

3.0

Making Design Decisions

Lots of guidance on what constitutes good urban design exists, and many Local Authorities provide direction on what is expected in the form of Supplementary Planning Documents (SPDs) and Design Codes. Many Local Authorities signpost developers to best practice resources, such as CABE. Urban design at this scale most usually considers a number of interrelated elements in the creation of successful places.

The elements usually promoted include:

- character of the new neighbourhood
- a sense of place and history
- a place that responds to and reinforces locally distinctive patterns of development
- cultural contexts
- strong landscape
- distinctiveness
- natural features and special spaces

These aims are usually manifested in a series of techniques, including:

- continuity and enclosure
- clarity of form
- quality public and private spaces that are clearly distinguished
- easily maintainable streets, footpaths and open spaces overlooked by buildings
- accessible routes and destinations that are easy to move to, from and around
- the avoidance of leftover spaces that may become unused and uncared for
- flexibility and adaptability

The best examples tend to integrate multiple themes and objectives, made possible by interdisciplinary working that includes development team, local people and the local Planners.

This section simplifies the decision-making process by illustrating the approaches to water, waste and energy infrastructure as described in the previous sections by the use of simple process flowcharts.

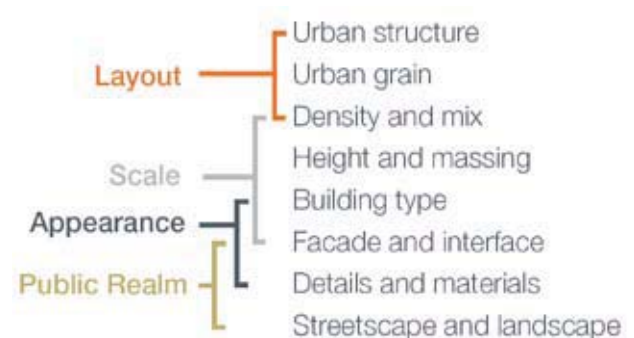
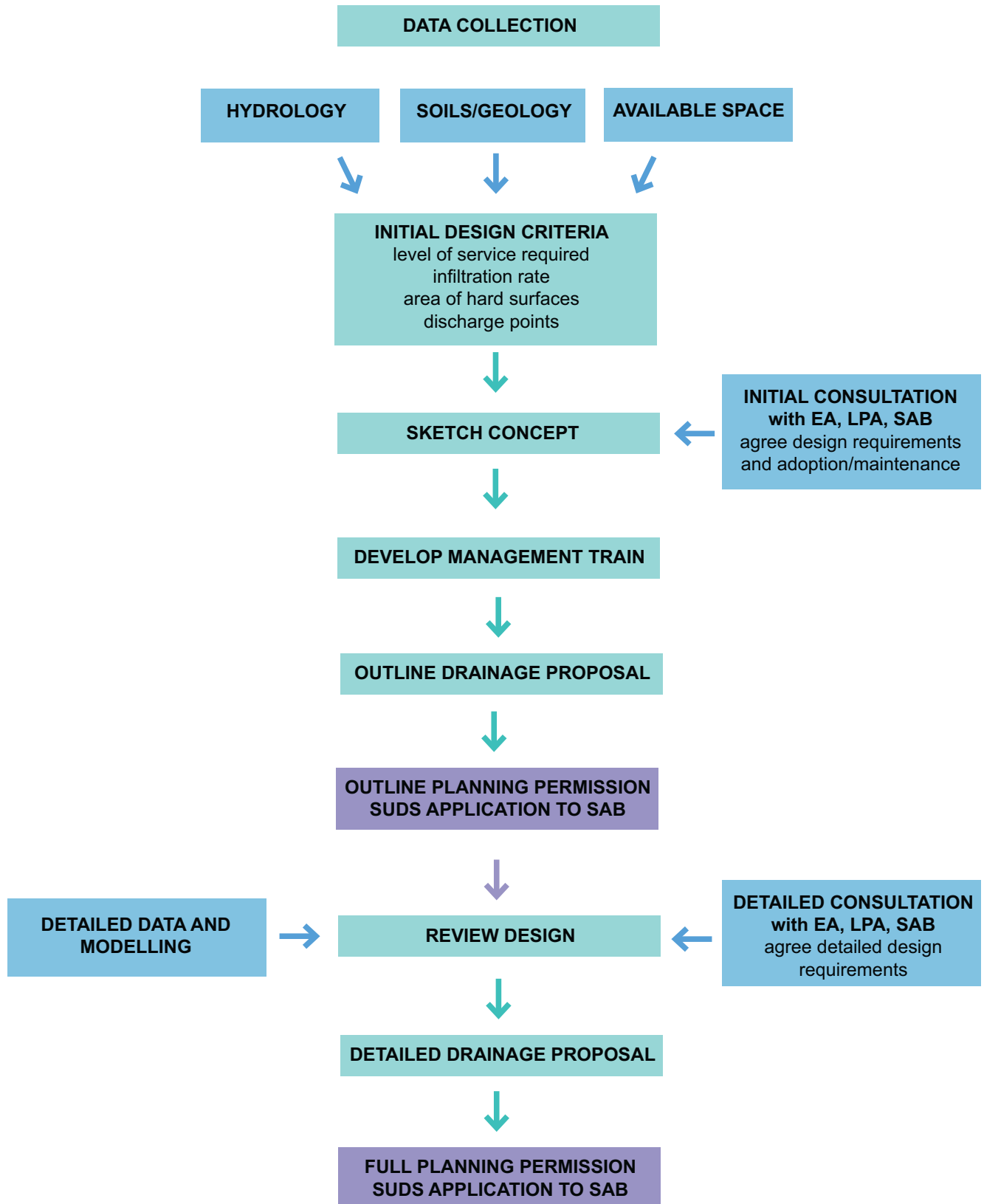


Figure 3.0.1: From CABE's 'The Councillor's Guide to Urban Design'

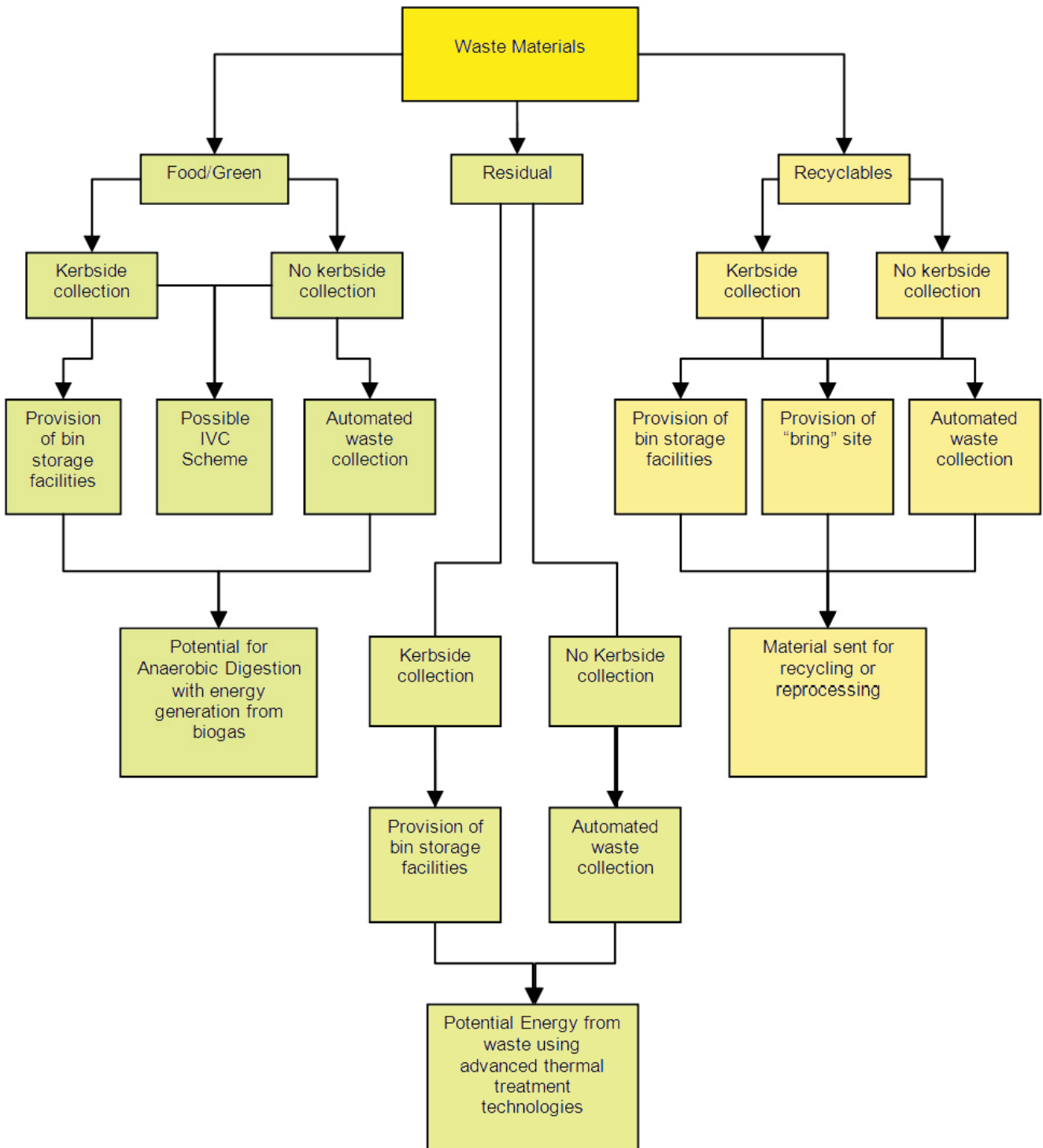
3.1 Surface Water - Design Decisions

Figure 3.0.2: These guidelines promote SUDS as the most sustainable method for dealing with surface water on site - usually a requirement for ecologically-sound sites. The SUDS process flowchart below summarises and describes the process the developer team should engage in to ensure SUDS are an integrated element of the development proposals



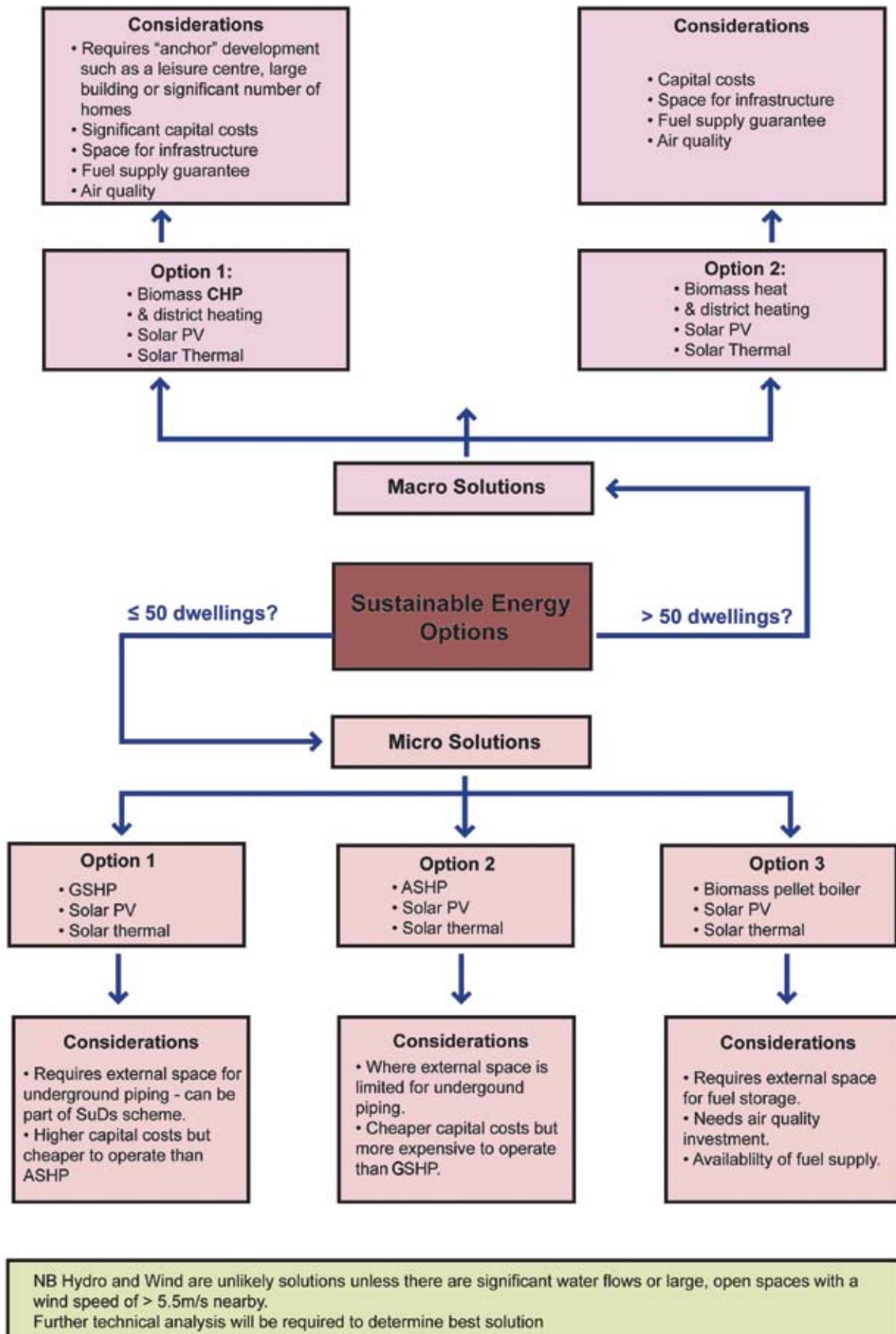
3.2 Household Waste Management - Design Decisions

Figure 3.0.3: The below design decision tree for waste management shows the options for small scale management provided for each fraction and the routes to harness Energy From Waste



3.3 Operational Energy - Design Decisions

Figure 3.0.4: The energy decision tree below shows some of the main options for sustainable energy depending on the size of the development (how many neighbourhood modules), the site constraints and the main considerations



3.4 Waste Water - Design Decisions

Figure 3.0.5: Water discharge and reuse options are simply shown in the flowchart below

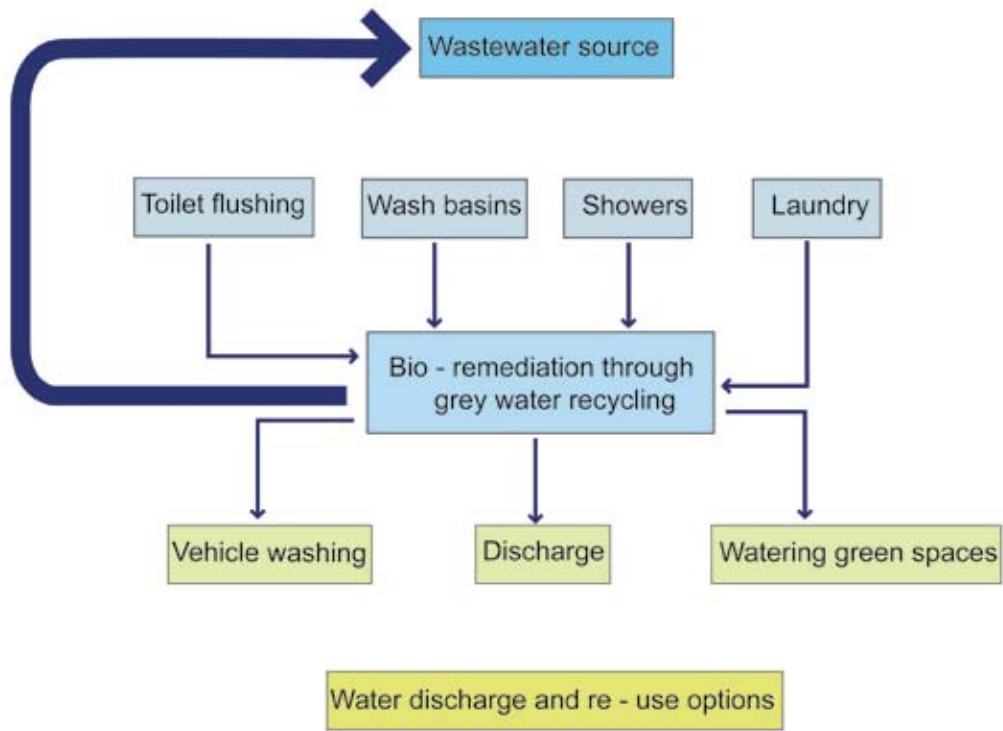
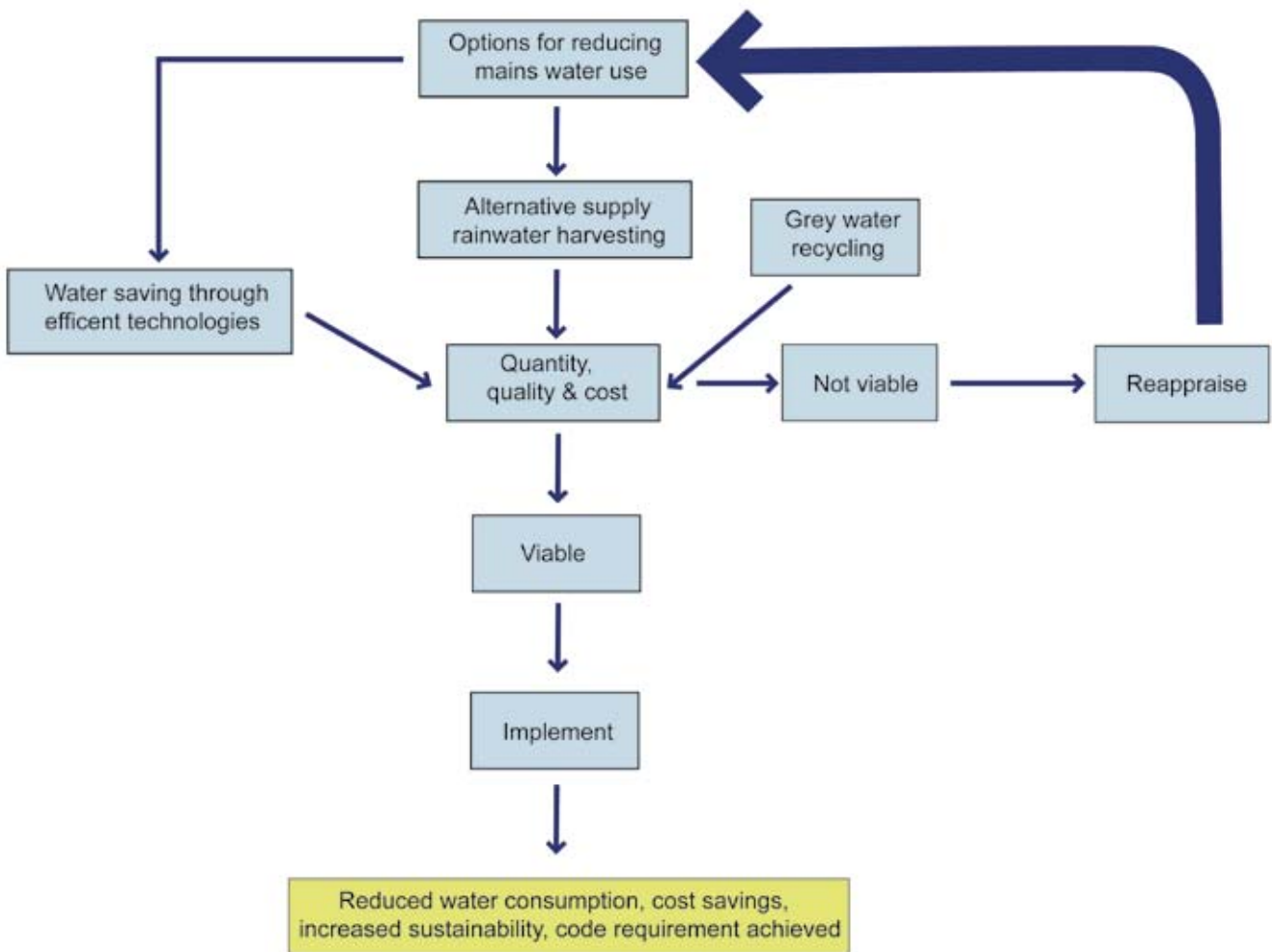


Figure 3.0.6: Adapted from CIRIA (2004) Model agreements for sustainable water management systems: Model agreement for rainwater and grey water use systems



4.0

Introducing the Case Studies

“Plug and Play” Neighbourhoods

Two case studies sites have been selected to demonstrate the practicalities of applying the guidance laid out in the previous sections.

The first is **Middlemore**, a small site in Daventry, Northamptonshire that demonstrates a single phase development of approximately 50 residential units in a new local community. The second site is **Shirebrook** – a much larger site with the potential for several phased 50-unit developments as an extension to an existing community in Derbyshire.

The Middlemore site has been chosen to demonstrate an approach that could be taken in a typical case where a team is developing a single site to be integrated into its neighbouring surroundings. The Shirebrook site is a zoomed out approach, illustrating the opportunities for wider solutions to large developments, whereby each smaller phase could be delivered by independent developers.

These guidelines aim to demonstrate a “plug and play” approach, whereby each 50 unit modular neighbourhood (regarded as individual phases) would be “plugged into” adjoining phases.

The sites chosen do not have any particularly rare characteristics. They are each surrounded by areas of housing and open land, and are part of wider towns. Neither have exceptional Town Planning limitations, hence making the learning from these case studies widely applicable to many sites across the UK. Neither site has been developed before.

For consistency, each site has been assigned an approximate development mix of:

- 30% 2-bedroom units
- 50% 3-bedroom units
- 20% 4-bedroom units

The case studies in these guidelines show flexible masterplans that can accommodate different mixes at varying densities. As a baseline for future development, it is assumed that all homes would be built to **Code for Sustainable Homes Level 5**.

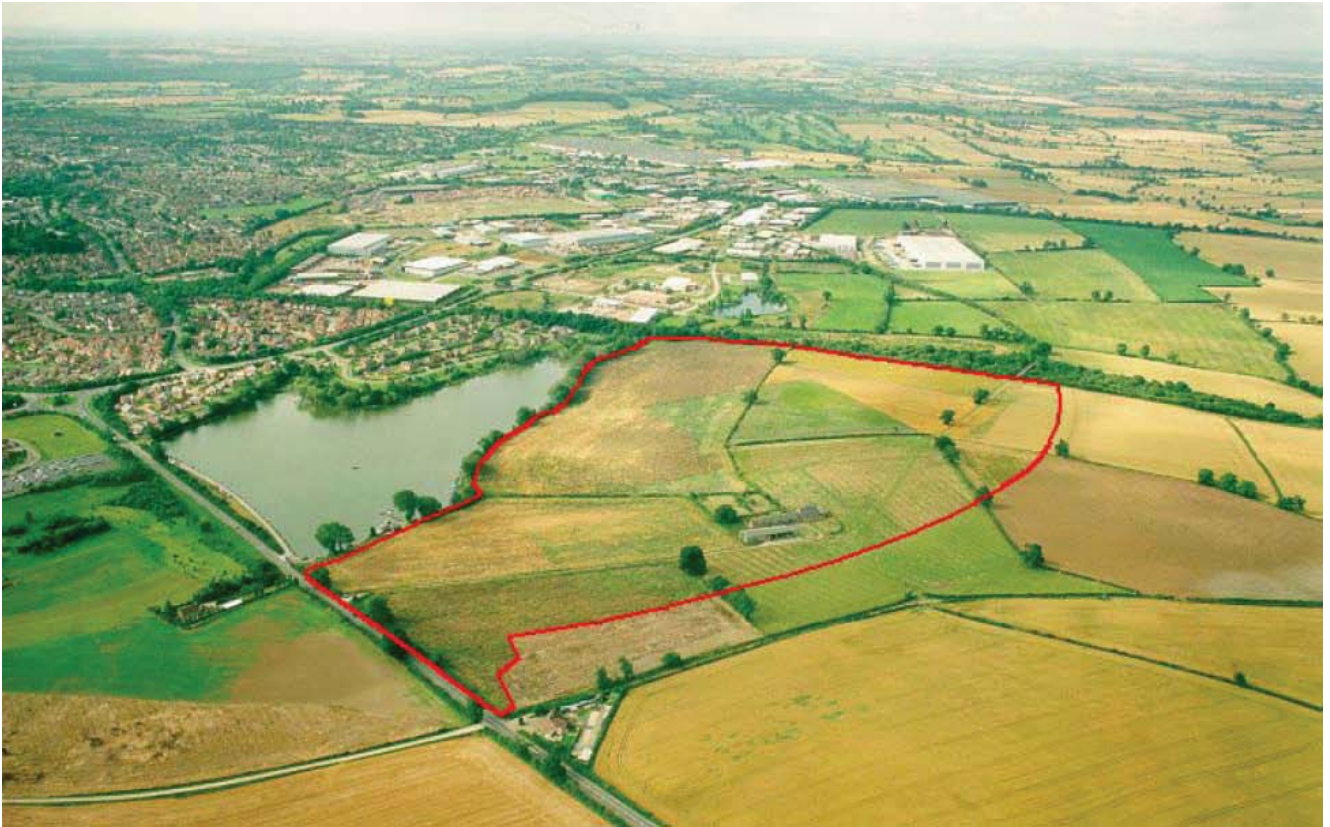


Figure 4.0.1: An aerial view of the Middlemore site, looking South



Figure 4.0.2: An aerial view of the Shirebrook site, looking North



Figure 4.1.1: A photo of the edge of the site, looking South, with new development to the East



Figure 4.1.2: A photo of the surrounding new residential development

4.1 Case Study 1: Middlemore An overview:

The Middlemore site is essentially an urban extension to the North of Daventry– a market town in Northamptonshire with a population of just over twenty-two thousand people. Daventry is surrounded by new housing and light industrial development. On the edge of the town centre is the Drayton reservoir, just east of the A425 road.

The site chosen is 2.72 hectares overall with a target density of approximately 36 dwellings per hectare. Affordable Housing on this site would comprise 30% on site. A Public Open Space provision needs to be a minimum 10% or 0.2 Ha/50 houses divided equally between play and amenity. Street parking provision is 1.5 spaces per dwelling as a maximum.

It is envisaged that perhaps two 50-unit neighbourhoods would “plug in” to the site.

The site is surrounded by new build development, both residential and warehouse commercial units, with a grid of roads parcelling each piece of development land.



Figure 4.1.5: An closer aerial view of the site (red line boundary)



Figure 4.1.3: An photo from the trunk road with the site to the right



Figure 4.1.4: A photo of the site sloping down to the South



Figure 4.1.6: An aerial view of the site (red line boundary), the reservoir to the South-east and new residential land to the East.



Figure 4.2.1: A photo of the edge of the site, looking East, with the site fields to the left



Figure 4.2.2: A photo of the surrounding existing residential development on the Eastern boundary

4.2 Case Study 2: Shirebrook

An overview:

Shirebrook is a town with a population of approximately ten thousand people in the Bolsover district of North-East Derbyshire, on the border with Nottinghamshire.

The site area chosen is approximately 14 hectares overall with a target density of 25+ dwellings per hectare and at a minimum, 250 properties across 5 “phases”. Affordable Housing is to be provided “where there is a proven need”. Public Open Space is targeted at a minimum 2.4 ha per 1,000 population (sub-divided into 1.7 ha for formal recreational/sports space + 0.7 ha for informal neighbourhood open space including play). Street parking provision is: 1 space per 1 bedroom unit, 2 spaces per 2 or 3 bedroom units and three spaces per four or more bedroom units.

It is envisaged that perhaps five or six 50-unit neighbourhoods could plug into the site.



Figure 4.2.6: An closer aerial view of the site (red line boundary)



Figure 4.1.3: An photo of the Western boundary condition



Figure 4.1.4: A photo of the site showing undulations in the landscape, looking South



Figure 4.2.5: An aerial view of the site (red line boundary), the housing surround the North-east and North-west



Figure 4.2.7: The context of each site: Middle above, Shirebrook below

