parameter Plans - Access & Circulation

5.0 The Masterplan Solution

5.3.6 Open Space

50.3 hectares of open space is provided within the masterplan, including the retention of 19.3 hectares of existing defined open space (Leyland Park, Sports Pitches, Children and Youth Play Facilities and Semi-Natural Green Space). This provision is significantly above policy requirements and is reflective of the design intent to create a strong landscape framework which responds to the site context. For more detail please see section 5.4 Landscape Strategy.

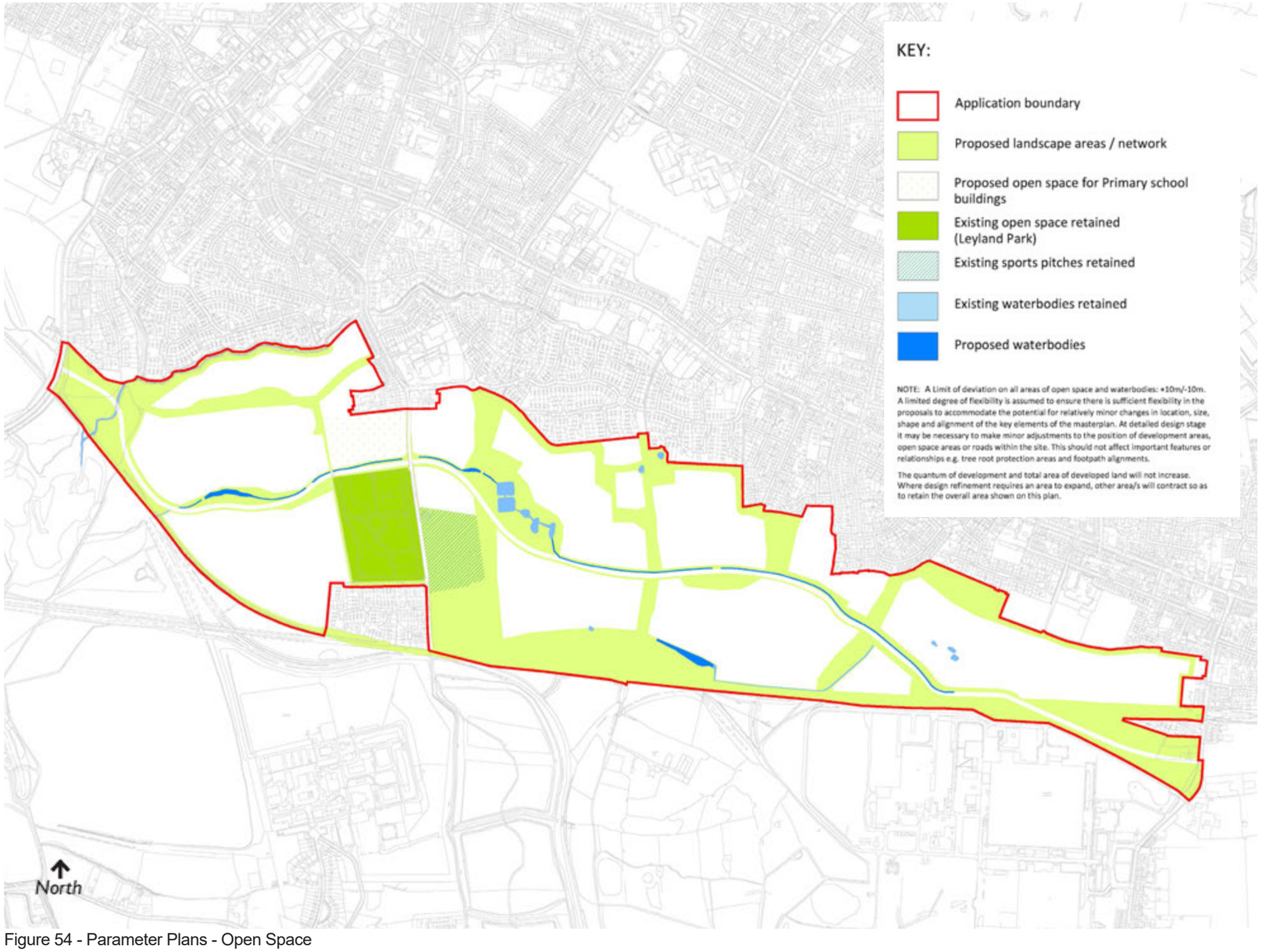


Figure 54 - Parameter Plans - Open Space

5.4 Landscape Strategy

5.4.1 General Design Principles & Quantity

As discussed in section 4.2.1 a key principle for the South Hindley site is the establishment of a strong landscape framework, due in part to the presence of a green belt adjacent to the sites southern edge, existing site features, and the present ecological value. These factors promote the need to reinforce its green character, and create a strong character that responds to its contextual setting. The greenspace network reinforces the existing public routes (including PRoW) to create a strong open space framework, balancing the policy requirements of the site and the maximising site features, with the three key principles of

- Grouping of open spaces to provide larger multifunctional opportunities;
- Strengthening the east-west links through the site along the multi-user recreational route and strategic (highway) route; and
- Strengthening north-south links through the masterplan to connect the existing community to new open space within the South Hindley site beyond promoting access to Wigan's Greenheart and green belt, along with existing Local Nature Reserves.

5.4.2 Green Infrastructure and Open Space Typologies Mix

As part of the Landscape Strategy a range of typologies have been developed and located across the masterplan to ensure site constraints are features and retained and integrated and the needs of the new community are met. The following table identifies the quantum's of open space typologies and their GI and Biodiversity functions (corresponds with Figure 49):

GI Asset / Typology	Existing Defined Quantum within Application Boundary (Wigan Council Open Space Audit) (ha)	Existing Defined Quantum (Wigan Council) detail	South Hindley Masterplan Proposed Quantum (proposed and retained existing) (ha)	Proposed Quantum (combined proposed and retained existing) detail	Proposed Green Infra Quantum (ha)	Existing / Proposed	Description	Existing GI Function / Benefits	Proposed GI Function / Benefits	Existing Habitats / Biodiversity Benefits	Proposed Habitats / Biodiversity Benefits
Natural Play & Recreation	0.27	0.1ha (1 NEAP), 0.17ha (1 Youth Play)	0.54	0.21ha (12 LAP's), 0.33ha (1 LLAP)	0.97	Proposed	LLAP provided in or adjacent to Natural and Semi Natural areas on site within woodland setting using natural materials to creative attractive setting for play. LAP's distributed across site, providing small area of open space specifically for very young children to play close to where they live.	N/A	Health and well-being, community cohesion, active recreation active recreation and areas for relatively calm relaxation and social interaction.	N/A	LLAP - see 'Woodland' and 'Water / Ephemeral bodies' below. In addition create areas of long grass habitats for invertebrates, and areas of dense scrub habitat comprising native species that produce flowers, fruit and nuts suitable for nesting and foraging birds, and that also provide shelter for other wildlife such as invertebrates, amphibians and hedgehogs.
Natural Play & Recreation			0.43	0.1ha (1 NEAP), 0.17ha (1 MUGA), 0.16ha (3 LEAP's)		Existing / Proposed	Leyland Park (existing) provides for both older and younger children with a toddler and junior play area, trim trail, and aerial runway (NEAP), and MUGA. LEAP's (proposed) distributed throughout development providing areas of open space specifically designated and laid out with equipment for children who play independently.	Health and well-being, community cohesion, active physical recreation, and social interaction	Health and well-being, community cohesion, active physical recreation, and social interaction	Trees / woodland of value to nesting birds. Also provide shelter for fauna, including invertebrates, hedgehog and amphibians.	Create areas of long species-rich grass habitats around LEAP's for invertebrates, and areas of dense scrub habitat comprising native species that produce flowers, fruit and nuts suitable for nesting and foraging birds, and that also provide shelter for other wildlife such as invertebrates, amphibians and hedgehog.
Amenity Green Space	0	N/A	10.9	-	10.9	Proposed	"Amenity green spaces are scattered throughout the development providing open space which is suitable for informal recreational activities, or that otherwise makes an important contribution to visual amenity"	N/A	Amenity, health & well-being, active & passive recreation, community cohesion, leisure.	N/A	Managed landscape areas containing areas / pockets of long species-rich grass habitats for invertebrates, and areas of dense scrub habitat comprising native species that produce flowers, fruit and nuts suitable for nesting and foraging birds, and that also provide shelter for other wildlife such as invertebrates, amphibians and hedgehog. Create wood piles and hibernacula which provide shelter for invertebrates, amphibians and hedgehog. Also see woodland and hedgerows as these features may also be present. Woodland and hedgerows provide nesting and foraging opportunities for birds and foraging opportunities for bats, and shelter for invertebrates, amphibians, badger and hedgehog. Hedgerows also create linear commuting routes for all types of fauna.

5.0 The Masterplan Solution

GI Asset / Typology	Existing Defined Quantum within Application Boundary (Wigan Council Open Space Audit) (ha)	Existing Defined Quantum (Wigan Council) detail	South Hindley Masterplan Proposed Quantum (proposed and retained existing) (ha)	Proposed Quantum (combined proposed and retained existing) detail	Proposed Green Infrastructure Quantum (combined proposed new GI and retained existing defined open space) (ha)	Existing / Proposed	Description	Existing GI Function / Benefits	Proposed GI Function / Benefits	Existing Habitats / Biodiversity Benefits	Proposed Habitats / Biodiversity Benefits
Newt Ponds	3.8	not including all areas of hedgerow and woodlands	0.26		0.26	Existing / Proposed	Provided in Natural & Semi Natural Green Space adjacent to Recreational Corridor	Protected species habitat	Protected species habitat, biodiversity, micro climate resilience, water management, climate change resilience	Six ponds support a medium population of great crested newts.	Create new features, and expand areas to provide benefit to the existing great crested newt population and provide habitats that support a greater diversity of wetland plants and aquatic fauna. Provide informative signs in the vicinity of the ponds to raise public awareness of the presence of protected species, their value to biodiversity and the potential negative effects that some activities (i.e. introduction of fish and invasive aquatic plants, and dumping of domestic refuse) may have on these protected species.
Woodland / Copse			12.26		12.26	E / P	New woodland area created around key open space south of School site.	Biodiversity, Regeneration, through pioneer woodlands, visual screening, landscape character, shelter, shade, and wind break.	Amenity, informal active and passive recreation, shelter and shade, landscape features to reinforce landscape character, visual screening, biodiversity, climate change resilience, education, tranquillity	Provide shelter for woodland birds, badgers, hedgehogs and amphibians.	Enhance the value of the existing habitats through new planting and management to encourage the development of a distinct canopy and shrub layer. Create wet woodland within areas that will be frequently waterlogged, including suitable trees species such as downy birch, alder and willow. Within dry areas, create wood piles and hibernacula which provide shelter for invertebrates, amphibians and hedgehog.
Hedgerows			0.64		0.64	Existing	Hedgerow buffer = 3m to each side + existing hedgerow	Biodiversity and ecological corridor, visual screening, historic field pattern, landscape character, wind break	Biodiversity, ecological corridor, visual screening, historic field pattern, landscape character, micro climate resilience, food production, education	Of value to nesting / foraging birds and commuting / foraging bats. Also provide shelter for fauna, including invertebrates, badger, hedgehogs and amphibians.	Provide appropriately sized buffers of semi natural long species-rich grasslands to maintain value. Manage hedgerows to maintain their value, increase species diversity and create and reinforce biological corridors through new habitats and open space network.
Water / Ephemeral bodies			0.21	excluding SuD'S adjacent to vehicle corridors	0.21	Proposed	Retained water-bodies as shown on masterplan	Biodiversity, micro climate resilience, climate change resilience.	Biodiversity, micro climate resilience, climate change resilience, water management, amenity.	Six ponds support a medium population of great crested newts. One pond supports a small population of great crested newts. Other ponds also support other amphibians (smooth/palmate newts, common toad and common toad), fish, invertebrates, foraging habitat for birds and bats. The ponds in the reservoirs east of Leyland Park support water vole.	Create semi natural habitats using existing water body features and new features using surface water runoff in proposed development to include swales, and water features. Provide informative signs in the vicinity of the ponds to raise public awareness of the presence of protected species, their value to biodiversity and the potential negative effects that some activities (i.e. introduction of fish and invasive aquatic plants, and dumping of domestic refuse) may have on these protected species.
Wildlife Areas			3.55		3.55	Proposed	Extension to Low Hall Nature Reserve at western edge of site.	N/A	Environmental awareness, enjoyment of nature, expansion of nearby feature, water management, sense of place / placemaking, recreation, biodiversity, Habitat translocation, climate change resilience, landscape character, tranquillity	N/A	Potential to create permanently wet feature along Dog Pool and Borsdane Brook. Create dry habitats that hold water for slightly longer to include swales, rain gardens, ephemeral ponds, marshy grassland and wet woodland. Benefit to diversity of fauna, including invertebrates, fish, amphibians and water vole. Within dry areas, create wood piles and hibernacula which provide shelter for invertebrates, amphibians and hedgehog.
	Total Natural and Semi Natural Green Space =				16.92						

GI Asset / Typology	Existing Defined Quantum within Application Boundary (Wigan Council Open Space Audit) (ha)	Existing Defined Quantum (Wigan Council) detail	South Hindley Masterplan Proposed Quantum (proposed and retained existing) (ha)	Proposed Quantum (combined proposed and retained existing) detail	Proposed Green Infrastructure Quantum (combined proposed new GI and retained existing defined open space) (ha)	Existing / Proposed	Description	Existing GI Function / Benefits	Proposed GI Function / Benefits	Existing Habitats / Biodiversity Benefits	Proposed Habitats / Biodiversity Benefits
Recreation Corridors (Multi user Route - inc bridleway's)	5.3	Aspirational Sustrans route, inc woodland	6.5	Existing Sustrans route not accessible in entirety due to Woodland / wet nature of ground.	6.5	Existing / Proposed	Multi-user Recreational route along former railway line including PRoW / cycle / bridle way access - width = 5m with 4m (2m min) buffer to either side	Not currently use-able as recreational corridor. Biodiversity only	Movement, health & well-being, active and passive recreation, leisure, biodiversity, community cohesions, sense of place / placemaking, landscape character, shelter and shade, ecological corridor, tranquillity	Provide shelter and commuting habitat for woodland birds, bats, badgers, hedgehog and amphibians. Existing ponds on site supporting GCN, with a medium population.	Create a linear feature with trees / hedgerow to provide a commuting corridor for all types of fauna. Also provide unshaded areas of long species-rich grass to create suitable habitats for invertebrates, amphibians and hedgehog. Use hedgerows and dense scrub to separate public from areas to be undisturbed, such as the proposed great crested newt receptor area.
Local Corridors (PRoW, Footpath, Cycle Shareway)	0	Note: 943 lin m of existing PRoW, not defined in WC OSA (assume 2m wide)	3.8		3.8	Proposed	PROW footpath only - width = 3m (2m min) with 2m (1m min) open space buffer to either side when in open space.	N/A	Movement, health & well-being, active and passive recreation, leisure, biodiversity, community cohesions, sense of place / placemaking, landscape character, shelter and shade, ecological corridor, street trees, tranquillity	N/A	Create areas of long species-rich grass habitats around LEAP's for invertebrates, and areas of dense scrub habitat comprising native species that produce flowers, fruit and nuts suitable for nesting and foraging birds, and that also provide shelter for other wildlife such as invertebrates, hedgehog and amphibians. Use hedgerows and dense scrub to separate public from areas to be undisturbed, such as the proposed great crested newt receptor area. Mown paths through grassland, board-walks across wetland areas and hedgerows would encourage people to follow and adhere to main routes. Education and information signs would be provided at access points to the Sites of Biological Importance, encouraging visitors to act responsibly in terms of their impact on wildlife and the enjoyment of other visitors. Information about the wildlife that visitors might see and the management strategy would be provided. Way-marked routes would be set out to guide visitors on interesting walks through varied habitats.
Vehicle Corridors (Strategic Route, Residential Roads & Streets)	0	Note: 1683 lin m of existing road / track not defined in WC OSA (assume average 4.5m road with 2m green buffer)	7.37		7.37	Proposed	"Vehicle Corridor definition: Strategic Route = 21.8m width min (7.3m road, 6m SuD'S, 3.5m share way, 2m footway, 3m verge) Residential Road width = 15m wide (7m road, 2x2m paths, & 2x2m verges) Residential Street width = 10.6m wide (6.6m road, 2x2m paths) GI quantum includes open space adjacent to Highway including SUD's, Footway and Cycle Networks, and exclude road widths from calculation."	N/A	Movement, amenity, urban heat island mitigation, street trees, water management, sense of place / placemaking, environmental awareness, and educational resource.	N/A	Formal tree lined corridor with street trees provide nesting / foraging habitat for birds and commuting foraging habitat for bats. Potential to create permanent wet features (ponds ditches, watercourses), along vehicle corridor as SUD's, to benefit invertebrates and amphibians. Create dry habitats that hold water temporarily and those that hold water for slightly long, to include swales and rain gardens. Greater diversity of fauna and flora.
		Total Green Corridors =		17.67							

5.0 The Masterplan Solution

GI Asset / Typology	Existing Defined Quantum within Application Boundary (Wigan Council Open Space Audit) (ha)	Existing Defined Quantum (Wigan Council) detail	South Hindley Masterplan Proposed Quantum (proposed and retained existing) (ha)	Proposed Quantum (combined proposed and retained existing) detail	Proposed Green Infrastructure Quantum (combined proposed new GI and retained existing defined open space) (ha)	Existing / Proposed	Description	Existing GI Function / Benefits	Proposed GI Function / Benefits	Existing Habitats / Biodiversity Benefits	Proposed Habitats / Biodiversity Benefits
Allotments	0	N/A	0.75		0.75	P	As shown on masterplan	N/A	Food Production, biodiversity, health & well-being, Education, community cohesion.	N/A	Open compost heaps and other scruffy habitats that provide shelter for fauna, including amphibians and hedgehog.
Civic Space (Public Square)	0	N/A	0.1		0.1	P	Opportunity to create a civic space / formal square at the north east entrance to Leyland Park.	N/A	Community cohesion, sense of place / placemaking, amenity	N/A	N/A
Parks and Gardens	4.39	4.39ha (Leyland Park - excluding NEAP, MUGA, Tennis))	4.39	Leyland Park		Existing	As existing	Amenity, street trees, sense of place / placemaking, community cohesion, passive and active recreation, health & well-being, sports and fitness.	Amenity, street trees, sense of place / placemaking, community cohesion, passive and active recreation, health & well-being, sports and fitness.	Trees / woodland of value to nesting birds. Also provide shelter for fauna, including invertebrates, hedgehog and amphibians.	N/A
Sports Provision (Public and Private)	5.54	0.14ha, 1.9ha, 2.5ha, + 1ha (Football Pitch @ Old School site)	4.54	0.14ha (Tennis Courts x 3), 1.9ha (Football Pitches x 3) 2.5ha (Football Pitches x 3)	4.54	E / P	Hindley Juniors FC retained, and 3 pitches in Leyland Park relocated within masterplan (2 south of HJ FC, and 1 adjacent to employment zone). 1 unused pitch associated with former school removed from provision .	Health & well-being, sports and fitness, active recreation, community cohesion	Health & well-being, leisure, sports and fitness, active recreation, community cohesion	Areas of short grass suitable for foraging birds with habitats of high value to other wildlife on the edge of these areas (long grass, dense scrub, tree planting).	Create areas of short grass suitable for foraging birds. Create habitats of high value to other wildlife were appropriate on the edge of these areas (long grass, dense scrub, tree planting). Maintain semi natural vegetation on periphery.
	0	N/A			0	Proposed	Funding to be made available to Wigan council to deliver off site All Weather Pitch Facilities	N/A	Health & well-being, leisure, sports and fitness, active recreation, community cohesion	N/A	Create areas of short grass suitable for foraging birds. Create habitats of high value to other wildlife were appropriate on the edge of these areas (long grass, dense scrub, tree planting). Also see "Hubs (Village Greens)".
School Playing Field	0	N/A	1.43	Based on 510 pupils requirement of 1ha min and 1.22ha max	1.43	Proposed	New Sports Field associated with New Primary School	N/A	Health & well-being, leisure, sports and fitness, active recreation, community cohesion	N/A	Create areas of short grass suitable for foraging birds. Create habitats of high value to other wildlife were appropriate on the edge of these areas (long grass, dense scrub, tree planting). Maintain semi natural vegetation on periphery and to adjacent green corridors / natural and semi natural areas.
	Total Outdoor Sports Facilities =				5.97						

Total Quantum of Open Space Analysis

Green Infrastructure / Open Space Total	Existing Defined Quantum (Wigan Council Open Space Audit) (ha)	Proposed New GI (*1) (ha)	*Total GI (Existing + Proposed) (ha)*	Application Boundary Area (ha)	*Proposed New GI % (Proposed Only)*	Total GI % of Application Boundary (Combined Proposed & Existing)
	19.30	31.00	*50.30*	121.7	*25.47%*	41.33%

**1 excludes Vehicle Corridors typology*

5.4.3 Outdoor Sports Facilities

As demonstrated in the green infrastructure and open space typologies mix table, 5.97 hectares of outdoor sport facilities have been provided as part of the masterplan. These include existing and proposed facilities as identified in Figure 54. This plan also identifies approximate walking distances from these facilities. In addition it is anticipated that a commuted sum will be provided to enable the development of a further All Weather Pitch at a location of site and yet to be agreed.

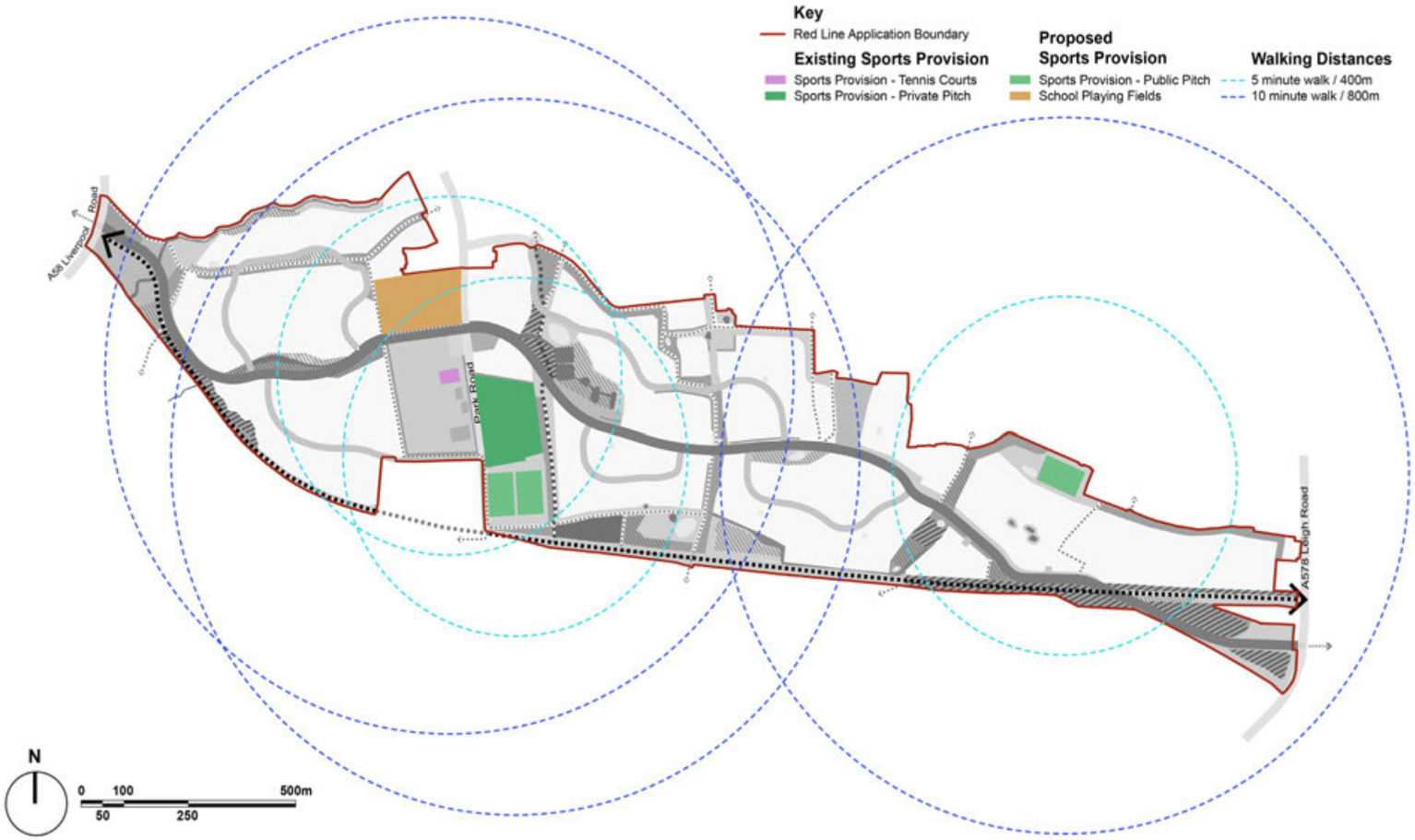


Figure 55 - Outdoor Sports Facilities

5.0 The Masterplan Solution

5.4.4 Play Facilities

As demonstrated in the green infrastructure and open space typologies mix table (Natural Play and Recreation), a range of facilities are provided across the masterplan. These include:

- 12 proposed Local Area of Play (LAP);
- 1 proposed Local Landscaped Area of Play (LLAP);
- 3 proposed Local Equipped Area of Play;
- 1 existing Neighbourhood Equipped Area of Play (NEAP); and
- 1 existing Multi-Use Games Area (MUGA) / Youth play area.

These are identified in Figure 56. This plan also identifies approximate walking distances from these facilities.

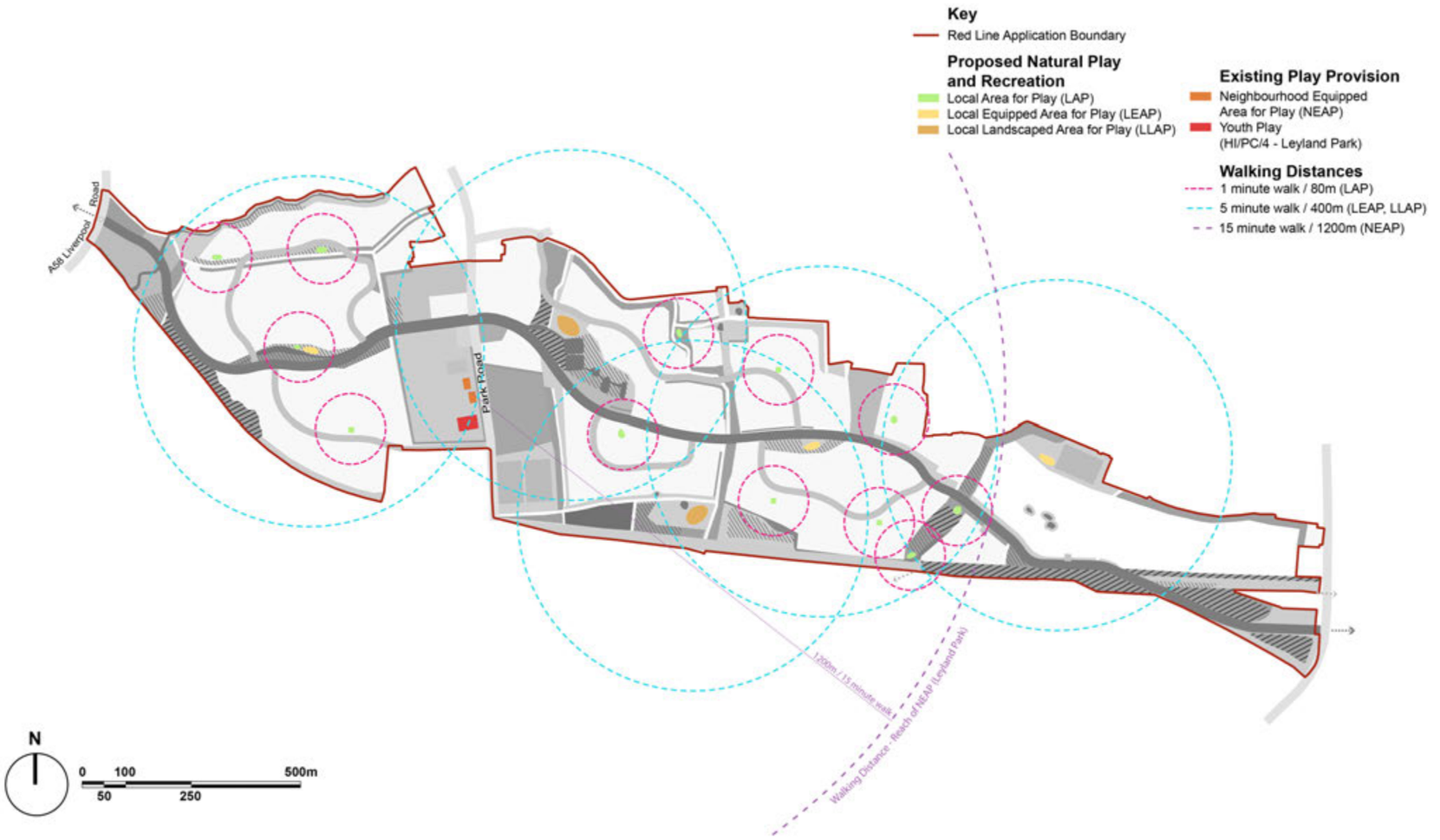


Figure 56 - Play Facilities

5.4.5 Recreational Access and Movement

As identified in the Access parameter plan (Figure 53) and further described in the green infrastructure and open space typologies mix table, the masterplan seeks to create 17.67 hectares of green corridors, these associated with the recreational and local corridors, but also the vehicular corridors, where careful design considerations look to integrate these urban features within a strong green corridor, through tree avenue planting, SUD's treatments, and wide verges with multi-user routes aligned adjacent which connect to a wider network of multi-user routes to promote alternative modes of movement including walking, cycling and equestrian use.

There recreational routes are shown on Figure 57, some of these being existing designated PRoW, which have been integrated and connected to a wider network of routes within the masterplan.

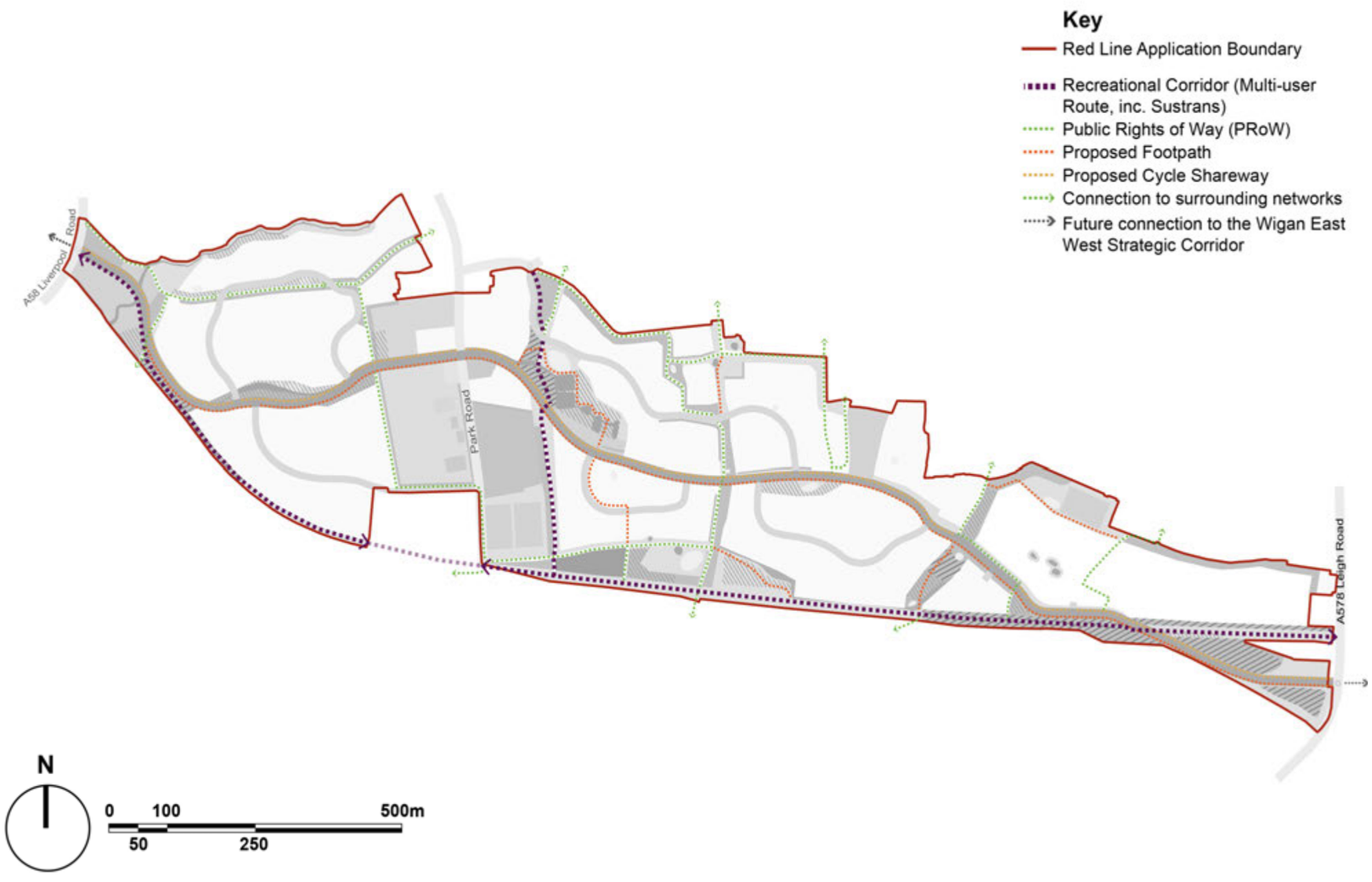


Figure 57 - Recreational Access and Movement

5.0 The Masterplan Solution

5.5.6 Ecology & Semi Natural and Natural Green Space

As discussed in section 3.2.6 the site contains a number of known ecological assets. As part of the masterplan the principle of creating a strongly defined landscape framework has ensured were possible these assets are retained and integrated as part of the Green Infrastructure network, which has in part formulated the spatial layout of the masterplan.

The creation of improved east west and north south green corridors ensures ecological corridors are provided and enhanced throughout the site. Further more the open space mix provides for 16.92 hectares of Semi Natural and Natural Green Space, in a range of typologies included, water / ephemeral bodies, hedgerows, woodland, defined newt ponds, and proposed wildlife areas.

These wildlife areas provide opportunity for habitat creation, where it has not been possible to retain ecological assets.

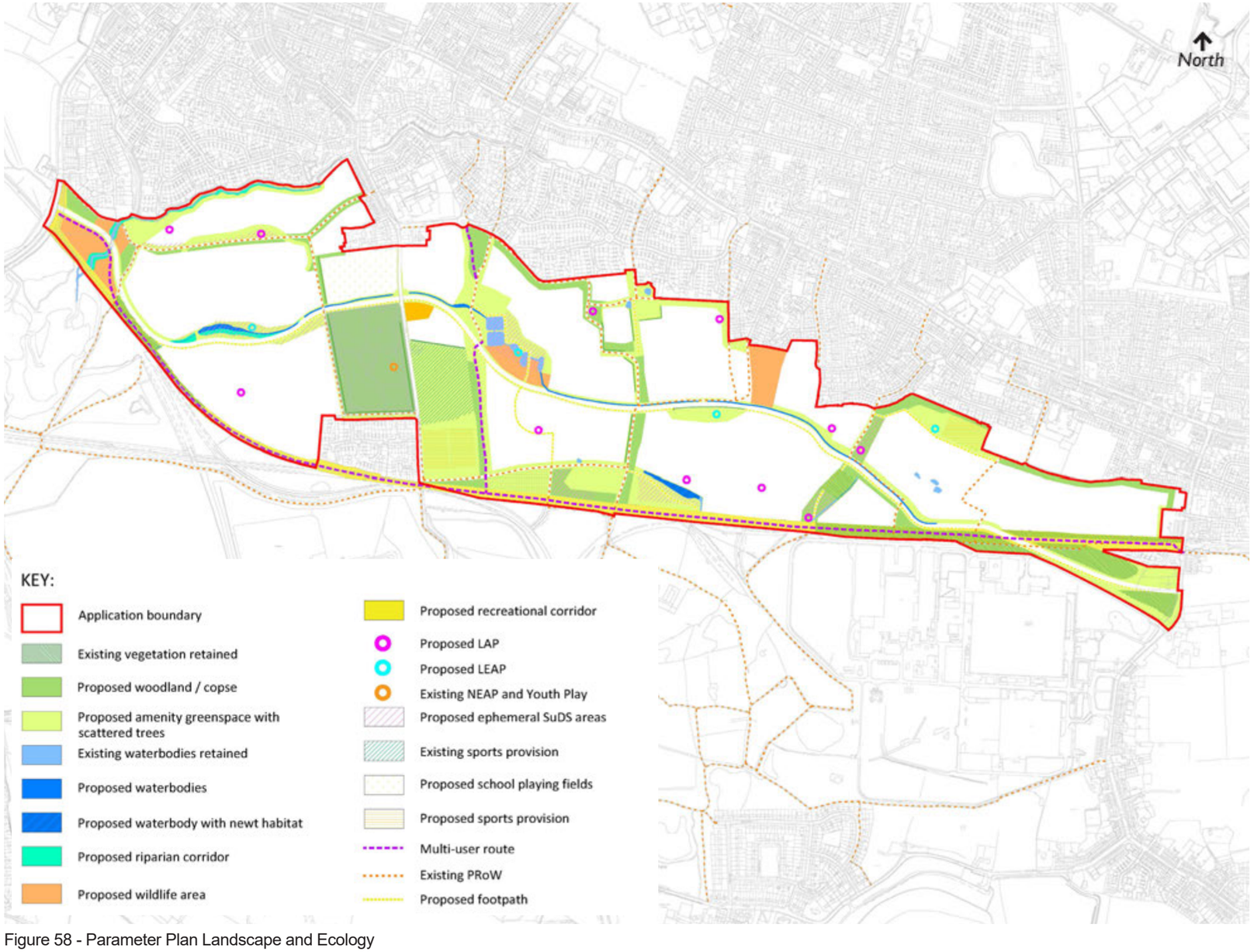


Figure 58 - Parameter Plan Landscape and Ecology

5.5.7 Flooding and Drainage

A flood risk and drainage strategy has been prepared for the masterplan. This places a strong emphasis on the utilisation of a Sustainable Urban Drainage System to meet the requirement of the surface water drainage requirements on site. SuD'S components have been identified for three of the key functional assets of the masterplan, including the residential areas, employment zone and the Strategic route (highway), each having different requirements and presenting different solutions which have been discussed. These include, Filter Strips, Green Roofs, Permeable Paving, Rainwater harvesting, Wetland Ponds, Swales, and Detention Basins.

Based on requirements for discharge rates on site storage requirements range from between 32,000m^3 and 47,000m^3. A total of 46,600m^3 of attenuation areas have been incorporated into the multifunctional open spaces to facilitate flood events storage requirements.

A small area of flood risk zone 3 is present within the application boundary, however development as avoided these areas, specifically around Dog Pool brook.

Please refer to the flood risk and drainage strategy report for more detail.

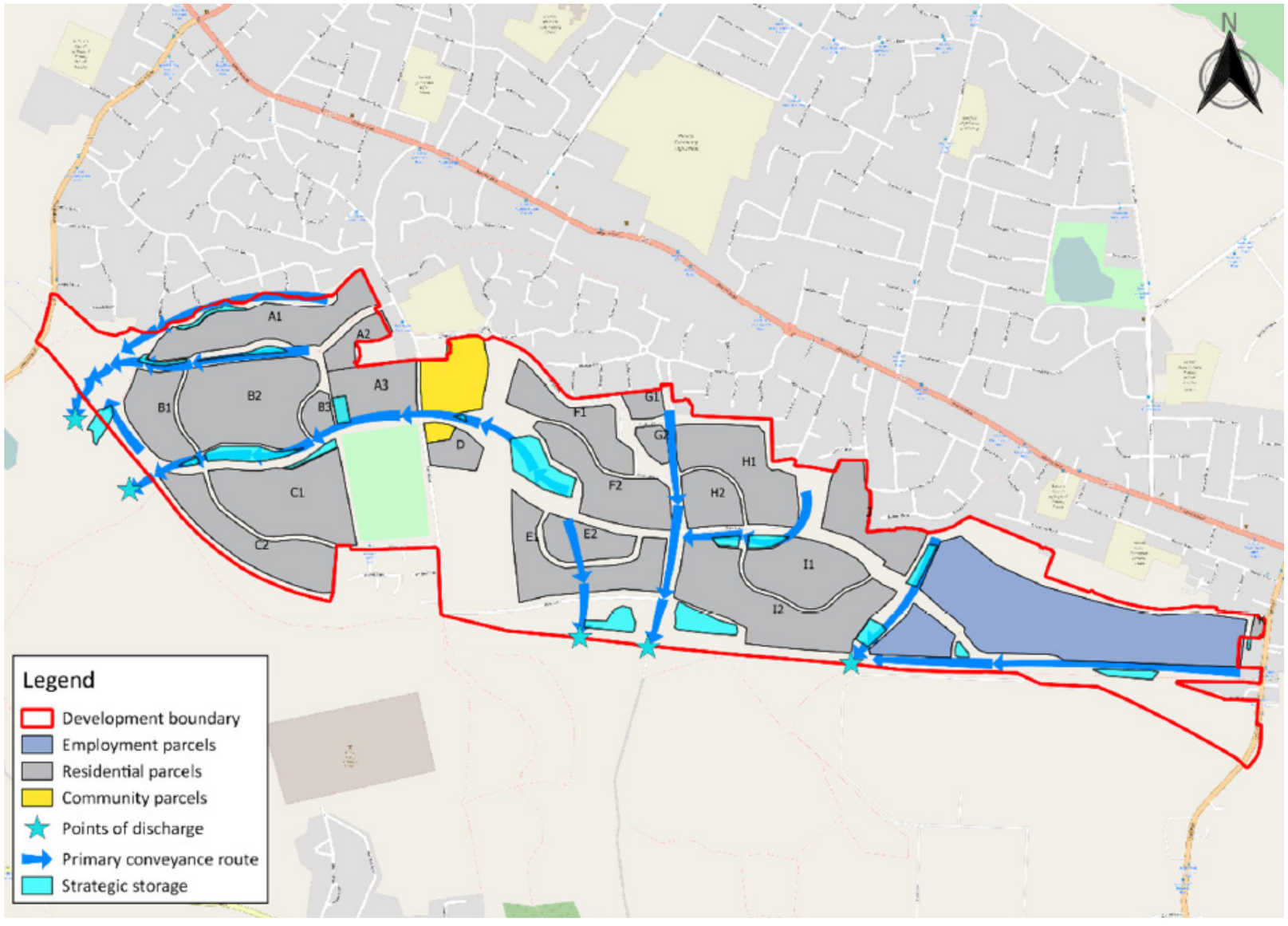


Figure 59 - Proposed Conceptual Surface Water Strategy

5.0 The Masterplan Solution

5.5.8 Tree Protection and Removals

A supporting arboricultural impact assessment has been completed to support the application. The report contains:

- A full tree survey to the requirement of BS5837 (2012) Trees in Relation to Design, Demolition, and Construction - Recommendations;
- A Plan showing tree survey information, retention categorisation, and root protection areas;
- An assessment of the arboricultural implications of development detailing trees to be retained/ removed and appropriate protection measures; and
- A draft Heads of Terms Arboricultural Method Statement detailing principles for tree protection, implementation and phasing of works.

This concludes that the majority of trees with the South Hindley site are self set pioneer trees that have been allowed to develop through natural succession. The majority of the material is mediocre and of little merit. There are some areas of potential future development that could be enhanced through a continuous cover , low intervention policy, and these areas are located in the south western portion of the site as well as centrally and along the former railway cutting.

Leyland Park and the playing pitched are specifically mentioned in the Core Strategy Policy. This area contains the highest proportion of desirable specimens. The site benefits from management of the tree stock. A number of trees have been poorly managed trough line clearance beneath the electricity transmission lines. Overall, the park and playing pitches contain many well formed specimens that enhance the site giving scale and maturity as landscape features.

The principal identified impact for trees is the Strategic Route. The development will result in the loss of a number of Category C trees and groups. The trees are unremarkable specimens of very limited merit or of such impaired condition that they do not qualify in higher categories. They are of low quality offering only temporary / transient landscape benefits. Some desirable specimens are to be removed, however their losses are substantially offset by the allocation of land use that will enhance the areas green infrastructure of which trees are a fundamental part.

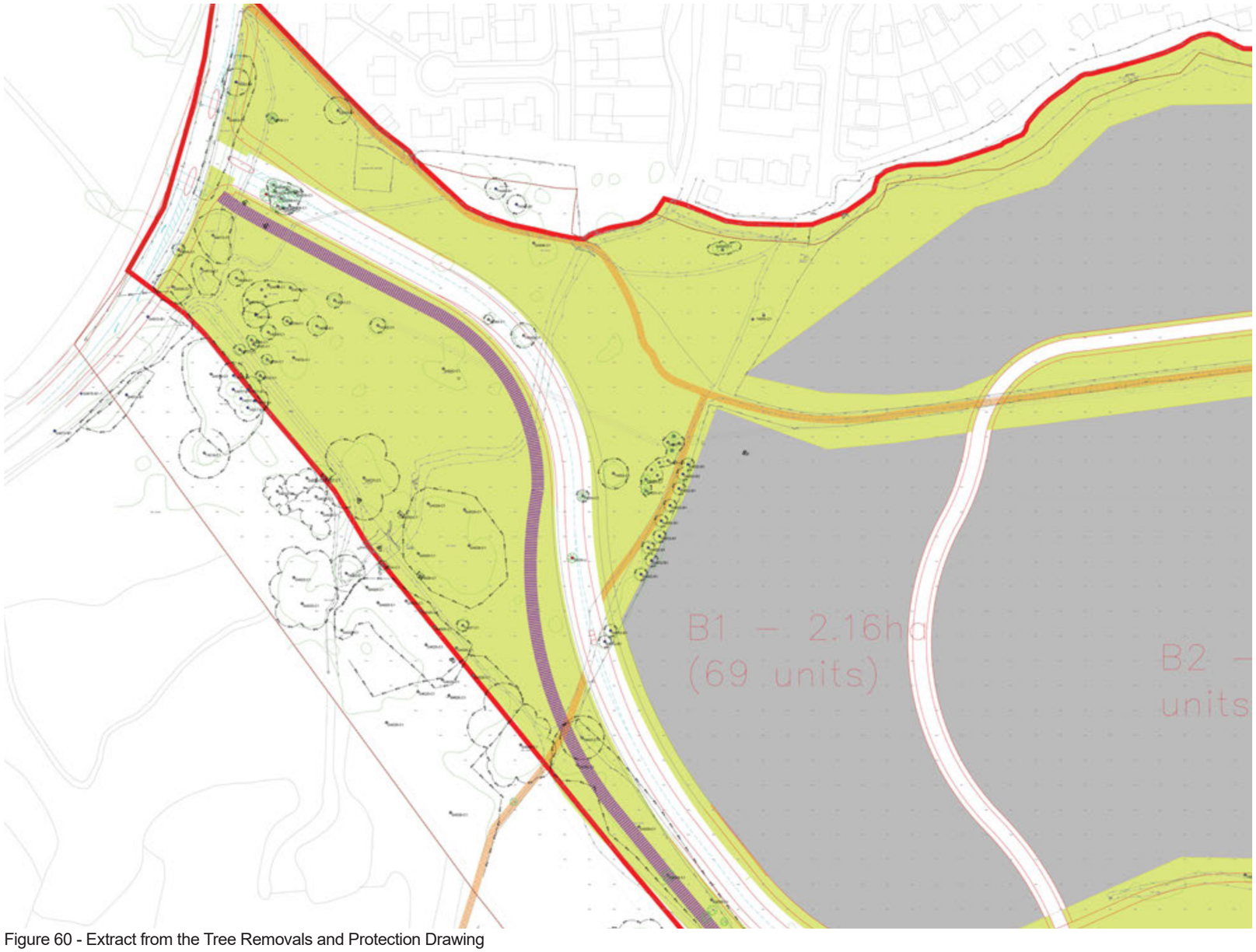


Figure 60 - Extract from the Tree Removals and Protection Drawing

5.5.9 Indicative Open Space Design Study

The following design study explores open space located to the east of Leyland Park within a central position of the application site. Here the open space typologies identified a key multi modal recreational route travelling north south and connecting to the east west corridor. In addition the retention of Hindley Juniors football pitches, together with the creation of two new pitches are identified.

Provision for allotments together with a LLAP, and various LAPs is included, these set within and between a range of Natural and Semi Natural spaces which aim to retain identified features and enhance biodiversity through new ecological corridors. Wetland and ephemeral areas are also identified as part of the masterplans SUD's strategy. The frontage of adjacent residential development provides an indication of potential frontages.

Key Plan

Figure 61 - Open Space Design Study

5.0 The Masterplan Solution

1 Proposed access from Close Lane roundabout

2 Existing residential properties - rear gardens facing South Hindley development

3 Proposed Natural and Semi-Natural Green Space - Native Woodland to provide visual screening and integration

4 Proposed Natural and Semi-Natural Green Space - Native Woodland

5 Indicative proposed residential properties fronting primary access route

6 Indicative proposed residential properties with residential street and open space frontage

7 Indicative proposed residential properties with residential street frontage

8 Indicative proposed residential properties fronting strategic highway and open space frontage

9 Retained Natural and Semi-Natural Green Space - Enhanced and integrated existing woodland

10 Proposed SuDS swale (Strategic SuDS Integration Area)

11 Proposed Natural Play - Local Landscaped Area for Play (LLAP) with earth sculpture and wildflower planting

12 Retained Natural and Semi Natural Green Space - Ponds with enhanced access for pond dipping (Strategic SuDS Integration Area)

13 Proposed Amenity Green Space - Community Orchard with wildflower areas

14 Retained Natural and Semi-Natural Green Space - Enhanced and integrated existing woodland

15 Retained Natural and Semi-Natural Green Space - with enhanced and integrated woodland and water bodies (Strategic SuDS Integration Area)

16 Proposed Amenity Green Space - Community Orchard

17 Existing Formal Outdoors Sports Pitches - Retained Hindley Juniors Football Club

18 Proposed Natural and Semi Natural Green Space - Native Woodland to provide landscape integration and enhance biodiversity

19 Proposed Amenity Green Space - wildflower areas

20 Proposed Formal Outdoor Sports Pitches - Community accessible pitches

Figure 62 - Open Space Design Study - North South Corridor

1. Existing residential properties
2. Proposed Formal Outdoor Sports Pitches - Community accessible pitches
3. Proposed Natural and Semi-Natural Green Space - Native Woodland to provide landscape integration and enhance biodiversity
4. Proposed Amenity Green Space - wildflower areas
5. Proposed Allotment and Community Gardens
6. Indicative proposed residential properties with residential street and open space frontage - offering natural surveillance of allotment and community gardens
7. Retained Natural and Semi Natural Green Space - Ponds with enhanced access for pond dipping (Strategic SuDS Integration Area)
8. Indicative proposed residential properties with residential street and open space frontage
9. Proposed Natural Play - Local Landscaped Area for Play (LLAP) with open space, earth sculpture and wildflower planting
10. Proposed Natural and Semi Natural Green Space - Native Woodland to provide landscape integration and enhance biodiversity
11. Proposed Natural and Semi Natural Green Space - Wildlife Areas with retained and integrated water bodies with dedicated newt ponds, ephemeral wetland areas and species rich meadows (Strategic SuDS Integration Area)

Figure 63 - Open Space Design Study - East West Corridor

5.0 The Masterplan Solution

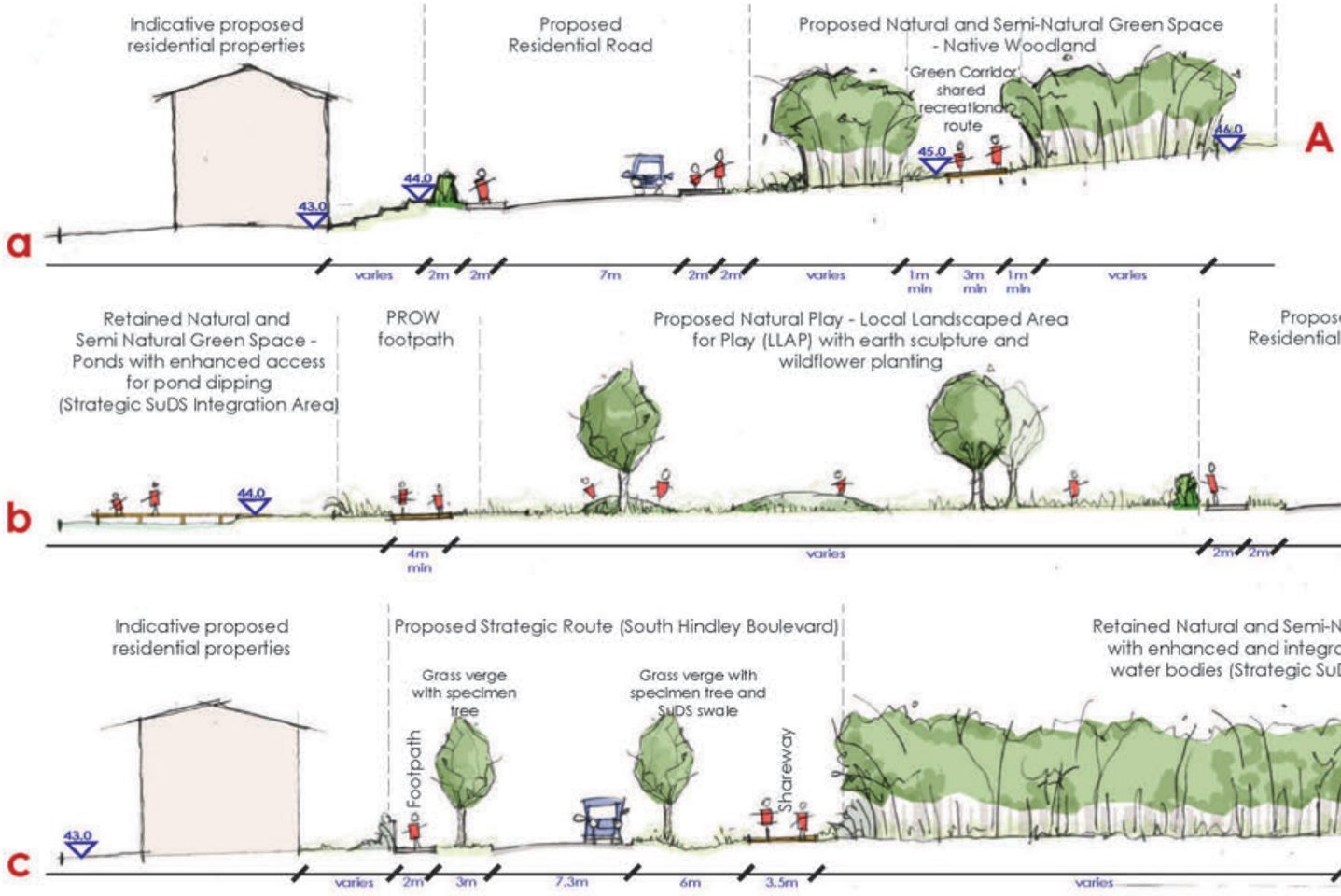


Figure 64 - Open Space Design Study - Supporting Sections

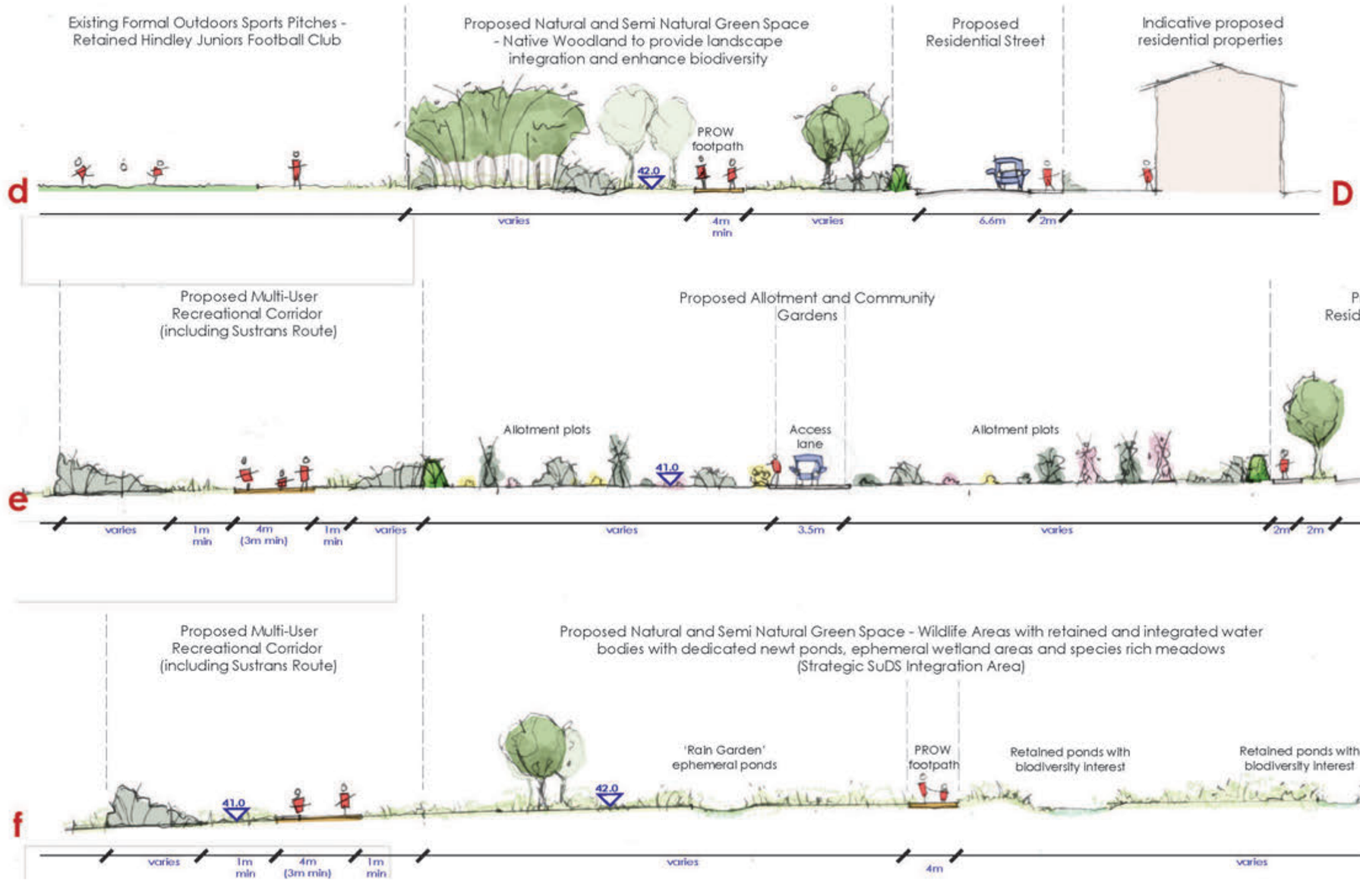


Figure 65 - Open Space Design Study - Supporting Sections

5.0 The Masterplan Solution

5.5 Movement Framework

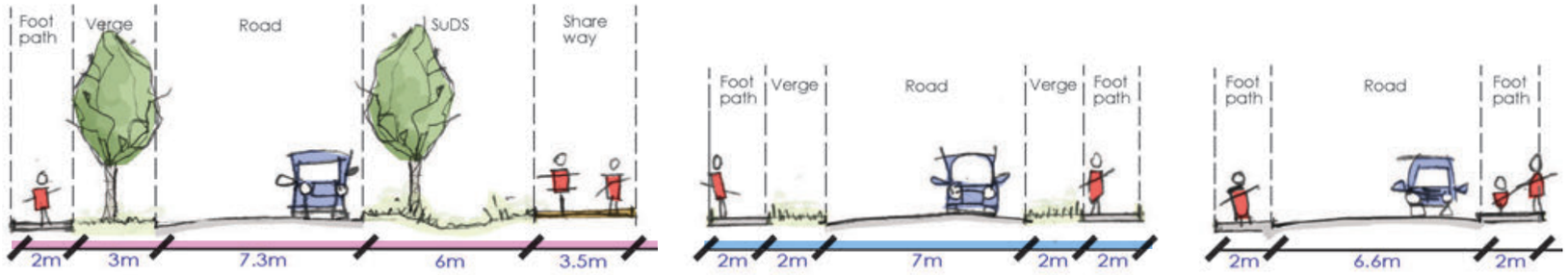
5.5.1 Access

Figure 67 (plan) demonstrates the proposed access positions, highway network hierarchy, and junction typologies. Three way signalised vehicular junctions will be created, one to the east as A578 Leigh Road, and one to the west at A58 Liverpool Road. These access points will be connected through the masterplan by the strategic route which is located within a central position in the masterplan and will provide the primary movement network. This strategic route will connect to a series of internal residential roads, primarily by T junctions with right hand filter lanes; these will provide access to the development cells. In addition a 4 way signalised junction at the junction of Park Road, will be created and a further connection at the existing roundabout on Close Lane will be accessible via a residential road.

5.5.2 General Street Hierarchy

Figure 66 (sections) demonstrates the proposed design solution for the street hierarchy at South Hindley. This will comprise the following:

- Proposed Strategic Route: This is the primary route through the masterplan which aims to meet the requirements of the Wigan future transport strategy whilst defining the placemaking opportunity at South Hindley. This is typically 21.8m wide and aims to balance the requirements of different road users (including vehicles, cyclists and pedestrians), respond to the surrounding built form and meet Sustainable Urban Drainage requirements. Please see section 5.5.3 for more detail.
- Proposed Residential Road: This is the secondary vehicular network which provides connectivity from the strategic route to the development cells. Here the vehicular road, will balance needs of pedestrian users through utilisation of green verges, and meandering routes, which aim to control vehicle speeds. Building lines and frontages to the route will vary, with limited provision of direct access to driveways. Typically street enclosure will be greater with building frontages face to face distances of around 15-20 metres.
- Proposed Residential Street: This is the tertiary vehicular network which provides connectivity from the residential street to individual dwellings. Here vehicular dominance should be reduced through careful design solutions which further control vehicular speeds, sympathetically integrate off and on plot parking. Building lines and frontages to the route will reduce further to ensure street enclosure is maximised and further promote the pedestrian environment. Typically building frontages face to face distances will be around 11-15 metres



Proposed Strategic Route (Typically 21.8m wide)

Proposed Residential Road (Typically 15m wide)

Proposed Residential Street (Typically 10.6m wide)

Figure 66 - Proposed Street Hierarchy (sections)

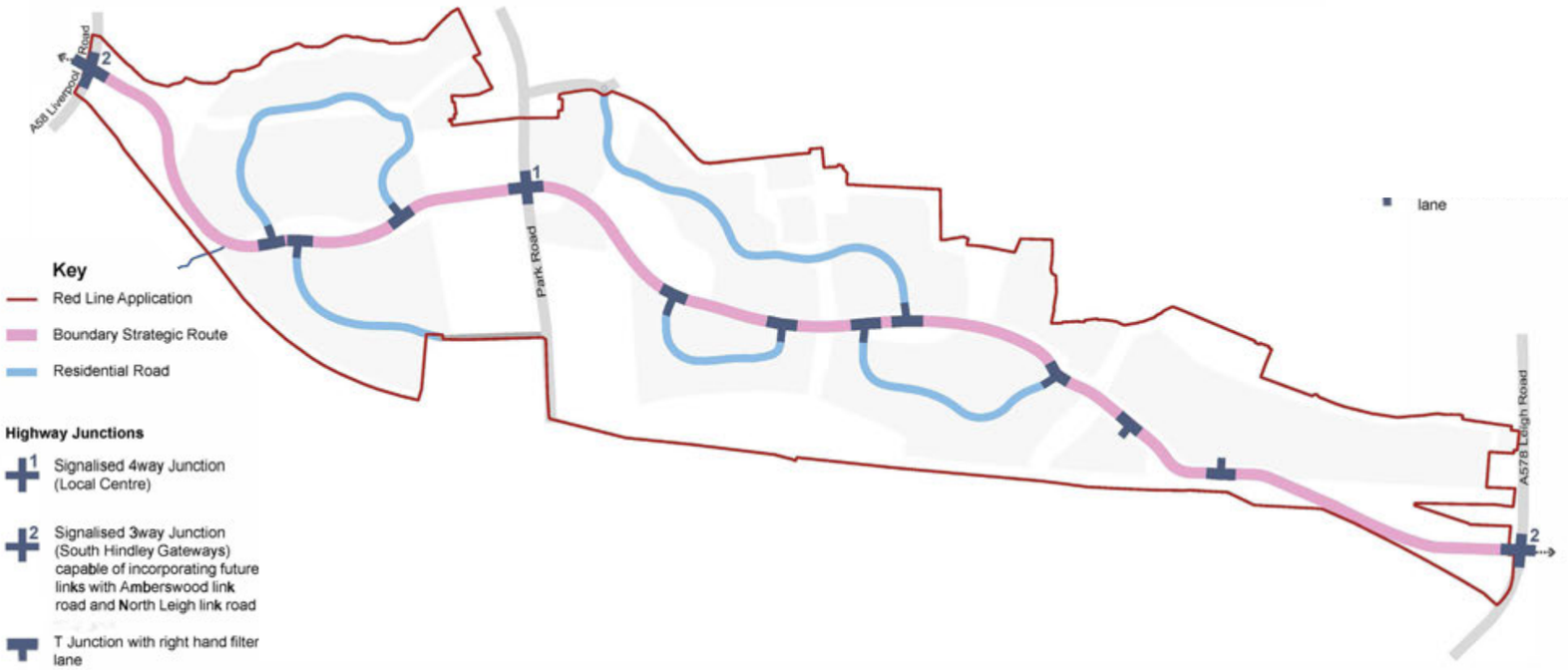


Figure 67 - Proposed Street Hierarchy & Junctions (plan)

5.5.3 Strategic Route Design Study

Key to the success of the masterplan is the delivery of the strategic route. A design study has been undertaken along the route to explore the strategic routes design rationale, including treatment of a range of built form frontages, junction typologies, and pedestrian / recreational crossings.

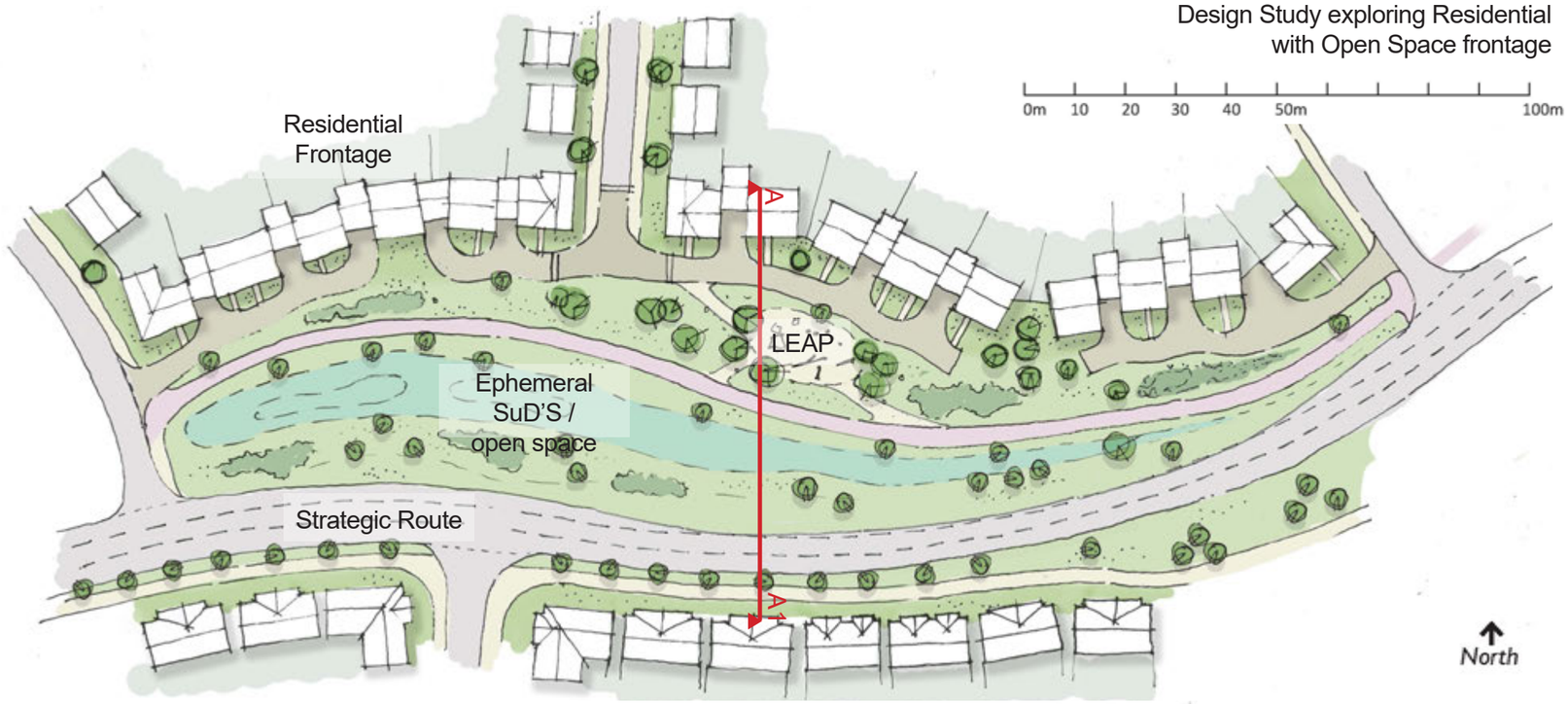
With reference to the built form frontages, these will help define a series of individual typologies and character zones. The creation of individual character zones using a consistent materials pallete and detailing will aid legibility and placemaking through the masterplan, and ensure the success of route. The following figures explore the design solutions in more detail.

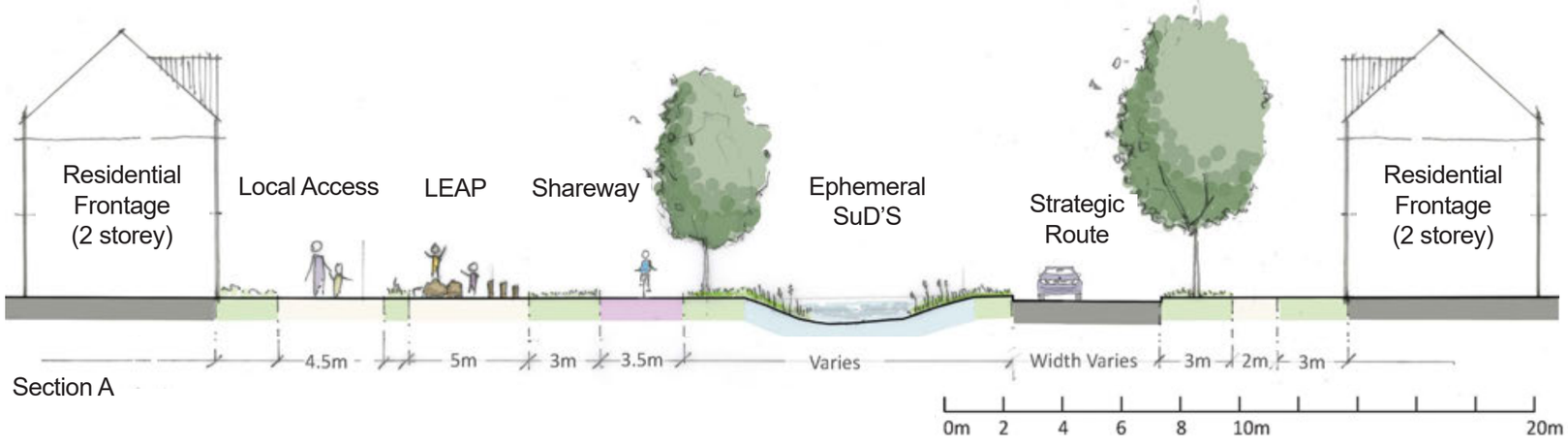
Key Plan

Key

- Road
- Proposed landscape areas (public)
- Front garden (Semi-private)
- Rear garden (private)
- Block woodland/tree
- Individual specimen tree planting
- Private drives
- Footpath
- SuDS area
- Cycle & footpath shareway

Design Study exploring Residential with Open Space frontage





Section A

Figure 68 - Strategic Route Design Study Location 1 - Plan and Section

5.0 The Masterplan Solution

5.5.3 Strategic Route Design Study contd.

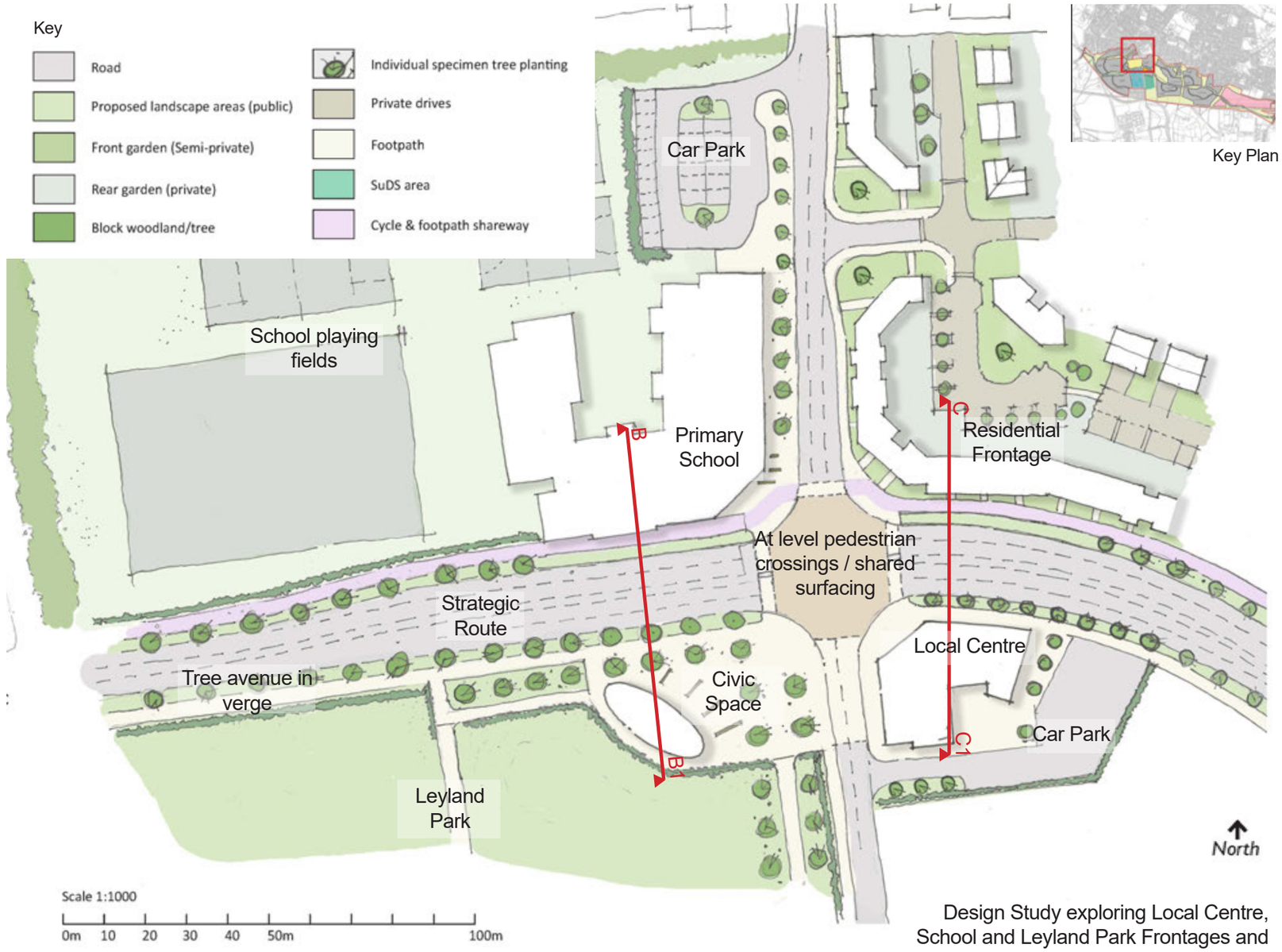
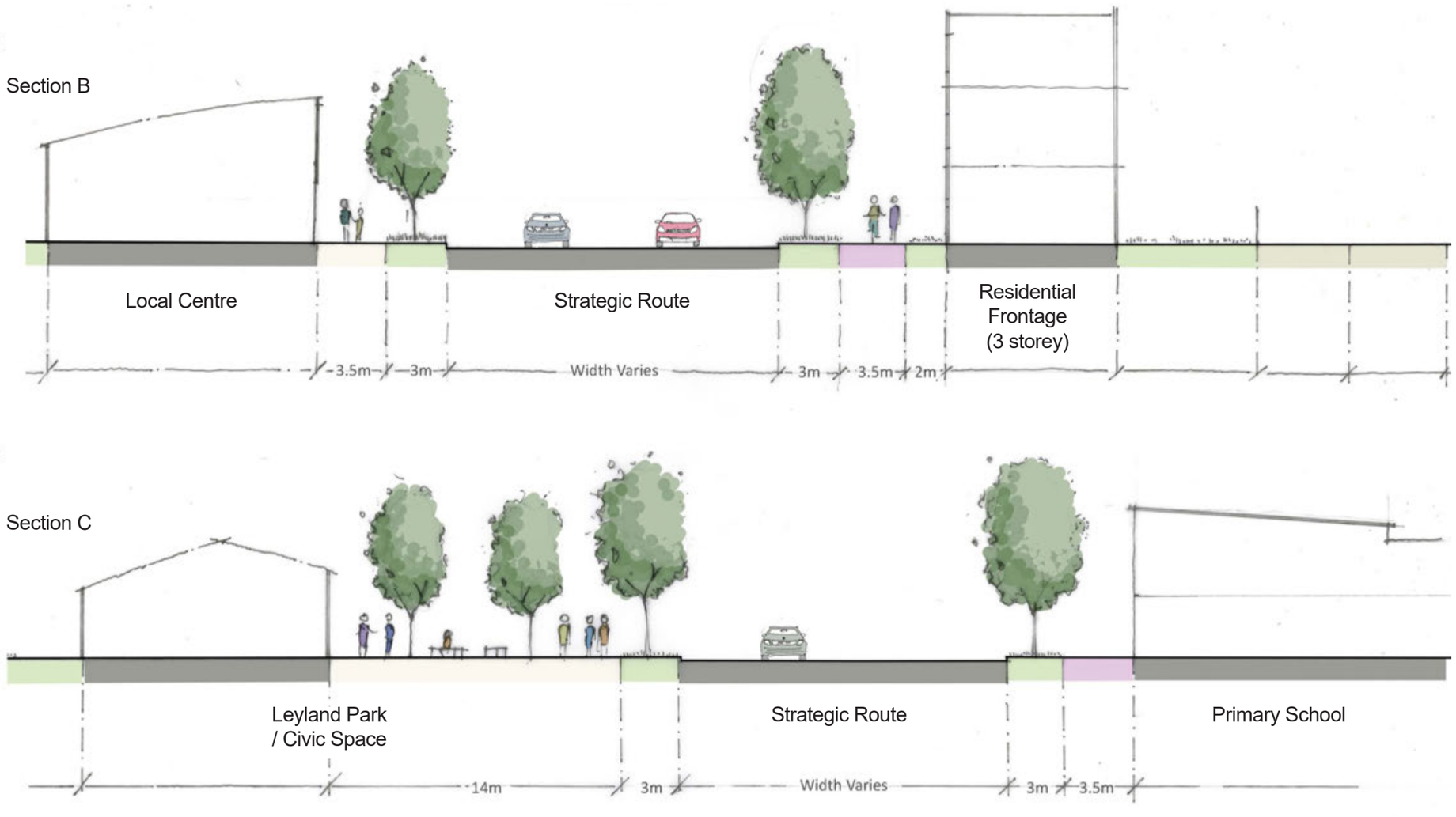


Figure 69 - Strategic Route Design Study Location 2 - Plan

Design Study exploring Local Centre, School and Leyland Park Frontages and 4 way signalised junction

5.5.3 Strategic Route Design Study contd.



Design Study exploring Local Centre, School and Leyland Park Frontages and 4 way signalised junction

Figure 70 - Strategic Route Design Study Location 2 - Section

5.0 The Masterplan Solution

5.5.3 Strategic Route Design Study contd.

Key

- Road
- Proposed landscape areas (public)
- Front garden (Semi-private)
- Rear garden (private)
- Block woodland/tree
- Individual specimen tree planting
- Private drives
- Footpath
- SuDS area
- Cycle & footpath shareway

Key Plan

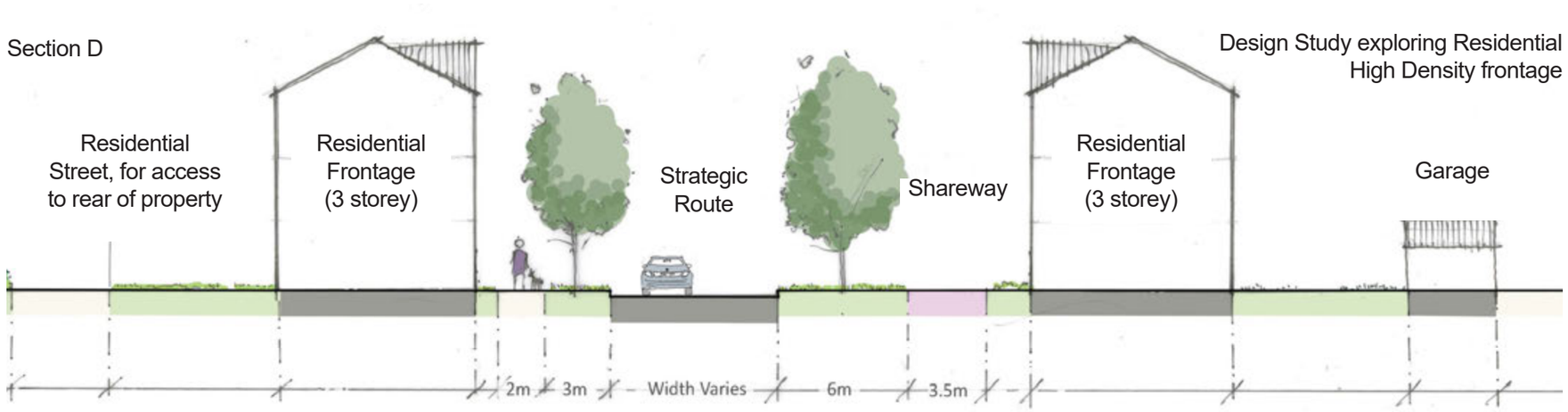
Design Study exploring Residential High Density frontage

Figure 71 - Strategic Route Design Study Location 3 - Plan

5.5.3 Strategic Route Design Study contd.

Section D

Design Study exploring Residential High Density frontage



Section E

Design Study exploring Employment frontage

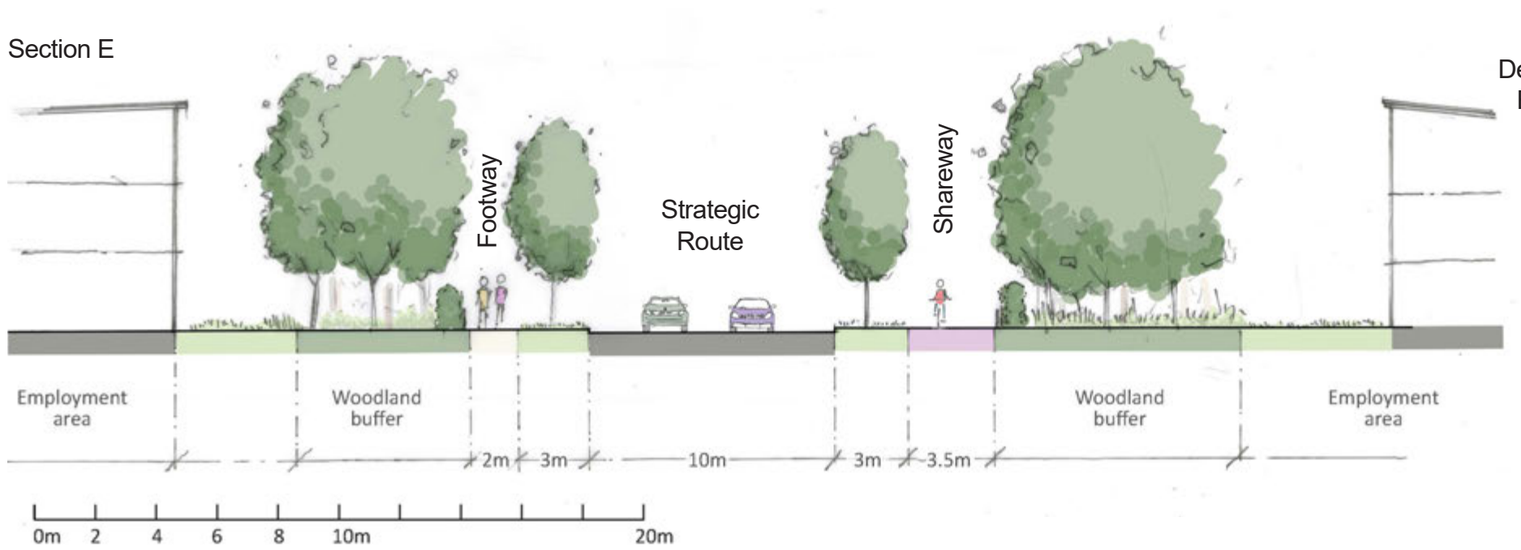


Figure 72 - Strategic Route Design Study Location 3 & 4 - Sections

5.0 The Masterplan Solution

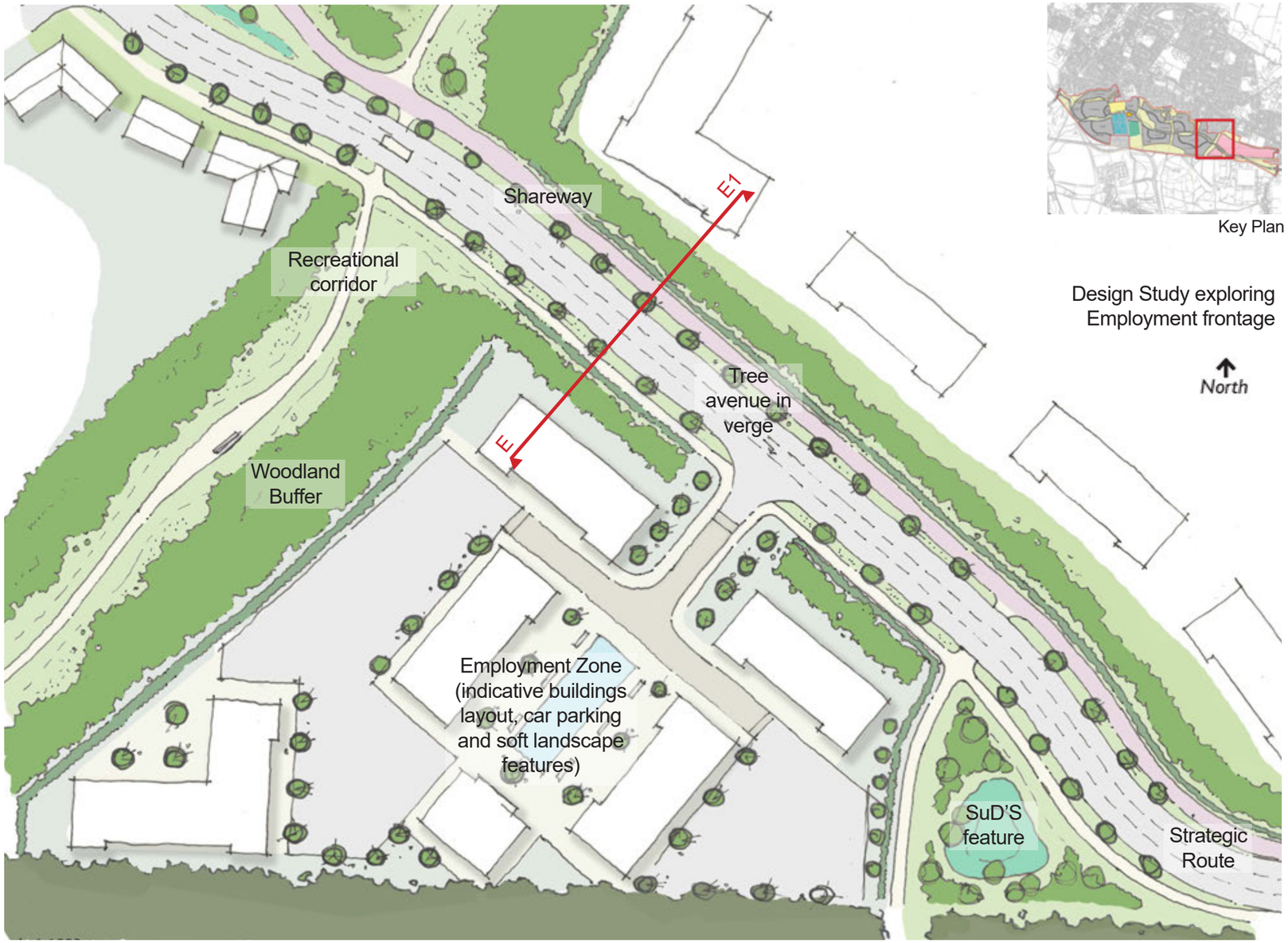
5.5.3 Strategic Route Design Study contd.

Key

- Road
- Proposed landscape areas (public)
- Front garden (Semi-private)
- Rear garden (private)
- Block woodland/tree
- Individual specimen tree planting
- Private drives
- Footpath
- SuDS area
- Cycle & footpath shareway

Scale 1:1000

0m 10 20 30 40 50m 100m



Key Plan

Design Study exploring Employment frontage

Figure 73 - Strategic Route Design Study Location 3 - Plan

5.5.3 Strategic Route Design Study contd.

A series of T junctions with right hand turn filter lanes are proposed along the strategic route. These are to facilitate movement to the surrounding residential roads, and streets with the intention of prioritising the main flow of traffic flows on the strategic route. Figure 74, shows a typical arrangement.

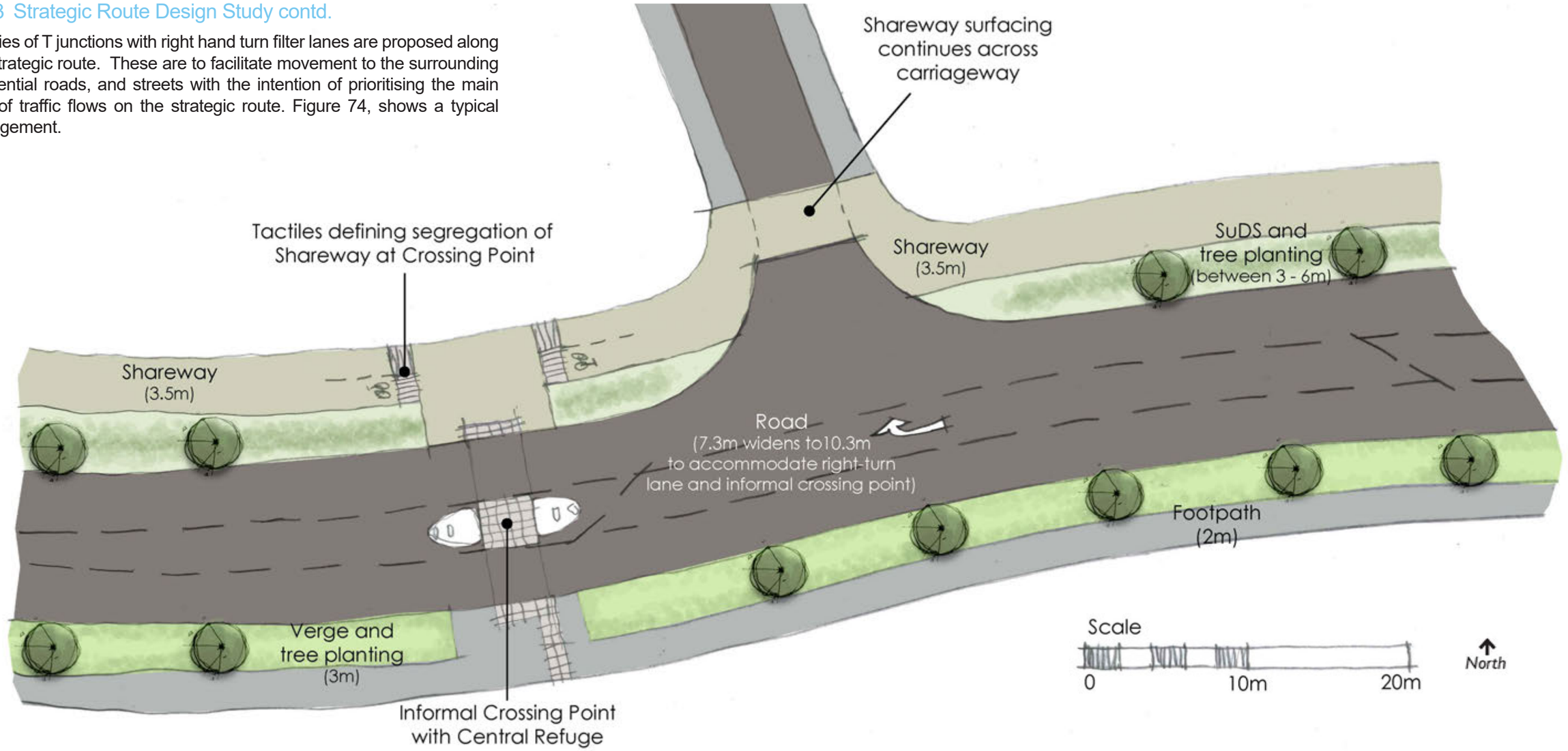


Figure 74 - Strategic Route Design Study - T junction with right hand filter lane detail

5.0 The Masterplan Solution

5.5.3 Strategic Route Design Study contd.

Two three way signalised vehicular junctions will be created, one to the east at the A578 Leigh Road (Figure 75), and one to the west at A58 Liverpool Road (Figure 76). The junctions have been designed to enable ease of future integration with the wider strategic east west link road, and links to the Amberswood link Road to the west and North Leigh link Road to the east. Both will result in the creation of a fourth arm link to the proposed junctions shin below.

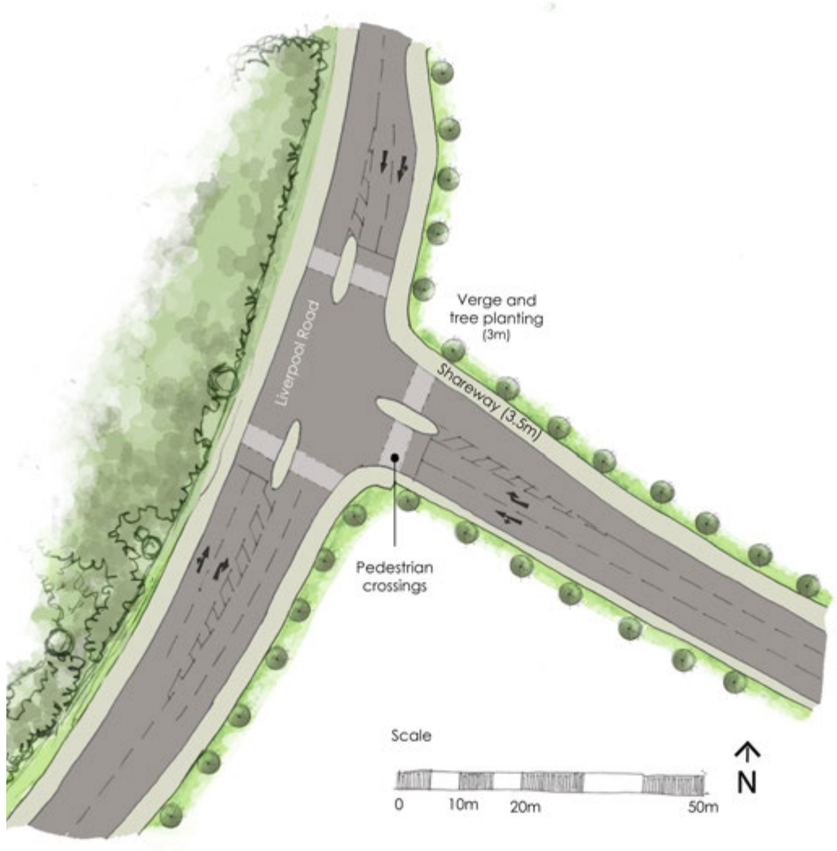


Figure 75 - Liverpool Road Junction Layout

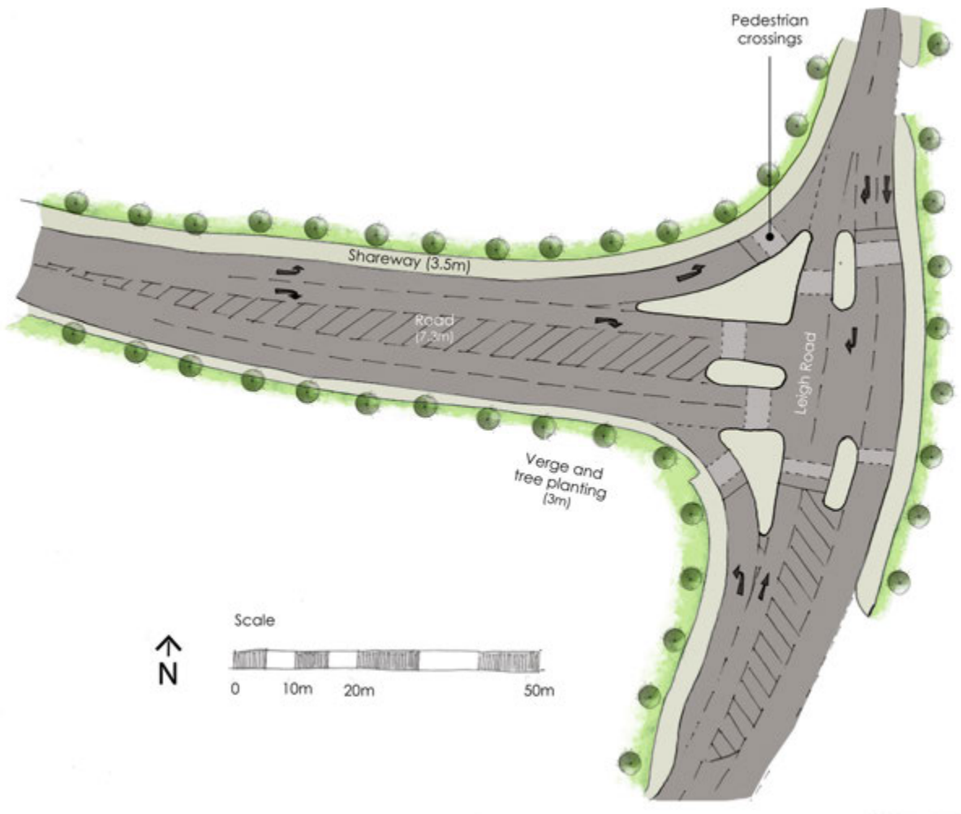


Figure 76 - Leigh Road Junction Layout

5.5.3 Strategic Route Design Study contd.

Figure 77 identifies the proposed pedestrian, cycle and equestrian crossings along the strategic route, and how these connect / relate with the surrounding non vehicular movement network to facilitate and promote north south connectivity within the masterplan.

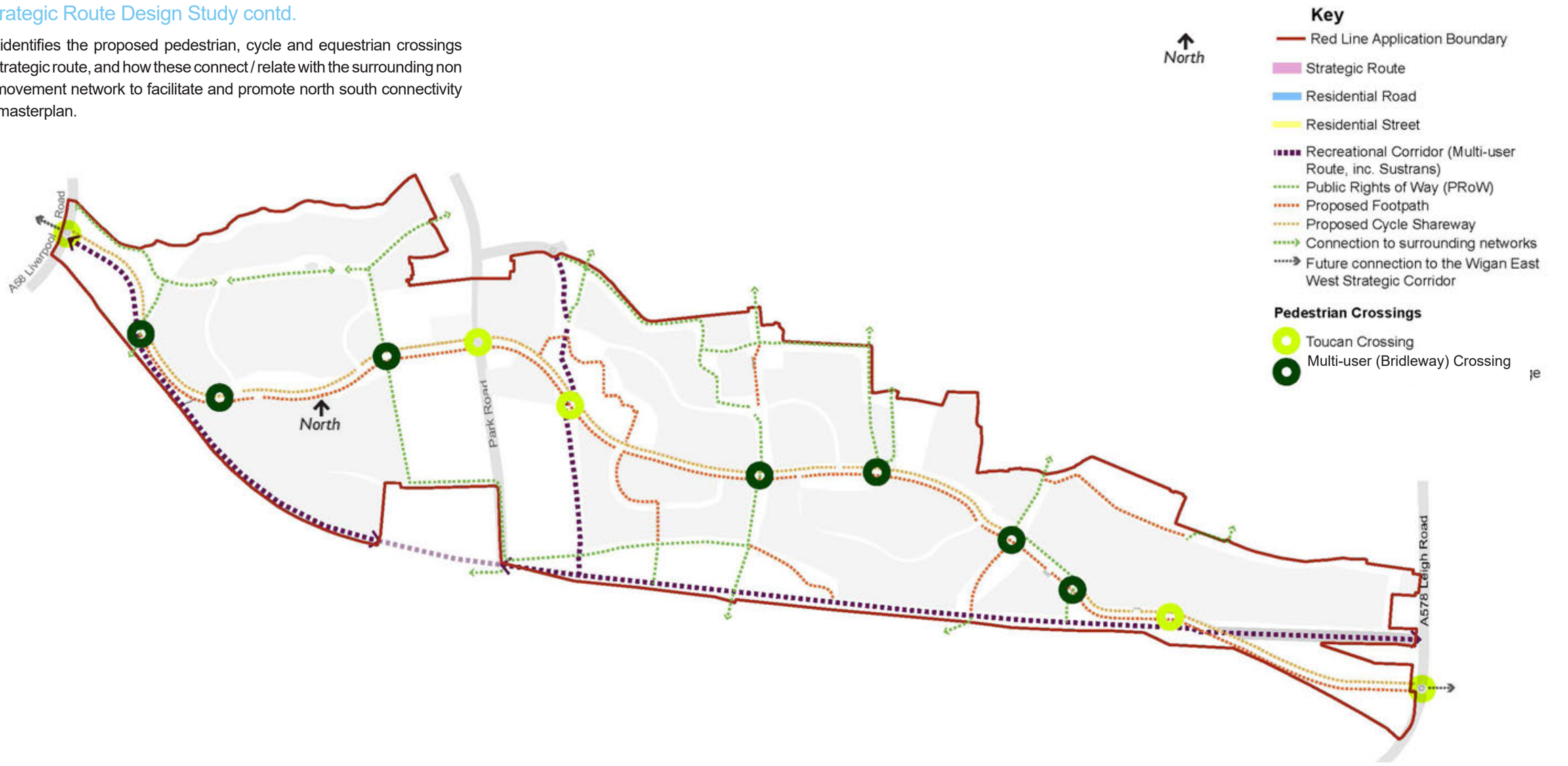
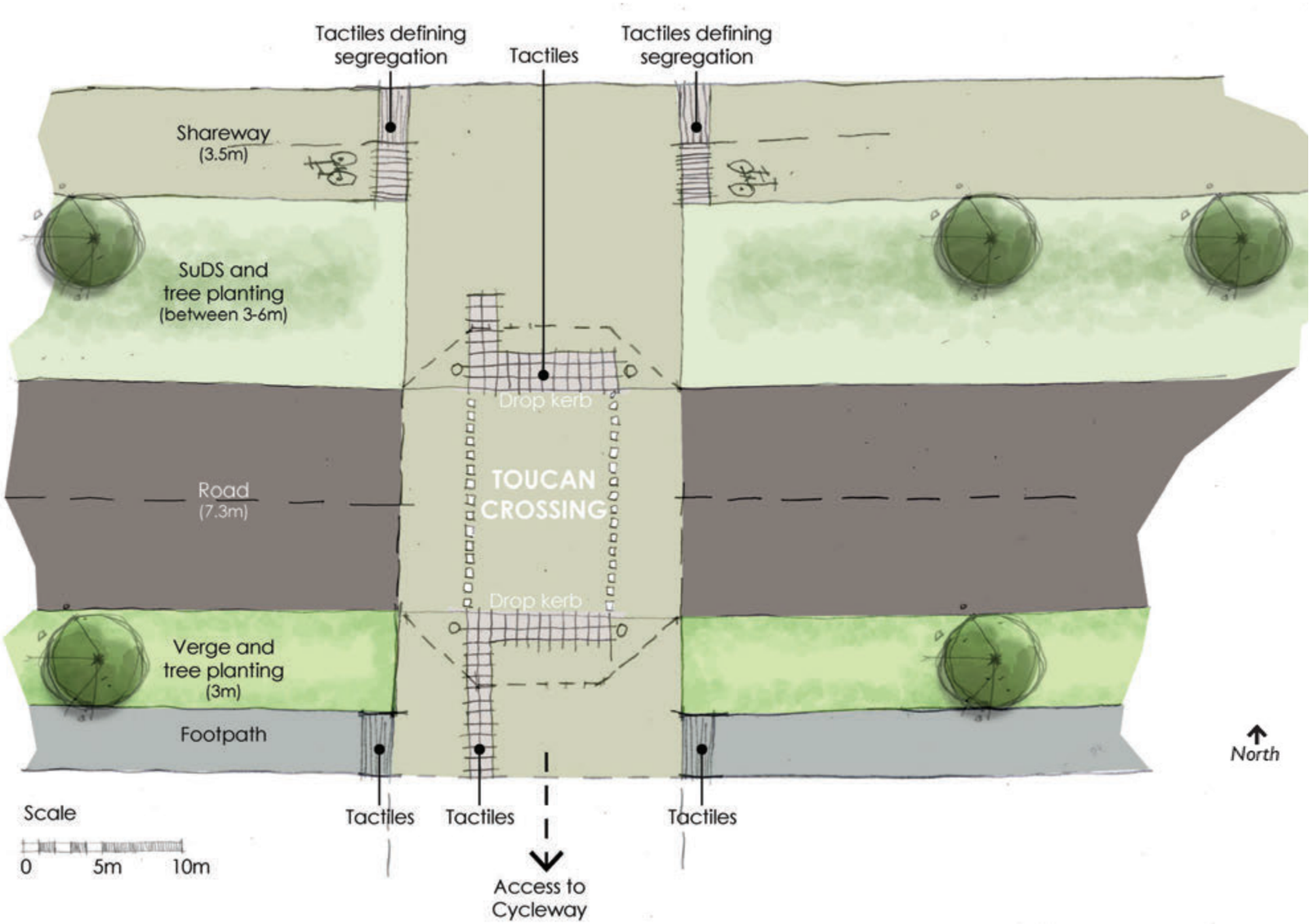


Figure 77 - Strategic Route Design Study - Pedestrian Crossing Typologies and Locations

5.0 The Masterplan Solution

5.5.3 Strategic Route Design Study contd.

Multi user crossings are proposed (toucan and / or pegasus) to facilitate pedestrian, cycle, and equestrian movement across the strategic route and residential roads. Figure 78 shows a typical toucan crossing arrangement.



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5.5.3 Strategic Route Design Study contd.

Zebra crossings could be considered to facilitate pedestrian movement across the strategic route at key locations. These could be developed to incorporate cycle provision as demonstrated below. Figure 79 shows a typical zebra crossing arrangement.

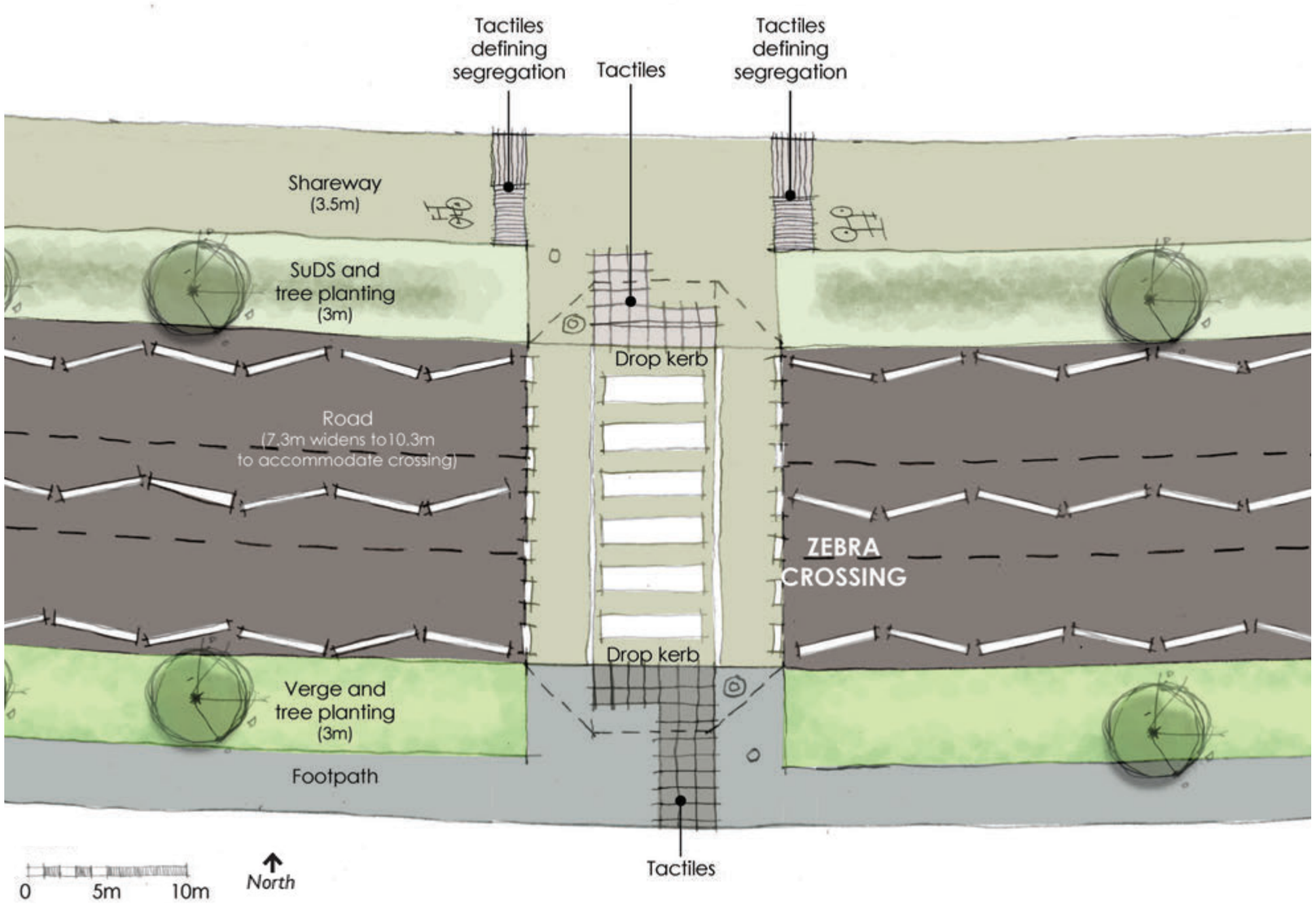


Figure 79 - Strategic Route Design Study - Zebra Crossing Typical Layout

5.0 The Masterplan Solution

5.5.3 Strategic Route Design Study contd.

In addition to the defined crossings additional un-signalled crossing positions with central refuge islands are proposed at a number of locations to facilitate pedestrian permeability and movement across the strategic route. Figure 80 shows a typical arrangement.

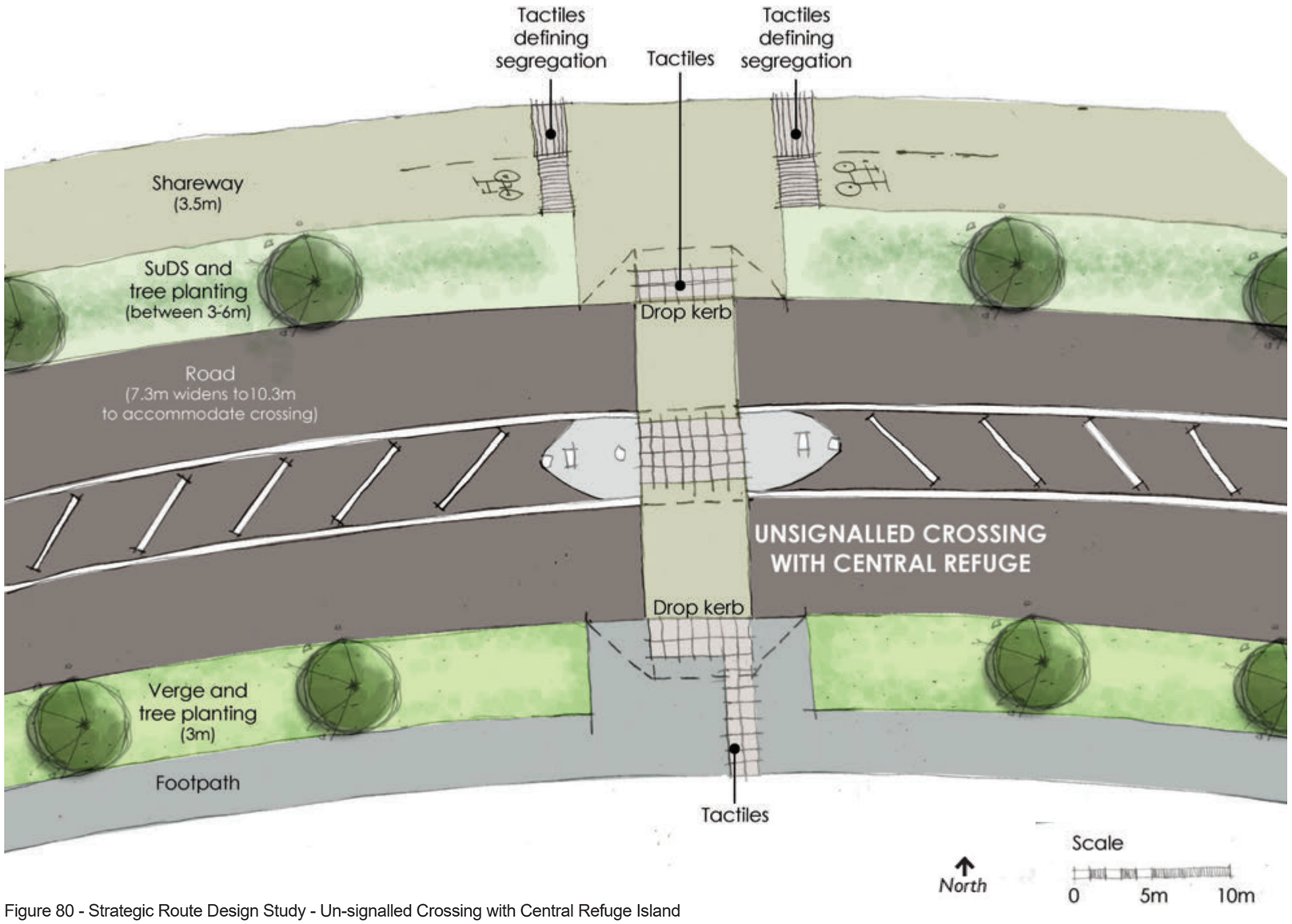
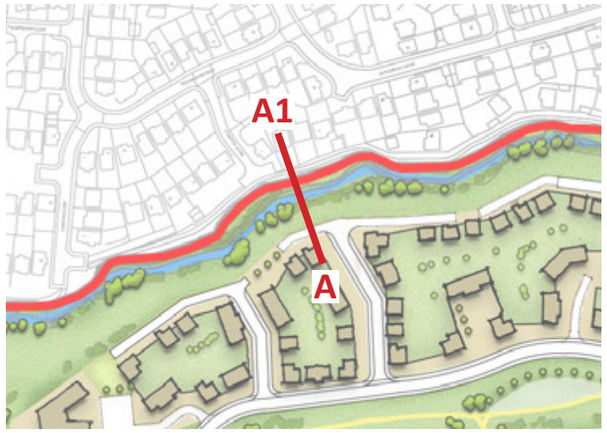


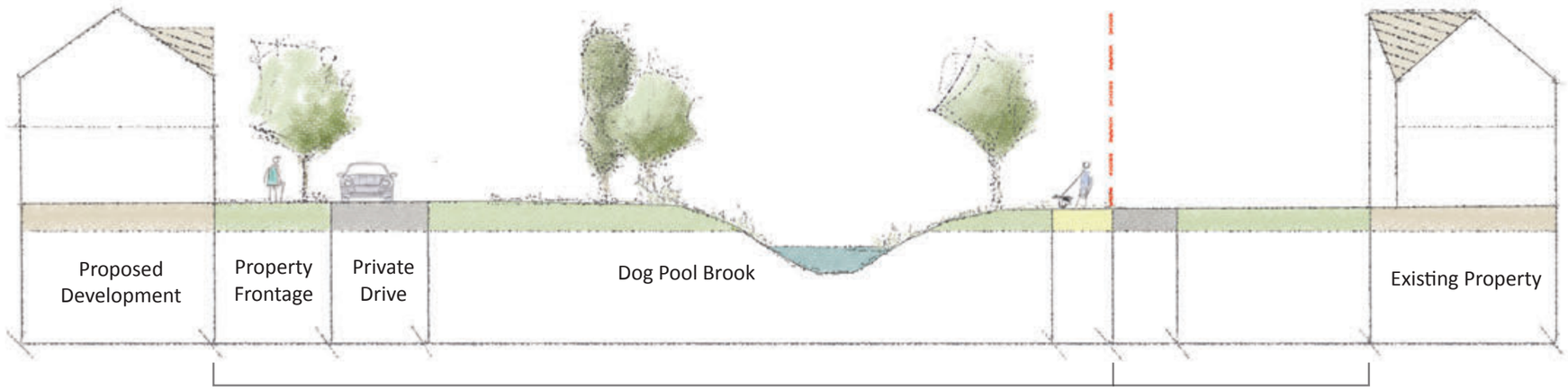
Figure 80 - Strategic Route Design Study - Un-signalled Crossing with Central Refuge Island

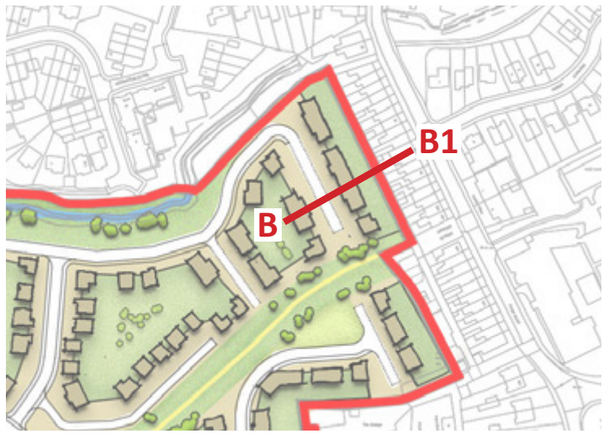
5.6 Hindley & Hindley Green Adjacencies Design Study

The following sections explore how the masterplan development responds to the existing residential built form of HIndley, and Hindley Green located along the northern edge of the site boundary.



Section A-A1





Section B-B1

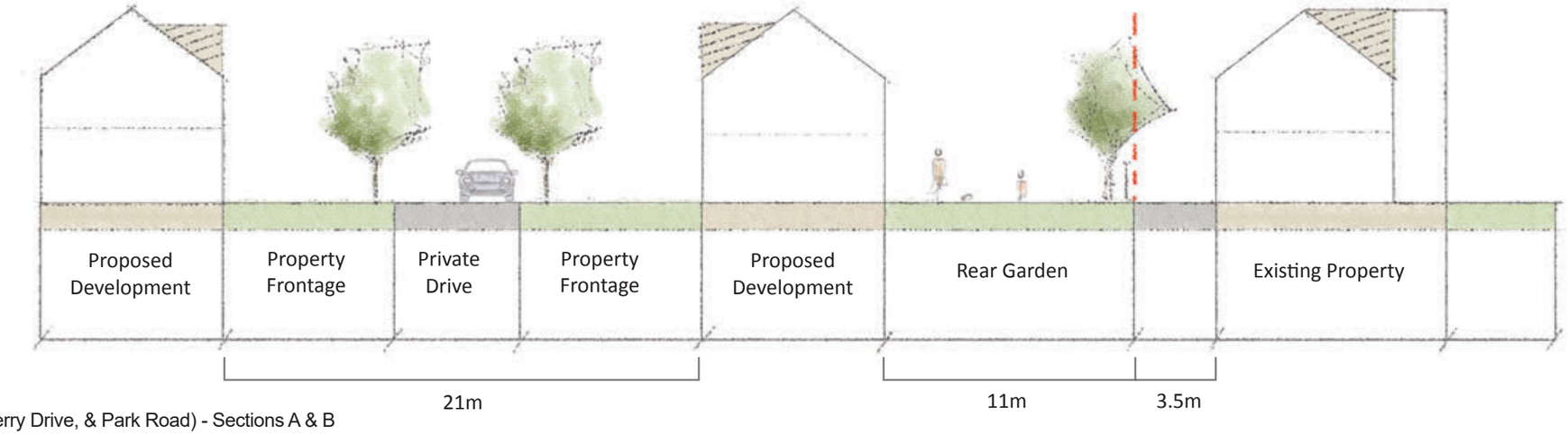
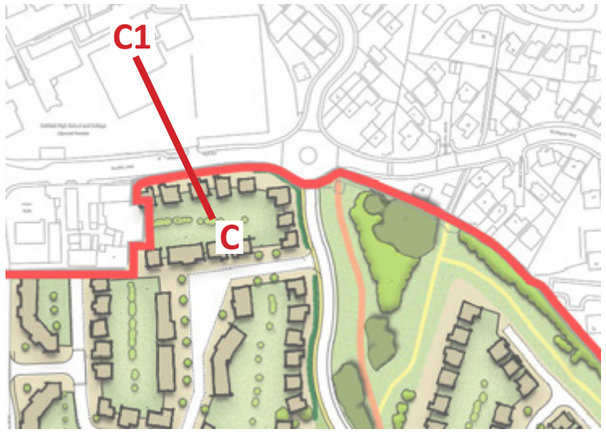
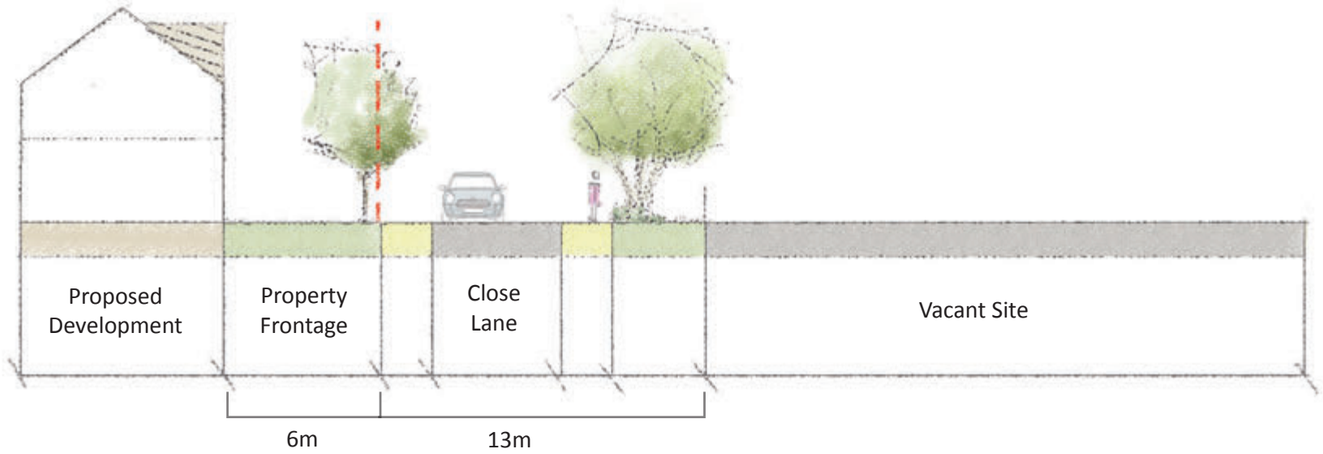


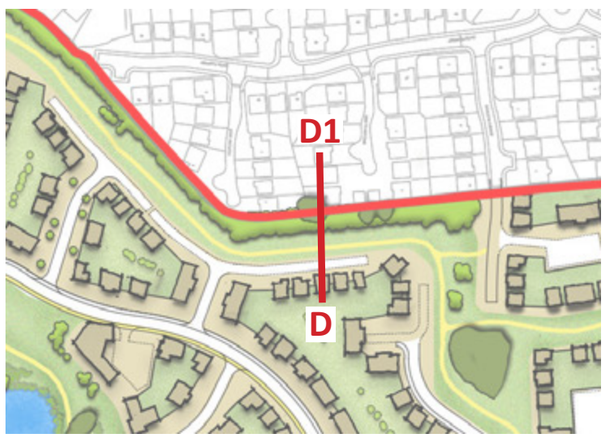
Figure 81 - Design Study Exploring adjacencies with Hindley (Blackberry Drive, & Park Road) - Sections A & B

5.0 The Masterplan Solution



Section C-C1





Section D-D1

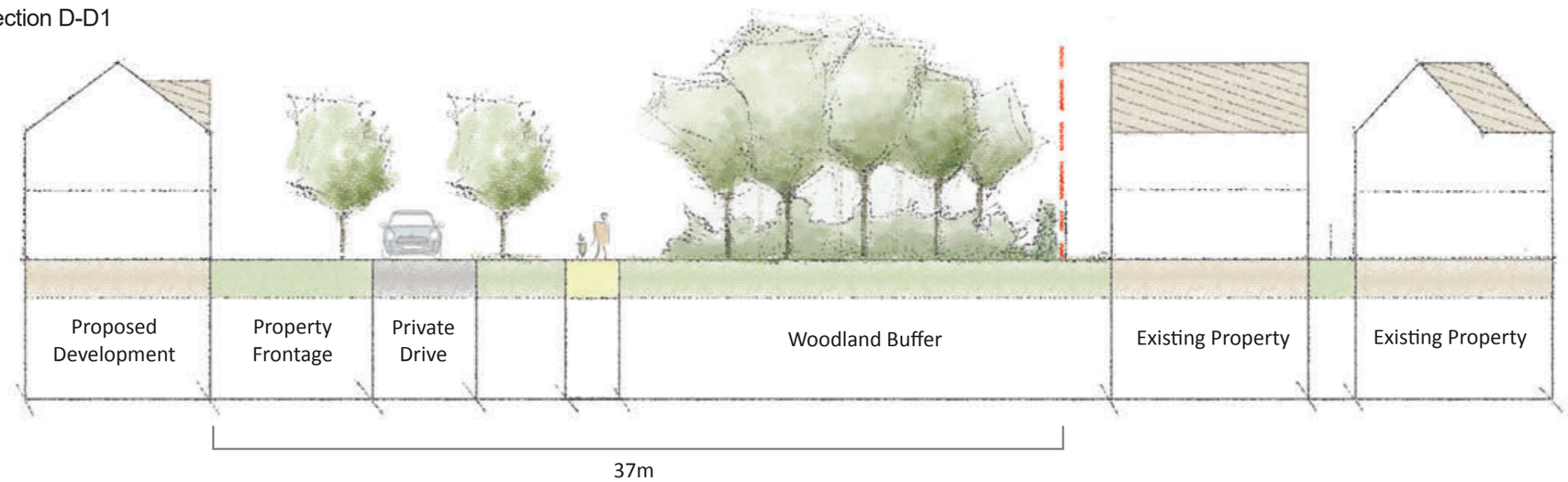
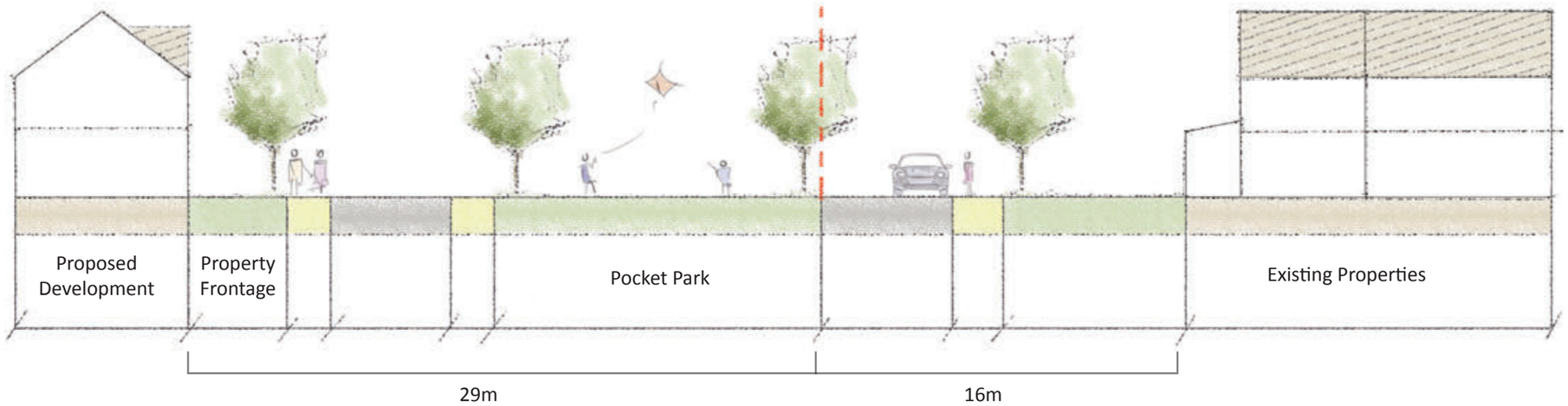


Figure 82 - Design Study Exploring adjacencies with Hindley (Close Lane, & Askwith Rd / Brough Close Road) - Sections C & D

Section E-E1



Section F-F1

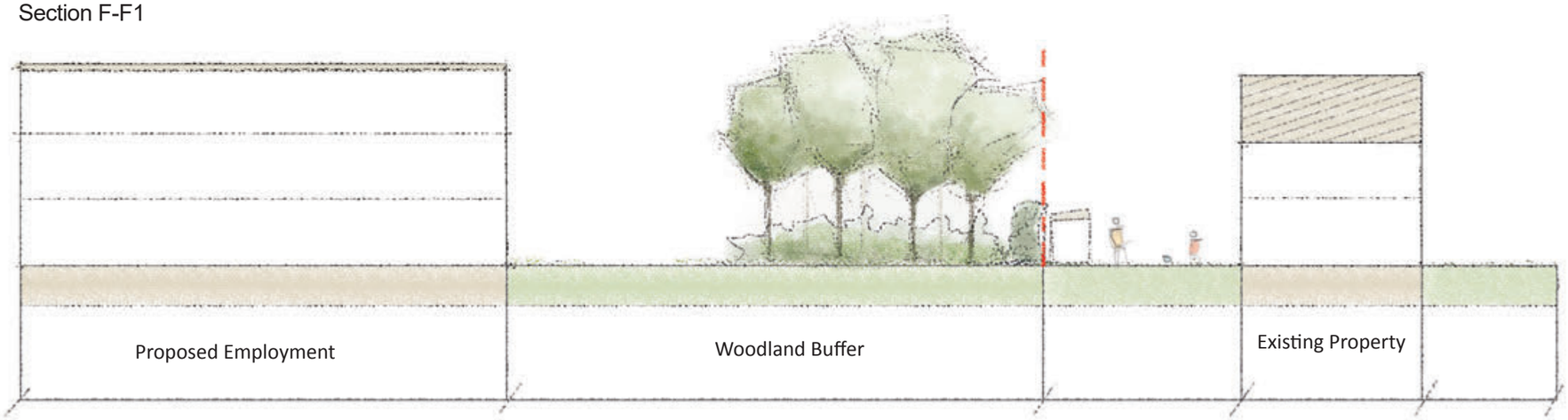


Figure 83 - Design Study Exploring adjacencies with Hindley (Oak Avenue, & Sarah Street) - Sections E & F

6.0 Sustainability

6.1 Sustainability

The development of the site will be based on the following principles:

- Provide a mix of new homes that meet the requirements of the local community;
- Provide for connectivity with the surrounding landscape and urban areas;
- Provides safe and attractive walking and cycling routes and good access to public transport and local facilities;
- Provide well defined streets and spaces which respond to local character and the sites context;
- Provide a high quality, inclusive public realm that meets the needs of all users; and
- Encourages biodiversity.

The design of the site has been approached with sustainability a key consideration with the outline layout of the scheme being designed to maximise the natural resources on site to enable future occupants of the dwellings to lead sustainable lifestyles and reduce emissions.

Orientation of buildings to maximise passive solar gains, where possible has been considered to maximize solar gains to both internal and external spaces.

A SUD's systems forms an integral feature of the masterplan which incorporates and adds to the existing watercourse to provide on-site surface water attenuation, and flow paths. The drainage strategy takes into account likely climate change scenarios to ensure the longer-term compatibility of the development with its surroundings.

6.2 Energy and Carbon Dioxide Emissions

All dwellings will be designed to:

- Minimise and limit heat loss through the effective use of insulation and high-performance windows and doors; and
- Provide space and services for home working in most dwellings.

It is the aspiration that construction methods, building fabric and the scheme specification will ensure that the development complies with best practice sustainability principles and guidelines, and that energy use and carbon dioxide emissions across the site are minimized.

6.3 Water

The development will be designed to reduce the consumption of potable water in the home and externally. The strategy places a strong emphasis on the utilisation of a Sustainable Urban Drainage System to meet the requirement of the surface water drainage requirements on site. SuD'S components have been identified for three of the key functional assets of the masterplan, including the residential areas, employment zone and the Strategic route (highway). Solutions proposed include, Filter Strips, Green Roofs, Permeable Paving, Rainwater harvesting, Wetland Ponds, Swales, and Detention Basins.

Surface water run-off from the development will be controlled through the use of these measures which will provide on-site attenuation and manage run off to acceptable limits Multifunctional open spaces have been incorporated to facilitate for flood events storage requirements.

6.4 Waste

The scheme will be designed to provide appropriate space for the storage of non-recyclable and recyclable household waste. Waste storage facilities will be able to accommodate containers with the volume recommended by British Standard 5906 (i.e. 100 litres volume for a single bedroom unit with a further 70 litres volume for each additional bedroom) and, space to accommodate containers used by the Council as part of its recycling scheme is provided.

6.5 Health and Well Being

The proposed development, and subsequent management of the site will strive to encourage sustainable lifestyles and habits of residents. For example:

- High quality sound insulation will be used to protect residential amenity and reduce the likelihood of noise complaints from neighbours;
- A landscape led design approach which provides a high level of outdoor space; and
- The creation of family housing which provides appropriate private outdoor gardens.

6.6 Ecology

The site contains a number of known ecological assets. As part of the masterplan the principle of creating a strong landscape framework has ensured were possible these assets are retained and integrated as part of the Green Infrastructure network, which has in part formulated the spatial layout of the masterplan.

The creation of improved east west and north south green corridors ensures ecological corridors are provided and enhanced throughout the site. Furthermore, the open space mix provides for 16.92 hectares of Semi Natural and Natural Green Space, in a range of typologies included, water / ephemeral bodies, hedgerows, woodland, defined newt ponds, and proposed wildlife areas. These wildlife areas provide opportunity for habitat creation, where it has not been possible to retain ecological assets.

6.7 Management and Maintenance

The masterplan proposes a series of linked new open spaces. A vital component in the successful delivery of the vision will be the long-term stewardship of these public spaces, and key to the success is engaging with the Community so that they feel a sense of pride and ownership.

A robust management framework for the open space fabric running through the development is essential to its long-term sustainability. The masterplan for the site has been careful to create spaces that are overlooked to provide a secure environment and a strong sense of these areas being 'owned' by the community.

6.8 The Developer

The Developer will ensure the ultimate delivery of a mechanism for the long-term delivery and stewardship of public open space and play areas on the site.

In the eyes of the public the Managing Partners will be the future managers of the site and the named point of contact. They will be responsible for the physical maintenance of the site. The new and existing community residents within the local area can be expected to have an active interest in the development of the site.

6.9 Mechanism for Delivery

This is yet to be agreed, however it is considered there could be two management partners that will deliver the long-term management of the public spaces and private communal spaces within the site. These are either:

1. The Council, Wigan Council who could formally adopt the areas of open space, providing long term stewardship.

2. A Management Organisation Responsibility for non-adopted areas could be transferred to a suitable management company who would take responsibility for the long-term delivery of the management plan relating to these areas. It is envisaged that a service charge would be payable by residents enjoying the benefits of these private communal areas, and by this means, a sustainable funding source would be established for future management

7.0 Summary and Conclusion

The development of the masterplan proposals for South Hindley, has been ongoing since 2014. This has involved three work sates, which have ensured the delivery of a robust outline masterplan for submission to the planning authority. Activities commenced with a detailed technical studies baseline capture exercise at Stage 1, a Masterplanning options and consultation exercise at Stage 2, and culminated with the preparation of the preferred outline masterplan solution at Stage 3.

A large amount of time, effort and investment has gone into the design of this scheme, and we are sure that this approach does justice and responds to the site providing a locally relevant and high quality response.

The proposals outlined help deliver and realise the aspirational vision for the South Hindley, which is to:

"Provide a high quality sustainable urban extension at South Hindley which provides new family homes and future opportunities for employment, creating a place for people to live, work and enjoy."

The development proposals provide a strong landscape framework which incorporates existing site features, and helps:

- *provide much needed new 'Homes' and job opportunities;*
- *deliver a new road through the site, to alleviate heavy traffic congestion through Hindley;*
- *provide new areas for sport and play;*
- *regenerate and improve Leyland Park and integrate the park with the development through new and inclusive access routes;*
- *provide connection with adjacent areas, including for walking and cycling, and opportunities to use public transport;*
- *provide good connections and accessibility to the countryside to the south and west as part of the wider Greenheart countryside park;*
- *provide attractive sustainable drainage features to protect against flooding maintain and enhance wildlife habitats and provide natural green corridors between them; and*
- *be of a high standard of design that is well integrated with its surroundings.*

Land & Property

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