4.0 Design Influences

4.3 Trees

Tree survey and appraisal carried out in accordance with BS5837:2012'

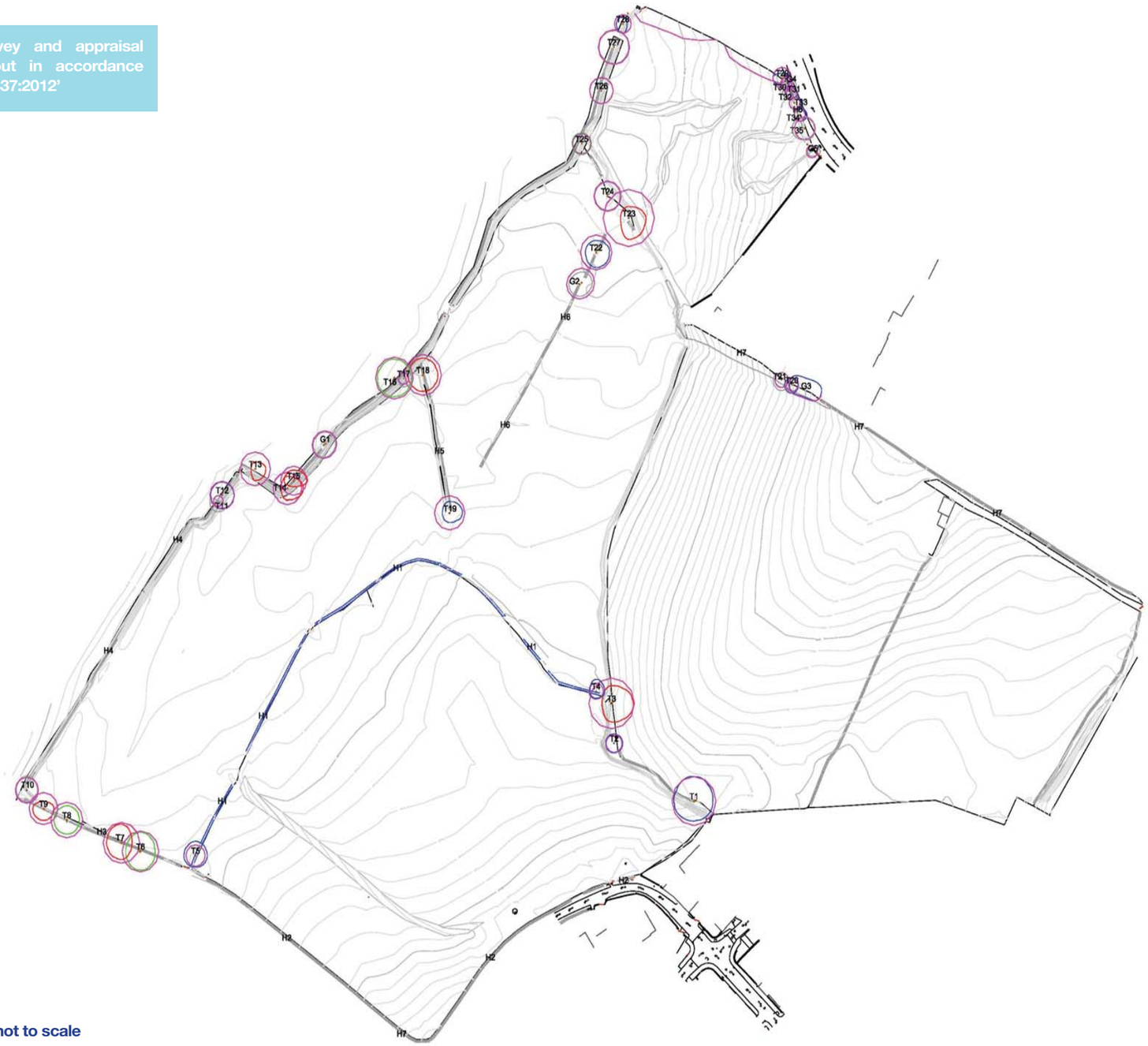

Diagram not to scale

Tree categorisations

Those of a High and Moderate Quality/Value that Should Subsequently be Considered a Constraint to Development and Therefore be Retained in the Context of the Design Where Possible:

KEY

T = Surveyed Individual Tree
G = Surveyed Group of Trees
H = Surveyed Hedge

Please refer to associated Arboricultural Impact Assessment report for specific details in respect of items below:

Tree Categorisations:

Those to be Considered for Retention:

Category 'A' Tree/Group/Hedge
Those of a High Quality with an Estimated Remaining Life Expectancy of at Least 40 Years

Category 'B' Tree/Group/Hedge
Those of a Moderate Quality with an Estimated Remaining Life Expectancy of at Least 20 Years

Category 'C' Tree/Group/Hedge
Those of Low Quality with an Estimated Remaining Life Expectancy of at Least 10 Years, or Young Trees

Those Considered Unsuitable for Retention:

Category 'U' Tree/Group/Hedge
Those in Such a Condition that they Cannot Realistically be Retained as Living Trees in the Context of the Current Land Use for Longer Than 10 Years

Note: The locations of trees T4, T11, T13, T16, T17, T20, T28 and T31, along with groups G3 and G4, were not included on the topographical survey plan provided, and their locations were subsequently plotted by the arboricultural surveyor using GPS siting at the time of the survey. As such, these locations cannot therefore be considered to be entirely accurate, and this should be taken into consideration during the detailed design stage

Root Protection Areas:

Radial Root Protection Area (RPA)
Area(s) of Ground that Should be Protected Throughout Development Works with Protective Fencing to form a Construction Exclusion Zone - see Temporary Protective Fencing Specification

4.0 Design Influences

4.4 Ecology

4.4 Ecology/Environmental

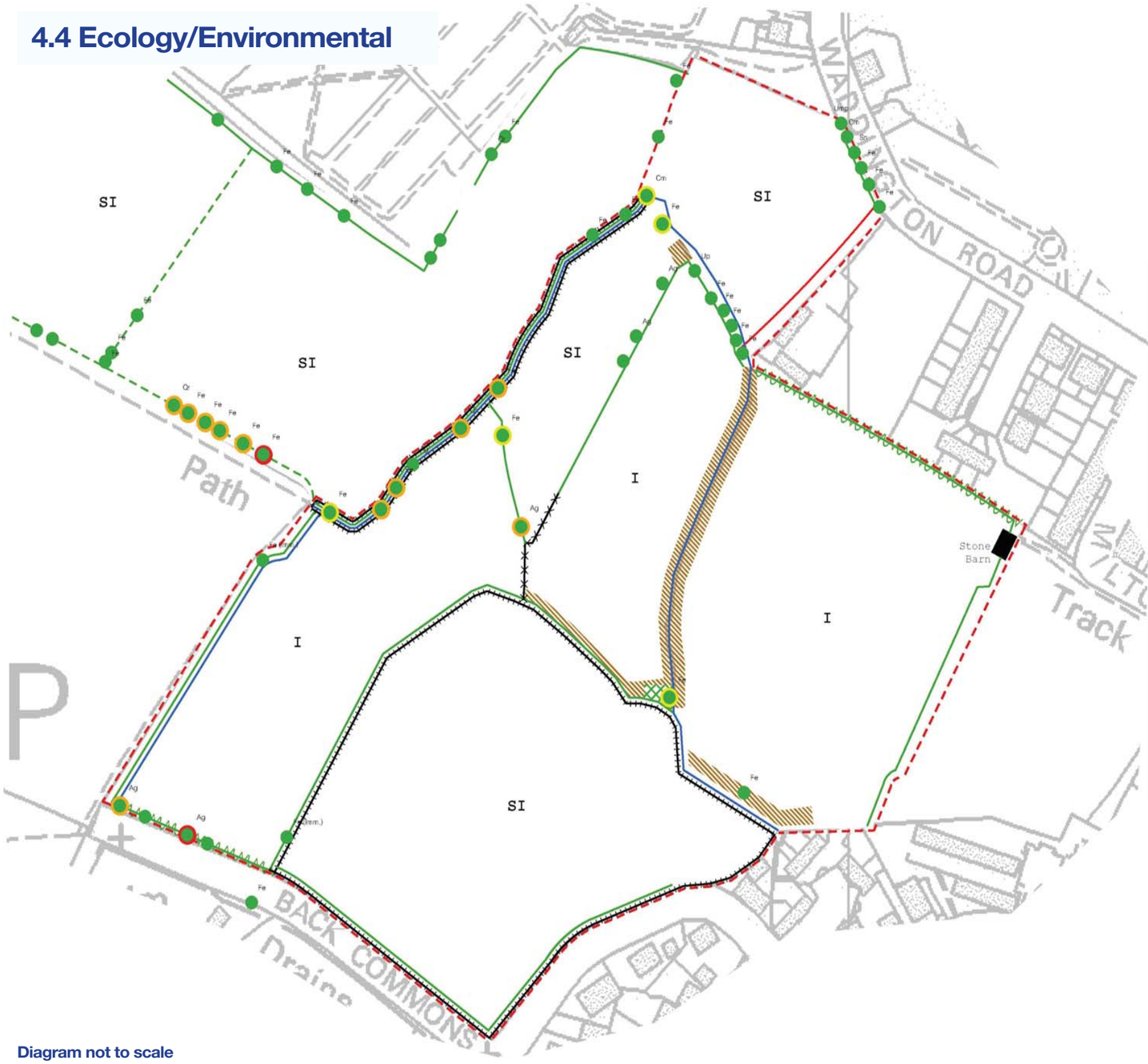

Diagram not to scale

Drain along northern boundary of site

Watercourse running through the centre of the site

Species poor hedgerow

Species poor out grown hedgerow

Legend

- Site boundary
- Scrub - dense/continuous
- I — Improved grassland
- SI — Poor semi-improved grassland
- Other, tall herb
- Amenity grassland
- Building
- Running water
- Hedge - species-rich
- Intact hedge - species-poor
- Defunct hedge - species-poor
- Fence
- Wall
- Boundary removed
- Tree (High bat potential)
- Tree (Moderate bat potential)
- Tree (Low bat potential)
- Tree (Negligible bat potential)

Species poor semi-improved grassland

4.5 Flood Risk/Drainage

4.5.1 Background and Context

The site is in an area identified as having a 'low' probability of flooding on the Environment Agency Flood Map and is located in Flood Zone 1.

The NPPF requires that planning applications for development proposals of 1 hectare or greater in Flood Zone 1 should be accompanied by a Flood Risk Assessment.

The residential nature of the development proposals means the classification of the site is 'more vulnerable' from the NPPF Table 2.

The Flood Risk Assessment (FRA) has reviewed all sources of flood risk to both the proposed development and to the existing adjacent development as a result of the proposals, including; fluvial, tidal, pluvial, groundwater, sewers and flooding from artificial sources.

An Internet based search for flooding events did not recall any historical flooding in the immediate site area. The predevelopment enquiries with the EA also failed to highlight any historical flooding events specific to the development site.

Local residents have highlighted an existing highway drainage issue where Waddington Road passes under the Railway, although this presents little risk to the proposed development there is potentially scope to assist in alleviating this offsite issue as part of the development proposals, however viability will require additional investigation and detailed design.

4.5.2 Hydraulic Modelling

The small watercourse bisecting site was modelled to determine whether it presented a flood risk to the proposed development. The study considered the; 1 in 1 year, 1 in 100 year, 1 in 100year + 20% allowance for climate change and the 1 in 1000 year flood flows along the brook.

A steady state 1 dimensional model of the brook was developed using HEC-RAS v4.1 which solves the Energy Equation using the Standard Step Method.

The results indicate that an insignificant amount out of main channel flooding would occur even for the 1 in 1000 year event; the extent of this flooding is indicated on the Flood Plain Plan.

There is no requirement to set minimum Finished Floor Levels (FFL) as the proposed development is located outside of the floodplain, however it is advised that FFL be set ideally 600mm above the adjacent Q100+CC (1%AEP) Top Water Level; with safe avenues of overland flow being identified and designed to minimise risk to the proposed and surrounding development should exceedance occur.

4.5.3 Surface Water Drainage Strategy

In light of the relatively low flood risk from all of the sources reviewed the principle focus of the FRA is on the effective management of surface water drainage. It is proposed for surface water to be discharged to ground via soakaways if feasible; however it is more likely that a practical solution will be to discharge to the watercourse crossing site.

The Greenfield run-off rates have been calculated using the IH124/ICP-SUDS method based on the catchment characteristics of the site obtained from the FEH CD-ROM (v3.0). The mean annual peak rate of run-off QBar is calculated to be 33.0l/s and this has been agreed with the Environment Agency.

It is proposed that the foul water be discharged to the combined public sewer crossing the southern corner of site as agreed with United Utilities. Any private drainage systems crossing the proposed development area need to be catered for within the development proposals.

4.5.4 Sustainable Urban Drainage Systems

In accordance with NPPF, Sustainable Drainage Systems (SuDS) should be specified wherever possible to manage surface water. This in turn reduces the burden downstream on both watercourses and sewerage systems.

SuDS have the ability to address three core objectives; water quantity, water quality and amenity value. With the appropriate system specified, all three core objectives can be satisfied. Where possible, peak surface water discharge rates to watercourses and sewers should be reduced.

Preference should always be given to SuDS over the traditional methods of buried sewers wherever possible and practical.

Runoff from car parking areas and roads could be conveyed through swales, permeable pavements, bio-retention areas and petrol interceptors to provide a degree of treatment before flows are carried to public sewers.

Opportunities should be taken to provide soft landscaping where at all possible on site to assist in minimising surface water run-off. Added benefits include biodiversity and visual enhancements.

4.5.5 Summary

The development is accessible for emergency access and egress during times of extreme flooding as the floodplain does not extend into the area proposed for residential development.

The development and its drainage systems should be designed to cope with intense storm events up to and including the 100 year return period rainfall event with an allowance for Climate Change (CC). If an extreme rainfall event exceeds the design criteria for the drainage system it is likely that there will be some overland flows that are unable to enter the system, it is important that these potential overland flows are catered for within the proposed planning layout in the event that the capacity of the drainage system is exceeded.

The Flood Risk Assessment is considered to be commensurate with the development proposals and in summary, the development can be considered appropriate for Flood Zone 1 in accordance with the NPPF.

4.0 Design Influences

4.5 Flood Risk & Drainage

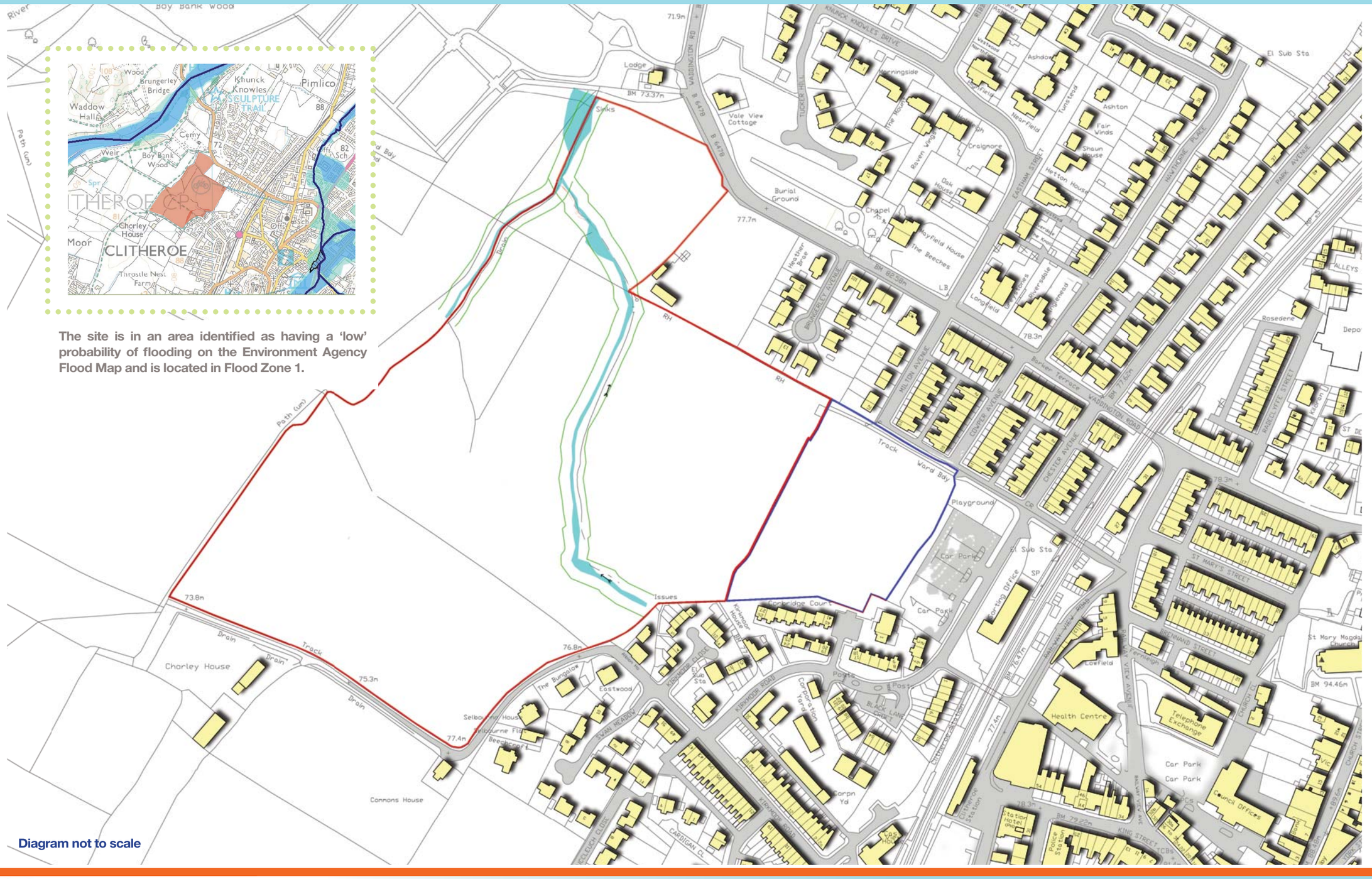

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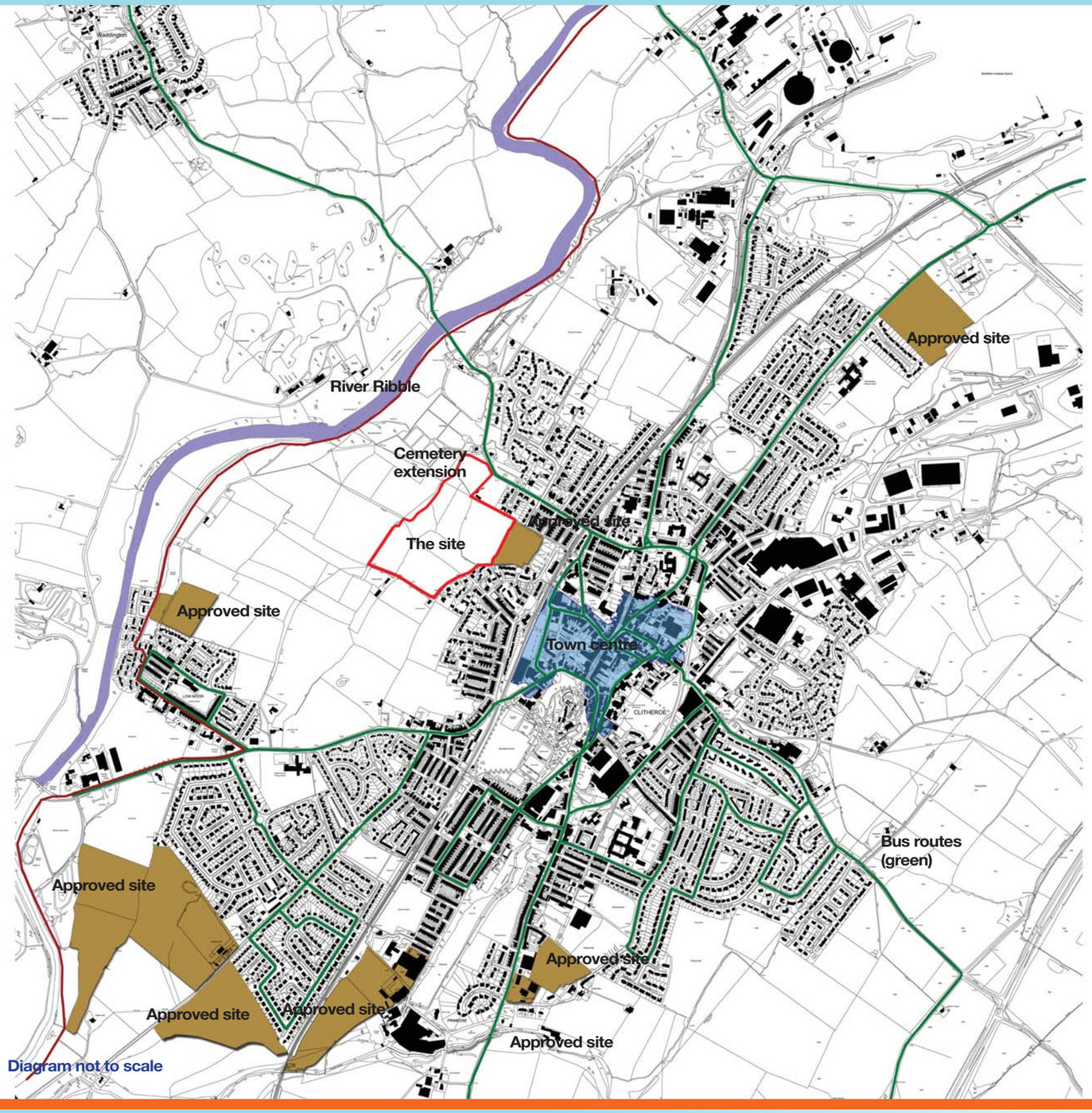
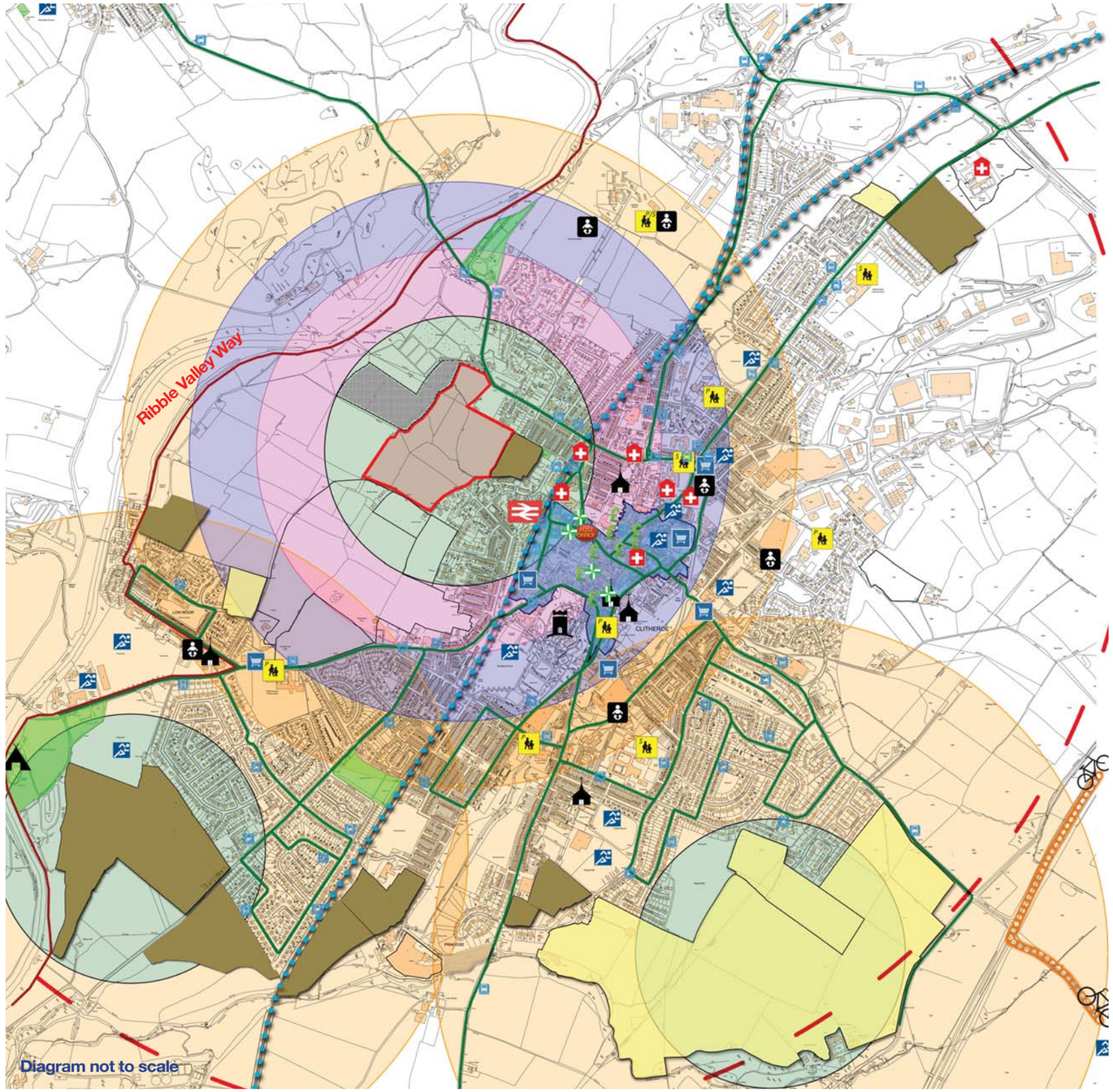
Diagram not to scale

4.6 Socio-Economic Benefits



4.0 Design Influences

4.6 Socio-Economic Benefits



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4.6 Socio-economic benefits

An assessment of the social and economic and community effects of the proposed development has been undertaken.

The assessment has concluded that there is a strong fit with and

Contribution to local economic development and regeneration objectives specifically in terms of attracting more highly skilled people to live and work in the town in order to increase productivity and economic growth.

The sites highly sustainable location means that the following amenities and places of employment are located within a maximum 30 minute walk from the site.

The sites highly sustainable location means that the following amenities and places of employment are located within a maximum 30 minute walk from the site.

Zone 1, 400m/5minute walk – this zone has the following attractions bus and rail stations, food store, 2 doctors/dentist/health care and 15% of town centre area.

Zone 2, 600m/7 minute walk – this zone has the additional attractions to zone 1 of the market, post office, 55% more of the town centre, 8 banks/building societies, place of worship, 3 pharmacies, doctor/dentist/health care

Zone 3, 800/9.5min walk – this zone has the additional attractions to zone 1 and 2 of 3 doctors/dentist/health care, 2 places of worship, 2 nurseries, 4 sports facilities, 3 food stores, 3 primary schools, 1 senior school, the remainder of the town centre.

Zone 4, 1000m/15minute walk – this zone has the additional attractions to zone 1 to 3 of 4 nurseries, 1 food store, 3 primary schools, place of worship, senior school, 2 sports facilities

Zone 5, 2km/30 minute walk – this zone has the additional attractions to zone 1 to 4 i.e. all of Clitheroe including the employment sites.

4.7 Access & Travel Modes

4.7.1 Setting

The proposed allocation is a logical extension and rounding off of Clitheroe. It forms a natural infill between the Waddington Road and Bawlands corridor via the Castle View area. The wrap around design will integrate the two areas for car and non car modes.

4.7.2 Non Car Accessibility

The site is exceptionally well located to ensure that movements by car mode are reduced as much as possible lying close by to the bus/rail interchange and town centre.

4.7.3 Walk

With consideration of walking distances, the Institute of Highways and Transportation (IHT) produced their 'Guidelines for Journeys on Foot' in 2000 which suggests that around 80% of walk journeys and walk stages in urban areas are less than 1 mile with the average length of a walk journey being just 1km (0.6 miles). Historic guidance in PPG13 also recognises that walking is the most important mode of travel at the local level, and has the greatest potential to replace car trips for distances up to 2 kilometres.
The distance that people are prepared to walk depends somewhat on the journey purpose. The IHT guidance also provides 'suggested acceptable walking distances'. The walking thresholds are suggested:

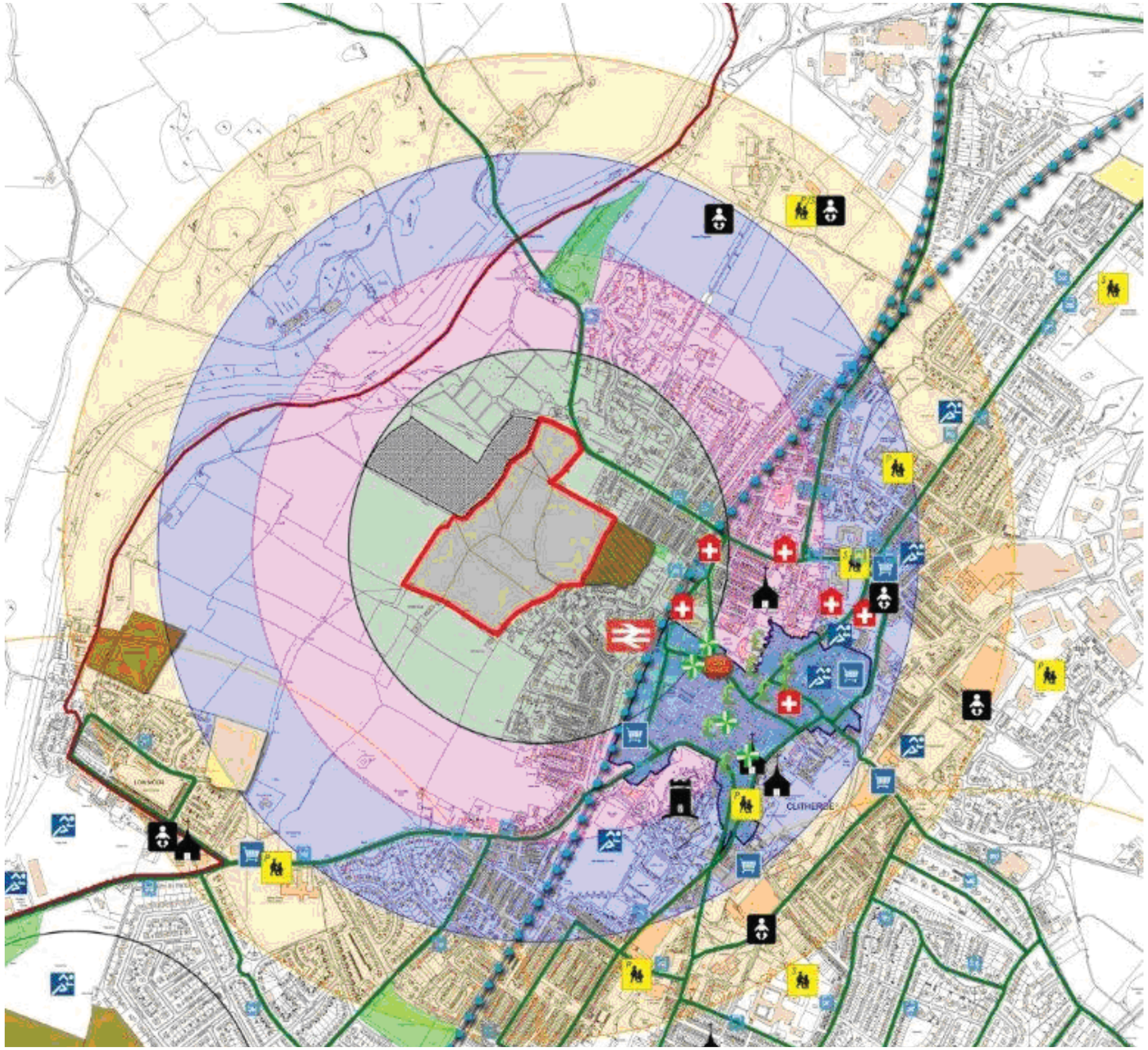
	Town Centre	Commuting, school & sightseeing	Elsewhere
Desirable	200	500	400
Acceptable	400	1000	800
Preferred	800	2000	1200

For residents commuting, indicates that the potential walk catchment is up to 2km from the Site.

The site is within a 4/5 minute walk of the bus/rail interchange connecting it via a linked trip to the NW, locally the 5 min walk encompasses the market area and Booths supermarket.

The 10 minute walk covers the whole of the town centre and the edge of centre employment zones.

There are 9 schools within a 3km walk distance. These include schools for nursery, primary and senior levels.
The National Travel Survey NTS (undertaken by the Dft) has identified that bicycle dependant on the topography considers a mean distance of between 5 – 10 kilometres a reasonable travel distance between home and workplace. The plan shows that a number of the smaller adjacent villages are within the 5km cycling distance a journey of around 25 minutes using a leisurely cycle speed of 12 kilometres per hour of the site



Page 39

4.0 Design Influences

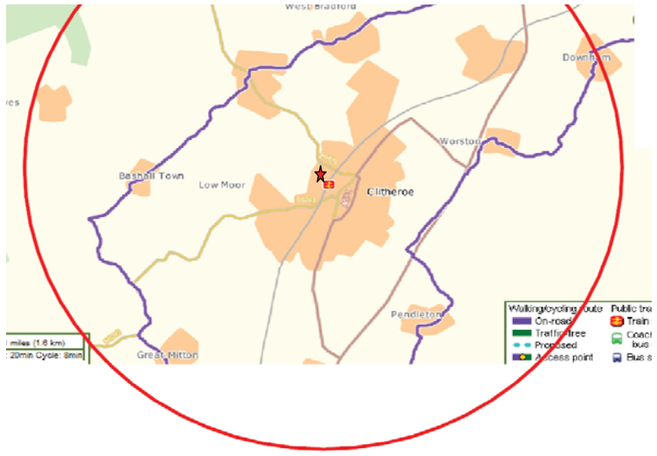
4.7 Access and Travel Modes

4.7.4 Cycle

Cycling also has the potential to substitute for short car trips, particularly those under 5 km, and form part of longer journeys by public transport'.

The 5km cycle distance encompasses the whole of the Clitheroe area giving access to schools, leisure and employment opportunities.

The national route network lies to the north and south of the area and within the 5km distance connection can be made to route 90 and 91 giving access to the wider area.



5km Cycle Catchment

4.7.5 Bus

National criteria says a 400m distance to a bus stop with high frequency bus services is a highly accessible location and normally occurs in a city or large town. The site is similarly located close to the bus station which connects the town to the rural hinterland and Preston, Blackburn, Burnley and other urban areas.

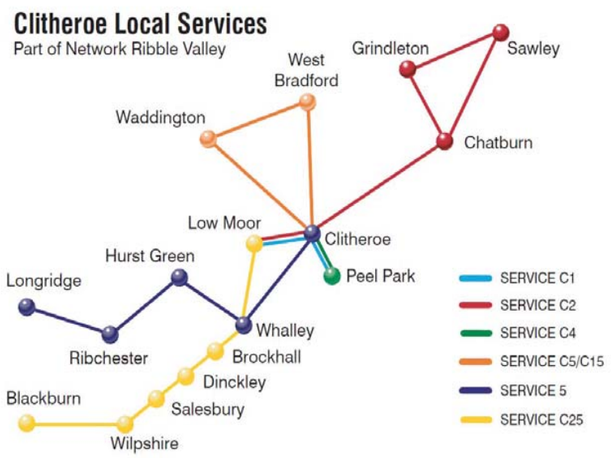
The routes have a range of frequencies from high to the major towns to lower frequencies for the rural hinterland to meet the local needs.

Local and wide area network mapping shows the connectability of Clitheroe and thus the site.

The network can be improved by designing the layout to accommodate a bus/shuttle route through the site (in purple) with bus gate (in brown) to ensure that short cutting by cars does not occur, the route can be used for emergency vehicles as well.

4.7.6 Rail

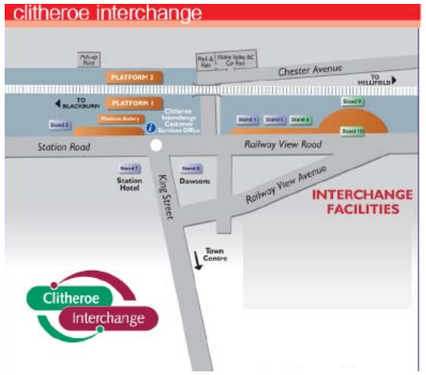
As the rail station is a similar distance to the site and connects on an hourly basis across the NW via Blackburn and Manchester and beyond the site is well placed for rail to be used as a travel mode.



4.0 Design Influences

4.7 Access and Travel Modes

Local and wide area network mapping shows the connectability of Clitheroe and thus the site.



Mode split

	NTS Mode Split	
	England	North West & Merseyside
Bus/Rail	10%	11%
Walk /Cycle	18%	17%
Taxi/ MC	1%	1%
Car Driver on Own	59%	61%
Car Driver + Other Staff	12%	10%

The site has the potential to achieve the regional mode splits for non car travel given its location by use of the bus and rail networks, beyond the Castle Hill the topography is undulating which for cycling means it can be used for all trip needs.

4.7.7 Non Car Summary

The highly accessible location of the site in relation to are range of attractions and non car modes ensures that it is well placed to meet national, regional and local policy.

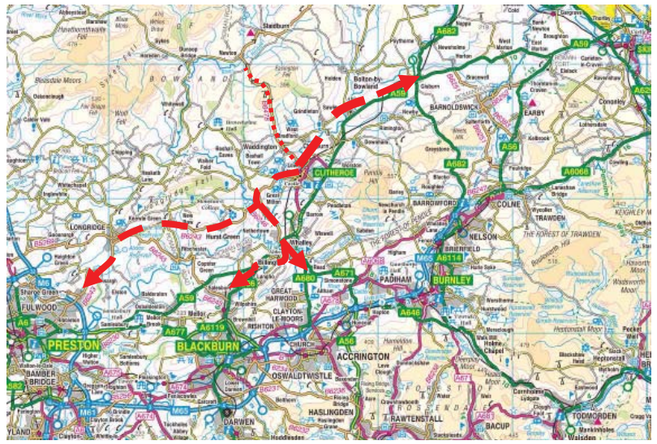
4.7.8 Car mode access

All the roads in the area serve primarily a residential catchment supported by local services/retail units in the town centre. The site is accessed via a new junction on Waddington Road with a right turn ghost Island to create gateway into Clitheroe.

Access onto Kirkmoor to bawlands will be reserved for pedestrians/ cyclist and the future bus route only, no vehicles will use this route to accord with the Appeal commentary.

To the north there are little or no constraints on the route to Waddington and the rural hinterland, it also allows movements east to the A59 at Chatburn. Southwards to the town centre the route is constrained by a low bridge that affects hgv's and double decker buses but all other vehicles are unaffected.

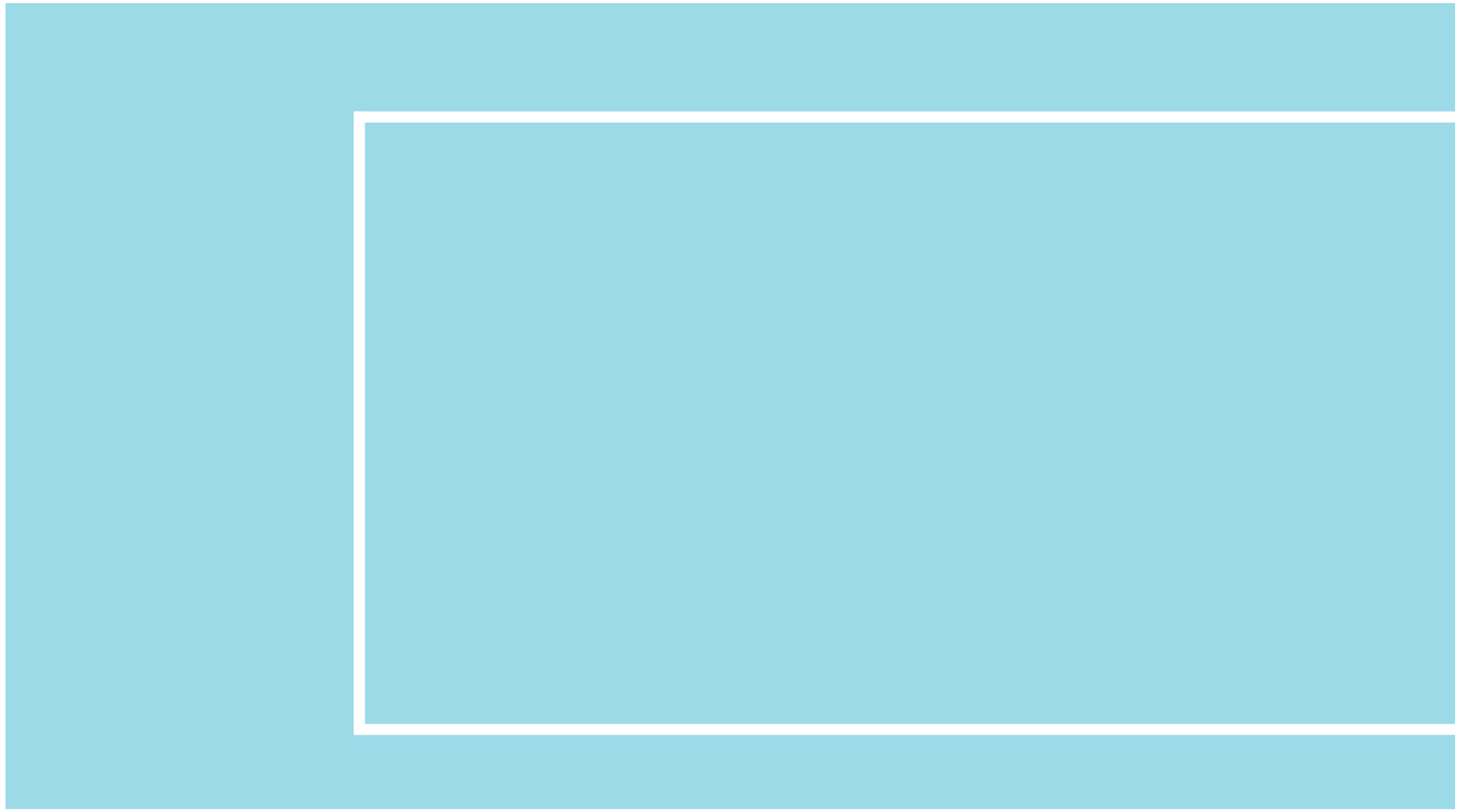
The Church Brow junction gains access to the wider urban area and the A59 strategic road corridor.



By wrapping around the west side of the town centre the new allocation also connects to the Bawlands corridor at the rail bridge crossing point at an acute angle.

The corridor connects the town centre to Longbridge and thus Preston areas, it also allows access via Whalley to the A59 corridor.

The local network has been assessed and no capacity issues found at the junctions.



5.0
SWOT analysis

5.0 SWOT Analysis

5.1 Framework for Development

The analysis of the existing site shows that the field pattern and landscape are a strong driver for the development of the scheme. The initial tree survey indicates that over half of the trees are either high or moderate value and should therefore be incorporated into the design of the development. However, the remaining trees are of low value and should therefore be considered for removal and replacement with new high quality trees as part of a progressive landscape scheme aimed at improving the long-term tree cover of the locality.

The ecology survey has determined that the hedgerows are of limited value in terms of amenity and ecology. However it is recognised that retention of perimeter and on-site hedgerows will maintain character and assimilate the development into the landscape setting. This is apparent along the boundary with Back Common Lane and Kirkmoor Road.

The topography of the site is relatively flat with a gentle gradient from East to West, with the lowest areas to the North West corner of the site. In order to minimise visual impact of the scheme, the more dense development should therefore be towards the East of the site were it abuts the existing settlement boundary.

The ground conditions on the site also give pointers towards how surface water should be dealt with. In order to maintain acceptable run-off rates, a number of surface water attenuation features will need to be incorporated.

There is limited ecological value on the site and there are no significant characteristics which will impact the proposals.

The existing watercourse which runs through the site poses little risk in terms of flooding. It is accepted that this feature will provide a high level of amenity to the development. Its integration should be taken advantage of in providing a unique character to the development.

Density and character should be considered. A transitional approach taken. As a result development on the Western and South Western fringe should be low, high on the North Eastern fringes and medium on the Easterly fringe. Density in the central areas should work in harmony with these principles but be allowed to provide character and sense of place.

The development should be designed to provide an integrated edge to the open countryside by placing the buildings on edges, at an appropriate density and facing outwards rather than inwards. This approach ensures that when the development is viewed in the wider landscape it is the public fronts of buildings that are seen not the private backs of gardens.

The site is located in a highly sustainable location with the Clitheroe interchange within easy walking distance. Therefore pedestrian and cycle permeability should be a primary factor in the layout design.

All utility service records have been checked and it is anticipated that there will be no impact on the layout to consider.

5.2 Edges and Gateways

Edges

Strong rural edge - scattered settlement embedded within landscape and street scene

Established rural low density edge - good rhythm, strong identity house types

Post 20th century urban edge, and future housing site. Opportunity for good connectivity with adjacent future housing site.

Gateways

Potential pedestrian and vehicle gateways into the site.

Potential pedestrian and cycle only access points

Bus & Emergency Vehicle only connection from Milton Avenue access and Kirkmoor Road

Public Footpath

Design prompts

Consideration to strong rural edges. Rhythm and block spacing appropriate to location.

Setbacks, house types and densities sympathetic to location. Existing hedgerows maintained.

Connectivity with future housing site and consideration to wider concept.

Permeability with surrounding area and easy access to nearby local amenities.

5.0 SWOT Analysis

5.3 Views

5.3 Views

Views out

Views in

Design prompts

Consider views over site by sensitive building positioning and heights. Interface distances with existing buildings that abut the site considered.

Strengthen central landscape structure with good permeable views through the site

Soften edges along Western and South Western boundaries

Outward looking buildings along rural edges, in particular Western and Southern edges.

LANDMARKS

THE INCLUSION OF LANDMARKS AND TALL DISTINCTIVE BUILDINGS THAT STAND OUT FROM THE REST OF THE SURROUNDING DEVELOPMENT WILL ADD VARIETY AND INTEREST TO THE APPEARANCE OF THE DEVELOPMENT, PROVIDE POINTS OF FOCUS AND HELP PEOPLE FIND THEIR WAY AROUND THE SITE. LARGER BUILDINGS WITH IDENTITY COULD BE LOCATED CENTRAL WITHIN THE SITE WITHOUT IMPACTING ON CHARACTER EDGES.

5.4 Landscape Character

5.4 Landscape Character

Key

- Existing trees outside the site
- Existing Hedgerows
- Site Boundary
- Residential Development Site with OUtline Approval
- Main Settlement Boundary G2
- Conservation Area ENV16
- County biological heritage site / Scheduled monument ENV9
- Historic PArk and gardens ENV21
- Existing Cemetery
- Proposed Cemetery Extension
- Flood Risk Zone
- Public Right of Way PROW
- Agricultural vehicle access points
- Contours (approx location)

5.0 SWOT Analysis

5.5 Landscape and Green Spaces

The development of the masterplan has been landscape led and considers both the landscape features and attributes of the site as well as the potential impact on visual amenity and landscape character of the adjoining countryside.

Existing brook

The existing brook provides a beneficial opportunity for enhancement of the biodiversity of the site and provides a strong delineation of green space running through the site. It is anticipated that this corridor can be widened and form a continuous link from the town to the wider countryside to the north and north west.

Existing public right of way

The existing public right of way is a well used footpath from the town linking into the wider footpath network and to Waddow Hall beyond the River Ribble. It is recommended that this footpath route remains in its current alignment within a wide semi rural parkland setting. This will allow for pedestrian movement through an attractive environment which reflects the current circumstances and links seamlessly with the widespread footpath network beyond the site's boundary.

Existing 'important' hedgerow

The hedgerow to the south western portion of the site is considered to be an 'important' hedgerow under the criteria of the Hedgerow Regulation 1997. This hedgerow is part of a field system pre-dating 1845 and the Enclosure Act and is recorded within artwork of local significance. The retention of this hedgerow would help define the landscape heritage of the site and provide a distinct character in this part of the development.

Landscape structure proposals

A range of green spaces are indicated on the masterplan in order to provide amenity space, mitigate for any visual impact of the development in the surrounding landscape, provide enhanced wildlife habitat and provide local distinctiveness.

The western edge is low lying in relation to the edge which abuts the settlement. It is proposed that a wide buffer is introduced to assimilate the development within the surrounding countryside and to compliment the edge of the cemetery which abuts the site to the north west. Similarly a wide buffer is proposed between the edge of development and those properties facing Back Commons in order to provide a screening and mitigation to the views from these properties.

The development proposals will have a hierarchy of streets and routes including a local distributor road which will be set against the brook corridor. A small central village green is proposed to provide a focal point. This will add to the local character of the site and allow for a distinctive built form to front the development in this area. Streets to the northern edge are proposed to have tree lined verges which reflect the village character with all development cells adopting a strong tree'd and hedgerow roadside landscape. Tree planting throughout the development will aid in filtering views and breaking up the built form from longer distance viewpoints.

The inclusion of a green public open space within the eastern portion of the site will reflect the denser grain of the surrounding existing settlement and reflect a more urban pocket park identity. This will be easily accessible on foot by local and surrounding residents, being well within walking distance of any local residential property.

Existing hedgerows and trees to all the boundaries will be retained, gapped up where necessary and enhanced for wildlife. The development proposals accounts for these features and provides for generous setbacks and additional landscape strips. Along the south western edge an integrated footpath will be proposed. Retained hedgerows will provide amenity value and aid with screening the development and assimilating built form into the surrounding landscape