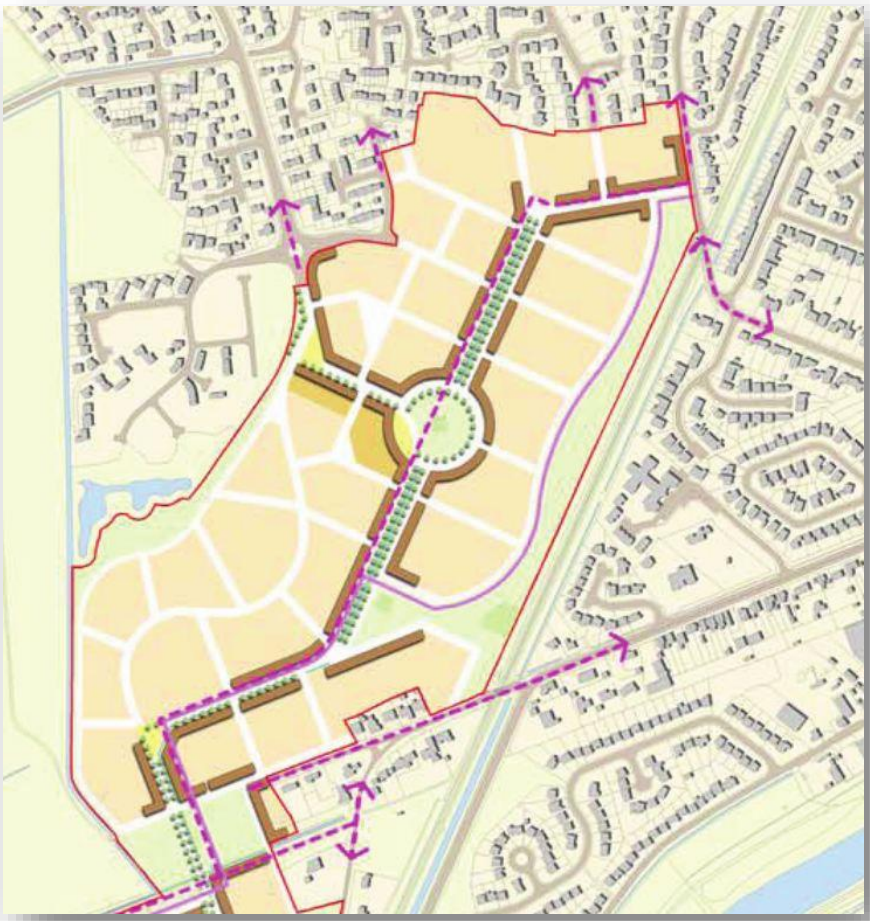
DESIGN CODE

NORTHERN NEIGHBOURHOOD

HOLLAND PARK, SPALDING



Document ref: BH.DC.NN.2014

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Contents

1. INTRODUCTION
1.1 BACKGROUND

2. THE DESIGN PROCESS
2.1 EXISTING APPROVED DOCUMENTS
2.2 PROPOSED DOCUMENT

3. THE DESIGN CODE
3.1 SCOPE OF THE CODE
3.2 STRUCTURE OF THE CODE
3.3 Character areas
3.4 Street Hierarchy
3.5 Block Principles
3.6 Key Groupings
3.7 Details Within The District And Local Centres
3.8 Approach To Ancillary Infrastructure
3.9 Approach To Vehicular Parking
3.10 Approach Towards Cycling Parking
3.11 Character And Treatment To Structural Planting
3.12 Treatment Of Footpaths, Cycleways And Play Areas
3.13 Details Of The Sustainable Drainage Management Regime
3.14 Details Of The Public Realm
3.15 Details Of The Lighting Strategy
3.16 Details Of The Waste And Recycling Provision
3.17 Measures Of Resource Efficiency And Climate Change Adaption

1. INTRODUCTION

1.1 BACKGROUND

1.1.1 The Holland Park Development Brief was adopted by South Holland District Council as a Supplementary Planning Document in 2007.
Its aim was to:

- **Provide clear guidance for the production of planning proposals for the development.**
- **Guide the progress of the development and integrate the development of housing with community infrastructure.**
- **Act as a vehicle for community involvement and the participation of infrastructure providers in the planning of the development.**
- **Indicate those elements of national, regional and local planning policy which are expected to exert significant influence on the nature of the final proposals.**
- **Set out the required range and content of the development proposals.**
- **Indicate those documents or other items of information which will be required to guide the Master Plan or accompany any application for planning permission.**

1.1.2 The Holland Park Master Plan followed in 2009 as an Outline Planning Application under planning reference H16-0571-09 and was subsequently approved on 18th May 2012.
The structure of the Design & Access Statement includes the following:

- **Outline the proposed development and planning background.**
- **Assess and evaluate the local facilities and services to inform the design process.**
- **Assess, evaluate and illustrate existing opportunities and constraints on the site.**
- **Assess policies relevant to the redevelopment of the site and their impact upon the proposals.**
- **Assess and evaluate settlements surrounding the site to inform the design and characteristics of the Master Plan.**
- **Assess and evaluate local densities to inform the design and characteristics of the Master Plan.**
- **Summarise public consultations events and findings.**
- **Further details of the evolution of the design of the Master Plan.**
- **Outline proposals for the Master Plan. Explain the Concept, the development Amount, Layout, Scale, Appearance, Landscape, Access, Landform, Building Performance, Climate Change.**
- **Phasing and Implementation.**

2. THE DESIGN PROCESS

2.1 EXISTING APPROVED DOCUMENTS

HOLLAND PARK DEVELOPMENT BRIEF - 2007

HOLLAND PARK MASTER PLAN - 2009

2.1.1 The purpose of each document mentioned on the previous page and listed above, is to provide a co-ordinated approach in providing comprehensive layers of information that goes towards assisting in the compilation of the Design Code, the Development Brief and ultimately the detailed design of each Reserved Matters Application.

2.2 PROPOSED DOCUMENT

CHAPTER 3 - NEIGHBOURHOOD SPECIFIC DESIGN CODE

2.2.1 The purpose of The Design Code in Chapter 3 of this document is to extract both the design principles and content from the approved documents above that are relative to its respective Neighbourhood whilst providing a final layer of detailed design guidance via written and graphic rules but do not establish the overall outcome. This guidance will ensure continuity and consistency over time.

SEPARATE DOCUMENT –
NEIGHBOURHOOD SPECIFIC DEVELOPMENT BRIEF & DESIGN STATEMENT

2.2.2 In addition to The Design Code, a separate document must accompany each Reserved Matters Application being submitted for detailed approval.
This separate document should be in the form of a Neighbourhood Specific Development Brief and Design Statement that demonstrates the actual detailed scheme accords with all preceding documentation referred to above.

2.2.3 The process of designing each phase of development requires the designer to follow a sequence of 'thought-processes' to design a scheme that is compliant with the Design Code.

It is suggested the following 'eight-stage' process is considered to ensure every element is properly explored and successfully executed:

STAGE 1 PEDESTRIAN/CYCLE & VEHICULAR MOVEMENT + STREET TYPE	**Understand the pedestrian/cycle and vehicular network which will inform the block and street structure including street types**
STAGE 2 BLOCK TYPE	**Establish the basic block structure and block type**
STAGE 3 SETBACK + BOUNDARIES	**Consider the location of the built form and treatment between the street and buildings**
STAGE 4 BUILT FORM	**Apply details of the built form such as variation in the building typologies**
STAGE 5 BUILDING HEIGHTS	**Building height information provides parameters within which each street will be designed**
STAGE 6 MATERIALS	**With external location and scale parameters established, attend to materials and details to elevations**
STAGE 7 PARKING CODES	**Understand how, where and what type of parking is to be accommodated**
STAGE 8 PUBLIC REALM	**Establish the public space to each street type and attend to details such as tree planting, street furniture, services**

3. THE DESIGN CODE

3.1 SCOPE OF THE CODE

3.1.1 Overall, this document responds directly to Condition 5 and 6 of H16-0571-09.
Therefore the structure of this particular chapter is based upon the physical components listed within Condition 5.
These conditions require specific elements to be cross-referenced and interlinked between each Condition.
For this reason and to assist legibility, it is deemed appropriate to merge the response to these conditions into a single document.

3.1.2 The approved Master Plan identifies Character Areas within 3 distinctive Neighbourhoods:

1) St John's View and Church View in the Northern Neighbourhood
2) Fantail Park in the Central Neighbourhood
3) South Drove Village in the Southern Neighbourhood

3.1.3 This document will accompany all subsequent Reserved Matters Applications that lie within the Northern Neighbourhood to ensure continuity and consistency.

3.1.4 A separate Design Code and Development Brief will be prepared for each of the two remaining Neighbourhoods concurrent with the submission of the first Reserved Matters Applications made in each respective Neighbourhood.

3.2 STRUCTURE OF THE CODE

3.2.1 The DCLG document – Preparing Design Codes: A Practice Manual (2006) recognises that the prescription of Designs Codes varies considerably.
They tend to focus on those characteristics that are important to achieve and fix the essential components to provide continuity in quality and consistency over time.
It also acknowledges that Codes can include provisions that are advisory or optional.

3.2.2 For clarity and the avoidance of any doubt, this document does not Code for every detail, the intention being that designers should retain a degree of creative freedom, all be it limited.
However the items listed below on the following page are considered the important components as they are specifically listed in Condition 5 of H16-0571-09.
These components give the designer clear guidance, a level of detail and a degree of explanation as to what is expected.

3.2.3 As this section of the document is Neighbourhood Specific, parts of some components listed below may relate to a separate Neighbourhood and consequently be dealt within that respective Neighbourhood Specific Design Code.

3.2.4 The essential components as stated in Condition 5 of H16-0571-09 of the Outline Planning Permission are listed in the table below and as such forms the structure of this Design Code:

a.	**The character, mix of uses and density established through the perimeter plans at the outline stage to include the layout of blocks and the structure of public spaces.**
b.	**The street hierarchy, including the extent of the adoptable highway, typical street cross-sections, street trees and detailed design elements and how these translate into a legible movement strategy across the site.**
c.	**Block principles to establish use, density and building typologies. In addition, design principles including primary frontages, access, fronts and backs and perimeter of building definition.**
d.	**Key groupings and other buildings including information about height, scale, form, level of enclosure, building materials and design features.**
e.	**Comprehensive designs including detailed plans, sections, and materials relating to the treatment of the public realm at all crossing points over the Primary Street or any other highway, at the District Centre, the Local Centres and local squares, and the proposed primary access points into the Primary School, the Community Building/Changing Rooms, the Health Centre and Extra-Care Facility.**
f.	**The approach to the incorporation of ancillary infrastructure such as pipes, flues, vents, meter boxes, fibres, wires and cables required by statutory undertakers as part of building design.**
g.	**Details of the approach to vehicular parking across the entire site and for each development block, including the District and Local Centres.**
h.	**Details of the approach to cycle parking for all users and for each development block, including the distribution (resident/visitor parking and location in the development), type of rack, spacing and any secure structures associated with the storage of cycles.**
i.	**The character and treatment of the structural planting to the development areas.**
j.	**The treatment of footpaths and cycleways and the treatment of all play areas.**
k.	**Details of how the sustainable drainage management regime is being applied to the built-up area to control water volume and water quality including specification of a palette of sustainable drainage features to be used, including planting strategies to enhance biodiversity and improve water quality as much as possible before discharge into the ponds and basins located within the informal open space.**
l.	**Details of the public realm to include public art, materials, signage, utilities and any other street furniture.**
m.	**Details of the lighting strategy and how this will be applied to different areas of the development with different lighting needs, so as to maximise energy efficiency, minimise light pollution and avoid street clutter.**
n.	**Details of waste and recycling provision for all building types and their location within the development block.**
o.	**Measures to demonstrate how opportunities to maximise resource efficiency and climate chance adaption in the design of the development will be achieved through external, passive means, such as landscaping, orientation, massing and building features.**

3.2.5 Whilst the Design & Access Statement – July 2009 provides guidance on the essential components listed on the previous page, the Design Code now looks to apply an extra layer of detail and will help to inform each Reserved Matters Application.

3.2.6 The following components have been deliberately arranged to replicate those listed above and so accord with Condition 5 and 6 of H16-0571-09:

3.3 COMPONENT 'a' – CHARACTER AREAS

Character

3.3.1 The Northern Neighbourhood comprises of two distinctive Character Areas that are highlighted in Chapter 19 of the Design & Access Statement – 2009:

St John's View - Formal:

19.3 The St John's View - Formal character area follows the alignment of, and is tightly defined around, the Major Street and key axis which runs from the Raceground north eastwards towards the town centre, aligning with the spire of St John's Church. In keeping with this strong axis, articulated by the Illustrative Master Plan, the character is formal. Medium densities deliver a high proportion of continuous terraced frontages with a consistent height and form. Predominantly 3 storey buildings provide a high degree of enclosure and frame the central tree lined 'canal' and 'circus' which could function as a key part of the sustainable urban drainage system for the site.

Church View – Semi Formal:

19.4 The Church View - Semi Formal character area occupies the land either side of St John's View (Formal) axis. As such it makes the transition between this key structuring element of the Holland Park Master Plan and the: ongoing development at Broadway and open countryside to the west; the existing residential area to the north; and the proposed linear open space adjacent to the railway line to the east. The strong form of the streets ('ribs') branching from the central street ('spine') provide the ordering structure to the semi formal character. Predominantly low densities within the character area allow for variation in building heights between 2 and 2.5 storeys with occasional 3 storey elements and an increased proportion of detached and semi detached dwellings.





3.3.2 Here both St John's View and Church View are described simply and concisely to inform the designer of their basic composition.

Mix of Uses

3.3.3 The Northern Neighbourhood will contain a mix of residential, non-residential, open space and infrastructure uses to ensure a sustainable and integrated development. Land uses and their location should follow the Land Use Plan – Figure 43 of the Design & Access Statement – 2009.

3.3.4 The primary use across most of the land is residential development.
Public Open Space shall appear around the periphery of Church View on three sides and one formal area locked in the centre of St John's View.
A Local Centre is to be allocated to the south of the primary gateway – south side of the Broadway roundabout.

Density

3.3.5 The pattern of development should follow a traditional theme in that the greater density is formed along the central parts of the development and reduces as it reaches towards the outer edges.
Indeed this is illustrated in Figure 44 of the Design & Access Statement where Holland Park has been subdivided into four density bands.

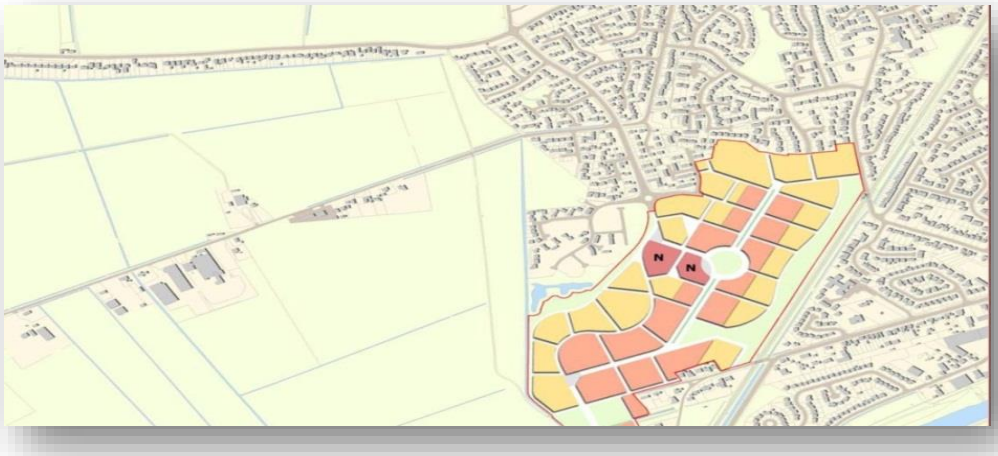




Figure 44 Density Plan

3.3.6 Residential development within the Northern Neighbourhood consists of two density bands.
Each band coincides with a Character Area.
As St John's View runs through the centre of the development then this Character Area should adopt up to a maximum ratio of 45 dwellings per hectare.
By contrast, Church View should allocate up to a maximum ratio of 30 dwellings per hectare.

3.3.7 In addition, the Local Centre located in the centre of the Northern Neighbourhood is awarded the highest density concentration of no more than 60 dwellings per hectare.
However this will depend upon the extent of non-residential buildings that eventually occupy this facility.

Layout of Blocks

3.3.8 The formation and structure of the housing blocks should accord with that illustrated in Figure 67 of the Design & Access Statement - 2009.
As such the structural framework of all housing blocks needs to follow this to ensure the basic composition of the Master Plan is followed.



Figure 67 Urban Form and Character Area Plan

3.3.9 Figure 67 clearly demonstrates the urban form proposed and arranges the housing blocks in such a way that they reflect their respective character area.
The layout of blocks within St John's View should line up with each other, be square and laid in a grid formation to reinforce the formal character.
Church View needs to maintain an element of formality at the interface with St John's View.
It should then extend out to the periphery where the housing blocks need to take a more semi-formal approach.

3.3.10 The Residential Block Principles are described in detail below under 3.5.

Structure of Public Spaces

3.3.11 Chapter 19 (19.22-19.38) of the Design & Access Statement – 2009 outlines the scope in which the designer can work within to maintain a consistent approach when creating space for each street type.
This in turn will provide legibility throughout the development.

3.3.12 This table summarises some of the components that will help shape the public spaces:

	FRONTAGE	BUILDING TYPE	BUILDING HEIGHT	SET BACK	BOUNDARY TREATMENTS
PRIMARY STREET WITHIN ST JOHNS VIEW	Continuous frontage with common building line	Terraced, Semi Detached	3 storey	2 – 6 M	Railings, Railings set behind shrub border and ornamental trees
MAJOR STREET WITHIN ST JOHNS VIEW	Continuous frontage with common building line	Terraced, Semi Detached	3 storey	2 – 6 M	Railings, Railings set behind shrub border and ornamental trees
MAJOR STREET WITHIN CHURCH VIEW	Varied building line	Terraced, Semi Detached	2 storey, 2.5	1 – 3 M	None, Railings
MINOR STREET WITHIN ST JOHNS VIEW	Continuous frontage with occasional breaks only for parking	Terraced, Semi Detached	2 storey, 2.5	0.6 – 1 M	None
MINOR STREET WITHIN CHURCH VIEW	Continuous frontage with occasional breaks only for parking	Terraced, Semi Detached	2 storey, 2.5	0.6 – 1 M	None
MEWS	Continuous frontage, Brick boundary walls with occasional breaks for access	Terraced, Semi Detached, Flats over garages	2 storey, 2.5	0 – 0.6 M	None
LANE WITHIN CHURCH VIEW	East side - Common building line with garage set back between buildings. West – Varied building line	East side – Detached, West side – Semi Detached, Detached	East side - 2 storey, West side – 2, 2.5	2 – 6 M	Hedgerow lined with trees

3.4 COMPONENT 'b' – STREET HIERARCHY

Street Hierarchy

3.4.1 A successful public realm will be created if subsequent Reserved Matters Applications follow a simple set of criteria below:

- A legible and permeable network will give options and choice for movement between and within development blocks.
- Streets need to create a safe environment and design traffic speeds appropriate to their surroundings whilst responding to the anticipated volume and type of traffic.
- Clear definition between the public and private realm whilst providing multi-use spaces between buildings.

3.4.2 Figure 81 of the Design & Access Statement – 2009 illustrates how the determined street hierarchy throughout Holland Park should be laid out and inter-connected.

3.4.3 The description of each street type, referred in Chapter 19 (19.22-19.38) of the Design & Access Statement, should always be used as a constant point of reference.

3.4.4 In order to accord with the Master Plan, it is recommended that the street pattern shown in Figure 81 should be followed and used as a base plan when preparing a detailed scheme.
There can of course be some slight variation and indeed additional lower order streets can be added to allow the designer a degree of flexibility within the housing blocks.

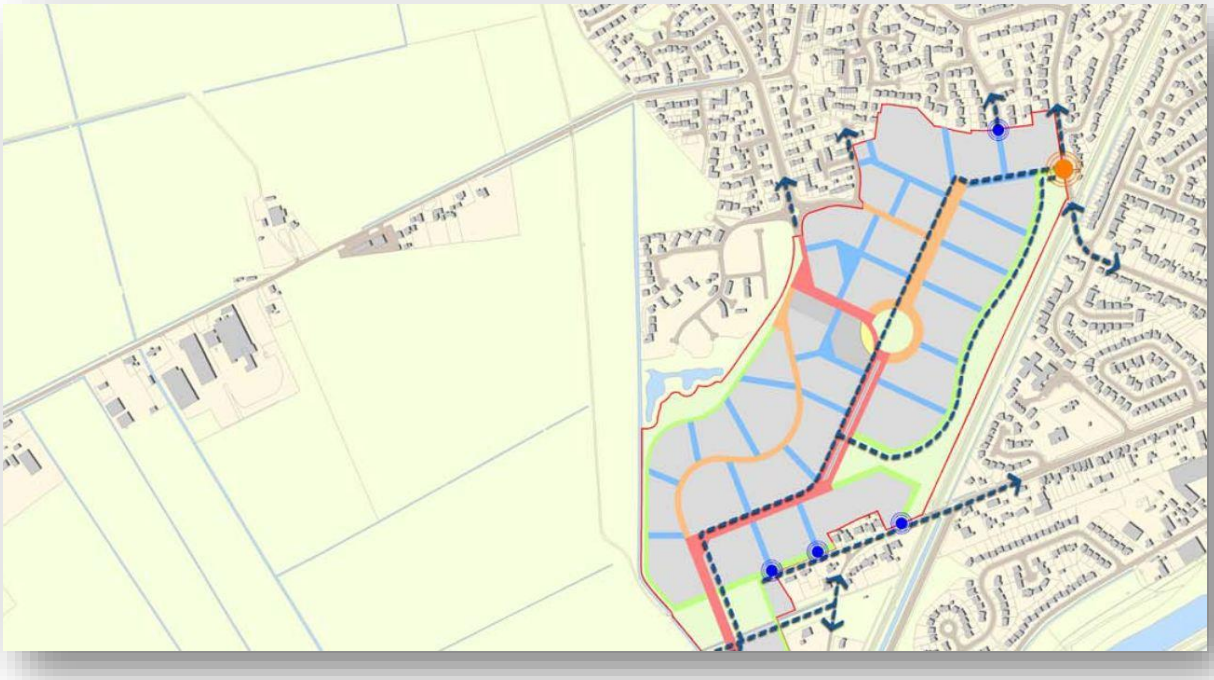


Figure 81 Space Typology Plan

3.4.5 The streets and the spaces they create have therefore been categorised according to their intended character, function and the movement they accommodate.
Four out of the five street types identified in Figure 81 feature within the Northern Neighbourhood and are listed below in order of hierarchal importance:

1. Primary Street
2. Major Street
3. Minor Street
4. Mews / Courtyard / Lane

The Primary Street

3.4.6 The Primary Street will serve as the main movement corridor throughout the development. It shall incorporate a bus route along its entire length, a cycle route, safe and attractive pedestrian routes and a clear and direct route for motorists.

3.4.7 The alignment of the Primary Street should generally pass through the centre of the built up areas of development and allow the majority of the lower order streets to feed off it at regular intervals.

3.4.8 Similarly, both the cycle and pedestrian routes should run alongside and across the Primary Street at regular intervals to ensure a consistent and permeable network is maintained along its length.

3.4.9 The Primary Street must serve and maintain a connection with development either side at all times.
Furthermore the detailed design must ensure that the buildings proposed either side of the Primary Street relate to each other.
Under no circumstances must the Primary Street ever be used to divide areas of development.

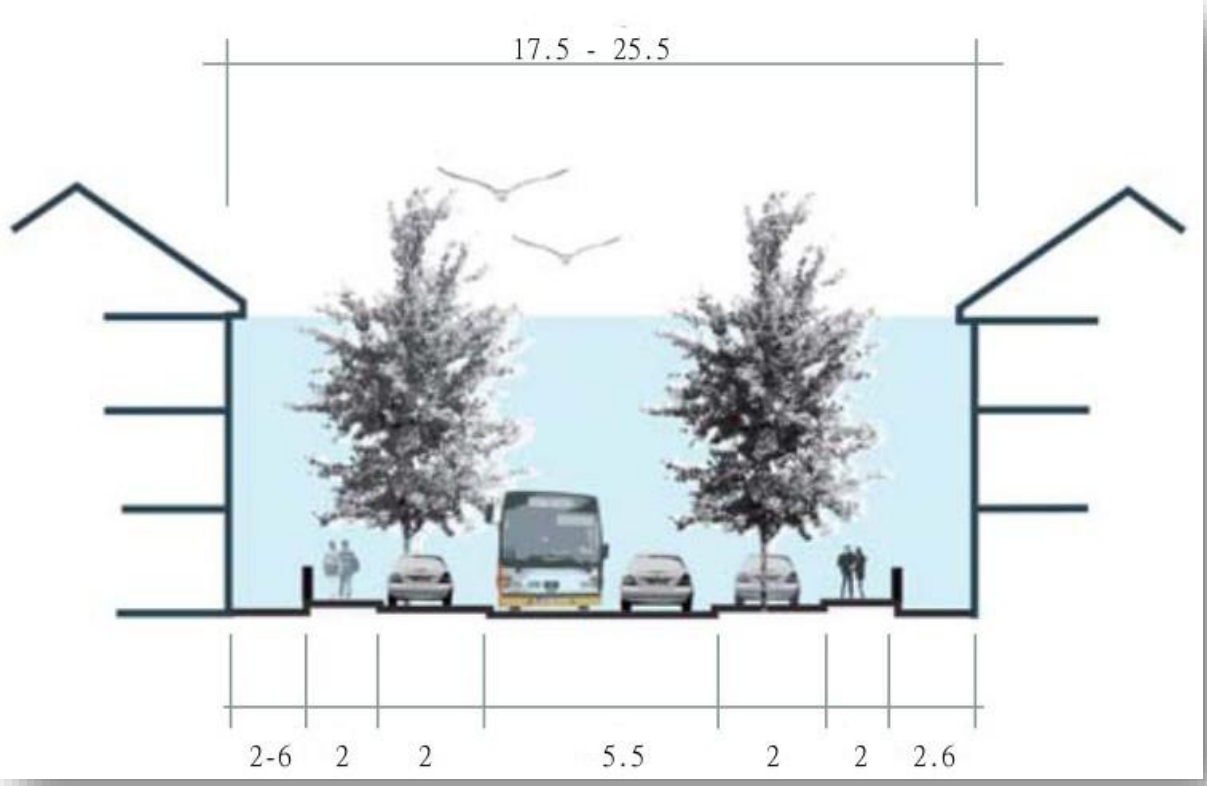


Fig. PRIMST01 – Illustrative Cross Section of Primary Street

This street profile may be appropriate between St Johns Circus and The Local Centre.

The Major Street

3.4.10 The Main Street plays an important role within the Northern Neighbourhood by forming one half of St Johns View.
Whilst Figure 81 defines the top half (northern) of St Johns View as a Major Street, it should in this instance display the same characteristics as that of the bottom half, defined as a Primary Street.
The only difference between the two is for the majority of those who pass through Holland Park, the Primary Street identified in Figure 81 will be their direct route when travelling north or south bound.
The Major Street also serves the lower order streets in exactly the same way as described above.

3.4.11 All the design components that form St Johns View must be rigidly maintained and used continuously along its entire length.
It is crucial these components are repeated throughout to reinforce its strong, formal identity within the scheme.
There must be no departure from this.

3.4.12 An open ended spur currently exists that runs east off the Broadway roundabout, known as Meadow Way.
Figure 81 shows Meadow Way connecting onto St Johns View as a Major Street. However the road hierarchy for the Meadow Way extension should be significantly scaled down compared to that of St Johns View.
This is demonstrated on the following page.

3.4.13 Additional Major Streets beyond this within the Northern Neighbourhood should be limited and their inclusion would need justifying as subsequent detailed designs need to encourage motorists to use the Primary Street for most of their movement through the development.

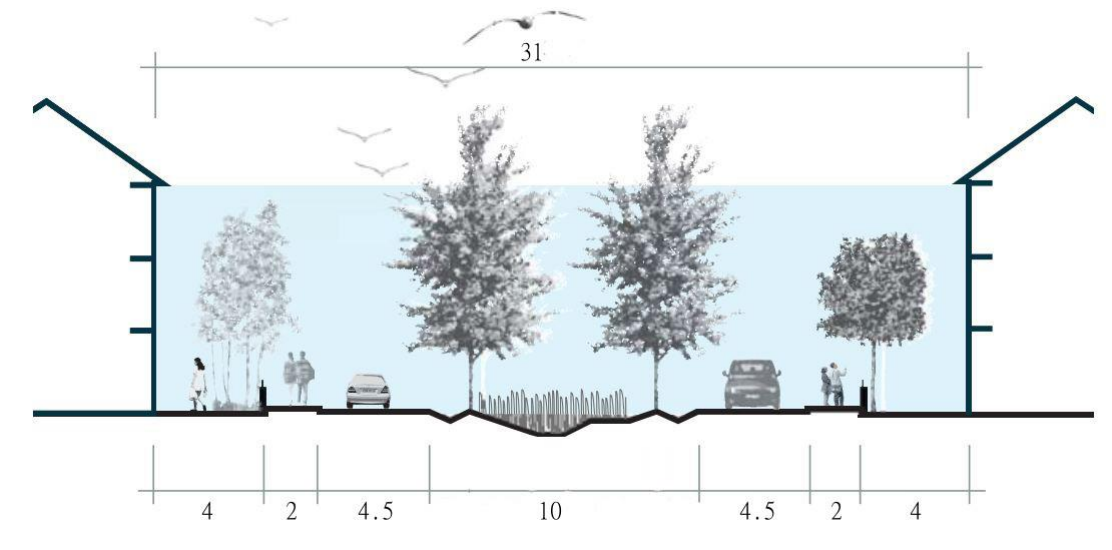


Fig. MAJST01 – Illustrative Cross Section of Major Street

This street profile may be appropriate across part of St Johns View, north side of St Johns Circus.

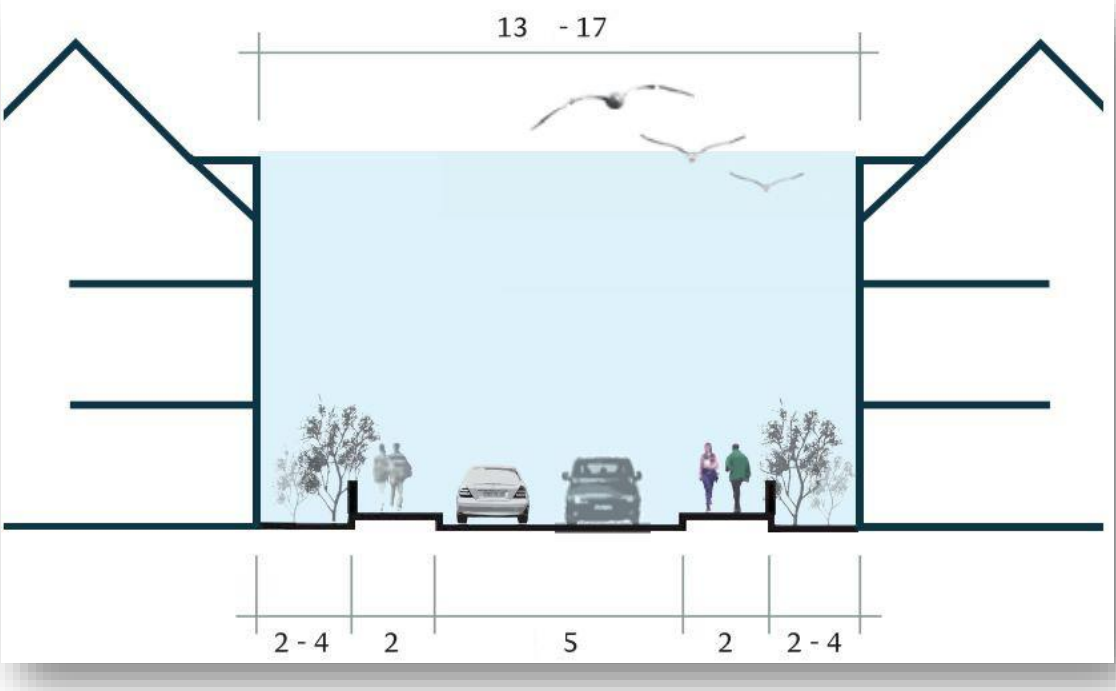


Fig. MAJST02 – Illustrative Cross Section of Major Street

This street profile may be appropriate for the Meadow Way Extension.

The Minor Street

3.4.14 The Minor Streets should serve as connection points from the high order streets to the low order streets.
Where St Johns View is the main spine through the Northern Neighbourhood, the Minor Streets serve as ribs that branch out from St Johns View.

3.4.15 The Minor Street should be very distinctive from the high order streets mentioned above by virtue of their lower level of traffic movement, their means of reducing traffic speed, their reduced street widths and immediate reduction in scale of the public realm.
Here on-street parking should be considered as a means to calm traffic speeds.

3.4.16 All Minor Streets that branch out from St Johns View should be designed to complement the semi-formal character that those particular streets should look to adopt.
As these streets move away from St Johns View their arrangement can take a more informal approach and variations of their composition can be applied.

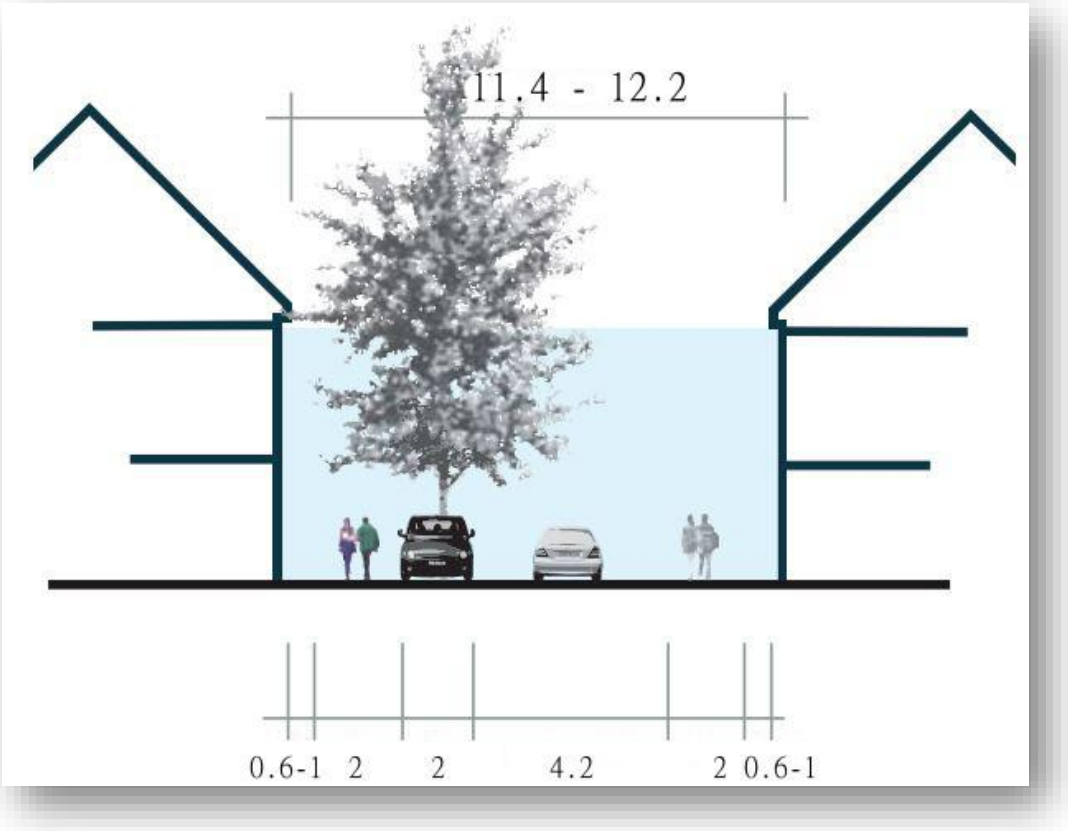


Fig. MINST01 – Illustrative Cross Section of Minor Street

This street profile may be appropriate as a link between St Johns View and the East Side of Church View.

Mews / Courtyard / Lane

3.4.17 It is expected that various arrangements of Mews and Courtyard street types are to be used mainly within the centre of housing blocks.
They should always form intimate spaces where the housing is inward facing, surrounding the public realm with minimal setback.
They also present an opportunity to change the surface material that will reinforce their own identity within the scheme.

3.4.18 Consideration should be given to apply a shared surface where possible to give pedestrians and cyclists equal priority over motorists.
This can be positively enforced by applying an irregular road alignment to deliberately force low traffic speeds through the space.

3.4.19 By contrast, the use of Lanes should be restricted and applied only around the edges of development.
Consequently they will serve one sided development only.
Lanes need to contribute sympathetically towards the transition between the perimeter housing and areas of public amenity / open space.
Lanes should always appear as a minor component of the public realm it serves and allow the adjacent open areas and landscaping to dominate the space.
Their width should therefore be kept to a minimum and a footpath applied to one side only to maintain its function but to minimise its impact.

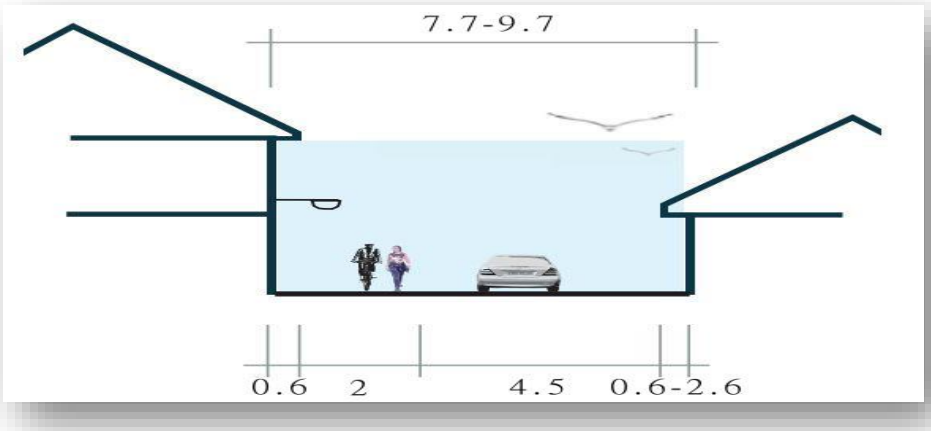


Fig. MEWS01 – Illustrative Cross Section of Mews

This street profile may be appropriate behind the frontage plots of St Johns View and the East Side of Church View.

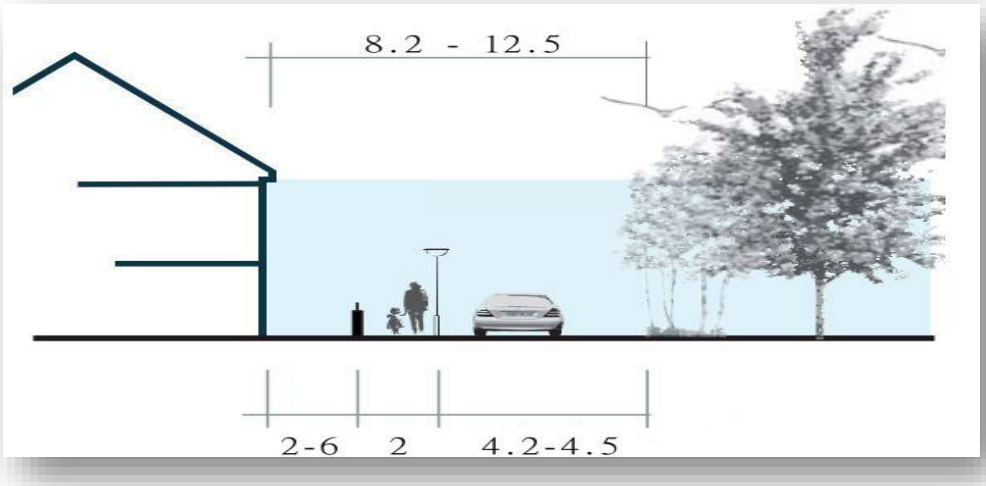


Fig. LANE01 – Illustrative Cross Section of Lane

This street profile may be appropriate for the perimeter/frontage plots along the East Side of Church View.

Extent of Adoptable Highway

3.4.20 In the first instance, it is expected that the designer shall consider all streets illustrated in Figure 81 as adoptable highways unless there is good reason for them not to be.
As each Reserved Matters application is being prepared, the extent of public highway should be maximised to offer options and choice for movement for the public.
It is recognised however that there shall be occasions where private drives are deemed more suitable but their use should be limited and their application kept to a minimum.
A plan identifying the extent of public highway should therefore be included with each Reserved Matters Application.

Street Trees

3.4.21 Street Trees are covered within 3.11.
Please refer to this section for further information.

Legible Movement Strategy

3.4.22 Figure 81 of the Design & Access Statement – 2009 is a constant point of reference throughout this particular section of the Design Code.
The road pattern illustrated in Figure 81 lays out a robust and permeable network of streets that not only give options and choice for movement but due to the street hierarchy described above, sets out a logical arrangement of street types that in turn

will provide clear legibility to the layout.
In simple terms, the high order streets are generally placed central to the Northern Neighbourhood and branch out to the lower order streets either side.

3.4.23 Each street type described above, are to have their own distinctive components that will set them apart from each other.
Furthermore, the Character Areas of St Johns View and Church View described in the following section should be compiled in the same manner whereby they have components distinct from each other.
To summarise, the roads within St Johns View must be deliberately straight, square and uniform irrespective of street type and the buildings that line those streets need to compliment that linear and formal formation.
By contrast, the road alignment within Church View should take a more varied approach where the level if variation depends on the street type.

3.4.24 In turn this should define the different street types located within the two character areas thereby providing clear legibility for movement throughout the development.

3.5 COMPONENT 'c' – BLOCK PRINCIPLES

Block Principles

3.5.1 The principles established here are to inform the subsequent detailed layouts of how to establish where particular block types are used.

3.5.2 The Design & Access Statement – 2009 demonstrates generic representations of best practice design principles for residential block types that are deemed appropriate for Holland Park.
The intention here is not for these to be simply copied but used as guidance only when designing the residential blocks at the Reserved Matters stage.
This allows the designer some flexibility to formulate their own interpretations so long as the key principles are followed:

Figure 68 Residential Block Principles: Courtyard



3.5.3 Fig. 68 - The internal areas of Fig. 68 should accommodate a number of uses.
The amount of parking should vary according to density but must not dominate the space without regard to amenity.
Buildings should be provided around the block perimeters to define the public realm from the private realm.
The street width should vary according to the prominence of the route and housing density, allowing a range of parking types to be used and help vary the street character.



Figure 69 Residential Block Principles: Mews

3.5.4 Fig. 69 – The Mews character block helps to prevent the domination of parked cars around the perimeter of the block.
Buildings around the perimeter of the block should define the public realm.
Access points to the Mews should be limited to two with at least one of them designed to give access to refuse vehicles.



3.5.5 Fig. 70 – The arrangement of parking within the plot curtilage should clarify private space from the public and help limit the extent of casual on-road parking.
A minimum of 21 metres must be maintained between rear face elevations for an acceptable level of privacy for properties.
Look to accommodate on-street parking with tree planting where possible.

Building Typologies

3.5.6 Illustrative Tiles for St John's View and Church View have been extracted from the Design & Access Statement – 2009 and are presented below to demonstrate how the block types can be successfully applied in conjunction with the appropriate building typologies:

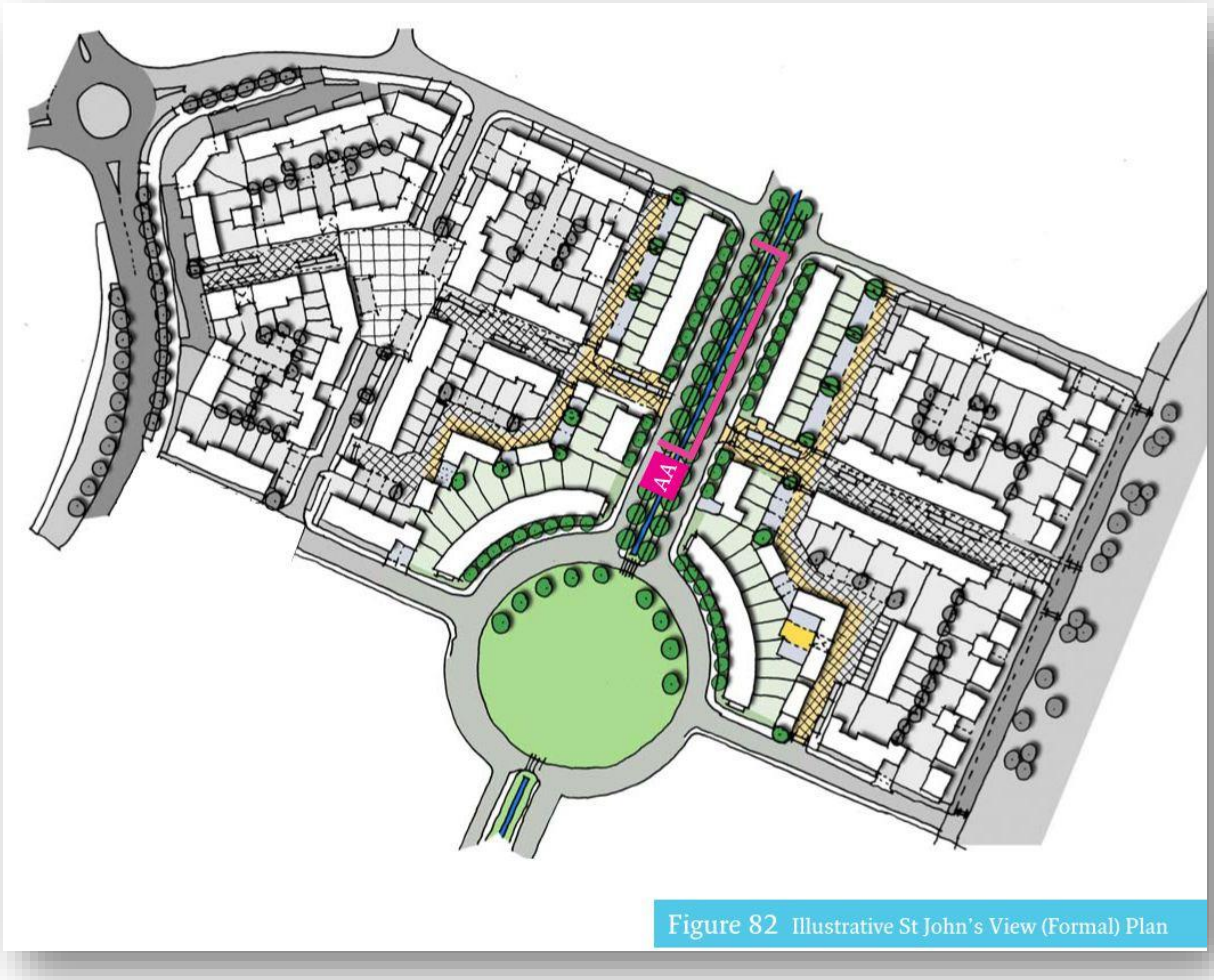
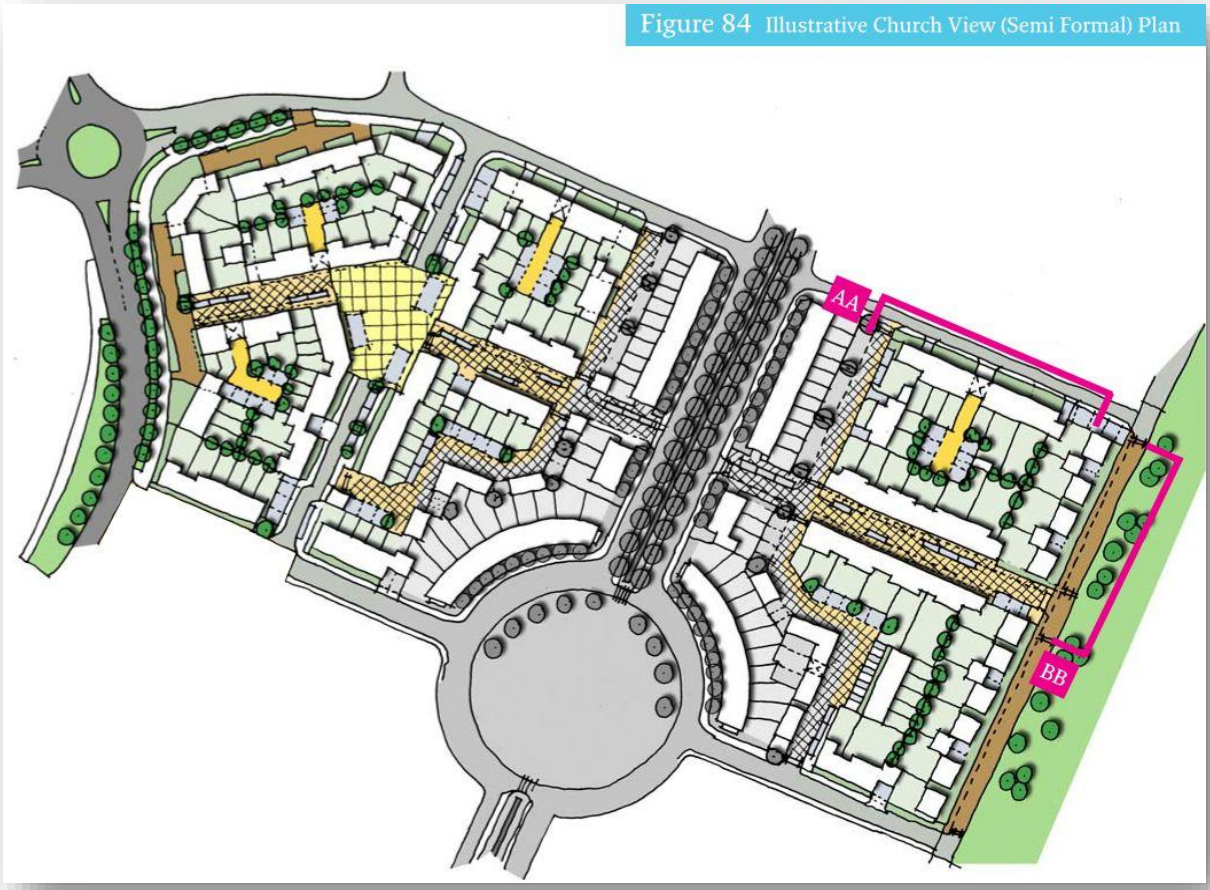


Figure 82 Illustrative St John's View (Formal) Plan

3.5.7 To summarise, St John's View should look to incorporate the following principles:

- Formal building typologies are to be repeated either side of the boulevard with elevations having a strong symmetry.
- Terraced forms should be prominent here with near continuous frontages.
- A consistent 3 storey building height is critical throughout.
- Building lines must have a consistent set-back and front gardens need to have a well-defined common boundary treatment that is repeated throughout.
- The Mews Block Structure is suitable here as it allows dedicated parking provision to the rear with the addition of limited on-street parking as part of the boulevard.

Figure 84 Illustrative Church View (Semi Formal) Plan



3.5.8 Church View can be defined in two parts as it responds to two different environments. To summarise, the western edge of Church View should look to incorporate the following principles:

- A variation of building typologies are to be used.
- Terraced forms should be prominent here with near continuous frontages.
- A variation of 2 and 2.5 storey buildings can be used.
- Building lines are to have consistent yet minimal set-back.
- A range of block structures are relative here to enable different parking solutions to be used.

3.5.9 The eastern edge of Church View should look to incorporate the following principles:

- Formal building typologies should be used continuously.
- Detached, villa style should be designed throughout.
- Hipped roofs should be used.
- A consistent 2 storey building height should be used.
- Building lines should be consistent with generous front gardens.
- On-plot parking set behind and between buildings.

Primary Frontages, Access, Front, Backs, Perimeter Definition

3.5.10 The contribution that Active Frontages can make to the quality of the built environment and creating sustainable communities for the future is recognised in best practice guidance, including By Design: Better Places To Live and the Urban Design Compendium.

3.5.11 Well-designed, active frontages add interest, life and vitality to the public realm. This is achieved by the amount of attention that is given to the elevations that are in public view.
This includes frequent doors and windows with few blank walls on dwellings and the use of good detailing such as bays, chimneys and canopies wherever possible.

3.5.12 The corner of buildings also play an important role in achieving this objective by ensuring treatment is continued, to some degree, around the side elevation.
Here at least one window should be incorporated to maintain continuity.

3.5.13 Boundary treatments provide the transition and define the relationship between the public and private spaces.



Example of 1.8 metre high Brick Wall with Stone Coping and Timber Personnel Gate



Example of 1.8 metre high Timber Closeboard Fence



Example of 0.9 metre high Metal Railings

Front Gardens

3.5.14 The boundary treatments to front gardens are crucial in providing clear definition to the private areas and contribute positively to the overall character and quality of the development.

The height of any walls, railings, fences or hedges shall not exceed 1.2 metres high.

Side Gardens

3.5.15 Boundaries between private gardens will have a screen consisting of a 1.8 metre high fence along its whole length.

Adjacent to the public realm, side boundaries will consist of 1.8 metre high brick walls.

Any treatment adjacent to access points, where they are not providing privacy to rear gardens, shall be no higher than 600mm. This is to ensure that pedestrian safety is secured.

Rear Gardens

3.5.16 Boundaries between private gardens will have a screen consisting of a 1.8 metre high fence along its whole length.

Where a rear garden backs onto a private access way or parking area, then a lockable timber gate will be provided for access.

3.6 COMPONENT 'd' – Key Groupings.

3.6.1 This particular section describes how the physical form of the development should be structured to ensure that each Reserved Matters Application is consistent with and remains true to the Master Plan.

3.6.2 Two key plans within the Design & Access Statement, Figure 46 – Building Heights Plan and Figure 67 – Urban Form and Character Area Plan, give clear guidance as to how the physical form is shaped and where that form lies in relation to the overall scheme.
Therefore all Reserved Matters Applications must observe and respect both plans in order to successfully reinforce both form and character.

Key Groupings

3.6.3 Figure 67 of the Master Plan identifies a series of key features that are strategically placed to aid the legibility of the scheme and focus the attention at certain points across the development.

3.6.4 Those key features located within the Northern Neighbourhood must include the following of which special attention should be given:

Landmark / Key Buildings –

1) South side of the existing Broadway roundabout that forms a backdrop from the site entrance as one enters the development from the north.
2) The northern tip of St John's View.
3) The southern tip of St John's View (not included in Figure 67 but equally important as item 2).
4) The southern tip of the Northern Neighbourhood, on the edge of Hills Park.

Gateways -

5) The actual site entrance on the south side of Broadway roundabout is the Principle Entrance into the development when travelling from the north.
6) The interface between the Northern Neighbourhood and the existing properties along Hawthorn Bank.

Key Spaces -

7) St John's View forms the structural spine of the entire Northern Neighbourhood. In addition it acts as a viewing corridor towards St John's Church.
8) St John's Circus is the centre-point for not only St John's View but for the Northern Neighbourhood as a whole. As a result it must provide a strong sense of place.

Scale & Height

3.6.5 The physical scale and massing for the development should follow both the principles and profile of a traditional Urban Form.
Here the combination of building heights and density are at their greatest through the functional centre of the scheme.
As the development spreads out towards the edges then building heights and density should fall accordingly.

3.6.6 Chapter 17 - Table 7 and 8 of the Design & Access Statement outlines the broad, physical scale and the range of buildings likely to be incorporated throughout the development.
Whilst these general scale parameters are still relative, it is critical that the scale of each building or group of buildings is applied in the right location and in context with each respective Character Area.

3.6.7 Figure 46 of the Design & Access Statement clearly illustrates where the heights of buildings rise and fall in relation to the Urban Form described above.

Building Form, Level of Enclosure, Materials and Design Features

3.6.8 During the compilation of the Master Plan, a Local Character Study was carried out to identify these particular components, amongst others, within the towns of Spalding, Holbeach and Crowland.
The findings were then applied to Holland Park to ensure the same characteristics are integrated and contribute towards maintaining some of the architectural quality associated with these local towns.

3.6.9 Northern Neighbourhood comprises of two distinctive Character Areas:
1) St John's View - where local characteristics relate to those found along Pinchbeck Road in Spalding.
2) Church View – where local characteristics relate to those found along Albert Street, Holbeach and South Street/East Street, Crowland.

3.6.10 The following table looks to give guidance on what and where these physical components should be used:

	ST JOHN'S VIEW – FORMAL	CHURCH VIEW – SEMI FORMAL
BUILDING FORM		
Building Types	Mainly use terraced typologies with occasional detached. Gaps between any building must be kept to a minimum	Mainly use a variety of building typologies, except along Hawthorn Greenway where detached types are to be used
Building Heights	Consistent 3 storey along the primary street. No departure from this	Mainly use a variety of 2 and 2.5 storey with only occasional use of 3 storey, except along Hawthorn Greenway where only 2 storey are to be used
Frontage and Level of Enclosure	Strong continuity and consistent frontage along the primary street. Level of Enclosure around plots must be continuous and in-keeping with its surroundings with gaps only permitted for access purposes by foot and car	Mainly minimal to zero frontage, except along Hawthorn Greenway where consistent yet spacious frontage can be given. Level of Enclosure around these plots must be continuous and in-keeping with its surroundings with gaps only permitted for access purposes by foot and car
DESIGN FEATURES		
Roof Types	Mainly use pitched roof style with only occasional use of hip roof possibly at point of feature	Mainly use pitched roof style, except along Hawthorn Greenway where hip roofs are to be used throughout
Dormer Windows	None	Use on 2.5 storey and some cottage typologies only
Openings	Openings must have a strong symmetry across the elevation with a vertical emphasis	Openings should generally have a degree of symmetry but can be asymmetric within cottage typologies
Bay Windows	Yes, occasional use will be welcome so long as strong symmetry is maintained	Yes, but not essential
Chimneys	Yes, consistently use either on gable ends or on ridge over party walls	Yes, on gable ends or ridge over party walls but use randomly
MATERIALS		
Roofs	Slate effect throughout with no variation	Mixture of pan-tile and slate effect
Walls	Primary wall material will consistently be red/red multi brickwork. No departure from this. Use stone cills to windows throughout. Mainly use brick soldiers except in St John's Circus where stone heads are to be used	Use buff brickwork or render to the inner parts of Church View. By contrast use red multi brickwork to the outer edges on both east and western perimeters
Windows + Doors	Windows and door frames are to be white. Front doors are to be painted using a variation of primary colours	Windows and door frames are to be white. Front doors are to be painted using a variation of primary colours

3.7 COMPONENT 'e' – Details and treatments within the District and Local Centres.

3.7.1 This particular section asks for detailed plans, sections and surface treatments over any public highway within or leading up to the range of public or non-residential buildings that will feature in the District and Local Centres located throughout the development.

3.7.2 Whilst a consistent approach to the treatment of the public realm needs to be adopted across the development, particular attention should be paid to prominent spaces within and around each of the Centres where higher quality materials should be considered to signify their importance.

3.7.3 The selected materials and their arrangement need to reflect the character and function of the spaces to which they form part of.
Furthermore the materials and their level of detailing should provide adequate contrast with treatments elsewhere as a clear indication that these spaces have pedestrian priority.

3.7.4 Those buildings that appear within the Centres will accommodate a variety of uses and consequently the design approach needs to consider not only the buildings but the public spaces that serve them.

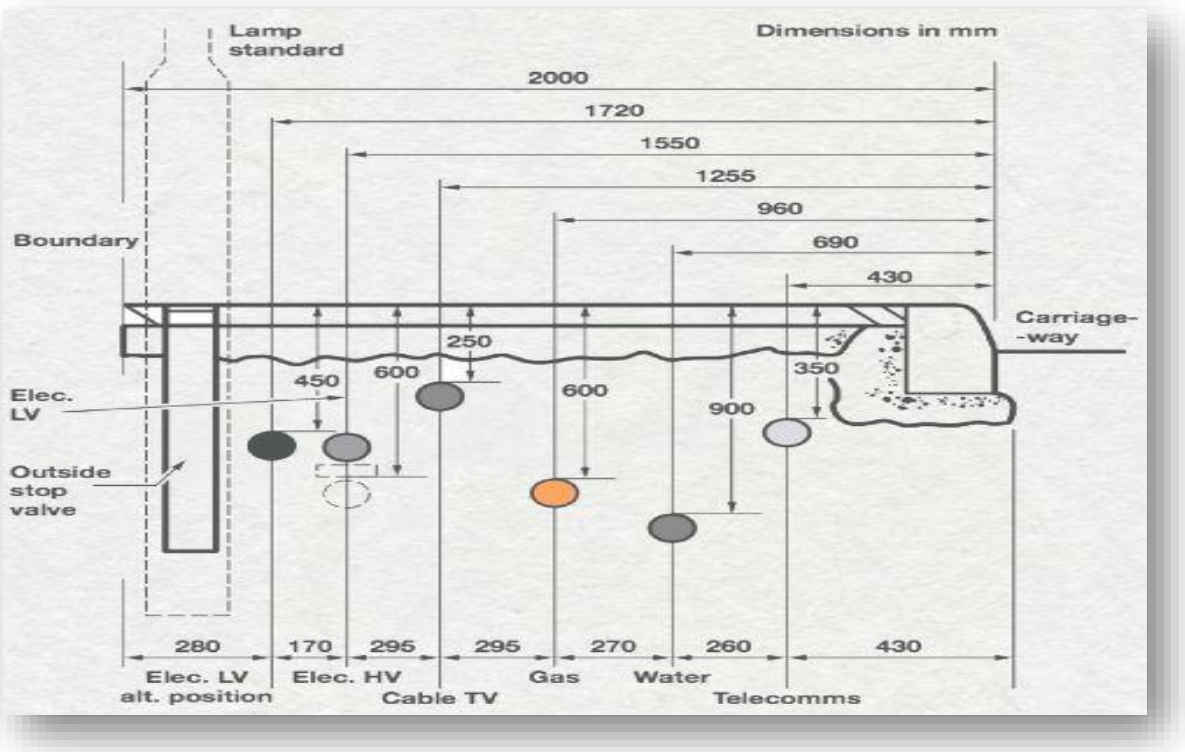
3.7.5 It would therefore seem appropriate for the particular elements required to deal with this part of the condition, to be considered and prepared collectively when the buildings within each Centre are designed and their end uses known.

3.8 COMPONENT 'f' – Approach to Ancillary Infrastructure.

3.8.1 The design of utilities must be integral to the development so as not to visually impact the environment.

Utilities laid within the public realm

3.8.2 The diagram below highlights the disposition of underground pipes and cables located within/beneath the public footpath as required by the statutory undertakers. This arrangement must be strictly followed and repeated throughout the development.



Utilities connected to individual properties

3.8.3 Where services are brought up to/into properties, consideration must be given to the type and location of meter boxes and duct covers when fixed to the elevation/s that face the public realm.
Every attempt should be made to use floor mounted meters to minimise their impact.

3.8.4 As the Electric meter box and BT duct have to be wall mounted, then wherever possible they should be positioned on the side elevation.

3.8.5 In addition, meter boxes should be painted a colour to match the treatment of the wall.

3.8.6 The Gas meter box can be either wall mounted on the side elevation or floor mounted on the front elevation.

3.8.7 The meter for the Water supply should wherever possible be installed at the front boundary, flush at ground level, and within the public footpath.









Top left: wall mounted electric meter box
Top right: floor mounted gas box
Bottom left: wall meter concealed beneath public footpath
Bottom right: wall mounted bt duct

Pipes, Flues and Satellite Dishes

3.8.8 Where possible, drainage pipes and flue terminals should not be placed on front elevations or any elevation in view from the public realm.

3.9 COMPONENT 'g' – Approach towards Vehicular Parking.

3.9.1 Within the residential areas a mix of parking typologies can be provided in the following forms:

On-Street Parking

3.9.2 Spaces shall be arranged in such a way which is not intrusive and does not compromise pedestrian safety.

3.9.3 In all cases, these will be un-allocated as they are situated on the public highway.

3.9.4 The first four examples that follow demonstrate on-street parking typologies that could be incorporated in the detailed design:



Parallel

Kerbside parking parallel to street. Bays may be marked or unmarked.

Typically unallocated (must be, if on public highway).

Can also be used in shared surfaces / home zones.

Vehicles enter and leave the parking space in same direction. Marked bay generally more efficient.

The formality of 'Parallel' parking could be well suited along St John's View.



Angled

Kerbside parking at less than right angle to street - typically 30 to 60 degrees.

Typically unallocated (must be, if on public highway).

Can also be used in shared surfaces / home zones.

Suitable for one way streets, in which case spaces should preferably be angled to face direction of flow.



Perpendicular

Kerbside parking at right angles to street.

Typically unallocated (must be, if on public highway).

Applicable where traffic speeds at or below 20 mph.

Can also be used in shared surfaces / home zones.

Both examples shown above could work well within the eastern side of Church View.



Housing Square

Parking arranged around landscaped central space where streets meet.

Typically unallocated (must be, if on public highway).

Can also be used in less formal arrangements within shared surfaces, public squares and in home zones.

Pedestrian desire lines to and across the central space should be properly provided for.

There is an opportunity to incorporate the 'Housing Square' parking within St John's Circus.

Off-Plot Parking

3.9.5 Spaces serving dwellings shall normally be provided in small groups serving no more than six properties.



Mews Courtyard

Terraced garages or carports with accommodation over (flat over garage units). Garages serve both off plot and on plot dwellings.

Allocated.

Often used in perimeter blocks or mews streets to add visual interest and improve security.

Blank ground floor facades can be unattractive.



Rear Court

Single or larger hardstanding accessed from and located at rear of property. Differs from rear court (off plot) in having direct access to dwelling.

Allocated.

Both examples shown above could work well within the higher density areas where the transition occurs between St John's View and Church View.

On-Plot Parking

3.9.6 Spaces can be arranged in a variety of ways that include detached or integral garages, spaces with accommodation over and spaces between dwellings.



Integral Garage

Garage within footprint of house gives access to dwelling, accommodation continues above or around.

Allocated.

Risk of inactive streets, so better used with double fronted bay windows for surveillance. Garage doors placed close to highway.



Attached Garage

Garage is located to side of house, giving access to dwelling, often with 'bonus' rooms over. May be paired with neighbour.

Allocated.

Garage placed close to highway.

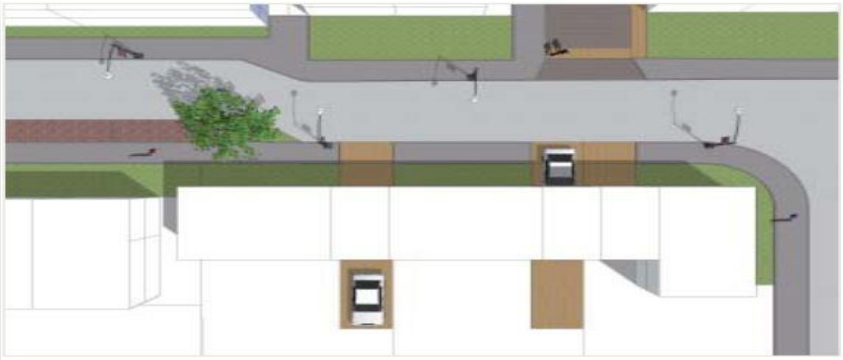
The examples shown above should only be applied where a generous set back is provided.



Detached Garage

Garage is located to side of house, giving indirect access to dwelling. Option of accommodation over. May be paired with neighbour.

Allocated.



Cut Out or Drive Through

Arch formed at street level allowing driveable access under first floor accommodation to hardstanding or garage at rear of plot. May be shared with neighbour if hardstandings or garages paired.

Allocated.

Additional tandem parking space formed by access way, if not shared with neighbour.

The 'Detached Garage' for example, will be ideally suited to the properties situated along the perimeter of Church View (west side) that overlook Hawthorn Greenway.

3.9.7 The illustrations shown on the previous pages are by no means an exhaustive list of parking solutions and alternatives may well be appropriate.
However, in general terms these forms should be considered first when selecting suitable ways to incorporate parking within each Block Type at each Reserved Matters stage.

3.9.8 A Car Parking Strategy shall accompany each Reserved Matters Application which will determine the precise parking provision.

3.9.9 Parking provision within the mixed use areas, shall respond to the requirements of their particular uses.
Precise numbers and the arrangement of parking within the mixed use areas will be determined through further consultation with the Local Authority at the time of preparing that particular Reserved Matters Application and once their end use is known.

3.10 COMPONENT 'h' – Approach towards Cycle Parking.

3.10.1 It is important for Holland Park as a whole to encourage cycling as an integral form of movement not only within the development but beyond into the town centre and the surrounding countryside.

3.10.2 A strategic cycle network has been identified in Figure 42 of the Design & Access Statement – 2009 which must be incorporated into the detailed design.

3.10.3 Any further steps supplementary to the cycle network itself that positively encourages people to leave the car at home and travel by other means should be explored.
One way this can be achieved is be to make provision for cycle parking adjacent to the non-residential buildings.
That way people can make short journeys within the development and leave their cycle safely and securely whilst visiting the range of non-residential buildings / community buildings located throughout the development as a whole.

3.10.4 Any cycle park should be located directly adjacent to the non-residential buildings it is looking to serve, within the public realm, directly adjacent to a public highway or cycleway and be surrounded by buildings which will provide natural surveillance towards the cycle park.

3.10.5 The size and specification must be considered and agreed with the County Council who, in turn, will need to be satisfied with the arrangements in full in order to formally consider this provision for adoption.

3.10.6 The actual appearance must be considered and agreed with the Local Authority. Its design should be sympathetic to its surroundings and used specifically for the people visiting the non-residential buildings.

3.10.7 It would therefore seem appropriate for these particular elements to be considered and prepared collectively when each Centre, Local and District, are designed and Cycle Parking incorporated as part of the total design solution.

3.10.8 For the residential plots themselves, where a garage is provided it should have the capacity to store at least two cycles within.
If no garage is provided then accommodation should be made either within the property or sheltered, lockable storage within the curtilage of the plot.
Either way details should accompany each subsequent Reserved Matters application.

3.11 COMPONENT 'i' – Character and Treatment of Structural Planting.

3.11.1 The character and treatment of the structural planting to each development area needs to respond to its respective environment.
This may either be in the form of private or public space or a combination of the two.

3.11.2 In order to successfully achieve this, it is recommended that an experienced landscape designer is involved in the selection and position of the structural planting and to also accompany each Reserved Matters Application with a more detailed strategy.

3.11.3 Figure 48 within Section 18 of the Design & Access Statement that accompanied the Outline Planning Application identifies four primary areas of formal and informal public open spaces within the Northern Neighbourhood.
Here these areas run through, around or even break up development areas.
Consequently the characteristics of each development area should first be considered and then apply appropriate structural planting that suits.



Legend

Application Site Boundary

1 Fantail Park
2 South Drove Park
3 Fantail Greenway
4 Hills Greenway
5 Fantail Dry Canal
6 Hills Park
7 Raceground Park
8 Hawthorn Greenway
9 St. John's View & Circus
10 South Drove Greenway
11 South Drove Village Greenway

Figure 48 Open Space Plan

The four primary areas of public amenity space are summarised below:

Area 6 of Figure 48 – Hills Park

3.11.4 This area is located between The Raceground and Hills Drain.
It forms a strategic landscape break between the Northern Neighbourhood and Fantail Park.
Here the structural planting must respond to a number of different elements:

1) A clear change in development characteristics from the north to the south. The Northern Neighbourhood is traditional, formal and semi-formal in character whereas Fantail Park takes a more modern, futuristic interpretation.

2) A view to the west includes open countryside across agricultural land and the proposed Fantail Park recreation area.

3) The new Primary Street and Cycleway dissect Hills Park in two.

Area 7 - Raceground Park and Area 8 - Hawthorn Greenway

3.11.5 This area is primarily the landscape buffer between the eastern edge of the Northern Neighbourhood and the existing railway line.
Its linear profile stretches from Hawthorn Bank at the north to The Raceground at the south.
Again the structural planting needs to consider the following elements:

1) Inclusion of a foot/cycleway along its entire length.
2) Inclusion of two new children's play areas.
3) Form a buffer between housing and the railway line.
4) Form a soft edge along the frontage of the one-sided development.

Area 9 - St John's View and Circus

3.11.6 This area is sandwiched along the central axis of the Northern Neighbourhood.
Again linear in profile, it stretches from Raceground Park at the south and runs in a straight line through and up to the top of the Northern Neighbourhood.
Here the structural planting must respond to the following:

1) Trees should be uniform and consistent by arrangement to compliment the character of the development.

2) Formal style of trees must carry through both public and private spaces.

Street Trees

3.11.7 The profile and stature of trees is an integral element of the street scape and must be selected in context with their surroundings.

3.11.8 Trees give clarity to the street hierarchy and aid definition of place.
The species will change with the street type reflecting the location and function.
They also add structural quality to the streets yet provide a softening effect and contrast against the prominent hardscape within the public realm.

3.11.9 Planting location and conditions are critical in tree selection.
In streets, space can be restricted above and below ground and trees with an appropriate rooting structure and low to medium water demand must always be used.
Species with limited space should have a narrow crown with modest leaf and branch drop.
Where space is less restricted, species with wider crowns can be used.

3.11.10 As mentioned above, it is recommended that a Landscape Designer is involved in the selection of all tree species throughout the development in order to maintain consistency, to achieve impact and appropriate selection at any given location.

3.12 COMPONENT 'j' – Treatment of Footpaths, Cycleways and Play Areas.

3.12.1 Any surface within the public realm must be safe, durable, installed correctly and fit for purpose.

3.12.2 The surface of each element listed below should also complement its environment by being part of a cohesive palette of materials chosen for all respective surfaces within a particular area.
This does not mean that all surface materials should necessarily blend in.
In some instances, a contrast of materials may be appropriate or a change of texture. For example where a cycleway crosses a road or passes through open space.

Foot and Cycleways

3.12.3 The adoption of all public footpaths and cycleways will be offered to Lincolnshire County Council.
Consequently the chosen materials and treatments used will be subject to their approval.

3.12.4 Tarmacadam is considered to be a primary treatment however a transition of material and/or texture needs be used to define a change in environment or character.

3.12.5 It is expected that brick paving is used throughout the public realm to define these changes particularly where foot and cycleways appear in well-defined spaces.
The surfacing should reflect that transition.
St John's Circus is a good example where bold changes to the surfacing can be deliberately used to exploit this strong Character Area.
Here brick paving along footpaths should be at its most extensive and could well be used on other elements such as the on-street parking bays.

3.12.6 Another opportunity lies within the linear feature along the central axis of St John's View.
It may be possible here to pedestrianize part of this space and treat with an alternative material.

3.12.7 Elsewhere the surface transitions should be more subtle but at a level to reflect its respective environment.

Play Areas

3.12.8 The surface area confined within each play area will almost always comprise of more than one type of surface treatment as it responds to a change in activity.

3.12.9 Typically the following needs to be incorporated:

* A level, hard surfaced footpath required at the point of entry up to and including any seating provision.
* Safety surfacing will be required beneath and around all play apparatus.
* All remaining areas to be laid to grass for general play activities.

3.12.10 All safety surfacing within designated 'fall zones' for each respective piece of play apparatus must conform to all appropriate standards including EN1177.

3.13 COMPONENT 'k' – Details of the Sustainable Drainage Management Regime.

3.13.1 Chapter 18 (18.22-18.47) of the Design & Access Statement – 2009 considers how Surface Water Drainage for the development could be dealt with.
Here it devises a range of principles of how a Sustainable Surface Water Strategy could be developed to deal with not only surface water by sustainable means, but also enhance the amenity, environmental and biodiversity value of the site.

3.13.2 Indeed whilst the Design & Access Statement was being considered, the Surface Water Strategy reflected the emerging requirements of the Floods and Water Management Act Schedule 3.
Whilst this particular condition asks how a Sustainable Drainage Management Regime will be applied, it should be noted that currently the Floods and Water Management Act Schedule 3 is still pending and as such cannot be enforced.
As a consequence the SUDS Approving Bodies are not currently operational which impacts directly on the implementation and future management of any Sustainable Urban Drainage System.

3.12.3 Until the Floods and Water Management Act Schedule 3 is passed and has been fully endorsed by the regulating authorities, any Reserved Matters application needs to have considered an alternative Surface Water Strategy that is fully implementable yet attempts to include a level of sustainable surface water solutions where practicably possible.
For example this could include soakaways and the use of permeable surfaces within private areas.

3.12.4 A Sustainable Drainage Management Regime should therefore be compiled once the SUDS Approving Bodies are in a position to consider and fully embrace the specific elements listed in Condition 5(k) of H16-0571-09.

3.14 COMPONENT 'I' – Details of the Public Realm.

3.14.1 The selection of Street Furniture shall be considered in a manner that ensures a common language is maintained across the public realm.

3.14.2 The furniture should also reflect the street hierarchy across the site.
In choosing street furniture, consideration should be given to the use of materials that have been or can be recycled and/or that are biodegradable or the use of FSC certified timbers.

3.14.3 The specification of furniture to be used within adoptable areas will be subject to approval by Lincolnshire County Council as they need to consider implications for future maintenance, repair and replacement.

3.14.4 Where provided, the use and placement of street furniture should reflect the following principles:

* Ensure that it is robust, high quality and durable with hidden/recessed anti-vandal fixings.

* The location of street furniture should be given consideration to the direction of pedestrian movement maintaining clear unimpeded access corridors for all with particular consideration for the elderly, and the visually and mobility impaired.

* Seating should always be orientated towards the adjacent open space or street/movement corridor.
Ensure that seating is perceived to be 'safe' from nearby vehicular traffic.

* Litter bins should be provided at key pedestrian nodes and entrance points, within 4 metres from seating areas and subject to approval by the Local Authority.

* Dog litter bins should be provided in appropriate open spaces and subject to approval by the Local Authority.

* Bollards must be of solid and robust design, ideally have reflective bands especially where adjacent to vehicular traffic.

3.15 COMPONENT 'm' – Details of the Lighting Strategy.

General Design Consideration

3.15.1 Provision of all street lighting along public highways, public pedestrian routes and cycle-ways shall be designed by and be subject to approval by Lincolnshire County Council.

3.15.2 All lighting should reflect the general palette of street furniture and keep light pollution to a minimum.

3.15.3 Public realm lighting should be suited to use at a variety of heights and in a variety of situations.

3.15.4 Lighting must be sensitively located whilst respecting adjacent building uses.

3.15.5 The location of lighting and position of trees should be considered together so that one does not detrimentally affect the other.

Design Standards to maximise energy efficiency and minimise light pollution

3.15.6 Street lighting installations shall be designed by Lincolnshire County Council in accordance with the recommendations contained in BS 5489 – 1:2003 and BS EN 13201 – 2:2003.

3.15.7 Compact florescent, high pressure sodium, LED and HID white light lamps shall be the preferred light source.

3.15.8 Street lighting burning hours will be:

For All Night Lighting:	Dusk to Dawn 35 LUX on and 18 LUX off
For Part Night Lighting:	Dusk to 24:00 hrs / 05:30 hrs to Dawn
For Dimmed Lighting:	21:00 hrs to 06:00 hrs

3.15.9 To minimise light pollution, lanterns on principal traffic routes may have a cut off distribution using low energy electronic gear and photocells.

3.15.10 The lighting scheme shall be dimmed wherever practicable.
Dimming shall be a designed solution taking into account the reduced traffic flow between peak periods.

3.16 COMPONENT 'n' – Details of Waste and Recycling Provision.

3.16.1 The design and location of these facilities shall be considered at an early stage to successfully integrate into the development.
In all cases refuse and recycling storage should not be visible from public view however, as refuse and recycling collection takes place at the kerbside of adopted highways, storage facilities must be sited and designed to enable residents to conveniently, safely and easily access collection points.

3.16.2 Currently South Holland District Council continues to collect household waste and recycling using sacks instead of wheelie bins.
A weekly kerbside collection is provided for all residents in the district to dispose of their refuse and recycling.
Non-recyclable waste is collected in black sacks and recycling is collected in green sacks.

3.16.3 Where the curtilage of properties does not extend up to the public highway, a Communal Refuse Collection Point (CRCP) shall be installed adjacent to the public highway, accessible to those who need to use it yet not in a direct view from a property.
The CRCP must be level and finished in a hard surface. It should also be strictly designated as a place to put out refuse and recycling only on the day of collection.

3.16.4 For residential properties, provision for storing refuse and recycling must be made inside the curtilage of each plot i.e in the rear garden.

3.16.5 Those residential properties that do not have a garden and for all non-residential buildings, provision must be made at the building's ground floor to store refuse and recycling.
The overall design of storage should complement that of the proposed parent building and should be discrete, secure and well screened from the street and neighbours.
Storage should be easily accessible and finished in a hard surface.

3.17 COMPONENT 'o' – Measures of Resource Efficiency and Climate Change Adaption.

3.17.1 The main design issues affected by climate change which need to be considered are:

- Site Layout
- Buildings
- Ventilation and Cooling
- Drainage
- Water
- Outdoor Spaces and Connectivity

Site Layout

3.17.2 Flooding – Development could change the way in which an area is affected by flooding through the placing of buildings, a change in the land topography and changes in permeability of surfaces.

3.17.3 Heat Gain – The layout of the new development should look to balance the benefits of minimising heat loss in winter with excessive solar gain during the summer.

3.17.4 Outdoor Space – The provision of outdoor natural spaces has the benefit that the landscaping can play a part in helping to reduce the 'urban heat island effect'.

3.17.5 Summary – Ensure the layout and massing of the development does not increase the flood risk, minimises solar gain in summer, maximises natural ventilation and vegetation, and provides private and public outdoor space.

Buildings (Structure)

3.17.6 Soils – If rainfall becomes more seasonal, certain types of soil may experience more extreme cycles of wetting and drying.

3.17.7 Heat Loss and Gain – The thermal mass of the buildings is important in how it responds to heat loss and gains.
Masonry construction can help to regulate temperatures better than timber frame construction.

3.17.8 Summary – Consider the soil composition when determining appropriate foundation methods and consider an appropriate thermal mass for buildings.

Buildings (Physical Envelope)

3.17.9 Rainfall – Climate change may result in more intense rainfall and therefore drainage systems need to adapt to cope with this.
The risk of flash flooding with Building Regulations requiring level thresholds for disabled access, increase the risk of water ingress at ground level.

3.17.10 Heat Gain – The building envelope should be designed to maintain an ambient temperature throughout the changing seasons.

3.17.11 Air Tightness – There is a requirement under the Building Regulations to ensure buildings are air tight whilst providing adequate controllable ventilation.

3.17.12 Summary – Drainage systems and entrance thresholds need to cope with occasional intense rainfall, the buildings' exterior must reduce heat loss in winter and heat gain in summer.

Ventilation and Cooling

3.17.13 Ventilation – Buildings should be designed to incorporate natural ventilation and their layout helps to support the building in coping with ventilation and cooling.

3.17.14 Cooling Systems – Providing summertime thermal comfort does not result in the use of air conditioning systems.
Passive design such as solar shading, thermal mass and proper use of ventilation will be the preferred way buildings adapt to climate change impacts.

3.17.15 Summary – Appropriate means of ventilation to bring clean pollution-free air into buildings whilst not compromising security.

Drainage

3.17.16 Increased Surface Water Run-Off – The development should look to incorporate permeable surface materials where possible to minimise the impact of the development.

Water

3.17.17 New buildings should look to incorporate measures to reduce water consumption such as appliances fitted with flow restrictors and recycling or rain-water storage for external use such as washing cars and watering the garden.

3.17.18 Summary – Minimise water use in buildings.
Consider the use of rainwater collection and the environmental impact, in terms of water consumption, of products and building materials and methods.

Outdoor Spaces

3.17.19 The development should look to include green space and tree cover which can help ameliorate the extremes of urban microclimate.

3.17.20 If temperatures generally increase due to climate change then there is likely to be more demand for private and public outdoor spaces.

3.17.21 Summary – Incorporate an appropriate range of both public and private outdoor spaces with appropriate shade and vegetation.

Connectivity

3.17.22 Climate change may affect the development's infrastructure.
It is important to liaise with the utility providers to ensure that the infrastructure planned is designed appropriately such as the siting of electric sub-stations and other apparatus that could be affected by a flood.

3.17.23 Summary – Check with the utility providers over the resilience of services and infrastructure for the development.