Horncastle Neighbourhood Development Plan 2014-2029

Appendix T - Urban Structures Study

Contents

Cover images from left to right:
Pedestrian and cycle route off Mareham Road
Spilsby Road
Stanhope Road
Boston Road

OPUN This report was produced by OPUN, the architecture and built environment charity.

Part one: background

1.1 Introduction

Horncastle is a town with a rich and diverse built environment that sits in an attractive landscape setting.

The Horncastle Neighbourhood Development Plan (HNDP) has been produced to ensure that any new development supports and enhances the existing town, both in terms of design and in terms of its social and economic aspects.

To do this, the HNDP has established a vision for the town's future (Appendix I: Vision for Horncastle 2014 - 2029).

This includes a particular emphasis on quality new housing and the careful management of the existing built assets of the town, as well as other aspects such as identifying flood risk and improving access to the town's open spaces and green assets.

To achieve the vision, the HNDP also sets a series of objectives (see Appendix II: HNDP Community Objectives).
Included in these are objectives that relate directly to the approach to development, the quality of the design of new spaces and buildings, and supporting the economic vitality of the town.

This document has been produced to help ensure new development works towards turning the vision into reality through achieving the objectives.

Images (clockwise top):
St Mary's Church in central Horncastle.
Open views across the town from Langton Hill
The roll of trees in defining the street on Louth Road

1.2 About Horncastle

Horncastle is a large and centrally located Lincolnshire market town that dates back to the Romans, and features numerous Roman artifacts including remains from the walls of a Roman fort. It is listed in the Doomsday book as a small settlement that has seen its population grow to around 6,000 residents in 2014.

The Roman origin of the town is not especially evident in its main structure, as the town doesn't appear to sit on any major Roman road routes.

This suggests the rivers may have been its primary transport link and to this day the rivers plays an important role in shaping Horncastle's growth, use and image.

The town is sited on the edge of the Lincolnshire wolds and the topography of the area is striking. Combined with the Bain and Waring river valley, the morphology of the town shows the influence of these natural conditions in its structure.

The town's built form demonstrates distinct character areas and the town centre is home to a number of listed buildings. The town centre is also designated a conservation area, as are areas of housing adjacent to the town centre.

Overall, the town is busy, bustling and beautiful, and the residents want to make sure that should the town grow it does so in a way that only adds to this.

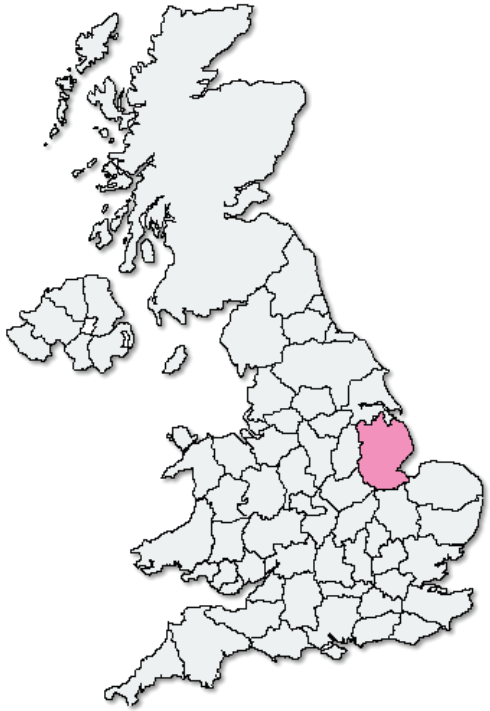


Fig 1.1 Lincolnshire in the UK context

The impact of the long coastline on the inland areas of this county can be seen in the formation of Lincolnshire towns.

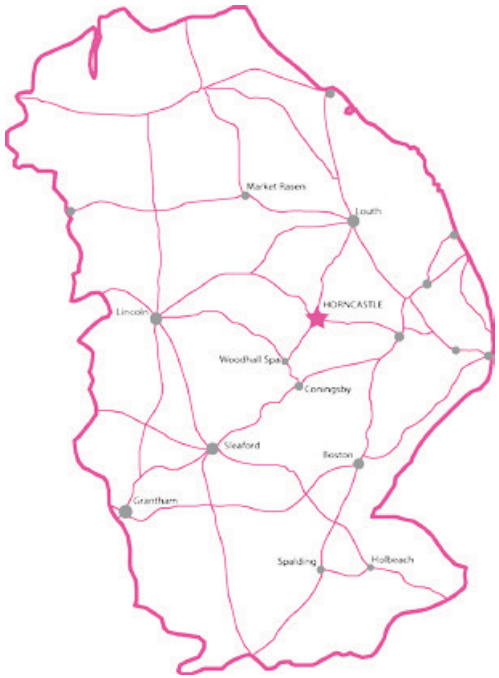


Fig 1.2 Horncastle in it's county setting

Sitting on main lines of movement to surrounding towns and well-located for access to Lincoln and the coast.

Part two: study outline

2.1 Purpose of this study

This study is aimed at helping to answer the question 'How can new development in Horncastle support and enhance the existing town?'.

To do this, the 'urban structure' of the existing town has been analysed to help uncover what makes Horncastle recognisable as a distinct and memorable place.

English Partnership's Urban Design Compendium describes urban structure as:

'The elements which make up a place – blocks, streets, buildings, open space and landscape – and how they fit together. It applies equally to all places - to the centre and the suburb and everything in-between and to the city, town and the village.

Urban structure is important because it provides the foundations for the detailed design of individual developments enabling:
-Integration with surrounding area
- Individual elements to function efficiently together
- Environmental harmony
- A sense of place
- Commercial viability'

By drawing upon the results of previous townscape studies, consultation exercises and new analysis, this document seeks to make 'structural' recommendations for new development.

It also gives recommendations at the more detailed level, with the various design scales working together to deliver development that is recognisably 'of Horncastle' and not 'anytown' new development without a distinctive character.

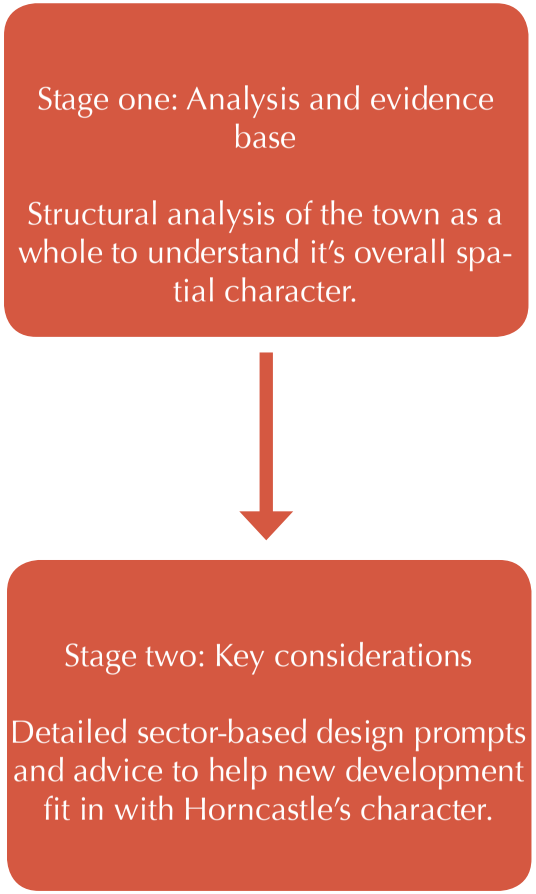
Images (clockwise top):
Market Square in the centre of town
Bridge Street looking along the river
Green boundaries on Accommodation Road
Pedestrian and cycle route off Mareham Road

2.2 Structure of this study

This study is structured in a way designed to layer evidence from the analytical stages to build to propositions for future development.

To do this two key stages of work are developed; one covering town analysis and the other developing guidance for future change.

For this second stage, the town is divided into 'segments' based on their spatial integration with one another. For each, a list of suggested design advisories is provided to help future design teams develop proposals that meet the wider needs of the town and help improve it as a whole.



2.3 Methodology

This study draws upon the approach developed by the North Northamptonshire Joint Planning Unit in devising their Urban Structures Study.

Using a range of analytical techniques, this study 'decodes' the existing town's structure and form to enable it to be 're-coded' into new development should it come forward.

To do this, a range of analytical techniques have been used:

Geomorphology: An investigation into how landform and landscape have influenced the structure of Horncastle to highlight considerations for future development in relation to topography and watercourses (see Fig 2.3.1)

Structural development: A review of Horncastle's change over time to identify which patterns emerge, their relative quality, and if these have anything valuable to add to discussions relating to future development.

Route Structure Analysis: The NNJPU study uses a modified version of the analysis system developed by Karl Kropf (Urban Morphology Unit, University of Birmingham).

This analysis is conducted by colour-coding the town's routes based on how they interconnect. This study identifies and labels the following types of routes:

Major routes – long distance routes that connecting to adjacent settlements.

Main routes – routes of major importance within Horncastle, likely to be multifunctional streets that play a key role in internally structuring the town.

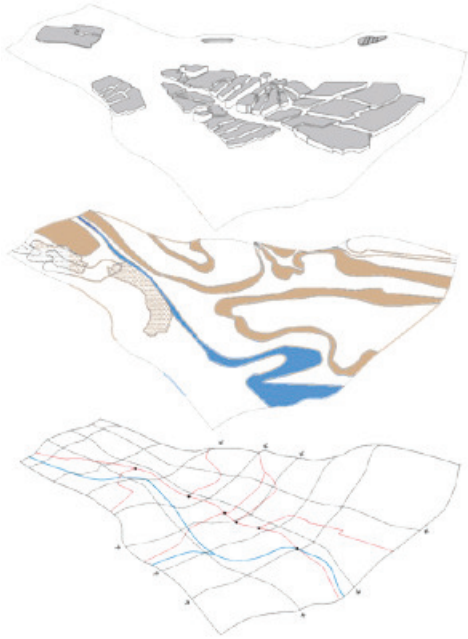


Fig 2.3.1 Geomorphology

How landform influences the layout of a settlement, with routes and settlement form shaped by the underlying geomorphology.

Image: Bentley and McGlynn, Eco-responsive Environments

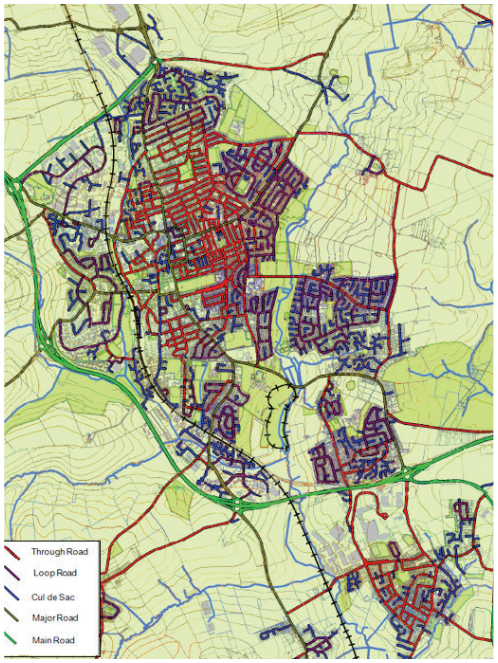


Fig 2.3.2: Route structures analysis

A route structures analysis of Kettering, Northamptonshire using the system developed by Karl Kropf.

Image: NNJPU Urban Structures Study.

Through routes – streets that connect to a different route at each end, although likely to be less functionally diverse as main routes.

Loop routes – streets that connect to the same street at each end.

Culs de sac – a street connected only at one end.

See Fig 2.3.2 for an example of a route structures analysis of Kettering.

Space Syntax analysis: The research and analytical techniques developed by the Space Syntax Laboratory, UCL provides an evidence base for the fundamental links between spatial layout and the social, economic and environmental performance of places.

This study uses Space Syntax software to perform axial graph analysis on the structure of Horncastle to assess the potential of different parts of town to enable walking and cycling, to foster community and neighbourliness, and to add economic value. In this study we use a spatial depth or 'radius' of 3. The research generated by the Space Syntax Laboratory demonstrates that a spatial depth of 3 (R3) is a key 'tipping point' for modal choice. Areas that are 'deeper' than 3 have been demonstrated to be likely to have lower instances of walking and cycling. See Fig 2.3.3 for an example.

Structural character areas: Combing the results from the routes structures analysis and Space Syntax analysis enables the identification of broad structural character areas.

Literature review: A review of existing townscape reports with a view to take their recorded observations and make them 'propositional' for future design teams looking to develop in Horncastle.

Figure ground: A figure ground diagram can be used to show how

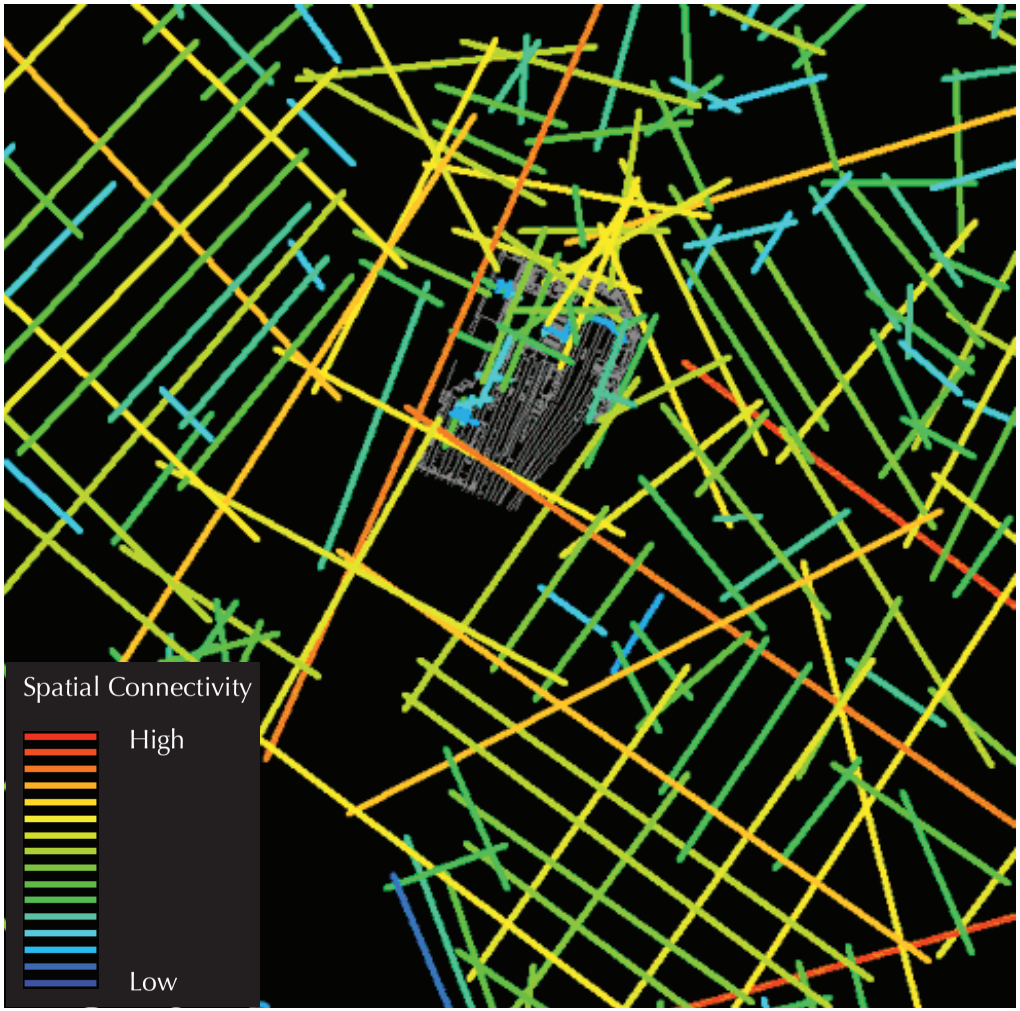


Fig 2.3.3 Space Syntax

An axial line diagram of Victoria Station, London showing the best integrated streets.
Image: Space Syntax Ltd.

space is distributed in a town (see Fig 2.3.4).

By showing only the built form, relationships between buildings and spaces can be quickly assessed and analysed.

How buildings relate to their surrounding spaces and which arrangements should influence future development (and which should be avoided) can be shown via this approach.

Site visits and consultation results: Data on the way people use the town's routes and spaces has been collected during the development of the Neighbourhood Development Plan and this information is combined with the other analytical techniques to develop a qualitative understanding of the towns urban structure.

Fig 2.3.4 Figure ground

A figure ground of Nottingham showing the fine grained residential streets to the north and the large industrial area near the river Trent.

2.4 Scope and limitations

This document is not a commentary on site-specific issues or architectural styles. Nor does it attempt to 'allocate' or 'reject' sites for potential development.

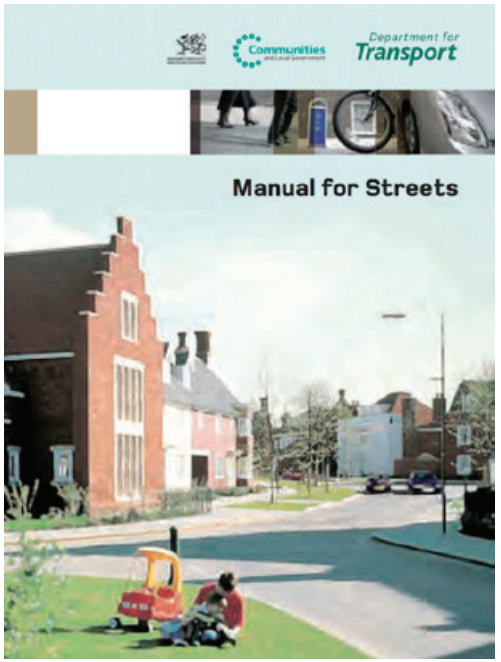
Also, it does not cover every aspect of urban design and should be read in conjunction with other documents such as the Urban Design Compendium, Manual for Streets and Building for Life 12.

The approach developed for this study is different from the more familiar 'Townscape Assessment' work often developed for historic settlements.

Often, these assessments are not designed to be 'propositional' and have limited scope for influencing development outside of the historic core of their study location.

Here we attempt to use a deeper morphological basis for influencing how the town might grown and absorb change in the future.

Urban Design Compendium 2, English Partnerships



Manual for Streets, TFL

Building for Life 12, the BfL Partnership

Urban Design Compendium 2, English Partnerships

When the Urban Design Compendium was first published in 2000 it noted that quality of design was becoming one of the most important criteria in determining whether a project should be eligible for public funding.

Since this time understanding of the importance of design quality in creating places people want to live and work in has grown. All development proposals – whether for new development or redevelopment of small infill sites – need to demonstrate that they will be delivering quality places.

It is therefore vital that those evaluating the quality of design proposals have some guidance on what forms of urban design work well and why.

Similarly those developing proposals need information on what will be expected of them in terms of their investment in project design.

The purpose of the Urban Design Compendium is to help equip all those involved in the delivery of places with guidance on achieving and assessing the quality of urban design in developing and restoring urban areas.

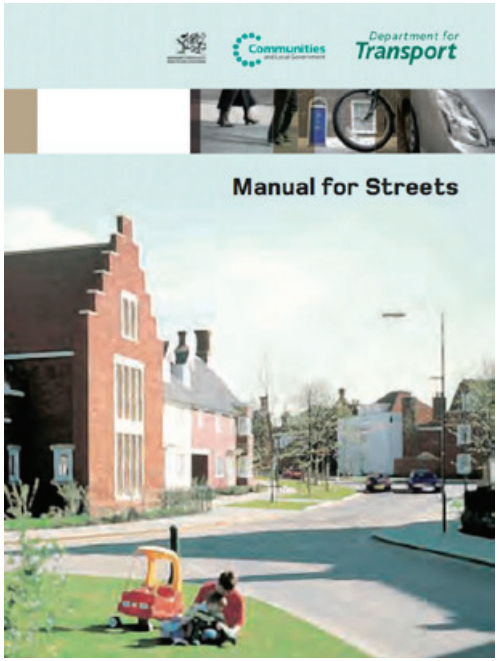
It is not an exhaustive text. The Compendium provides an analysis of core design issues through the different stages of the project process, from assessment of overall context to deciding the detail of proposed developments.

It is principally about the substance of urban design in creating the product. In other words, how do we change the urban landscape to create places where people want to live, work and socialise, from the street corner to the settlement.

The Compendium is not generally intended as a guide on how design relates to the detail of the planning and management process. However, we address these issues in the new companion publication 'Urban Design Compendium 2: Delivering Quality Places'.

The material within the Compendium reflects good practice both in the UK and overseas, relying on the stream of new and rediscovered approaches to urban design that emerged at the end of the twentieth century.

The regeneration movement has been at the forefront of producing this new wave of thinking about how design can position development in the market, change perceptions of place and create value. There is also a strong body of research to be drawn upon what constitutes urban quality.



Manual for Streets, TFL

Manual for Streets (MfS) replaces Design Bulletin 32, first published in 1977, and its companion guide Places, Streets and Movement.

It puts well-designed residential streets at the heart of sustainable communities. For too long the focus has been on the movement function of residential streets. The result has often been places that are dominated by motor vehicles to the extent that they fail to make a positive contribution to the quality of life.

MfS demonstrates the benefits that flow from good design and assigns a higher priority to pedestrians and cyclists, setting out an approach to residential streets that recognises their role in creating places that work for all members of the community. MfS refocuses on the place function of residential streets, giving clear guidance on how to achieve well-designed streets and spaces that serve the community in a range of ways.

MfS updates the link between planning policy and residential street design. It challenges some established working practices and standards that are failing to produce good-quality outcomes, and asks professionals to think differently about their role in creating successful neighbourhoods.

It places particular emphasis on the importance of collaborative working and coordinated decision-making, as well as on the value of strong leadership and a clear vision of design quality at the local level.

Research carried out in the preparation of Manual for Streets indicated that many of the criteria routinely applied in street design are based on questionable or outdated practice.

For example, it showed that, when long forward visibility is provided and generous carriageway width is specified, driving speeds tend to increase. This demonstrates that driver behaviour is not fixed; rather, it can be influenced by the environment.

MfS addresses these points, recommending revised key geometric design criteria to allow streets to be designed as places in their own right while while still ensuring that road safety is maintained.

Building for Life 12, the BfL Partnership

Building for Life 12 is the industry standard, endorsed by government for well-designed homes and neighbourhoods that local communities, local authorities and developers are encouraged to use to help stimulate conversations about creating good places to live.

The 12 questions reflect our vision of what new housing developments should be: attractive, functional and sustainable places. Redesigned in 2012, BfL12 is based on the National Planning Policy Framework and the government's commitment to not only build more homes, but better homes - whilst also encouraging local communities to participate in the place making process.

The questions are designed to help structure discussions between local communities, local planning authorities, developers and other stakeholders.

BfL12 is also designed to help local planning authorities assess the quality of proposed and completed developments; it can be used for site-specific briefs and can also help to structure design codes and local design policies.

BfL12 comprises of 12 easy to understand questions that are designed to be used as a way of structuring discussions about a proposed development. There are four questions in each of the three chapters:

- Integrating into the neighbourhood
- Creating a place
- Street and home

Based on a simple 'traffic light' system (red, amber and green) we recommend that proposed new developments aim to:

- Secure as many 'greens as possible,
- Minimise the number of 'ambers' and;
- Avoid 'reds'.

The more 'greens' that are achieved, the better a development will be.

A red light gives warning that a particular aspect of a proposed development needs to be reconsidered.

2.5 The structure of successful places

A great deal of research has been undertaken into what physical and spatial arrangements help make places successful.

Successful places show a remarkable degree of similarity in certain critical areas.

These relate to the accessibility of the town's various spaces from one another, including the user experience of using routes and public areas.

This is hardly surprising; the reason people collect together to create settlements is because of the social and economic value they generate through allowing people to interact and transact.

The 'backbone' of most settlements are the major 'radial' routes that provide access from the edge of the settlement to the centre. Where these radial routes meet is almost always the settlement's 'core' or heart. It's where you are most likely to find any retail offer, and historic buildings and spaces with a civic function are often found in this area too.

Over time and with the advent of motorised travel, many radial routes have been reprioritised to deal with traffic to the detriment of the experience of other people using them.

They can sometimes be fast and intimidating, and the conditions along the edges of these streets is sometimes unpleasant, with buildings turning away from the pubic space providing a black edge to the pavement.

A key priority is therefore to ensure that radial routes, which are so important to a town's urban structure and the ability of development on the edge of town to integrate socially and economically with the centre, are useable by everyone and provide a pleasant and safe environment.

In addition to radial routes, successful places provide links between these radial routes to

Clockwise top left: Jubilee Way, a car-dominated road in the heart of Horncastle.

A more balanced street in the town centre, allowing for the needs of traffic and people.

Historic market place in Horncastle, where the retail core is clustered around the convergence of the town's main radial routes.

facilitate cross-town movement. These 'spokes on the wheel' or 'orbitals' offer a choice for moving and experiencing different parts of town without the need to move through the very core, whilst also providing for direct and easy access to a radial that leads to town.

Taken together, orbital and radial routes provide a type of grid. The most economically and socially successful places are based on this grid-like arrangement (see Fig 2.5.1).

Non-gridded places are often less successful and, due to how poorly they distribute movement throughout their structure, they often find it difficult to support movement-dependant uses such as good shops and restaurants. Often, Non-gridded places are 'mono-functional' and highly zoned, with different uses not mixed into an area but instead in distinct areas that are often accessible only by car (see Fig 2.5.2)

A place's pattern of streets divides the town into 'urban blocks' that can accommodate buildings and open spaces. It is critical for a walkable and cycleable neighbourhood to avoid spacing street junctions too far apart as this erodes the instances of people choosing modes of transport other than the private car. This is critical in Horncastle as car traffic is seen as one of the town's most negative features.

Within the urban block, buildings can be arranged. How buildings are arranged in relation to the public spaces in the streets is critical to how a public space performs. The best places ensure that building fronts address public spaces and that private space is created to allow for private functions of a buildings user's to be undertaken (see Fig 2.5.3).

The typical arrangement that flows from these two arrangement decisions is the 'perimeter block', with the public edges of the blocks addressed by building fronts and

Fig 2.5.1 Figure Ground of East Oxford

A continuously connected grid of streets, which until recently was the typical way of structuring towns.

Fig 2.5.2 Figure Ground of North Bicester

A 'mono-functional' hierarchy of residential roads creating a disconnected tangle of routes.

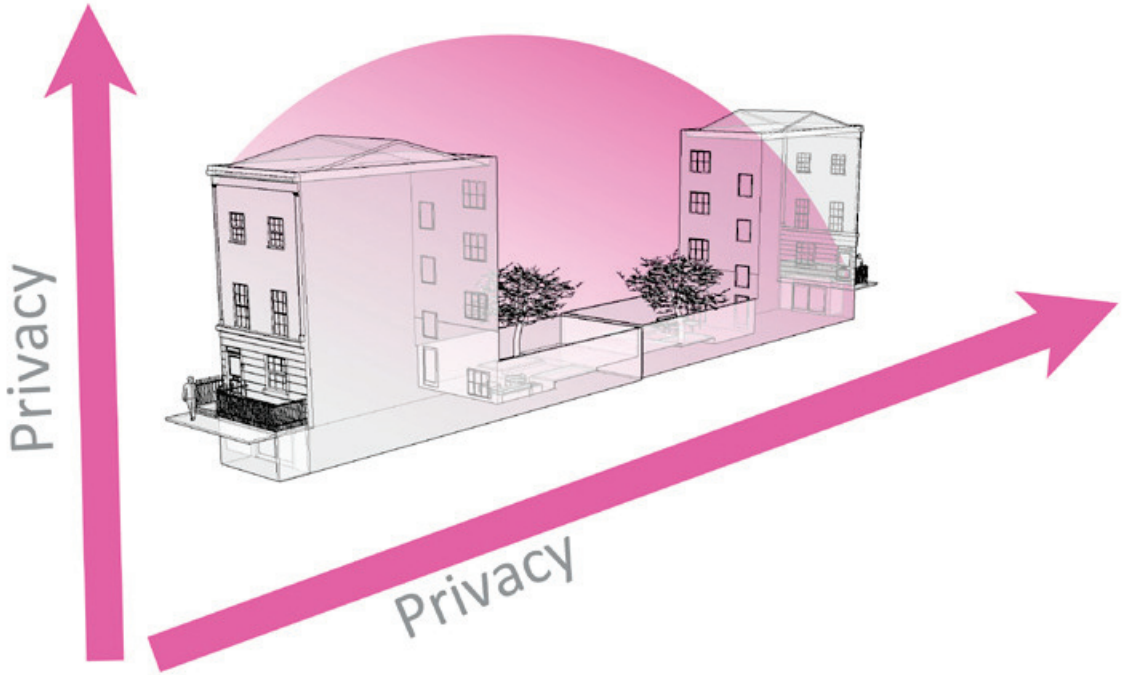
the private building backs facing each other towards the centre of the block (see Fig 2.5.4).

Some of the most widely criticised modern residential areas arrange public and private space differently, often placing people in public spaces adjacent to the most private areas of a building such as a garden or back door.

Research has shown that this sort of arrangement is a significant causal factor in determining rates of property crime. Separate research also shows that routes that are not addressed by building fronts or 'active edges' are less used for walking and cycling as they do not feel safe.

Finally, a successful place must provide for and facilitate access to open space and provide a green and ecologically rich environment.

The management of water can play a positive role in this, and Horncastle has a particular



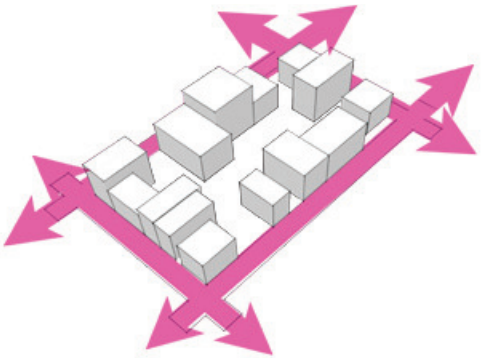


Fig 2.5.3 Above: Placing fronts facing out creates an area of privacy within the block whilst also providing 'eyes on the street' for increased feelings of safety.

Fig 2.5.4 Left: A typical perimeter block formed by the spacing of street junctions and resultant building placement.

requirement to carefully manage flood potential.

The importance of access to green routes and spaces has been demonstrated repeatedly by studies from all over the globe, and the role of incidental exercise in combating mental and physical health problems is becoming ever more widely understood.

The best places connect people with their landscape, waterscape and provide a framework of green spaces and routes to encourage getting out and about.

Taken together, it is possible to form general place-structuring principles (see Fig 2.5.5).

With these principles established, it is possible to analysis existing Horncastle and test it's structure and spaces for their adherence to or divergence from the attributes of a successful place.

Top: SUDs add to the quality of the public realm in Upton, Northampton.

Bottom: A rural pedestrian link between Mareham Road and Davereux Way in Horncastle.

Fig 2.5.5: The structure of sucessful places

- Main streets that connect from the centre to the edge of town must provide an attractive and usable environment for all users, not just motorised travel.

- Main streets should, where possible, be interconnected through a grid-based route structure that creates a 'permeable' network that enables easy movement for all modes through the town.

- Urban blocks should be of an appropriate scale to allow for different parts of town to remain integrated for all people. Larger blocks may be appropriate for some locations but they should not act as a barrier to a town's walkability.

- The buildings within the blocks should provide for a public front so that all public spaces are well overlooked and 'active'. Where possible, plots and buildings should not offer a blank edge to public spaces.

- Green elements and water should be fully integrated into the town's structure so that they are accessible for people. Street trees and plot boundary treatments have a roll to play in this, as do Sustainable Urban Drainage systems (SUDs).

Part three: urban structures analysis

3.1 Horncastle's structural development

The overall shape of Horncastle is driven by its relationship with the local topography and its two rivers; the Waring and the Bain. The alignment of the main routes in the town - aligned with and perpendicular to the ridge lines - gives the town a rough cruciform main structure.

Horncastle's main route structure – Spilsby Road, Boston Road, Lincoln Road, and Louth Road – is evident on even the earliest maps, demonstrating the staying power of strategic routes but also showing how the town centre's location is due to the convergence of these routes, with the town's major trading centre forming to take advantage of access to the river and then it's ability to access the wider area.

This principle is near-universal in underpinning the structure of historic settlements, augmented by local geomorphological considerations. Later town growth adds 'spokes to the wheel', joining together the radial routes that connect Horncastle to adjacent settlements. Gaps in this approach exist in Horncastle, due to the two rivers and their extensive floodplains.

This results in a very high concentration of movement focused on the town centre and a high level of constraint when thinking about how to distribute this more evenly through the town's network of routes.

Modern periods of growth have seen the adoption of a structural approach that makes a distinct break from the more gradual, historic growth of Horncastle.

New housing development at the edges of the town dating from around 1950 through to the early 2000's shows a pattern of streets that uses a 'nested hierarchy', with distributor and access roads ending in cul-de-sac housing 'pods'.

Again, this approach is ubiquitous for this period of development in England, often leading to complaint that more modern development can be 'from anywhere'.

Images (clockwise top left):
Trees in private gardens add interest to Spilsby Road.
Long sight lines such as those on Spilsby Road typify established routes in Horncastle.
New development using a less direct layout along Wesley Way.

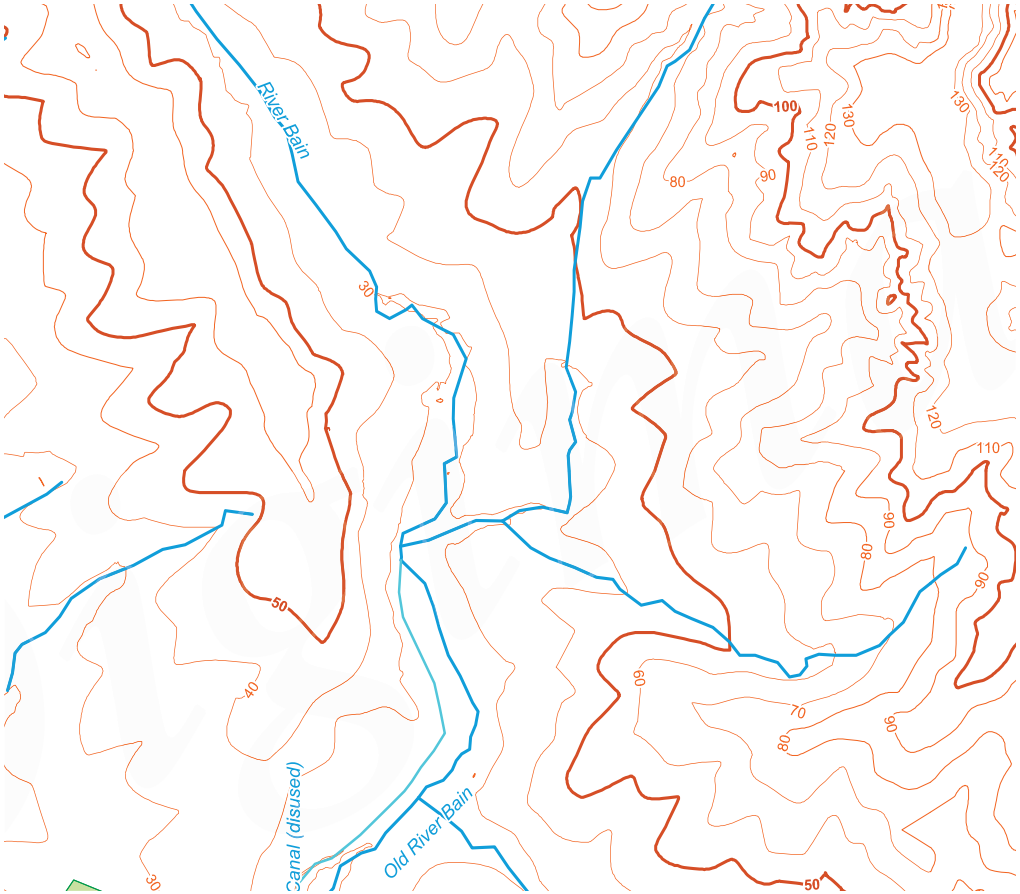


Fig 3.1.1 Topography and watercourses show underlying geomorphology on which the town sits.

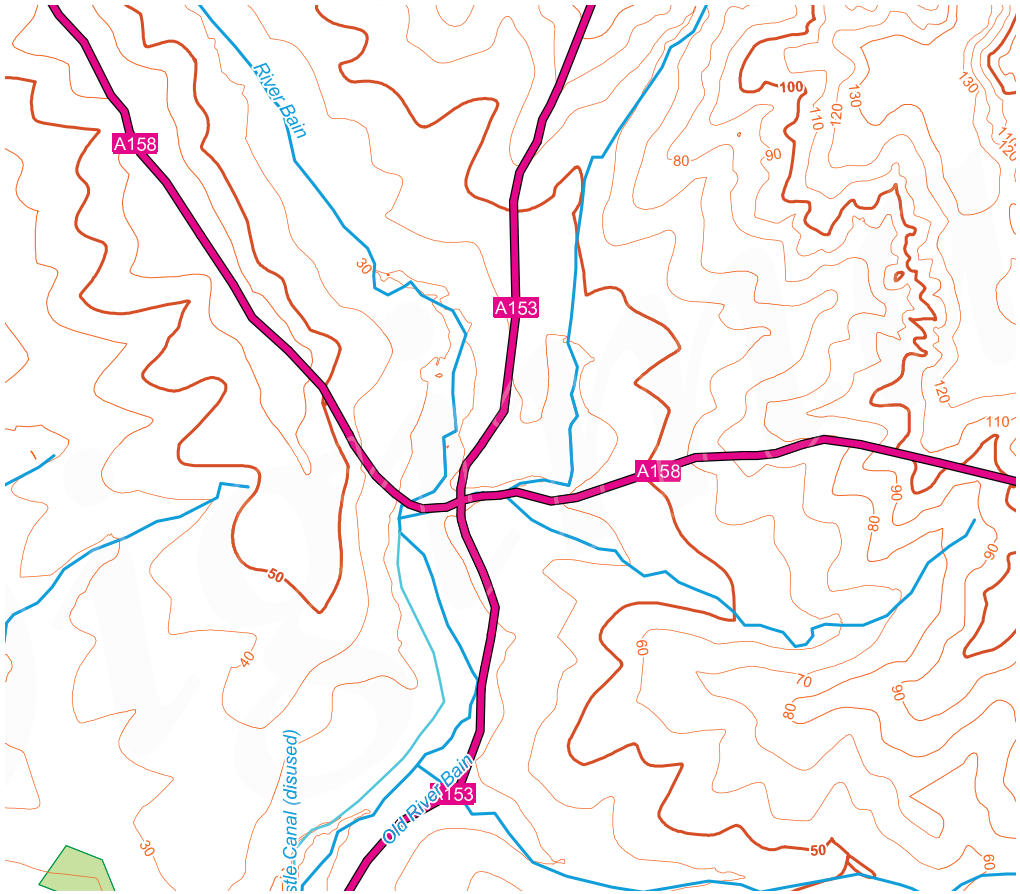


Fig 3.1.2 The main routes run either ‘with’ the contours (Louth Road, Boston Road) or ‘against’ them (Spilsby Road, Lincoln Road).

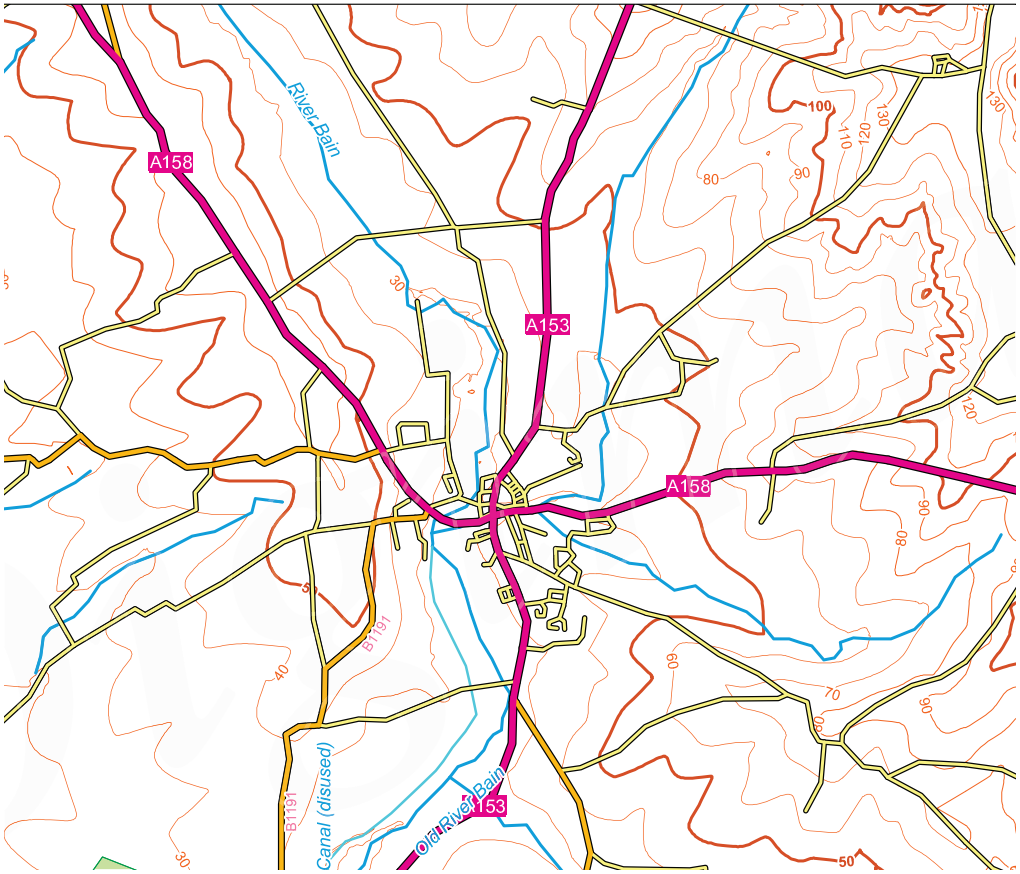


Fig 3.1.3 Secondary routes add orbital options to the main radial structure such as Stanhope Road and Queen Street.

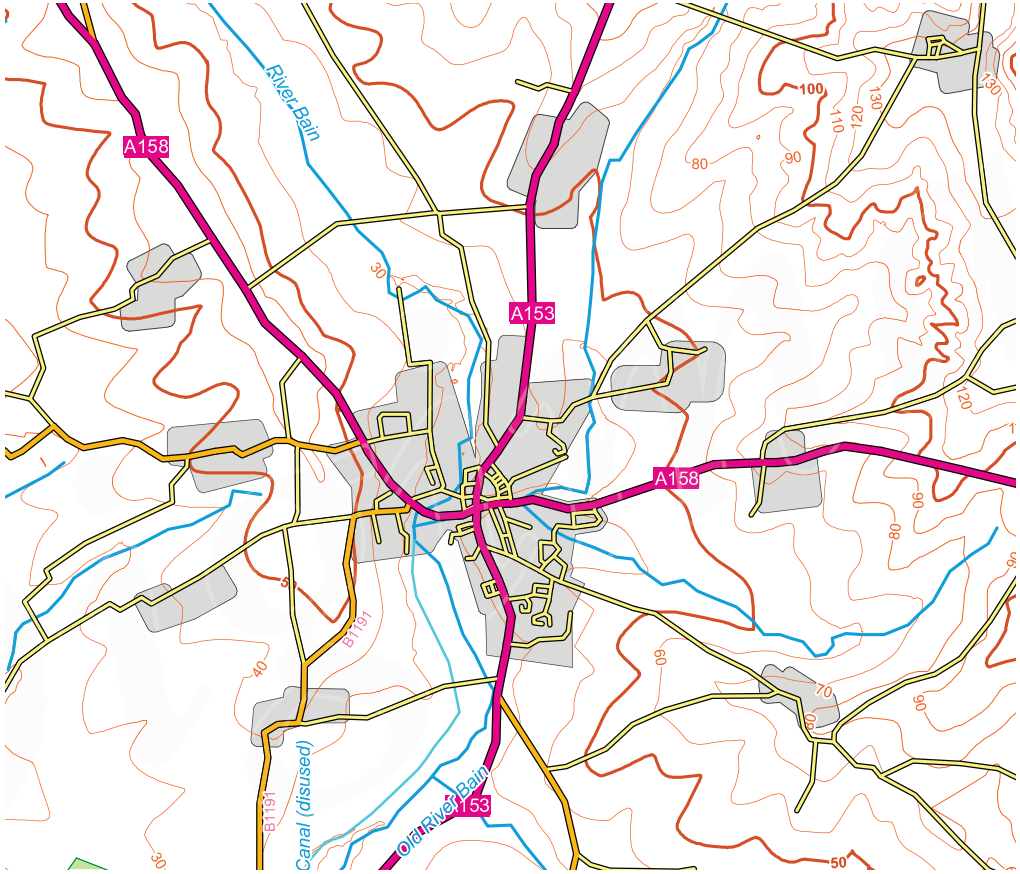


Fig 3.1.4 Developed areas cluster strongly around the radial routes but large gaps begin to emerge due the constraints of the rivers.

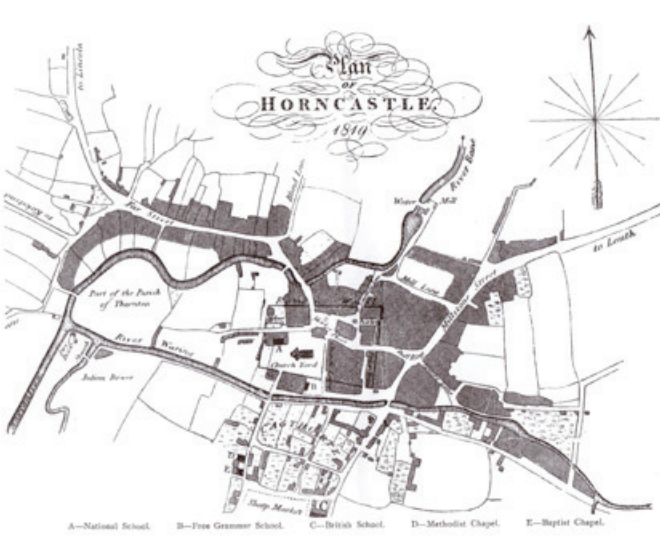


Fig 3.1.5 Horncastle 1819

In 1819, Horncastle was still a relatively small town but it's main structure was fully developed. Field boundary's running between what is now Louth Road and Banks Road hint at the future locations of Horncastle's first orbital routes - Linden Road and Stanhope Road.

Fig 3.1.6 Horncastle 1880

By 1880 the main orbital routes are evident; Stanhope Road and Linden Road have been installed and Foundry Street and Queen Street are also in place. Development is starting to infill the 'spokes' of the radial route system.

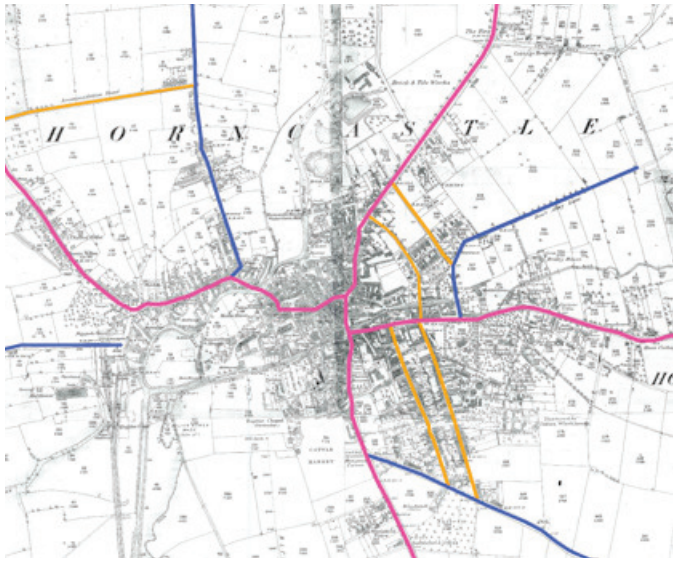


Fig 3.1.7 Horncastle 1900

By 1900 Horncastle's structure is fully mature, with development clustering around the main radial routes (pink) and the main orbital routes (orange) also starting to become fully developed.

3.2 Route structure analysis

The route structures analysis reveals some very important things about how different approaches to growth have affected the pattern of connectivity in Horncastle.

Newer development at the edges of town use a street pattern that is highly disconnected both internally and externally; the streets connect poorly with the radial routes in to town and also interconnect poorly with other streets on the same estate.

Particularly bad in this regard are the developments along Holmes Way to the south and Carlisle Gardens to the north east. Oak Tree Meadow to the North also typifies this development approach.

Better-connected streets can be found around Linden and Stanhope Road and around Queen Street and Foundry Street.

In all instances, the best-connected streets to be found in Horncastle are the older streets. These streets show up in the consultation work as Horncastle's best-loved streets and their form is part of what gives Horncastle its character.

Fig 3.2.1 Route structure analysis

The plan above shows the route structure analysis for Horncastle.

Fig 3.2.2 Route structure (just routes)

Note the low number of red and blue routes as you reach the town's edge. Future development needs to ensure connectivity is restored and provide a more connected route structure to mirror the better parts of Horncastle's built form.

3.3 Space Syntax analysis

The Space Syntax graph analysis software (DeathMapX) offers an array of analytical techniques that reveal information useful to understanding how the different parts of Horncastle are structured. See Fig 3.1.

The first step in developing a Space Syntax model is to create an 'axial line' diagram. This is done by drawing the fewest, longest lines along the street centre line as possible.

This diagram is then imported into the software for analysis. The software adds colour to show 'heat'; red lines are routes that score highly for whichever analysis is being performed, blue lines are ranked near the bottom.

For this study, we analyse connectivity, line length, integration and node count.

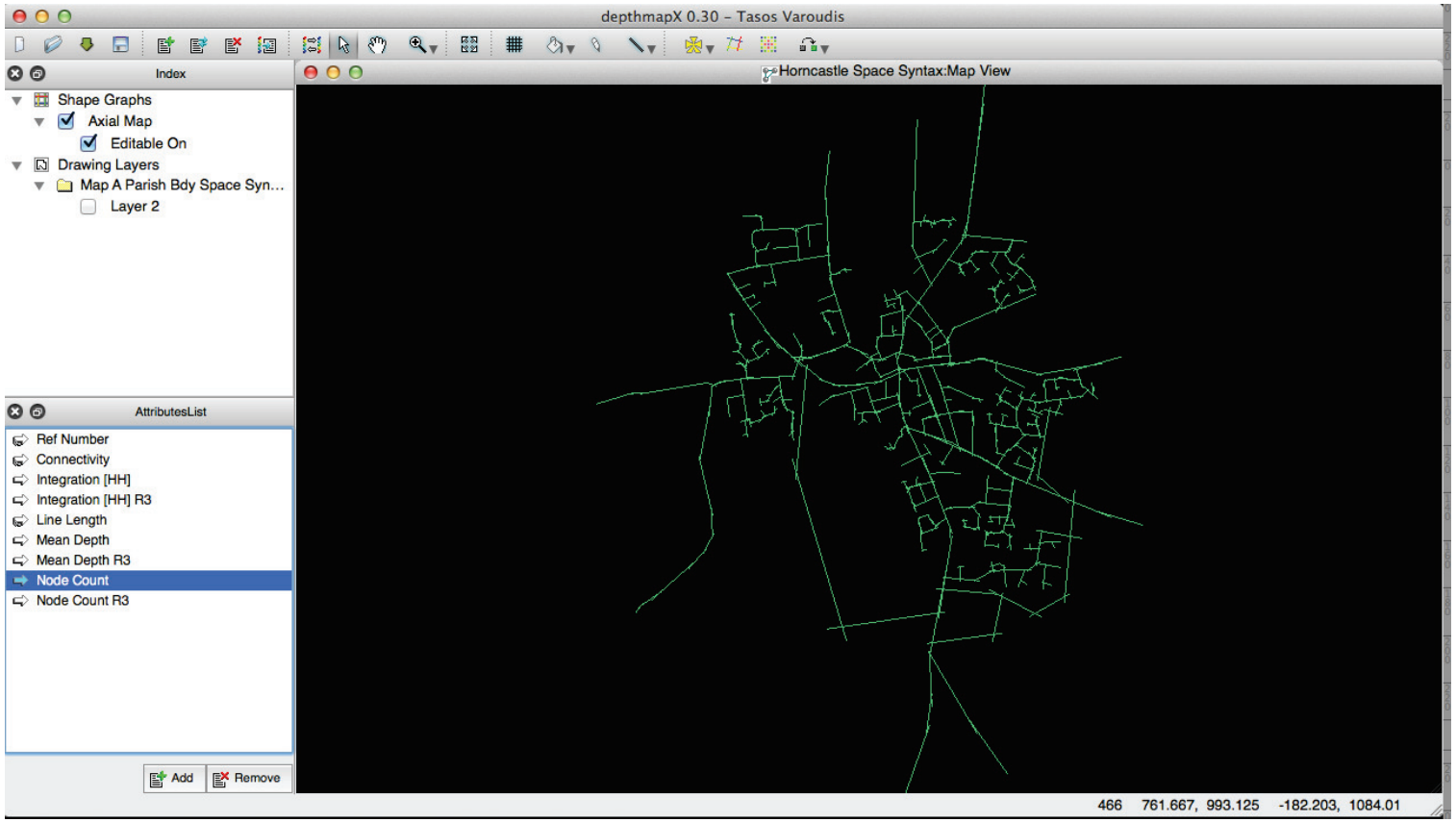


Fig 3.1: DepthmapX 3.0

DepthmapX, developed by Space Syntax, showing Horncastle in 'axial line' form ready for spatial analysis.

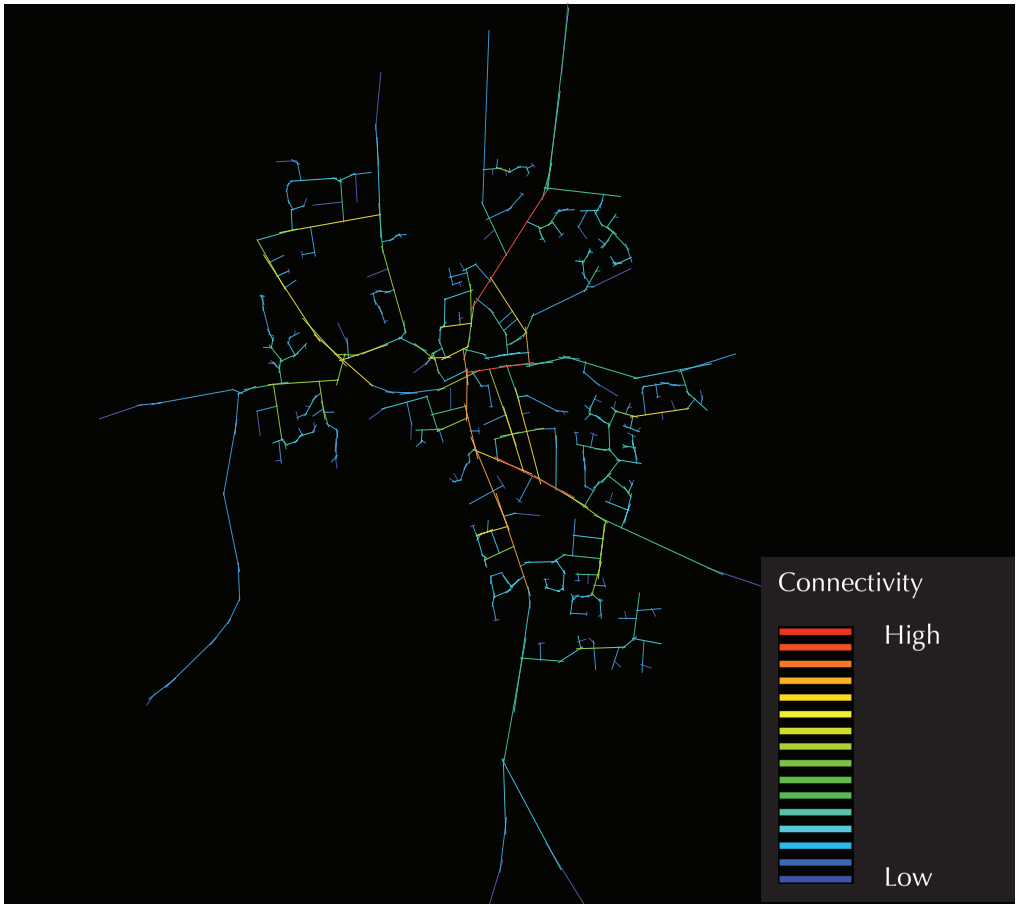


Fig 3.3.2 Connectivity Analysis

The Horncastle connectivity analysis show that historic Horncastle is distinct from the more modern developments in that it is very well interconnected.

Connectivity analysis

Relative to one another, the streets are coloured to show how well connected they are.

Better-connected streets play or could play a key role in movement around town. Poorly connected streets do not contribute to town-wide movement and can act as a barrier.

Results

The connectivity analysis shows very clearly that edge-of-town development between the radial routes are very 'cold' and offer only access to the housing etc contained within them.

Where orbital routes do exist, this analysis reveals their importance in 'stitching' the parts of town together, as seen by their 'warmer' colouring.

New development should look to provide streets that contribute to local and town-wide connectivity and avoid where possible streets that act to disrupt wider movement.

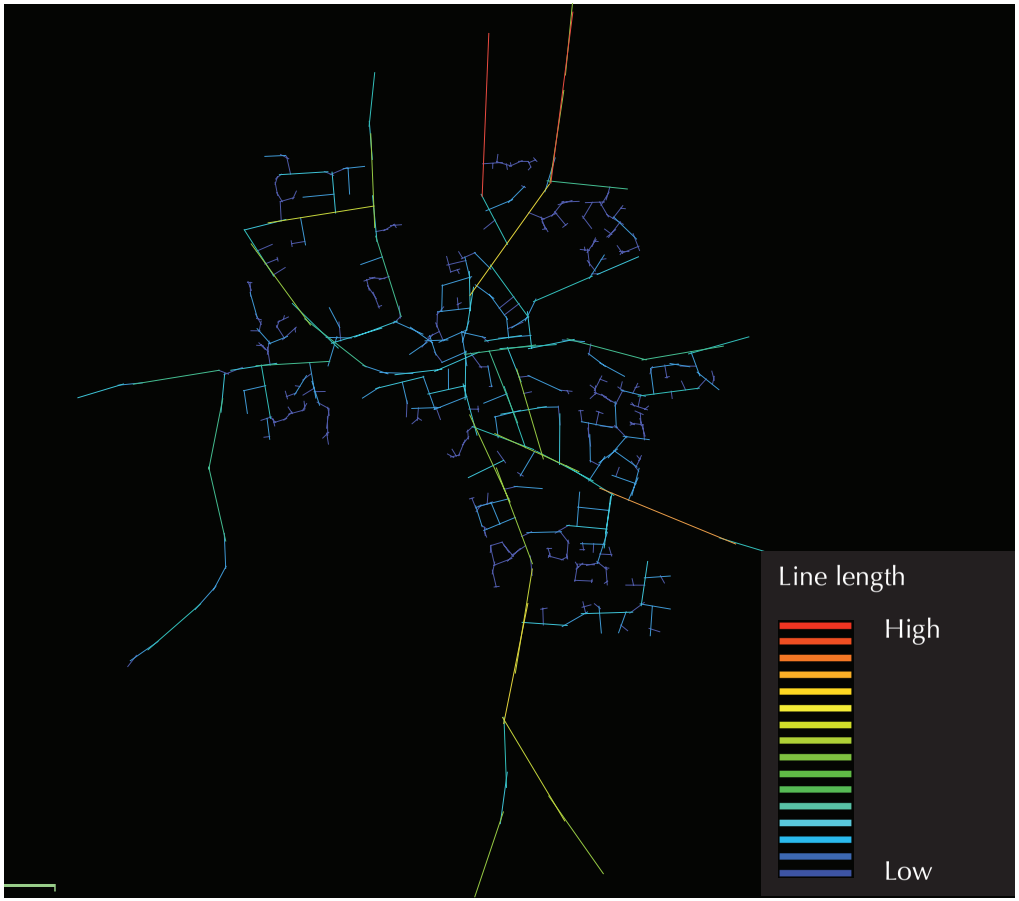


Fig 3.3.3 Line Length

The very earliest streets and spaces in Horncastle are characterised by having relatively long sight lines; the main radials in particular are very straight, as are Foundry Street and Queen Street.

Line length analysis

The line length analysis measures each axial line relative to the rest, ranking lines in order of length. Longer lines (straighter streets) have been shown to aid in encouraging walking and cycling.

Results

The line length analysis shows that the historic streets of Horncastle are much straighter and offer much longer lines of sight than the newer additions to the network.

The core of Horncastle features the sort of tighter street mesh expected for a dense retail area, but getting to the core is direct if you use the older routes. This is in striking contrast to the streets along the edges, which are extremely short and indirect.

To make future development more reflective of Horncastle's more valued townscape, line lengths need to increase.

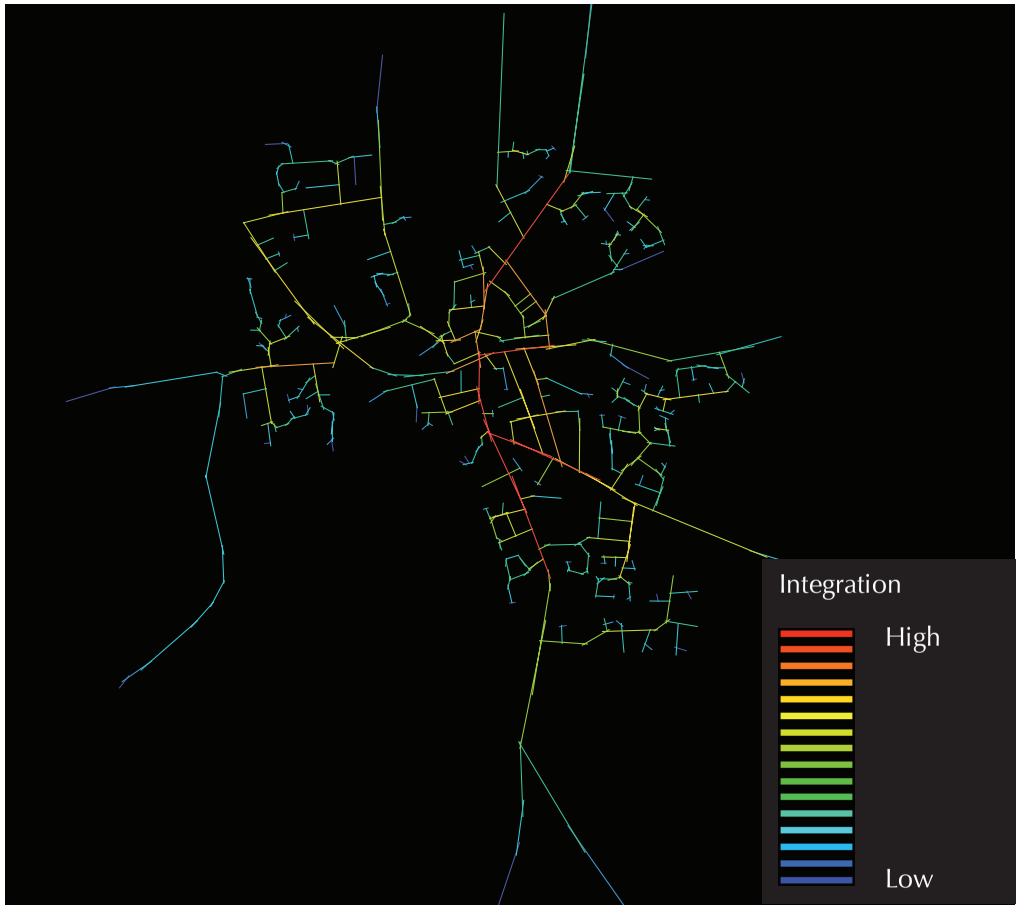


Fig 3.3.4 Integration analysis

Horncastle's more historic structure is well integrated, offering good levels of connection between areas. The newer additions to town, all coloured 'blue', are a different story, not integrating with town and acting as housing 'pods'.

Integration analysis

This measures a streets level of interconnectedness with the rest of town. Here we use a value of Radius 3 which has been show to be the 'tipping point' for walkability; beyond R3 and people find routes too complicated to use conveniently and instead opt for car use.

Future development must consider how people will walk/cycle within and out to the rest of the town. New roads and footpaths must connect with existing residential areas and provide clear and direct routes into the town centre. New development should aim to be as 'shallow' as possible to the wider route structure by aiming for a radius or depth value of 3 or less.

Results

What is revealed is that, in spite of their relatively high distances from town, the radial routes running north-south (Louth Road and Boston Road) are still very well integrated to the rest of the town's network.

Both of these routes have orbital connections; Boston Road is connected to Mareham Road albeit via a relatively 'cool' route (Wesley Way, Banovallum Gardens).

Louth Road's orbitals are Stanhope Road and Linden Road, both relatively close to town but still helping to make cross-town connections possible.

Poor levels of integration exist in disconnected parts of town even close to the town centre. Langton Drive and especially Bell Yard Close are disproportionately poorly integrated to the town centre.

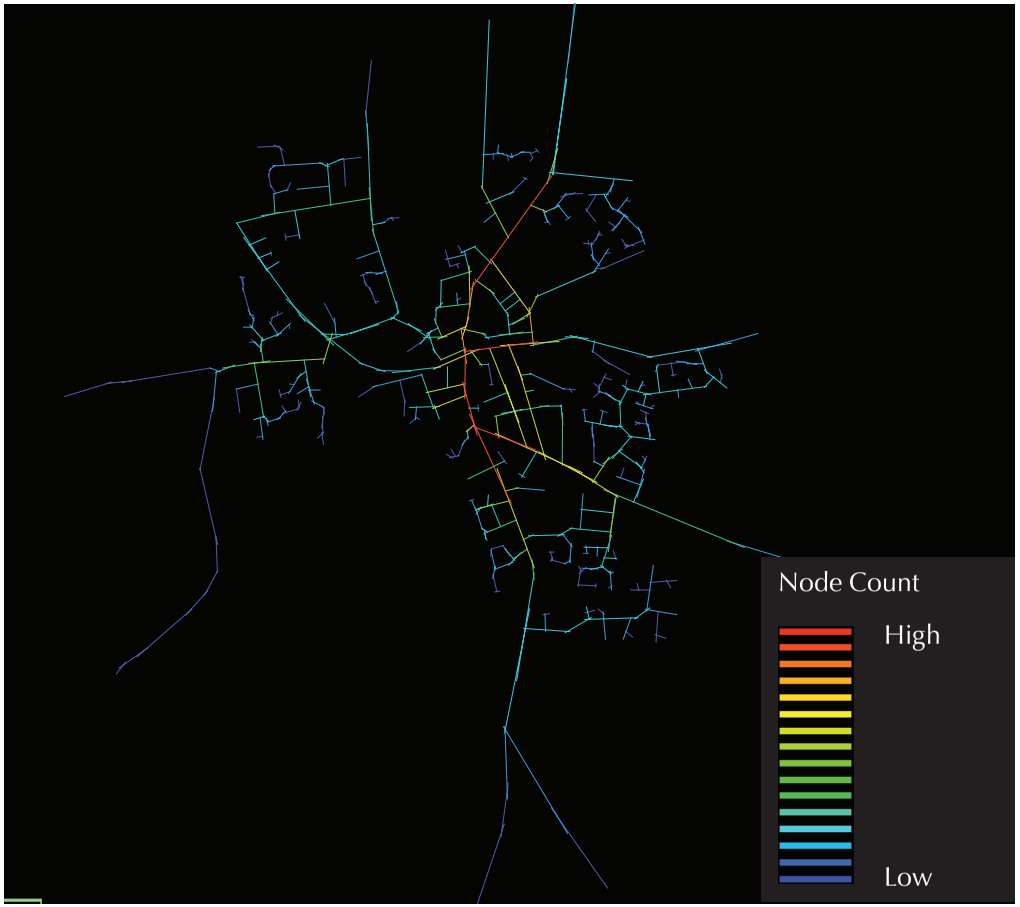


Fig 3.3.5 Node count

Horncastle's more locally distinct parts are typified by offering a high level of route choice, indicated by 'warm' areas on the plan where a high number of nodes (or junctions) exist.

Newer development offers little by way of choice of route and thus walkability is reduced.

Node count analysis

This analysis counts the number of times a line crosses with another. It gives an indication of how well 'joined onto' a street is, thus how many routes lead to a particular line. This is useful for understanding a streets' role in stitching the town together.

Results

The node count analysis was undertaken using a 'Radius 3' constraint as R3 has been shown to be a good indicator of the likelihood of a walkable place.

Again, a strikingly discordant pattern emerges, with newer developed often having a very low number of nodes and thus offering little choice of route. Older development has multiple options for which route to take and these relate well to each other spatially, increasing the walkability of the more historic core.

New development should look to add streets that have more than one node or junction, so that each street leads to another rather than a dead end.

3.4 Proposed Green Wheel network

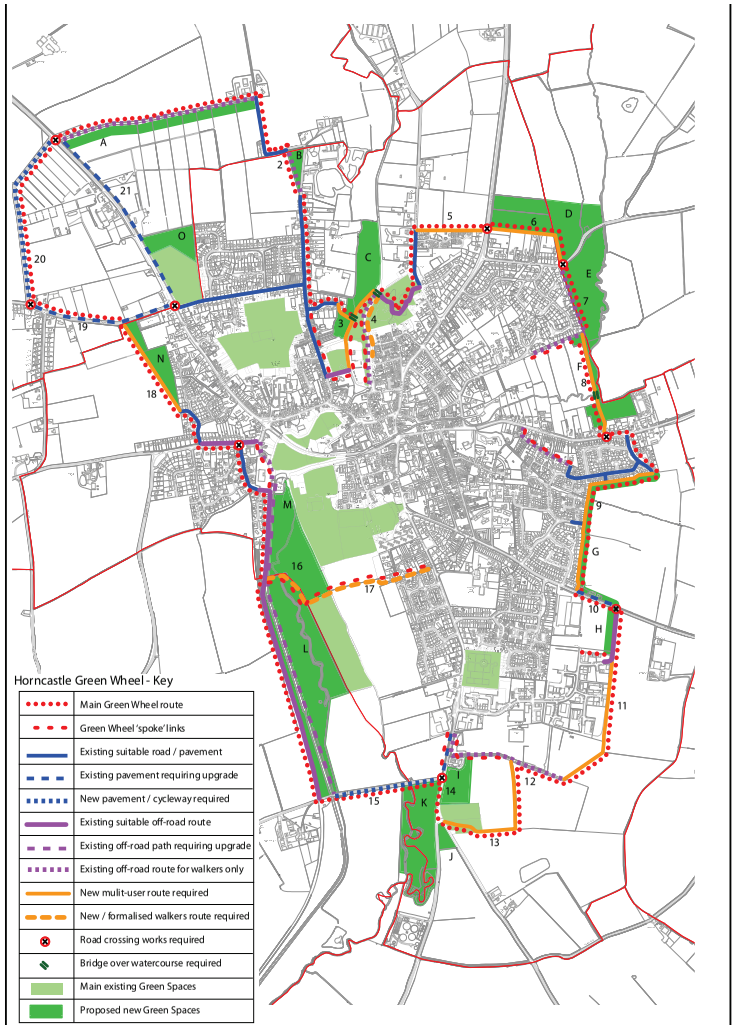


Fig 3.4.1 Green Wheel Network

Draft GW network map showing how routes around Horncastle could be connected to form a leisure and walking grid.

Part of the supporting work for the Neighbourhood Development Plan is the exploration of how to integrate a Green Wheel (GW) network around the town into a network that has the potential to act as movement structure to help get people out walking and cycling.

Adding the proposed GW network to the existing town structure shows a dramatic improvement in walkable integration (R3) around the town edge. The proposed GW network essential adds pedestrian 'orbitals' which allow for cross-town movement without the need to travel into and through the town centre.

A GW network of this sort could also aid access to the town's rural edge.

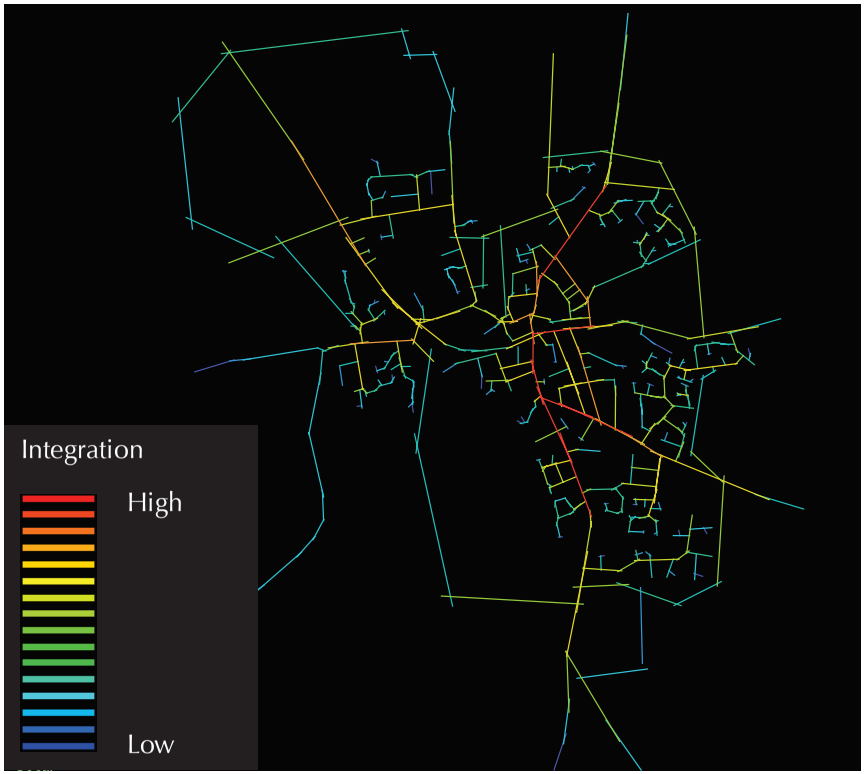


Fig 3.4.2 GW effects on integration

Space Syntax integration analysis showing the impact of adding in the proposed GI network on the town's level of interconnectedness.

3.5 Possible connections

An interesting exercise is to test the outcomes of better connecting the town's existing structure. By testing this 'what if?' scenario it is possible to give pointers for future development projects which could include work around the existing street pattern.

The integration analysis (R3) shows the results of adding in connections between the new housing estates and the rest of town and includes the proposed GW network.

The result is less 'heat' focused on the town's main routes (see analysis overpage), as movement is dispersed more evenly through the network and trips not involving the town centre become possible.

This lends weight to the notion that incremental development that gives no consideration to wider movement through town has been damaging to the town's movement network, resulting in high levels of traffic and lower instances of walking and cycling.

Not all of the potential connections shown are possible at present; bridges are expensive, private land ownership is a barrier, and other physical constraints currently exist.

However, care should be taken not to undertake development in a way that stymies the potential for this sort of restructuring to be undertaken at some point in the future should conditions allow.

Fig 3.5.1 Horncastle as axial lines

Horncastle in axial line only form but with added connectivity between adjacent housing areas and including the proposed GW network. This can then be analysed to see what effect joining up existing streets has on town-wide movement potential.

Fig 3.5.2 Existing integration (R3)

Horncastle's existing structure analysed for integration (R3). Note that the main routes into town show as very 'hot', indicating that they are likely to be heavily trafficked. The junction with traffic lights on Jubilee Way has to deal with this high amount of concentrated movement, causing it to act as a bottleneck and increasing the feeling of congestion in the town centre.

Fig 3.5.3 Potential integration (R3)

The same analysis run but with new routes added. The levels of congestion at key junctions is slightly reduced but what is more striking is how 'warm' the new cross-town links are, indicating that should these routes be provided then they would be very well

3.6 Figure ground

Fig 3.5.4 Figure ground of Horncastle

By colouring only the buildings, key relationships between buildings and spaces can be determined.

A figure ground diagram, where only buildings are coloured, is a good tool for understanding how buildings relate to public space.

The figure ground analysis of Horncastle reveals that the older, most historic parts of town use a very simple linear street form with strong building lines.

In newer parts of town, such as the development off Langton Hill and that off Louth Road, the street pattern is less easy to discern and gets progressively more difficult to understand the later the period of development - Bells Yard Close is an example of this.

New development needs to reflect more strongly the underlying structure of the best parts of town to be in character by creating building to street relationships that reflect historic Horncastle, with simple linear arrangements.

3.7 Conservation Area

Horncastle has a large conservation area that contains a high number of listed buildings and valuable townscape settings.

This valuable townscape and built environment heritage is detailed in the 2008 Qube Conservation Area Appraisal document.

It is important that new development in Horncastle references this appraisal, even if the proposed development area is not within the conservation area; understanding the town's most valuable built assets and how elements on their character might influence new development is a key ingredient to making new development 'tie in' to the existing town.

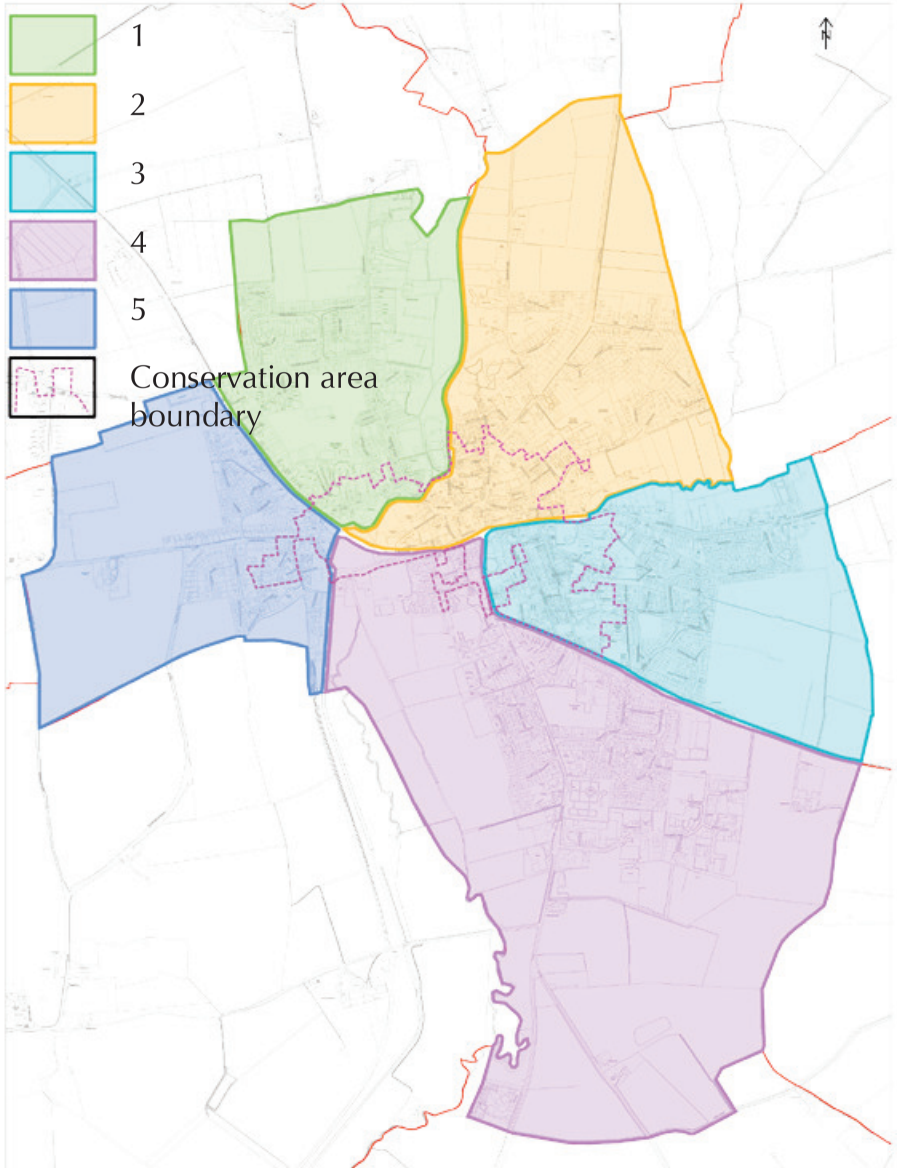
The study gives design teams examples of how the existing townscape might influence new development outside of the conservation area but without suggesting architectural style. Instead, here we focus on spatial relationships, colours, materials and the interface between public and private spaces.

Fig 3.7.1 Horncastle's conservation area

Listed buildings and other designations area shown here.

Part four: key considerations

4.1 Spatial character areas



Based on the town's topography and landform, it's historic development, and it's spatial characteristics, it is possible to divide the town into five broad sectors for more detailed consideration and guidance. These are defined as:

Sector 1: Lincoln Road to the river Bain including Prospect Street.

Sector 2: The river Bain to the river Waring including Louth Road.

Sector 3. The river Waring to Mareham Road.

Sector 4: Mareham Road to the old river Bain along the parish boundary and the river Bain nearer town.

Sector 5: The river Bain to the Lincoln Road including Langton Hill.

Fig 4.1.1 Sectors Map

Horncastle divided into spatial character areas. The conservation area boundary is superimposed.

For each spatial character area we assess the following:

1. Route structure and considerations around future change.

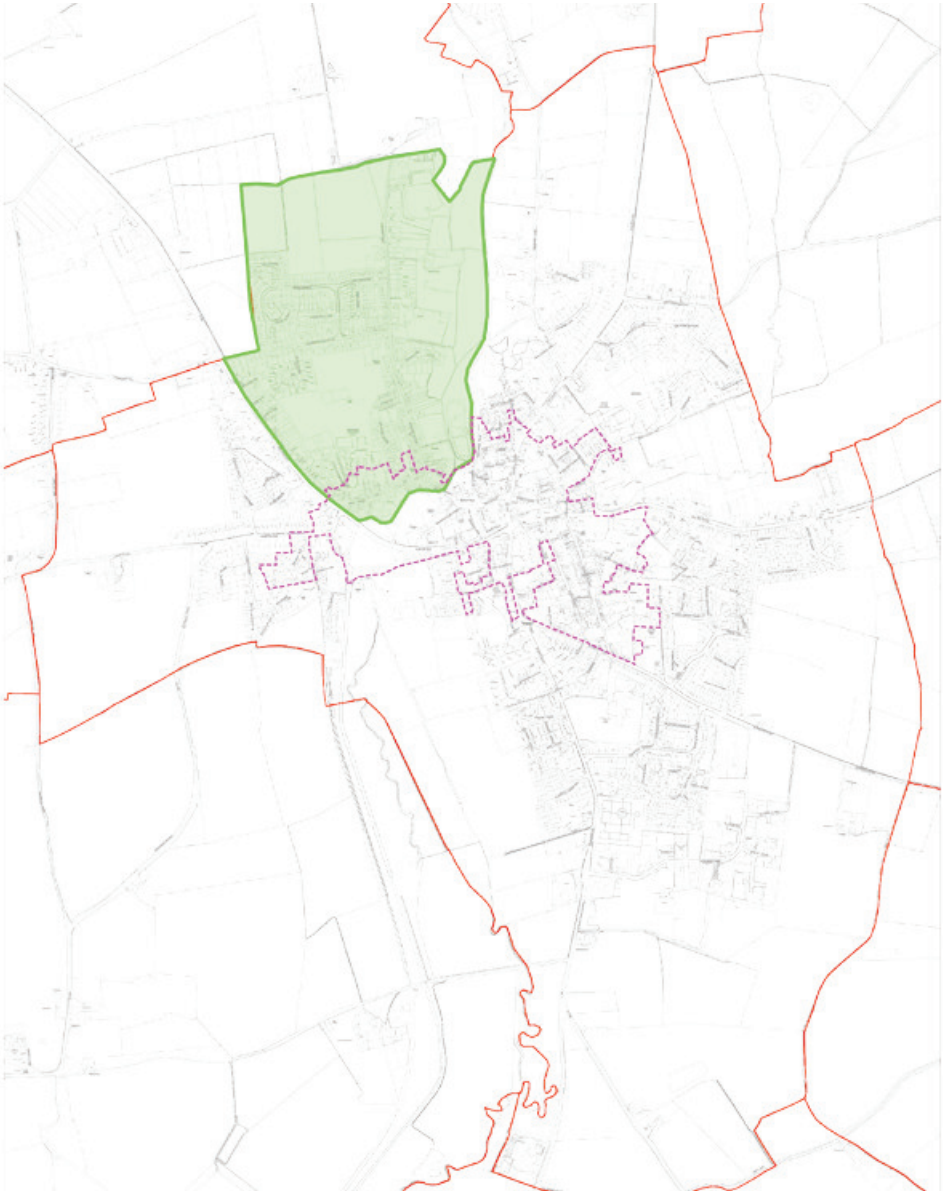
2. Space Syntax analysis and the sector's role in delivering town-wide movement.

3. Key relationships and precedents, where 'the best of the street' are analysed and pointers for the future developed.

4. Sector Green Wheel network contribution, where aspects of the 'green wheel' that need to be delivered are detailed.

5. Detailed design considerations, where potential influences from appropriate conservation area character areas are explored.

4.2 Sector 1: Lincoln Road to the river Bain



Sector 1, from Lincoln Road to the river Bain, is relatively sparsely developed, with the main cluster of development away from the town centre occurring along Accommodation Road (an orbital) and along Mark Avenue (a loop road).

Fig 4.2.1 Sector 1

Lincoln Road to the river Bain.

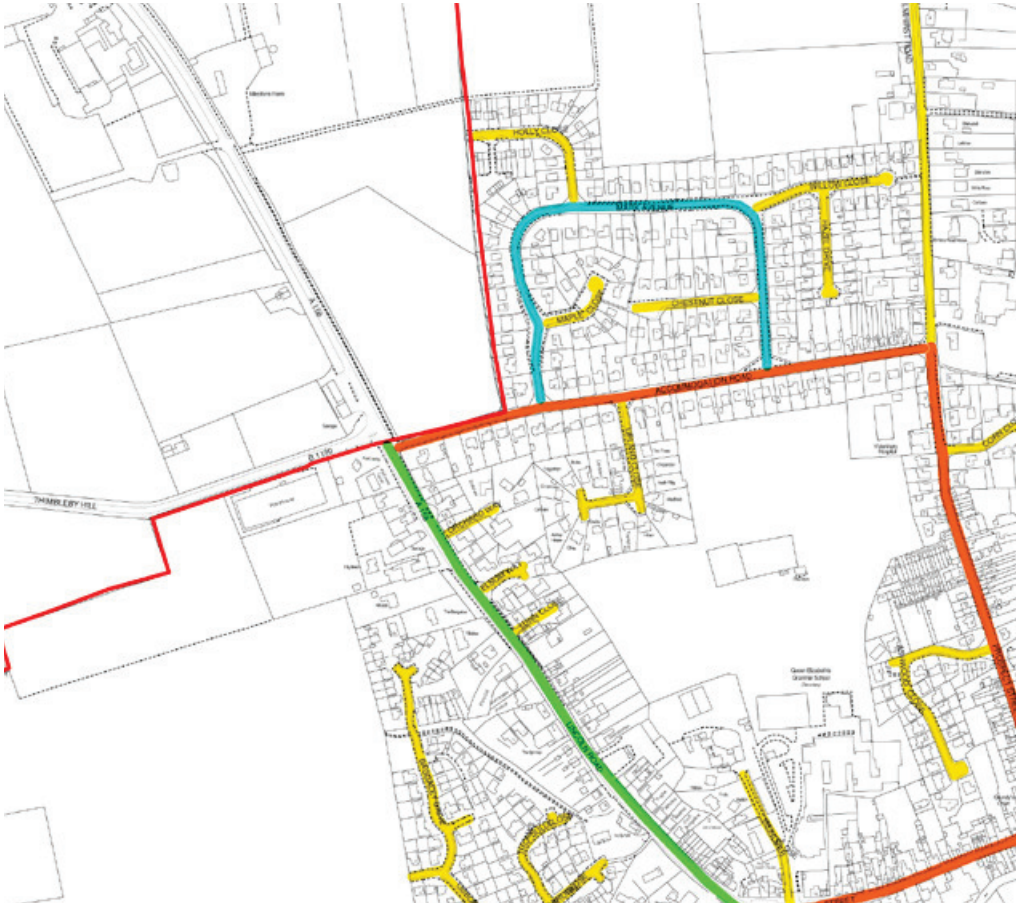


Fig 4.2.2 Route structures analysis

Route structures analysis for the streets in sector 1.

Route structure analysis

Sector 1 has a main radial (Lincoln Road) and the beginnings of a secondary radial (Elmhirst Road).

Accommodation Road provides an important link between these routes and off of this is a more introspective new housing estate that is poorly structured for access to town.

New development in this area needs to focus on either connecting to one of the radial routes in a direct manner or creating links between them.

Major route

Main route

Through route

Loop route

Cul de sac

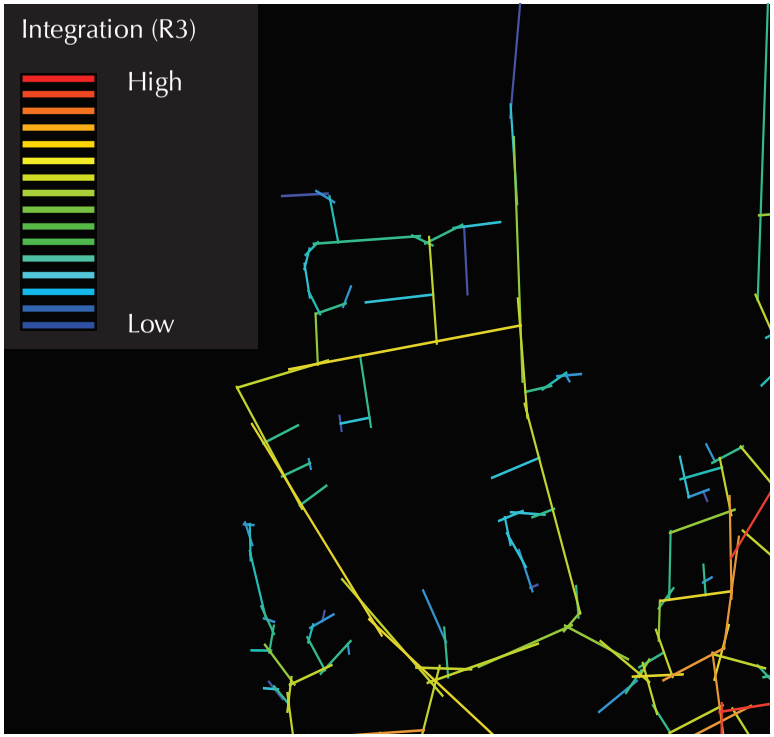


Fig 4.2.3 Space Syntax analysis: Integration (R3)

The different approaches to connecting the routes together show that the historic streets are well integrated for walking and cycling. Newer development shows 'cool' in integration terms. New development needs to be better-integrated to be reflective of the best parts of Horncastle's structure.

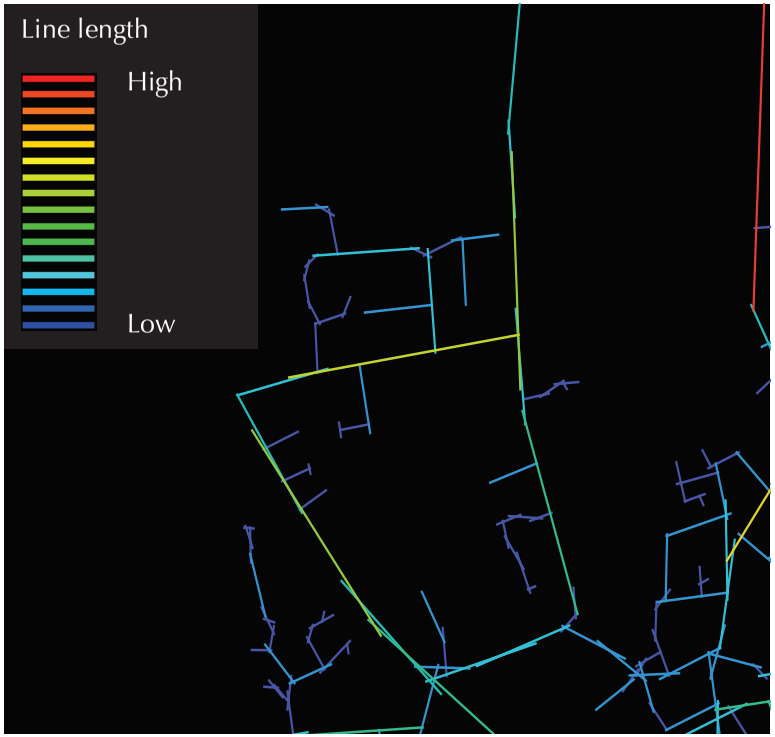


Fig 4.2.4 Space Syntax analysis: Line length

Short street lengths are not in character with the more historic routes in this area; street lengths on new development needs to be reflective of the older type.

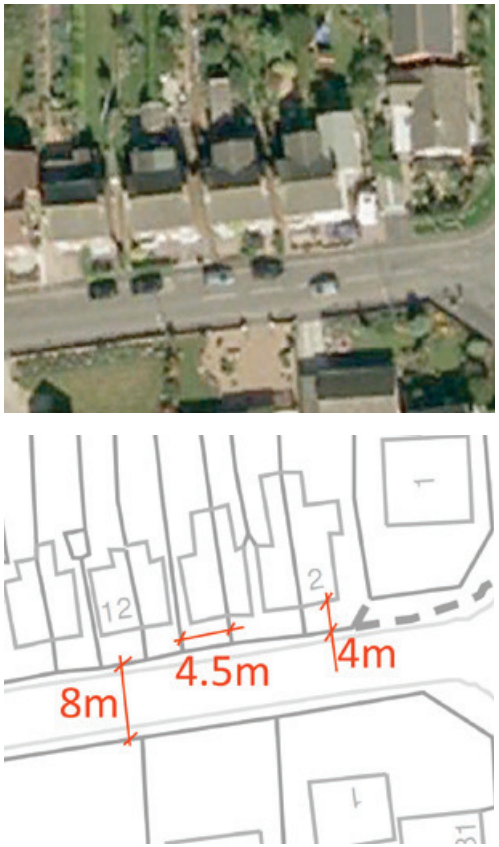


Fig 4.2.5 Key relationships: Accommodation Road

Key relationships and geometries for assembling the area around Accommodation Road and the junction with Elmhirst Road. A relatively wide street allows for on-street parking to supplement other provision.

Image: Google Earth

Key relationships: Accommodation Road.

Development that follows the more historic pattern found elsewhere in town features elements such as a consistent building line with a setback that allows for front-access on-plot parking.

A key feature in 'knitting' development together in this area is the boundary treatment, which allows for a clear delineation between public and private space.

Also consistent is the continuity of the active frontages; very few buildings offer blank elevations to the street.

New development in this area should draw on this spatial arrangement by providing a street composed of building fronts and a strongly delineated plot line.

Fig 4.2.6 Precedent study of Accommodation Road

Simple relationships between buildings and public routes, including small front gardens with a clear boundary.

Image: Google Earth.

Fig 4.2.7 Key relationships: Lincoln Road

Key relationships and geometries for assembling a representative section of Lincoln Road. Wide streets allow for verges and pavements, and plots have room at the front for a decent garden.

Image: Google Earth

Key relationships: Lincoln Road frontage

The development along Lincoln Road shows reasonably wide variety at the detailed level, with a range of plot widths, materials and setbacks.

The consistency here is generated by the strong boundary line, either with low walls or hedge planting, and with the way buildings strongly address the street with active building fronts.

A variety of parking arrangements is allowed for but note that on-plot access is freely made. Future development on this busy route should follow this approach and avoid the temptation to restrict frontage access.

Fig 4.2.8 Precedent study of Lincoln Road

A strong building frontage, a simple pallet of colours and materials, and a consistent delineation of public and private space all contribute to helping Lincoln Road 'read' as a characterful street.

Image: Google Earth.

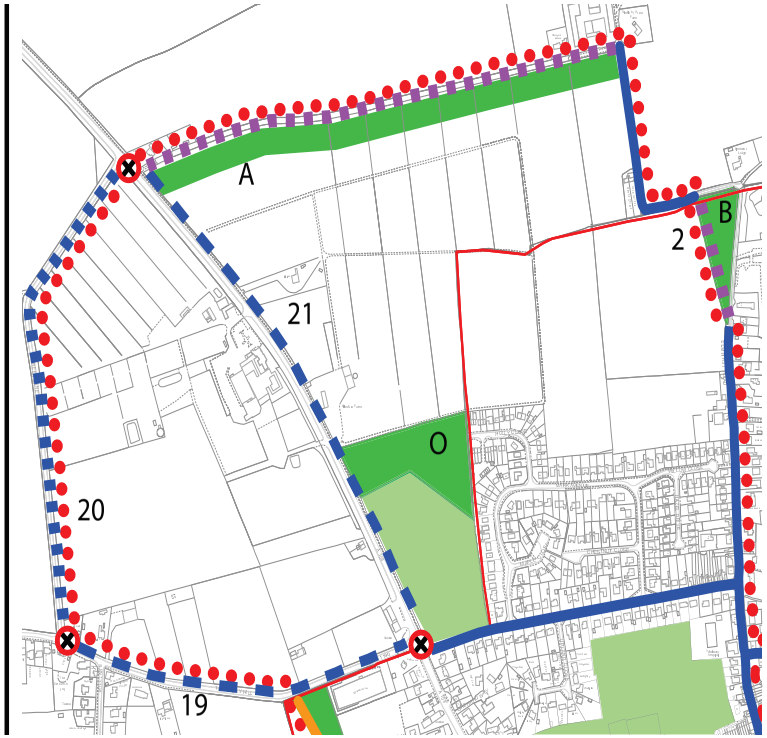


Fig 4.2.9 Sector 1 Green Wheel Network

Sector 1 has an important part to play in providing a key cross-town part of the proposed Green Wheel network connecting Prospect Street to Langton Hill via Lincoln Road.

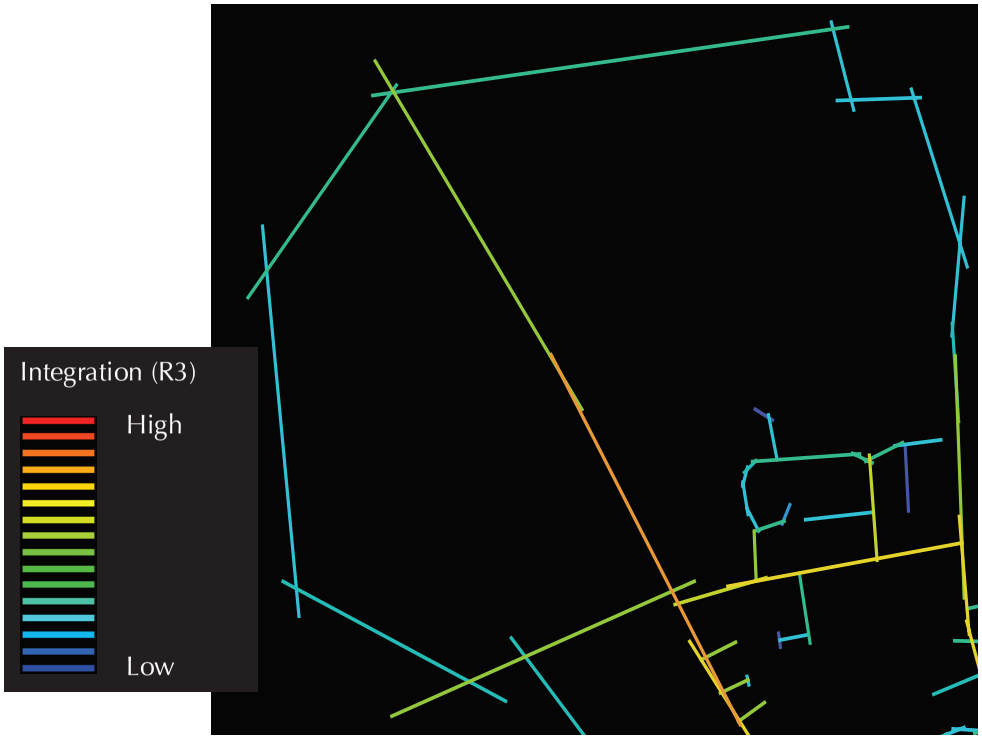


Fig 4.2.10 Sector 1 GW integration (R3)

The Space Syntax analysis shows how critical this GW link is to the wider area integration as at present only Accommodation Road links Lincoln Road with Prospect Street.

Detailed design considerations

Sector 1 draws most of its detailed influence from the West Street section of the conservation area.

The Qube Conservation Area Appraisal undertaken in 2008 describes the West Street character area as '... a predominantly urban, linear street, although the trees and meadows of the River Bain to the south form a verdant background to views south ' and '..one of the town's finest streets and is generally strongly defined by the development which lines it until the junction with Lincoln Road is reached.'

It is not suggested that new development try to precisely mimic existing development, rather that it draws inspiration and reference from the existing to help link new and existing.

Key detailed design elements that could help development further out of town draw from the character of Historic Horncastle are:

- Linear streets
- Red brick
- Paved yards
- Slate roofing
- Moulded eves and door casements
- Bowed or bay windows

(Source: Horncastle Conservation Area Appraisal 2008, p17)

Fig 4.2.11 Sector 1 Key Considerations Summary:

- New development should provide direct connections to existing orbitals and radials or seek to create new ones.

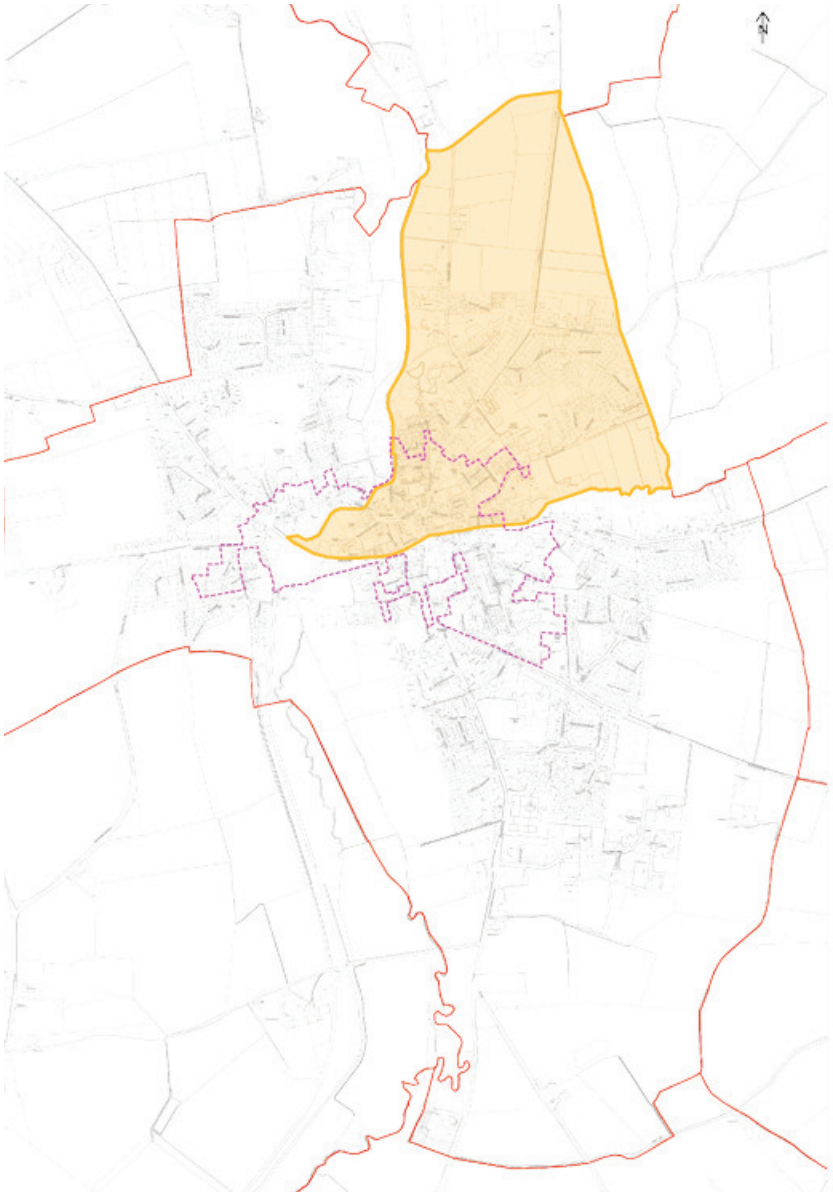
- New development should employ street lengths that are reflective of the more historic streets.

- Allowance needs to be made for inclusion of this section of the GI network in any design, and new design should seek to further add to the network.

- All buildings should have clearly delineated front boundaries and where possible on-plot frontage access parking. Active frontages are critical. Streets should be wide enough to allow for on-street parking.

- The West Street character area must be used as a starting point to provide prompts for building detailing.

4.3 Sector 2: River Bain to the river Waring



Sector 2, from the river Bain to the river Waring, includes an important radial route (the Louth Road). Also included are important linking routes - Linden Road and Stanhope Road - as well as two important green 'wedges' that run from the edge of town to the centre along the river valleys.

Fig 4.3.1 Sector 2

The river Bain to the river Waring.

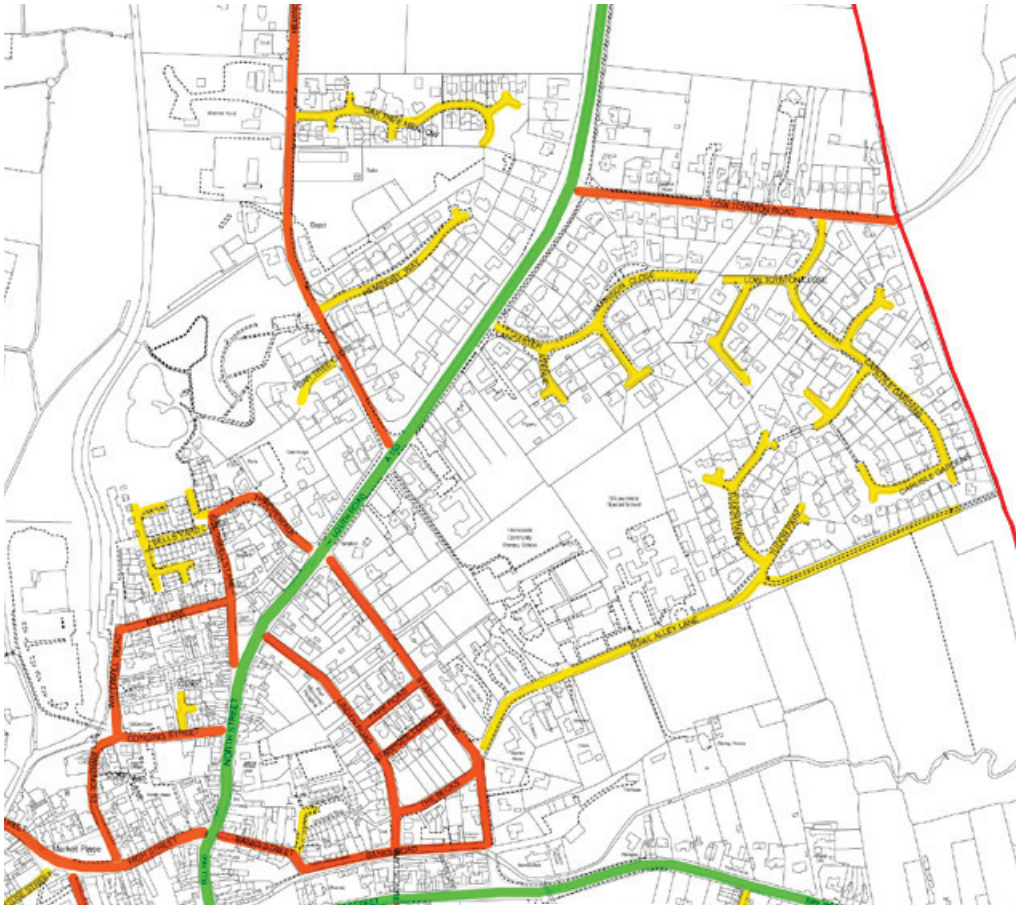


Fig 4.3.2 Route structures analysis

Route structures analysis for the streets in sector 2.

Route structure analysis

Sector 2 has a main radial (Louth Road) and two orbitals in Stanhope and Linden Road.

Beyond these, most of the routes in the area are non-connectors, making the areas out of town poorly integrated with the town centre.

New development here needs to address the issue of access into town, either through allowing for more cross-connections or by adding pedestrian routes along the river basins.

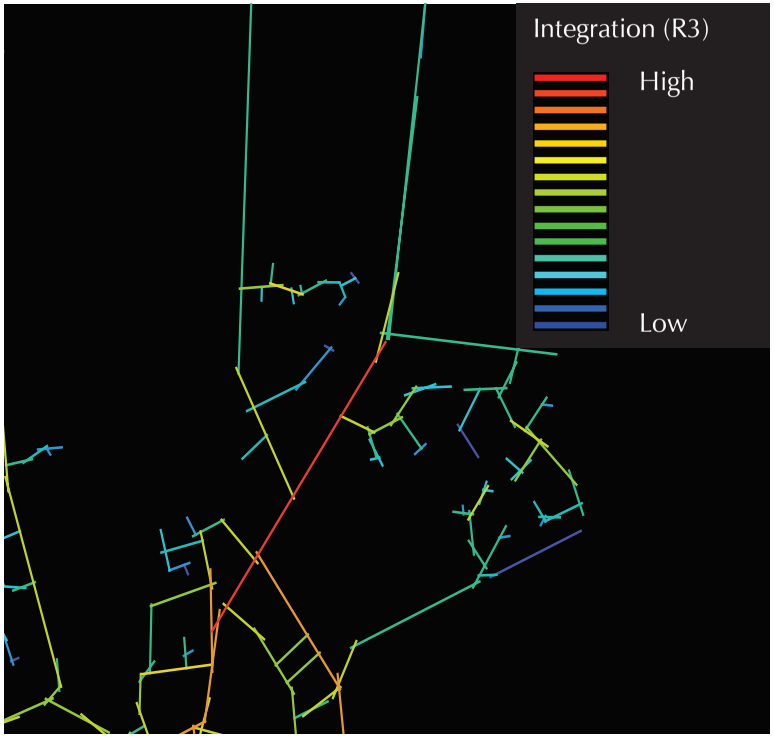


Fig 4.3.3 Space Syntax analysis: Integration (R3)

Aside from Louth Road and other older routes near town, the level of interconnectivity between streets is poor. New development should seek to create a connected street layout and where possible improve existing connections. Routes between Bowl Alley Lane and Louth Road would be particularly beneficial.

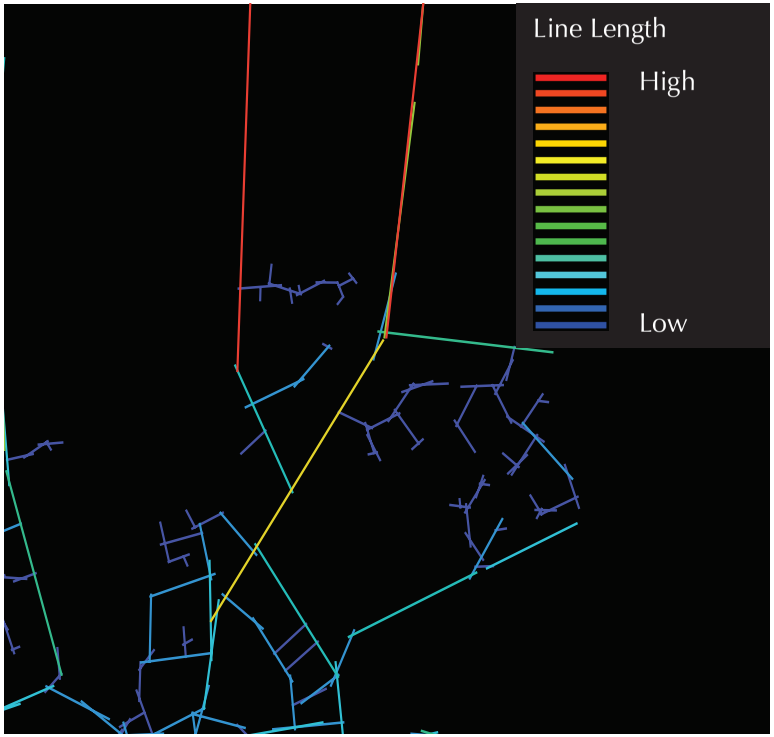


Fig 4.3.4 Space Syntax analysis: Line length

Very short streets in the new estates are completely out of character with Horncastle. New development needs to follow the example set by Linden / Stanhope Road, which are mainly straight. Where they do bend, they tend to do this in distinct 'segments' rather than sinuously.

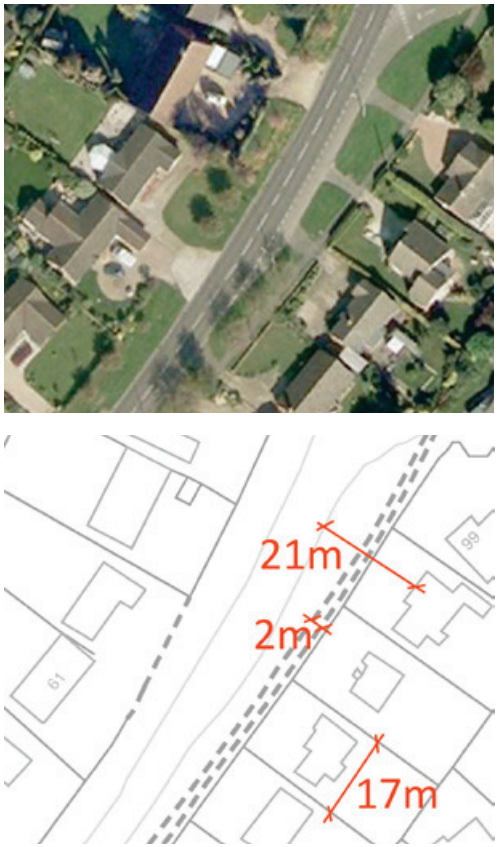


Fig 4.3.5 Key relationships: Louth Road

Key relationships and geometries for assembling the area along Louth Road. Note the inclusion of a generous footpath. Setbacks are generous with enclosure provided by the boundary treatment.

Image: Google Earth

Key relationships: Louth Road

This main route is characterised by a very green edge on either side made up by the boundary treatments and large number of street trees. A wide pavement makes this a useable route into town and new development should tie into this system to extend it, potentially including adding a second pedestrian route on the other side of the street.

Whilst it is unlikely that new development would allow for the very large front gardens typical here, effort should be made to include frontage access to the plot and a good boundary treatment that allows for parking that is well integrated.

Fig 4.3.6 Precedent study of Louth Road

Street trees and verges play a key route in making Louth Road feel green. New development in this area should try to continue this theme of creating well landscaped streets and boundaries.

Image: Google Earth.

Fig 4.3.7 Key relationships: Stanhope Road

Key relationships and geometries for assembling the area along Stanhope Road Road. A wide range of plot widths are evident but a consistent boundary is delineated by walls and planting.

Image: Google Earth

Key relationships: Stanhope Road

Stanhope Road is very straight, allowing for good sight lines and a continuous edge to be created by boundaries and building fronts.

Access is direct from the front to on-plot parking and plot widths vary dramatically, adding variety to the street scene.

New development can draw from the longer street types shown here rather than copying the short, disconnected types found elsewhere.

Fig 4.3.8 Precedent study of Stanhope Road

Very long sight-lines typify the better streets in Sector 2 and new development should seek to include straighter streets to allow for these.

Image: Google Earth.

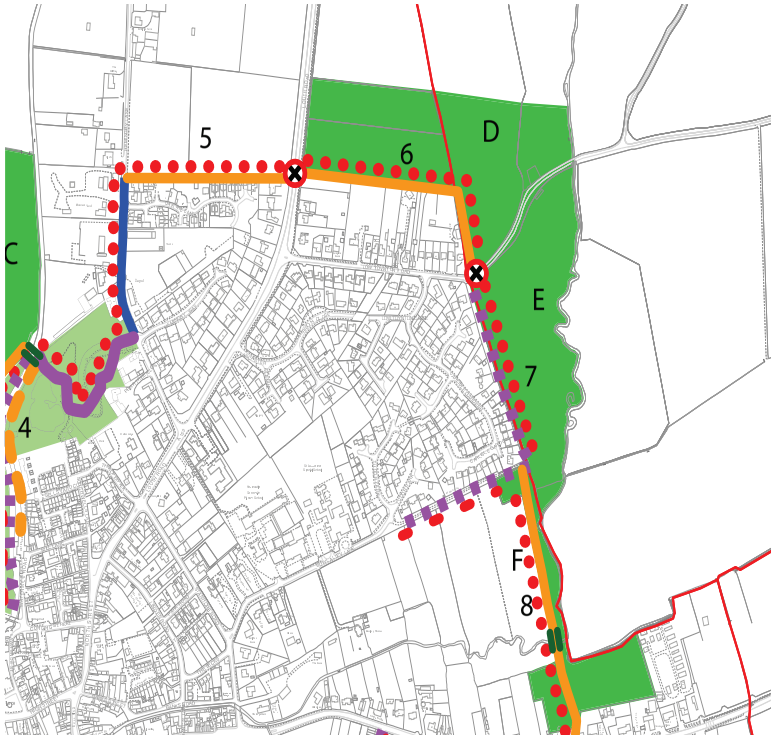


Fig 4.3.9 Sector 2 Green Wheel Network

Sector 2 should allow for a connection between Hemingby Lane and on to the river Bain and should also look to provide a route east towards the Waring. New development should seek to cater for these in their layout.

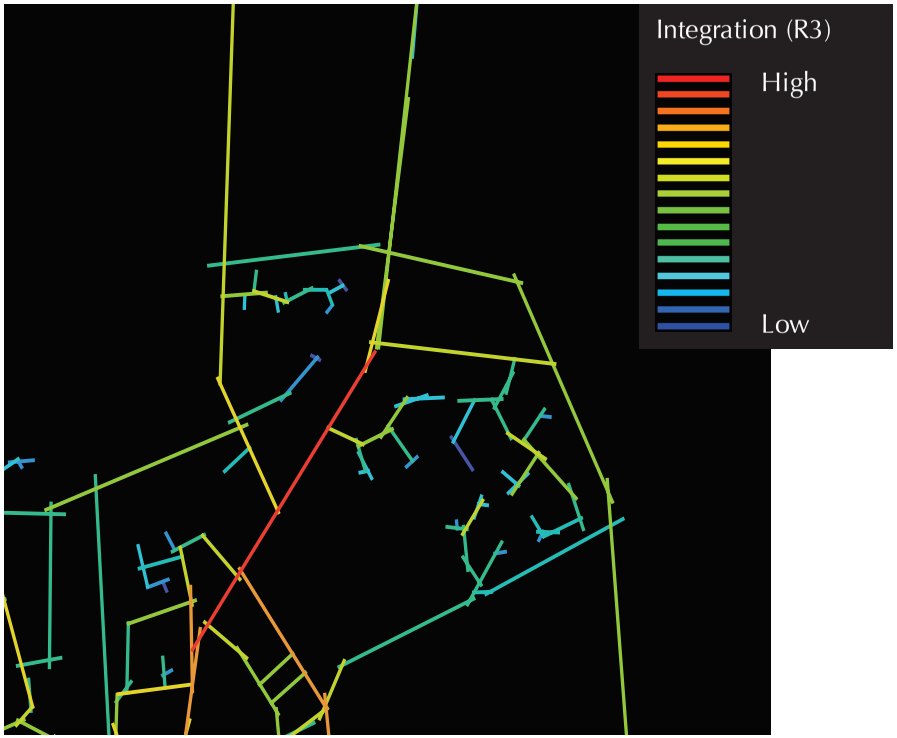


Fig 4.3.10 GW integration (R3)

The Space Syntax analysis shows that making the GW connections better integrates this edge with the town.

Detailed design considerations

Sector 2 is only partly influenced by the conservation area. The Linden Road character area could provide a useful steer to help building details better integrate with the historic core.

The Qube report highlights some of the main attributes that define the Linden Road Character area, stating that 'the large gardens and mature trees are a key component of the area's character, and in some cases are more dominant than the buildings themselves... Hedges are another common feature and contribute much to the luxuriant setting of the residences which are surrounded by large grounds with mature trees and other vegetation.'

Key detailed design elements that would help development further out of town draw from the character of Historic Horncastle are:

- Pairs or short terraces where appropriate
- Large gardens and mature trees
- Potentially some gothic detailing
- Contrasting brickwork
- Sash windows
- Railing boundaries and hedges

(Source: Horncastle Conservation Area Appraisal 2008, p30)

Fig 4.3.11 Key Considerations Summary:

- New development should provide direct connections to to the river edges as well as to the Louth Road.

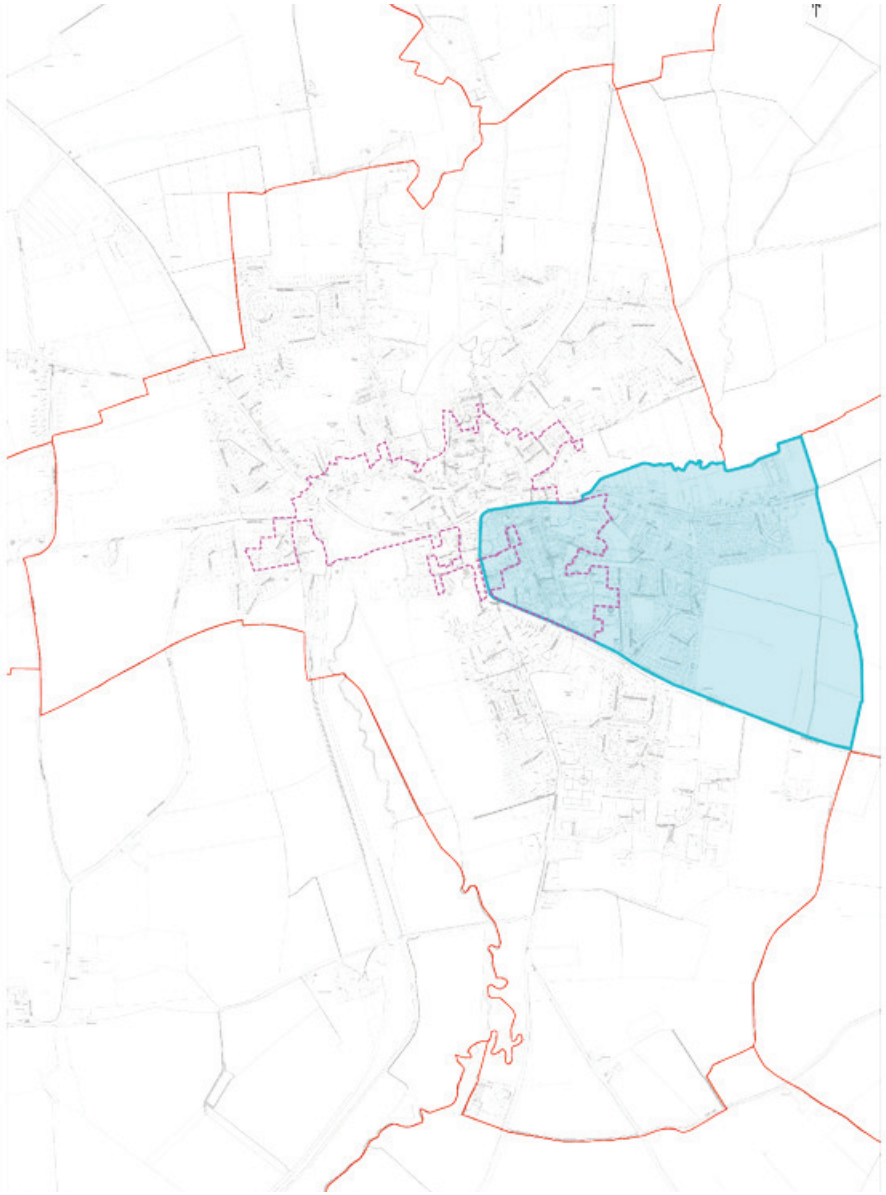
- Linden Road and Stanhope Road have straighter streets than later additions and provide a more town-specific approach.

- GW routes in this area need to be considered and integrated into any new development, especially between Hemingby Land and Louth Road.

- Strong tree and boundary planting is a key feature of this area and new development should employ this approach.

- The Linden Road character area offers some useful matters of detailing that could be used on future development to help it mesh with this side of town.

4.4 Sector 3: River Waring to Mareham Road



Sector 3, from the river Waring to Mareham Road includes the Spilsby Road, a major structuring route for the town.

Also included in this area is Thunker Drain, which will have implications for the design and scale of any proposals in this part of the town

Other key features in this area include the convoluted orbital that runs between Mareham Road and Spilsby Road via Wesley Way and Banovallum Gardens.

Fig 4.4.1 Sector 3

River Waring to Mareham Road

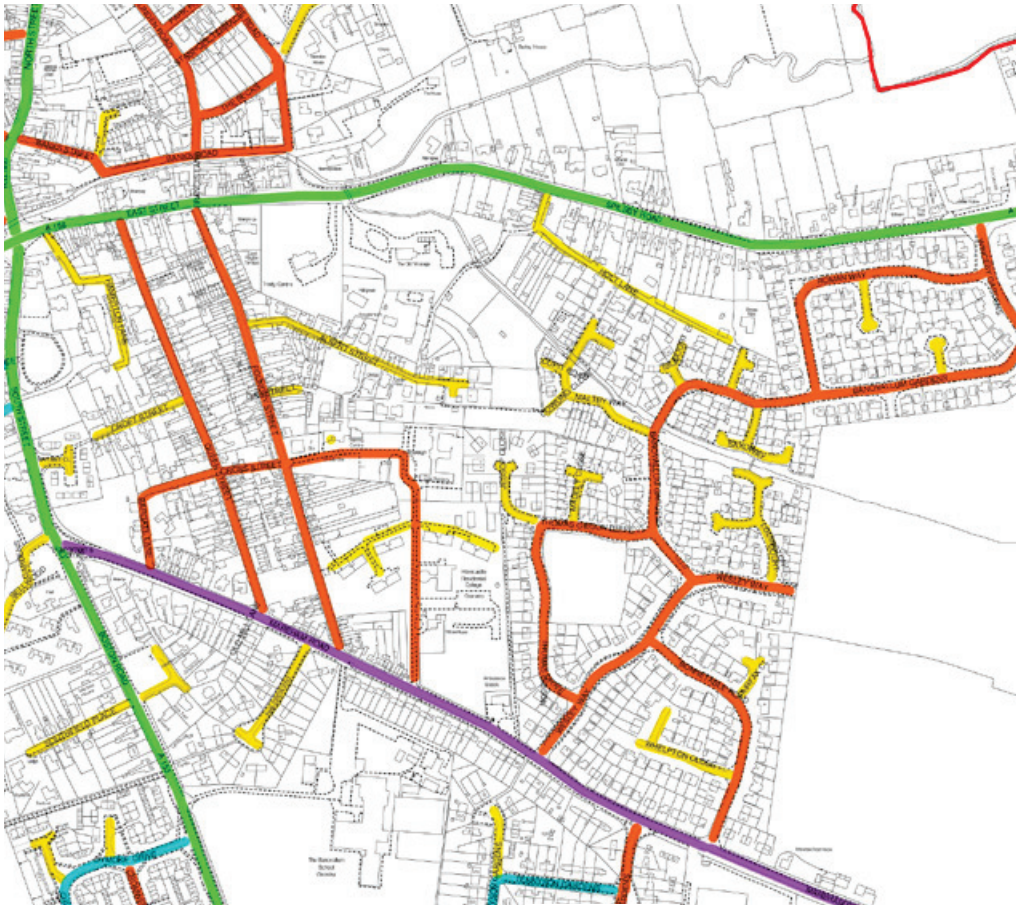


Fig 4.4.2 Route structures analysis

Route structures analysis for the streets in sector 3.

Route structure analysis

Sector 3 has a main radial (Spilsby Road) and a less major route that runs from centre to edge (Mareham Road). Many of the routes in between are better connected than elsewhere in town, but there are still a high number of dead-end routes.

Nearer to town, two important cross-town links are made in Queen Street and Foundry Street. These add to the ability to move around town without the need to go right into the centre.

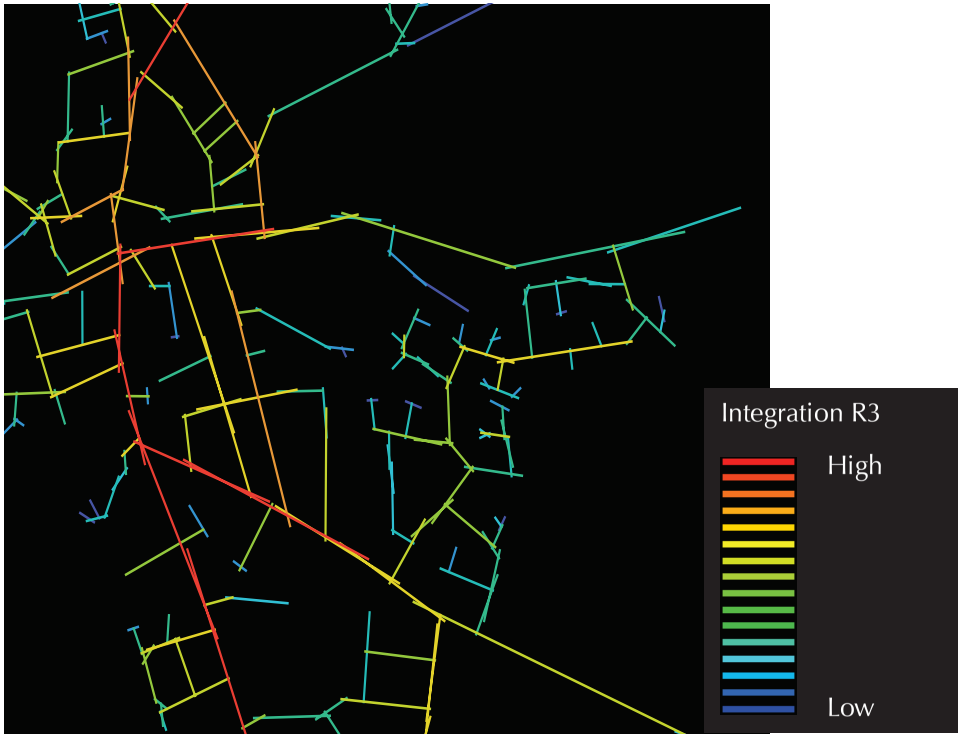


Fig 4.4.3 Space Syntax analysis: Integration R3

The best integrated routes are to be found in the older parts of town but the main 'spine' of the newer development offers a fair degree of integration. The streets away from this main 'spine' are poorly integrated with their town.

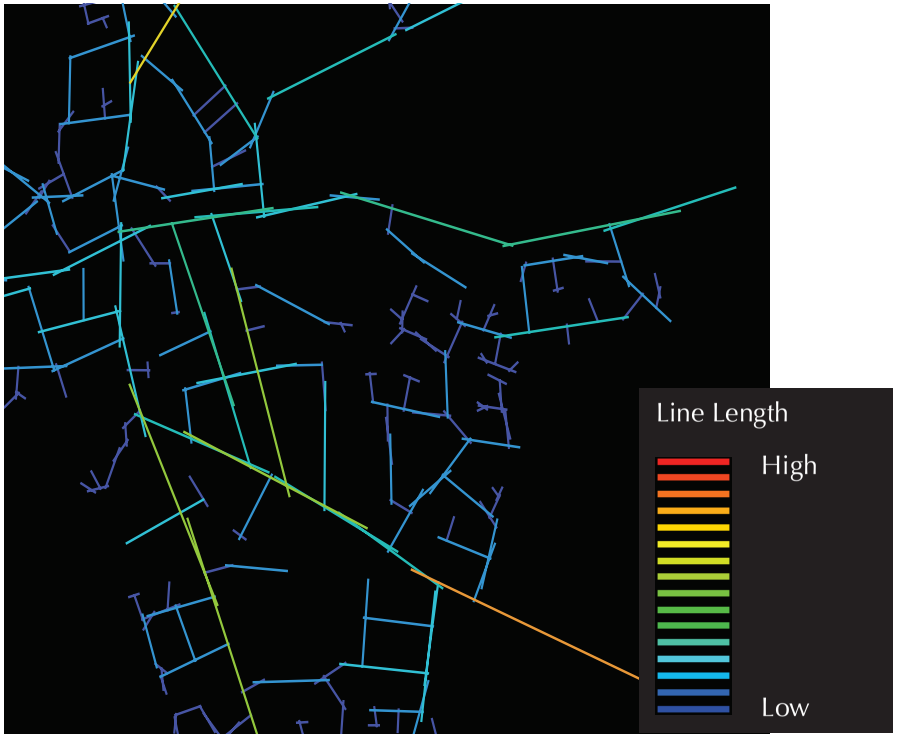


Fig 4.4.5 Space Syntax analysis: Line Length

Newer development again shows very short street lengths which are not in character with the fabric of Horncastle.

Fig 4.4.6 Key relationships: Spilsby Road

Key relationships and geometries for assembling the area along Spilsby Road. Relatively high setbacks along here allow for frontage parking contained within a low boundary.

Image: Google Earth

Key relationships: Spilsby Road

Spilsby Road has a strong building line for the most part, augmented by a consistent boundary line.

Direct frontage access is a key feature of this main route and new development should continue this theme. Active frontages face this street with most front doors facing the street.

Trees in private gardens add a great deal to the street scene and could be a feature of new development in this area.

New development should also look to maintain the good sight lines allowed by straight streets.

Fig 4.4.7 Precedent study of Spilsby Road

Planting in private gardens adds a great deal to Spilsby Road and visually narrows the street.

Image: Google Earth.

Fig 4.4.8 Key relationships: Queen Street

Key relationships and geometries for assembling the area along Queen Street. Narrow frontages with limited setback.

Image: Google Earth

Key relationships: Queen Street

Queen Street offers a model for a more dense, 'urban' street. Here, there is limited setback that creates an enclosed feeling in the street.

The low wall and railing boundary treatment is distinctive and helps tie together the various building types that line the street.

Parking could be an issue with this arrangement, although semi-detached types could offer side-of-plot parking without overly eroding the continuity of built frontage.

New development should allow for variety at the building level but the colour pallet should remain narrow and key relationships should be maintained.

Fig 4.4.9 Precedent study of Queen Street

A tight, intimate street that feel very well overlooked. Care needs to be taken with this type to integrate parking.

Image: Google Earth.

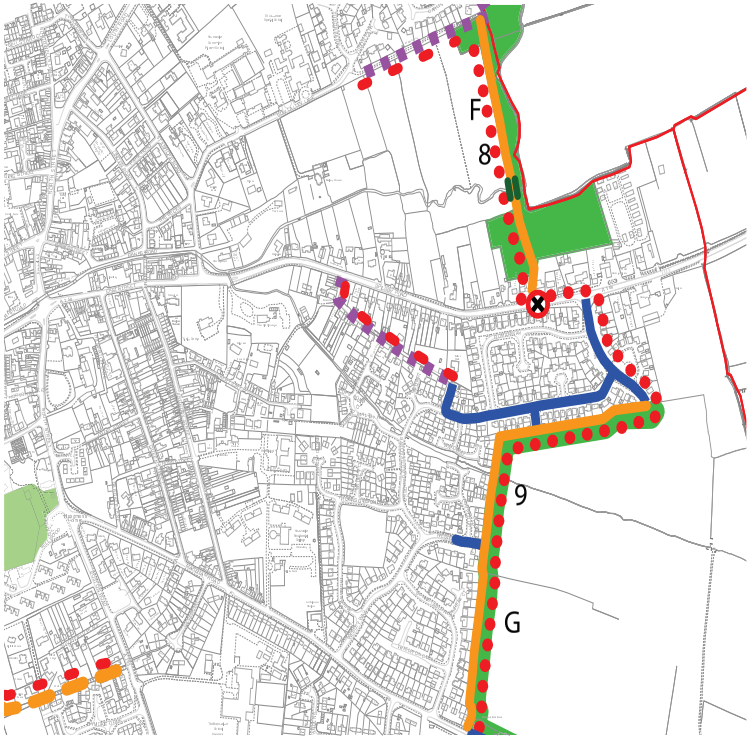


Fig 4.4.10 Sector 3 Green Wheel Network

New development in Sector 3 should be designed to accommodate the proposed connection across Thunker Drain that links Mareham Road with Spilsby Road. This route could also continue on to the Waring.

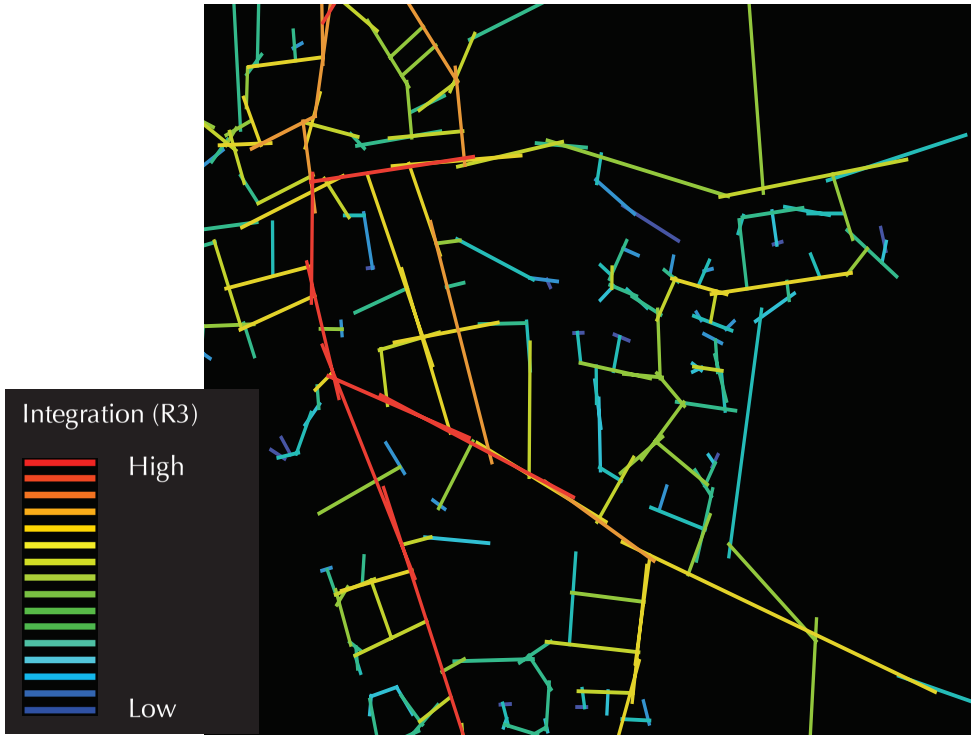


Fig 4.4.10 GW integration (R3)

This area is reasonably well integrated; the GW route will boost that further still.

Detailed design considerations

For Sector 3, elements of the Queen Street conservation area detailing has the potential to add character-forming elements to new development to help them relate back to the existing town.

The Qube report states that the buildings and spaces in the Queen Street character area 'form a coherent group despite the great variety of detailing displayed because of the continuous building line and common building language' and that 'a significant number of good quality railings survive in the area, providing good enclosure to the street and attractively enclosing the small front gardens of the properties.' Details that must be reflected in new proposals include:

- Two storey frontage
- A continuous building line
- Chequered wall detailing plus some brown brick
- Boundaries made up of railings

(Source: Horncastle Conservation Area Appriaisal 2008, p24)

Fig 4.4.11 Key Considerations Summary:

- Future development needs to ensure that any new routes made are more direct than recent developments in this area to help with integration.

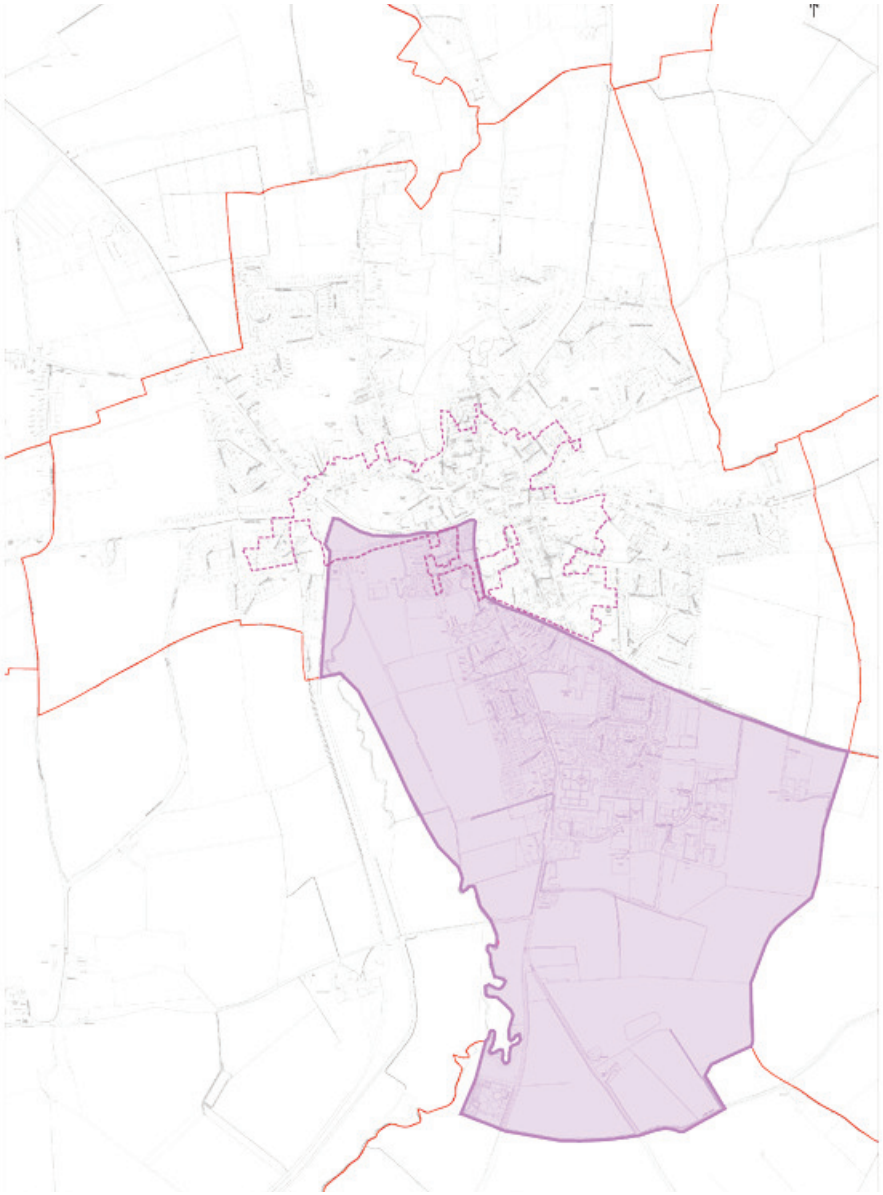
- Less culs-de-sac and straighter streets would help new development reflect on the historic pattern of Horncastle.

- New development should give careful consideration to GI routes that link Spilsby Road to Mareham Road. Provision of this route will require a new crossing of Thunker Drain.

- Private tree and other boundary planting is a key factor in greening the streets and public spaces.

- The Queen Street character area could provide some influencing features to help new development relate back to this area of the historic town.

4.5 Sector 4: Mareham Road to the old river Bain



Sector 4 runs from Mareham Road to the old river Bain and encompasses one of the towns major routes; Boston Road.

The only link allowed for between Mareham and Boston Road is along Tennyson Gardens.

Most the development along here dates from the 1950's onward and as such the pattern is that of a more modern settlement.

Development here offers a transition to the town's more rural edge.

Should new development occur beyond the current development, away from the town centre, the temptation may be to manage the transition to rural countryside with a green 'buffer'.

This should be avoided as buffers can act as barriers to integration in the future.

Instead, new development should look to positively address the rural edge and provide any softening in a way that does not prevent future development from integrating.

Fig 4.5.1 Sector 4

Mareham Road to the old river Bain.

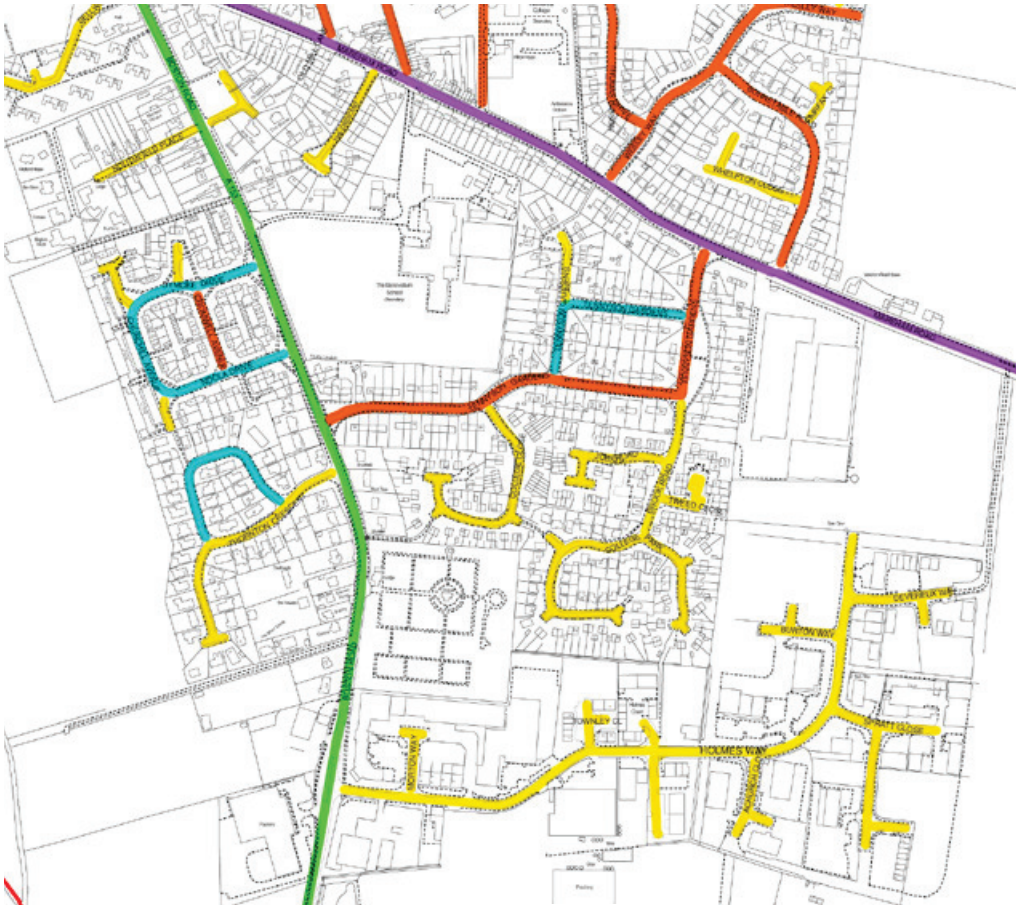


Fig 4.5.2 Route structures analysis

Route structures analysis for the streets in sector 4.

Route structure analysis

Sector 4 has a main radial (Boston Road) and a convoluted and complicated orbital (Tennyson Gardens).

Most of the other routes here are dead-ends with only three loop roads that add little to the overall structure.

The river and it's flood plain constrain development to the west of Boston Road but this also presents an opportunity for creating access to open space.

The limited orbital route that connects Mareham road and Boston road is a significant impediment to walking/cycling to local services.

Development in this sector must make provision for a connecting road or at least ensure development proposals do not prevent future opportunities for making such a connection.

Development proposals must also provide links to the river.

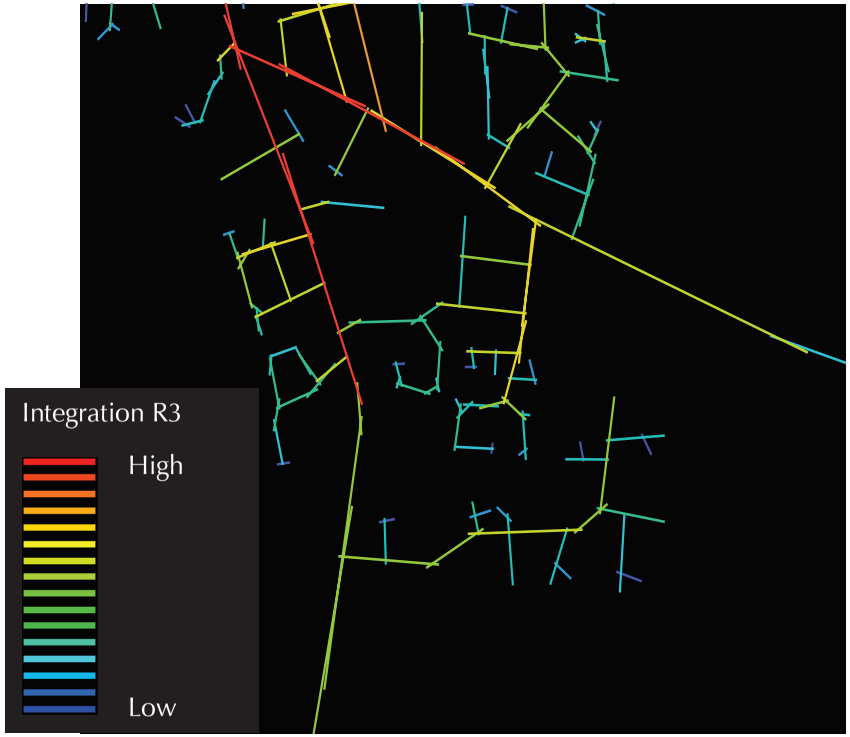


Fig 4.5.3 Space Syntax analysis: Integration R3

This area of town is reasonably well integrated to the wider town, helped by it's orbital. The industrial area is very cut off even though it provides for a pedestrian link from the Mareham Road.

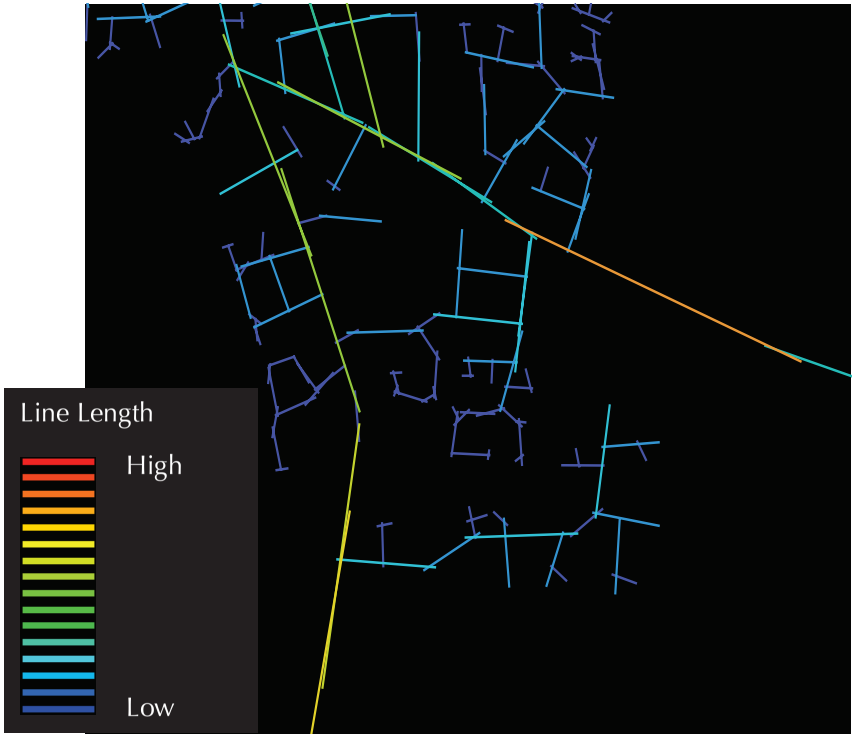


Fig 4.5.4 Space Syntax analysis: Line Length

Again, the relatively young age of development in this area shows up in the short street length employed.

Fig 4.5.5 Key relationships: Boston Road

Key relationships and geometries for assembling the lower Boston Road. Note side of plot parking with a small front garden often delineated by a low wall.

Image: Google Earth

Key relationships: Boston Road

Further out of town, Boston Road is typified by later properties at very low densities that do not speak of Horncastle in their arrangement.

Nearer to town, simple but elegant housing lines the street and the way these are arranged could offer a valuable steer to new development in this area.

Again, planting in private plots adds a great deal to the street, as does the simple arrangement of buildings with a continuous active frontage.

New development should seek to maintain these key relationships between public and private space whilst allowing for long sight lines and direct walking routes.

Fig 4.5.6 Precedent study of Boston Road

Development nearer to town along Boston Road offers queues that might be of benefit in helping new development embed Horncastle's character.

Image: Google Earth.

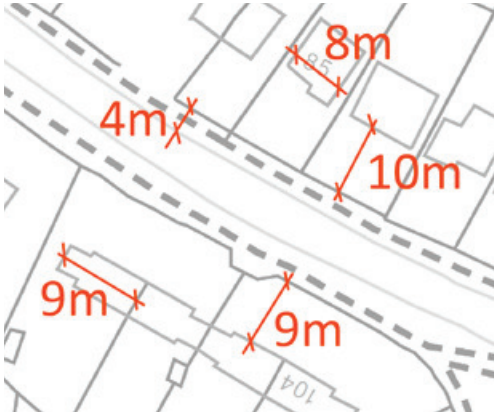


Fig 4.5.7 Key relationships: Mareham Road

Key relationships and geometries for assembling the area along Mareham Road. Large setback but still a consistent building and boundary line.

Image: Google Earth

Key relationships: Mareham Road

Development along Mareham Road is mostly relatively recent and features a very simple arrangement of buildings to street, with strong front boundary treatments providing a green edge to the street and mostly obscuring the housing.

New development should look to continue this theme, offering decent sized front gardens that can accommodate parking and planting to mesh in to the character of the street.

Fig 4.5.8 Precedent study of Mareham Road

There is some verge provided on Mareham Road but most of the greenery is in private gardens. New development in this area should aim to have very green boundaries.

Image: Google Earth.

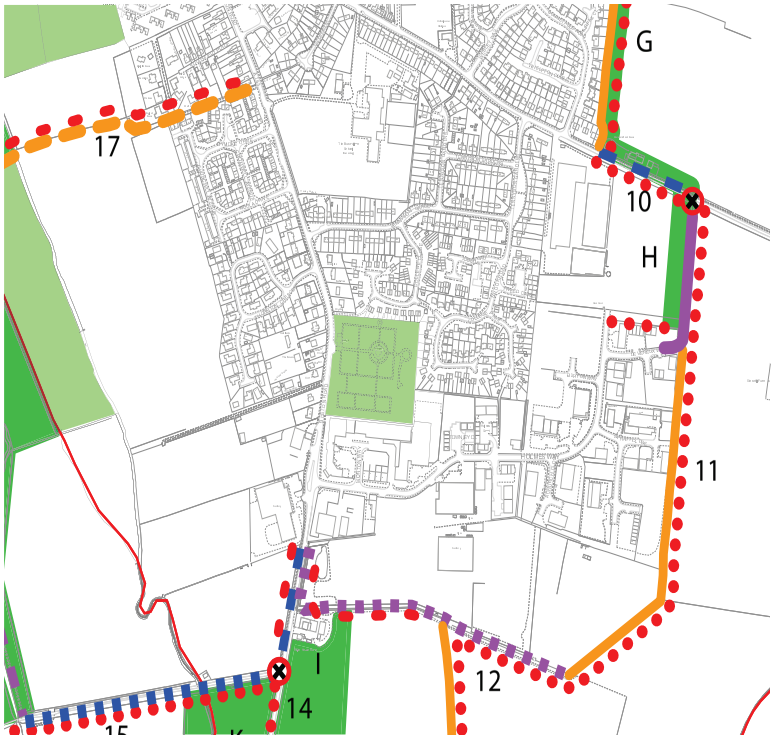


Fig 4.5.9 Sector 4 Green Wheel Network

The main GW link proposed uses the existing footpath that links Mareham Road to the industrial estate. Links down to the Bain should form a key consideration for new development, as should links to the rural edge of town.

Fig 4.5.10 GW integration (R3)

The integration analysis shows there is scope for improving cross-town connectivity along the GI route.

Detailed Design Considerations

Sector 4 currently does not draw influence from design elements in the towns historic built environment.

Effort should be made to draw upon Horncastle's deeper structural characteristics to make new development in this area reflective of the town.

Simple colour pallets, straight streets and strong boundaries could be used in conjunction to create new development in Sector 4 that strikes a balance between new and existing.

Fig 4.5.11 Key Considerations Summary:

- Interconnections between existing streets and the addition of cross-town links should be explored by new development.

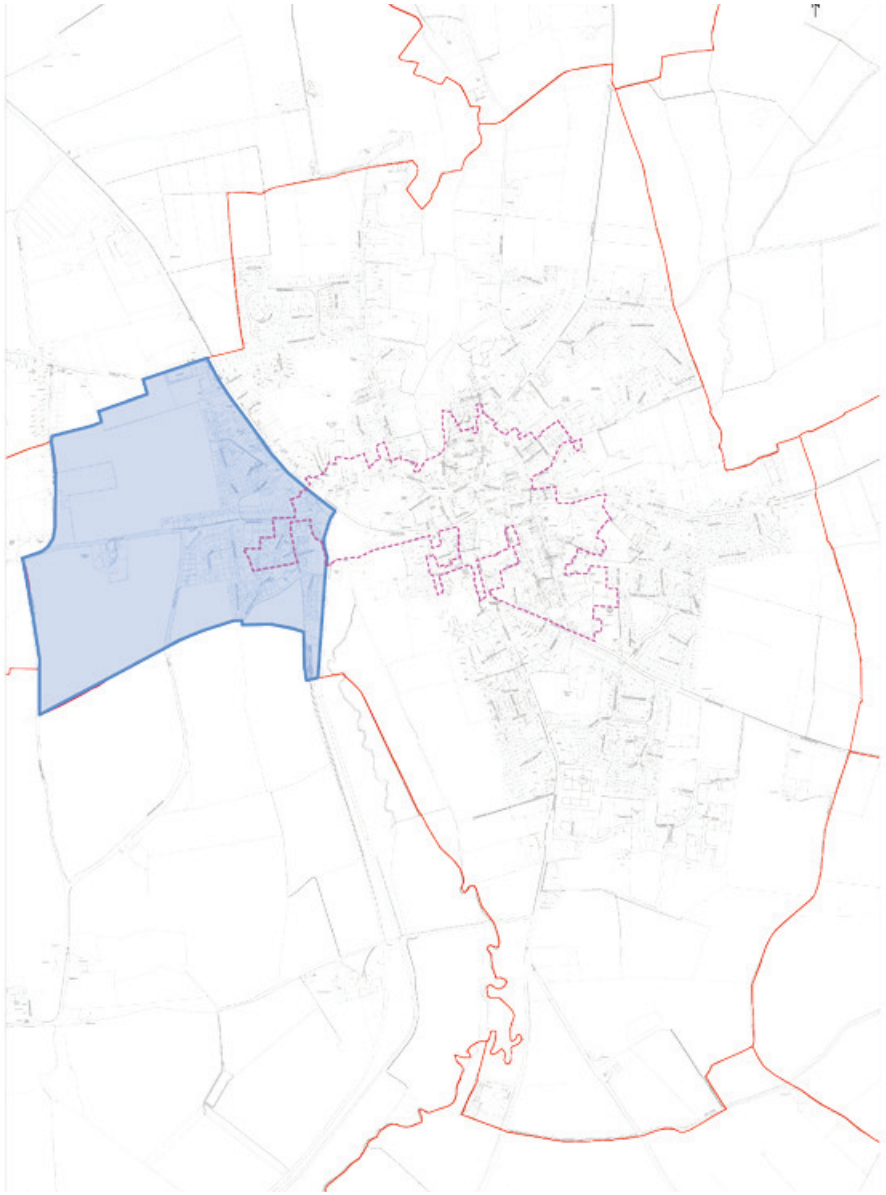
- Development towards the edge of town provides a transition to the settlement's rural edge and new development here needs to make that transition without disconnection and 'buffering'.

- The main GW provision in this area is likely to be outside of development zones, but care should be taken to add to the network where possible, especially in linking to the river Bain.

- Consistent and strong boundary treatments with high levels of greening should be adopted where possible.

- Simple arrangements of buildings with active fronts, a narrow range of colour pallets and on-plot frontage access parking are in character with this area.

4.6 Sector 5: New river Bain to Lincoln Road



Sector 5, which includes the part of the Bain valley through to Lincoln Road via Langton Hill is the least developed sector of Horncastle.

The main development areas sit along and behind Langton Hill and the Lincoln Road frontage is quite separate from this development.

Most of this area occupies a rising slope or hilltop location with excellent views on to the town.

Fig 4.6.1 Sector 5

New river Bain to Lincoln Road

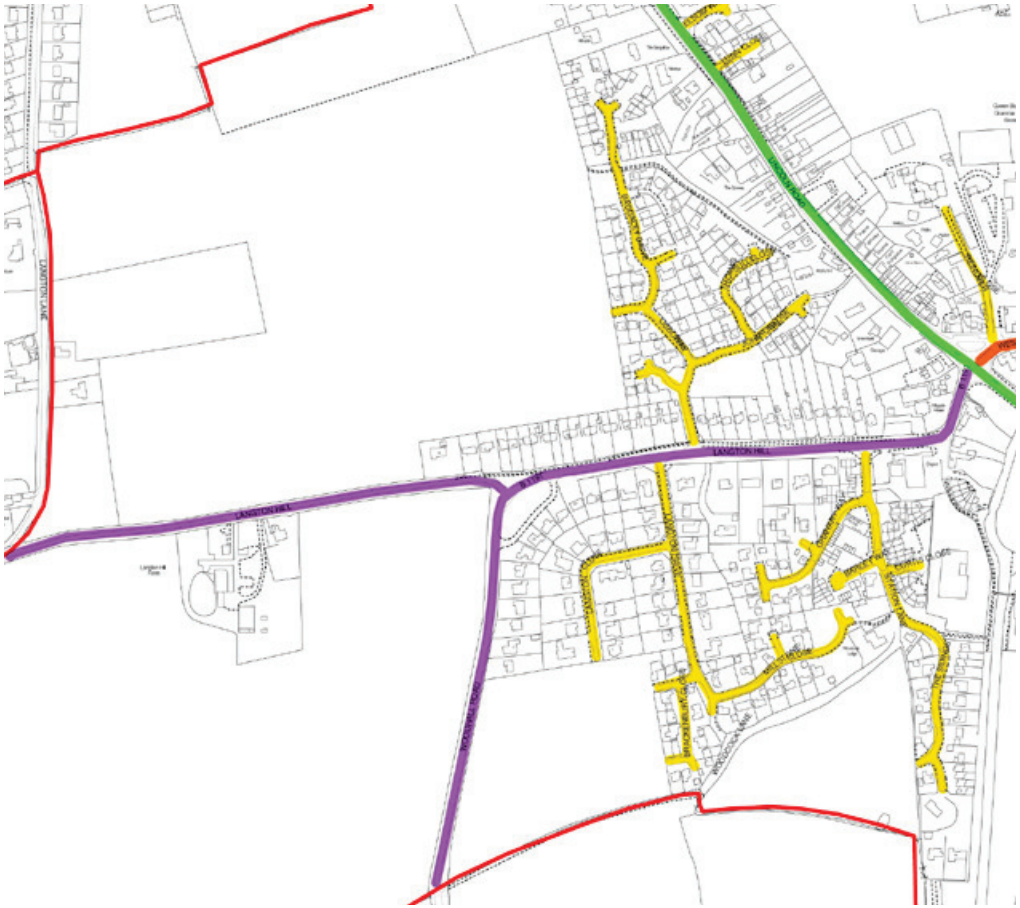


Fig 4.6.2 Route structures analysis

Route structure analysis for the streets in sector 5.

Route structure analysis

Sector 5 has essentially a single main route in to town along Langton Hill. Lincoln Road offers direct access but it is quite separate from the development that makes up most of this area.

Aside from the very well structured route along Langton Hill, the adjacent development is entirely disconnected, offering only dead-end routes.

This approach is not in keeping with wider historic and memorable Horncastle and future development should seek to be both connected internally, joining new streets on site with one another and externally, allowing for as many connections to the wider network as possible.

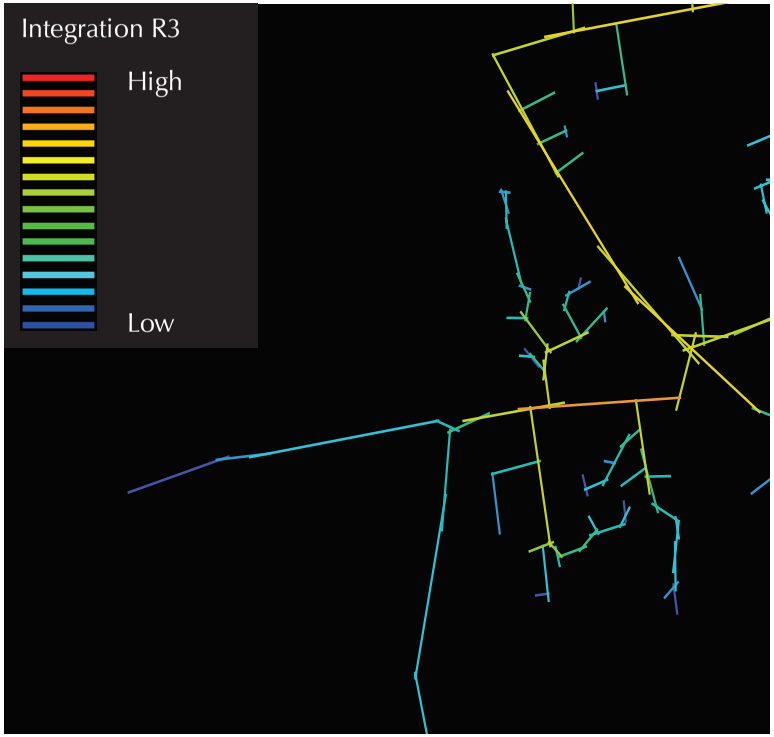


Fig 4.6.3 Space Syntax analysis: Integration R3

Considering it's close proximity to town, the integration analysis suggests that walking and cycling for this area might be poorer than expected due to the low levels of integration. For this reason, future development should not seek to replicate this approach.

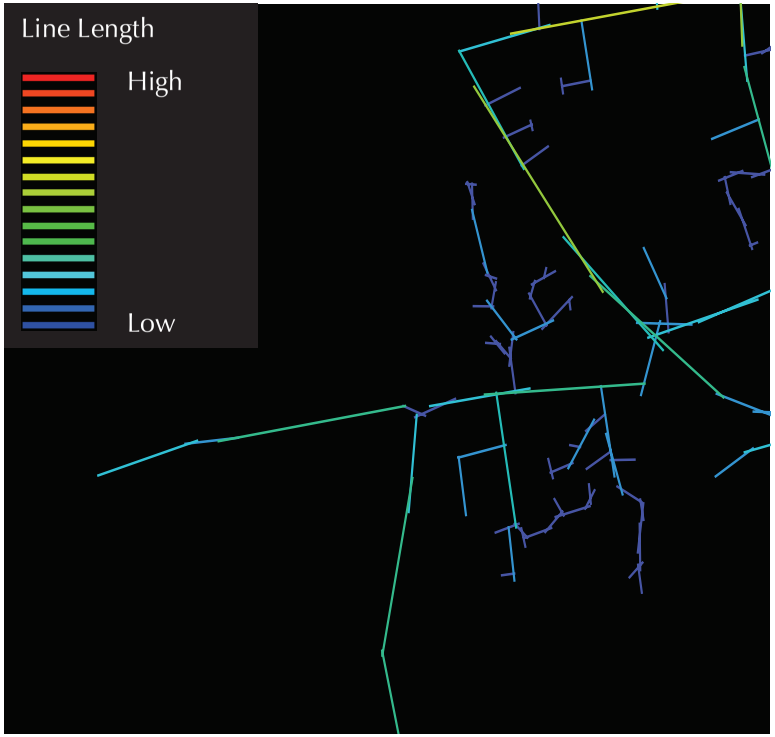


Fig 4.6.3 Space Syntax analysis: Line Length

Aside from Langton Hill, new development provides for some of the shortest streets in town which is out of character with Horncastle's structure.

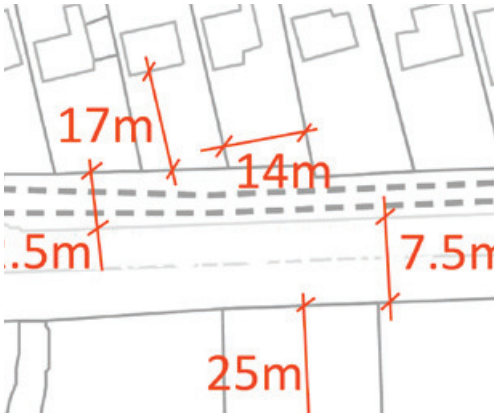


Fig 4.6.4 Key relationships: Langton Hill

Key relationships and geometries for assembling the area Langton Hill. The dedicated cycle route here should be continued into new development where possible.

Image: Google Earth

Key relationships: Langton Hill

Langton Hill provides an impressive route into town, with much of the character and identity of this area being provided by attractively maintained private gardens.

Some verging exists and a dedicated foot and cycle way helps access to and from town.

Tree and hedge planting in private plots gives the street a mature and green feel.

New development should look to continue the cycle network where possible and to maintain the straight forward relationship of buildings fronting on to the street with a strong boundary.

Fig 4.6.5 Precedent study of Langton Hill

Allowance for a cycle and footway that is well overlooked by properties helps Langton Hill feel safe and inviting. The role of front gardens in generating quality can be seen here.

Image: Google Earth.

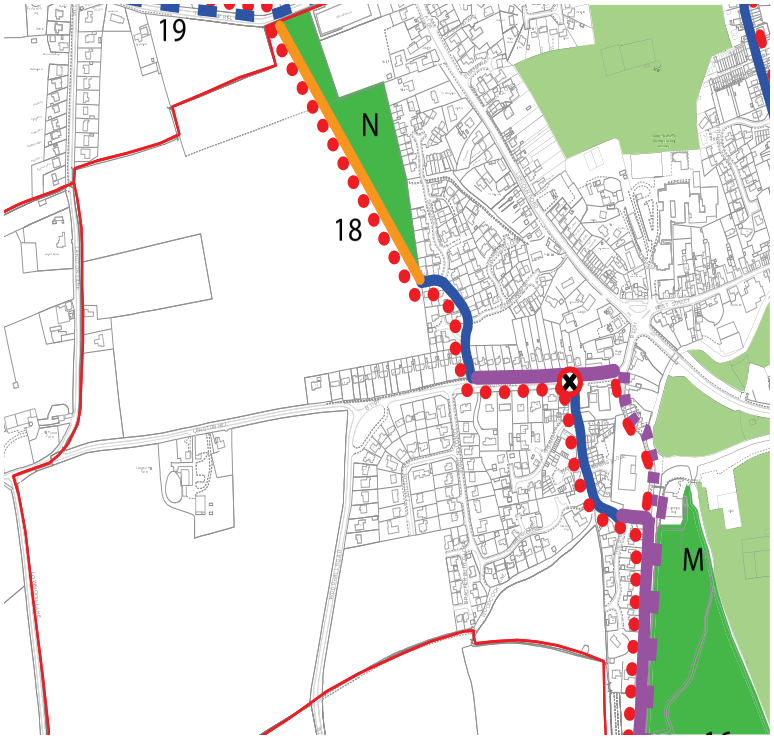


Fig 4.6.6 Sector 5 Green Wheel Network

Although Sector 5 features only a small part of the GI network, thought should be given for how any new development can add to this and provide extra options for GI movement.

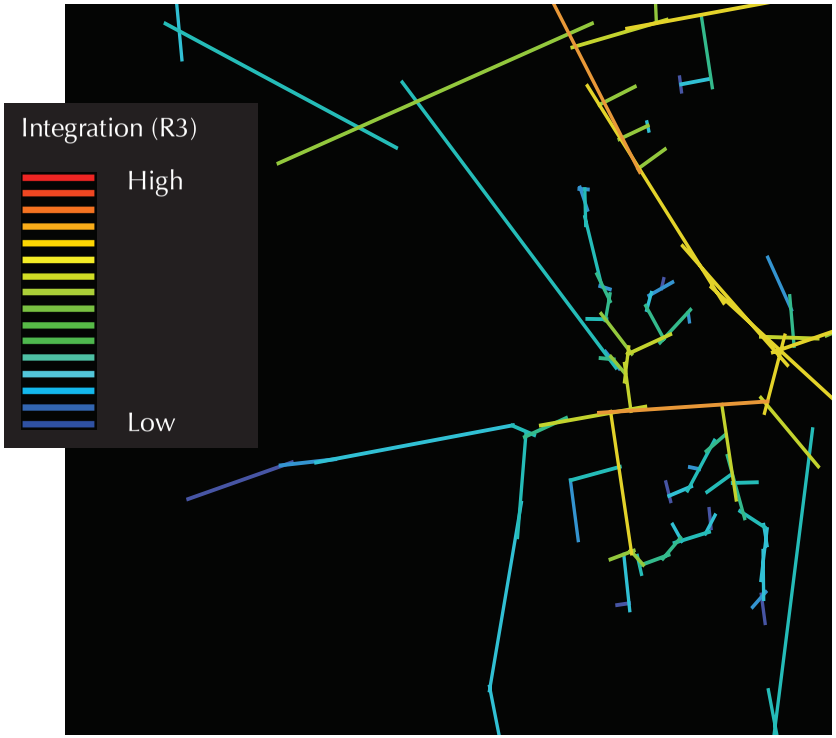


Fig 4.6.7 GW Integration (R3)

Beyond Langton Hill, integration is low. The GW network is key in addressing this issue.

Detailed Design Considerations

Sector 5 sits apart from the conservation area but has built form of it's own that is of considerable merit.

The Langton Hill housing uses a simple range of materials, little variation in setback, and as thus creates a street that feels consistent whilst allowing for variation at the very detailed scale.

New development in this area should seek to draw from this, offering simple building to plot relationships, a narrow range of colours and forms, and opportunities for people to add character to the street with the ability to personalise front gardens.

Fig 4.6.8 Key Considerations Summary:

- Langton Hill is currently very poorly integrated beyond the main street and new development should make direct and regular connections to Langton Hill and Lincoln Road.

- Short streets should be avoided as they erode integration and are not in character with Horncastle; longer streets with good sight lines should be adopted.

- New development should not limit its self to just providing the GW network in this area; expanding the network should be explored where possible.

- The role of front gardens and people's ability to personalise these is a key factor in delivering the area's character.

- Development needs to be sensitive to the topography of this area, ensuring that care is taken to not detrimentally impact the setting of the town and to allow for views into and out of the town centre.

Appendices

Appendix I: Horncastle NDP Community Vision

The Horncastle Neighbourhood Development Plan will take a positive approach to development so long as it brings forward a balance of housing, employment, retail, community and leisure development to ensure Horncastle remains an attractive, vibrant place, providing all the amenities you would expect in a desirable town. All development within the Plan period will maximise the environmental assets in and around Horncastle, improving access to the countryside and the open spaces for residents and visitors.

Appendix II: Horncastle NDP Community Objectives

Community Objective 1: To ensure that future housing growth meets the needs of the local community.

Community Objective 2: To ensure that all new development is sited where it does not detract from the towns setting.

Community Objective 3: To ensure that all new development relates positively in form and function, in particular with respect to materials, style, and connections where it will adjoin the existing settlement.

Community Objective 4: To ensure that visual connections with the countryside are retained.

Community Objective 5: To ensure that planning gain from all development is maximised for the benefit of the town.

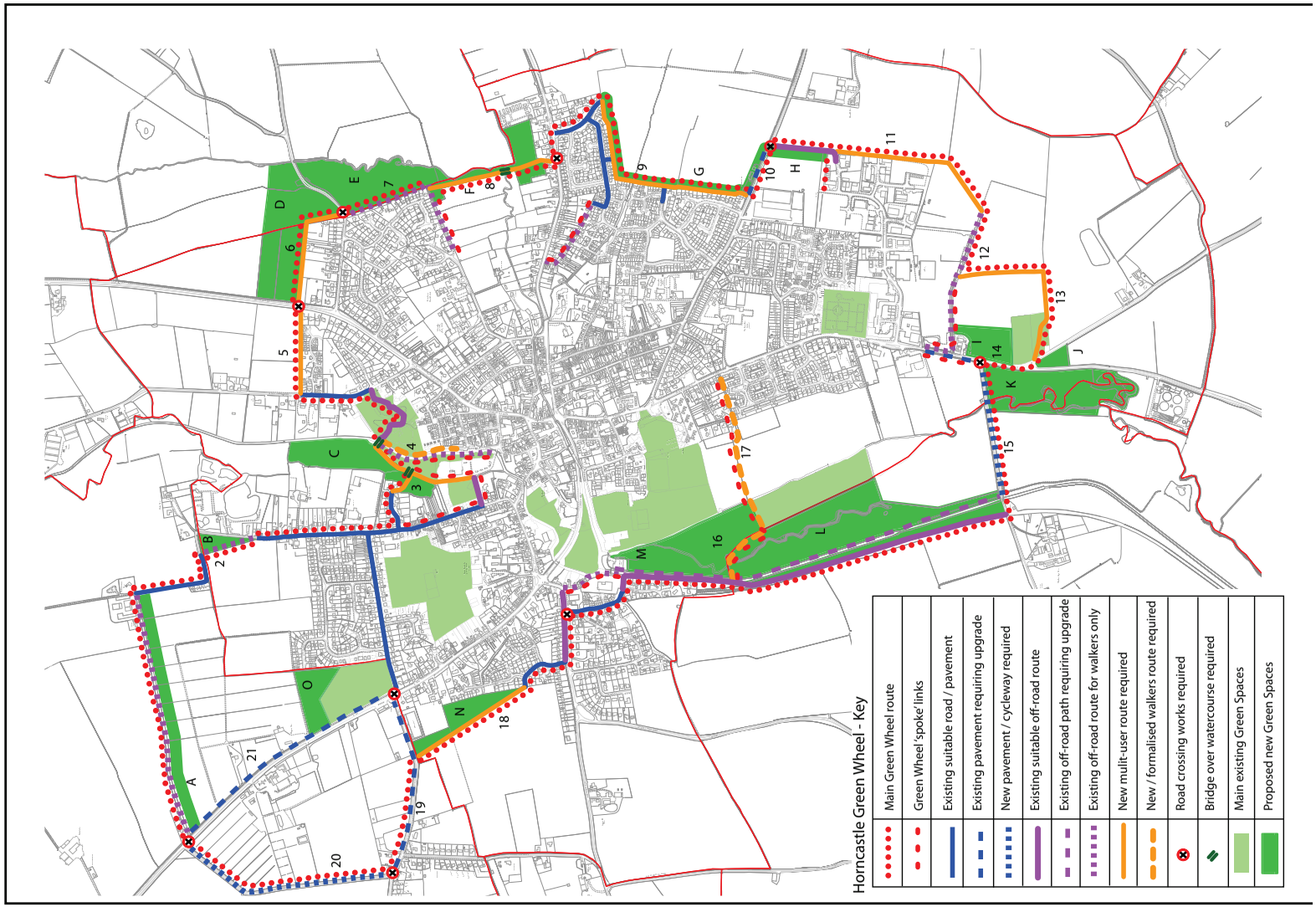
Community Objective 6: To protect and enhance the best of Horncastle's environmental assets.

Community Objective 7: To ensure that the issues identified in the Horncastle Townscape Assessment are addressed in the development of sites in and around the town.

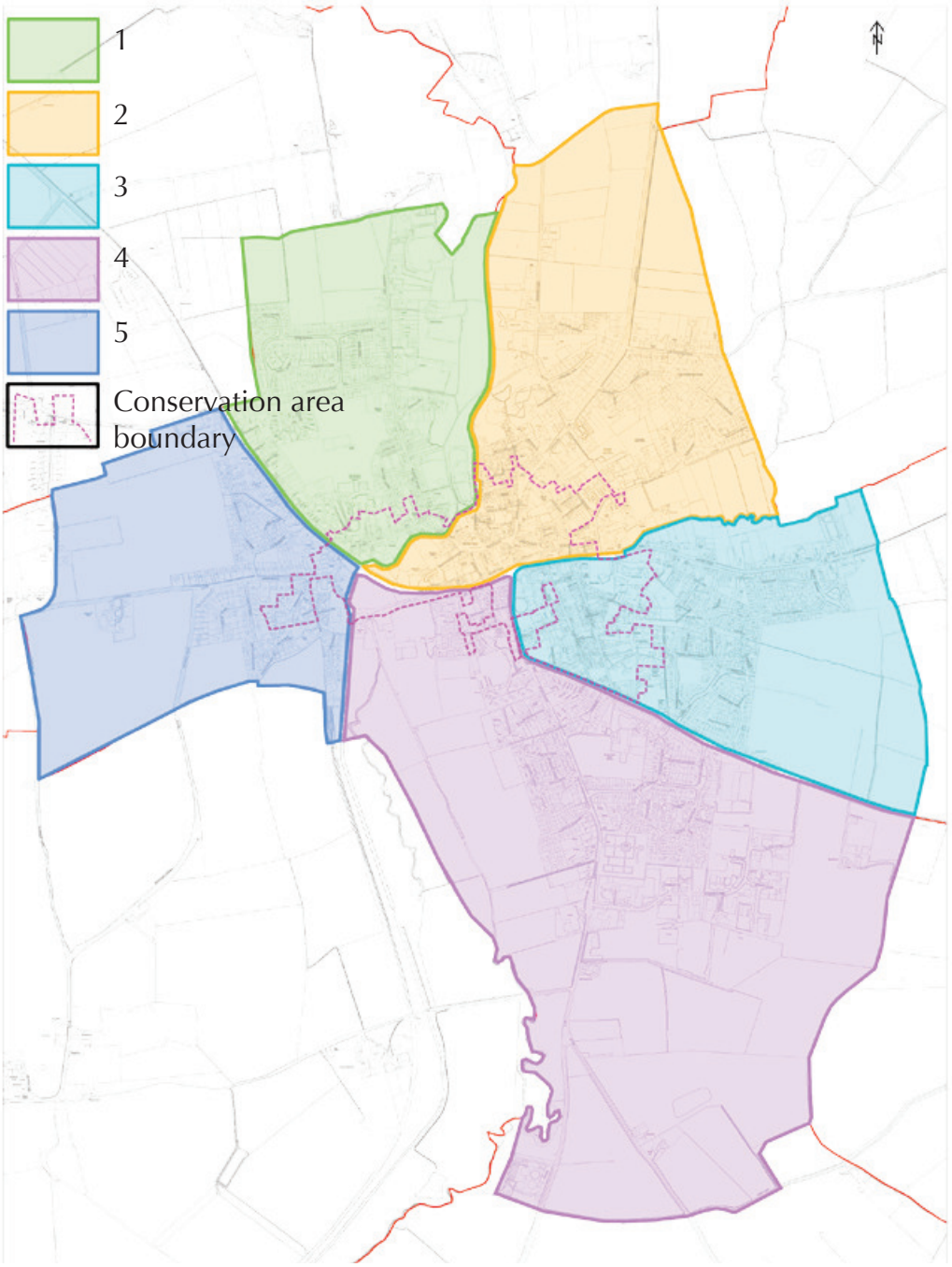
Community Objective 8: That the community are consulted early in the planning application process via the mechanisms outlined in this Neighbourhood Development Plan.

Community Objective 9: That the economic vitality of the town is supported by ensuring that
a) future housing development is flexibly designed to support home working
b) future development ensures that good broadband connectivity is possible
c) future development supports retail and commercial activity in the town centre.

Appendix III: Proposed Green Wheel network



Appendix IV: Spatial character areas



Sector 1: Lincoln Road to the river Bain including Prospect Street.

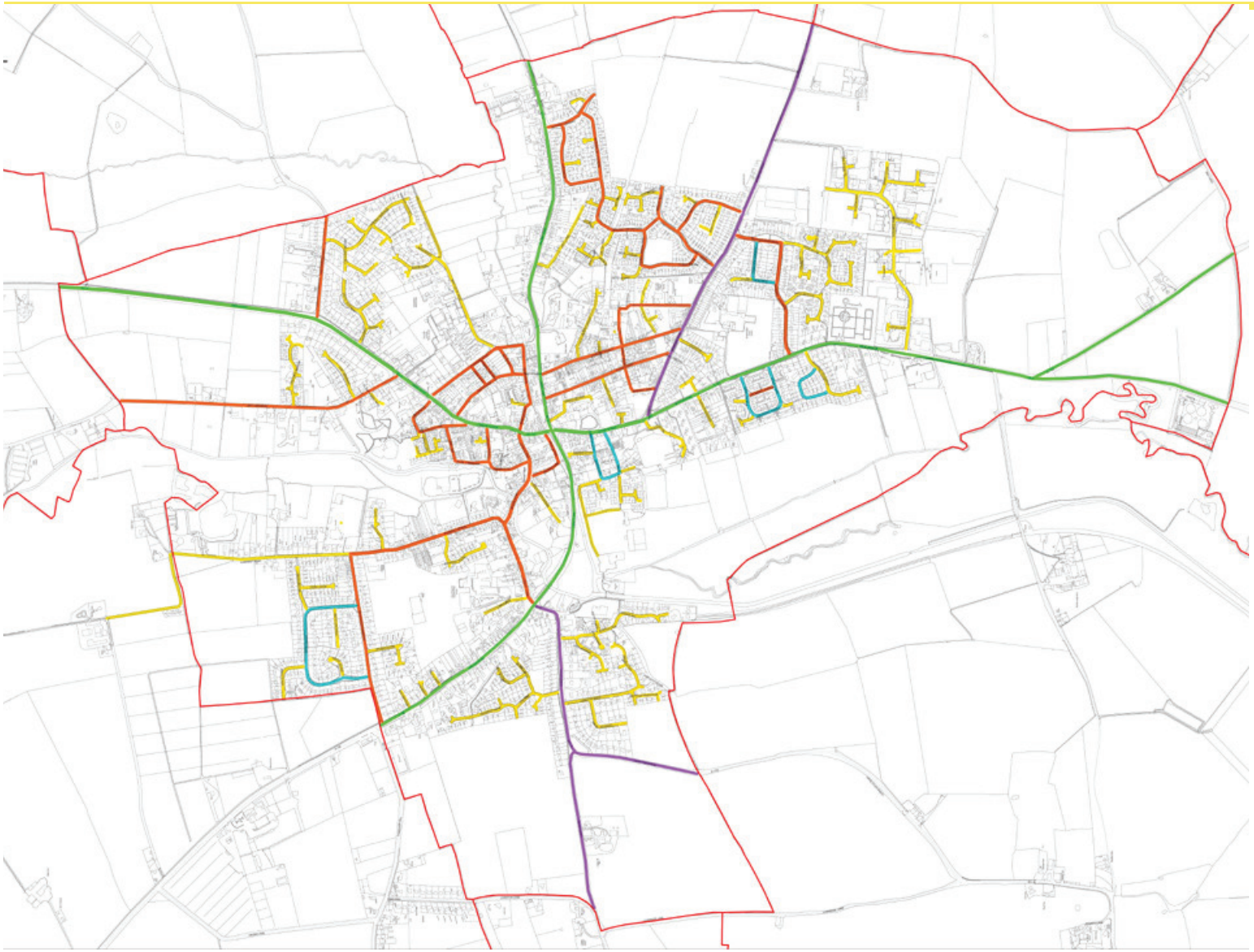
Sector 2: The river Bain to the river Waring including Louth Road.

Sector 3. The river Waring to Mareham Road.

Sector 4: Mareham Road to the old river Bain along the parish boundary and the river Bain nearer town.

Sector 5: The river Bain to the Lincoln Road including Langton Hill.

Appendix V: Route structure analysis



Major route
Main route
Through route
Loop route
Cul de sac

Appendix VI: About OPUN

OPUN is a charity that promotes good design practice. We work across the East Midlands with the aim of improving the quality of new and restored places for the communities that live and work in them.

We work with decision makers, design, planning and regeneration professionals, communities and young people to improve the design of the built environment. We put high value on the contribution excellent design, culture and creativity bring to making places which are distinctive, places where people can enjoy living and working and have pride in.

This report was produced by Garry Hall, OPUN's design manager.

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Alternatively, you can visit the OPUN website at: www.opun.org.uk

OPUN Architecture East Midlands is a registered charity 1143920.