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# GRANTHAM SOUTHERN QUADRANT MASTERPLAN

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**SUPPLEMENTARY PLANNING DOCUMENT**  
**Draft for Consultation**

October 2012





# CONTENTS

<b>Introduction</b>	<b>1</b>	<b>Development Objectives</b>	<b>24</b>	<b>Urban Design</b>	<b>51</b>
Purpose of the Masterplan	2	Development Objectives	24	Streets	51
Objectives of the Masterplan	3			Heights, Density and Form	53
Objectives of the SQ Urban Extension	3			Appearance	54
Sustainable Communities	3	<b>Masterplan Principles &amp; Evolution</b>	<b>25</b>	Blocks and Plots	55
		Landscape and Ecology	25	Sustainability	56
<b>Background &amp; Planning Policy Context</b>	<b>5</b>	Water and Drainage	27	<b>Timescale &amp; Phasing</b>	<b>59</b>
Growth Point Status	5	Access and Movement 1 - Vehicles	29	Timescale	59
Development of the Masterplan SPD	5	Access and Movement 2 - Pedestrian and Cyclist	31	Phasing	59
National Planning Policy	8	Green Infrastructure Framework	33		
Local Planning Policy	8	Development Parcels	35		
Other Relevant Guidance	10	Illustrative Masterplan	37		
		<b>Masterplan Proposals</b>	<b>39</b>		
<b>Site &amp; Context</b>	<b>11</b>	Residential	41		
Site Location and Description	11	Green Infrastructure, Landscape and Public Open Space	43		
Character	13	Employment	47		
Views and Visual Analysis	15	Local Centre	48		
Water, Drainage and Geology	19	Schools	49		
Archaeology and Heritage	20	Southern Relief Road	50		
Nature Conservation and Ecology	21				
Access and Movement	23				
Services and Utilities	23				



# INTRODUCTION



Oblique aerial photograph of the site



## Purpose of the Masterplan Supplementary Planning Document

**G**rantham is the largest town in South Kesteven District and is a sub-regionally significant centre with excellent transport links to London and Nottingham.

The Southern Quadrant Sustainable Urban Extension (SUE) to the south of the town is the largest of the development sites identified in the Core Strategy. The development of the Southern Quadrant (SQ) will deliver a sustainable new community in a high quality landscape setting, providing much needed new homes and jobs whilst contributing to the wider regeneration of Grantham Town centre.

This Masterplan Supplementary Planning Document (SPD) has been developed as part of South Kesteven's emerging Local Plan and will act as a foundation for guiding future development on the Southern Quadrant SUE.

The vision and design principles included in this SPD are intended to provide potential developers intending to pursue a major development proposal with clear guidance from the local authority in terms of delivering a distinctive and high quality scheme. Whilst this SPD will be a material consideration in the assessment of such development proposals, it is not intended to restrain or stifle innovation and creativity.

The preparation of this SPD has involved discussions and partnership working with a number of stakeholders, including officers of South Kesteven District Council and Lincolnshire County Council and the landowners. Furthermore, public exhibitions were held in September 2011 and April 2012 to seek the views of the existing local community on key issues to be addressed in the future development of the Southern Quadrant.

## Objectives of the Masterplan SPD

The SPD establishes a set of objectives, principles and guidelines to inform the preparation of detailed development proposals. The document aims to:

- Articulate a vision and set out masterplan and key design principles covering the site.
- Demonstrate how the vision and aspirations for the SQ can be achieved through following best practice sustainable development and urban design principles.
- Inspire the imagination and creativity of designers and developers in the formulation of future development proposals.
- Inform the extent, character and strategic form of the development and provide guidance for developers and designers in delivering best practice in architecture, urban design, landscape and sustainability.
- Help ensure that development proposals accord with current local and national planning policy.
- Speed up the development process by providing clarity in the key design principles and measures to be adopted.

The SPD details the development aspirations and objectives for the SQ which will subsequently inform and underpin the more detailed masterplanning and design proposals for the development. It starts by explaining the background and planning policy context for the project and understanding the existing characteristics of the land and its surroundings. It then outlines and illustrates the principles and design guidelines that will shape the future development.

It is important that the scheme has a series of development objectives and a set of key design principles. This will provide an expression of what the “place” could be like in the future and will provide the foundation for the subsequent design and delivery process.

## Objectives of the SQ Urban Extension

South Kesteven District Council's Core Strategy (2010) states that urban extensions to Grantham should seek to achieve the following objectives:

- Minimise the total amount of land required for development, whilst ensuring that there is sufficient land available to provide a mixed-use development with a wide range of facilities and services capable of fostering a high degree of self-sufficiency
- Retain and preserve land and/or landscape features that are protected, or considered locally important, unless appropriate mitigation strategies can be successfully implemented or there are no other feasible alternatives
- Locate development around existing physical and social infrastructure to minimise the development of new infrastructure and to ensure that existing residents can benefit from new development
- Implement sustainable urban drainage systems to minimize impacts on groundwater quality and quantity
- Promote energy efficient layouts and buildings and encourage the harnessing of renewable sources of energy
- Ensure that areas of new residential development are successfully integrated with existing residential areas;
- Enhance the local environment through the creation of wildlife corridors and refuges and through careful consideration of the landscape
- Promote the use of active, overlooked streets and areas of open space to provide community safety
- Ensure that development is based around existing good quality public transport links and improve the quality and frequency of public transport links where possible
- Ensure that there are safe, attractive, short and direct linkages for pedestrians and cyclists between housing areas and employment, retail, leisure and education facilities, and public transport links.

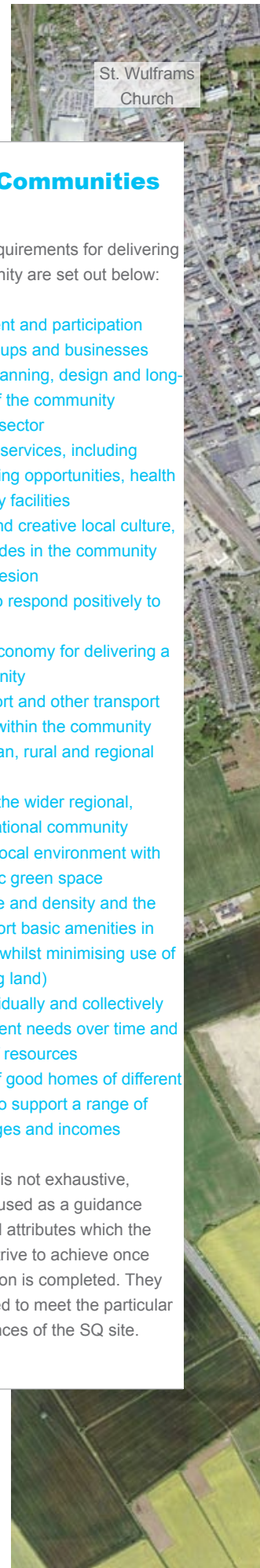
These broad objectives underpin the principles and masterplan contained within this SPD.

## Sustainable Communities

Some of the broad requirements for delivering a sustainable community are set out below:

- Effective engagement and participation by local people, groups and businesses particularly in the planning, design and long-term stewardship of the community
- An active voluntary sector
- Good quality public services, including education and training opportunities, health care and community facilities
- A diverse, vibrant and creative local culture, that encourages prides in the community and engenders cohesion
- Strong leadership to respond positively to change
- A flourishing local economy for delivering a sustainable community
- Good public transport and other transport infrastructure both within the community and linking it to urban, rural and regional centres
- The right links with the wider regional, national and international community
- A safe and healthy local environment with well-designed public green space
- Sufficient size, scale and density and the right layout to support basic amenities in the neighbourhood whilst minimising use of resources (including land)
- Buildings both individually and collectively that can meet different needs over time and minimise the use of resources
- An integrated mix of good homes of different types and tenures to support a range of household sizes, ages and incomes

The list shown above is not exhaustive, however it should be used as a guidance list of the fundamental attributes which the SQ should adopt or strive to achieve once physical implementation is completed. They will need to be adapted to meet the particular needs and circumstances of the SQ site.





Aerial photograph of the site

# BACKGROUND & PLANNING POLICY CONTEXT

## Growth Point Status

In 2007 Grantham was awarded Growth Point status by the Government after successfully bidding to secure growth point funding of £6 million from the Department for Communities and Local Government. In order to secure this, South Kesteven District Council and Lincolnshire County Council identified a strategy for the town's future growth and development which set out areas in which funding support from the Government would help to deliver the town's growth plans.

The town has capacity to deliver Government Growth targets, provided that key infrastructure required to achieve this is put in place at the earliest stages of development. Grantham's current population is around 44,000 but is anticipated to grow to around 60,000 by 2026 with the delivery of increased housing growth. Grantham's designation as a Growth Point provides the town with an opportunity to realise its potential as a sub-regional centre.

Housing growth alone will not lead to an improved Grantham without key challenges being tackled, such as unlocking the potential of development sites whilst improving local services and delivering new community services, providing protection for biodiversity, creating new job opportunities and promoting local transport links including green corridors. Meeting these challenges will ensure that Grantham becomes an even more attractive place to live, work, shop and visit.

Four key development sites were identified within the Growth Point Programme of Development (PoD), as being capable of delivering the levels of growth required, with the Southern Quadrant (SQ) being identified as one of these.

## Development of the Masterplan SPD

In September 2011, the Council undertook a six week period of public consultation in which it contacted around 1,100 local residents and businesses in the area directly surrounding the site and asked them to attend a drop-in session and/or advise what features of the local area were important for retention in the development, as well as where there were any existing issues that the development could help address.

The main issues that arose from this initial period of informal consultation are set out over:

- Protecting the natural environment, especially the River Witham and woodland valley, and preserving views and the countryside feel to the existing housing.
- Providing sufficient open spaces and play areas for children as well as protecting



Buckminster Trust South Grantham, Grantham **SOUTHERN QUADRANT: INDICATIVE LAYOUT PLAN - OPTION 1** 3295-L

Option 1 from the second round of consultation



- wildlife and retaining hedgerows.
- Delivering the east-west relief road before the development of any housing.
- Retaining existing footpaths.
- Restricting vehicular access through existing estates into new development.
- Avoiding overlooking from new development onto the existing housing.
- Concerns about traffic impacts of development upon Somerby Hill, Bridge

- End Road and Gainsborough Corner.
- Locating community facilities together in one area as well as local shops to serve the development.
- Locating employment uses on Spittlegate Level.
- Ensuring that housing provided is of high quality, with some provision for affordable housing and homes for the elderly.

These main issues were then taken into account in developing two layout options for the site which were put out to a six week period of public consultation in March and April 2012. Once again the 1,100 local residents and businesses were contacted directly, whilst the consultation was also advertised in the local media, and through posters prominently displayed in supermarkets in the town. Three drop-in sessions were



Option 2 from the second round of consultation

also held for residents to meet with Council Officers to discuss the plans. The consultation asked people to let SKDC know their likes and dislikes for both options, and to advise which of the two options they preferred overall.

The second consultation showed that the overwhelming preference was for the east-west relief road to run to the south, skirting the edge of the site so as to ensure that it is as far removed from housing, schools and community facilities as possible.

Preference was also expressed for the local neighbourhood centre with its complementary facilities to be located within the centre of the site adjacent to educational facilities to ensure that a new “village centre” was created. The landscape “buffer” that was proposed between the existing housing and the new development was felt to be insufficient and concerns were

once again expressed about the potential for overlooking and loss of privacy.

Once again concerns were expressed about the potential traffic impacts of the development and the need for public transport improvements to encourage modal shift away from the use of the private car. A desire to see more open spaces, particularly children’s play areas, was expressed, as were concerns about access to and the location of the allotments and some of the sports pitches.

All of the representations received have been considered and used to inform the preparation of a preferred development option and the masterplan as detailed in this document.

The contents of this SPD reflect the national and local policy context set out over.



Consultation on the Masterplan Options

## National Planning Policy



National Planning Policy Framework



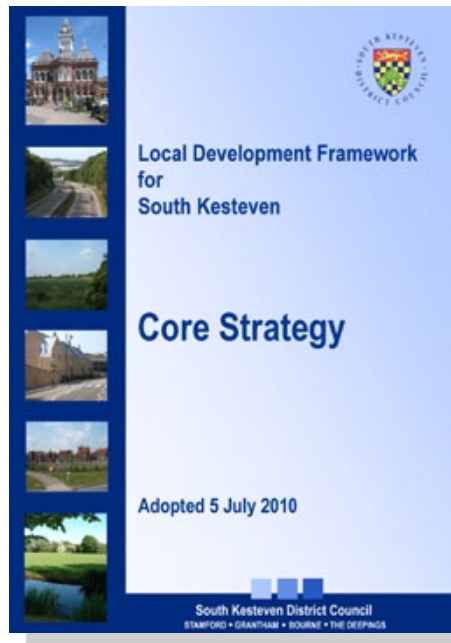
The National Planning Policy Framework (NPPF) sets out a presumption in favour of sustainable development and indicates that Council's must be ambitious in delivering much needed new homes that communities need.

Good design is an essential part of sustainable development and high quality design which reflects the character and identity of the local surrounding areas is promoted. Developers are expected to work closely with those directly affected by development proposals to evolve design proposals to take account of the views of the community.

The NPPF makes it clear that priority should be given to ensuring access to high quality local public transport for new development with priority given to cyclists and pedestrians and where possible key facilities, such as schools and shops should be within walking distance of most properties.

## Local Planning Policy

### South Kesteven Core Strategy (July 2010)



The emerging Local Plan sets out the planning policy context within which the Growth Point projects will be implemented. The South Kesteven Core Strategy (adopted July 2010) has been developed to reflect Grantham's growth ambitions and illustrates the SQ as a development site critical to the delivery of this growth.

Within the Core Strategy, the SQ is recognised as being a major development opportunity for the town and as such is designated under Policy H2B which states that:

*The site is located to the south of Grantham, and spans the East Coast Main Line. The whole SUE includes land between the A1 in the west and the A52 in the east, although it is envisaged that housing development will be contained within that part of the site between the railway line and the A52. It is expected that the site could yield up to 4000 new homes, together with employment development and community facilities. Access to the residential part of the SUE will be dependant upon the provision of a new road from the A52. Construction of new homes on the site is not likely to begin until 2011/2012.*

*The site is currently part agricultural and part industrial. There is likely to be contamination around the industrial part of the site and also abutting the railway line. The land adjacent to the River Witham has been identified as being at a high risk of flooding and should, therefore, remain undeveloped; the incorporation of appropriate SUDS to alleviate any potential increase to flood risk arising from the development must be included in design proposals. Part of the site has been identified as a site of nature conservation importance (SNCI) and should be protected.*

*There are known archaeological remains on part of the site, which should be investigated and protected if appropriate. The river corridor and wooded areas of the site are important for biodiversity and contribute to the landscape character of the area. As such, the development of the SUE will be expected to recognise important features and characteristics of the site an incorporate them fully into the design of development, ensuring protection and enhancement where necessary.*

There are a range of other broader policies within the Core Strategy which will also be of particular relevance to the development of the SQ, including:

- Policy SP3: Sustainable integrated transport
- Policy SP4: Developer contributions
- Policy EN1: Protection and enhancement of the character of the district
- Policy EN2: Reducing the risk of flooding
- Policy EN3: Sustainable construction and design
- Policy H3: Affordable Housing

**Grantham Area Action Plan**



The emerging Grantham Area Action Plan (GAAP) is designed as a planning policy document with a specific focus on implementation, which will guide the location, design and use of both land and buildings within the town for the next 20 years. Policies within the GAAP build upon those defined at a

strategic level in the Core Strategy. The GAAP focuses upon the implementation of policies and is an important tool for ensuring that development is of the appropriate mix, quality and scale for opportunities to be taken forward. It covers the whole of Grantham and includes the SQ site. The GAAP allocates the SQ for development, defines the site boundary and provides specific policy detail to support development on the site.

The "Vision for Grantham", included within the GAAP includes the following reference to the SQ;

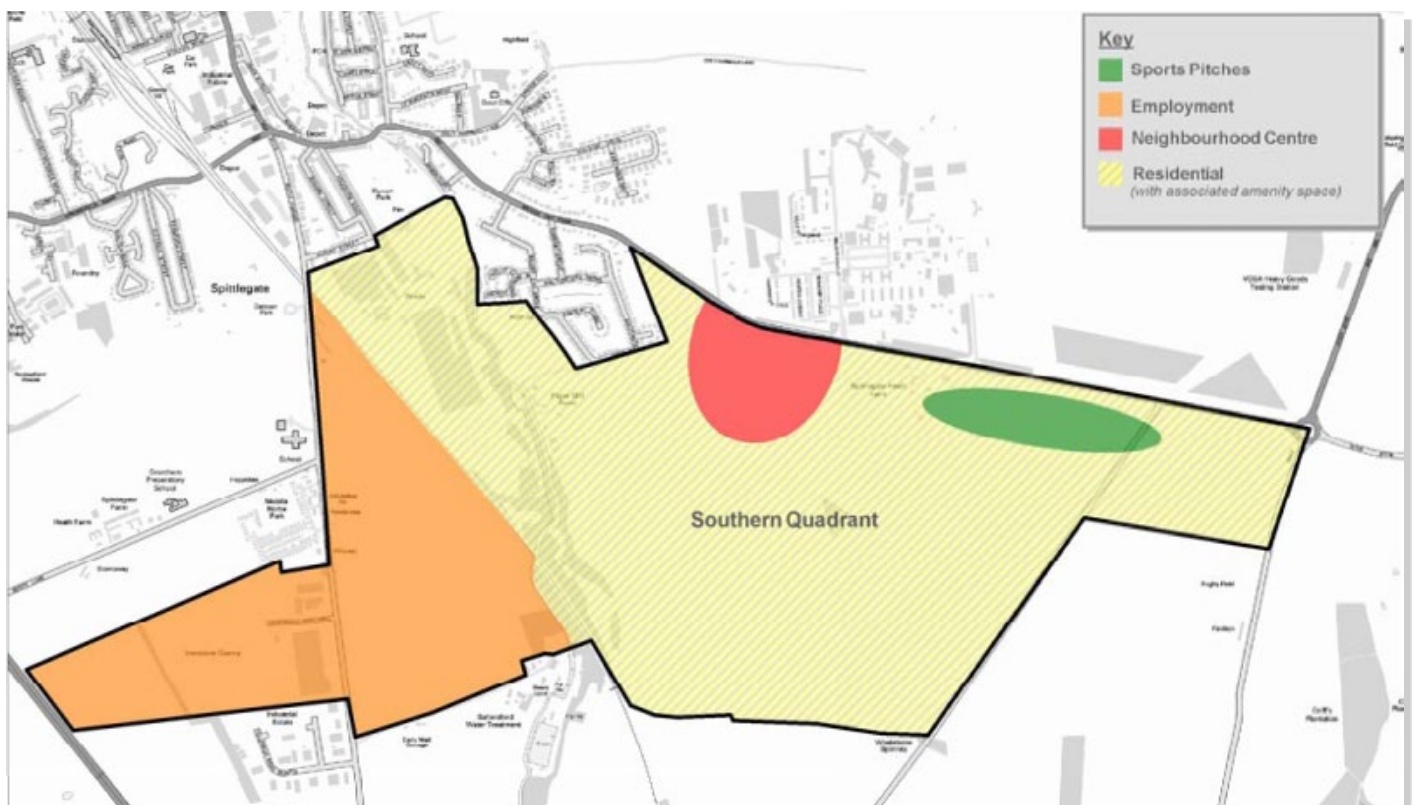
*"The Northwest and Southern Quadrants will provide a high quality "place" and neighbourhoods which are sustainable, attractive, and safe for people to aspire to live, work and visit."*

Policy SQ1 of the GAAP specifically covers the SQ and builds upon policy H2B as outlined in the Core Strategy. This policy is intended to help guide the development of this Masterplan SPD. Figure 13 gives an indication of the possible distribution of some of the land uses. The GAAP goes on to advise that further detail will be delivered in the Masterplan.

**Lincolnshire County Councils Transport Strategy for Grantham 2007 to 2021**

Lincolnshire County Councils Transport Strategy for Grantham 2007 to 2021 and beyond will also be relevant reference material, the key themes of which are:

- Making Grantham a better place in which to live, work and shop
- Making alternative ways of travelling more attractive
- Making the most of the railway station
- Helping people get around town more easily
- Catering for new developments



GAAP plan denoting the broad distribution of land uses at the SQ

## Other Relevant Guidance

Numerous guidance documents have been referred to in the development of this SPD and which must be considered where relevant in the development of future designs and planning applications for the development of the SQ. These range from general design and development guidelines to site specific studies and technical appraisals. The current relevant documents include:

### National and General

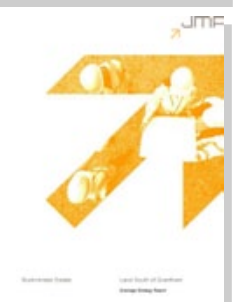
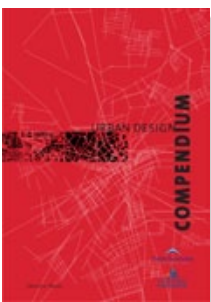
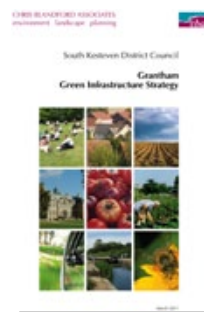
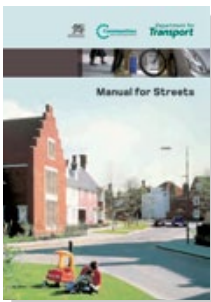
- By Design: Urban Design in the Planning System (CABE, 2000)
- By Design: Better Places to Live (CABE, 2001)
- Safer Places – The Planning System and Crime Prevention (CLG, 2004)
- Urban Design Compendium (English Partnerships, 2000)
- Better Streets, Better Places: Delivering Sustainable Environments (CLG, 2003)
- Manual for Streets 1 & 2 (DfT, 2007 and 2010)
- The Code for Sustainable Homes (CLG, 2008)
- The Principles of Inclusive Design (CABE, 2006)
- CABE Building for Life (CABE, 2001)
- Sport England – Active Design (Sport England 2007)

### Local

- South Kesteven Strategic Flood Risk Assessment
- Grantham Water Cycle Study Stages: Outline, 2a and 2b
- Grantham Movement Strategy (2010)
- Grantham Townscape Character Assessment (2011)
- Grantham Green Infrastructure Strategy (2011)
- Grantham Walking and Cycling Strategy (2010)
- Grantham Southern Relief Road EIA Scoping Report (2009)
- A Study of Open Space, Sport and Recreation in South Kesteven District (2009)
- Belton House and Park Setting Study and Policy Development (2010)
- South Kesteven Landscape Character Assessment (2007)

### Southern Quadrant - Site Specific

- Southern Quadrant Ecological Assessment (2011)
- Southern Quadrant Key Views Analysis (2011)
- Southern Quadrant Landscape and Visual Assessment (2011)
- Southern Quadrant Archaeological Assessment (2011)
- Southern Quadrant Drainage Strategy (2011)
- Southern Quadrant Flood Risk Assessment (2011)
- Southern Quadrant Grantham Energy Study
- Southern Quadrant Stage 1 Consultation – Summary of Responses (2011)
- Southern Quadrant Stage 2 Consultation – Summary of Responses (2012)



# SITE & CONTEXT

## Location and Description

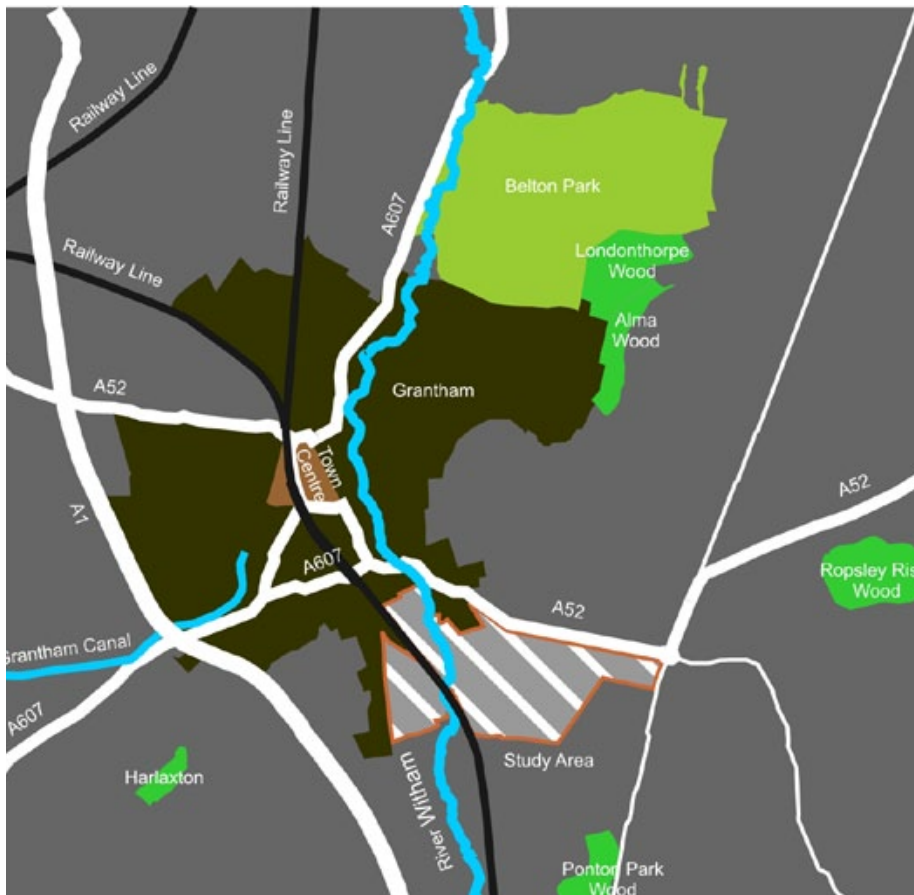
The Southern Quadrant (SQ) site is located on the existing south-eastern fringe of Grantham and extends as a broad arc of land between the B1174 (Spittlegate Level) to the west, the existing settlement edge to the north and the A52 (Somerset Hill) to the north east. Between these existing limits, the site extends south and east, bounded by B6403 / High Dyke and mature hedgerow field boundaries. More broadly, the A1 runs in a north west to south east direction, approximately 750 – 1,000 metres to the west of the site.

The majority of the site comprises large arable fields on the rising slopes and plateau top, with hedgerows forming the majority of the field boundaries. A prominent yet small copse of woodland is located in the corner of a field close to the centre of the site.

The plateau edge forms a distinctive landscape feature that stretches around Grantham and contributes strongly towards the sense of place of both the site and the town itself. The direction of the slopes into the valley bottom and towards the town help to connect with the existing urban edge.



Plateau edge view and woodland copse



SQ site context



Enclosed waterside habitats



Along the lower slopes of the River Witham valley, the landscape includes a matrix of woodland and wetland habitats that hold the majority of the sites biodiversity and ecological interest. This corridor, including the smaller pastoral fields has a strong sense of enclosure, is of a more varied and smaller scale and in places has more tranquil character.

In addition to the mature woodland and wetland habitats in the valley bottom, this part of the site also includes a large industrial and former industrial area (Invictas Works) adjoining the urban edge in the north west and the rail line, that sweeps across the lower valley slopes from the eastern side of the river to the western side as it extends into Grantham. Dysart Park is also situated on the existing urban edge as are existing residential properties, along Bridge End Grove.



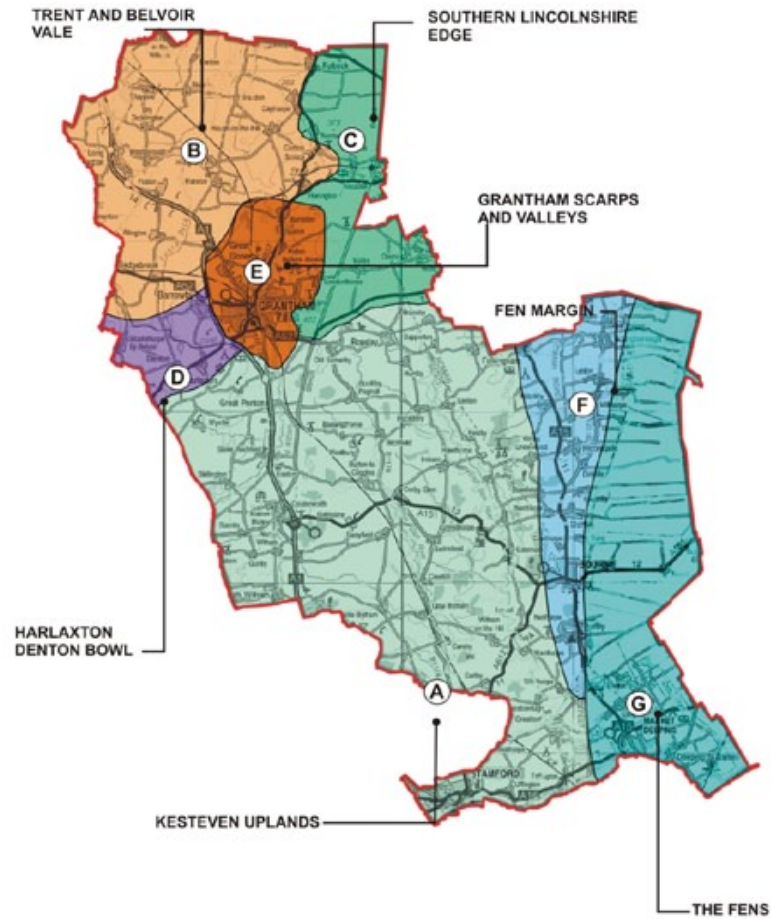
## Character

### Landscape

The SQ site landscape comprises a mix of urban edge influences and uses yet is predominantly under agricultural use. In addition to the significant influence of the existing built urban edge (including both employment and residential uses), the character of the landscape is also strongly shaped by the local topography. The site landform encompasses both the River Witham valley and the higher plateau beyond to the east. The landscape is generally of a medium to large scale and includes both enclosed areas and more open parts.

The South Kesteven Landscape Character Assessment (2007) indicates that the site lies primarily with the “Grantham Scarps and Valleys” character area, yet also includes land on the more elevated eastern edge of the site within the “Kesteven Uplands” character area.

### LANDSCAPE CHARACTER AREAS



South Kesteven Landscape Character Areas (2007 study)



Rail corridor and industrial works in the north west of the site

The site is subject to a number of urban fringe influences, predominantly to the north and west. These include the existing peripheral residential properties, industrial units and Barracks along the approach roads of the A52 and B1174 respectively. To the south and east and in addition to the surrounding agricultural land, the area is characterised by a number of dispersed woodland copses and spinneys, generally located on the edge of arable fields.

The existing industrial units at the Invictas Works (Aveling Barfords) are local visual detractors within views along the parts of the valley. The existing adjoining housing and Barracks occupy more elevated positions, and together with electricity pylons (that traverse the western portion of the site), extend the immediate urban influences into and across the site.

## Townscape

The Grantham Townscape Assessment includes an analysis of the townscape character of the town, including the Northwest and Southern Quadrant potential development areas. It identifies and defines 17 townscape character areas.

The SQ site falls within area CA17 (“Landscape Fringes”). The description of this area includes a number of references to the SQ site. These include:

*“The proposed urban extensions offer an opportunity to create new neighbourhood identities, belonging to the town, but celebrating a positive new image. This should free development from the sterile cul de sacs of pastiche and promote contemporary architecture derived from a sense of place but*

*addressing current cultural and technological issues.”*

The assessment also identifies the views considered to be of very high importance in terms of the town’s heritage assets and the wider context of the town,

In the context of the site, a series of relevant views and features include:

- [Panoramic views into the town from the A52 Somerby Hill and the B1174 Spittlegate Level](#)
- [Countryside views towards the study area from within the town and elevated land to the west of the site](#)
- [Views towards the Spire of St Wulfram’s](#)
- [Location of perceived ridgelines in the east and beyond to the west of the site](#)

The view from Somerby Hill on the southern approach to the town which takes in both the tower of St John’s Church and the spire of St Wulfram’s is sensitive to change within the character area south of these assets. Given the green backdrop provided by the character area, the important heritage assets within the town are often seen against a green backdrop of open fields and/or trees. This is an important characteristic of the role played by this character area and must be carefully considered.

Views across the town are strategically important with some of the best views had from the Somerby Hill area.

The site is not considered to be sensitive in relation to the setting of Belton Park unless development were to visually rise above the containing ridgelines and tree screens.



[Expansive views across the town from the highest part of the site](#)

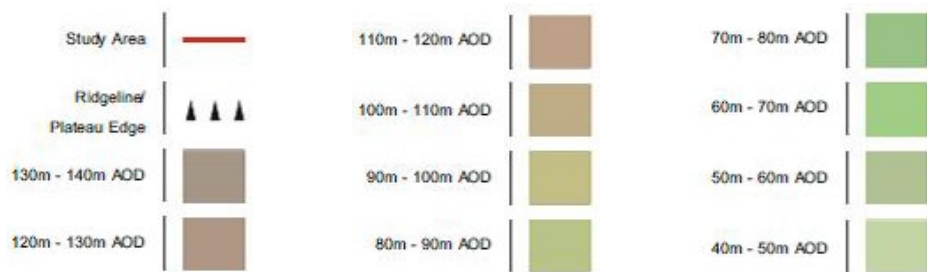
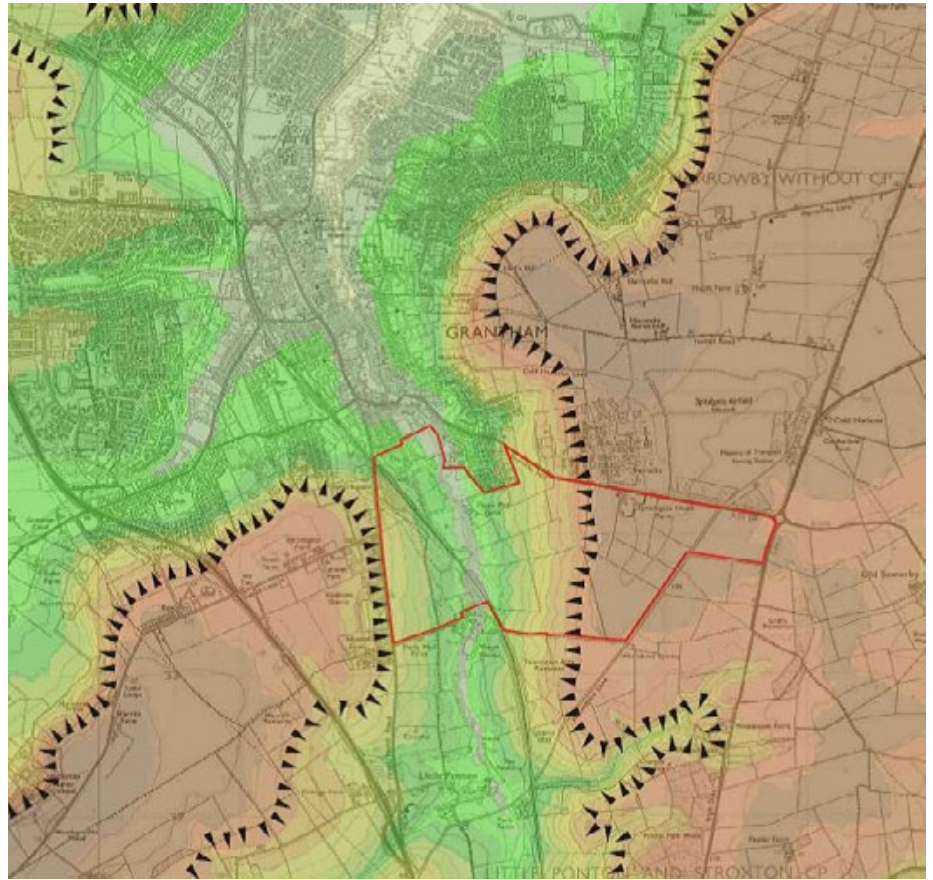
## Views and Visual Analysis

### Landform and Ridgelines

The landform and ridgelines are significant elements shaping the significance of views within and around Grantham. The topography is the primary factor in limiting the extent of the longer ranging views across the town and is visually important in providing the context and backdrop to the town and the existing urban edge.

The landform and in particular the elevated plateau edge are prominent in views towards the site from a number of vantage points, including from across the valley to the west and more distantly across the town from the north west and Great Gonerby. In these views the plateau edge is occupied by farmland and a number of woodland plantations. The triangular shaped plantation within the central part of the site occupies the skyline in many of these views and beyond the study area lies further woodland, including Twenty Two Acre plantation, Whalebone Spinney and Griff's Plantation.

The western edge of the site occupies the rising valley slopes on the opposite side of the River Witham valley. However, the site does not extend up on to the highest slopes and therefore in terms of visual sensitivity is notably less. The western edge of the study area is however defined by the B1174 Spittlegate Level and from this road clear and expansive views are afforded eastwards across the site. Views back towards the existing ribbon development along this road are possible from within the site.



Topography - highlighting the ridgelines and plateau edge



View across the River Witham Valley to the rising westerly slopes

## Landmarks

The most significant visual landmark and reference within Grantham is the St Wulfram's Church Spire. In visual terms the church spire is a distinct and positive landmark within the town centre and benefits from an absence of other tall buildings or structures within its context. In fact, the town includes few buildings or structures of any significant height and visual prominence and this is the reason why other churches and lower spires are also visible in views across the town.

This is a positive visual characteristic of the views towards the town from a number of surrounding elevated positions. This is partly reinforced by the visual containment provided by the surrounding landform and the limiting effect this has on development in the past.



Prominent St Wulframs Church spire



Approaching and 'gateway view' of the town from the A52



## Gateway Views

There are two relevant "gateways" and "gateway views" into Grantham from the south. From the A52 at Somerby Hill, the view is expansive and dramatic and occurs close to the plateau edge. From this location, the view encompasses much of Grantham, with the exception of areas in the north and east and significantly also includes the town centre and spire of St Wulfram's.

The significance of this existing gateway view is heightened by the plateau edge, which does not reveal the view until the last moment for drivers on the A52 Somerby Hill.

The entrance into the town from the B1174 Spittlegate Level is different in visual character but nevertheless presents a more channelled view towards the town centre from close to the north west corner of the site.



More enclosed approach to the town along the B1174 Spittlegate Level

### Panoramic Views and Viewpoints

There are panoramic views both to and from the site. Those towards the site include distant panoramic views from the northwest of Grantham, including from the edge of Great Gonerby and the Northwest Quadrant site. In these longer ranging expansive views the site is a relatively minor component in the view but importantly does act as the backdrop and occupies the skyline.

Closer expansive views towards and across the study area are possible from the western River Witham valley slopes. These include

views from the B1174 Spittlegate Level and from more restricted vantage points on the higher ground around Spittlegate.

The site allows expansive and panoramic views across Grantham and the landscape to the north, south and west from the highest valley slopes and plateau edge to the east of the River Witham. With the exception of the panoramic views across Grantham from the A52 at Somerby Hill and a lesser and more contained view from Whalebone Lane to the south of the site, there are currently no publicly accessible viewpoints from the plateau edge within the site.



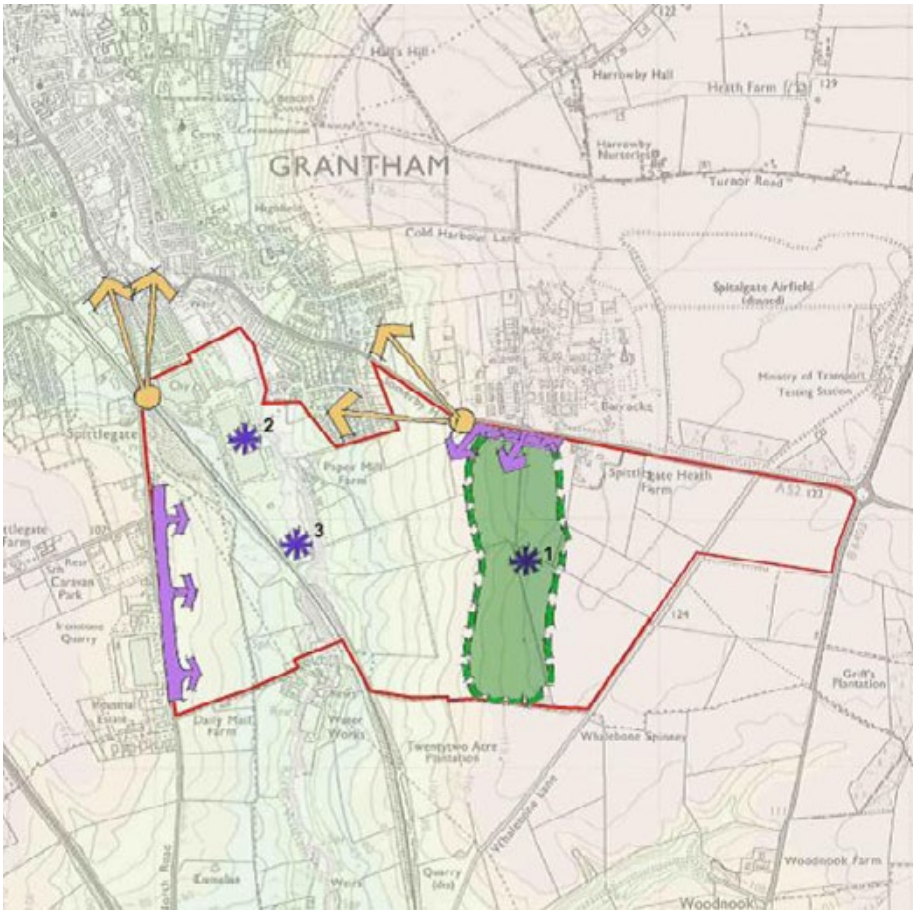
View east across the site from the B1174 Spittlegate Level



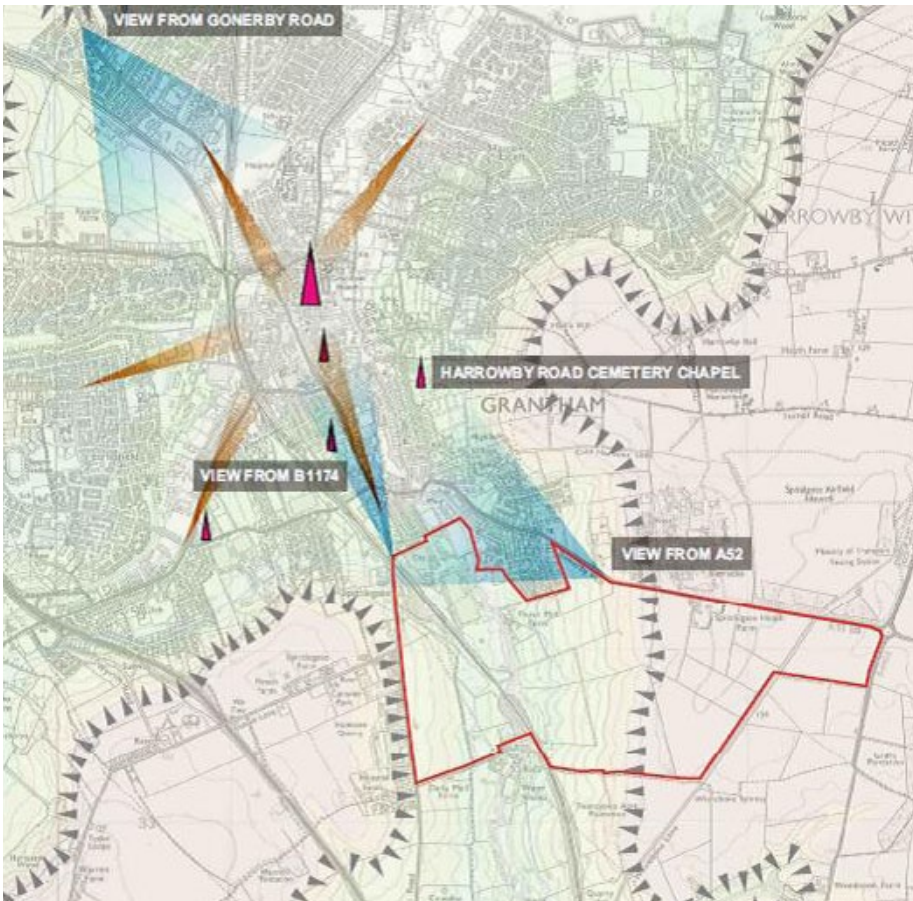
View south east across the rail and river corridors



View from the A52 Somerby Hill on entering the town



- Visually Significant Landscape Features (Study area based)**
  - 1. Woodland
  - 2. Industrial Works
  - 3. River Witham Corridor Woodland & Vegetation
- Visually Prominent Landform (Higher Valley Slopes/ Plateau Edge)**
- Close Prominent Views of the Study Area (from roads)**
- Primary views towards the centre of and across Grantham**



- Study Area**
- Ridgeline/ Plateau Edge**
- Landmark**
- Strategic Views to Landmark**
- Panoramic Gateway Views**

Viewpoints and Visual Analysis plans

## Water, Drainage & Geology

The River Witham flows south to north in a relatively narrow steep-sided valley. It bisects the site into approximately one-third and two-thirds west and east respectively of the river. No other watercourses have been identified or are marked on the Ordnance Survey plan. The landform indicates a very shallow valley feature relatively central to the area and running broadly east-west from a location directly south of the barracks. This is a relatively small scale feature and has only been observed dry on site, which is consistent with an underlying permeable geology as noted below.

The whole SQ site overlays the limestone plateau that characterises the uplands area around Grantham. The River Witham valley has been incised into this plateau. A number of historic borehole records for the site show that the western area comprises a layer of limestone thinning down towards the river.

This in turn overlies a layer of “estuarine sand and clay” or “gravel” and ironstone beneath that.

The records indicate similar geological conditions in the east area, although the main difference is a greater depth of the limestone across the higher ground in the higher eastern-most parts of the site.

The absence of regular watercourses or significant surface field drainage strongly suggest that the underlying geology is relatively permeable and free-draining and that the normal water table is relatively far below the ground surface. The historic borehole records support this, with little record of any near-surface groundwater. Other information from the EA also suggests that the active water table is well below ground level across the vast majority of the site. There is currently no detailed information available on the actual permeability of the underlying limestone.



River Witham

### Archaeology & Heritage

Walkover, desk based air-photographic and cartographic assessments have been undertaken to date. The site lies beyond the early boundaries of Grantham, though now adjoins the edge of town. It was formerly contained within the parish of Spittlegate, Houghton and Walton.

There are no known Listed Buildings, Conservation Areas or Registered Parks and Gardens within the site. The nearest Listed Building is the Officer’s Mess in the Prince William of Gloucester Barracks, located approximately 150 – 200 metres to the north of the site. A number of buildings and structures of some historic some interest do however exist within or close to the site boundary, yet are not known to be designated. These comprise;

- Aveling Barford Ltd Factory (Invicta Works), Albert Street
- Railway Viaduct Over the River Witham
- Paper Mill Farm
- Grantham Waterworks
- Spittlegate Heath Farm
- Prince William of Gloucester Barracks

One additional feature of interest identified from an earlier walkover inspection is a drystone wall, defining the boundary between the parishes of Little Ponton and Stroxton, and Londonthorpe and Harrowby. This feature extends along part of the southern boundary of the SQ site. The wall is in variable condition, surviving to its full height in some stretches and substantially collapsed in other places. The wall is likely to have been constructed during the post medieval period.

With regards to archaeological remains, the nearest Scheduled Ancient Monument is

the “Bowl Barrow 450m North West of St Guthlac’s Church” (SAM 27863), located approximately 600m south of the site. Other archaeological sites have been identified from the studies undertaken to date. Most of these known archaeological sites are either findspots of artefacts or are entirely below ground and so are not visible. The known sites include;

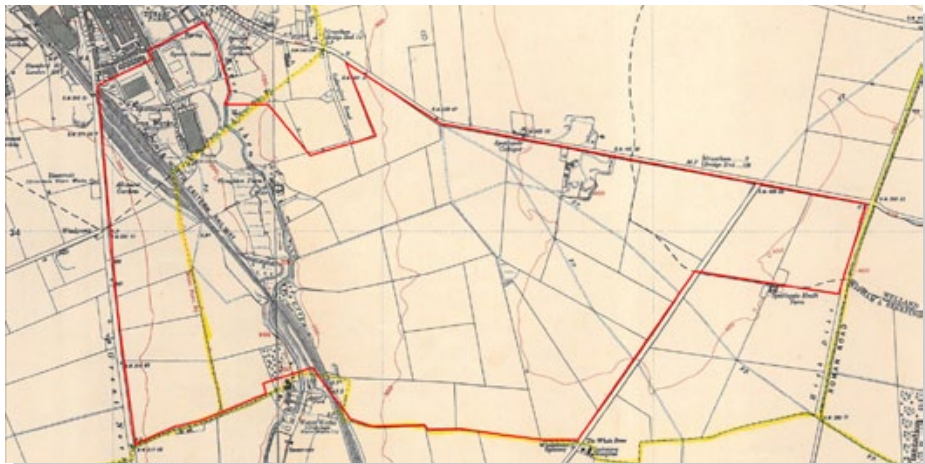
- The Jurassic Way (Prehistoric Route) and Ermine St (Roman Road) follow the line of the B4063 on the eastern boundary of the site;
- Salters Way (Roman Road) extends north-east to south-west across the site;
- Medieval village of Haughton and post medieval paper mill close to the northern boundary of the site alongside the River Witham;
- The land around the existing waterworks and to the west of the river includes a concentration of sites

Further studies and assessment will be undertaken as part of the planning, design and construction stages work and this is likely to include an agreed and staged programme of archaeological investigations. Incorporation and interpretation of the identified sites and features into the scheme design will be considered further as part of this process.

Studies for the Southern Relief Road undertaken by Lincolnshire County Council have also included an assessment of the archaeological implications of the different route options.



1890 - 91 OS Plan



1947 - 48 OS Plan



Parish boundary wall (in the ownership of the adjoining land owner to the south)

## Nature Conservation & Ecology

A combination of desk studies, site visits and walkover surveys have been undertaken for the site and surrounding area over a number of years.

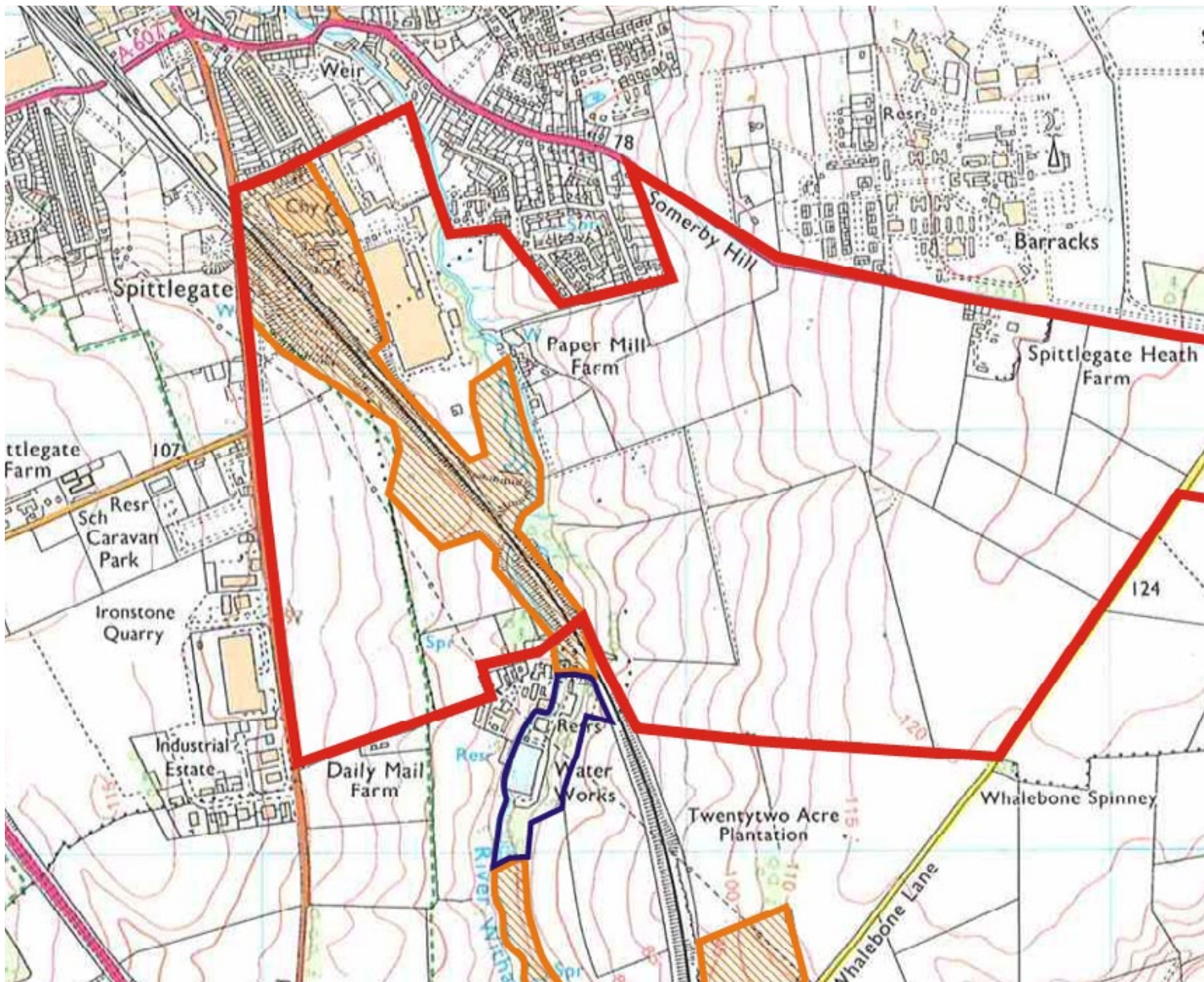
There are no statutory sites of international or national nature conservation importance present within the site. The Woodnook Valley Site of Special Scientific Interest (SSSI), a site of national nature conservation importance designated for its calcareous grassland, is present approximately 570m to the south and is the only site that receives statutory protection within 2km of the study boundary.

A number of sites of County Value (designated by the Local Planning Authority as being either Sites of Nature Conservation Interest (SNCIs) or Local Wildlife Sites (LWSs)) lie within or close to the site. Of these, the Clay Bank SNCI, Aveling Barford's Industrial Site SNCI, Grantham BR SKn4 SNCI and Salter's Ford Valley SNCI/LWS all lie within or partially within the site boundary. Four further Local Wildlife Sites, all grass verges along the A52 and adjoining roads, lie adjacent to sections of the north-eastern site boundary.

Large, intensively managed arable fields dominate much of the site and are considered to be of limited ecological value. These are

bounded by mature, predominantly hawthorn-dominated hedgerows with occasional perimeter trees of more value. Habitats towards the western side of the site include the following habitats of greater interest: broadleaved woodland; the River Witham and associated riverine habitats, and marshy, wet and dry grasslands and scrub within designated SNCI sites (in and adjacent to the industrial site to the northeast).

A Tree Preservation Order covers some existing trees and groups of trees in the very north of the site on part of the Aveling Barford site alongside the River Witham. Habitats within the site have the potential to support several protected and priority



Designated sites of ecological interest

species of conservation importance including amphibians, bats, badger, otter, water vole, brown hare, nesting birds, white-clawed crayfish, reptiles and freshwater fish.





The work undertaken to date provides a comprehensive understanding of the nature conservation issues, constraints and opportunities presented by the site. All of this work has informed the masterplan. Ongoing and further ecological surveys and appraisals will be undertaken to further inform the subsequent planning and design process as the SQ project advances. This will include agreement with the relevant wildlife bodies on the scope and extent of those studies to be carried out.



River Wiltham and associated habitats



Mature woodland and trees on the lower slopes

-  Study Area
-  Site of Nature Conservation Interest
-  Local Wildlife Site
-  Wildlife Trust Reserve

## Access & Movement

The SQ site lies between the A52/ Somerby Hill, on the northern boundary of the site and the B1174 Spittlegate Level to the west. The B6403/ High Dike passes north – south along the eastern edge of the site and Whalebone lane a smaller road runs through the eastern part of the site from the A52. This framework of roads surround the site and connect into Grantham town centre and more broadly out to the countryside to the east and south. The A1 lies approximately 700 metres to the west.

A number of local residential access roads (including Bridge End Grove and Saltersford Road) lie close to the northern boundary of the site, within the existing settlement edge. A small lane/ track provides access down the valley slopes to Paper Mill Cottage from this area. Albert Street and Houghton Road provide access to the existing Invicta Works site, which is bounded by the River Witham and the East Coast Mainline, in the north west of the site.

Existing public access to the site is very limited. A Public Right of Way (PROW)

(Public Footpath ref 13) passes through the western part of the site and provides a link between the B1174/ Spittlegate Level and the Water Treatment Works access road on the southern edge of the site. The Public Footpath continues to the south of the site (ref 2) and through to Little Ponton. No PROW exist throughout the rest of the site or within the River Witham valley and corridor.

North of the site the existing Riverside Walk (including cycleway) follows the River Witham towards the centre of the town from the A52 bridge crossing. This route does not however currently extend all of the way southwards to the site.

A series of transport studies have been undertaken to date to inform the Masterplan; including those specifically relating to the Southern Relief Road (SRR). The SRR proposals have been progressed by Lincolnshire County Council and have been through a number of design and assessment stages. Ongoing and further work will be undertaken on all aspects of the access and movement proposals as part of the continuing planning and design of the SQ scheme.

## Services & Utilities

A preliminary infrastructure appraisal has been undertaken, based on consultation with the principal statutory undertakers in respect of the possible implications of the development on local services and utilities, including foul drainage, electricity supply, water supply, and other relevant services.

Anglian Water has undertaken a Development Impact Assessment Report regarding foul drainage, which identifies that preliminary phases can served via connection to an existing sewer crossing the western part of the SQ. The discharges from the wider SQ scheme can be accommodated within the trunk sewer network at the point north of the A52 Bridge End Road near the A52 / B677 / B1174 junction nearby.

In relation to potable water supply, Anglian Water has confirmed that the site can be served from the existing service reservoir north-east of Harrowby Hall. A new trunk main to site will be required. Part of the western site may be served from the local mains network on the B1174.

There are existing water mains that cross the site which are to be retained in place due to the high costs and disruption of relocating them. The alignment of these water mains have therefore acted as a constraint and informed the preparation of the Masterplan. Access to these corridors for future maintenance will need to be maintained.

In terms of electricity, the development will require new primary sub-station(s), new cabling, and the provision of sub-stations within the site for local connections. This infrastructure would be provided as part of the development. Connections to the gas network are available locally.



Existing Grantham Riverside Walk and Cycleway north of the A52



Views along the direct A52 and Whalebone Lane in the north east of the site

# DEVELOPMENT OBJECTIVES

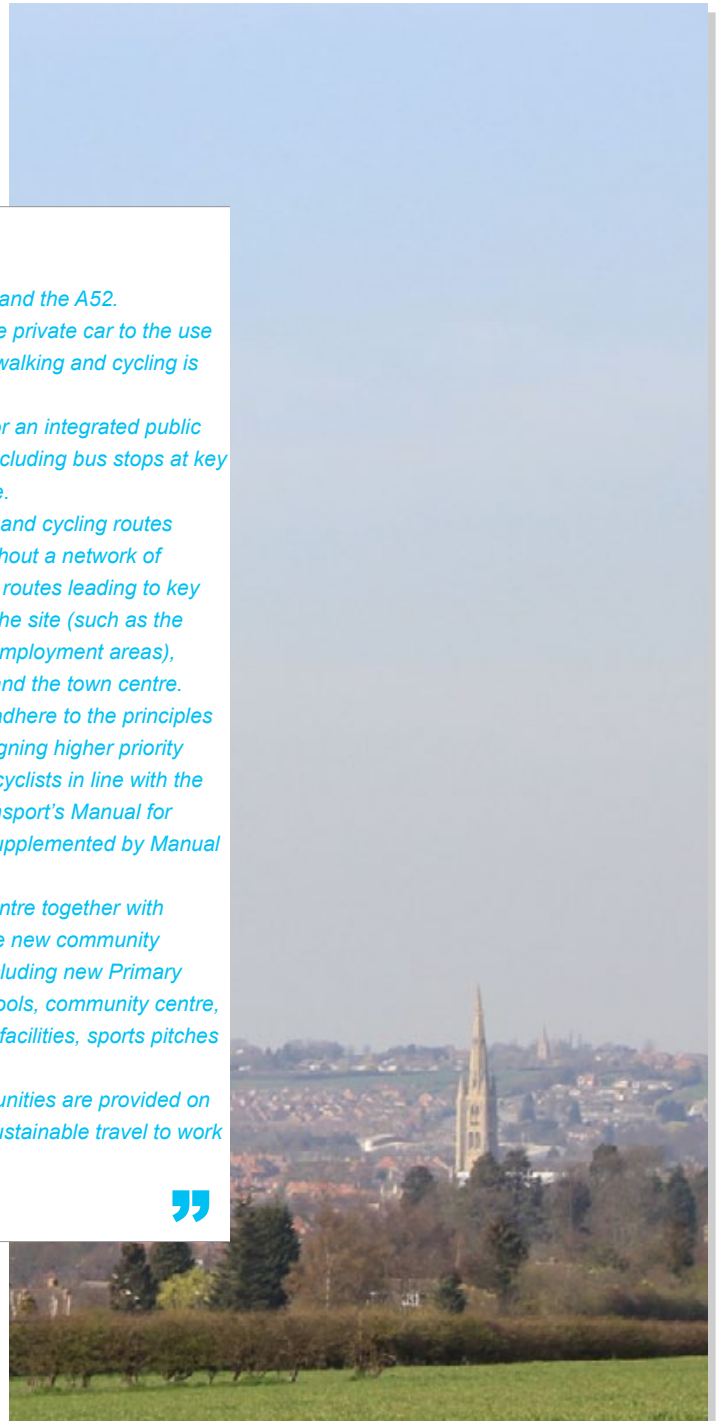
The Grantham Area Action Plan states at Policy SQ1 (Developing Sustainable New Neighbourhoods (South)) that the development proposals should ensure that:



- *The design and layout responds to the following issues, as identified in the Grantham Townscape Assessment:*
  - *Strategic views into and from the site*
  - *Encroachment of development along ridgelines*
  - *The use of colour and materials palettes to reinforce local identity*
  - *The integration of the built edge of development with the landscape fringe.*
  - *An appropriate mix of residential tenures and types are provided throughout, including affordable housing.*
  - *The River Witham is protected and enhanced including the population of white clawed crayfish together with other significant biodiversity values and natural landscape features within and surrounding the site.*
- *A high standard of sustainable design and construction is provided in all residential, commercial and community buildings.*
- *Renewable energy generation is delivered on site wherever possible.*
- *Impacts upon the ecosystem are minimised with existing trees, hedgerows and wildlife habitat retained wherever possible.*
- *The East-West Relief Road is delivered in full between the A1 and the A52.*
- *A shift away from the private car to the use of public transport, walking and cycling is promoted.*
- *Provision is made for an integrated public transport network including bus stops at key points within the site.*
- *Safe, direct walking and cycling routes are provided throughout a network of green infrastructure routes leading to key destinations within the site (such as the River Witham and employment areas), surrounding areas and the town centre.*
- *Residential streets adhere to the principles of good design assigning higher priority to pedestrians and cyclists in line with the Department for Transport's Manual for Streets (2007) as supplemented by Manual for Streets 2.*
- *A neighbourhood centre together with facilities to serve the new community delivered on site including new Primary and Secondary schools, community centre, health centre, retail facilities, sports pitches and play areas.*
- *Employment opportunities are provided on site to encourage sustainable travel to work patterns.*



These overarching policy objectives have provided the framework for the design of the Masterplan



# MASTERPLAN PRINCIPLES & EVOLUTION

## Landscape and Ecology

### Key Points:

- Conserve and enhance the character and ecological value of the River Witham valley floor and the associated mature vegetation and other habitats.
- Maintain and suitably buffer the woodland copse at the centre of the site. Enhance the connectivity and consistency of this through additional tree planting.
- Utilise and reinforce the majority of the existing trees and hedgerows as part of the landscape framework for the built development.



Existing riverside trees in the north of the site



Landscape & Ecology Plan

**H**aving gained a good understanding of the existing site and place, through the various environmental and technical studies, it is possible to formulate an appropriate masterplan response. This section sets out the rationale which has informed the masterplan design. It considers the inherent and underlying characteristics of the site and how these should shape and structure the

development. Overlying this, the process considers the location and extent of the built development and in particular the key activity areas and location and mix of activities.

The creation of an integrated network of movement corridors focussed around pedestrian and cycle access and public transport provides a further key layer in the

process before the character and appearance of the future development is more closely analysed and the masterplan refined.

The following pages include a series of design sheets that convey how the main issues and considerations build up layer by layer to define the masterplan concept.



## Water & Drainage

### Key Points:

- Avoid development in areas at risk of flooding and incorporate flood mitigation for the River Witham.
- Conserve the existing watercourses, ditches, water features and wetlands within the site
- Adopt a Sustainable Drainage (SuDS) strategy throughout the site; to include draining the surface water via a series of open swales and infiltration features or ponds, with particular consideration given to the draining of the valley slopes.



River Witham



Water & Drainage Plan



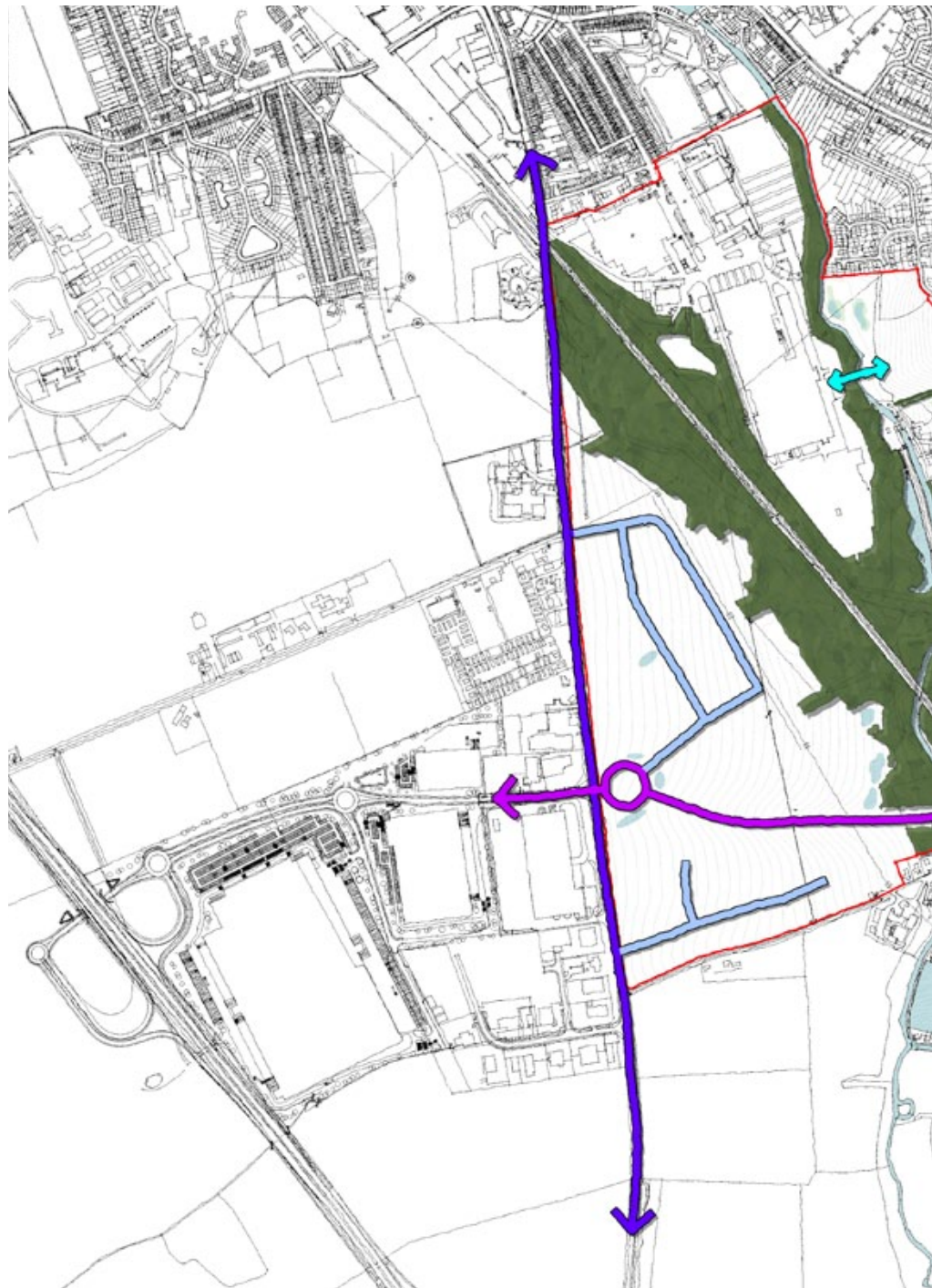
## Access & Movement 1 - Vehicles

### Key Points:

- The site is located close to Grantham town centre and is bound by two arterial routes with existing bus services that could be diverted into the site. This would ensure that the site is maximised as a sustainable development.
- Introduce a primary north – south street to link the A52 and proposed development into the proposed relief road, with an intersecting main street east – west to link the proposed development.
- Provide a series of links to and junctions on the A52 and B1174 for connectivity into the surrounding urban fabric.



A52 and B1174



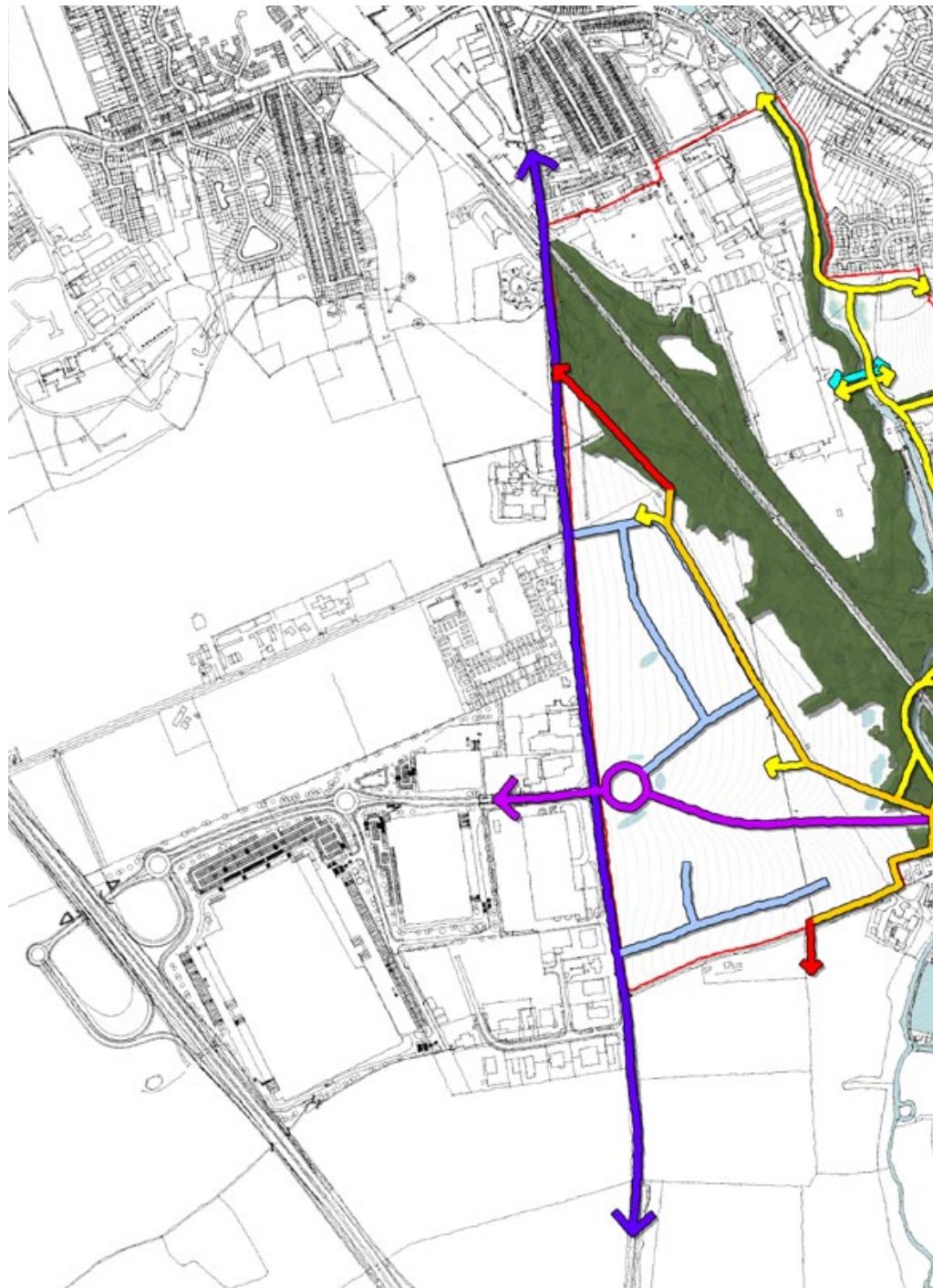
Access & Movement 1 - Vehicles Plan



## Access & Movement 2 - Pedestrian & Cyclist












Key Points:

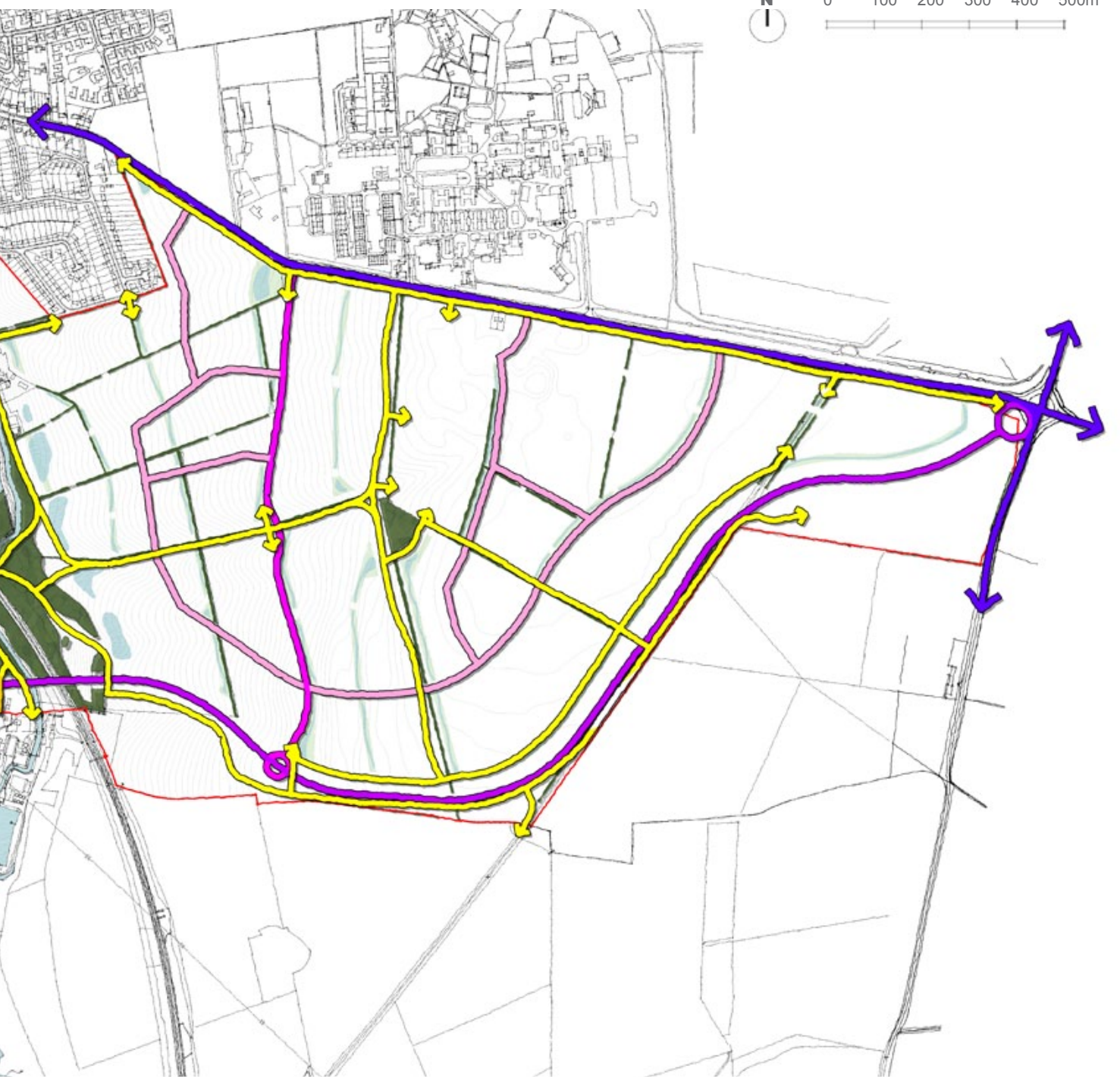
- Extend pedestrian / cycle access links throughout the site.
- Facilitate safe and easy pedestrian (and potentially cycling) access between the existing urban edge, the development and the countryside.
- Provide formal and informal crossing points for pedestrians / cyclists throughout, including the A52 and B1174 along the site boundary.
- Open up the River Witham corridor to pedestrians / cyclists with the creation of a River Witham Riverside Walk.



Existing links to the north and south of the site

Access & Movement 2 - Pedestrian & Cyclist Plan

-  Existing and proposed SuDS features (indicative locations and extents for wet or dry features)
-  Existing road corridors (A52 / B1174)
-  Proposed Southern Relief Road
-  Primary street
-  Secondary street
-  Existing vegetation
-  Primary employment access
-  Vehicular bridge crossing to river
-  Existing public right of way (footpath)
-  Diverted / realigned public right of way
-  Proposed footway and / or cycleway



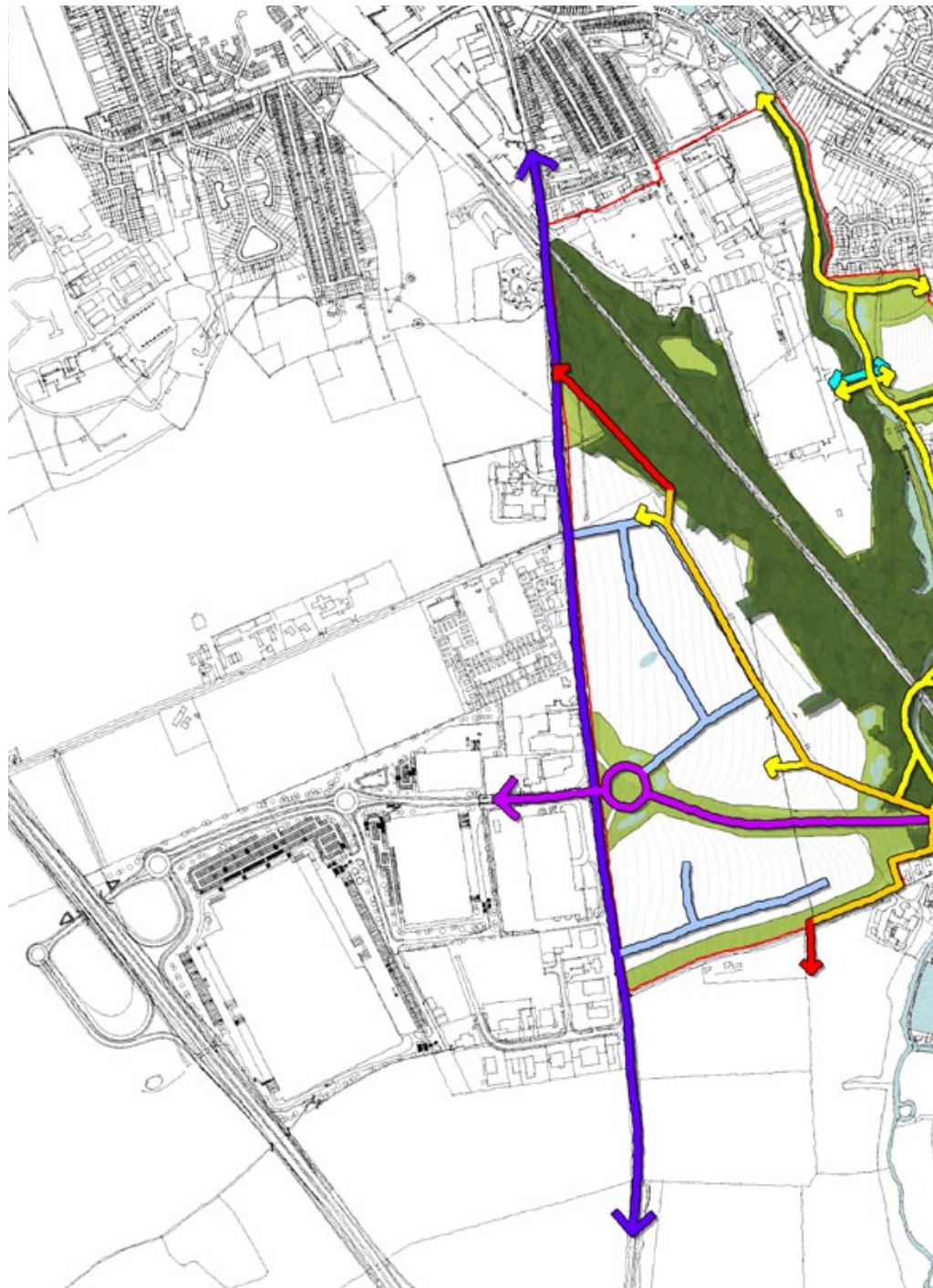
## Green Infrastructure Framework

### Key Points:

- Green Infrastructure (GI) framework builds upon the existing framework of woodland, trees, hedgerows, water features and public rights of way.
- Provide a multi-functional and well-connected network of green corridors and space, which are readily accessible and maximise opportunities for recreation, habitat creation and landscape enhancement.
- GI framework structured to deliver north – south and east – west corridors punctuated and linked by key public spaces and landscape areas.
- Existing habitats within the River Witham valley floor are to be conserved and appropriately managed for wildlife, landscape and informal recreational interest.
- Provide a robust landscape “buffer” to existing properties which neighbour the site, which also enhance the GI network.
- New SuD’s features to be designed and managed to contribute positively to the character and appearance of the development

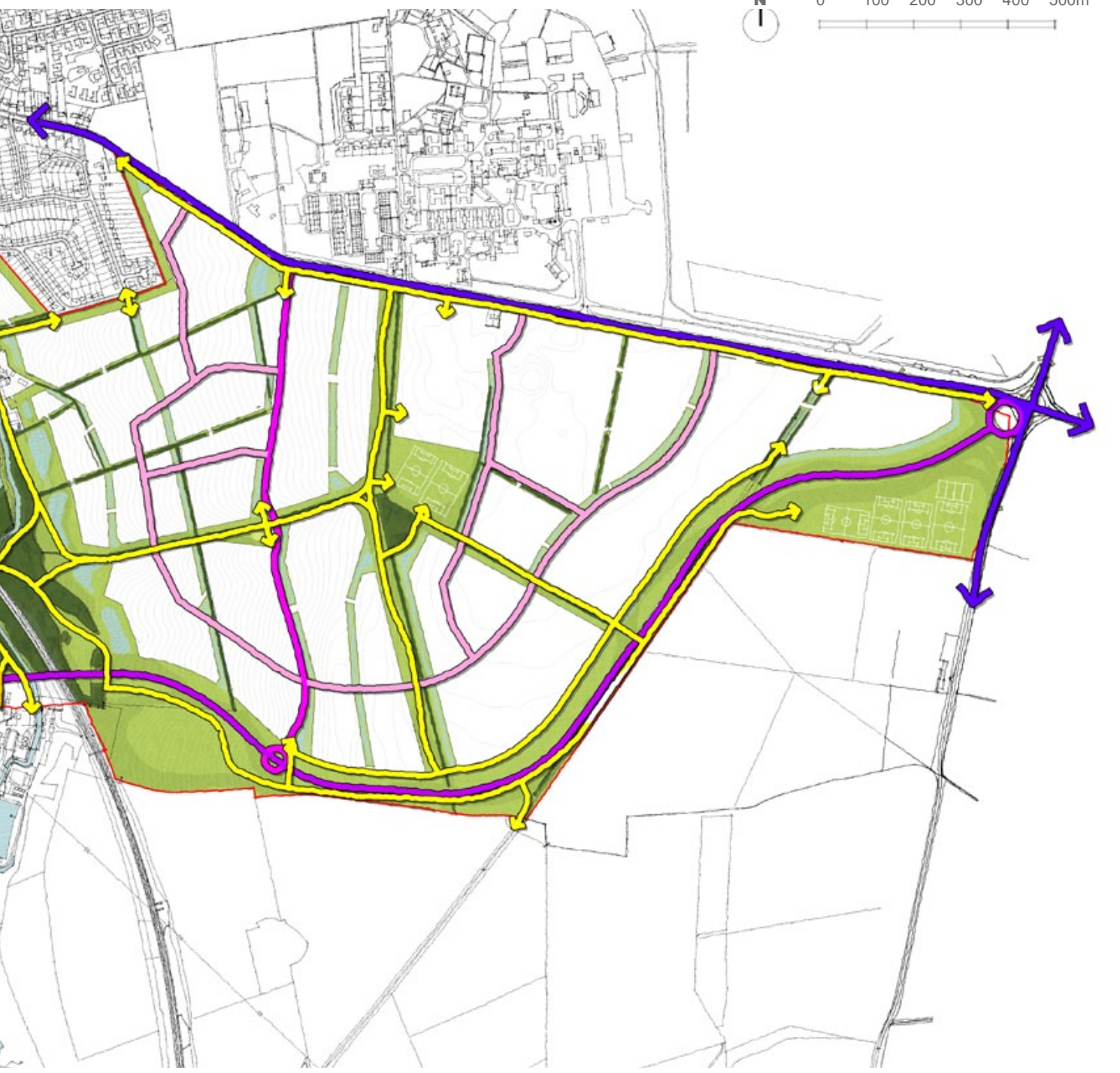


Mature woodland to be conserved



Green Infrastructure Framework Plan

- Existing vegetation
- Existing and proposed SuDS features (indicative locations and extents for wet or dry features)
- Existing road corridors (A52 / B1174)
- Proposed Southern Relief Road
- Primary street
- Secondary street
- Primary employment access
- Vehicular bridge crossing to river
- Existing public right of way (footpath)
- Diverted / realigned public right of way
- Proposed footway and / or cycleway
- Green infrastructure network



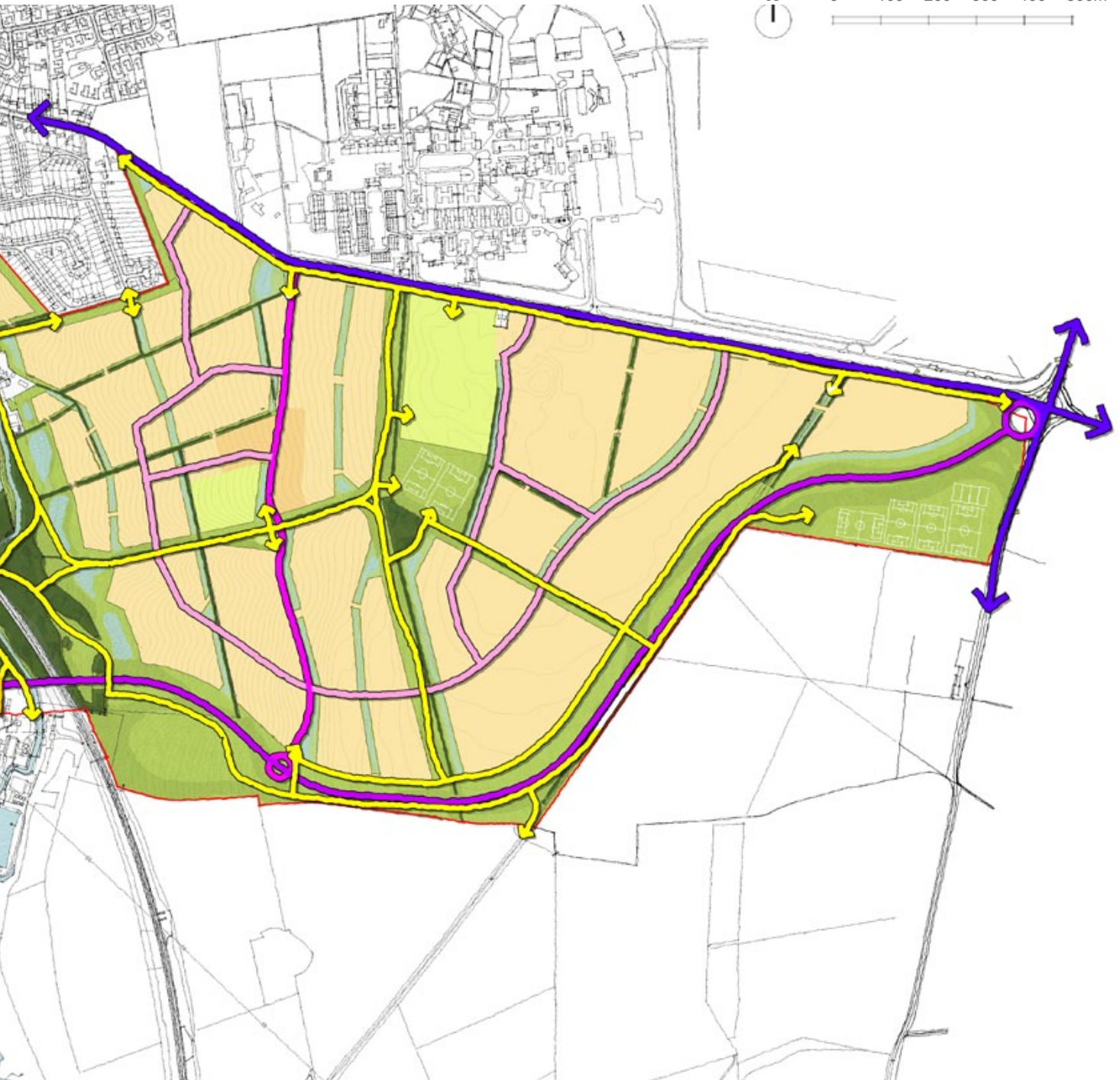
## Development Parcels

### Key Points:

- Development parcels based upon a logical and sustainable layout structured around the environmental characteristics and features of the site and closely related to the existing adjoining development uses.
- Residential areas focused around the centre of the site with a good relationship to other existing residential areas and to the River Witham valley to the west.
- Employment areas related to the existing uses along the B1174 in the west
- Local Centre sited to form an active focus at the centre of the site with good links to the proposed residential areas.



- Existing vegetation
- Existing and proposed SuDS features (indicative locations and extents for wet or dry features)
- Existing road corridors (A52 / B1174)
- Proposed Southern Relief Road
- Primary street
- Secondary street
- Primary employment access
- Vehicular bridge crossing to river
- Existing public right of way (footpath)
- Diverted / realigned public right of way
- Proposed footway and / or cycleway
- Green infrastructure network
- Residential
- Local Centre
- School
- Employment



















## Illustrative Masterplan

Having built up the masterplan through a series of layers, the Illustrative Masterplan shows how the design principles could be carried forward into a more detailed masterplan solution.



Illustrative Masterplan

- |   |                   |   |   |   |   |
|---|-------------------|---|---|---|---|
|   | Residential       |  | Southern Relief Road (SRR)                            |  | River Wltham GI corridor  |
|   | Employment        |  | SRR viaduct   |  | Footway / cycleway crossing of the river (beneath rail viaduct) |
|  | Local centre      |  | Allotments  |  | Vehicular bridge crossing of the river                          |
|  | Primary school    |  | Conserved woodland and GI corridors                   |  | Footway / cycleway connections                                  |
|  | Community school  |  | Whalebone Lane retained for footway / cycleway access |   |   |
|  | Sports facilities |  | Footway / cycleway crossing to the SRR                |   |   |



# MASTERPLAN PROPOSALS

The development will take account of its unique environment and characteristics and the surrounding settlement to create a place with a good urban form and design based upon quality local vernacular.

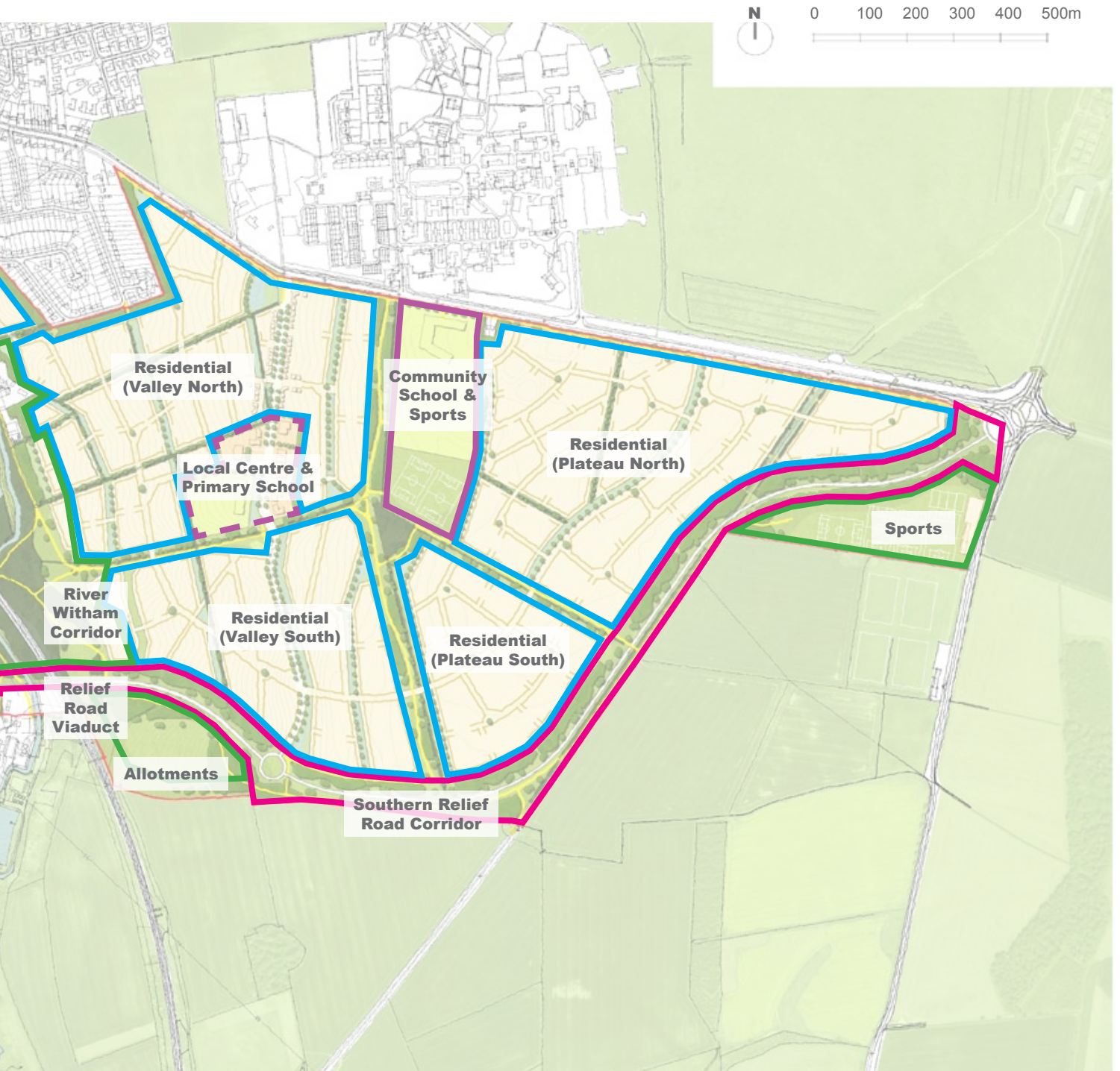
Having devised the key design and masterplanning principles to underpin the development, it is then possible to define several distinct areas and features based around a combination of the following key considerations:

- Existing local landscape/ townscape characteristics and setting;
- Topography;
- Proposed urban structure and street pattern;
- Development uses and activities
- Development density and main building types
- Green Infrastructure (GI) and Public Open Space

Several distinct areas and features have been identified as part of the masterplan and are summarised on the accompanying plan.



Key Areas and Features Plan



## Residential

The proposed housing areas are located throughout the central and eastern parts of the site to the east of the River Witham. In terms of the location and siting of the housing areas these fall into two distinct areas;

1. Valley Slopes – Occupying the eastern River Witham valley slopes, generally with a west and north west aspect and views towards and across Grantham. The existing valley slopes are typically 1:10 to 1: 15
2. Plateau – Occupying the eastern third of the site on the relatively flat and elevated plateau

These two distinct areas are separated by a key north – south GI corridor which extends across the plateau edge, with other GI corridors, existing hedgerows, landscape and SuD’s proposals further defining and shaping these areas.

Residential areas will provide for a broad range of house types that cater for modern living and for a wide demographic. It will include affordable housing and could also include some housing for the elderly and some self-build plots.





Existing properties in Grantham



Existing properties close to the River Wltham

## Green Infrastructure, Landscape and Public Open Space

The development's Green Infrastructure, landscape and public open space is the primary organising feature that structures the built development and other infrastructure components. It is based around delivering well designed and functional green spaces that take advantage of the existing characteristics and features of the site. It reflects the aims and objectives of the Grantham Green Infrastructure Strategy and the broader principles outlines in the Natural England Green Infrastructure Guide.



River Witham corridor north of the site

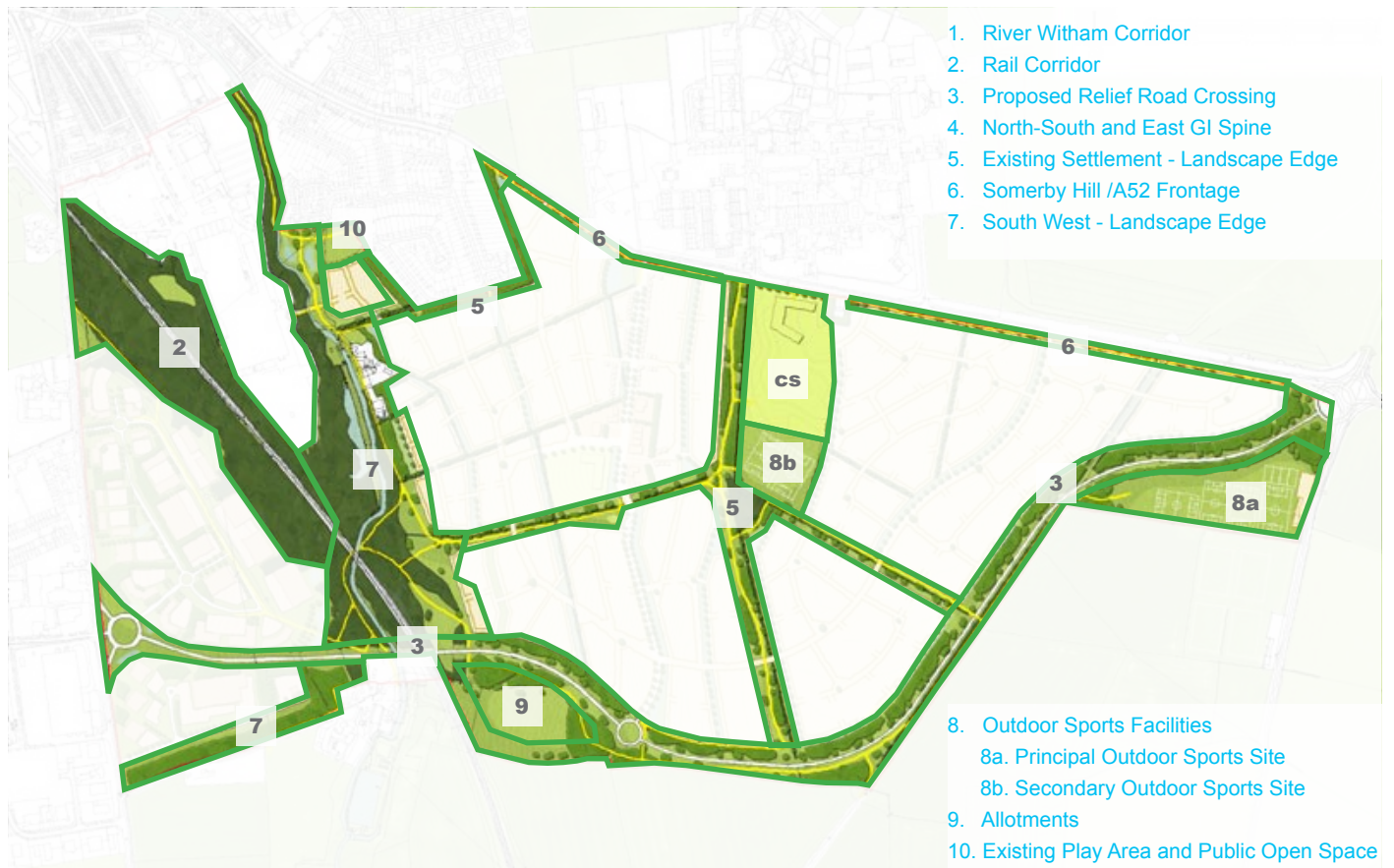
The existing habitats and features will be supported by new planting including grassland, meadows, native woodland, trees and hedgerows and wetland features. This combination of conserved existing and new landscape areas will form a connected network of corridors and spaces running throughout the site. These will ensure that not only is a strong landscape framework established for the built development areas

but also that there are valuable benefits for wildlife, for pedestrians and cyclists and for the sustainable drainage of the development.

The proposals will include the conservation of significant areas of existing woodland, trees and hedgerows. Notably, this includes the corridor of mature woodland and planting lining the River Witham, and the prominent small woodland copse at the centre of the site.



New footway / cycleway access to be provided alongside existing trees on the western banks of the river



The development will include the following key GI areas and features:

**1. River Witham Corridor**

The mature and enclosed character of the lower slopes of the river valley corridor will be conserved. New footway and cycleway access will be provided along this north – south corridor and within the mature planting and woodland areas. The detailed alignment of this route will be determined based upon balancing the ecological interest and sensitivities of the river corridor with providing good and safe access across and along the riverside.

Positive and active management of the planting and habitats along the corridor will be undertaken and will prioritise biodiversity objectives and be underpinned by suitable long term landscape and environmental management plans.



Conserved wetland habitats to be managed for ecological benefit

**2. Rail Corridor**

The East Coast Main Line (ECML) passes to the west of the River Witham in cutting and to the east on embankment. This land is beyond the control of the landowners, yet the existing railside planting and habitats will contribute towards the wildlife corridors that extend beyond the site and link together with the River Witham corridor.



Broad landscape corridor to the rail line in the north west of the site



River Witham below the existing rail viaduct

**3. Relief Road Corridor**

The proposed Relief Road will incorporate a broad corridor of new native planting, landscape and SuD’s proposals. These proposals will assimilate the new road into the landscape and mitigate its potential effects upon the existing and new settlement and properties. The road will entail new earthworks, particularly within the valley and the inclusion of a new viaduct crossing of the ECML and River Witham. The design of the viaduct is considered to be very important and will have an influence on defining the character and identity of both the road corridor and the adjoining new settlement.

The design of the Relief Road is being progressed by the local Highway Authority, Lincolnshire County Council and they have been involved in the design and development of the Masterplan proposals to date. Various options for the alignment and layout of the new road have been considered and assessed to date and further detailed design and technical work is ongoing. It is important that this close liaison between all parties associated with the wider SQ site and the new road continues throughout the design and implementation stages.

**4. North – South and East – West GI Spines**

Extending through the centre of the residential development area, these primary GI corridors will incorporate existing and new woodland, tree and hedgerow planting, alongside new footway/ cycleway links, SuD’s features and other public open space. These corridors will provide good and direct access across the development and between the Riverside Corridor, the new local centre, schools, sports facilities, A52 (Somerset Hill) and the new Relief Road.

The corridors have been designed and aligned to ensure that there is easy access to the lower valley slopes and Riverside Walk and to provide a “green edge” to the highest and most prominent plateau edge areas. The latter will include conservation of the woodland copse at the heart of the site and new planting and outdoor sports and play facilities in close proximity. They will be typically 30 – 60 metres wide and will broaden further in places.



View into the valley along the proposed east-west GI spine

Secondary GI links and other public open space, landscape and SuD's proposals will connect with these main corridors and filter throughout the wider built development areas.

#### 5. Landscape Edge – Existing Settlement

The relationship of the existing settlement edge to the new development has been carefully considered as part of the design and consultation process. The proposed design approach will offer effective "buffering" of the new development, whilst providing valuable footway and cycleway connections and landscape and wildlife corridors that will connect between Somerby Hill in the north and the Riverside Corridor to the south.

New native woodland, tree and hedgerow planting and sympathetic mounding will be

incorporated with new housing and streets fronting on to the proposals. It is envisaged that the early implementation of these works could be undertaken (subject to the necessary approvals and agreements) to establish the proposals prior to the nearest built development.

Whilst no direct vehicular access between the existing and new residential areas is envisaged in this area, vehicular access from Bridge End Grove/ Saltersford Road down towards Paper Mill Farm Cottage and the lowest valley slopes would be maintained. Footway and cycleway links are proposed and would connect through to the Riverside Corridor.

#### 6. Somerby Hill/ A52 Frontage

A landscape and public open space

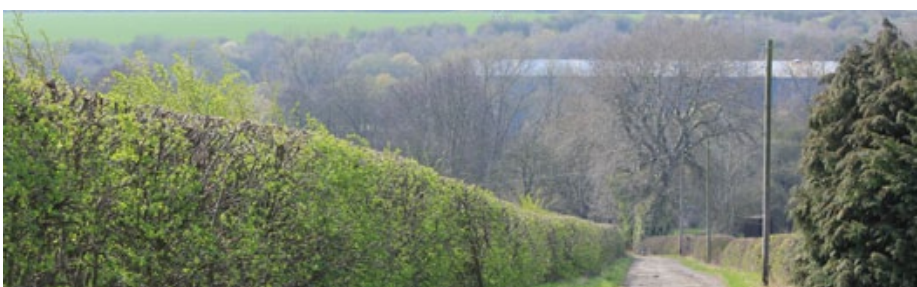
frontage will extend for the majority of the northern edge of the site, alongside the Somerby Hill/ A52. This frontage will allow for the inclusion of a safe and direct "off road" footway/ cycleway and for a continuous and cohesive landscape and planting treatment to the roadside. The use of street trees and existing and new hedgerows, with new properties and streets fronting towards this landscape frontage will create an attractive impression and approach into Grantham.

#### 7. Landscape Edge – South West

On the south western edge of the site, a broad swathe of woodland planting will be included to form a robust and enduring landscape boundary to the development. This will provide a planting link between the B1174 roadside and the Saltersford



Footway / cycleway access only from Bridge End Grove



Existing access to the Paper Mill Farm Cottage retained



New sports facilities to be sited alongside existing pitches



Access road to existing water treatment works

Water Treatment Works and proposed Relief Rd corridor. In addition to the new native planting proposals the existing public footpath connection (that extends to the south of the SQ site at this location) will be maintained, although will potentially be diverted as part of the Relief Road works.

8. Outdoor Sports Facilities

New outdoor sports facilities are proposed at 2 locations. On the eastern edge of the SQ site, new facilities are proposed alongside the existing sports ground, with access off the B6403. These will be sited to the east of the new Relief Road yet would be accessible on foot and cycle from the new development via a crossing and Whalebone Lane. Other new outdoor sports facilities are proposed at the centre of the development area alongside the School and



New woodland planting along the south west site boundary will establish a robust edge to the landscape beyond

with easy access to the main GI corridors and nearby Local Centre and Primary School.

The type and number of facilities and pitches to be included within these locations will be determined and agreed with the relevant authorities and organisations as part of the subsequent design process. The proposed facilities in the east of the site could potentially be linked to the existing facilities to provide a "hub" of sporting activity.

9. Allotments

A site for new allotments is proposed close to the southern edge of the site on the mid valley slopes. The site will be accessible for vehicles via links either beneath the proposed viaduct or from the Relief Road

junction to the east of the allotments. They will also be linked to the footway cycleway network that extends around the Relief Road and connects with the Riverside Corridor link.

10. Play Spaces

An existing play facility will be retained in the northern part of the area and potentially extended or improved as part of the delivery of play provision across the site. Other new formal and informal play spaces will be located throughout the development to provide safe and easy access to a variety of spaces. A Play Strategy will be devised as part of the subsequent design process, in conjunction with the relevant authorities.



Facilities in the east of the site



Existing play provision will be enhanced with new formal and informal play spaces

## Employment

With the exception of any potential small scale employment uses associated with the Local Centre, all other employment uses will be sited on the western third of the site, west of the River Witham and ECML. This area will logically sit on the slopes beneath the B1174 (Spittlegate Level) and the existing employment and commercial uses on the more elevated western side of this road

The identified employment area will form an extension to the existing uses west of the B1174. The proposals will cater for a potential range of business, office, manufacturing, general industrial and distribution uses. It is envisaged that these development areas will comprise contemporary and sustainable buildings set within an attractive landscape setting, utilising new and conserved green infrastructure. The proposed Relief Road corridor will extend through the southern part of this area, with new employment buildings sited to both the north and south of the new road.

Access will potentially be gained from both the B1174 (Spittlegate Level) and the new Relief Road roundabout, subject to further design development and agreement with the Highways Authority. Footway and cycleway access will be provided via the existing connections and public footpath directly to the north of this part of the site. Significantly, a new footway/ cycleway link from this part of the site to the proposed housing on the eastern valley slopes and to the Riverside Corridor is proposed. Given the steeply sloping nature of the lower valley slopes in this part of the site and the associated dense mature nature of some of the existing woodland, this link will require further detailed evaluation and design. It is envisaged that the route will cross the river close to the existing rail viaduct and pass beneath the viaduct. It potentially offers a dramatic and attractive link and importantly, will connect the housing with the employment uses.

It is envisaged that new offices and business based buildings will front the more visible and gateway frontages to this part of the site, with other industrial, distribution or general employment buildings on the less visible areas behind. The layout, design and appearance of the development should adopt a good quality, sustainable and co-ordinated approach to achieve a “park” style appearance.



Existing car showrooms along the B1174 Spittlegate Level



New distribution development proposed to the west of the B1174



Employment Proposals Plan

## Local Centre

Similar to traditional places and communities, it is anticipated that the local centre will include a variety of jobs, retail and community facilities, which will generate a vibrant focus. This part of the development is located centrally and will have a visual presence on the main distributor road extending through the centre of the site (between the new Relief Road and the existing Somerby Hill/ A52). Importantly, it will also sit alongside the main GI corridor and footway/ cycleway link to the Riverside Corridor and close to the proposed schools and central sports facilities. The sloping nature of the topography underlying the local centre will present design challenges. However, it is generally orientated along the new primary street and therefore across the slopes. The use of stepped building arrangements across the street and other innovative design solutions should enable a distinctive centre to be formed.

It is envisaged that the centre could include shops, healthcare/ pharmacy, cafes, community facilities and potentially some

residential uses over ground floor commercial properties. This will create a truly diverse and mixed-use 'heart' to the development. The range of uses could include A1 (shops), A2 (offices/services), A3 (restaurants), A5 (hot food take away), B1 (offices and light commercial uses), C1 (hotel/guest houses), C3 (residential) and D1 (health and community uses).

The main design principles for the layout of the local centre are:

- Creation of a sustainable communal space, which will be defined and enclosed by good quality and attractive buildings that will form a strong and active focus;
- Positive and active building frontages towards the new primary street and public realm;
- Footway, cycleway and public transport connections from the GI corridor and along the new primary street;
- A key "community/ public square" alongside this frontage;
- A high quality public realm with appropriate street furniture, lighting and tree planting.



## Schools

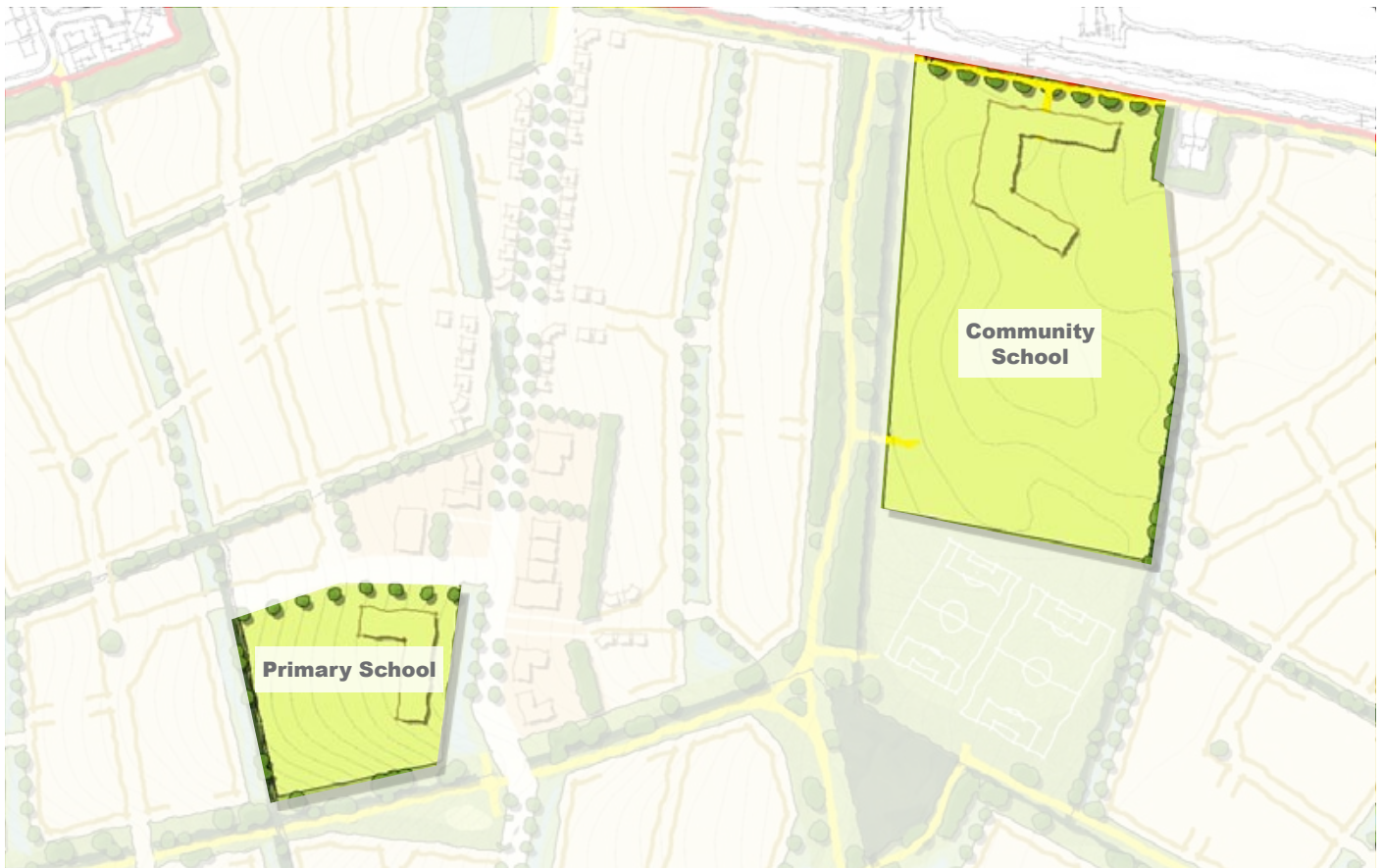
The Masterplan currently assimilates a Community School and Primary School as integral parts of the development, although final requirements will be determined based upon the final number and types of housing. The Community School is located in the central higher and relatively flat parts of the site with a frontage towards the Somerby Hill/ A52. This school site lies close to the plateau edge and alongside the key north-south GI corridor. It is envisaged that the design of the school facilities on this site will take due account of the visual sensitivity of

the plateau edge, whilst taking advantage of the expansive views across Grantham. Community outdoor sports pitches are located immediately south of this school site. Vehicular access to this school will be principally direct from the A52.

Situated alongside the Local Centre and central to the development on the valley slopes is the proposed Primary School. This school is similarly sited with excellent access links and connections to the GI network. This school will positively contribute towards

the vibrancy of the adjacent Local Centre and to the creation of a focus to the new neighbourhood. The sloping nature of this site will present design challenges for the school.

The design requirements and objectives of the school sites, when determined, will be advanced in close consultation with the education authority and any other relevant parties in due course. The layout, design and landscape treatment of the identified sites will need to respect the amenity and privacy of the existing and new properties.



## Southern Relief Road

The Southern Relief Road (SRR) will provide a high standard link road between the A1 in the west and the A52 in the east. It will provide much needed relief to the centre of Grantham and will in turn have significant regeneration and enhancement benefits for the wider town. In addition to resolving key town centre traffic issues, the SRR will also provide a key strategic access point to the SQ development.

At its western extent, the SRR will be likely to tie-in to a new roundabout on the B1174 which is to be constructed as part of a separate yet related scheme linking the B1174 to a new grade separated junction on the A1. At its eastern extent, the scheme would tie-in to the A52 at a new roundabout.

Lincolnshire County Council are advancing the proposals for the SRR and have undertaken various studies and considered different design options (See also Green Infrastructure section, reference area 3). Two key options were considered before the peripheral alignment running largely around the southern boundary of the development area was chosen.

In the context of the masterplan and the design of the SQ, the proposed viaduct is a key feature and its design and environmental effects will be of particular importance to the future development.



The future link road to the A1 will extend to the west of the B1174



Whalebone Lane would be retained alongside the SRR for footway / cycleway access



Southern Relief Road proposals plan

# URBAN DESIGN

## Streets

Best practice approaches for street design are founded on places that have a series of different street types. Usually this is based upon a hierarchy of streets, each having different design characteristics in terms of function, width, building form, landscape and frontage details. Collectively and in conjunction with the broader development areas, this will help to generate a legible environment and give the development identity and a sense of place.

The key design principles to be adopted for the streets and access proposals are to:

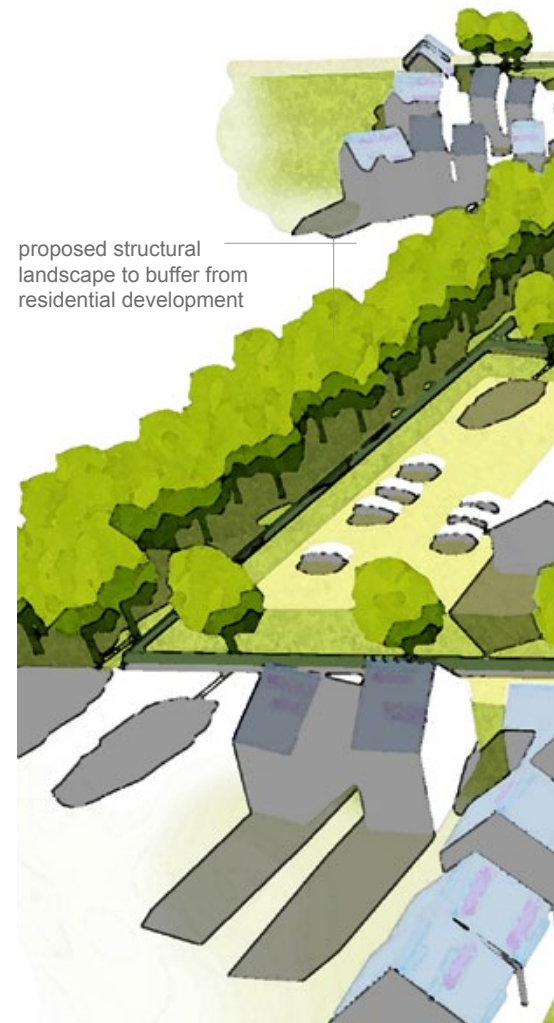
- Create streets for people and avoid highway dominated layouts;
- Create a series of different street types, that have different characteristics;
- Provide a connected and typically a regular grid pattern of streets;

- Maximise connectivity with the existing surrounding area and uses;
- Encourage people to walk, cycle and use public transport;
- Provide a choice of routes which are direct and provide easy connections to local facilities and activities both on and off site.
- Ensure all users can move safely and freely through the streets;
- Calm and control vehicular speeds through the adoption of good urban design practices;

The site's existing environment has been central to shaping the development concept, as detailed in the preceding sections. The sloping topography, views into and out of the site and its relationship to the A52, B1174 and the proposed SRR have been important factors in considering the urban structure and street design. The broader Grantham Movement Study has also informed the process.

The primary streets and access to the site have been the subject of discussions with Lincolnshire County Council and these principles are detailed earlier in this document.

The masterplan envisages a series of street types;



proposed structural landscape to buffer from residential development



Existing street on the sloping landform surrounding the town

### Primary Street

The primary street will be the principal route which extends between the SRR and Somerby Hill/ A52, in a broadly north – south direction and across the mid valley slopes. The street will also connect through the main square at the centre of the site and with other secondary streets and GI corridors.

It will be a street typically lined and by relatively higher density and more compact arrangement of buildings, potentially including linked 2.5 and 3 storey narrower plan dwellings. The primary street will include other feature squares and will accommodate a public bus route. This street will run across the mid valley slopes (generally following the contours) yet will pose some urban design challenges in addressing the cross fall and the arrangement and relationship of buildings

and spaces across this corridor. Narrowing the street in places; using wider plan dwellings and the use of some split level buildings would be envisaged.

### Secondary Streets

Secondary residential streets will lead off from the primary street and the A52. These streets will generally be slightly narrower, and include medium and medium/ high density, with a mix of predominantly 2 storey, narrow and wider plan dwellings.

### Side Streets and Lanes

The Side Streets and Lanes will add further tiers to the street types and will generally be located linking the primary and secondary streets and around the lower density areas and fronting onto the GI corridors and public

open space. These streets will generally be designed as narrower corridors and will include some shared surface streets.

These streets and lanes will be generally narrower, with the dwellings predominantly wider in plan and informal in arrangement.

### Main Square

As the 'centre' of the scheme and on the mid valley slopes, the street design will include a Main Square. This will be located along the primary street and will relate top both the Local Centre and Primary School and to the key east – west GI corridor. It will form an important feature of the public realm. Other features squares will be provided throughout the development at key intersections of streets and GI corridors.



Illustrative view of the Primary Street and Local Centre showing the potential arrangement of uses and landscape proposals

## Heights, Density and Form

The proposed development will include changes in building heights, density and forms. This will ensure that there is character and visual interest and will also enable the layout and detailed design of the proposals to respond to its context. In general, it is anticipated that the majority of the new houses will be 2 storey, with some 2.5 or 3 storey properties in appropriate locations.

A range of dwelling densities will be provided across the site relating to a number of factors, including its settlement edge location, the character of the particular area and relevant street type and the underlying landform characteristics. In general the relative higher densities will be defined by the use of more linked dwellings, narrower plan forms and reduced frontages, with more 2.5 or 3 storey properties. These higher densities and taller properties are most likely to be located along the primary and secondary streets and around the local centre and at other street intersections of feature squares across the site.

The lower density housing will be characterised by more detached and semi-detached properties, with deeper frontages (or “set backs”), tree lined roads and more

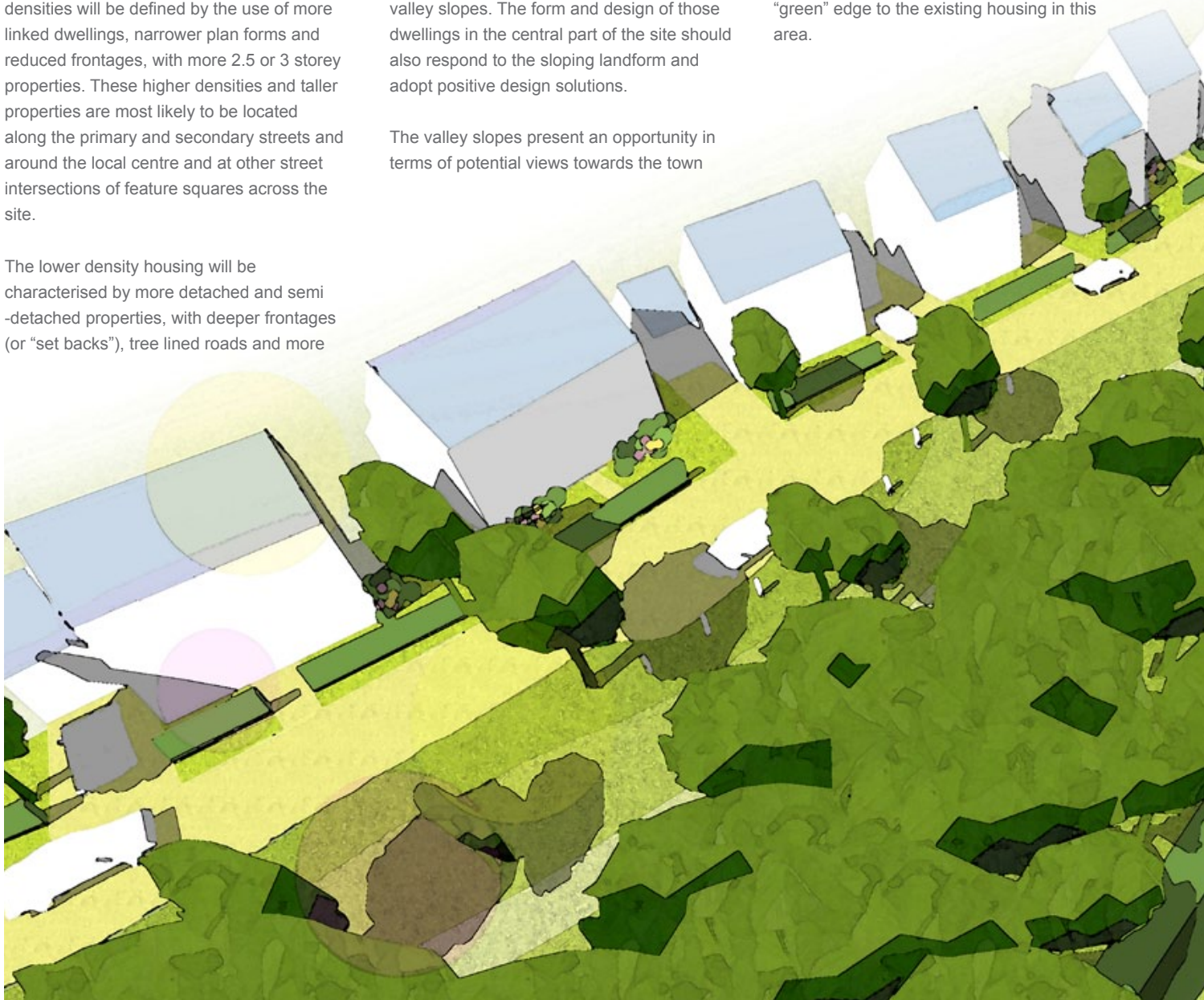
green elements (trees, front gardens, hedges and open space). The range of building heights, densities and form will be need to be fully explored and defined as the scheme design advances. These factors will be important considerations in defining the character areas to be established across the site.

The marked difference between the relatively flat topography of the plateau top in the eastern third of the site and the steeper valley slopes to the east of the River Witham towards the centre of the site is also an important consideration. Taller properties should avoid the plateau edge and the highest valley slopes. The form and design of those dwellings in the central part of the site should also respond to the sloping landform and adopt positive design solutions.

The valley slopes present an opportunity in terms of potential views towards the town

centre and across the valley. Split level floor plans and other innovative and varying design solutions could be employed on the steeper sloping parts of the site.

As highlighted within the Green Infrastructure features of the proposed development, the relationship of the existing settlement edge to the new development will be important. The proposals will offer effective “buffering” of the new development, whilst providing valuable footway and cycleway connections. The design approach will seek to provide a robust landscape corridor, comprising sympathetic mounding and native tree, hedgerow and shrub planting. This will maintain a suitable “green” edge to the existing housing in this area.



Landscape corridor to existing settlement edge

## Appearance

The intention of this Masterplan document is not to detail all of the design principles to be adopted by the development or at this stage to be rigid or prescriptive in terms of the appearance or architecture of the proposals. Ultimately, the appearance and character of the development will not just be about the design and architecture of individual buildings but also the way the streets, plots and landscape are all designed and interact.

Building design and appearance will relate to good examples that can be found within the local area and to the Grantham Townscape Character Assessment. The emphasis will be on providing new high quality homes and building designs that are enduring, desirable and attractive. Simplicity of form and a good sense of scale and proportion, coupled with the use of quality materials will underpin the designs.

The proposed employment areas will include buildings of varying sizes, forms and design appearance, although it is envisaged that a contemporary architectural style will run throughout these areas. Whilst there will undoubtedly be variations in the appearance and architecture of these units, it is anticipated that through a combination of a consistent landscape treatment and the use of similar design approaches, colours or materials, a cohesive and modern employment area will develop.

The public realm proposals will include a variety of new areas and features. New high quality street trees, hedgerows and other planting and habitats would be provided. A mix of planting sizes and stock will be used, with large trees and plants used where an immediate effect would be beneficial. Footways, cycleways and other hard paved areas would be created, utilising a variety of materials and products, with the higher profile spaces (eg within and around the local centre) adopting specific materials and specifications.



## Development Blocks & Plots

The following principles will be adopted in the design of the residential areas of the development;

- In general, blocks would be designed as closed perimeter blocks with "back to back" properties;
- A range of block sizes would be adopted that would assist in varying the character of the different identified areas
- Arranging buildings so that they enclose and overlook streets and spaces and where relevant have a positive and direct interaction with the public realm
- Efficient and practical block and plot sizes
- Draw reference from positive local examples

Plot design will be centred on delivering efficient plot depths and widths, with appropriate space for parking and space for private rear gardens and frontages. In the relative higher density areas, buildings will generally be located to the front of the plot near the footway and public realm so as to encourage street enclosure and active streets. The development block design on the central sloping part of the site will include more



Existing housing on sloping ground at Grantham



Typical closed block arrangement which could be adapted to respond to the underlying landform

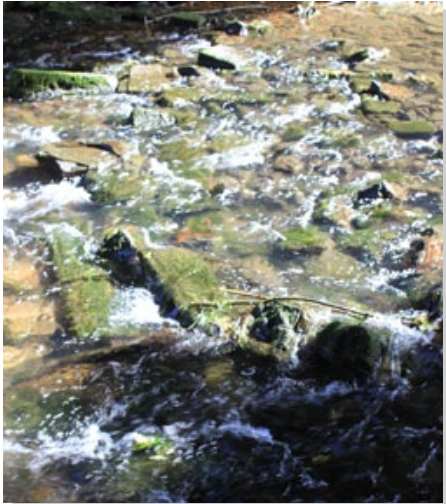
## Sustainability

The site is located within a sustainable location. Grantham town centre lies approximately 2km to the north and is within walking and cycling distance and bus stops already lie along the A52 and B1174 immediately to the north and west of the site. It is envisaged that public transport provision would be extended through the proposed development with bus routes and stops to effectively serve the entire site.

Existing employment and retail areas border the site and further provision of these uses is included within the proposed development. Easy and excellent access between the future housing areas and these existing and proposed facilities will therefore be possible. With the well-connected network of footways and cycleways extending throughout the development and its surroundings this will reduce the need to travel by car.

A Landscape and Environmental Management Plan would support the conservation of the existing retained planting and habitats and the successful establishment and continued thriving of the new proposals.

All new housing would seek to reduce energy use by improving efficiency and will embrace the latest sustainability standards for housing construction. Similarly, all other new buildings would be designed to the relevant approved standards. Waste management and reduction will be encouraged through best practice approaches. This will include the provision of space for recycling and the use of a range of water saving devices.



The site offers good potential links to the town and countryside

A significant proportion of the site would be dedicated to Green Infrastructure (GI) and this will include a SuD's strategy (see below), a mix of new and conserved habitats, trees and public open space. This will provide valuable benefits, including contributing towards urban cooling. The management of the GI and including the proposed recreational facilities would be agreed and carried out by the relevant authorities.



Appropriate long term management of the existing riverside habitats will form part of the proposals

### Sustainable Drainage Strategy (SuD's)

Based upon the preliminary studies undertaken, both infiltration and attenuation SuDS applications are deemed appropriate for the SQ site. Substantial areas will be required to accommodate the likely scale of run-off generated by the size of the proposed development proposed. This will in turn entail a significant quantity of earthworks work to create the storage volumes and to dispose of the material arising from those excavations.

An outline network of surface water drainage, attenuation and infiltration features has been designed into the Illustrative Masterplan, in accordance with current standards for drainage performance. This will achieve the objectives of controlling peak flows leaving the site and providing appropriate pollution control facets in the drainage process.

The vast majority of the SuD's features will be in the form of open ponds or swales. In addition to their functional drainage objectives, these features will be designed and managed to positively contribute towards

the character of the built development and the GI and wildlife objectives. The strategy will incorporate a network of SuD's features, generally associated with the GI, existing hedgerows and framework of organising streets. This is most likely to entail the creation of swales and linear ponds extending across the contours on the more steeply sloping parts of the site, with larger ponds on the lower slopes and within the Riverside Corridor.

The SuDs features will be "designed in" to the development proposals and for example could be lined by street trees and other public realm proposals to create attractive green features within the built up areas. Other larger ponds on the lower slopes will be more informal and will adopt a stronger wildlife emphasis to their design and management. These features will compliment the character and interest of the River Witham habitats.



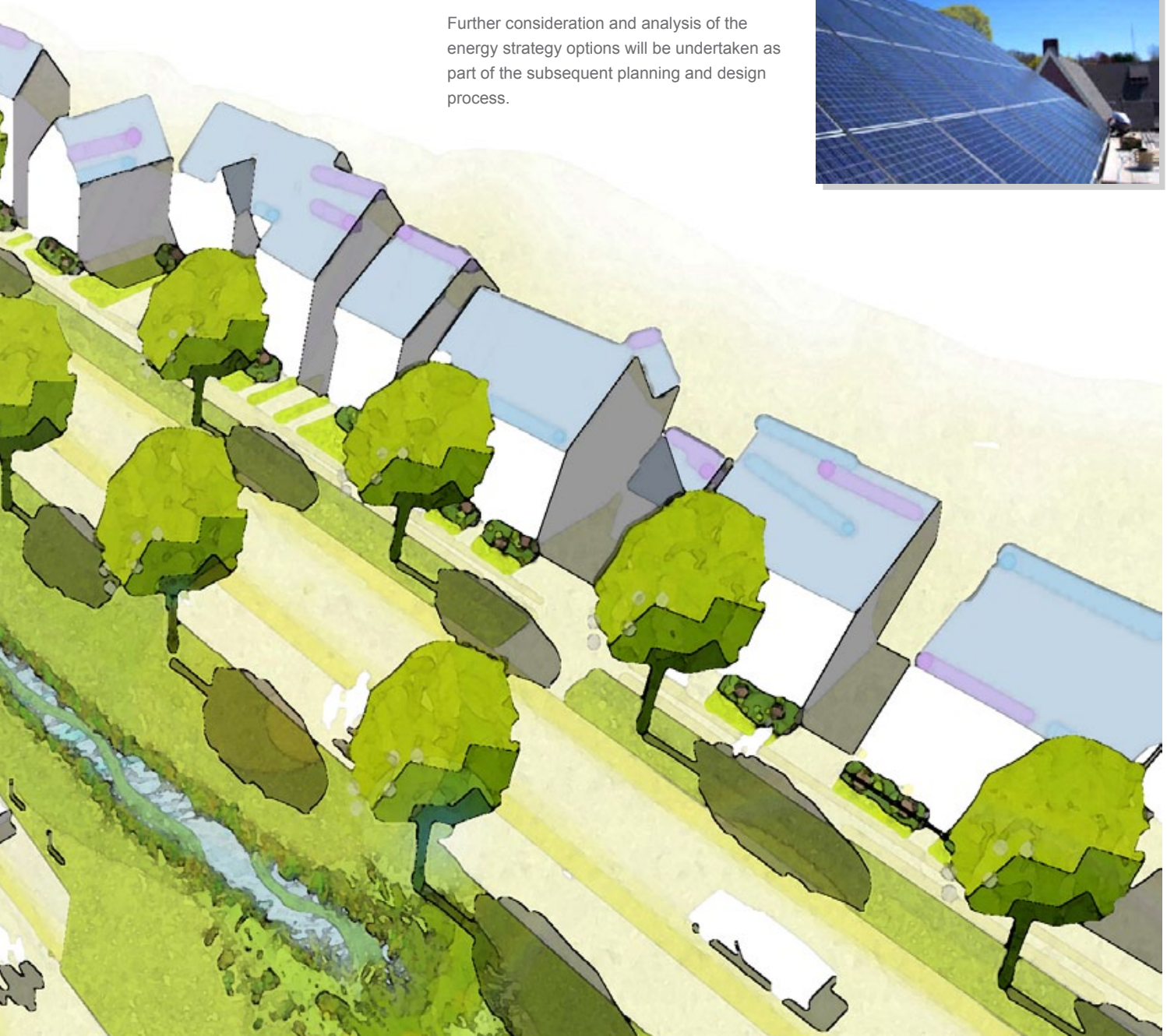
Indicative sketches showing how SuDS swales and linear ponds could be incorporated into the design of the streets and GI corridors

**Energy Strategy**

A study was undertaken in late 2011 to examine the energy strategy options available for the future development on the site. It was conducted through the Carbon Trust Strategic Design Advice framework. The study put forward a number of potential outline schemes which could potentially deliver carbon savings and energy efficient solutions for the SQ development. It offered a very broad overview of the likely options available and advised that the final strategy may consist of a combination of different options for different parts of the site.

The proposed energy strategy for the development needs to be in accordance with the future regulations and local policy governing energy consumption and CO2 emissions and also compatible with the development objectives and design aspirations for the SQ scheme. It should be noted that the future building regulation proposals (with zero carbon homes from 2016 and zero carbon non-domestic buildings from 2019) will represent a significant change in practice. By meeting these future standards, the development could be considered sustainable from an energy and CO2 perspective.

Further consideration and analysis of the energy strategy options will be undertaken as part of the subsequent planning and design process.



# TIMESCALE & PHASING

## Timescale

**D**evelopment on the site will progress in a timely manner according to agreed phasing requirements, ensuring the delivery of new community infrastructure, such as schools, local shops and community facilities at appropriate points within the development programme.

Before any development commences and any new homes or employment development is ready for occupation, there are a number of stages that still need to be completed.

The proposed Relief Road is currently being designed by the Highways Authority and a planning application and other necessary agreements for this key component of the SQ development are expected to be advanced in early 2013. For the remainder of the scheme, it is currently anticipated that an outline planning application would be prepared in 2013, with a view to approval in late 2013/ early 2014. Detailed planning permission for the first phase of development could therefore be tentatively programmed for 2014, in advance of works starting at the earliest later that year. It is currently envisaged that some advance landscape works may be undertaken as part of the first phase of work, including the settlement edge landscape proposals, surrounding the existing properties on Bridge End Grove and Saltersford Road.

## Phasing

The accompanying diagram shows an indicative phasing of the development. It is envisaged that the residential development will commence in the central northern part of the site. This will enable some supporting community and mixed uses to come forward early in the development. It is then generally



Indicative Phasing Plan

envisaged that the residential development areas will be progressively built out towards the east and south. Detailed phasing arrangements will need to be agreed with the statutory undertakers and utility companies as the availability and timing of utilities to serve the site will influence the phasing options.

It is anticipated that the key Green Infrastructure proposals within the River Witham corridor (and including the Riverside Walk); around the existing settlement edge (surrounding the properties on Bridge End Grove) and across the higher valley slopes

and plateau edge will be undertaken relatively early in the development. Importantly, this will enable the woodland, tree and other planting associated with these proposals to establish and grow prior to much of the nearby and wider built development being implemented.

The phasing of the employment area will be generally independent of the development east of the river. The phasing and implementation of this area will be largely dictated by economic factors and specific end user requirements. It is however, anticipated that the gateway and frontage

landscape proposals and other important aspects governing the character and appearance of this part of the development will be undertaken early in the implementation process. This will set the scene and character for the employment area.

Further details of the likely phasing and delivery programme would be advanced as part of the outline planning stage of the development process. This will include further details of the phasing of all the green infrastructure components and access and utilities infrastructure.

