

VOLUME ONE: REPORT

STEWARTBY PARK

Design Guide

Prepared on behalf of
O+H Properties Ltd

by
David Lock Associates Ltd

Approved March 2012



David Lock Associates
Town Planning and Urban Design



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**SECTION A:
INTRODUCTION TO
THE MASTER PLAN
FOR STEWARTBY PARK**

1.0
Introduction

SECTION A: INTRODUCTION TO THE MASTER PLAN FOR STEWARTBY PARK**1.0 INTRODUCTION**

- 1.1 Stewartby Park is a consented residential led, mixed use development lying to the north of Stewartby, a model 'garden village' in Bedfordshire, which is renowned for its unique character. Development started in 1926 and built to house the workers of the London Brick Company. It takes its name from the Stewart family whose son – Sir Malcolm Stewart – bought the London Brick Company in the 1920s. Stewartby brickworks closed in 2008 although four brick chimneys remain, listed for the preservation of Bedfordshire's brick-related history.
- 1.2 The outline planning permissions¹ for the Stewartby Park site comprise residential development, employment uses, a shop, a public house, open space and associated infrastructure. The site, which extends to approximately 37 hectares (91 acres), lies within the jurisdiction of two local authorities, Bedford Borough and Central Bedfordshire (the Local Planning Authorities (LPAs)), both of whom are committed to delivering a complementary development which integrates well with and enhances the existing village. The extent of the site is illustrated on Figure 1a – *Stewartby Park Site Boundaries*.
- 1.3 To ensure that a high standard of design is delivered on site and when preparing and considering reserved matters applications it is important that appropriate guidance is in place to help control the design of the scheme and ensure that it is sympathetic to its surroundings. To secure the requirement for the preparation of this design guidance two identical conditions (included in Appendix 1) were imposed on both outline planning permissions for the development (97/01163/OUT – Bedford Borough Council, MB/97/01085 Mid Bedfordshire District Council (now Central Bedfordshire Council)).
- 1.4 This Design Guide fulfils this requirement and, consistent with the requirements of the respective planning conditions, does not extend to the employment area, albeit that it is included within the outline permission. Stewartby Sports Ground is also included within the scope of the outline planning permission and although it does not form a part of the Design Guide, Appendix 3 provides additional information on the Sports Ground. The site area covered by the Guide is illustrated on Figure 1b – *Design Guide Coverage*.

Figure 1a – Stewartby Park Site Boundaries

Figure 1b – Design Guide Coverage

The Purpose of the Design Guide

- 1.5 This Design Guide has been prepared to ensure that the design ethos and development principles established as part of the two outline planning permissions are translated effectively into an attractive and successful development. A comprehensive level of character assessment work was undertaken as part of the outline planning applications, which helped to establish the design principles associated with the unique development of the village of Stewartby. It is paramount that the development that is delivered at Stewartby Park reflects and enhances this inherent character.

¹ Two outline planning applications were submitted in respect of Stewartby Park to Bedford Borough Council and Mid Bedfordshire (now Central Bedfordshire) Council, subsequently there are two planning permissions which, unless otherwise stated, will be referred to in this document as the 'outline permission'.

Summary

This Design Guide seeks to set out the design parameters, through effective guidance and coding, that developers must adhere to in progressing detailed schemes through reserved matters and full application stages to implementation on site. The Design Guide will provide advice on the design approach that is to be adopted in terms of built form, open space and movement during the delivery of development at Stewartby Park.

Why is a Design Guide Required?

- 1.6 This Guide seeks to balance the planning requirements of the outline planning permissions with the design aspirations for the site within its historic context to help create a sustainable community for the future. It is important to deliver a special, site specific design response for Stewartby in light of the village's unique heritage and to develop a design typology that reflects its local distinctiveness.
- 1.7 The village is situated in the heart of the clay valley of the Marston Vale, an area with a diverse and rich landscape that has been shaped physically and socially by the historic practices of clay excavation and brick making activity. The proposed development represents a major expansion to the village and will have a significant impact on the built form of Stewartby and its position in the Vale, doubling its built area and population. It is important that the landscape character of the Vale is respected and enhanced in bringing forward this level and type of development.
- 1.8 The Design Guide aims to ensure that a consistent standard of design is delivered that relates to both the existing village and the surrounding landscape.

Development History

The village of Stewartby was developed as a response to the need to accommodate the local labour force of the Stewartby Brickworks. The concept behind the design, developed by Sir Halley Stewart and his son Sir Malcolm Stewart, was based on an aspiration to improve the living conditions of the workers and provide decent housing with community facilities and an abundance of open space. The Stewarts wanted to provide each house with piped water, drainage facilities and electricity. A key ambition for Stewartby was to ensure all properties were spacious in design and had their own large garden.

The plans that were submitted for the model village, designed by Mr F.W. Walker, the architect for the London Brick Company, were based on the 'garden village' principle striking a harmonious balance between the built form and the countryside.

The resultant development was one that is special and locally distinctive with many characteristics that are inherent to Stewartby. Some further development has taken place since the village was first developed in the post war era; this phase of development including Rousbury, Pillinge and Magpie estates, retained the formal and spacious character of Stewartby.

Source: Welcome to Stewartby Model Village Organisation (2011)

Role of the Design Guide

- 1.9 The Stewartby Park Design Guide provides prospective developers and the two local planning authorities (LPAs) with a compilation of all the design guidance that is relevant to the development of Stewartby Park. It undertakes a comprehensive review of the site and its surrounding context, and reflects on existing design

guidance at national and local levels. This Guide assembles all of the relevant plans, concepts and principles, and sets out the design parameters for the future development of the site. It is a single information resource providing all the information required to enable developers and the LPAs to proceed with both the preparation and determination of reserved matters applications.

Summary

The Design Guide:

- *Provides clarity to developers regarding the type of development that will be acceptable for the site;*
- *Provides both local planning authorities with a design tool with which they can assess reserved matters schemes;*
- *Provides a compilation of all of the relevant design guidance for the site, informed by the background character analysis, national and local planning policy and other best practice guidance.*

How the Guide is to be used?

- 1.10 The Guide builds on the approved Development Principles Plan, Figure 3a, and Master Plan, Figure 3b, which set out the fundamental design, layout and other principles of the proposed development.
- 1.11 The Guide provides both local authority development management teams and developers with prescriptive advice, clarifying what type of development is expected for the site. To facilitate this, the Guide aims to be precise yet coherent and consistent in articulating the design requirements for the site in a way which can be easily interpreted by developers. This will help ensure a high standard of development is delivered on the ground.
- 1.12 In order to effectively translate the aspirations for Stewartby Park into accessible and practical guidance, the Design Guide is primarily an illustrative document. Mandatory design requirements have been established and these are articulated in the document through the use of design principles, proforma sheets, plans, images and illustrations and supplementary text.
- 1.13 The headlines design principles that should be followed are set out in boxes throughout the document, these provide the overarching principles that will guide the development at Stewartby Park.

Use of the Regulatory Plan

- 1.14 The key design reference tool within the Design Guide is the Regulatory Plan; this forms the foundation of the Guide and establishes the key parameters for development. The Regulatory Plan underpins all of the design guidance contained in the Guide and is cross referenced throughout.

The Design Guide is an accessible and practical document that has been formulated to provide detailed and coherent design advice. To use the Guide effectively the user should consult all of the plans, including the Regulatory Plan, images, proformas and text as it is a holistic document.

Status of the Design Guide

- 1.15 The concept for this level of development at Stewartby was established through the *Stewartby Development Brief – Land off Rousbury Road / Magpie Avenue* (Bedford Borough Council, 1992). The development of the site at Stewartby Park was granted outline planning permission in August 2009. This followed its allocation as

a strategic development site (Policy H13) for residential led, mixed use development in the *Bedford Borough Local Plan (2002)* and, more recently in the *Bedford Borough Core Strategy and Rural Issues Plan (2008)* where Stewartby is identified as a 'Key Service Centre'. The site also benefitted from an allocation in the *Mid Bedfordshire Local Plan (2005)* as a strategic site (Policy HO8(a)) within the South West of Bedford Strategic Corridor. Policy HO8(a) remains a saved policy from the Mid Beds Local Plan (2005).

- 1.16 The requirement for design guidance was established within Policy H13 of the Bedford Borough Local Plan which stated that design guidance should be produced to "*ensure that the new development reflects the character of the older part of Stewartby in terms of layout, urban spaces and building design*" (Bedford Borough Local Plan, 2002). This requirement was reinforced by the respective conditions on the planning permissions. The policy context supporting development in this area and subsequently for the requirement of a Design Guide is illustrated in Figure 1c – Flow chart of Stewartby Policy Framework

Figure 1c – Flow Chart of Stewartby Policy Framework

- 1.17 This Design Guide therefore complies with both Policy H13 of the Bedford Borough Local Plan and the outline planning permissions; it has been prepared to ensure the provisions within the Guide are consistent with the provisions of Policy H13 and the related permissions. The content of this Guide has been directly informed by the detailed requirements as set out in the respective conditions. The Guide is also consistent with the other requirements of the planning permissions. Table 1 in Appendix 2 illustrates how the Guide has taken account of other factors included within the permissions.

The Guide is fundamental to facilitating the implementation of the proposed development, as only when the Guide is approved by both Bedford Borough Council and Central Bedfordshire Council can reserved matters applications be submitted, approved and the development commenced.

Objectives and Design Response

Objective	Design Response
<ul style="list-style-type: none"> • Sense of Place - To create a place that responds to and reflects the unique character of the existing village. The built form and arrangement of open space will reflect the locally distinctive design, layout and appearance of the existing village of Stewartby. 	<p><i>The proposals will understand and respond to the historic development of Stewartby and appreciate the valuable industrial heritage of the village. This will enable the proposed development to reinforce the current identity and sense of place in Stewartby, and help facilitate a sense of ownership for residents both new and old.</i></p>
<ul style="list-style-type: none"> • Mix of uses - To create a place that will support a mixed and balanced community, which is vibrant and has a high standard of vitality. Successful sustainable communities require access to a range of social and community facilities, appropriate housing and employment opportunities. 	<p><i>The wider proposals will deliver a healthy mix of uses, including employment, (primarily not covered by Guide) and retail provision together with community facilities complementary to those in the existing village, ensuring the development meets the day to day needs of the local community.</i></p>
<ul style="list-style-type: none"> • Safe and Secure - To create a place that reduces opportunities for crime and anti-social behaviour. 	<p><i>The proposals will adopt a layout which encourages an increased level of activity and eliminates opportunities for crime. The built form will be legible and coherent thus improving safety and security.</i></p>
<ul style="list-style-type: none"> • Sustainable Travel - To create a place that has a high level of accessibility through a choice of modes of transport. 	<p><i>The proposals will take all reasonable opportunities to reduce private car use through the provision of efficient and safe pedestrian and cycle connections, and creating good public transport links.</i></p>
<ul style="list-style-type: none"> • Landscape and Biodiversity - To create a place that enhances the surrounding landscape and contributes to habitat creation. 	<p><i>The proposals will take account of the existing landscape character of Stewartby and its surroundings, the restoration proposals for Coronation Pit and the wider objectives of the Forest of the Marston Vale project. They will ensure that the development contributes to the enhancement of the rich landscape through sympathetic design and provision of attractive and usable open space that integrates well with the surrounding Marston Vale.</i></p>
<ul style="list-style-type: none"> • Resource Efficiency - To create a place that will help mitigate against the effects of climate change and contribute to a reduction in carbon emissions for the local area. 	<p><i>The proposals will promote energy and resource efficiency through the use of renewable energy, minimising water use and waste and encouraging recycling.</i></p>

Structure of the Design Guide

- 1.18 To ensure the Design Guide is a practical and coherent document it has been structured into three main sections to make it an accessible design tool. Figure 1d illustrates the content and structure of the Design Guide.

Figure 1d – Diagram Overview of Design Guide Content

Section A

1. Introduction - this provides a general introduction to the role of the Design Guide;

2. Site Context - this provides an overview of the site and its surrounding environment, particularly the existing village of Stewartby and evaluates the factors that have influenced the development of the Master Plan and subsequently the preparation of this Design Guide;

3. The Approved Development – this section introduces the proposed development, establishes the key parameters that have influenced the evolution of the design and explains the guiding principles that have been key to development of the Master Plan;

Section B

4. Developing the Master Plan – this explains how the Master Plan will be delivered, providing more detail on the emerging built form and how the use of a Regulatory Plan will translate detailed design information into an illustrative format. It also explains how the detailed design of Stewartby Park will deliver a socially, economically and environmentally sustainable extension to Stewartby;

5. Built Form & Placemaking – this details the requirements of the built form, prescribing the required scale and appearance of the built development; this is the key information section to understand the type and form of development that is acceptable at Stewartby Park;

6. Movement Framework – this explains how the movement network within Stewartby Park should be developed, provides the rationale behind the street hierarchy and explains the strategy for encouraging walking and cycling. It details how private car use will be managed; the incorporation of speed restraint measures and accommodating public transport;

7. Landscape Framework – this details the landscape aspirations for the site including the disposition of public open space across the site, the location and design of play areas and public art;

8. Sustainability and Energy – this explains how the proposed development will incorporate measures to reduce carbon emissions;

9. Parcelisation, Phasing and Implementation – this details the stages and timing for the implementation of the development having regard to the phasing requirements of the S106 agreement related to the permissions for the development;

Section C

10. Character Areas - this defines and describes the development concept for each character area and details the specific design requirements for each area.

**SECTION A:
INTRODUCTION TO
THE MASTER PLAN
FOR STEWARTBY PARK**

2.0
Site Context

2.0 SITE CONTEXT

Introduction

- 2.1 Stewartby is a unique place with special characteristics by virtue of its industrial heritage. Local distinctiveness plays a key role in placemaking, creating a sense of identity and also facilitating a sense of ownership for local residents. Subsequently, local pride helps form communities that are socially inclusive and have a strong cohesiveness.
- 2.2 To create a successful development that has a true sense of identity and supports a balanced and sustainable community it is vital that the proposals are designed to successfully integrate with and positively respond to the surrounding context within which they sit. It is fundamental therefore, particularly for a place as special as Stewartby, to understand the site and appreciate the important factors that influence the character of the area.
- 2.3 A thorough and detailed background analysis was undertaken and submitted with the outline application as a 'Stage 1 Design Guide' (David Lock Associates, 2004), a summary of the current site context is provided below.

Local context

- 2.4 The wider site, including the employment area, extends to 37 hectares (91 acres) and is located to the north of the existing village of Stewartby; the site forms an arc around the village and the Stewartby Brickworks. The site is bisected by Broadmead Road, a key local route linking Stewartby to the recently de-classified C94 (Bedford Road) which provides onward connections to the newly dualled A421. Primarily, the site is located within the administrative area of Bedford Borough Council, however 5.4 hectares (13 acres) is situated within Central Bedfordshire Council's administrative area. The location of the wider application site is illustrated on Figure 2a – Site Location Plan and the extent of the site covered by the Guide on Figure 1b.

Figure 2a – Site Location Plan

- 2.5 Stewartby is situated in the clay valley of the Marston Vale where historically the area was a focus for excavation and brick making activity. Some of the excavated pits now have either been restored as lakes or used for landfill purposes. Therefore the surrounding landscape is rich in industrial heritage undergoing regeneration, whilst also representing a more traditional rural landscape and increasingly, providing for water-based recreation and biodiversity. Stewartby Lake is located to the south west of the village and is home to a water-based sports club, to the north of the site is Coronation Pit, an excavated pit which is currently subject to a restoration scheme. Also in close proximity to the site are Broadmead Lower School and the Stewartby Brickworks site, for which development proposals are currently being prepared. These adjacent uses are illustrated on Figure 2b – Adjacent Land Uses.

Figure 2b – Adjacent land uses

- 2.6 Stewartby Park currently comprises primarily poor semi-improved grassland and low grade agricultural land. There are a number of hedgerows and wet ditches on the site, together with two small ponds. Advance buffer planting has taken place along and within the north and east site boundaries in association with the restoration of Coronation Pit and the Midland Mainline Railway line.

Stewartby Design Cues

- 2.7 Stewartby, built as a model 'Garden village', aimed to provide decent, spacious housing for employees of the Brickworks. As such the provision of space was a key principle underpinning the development - house sizes were generous, as too was the provision of open space, and houses were also arranged at a low density. The background analysis (*Stage 1 Design Guide, David Lock Associates, 2004*) identified a number of design approaches that were prevalent in the development of Stewartby. These design 'cues' provide important indicators for the proposed development at Stewartby Park, which will help ensure that the new development integrates well with and reflects the character and design of Stewartby.

Design Cues

- Use of a formal pattern of development with a series of formal open spaces, vistas, focal points and axial compositions;
- Formal character of Stewartby Way which forms a key structuring element within the village, such a public route with formal street tree planting helps give identity and legibility;
- A network of through streets and residential closes to achieve a balance of connectivity and community safety;
- A variety of block and street types across the village providing a varied character; and
- The consistent use of building materials, house types and design details to create a unified character, with a limited palette of materials.

- 2.8 Consistency in the built form is a key theme in Stewartby and in addition to the general design cues listed above there are also a number of detailed design features that provide important detailed design cues for the future development, some of which are illustrated on Figure 2c – Building Features and Design Cues. Further information on these locally distinctive features is provided in Chapter 5.

Figure 2c– Building Features and Design Cues.

Site Constraints and Opportunities

- 2.9 The site and its wider context present a number of constraints and opportunities that may influence the proposed development. These are both strategic in terms of growth opportunities and site specific. The following provides a summary of the constraints and opportunities and these are illustrated on Figures 2d and 2e.

Constraints**Midland Mainline Railway**

- 2.10 To the east the Midland Mainline railway bounds the site. At the point where the railway line borders the site it is raised on an embankment and noise from the railway affects the eastern part of the site. A detailed noise assessment was undertaken as part of the outline planning application and this advised that building design features, in particular conventional double glazing, would be sufficient to mitigate the impact of noise from the railway line on the residents of the development. To further reduce the perceived visual impact of the railway on residential amenity there is an existing landscape buffer along the eastern edge of the site. Additional technical work has been undertaken to inform the detailed design response within this Guide.

Marston Vale Railway Line

- 2.11 Beyond the Stewartby Brickworks to the west of the site is the Marston Vale railway line connecting Bedford and Bletchley. This is not on the immediate site boundary, nor will it have a direct impact on the development in terms of noise or affecting residential amenity. The railway line does however act as a barrier to wider permeability and integration with the surrounding area.

Utilities

- 2.12 There are foul and surface water sewers located to the north of Broadmead Lower School. These will be diverted and incorporated as part of the strategic drainage strategy for the site and so there will be no significant impact on the development.
- 2.13 There are also low voltage overhead power lines that cross the site, which are proposed to be diverted underground and incorporated with the main development network. Therefore they will not present an undue constraint on the development.
- 2.14 A further constraint on the proposed development is the absence of mains gas in Stewartby. This means that the proposed development would require an alternative base energy supply or connection to main line gas.

Existing ditches

- 2.15 The site contains a number of wet ditches; two in particular are towards the centre of the site, and there are also two small ponds, one in the north western part of the site and one at the end of a ditch course. These water bodies form part of the natural surface water drainage system for the site and therefore appropriate detailed drainage proposals must be prepared to ensure that surface water drainage is addressed and adequately accommodated in the detailed design for Stewartby Park.

Coronation Pit

- 2.16 Immediately to the north of the site is Coronation Pit. This previously excavated pit is a County Wildlife Site and is subject to emerging restoration proposals which will promote the nature conservation value of the pit through the creation of new habitats. The restored Pit presents Stewartby Park with an attractive landscape backdrop, providing potential ecological and drainage functions for the development. Advanced buffer planting has already been undertaken to the south of Coronation Pit; this will be retained in the proposals, albeit with the creation of 'windows' to allow for inter-visibility into this valuable open space and help create a positive interface between the development and the Pit.

Existing Vegetation

- 2.17 The site primarily comprises agricultural land and grassland, however it does contain a number of hedgerows and field boundaries, together with advanced buffer planting along the site boundaries adjacent to the Midland Mainline Railway and Coronation Pit. The site also contains a small number of free standing trees. As far as possible the proposed development will retain the existing vegetation, particularly where it has significant nature conservation or amenity value. Figure 2f illustrates in more detail the extent of the existing vegetation, trees and other environmental features present on site.

Figure 2f – Ecological Considerations on Site

Stewartby Landfill Facility

- 2.18 Stewartby landfill facility is situated to the north west of the site. Although not immediately adjacent to the site it should still be considered that as a neighbouring land use as landfill it can have an adverse impact on residential amenity. To minimise such adverse impacts only employment uses are permitted to the west of Broadmead Road, the area not covered within the Guide. When restored this may also provide an additional recreational facility.

Opportunities

- 2.19 The key opportunities that are presented by the site and its surrounding context include the following.

Figure 2e – Opportunities Plan

Local Context Opportunities**Surrounding Development**

- 2.20 Bedfordshire, and more specifically the Marston Vale, is part of a Growth Area (*Sustainable Communities Plan, 2003*) and currently a focus of development activity. Identified as an area with exceptional growth potential there are a wealth of new development opportunities that are currently being pursued. These comprise both significant residential schemes and high profile employment related developments as well as major recreational projects. Collectively, these recently developed and proposed schemes start to demonstrate the considerable potential of the Marston Vale as a key growth area and serve to indicate the opportunities that the area presents in terms of economic, social and environmental activity.
- 2.21 In close proximity to the site there are a number of high profile projects including The Wixams new settlement, Center Parcs, Rookery South Resource Recovery Facility and NIRAH. These illustrate that the area is one with significant future potential. Figure 2g – *Committed Development in a Bedford Context* below shows the location of surrounding development sites in relation to Stewartby Park, and the key sites are summarised below.
- **Wixams** – this consented development will create a whole new settlement of about 4,500 homes within the Marston Vale with potential expansion land creating a whole settlement of up to 7,000 new homes. Wixams will comprise four villages and a town centre together with community facilities, open space and major new infrastructure including a new railway station. This new settlement will provide a new destination to live, work and play. With outline permission granted for the scheme, Village 1 is well underway with many houses completed and occupied, and site preparation works for the next phase of development – Village 2, is due to commence in 2011;
 - **Center Parcs** – the new Center Parcs Village at Warren Wood, Millbrook, will be the fifth in the country and when complete will be a major new tourist attraction for the area. The outline planning application has been approved together with various reserved matters applications and infrastructure works have commenced;

- **Rookery South Resource Recovery Facility** – this is a major infrastructure development that could contribute significantly to the energy requirements of other new developments across the Vale through the production of renewable energy, potentially reducing carbon emissions in the Marston Vale considerably. The application for this major ‘Energy from Waste’ generating station and materials recovery facility at the Rookery South Pit, to the south of Stewartby, was granted development consent by the Infrastructure Planning Commission in October 2011.
- **NIRAH** – this proposal for a national institute for research into aquatic habitats, a freshwater nature conservation based tourist attraction, is near Quest Pit, Stewartby and comprises a freshwater aquarium and major leisure complex. Outline planning permission for the scheme was granted by Central Bedfordshire Council in 2009, and subject to funding, the next phase of work will be to obtain reserved matters approval.

Figure 2g – Committed Development in a Bedford Context

Stewartby Lake leisure and recreation

- 2.22 Stewartby Lake is located to the west of the existing village of Stewartby. The lake hosts a water sports club and other leisure facilities. This is a key recreation asset within the Marston Vale and being in such close proximity to Stewartby Park, it provides a significant opportunity to create wider recreational links with the site, giving local residents access to a range of leisure facilities.

Forest of Marston Vale

- 2.23 The Forest of Marston Vale, one of Britain’s few community forests covering 61 square miles of Bedfordshire and comprising woodland, wetland and open spaces, is an important environmental asset to the local area. There is a commitment to a significant tree planting programme across the Forest of Marston Vale, and this will significantly contribute to the already rich and diverse landscape. Conserving and enhancing the Forest is a key issue that the proposals will have to consider, and the opportunities to provide links to the wider green infrastructure across the Vale should be exploited.

Stewartby Railway Station and Wixams Proposed Railway Station

- 2.24 Stewartby further benefits in terms of accessibility by virtue of its proximity to railway connections. Stewartby itself has a station on the Bedford to Bletchley line and there is also a proposed new station at Wixams, which is situated on the Midland Mainline and will provide excellent links to London.

New Dualled A421 Trunk Road

- 2.25 The new dualled A421 trunk road (T) has recently opened and now provides excellent strategic transport links between the M1 and the A1. Stewartby is well located for access onto the new A421T and therefore benefits from good accessibility by road as well as by rail.

Stewartby Village Opportunities

Brickworks Heritage and Rich Architectural Vernacular

- 2.26 Stewartby is internationally known for its brickworks heritage, with the kilns and chimneys providing heritage assets. The whole pattern of development in the village owes its origins to this historic industry, and the chimneys themselves are notable visual landmarks. The dominance of brick as the main building material through the village is a key feature and has created a distinct character for the area. There is an important historic story in the development of Stewartby - both as a centre of industry and as a residential village - and the proposed development should ensure that this heritage is respected and enhanced with the ‘story’ continued through sensitive future development.

Generous Provision of Open Space

- 2.27 Stewartby, owing to its unique development role in providing employees of the Brickworks with decent housing, has a generous provision of open space, illustrated on Figure 2h – *Key Existing Open Spaces*, however the majority of this existing green space is currently under utilised.

*Figure 2h – Key Existing Open Spaces***Existing facilities and infrastructure**

- 2.28 Stewartby Park will become a new integrated part of the existing village. Stewartby already benefits from a good provision of facilities and highway infrastructure, and the existing road network provides efficient connections to the existing village centre.
- 2.29 Stewartby has a good range of local amenities including a lower and middle school, a village hall (all illustrated on Figure 2i – *Stewartby Local Facilities*) and employment facilities at Broadmead Business Park. Stewartby Park will be able to benefit from the existing infrastructure and facilities but will also be able to contribute to service provision and provide additional amenities to the existing services. In doing so it will be able to fully integrate with the existing village.

*Figure 2i – Stewartby Local Facilities***Coronation Pit**

- 2.30 This County Wildlife Site (CWS) is an important area of nature conservation value. Once the restoration proposals are fully complete the Pit will form a considerable water body and provide Stewartby Park with a special area for recreation and nature conservation, as well as being a key resource for surface water drainage for the development. It is important that links, both visual and physical, into and around Coronation Pit are exploited through the development.

Key Views

- 2.31 Vistas into and out of the site are important in helping create a sense of place. The site is well located to benefit from key views across to the Brickworks chimneys, now Grade II listed structures, to the centre of the existing village and into Coronation Pit. An appropriate design response will be required to take advantage of these views and ensure that they are enhanced to help integrate the new development into its surrounding environment through the provision of visual connections.

Topography

- 2.32 The site has relatively few physical constraints in terms of obstructions or topography and this should be exploited through the design, particularly through the provision of key vistas both within the development and to important landmarks.

Single ownership

- 2.33 Further to the physically unconstrained nature of the site, Stewartby Park is currently wholly under the ownership of O & H Properties Limited (O&H). Benefitting from one single landowner, the proposals can be developed in a holistic manner thereby ensuring there is a consistently high standard of development that integrates well across the site as well as with the existing village. O&H have a proven track record as master developers and in coordinating major strategic developments; this is a key opportunity for this site to sustain a balanced and mixed community and become a successful place.

**SECTION A:
INTRODUCTION TO
THE MASTER PLAN
FOR STEWARTBY PARK**

3.0
The Approved
Development

3.0 THE APPROVED DEVELOPMENT**Quantum of Development**

- 3.1 In August 2009 outline planning permission was granted by Bedford Borough Council and Central Bedfordshire Council for a residential led, mixed use development on the site. The following summarises the key elements of the entire consented development informed by the respective decision notices and Section 106 Agreement:

- *Provision of up to 610 dwellings within Bedford Borough;*
- *Provision of up to 120 dwellings within Central Bedfordshire;*
- *Provision of 1 Super Neighbourhood Equipped Area for Play (SNEAP);*
- *Provision of 3 Super Local Equipped Areas for Play (SLEAP);*
- *Provision of 29.72% affordable housing (equates to 217 dwellings);*
- *No more than 500m² of shopping provision (at least 400m² to be A1 use class); and*
- *School expansion site.*

- 3.2 A certain quantum of employment related development was also consented, however although forming part of the overall Stewartby Park development, the majority of the employment provision will be contained within the designated employment area, which is not covered by this Design Guide.

- Provision of employment to meet the following Use Class floor area limits:
 - B1: up to 5,456m²
 - B2: up to 5,456m²
 - B8: up to 2,728m²

Development Principles Plan

- 3.3 The original planning application for comprehensive development at Stewartby, submitted in 1997, was based on a Development Principles Plan. The Development Principles Plan (Figure 3a), approved as part of the outline planning permission, provided the general development structure for the site, illustrating the composition of land uses and their arrangement across the site together with the essential movement and landscape framework. This original Plan was based on the concept of creating a curvilinear grid structure which integrates effectively with the existing village of Stewartby. The design concept was focused on the provision of a primary street which would create a spine to the development and provide the key access points, linking it with Broadmead Road and the main residential areas of the existing village. The basic principles for the development have been derived from this original Development Principles Plan.

Figure 3a – Approved Development Principles Plan

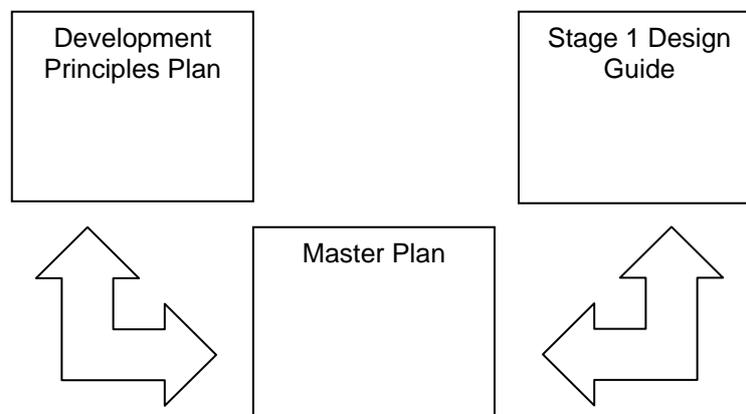
The Approved Master Plan

- 3.4 The Master Plan, approved as part of the outline planning permission, sets out the general form of development proposed. The original Development Principles Plan formed the foundations upon which the Master Plan was developed. The Master

Plan provides an additional level of detail which, informed by the Stage 1 Design Guide, was also approved as part of the outline planning permission. This Stage 1 Design Guide, which also forms part of the outline permission, provided a valuable background analysis of the characteristics of the existing village which was then used in drawing up the Master Plan design principles.

- 3.5 The approved Master Plan (Figure 3b), as well as building on the structuring elements of the Development Principles Plan, considered current national and local planning policy and design guidance to ensure that the new development would meet the required design standards. In response to the Development Principles Plan and the Stage 1 Design Guide, the primary aim of the Master Plan was to reflect the distinctive character of the existing village, particularly the public realm and deliver a sustainable, efficient and safe development. The Master Plan was based on a Design Concept and a number of overarching planning and design principles.

Figure 3b – Approved Master Plan



Design Concept

3.6 The Design Concept sets out the primary objective for the development at Stewartby:

To contribute to the creation of a high quality environment for Stewartby, integrating with and responding to the village's distinctive character and the constraints and opportunities of the site.

Figure 3c – Concept Plan

Vision Statement

The aspiration for Stewartby Park is to create a new integrated part of Stewartby that will reflect and enhance the locally distinctive character of the existing village, responding to the special characteristics that are inherent to its form. The development will deliver new facilities complementary to those within Stewartby, along with a mix of housing types and good quality usable open space. Stewartby Park will support a mixed and balanced community that is sustainable now and in the future, providing a safe and secure environment that responds positively to the surrounding landscape.

Design Aims

- *Integration of the development across the two administrative authorities within which the site is situated;*
- *Reflecting the distinctive character of the existing village, in particular:*
 - *The curvilinear street structure; and*
 - *The series of open spaces;*
- *Utilisation of open space to integrate the existing village with the new development by creating a green infrastructure network;*
- *Creation of a formal gateway entrance from Broadmead Road to both the new development and the village as a whole;*
- *Minimal variation in residential densities, with areas of lower density along the primary street and the area referred to as Coronation Walk;*
- *Location of the local centre at the principal gateway to the site off Broadmead Road to maximise its visibility.*
- *Dwellings to front all streets and open spaces;*
- *Maintaining an appropriate buffer between the proposed built development and the Midland Mainline railway line to the east of the site; and*
- *Retention of key views to landmark points through the provision of corridors.*

Figure 3d - Design Analysis Plan

- 3.7 The following key principles also apply across the whole site and were established as part of the outline permission. It is important to consider these as they set the overall parameters for the development from which this detailed Design Guide has been developed.

Settlement Pattern

- 3.8 The Master Plan sets out the broad location and disposition of the various land uses and the movement network. This takes its precedent from the existing village which is characterised by an arrangement of straight and curvilinear streets, closes and crescents that are punctuated with key civic buildings.
- 3.9 To reflect the existing village pattern the Master Plan has started to develop a grid structure of curvilinear blocks. A primary street, characterised as a tree lined boulevard, will link the existing village via Broadmead Road to Rousbury Road/Montgomery Close. This will form the main spine to the proposed development and provide the basic framework for the built form. This primary street will ensure there is consistency in the design and scale of development in both administrative authorities and assist in helping tie the whole development together.
- 3.10 The land uses have also been arranged to integrate with and reflect the character of the existing village. The proposed local centre is located in a prominent location on Broadmead Road, creating a gateway to the development. The residential areas

have been designed to front onto and help define the streets and open spaces, helping promote a safe and inclusive environment as well as improving legibility throughout the development.

Movement and Access Framework

- 3.11 As part of the consented Master Plan for Stewartby a movement and access framework plan was also approved (see Figure 3e – Movement and Access Framework). This movement and access framework plan was developed in response to the existing street character in Stewartby and its relationship with the built form. A number of detailed highways arrangements were also approved as part of the outline permissions – see Figures 3f – 3h.
- 3.12 The movement framework was designed to prioritise pedestrian and cycle movement and promoting the use of public transport, ensuring that there is a wide choice of transport modes, reducing reliance on the private car; residents should have safe and efficient access to facilities in Stewartby to meet their daily needs. The movement framework enables the majority of new residential properties to be within a 400m radius of the existing and proposed facilities, which is a comfortable 5 minute walking distance.

Figure 3e – Movement and Access Framework
Figures 3f -3h Approved Highways Scheme Plans

Established Movement Principles

- *Provision of a primary street linking Broadmead Road to Rousbury Road /Montgomery Close;*
- *primary street to be characterised as a boulevard / avenue with strong tree planting;*
- *Bus stops to be located close to the local centre and to the east of the development;*
- *Designing all streets to restrict vehicle speeds to 20mph;*
- *Facilitating key pedestrian routes to the existing village, linking the play areas, the employment area, the local centre through the provision of shared surface / traffic calmed areas;*
- *Orientation of streets to create vistas and ensure views are effectively terminated.*

Density

- 3.13 Overall, the existing village of Stewartby has a relatively low residential density varying from 16 dwellings per hectare to 32 dwellings per hectare across the sub-areas of the village.
- 3.14 The density of the new development was designed to reflect the character of the existing village, however to ensure there is an efficient use of land an average density of 32 dwellings per hectare will be applied across the site. Variations in density across the site will not be significant.

Established Density Principles

- *Accommodating the required dwelling numbers:*
 - *Up to 610 dwellings within Bedford Borough;*
 - *Up to 120 dwellings within Central Bedfordshire;*
- *Providing the lowest density of development along the Primary Avenue and the Coronation Walk area; this will reflect the character of Stewartby Way in the existing village;*
- *Higher densities to be provided in the Park Edge area and across the remainder of the site (up to 40 dwellings per hectare); and*
- *Flexibility for pockets of lower density development.*

Building heights

- 3.15 The building heights across the new development have also been designed to reflect the character of Stewartby where building heights are restricted to one and two storeys for residential development albeit with a steeper roof pitch accentuating heights. Housing across Stewartby Park will generally not exceed two storeys to match the established scale of residential development within the existing village. However, there may be opportunities, as illustrated on the approved Building Heights Plan – Figure 3i, to include development up to 2.5 and 3 storeys in height as detailed in Chapter 5 - Built Form and Placemaking.

Established Building Heights Principles

- *Increased building heights adjacent to Coronation Pit to exploit views into the County Wildlife Site;*
- *Increased building heights facing into the Crescent to help define this important space;*
- *Increased building heights around the proposed local centre to help reinforce a more formal built arrangement and to create a sense of place.*

Figure 3i – Approved Density and Building Heights Plan

Affordable Housing

- 3.16 There is a requirement for 29.72% of the total dwelling provision on site to be provided as affordable housing; this equates to 217 dwellings of the total 730. This affordable housing requirement is established in the S106 Agreement.
- 3.17 The delivery of a residential development which delivers a good housing mix with a range of dwelling types and tenures, including affordable housing, is integral to meeting the principles of sustainable development and creating a balanced and mixed community.
- 3.18 An affordable housing plan, Figure 3j – *Affordable Housing*, was approved as part of the Master Plan with the outline planning permission. This plan divides the site into three affordable housing sub-areas and importantly identifies potential locations for affordable housing.

Figure 3j – Approved Affordable Housing

Landscape Design

- 3.19 In light of the site's location in the Marston Vale and the legacy of open space provision in Stewartby, the landscape framework is a key component of the Master Plan. The existing village can be considered to have a 'garden village' type character and therefore ensuring that Stewartby Park has appropriate landscape provision is fundamental to retaining this green, open character. Figure 3k – Approved Landscape Framework emphasises the key landscape components of the approved Master Plan.
- 3.20 The landscape framework at Stewartby Park comprises two main components:
- **formal landscape** – this includes areas within the development where the formal development structure should be complemented in a manner that promotes a high standard of amenity, recreational opportunities and a safe and secure environment while retaining important nature conservation assets and promoting wildlife corridors; and
 - **informal landscape** - this includes areas around the periphery of the development including parts of Coronation Pit County Wildlife Site; these areas of open space will be important for both nature conservation and informal recreational opportunities. They will also contribute significantly to the setting of the proposed development.

Key Landscape Features

- *Formal tree planting along the Primary Avenue, Boulevard and secondary streets that provide a distinct landscape setting for the built development;*
- *Provision of a central green corridor providing pedestrian and cycle connections to Stewartby Sports Ground and the existing village;*
- *Enhancing views and creating vistas through the provision of green infrastructure and maintaining clear open space corridors;*
- *Provision of 3 SLEAPs and 1 SNEAP which will be the focal point of key open spaces within the site;*
- *Maintaining and utilising buffer planting along the edges of the site adjacent to Coronation Pit and the Midland Mainline railway line; and*
- *Retention of the pond in the northern part of the site and embracing the opportunity to create an area of informal recreation and nature conservation.*

Figure 3k – Approved Landscape Framework Plan

**SECTION B:
DESIGN GUIDANCE
FOR STEWARTBY PARK**

4.0
Developing the
Master Plan

SECTION B: DESIGN GUIDANCE FOR STEWARTBY PARK**4.0 DEVELOPING THE MASTER PLAN****Developing a Sustainable Urban Extension to Stewartby**

- 4.1 Stewartby Park will present a different 'offer' to many other residential developments that are currently being developed around Bedford in that it can supply relatively large, spacious family housing. The design parameters allow a response to the market shift towards family housing and lifetime homes rather than investment properties, which in turn can result in transient communities. Consequently, Stewartby Park can genuinely offer the prospect of a long term home for its future residents and therefore foster a sustainable community. Achieving a special design response is integral to delivering a sustainable community at Stewartby Park. Reflecting the unique development principles of the existing garden village will be fundamental in creating a cohesive and integrated community.
- 4.2 A sustainable community at Stewartby Park will evolve from following two key principles:
- taking advantage of the site's natural environment; and
 - developing the site in a way that attracts a mix of families and generations.
- 4.3 Together this will help to increase the community value that Stewartby Park has to offer and subsequently, will improve social capital and the investment value of locating within Stewartby Park.
- 4.4 There are a variety of aspects of the Stewartby Park scheme that intrinsically link economy, society and the environment; these are illustrated on Figure 4a – *A Sustainable Extension to Stewartby*. Investment into facilities in Stewartby, sustainable infrastructure and the enhancement of Coronation Pit provide the foundations for a sustainable community which will develop over time.
- 4.5 In addition to these wider sustainability drivers for Stewartby Park, there are more specific investments that must be made into the infrastructure to improve the environmental sustainability of the development and foster resource efficiency. These are addressed in more detail in Chapter 8.

Figure 4a – A Sustainable Urban Extension to Stewartby

The Regulatory Plan

- 4.6 The key plan in the Design Guide is the Regulatory Plan. This builds on the approved Master Plan and Development Principles Plan and provides an increased level of prescriptive guidance as to the form, scale and type of development that is acceptable at Stewartby Park. It compiles the design requirements that apply across the site and it is to be used as a practical tool in conjunction with the other plans, text and images in the Design Guide. **It is intended to be used as a large format A0 reference plan (A0 printed copy included in the sleeve of paper copies of the Design Guide and small version included as Figure 4b).**
- 4.7 A number of structural parameters are established by the Regulatory Plan. These include:
- Land use disposition
 - Strategic open space and landscape features
 - Development blocks
 - Appropriate arrangement of built form
 - Building frontage lines
 - Very important frontages
 - Key Groupings

- Boundary treatments
- Building heights
- Street hierarchy
- Footpaths
- Parking – residential and visitor
- Private gardens
- Retained trees
- Play areas
- Public art
- Views and vistas

Figure 4b – The Regulatory Plan

Creating a Mixed Use Development

- 4.8 Stewartby Park will be a sustainable and integrated extension to the existing village, and will foster a mixed and balanced community. The proposed development is a residential led, mixed use scheme that has been designed to meet current and future local needs and therefore the land uses, particularly the residential element of the scheme, has been developed to ensure that the provision reflects demand and is flexible to the current market.
- 4.9 The residential element of the scheme has been carefully developed to ensure it can accommodate the needs of a mixed community. As such there is provision within the total number of dwellings for:
- **Affordable housing** – approximately one third of the total dwelling provision will be tenure blind affordable housing. This will include a mix of tenures to include social rented, affordable rented and intermediate housing. The exact tenure split will be agreed according to local need and the disposition of affordable housing across the site will be sensitively designed, as detailed further in Chapter 5;
 - **Mobility housing** - 10% of the total dwelling provision will be designed to 'mobility standards' as set out in the Bedford Borough Supplementary Planning Guidance '*Mobility Housing*' (2002), or any other superseding guidance. This will ensure that the housing will be accessible to the whole community and will provide a mix of dwelling types; and
- 4.10 In reflecting the existing character of Stewartby, Stewartby Park aims to provide family orientated housing at a lower density than is currently the trend at alternative residential led developments in the Bedfordshire area. In providing a higher level of open space, including increased front and back garden sizes, and a low proportion of flats in favour of larger family housing, Stewartby Park offers an ideal, individual location to buy a lifetime family home.
- 4.11 The provision of other complementary land uses will help to enhance the Stewartby Park offer of investing in a 'lifetime' home providing facilities and amenities complementary to those in the existing village, subsequently helping sustain a balanced community. The key uses include:
- **A local centre** – this has the potential to comprise retail, a public house and other community facilities including a recycling 'Bring Site';
 - **Open space** – the provision of open space will be both formal and informal, including the required play area / equipment provision; and
 - **Employment** – although a small proportion of employment provision will be included within the local centre, the majority will be contained within the employment parcel to the west of Broadmead Road (this does not form part of the area covered by the Design Guide).

Character Areas

- 4.12 Creating a distinct sense of place is fundamental to Stewartby Park, drawing upon the location, local character and distinctive landscape setting of the site. A number of character areas have been developed that will help the new development reinforce and enhance the setting within which it is situated. The primary aim of these character areas is to ensure that certain aspects of the development, important for their place-making role, reflect the public realm that they seek to address and to which they relate. This will help tie key areas of the development together and create a sense of identity throughout the site as well improving legibility and providing a coherent design.

**SECTION B:
DESIGN GUIDANCE
FOR STEWARTBY PARK**

5.0
Built Form &
Placemaking

5.0 BUILT FORM & PLACEMAKING

5.1 Stewartby Park will be a place where people want to live, work and play. It will provide a harmonious environment where the new development will integrate well with and complement the existing village and its natural landscape setting. Creating a positive relationship between the built form and the public realm is integral to delivering a successful place with a local distinctiveness.

5.2 This section of the Guide draws upon the existing *Stewartby Stage 1 Design Guide Background Analysis* (DLA, 2004). This contextual appraisal helps establish the appropriate street and building typology for Stewartby Park, which forms the basis of the guidance provided in this section. The main principles of the development were agreed as part of the outline planning permission, however to ensure current market trends are better reflected and that the scheme can respond more appropriately to local needs and the surrounding context of the site, this design guidance sets out the most relevant and up to date guidance and may supersede other design details previously agreed.

Built Form Guiding Principles

5.3 The following principles have been established through extensive background research of the existing village; they are considered to be justified within their context and are important in continuing the story of Stewartby 'Garden Village', which is so important to the heritage of the area.

5.4 These principles are the underlying spatial elements that will contribute to place-making and help make Stewartby Park a unique place that is complementary to its context. They have been directly informed by a number of key design cues from the existing village. These guiding principles have subsequently influenced the detailed design guidance that will determine how the built form and key place-making areas will be built out.

5.5 The Design Analysis Plan (Figure 3d) illustrates the key principles that have influenced the design and layout of Stewartby Park. Figure 5a provides a selection of photographs of the existing village that illustrate some of the Guiding Principles.

- **Continuing the layout structure of Stewartby Garden Village** - Stewartby Garden Village has a formal curvilinear structure where streets, closes and crescents are punctuated by civic buildings and open spaces. The street structure is one of wide, tree-lined streets with generous grassed verges. The building line is varied with large set backs between the house frontages and the street on Stewartby Way, with considerable separation between buildings. To ensure that Stewartby Park creates a neighbourhood akin to that of the existing village the development will adopt a structure based upon:
 - Wide tree-lined Primary Avenue;
 - Generous public open space;
 - Axial viewpoints;
 - Varied set backs between house frontages and the street; and
 - Generous building separation with spacing between side elevations.
- **Interpreting the Vernacular of Stewartby House Types** – Stewartby Park will reflect and complement the vernacular of Stewartby Garden Village. In creating a development which is sympathetic to the existing village a number of features will drive the design including:
 - House types to include detached, semi-detached, terraced and bungalows;

- Provision of front, rear and side gardens appropriate to house types and location;
 - On-plot car parking;
 - Consistent materials palette; and
 - Detailed design features in elevations and façades.
- **Establish an integrated movement network** – Stewartby Park will be permeable with a legible movement network and be well integrated with the existing village. Movement into and through the development will be via safe, direct and efficient routes and will promote access through a variety of travel modes. To ensure that Stewartby Park is accessible and easy to navigate the following principles have led the design of the movement network:
 - Creation of a robust and legible street hierarchy;
 - Provision of a primary spine route through the development;
 - Prioritising the safety and movement of pedestrians and cyclists;
 - Making provision for public transport access through the development.
 - **Energy Efficient Design** – to mitigate the effects of climate change and contribute towards the local carbon reduction targets, Stewartby Park will incorporate measures within the building design and the wider development to conserve energy and water and promote waste minimisation. The following key principles have influenced the design of Stewartby Park:
 - Housing design and layout will seek to incorporate measures to maximise energy efficiency;
 - Housing design will seek to maximise water efficiency;
 - Stewartby Park will explore opportunities for renewable energy.
 - **Creating links to Landscape Assets** –Stewartby Garden Village benefits from a 'green' character by virtue of its location within the Marston Vale and the value of the surrounding landscape assets. This will be exploited throughout the development to ensure that Stewartby Park fully capitalises on the opportunities presented by its landscape assets. Key ways by which the development will seek to realise such opportunities, through the provision of a green infrastructure network, include:
 - Provision of links to the north to Coronation Pit, connecting to the existing circular walks;
 - Provision of links to the south west to Stewartby Sports Ground; and
 - Provision of links to the south east to the Crescent.
 - **Stewartby Park as a unique development form** – in responding to the location, the unique character and the typology of the existing village, the form and structure of the residential offer at Stewartby Park will present a development that is set apart from the norm and is locally distinct. Stewartby Park aims to bring a fresh offer to the residential market in the Bedford area; building on the Garden Village form it has the opportunity to provide more family orientated homes that benefit from lower densities, on-plot parking and private gardens to the rear and front of the properties.

Figure 5a – Built Form Guiding Principles Photographs

Block Structure**Block Principles**

- The block structure will sensitively extend the existing pattern of street, blocks and spaces from the existing village;
- Building parcels are established within the perimeter block structure whereby the buildings form blocks which encompass private space within the centre of the block where possible;
- The perimeter blocks will ensure that active building frontages face onto the streets and public realm, thus maximising natural surveillance;
- Residential parcel boundaries will be clearly identified to provide a clear pattern of blocks for development;
- Creation of a legible and robust layout – the layout must be coherent and promote direct and efficient movement and respond well to gateways and the existing landscape;
- The formulation of the perimeter block structure will enable the designation of different areas of residential density;
- Blocks around the local centre should help reinforce the sense of enclosure and those along the Primary Avenue should contribute to the spacious low density character in this area;
- The blocks along the eastern edge of the site fronting the railway line will facilitate a more continuous building line to mitigate the noise impact on this part of the site;
- Blocks will be created in a range of shapes and sizes that relate to the existing character of the site to avoid a regimented and standardised layout, but should aid legibility and help create a coherent development;
- Blocks should ensure buildings are orientated in such a way as to maximise the opportunity for daylight and the use of renewable energy technologies;
- Block dimensions have been designed to accommodate back to back rear gardens of sufficient size to meet Central Bedfordshire Council guidance included within the '*Design in Central Bedfordshire*' document (2010).

- 5.6 The layout and overall structure of Stewartby Park will be based on the traditional curvilinear perimeter block approach, as illustrated on Figure 5b – Block Structure, The Block Structure Plan opposite illustrates the disposition of the perimeter blocks across the site; this has been carefully formulated with attention to the movement network and the public realm infrastructure to ensure the layout is robust and deliverable.

Figure 5b – Block Structure Plan

Frontages and Enclosure**Frontages and Enclosure Principles**

- Where possible development should be orientated to ensure that the active fronts of homes address the outer edges of residential parcels, with inactive backs of properties enclosed within the block;
- Active frontages at the front of properties will, where possible, comprise front doors and frequent and consistent fenestration;
- A common building line should be used to help define the public realm, projections to be used to provide variety and interest to the streetscape;
- The depth of the set back between the street and building line will differ according to street type;
- Detailing to include gable fronts, open porches, annexes and bays should be included to animate the building line and create a rhythm to the street;
- Architectural detailing within the brickwork to create decorative features on facades should be provided on dwelling frontages;
- Where appropriate there should be the provision of suitable enclosure treatment to the plot boundaries of residential properties;
- The level of enclosure should be defined according to the space which the building frontage addresses;
- Where appropriate front garden boundaries will be provided to establish a zone of defensible space between the public realm of the street and the private realm of the home;
- Side and back gardens that border the public realm (for instance corner plots) will be edged with full height screening (1.8m brick walling);
- Where buildings are used to turn corners a continuous building frontage will be employed and a façade detail including windows and doors will be used to ensure the frontage is active on both streets at a corner;
- Continuous frontages may be employed in key place-making areas including the Crescent and the Boulevard End areas to provide a sense of enclosure. In these locations the use of terraced housing form (reflective of terraced form in the existing village) may be flanked by detached or semi detached homes. The landscape character of homes with gardens will be continued with gardens acting as separation between the house types and detached homes used to emphasise corner plots;
- A continuous frontage to be maintained as far as possible along the eastern edge of site adjacent to the railway line to mitigate noise impact issues;
- Where buildings front open spaces, in particular where there are children's play spaces, a more continuous active building frontage will be provided to create enclosure and provide natural surveillance;
- Building frontages should be clear of utility infrastructure - utility meter cupboards and extractor fan exhausts should be located discretely away from the front elevation yet still be easily accessible for utility companies.

Figure 5c – Building Frontages Plan

- 5.7 Within each perimeter block the building frontage line indicates the extent of the frontage and defines those frontages that are of particular importance.

Figure 5d – Precedent Photographs: Frontages

Residential Density Ranges**Density Principles**

- The development will have a low average residential density of approximately 32 dwellings per hectare (dph);
- Areas of higher density (35-40dph) will occur on the outer edges of the site; and around the Local Centre;
- Areas of lower density (20-30dph) will occur along the Primary Avenue frontage where the form of the existing Garden Village will be extended into the new development;
- Creating a spacious character through the provision of a number of significant public open spaces (as shown on Figure 7b Key Landscape Spaces) and creating wide streets on the Primary Avenue and the Boulevard.
- Ensuring all dwellings have front and rear private realm that meet the standards set out in the section on Gardens and Private Amenity Space.

- 5.8 The unique character of Stewartby derives fundamentally from its spacious layout, which should be retained as far as possible in the development of Stewartby Park.
- 5.9 The density of the residential dwellings across the whole of Stewartby Park is relatively low with minimal variation across the site; however there will be localised variations to address the character of different areas, as illustrated on Figure 5e – Density Plan.

Figure 5e – Density Plan

Building Heights

Building Heights Principles

- The predominant building height for the development will be **2 storeys**;
- Subtle variations in building height will occur across the site to take account of the distribution of residential density and key place-making areas within the development;
- Higher density parcels including the local centre, the Coronation Pit edge and the railway edge could accommodate some buildings of up to 3 storeys – this is to create a sense of enclosure and for noise mitigation along the railway line;
- Lower and medium density parcels will accommodate a range of building heights from 1 storey to 2.5 storeys;
- Steeper roof pitches may result in a nominal increase in eaves to ridge heights set out above;
- The development could accommodate a range of house types with a small variation in height:
 - Single storey bungalows;
 - 2 storey detached, semi-detached and terraced houses;
 - 2.5 storey detached, semi-detached and terraced houses;
 - 3 storey terraced houses;
- Key buildings and point features on buildings will be used to aid legibility and contribute to place-making;
- Individual buildings will host a variety of heights to add interest to their shape and form, consistent with the existing village;
- A hierarchy of housing styles should be used to aid legibility; and
- An increase in building heights should not be solely used to denote landmark buildings; where buildings are to be used for place-making, architectural detailing and special features should be used to help define key buildings.

5.10 The existing Garden Village of Stewartby features mainly two storey buildings with some bungalows. Stewartby Park should retain this precedent and limit the height of dwellings, allowing an increase in building heights in areas only where a special design response is required including the 'Key Groupings' (see Key Groupings Section for more detail). A distinctive feature of Stewartby is the steep roof pitch on many of the residential properties; this increases the overall height and scale of these buildings. This provides scope in Stewartby Park to raise the heights of dwellings without increasing the number of storeys whilst providing the opportunity for buildings to maintain a dominant position in the street scene.

Figure 5f – Building Heights Plan

Legibility: Views, Vistas & Landmarks

Legibility: Views, Vistas & Landmarks Principles

- The alignment of the movement network needs to be carefully designed to improve legibility and place-making by creating visual connections to key areas and terminating key views effectively;
- **Vistas / view corridors** will be created to emphasise the Key Groupings in the following areas:
 - the alignment of the Boulevard will accentuate the view from the **Western Gateway** to the **Boulevard End** - this tree-lined avenue acts as a gateway and provides a key view into Stewartby Park;
 - **Coronation Walk** – this key space will provide important visual and physical connections along the route between Stewartby Sports Ground and Coronation Pit;
 - **The Crescent** – there will be a continuation of the ‘desire line’ from Pillinge Road into the site, with the consistent building line of the Crescent terminating the immediate view;
 - **Northern Linear Park** – an important physical connection between the new public square in the heart of the northern residential quarter to the western edge of Coronation Pit will be reinforced with views over the landscaped western edge of the Pit;
 - **Coronation Pit** – dwellings fronting Coronation Pit will be orientated to take advantage of the views across to the natural landscaped edge that the Pit provides, and where windows in the structure planting allow, to benefit from views across the pit;
- **Legibility** - Symbols and decorative features to be used on key buildings (built into the façade) to assist in wayfinding as an alternative to changing the overall height / scale of the building itself; this approach should be more subtle, discouraging the use of ‘landmark’ buildings where building heights are often increased;
- **Key buildings and point features** will be used in important locations to aid legibility, as follows:
 - Terminate vistas or view corridors;
 - Important corners;
 - Gateway locations.

5.11 Creating visual connections within Stewartby Park and to the surrounding environment, including the existing village, is fundamental in facilitating a sense of identity and ensuring there is a strong relationship between the new development and the existing village. Creating and retaining key views and vistas within the built form aids legibility and helps create a more coherent development.

Figure 5g – Legibility Plan and Place-Making Plan

Location of Affordable Housing Parcels**Affordable Housing Principles**

- **Amount:** 29.72 % (up to 217 dwellings) of properties will be affordable homes;
- **Distribution: pepper-potted dispersal of clusters** of affordable housing across the site as illustrated on Figure 5h – Location of Affordable Housing;
 - **Groupings of no more than 15 units** in each affordable housing cluster will be acceptable where there is a mix of tenure opportunities including intermediate (shared ownership) and affordable rent as well as social rented properties;
 - **Groupings of no more than 10 units** in each affordable housing cluster where tenure is limited to social rented properties;
- **Appearance:** affordable housing is to be **'tenure blind'** – there should be no noticeable difference in design, appearance, materials or colours to adjacent market sale homes;
- **Arrangement:** the dwelling arrangement in affordable housing clusters will be designed to ensure there is a high level of legibility and natural surveillance and will not result in isolated pockets of residential units;
- **Positioning:** Market homes will be positioned between affordable housing clusters to ensure that they are well integrated with the rest of the development;
- **Affordable Housing Mix:** to include affordable rent homes / social rented homes / key worker homes / reduced market value homes and others to be advised by Registered Providers and LPAs.

5.12 The above table sets out the general principles relating to affordable housing that need to be applied across Stewartby Park:

Figure 5h – Affordable Housing

Community Safety and Secured by Design

- 5.13 An important underlying principle that has influenced the emerging layout for Stewartby Park and which should be fundamental to the detailed design of the future residential development is that of community safety and security. Good design is integral to creating places where people feel safe and secure and where opportunities for or the perception of crime are minimised or eradicated.
- 5.14 Stewartby Park will reflect and demonstrate best practice guidance in designing out crime. At national level the development will have particular regard to '*Secured by Design Principles*' (2004) and '*Secured by Design - New Homes* (2010) principles and give consideration to '*Safer Places: the Planning System and Crime Prevention*' (ODPM, 2004). At local level Stewartby Park should comply with guidance contained within Bedford Borough Council's '*Community Safety*' Supplementary Planning Document (2005) and Central Bedfordshire's '*Design in Central Bedfordshire – a Guide for Development*' and supplement 1 – '*New Residential Development*' (2010).
- 5.15 The following principles are to be incorporated into the detailed design of Stewartby Park to help reduce opportunities for crime, fear of crime and anti-social behaviour. These principles have informed the Regulatory Plan and respond directly to the guidance provided in the documents above:

Scheme Layout:

- **Maximising natural surveillance to streets and spaces** – the orientation of buildings, streets and spaces will be designed to provide a high level of 'eyes on the street' and careful use of hard and soft landscape features to ensure natural surveillance is not impeded;
- **Perimeter block form** – perimeter blocks are to be designed according to the layout prescribed on the Regulatory Plan to ensure the correct orientation of fronts and backs of properties. The block structure has been designed to ensure the correct arrangement of backs and fronts and dwellings;
- **Active frontages** – buildings should front onto the public realm with regular windows and doors overlooking the street:
- **Facades and gables** - blank facades and gables, particularly at ground floor level, are to be avoided. Where possible front doors should be located on the main street elevation;
- **Internal layouts** - should be orientated to provide busy internal uses towards the front of properties to provide a higher level of activity where properties address the public realm;
- **Clear definition of public / private space** – private space should be principally contained to the rear of properties, enclosed within the perimeter block, ensuring there is no public access to rear gardens. Private space to the front of properties should be well defined with appropriate boundary treatments to discourage anti-social behaviour.

Routes and Access

- **Low order character of tertiary streets** – the design of tertiary streets should deter their use as through routes and restrict their use to that of resident access;
- **The disposition of community facilities** and direct pedestrian routes will ensure walking distances to bus stops, the local centre and schools are quick and efficient;

- **Safe network of routes** – streets, footways and cycle paths will be direct to ensure routes are as legible and efficient as possible. They will be well lit with residential properties orientated to provide natural surveillance. Pedestrian and cycle routes should not be segregated and isolated from properties and vehicle routes to ensure they are overlooked. Safe routes to both Marston Vale Middle School and Stewartby Lower School should be provided, these in particular should be direct and well surveilled.

Parking and Dwelling Access:

- **Minimal use of car parking courts** – majority of homes to have on-plot parking; where courtyard parking is provided it should be limited in size with only one rear access. It should be overlooked and potentially controlled with entry systems. The design of the courtyard should reflect the private nature of the space;
- **Access to rear gardens in terraces** – private entrances will reinforce a sense of privacy and community safety. They should be kept to a minimum length and should be terminated by a dead end, thus not providing any through routes.

Open Space and Public Realm:

- **Safe Public Spaces** – the public realm including key open spaces will be well lit, with residential properties orientated to provide natural surveillance, particularly in relation to the play areas within the open space. The design of public spaces should be coherent and robust and eliminate any opportunities for crime and anti-social behaviour;
- **Lighting of public realm** - a lighting strategy has been developed (see Chapter 6); this requires appropriate lighting of the streets, key spaces, car parks and footpaths / cycleways to ensure opportunities for crime, fear of crime and anti-social behaviour are reduced.

Figure 5i – Community Safety Considerations

House Types

House Type Principles

- The range of housing types should be appropriate for a low/medium density development, with a focus on the provision of semi-detached properties;
- There will be a mix in housing types across Stewartby Park, although housing will reflect a shift towards the provision of family / lifetime homes, albeit with a range of sizes;
- The range of house types could include:
 - Detached;
 - Semi-detached;
 - Short Terraces (of no more than 8 units);
 - Cluster homes; and
 - Bungalows.
- House types will incorporate the core vernacular features of Stewartby Garden Village House Types, comprising:
 - Private amenity space (gardens to front, back and side on appropriate house types);
 - On-plot car parking;
 - Consistent material palette;
 - Detailed design in elevations and façades.
- Opportunities for larger plots to incorporate annexes on detached and semi-detached dwellings should be pursued to reflect the character of existing housing;
- There is a requirement that 10% of homes will be **Mobility Housing**, designed to conform with Mobility Housing Standards; no more than 20% of the total number of Affordable Homes shall contribute to the total number of Mobility Housing;
- The potential to include bungalows adjacent to the local centre should be considered with the potential for such provision to accommodate a proportion of the required mobility units.

5.16 There is minimal variation in the house types within the existing village, being predominantly two storey detached, semi detached and terraced forms of brick constructed properties. Stewartby Park will seek a sensitive balance between this form and a more modern interpretation. Consequently, there will be more variation in the house types within the new development. Stewartby Park will make reference to the existing Garden Village through the material palette and architectural detailing on the facades of residential properties to retain the important historic character of this brick making area.

5.17 The house types precedents as presented in Figure 5j illustrates the potential range of house types that would be appropriate within Stewartby Park. These house types are applicable to both market housing and affordable housing. This will help to ensure that the affordable housing elements of the scheme are tenure blind (see the section on Affordable Housing).

Figure 5j – House Types

Building Line**Building Line Principles**

- Building set backs from the street to vary dependant upon character area and street type:
 - Deeper set backs in lower density areas; areas replicating the Garden Village theme;
 - Shallower set backs in higher density areas, with lower order tertiary roads – e.g. mews/lanes
- Consistent building line should be used to define key place-making areas including along the Primary Avenue and within the Crescent;
- Consistent building line for walling used to define boundary of front gardens;
- In appropriate areas along the Primary Avenue opportunities for subtle curves or crescents within streets should be pursued to reflect the character of Stewartby Way.

- 5.18 Maintaining a common building line with areas of consistent set backs across Stewartby Park will help create a legible and coherent development. However, the level of set back from the street will vary according to street type and character area, and will also depend on the relationship between the built form and the public realm.
- 5.19 Figure 5c – Building Frontages shows the extent of building frontage which will help determine the building lines within Stewartby Park.

Building Separation**Building Separation Principles**

- Separation should be maintained as far as possible where house types allow, including;
 - detached homes;
 - pairs of semi-detached homes;
 - groups of terraced homes;
 - bungalows.
- Separation to be used to provide side access to properties;
- Separation to be used to provide additional private amenity / garden space to the side of dwellings;
- A consistent level of building separation to be retained within the affordable housing clusters to ensure these areas reflect the same character and density as the rest of the site; and
- Separation can be combined with on-plot parking with driveways and garages providing an appropriate level of separation.

5.20 The separation between residential properties is an important feature of the existing village and is also fundamental to the low density character of Stewartby. Where possible this principle should be maintained throughout Stewartby Park to create a spacious character for the new development and to ensure it integrates effectively with the Garden Village.

Boundary Treatment**Boundary Treatment Principles**

- Robust boundary treatments are important to create a clear demarcation between public and private realm and in creating a defensible front space;
- Limiting the height of front of plot boundary treatments to ensure there is adequate natural surveillance over the public realm;
- A consistent material palette for boundary treatment will be applied to tie the street scene together; this will vary in specification across different street types and character areas;
- Variations in the type of boundary treatment will adapt to respond directly to the public realm onto which it fronts;
- The key boundary treatments that will be acceptable across Stewartby Park are:
 - **Front of plot: boundary treatments used to demarcate front gardens:**
 - **Primary Street** - high quality double skinned dwarf brick walling, no higher than 500mm;
 - **Secondary Streets** - established low evergreen hedging;
 - **Tertiary Streets and Shared Surface Lanes and Courtyards** – no formal boundary treatment, open grass lawn front gardens to support the open character of Stewartby Park;
 - **Side and rear property boundaries that address public realm (of particular relevance to corner plot properties) should have full height (1.8m) brick wall screening.**

5.21 A consistent approach to boundary treatment is important to help unify the treatment of the street frontage and provide a harmonious environment, Figure 5k – Boundary Treatment Plan, illustrates areas where consistent boundary treatments will be employed. Boundary treatments play an important role in defining public / private space which can instil a sense of ownership and reduce anti-social behaviour.

5.22 There will be a simple approach to boundary treatments across Stewartby Park with few variations in the options that are available, the suitable boundary treatments are displayed in Figure 5li – Front Garden Boundary Treatment.

Figure 5k - Boundary Treatment Plan

Figure 5l i – Front Garden Boundary Treatment

Figure 5l ii – Boundary Treatment Palette: Enclosure Walls

Gardens and Private Amenity Space**Gardens and private Amenity Space Principles**

- Private amenity space provided as gardens to the front, back and side of properties;
 - **Front garden depth will be a minimum of 3m along the Primary Street;**
 - **Front garden depth to be between 2 – 3m on secondary streets;**
 - **Front garden depth a maximum of 2m on Tertiary Streets and Shared Surface Lanes and Courtyards.**
- Back Garden provision will be as follows:
 - **to retain minimum back to back privacy distance, a minimum of 11m in depth;**
 - **to meet Central Bedfordshire guidance in their Design in Central Bedfordshire document.**
- Side of plot gardens to be provided on corner properties where appropriate;
- Front garden space should contribute to the streetscene and reinforce the street hierarchy;
- Access gates to be incorporated in boundary wall / fence for all detached, semi-detached, end-of terrace and bungalow properties;
- The Primary Avenue and Boulevard will have greater set backs to allow for an increase in front garden space akin to that of Stewartby Way.
- Secondary and tertiary streets will have a reduced front garden depth reflecting the higher density of these areas.

5.23 Private amenity space is a valuable feature of residential development that will help reinforce the spacious character of the Garden Village form of Stewartby, the extent of private amenity space is illustrated on Figure 5n. The level of private garden space that is provided will be determined by the density of the built development and the street hierarchy across the site. Creating the correct balance of private amenity space to the front of dwellings is fundamental in reflecting the appropriate character of the street; this will be particularly important along the Primary Avenue where there will be direct reference to the character of Stewartby.

Figure 5m – Private Gardens and Private Amenity Space Plan

Materials & Detailing: Detailed Building Design Guidance**Building Materials Palette****Building Materials Principles**

- Consistent use of traditional materials similar to those used in the existing village;
- Subtle variations in brick types should be applied across the development with consistent use of materials along uninterrupted frontages. A common brick specification is required in key grouping locations to maintain consistency of colour, texture and appearance for all built form (houses, garages, out-buildings, and boundary walls) that face onto these important locations.
- Brick types may vary between one area and another as long as they are consistent with the materials palette set in the Design Guide, and within each key grouping area the brick specification must be consistent across the whole area;
- The principal and predominant materials are to include:
 - **Exterior Walls** (buildings, plot boundaries, garages & annexes):
 - Material - Brick of two core types (see Figure 5n – Materials Palette);
 - Colour - Rustic Red / brown (blends and buff to be avoided);
 - Texture - Sand finished;
 - Mortar - Should match existing in Stewartby village;
 - Possible use of particular bonds to add visual interest;
 - **Detailing:**
 - Alternative brick of two complementary types to be used to provide detailing in elevations to include lintels, brick string courses, and corbelling;
 - Tiles to be used to provide features on building facades to include tile creasing and projecting gable and bay features;
 - **Roofs:**
 - Material - Clay or concrete tiles (see Materials Palette);
 - Colour - Brown (shade to be darker than brick);
 - **Fenestration materials:**
 - Material - Painted Timber, Painted Metal or UPVC;
 - Colour - White, Cream or Grey.

5.24 The materials palette across Stewartby Garden Village has minimal variation as there is a consistent approach to the use of building materials across the village by virtue of its direct relationship to the London Brickworks. There is currently a predominance of red brick and red clay tiles. This palette of materials provides an appropriate precedent and will generally be continued throughout Stewartby Park to ensure that the new development integrates with and is complementary to the existing village.

5.25 The brick types to be used across Stewartby Park will only exhibit a slight variation to ensure that there is a consistent approach across the site, the appropriate materials are illustrated in Figure 5n – Materials Palette. The intention of the character area approach within the site is not to facilitate a distinct change in materials between areas but to adopt a suitable approach to addressing the public realm within that particular area.

Figure 5n – Materials Palette

Colour Palette**Colour Palette Principles**

- Brick colour: Rustic Red / Brown;
- Roofing material colour: Shades of Brown (to be darker than brick);
- Fenestration colour:
 - only white will be acceptable within the Boulevard and Primary Avenue character areas;
 - potential for subtle variation (white – grey – cream shades) in outer edge character areas;
- Street furniture to adopt a consistent colour palette with a predominance of pale green to reflect the aged copper used in the Garden Village along the Primary Avenue and Boulevard.

5.26 To complement the approach to materials as outlined in the previous section the colour palette to be utilised across Stewartby Park will adopt a similar consistent approach throughout the development. A consistent colour palette will help tie the development together and create a sense of place and identity. It is also important in integrating Stewartby Park with the existing Garden Village. Figure 5o displays the appropriate colour palette that should be employed across Stewartby Park.

Figure 5o – Colour Palette

Fenestration

Fenestration Principles

- There should be a consistent approach to the fenestration used throughout the whole development as it is important to ensure the development reads as one;
- Arrangement of internal rooms, particularly kitchens, should not adversely affect the fenestration pattern and design of dwellings;
- The ratio of frame to glazing should address the following:
 - Use of thin frames / casements and larger areas of glass provide multiple benefits including attractive external appearance, and more natural daylight to internal space;
- Use of triple casement windows reflecting Stewartby characteristics;
- The size and proportion of windows will vary depending upon their location on ground or first floor:
 - **Ground Floor windows:**
 - triple casement;
 - windows to the main room to have a horizontal bias;
 - **First Floor windows:**
 - double casement;
 - windows to have a vertical bias;
- Use of side hung and sash windows (**top hung windows will not be accepted in Stewartby Park**);
- Colour of Frames: White, grey or cream depending on area (see Colour Palette section).
- Frame material: painted metal, timber or UPVC;
- Glazing: Double or triple glazed panes of glass for maximum thermal efficiency – triple glazed panes will be required along the eastern edge of Stewartby Park to help mitigate the impact of railway noise;
- Cills: to be integrated into window frame and to be of a slim tiled design, avoiding the use of plastic;
- Lintels to be provided to reflect the detailing of the existing village; to be shaped as gentle curves as soldier courses of facing brick or tile.

5.27 Fenestration will be a strong feature of the new development and it is important that it is sympathetic and complementary to the existing garden village. A regular pattern of fenestration will ensure that the street scene ties together creating a more legible and coherent place. Fenestration also plays an important role in providing natural surveillance and creating active frontages as the provision of regular windows and doors on the front elevation of residential properties helps put 'eyes on the street'. Figure 5p displays precedents of the appropriate window types and features that are appropriate for use in Stewartby Park.

Figure 5p – Fenestration Precedents

Entrances: Front Doors & Porches**Front Door and Porch Principles**

- Where possible dwellings to provide a front door on their front elevation to help create active frontages onto the public realm;
- All properties to incorporate a simple porch feature at front door;
- Porch features should predominantly take the form of a protruding flat linear canopy to provide shelter at front door threshold and should avoid the use of enclosed porches;
- Porch features should avoid the use of fibreglass;
- Porch features on the existing Sir Malcolm Stewart Bungalows should be used as a precedent and the opportunity for built out porches combined with a window feature should be provided where appropriate particularly on bungalows.

5.28 To further animate the street scene and reflect the existing character of the Garden Village, the use of porches will be a significant feature of Stewartby Park. The emphasis of entrances is an important place-making device that will help articulate the street scene. Porch design in Stewartby Park should be kept simple with minimal variation across the development; Figure 5q shows porch design precedents that will be appropriate for Stewartby Park.

Figure 5q – Porch Design Precedents

Design Details**Design Details Principles**

- A broad use of detailed design features to help reinforce and complement the existing character in the garden village;
- Detailed design features should celebrate the location of Stewartby Park and optimise the use of brick;
- The incorporation of detailed design features will be most important on property elevations that face the public realm;
- All very important frontages, as specified on the Regulatory Plan, should include detailed design features;
- There should not be a repetitive approach to incorporating detailed features; a range of decorative features should be identified and used across the site;
- The use of more elaborate features on the facades of landmark buildings in key locations to assist in way-finding rather than using an increase in building heights;
- The incorporation of brick band / string courses at the break between storeys to help articulate elevations;
- The emphasis of exposed gable ends through the use of decorative brickwork patterns and fenestration as appropriate;
- Where lintel features are incorporated above windows they shall be constructed in brickwork;
- There should be attention to detail at eaves to make them a distinctive feature of all properties, creating a focal point between the roof and wall elevation;
- Materials for detailing (see Materials Palette).

5.29 Stewartby Park has a unique opportunity to celebrate its location abutting Stewartby Garden Village and the historic London Brickworks site and will accordingly incorporate brick as its predominant building material. A unique feature of the existing village is the creative use of brick and tile work to articulate building facades; this approach to detailed design will be retained in the proposed development of Stewartby Park. Figure 5r shows design detail precedents that are appropriate for use across Stewartby Park.

Figure 5r- Design Detail Precedents

Roof Design

Roof Design Principles

- There should be pitched roofs on all properties, including homes, garages, annexes and public utility buildings;
- Variations in roof pitch should be used to incorporate subtle increases in building height where increasing the amount of storeys is not a viable option;
- The decorative projection at eaves that is a feature of the existing village should be seen as an important precedent and retained in the roof design of Stewartby Park. At eaves the verge can incorporate a brick or tile corbel overhang;
- Hipped gables and roof design features should be provided to properties in prominent locations, along key frontages and where buildings turn corners;
- Porch features should be flat roofed;
- Materials: see **Materials Palette**;
- Colour: see **Colour Palette**;
- Roof design should include integral bat box provision;
- The incorporation of renewable energy technology should be pursued on south facing roofs. This may involve:
 - Provision of less visually intrusive modular PVs or solar panels that fit into the matrix of roof slates where south-facing roofs address the public realm;
 - Steep roof pitches should be fully exploited for PV installations as they are more efficient in gaining optimum solar energy;
 - More visually intrusive 'bolt-on' PV installations are only acceptable where south-facing roofs address the private realm of rear gardens.

5.30 Roofscape design is a fundamental feature within Stewartby Park and is essential to create visual interest that is akin to that within Stewartby Garden Village. Building heights within Stewartby Park will be relatively low with only limited opportunities to increase heights above 2.5 storeys. Therefore using the roofscape to create diversity will help animate the streetscape. Variations in pitch, angles and projecting features, as shown in Figure 5s – Roof Design Precedents, should be used to enhance the character of Stewartby Park and ensure it integrates well with and complements the existing village housing.

Figure 5s – Roof Design Precedents

Chimneys

Chimney Principles

- Chimneys should be incorporated as they are a defining characteristic of Stewartby's built form and roofscape;
- Chimneys should be used to denote key buildings and corner buildings should incorporate taller chimneys;
- A proportion of new homes must incorporate well designed chimneys as follows;
 - minimum of 80% of homes on Boulevard and Primary Avenue to ensure there is continuity with existing village;
 - minimum of 50% of homes in other character areas;
- Wherever possible functional chimneys can be provided to perform one of two roles:
 - as traditional chimneys to allow wood or mixed fuel burning;
 - to assist in providing passive ventilation (i.e. with wind cowls to aid stack effect);
- Material: Chimneys must be constructed of or faced with brick with clay chimney pots to ensure they are in keeping with the character of the village;
- Colour: Chimneys must be faced with reddish brown brick to complement the colour palette used throughout Stewartby Park.

5.31 Chimneys are a traditional and distinctive feature of the existing Garden Village – a feature that should be retained and used throughout Stewartby Park. Chimneys fulfil both a visual and functional role and therefore are an important aspect of residential development. The provision of functional chimneys should be widespread throughout the development to help create a unified character and improve the residential offer in terms of providing family / lifetime homes.

Figure 5t – Chimney Design Precedents

Waste Storage

Waste Storage Principles

- Provision of on-plot storage of household waste (bins) for all homes;
- Properties within the Central Bedfordshire area are to provide a waste storage area to accommodate at least 2 wheelie bins;
- Properties within the Bedford Borough area are to provide a waste storage area to accommodate at least 3 wheelie bins;
- Waste storage and collection should be in accordance with the policies and principles set out in the Bedford Borough Council Climate Change and Pollution SPD (2008).
- Waste storage to be provided to the rear of dwellings with access through garages on larger plots;
- Bin storage at rear of terraced properties will be accessed through shared entry system;
- Utility annex 'extensions' to the side of the main property may provide storage space for waste & recycling bins;
- Annexes should have secure access that provides direct access from the front / side of the property for ease of access for bins;
- Purpose built bin storage cupboards could be integrated into side elevations of properties, where possible to be combined with utility meter storage;
- Waste storage in communal areas - to rear of local centre and other courtyard locations should apply the following approach:
 - communal waste storage cupboards to be incorporated in the car parking courtyard area;
 - a more formal approach should provide brick built annex style building;
 - the possibility of combining waste storage with communal cycle shelter/store to be explored.

5.32 Adequate space for the storage of refuse will be provided for each dwelling. Where courtyard parking is provided waste storage will be accommodated in grouped stores within the communal courtyard. In all other cases waste storage is to be provided to the rear of dwellings, not visible from the public realm to ensure they have minimal visual impact. It is however essential that the storage facility is easily accessible from the dwelling and has direct access onto the street for ease of collection.

Annex Buildings**Annex Principles**

- Some detached, semi-detached, end-of terrace and bungalows could, where appropriate, incorporate utility annex 'extensions';
- Annex buildings should be located on the side elevation of residential properties;
- The design of annexes shall be consistent with the dwelling design and incorporate the same principles with regard to pitched roofs, fenestration, materials and colour palette;
- The functional role of annex buildings should either:
 - provide space for the storage of waste and recycling bins; or
 - provide additional internal floorspace as a utility room / study / 'granny annex' (the use of the annex for this purpose by a family member would not be classified as an additional dwelling); or
 - act as an integral garage.

5.33 Stewartby Garden Village is characterised in some areas by the provision of single storey annexes on the side elevation of semi-detached and detached properties. Annex buildings can help articulate residential elevations and roofscape by adding variety to the building heights. They also provide valuable additional space, which is suitable for future adaptation and creation of 'lifetime' or family homes.

Noise Mitigation

- 5.34 The most easterly edge of the site requires careful consideration due to its immediate proximity to the Midland Mainline railway and to effectively mitigate the noise impact of the railway upon the proposed residential development.
- 5.35 The railway line is on a raised embankment and although there is an existing landscape buffer to this edge of the site, which provides a visual buffer to future housing, this vegetation has minimal acoustic value. As such, following technical assessments, noise from the railway will impact on the occupiers of residential properties situated within 150m of the railway line. Acoustic modelling of the site and the proposed development has been undertaken to inform the appropriate mitigation that will be required to minimise the effect on residential amenity.
- 5.36 In order to ensure satisfactory internal and external noise levels within new dwellings, Figure 5u – Noise Mitigation Plan, illustrates the required design response along this edge of the development. The mitigation will be implemented through two key measures:

Noise Mitigation Measures

- Protection of noise levels within garden areas and through the built form including:
 - Provision of a continuous building line on the first line of housing adjacent to the railway embankment, fronting to the east, with a minimum height of 7m and including short terraces and link detached properties;
 - Dwellings along the eastern edge of the site to front the railway line with gardens to the rear to minimise the impact of the railway on the use of outdoor amenity space;
 - Ensuring houses fronting on to the open spaces and streets, behind this first row of houses and situated up to 150m back from the railway line, face into the open space / street to provide a further barrier to noise leakage through these areas;
- Protection of noise levels within dwellings through the built fabric of dwellings, particularly the use of suitable glazing as indicated in Tables 1 - 3 below and on the Figure 5u and:
 - Potential orientation of internal rooms to face habitable rooms (living room and bedrooms) away from the railway line.

Table 1: Mitigation Scheme for housing fronting eastern edge of site (indicated in blue on Noise Mitigation Plan)

Window Location	Glazing Specification Weighted Sound Reduction Index (R_w dB)	Glazing Example (glass mm/air gap mm/ glass mm)	Ventilation Specification Weighted Element Normalized Level Difference ($D_{n,e,w}$ dB)
Ground floor level	37	10/12/6	38
First Row Level	42	SG Phonip 9/12/10	51

Table 2: Mitigation Scheme for housing fronting open spaces within 150m of eastern edge of site (Pink on Noise Mitigation Plan)

Window Location	Glazing Specification Weighted Sound Reduction Index (R_w dB)	Glazing Example (glass mm/air gap mm/ glass mm)	Ventilation Specification Weighted Element Normalized Level Difference ($D_{n,e,w}$ dB)
Ground floor level	31	4/12/4	27
First floor level	37	10/12/6	44

Table 3: Mitigation Scheme for housing within 150m of eastern edge of site but protected by housing fronting the railway line and open space

Window Location	Glazing Specification Weighted Sound Reduction Index (R_w dB)	Glazing Example (glass mm/air gap mm/ glass mm)	Ventilation Specification Weighted Element Normalized Level Difference ($D_{n,e,w}$ dB)
Ground floor level	31	4/12/4	22
First floor level	31	4/12/4	31

Figure 5u – Noise Mitigation Plan

Public Utilities – Above Ground Infrastructure**Above Ground Utility Infrastructure Principles**

- Above ground utility infrastructure to include the provision of:
 - Electricity sub-stations;
 - Water pumping stations;
 - Telecommunication cupboards;
 - Meter boxes; and
 - Renewable energy infrastructure.
- Materials/colour of above ground infrastructure to match material palette and appearance of residential properties:
 - Sub-stations and pumping stations to be brick built using same palette as residential properties;
 - Meter boxes and telecommunications cupboards to be white to match predominant fenestration colour;
- Access: utility infrastructure that requires access for maintenance and management should be located adjacent to public highways for ease of access for servicing vehicles; consideration must be given to the sympathetic siting of such infrastructure within the public realm with careful thought given to its impact upon vistas and spaces forming the wider development context.

5.37 It is important that the provision of utilities does not have a significant detrimental impact on the streetscape and therefore such facilities should not be visually intrusive. The approach to the provision of utility infrastructure should seek to minimise the effect on building frontages and on the streetscape as a whole.

Key Groupings

- 5.38 To help strengthen the sense of place and create a distinctive identity five key groupings have been identified within Stewartby Park. These are areas, distinct from but within the Character Areas, where achieving the correct design response is fundamental to creating a successful place and space. The key groupings are integral to the legibility of Stewartby Park by playing an important role in way-finding and defining particular locations within the development. An increased level of design control is required in these areas and the following guidance sets out the role and character of each key grouping together with the required design response.
- 5.39 Figure 5v illustrates the location of the five key groupings; each grouping is then described and illustrated in more detail.

Figure 5v – Key Groupings Location Plan

Key Grouping 1:**Western Gateway**

The Western Gateway is the principal entrance into Stewartby Park. It is therefore fundamental not only in facilitating a sense of arrival into the development, but is also crucial in establishing a sense of place and identity for the overall scheme. The Western Gateway will define the character of the Boulevard and also denote the main entrance into the employment area (not covered by this Guide).

The Western Gateway accommodates the greatest range of uses within Stewartby Park including residential, employment and retail which are complemented by strong and defined highway and landscape treatments to help create a formal and distinctive place.

The built form of the Western Gateway should be characterised by a stepped building line and continuous frontage on both sides of the Boulevard; this will also help to provide design consistency around the Boulevard. The orientation of the buildings fronting Broadmead Road and the Boulevard should ensure there are active frontages facing onto the public realm. An architectural form that reflects the traditional Stewartby Garden Village character is important so as to reinforce the place-making role of this space. The design approach should include steeper pitched roofs with architectural detailing within the brickwork and feature projections to help further animate the street scene. Prominent porch detailing and decorative features on frontage elevations should be used to help accentuate the stepped building line and emphasise the significance of the area.

The continuity of the area will be reinforced through a consistent approach to boundary treatments of double skinned dwarf brick walling; this will also help maintain a clear distinction between public and private space. Formal street tree planting of a uniform line of stately large round headed tree species will add consistency to the area. Robust landscape treatments should be used to create a legible and coherent junction at the Broadmead Road roundabout, enabling safe and direct access and egress into and out of Stewartby Park.

- 5.40 Figure 5w i) illustrates the key principles which should be adhered to in designing the Western Gateway key grouping to ensure that the correct character in this area is achieved.

Figure 5w i) – Key Grouping 1: Western Gateway

Key Grouping 2:**Boulevard End**

The Boulevard End is fundamental for maintaining a legible route through from the Western Gateway, along the Boulevard and onto the Primary Avenue. This is considered to be a formally designed area. In terminating the principal view for vehicles, pedestrians and cyclists that enter Stewartby Park via the Western Gateway, the Boulevard End terminates the Boulevard in a coherent and robust space. In providing a key turning point along the primary street, the Boulevard End also helps define the main route through the development. The Boulevard End also frames an important area of public open space which includes a SLEAP. Creating a sense of enclosure around this space will be integral to establishing the safety and legibility of this area of public realm.

The built form within the Boulevard End must facilitate a sense of enclosure and continuity along the primary street, through into the Primary Avenue. This should be achieved through the provision of a set piece design at the top of the Boulevard whereby a consistent building line within a short curved terrace will help accentuate and terminate the view from the Western Gateway. Buildings will retain the character of the existing Garden Village and use brick detailing and diversity in the roofscape, including chimneys, to add diversity and interest to the street scene. Regular fenestration and consistent porch design will be essential to reinforce the continuity of the terrace. Strong boundary treatments, of dwarf brick walling, will be important to provide definition between the public and private realm and improve the uniformity of the area.

The open space, including the SLEAP, will primarily comprise a formally designed area with specimen tree planting and mown grass which encompasses the appropriate play equipment (see chapter 7). The alignment and curvature of the roundabout at the Boulevard End will help reduce vehicle speeds, improving the safety of the open space.

- 5.41 Figure 5w ii) illustrates the key principles which should be adhered to in designing the Boulevard End key grouping to ensure that the correct character in this area is achieved.

Figure 5w ii) – Key Grouping 2: Boulevard End

Key Grouping 3:**Coronation Walk Crossroads**

The key grouping at Coronation Walk is focussed on the intersection of this important linear open space with the Primary Avenue. In this particular area it is essential that an appropriate design response is achieved to ensure that these two distinctive environments integrate successfully with each other and create a space that is legible and coherent, with a focus upon pedestrians crossing the highway space.

This location is an important node within Stewartby Park and therefore must be designed to allow all users to interact safely with each other, whilst prioritising pedestrian and cycle movement through the Coronation Walk leisure route. To facilitate this, the highway layout of the Primary Avenue will be carefully designed to further reduce vehicle speeds over a short distance through a change in surface material and a subtle deviation in the carriageway restricting forward visibility.

Coronation Walk itself is an important linear green space that provides key visual and physical connections along the route between the existing Stewartby Sports Ground and the restored Coronation Pit. It is important that the key grouping emphasises this role of the space and enhances the connectivity through the linear route. In creating a cross-road within the green infrastructure network, the key grouping will need a robust and suitably complementary landscape response. A leisure route will be formed through Coronation Walk and this will need to be sensitively incorporated within the key grouping, ensuring there is a positive relationship between the built development and the recreational routes.

The built form within this key grouping should help provide a sense of enclosure to the linear space and ensure active frontages address the public realm. Key corner buildings will face onto the crossing point and will help define the extent of this space. Building heights should be restricted to 2 storeys to maintain a feeling of openness. The landscape design should promote the green character of this space and include tree planting, particularly within the Primary Avenue area, to help the natural character extend out into the street.

- 5.42 Figure 5w iii) illustrates the key principles which should be adhered to in designing the Coronation Walk Crossroads key grouping to ensure that the correct character in this area is achieved.

Figure 5w iii) – Key Grouping 3: Coronation Walk Crossroads

Key Grouping 4:**The Crescent**

The Crescent represents one of the most important vistas within Stewartby Park and is a key reference point to the existing Garden Village. It has a strong relationship with Pilling Road and is crucial in providing a physical and visual connection to the existing village. This key grouping is fundamental in reflecting the Garden Village character within Stewartby Park and having dwellings fronting on to a significant open space. The Crescent also fulfils the role as an important community space, incorporating a SLEAP; it provides a valuable and functional open space for the surrounding residents with a robust sense of enclosure and a high level of natural surveillance.

The Crescent is an important node within the development where the Primary Avenue is taken through a deliberate curved intervention and connects to various secondary and tertiary streets. Vehicle speeds are reduced naturally by the curvature of The Crescent highway.

The built form within this key grouping must make an important statement reflecting the character of the Garden Village and should both address and respond to the formality of The Crescent. Building heights will be slightly increased on dwellings that directly front onto The Crescent open space, either by going up to 2.5 storeys or by increasing the eaves to ridge height. A continuous building line will reinforce the sense of enclosure and will be achieved through the provision of short terraces, particularly on The Crescent frontage. As this is one of the most significant frontages within Stewartby Park a consistent approach to fenestration, architectural detailing, chimneys, porches and roofscape for each dwelling will be fundamental to creating a successful sense of place and identity.

The landscape design will further reinforce the formality of the space and include the provision of formal street tree planting and mown grassed areas, which will also have regard to the highway visibility requirements. The green character of The Crescent will permeate through to Pilling Road to ensure the view down to the built Crescent form is framed. The dwellings that frame this view should have a specific design response to 'book end' the vista from Pilling Road through to the eastern edge of the site.

- 5.43 Figure 5w iv) illustrates the key principles which should be adhered to in designing the Crescent to ensure that the correct character in this area is achieved.

Figure 5w iv) – Key Grouping 4: The Crescent

Key Grouping 5:**Northern Square**

The Northern Square encompasses the Northern Linear Park which is an important open space within the heart of the residential development. This key grouping is focused on this informal space and allows the green character of the surrounding landscape to penetrate into Stewartby Park, providing an attractive natural setting for the surrounding dwellings. This space is focused around a pond and associated swale that provides natural surface water drainage into Coronation Pit and this helps create a natural character to this key grouping.

To provide an attractive outlook for the dwellings fronting the Northern Linear Park, the area should be a softer, more natural, environment as this space represents an integration of Stewartby Park with the wider landscape as well as offering biodiversity benefits. The space also plays an important role in providing visual and physical connections to Coronation Pit and the landscape approach should seek to enhance such connections.

The built form within this key grouping should reflect the surrounding landscape context and can be a more modern interpretation of the character of the existing Garden Village, allowing a more contemporary approach to influence the architectural style. Dwellings fronting the open space to the north should incorporate a predominance of detached and semi-detached housing types to enhance the open and natural qualities of this area. Architectural detailing and projections should be used to create distinctive features on built facades; feature fenestration should also be incorporated to exploit views over the open space and over into Coronation Pit.

- 5.44 Figure 5w v) illustrates the key principles which should be adhered to in designing the Northern Square key grouping to ensure that the correct character in this area is achieved.

Figure 5w v) – Key Grouping 5: Northern Square

**SECTION B:
DESIGN GUIDANCE
FOR STEWARTBY PARK**

6.0
Movement Framework

6.0 MOVEMENT FRAMEWORK

6.1 Fundamental to the success of Stewartby Park is ensuring that movement routes are well connected to the wider area and promote easy and direct access throughout the development. The provision of links within Stewartby Park and connections to the surrounding highway network, as well as ensuring there is a strong physical relationship with the existing Stewartby village, are integral to creating a sustainable inter-connected, walkable community and successful development.

Access & Movement Guiding Principles

- **Creating a robust and legible movement network** – this should ensure that Stewartby Park is a coherent place that is easy to negotiate by all;
- **Promote travel through a choice of modes** – the movement network should seek to encourage access by all modes of travel so as not to increase reliance on private cars;
- **Central primary street through development as main ‘spine’** – this will connect the Western Gateway to the heart of Stewartby Park, through to The Crescent and enable a clear legible primary route to be established;
- **Hierarchy of streets** – a workable hierarchy of primary, secondary, tertiary streets and shared surface lanes and courtyards which provide the appropriate design response to individual areas throughout Stewartby Park;
- **Prioritising movement and safety of pedestrians & cyclists** – a comprehensive network of safe and direct routes for pedestrians and cyclists;
- **Facilitate access for public transport** – ensuring the development can accommodate public transport through the provision of a bus route and bus stops;
- **Accommodating the parked car without it dominating** – a parking strategy to determine the location of parked cars to ensure that they can be accommodated without dominating the built environment;
- **Linkage to existing development** – ensuring there are effective vehicular, pedestrian and cycle connections to the existing village;
- **Traffic speed control creating a ‘safe’ environment** - sympathetic traffic calming measures and carefully devised road alignments will help reduce vehicle speeds;
- **Integrated junction designs** – junctions will be designed to integrate safely with the movement network with sufficient visibility to enable the safe and efficient movement of vehicles;
- **Compliance with defined standards** – ensuring that carriageway and pathway widths and other design principles are in accordance with adopted highway standards including *Bedford Borough Highways Design Guide* (1995), *Central Bedfordshire Council Design Supplement 7: Movement, Streets and Places* (2010) and *Manual for Streets 2* (2010) (except where contradictory to local standards in which case local standards take precedence).
- **Sensitive design of street environment** – the design of streets should be sensitively integrated into Stewartby Park, avoiding ‘over engineering’ and minimising signage and street clutter.

Figure 6a – Access and Movement Principles Precedent Character Photos

Hierarchy of Streets, Cycleways and Footways

- 6.2 The movement network in Stewartby Park is based on a balanced hierarchy of streets and footways to ensure there is provision for travel through a variety of modes. This hierarchy has been developed to ensure that the streets and footways reflect and respond to the character of individual areas within Stewartby Park. With slow vehicle speeds of 20mph and low volumes of traffic, cycling is assumed to occur on the highway except where indicated otherwise. This will subsequently ensure that there is a consistent and complementary relationship between the streets, public realm and built form.

Street Hierarchy

- 6.3 The street hierarchy plays an important role in defining the character of particular areas within a development and helps create an environment that is legible and coherent.
- 6.4 The role and function of individual streets will differ depending upon their position within the development and the areas which they transect. The street type is integral to the character of the surrounding built form which will reflect the level that the particular street holds in the hierarchy and its significance within Stewartby Park. This has a direct impact on the level and type of traffic that the street will accommodate and has influenced the design criteria of the different types of route.
- 6.5 There are four main street types within the street hierarchy at Stewartby Park. To ensure that the character of the street responds appropriately to the adjacent land uses, both tertiary streets and shared surfaces have been sub divided into two categories to enable a tailored response to either built development or landscape edges. The arrangement of these six different street types are illustrated on Figure 6b – Street Hierarchy Plan, they include:

Street Hierarchy

- Primary Street;
- Secondary Street;
- Tertiary Street – Standard Form;
- Tertiary – Single Sided;
- Shared Surface Lanes and Courtyards – Standard Form;
- Shared Surface Lanes and Courtyards – Single Sided.

- 6.6 Figure 6c shows some street type photos that can provide precedents for the street hierarchy in Stewartby Park.

Figure 6b – Street Hierarchy Plan

Figure 6c – Street Types Matrix

Street Types

- 6.7 The design of the four main street types – Primary, Secondary Tertiary and the Shared Surface Lanes and Courtyards, has been informed, in part, by the principles set out within the Bedford Borough Highway Design Guide (1995) the Central Bedfordshire Guidance contained within 'Supplement 7 – Movement, Streets and Places' (2010) of their *Design in Central Bedfordshire Guide and Manual for Streets 2* (2010).
- 6.8 Each street type is explained within the following proformas, including their character and the design requirements that they should meet.

Street Types Table

Street Type	Number of homes served	Maximum Carriageway width - <i>Based on UPPER LIMIT widest BBC/CBC requirement</i>	Footpath width (where shared surface - utility strip width)	Development on both sides of street?	Verge / strip for utilities on side of street with no homes	Total Street Width	Materials
Primary	ALL	6m	2 x 2m	Yes	5m for landscaping	15m	- Black-top bituminous surface carriageway & paths, concrete kerbs - Blockwork speed restraint measures
<i>Boulevard**</i>		<i>5.5 x 2</i>			<i>2 x 4m with 10m central reservation</i>	33m	
Secondary	Up to 100 (300 if 2 points of access are provided)	5.5m*	2 x 2m	Yes	n/a	9.5m	- Black-top bituminous surface carriageway & paths, concrete kerbs - Blockwork at transition between Primary / Secondary streets
Tertiary	25 – 50	5.5m*† <i>(range of 4.1 – 4.8m widths see comment below)</i>	2 x 2m	Yes	n/a	9.5m	- Black-top bituminous surface carriageway & paths, concrete kerbs - Blockwork at transition between Secondary / Tertiary streets
Tertiary: <i>– single sided street facing public open space</i>	25 (50 if 2 points of access are provided)	5.5m*† <i>(range of 4.1 – 4.8m widths see comment below)</i>	1 x 2m	No: single sided street	1m	8.5m	- Black-top bituminous surface carriageway & paths, concrete kerbs - Blockwork at transition between Secondary / Tertiary streets
Shared Surfaces Lanes & Courtyards	0 – 25	4.8m*† <i>(range of 4.1 – 4.8m widths see comment below)</i>	2 x 2m (shared surface or verge)	Yes	n/a	8.8m	Blockwork
Shared Surfaces Lanes & Courtyards <i>– single sided street facing public open space</i>	0 – 25	4.8m*† <i>(range of 4.1 – 4.8m widths see comment below)</i>	1 x 2m (shared surface or verge)	No: single sided street	1m	7.8m	Blockwork

NOTES:

* Secondary, Tertiary carriageways to be 6m wide when opposite garages/driveways.

** The Boulevard is a sub-section of the Primary Street, however due to its Boulevard type design with 2 lanes of carriageway serving each direction and the provision of a central reservation, different street dimensions apply to the rest of the Primary Street. Where different dimensions apply these are indicated in italics on the table above.

† Tertiary street carriageways may be narrowed to between 4.1m – 4.8m in some locations, as a speed restraint measure.
Shared Surface street carriageways may be narrowed to 4.1m in some locations, as a speed restraint measure.

Street Type - Primary Street

General Information	
Street Type	Primary
Location	The main route within the development, running through the site connecting the southern and western gateways. The Primary Street includes the Boulevard.
Character	Formal in character, fronted by lower density homes in keeping with Stewartby village and local centre. The widest street corridor, forming the spine and defining the character of the development. The Boulevard element will be characterised by wide avenue containing a green central reservation adding to the open character of the primary street.
Street Design	
Total Corridor Width	10m - 15m (33m on Boulevard)
Footpaths	2m wide on both sides of the street and 2m wide where segregated from the carriageway.
Cycleways	No dedicated cycleway provided adjacent to carriageway – cyclists to use the carriageway. 3m wide combined footway / cycleway where the cycleway is segregated from the carriageway.
Carriageway	6m wide (sufficient for two larger vehicles to pass alongside each other) with widening on bends to allow for larger vehicles turning. On Boulevard 2 x 5.5m carriageways in both directions of travel with central reservation of 10m.
Public Transport Route?	Yes – Bus route shares carriageway
Traffic Calming	Traffic to be calmed by the character of the street which will include traffic calming features at approximately 70m intervals. The following design features will encourage driver caution and slower speeds: <ul style="list-style-type: none"> ▪ Surface material change; ▪ Areas of horizontal deflection and shared surface where a common surface material between footpath and carriageway will be used; ▪ Minimal use of vertical deflection only in areas where other traffic calming measures are not appropriate. ▪ Sinuous routes reducing forward visibility; ▪ Short unrestricted lengths between junctions; ▪ Use of tight radii. <p>Use of planting within verges to minimise excessive visibility as appropriate. Not to be located within visibility splay at junctions and access points.</p>
Utilities corridor	<ul style="list-style-type: none"> • Located under footways; • Sewers to be located within the carriageway; • Utility junction boxes to be located within landscaped verge where possible to minimise disruption to pedestrians. However utility routing not to be located under soft verge to minimise conflict with trees.
Surface Finishes	Surface Materials – refer to Surface Materials Section
	Kerbs – refer to Surface Materials Section
	Street Furniture – refer to Street Furniture Section
Street Lighting	Refer to Lighting Scheme
Technical Details	
Target Speed	20mph
Road markings	To demarcate priority at junctions only.
Junction Spacing (centreline-centreline)	25m same side / 15m opposite side.

Junction radii	6m – to be increased as necessary at the local centre to allow access for larger vehicles.
Forward visibility	25m
Visibility Splays	'x' 2.4m
	'y' 25m
Centreline radii	30m as a guide but to be dictated by swept paths.
Street Landscaping	
Verge width	0-5m (on Boulevard 2 x 4m verges + 10m central reservation)
Street Trees	Planted in verges on either side of street or both and in open spaces that fall within the highway corridor.
Planting Palette	Trees that do not restrict visibility at junctions – larger trees can be located further back outside of visibility splays; Low level planting in verge to be less than 0.6m tall.
Interaction with homes	
Direct Access to homes	Yes (single driveways and shared accesses for up to 5 dwellings).

- 6.9 The Boulevard and Primary Avenue are the only primary streets within Stewartby Park and together they form the central spine to the development, creating a legible route through from the Western Gateway to The Crescent and towards Montgomery Close. This primary street accommodates the majority of traffic movements within Stewartby Park, providing the key north – south / east - west link and connecting the residential core of the development to the local centre. The primary street is also the public transport route, providing connections to the existing highway network.
- 6.10 The design of the primary street is formal in character and will provide the greatest reference to the existing Garden Village, reflecting the spacious and open style of Stewartby, in particular Stewartby Way. As such, the built development fronting the primary street will be the lowest density and the architectural style of the properties will be more of a replication of the existing village of Stewartby. More detail on the character and architectural style in this area is provided in Chapter 5 – Built Form.

Design Principles for the Primary Street

- 6.11 The key design principles that should be adopted for the primary street include:

- The primary street will be designed to carry the highest volume of traffic and will be the widest carriageway within Stewartby Park. The Boulevard element of the Primary Street will have a 5.5m carriageway serving both directions of travel and the remainder of the Primary Street will provide a 6m wide carriageway, with widening at bends to allow larger vehicles to manoeuvre safely and conveniently.
- The total street width including 2m pathways on both sides extends to between 10 – 15m; on the Boulevard the total street width will increase to 33m with a 10m central reservation.
- The built development fronting the primary street will reflect the character of Stewartby Garden Village, creating a common building line with a consistent approach to boundary treatment and will be the lowest density development within Stewartby Park;
- There will be a predominance of on-plot residential parking to reflect the existing situation in the village;
- The approach to tree planting along the primary street will be regular and formal to help define a uniform boulevard / avenue type character. Formal planting of street trees will be provided within the open space adjacent to the highway. This space is to be adopted as open space rather than as highway land. A consistent approach to suitable species will be employed.

- There will be a series of traffic calming interventions along the primary street including changes in surface materials, areas of horizontal and minimal vertical deflection and shared surfaces, tight radii and driveway accesses. These features will require drivers to be more aware of the interaction between the street and the built development and the movement of other vehicles;
- Standard bituminous surfacing material will be used for the carriageway with blockwork used to demarcate key locations and delineate pedestrian crossovers. Footpaths to be predominately bituminous surfacing material.

Key Events

- 6.12 A number of sections of the primary street are significant in facilitating the safe and efficient use of the street as a whole and its interaction with the wider movement network. Figure 6d illustrates the location of the various speed restraint measures that should be provided along the primary street, these include (from west to south):

1. Change in level (vertical deflection) and change in surface material at Boulevard junction to create a shared surface adjacent to the Local Centre;
2. Roundabout marks change in direction of route of the primary street;
3. Change in direction (horizontal deflection) with carriageway undulating within street corridor, with wide areas of landscape planting one side of the street;
4. Change in level (vertical deflection) and change in surface material at the intersection between the route of the primary street (east-west) and the Coronation Walk linear open space (north-south) to create a shared surface environment;
5. Change in direction (horizontal deflection) with carriageway undulating within street corridor, with wide areas of landscape planting one side of the street;
6. Change in surface material in the zone at the staggered crossroads on the primary street;
7. Change in surface material on the corner as route of the primary street changes direction. Inclusion of overrun area for large vehicles.
8. Change in level (vertical deflection) and change in surface material at the intersection between the route of the primary street (north-south) and the Crescent open space (east-west) to create a shared surface;
9. Change in surface material on the corner as route of the primary street changes direction. Inclusion of overrun area for large vehicles.

- 6.13 The following provides additional detailed information on the required design response at the most important 'Key Events' along the primary street:

Western Gateway and Broadmead Road Roundabout

- 6.14 The main entrance to Stewartby Park is provided from the new roundabout to be created on Broadmead Road. This will denote the arrival into the development and into the employment area. The roundabout itself should be sensitively designed to act as a landmark feature for the new development, to be achieved through special landscape design and will include cycleway provision separately to the carriageway at this location (shared 3m wide footway / cycleway) linking the employment area to the main body of the site. The entrance to the site is along a wide straight formal tree lined Boulevard which includes access to the local centre. The local centre will be a key focal point within the development and as such, a change of surface material from bituminous surfacing material to blockwork and a change in carriageway level will be incorporated at the junction to the local centre to ensure that vehicle speeds

are controlled to a maximum of 20mph. The pedestrian links across the Boulevard will be given prominence through the use of additional coloured denotation on the raised block work shared surface. This will change the character of the carriageway and ensure that drivers are aware of the shared nature of this space and adjust their speed appropriately.

- 6.15 Bus stops will be located immediately adjacent to the local centre to minimise the length of pedestrian desire lines accessing the local centre and fully incorporate public transport to encourage the most effective sustainable transport mode use.
- 6.16 Footways will be set back from the carriageway edge, segregated by 3m wide verges that will contain formal tree planting, will open out this corridor and replicate the open nature of the street corridors within Stewartby village.
- 6.17 Some inclusion of direct driveway access on the Boulevard will also assist in reinforcing the multifunctional street character, highlighting that the primary street is a fully utilised residential street not just as a distribution network for accessing plots located adjacent to the primary street.

Boulevard End

- 6.18 The Boulevard End demarcates the change in the primary street from the more formal Boulevard to the less formal Primary Avenue. The use of a roundabout within the street layout acts as an interface between the different street characters, whilst also incorporating a junction with a secondary street that allows access to the northern residential area and the Coronation Pit frontage. Bituminous surfacing material will be maintained throughout this area and the use of a roundabout will ensure vehicle speeds are maintained at an appropriate level on entering the main development.
- 6.19 The formal central island will be a key feature terminating the view along the Boulevard, setting the standard for the expectations of the wider development.

Coronation Walk Crossroads

- 6.20 This will provide a suitable environment for the Primary Avenue to cross Coronation Walk. Movement through Coronation Walk will be given prominence through the use of additional coloured denotation on the raised blockwork shared surface which has been incorporated to bring together the two routes through the development. This will change the character of the street and ensure that drivers are aware of the shared nature of this space and adjust their speed appropriately.
- 6.21 Whilst the footways will still be separate from the carriageway, no verges will be included and the use of a consistent surfacing material throughout will ensure that the pedestrian links through this area appear more integrated into the streetscape.
- 6.22 To highlight the sensitive nature of this area and to maintain appropriate vehicle speeds, an additional feature will be incorporated into the street. This feature will take the form of a central lozenge that splits the street to give the impression of reduced carriageway width available to vehicles as well as causing vehicles to take a more sinuous route through this open space.

The Crescent

- 6.23 The Crescent runs along the periphery of an area of open space at the eastern end of the development. To emphasise the formal nature of the area, the footways will be located immediately adjacent to the carriageway through the Crescent with the key building grouping located opposite the open space. The tight radii used to route vehicles round the open space will maintain appropriate vehicle speeds through this

built up area, whilst pedestrians will be able to take a more direct route through the open space.

- 6.24 The change of surfacing at the junction located at the apex of the Crescent will highlight the change in the character of the street and ensure that drivers are aware of the shared nature of this space where pedestrians will be crossing to access the open space.

Figure 6d – Primary Street Speed Restraint Measures

Street Type - Secondary Street

General Information	
Street Type	Secondary
Location	Providing access to plots from the main route for all areas of the development.
Character	Middle order streets, providing access to and through residential areas and the local centre, linking from the higher order primary street through to the lower order internal tertiary streets and shared surfaces lanes and courtyards. Higher density housing than on the primary street.
Street Design	
Total Maximum Corridor Width	9.5m
Footpaths	2m (both sides)
Cycleways	No dedicated cycleway – Cyclists to use the carriageway.
Carriageway	5.5m wide with widening on bends to allow for larger vehicles turning. (6m wide opposite garages and parking areas perpendicular to the carriageway).
Public Transport Route?	No
On-Street Parking	Casual on street parking to be allowed for outside of the tracking areas. Not to be located within 10m of junctions.
Traffic Calming	Traffic to be calmed by the character of the street. The following design features will encourage driver caution: <ul style="list-style-type: none"> ▪ Surface material change; ▪ Areas of horizontal deflection and shared surface where a common surface material between footpath and carriageway will be used; ▪ Minimal use of vertical deflection only in areas where other traffic calming measures are not appropriate. ▪ Sinuous routes reducing forward visibility; ▪ Short lengths between junctions; ▪ Use of tight radii; ▪ Use of on street parking to restrict visibility where required; and ▪ Narrow street widths.
Utilities corridor	Located under footways; Sewers to be located within the carriageway.
Surface Finishes	Surface Materials - refer to Surface Materials Section
	Kerbs – refer to Surface Materials Section
	Street Furniture – refer to Street Furniture Section
Street Lighting	Refer to Lighting Scheme
Technical Details	
Target Speed	20mph
Road markings	To demarcate priority at junctions only.
Junction Spacing (centreline-centreline)	25m same side / 15m opposite side (the use of crossroads could be considered however this should be reviewed for safety).
Junction radii	6m
Forward visibility	25m
Visibility Splays	'x' 2.4m
	'y' 25m
Centreline radii	20m as a guide but to be dictated by swept paths.
Street Landscaping	
Verge width	No verge provided
Street Trees	Planted at irregular intervals in key locations, including the termination of views & vistas as well as areas of open space.
Interaction with homes	
Direct Access to homes?	Yes

Design Principles for the Secondary Streets

- 6.26 The secondary streets will carry a lower volume of traffic as they connect only into residential areas and will not act as main through routes. The secondary streets provide important connections between the primary street and the residential areas. Although still providing access for residential traffic into the heart of the development the lower intensity of use will be reflected in the design of the street.
- 6.27 There will be a semi-formal character along the secondary streets and this will be reflected in the street design, landscape approach and surrounding built form. The development along the secondary streets will incorporate design principles from the existing garden village but will not be a pastiche of Stewartby.
- 6.28 The secondary streets will incorporate appropriate speed restraint measures that are suitable for the level of anticipated traffic which they will accommodate. Speed restraint measures along these streets should be sensitive to the surrounding development using primarily areas of horizontal deflection and changes in surface material where appropriate.

6.29 Tertiary Streets

6.30 Two sub categories of Tertiary Street will be provided within Stewartby Park as a different design response is required depending on the nature of the adjacent land use. The following tables set out the design standards for:

- a) Tertiary Streets – Standard Form.
- b) Tertiary Streets – Single Sided.

Street Type - Tertiary Street (standard form)

General Information	
Street Type	Tertiary (standard form)
Location	Within the residential plots – no through routes.
Character	Minor residential access ways mainly accessed from secondary streets. Low order, quieter, less formal, similar density to the secondary streets.
Street Design	
Total Maximum Corridor Width	9.5m
Footpaths	2m on both sides
Cycleways	No dedicated cycleway
Carriageway	5.5m wide (6m opposite garage & off carriageway parking), with widening on bends to allow for larger vehicles turning. To include a range of 4.1 – 4.8m widths for narrowing as appropriate.
Public Transport Route?	No
On-Street Parking	Casual on street parking to be allowed for outside of the tracking areas with majority of parking on private driveways.
Traffic Calming	Home-Zone Approach – traffic to be calmed by the character of the street. The following design features will encourage driver caution: <ul style="list-style-type: none"> ▪ Narrow street widths; ▪ Sinuous routes reducing forward visibility; ▪ Common surface material between footpath and carriageway; ▪ Short lengths between junctions.
Utilities corridor	Located under footways; Sewers to be located within the carriageway.
Surface Finishes	Surface Materials - refer to Surface Materials Section
	Kerbs – refer to Surface Materials Section
	Street Furniture – refer to Street Furniture Section
Street Lighting	Refer to Lighting Scheme
Technical Details	
Target Speed	15mph
Road markings	No dedicated street markings – home zone approach.
Junction Spacing (centreline-centreline)	17m same side / 0m opposite side
Junction radii	2m minimum
Forward visibility	17m
Visibility Splays	'x' 2.4m

	'y' 17m
Centreline radii	N/A - to be dictated by swept paths
Street Landscaping	
Verge width	None
Street Trees	Planted at irregular intervals in key locations, including termination of views & vistas.
Interaction with homes	
Direct Access to homes?	Yes

Design Principles for Tertiary Streets (standard form)

- 6.32 With the exception of private access lanes and courtyards, the tertiary streets are the lowest order routes within Stewartby Park and provide access into individual residential parcels and therefore carry the lowest volume of traffic. These minor streets will be designed appropriately for a residential context with a home zone approach to street design to restrict vehicle speeds to 10 - 15mph. The design of these low order routes should promote the safe and integrated movement of pedestrians, cyclists and vehicles.
- 6.33 These streets will be designed as low order streets that are intended to provide access into residential parcels. With development on both sides of the carriageway the corridor will accommodate separate pathways on both sides of the carriageway.
- 6.34 There will be a more informal character along the tertiary streets which will be reinforced through more occasional tree planting. The sinuous and narrow form of the streets will naturally raise driver awareness.

Street Type – Tertiary Street (Single Sided)

General Information	
Street Type	Tertiary – Single sided and adjacent to open space
Location	Within the residential plots – no through routes.
Character	Minor residential access ways mainly accessed from secondary streets with built development on one side of the carriageway only. Low order, quieter, less formal, similar density to the secondary streets.
Street Design	
Total Maximum Corridor Width	8.5m
Footpaths	2m on side of built development only.
Cycleways	No dedicated cycleway
Carriageway	5.5m wide (6m opposite garage & off carriageway parking), with widening on bends to allow for larger vehicles turning. To include a range of 4.1 – 4.8m widths for narrowing as appropriate.
Public Transport Route?	No
On-Street Parking	Casual on street parking to be allowed for outside of the tracking areas with majority of parking on private driveways.
Traffic Calming	Home Zone Approach – traffic to be calmed by the character of the street. The following design features will encourage driver caution: <ul style="list-style-type: none"> ▪ Narrow street widths; ▪ Sinuous routes reducing forward visibility; ▪ Common surface material between footpath and carriageway;

	<ul style="list-style-type: none"> ▪ Short lengths between junctions.
Utilities corridor	Located under footway and within the 1m wide service strip adjacent to open space; Sewers to be located within the carriageway.
Surface Finishes	Surface Materials - refer to Surface Materials Section
	Kerbs – refer to Surface Materials Section
	Street Furniture – refer to Street Furniture Section
Street Lighting	Refer to Lighting Scheme
Technical Details	
Target Speed	10 - 15mph
Road markings	No dedicated street markings – home zone approach.
Junction Spacing (centreline-centreline)	17m same side / 0m opposite side
Junction radii	2m minimum
Forward visibility	17m
Visibility Splays	'x' 2.4m
	'y' 17m
Centreline radii	N/A - to be dictated by swept paths
Street Landscaping	
Verge width	None
Street Trees	Planted at irregular intervals in key locations, including termination of views & vistas.
Interaction with homes	
Direct Access to homes?	Yes

Tertiary Streets – Single Sided

6.35 These streets will be more informal in character but will retain the maximum carriageway width of 5.5m. Where the street fronts development a 2m wide pathway will be provided. A corridor for utilities will need to be provided at the edge adjacent to the open space, which will likely take the form of a 1m wide landscaped verge between the carriageway and open space.

Street Type – Shared Surface Lanes and Courtyards (standard form)

General Information	
Street Type	Shared Surface Lanes and Courtyards (standard form).
Location	Within the residential plots – no through routes.
Character	Very minor residential access ways, serving a minimal number of dwellings.
Street Design	
Total Maximum Corridor Width	8.8m
Footpaths	shared surface
Cycleways	No dedicated cycleway
Carriageway	4.8m wide shared surface (6m opposite garage & off carriageway parking), with widening on bends to allow for larger vehicles turning. To include 4.1m widths for narrowing as appropriate.
Public Transport Route?	No
On-Street Parking	Casual on street parking to be allowed for outside of the tracking areas with majority of parking on private driveways.
Traffic Calming	Home Zone Approach – traffic to be calmed by the character of the street. The following design features will encourage driver caution: <ul style="list-style-type: none"> ▪ Narrow street widths; ▪ Sinuous routes reducing forward visibility; ▪ Common surface material between footpath and carriageway; ▪ Short lengths between junctions.
Utilities corridor	2m wide utility strips to be provided on both sides of the shared surface, to be either hard paved or verge (minimum of 5.5m width of hard paved shared surface and 6m opposite garage & off carriageway parking); Sewers to be located within the carriageway.
Surface Finishes	Surface Materials - refer to Surface Materials Section
	Kerbs – refer to Surface Materials Section
	Street Furniture – refer to Street Furniture Section
Street Lighting	Refer to Lighting Scheme
Technical Details	
Target Speed	10mph
Road markings	No dedicated street markings – home zone approach.
Junction Spacing (centreline-centreline)	12m same side / 0m opposite side
Junction radii	2m minimum
Forward visibility	12m
Visibility Splays	'x' 2.4m
	'y' 12m
Centreline radii	N/A - to be dictated by swept paths
Street Landscaping	
Verge width	None
Street Trees	Planted at irregular intervals in key locations, including termination of views & vistas.
Interaction with homes	
Direct Access to homes?	Yes

Design Principles for Shared Surfaces (standard form)

- 6.36 These are the lowest order streets in Stewartby Park and provide access only to individual parking courts or small lanes. They will be designed to reflect this private character with access only for up to 25 dwellings. No more than 6 dwellings should normally be served from a courtyard.
- 6.37 These lanes and courtyards will be designed as shared surfaces / home zone areas where a maximum 8.8m wide corridor will accommodate vehicular, pedestrian and cycle movement. Service margins will be accommodated either as widened block work corridor or soft landscaping / verge. The total corridor width allows for 4.8m plus 2m wide service strips allowance on either side however a minimum width of 5.5m shall be hard paved shared surface and 6m opposite garage and off carriageway parking.

Street Type – Shared Surface Lanes and Courtyards (single sided)

General Information	
Street Type	Shared Surface Lanes and Courtyards single sided.
Location	Within the residential plots – no through routes.
Character	Very minor residential access ways, serving a minimal number of dwellings with built development on one side of the carriageway only.
Street Design	
Total Maximum Corridor Width	7.8m
Footpaths	shared surface
Cycleways	No dedicated cycleway
Carriageway	4.8m wide (6m opposite garage & off carriageway parking), with widening on bends to allow for larger vehicles turning. To include 4.1m widths for narrowing as appropriate.
Public Transport Route?	No
On-Street Parking	Casual on street parking to be allowed for outside of the tracking areas with majority of parking on private driveways.
Traffic Calming	Home Zone Approach – traffic to be calmed by the character of the street. The following design features will encourage driver caution: <ul style="list-style-type: none"> ▪ Narrow street widths; ▪ Sinuous routes reducing forward visibility; ▪ Common surface material between footpath and carriageway; ▪ Short lengths between junctions.
Utilities corridor	2m wide utility strip to be provided on development side and a 1m utility strip to be provided adjacent to open space, to be either hard paved or verge (minimum of 5.5m width of hard paved shared surface and 6m opposite garage & off carriageway parking); Sewers to be located within the carriageway.
Surface Finishes	Surface Materials - refer to Surface Materials Section
	Kerbs – refer to Surface Materials Section
	Street Furniture – refer to Street Furniture Section
Street Lighting	Refer to Lighting Scheme
Technical Details	
Target Speed	10mph
Road markings	No dedicated street markings – home zone approach.
Junction Spacing (centreline-centreline)	12m same side / 0m opposite side
Junction radii	2m minimum
Forward visibility	12m
Visibility Splays	'x' 2.4m 'y' 12m
Centreline radii	N/A - to be dictated by swept paths
Street Landscaping	
Verge width	None
Street Trees	Planted at irregular intervals in key locations, including termination of views & vistas.
Interaction with homes	
Direct Access to homes?	Yes

Design Principles for Shared Surface Lanes and Courtyards (single sided)

- 6.38 These lowest order streets will respond to their position adjacent to landscape / open space through the design of a shared surface with a maximum corridor width of 7.8m. This allows for a single 2m service margin on the side adjacent to built development and a 1m service margin adjacent to the open space, to be either hard paved or verge (minimum of 5.5m width of hard paved shared surface and 6m opposite garage and off carriageway parking). This helps reinforce the low order character of the street.

Speed Restraint Measures

- 6.39 Traffic calming within the development will be integral to the highway design with speeds being regulated by the corridor design. The traffic calming will be provided by the character of the street in line with Manual for Street principles and based on the Bedford Borough Council document *Traffic Calming – Streets for People, Design Guidance* (1996) and the Central Bedfordshire Council *Design Supplement 7 – Movement Streets and Places*.
- 6.40 The following design features will be integrated into the movement network to increase driver caution, reduce speeds and improve driver awareness of other road users, these features are also shown on Figure 6d.

- **Surface material changes** - these will create a change in context within a particular area encouraging drivers to slow down to enable them to understand the area and respond in an appropriate way;
- **Areas of horizontal and some vertical deflection and shared surfaces** – the use of common surface materials between footway and carriageway to reduce the segregation between the driver and pedestrians. This will change the character of the carriageway and ensure that drivers are aware of the integration between vehicles and pedestrians and slow down to appropriate speeds. Vertical deflection only to be used where horizontal speed control measures are not appropriate;
- **Sinuous routes and the use of tight radii for horizontal deflection** – this will reduce forward visibility requiring greater driver caution and should subsequently lower traffic speeds. Drivers will need an increased level of awareness of oncoming vehicles travelling around tight bends and this too will reduce speeds;
- **Regular interventions** – limiting the distance between junctions will reduce the stretches of straight road and increase the number of potential turning movements. This will ensure drivers approach junctions at appropriate speeds and reduce overall traffic speeds;
- **Direct accesses to dwellings** – punctuating the street with private driveways will increase the number of potential traffic movements and turning points. This will require increased driver caution and subsequently will reduce traffic speeds;
- **Use of on street strategic parking** – this will restrict visibility and ensure drivers are more aware of the interaction between street edges, pedestrians and potential vehicle movements;
- **Narrow street widths** – there is a proven direct correlation between minimising the segregation of oncoming traffic by creating narrow carriageways and reducing vehicle speeds. This method will be used to create 'pinch points' in the primary and secondary streets and throughout the tertiary street network;
- **Planting within verges and/ or adjacent greenspace** – this will restrict visibility and require drivers to be more cautious about potential traffic movements and interactions with the street edges and pedestrians, thus reducing vehicle speeds.

Footpaths & Cyclists

- 6.41 To support the sustainability principles outlined in Chapter 4, which seek to create a sustainable community at Stewartby Park, one of the key features of the development will be the prioritisation of pedestrian and cycle movement. This will be achieved through the provision of safe and direct routes, illustrated on Figure 6e, that are well integrated into the built form to ensure the development is as permeable and as accessible by such modes as possible. Cycle movement, although accommodated within the carriageway, will be promoted through the restriction of vehicle speeds to 20mph and by the low volumes of traffic throughout the development.

Links to Stewartby and the wider movement network

- 6.42 It is important to integrate Stewartby Park with its wider surroundings, particularly the existing Garden Village and the adjoining movement network through more sustainable modes of travel. The Marston Vale is a focus for recreational activity and central to this is the provision of cycle and pedestrian routes. Creating links, including recreational routes, between the settlements and the natural environment, particularly the key recreational assets (including Coronation Pit), is fundamental to providing a green infrastructure network through the Vale.
- 6.43 There is already an existing network of pedestrian and cycle links in close proximity to Stewartby Park. These include the Marston Vale Timberland Trail and the circular walks around Coronation Pit. The development will provide safe and direct connections to the surrounding cycle and pedestrian links to ensure it integrates well with the surrounding built and natural environment. Particular connections that will be an integral part of the development include:

- **Pedestrian links to the circular walk around Coronation Pit;**
- **Cycle and pedestrian access into the existing village** through the creation of new routes adjoining Magpie Avenue and Pillinge Road which also accommodates an emergency access route;
- **A pedestrian footpath will be provided southbound** from the main roundabout on Broadmead Road to the existing village;
- **Pedestrian and cycle access to the employment area** will be facilitated through the provision of appropriate designated links across Broadmead Road
- **Pedestrian connection to FP02** – in accordance with the S106 requirement to provide a pedestrian link to Footpath number 2 (FP02), the Regulatory Plan illustrates an indicative alignment of the pedestrian connection to FP02 along Broadmead Road, which then connects into Stewartby Park. The southern element of this pedestrian route can be accommodated through Stewartby Park on footpaths adjacent to the highway, with a link through to Broadmead Road in the North Western element of the site.

Routes within Stewartby Park

- 6.44 Within Stewartby Park there is generally a consistent approach to accommodating cycle and pedestrian movement, which will be adopted throughout the development. As vehicle speeds will be restricted throughout the whole of Stewartby Park, cycle movement will be accommodated within the carriageway. However, dedicated segregated footpaths will be provided on the primary, secondary and tertiary streets. More information on the location of footpaths is provided in the tables above. Lanes and courtyards however will have a shared surface and therefore cycle and pedestrian movement will be integrated with vehicle movement.

Other important links within Stewartby Park

- 6.45 To encourage full use of the public open spaces within Stewartby Park and ensure that they are integrated into the development a number of more informal footways will be provided within the green spaces to connect them to surrounding residential areas and make the area more permeable.
- 6.46 The network of footpaths and leisure routes, as shown on Figure 6e, within Stewartby Park will include:

- **A leisure route through Coronation Walk** - This will facilitate a continuous green link from Stewartby Sports Ground to Coronation Pit and its surrounding circular walk, linking the existing village with Stewartby Park and allowing greenspace to permeate through the development. This leisure route will be intersected by the Primary Avenue, but a sensitive design response within this intersection will ensure that there is minimal disruption to pedestrian and cycle movement. This leisure route will accommodate a linear play feature to facilitate play activity throughout the space. A high quality pedestrian crossing will be provided across Park Crescent to the south to ensure the route is as permeable as possible;
- **An informal recreation link from the Northern Linear Park to Coronation Pit** – this route will link the more natural open space within the Northern Square to the circular walk around Coronation Pit;
- **The Crescent Walk** - a pedestrian route will connect The Crescent Green to the communal garden to the west and through to Magpie Avenue and Pillinge Road to the south east, creating a green link from the existing village to the western edge of the site.

Public Transport Routes & Facilities

- 6.47 The street layout has been designed around the main spine of the Primary street which incorporates the Boulevard and the Primary Avenue. This route, illustrated on Figure 6f – Public Transport Plan, connects the two main access points into Stewartby Park and has been designed to accommodate buses. This will promote convenient and safe public transport access into the development and help link Stewartby Park to the wider public transport network serving the surrounding area.
- 6.48 Four indicative bus stop locations are proposed on the Regulatory Plan, one in each direction on the Boulevard in close proximity to the local centre and one in each direction within the Crescent. Positioning the bus stops in these locations is required to ensure that all parts of the development are within a 400m walking distance of a bus stop. Bus stops will be accommodated within the carriageway rather than within separate bus lay-bys as this will help to contribute towards traffic calming, and assist the operation of the service, which is envisaged to be relatively infrequent. Bus shelters are to be provided at all bus stop locations.

Figure 6f – Public Transport Plan

Accommodating the Parked Car

- 6.49 The parked car must be effectively accommodated within Stewartby Park without the appearance of parked cars being over-dominant in the street scene and causing detriment to the character and visual amenity of the development. Therefore a workable, practical relationship between the street and the built form needs to be provided.
- 6.50 To ensure that there is a safe and effective approach to the provision of car parking within Stewartby Park a tailored design response has been developed according to the street hierarchy and related to the residential densities and predominant house types in the development. The approach to car parking as illustrated on the Regulatory Plan responds to local parking standards and to advice in Planning Policy Statement 13: Transport by determining the level of parking required and good design practice.
- 6.51 The parking provision within Stewartby Park primarily accommodates residential parking but also provides for visitor parking. There are three main types of parking within Stewartby Park which will be outlined further below, which include:
- On-plot curtilage parking
 - Courtyard parking
 - On – street car parking
- 6.52 The following principles should be applied when designing for the parked car at Stewartby Park:

- Reflect the character of the existing Garden Village and the approach to accommodating the parked car with a predominance of on-plot residential parking;
- Responding to lower residential densities and larger plots through the provision of private garages and driveways;
- Courtyard parking should be minimal and used only where a more continuous building line is required or where higher residential densities restrict the potential for individual private garages and/or driveways;
- Reducing vehicle speeds along the Primary Avenue by punctuating the street with access points to shared driveways;
- On-plot parking should aim to place parked vehicles behind the built façade;
- Provision of visitor parking at a rate of up to 0.25 spaces per dwelling in accordance with Bedford Borough and Central Bedfordshire standards;
- Parking standards, including dimensions and garage size standards, to be consistently applied across the site to ensure there is no discernible difference between the approach to development in the Bedford Borough and Central Bedfordshire areas;
- Parking provision should conform with the adopted parking standards as set out in *Bedford Borough Council's adopted Parking Standards Design Guide (1996)* and Central Bedfordshire Council in both supplements 1 and 7 of their *Design in Central Bedfordshire Guide (2010)*.

Figure 6g – Parking Precedents

Hierarchy of Residential Car Parking

- 6.53 To reflect the character of the existing Stewartby village residential car parking within Stewartby Park will be predominantly on-plot wherever possible. Where additional visitor parking is required parking will be accommodated on-street. In higher density areas where more parking provision will be required then courtyard parking will be acceptable. Further detail on these different types of parking is provided below:

Residential Parking - Curtilage Parking

- 6.54 As far as possible on-plot or curtilage parking will be used throughout Stewartby Park. The generally lower densities throughout the development mean that the larger plots lend themselves to on-plot provision. Taking precedent from Stewartby Garden Village the majority of dwellings will have a relatively large set back from the street to provide a good sized front garden. This set back and the generous plot size will help to accommodate parking within the curtilage of residential dwellings either through garages or driveways. The Regulatory Plan shows the extent of the dwellings where on-plot and garage provision can be provided. Garage provision is an important feature of Stewartby Park as it helps provide enclosure to dwellings; where larger dwellings do not accommodate garage provision 1.8m brick walling should be provided.
- 6.55 The Primary Avenue will have the deepest and largest plots with the lowest density dwellings and therefore will have the largest provision of on-plot parking. However, to retain the character along the Primary Avenue a sensitive landscape design response will be required to this curtilage parking to prevent the parked car having a detrimental impact on this high quality environment.
- 6.56 The secondary and tertiary streets will be higher in density with more terraced and semi-detached housing and therefore the level of curtilage parking at dwellings on these streets will be reduced, however it should still be promoted as the preferred approach, wherever this is possible.
- 6.57 Where garages are used for on plot parking they will have to comply with the standards set by Central Bedfordshire Council in both supplements 1 and 7 of their *Design in Central Bedfordshire Guide* and Bedford Borough Council's adopted *Parking Standards Design Guide (1996)*. Driveways will also have to meet a certain standard to provide enough space for vehicle parking. The required dimensions for on-plot parking are as follows:

On-plot parking requirements and dimensions

- Driveways not to be located within 10m of junctions
- Driveways: minimum 2.75m width x 6m length, or, where to allow for cycle access 3.3m width.
- Front of plot parking spaces: minimum 2.5m width x 5.5m length per space
- Garages: internal space within garages should be 3m x 6m as a minimum. However the ideal garage dimensions of 3.3m x 6.3m allow additional space for cycle storage and circulation. There is also the potential for barn garages, and additional overhang to the rear of garages to provide further useable space as follows:
 - Width: 2.5m garage door opening + 1m storage / circulation space to side = 3.5m;
 - Length: 5m parking + 1m front door clearance + 2m storage / circulation at rear = 8m.

On Street Parking

- 6.58 On-street parking will be provided to accommodate visitor parking within residential areas.

On-street Parking Principles

- Predominantly on street parking will be accommodated through parallel parking to the carriageway;
- On street parking will not be located within 10m of junctions;
- On street parking will be in dedicated, although not necessarily demarcated, bays or informally where widened carriageways allow;
- On street parking will be incorporated into the street by adapting the layout of the street including changing the alignment of the carriageway, the landscaped verges and the pavements and also through the appropriate use of planting;
- Parallel parking bays will be designed to be set into the landscaped verge to ensure they integrate with the streetscape;
- Parallel parking bays should be designed to local authority standards of 6m x 2.4m. In confined areas the length can be reduced to 4.8m;
- Some on street parking is to be provided on the western edge of Coronation Pit to provide access for recreation purposes connecting into the circular walks around the Pit;
- Parallel parking bays can also perform a dual role for traffic calming as parked cars can reduce visibility and improve driver caution;
- Along the tertiary streets, where a shared surface prevails, on street parking will be more informal and will be accommodated within the overall carriageway.

Courtyard Parking

- 6.59 Courtyard parking may be required in some areas. The areas where courtyard parking will primarily be employed include the higher density areas, particularly along the secondary and tertiary streets and around the local centre and the Crescent where there is to be minimal punctuation in the building line. A number of key principles should be applied to the provision of courtyard parking, which include:

Courtyard parking Principles

- The size of parking courts should be kept to the minimum size necessary to accommodate a maximum of 6 vehicles and bin storage facilities, where appropriate;
- Parking courts should not normally serve more than 6 dwellings;
- Parking courts should be easily accessible from the dwellings that they serve through safe and direct routes;
- Access to parking courts should be secured with shared private entry systems ensuring there is a clear definition between public and private space;
- Sensitive planting and landscaping should be provided to ensure a visually harsh environment is not created;
- Surrounding properties should overlook the courtyards to provide natural surveillance.

Figure 6h – Parking Design Guidance for Frontage and Perpendicular Parking
Figure 6i – Indicative Layout for Garages

Parking within the Local Centre

- 6.60 Within the local centre car parking will be accommodated as a shared parking area along the building frontages. This parking area will have two access points located on the tertiary street to the rear of the local centre which provide access back onto the secondary street network and into Stewartby Park. The shared parking area within the local centre will provide demarcated parking bays with a circulation route to avoid congestion into and out of the local centre.

Surface Materials Palette

- 6.61 Each street type within Stewartby Park has a distinctive character which is tailored to and appropriate for the function of that particular route. Materials are integral to street design and help define the character and function of particular streets. The use of appropriate materials helps raise driver awareness to the type of route they are using and consequently a change in material is important in signifying that a vehicle is entering a different area or that a heightened level of attention is required. It is therefore important that the correct approach to surface materials is delivered throughout Stewartby Park not only to contribute to the character of the development but to improve highway and pedestrian safety.
- 6.62 The following surface materials matrix and surface materials palette (Figure 6j) identifies the appropriate range of surfacing materials for each street and route type thus ensuring the materials are suitable for the area within which they are to be used. Most notably the palette demonstrates that standard bituminous surfacing material and pre-cast concrete (PCC) bullnose kerbs, consistent with the existing village, are acceptable for use throughout the majority of the development, and blockwork paviors will be used in key locations to define a shift in character, function or movement priority.

Surface Materials Matrix

Area	Description	Materials	Images
Primary Street	Form and Function	<ul style="list-style-type: none"> –6m wide carriageway; –For vehicles including public transport and cyclists; –2m wide segregated footways for pedestrians; 	See Surface Materials Palette
	Surface Finish	<ul style="list-style-type: none"> –bituminous surfacing material for carriageways; –Blockwork to demarcate key locations and to delineate pedestrian crossovers; –Footpaths predominantly bituminous surfacing material; –Dark brick pavements or dark block paving for footway to front door and driveways 	See Surface Materials Palette
	Edging	<ul style="list-style-type: none"> –Kerb height = 125mm or 50mm at raised blockwork areas; –Standard raised PCC bullnose or conservation kerbs; –No distinct kerb material required at raised blockwork areas as the change in area will be a subtle demarcation in the height; –Flush PCC edging; 	See Surface Materials Palette
Secondary Streets	Form and Function	<ul style="list-style-type: none"> –5.5m wide carriageway; –For vehicles and cyclists; –2m wide segregated footways for pedestrians; 	See Surface Materials Palette
	Surface Finish	<ul style="list-style-type: none"> –bituminous surfacing material for carriageways with light brown or grey chippings rolled into the surface finish to identify a different character to the primary street; –Blockwork to demarcate key locations and junction; –Footpaths predominantly bituminous surfacing material; –Dark brick pavements or dark block paving for footway to front door and driveways 	See Surface Materials Palette
		<ul style="list-style-type: none"> –Kerb height: 125mm or 50mm at raised blockwork areas; 	See Surface Materials

	Edging	<ul style="list-style-type: none"> – Standard raised PCC bullnose or conservation kerbs; – No distinct kerb material required at raised blockwork areas as the change in area will be a subtle demarcation in the height; – Flush PCC edging; 	Palette
Tertiary Streets	Form and Function	<ul style="list-style-type: none"> – Up to 5.5m wide carriageway; – For vehicles and cyclists; – 2m wide footways, or single 2m wide footway and a 1m wide service strip (where adjacent to open space) which is anticipated to be soft landscaping / verge 	See Surface Materials Palette
	Surface Finish	<ul style="list-style-type: none"> – bituminous surfacing material for carriageways; – Blockwork to demarcate key locations and junction; – Footpaths predominantly bituminous surfacing material; 	See Surface Materials Palette
	Edging	<ul style="list-style-type: none"> – Kerb height: 125mm or 50mm at raised blockwork areas; – Standard raised PCC bullnose or conservation kerbs; – No distinct kerb material required at raised blockwork areas as the change in area will be a subtle demarcation in the height; – Flush PCC edging; – Dark brick paviours or dark block paving for footway to front door and driveways. 	See Surface Materials Palette
Shared Surface Lanes and Courtyards	Form and Function	<ul style="list-style-type: none"> – Up to 8.8m wide shared surface depending on location adjacent to open space; – 1x2m - 2x2m wide service strips or a single 2m wide service strip adjacent to development and a 1m wide service strip (adjacent to open space). Service strips to be either hard paved or verge and 6m opposite garage & off carriageway parking); 	See Surface Materials Palette
	Surface Finish	<ul style="list-style-type: none"> – Blockwork 	See Surface Materials Palette
	Edging	<ul style="list-style-type: none"> – N/A 	See Surface Materials Palette

Figure 6j – Surface Materials Palette

Street Furniture Palette

- 6.63 Street furniture plays an integral role in the public realm making it user- friendly, animating the street and encouraging activity within the public realm. Different parts of the public realm will require a different response in terms of street furniture depending on the role that they play within the wider development. Therefore a street furniture palette has been developed for Stewartby Park to ensure that the approach to street furniture across the full extent of the development is appropriate to the area that it sits within and is also robust and usable.
- 6.64 There will generally be a consistent approach to street furniture across Stewartby Park in terms of materials and colours used with the predominant use of pale green to provide reference to the existing Garden Village. The level of street furniture will depend of the proposed use of the public realm and will vary according to the street hierarchy with the Primary street and areas of public open space requiring the highest level of street furniture due to increased pedestrian movement and social interaction.
- 6.65 The following Street Furniture Palette (Figure 6k) displays the street furniture appropriate for use across Stewartby Park.

Figure 6k – Street Furniture Palette

Lighting Scheme

6.66 Public Realm Lighting

6.67 To ensure Stewartby Park is a safe and secure place where all publicly accessible areas do not increase opportunities for anti-social behaviour, crime or the fear of crime, there is a need to provide appropriate lighting within the public realm. Street lighting designs can have a significant impact on the street scene and are an important feature that can help tie a development together. Therefore, there should be consistency throughout Stewartby Park within a limited palette of lighting options which should be tailored to the area within which they are situated and the role that the lighting plays for that particular area.

6.68 As some areas will require a different lighting design response the following lighting scheme and lighting palette has been devised (Figure 6I). This determines the appropriate lighting that should be adopted for the various streets and public spaces within Stewartby Park. The lighting palette has been carefully selected to ensure the lighting columns and lanterns reflect the existing heritage and character of the existing village.

Lighting Scheme

Area	Form & Function	Images	Measures to minimise light pollution
Primary Street	<ul style="list-style-type: none"> ▪ Most formal street lighting required as appropriate for the main street in keeping with the character of the area and the other street furniture; ▪ Tallest lighting columns due to the width of the corridor for the primary street; 	See Street Lighting Palette	<ul style="list-style-type: none"> ▪ Lighting to be located within the verges; ▪ Regular placing of lamp columns;
Secondary Streets	<ul style="list-style-type: none"> ▪ Less formal lighting columns than on the primary street; ▪ Medium sized lighting columns on secondary streets; 	See Street Lighting Palette	<ul style="list-style-type: none"> ▪ Lighting to be located within verges or at the back of footways; ▪ Consideration to be given to the interaction of planting, driveways, on street parking and lighting column positions; ▪ Placement of lighting at regular intervals;
Tertiary Streets	<ul style="list-style-type: none"> ▪ Lighting columns will be lower and more discrete than the lighting columns on the primary and secondary streets; ▪ Less formal lighting columns than on the primary street; 	See Street Lighting Palette	<ul style="list-style-type: none"> ▪ Sensitive lighting required on the lowest order tertiary streets; ▪ Sensitivity to positioning of columns required; ▪ Placement of lighting more irregular with consideration of on street visitor parking;
Shared Surface Lanes and Courtyards	<ul style="list-style-type: none"> ▪ Lighting columns will be lower and more discrete than the lighting columns on the primary and secondary streets; ▪ Less formal lighting columns than on the primary street; 	See Street Lighting Palette	<ul style="list-style-type: none"> ▪ Lighting to be located at the back of the shared surface areas; ▪ Sensitive lighting required on the lowest order shared surface lanes and courtyards; ▪ Sensitivity to positioning of columns required; ▪ Placement of lighting more irregular with consideration of on street visitor parking;

Informal Routes	<ul style="list-style-type: none"> ▪ Lighting only where required for safety and security reasons; ▪ Lighting columns will be low due to the narrow width of the route; ▪ Least formal columns used; 	See Street Lighting Palette	<ul style="list-style-type: none"> ▪ Lighting of footways / cycleway away from the carriageway required; ▪ Sensitivity to positioning of columns required along the edge of Coronation Pit;
Play areas	<ul style="list-style-type: none"> ▪ Lighting only where required for safety and security reasons; ▪ Lighting columns will be low and more informal to reflect more natural character; 	See Street Lighting Palette	<ul style="list-style-type: none"> ▪ Adequate lighting to ensure safety and provide better surveillance but sensitive positioning and lower height of columns to restrict light pollution to residential parcels;
Public open space	<ul style="list-style-type: none"> ▪ Lighting only where required for safety and security reasons if part of well used pedestrian route; ▪ Lighting columns will be low and more informal to reflect more natural character. 	See Street Lighting Palette	<ul style="list-style-type: none"> ▪ Adequate lighting to ensure safety and provide better surveillance; ▪ Sensitive ecological receptors including bats, badgers and some species of bird are sensitive to light pollution. Direct lighting should be avoided in areas of high ecological value and its pollutant affect minimised by low pressure sodium lamps where suitable.

Figure 6l – Street Lighting Palette

Accommodating Utilities - Below Ground Infrastructure

- 6.69 In order to successfully deliver the requirements set out in this Design Guide aimed at achieving a well detailed, high quality and sensitive development it is vital that the essential but normally unseen elements of utilities or below ground site infrastructure are properly considered from the outset.
- 6.70 The provision of utilities which include electricity, telecommunications, gas, water and sewerage to every home presents a specific challenge in relation to the design of the public realm.
- 6.71 To ensure that routing of these utilities or services accords with the requirements of the utility companies for maintenance access, etc, but also importantly, that key components of the scheme such as tree planting, street furniture and surface finishes are not compromised by the installation of utility apparatus it is necessary to refer to key industry guidance.
- 6.72 Figure 6n is extracted from The National Joint Utilities Group (NJUG) recommendations for the positioning of utility apparatus under a 2 metre wide footway.
- 6.73 As described elsewhere in the Guide, a consistent approach of providing a 2 metre wide footway occurs across the three street hierarchy types creates the opportunity for the NJUG recommendations to be fully implemented.
- 6.74 It is expected that sewerage (foul and surface water) will be accommodated under the main carriageway itself.
- 6.75 It may be necessary in some locations to utilise specific tree pits incorporating physical root barriers to ensure that the requirement for tree planting can be delivered alongside utility apparatus (see section on 'Street Trees', Chapter 7).
- 6.76 Further detail on above ground utilities is provided in Chapter 5.

Figure 6m – Correct Alignment of Inspection Covers

Figure 6n – Recommended positioning of utility apparatus under footway

Management & Maintenance of Streets

- 6.77 The roads, verges and footpaths within the development which are to be offered for adoption will be constructed to the requirements of the relevant Highway Authority. Other access roads or private drives which are to remain private will be designed to accord with the requirements of the Building Regulations or the appropriate standard/specification and will be maintained by the landowner.
- 6.78 Street furniture should be appropriately positioned around Stewartby Park, however it will not be acceptable to place street furniture in areas offered for adoption by the relevant Highway Authority.

**SECTION B:
DESIGN GUIDANCE
FOR STEWARTBY PARK**

7.0
Landscape Framework

7.0 LANDSCAPE FRAMEWORK

- 7.1 The open garden frontages and areas of open space within Stewartby Garden Village are one of its most distinctive and characteristic features. Surrounded by the attractive Marston Vale countryside, with Coronation Pit immediately to the north of the site and a generous provision of public open space within the village, there is a defining green character to Stewartby which should be reflected in and complemented by the development at Stewartby Park.
- 7.2 The general distribution, scale and form of open space and public realm has already been established by the Master Plan approved as part of the outline planning permission, and the specific design details are to be determined by further work to be undertaken to discharge the respective open space planning conditions of the outline permission (*Condition 7 BBC Decision Notice 2009, Condition 14 CBC Decision Notice, 2009*). Therefore, this landscape framework provides a predominantly high level of guiding design principles which set out the general approach that should be applied to the treatment of open space and the public realm across Stewartby Park, to be developed in further detail at subsequent stages.
- 7.3 This guidance sets out the overall landscape framework for Stewartby Park, setting the baseline for future detailed work. Figure 7a provides precedents for the landscape design across Stewartby Park which illustrates the character that the landscape framework should achieve.

Landscape Guiding Principles

- 7.4 The following principles should be applied to the design and distribution of open space across Stewartby Park:

- **Provision of an integrated network of public open space:** key public open spaces connected by physical and visual features;
- **Provision of key public spaces:** focal areas of public open space in key locations and nodes along the primary street;
- **Street Character:** tree-lined boulevards and avenues reinforced with hedgerows where appropriate to define main routes and circulatory access;
- **Provision of private amenity space:** all properties to have garden provision to include front, rear and side gardens as appropriate to the particular house type;
- **Integrative response to Coronation Pit:** creating visual and physical links between the new development and the future restored Coronation Pit, providing connections between the existing village and the circular walks around the Pit;
- **Buffer planting:** Retain and protect established planting that offers an effective buffer to development from the Midland Mainline railway line and provides existing wildlife corridors; provide some windows through planting to allow for views and access to Coronation Pit;
- **Provision of biodiversity linkages:** Network of interconnected green space incorporating existing and providing additional ecology links to encourage protection and enhancement of biodiversity. Detailed features to include dropped wildlife kerbs should be considered where streets cross ecology links.

Figure 7a – Landscape Character Photographs

Key Ecological Considerations

- 7.5 Stewartby Park is currently formed of agricultural fields, the majority of which are in arable production. Boundary features include several habitat types including woodland, scrub, grassland and ponds. Jointly, these habitats have the potential to support various species and are also important in providing ecological linkage through Stewartby Park and into the wider Marston Vale.
- 7.6 Ecological surveys have guided the nature, location and future management of open space provision within Stewartby Park. These surveys confirmed the following are key ecological features of Stewartby Park and have been important considerations in detailed design:

Key Ecological Considerations

- **Reptiles:** populations of common lizard and grass snake were recorded within grassland and woodland edge habitats within the site boundaries;
- **Amphibians:** species of newt, including great crested newt are a key characteristic of water bodies in the base of the Marston Vale. Ecological surveys have demonstrated that the existing ponds may support such species.
- **Bats:** there are no evident bat roosts within Stewartby Park although the mature trees include features with the potential to be used by roosting bats. The woodland and hedgerows at the field boundaries are used by commuting and foraging bats.
- **Ponds:** those within Stewartby Park and in the surrounding area are amongst many that are characteristic of the base of the Vale. Jointly they are an important biodiversity resource and contribute to supporting great crested newts.
- **Terrestrial links:** the woodland, scrub, hedgerows and grassland habitats that are present within the current field boundaries comprise a mosaic that supports reptiles and amphibians. These habitats also provide shelter and foraging for birds, bats and badger allowing movement through Stewartby Park and dispersal into the wider Vale.

Distribution and Design of Open Space

Key Public Open Spaces within site

7.7 Public open space is a key feature of Stewartby Park; it is integral to the high quality, green character of the development. To ensure the maximum use of public open spaces it is essential that they are designed to integrate well with the built form and respond appropriately to their location and setting. The open spaces will be designed as areas of multi-functional green space with good connections to the wider built and natural environment. The following sets out the key open spaces within the site (highlighted on Figure 7b) and details their role within the development and the subsequently necessary design response.

- **Northern Linear Park** – there should be a strong focus on the biodiversity value of this space with it playing an important role in bringing the natural landscape into the development and retaining existing environmental features. The Northern Linear Park will be naturalistic in character with a more diverse range of planting and a prevalence of native species. The retained pond provides a focus for the space and defines its wildlife value with the potential to create a swale-type feature that will provide a Sustainable Drainage System (SuDS) with an outfall into Coronation Pit. The topography of the landscape in the Linear Park should provide an undulating landform which facilitates the use of the space for a swale. This form should take into account existing levels and achieve gradients which are safe and appropriate. A multifunctional approach will be taken to the form of the swale to allow the area to function both as a natural drainage feature and as an area of informal play for the majority of the time.

This natural greenspace is a unique asset to the residential properties within this northern element of the site and there is the potential for a more contemporary architectural response to provide a visual reflection of the natural character. Where possible buildings should be orientated to take advantage of the view over the Linear Park.

- **Broadmead Gardens** – this small green space is enclosed by the surrounding residential development and is intended to have the feel of a more intimate communal garden. As a communal garden it will be a shared managed space with intensive planting and provision for seating and communal uses.
- **Boulevard Square** - this is one of the most formal spaces within Stewartby Park by virtue of the important position it holds within the Boulevard; it is a prime set piece which provides a counterpoint to the Local Centre. Boulevard Square will help transform the Boulevard into a destination and reinforce the sense of place in this area, helping to consolidate the whole space and enabling it be to read as one. The formal approach to design within Boulevard Square will help strengthen the formality through the Boulevard and into the Primary Avenue, reflecting the approach to open space provision within the existing village. The strong architectural character of the surrounding built form should be reflected in the design of this space to emphasise its prominent and important location.

This space will incorporate a SLEAP that itself will take a more formal approach to layout and design and include a community orchard, which will be planted in a grid pattern to reflect the formality of the space. The SLEAP will incorporate innovative pieces of play equipment which will provide a draw to the whole community. The design of this space should also integrate valuable existing trees as indicated on the Regulatory Plan; most importantly the mature oak tree should be retained with consideration given to the visual significance it can have within both the Boulevard and Primary Avenue.

- **Coronation Walk** – this green corridor is a key landscape asset within Stewartby Park providing important visual and physical connections through the centre of the development from the existing village to Coronation Pit to the north. The space provides series of visual links from Stewartby Sports Ground, through Stewartby Park and into Coronation Pit. The features within Coronation Walk should be designed to enhance the visual experience throughout the Walk with play or art features forming visual landmarks at both terminals of the Walk. The design of this green corridor should promote the use of the space as a leisure and recreation corridor and therefore it should facilitate movement through the space with formal linear footways and more informal seasonal mown grass pathways.

Coronation Walk also accommodates a SLEAP which, due to the linear form of the green space, should be designed as a linear series of natural play features. The linear design will incorporate clusters of natural play features together with individual play opportunities which should be integrated with seating areas. The remainder of the space should comprise a mosaic of mown grassed and meadow areas with gentle mounding. Planting should comprise large native tree species with a strong visual presence. The tree planting and mounding will enhance the role of the space which provides an important visual break to the extent of the built development. The space is bisected by the Primary Avenue where a robust design response will be integral to maintaining safe and direct pedestrian links through Coronation Walk. A further high quality crossing at the southern end of the corridor will also be provided to facilitate a complete connection to Stewartby Sports Ground and subsequently to the existing village.

- **Crescent Walk** – this is a key feature on the Primary Avenue and an important space in the structure of the overall development. Crescent Walk is a set piece which responds directly to the spatial layout of the built form and as such requires a symmetrical design response. It retains a significant vista from Pillinge Road through to Pillinge Gardens and the landscape and planting response should reinforce this vista. The shrub and hedge planting for this green space should be consistent with that of the primary street, reinforced through tree planting which are to be of a prominent size at the time of planting to emphasise the curvature of the space.

Primarily, Crescent Walk will comprise a mown grassed area incorporating a further SLEAP which will take on a more formal, traditional play area structure. The design of this SLEAP should take into account the alignment of the vista from Pillinge Road. This space must accommodate a combined cycleway and emergency access which will require a sympathetically designed route through the south western element of Crescent Walk.

- **Pillinge Gardens** - enclosed by residential dwellings this green space is intended to be a communal garden which plays an important role in terminating the axial viewpoint from Pillinge Road. This viewpoint should be terminated through the provision of a central landscape and / or public art feature which will help define the role of the space. Situated within a wider area that is dominated by heavily vegetated tree belts Pillinge Gardens should retain an open character with some more ornamental planting.
- **Southern Gateway** – this space frames the secondary access into the site and therefore performs an important visual function. The combined use of gentle mounding and strong planting will help define the space and establish a sense of arrival into Stewartby Park. The design of this space should be sympathetic to the existing village to ensure a good visual and physical relationship with Stewartby given the proximity of the existing dwellings.

Incidental Green Spaces

- 7.8 To help further enhance the green image of Stewartby Park and to protect and retain existing landscape features, a number of incidental spaces are incorporated into the development. These include:
- **Northern and Western Development Edge** - this area abuts Broadmead Road to the west and open arable fields to the north; it therefore provides an important buffer to the development. It seeks to retain existing tree and shrub planting which will then be supplemented by additional native planting of local provenance to create a robust area of vegetation that will provide an attractive setting for the development on the approach from Broadmead Road. This planted edge must be sufficient enough to negate the requirement for close board timber fencing.
 - **Coronation Pit Restoration Edge** – the land included within this edge is outside the remit of this Design Guide and is covered by a separate restoration scheme. It is still a key consideration as it provides potential opportunities for creating visual and physical connections from Stewartby Park through to Coronation Pit.
 - **Retained Linear Woodland** – this is an important area of woodland that should be managed to retain and enhance the existing planting to improve its role as a key wildlife corridor. Any additional planting should be consistent with the natural native character of this green space. Where Coronation Walk connects into this retained linear woodland there is a key opportunity to provide visual and physical connections into Coronation Pit and the circular walks around the Pit. To facilitate such connections there will be a requirement to open up a ‘window’ in the planting and potentially provide recreational facilities including an interpretation / information board and seating to encourage access to the Coronation Pit circular walk. In addition there may be further scope for opening visual windows in the understorey of the vegetation, retaining the canopy, but creating vistas through into the rich landscape of Coronation Pit.
 - **Midland Mainline Buffer** – providing a visual buffer to the railway line, this area should be managed and supplemented to protect and enhance the existing planting and promote its use as an a visual screen and an important ecological corridor. The evergreen pines within the planting will be retained and managed to provide year round interest and screening. Due to its proximity to the railway public access to this green space should be precluded for health and safety reasons.
 - **Retained hedgerow link** – this retained vegetation link seeks to protect the existing hedgerow which follows the line of Central Bedfordshire Council’s administrative boundary. Primarily this is a low key space with the potential for linkages across the space to prevent the two neighbouring residential parcels becoming isolated from each other. Any additional planting should include native species and enhance the natural character of the space. There is potential to create a viewing corridor through this space into Coronation Pit by opening up a ‘window’ in the Retained Linear Woodland (see Retained Linear Woodland above). The extent of the open space allows for a buffer zone to be created to the side of the hedgerow.
 - **Retained tree belt** – this relatively wide space provides an attractive green corridor within the southern element of Stewartby Park. The existing tree belt should be retained and the remainder of the space designed as a naturalistic area which promotes informal natural play both within the tree belt and the associated open space. The extent of the open space allows for buffer zones to be created to each side of the tree belt.
 - **Proposed Woodland Infill** – this space presents an opportunity for a secluded area of woodland that will be managed for nature conservation purposes. There

is the potential for the creation of a wetland or pond feature to further enhance the ecological value of this space from which public access should be discouraged for safety reasons. The woodland planting should avoid over shading of the pond and should provide an opening where the space is adjacent to residential properties to provide natural surveillance. The gradient of the pond will be carefully designed to ensure it does not pose a safety risk and is the minimum depth required for its biodiversity role.

Figure 7b – Key Landscape Spaces

Equipped Play Areas

- 7.9 The outline planning permission sets out the overall play space requirement for the wider Stewartby Park development and requires the incorporation of 1 Super Neighbourhood Equipped Area for Play (SNEAP) (or equivalent) and 3 Super Local Equipped Areas for Play (SLEAPs) (or equivalent). The outline planning permission indicates that provision of a SNEAP and 3 SLEAPs formally replaces the Local Areas for Play (LAPs), Local Equipped Areas for Play (LEAPs) and Neighbourhood Areas for Play (NEAPs), as defined by National Playing Field Association's Six Acre Standard.
- 7.10 This Design Guide provides over-arching design guidance for the three SLEAPs but as the SNEAP is to be provided in Stewartby Sports Ground it is not covered by the Guide. Detailed schemes for each play area are to be prepared and submitted to the LPA for their approval under the respective conditions of the planning permissions, therefore this Guide sets out the framework for future design work for the play areas. Although the provision of play facilities has been set out in the S106 Agreement and planning permissions, the location and disposition of play equipment can be agreed at detailed design stages.
- 7.11 The general principles that will determine the size, design and extent of the play areas and equipment to be provided within the play areas are set out below and their locations across the site are illustrated on Figure 7c. The photos also included in Figure 7d provide precedents for the play provision across Stewartby Park.

Principles for Play Provision

- Opportunities for natural play features in a linear arrangement should be explored to include play equipment, seating and potential informal cycle tracks as an alternative to traditional play clusters but to include the equivalent level of equipment and ensure 'play value' is equal to traditional equipment;
- SLEAP 2 should be provided as a linear arrangement of natural play features throughout the length of Coronation Walk. The play features should provide the same play value as the traditional form of a SLEAP;
- Play areas for younger children - the play areas are to incorporate an area for younger children, generally distinguishable from the areas for older children. They could be provided in more traditional clusters, possibly incorporated into linear play, but with formal play equipment and appropriate boundary / fencing;
- Play areas must be provided with their required buffer zones to ensure each type of play area / play equipment is not too close to neighbouring properties, however where linear natural play features are provided a sensible and appropriate approach should be adopted:
 - SLEAP – minimum 20m buffer to nearest property;
 - SNEAP - minimum 30m buffer to nearest property.
- opportunities for themed play areas incorporating public art should be explored, play areas should be imaginatively designed appropriate to the target age range;
- potential to integrate play facilities into the natural landscape; opportunity to balance play clusters with more informal fragmented provision;
- materials - particularly surfacing should reflect the target age range and type of equipment to be provided as well as the setting of the play area;
 - Rubber surface for younger age range (under 4) but reinforced grass and sand can also be used in areas subject to less impact;
 - More robust, reinforced ground surface for older age ranges;

- Fencing should be sympathetic to natural surroundings and therefore should be of a low key design, softened where possible by planting and follow the colour scheme of the street furniture palette where appropriate;
- Planting should be used to assimilate the play provision into the wider landscape; Robust species of native planting, appropriate to the setting and form of the play area, can be provided to contribute to the structure and visual quality of the play area;
- Planting belts should be provided around the perimeter of play areas to provide a soft landscape buffer, with large tree species incorporated into the play space – this provides future potential for play provision to be built into and utilising the trees;
- Planting in and around play areas should ensure that natural surveillance is not compromised;
- Materials should be carefully considered:
 - Plastic should be minimised;
 - Timber can be used, particularly where a more natural appearance is required, but not exclusively. Where appropriate it could be coloured to add interest;
 - Stainless steel with coloured elements.

7.12 As part of the outline permission the following are established requirements with regards to play space (excluding the SNEAP which is covered in Appendix 3), however the principles above should guide their provision:

- **Provision of 3 Super Local Equipped Area for Play (SLEAPs) comprising:**
 - An enlarged version of a LEAP as defined by the NPFA (now 'Fields in Trust'); Six Acre Standard;
 - Activity zone of a minimum area of 750m²;
 - A minimum of 10 pieces of equipment including at least 1 multi-play piece of equipment for 4-8 year olds and a minimum of 3 pieces of play equipment suitable for under 4 year olds;
 - Safety surface;
 - Litter bins;
 - Seating;
 - Cycle parking facilities;
 - Dog proof fencing;
 - Amenity protection buffer area.

Figure 7c – Play and Recreation Locations

Figure 7d – Play and Recreation Precedents

Integration of Existing Features

7.13 The landscape framework will seek to incorporate existing landscape features where they make a positive contribution to the overall environmental character. Features to be retained and enhanced where appropriate include:

- Buffer planting to north along boundary with Coronation Pit;
- Buffer planting along eastern boundary with railway line;
- Pond within the north western element of the site;
- Trees and hedgerows of high ecological and visual value.

Maintaining a Biodiverse Landscape

7.14 The Landscape Framework incorporates well connected habitat features that will maintain populations of protected species currently associated with Stewartby Park and also provides additional features that will be effective in enhancing the biodiversity resource.

7.15 Development of the Landscape Framework has been guided by the following broad objectives:

- Maintenance and management of populations of protected species into the future;
- Creation of new opportunities for protected species; and
- Maintenance and enhancement of ecological connectivity within Stewartby Park and with the wider Vale.

7.16 These objectives will be achieved through delivery of a range of measures:

- Existing ponds that have ecological value due to the species which they support will be retained in a setting that comprises suitable terrestrial habitat for amphibians and reptiles and will be maintained in positive management;
- New suitable ponds and other wetland features will be created. These will be located within semi natural habitats in order to facilitate species dispersal. Where appropriate public access will be restricted in order to minimise disturbance and to maximise biodiversity value;
- Trees are a valued biodiversity resource. The landscape framework retains mature trees where possible, in particular to ensure no loss of potential roosting opportunities for bats;
- New planting will incorporate native species to enhance the integrity and viability of ecological corridors. Planting elsewhere within Stewartby Park will either be of native species or species that are of high biodiversity value, being nectar rich and/or berry bearing. In particular fruit trees will be established in rear gardens and within small community orchards in public open space.
- The ecological value of corridors within and at the boundaries of Stewartby Park will be enhanced not only by the additional planting described above, but also by the potential inclusion of hibernacula that will increase opportunities for shelter for reptiles, amphibians and small mammals. These corridors will be placed in positive management, in particular to maintain a well connected habitat mosaic that will provide good conditions for the protected species characteristic of the base of the Vale.
- Features to facilitate movement where natural links are not continuous will be included in the built form. These could potentially include placement of wildlife kerbs and a lighting scheme that will be sensitive to key movement corridors. Nest and roost boxes could potentially be included within buildings to provide additional shelter for birds and some species of bat.
- An understanding of the ecological features of Stewartby Park will be promoted through a low key Interpretation Strategy which will explain the relationship of the habitat and species present within Stewartby Park with those in the wider Vale.

Locations for Public Art

- 7.17 Whilst potential locations for public art were specified on the approved Master Plan as part of the outline planning permission, this Guide provides further detail to ensure that public art is an integral part of the development.
- 7.18 The use of public art will help create a sense of place and help define key spaces within Stewartby Park. Public art helps to contribute to the memory of place and enhances spaces to create a high quality environment. The potential locations for public art are identified on the Figure 7e and the general principles below should be applied to the provision of public art:

- Public art to be considered from the outset as an integral element of the development so it potentially can be incorporated into the built fabric rather than as stand alone installations;
- Public art should celebrate the heritage of the area, incorporating references to the London Brickworks heritage and encouraging further use of brick to create innovative and dynamic features within the built form. Figure 7f provides a number of precedents that should be used to guide the public art provision;
- Opportunity for new development to contribute to funding the restoration of existing village features: e.g. defunct water fountain or original street lighting;
- Potential for public art to be combined with a bespoke palette of street furniture;
- Potential for public art to be incorporated in the design of children's play areas;
- Potential locations for new installations to coincide with Key Groupings or to terminate vistas e.g. Coronation Walk;
- The local centre provides an opportunity for public art to be incorporated into the retail units – potential for using stained glass and to carry this and other features through the development;
- Public art could be delivered as bespoke decorative metal railings / iron work to provide front garden definition on the Primary Avenue or Boulevard - a prime location for decorative railings could be the front garden boundaries to The Crescent;
- Public art could incorporate former machinery from the Stewartby Brickworks (subject to safety certification and availability);
- Public art could utilise and exploit views of the existing brickworks chimneys which are an iconic feature within the area.

Figure 7e – Public Art: Potential Locations

Figure 7f – Public Art: Precedent Photographs

Landscape Planting

- 7.19 The appropriate use of planting can help define the character and function of an area. With the landscape being such a significant feature of Stewartby Park it is essential that the landscape provision within the development has a good relationship with the existing landscape and integrates well with the existing Garden Village and the wider Marston Vale.
- 7.20 Consistent planting reinforces identity within a site and therefore species within Stewartby Park should be of local provenance, wherever possible.

Retained trees and vegetation

- 7.21 A significant amount of existing vegetation is retained throughout the site both in the form of woodland and hedgerow blocks, but also in the case of free-standing trees. It is vital that these are properly protected during construction. The design is to consider the Root Protection Areas of the retained trees, woodland and hedgerows during the construction process with reference to BS 5837 (2005) '*Trees in relation to Construction Recommendations*'. Free-standing trees have been subject to a full arboricultural survey (Spring 2011). Any gapping-up or new planting within these areas should reflect the existing species present on the site. The plants should also be of local provenance arising from regional Provenance 40 (Forest Reproductive Regulations, 1977), wherever possible.

Rear garden fruit trees

- 7.22 It is the intention that, wherever possible, rear garden fruit trees are planted at the time of construction prior to sale for each phase of development. This requirement will introduce greater landscape diversity within the development and provides the opportunity for doorstep local food production. Trees can be of mixed domestic fruit varieties including apple, pear, plum and cherry. Trees should be of a suitable rootstock for the scale of a domestic garden.

Local centre

- 7.23 Particular care must be given to planting robust species in this area which can respond to the more 'hostile' environment and greater intensity of use that this location will experience. Trees may be planted in paving, incorporating tree grilles and structural soil and the ability to irrigate as appropriate.

Key Public Spaces

- 7.24 There are a number of key public spaces identified on Figure 7b (Key Landscape Spaces). These spaces have additional planting requirements to define their specific character. These requirements are identified below.

i) Boulevard Square

- 7.25 The Boulevard Square is to accommodate a formal community orchard planted in a grid pattern to reflect the formality of the Boulevard and adjoining built form whilst delivering a diverse and interesting landscape feature. Tree planting is to be of domestic apple varieties as a minimum 'standard' nursery size on M25 rootstock or similar vigour.

ii) Broadmead Gardens

- 7.26 These communal gardens are intended to be accessed by directly adjoining residents only and therefore there is increased flexibility in their planting opportunities.

- iii) Northern Linear Park**
- 7.27 With a wilder character, planting within the Northern Linear Park should have a native focus offering a distinct difference to other more formal spaces in Stewartby Park.
- iv) Coronation Walk**
- 7.28 An important corridor which should provide the opportunity for the planting of native vegetation consistent with the species outlined for use in the Northern Linear Park.
- v) Crescent Walk**
- 7.29 A key feature on the primary street where planting should be more formal in character.
- vi) Pillinge Gardens**
- 7.30 A formal communal garden space has the opportunity for more ornamental planting, including herbaceous and perennial planting.
- vii) Southern Gateway**
- 7.31 This area presents the opportunity to make a landscape statement and the potential to create an undulating landform to further articulate this important piece of informal, primarily visual, space.
- viii) Northern and Western Development Edge**
- 7.32 Through retaining the existing tree and shrub planting, this open edge to Broadmead Road and the north of the site (open fields) should form a robust buffer through the planting of further native tree and hedge species.
- viii) Retained Tree Belt, Retained Hedgerow Link and Retained Linear Woodland**
- 7.33 These areas must be managed to retain and enhance existing planting; some infilling of gaps may be appropriate and should comprise wholly native stock from the list identified for use in the Northern Linear Park.
- x) Coronation Pit Restoration Scheme**
- 7.34 Details of this scheme are separate and not covered by this Design Guide.
- Street Trees**
- 7.35 Street trees are an important structuring feature of Stewartby Park and street trees should be accommodated into the street scene within the open space or verges adjacent to the carriageway. Street trees should comprise large, established specimen trees to allow the trees to fill the greatest possible space. These will make a vital contribution to the public realm, the character of the place and continuing the street tree planting character of Stewartby, especially evident along Stewartby Way.
- 7.36 The position and species of tree should carefully consider any neighbouring built form and ensure that they do not have an adverse impact on the built environment or highway safety. There will also need to be careful coordination between street tree planting and the positioning of underground utilities to ensure that the location of services do not undermine the landscape strategy. The 'Accommodating Utilities' section should be read in conjunction with this section on street trees to ensure that a coordinated approach is delivered.
- Verges**
- 7.37 The following sets out the type of verges that should be provided according to street type. Verges may potentially be incorporated as part of the open space provision rather than adopted as highway land for management and maintenance purposes.
- On Primary Street: grass
 - On Secondary Streets: grass
 - On Tertiary Streets: none

Front Gardens

- 7.38 Front gardens can make a significant contribution to the street scene and local identity through a cohesive approach. Therefore planting within this private amenity space should be considered as part of the detailed design process to potentially include the following:

- Grass only on the Primary Street to retain the open character;
- Grass lawn front gardens on secondary streets, edged with evergreen hedging;
- Homes fronting Tertiary and Shared Surface streets will have open front gardens with no formal boundary enclosure. Grassed lawns will be the predominant landscape response for these front gardens, supplemented by the following where appropriate:
- Ornamental, flowering tree species to provide colour and interest to enhance streetscape / contribute to public realm;
- Low level planting / hedging with evergreen element;
- Use of climbing species to add visual interest.

Rear Gardens

- 7.39 Rear gardens can play an important role in enhancing the biodiversity value of an area and therefore planting and future planting opportunities should be a consideration from the outset, this should include:

- Rear gardens to be provided with at least 1 fruit tree in keeping with principles of a Garden Village wherever possible;
- All back gardens to be adequately topsoiled to allow grass lawn establishment;
- Hard-standing paved footpaths to provide connections between the rear of houses, garages, annexes and rear/side access gates.

Sustainable Drainage Systems (SuDS)

- 7.40 Opportunities exist to incorporate water courses, drainage channels / SuDS into the public open space provision at Stewartby Park. The Master Plan incorporates strategic landscape corridors and linear open space connections. These linear landscape connections are ideally suited for incorporating SuDS features and channels.
- 7.41 One potential location for a natural SuDS feature is within the Northern Linear Park where there is the possibility for the landform to be structured to encourage informal surface water drainage through into Coronation Pit in wet periods.
- 7.42 For areas of the scheme where open space is less abundant (for instance in higher density areas) it would be acceptable to use a positive drainage system to route surface water run-off to Coronation Pit where it will be attenuated in accordance with the Internal Drainage Board's (IDB) requirements.

Management & Maintenance of Public Realm & Landscape Features

- 7.43 In accordance with the S106 Agreement a management regime for the public realm and landscape features will be agreed. This will be agreed at detailed stages together with suitable management of the play areas and Stewartby Sports Ground.

**SECTION B:
DESIGN GUIDANCE
FOR STEWARTBY PARK**

8.0
Sustainability & Energy

8.0 SUSTAINABILITY AND ENERGY

8.1 The principle of reducing resource consumption at Stewartby Park has been considered within the spatial design and the place-making of the development. The following design features are to be considered where possible.

Energy Efficient Layout***i) Solar Management through Orientation***

8.2 Passive solar energy gains for new buildings can be enhanced through their careful orientation. The main glazed axis (and preferably the primary façade) should, where possible, be oriented within 30 degrees of south to obtain maximum daylight. Consideration should be given to solar orientation of the buildings on a site-wide basis as this will also enable roof pitches to accommodate solar powered renewable energy technologies.

8.3 In order to allow buildings within the development to have a beneficial solar orientation, consideration should be given to road alignments to enable them, where possible to be aligned along an east-west axis. This needs to be managed in line with other potential conflicting requirements such as the place-making agenda for Stewartby Park. Where the road alignment does not allow a building to have a suitable solar orientation, alternative roof pitches should be considered to enable a southerly aspect to be provided.

ii) Natural Environment

8.4 The high embankments along the eastern boundary of the site, abutting the Midland Mainline railway, provide an excellent shelter belt to cold North Easterly winds crossing the site, particularly in winter. This will reduce space heating requirements during cold spells of weather.

iii) Minimising Uncontrolled Shading

8.5 Overshadowing from buildings reduces the amount of natural daylight entering properties within this shaded path therefore the detailed design should aim to prevent uncontrolled shading of properties. It should consider the height and form of buildings to use shading in a positive manner and provide good access to daylight for buildings.

8.6 The same issues of uncontrolled shading can also occur through poor landscaping and insufficient maintenance where large evergreen trees are allowed to grow to a height that causes overshadowing of properties.

iv) Landscape

8.7 Residential plot layout should, where possible, seek to place garden space to the south of properties. This will allow good access to sunlight within the gardens and promote internal orientation of "living areas" within homes so that they face towards the garden space. This however needs to be considered within the context of other design criteria such as noise mitigation.

8.8 In locations where the southerly aspect of a dwelling is facing a road, provision of shrubs and trees of local provenance should be considered to provide privacy to garden spaces.

8.9 The use of green infrastructure can support energy demand reduction through solar shading. Planting of deciduous trees above the shadow line will allow summer shading where necessary and allow buildings to have access to winter sunlight.

8.10 Green spaces, as illustrated on the Regulatory Plan, have been designed to provide positive micro-climates within the urban form. During the daytime trees within these

green spaces will provide shading whilst at night, there is space for evaporative cooling. This process will moderate any potential urban heat island effects.

- 8.11 Figure 8a illustrates the principles that should be incorporated, where possible, into the detailed layout of Stewartby Park to encourage energy efficient design.

Figure 8a – Energy Efficient Design – Layout

Energy Efficient Building Design

i) Internal Orientation

- 8.12 At the detailed design stage consideration should be given, wherever feasible, to the internal layout of the residential properties to orientate “liveable rooms” such the living room, kitchen and bedrooms to the south of the property to allow maximum natural daylight to be obtained and the property utilised more efficiently in energy terms.
- 8.13 Rooms that are not in continuous occupation, such as utility rooms and bathrooms, should be incorporated on the northern side of a dwelling wherever feasible. Rooms without good access to natural daylight can be supported by innovative natural lighting mechanisms such as rooflights and solar tubes or pipes.
- 8.14 For local centre buildings, heat emitting plant can be placed on the northern side away from solar heating gain. Most plant runs more efficiently if kept at a constant temperature. Heat can either be extracted from warmer rooms (utility rooms for example) and utilised within the buildings’ heating systems (naturally or actively) or naturally ventilated externally.
- 8.15 The internal layout of commercial buildings should consider the final occupants’ requirements. Therefore internal layouts should ideally only be decided once the final occupants are known.

ii) Natural Day Lighting

- 8.16 In order to make the best use of daylight the majority of glazed elements should be placed on the southern face or facade of buildings. On the north side of the property small window openings should be provided to reduce heat loss through window areas.
- 8.17 Consideration will be given to internal finishes within all properties including having reveals that incorporate a curved arris to allow better light shaping within rooms alongside the use of light reflective paints.
- 8.18 In commercial buildings interior space should be planned to maximise access to daylight. Within these buildings consideration will be given to light-shelves to maximise the distribution of natural daylight. Internal finishes can also aid reflection of natural daylight.
- 8.19 Both commercial and residential developments will consider the use of roof lights and roof lanterns to allow access to direct sunlight and to incorporate secure natural evening ventilation.

iii) Thermal Mass

- 8.20 Building materials that absorb sun during the winter, spring and autumn can be used to warm a building. During summer months the thermal mass capacity of building materials can be used to absorb and dissipate heat within a building.
- 8.21 In commercial buildings consideration should be given to using double skin facades to allow air and heat to flow around the walls of the building.

iv) Passive Ventilation

- 8.22 Natural ventilation is critical to allowing heat and stale air to be drawn out of a building through cross ventilation or stack methods. During the summer months, night time ventilation is used to provide heat loss where a building has accumulated heat during the day.
- 8.23 Within a building, natural ventilation systems rely on pressure differences to move fresh air through buildings, for example caused by wind or buoyancy effects from differences in temperature or humidity. The amount of ventilation will depend critically on the size and placement of openings in the building, e.g. transom windows between rooms. Consideration should be given to incorporating these and other such features in new buildings to maximise natural ventilation, reduce energy demand and increase environmental comfort.
- 8.24 Figure 8b illustrates the principles of energy efficient building design that should be incorporated into Stewartby Park.

Figure 8b – Energy Efficient Building Design

Renewable Energy Generation**Available Effective Solutions for Energy Generation**

- 8.25 The following low carbon and renewable energy technology solutions are considered viable for the development based on environmental impacts, economic viability and design implications.
- Solar thermal
 - Solar photovoltaics
 - Ground source heating
 - Air source heating
 - Biomass heating
 - Micro combined heat and power (CHP)
- 8.26 The integration of micro-generation technology into the scheme will be completed during the building design rather than “retro fitted” post-design to meet Building Regulation targets.
- 8.27 The Bedford Borough requirement for 10% renewable energy will be achieved through the built envelope i.e. through the built fabric of dwellings to increase energy efficiency.

Water Use Minimisation and Recycling**Water cycle at Stewartby Park**

- 8.28 The following elements will be considered as part of the design of Stewartby Park to ensure that water use minimisation occurs wherever possible:
- Sustainable urban drainage system;
 - Swales and surface water attenuation;
 - Permeable paving;
 - Reduced capacity water tanks;
 - Aerating showers.

Figure 8c – Water Use Minimisation Diagram

Provision for Waste Recycling

- 8.29 The development shall be designed to include space for domestic bin storage. This provision reflects the respective local authority waste collection requirements being three wheelie bins in the Bedford Borough area and two in the Central Bedfordshire area.
- 8.30 External space will be available for housing the wheeled bins and crates in line with Code for Sustainable Homes requirements (see Chapter 5 section on Waste Storage).
- 8.31 As required by the outline permission the provision of community recycling facilities, including a 'bring' site should be accommodated within the local centre. The design of the 'bring' site will be detailed further when the Waste Management Strategy is prepared and submitted to the Local Authority for their approval and condition 36 of the Bedford Borough permission is discharged requiring details of the specification of the 'bring' site to be submitted and approved by Bedford Borough Council.

**SECTION B:
DESIGN GUIDANCE
FOR STEWARTBY PARK**

9.0
Parcelisation, Phasing
& Implementation

9.0 PARCELISATION, PHASING AND IMPLEMENTATION**Parcelisation**

- 9.1 This Design Guide has considered the delivery of Stewartby Park to ensure the development comes forward as a unified and integrated development. Key to achieving this is ensuring that individual parcels exhibit consistency in design and integrate well with neighbouring development parcels.
- 9.2 Recognising that individual parcels will be implemented by different developers and house-builders is a key consideration and the following principles should be considered in the parcelisation of the site.

Phasing Principles

- Providing a consistent approach along key frontages, allowing subtle variations to occur to the rear of plots;
- Ensuring the movement network is incorporated into parcels to provide consistency between the street and the built form;
- Incorporating key open spaces into whole parcels to ensure the public realm and built form are developed in an integrated and complementary way;
- Keeping key groupings contained within minimum parcels to ensure a consistent standard of design throughout;
- Ensure affordable housing sub-parcels are effectively integrated with market housing parcels to ensure they are 'tenure blind'.

Phasing

- 9.3 A sequential approach to the implementation of Stewartby Park will be adopted. This will ensure that the development will come forward in a number of logical phases in line with the phasing requirements as set out in the S106 Agreement. The phases take into consideration the need to bring forward infrastructure and community facilities in line with certain dwelling numbers to help create a functional neighbourhood from the outset. Figure 9a illustrates the broad phases within which the development will come forward. The phasing strategy exhibits a general west to east implementation sequence, with the final phase (Phase 4) in the north western part of the site.

Phase One

- 9.4 The first phase is focussed on establishing the key western gateway of the development to provide the main access into Stewartby Park. This phase will include:

Phase 1

- **Formation of the main access off Broadmead Road** – this is the key gateway into Stewartby Park and is an important symbol of the commencement of development, making a clear statement on the approach from Broadmead Road;
- **Construction of the Boulevard and first section of Primary Avenue** – this is an important part of the infrastructure which will provide the layout and form of the central spine;
- **Creation of sites for the local centre** – it is important to bring forward the majority of the proposed community infrastructure in this early phase of development to ensure that the first residents have access to their required facilities and amenities;
- **Provision of first SLEAP and Boulevard Gardens** – bringing forward this key open space and children’s play area is an important aspect of the development as a whole and establishes its green character early on in the development. It is a vital community asset that represents the immediate incorporation of green space into Stewartby Park.
- **Development of first stage of residential development along the Boulevard and Primary Avenue** – this will commence the delivery of dwellings on site and help to establish the low density, spacious character of Stewartby Park, setting the precedent for the remainder of the development.

Phase Two

- 9.5 Phase 2 enables the largest section of the Primary Avenue to be delivered and subsequently provides a key structuring role to the development. It also brings forward The Crescent, a key character defining element of the scheme and additional public open space. This phase will include:

Phase 2

- **Implementation of central section of Primary Avenue** – this will provide the key structure at the core of the residential development;
- **Creation of Coronation Walk** – providing a fundamental green linear link from the village, through Stewartby Park, to Coronation Pit, it is important to deliver in the early stages to enable the green character of the development to penetrate throughout. It will also incorporate the delivery of a second SLEAP;

- **Development of the northern half of The Crescent** – this is a key feature within the development which reflects the character of the existing Garden Village; therefore The Crescent will be integral to establishing the character of Stewartby Park. It is also a key structuring feature and will facilitate the delivery of a further SLEAP in Crescent Walk;
- **Development of residential dwellings in parcels adjoining the Primary Avenue and in the northern half of The Crescent** – this will ensure that there is a robust built form enclosing the primary street throughout the development thereby creating a legible development;
- **Railway Edge** – within this phase it will be necessary to deliver the residential dwellings directly fronting the railway line first as this frontage is fundamental in mitigating the noise impact of the railway.

Phase Three

- 9.6 The third phase of the development will complete the south eastern extent of Stewartby Park and facilitate the completion of the primary street joining the spine route to the secondary access point at Montgomery Close. This phase will include:

- Phase 3**
- **The completion of the primary street and Southern Gateway**– this will see the implementation of a complete through route which links the western and southern access points to the development and provides a clear spine to structure the remaining built form;
 - **Development of the southern half of The Crescent** – this will complete this key grouping and form one of the most important elements of the development, which provides important visual and physical connections with, and character references to, the existing village;
 - **Delivery of southern residential area** – this will complete the residential development adjoining the existing village and is important in maintaining and improving the relationship between the new and established parts of Stewartby;
 - **Railway Edge** – as in Phase 2 it is essential to deliver the residential dwellings fronting the railway edge first to ensure the noise impact of the railway is mitigated and there will not be any subsequent impact on dwellings further in to the site.

Phase Four

- 9.7 The fourth phase is the final phase of Stewartby Park which sees the completion of the built form, public realm and movement network. This final phase involves:

- Phase 4**
- **Development moves north from the western gateway into the northern quarter to encompass the remaining residential parcels** – this will complete the residential element of the development;
 - **Delivery of Northern Linear Park** – this will bring a more naturalistic open space into the development which also provides a SUDS system with outfall into Coronation Pit. This space is an important visual link to the Pit and physical connection to the circular walks; this provides significant recreational opportunities for the new (and existing) residents.

Figure 9a – Phasing Plan

**SECTION C:
CHARACTER AREAS
SUMMARY FOR
STEWARTBY PARK**

10.0
Character Areas

SECTION C: CHARACTER AREAS SUMMARY FOR STEWARTBY PARK

10.0 CHARACTER AREAS

- 10.1 Stewartby Park has been divided into a number of specific and individual 'character areas'. These character areas, shown on Figure 10a, provide an important structuring role for the development as the detailed design criteria for each character area has been determined according to the role, function and character of each individual area.
- 10.2 The character areas have been identified according to the public realm that they address. Although each has its own characteristics, the character areas are not intended to be distinctively different from each other but are used to emphasise the intrinsic qualities and landscape features of their individual area.
- 10.3 The Character Area proformas (Figures 10b – 10f) set out the detailed design guidance that should be adopted for each character area.

Figure 10a – Character Areas Plan

Figures 10b – 10f – Character Areas Precedent Photos

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APPENDICES

APPENDIX 1: Condition 5 of Bedford Borough Planning Permission & Condition 12 of Central Bedfordshire Planning Permission

Stewartby Outline Planning Permissions

Bedford Borough Council Outline Permission Reference: 97/01163/OUT Condition number 5

Central Bedfordshire Outline Permission Reference: MB/97/01085/OUT Condition number 12

Prior to the submission of any reserved matter application a Design Guide shall be submitted to and approved in writing by the Local Planning Authority. The Design Guide shall consist of guidance and coding relating to the following matters:

- a) Residential density ranges; and
- b) The distribution and extent of each employment and residential development parcel including affordable housing sub parcels;
- c) The development phasing programme including the phased provision of key community/leisure facilities in accordance with the Master Plan; and
- d) Building form, scale and design, including heights, bulk, massing, materials and detailing, colour palette and boundary treatments; and the identification of key building groups, frontages and placemaking; and
- e) A Movement Strategy to include:
 - (i) A plan showing the general hierarchy of proposed roads, footpaths and cycleways; and
 - (ii) Guidance and coding giving details of typical surface finishes and of street furniture for roads, footpaths, cycle-ways and car parking areas; and
 - (iii) General hierarchy of car parking, including principles of public/private split and management and maintenance of private car parking; and
 - (iv) Speed restraint measures; and
- f) Design and distribution of landscape and open space including identification of the public realm, incidental green open spaces, equipped play/outdoor sport areas including the range of play and outdoor sports infrastructure to be provided; and
- g) Incorporation and promotion of sustainability and renewable energy initiatives to include guidance as to the achievement of:
 - (i) Energy efficient layouts; and
 - (ii) Energy efficient building design;
 - (iii) Renewable energy generation including the safeguarding of residential buildings with a southerly aspect of the option of providing in the future for energy generation by the use of solar panels or photo voltaic cells;
 - (iv) Water use minimisation and recycling; and
 - (v) Provision for waste recycling; and
- h) Community safety; and
- i) Potential locations of public art; and
- j) Public transport routes and facilities including proposed bus stops and shelters; and
- k) A scheme for lighting of roads, footpaths, cycle routes, play areas, open spaces and all other areas accessible to the public including guidance on the height of the lighting columns and the types and measures to limit light pollution from development within each parcel;
- l) public utilities: Confirmation of arrangements and above ground land use provision for telecommunications apparatus, electricity substations, pumping stations and any other above ground utility infrastructure.

Applications for reserved matters approval shall thereafter be accompanied by written statements detailing the account taken of, and measures incorporated within such applications to implement the Design Guide. Unless otherwise agreed in writing by the Local Planning Authority no part of the development shall start until the Local Planning Authority has approved in writing the acceptability of the required written statements submitted for that part of the development and shall thereafter proceed only in accordance with the approved details.

Reason: To promote high standards of design and in accordance with Policy DPS5 of the Mid Bedfordshire Local Plan, First Review 2005 (Central Bedfordshire Permission) and Policies CP21 and CP26 of the Bedford Borough Core Strategy and Rural Issues Plan 2008 and Policies H13, BE29, BE31 and BE35 of the Bedford Borough Local Plan 2002 (Bedford Borough Permission).

N.B The above condition is recited from the Bedford Borough Decision Notice (August 2009). The sister condition from the Central Bedfordshire Decision Notice sets out the same provisions albeit with slight variations in the wording.

APPENDIX 2: Comparison of Conditions on the two outline permissions with the Design Guide Contents

Planning Permission Condition Comparison Table

This note provides a comprehensive overview of the planning conditions that were imposed on the planning permission for the Stewartby Development from both Bedford Borough Council and Central Bedfordshire Council.

The purpose of examining all of the relevant conditions is to ensure there is consistency throughout the preparation of the Design Guide and all the required, relevant information is included.

It is important to note that although this briefing paper examines all of the pertinent conditions, only Condition 5 (Bedford Borough Council) and Condition 12 (Central Bedfordshire Council) are directly relevant to the Design Guide and its overall content and structure. The other conditions and S106 Schedules outlined below provide additional background information to ensure the Design Guide covers all aspects of the planning permission. Further work will need to be undertaken to discharge the other conditions listed below.

Condition Reference No.	Condition Requirement	Section of Design Guide where conditions are covered
BBC Condition 2 / CBC Condition 2	<ul style="list-style-type: none"> • Applications for approval of the reserved matters for at least 100 (20 dwellings CBC) dwellings as approved pursuant to condition 4(b) of this permission shall be made to the Local Planning Authority before the expiration of three years from the date of the approval of the Design Guide (pursuant to condition 5) by the LPA. The development to which those reserved matters relate shall be begun not later than the expiration of 2 years from the final approval of those reserved matters or within 5 years of the date of this permission, whichever is the later. • For at least 20 dwellings within 3 years 	<ul style="list-style-type: none"> • Detail not required at this stage
BBC Condition 3/ CBC Condition 3	<ul style="list-style-type: none"> • Application for approval of reserved matters in relation to the remainder of the development hereby permitted shall be made to the Local Planning Authority before the expiration of 8 years from the date of this permission and the development to which those reserved matters relate shall be begun not later than:- a) the expiration of 10 years from the date of the grant of outline planning permission; or, if later b) the expiration of 2 years from the final approval of the reserved matters, unless otherwise agreed in writing by the Local Planning Authority. 	<ul style="list-style-type: none"> • Detail not required at this stage
BBC Condition 4 / CBC Condition 11	<ul style="list-style-type: none"> • Reserved matters applications to accord with approved master plan including: <ul style="list-style-type: none"> ○ <i>Route of estate Road from Broadmead Road to Rousbery Road;</i> 	<ul style="list-style-type: none"> • Regulatory Plan & Chapter 6.0 Movement Framework;

	<ul style="list-style-type: none"> ○ <i>Phasing of development including advanced structural planting/ spine road provision;</i> 	<ul style="list-style-type: none"> ● Chapter 9 – Parcelisation, Phasing and Implementation, Chapter 7 Landscape Framework;
	<ul style="list-style-type: none"> ○ <i>Location of residential development including affordable housing;</i> 	<ul style="list-style-type: none"> ● Chapter 5, specifically 'Location of Affordable Housing Parcels';
	<ul style="list-style-type: none"> ○ <i>Location of open space, structural planting and play areas, also buffers (including railway buffer);</i> 	<ul style="list-style-type: none"> ● Chapter 7, specifically 'Distribution and Design of Open Space' and 'Equipped Play Areas';
	<ul style="list-style-type: none"> ○ <i>Location of public house and shopping facilities and waste 'bring site';</i> 	<ul style="list-style-type: none"> ● Chapter 4 specifically 'A Mixed Use Development'; and ● Chapter 8 specifically 'Provision for Waste Recycling';
	<ul style="list-style-type: none"> ○ <i>Cycle/vehicular/pedestrian junctions/access connections with existing network;</i> 	<ul style="list-style-type: none"> ● Chapter 6 – Movement Framework
	<ul style="list-style-type: none"> ○ <i>Provision of a pedestrian connection to the circular path around Coronation Pit from Magpie Avenue or Pillinge Road, and safer routes to schools.</i> 	<ul style="list-style-type: none"> ● Chapter 6 –Movement Framework, specifically 'Footpaths and Cyclists'.
<p>BBC Condition 5/ CBC Condition 12</p> <p>- The key conditions relating to the production of a Design Guide</p>	<ul style="list-style-type: none"> ● Residential density ranges; 	<ul style="list-style-type: none"> ● Chapter 5 – Built Form & Placemaking, specifically Residential Density Ranges;
	<ul style="list-style-type: none"> ● Distribution and extent of each employment and residential parcel and affordable housing sub parcels; 	<ul style="list-style-type: none"> ● Chapter 5 – Built Form & Placemaking, specifically 'Block Structure' and 'Location of Affordable Housing Parcels';
	<ul style="list-style-type: none"> ● Development phasing programme including community facilities provision; 	<ul style="list-style-type: none"> ● Chapter 9 – Parcelisation, Phasing and Implementation;
	<ul style="list-style-type: none"> ● Building form, scale and design including: 	<ul style="list-style-type: none"> ● Chapter 5 – Built Form and Placemaking, specifically 'Building Heights', 'Block Structure', 'Residential Density' and 'Materials and Detailing';
	<ul style="list-style-type: none"> ○ <i>Building heights;</i> 	<ul style="list-style-type: none"> ○ Chapter 5, specifically 'Building Heights';
	<ul style="list-style-type: none"> ○ <i>Bulk & massing;</i> 	<ul style="list-style-type: none"> ○ Chapter 5, specifically 'Block Form' and 'Residential Density Ranges';
	<ul style="list-style-type: none"> ○ <i>Materials and detailing;</i> 	<ul style="list-style-type: none"> ○ Chapter 5 specifically 'Materials & Detailing: Detailed Building

		Design Guidance’;
	○ <i>Colour palette;</i>	○ Chapter 5 specifically ‘Building Materials Palette’ and ‘Colour Palette’;
	○ <i>Boundary treatments;</i>	○ Chapter 5 specifically ‘Boundary Treatment’;
	○ <i>Key building groups;</i>	○ Chapter 5 specifically ‘Key Groupings’;
	○ <i>Frontages;</i>	○ Chapter 5 specifically ‘Frontages and Enclosure’;
	○ <i>Placemaking;</i>	○ Chapter 5 Built Form & Placemaking;
	● Movement Strategy to include:	● Chapter 6, specifically:
	○ <i>Hierarchy of roads, cycleways and footpaths;</i>	○ Hierarchy of Streets, cycleways and footpaths;
	○ <i>Guidance and coding on surface finishes;</i>	○ Surface Materials Palette;
	○ <i>Street furniture for roads, footpaths, cycleways and car parking areas;</i>	○ Street Furniture Palette;
	○ <i>Hierarchy of car parking and public/private split;</i>	○ Hierarchy of Residential car parking; and ○ Accommodating the Parked Car;
	○ <i>Management and maintenance of private car parking;</i>	○ Management and Maintenance of Streets;
	○ <i>Speed restraint measures;</i>	○ Speed Restraint Measures;
	● Design and distribution of landscape and open space including identification of public realm, incidental green spaces, equipped play areas (and range of equipment to be provided);	● Chapter 7 – Landscape, specifically: ○ Distribution and Design of Open Space; ○ Key spaces within the site; and ○ Incidental Green Spaces; ○ Equipped Play Areas; ○ Locations for Public Art;
	● Incorporation of sustainability and renewable energy initiatives including:	● Chapter 8 Resource Efficiency & Energy, specifically:
	○ <i>Energy efficient layouts;</i>	○ Energy Efficient Layouts;
	○ <i>Energy efficient building design;</i>	○ Energy Efficient Building Design;
	○ <i>Renewable energy generation; Safeguarding southerly aspect residential dwellings;</i>	○ Renewable Energy Generation (inc safeguarding southerly aspects for PV/solar);
	○ <i>Water use minimisation;</i>	○ Water use Minimisation;
	○ <i>Provision for waste recycling;</i>	○ Provision for Waste Recycling;

	<ul style="list-style-type: none"> • Community safety; 	<ul style="list-style-type: none"> • Chapter 5 specifically Community Safety and Secured by Design;
	<ul style="list-style-type: none"> • Potential locations of public art; 	<ul style="list-style-type: none"> • Chapter 7, specifically Locations for Public Art;
	<ul style="list-style-type: none"> • Public Transport routes and facilities including bus stops and shelters; 	<ul style="list-style-type: none"> • Chapter 6, specifically Public Transport Routes and Facilities;
	<ul style="list-style-type: none"> • A scheme for lighting of roads, footpaths, cycle routes, play areas, open spaces and all other areas accessible to the public, including guidance on height and types of columns and measures to limit light pollution in each parcel; 	<ul style="list-style-type: none"> • Chapter 6, specifically Lighting Scheme;
	<ul style="list-style-type: none"> • Public utilities – arrangements for telecommunications apparatus, sub stations and pumping stations, and all other above ground infrastructure. 	<ul style="list-style-type: none"> • Chapter 5, specifically Public Utilities (above ground infrastructure) • Chapter 6, specifically Accommodating utilities (below ground infrastructure)
BBC Condition 6/ CBC Condition 13	<ul style="list-style-type: none"> • The permission shall not authorise more than 610 dwellings • Shall not authorise more than 120 dwellings. 	<ul style="list-style-type: none"> • Chapter 5 - Built Form Guiding Principles
BBC Condition 7/ CBC Condition 14	<ul style="list-style-type: none"> • Site wide scheme of open space, advanced structural planting and landscaping to include: <ul style="list-style-type: none"> ○ Existing trees, shrubs and hedges and those to be retained/removed; ○ New planting – location, density, height and spread; ○ Surface treatment of existing and proposed rights of way; • Timing of implementation; • Management and maintenance; 	<ul style="list-style-type: none"> • Chapter 7 provides framework but there is <u>no requirement for site wide landscape scheme at this stage</u>; • Chapter 9 Phasing and Implementation (<i>no specific dates required at this stage</i>); • Chapter 6 - Management and maintenance of Streets • Chapter 7 - Management and maintenance of public realm and landscape features; • Further detail will be provided in site wide scheme of open space.
BBC Condition 10	<ul style="list-style-type: none"> • Provision of play space to include: <ul style="list-style-type: none"> ○ 1x Super Neighbourhood Equipped Area for Play; ○ 3 x Super Local Equipped Area for Play; • Schemes for approval of play areas 	<ul style="list-style-type: none"> • Chapter 3 - Quantum of Development; • Chapter 4 - Regulatory Plan; • Chapter 7 – Equipped Play Areas; • Further detail will be provided when each play area scheme is prepared. • <i>Not required at this stage but Chapter 7 sets framework</i>;
BBC Condition 11	<ul style="list-style-type: none"> • No dwelling constructed until provision of following facilities at Stewartby Sports Ground: <ul style="list-style-type: none"> ○ Position of 2 full size football pitches; 	<ul style="list-style-type: none"> • <i>Not required at this stage, reference is provided in Appendix 3</i>;

	<ul style="list-style-type: none"> ○ Provision of grass cricket square; ○ Changing room and storage facilities; ○ 50 space car park; ○ Boundary enclosure to site; ○ Timetable for works 	
BBC Condition 14	<ul style="list-style-type: none"> ● Shopping provision limitations: <ul style="list-style-type: none"> ○ No more than 500m² gross, of which at least 400m² will be use class A1 	<ul style="list-style-type: none"> ● Chapter 3 - Quantum of Development; ● Chapter 4 - Local Centre;
BBC Condition 23/ CBC Condition 20	<ul style="list-style-type: none"> ● Provision for at least 10% of dwellings to be constructed to mobility standards (no more than 20% of affordable housing shall contribute to this figure) 	<ul style="list-style-type: none"> ● Chapter 5 – House Types;
BBC Condition 24	<ul style="list-style-type: none"> ● Scheme to offset climate change including: <ul style="list-style-type: none"> ○ <i>Minimise emission of pollutants;</i> ○ <i>Minimise energy use through design and utilisation of buildings;</i> ○ <i>10% reduction in Carbon emissions above Building Regs requirement;</i> ○ <i>10% of energy to be from decentralised/renewable/low carbon sources;</i> ○ <i>Minimise use of water.</i> 	<ul style="list-style-type: none"> ● Chapter 8, specifically: <ul style="list-style-type: none"> ○ Energy Efficient Design; ○ Renewable Energy Generation; ○ As Above; ○ Water Use Minimisation
BBC Condition 26 / CBC Condition 22	<ul style="list-style-type: none"> ● All dwellings to achieve CfSH level 3 	<ul style="list-style-type: none"> ● Chapter 8 - Energy Efficient Design
BBC Condition 30 / CBC Condition 26	<ul style="list-style-type: none"> ● Vehicular and Pedestrian Access to be in accordance with submitted and approved drawings 12373/006/007A, 12373/006/009C and 12373/006/008 ● In accordance with OHB007/007/e 	<ul style="list-style-type: none"> ● Chapter 6 - Access and Movement Guiding Principles;
BBC Condition 35	<ul style="list-style-type: none"> ● Requirement for a Waste Management Strategy including: <ul style="list-style-type: none"> ○ <i>Provision within layout of buildings for waste storage;</i> ○ <i>Provision of community recycling facilities (bring site);</i> ○ <i>Road layouts to allow for efficient waste collection</i> 	<p><i>Not required at this stage but will accord with principles set out in:</i></p> <ul style="list-style-type: none"> ○ Chapter 5 -Waste Storage; ○ Chapter 8 – Provision for Waste Recycling; ○ Chapter 6 – Movement Framework;
BBC Condition 36	<ul style="list-style-type: none"> ● Details of 'Bring' site to be approved by the LPA prior to occupation of 450th dwelling and made available for use prior to occupation of 600th dwelling. 	<ul style="list-style-type: none"> ● Chapter 8 – more detail will be provided when details of Bring site are provided to discharge this condition.
BBC Condition 42	<ul style="list-style-type: none"> ● Primary Avenue between linking Broadmead Road to Montgomery Road shall be fully available to vehicular traffic and pedestrian use prior to occupation of 300th dwelling, and for bus use prior to occupation of 450th dwelling. 	<ul style="list-style-type: none"> ● Chapter 9 Parcelisation, Phasing and Implementation;
BBC Condition 46 / CBC Condition 9	<ul style="list-style-type: none"> ● Prior to the submission of any reserved matters application for the siting of residential development, a noise survey shall be carried 	<p>Not required at this stage but will be in general conformity with:</p>

	<p>out in accordance with PPG24 for proposed dwellings within 150m of the railway line. Development shall not begin until a scheme to protect those proposed dwellings has been submitted and approved by the LPA.</p>	<ul style="list-style-type: none"> • Chapter 4 - Regulatory Plan; • Chapter 5 – Noise Mitigation;
CBC Condition 29	<ul style="list-style-type: none"> • Waste Audit to be submitted with Reserved Matters Applications for any parcel to include steps to ensure effective segregation of wastes at source including provision of waste sorting, storage, recovery and recycling. 	<ul style="list-style-type: none"> • Not required at this stage;
CBC Condition 30	<ul style="list-style-type: none"> • Waste Management Strategy to be submitted with reserved matters application for any parcel including details of provision within the design and layout of buildings for waste and recycling storage areas. 	<ul style="list-style-type: none"> • Not required at this stage;
CBC Condition 32	<ul style="list-style-type: none"> • Details of surface finishes for roads, footpaths, cycle ways and car parking areas to be submitted with any reserved matters application. 	<ul style="list-style-type: none"> • Not required at this stage;
S106 Requirement		Section of Design Guide where covered
<ul style="list-style-type: none"> • No reserved matters applications for residential dwellings to be submitted until the Affordable Housing General Layout Plan has been approved, and for Affordable Housing units until the Affordable Housing Scheme has been approved. 		<ul style="list-style-type: none"> • Not required at this stage but should be in accordance with Chapter 5 – Location of Affordable Housing Parcels;
<ul style="list-style-type: none"> • The developer must supply 29.72% of the residential units as Affordable Housing or land – to be provided in line with the affordable housing scheme and affordable housing general layout plan. 		<ul style="list-style-type: none"> • Chapter 5 - Location of Affordable Housing Parcels
Phasing		Section of Design Guide where covered
<ul style="list-style-type: none"> • Bedford Borough Councils approval of Stewartby Sports Ground Scheme prior to construction of any residential dwelling above slab level. 		<ul style="list-style-type: none"> • Does not form part of Design Guide but general framework for phasing is set out within Chapter 9;
<ul style="list-style-type: none"> • No more than one residential dwelling to be occupied prior to gaining the approval of the part of the open space scheme that relates to SLEAP 1. 		<ul style="list-style-type: none"> • Does not form part of Design Guide but general framework for phasing is set out within Chapter 9;
<ul style="list-style-type: none"> • Prior to occupation of more than 50 residential dwellings must identify the School Land to the Borough Council. 		<ul style="list-style-type: none"> • Does not form part of Design Guide but general framework for phasing is set out within Chapter 9;
<ul style="list-style-type: none"> • Prior to occupation of more than 100 residential dwellings must substantially complete SLEAP 1 and the SNEAP. 		<ul style="list-style-type: none"> • Does not form part of Design Guide but general framework for phasing is set out within Chapter 9;

<ul style="list-style-type: none"> • Prior to occupation of more than 200 residential units to transfer the School Land to Borough Council, and gain approval of open space scheme relating to SLEAP 2. 	<ul style="list-style-type: none"> • Does not form part of Design Guide but general framework for phasing is set out within Chapter 9;
<ul style="list-style-type: none"> • Prior to occupation of more than 300 residential units to have substantially completed SLEAP 2 and Stewartby Sports Ground. 	<ul style="list-style-type: none"> • Does not form part of Design Guide but general framework for phasing is set out within Chapter 9;
<ul style="list-style-type: none"> • Prior to the occupation of more than 400 residential units must gain approval of the part of the open space scheme relating to SLEAP 3, and of the Public Art Scheme. 	<ul style="list-style-type: none"> • Does not form part of Design Guide but general framework for phasing is set out within Chapter 9;
<ul style="list-style-type: none"> • Prior to occupation of more than 600 units to substantially complete SLEAP 3. 	<ul style="list-style-type: none"> • Does not form part of Design Guide but general framework for phasing is set out within Chapter 9;
<ul style="list-style-type: none"> • No more than 600 units to be occupied until the shop and public house have been provided. 	<ul style="list-style-type: none"> • Does not form part of Design Guide but general framework for phasing is set out within Chapter 9;
<ul style="list-style-type: none"> • Must not permit occupation of more than 60% of the market housing prior to the provision of 50% of the affordable units or land. 	<ul style="list-style-type: none"> • Does not form part of Design Guide but general framework for phasing is set out within Chapter 9;
<ul style="list-style-type: none"> • Must not permit occupation of more than 80% of the market housing prior to the provision of 100% of the affordable housing units or land. 	<ul style="list-style-type: none"> • Does not form part of Design Guide but general framework for phasing is set out within Chapter 9;
<ul style="list-style-type: none"> • Must not permit occupation of any development on the school footpath residential phase until the school footpath and access has been constructed as is a standard that is adoptable for use. 	<ul style="list-style-type: none"> • Does not form part of Design Guide but general framework for phasing is set out within Chapter 9;
<ul style="list-style-type: none"> • Management and maintenance requirements for Stewartby Sports Ground, SNEAP and other open space as required by S106. 	<ul style="list-style-type: none"> • Chapter 7 - Management and Maintenance of Public Realm and Landscape Features

N.B. this note is limited only to the provisions as set out in the planning conditions and S106 that may be relevant to the preparation of the Design Guide, and is not an exhaustive list.

The conditions specified in the table above have been summarised for the purpose of this appendix. The Decision Notices should be consulted for the full wording of the conditions.

APPENDIX 3: Stewartby Sports Ground Supplementary Information

Stewartby Sports Ground and SNEAP

The Stewartby development, as approved by Bedford Borough Council (reference 97/01163/OUT), included the requirement for children's play provision under Condition 10 of the outline permission for:

- a) 1 x Super Neighbourhood Equipped Area for Play (SNEAP); and
- b) 3 x Super Local Equipped Areas for Play (SLEAPs)

As established on the approved Master Plan the SNEAP is to be positioned within the village of Stewartby in the existing Stewartby Sports Ground. Consequently, the SNEAP falls outside the remit of the Design Guide and as such no guidance on this play facility is included within this document.

However, the preparation and implementation of a scheme to enhance the facilities at the Stewartby Sports Ground, including the provision of the SNEAP, is a fundamental provision within the S106 Agreement and forms part of the outline permission.

A Condition (number 11) on the outline permission requires the submission and approval of the Stewartby Sports Ground Scheme, by the Local Planning Authority, prior to the commencement of development. The S106 Agreement sets out the main provisions which should be included within the Stewartby Sports Ground Scheme, these include:

- Detailed specification;
- The location;
- The period required for provision or implementation;
- The proposed start date;
- Any other matters which the Relevant Council requires to assess the proposed provision adequately;

- The Stewartby Sports Ground Works shall comprise:
 - Provision of new / refurbished perimeter fencing;
 - Provision of access;
 - Provision of parking areas for 50 spaces unless otherwise agreed;
 - Provision of a single storey building consisting of:
 - 4 x 15 person changing rooms with communal showers benches and lockers
 - 2 x officials changing rooms with bench, 3 lockers each and a single shower cubicle in each;
 - Toilets and wash basins including disabled persons' facilities;
 - Clun / committee room;
 - Kitchen;
 - Storeroom (40 square metres) for goal posts, flag posts, grass seed, white line painter;
 - Landscaping of sports ground;
 - Provision of two full sized football pitches;;
 - Provision of grass cricket square.

The Bedford Borough Decision Notice states that the SNEAP shall include the following;

- Activity zone comprising a minimum of 1500m²;
- At least 12 types of play equipment suitable for 8 – 14 year olds to include a bespoke play piece constituting at least 4 pieces of play equipment;
- Weather shelter with seating;
- Graffiti / rebound wall;
- 30m x 54m informal grassed pitch for ball games;
- Safety surfacing;
- Litter bins;

- Seating;
- Cycle parking facilities;
- Dog-proof fencing;
- Amenity protection buffer area.

The Stewartby Sports Ground Scheme will be prepared separately to discharge the relevant condition of the outline permission and subsequently meet the provisions of the S106 Agreement.