

CONSULTATION DRAFT



ARBORFIELD GARRISON STRATEGIC DEVELOPMENT LOCATION

SUPPLEMENTARY PLANNING DOCUMENT

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Foreword

The approved Core Strategy sets out the broad vision for how the Borough of Wokingham will develop in the period to 2026 and how the council aims to protect and enhance the very good quality of life enjoyed in the Borough.

The Core Strategy is a vitally important document that sets out the future of the roads we will drive on, the homes we will live in, the schools our children will go to, the parks they will play in, the shops and doctors' surgeries we will visit – in short, the way our communities are maintained or will be established in Wokingham Borough.

It takes forward the views of the community for high quality development concentrated in a few locations with all necessary infrastructure delivered.

In order to deliver the Core Strategy four Strategic Development Locations (SDL) have been identified. These are Arborfield Garrison, South of the M4, North and South Wokingham. Separate master plans called Supplementary Planning Documents (SPD) have been produced for each SDL along with an overarching Infrastructure Delivery and Contributions SPD which covers all of the SDL's.

These documents have been subject of extensive public consultation which is summarised in each document. I would personally like to thank the Council Officers and the many members of the community and others who have put so much effort in these documents evolution to date.

This consultation will give everyone an opportunity to help in developing them further.

The Infrastructure Delivery and Contributions SPD has evolved from work undertaken in preparing the Core Strategy and is aimed at delivering a viable infrastructure rich solution to support the new developments. This infrastructure provision funded by developers has to be related to the development.

However, there is no doubt that the major infrastructure provision that can be achieved by supporting residents views that concentration of major development in a few locations will have major benefits for existing residents through provision of much needed highways improvements, new and expanded public transport, community facilities including schools, local shopping facilities, employment and public open space.

The key messages running through these documents and other emerging planning guidance and policy is that I expect an infrastructure rich solution and that in allowing new development in the Borough I will expect it to be of the highest possible design quality.

I appreciate that many people do not want new development at all but given the circumstances, not least the government dictate on housing numbers, I have been encouraged that residents recognise that fact and if we have to have further development then it must be of the very highest standard.

I aim to ensure that developers demonstrate conclusively that they will work with the council and the community in delivering high quality design solutions. The challenge to them is not just to meet current design standards but to exceed them and set new standards of excellence.

Strictly speaking these are not new communities but are new areas of development that will be expected to integrate with the existing communities and be in keeping with the area in which they will be located. Where they adjoin existing communities I will expect developers to give particularly careful attention to the interaction and relationship between established and the new.

Where the developments adjoin countryside or open land I will expect a sensitive solution to the transition between built and undeveloped land. In parallel with this project the council will actively resist unsatisfactory and insensitive back garden or back land development outside of the SDL sites, where further small development will take place but at a much smaller level. The provision of our major new housing and other development in the way the council has proposed will strengthen that position.

These and other emerging documents will provide the framework through which developers will submit their planning applications. These applications will be tested against this guidance and those found wanting will be refused or re-negotiated in order to find the right solution.

In summary, this guidance aims at delivering infrastructure rich high quality design solutions for the Strategic Development Locations. I realise that new development will not please everyone by setting exacting requirements for what will be provided and with community involvement I believe we can deliver development that we can be proud of.

I would encourage as many residents as possible to get involved in this consultation as their input will be crucial in the final master plans that will set the scene as to how Wokingham evolves over the next 20 years and beyond.

*Councillor Gary Cowan
Executive Member for Local and Regional Planning,
Wokingham Borough Council.*

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Section 1: Introduction



Arborfield Garrison is a major opportunity to deliver an infrastructure rich and high quality new village on predominantly brownfield land. The location is identified in the South East Plan and the Wokingham Borough Core Strategy as being capable of accommodating 3,500 new homes with associated new employment development and necessary community infrastructure. The existing character of the location and its rural context lends itself to a development in which the landscape is a dominant and influential feature.

1.1 Background

- 1.1.1 The South East Plan - Regional Spatial Strategy for the South East Region includes a requirement of 12,460 (to be confirmed) net additional homes for Wokingham Borough between 2006 and 2026. Wokingham Borough Council (WBC) responded to this regional requirement by identifying four Strategic Development Locations in the Wokingham Core Strategy (WCS) to accommodate the majority of housing (10,000 new homes).
- 1.1.2 The identification of four Strategic Development Locations (SDLs) within Wokingham Borough represents a major and unprecedented opportunity to plan for new development in a comprehensive manner, to ensure that the development of new homes goes hand in hand with the provision of essential physical and community infrastructure. The objective is not simply to meet housing targets, but to plan for the long-term delivery of sustainable

urban communities, and to avoid the need for piecemeal small scale housing development which may harm the character of well-established communities. The four SDLs are:

- **Arborfield Garrison;**
- **South of the M4 Motorway;**
- **South Wokingham; and**
- **North Wokingham.**

- 1.1.3 Each SDL is subject of a separate Supplementary Planning Document (SPD) and an overarching Infrastructure Delivery and Contributions SPD, which sets out how and when infrastructure is to be provided and the mechanisms for securing this.
- 1.1.4 The Arborfield Garrison SDL lies to the south west of Wokingham Town and comprises the current Garrison site, Hogwood Farm and Industrial Estate and land immediately to the south.



1.2 The Purpose of this Document

1.2.1 This SPD has been produced by WBC as a guide for future development of the site and to establish the Borough Council's expectations on masterplanning, design quality and infrastructure requirements. It does not contain detailed proposals for the SDL but, once adopted, will be a material consideration in determining the appropriateness of planning applications and in moving forward through implementation. The document has been prepared on the assumption that Outline applications will be submitted followed by Reserved Matters applications as appropriate. For the avoidance of doubt, any standards or requirements set out in this document will also apply to submission of Full applications.

1.2.2 The SPD relates to the area of land identified in red on **Figure 1.1**. The SPD does not include new policies for the SDL but builds on the Wokingham Core Strategy (WCS), in particular Policy CP18 and the Arborfield Garrison Concept Statement contained in Appendix 7. It should be read in conjunction with the WCS and Infrastructure Delivery and Contributions SPD for the SDLs.

1.2.3 The SPD has been prepared in accordance with the provisions of the Town and Country Planning (Local Development) (England) Regulations 2004 (as amended).

1.2.4 Extensive up-front consultation has taken place and views have been taken into account in the formulation of this document as summarised in Section 2 and set out in a separate Statement of Community Involvement. This draft SPD is subject to a formal 6-week consultation in accordance with Regulation 18 Town and Country Planning (Local Development) (England) (Amendment) Regulations 2004.

1.2.5 The SPD has been prepared through a process involving the current development consortium, landowners, the public, stakeholders, representatives from public sector agencies, and Officers of the Council. It aims to balance the aspirations and objectives of all of these groups with acknowledged best practice principles for the design and development of sustainable, high quality places.

1.3 The Role of the SPD: Establishing Good Design and Delivery

1.3.1 This SPD sets out the minimum design standards which must be achieved to deliver the new development. Developers will be encouraged to exceed these standards where possible and will be expected to apply new standards that arise during the life of the document.

1.3.2 The guidance given here reflects up to date best practice and the general principles can be used to inform all new development in Wokingham.



1.3.3 The key elements of the SPD are:

- a spatial framework plan which should form an important consideration in the “developer’s” Master Plan;
- design principles aimed at delivering a high quality scheme;
- requirements for addressing sustainable design;
- requirements relating to the scheme’s delivery; and
- requirements which must be met at the Outline planning application stage and beyond to ensure adequate and consistent approaches to quality and delivery.

1.3.4 It should be read in conjunction with other Government policy documents relating to large-scale development, sustainability, and design, in particular:

- Planning Policy Statement (PPS) 1 including Planning and Climate Change Supplement;
- PPS3;
- By Design (DETR);
- The Urban Design Compendium (editions 1 & 2) (Homes and Communities Agency);
- Places Streets and Movement: Better Places to Live by Design (CABE); and
- The Manual for Streets (DfT).

1.3.5 These documents collectively promote a consensus view of good design principles which should lie at the heart of the design of the SDL, comprising:

- **Character** – somewhere with a sense of place and local distinction;
- **Legibility** – a place which is easy to understand and navigate;

- **Permeability** – achieving a form of layout which makes for efficient pedestrian, vehicular movement and public transport provision ensuring places connect with each other;
- **An articulated townscape** – creating an interesting, contextually responsive townscape utilising building height, scale and massing, all of which should be related to human scale;
- **An integrated landscape** – a place which responds to its landscape setting and draws green space and infrastructure into the heart of the development;
- **Human scale** – the arrangement of building forms which are easy for the human eye to read and provide a sense of scale and perspective;

- **Secure, natural surveillance** – creating places which are properly overlooked and make for effective passive and active policing;
- **Detailing, richness and interest** – promoting ornamentation, rhythm, consistent vernacular, richness, and intrigue to the built environment;
- **Quality within the public realm** – promoting routes and spaces which are attractive, safe and uncluttered;
- **Continuity and enclosure** – promoting the continuity of the street frontage and the definition of public and private space;
- **Adaptability, robustness and sustainability** – the layout of the site and individual buildings should all contribute towards the minimisation of resources from the design stage; and

- **Diversity** – promoting diversity and choice through a mix of developments and uses, responding to local need.

1.3.6 The remainder of this SPD covers the following:

Location, Context and Policy (Section 2):

A summary of the location, characteristics, planning policy framework and consultation events (Chapter 2).

Vision and objectives for Arborfield Garrison (Section 3):

A summary of the overall concept for the site, the vision for the SDL and the key development principles.

Key Design Principles (Section 4):

An explanation of what will be required in the development proposals in order to meet the key design principles for the Location.

Climate change and sustainability (Section 5):

The development expectations for the SDL regarding sustainable design and construction.

Delivery (Section 6): A summary of the expectations for Outline application submissions, conditions and planning obligations, strategic phasing and management and maintenance.

1.3.7 The guidance provided in this SPD is intended as part of an ongoing design process. WBC will require the preparation of design codes and development briefs in advance of Reserved Matters applications in order to build upon the guidance, themes and principles set out in this document. Section 6 contains further advice on how design excellence will be carried through the planning and construction process.

1.3.8 For the avoidance of doubt, areas not shown as having specific designation will be subject to policies contained within the Managing Development Delivery Development Plan Document.

Section 2: Context

2.1 Location

2.1.1 Arborfield Garrison, situated approximately 4 km south west of Wokingham town centre and about 5 km south east of M4 Junction 11 and the edge of Reading, will provide new housing in the south of Wokingham Borough. A large proportion of the SDL is controlled and is currently in use by the Ministry of Defence (MoD). The SDL is broadly bounded to the west by the A327 Eversley Road, to the north by Langley Common Road, and to the east and south by Park Lane, as shown on Figure 2.1.

2.1.2 The Arborfield Garrison SDL falls into two broad parts north and south of Hogwood Farm. The northern part of the SDL is defined by the main Garrison complex including the School of Electronic Engineering and existing residential areas at Buttenshaw Avenue and around Whitehall Farm. The southern part of the SDL contains the Hogwood Industrial Estate, Hogwood Farm and Westwood Farm but the majority of the land is open and rural in character.

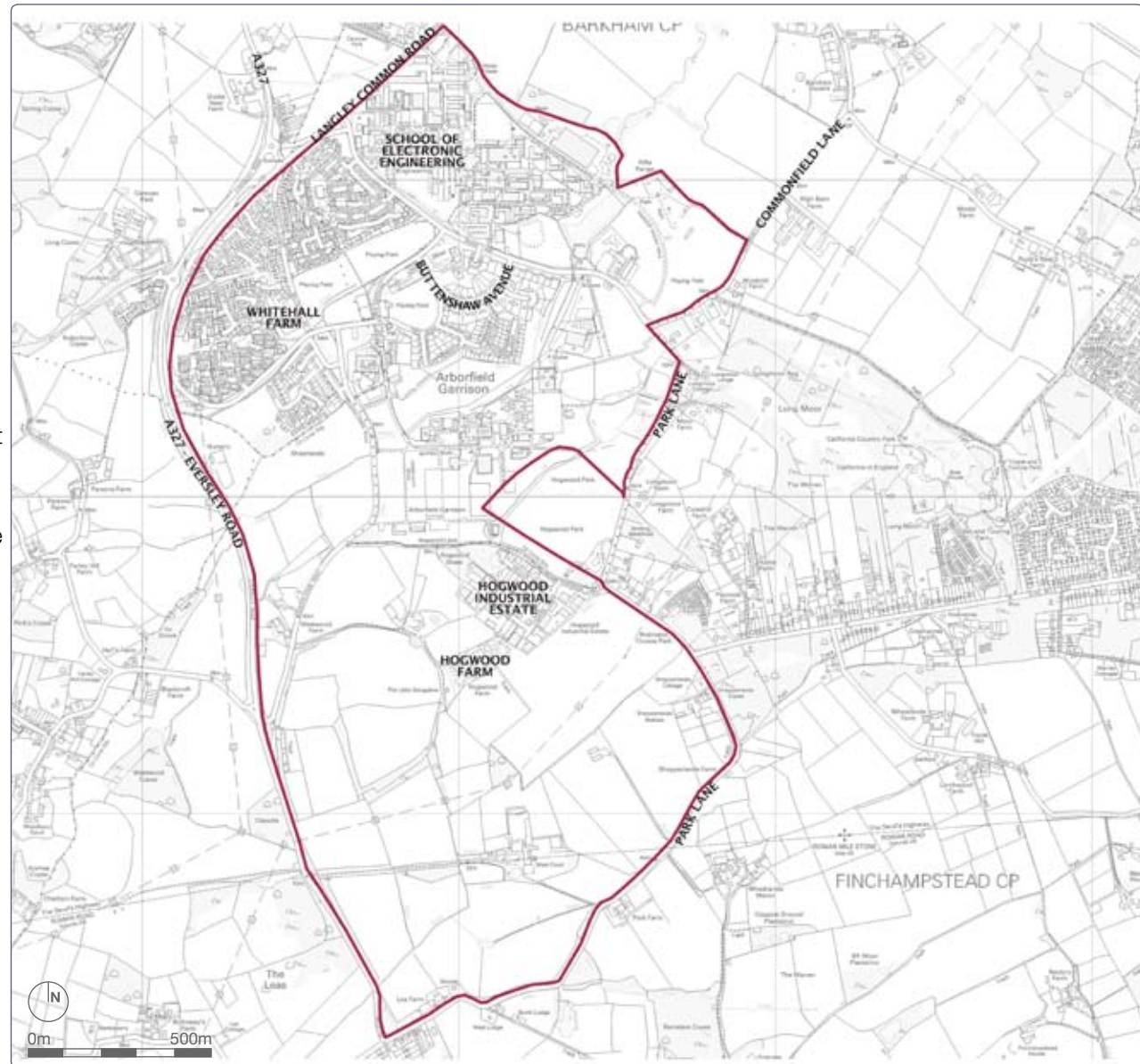


Figure 2.1: Strategic Development Location Boundary

2.2 Constraints and opportunities

2.2.1 The main physical constraints affecting the SDL have been identified as:

- existing residential areas at Buttenshaw Close and around Whitehall Farm which will need to be carefully integrated into the SDL;
- small watercourses which run across the SDL including a number of ponds which form part of a network of drainage. There is also a balancing pond to the north of the SDL which should be retained;
- pockets of mature woodland, trees and hedgerows, including formal avenues of trees on parts of the Garrison and green corridors along watercourses and drainage ditches, which would need to be incorporated into the overall landscape strategy for the SDL;
- overhead power lines running east west across the southern part of the SDL;

- a gas pipeline running across the SDL;
- a number of Listed Buildings and two Scheduled Ancient Monuments; and
- existing buildings and facilities associated with the Garrison and the School of Electrical Engineers.

2.2.2 The principal access constraints include:

- the need to establish better cycle, pedestrian and public transport links, as well as vehicular, between the SDL and Finchampstead North;
- the relative isolation from other parts of the Borough and from Wokingham Town Centre; and
- limited capacity and resulting congestion on the A327 through Arborfield Cross and other local roads.

2.3 Planning Policy Framework

A Supportive Development Plan

- 2.3.1 The South East Plan 2009 (SEP) includes a target of 12,460 net additional homes for WBC between 2006 and 2026 (average annual rate of 623 dwellings). Policy CP18 of the WCS sets out that the majority of housing growth in the Borough, some 10,000 new homes, is to be delivered through SDLs at: Arborfield Garrison, South of the M4, South Wokingham and North Wokingham.
- 2.3.2 Policy WCBV3 confirms a requirement for 3,500 homes at Arborfield Garrison plus the possibility of additional development during and/or after 2026. However, the Inspector's Report on the WCS Examination confirms that 3,500 new homes is an appropriate guideline figure for the plan period.

2.3.3 Policy CP4 states that planning permission will not be granted unless appropriate infrastructure is agreed for major development. Policy CP18 sets out key requirements for the development of Arborfield Garrison, in summary:

- phased delivery including 35% affordable housing (as supported by Policy CP5 of WCS);
- employment (as supported by Policy CP15 of WCS) and appropriate retail facilities;
- social and physical infrastructure;
- measures to maintain separation from Arborfield Cross, Barkham Hill and Finchampstead North;
- necessary measures to mitigate the impact upon Thames Basin Heath Special Protection Area (as supported by Policy CP8 of WCS); and

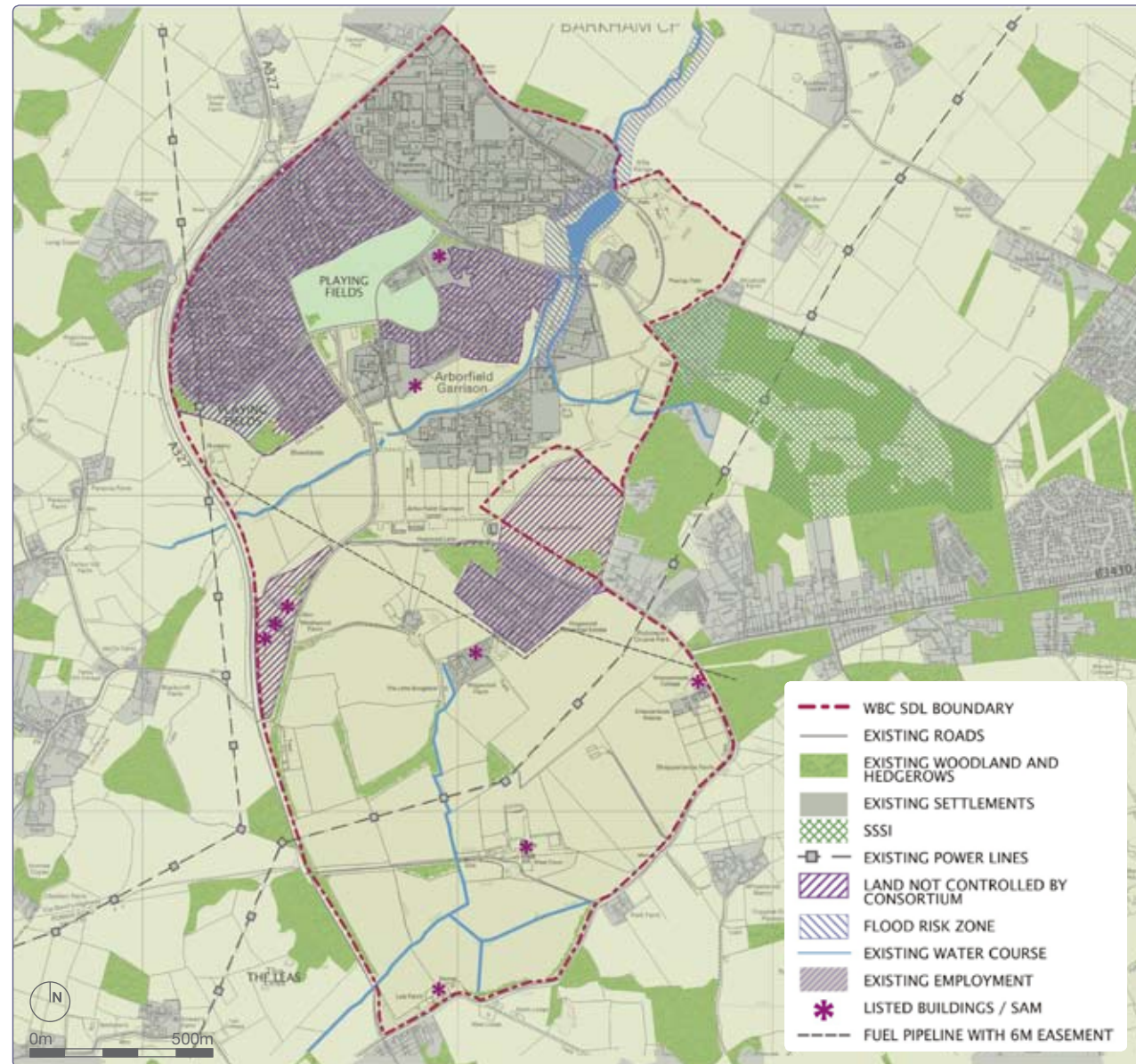


Figure 2.2: Constraints Plan

- improvements to transport capacity along A327 and routes towards Bracknell and Reading and measures to improve accessibility by non-car modes (as supported by Policy CP10 of WCS).

2.3.4 In terms of key infrastructure requirements, the supporting text identifies the need for around 30,600 M² of additional employment space. Policy CP16 identifies Hogwood Industrial Estate as a Core Employment Area within which development for business, industry or warehousing will be permitted including expansion and intensification of existing uses. The supporting text also identifies the need for new primary schools and a relocated secondary school.

2.3.5 A Concept Statement for Arborfield Garrison is appended as part of the WCS and, along with other policies of the WCS, forms the basis for this SPD. The Concept Statement includes

a Concept rationale, strategic objectives and key requirements including landscape structure, sustainability, infrastructure, housing land and mix, key design principles and planning obligations. The detail of the Concept Statement is not repeated in this summary. The strategic objectives and key design principles are elaborated in Section 4 of this SPD. In summary, the objectives for the SDL are:

- ensuring the overall scale of the settlement at Arborfield Garrison creates a sense of community through balancing the mix of dwelling types and sizes and providing local services and community facilities;
- focusing on appropriate mix of uses including convenience retail, nursery, primary and secondary education, primary health care and community facilities in new district and neighbourhood centres;

- responding to the attractive rural setting ensuring that development is absorbed into the landscape maintaining physical separation with Arborfield Cross, Barkham Hill and Finchampstead North;
- providing strategic and local transport linkages and enhancements including a public transport interchange facility;
- integrating existing residential development on the periphery of the SDL to provide safe and convenient access to new services and facilities;
- enhancing local employment opportunities to provide scope for people who wish to live and work in close proximity; and
- accounting for the setting of the Listed Buildings and Scheduled Ancient Monuments within the SDL and integrating them carefully with new development.

Planning guidance

- 2.3.6 There are other SPDs and other Supplementary Planning Guidance produced by WBC which should be read in conjunction with this SPD. These include:

Supplementary Planning Documents

- Barkham Village Design Statement 2007.
- Infrastructure Delivery and Contributions for Strategic Development Locations 2009.
- Wokingham Borough Design Guide 2007.
- Sustainable Design and Construction SPD 2010.

Other relevant documents

- Wokingham Borough Strategic Flood Risk Assessment 2007.

- Highway Design Guide 2004.
- Highway Design Guide Review 2010.
- Design and Access Statements 2006.
- Landscape Character Assessment SPG 2004.
- Pre-application advice and contributions 2009.

- 2.3.7 The Managing Development Delivery Development Plan Document (DPD) is expected to be adopted during the lifetime of this SPD. The DPD will translate high level policies of the Core Strategy into more detailed development management policies.

- 2.3.8 Other planning guidance is likely to emerge during the lifetime of this document which is likely to be relevant to determination of planning applications.

2.4 Community Engagement

- 2.4.1 This SPD has been prepared in consultation with the developers, the local community and other stakeholders. The full details of the consultation undertaken are contained in the Statement of Community Views (SCV).

- 2.4.2 Three workshops were held to help inform the initial options phase of the SPD process as follows:

Stakeholder Workshop (14th May 2009 Wokingham Borough Council Offices)

- 2.4.3 The stakeholder workshop involved a half-day event comprising invited technical stakeholders and the developer consortia from each SDL. It provided an early opportunity for issues and opportunities to be highlighted and key SDL constraints to be discussed.



Community Workshop 1 (20th June 2009 Arborfield Village Hall):

2.4.4 The workshop was held in conjunction with the consideration of South of the M4 SDL. The morning session involved a discussion of the key issues and a visit to the SDL. Clear themes emerged from the workshop which can be summarised within broad headings:

- Traffic and Travel; in relation to residential amenity, road capacity and movement choices.
- Community and Social Infrastructure; in relation to open space provision and availability of services for all ages.
- Environment; in terms of environmental quality, such as reduced impacts from flooding and noise.

- Character; so that new development fits well with the existing context.
- Economy; to preserve and enhance employment opportunities.
- Delivery and Funding; in terms of developing a suitable phasing strategy to ensure adequate infrastructure is put in place in the early stages of development.

2.4.5 The afternoon session involved a site planning exercise in which tiles could be plotted on a map showing locational preferences for development on the SDL. The results of the exercise are recorded in the SCI.

Community Workshop 2 (25th July 2009, WBC Offices, Wokingham)

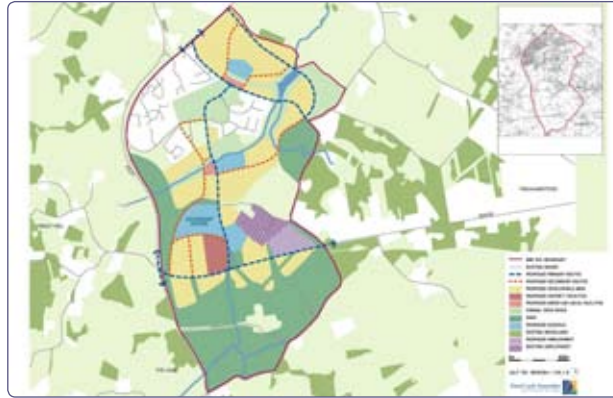
2.4.6 The second workshop provided an opportunity for those unable to attend Workshop 1 to be involved in the process and a further

opportunity for the previous attendees to comment and ask questions. Notably, two strategic options were produced and displayed for comment. In addition, views were sought over the character and form of development. Key points included:

- the need to reflect the existing character of the Arborfield and Barkham areas and to make the most of existing buildings and retain and enhance the landscape structure;
- some concerns about traffic issues relating to extensions of the Hogwood Industrial Estate but recognition of employment benefits; and
- an emphasis should be placed on sustainable construction measures, especially regarding utilities and water resources.



Option 1: Southern Link Focus.



Option 2: General Spine Focus



Option 3: Central Area Focus

Options Exhibition

2.4.7 Following the workshops, an Exhibition was held to display three strategic options and to seek views on the overall options and the various components of the options. The main boards were displayed at WBC offices and brochures at various other venues throughout the Borough. The exhibition and questionnaire were available in electronic form on the Council's web site. The exhibition ran for six weeks during September and October 2009 and questionnaires and comments were collated, recorded and analysed. The key issues arising from the consultation included:

- a clear difference of opinion over the location of the district centre, with some respondents preferring the centre of the site to maximise pedestrian accessibility across all neighbourhoods and others suggesting it should be located off Nine Mile Ride Extension for residents of Finchampstead North and beyond;
- a divergence of views about whether Nine Mile Ride should form a primary route in/out of the site, with some concerned about impact upon residents of Finchampstead North and others concerned that downgrading the road would lead to greater traffic levels on less suitable roads in the Barkham area;
- mixed feelings about extending Hogwood Industrial Estate, with some concerned about traffic implications whereas others supported the idea of more jobs in close proximity to the new homes;
- strong support for Suitable Alternative Natural Greenspace (SANG) located to the south of the site, and for the retention of the existing green infrastructure at Arborfield Garrison;
- support for further neighbourhood centres, for example off Biggs Lane, and the co-location of schools with district/ neighbourhood centres; and
- A general acceptance of a north-south spine route but concern about primary routes accessing Langley Common Road.

2.4.8 A summary of all the comments submitted can be found in the SCV.

Section 3:

Development Concept

3.1 Vision for Arborfield Garrison and development concept

3.1.1 Arborfield Garrison presents a rare opportunity within Wokingham Borough to redevelop a previously used site for a new community. In supporting the allocation of Arborfield Garrison through its Core Strategy, the Council expects to see a master plan for a progressive and distinctive settlement with a unique local identity.

3.1.2 Set within attractive landscape, Arborfield Garrison's large scale mature trees, watercourses and historic buildings provide an important context for a distinct settlement which draws its character references from these natural and well established features. This high quality setting provides an ideal physical framework for master planning. It requires an equally high quality development response, and the Council expects that the new settlement at Arborfield Garrison will be a Twenty First Century model of a sustainable, integrated place. The Council is looking to developers to show commitment to this approach in order to deliver a place that we can all be proud of and residents and visitors alike will enjoy. The requirements for "Building for Life" must be adhered to.

3.1.3 Carbon neutrality must be shown to be top of the agenda for the site's owners and developers, and their strategy and programme for delivering this must be clearly set out in any Outline planning application.

3.1.4 This will be a place in which access to open space, play and sports facilities will be a priority. Connected by safe walking and cycling routes, there will be an emphasis on promoting opportunities for healthy and active lifestyles.

3.1.5 The development must be planned and developed to achieve a good degree of self-containment. The daily needs of its residents must be catered for through provision of a mix of services and employment opportunities which are easily and safely accessible. Planning for efficient and convenient public transport for those undertaking journeys beyond the SDL must be evident, and the use of alternative modes of travel must be made appealing and attractive for local trips. The Local Planning Authority will need to be reassured that incentives and innovations are in place to encourage residents to adopt sustainable travel patterns from the scheme's inception.

3.1.6 New buildings at Arborfield Garrison will demonstrate the use of sustainable building techniques to ensure high levels of energy efficiency. Whilst the character of the architecture and the finishing materials used should draw on the local context, the style of the buildings is expected to be contemporary in so far as it reflects the influence of sustainable building design. Building construction techniques must minimise waste and embodied energy, and again this will need to be demonstrated at the Outline application stage. The SDL scheme should strive to become an exemplar scheme where public buildings demonstrate best practice in green building design.

3.1.7 A wide range of housing types, sizes and tenures will be made available to ensure housing choice and inclusivity for the widest possible group of residents. The layout and design of residential areas will create local distinctiveness in response to the setting of the site and the master plan structure. Variety will be evident as people move through the SDL, however, a sense of cohesion should prevail as a result of the materials used.

3.1.8 The scale of the development offers an opportunity for local energy generation, and water and waste management schemes. These are seen as essential components of the development. In addition, proposals for local food production and composting must be formulated. Long-term management of the landscape will encompass such activities and plans to demonstrate how this will be achieved will be required.

3.2 Development components for the Master Plan

3.2.1 The following development components must be evident in the master plan for the SDL. Each component will be governed and guided by the principles set out in Section 5.

- i) A **landscape framework** which embodies a green infrastructure and open space strategy, including provision for Suitable Alternative Natural Green space (SANG). Natural features and groups of trees and hedgerows should be incorporated, and the framework should integrate seamlessly with the rural surrounds at the edges of the SDL. Provision for additional sports, play and recreation is to be a priority.
- ii) **Residential neighbourhoods**, scaled and designed in accordance with the principles of walkable neighbourhoods, to provide an appropriate mix of housing to suit the needs of the whole community.

iii) **Character typologies** which reinforce the structure of the place. The intensity of development (density), the street types and the design of the public realm will combine to establish local distinctiveness.

iv) **One District and two Neighbourhood centres** designed to act as focal points within the residential neighbourhoods, providing local retail, community, recreation and education facilities for the residents of the SDL to enable them to access local facilities without the need to travel. Centres will include well designed public spaces capable of catering for a variety of functions, as well as enhancing the quality of the public realm experience.

v) **Employment** provision, through local services and facilities, within the District Centre (B1) and at designated employment sites (Use Classes B1, B2 and B8 at Hogwood Industrial Estate extension) to ensure a range of employment opportunities.

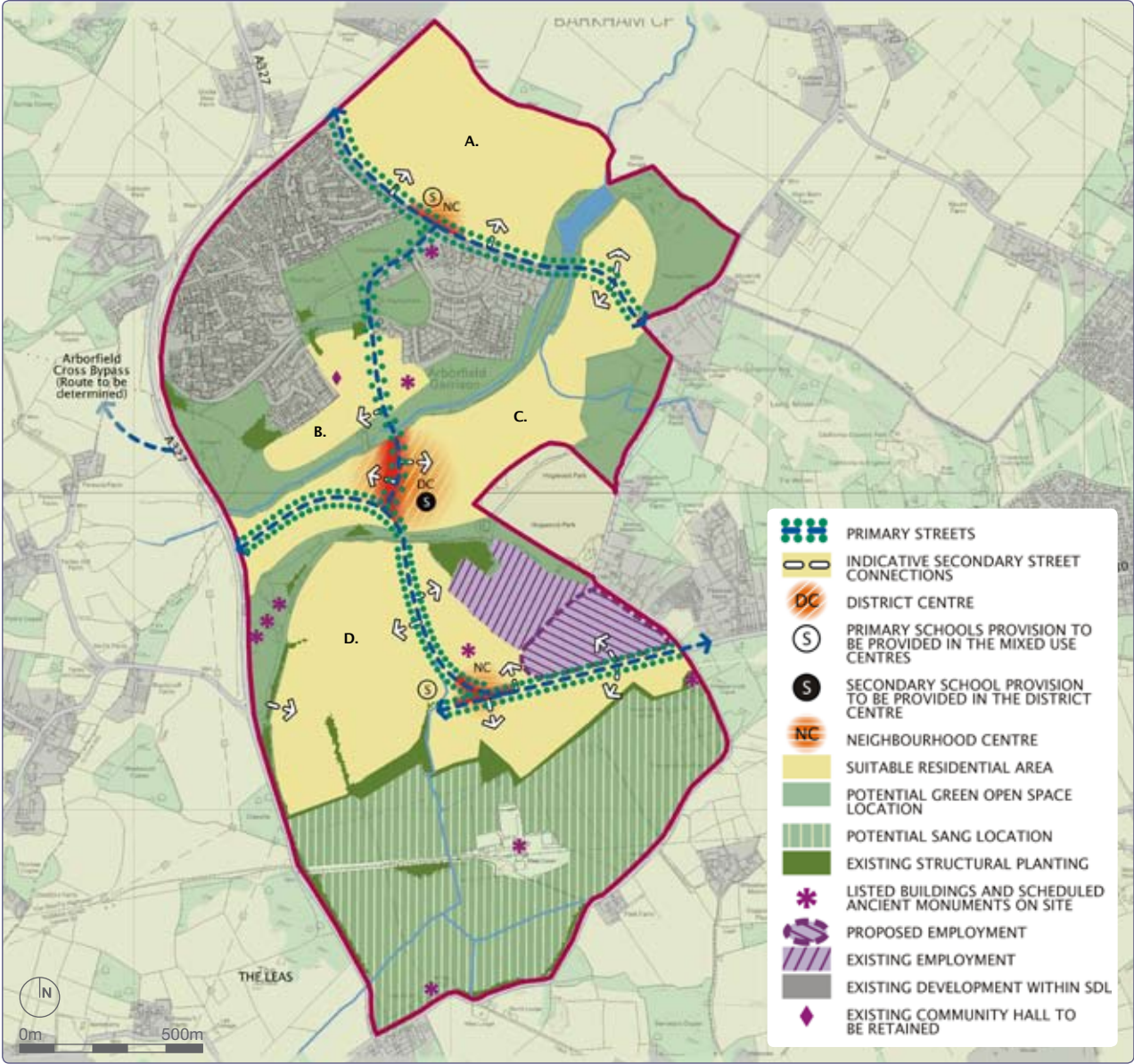
vi) An **access and movement framework** to include provision for a public transport interchange within the District Centre, and to facilitate easy and safe walking and cycling both within the development and to adjacent areas. Movement is to be catered for through the provision of a hierarchy of routes which distinguish between higher and lower order routes.

vii) **Physical connections to existing communities** to ensure community integration and access to new and existing facilities.

viii) The **integration of Listed Buildings**, elements of military heritage, Scheduled Ancient Monument and other key buildings to be retained and re-used.

3.2.2 The accompanying spatial framework plan (**figure 3.1** opposite) highlights the anticipated configuration of the strategic development components outlined above.

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	Approximate Indicative area (ha)	Indicative dwelling capacity (dwellings)
Area A	35	950
<i>Includes Neighbourhood Centre and a primary school</i>		
Area B	10	300
Area C	39	750
<i>Includes District centre and Secondary School</i>		
Area D	56	1,500
<i>Includes Neighbourhood Centre and a primary school</i>		
		3,500

- Notes
1. SDL to be planned according to guideline figure of 3,500 dwellings up to 2026
 2. Land for Schools assumed as up to 10 ha. for Secondary School and 2 ha. for each Primary School.
 3. Land for each centre assumed to be up to District Centre and up to 1.5 ha for Neighbourhood Centres.

Figure 3.1: Spatial Framework Plan (exact development areas to be agreed through ongoing discussions with LPA)

Section 4: Key design principles

4.1.1 This section takes each component of the Master Plan and provides a set of principles and requirements to guide the design of the SDL, both at the Outline application stage and for any subsequent Reserved Matters applications.

4.1.2 These principles are seen as a starting point for ongoing design, and are by no means exhaustive. Applicants are expected to develop and refine these ideas at the Outline and Reserved Matters stages, and to demonstrate how they have taken account of these principles through their Design & Access Statements and applied these to the development as a whole as well as individual sites.

4.1.3 Reference is made to the WCS Concept Statement requirements and the Council's Landscape Character Assessment SPG. In evolving these, a list of development requirements are grouped according to a number of design and development principles. Applicants are required to respond directly to these objectives and themes through their Design and Access Statements, in order to demonstrate and explain how they have been taken into account.



Arborfield Garrison already benefits from a number of high quality open spaces that are fronted by development. These must be incorporated into the landscape framework for the SDL.

1. Landscape Framework

The Core Strategy requires:

- **A clear landscape framework which integrates the development with the landscape and shows how the urban edge will be managed; and**
- **A positive response to the topography of the site and existing tree planting, which should be incorporated into the layout.**

The following design principles build on this requirement.



The remnants of a magnificent avenue of oak trees are a distinctive feature around West Court in the southern part of the SDL. These features provide important design clues that must inform the design and layout of the SDL.



An avenue of horse chestnut trees adjoins the gymnasium building at Arborfield Garrison and must be retained as part of the layout of development.



These horse chestnut trees and hedgerows adjoin Nuffield Road at Arborfield Garrison. Mature trees are a key asset of the SDL and must be retained.

Design Principle 1a: The landscape framework is of critical importance in the masterplanning of the SDL. The landscape design must draw on the existing landscape context which is a unique and distinctive element of the SDL and will assist in delivering a strong character providing an enviable setting for development. This in turn has significant potential to enhance development values within the SDL.

Requirements

1a (i): The landscape framework must seek to integrate and afford importance to all existing landscape features, including the local topography, hedgerows, the existing tree pattern including avenues of trees associated with the Garrison (such as the distinctive horse chestnuts adjoining Nuffield Road and the remnant avenues of oak around West Court), watercourses (including that bisecting the site broadly from east to north west feeding into the existing balancing lake in the north eastern part of the site adjoining Biggs Lane, and that which runs from the centre of the site southwards), ponds, wetland areas, grassland, footpaths and bridleways. The applicant must demonstrate how these have influenced the master plan, and how they will be incorporated into the landscape framework and within proposed development areas.

1a (ii): The existing landscape character zones across the SDL and beyond its boundaries should inform the landscape framework, and in turn the landscape treatment within the new residential neighbourhoods. The applicant should set out their analysis of the existing landscape character zones, and clearly explain how these have influenced the master plan, and how new development will respond to this important context.

1a(iii): Particular regard must be had to the relationship between the landscape framework and the adjoining Longmoor Bog, Site of Special Scientific Interest (SSSI) as well as the California Country Park.

Design Principle

1b: The landscape framework must protect and enhance ecological habitat and biodiversity across the SDL.

Requirements

- 1b(i):** In seeking to retain and enhance the existing landscape features, consideration must be given to the protection of all ecological habitat and biodiversity features of the site.
- 1b (ii):** Any impact on the ecological habitat and biodiversity of the site as a result of built development must be mitigated against in a manner which enriches and enhances the overall habitat and biodiversity assets of the SDL. Applicants will be required to demonstrate that proposals for the protection and enrichment of habitat and biodiversity across the site are capable of delivery and, where necessary, ongoing maintenance, within the wider landscape framework.

Design Principle 1c: The landscape framework must introduce new landscape and green infrastructure features to the SDL in order to enhance and protect the residential setting and quality. Landscape design within the SDL must relate to place making at both the strategic and local level, in order to create a living and engaging landscape.

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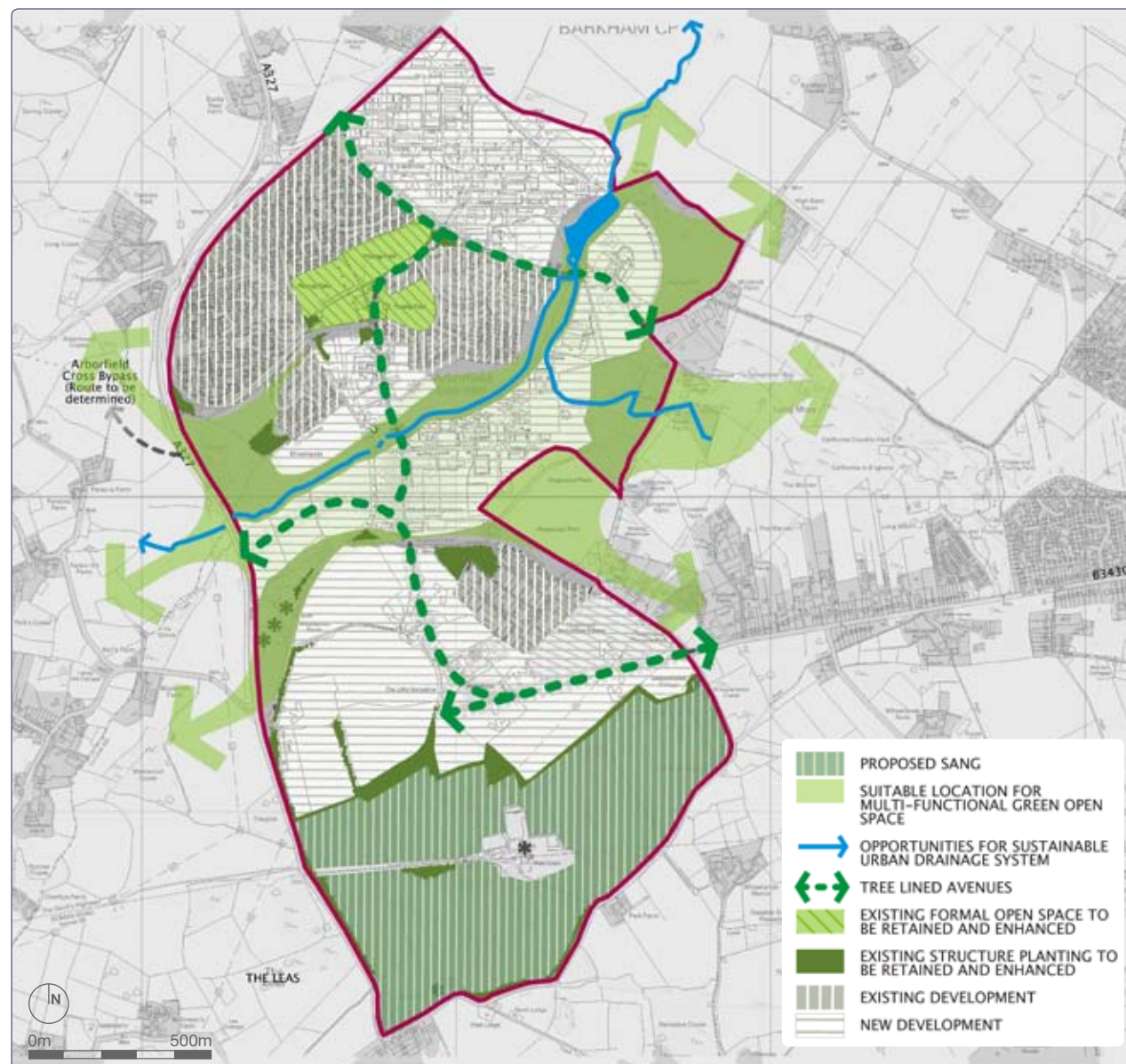


Figure 4.1: Landscape Framework Diagram



The balancing lake at Arborfield Garrison is a distinctive feature and must be carefully incorporated into the landscape framework for the SDL.

Requirements

1c(i): Public open space should be provided in accordance with Appendix 4 of the WCS and/or any subsequent DPD adopted by the Council.

1c(ii): A comprehensive system for water management must be provided, which takes account of existing site features. The new system should include, at least:

- proposals for effective sustainable urban drainage, drawing on evidence from other developments;
- measures to avoid flood risk;
- new ponds, which can enhance the recreational and visual qualities of the site; and
- wetland areas.

1c(iii): New planting will be carried out across the site to enhance the existing planting. New native



Allotment gardens should form an integral part of the landscape framework.



Outdoor play space must be conveniently located close to residential areas.

woodland and tree planting, new hedgerows, grasslands and wild flower meadows should be considered and proposed through the landscape framework.

1c(iv): In addition to open space requirements proposals for allotments and orchards should be made in order to promote local food production. These should be easily accessible for residents, and can form attractive and interesting focal points within residential neighbourhoods; on this basis they should not necessarily be located in peripheral locations, but should be integrated as part of the living landscape.

1c (v): Provision for sports and play is essential to promote opportunities for healthy and active lifestyles. Playing fields should be provided and designed in accordance with the standards and principles set out in *Fields in Trust: Planning & Design for Outdoor Sport and Play*. This will include provision for:

- designated play areas comprising Neighbourhood Equipped Areas for Play (NEAPs), Local Equipped Areas for Play (LEAPs), Local Landscaped Areas for Play, and Local Areas for Play (LAPs) from casual safety surveillance, by direct overlooking from adjacent and surrounding development, and by proximity to routes and connections through and across the site;
- Other outdoor play and recreational facilities, including Multi-Use Games Areas (MUGAs), Skate Parks, BMX Tracks, Youth Shelters, at safe and appropriate locations;
- Outdoor sports pitches, including natural turf pitches in suitably level and easy draining locations;
- Sports provision for activities such as tennis, bowls and basketball; and
- Changing facilities, club storage facilities, lighting and safe parking (including secure cycle parking).

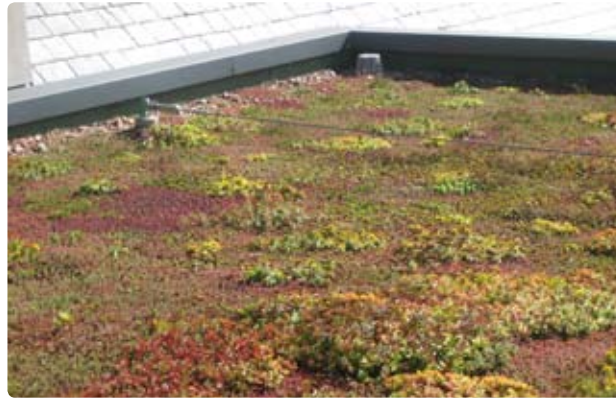
In providing for sport, existing facilities arising from the Garrison should be re-used provided that they can be demonstrated to be safe and easily accessible to residents.

Shared and dual use of sports facilities between new schools and clubs should be thoroughly explored with the Local Education Authority, local stakeholders and community groups. Where this is proposed the applicant will be required to demonstrate that such agreements can be delivered.

1c(vi): Suitable Alternative Natural Greenspace (SANG) should be provided in accordance with the requirements of the WCS, and will therefore be based on a formula of 8 hectares per 1000 population assuming an average household size of 2.4 persons per dwelling. It should take full account of the design criteria and specification of Natural England. This should be located in the southern part of the site, around West Court which is a Grade II Listed Building, as one large, comprehensive site.



At New Hall in Harlow careful attention to detail, a unified palette of materials and street tree planting create a high quality tertiary street that accommodates all users.



In Exeter a modern extension to a Listed mill building utilises a low maintenance sedum roof that minimises rainwater run-off and provides a valuable city centre habitat.



Sustainable Urban Drainage principles have been built into the layout of Broughton in Milton Keynes providing a strong setting for development and an important open space network.

Design Principle 1d:

The design of the urban landscape will contribute to the sustainability, ecology, and amenity of the development.

Requirements

1d(i): Streets will be characterised by well managed planting, to include street trees of an appropriate scale and robustness. Existing hedgerows may be incorporated into new streets where possible and steps should be taken to ensure their protection during construction and thereafter.

1d(ii): SUDS (Sustainable Urban Drainage System) will be required to permeate built-up areas of the site. Where SUDS features are present in streets they will be designed to fit that context, and to be an integral part of the street. SUDS features within the District and Neighbourhood centres are anticipated to be more urban in character, and will differ from those in residential areas and in areas of open space. The choice of surface materials for hard landscape areas will take into account the opportunity for comprehensive SUDS; this will need to be demonstrated at the Reserved

Matters stage as detail landscape schemes begin to emerge.

1d(iii): Play areas are expected to be designed on an individual basis to respond to their context. Therefore, those within the urban areas will have a different design approach to those located in areas of open space.

1d(iv): Opportunities for the use of green or brown roofs and green walls should be pursued for secondary schools, community buildings and for the supermarket. Primary schools in particular are considered suitable candidates for these features, as green roofs and walls will aid natural cooling and insulation. In addition, schools should benefit from outdoor classrooms and, good levels of sun-shading.



The landscape framework must provide for a variety of informal recreational activities as well a mix of habitats as at this linear park in Milton Keynes.



Footpaths provide ready access to this open space at Ravenswood in Ipswich. The space is fronted and overlooked by development.



Public art is an important component in the design of the landscape framework. This example is in Campbell Park, Milton Keynes.

Design Principle 1e:

The landscape framework should include high levels of connectivity between areas of open space, green infrastructure, sports and play areas in order to ensure good levels of access and use.

Requirements

- 1e(i):** A system of local recreational routes should cross the site and make provision for walking and cycling. Where possible, these routes should seek to enhance existing Sustrans routes and connect to public rights of way so as to afford access beyond the SDL boundaries.
- 1e(ii):** These routes should be regarded as green corridors, and should in themselves enhance ecological connections around the site.

1e(iii): Particular attention should be given to providing good connections between the proposed SANG and the residential neighbourhoods.

1e(iv): Within the network of recreational routes opportunities for interpretation panels should be identified in order to relate the sites cultural and military heritage to future site users.

1e(v): Art drawing inspiration from local traditions or history or providing a strong statement relating to the location as a place will be encouraged.

Design Principle 1f:

A system of landscape management should be put in place to ensure the ongoing maintenance, enhancement and stewardship of the landscape.

Requirements

- 1f(i):** The applicant must enter into discussions with WBC with regard to the ongoing management and maintenance of all of the landscape elements of the development. Innovative strategies and alternative mechanisms to maintenance by the Council should be tabled for discussion at an early stage in the design process.



This local centre at Oxley Park in Milton Keynes provides for a mix of retail opportunities with apartments above. Development fronts onto a square that accommodates areas for seating, parking and a public transport route.



The primary school at Ravenswood in Ipswich is a distinctive building that creates a local landmark and relates positively to the street and adjoining housing.

2. Neighbourhoods

The Core Strategy requires:

- A built form which supports the strategic objectives for the development and assists in creating a recognisable identity;
- Careful attention to the composition of the street frontage and street corners to ensure a continuous building line and help define the street. Long featureless blank frontages should be avoided; and
- Development which is inclusive and accessible for all in accordance with Policy CP2.

The following requirements build on these objectives.

Design Principle 2a:

The built development should be structured to create three attractive, walkable, residential neighbourhoods:

- the northern neighbourhood will focus around the area adjoining Biggs Lane;

- the central neighbourhood will focus around the existing community centre, the married Officers quarters on Tope Road, and the playing fields adjoining Baird Road; and

- the southern neighbourhood will be focused on the area between Princess Marina Drive and Sheerlands Road.

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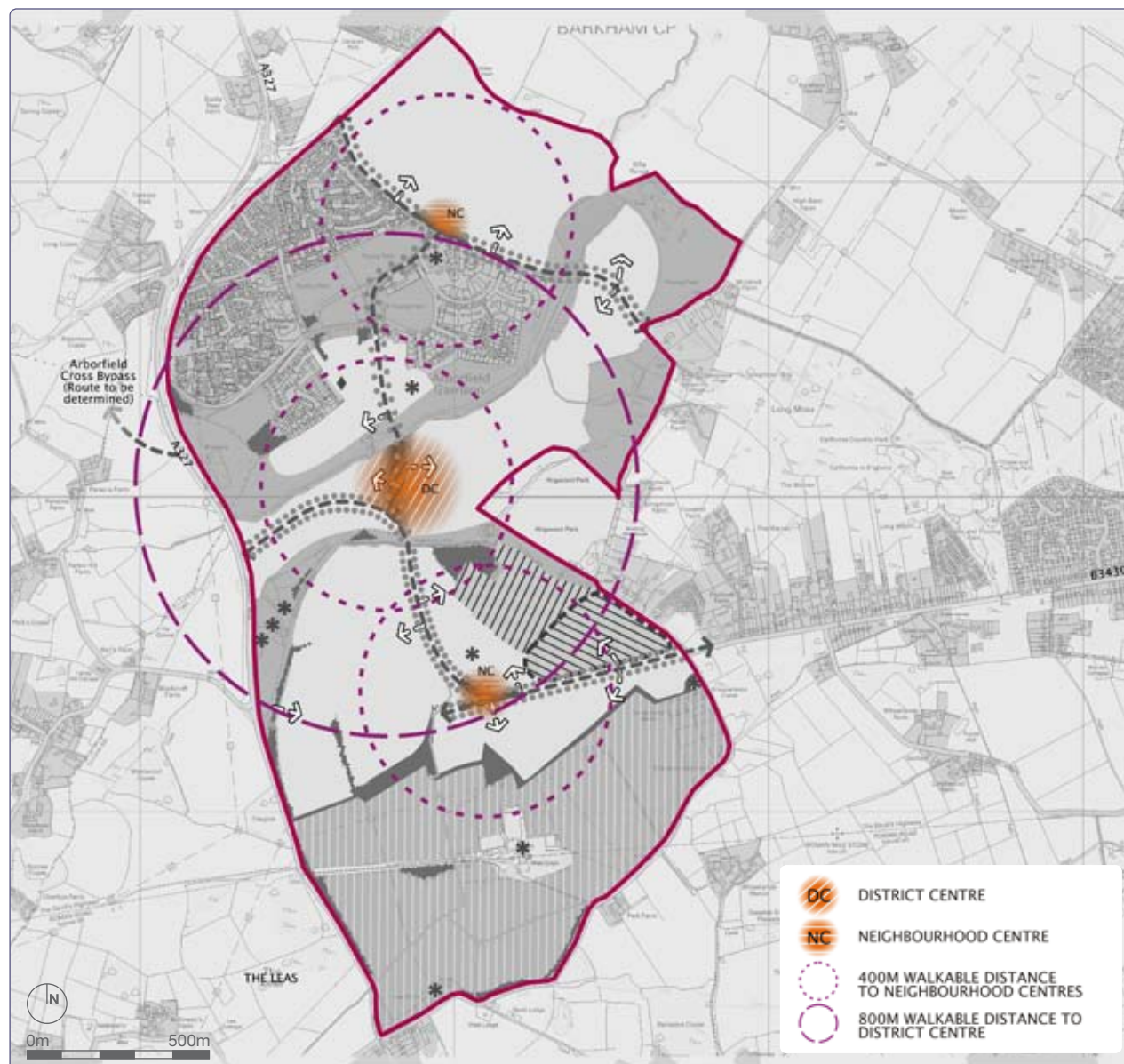


Figure 4.2: Walkable Neighbourhoods

Requirements

2a(i): Each neighbourhood should have a recognisable centre at its core, related to key streets to ensure that they are accessible and visually prominent (Biggs Lane to the north for example and the extension to Nine Mile Ride in the south). This centre should be the focal point for community activity and trade, and should therefore be the location for schools, shops, local services, health provision, indoor sports facilities, community centres and some small-scale employment.



The layout of Oxley Park in Milton Keynes places the mixed use local centre and primary school within easy walking distance of residents on a public transport route.



The development of Ravenswood in Ipswich allows for easy accessibility to key facilities by pedestrians and public transport users.



A mixed use block at Grange Farm local centre in Milton Keynes accommodates retail premises at ground floor with apartments above.

2a(ii): The layout of each neighbourhood should be designed so that access to centres is direct, easy and safe. Priorities for access should be as follows:

- the first priority should be given to the safety, comfort and convenience of pedestrians;
- second priority should be afforded to cyclists, who should also benefit from safe and easy routes, as well as secure cycle parking;
- public transport users should be given third priority for movement within neighbourhoods and to centres, with public transport stops being located within a short walk of each dwelling, and provision made for real time information and well designed shelters.

- Some parking provision can be made within the neighbourhood centres; this should be integrated into the landscape scheme for the centres, and should be shared by all facilities and services, rather than allocated for different uses. Further requirements for car parking are set out in relation to the street network and District Centre elsewhere in this section.

2a(iii): Neighbourhoods should be organised through a robust and traditional pattern of streets and blocks. Traditional streets and blocks are regarded as the most land efficient and flexible way to provide housing, and lead to safer and more active streets. They allow for the creation of private rear gardens and a variety of ways to accommodate car parking on-plot.

2a(iv): The dimension of the blocks is critical to ensure good levels of pedestrian connectivity through the neighbourhoods. Given an average residential density of between 30 - 35 dwellings per hectare will prevail throughout the site, the rule-of-thumb for residential blocks is 60m x 80m; this will allow for a range of parking options and provision for private rear gardens. Mixed use blocks can be larger where they need to accommodate larger footprint uses, but consideration must still be given to pedestrian connectivity.

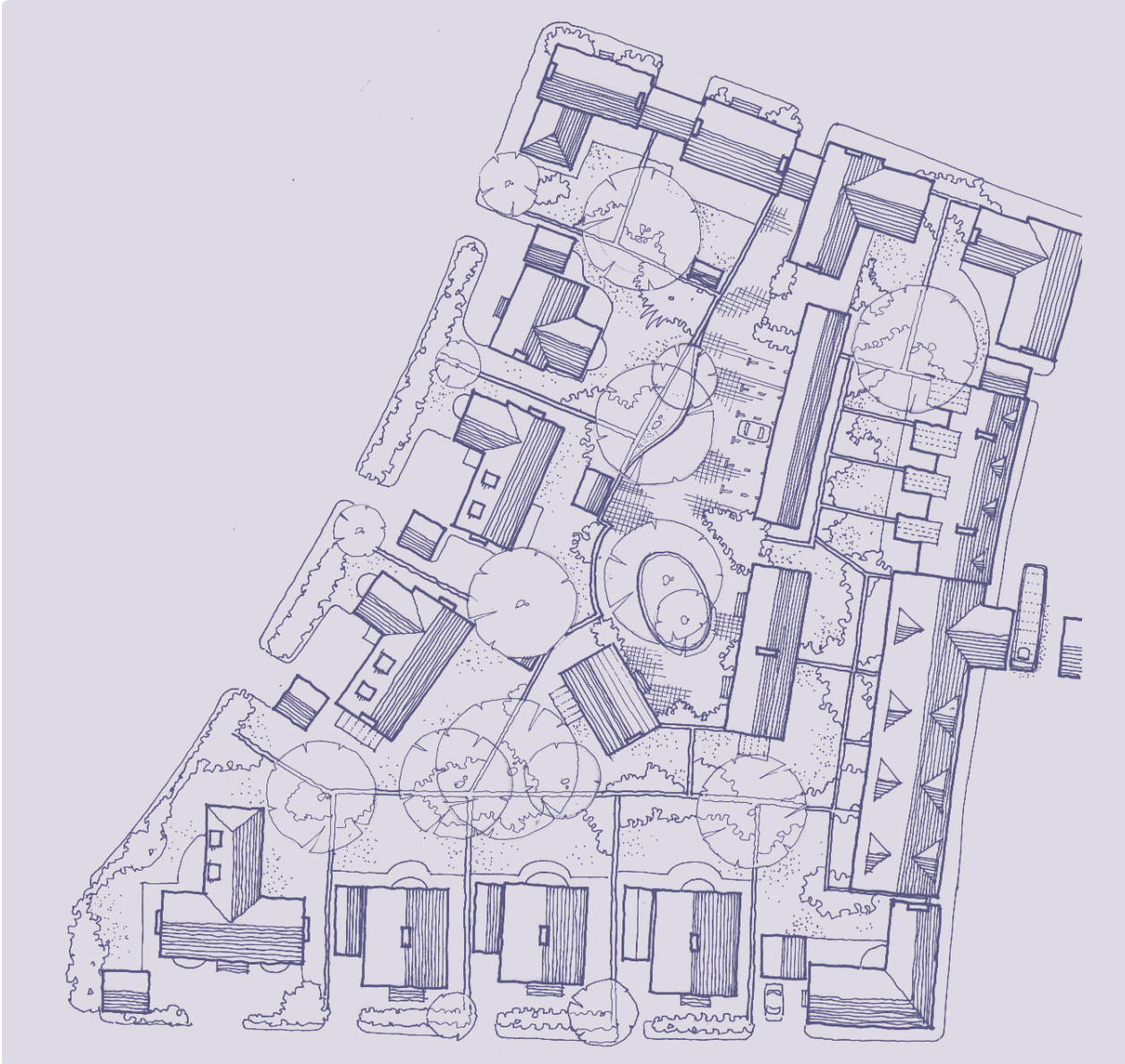


Figure 4.3: Traditional perimeter block layout incorporating mews court



The intersection between two frontages creates a corner which draws the eye and attractively terminates the vista along this tertiary street at Upton, Northampton. Paving materials and detailing are particularly well executed.

2a(v): Traditional blocks will ensure streets are fronted and enclosed by buildings. Frontages are the most publicly visible part of a building and should therefore be detailed accordingly. A clearly legible pattern of frontage development highlighted by appropriate detailing should form a key built form component at Arborfield Garrison. The intersection between two frontages often denotes a junction between two streets. The treatment of the corner in built form terms can highlight the relative importance of a particular location. A uniform approach to corner treatments, with a seamless continuation in the rhythm and appearance of the façade should be achieved.

2a(vi): Safe neighbourhoods should be achieved through the careful consideration and application of the principles outlined in urban design best practice documents and Secure by Design.

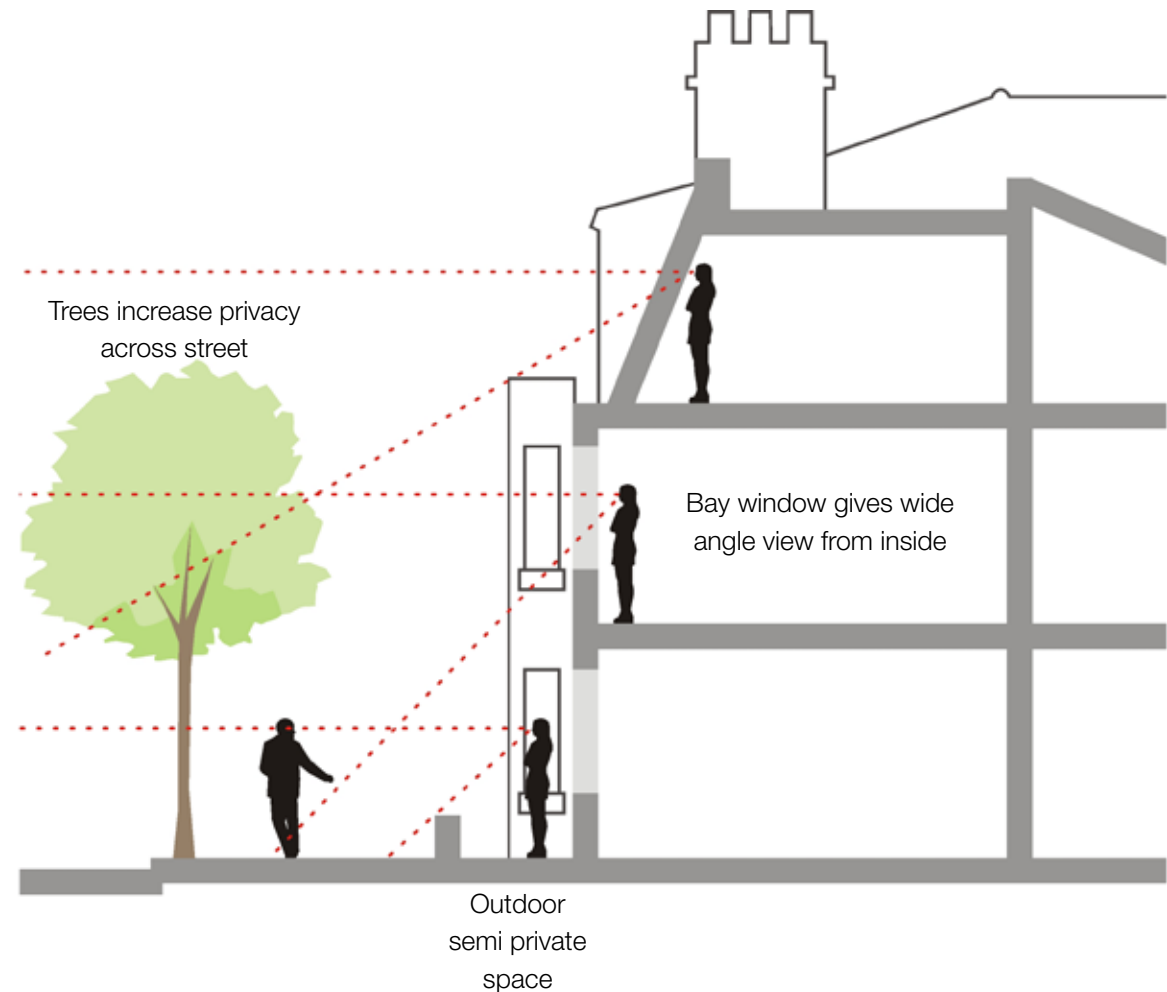


Figure 4.4: Overlooking and Natural Surveillance



The use of a taller apartment building at Accordia in Cambridge helps define and contain a primary street that accommodates tree planting.



These houses at New Hall in Harlow front the street and have a well defined base, middle and roofline which provide a clear structure to the façade.



Off-street parking at Accordia in Cambridge has been carefully considered as part of the overall street scene and incorporates opportunities for tree planting.

Design Principle 2b:

Each neighbourhood should make provision for a mix of house types and tenures in order to promote inclusivity and choice (the design of residential built form should respond to the requirements set out under “Character Types” in this Section).

Requirements

- 2b(i):** A full range of house types must be provided for, including apartments, small and larger family homes, homes for the elderly and homes for people with special needs and disabilities.
- 2b(ii):** The applicant will be expected to fully comply with the Council’s requirements for Lifetime Homes.

2b(iii): All housing will be “tenure blind” so as not to distinguish between private ownership, social rented and shared ownership properties in the appearance and setting of the dwelling.

2b(iv): Some provision should be made within at least one neighbourhood for self-built plots to enable individuals to design and construct their own dwellings.



Self-build plots can offer scope for greater variety and individual buildings. This example is at Hampton, Peterborough.

Design Principle

2c: Inclusive design is essential to the SDL in order to help break down barriers and exclusion. The needs of the diverse groups of people who will use and live at Arborfield should be fully considered.

Requirements

2c(i): The Disability Rights Commission guidance on inclusive design must be followed to ensure compliance with the Disability and Discrimination Act 1995. This requires development that is:

- Easily used by as many people as possible without undue effort, special treatment or separation;
- Able to offer people the freedom to choose how they access and use it and allow them to participate equally in all activities it may host;
- Able to embrace diversity and difference;
- Safe, legible and predictable; and
- Of consistently high quality in design and layout terms.

3. Character

Relevant Core Strategy requirements are:

- A built form which supports the strategic objectives for the development and assists in creating a recognisable identity;
- A demonstration of how the settlement edge will be managed;
- Architectural design of a high quality and which ensures a sense of cohesion. New buildings should be inspired by the character of existing high quality architecture in the Borough. Regard must be given to the Borough's Residential Design Guide;
- Vehicle parking as an integral part of the plan for the scheme should ensure limited impact on visual amenity and residential privacy. Larger surface level car parks should make provision for generous planting to aid visual containment; and
- Public art should be integrated into the design of the development.

Design Principle 3a:

Diversity and distinction within the site will be enhanced through the application of character typologies, which will reinforce the settlement structure. The typologies will inform the design of the built form, streets and spaces and landscape treatment of the built areas of the SDL.

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Three character typologies have been identified, and are shown on the accompanying plan. They promote a simple pattern which will see the most built up areas at the centres, with a gradual reduction in built intensity towards the edges of the site in response to the rural surrounds.

The following table summaries the requirements relating to the three identified typologies.

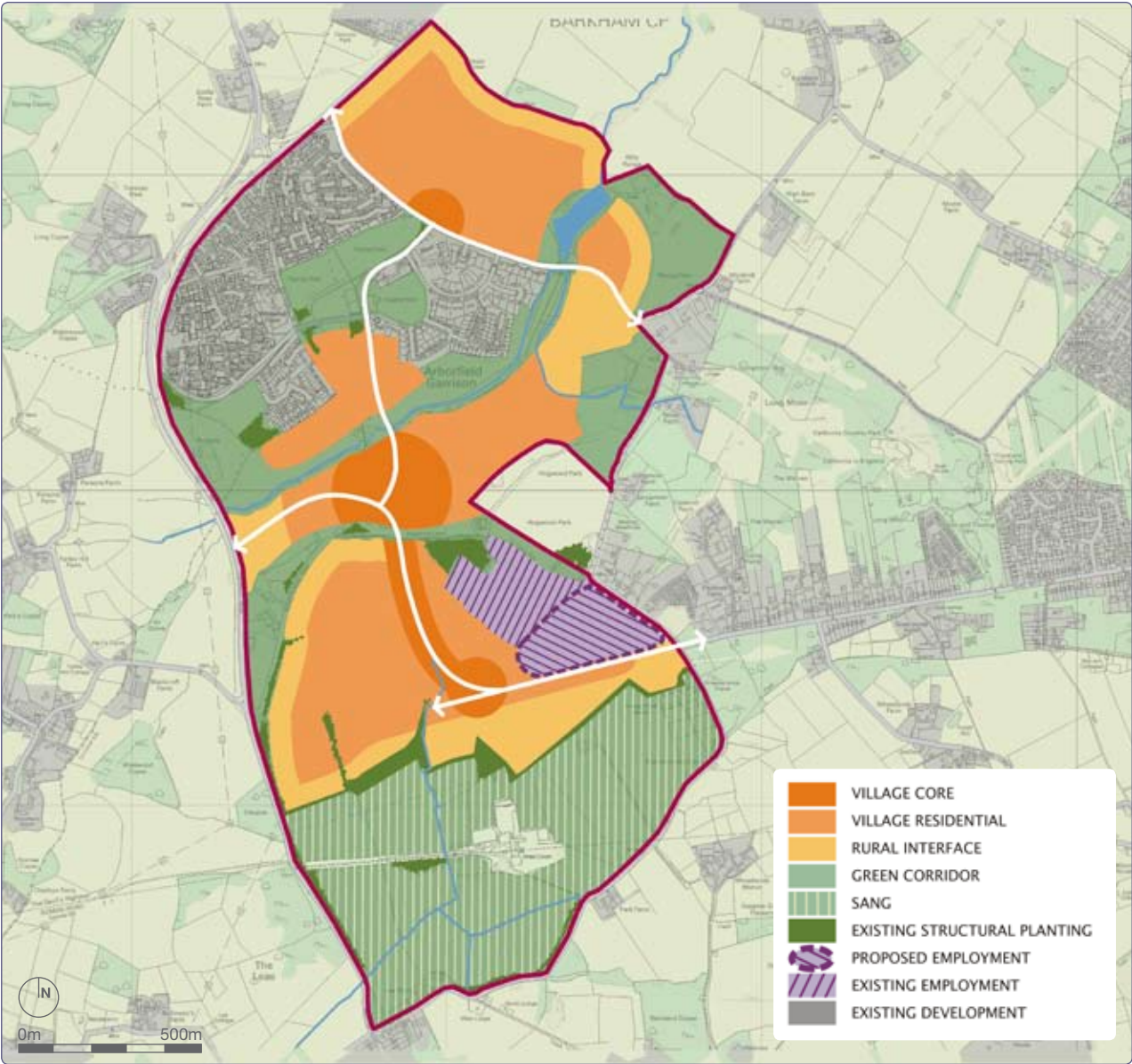
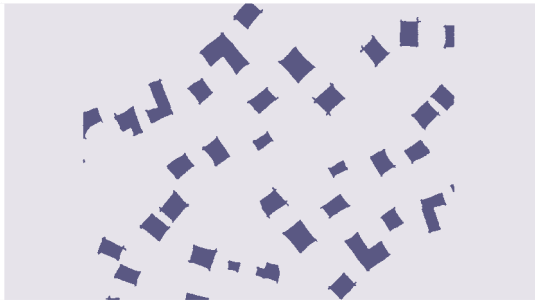


Figure 4.5: Character Typologies

Design Components	Village Core	Village Residential	Village Edge
General layout	Fine grain with continuous building frontages. Buildings perpendicular to the street to create well enclosed streets and spaces.	Generally perpendicular to the street, with some scope for relaxation in places, to create well lined but less formal streets and spaces.	Development should front onto and address open space and the surrounding landscape. Settlement edges must be carefully considered to reflect a more organic pattern of development typical to rural areas and villages. Development must not back onto open space or surrounding countryside, to ensure a positive address of these areas.
Built Form	Regular built form, generally townhouses, terraces and apartments parallel to the street. Taller properties could be justified where appropriate. No, or small front gardens. Generally narrower plot widths and regular massing will produce vertical repetition along the street and generate a more “urban” feel.	Scope for less regular built form, with shorter terraces and some semi-detached houses, with occasional detached buildings. Two storeys, with occasional three storeys at key corners and along important secondary streets. Setbacks should allow for small front gardens. Varying plot width will create variety but retain an overall sense of vertical repetition.	Larger, wider plots with larger semi-detached and detached forms, and more spacing between plots will generate a more informal, character in response to the immediate rural context. Two storeys. Sizeable gardens and more informal layout will also reinforce this character.
Indicative average residential density 30 - 35 dph (see Fig 4.6)	Approximately 40 - 50 dph	Approximately 35 - 40 dph	Approximately 25 - 30 dph

Indicative Block configuration			
Approach to streets, open space and landscape design	More formal, with an emphasis on hard landscape treatment and formal tree planting patterns with limited mix of species, in response to the more built-up character of the area and the provision of neighbourhood and district centres.	Generally informal in order to create a relaxed residential setting. Careful blend of hard and soft landscape treatment, with semi-formal planting and limited mix of tree species.	Strong reference to the rural context. Emphasis on informal and soft landscape. Very informal tree planting regime with greatest mix of species.
Residential parking	A mix of on-street and off-street parking. Parking courts can be used for apartments. Mews lanes can be used for terraces and townhouses.	Predominantly on-plot parking, with some mews parking and informal on-street visitor parking.	On-plot parking, with some informal on-street visitor parking.
Residential boundary treatment	Formal, consistent style to all residential properties with a setback. Predominantly walls and railings.	Semi-formal, with a mix of walls, or railings and hedges.	Very informal, predominantly hedges. Where properties are located at the edges of the SDL hedges should always be used.

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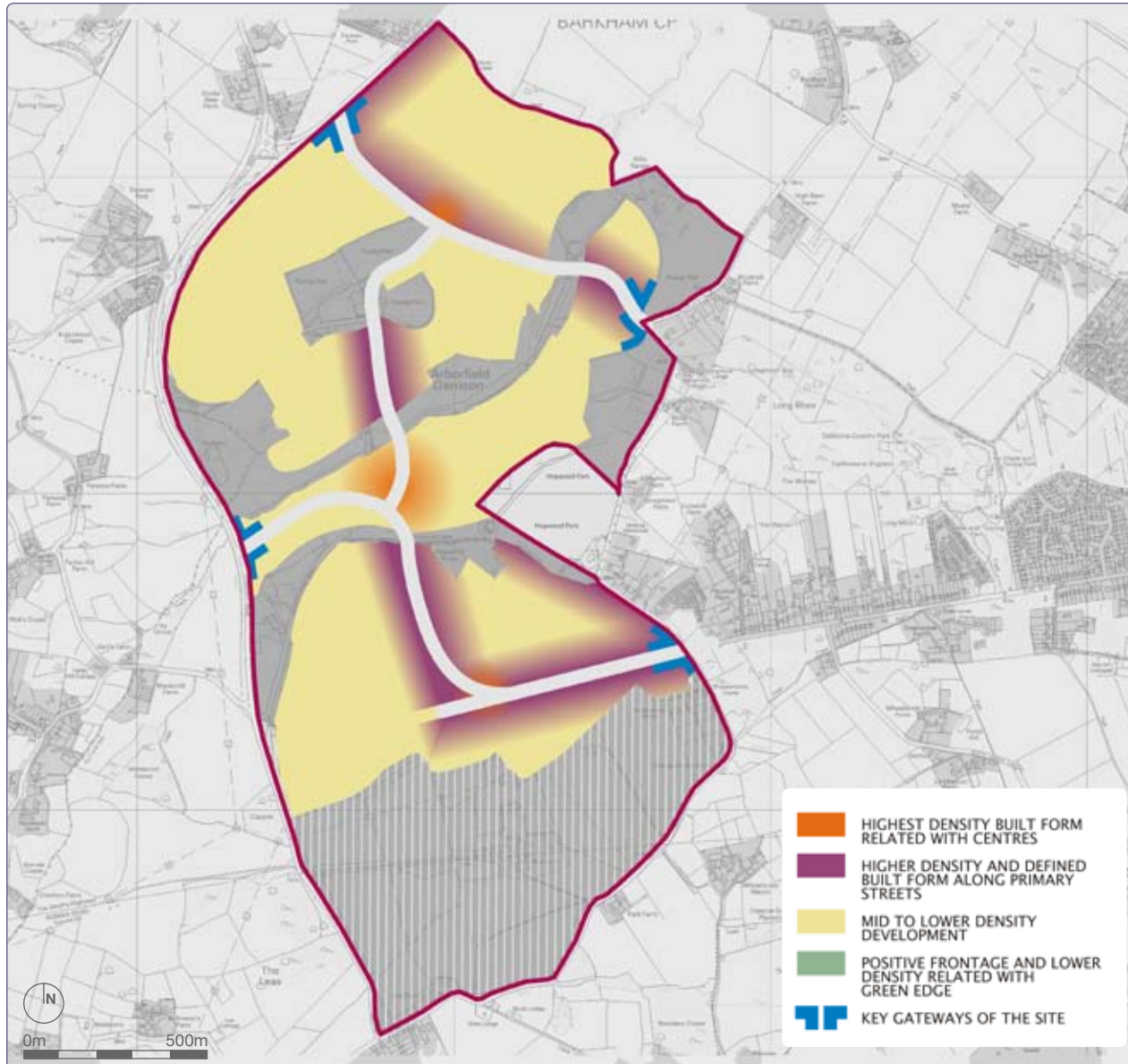


Figure 4.6: Built Form and Density



A mix of town houses and apartments are carefully arranged around shared courtyard spaces at King's Hill. The design has contemporary use of glazing and fenestration but draws references from the Kent vernacular.

Design Principle

3b: Buildings must be designed to ensure architectural and design excellence. The built form must positively respond to and draw references from the many fine buildings and rich townscape that is a strong characteristic of the Borough.



In Upton, Northampton, a terrace of town houses successfully merges traditional built forms with contemporary detailing that draws on a strong Arts and Crafts character.



The use of traditional materials that are typical of the locality together with a modern, glazed dormer window creates an interesting roofscape at Upton in Northampton.

Requirements

3b(i): The built form must not be a pastiche of traditional styles, rather it should take clear character references from the local vernacular, but should apply these in a contemporary style to ensure that buildings are of their time. Important design references include:

- careful interpretation of the Arts and Crafts character evident in the Officers houses on Buttershaw Avenue;
- key buildings from the military history of the Garrison;
- farmsteads and agricultural buildings within and close to the SDL; and
- listed buildings within the site such as West Court and Hogwood Farm.

3b(ii): The development must establish a clear pattern of well defined frontage development across the SDL. The public frontages of buildings must address streets and public spaces and be clearly distinguished from rear elevations overlooking gardens and other private spaces. This will ensure that development is 'legible' making it easy for people to find their way through the SDL.

3b(iii): Key building elevations should be designed so that there is a clear and identifiable 'bottom', 'middle' and 'top', adding visual interest. The bottom of the building should meet the ground and enliven adjoining streets and spaces through the positioning of doors and windows. A higher frequency of entrances creates a busier street. This will be particularly important in the district and local centres.



This contemporary house at Upton is very much of its time but uses a warm palette of traditional materials. It demonstrates a clearly defined building elevation and a positive relationship fronting onto the street.

The middle section of the building should give clues to its function. This can be achieved through the design and detailing of fenestration and the use of balconies and upper floor terraces. This also provides opportunities for the street to be overlooked, thus increasing passive natural surveillance.

The top of the building must also be carefully considered. An interesting and dynamic roofscape adds visual interest with roof pitch and roofline articulated to lend distinction to different parts of the SDL. With commercial buildings and schools any ventilation arrangements, air conditioning, lighting, servicing and any telecommunications equipment must be carefully designed and integrated into the overall structure of the building and must be masked from public view points. On domestic buildings consideration should be given to providing opportunities for discrete locations for satellite dishes.

Design Principle 3c: Landmark buildings will be designed and located to emphasise the role and status of a particular building or place. Landmark buildings will include those with a special architectural character, those incorporating distinctive features and those with special functions.



In New Hall, Harlow, a distinctive landmark has been built adjoining a mixed use local centre. The building accommodates apartments and uses copper cladding that will weather to verdigris over time.

Requirements

- 3c(i):** Landmark buildings should be located to aid legibility. Increases in building heights should reinforce the presence of the district and neighbourhood centres.
- 3c(ii):** The potential for existing buildings to be retained and employed as landmarks to assist with legibility and place making should be explored.

Design Principle 3d:

High quality materials should firmly establish the character and identity of the SDL, both in respect of the public realm and the built form of buildings and structures.

Requirements

3d(i): A strategy for a restrained palette of colours and materials should be prepared at the Reserved Matters stage to influence the detailed design of the development. This should include, but is not limited to warm red brick, clay roof tiles, timber cladding and panels of painted render, which are commonly found throughout the Borough. Modern interpretation of these materials will ensure that the SDL can be identified as a contemporary place. The image of place will also be reinforced by built form, decorative detailing, public art and even basic features such as windows and doorways.







A mews street at Accordia in Cambridge integrates garaging and storage into the design and layout of the development. The street is overlooked through use of roof terraces and balconies.



Use of high quality materials and street tree planting define parking bays at Upton in Northampton. The street is well overlooked by adjoining houses.

Design Principle 3e:

Vehicle and cycle parking will be well planned and designed to ensure that it does not have a detrimental impact on the amenity and character of the SDL.

Requirements

3e(i): A comprehensive strategy for car parking should be prepared, which clearly sets out how provision will be made across the scheme for both residential, visitor, employment and shopper parking. In general terms, residential parking will be accommodated on-plot, in garages or on driveways (or in combination) or in mews lanes where some degree of overlooking can be achieved. Mews lanes will be particularly relevant for dwellings fronting primary streets where direct vehicle access to the plot may be inhibited. There will be a presumption against rear parking courts except for apartment buildings, in order to maximise the level of privacy and security for dwellings.

3e(ii): On-street parking will be permitted where it is designed into the street from inception. Designated parking bays of up to a maximum of six vehicles, divided by street trees should be provided.

3e(iii): Public car parks should be well designed, lit and landscaped. Boundaries should avoid the use of close-boarded fencing in favour of brick walls to help establish attractive areas.

3e(iv): Secure and useable cycle parking and storage facilities including bin storage must be incorporated into new development, as part of the street or development block. Facilities should be safe to use and well overlooked. Within the public realm cycle stands should be located at key locations, particularly adjoining the proposed public transport interchange facility in the District Centre.



Bespoke seating in Portsmouth celebrates the city as birthplace of Charles Dickens. Public art can be functional as well as visually engaging.



In Hull drawing on local industry and traditions a simple but beautifully detailed sequence of installations creates a 'Fish Trail' through the city centre. Here the images of Whitebait are set into specially commissioned paviors.



Dramatic glazing on this café building at Princesshay in Exeter creates a striking local landmark. An artist in residence was employed as part of the development team.

Design Principle 3f:

Public art will form an integral component of the built form in order to reinforce local identity.

Requirements

3f(i): A strategy for public art within the built areas should be prepared. This should make provision for the involvement of artists in place making at the local level. The strategy should make explicit the timing, funding and delivery arrangements for public art.

3f(ii): Opportunities for public art should be widely considered, and may include:

- art installations and sculpture;
- unique street furniture and signage;
- surface treatment;
- lighting;
- unique walls and railings;
- paintings, murals, mosaics;
- uniquely crafted landforms; and
- individual elements and adornments within buildings.

Design principle 3g:
Place names should be carefully considered to ensure they are directly relevant to the location.

Requirements

3g(i): The developer will be encouraged to enter into discussions with the appropriate authorities including the Council and the Parish Council to develop an agreed approach to naming of streets and areas within the SDL, including parks, open spaces, schools and community centres. Use of local historic names or names of persons and uses associated with an area can add richness and assist in establishing the place.

4. Centres

The Core Strategy requires:

- **The proposed District Centre at a central point, well integrated with educational facilities. The district centre should include a food store of up to 4000 m² as well as a range of community facilities and services.**

Design Principle 4a:
Centres will act as the main focal points for local activity. The scale of the centres and the uses contained within them will ensure good levels of access to services and facilities for all residents, and will reinforce the objective of a self-contained settlement.

Requirements:

- 4a(i):** In accordance with the Strategic Framework Plan provided in the preceding section of this SPD, the development will provide for one District Centre and two Neighbourhood Centres. The District Centre will be located centrally within the site to act as a community hub, and the Neighbourhood Centres will be positioned in the north and south of the site.
- 4a(ii):** Public and community uses will be located according to their anticipated catchment, and the following accessibility standards will guide the location of key land uses:

Within 600m	Nursery school Primary school
Within 800m	Post office Pub
Within 1500m	Health Centre Secondary school
Within 2000m	Supermarket

Accordingly, in order to reinforce the self-containment of the settlement, any proposed supermarket of up to 4000 m² for the sale primarily of convenience goods, health centre and secondary school will be located in the District Centre. Sufficient land should be made available to achieve a reasonable level of future proofing and opportunity for expansion.

- 4a(iii):** Other acceptable uses include public houses (class A4), financial and professional services (class A2), cafés and restaurants (class A3); hot food takeaway (class A5), small office accommodation (class B1a), a hotel (class C1), assembly and leisure uses (class D2), and non-residential institutions such as community rooms and a crèche (class D1). Consideration will be given to granting consents that will allow movement between use classes if it can be demonstrated that this will assist in delivering a viable and sustainable centre.



At Ravenswood, Ipswich, street furniture, cycle stands and paving are all coordinated in a mixed use local centre.



The local centre at Oxley Park in Milton Keynes accommodates a primary school which fronts onto a public square and provides a focus for the neighbourhood.



Use of the first floors for small offices and apartments at King's Hill provide a good mix of uses at the district centre. The pedestrian orientated public realm allows opportunities for outdoor seating and spill out space for cafés and restaurants.

Design Principle 4b:

The centres will be characterised by high quality public realm which will add to their appeal and attraction.

Requirements:

- 4b(i):** Centres will be designed and laid out to provide a good degree of containment and enclosure around a central public space, street or area. This space will be scaled in response to the size of the centre, and should enable outdoor activities, such as pavement cafés, markets and festivals.
- 4b(ii):** Materials, lighting, street furniture, signage and advertising, and planting should be carried out under a comprehensive strategy for the site, which allows for some distinction between each of the centres.
- 4b(iii):** Provision for travel will be integral to the design of these outdoor spaces. Public transport stops, secure cycle parking and car parking (at a standard to be agreed with the Local Planning Authority) will be designed to seamlessly integrate with the public realm, and should not detract from the visual amenity or safety of the development.

Design Principle 4c:

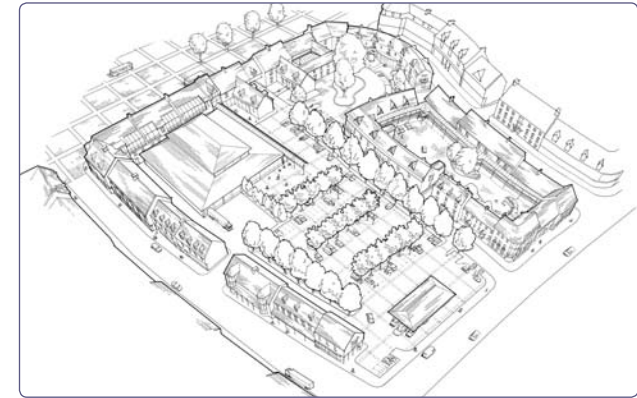
The position and design of buildings must help to distinguish the Centres, provide a cohesive identity and ensure a legible relationship with one another. In addition they must demonstrate the application of good urban design principles.



The main entrance and principal frontage of a supermarket is carefully integrated into the layout of the mixed use district centre at King's Hill in Kent.



At the Whitefriars Centre in Canterbury a service yard is obscured from view behind a simple gateway.



Large footprint uses such as supermarkets should be integrated into perimeter blocks.

Requirements:

4c(i): All buildings within the Centres will form part of the street frontage. The aim will be to establish a “high street” or “village square” around which development is located. Development must positively address the public realm by fronting onto principal streets and spaces. Pavilion buildings set within areas of surface car parking must be avoided and will not be an acceptable design response.

4c(ii): Large footprint buildings, for example a supermarket or school, must:

- be embedded within the block structure;
- have its principal front door onto the public street or space, with limited setback from the edge of the adoptable street area;
- not have blank elevations facing any publically accessible area;

- be serviced, and have storage and delivery areas which are unobtrusive. Service yards can be located within the centre of development blocks in order that they remain hidden from view. Access points must be discretely located and when not in use they should be gated to provide continuous frontage to the street; and
- have any allocated parking located within an area which is away from the main street frontage, and structured around an attractive landscape design which reduces the visual impact of the car park.

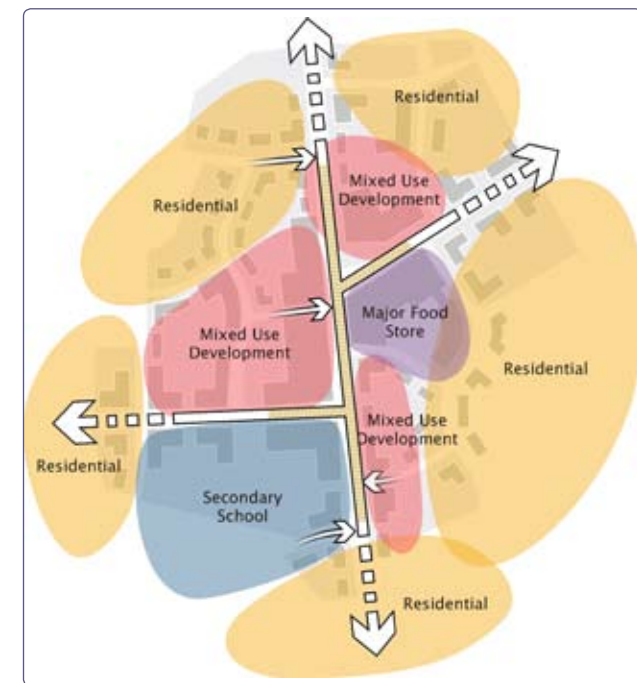


Figure 4.7: Development Components for District Centre Diagram



This three storey mixed use building at Princesshay in Exeter has a high quality elevational treatment. Access to the apartments above the shops is provided via partially glazed walkways with balconies on the southern elevation behind.

Requirements

Design Principle

4d: Residential uses will be included in the neighbourhood and district centres and are seen as essential for their vibrancy, safety and appeal.

- 4d(i):** Housing, including apartments and townhouses, should be included in every centre. Apartments should be located above ground floor uses, in particular shops, in order to increase the use mix within each centre.
- 4d(ii):** To safeguard the amenity of all users of the Neighbourhood and District Centres, in particular the residents, attention must be given to ensuring issues of noise transmission and vibration, refuse storage and collection, odour and light pollution are all adequately addressed through the design process. Care will need to be taken in the siting of mechanical extraction equipment and external lighting sources for example, and apartments and townhouses will need to be designed to minimise noise and disturbance from adjoining uses through appropriate sound insulation measures.

5. Design of Employment Areas

Design Principle 5a:

Employment within the SDL will ensure the close co-location of homes and jobs, so that the opportunity to live and work in close proximity is provided.



This parking area serving commercial premises in Oxford is well overlooked and attractively planted.

Requirements

- 5a(i):** The extension to the Hogwood Industrial Estate should be laid out so that it is easily accessible from surrounding residential areas. Streets should naturally extend into the estate to ensure good levels of connectivity. Principles governing street design set out in this document apply equally to industrial areas.
- 5a(ii):** Routes should be well lit, overlooked by businesses, and should make good provision for pedestrian and cyclist movement and safety. Secure and convenient cycle parking should be provided at places of employment.
- 5a(iii):** Provision must be made for convenient and well located public transport provision to enable local residents and those travelling into the area to work to choose public transport as their mode of travel.

Design Principle 5b:

Employment areas should be designed to create a high quality working environment for the amenity and benefit of employees and business investors.

Requirements

- 5b(i):** The layout of employment areas should extend the pattern of urban blocks established in the neighbourhood areas, albeit that blocks may be larger in size in order to accommodate larger footprint buildings; they will typically measure approximately 80m x 100m. The principal access to all businesses should front the street and should be directly accessible from the street.
- 5b(ii):** Parking for private vehicles, service and delivery vehicles should be located and designed to be unobtrusive and should not detract from the appearance and amenity of the public streets within the employment area.
- 5b(iii):** The landscape framework should extend into the employment areas. Street trees, landscaping to the front of buildings, and access to open space should be provided to enhance the setting of the workplace.

Design Principle 5c:

Employment buildings should be designed to be sustainable and to offer healthy and attractive working environments.



High quality materials, tree planting and convenient pedestrian crossings distinguish this primary street at Ingress Park in Kent.



Generous pavements, robust frontage development and opportunities for on-street parking are provided as part of the design of a secondary street at King's Hill.

Requirements

- 5c(i):** Buildings should be naturally ventilated, and should allow good levels of natural light to permeate into them. They should benefit from solar gain, and summer shading should be provided. All of these features must be incorporated to reduce reliance on heating, air-conditioning and artificial lighting.
- 5c(ii):** Building materials should make reference to the local character. They should be acquired from sustainable sources. Where the building design allows, buildings should be manufactured off-site and assembled on-site in order to reduce waste during construction.
- 5c(iii):** Buildings should be capable of adapting to meet the changing needs of employers, staff and businesses over time. They should be designed to allow for future sub-division or extension without the need for extensive remodelling.

6. Access & Movement Framework

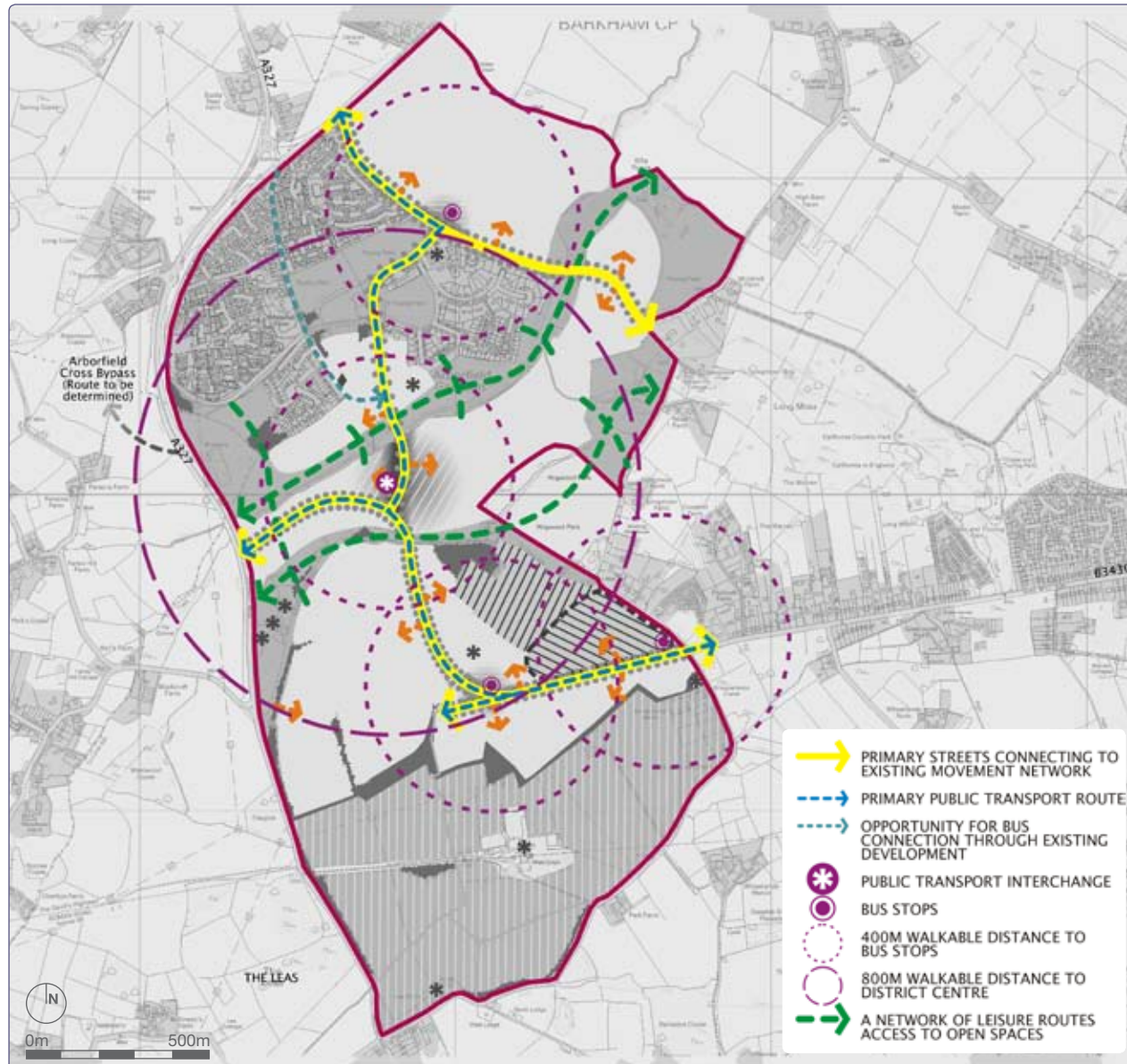
The Core Strategy requires:

- **A continuous network of streets to permit easy movement within the development. Within this network a legible hierarchy should be established to distinguish those streets associated with through movement from quieter residential streets;**
- **Good access to public transport, and provision for a high level of amenity, information and safety for passengers;**



A shared surface tertiary street fronted by dwellings establishes an attractive residential environment at King's Hill in Kent.

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Design Principle 6a:

The layout and design of the SDL will promote easy and efficient movement, balanced with high levels of residential amenity and an attractive environment. This will be achieved through a hierarchy of streets and routes which respond to different travel needs.

Figure 4.8: Transport and Movement Diagram

Requirements

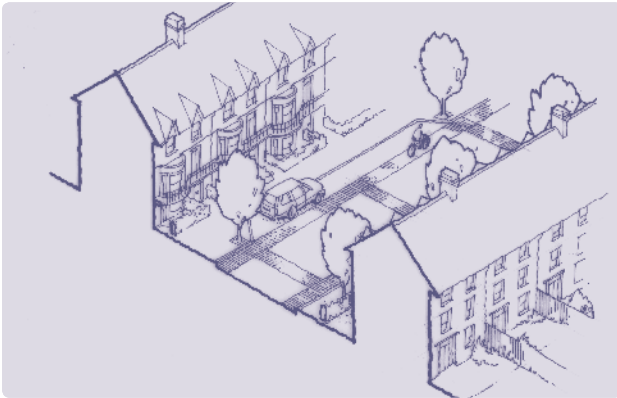
6a(i): The detailed design of streets should conform to the principles set out in the Department for Transport's Manual for Streets, and should be generated through discussions with the Local Highway Authority. The emphasis of these discussions will be first to establish agreed ambitions for urban quality, and then to work closely with the authority to establish how this can be achieved on a technical level in order to enable adoption. The authority intends to provide updated street design guidance in due course, which will help to inform these discussions.

6a(ii): The basic street hierarchy is set out below. This provides a starting point for design discussion. It is anticipated that the general aspirations and parameters provided will be designed in detail according to the requirements of the character typologies.



A residential street at Upton in Northampton is attractively detailed, has well defined parking bays and is fronted by development.

Design requirements	Primary Streets	Secondary Streets	Tertiary Streets	Mews Lanes	Pedestrian and cycle recreation routes
General function	To carry vehicles travelling through the development, to connect neighbourhoods and to give access and exposure to the centres.	To make up the local network, giving access to and through residential neighbourhoods.	Lower order routes giving access to dwellings, with no relevance to through movement.	Access to rear garages and for very local movement.	For recreational and functional purposes, and to allow movement around the SDL without the need to mix with vehicles.
Public Transport	Main public transport route.	Some secondary routes will be used for public transport.	No.	No.	No.
Design criteria	Carriageways should be sufficient width to carry public transport. Cycle lanes should be incorporated into the street. Generous pedestrian footpaths should be created along both sides. Tree planting along both sides of the street should be achieved.	Carriageways should be designed for a lower level of traffic movement. The emphasis should be on pedestrian comfort and safe cyclist movement. Street trees should line at least one side of the street.	Can be designed as shared surfaces, with an informal layout giving equal priority to slow moving vehicles and pedestrians. Informal planting should reinforce the quiet relaxed character of the street.	Narrow lanes, must be overlooked by some development. Shared surfaces and very informal landscape treatment. Security can be improved by the provision of resident controlled gates.	Set within the landscape, but convenient to dwellings, and connecting to the centres. Routes should be sufficient width to avoid pedestrian and cyclist conflict.
Frontage development	Continuous throughout the built areas.	Continuous throughout the built areas.	Continuous.	Partial.	Partial.
On street parking	In designated bays.	In designated bays.	Must be designed into the street layout.	No.	N/A.
Vehicle cross over	Limited opportunities.	Permissible.	Permissible.	N/A.	No.



Cross Section - Primary Streets



Cross Section - Secondary Streets



Cross Section - Tertiary Streets



Direct pedestrian crossings are provided as part of raised table at this junction in Ingress Park, Kent. A simple and consistent palette of quality materials is utilised.

6a(iii): There will be three primary streets within the SDL;

- Biggs Lane, which can be upgraded to meet the requirements of primary streets;
- A north/south street, acting as a bus priority corridor and providing important connections between the three residential neighbourhoods, plus access to the district centre; and
- A Nine-Mile Ride extension, connecting to the A327 and providing important access for the main employment area (measures should be discussed at the Reserved Matters stage to ensure residents of new and existing development are not adversely affected by employment traffic, in particular by large vehicles).

6a(iv): The street network should promote good connections with the existing community to ensure a good degree of integration. This includes pedestrian and cycle routes as well as vehicular streets.

Design Principle 6b: The landscape design of the street will be governed by a detailed street design strategy, which should be prepared by the developer in advance of the Reserved Matters stage.



Careful attention to detail produces a quality streetscape at Ingress Park, Kent which includes the use of street trees.



The consistent use of a family of street furniture, paving materials which incorporates existing tree planting establishes a quality environment at Accordia in Cambridge.



Simple, robust detailing and high quality materials have been used at this public transport stop on the edge of Dublin.

Requirements

6b(i): Street trees are an essential component of the new development. A selected list of trees should be prepared which identifies suitable species for each street type. Their scale, shape, robustness, attractiveness and ease of maintenance should be carefully considered. Similarly, shrubs which are compatible with the street type and character types should be identified within the strategy.

6b(ii): A simple palette of materials for use across the movement network should be identified in discussion with the Council. Materials from this palette should be used to highlight the distinction between different streets within the established hierarchy.

6b(iii): Tree and shrub species and materials should be applied to public spaces also, in order to create a coherent public realm.

6b(iv): The strategy should also make proposals for the specification of street furniture components including seating, litterbins, lamp stands, bus shelters, bollards and signage. These items should add to the overall identity, quality and character of the development, and should reinforce the Character Type objectives, whilst reducing 'clutter'.



A consistent but simple design approach to shelters, covered cycle parking and street furniture together with direct pedestrian crossings and tree planting create a functional public transport interchange at Kent Thameside.

Design principle 6c:

The District Centre will incorporate a bus interchange facility in order to facilitate easy and efficient use of public transport and to encourage longer journeys to be undertaken by this mode.



Direct, at-grade pedestrian crossings together with minimal guard rails provide easy access with minimal public realm clutter at this busy junction in Portsmouth.

Requirements:

- 6c(i):** Early engagement with bus operators is essential to maximise the potential of the opportunity to establish sustainable travel patterns and behaviour from the early phases of the development.
- 6c(ii):** The bus interchange facility should be designed and integrated with other development and with the public realm within the district centre in order to ensure it becomes a readily identifiable location and place in the SDL.
- 6c(iii):** Emphasis should be given to passenger comfort, safety and convenience. Therefore lighting, information systems, shelter and proximity to active uses will be essential. High quality, lightweight, contemporary glazed canopies incorporating seating and real time information should be provided.

7. Existing Buildings

The WCS requires:

- **Existing Listed Buildings be integrated with the development , with due regard to the character and setting of the buildings; and**
- **Consideration wherever possible of the reuse of other existing buildings on the site.**

In response, the SDL should achieve the following.

Design Principle 7a:

The following five Listed Buildings, one listing comprising a group of three buildings, and two Scheduled Ancient Monuments within SDL represent the best of the built form heritage within the site.



West Court is a Grade II Listed Building in the southern part of the SDL site. Reference should be made to its character and materials in determining the built form of Arborfield Garrison.



The Infirmary Stables are a Scheduled Ancient Monument. Careful consideration must be given to the setting of the stables together with opportunities for re-use, perhaps as a community building.



Bush Walk in Wokingham town centre demonstrates how Listed Buildings can be sensitively brought back into use. Finding a suitable alternative use for listed and other historic buildings and structures is a good way of maintaining them.

The Listed Buildings, all Grade II listed, are:

- **Hogwood Farm** which is a timber framed farmhouse dating from the 17th century and is timber framed with a hipped, tiled roof. The Farm is now used in association with the Hogwood Industrial estate and is centrally located within the SDL accessed from Sheerlands Road.
- **Lea Farmhouse** which is part brick, part timber framed with the earliest parts dating from the 16th century and in use as a private dwelling. The farmhouse is located adjoining the southern edge of the SDL.
- **Shepperlands Cottage** which is a timber framed cottage dating from the 17th century, also in use as a private dwelling. The cottage is located on the eastern edge of the SDL, close to the junction between Nine Mile Ride and Park Lane.

- **West Court**, a 19th century brick built house, extended in the 1930's and currently used as the Officer's Mess. West Court is centrally located in the southern most part of the SDL at the centre of the proposed site for the SANG.
- **Westwood Farmhouse** comprises three separate buildings – the timber framed farmhouse dating from the 17th century; the granary, also timber framed, dating from the 18th century, and the cottage the earliest parts of which were a hall house dating from the early 16th century. The buildings are privately owned and occupied. They are located on the western edge of the SDL.

Requirements

7a(i): Particular regard must be paid to the character and setting of these buildings through the master planning process to ensure that they are sensitively and appropriately integrated into the SDL. This will mean careful consideration of the location and alignment of key infrastructure for example, the edge treatment of development parcels and the overall landscape framework for the SDL. Proposals for the reuse of any of the buildings, West Court for example, which include alterations to the internal layout or external appearance will need to be assessed having regard to the relevant Listed Building policy framework.

7a(ii): The 2 Scheduled Ancient Monuments (SAMs) within the SDL each have a very different character. The first is a Medieval Moat (SAM number 20335) located adjoining Princess Marina Drive towards the centre of the SDL. It is currently used for informal landscape amenity and incidental open space. The second is

the Arborfield Infirmary Stables (SAM number 199) which were constructed in 1911-12. The stables are a single storey range of buildings with a shallow pitched roof. They were used for the convalescence of military horses and are preserved for their historic use and interest. The stables which are currently disused are also centrally located close to Princess Marina Drive and set within an area of open space.

It will be important that the setting and the future use of the SAM sites is carefully considered against the relevant statutory policy framework. They must be carefully integrated with patterns of development and the landscape framework of the SDL. For example, potential community uses for the stables could be considered together with interpretation information provided for both sites. The existing informal recreation and landscape amenity offered by the Moat site could also be incorporated into the wider landscape framework for the SDL.

Design principle 7b:

Many buildings associated with the Garrison and School of Electrical Engineers could fulfil useful community functions, such as the sports complex and gymnasium located on Nuffield Road. Additionally, there are several distinctive buildings and structures which may offer potential for conversion to other uses or provide a local landmark



These buildings at King's Hill in Kent, a former air field, have been retained and refurbished as commercial office space. The mature tree planting surrounding them has been incorporated as part of the rich landscape framework at the development.

that can contribute to the character of the SDL. These include the Moat House off Buttershaw Avenue, the Bailleul Sergeant's Mess which adjoins Biggs Lane, and the REME RHQ on Isaac Newton Road. In addition the water tower is a distinctive landmark at the northern end of the SDL. All should therefore be considered for retention.



The gymnasium building at Arborfield Garrison has potential to be reused as part of the community facilities provided at the SDL.

Requirements

7b(i): An assessment will be required as to the suitability of buildings for retention in terms of the contribution they make to the character of the area; structural condition; economic cost and viability of conversion; and location relative to key neighbourhoods and potential development parcels within the SDL.

8. Phasing

The WCS requires:

- **A phasing strategy which prioritises the provision of non-vehicle links, landscape planting and education within the early years of the scheme**

The following principles should be adhered to:

Design principle 8a:

The development should be sequenced in a manner which sees the introduction of essential services and facilities delivered earlier on in the development of the site in order to reduce the need to travel beyond Arborfield and to begin to establish local community.

Requirements

8a(i): A detailed phasing strategy will be prepared in advance of any Reserved Matters applications which clearly sets out the timing of:

- landscape and green infrastructure, including drainage, sports facilities and play areas;
- the provision of services and facilities, including education and health care, and any incremental growth of these facilities as the development advances;
- the programme and approach to developing the three neighbourhoods, including the timing of the centres; and
- the sequencing of the movement infrastructure and the provision of public transport infrastructure.

8a(ii): The phasing and delivery of the scheme should accord with the requirements of the Infrastructure SPD prepared by the Borough Council.



The existing nursery and crèche at Arborfield Garrison is an important community facility and should be retained at the heart of the SDL.

Section 5: Climate change & sustainability

5.1 Introduction

- 5.1.1 Delivering sustainable development in the Borough is a key objective of the Core Strategy and Policy CP1 sets out key sustainability principles for development proposals. Arborfield Garrison SDL provides a significant opportunity to design-in measures to mitigate and deal with the effects of climate change and to deliver innovative and integrated sustainable solutions.
- 5.1.2 The Borough-wide Sustainable Construction SPD will set out more detailed guidance for proposals but this section includes the main principles which should be taken into account as part of the planning application process. A Sustainability Report, including an Energy Statement, is expected as part of the Outline planning application submission and will be a key document in determining the planning application. This section provides guidance on SDL-wide sustainable urban design,

sustainable design and construction, energy and resource minimisation and renewable and low carbon energy generation.

- 5.1.3 Paragraph 4.13 of the Core Strategy states that Policy CP1 (Sustainable Development) will be delivered through a variety of different options including a Sustainable Construction SPD. The main purpose of this SPD is to provide guidance on the measures and opportunities available to developers and householders to integrate sustainability into their development. It will help developers think through the impacts and will offer real, alternative solutions to developments. It will provide clear and accessible information that can steer choices towards sustainable development. It will provide guidance on the requirements of Policy NRM11 (Development design for energy efficiency and renewable energy) of the South East Plan and will also include a Sustainability Checklist. This document will provide guidance for the SDL's but it will also be applicable to all planning applications.

5.2 SDL-wide Sustainable Urban Design

Land use and travel

- 5.2.1 The SDL will be a sustainable village which provides for local needs and contains a mix of jobs and homes to reduce travel. The overall development concept for Arborfield Garrison should create accessible neighbourhoods in which all homes are within approximately 5-10 minutes walking distance of at least one centre. District and Neighbourhoods centres should include the co-location of schools (where necessary) with other shops, services and public transport hubs to reduce the need to travel.
- 5.2.2 The developers will be required to create a clear network of safe and attractive pedestrian and cycle routes within, and linking beyond, the red line boundary to encourage sustainable travel.

Layout and orientation

5.2.3 Detailed layouts should, where possible:

- space buildings to avoid overshadowing of southern elevations and maximise use of natural daylight; and
- use landscape to reduce effects of wind and to reduce solar gain during summer months.

Surface water

5.2.4 Surface water drainage arrangements for Arborfield Garrison SDL should ensure volumes and peak flow rates of surface water leaving the SDL are no greater than the rates prior to the proposed development. In this regard, developers will be expected to make contributions to the construction and maintenance of Sustainable Urban Drainage Systems (SUDS) in accordance with Environment Agency advice. Attention should be given to the existing network of watercourses, ponds and drainage ditches on the Arborfield Garrison SDL as part of the overall flood attenuation and open space strategy.

5.3 Sustainable design and construction

The Energy Hierarchy

5.3.1 The Energy Hierarchy provides the overarching guide to principles on and measures for sustainable construction. Prioritising demand-side measures and reducing energy use in the first place is the most cost-effective and carbon saving approach to design.

The Energy Hierarchy

Sustainable	
Energy Conservation	Priority 1
Energy Efficiency	Priority 2
Exploiting renewable resources	Priority 3
Exploiting non-renewable resources but with low carbon technology	Priority 4
Conventional resource exploitation	Priority 5
Unsustainable	

Source: Energy Saving Trust.

Code for Sustainable Homes and BREEAM

5.3.2 An assessment should be included with the Outline planning application demonstrating how the proposed development will address Code for Sustainable Homes. This should include SDL-wide solutions.

5.3.3 As from October 2010, all residential development will need to be built to Code for Sustainable Homes Level 3. The residential element of the SDLs should continue to be built in line with the timetable for the CfSH (i.e. Code Level 4 from 2013, Code Level 6 from 2016). Developers should also be encouraged to build dwellings to higher standards than those required, ideally aiming all residential development to be Code Level 6. From 2010, the Energy Saving Trust will be promoting the higher energy performance requirements of the Code, notably level 4. Having regard to the

evidence in the Affordable Housing Viability Study undertaken by Levvels on behalf of WBC, it is reasonable to require Code Level 4 is met at the time development commences.

5.3.4 Non-residential development should be built to best practice standards which at the current time are the BREEAM (Building Research Establishment Environmental Assessment Method) 'very good' or 'excellent' standards. Regard will need to be given to any new energy efficiency standards which may be introduced for commercial development such as the proposal for zero carbon development by 2019.

5.3.5 Where a development combines both residential and non-residential development, the applicant is advised to consult the Building Research Establishment (BRE) who will draw up a bespoke assessment which will incorporate both the residential and non-residential elements.

5.3.6 Where feasible, and where development involves the re-use of existing Garrison buildings, developers should investigate the potential to retrofit the buildings with sustainable construction measures.

5.4 Energy and resources minimisation

Building Design

5.4.1 At the detailed design stage, the following measures will be expected:

- appropriate height; depth ratios to allow for natural daylight;
- flexibility in ducting, pipe work and cabling to accommodate future technology;
- inclusion of canopies and external blinds to limit solar gain;
- energy efficient lighting systems and external lighting in accordance with CIBSE Code for Lighting Guide 6; and

- maximising natural ventilation.

5.4.2 The developer will be encouraged to showcase innovative sustainable design in key buildings including schools, the food store and other District Centre/Neighbourhood Centre buildings or employment buildings.

Materials

5.4.3 The starting point in ensuring the most sustainable solution regarding building materials should be to maximise the re-use of existing Garrison buildings. The developers will be expected to undertake an audit of existing buildings identifying those which they propose to retain and those to be demolished. The audit should take account not only of the structural condition of the building and its suitability for conversion but also its contribution to the overall character of the area both now and in terms of opportunities to create a new setting. The audit should also give consideration to an appropriate method of

safe storage and re-use of materials or features such as monuments, plaques etc.

5.4.4 Developers will also be expected to:

- use locally sourced and available material (within 35 miles) to reduce transport impacts;
- use reclaimed and recycled materials, for example from demolished Garrison buildings where feasible; and
- using responsibly sourced materials, for example timber certified by the Forest Stewardship Council.

Water

5.4.5 Water should be considered a valuable resource and the developers will be encouraged to reduce waste water through the design of buildings, including demand management measures, grey water recycling and the use of green and brown roofs (which

also provide insulation and biodiversity benefits).

Waste

5.4.6 A strategic approach to waste management should be undertaken by developers. The approach to the waste hierarchy of reducing, re-using and recycling waste should be included in the Sustainability Report submitted with Outline planning applications. The proposals for the SDL should allow for community recycling facilities to be located in each Neighbourhood or District Centre, or in other accessible locations within approximately 800 metres from each home.

5.4.7 A Waste Management Plan will be required prior to submission of Reserved Matters. At the detailed stage, residential and non-residential development should be designed to include domestic recycling facilities including home composting if appropriate.

5.5 Renewable and low carbon energy generation

5.5.1 The critical mass of development enhances the opportunity to include large scale renewable or low carbon energy options. The Sustainability Report submitted with the Outline planning application should identify which energy options are most appropriate for Arborfield Garrison and how they will be implemented.

5.5.2 The UK Low Carbon Transition Plan contains a target of reducing Carbon Dioxide Emissions by 15% by 2020. The inclusion of renewable energy will be expected to be delivered as part of the development of the SDL and will be included in legal agreements. In accordance with Policy NRM11 of the South East Plan, at least 10% of energy to meet the SDL's needs should be from decentralised and renewable or low carbon sources. The developers are also encouraged to include combined heat and power and/or district heating infrastructure

to distribute waste heat. The 10% renewable energy requirement can be used as part of reaching CfSH Level 4 or higher.

5.5.3 Key options to consider include:

- renewable fuel sourced combined heat and power plants;
- geo-thermal heating systems;
- solar thermal heating;
- wind turbines; and
- co-digestion plants.

5.5.4 Large scale energy-generation or distribution facilities should be located away from residential areas for example be within or adjoining the Hogwood Industrial Estate, and environmental impacts will need to be taken into account.

5.5.5 Consideration should also be given to setting up community-owned or public-private partnership structures such as Energy Service Companies (ESCO) or Multi-utility Service Companies (MUSCO) to deliver energy. These structures can install, finance and manage community energy systems more efficiently and cheaply and reduce carbon emissions.

Section 6: Delivery

This section of the SPD sets out guidance for applicants regarding the application process, ensuring design excellence, strategic phasing principles and the future management of the Arborfield Garrison SDL.

6.1 Outline planning applications

6.1.1 All applications will be considered in the context of delivery of the whole of the SDL including all necessary infrastructure and its phasing in the extract of the Infrastructure SPD. Applicants will be expected to submit Outline applications for the whole of the SDL, supported by necessary documentation as set out in the National and Local List of Requirements. If applicants are unable to submit an Outline application for the whole SDL area, they will be expected to provide written justification. An illustrative master plan for the whole SDL should be included with each application with written confirmation of support

from all the necessary landowners should be obtained. The submitted master plan should be in accordance with WCS and this SPD.

6.1.2 Pre-application discussions will be encouraged and consideration should be given to a Planning Performance Agreement to establish agreed timetable, key milestones and information requirements.

6.1.3 It is likely the Outline planning application will need to be supported by an Environmental Impact Assessment as required by EEC Directive 85/337/EEC, as amended by EEC Directive 97/11/EC; and in accordance with the Environmental Impact Assessment Regulations. A Scoping Opinion, in accordance with Regulation 10, should be sought from WBC in advance of undertaking the EIA. In addition, sufficient information for the Authority to undertake a Habitats Regulations Assessment as required by EEC Directive 92/43/EEC.

6.2 Ensuring Design Excellence

6.2.1 This SPD is one mechanism for controlling the quality of the design within a hierarchy of policies, guidance and application stages, as is illustrated overleaf.

Policy	Wokingham Core Strategy including Concept Statement. Infrastructure Delivery and Contributions SPD.
Outline Planning	Outline planning submitted. Approved documents including Parameter Plans, Description of Development and Environmental Statement. Supporting Information including illustrative master plan for the SDL and Design and Access Statement. Design review process and Building for Life Assessment. Outline Planning permission with conditions, including requirement for Design Code/s, and planning obligations and/or Development Briefs.
Design Evolution	Preparation and approval of Design Code/s for key areas of the SDL or each phase.
Reserved Matters	Reserved Matters Applications. Reserved Matters Approvals with conditions.
Development	Construction, monitoring and management.

Design and Access Statements, parameter plans and illustrative master plans

6.2.2 Design and Access Statements are required under the 2004 Act. Regard should be had to the requirements of the Regulations and Circular 01/2006. The design principles and components set out in Design and Access Statements for Outline Applications should also be in accordance with good practice, the WCS, other Wokingham guidance and this SPD. Wokingham Borough Council has produced a check list of matters to be considered in a Design and Access Statement for Outline and Full Planning Applications.

6.2.3 The Design and Access Statements should provide the basis for the quality of design to be controlled through subsequent Design Codes and Reserved Matters applications. Applicants will be expected to demonstrate how they have incorporated high standards of design throughout the design evolution process and how these will be carried through to completions and subsequent maintenance. If the applicant is not the developer, the applicant will be expected to set out what steps will be taken to ensure that the high standards are carried forward by subsequent developers to completion and subsequent maintenance.

6.2.4 It is also a requirement of the 2004 Act for Outline Applications to include, as a minimum: details of uses proposed in different areas of a site; the amount of development for each use; an indicative layout; parameters of the sizes of buildings; and indicative access points.

6.2.5 Given the scale of the SDL, it would be appropriate to develop illustrative master plans which demonstrate how key developments aspects being applied for can be delivered and articulated across the SDL. It would also be appropriate to include a typology of blocks with clear principles for the relationship between the built form, spaces and streets. The information should be in accordance with the principles of this SPD.

Design Review

6.2.6 Design Review Panels provide an independent service in which peers can comment on major development schemes. It is expected that proposals for the Arborfield SDL will be reviewed by the South East Regional Design Panel or by the Commission for Architecture and the Built Environment (CABE). This should take place at an early stage of pre-application discussions in order to allow for recommendations of the Review Panel to be taken into account in preparing the proposals.

Building for Life Assessment

6.2.7 Building for Life (BfL) assessments score the design quality of planned or completed developments. BfL was introduced by CABE to provide a tool for Local Authorities and developers for greater design consistency and is based upon design 20 criteria (www.buildingforlife.org).

6.2.8 In preparing a Design and Access Statement for the SDL, the 20 BfL criteria should be considered. WBC will also undertake a formal assessment of major planning applications for the SDL.

Design Codes

6.2.9 It will be necessary for strategic Design Codes to be submitted and approved between Outline stage and prior to submission of Reserved Matters and Reserved Matters will need to be in accordance with the approved Design Codes. A Design Code sets out specific rules to guide the nature of the built form, streets and spaces and should be prepared in accordance with the principles of this SPD and subsequent approved Design and Access Statements. Design Codes will help to deliver the highest feasible and viable design standards and provide certainty and clarity to developers and other stakeholders about the form of development expected at the detailed stage.

6.2.10 Design Codes should be prepared in partnership between the developers, Local Planning Authority, services providers and other stakeholders. The Design Codes should prescribe the character of:

- primary, secondary and tertiary streets;
- edges, gateways and corners;
- community buildings and facilities;
- public spaces;
- block sizes and character;
- built form;
- appropriate parking solutions; and
- building heights and set backs.

6.2.11 Greater flexibility should be applied to building style within the guiding principles of ensuring distinctiveness, character and high quality.

6.3 Conditions and Planning Obligations

Planning Conditions

6.3.1 This SPD refers to various matters which may be controlled via planning conditions. As part of the planning application process draft planning conditions will be prepared by WBC for discussions with the applicants. Conditions should be in accordance with the advice contained in Circular 11/95 and should be necessary, relevant to planning, relevant to the development to be permitted, enforceable, precise, and reasonable in all other respects.

Planning Obligations

6.3.2 A legal agreement under section 106 of the Town and Country Planning Act (as amended) will be negotiated between WBC and applicants prior to the granting of planning permission to ensure appropriate delivery of key infrastructure and facilities and long-term management of infrastructure and public spaces. Section 106 agreements will be negotiated in accordance with Circular 05/2005. Draft Heads of Terms should be submitted with Outline planning applications to inform negotiations.

Delivery and Contributions

6.3.3 The Infrastructure SPD sets out that planning contribution may take the following forms:

- the direct provision of infrastructure both on and off the SDL;

- commuted payments in lieu of provision of infrastructure normally derived through standard formulae which may be pooled; and/or
- monetary contributions towards Strategic and off SDL Community Infrastructure normally derived through standard charges and or formulae which may be pooled.

6.3.4 Other Section 106 contributions might be imposed in order to prescribe the nature of development or use of land. WBC will ensure that development is not double charged in respect of the same obligation

6.3.5 The Planning Act (2008) provides for Local Authorities to apply a Community Infrastructure Levy (CIL) to development proposals to support infrastructure delivery in an area. The regulations which will provide the detail on implementing CIL have not yet been published. However it is envisaged that the Policies and provisions of the Core Strategy

and this SPD and the Infrastructure SPD for the Strategic Development Locations could be readily incorporated into a future CIL if this is the mechanism chosen by the Local Planning Authority.

6.4 Strategic Phasing

6.4.1 The Wokingham Borough Housing Trajectory identifies a build-out period of 15 years or more to deliver the Arborfield SDL. Infrastructure and development must be delivered at the right time and in the right place to ensure a high quality and sustainable community is established. Piecemeal and ad hoc planning applications which fail to deliver coherent and integrated strategic infrastructure will be resisted.

6.4.2 The phasing plans submitted with planning applications will be expected to be in accordance with the following principles:

- i) Seek to bring existing buildings and previously developed land back into use in the early phase.
- ii) Establish key public transport infrastructure and routes.
- iii) Establish key elements of the Community Hub, including the secondary school and primary schools.
- iv) Concentrate residential development close to the District Centre and public transport corridor in the first instance to establish a critical mass.
- v) Include requisite green infrastructure in addition to the SANG.

vi) Each development phase should contribute to the wider infrastructure costs to ensure it can be delivered and later phases remain viable.

vii) Develop outwards with integrated neighbourhoods and avoid disconnected and isolated pockets of residential development.

6.4.3 In accordance with Policy CP4 of the Core Strategy the Local Planning Authority will assess the infrastructure requirements of all new development proposals. Whilst the precise scope of planning obligations will vary with each SDL, the Local Planning Authority will seek an overarching Infrastructure Outline Planning application for each SDL in order to deliver the infrastructure requirements laid down in Policies CP18-21 and Appendix 7 of the Core Strategy. This will include highways, transport, community buildings, affordable housing, schools open space and SANG.

Any piecemeal planning applications will need to demonstrate how they will provide the infrastructure requirements laid down in the Core Strategy. Should land become unavailable for development flexibility will need to be applied to the phasing principles to ensure deliverability.

Sequencing of phases

6.4.4 The following outlines the sequence of development and infrastructure requirements in the first phase, estimated to be 2012-2016, and subsequent phases, 2017 onwards. This sequencing should be read in conjunction with the Infrastructure Delivery and Contributions Supplementary Planning Document for the SDLs and the estimated dwelling completion is based on the latest Housing Trajectory.

6.4.5 The Infrastructure Delivery and Contributions Supplementary Planning Document (SPD) sets out the infrastructure requirements for

Arborfield Garrison SDL in more detail and this delivery section should be read in conjunction with that document. Build out rates will be influenced by prevailing market conditions and are difficult to predict over a 15 year timeframe but the phasing principles and sequencing should be adhered to. Strategic phasing principles and guidance contained in this SPD are intended to provide clear guidance but detailed phasing of development should be submitted with Outline planning applications.

First Phase

6.4.6 The first phase is envisaged to be 2012-2016 assuming the build rate set out in the Housing Trajectory. The first phase should be in accordance with the phasing principles and deliver the following:

- 750-850 dwellings.
- Sufficient and proportionate Suitable Alternative Natural Greenspace (SANG) to Natural England's quality and quantity standards.
- Proportionate levels of affordable (no less than 35% of total dwellings) and specialist housing (including 60 units of extra care housing and 8-12 units of dementia housing).
- A proportion of the District Centre including a food store (up to 4,000 m2 gross in size) and multi-purpose community centre which should include facilities for community groups, faith groups, a library, retail and office uses and community café.
- Provision of neighbourhood police office and children's centre, in the District Centre and possibly in conjunction with the Multi-purpose community centre.
- Provision of GP surgeries.
- Contribution to Thames Valley Police in relation to employment development.
- Enhancement/expansion of Hogwood Industrial Estate.
- At least the first phase of the relocated secondary school and one primary school (with the secondary school to be operational).
- Extension of Nine Mile Ride to the A327.
- Public Transport Interchange and other public transport facilities, green travel measures and green travel plan.
- Contributions to Public Rights of Way to link to footpaths beyond the SDL boundary.
- SDL highway works.
- Highways works beyond the SDL boundary including upgrading Park Lane, improvement to capacity along A327.

- Measures to improve accessibility by non-car modes along the A327, B3030, B3349, B3430 corridors.
- Contributions to Shinfield Eastern Relief Road.
- SuDS Improvment to STW.
- Contributions to Arborfield Cross Relief Road (upon completion of 750 dwellings).
- Formal sports facilities including multi-use games area (MUGA) and Provision of new and/or enhancement of existing leisure facilities.
- Proportionate levels of open space and green infrastructure to National Playing Fields Association Trust Standards, including:
 - » Children's play areas, including LEAPs and NEAPs.

- » Formal Playing Fields.
- » Informal open space and biodiversity areas.
- » Allotments/Community Gardens.
- » Land for burial grounds.
- Measures to secure at least 10% of energy needs from decentralised, renewable or low carbon sources.
- Code Level 4 of GfSH or whatever code applies at the time of construction.

Subsequent phases

- 6.4.7 Each subsequent phase should deliver the necessary infrastructure, as set out in the Infrastructure Delivery and Contributions SPD for the SDLs, to support itself and mitigate the wider impacts. Subsequent phases should ensure development forms an integrated and logical extension from existing development.

Developers should continue to contribute to infrastructure delivery from the first phase where this is necessary. Subsequent phases are expected to occur from 2017 onwards and should deliver:

- 2,650-2,750 dwellings in total.
- Sufficient and proportionate Suitable Alternative Natural Greenspace (SANG) to Natural England's quality and quantity standards.
- The remainder of the District Centre and two further Neighbourhood centres, in the south and the north of the District centre.
- An additional primary school adjacent to a Neighbourhood centre.
- Further expansion of Hogwood Industrial Estate.
- Further Measures to improve accessibility by non car modes along the A327, B3030, B3349, B3430 corridors.

- Demand management measures on the Strategic Highway Network, such as junctions 10 and 11 of the M4.
- Further contributions to GP surgeries.
- Land for new Fire Station.
- Further and proportionate levels of affordable housing (no less than 35% of total dwellings) and specialist housing.
- Proportionate levels of further open space and green infrastructure including:
 - » Children's play areas, including LEAPs and NEAPs.
 - » Formal Playing Fields.
 - » Informal open space and biodiversity areas.
 - » Allotments/Community Gardens.
 - » Land for burial grounds.
- » Code for Level 6 of CfSH.
- » Zero Carbon non-residential 2019 onwards.
- Further measures to secure at least 10% of energy needs from decentralised, renewable or low carbon sources.

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