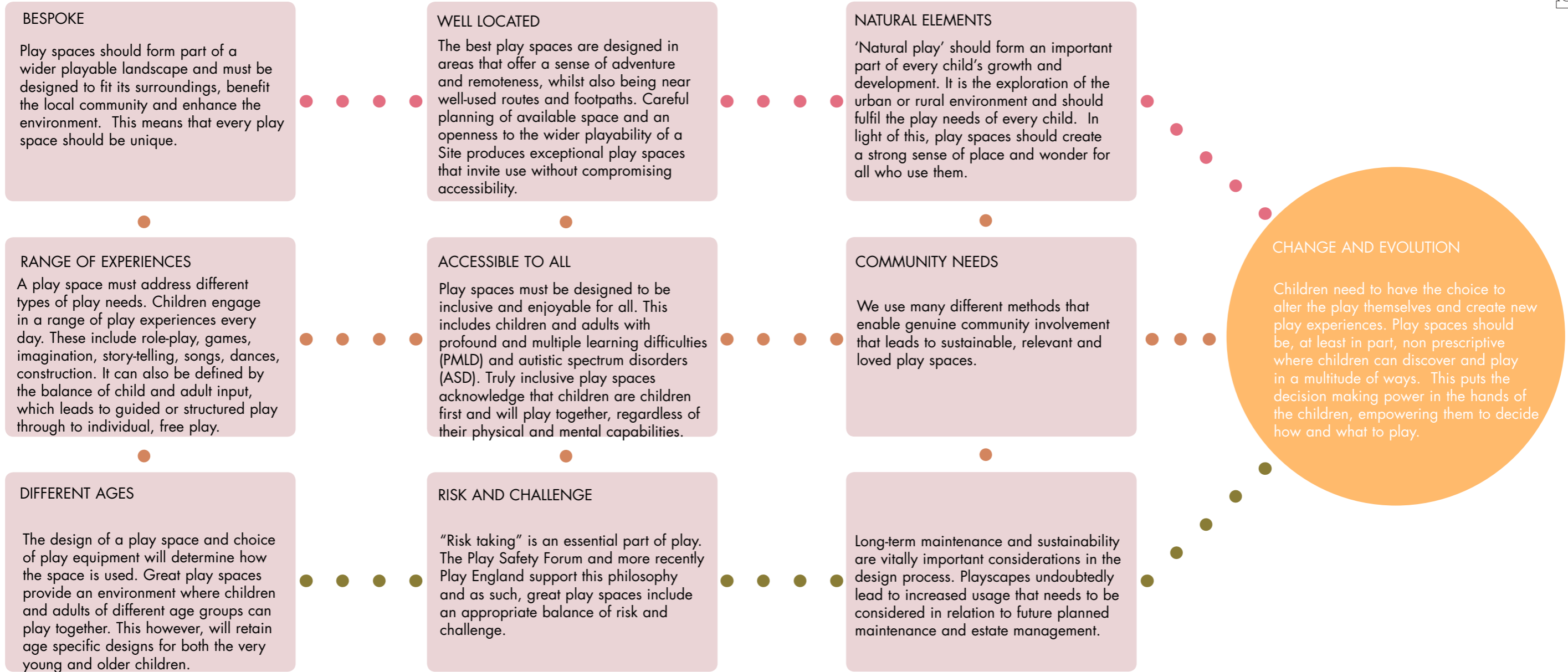


03.5 Play and Open Space

3.5.3 Play Philosophy



03

3.6 Water

- 3.6.1 Key Principles
- 3.6.2 Source Control

03.6 Water

3.6.1 Key Principles

Sustainable water management is critical in creating the vision of Bicester Eco-town. In accordance with the Local planning policy framework, the aims of the development is to achieve a balance between water supply and demand on the domestic level.

Furthermore, flood risk and adverse effects on the wider environment can be mitigated through appropriate on site water management and the design of sustainable drainage systems (SUDS).

The Environmental Strategy document sets out a surface water and flood mitigation strategy that links with this chapter.

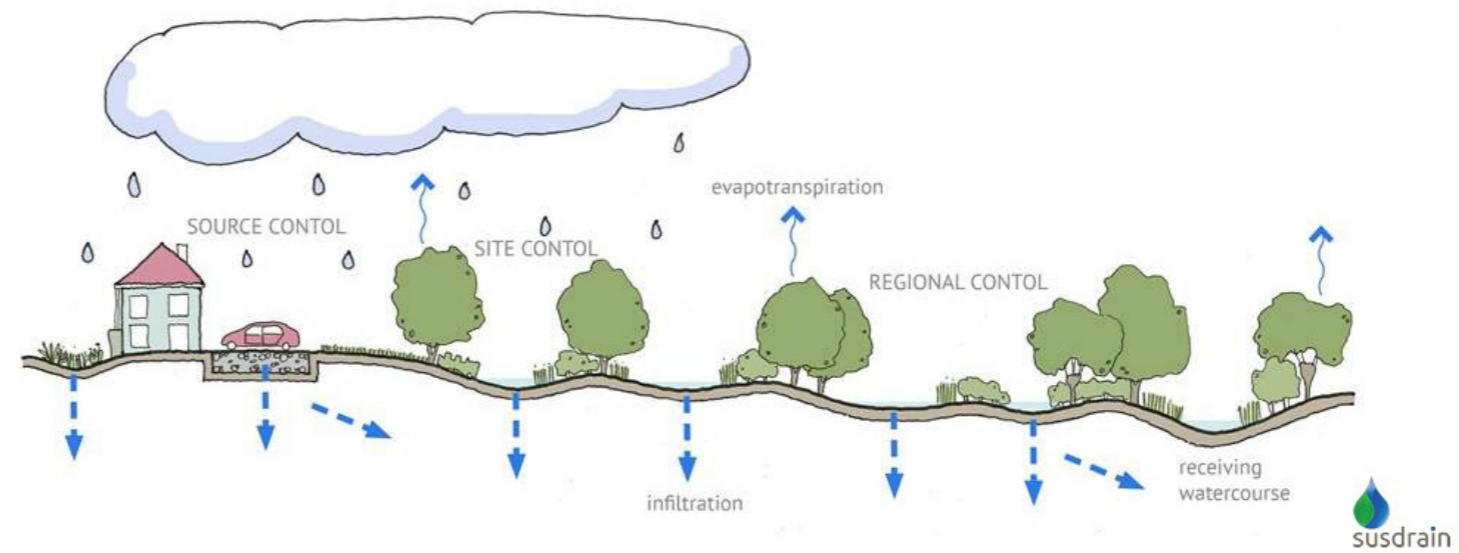
Set out below are some key principles of the water strategy which must to be implemented at each stage of the drainage system.

The strategy is to use natural drainage for the entire site omitting any 'conventional' drainage methods such as pipework. This is achievable and cost effective if the following principles are followed.

KEY PRINCIPLES

- Re-use at source - rainwater harvesting
- Treat and store water onsite where possible - including grey water and stormwater runoff
- Bring water into the public realm - play
- Infiltrate/irrigate
- Design for resilience
- Manage and store water in catchment and sub catchment areas (locally)

Any water, grey/foul that is treated on site should be retained for use either for irrigation, amenity water bodies or wetland habitat.



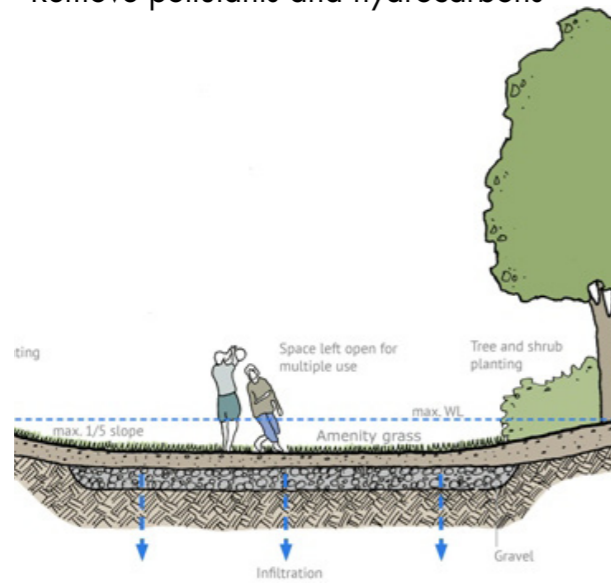
03.6 Water

3.6.1 Key Principles



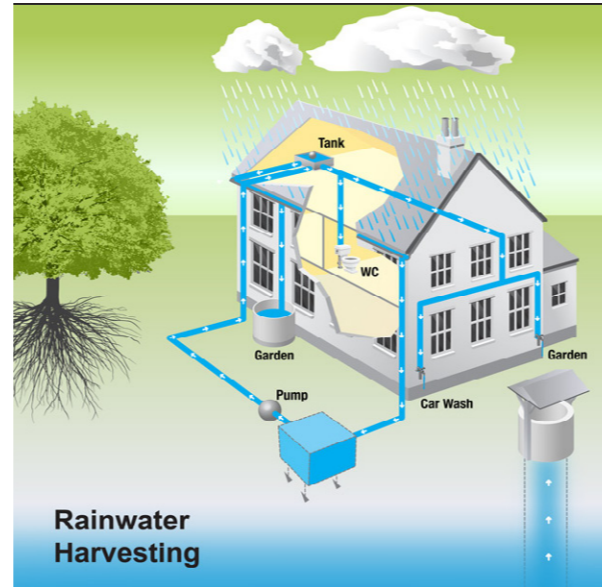
Treat water on site where possible

- Swale treatment
- Grey water
- Storm water runoff
- Remove pollutants and hydrocarbons



Infiltrate/Irrigate

- Recharge local groundwater
- Irrigate planting



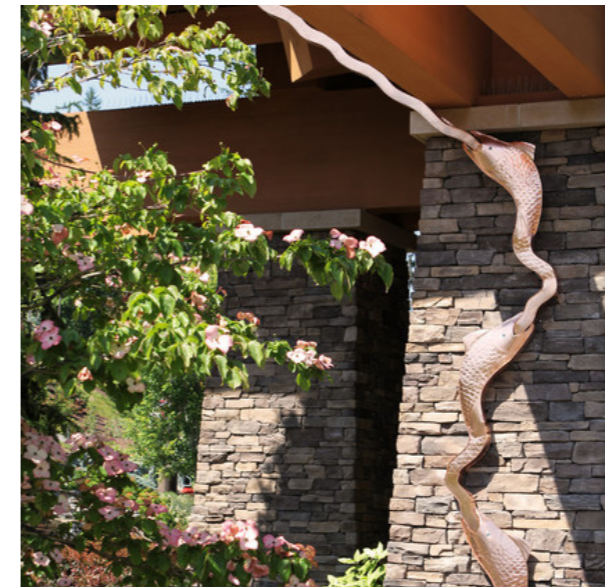
Re-use at source

- Rainwater Harvesting
- Greywater filtration



Design for resilience

- Consider the 1000 year storm



Bring water into the public realm

- Play
- Interaction/amenity use



Manage catchment and sub catchment

- Local treatment, storage then release into watercourse

03.6 Water

3.6.2 Source Control

In order to successfully integrate a water management system between the built form and the landscape, a combination of source control elements are recommended for use, including;

GREEN ROOFS

Slow run off and peak loading to the drainage system whilst simultaneously promoting biodiversity, retaining thermal storage and aiding with cooling.

RAINWATER HARVESTING

Average water consumption per person per household is approx 150 L/day. Planning policy requirements are 80 L/day.

Rainwater harvesting from a typical 3 bed house can equate to approx 90 L/day, capable of being supplied as non-potable use via a 2000 L storage tank located underground. Overflow and excess will be directed into the drainage network.

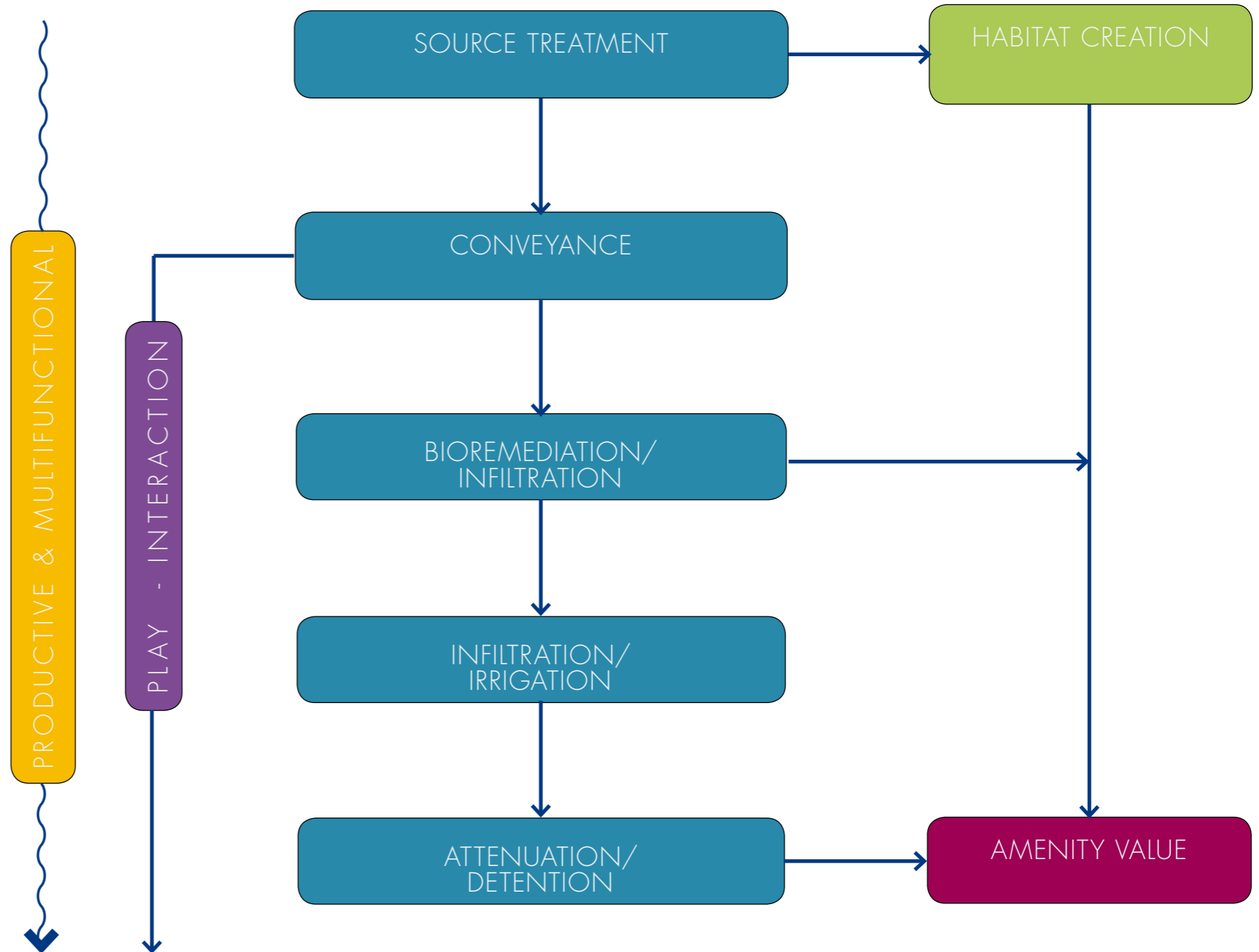
GREYWATER REUSE

Greywater recycling on a domestic level (low density) requires a high investment of energy and technology, i.e. UV filters, however on a neighbourhood scale (higher density) it may be feasible.

There are two options on treatment systems using either a technological approach or a more natural approach - reed beds. Employing biological filters greywater will be slowly released into the ground, recharging aquifers.

RAIN GARDENS

Localised and small rain gardens assist in source control of storm water, slowing the load to the system whilst also bringing water into the public realm which can be done creatively.



04

Detailing the Place

- 04.1 The Illustrative Masterplan
- 04.2 Description and Parameter Plans

04

4.1 The Illustrative Masterplan

04.1 The Illustrative Masterplan

As described above, the masterplan for Himley Village has been designed to respond to and integrate with the wider masterplan for NW Bicester.

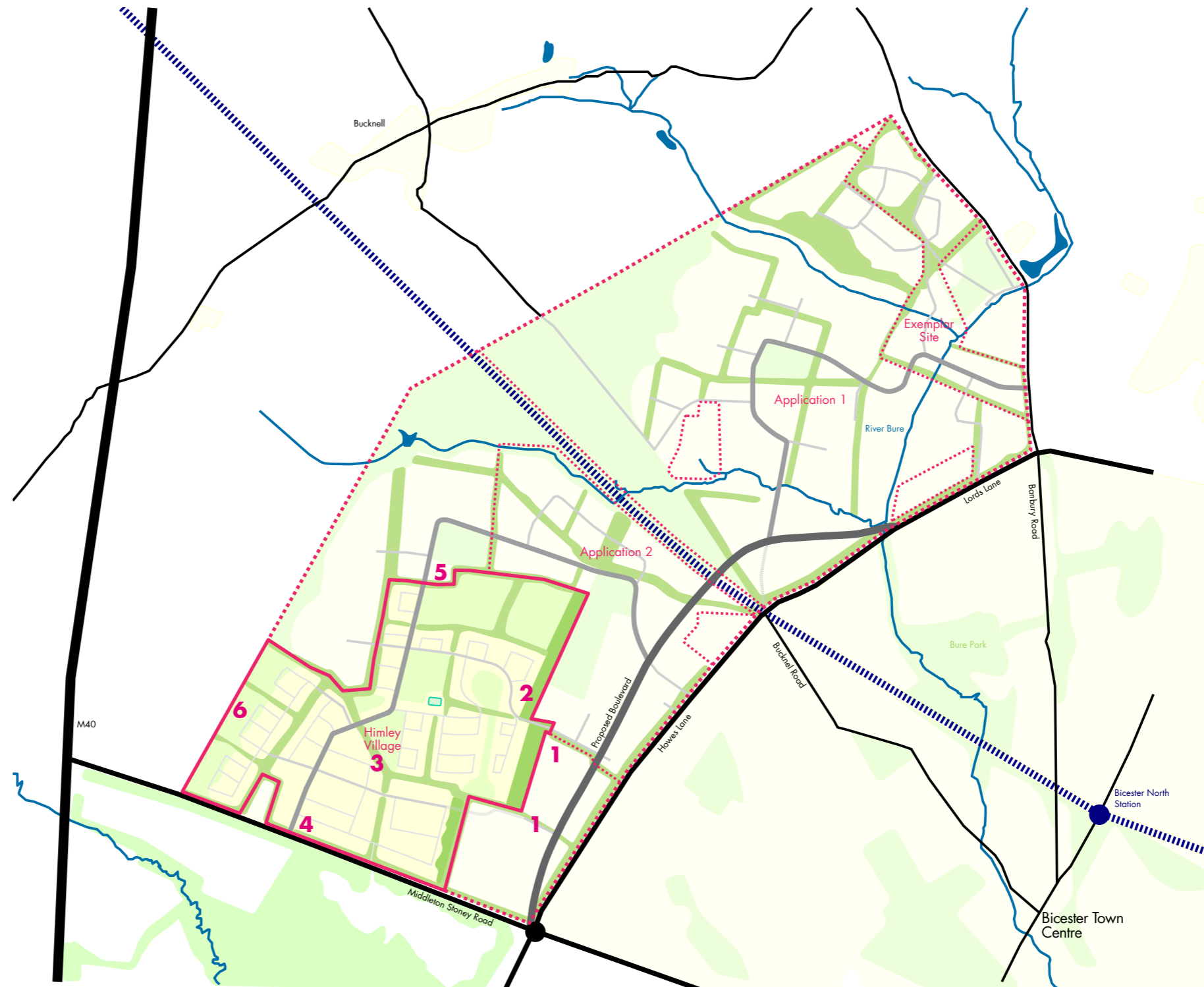
The plan opposite shows the Himley Village masterplan in relation to the Exemplar Site and the other more recent applications.

To east of the Site, provision has been made for vehicle connections to the proposed new boulevard (1).

The primary GI Corridors identified in the NW Bicester masterplan - along the eastern edge of the Site (2) and east - west along the hedgerow (3) have been retained.

The new primary route serving the land to the south of the railway line has been accommodated, with a new connection off Middleton Stoney Road (4) and provision for this to extend to the land to the north of the application Site (5).

A wooded area to the western edge (6), integrates with the key leisure route identified in the wider NW Bicester masterplan.



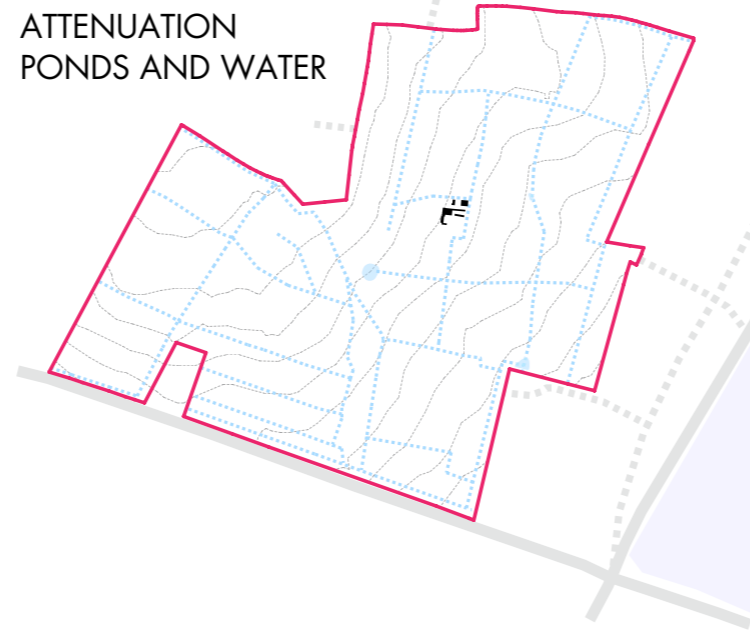
04.1 The Illustrative Masterplan

HEDGEROWS



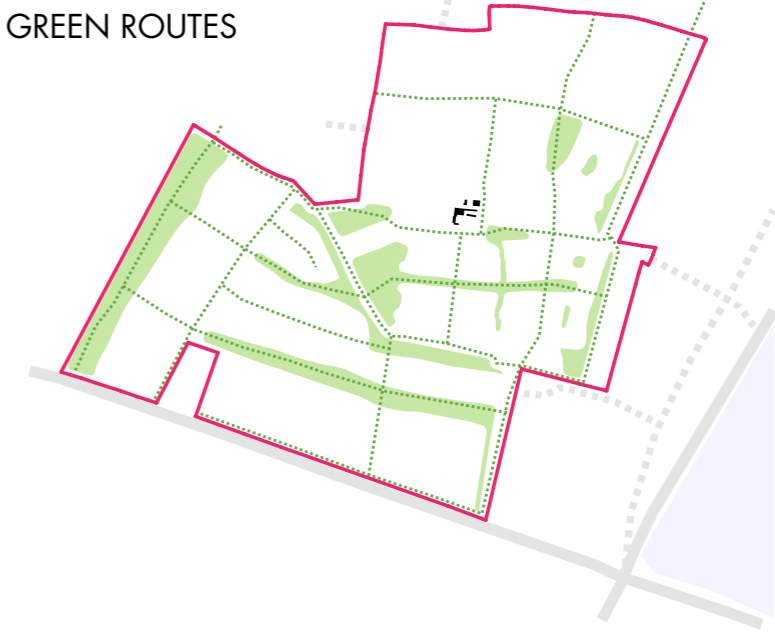
- Existing hedgerows and woodland retained
- Movement corridors created along existing hedgerows

ATTENUATION PONDS AND WATER



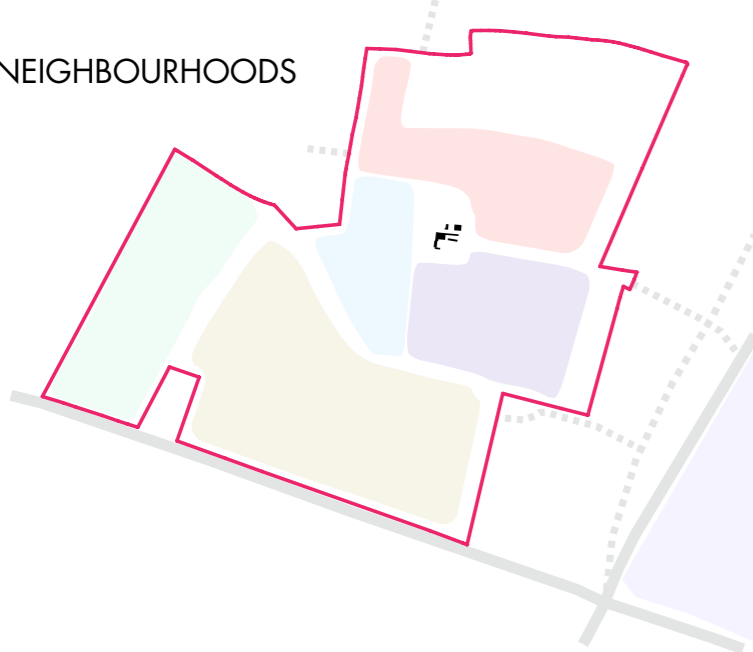
- Attenuation ponds location responding to topographical conditions

GREEN ROUTES



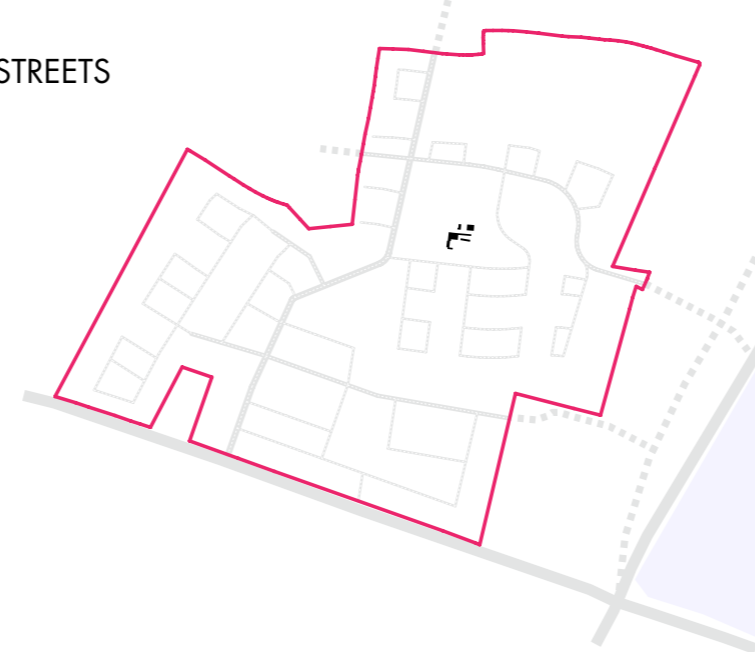
- New green routes created to supplement the hedgerows, creating a grid of off-road pedestrian and cycle movement corridors.

NEIGHBOURHOODS



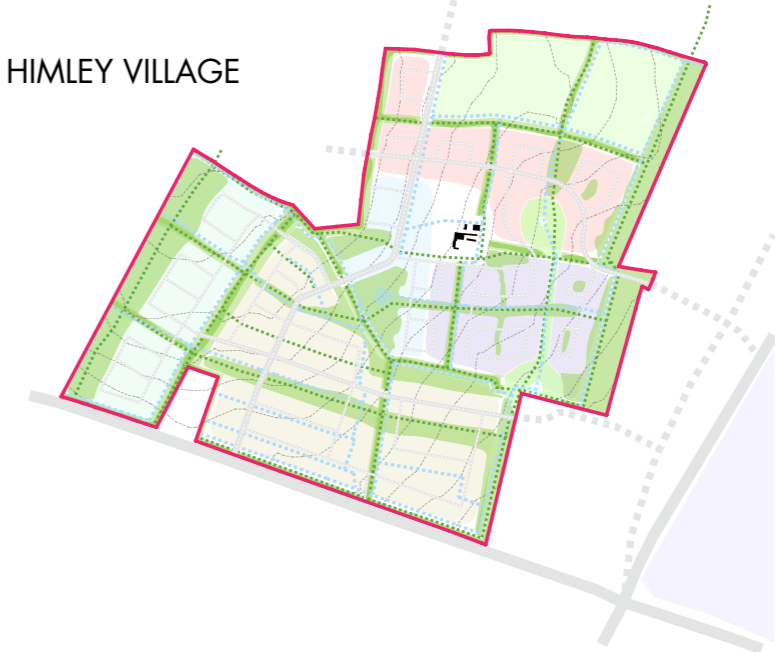
- Distinct neighbourhoods created, each responding to their own context

STREETS



- A clear hierarchy of streets; primary streets connecting to the wider masterplan and Bicester beyond, secondary streets connecting to individual neighbourhoods and tertiary streets serving individual groups of dwellings

HIMLEY VILLAGE



- A place embodying eco-town principles, with a close relationship between nature and the built environment
- A village with a clear identity creating a place where people will want to live, grow, work and play.

04.1 The Illustrative Masterplan

The run of the hedgerows, the track of the water over the contours and the nature of the edges of the site have guided the organisation of the flow of people, vehicles, energy and waste and the positioning of the buildings and private and public space. Together these influences have led to the creation of a clear identity for the village as a whole and a strong sense of place in its neighbourhoods.



04.1 The Illustrative Masterplan



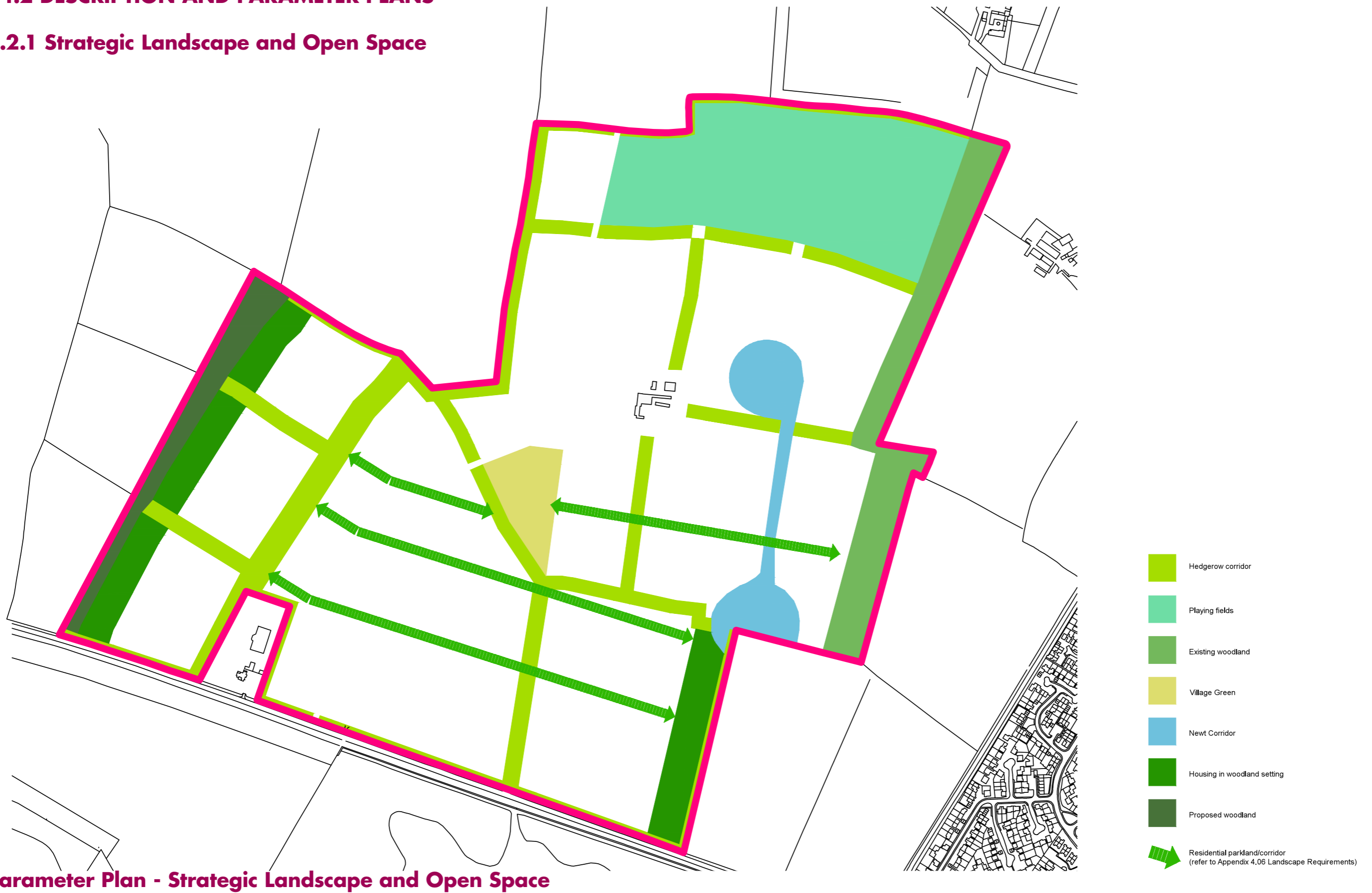
04

4.2 Description and Parameter Plans

- 4.2.1 Strategic Landscape and Open Space
- 4.2.2 Drainage and SUDS
- 4.2.3 Building Height
- 4.2.4 Density
- 4.2.5 Land Use
- 4.2.6 Movement and Access

04.2 DESCRIPTION AND PARAMETER PLANS

4.2.1 Strategic Landscape and Open Space



04.2 DESCRIPTION AND PARAMETER PLANS

4.2.1 Strategic Landscape and Open Space

OPEN SPACE STRATEGY AND ALLOCATION



Natural / semi-natural green space

- Existing woodland retained
- Proposed woodland
- Newt/ biodiversity rich planting
- Enhanced hedgerow planting

Amenity green space

- Village green; residential parks & corridors
- Allotments/ growing areas



Natural / Semi natural space with incidental play



Woodland with boardwalk



Hedgerow enhancement



Allotments

04.2 DESCRIPTION AND PARAMETER PLANS

4.2.1 Strategic Landscape and Open Space

OPEN SPACE STRATEGY AND ALLOCATION

- 1** Existing woodland
- 2** Proposed woodland
- 3** School playing fields/
School playground
- 4** Hedgerow corridor
- 5** Village Green
- 6** Residential parkland
- 7** Newt Corridor
- 8** Community resource

