# 8. A super green town

It's all in the name: Didcot is going to be a garden town. But it's important that this new handle is more than just a catchy brand – Didcot must take ownership of its garden town status and make 'garden' part of its identity. This chapter looks at all things green, setting out a strategy that will ensure Didcot Garden Town grows into a place deserving of its title.

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### 8.1 Summary of the super green town

### 8.1.1 Summary of the super green town

This chapter sets out the landscape strategy for Didcot Garden Town arising as a result of the development proposals. It describes how the integrated design of existing and new external space should be shaped to take account of the natural environment and why this is important. strategy for the garden town needs to be special to Didcot so that the town remains recognisably itself and retains the best features of its setting and makeup. The strategy also needs to identify ways in which new proposals can support and enhance the town's particular characteristics with better connections, a clearer identity to its streets and spaces and better amenity for local people.

Access to the countryside and high quality open space is important for the health and wellbeing of people, with the substantial changes to Didcot that are envisaged never has it been more crucial to balance the built environment with high quality external areas.

### The landscape setting

Didcot's landscape setting is a key part of the place, its identity and character. In providing a baseline to the design of the garden town understanding the landscape and how it forms the ground plane will be essential. New development should take its cue from the landscape of each site, respect and reiterate the relationship of the site with its environs and take account of all natural and physical features. Appropriate design and built environment responses to landscape setting will help to bind new development in place.

For this reason the landscape character assessment summarised in 8.2, and provided in full at Appendix L, is the

starting point for contextual studies to the garden town and its description forms the first part of this chapter on the green town.

Landscape priorities, green infrastructure and the open space strategy

Section 8.3 moves from the landscape setting to the evaluation of the spatial layout of the open spaces in the town and their connecting links. This is described fully in the green infrastructure strategy and a summary of this, in relation to the masterplan area, is given with the entire study being provided in Appendix K.

The green infrastructure of the town indicates that there is an underprovision of open space and some of which are relatively low quality. The proposals network which is illustrated describes the existing structure of open space and suggests where and what should be provided to address underprovision and how to improve quality, benchmarked against appropriate standards which are discussed in full. The green infrastructure strategy provides part of the evidence base for the councils' local plan process.

The remainder of section 8.3 deals with the landscape priorities and the open space strategy for the development of the garden town. The masterplan initiatives described have been drawn as examples or ideas which need further elaboration in site by site specific design. Example images which illustrate the types of ideas which would be appropriate are provided along with a description of the proposals in the supporting text. Where the development of the proposals requires more detailed analysis or supporting information which is beyond the scope

of the masterplan, then a strategy to develop the design has been proposed and this is included within the next steps section of the document at the end of this chapter.

Section 8.3 describes the landscape priorities which have been used to develop ideas and strategies for the design of the town and why they are important in this context. Under each of the following topics the document sets out how sustainable approaches to design, such as habitat creation and protection of natural resources, community involvement and integration of the open space network will contribute to the successful achievement of the garden town and make a huge contribution to the amenity and well being of its residents.

The topics include:

- Green routes and accessibility (see also chapter 5.1)
- · Multi-functional landscape spaces
- Growing local food
- Urban public space
- Key views
- Green gaps between the town and the surrounding villages
- Blue infrastructure (see also chapter 5.3)
- Upgrading the quality of existing green space
- Re-greening existing residential neighbourhoods
- Coherent planting structure in new housing developments
- · A summary of the next steps





## 8.2 Didcot's relationship with its landscape setting

# 8.2.1 Didcot's relationship with its landscape setting

### A summary of the landscape character assessment

#### Introduction

Didcot's landscape setting is largely rural land in agricultural use. It comprises a diverse pattern of landscapes, including rolling downland, historic parkland, low-lying farmland and riverside meadows, with scattered rural villages.



East Hagbourne in 2017 © Andy Barmer

#### Geology

The majority of land within the Didcot Garden Town masterplan boundary is undulating lowland farmland on predominantly Jurassic and cretaceous clays. Much of the area is underlain by upper greensand and is marked by pronounced, rolling landform and lighter, calcareous and fertile soils.

### Physical features

The most important landscape feature to the north and west of the town is the River Thames, along with its floodplains and tributaries. The land is flat and lies almost entirely below 60m above ordnance datum. Along the course of the river and its immediate corridor heavy impermeable clay soil is liable to flooding and usually under permanent pasture. The raised, better drained, gravel ground is better suited to settlement and cultivation.

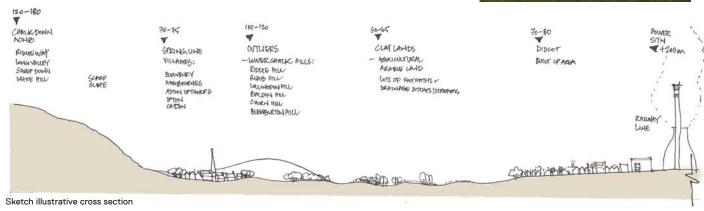
To the south and east of the garden town lies the chalk uplands - the North Wessex Downs (which is designated as an Area of Outstanding Natural Beauty (AONB)). Here the open, rounded chalk landform rise to an elevated plateau of smoothly rolling topography, dissected by dry combes, with scrub woodland on some steeper slopes. Predominantly



light soils are free-draining and thin.

Around Didcot, a band of calcareous siltstones and sandy limestones of the upper greensand forms the transition between the higher land of the downs and the lower-lying vale. These areas





share characteristics of the chalk downland with smoothly rounded landform and well-drained chalky and sometimes flinty soils. Isolated outcrops of greensand and chalk form prominent rounded hills at Wittenham Clumps and Cholsey Hill - distinctive features within the flat vale landscape. The land is farmed intensively, there are generally only sparse trees and woodland, except on the steeper valley and hillsides of the downs and at Little Wittenham.



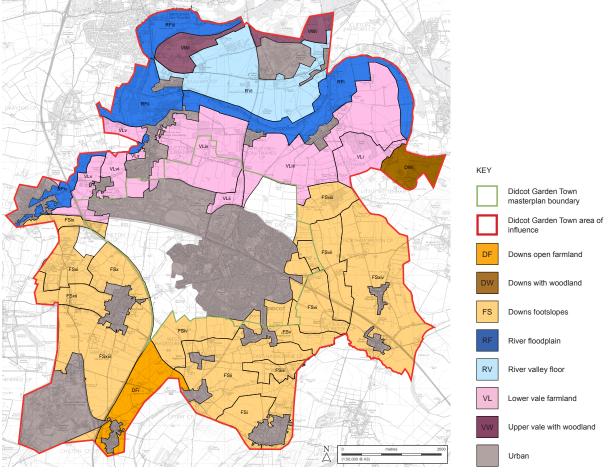


Figure 8.1 - Landscape character assessment plan



#### Water

In addition to the River Thames, there are numerous waterbodies resulting from mineral extraction. Sand and gravel has been sourced from the floodplain since Roman times but was only exploited on a commercial scale during the 20th century. There is also an extensive ditch system remnants of former now drained marshes.



### Vegetation

Woodland cover is low in the area but hedgerow and field trees are frequent. Watercourses are often lined by willows, with some black poplar. There were once many elms which have been lost to Dutch Elm disease. Shelter belts for agriculture are also evident in parts of the wider landscape.



### Agriculture

Much of the area is farmed and is mostly arable land with some horticulture including orchard fruit. Orchards around Harwell thrive on light, fertile, sandy soils at the foot of the chalk escarpment. There are also many relict orchards.



### History

With the exception of Didcot town itself the area continues to show a strong link between the physical features that underpin it and human activity and occupation.

At Didcot the original settlement was Iron Age, which became Romano-British after the conquest and although evidence for its size or longevity is scant, remains including pottery, coins and a coffin have been found.

The Romans brought an influx of people and as elsewhere in northern Europe their arrival heralded landscape change, with an integrated pattern of new settlements and planned roads, farm estates and pottery kilns. This development precipitated greater

woodland clearance as the need for timber and open land increased.

A Saxon settlement followed in the 7th or 8th century and despite the enclosures of the 16th and 19th centuries and break-up and sell-off of the manor land in the latter 17th century, Didcot village retained a largely medieval character.

Didcot grew from a village to a town with the arrival of the Great Western Railway in 1839. Five years later, Isambard Kingdom Brunel's covered station was built and conditions for the town's growth were set. The line now links to Oxford and there is a smaller station at Appleford which escaped Beeching's cuts of the 1960s.

Didcot A power station was completed in 1968. Didcot A was decommissioned in 2013 with demolition starting shortly afterwards. The three remaining cooling towers and the main Didcot A chimney stack, which currently stand as landmarks, are set be demolished. Didcot B power station, a gas-fuelled station will continue until approximately 2030. Local industry has now switched to science and high tech firms have been attracted by the proximity to London and the transport links.





### Settlement and buildings

Building materials in the vale comprise brick, tile and thatch while as the land rises to the downs, more flint and timber are prevalent. Settlement locations are influenced by slope, elevation and water supply, with the Saxon springline villages being characteristically sited at the foot of the chalk escarpment. While others of medieval origins grew on the trade routes that traverse the area. Steventon, for example, is on the old



main road between Oxford, Abingdon and Newbury.

Within the garden town masterplan boundary there are relatively few settlements in the river corridor, historically settlements have favoured the gravel terraces along the River Thames, such as Long Wittenham and Sutton Courtenay. Along the vale and downs edge, there is a history of settlement evident by prehistoric earthworks and hillforts (e.g. at Aston Upthorpe).

To the south runs the Ridgeway, an ancient track which runs along the top of the downs and is described as Britain's oldest road.



### Tranquillity

Although there remain some tranquil rural areas, the overwhelming impression is of an area criss-crossed by transport routes, including railways and roads and dominated by Didcot power station.

### Sense of place

Among the writers and artists attracted to the area are artist Eric Ravilious who painted numerous views of the downs, Paul Nash, who chose the distinctive Wittenham Clumps as a subject, and David Inshaw who drew on the mystical qualities of the prehistoric landscape.



© Paul Nash



# 8.3 Landscape priorities, green infrastructure and open space strategy

# 8.3.1 Landscape priorities, green Infrastructure and open space strategy

A green, leafy landscape with a generous network of parks, gardens and tree-lined streets is a defining characteristic of the original garden cities and a key reason for their lasting Green spaces offer a wide range of benefits to people in creating healthy, sustainable and resilient places. Recent studies into the economic value of high quality green infrastructure have shown it is fantastic value for money, adding value from increased land and property values to improved health and wellbeing. The Town & Country Planning Association's (TCPA) guidance document, 'The Art of Building a Garden City - Garden City Standards for the 21st Century' (2014), shows how the natural environment and green infrastructure is integral to four of the nine garden city principles which have been used to shape Didcot Garden Town's structure.

### Garden city principle:

Development that enhances the natural environment, providing net biodiversity gains and using zero-carbon and energy-positive technology to ensure climate resilience.

- Garden cities are places in which human development positively enhances the natural environment
- New garden cities should yield a net gain in local biodiversity and should adopt plans to achieve the objectives of the biodiversity 2020 strategy
- A garden city's multi-functional green infrastructure should provide a wide range of benefits for people and the natural environment, including: moderating temperature - green space cools the ground surface and air temperatures and mitigates the urban heat island effect: mitigating flooding and surface water run-off - a higher proportion of un-built permeable space allows rainfall to infiltrate naturally to recharge groundwater resources: supporting biodiversity - green spaces, and gardens in particular, are widely recognised as providing habitats for plants and wildlife, as well as giving opportunities for human contact with nature: promoting human health and wellbeing - green space and gardens support a wide range of physical and well-being objectives
- A garden city's green infrastructure network should also offer a range of benefits in terms of adaptation to

#### Garden city principle:

Strong cultural, recreational and shopping facilities in walkable, vibrant, sociable neighbourhoods.

- Garden city advocates put great emphasis on the role of the arts and culture in improving wellbeing as part of a co-operative approach to society
- Garden cities are places of cultural diversity and vibrancy, with design contributing to sociable neighbourhoods. This means, for example, shaping design with the needs of children's play, teenage interests and the aspirations of the elderly in mind, and creating shared spaces for social interaction and space for both formal and informal artistic activities, as well as for sport and leisure activities
- The creative arts cannot be perfectly planned but they can be brilliantly enabled. Garden cities should provide formal frameworks for cultural expression but also leave open space for artistic dissent and chaos

#### Garden city principle:

Integrated and accessible transport systems, with walking, cycling and public transport designed to be the most attractive forms of local transport.

- New garden cities should be designed to encourage positive behavioural change in terms of reduction of carbon: walking, cycling and low-carbon public transport should be the most convenient and affordable modes of transport
- Foster healthy and active communities by encouraging walking and cycling and providing a comfortable, stimulating and therapeutic environment, bringing together the best of the urban and natural environments

### Garden city principle:

Beautifully and imaginatively designed homes with gardens, combining the best of town and country to create healthy, vibrant communities.

- The 21st century garden city will be characterised by a landscape structure of multi-functional green infrastructure, including the private or shared gardens associated with homes and a surrounding belt of well managed agricultural land
- As a minimum (and including private gardens), 50 per cent of a new garden city's total area should be allocated to green space (of which at least half should be public) consisting of a network of multi-functional, well managed, high-quality open spaces linked to the wider countryside. Homes should have access to private or shared gardens and space to allow local food production from community allotment and/ or commercial gardens
- A fundamental aspect of the garden city model is the provision of an agricultural belt to prevent sprawl and provide a local source of food for the emerging market. This green belt must be properly managed, with urban and rural land management choices linked to ensure access for recreation, energy generation, agricultural production and habitat creation
- Set targets for walking and cycling.
   Review proposed schemes to see if they could be enhanced to provide a safer, more appealing environment for pedestrians/ cyclists of all ages
- Meet 'active design' guidelines to improve opportunities for access to sport and physical activity

- Identify opportunities to create innovative spaces for growing food
   e.g. allotments, derelict public open spaces, green roofs
- Require landscape or green infrastructure plans to demonstrate the potential use of any open space for community food growing

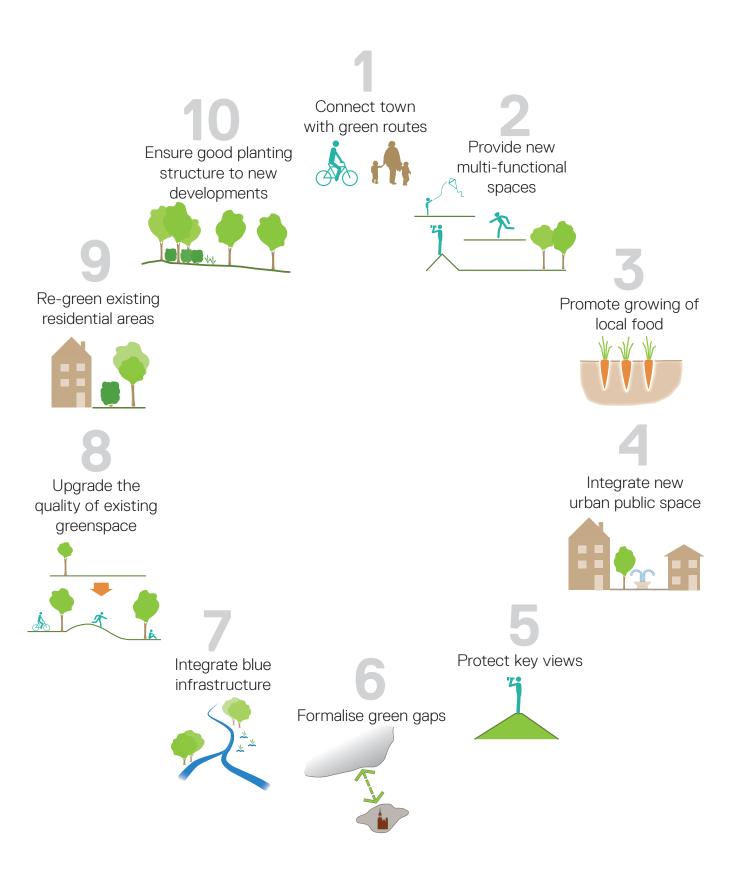


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© Sandor Bernath

### Key landscape priorities



Taking the TCPA principles as guidance the Didcot Garden Town landscape principles have been developed to take into consideration Didcot's particular circumstances and to include ideas that local people have put forward. The ten landscape priorities, as shown on the previous page, in Figure 8.2, are;

- 1 Connect town with green routes
- 2 Create new multi-functional spaces
- 3 Promote growing of local food
- 4 Integrate new urban public space
- 5 Protect key views
- 6 Formalise green gaps between Didcot Garden Town and villages
- 7 Integrate blue infrastructure

- 8 Upgrade the quality of existing green space
- 9 Re-green existing residential areas
- 10 Ensure coherent planting structure to new developments

This part of the delivery plan is structured to take each priority in turn and within a summary table at the head of the section, describing the status quo, the background to the principle and the issues raised.

Below, in Figure 8.3, a further explanation is given of the reasons why the priority has been included in the masterplan and how this will manifest

itself in ideas and initiatives in the delivery of the masterplan.

The detailed audit of green infrastructure forming evidence to support the local plan, is given in Appendix K.

Didcot aerial sketch of landscape masterplan showing the town in its landscape setting, with new green routes, new multi-functional landscape spaces and a redeveloped zone in place of the worked out gravel areas.



Figure 8.3 - Didcot aerial landscape masterplan sketch

# 8.3.2 Landscape priority 1: connect town with green routes

"If you plan cities for cars and traffic, you get cars and traffic. If you plan for people and places, you get people and places." Arup Slimcity





'Green routes' are cycle and pedestrian routes which connect key destinations in and around Didcot within an attractive environment. Cycling around Didcot is easily achievable in and around the town as the land is relatively flat.

Upgrading and introducing new cycle routes will enable people to have a real choice between using the car and taking a more sustainable alternative. The following table summarises the case for new cycle routes and introduces the first targets for a green route quick win. Further detail follows below.

The status quo	Why this is necessary?	Where the garden town team
The status que	inity time to necessary.	assumptions are from
Poorly connected routes, disjointed	Cycling and walking are sustainable	Desktop study of existing routes and
and indirect route layout.	transport modes, they promote	evaluation of their connection to
Breaks in cycle routes push cyclists	health, wellbeing and help integrate	destinations and town centre.
onto roads which are often not	community. They also provide an	Site survey of proposed routes.
conducive to cycling, with too much	alternative mode to the private car,	Public and stakeholder consultation
traffic, poor air quality and low safety.	thereby reducing air pollution, traffic	responses.
Existing cycle hire at station has poor	congestion, reducing global use of	
hire technology.	finite resources.	
How it can be improved and what	Is there enough in the masterplan	Within existing planning policy or
the aspiration is	and next steps?	garden town policy
Providing well-connected, direct	Masterplan makes strategic proposals.	Science Vale vision encourages a step
routes to the most important	More could be included within	change away from car travel towards
destinations and the town centre.	developments coming forward and	public transport, cycling and walking.
Providing a strong east west route;	better consideration of existing links	Vale of White Horse District Council
connections to the science parks	to new residential districts made.	- Core policy 35 promoting public
and strategic connections between	See: strategic cycle route plan.	transport, cycling and walking.
the River Thames and the AONB and		
Wittenham Clumps.		
How could this be funded and	Research/ consultation	Quick wins
supported?	Next steps	
A percentage of the infrastructure	Detailed consultation on proposals	Upgrading cycle routes has been
budget should be set aside to achieve	with HarBUG and other cycling	proposed as part of the quick wins.
the strategic target of upgrading cycle	groups.	The route along Station Road to
provision.	A strategy to upgrade the key routes	Milton and via Broadway to Harwell.
	is provided. Monitoring cycle use and	The route to Wittenham Clumps
	recording the modal shift helps build	should also be a priority.
	a case for next developments. Pop up	
	café and workshop on Broadway.	
	•	1

### Reconnecting the town and country

Cycle routes should be provided for two types of use; direct routes for commuting between the station and places of employment and more circuitous routes used for recreation. Shorter local paths from residential areas to schools, which also meet up with longer distance routes, will enable the town to connect to its landscape setting as well as for day-to-day functional use.

Regardless of whether the cycle routes are new or have been in existence for some time, it is important that a commitment is made to the maintenance and upkeep of these routes.

The technical garden town's consultants have collaborated to ensure that the proposed routes are well connected to the town centre, to new development proposals and to the existing chief destinations such as Culham, Milton and Harwell science parks. Paths are also planned north and south between the River Thames and the Ridgeway, as well as east and west to Oxfordshire's most visited local attraction - Wittenham Clumps. The layout of proposed routes is illustrated in Figure 8.5.

### Why cycling works

Promoting cycling is not only good for direct access to local destinations, it provides a healthy means of exercise as part of daily routine, in the fresh air, with opportunities for people to interact, helping to build community. Starting children early in the habit of cycling is good education for life, setting the pattern for regular exercise and helping them to make a sustainable transport choice.

A successful shift in thinking can be achieved by supporting cycling as a choice through the provision of local facilities. It is proposed that the new station square has covered cycle racks, lockers to leave cycle kit, as well as toilets and showers. Cycle hire facilities at the station and at key locations in the town centre should also be available.



Cyclist in the countryside © South Oxfordshire District Council

Hire technology, such as an app or website, needs to be interactive and efficient to avoid putting off potential users.

The local economy may also be boosted by routes which pass new cafés or cycle workshops, to enable bike maintenance, and bike equipment. For example, Broadway provides a location where pop-up shops or 'meanwhile uses' can test this theory, with a bike workshop/ café being provided on a well-used route in the town centre.

There are already established cycle groups such as HarBUG, (Harwell Bicycle Users Group) whose members are based at Harwell Campus. Community engagement has shown that there is an appetite for cycling. This is borne out by the increase in cycling in other cities, both in the UK and on the continent. Tapping into these groups to spread the council's plans for improved cycle routes, listening to practical requests for facilities etc. will

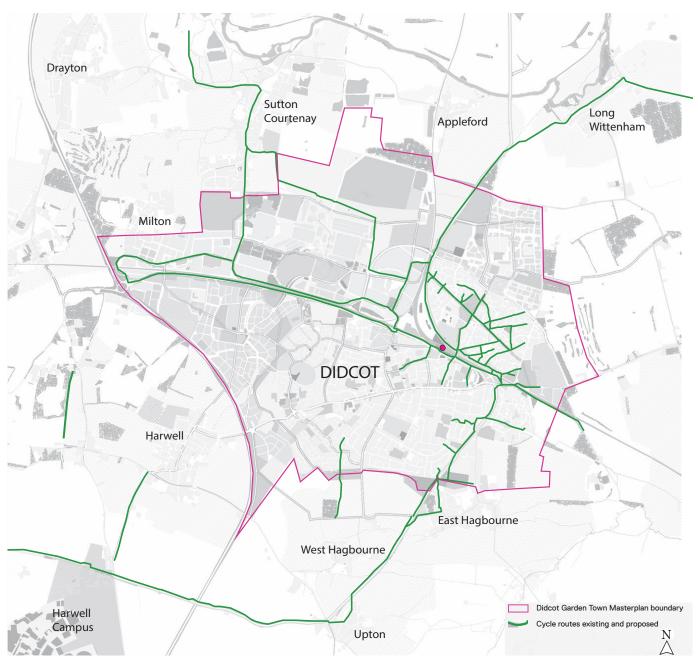


Figure 8.4 - Existing cycle network

also help to ensure that new provision is well tailored to what is required by local users, which will help to spread the word about the ease of cycling in Didcot's community.

The cycle route from Didcot to Wittenham Clumps and the Earth Trust should also be upgraded to make it more complete. The success of the Earth Trust as a visitor attraction means that the number of people arriving by car exceeds available parking, leading to congestion in local lanes, parking on verges and field entrances leading to degradation of the local environment. A complete cycle path will give visitors an alternative option for getting there.

Illustration of the types of route, proposed sections and images are included in chapters 5 and 9. The development of the detailed alignment, signage, planting and surfacing details will be part of the next stage of work.

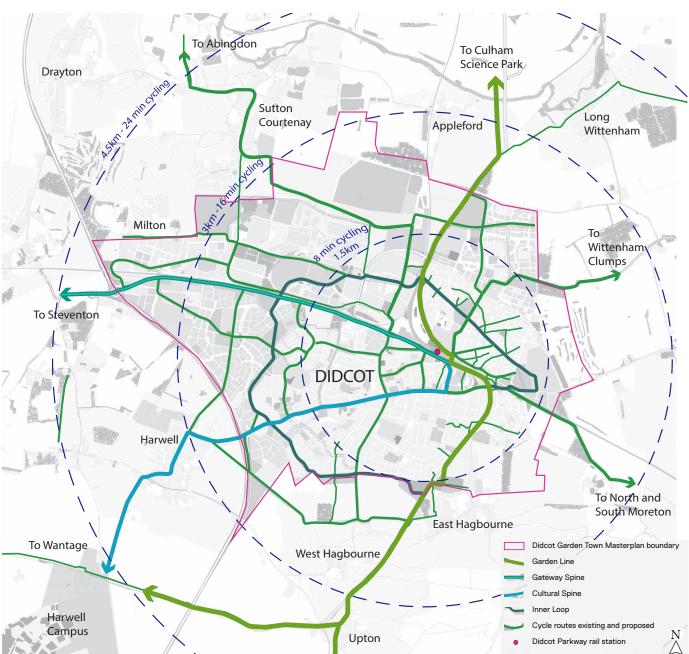
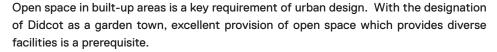


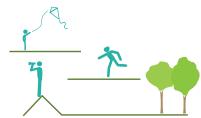
Figure 8.5 - Proposed cycle network

### 8.3.3 Landscape priority 2: provide new multifunctional spaces

"It has been calculated that the NHS could save £2.1bn a year if everyone had access to green spaces"

Sue Holden, Chief Executive Woodland Trust





The status quo	Why this is necessary?	Where the garden town team assumptions are from
In the existing town there is a deficit	Didcot's proposed population will further	Desktop assessment of the standards
of open space generally (see green	reduce the availability of open space.	and review of disposition of open
infrastructure strategy). Insufficient	Multi-functional spaces provide	space across all types shows there is
accessible green space per head of	potential for maximum use,	a deficit of most types in Didcot.
population according to Accessible	promoting health and wellbeing,	See green infrastructure strategy
Natural Green Space Standard	social interaction, physical activity	(appendix K) for more details.
(ANGst).	and education. Well designed	,
Existing open spaces tend to be	multi-functional open space have	
maintained in a uniform fashion	multiple uses including environmental,	
leaving a biodiversity deficit in the	ecological, social and amenity	
spaces as a whole. Quality provision is	purposes which are described further	
also uninspiring.	in the text above.	
How it can be improved and what	Is there enough in the masterplan	Within existing planning policy or
the aspiration is	and next steps?	garden town policy
Open space is proposed as part of	If all the space set out in the	Both district councils have
emerging development proposals but	masterplan is provided there will be	policies which refer to the natural
not necessarily in the right place, type	sufficient open space per capita in	environment and to the design of
or size to help redress the deficits. By	the plan period (2031). The garden	open space as it relates to new
understanding the appropriate type	town must provide larger new spaces	development. There is not a great
and disposition of spaces, it is possible	as required by the ANGst. Review of	deal on the character, quality, design
to make a townwide plan rather than	garden town standards may result in	or use of multi functional green
development focused provision. The	a need for greater provision if Didcot	space, its benefits or potential
masterplan strategy shows all space	is benchmarked against other garden	locations.
types at locations where they are	towns – typically 40 per cent. (see	
required.	green infrastructure strategy).	
How could this be funded and	Research/ consultation	
supported?	Next steps	
Some of the new spaces will be funded	Commission detailed design of	
by development.	proposed new spaces. Research	
The long term management and	trusts set up to manage open	
maintenance of the spaces is the	space. Research funding from other	
included in the green infrastructure	organisations e.g. health authority if	
strategy. Potential to set up a trust	connection between wellbeing reduces	
to ensure that the spaces remain well	impact on health services. Research	
cared for and relevant to the local	into other contributors to the trust.	
population. Other initiatives could	Research how communities can be	
include using community volunteers to	encouraged to take ownership and care	
perpetuate some aspects of the open	for the green spaces around them.	
space provision.		

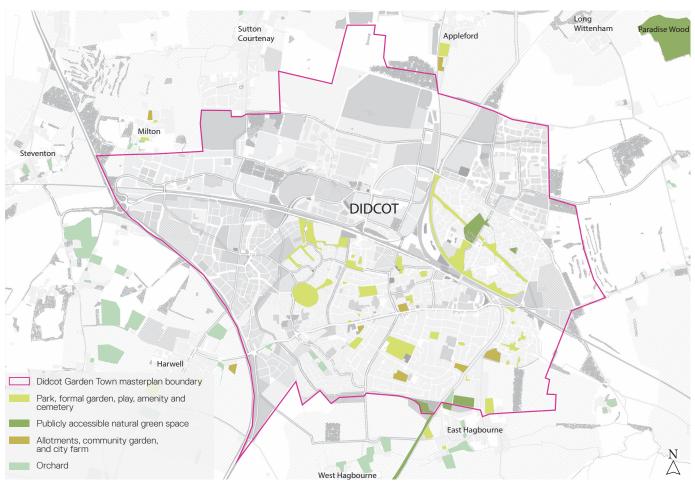


Figure 8.6 - Existing accessible open space

### Existing accessible open spaces

Didcot already has a network of open space, wide tree-lined streets and a green setting. The district councils have adopted Natural England's Accessible Natural Green space Standard (ANGSt) for natural and semi-natural green spaces which is an accessibility standard based on distance to different sized sites rather than a quantity standard per head of population. While some overlapping in the criteria means that some parks are included in the calculation, the ANGSt assessment helps identify spatially where new green spaces should ideally be located, and their recommended size.

Using ANGSt analysis, which states:

- No person should live more than 300 metres from their nearest area of natural green space of at least two hectares in size
- There should be at least one accessible 20 hectare green space

- site within two kilometres from home
- There should be one accessible 100 hectare green space site within five kilometres
- There should be one accessible 500 hectare green space site within ten kilometres

### Assessment findings

There is a partial deficit of accessible natural green space sites two hectares and above within 300m from home in Didcot. The central area between Broadway and the railway in particular is lacking access to accessible natural green space. North of the railway line, Ladygrove Park and lakes provide an important area of accessible natural green space. Residential areas further than 300m from this site tend to be well greened with access to the Ladygrove Loop and generous private gardens.

 There is a complete deficit of accessible natural green space sites 20 hectares and above within two

- kilometres from home in Didcot. The Earth Trust land at Wittenham Clumps is the only nearby site above 20 hectares but is over two kilometres away.
- There is a partial deficit of accessible natural green space sites greater than 100 hectares within five kilometres from home in Didcot. The Earth Trust land at Wittenham Clumps and around is the only site above 100 hectares and much of the south and west of the town is further away from this site than 5 kilometres.

Given the space constraints in existing urban areas green space in new developments needs to be planned to meet ANGSt standards and will help to mitigate any lack of accessible natural green space in adjoining existing areas provided footpath links are created between areas. As a guide, and based on a spatial assessment of potential new development sites, the following additional accessible natural green spaces should be provided as a minimum:

- Seven accessible natural green space sites of 2-20 hectares – four to the north and east of the existing town and three to the west of the existing town amounting to a minimum of 14 hectares in total. Locations will depend on the final layout of development and the proximity of the larger 20 hectare plus sites.
- Two accessible natural green space sites of 20 hectares or above – one to the north and one to the south

of the existing town amounting to a minimum of 40 hectares in total. Identifying suitable land and resources to create these large sites is challenging but early identification and planning is vital. Potential locations are shown on the landscape masterplan on the following pages. Recommendations for funding are included in the green infrastructure strategy in Appendix K

It is unlikely that land will be available for a 100 hectare or larger site within five kilometres of the town, so this has not been included in the recommendations for new green space. However it will be important to improve access to the countryside, in particular to key sites such as Wittenham Clumps and the AONB landscapes to maximise people's access to large areas of natural green space. (see section 8.2.1)

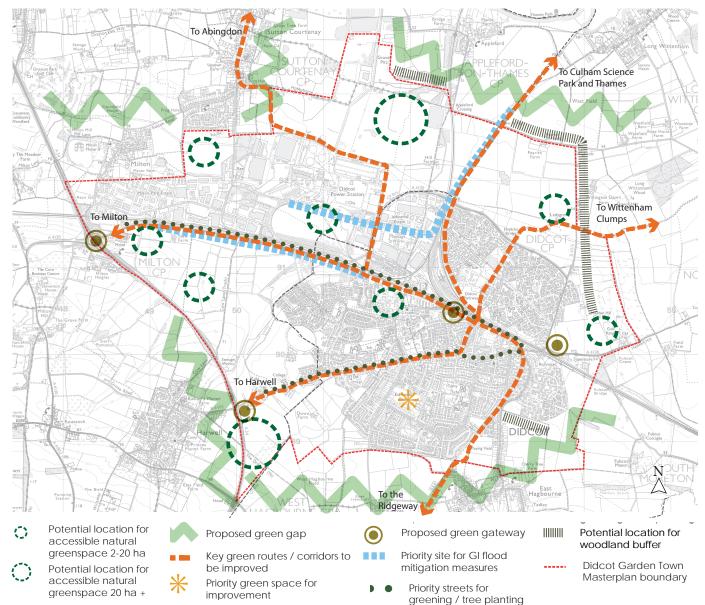
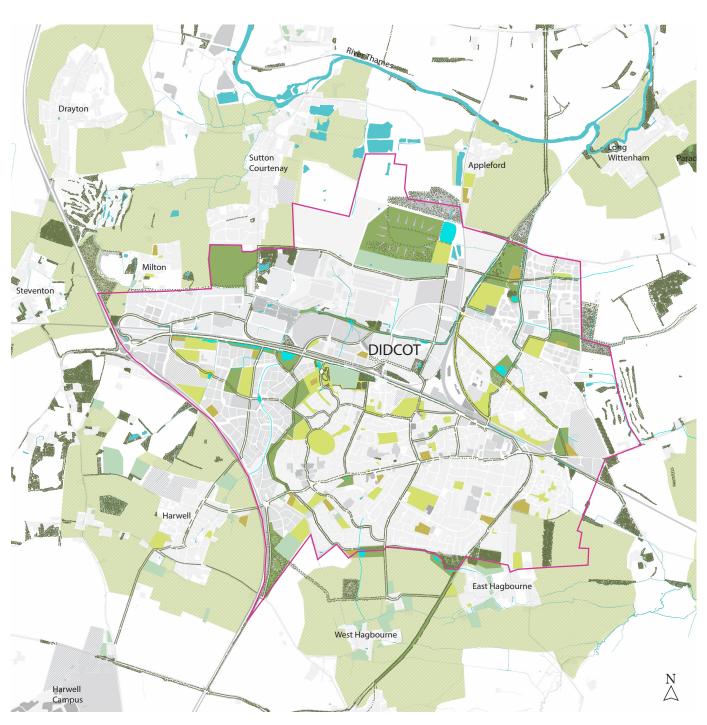


Figure 8.7 - Green infrastructure key recommendations plan



Orchard

Woodland

Landform

. .....

\*\*\*\*

Water/ wetland

Green corridor

Didcot Station

### Key

Didcot Garden Town master plan boundary

Park, formal garden, play, amenity and cemetery

Publicly accessible natural green space

Allotments, community garden, and city farm

Proposed green buffer around necklace of villages

Figure 8.8 - Proposed landscape plan

### How open space can form a key part of the quality of Didcot Garden Town

A fundamental principle of green infrastructure is that a single site or asset can provide a range of social, economic or environmental functions and benefits. This multi-functionality highlights the advantage that green infrastructure has over traditional engineered solutions to environmental problems (Natural England, 2009) such as:

- Access, recreation, movement and leisure
- Habitat provision and access to nature
- Landscape setting and context for development
- · Energy production and conservation
- Food production and productive landscapes
- Flood attenuation and water resource management
- · Cooling effect

There is a growing body of evidence that identifies strong links between investment in green infrastructure and the economic, social and health benefits that can result (Natural England, 2014), including:

- Inward investment increasing the attractiveness of the environment increases inward investment and property values in proximity
- Visitor spending the quality of the environment impacts on the number of visitors it attracts and how much money they spend in the area
- Environmental cost-saving green infrastructure provides important regulatory services which can reduce damage costs and allow greater investment in productive activities
- Health improvement access to quality green space has a positive impact on ill-health issues and productivity

- Market sales urban food growing can increase economic output locally
- Employment generation developing and maintaining green infrastructure provides jobs (Defra, 2013)

The green infrastructure strategy has evaluated open space provision, quality and standards. The masterplan shows the disposition of new spaces which address the deficits thrown up by the green infrastructure audit. Each of these sites needs careful design to ensure that the new spaces provide the following:

- Coherent design which evokes good identity and local distinctiveness
- Green space which links to the wider network of the town
- Inclusion of water sensitive design and provision for sustainable urban drainage systems (SuDS)
- Planting appropriate to the location



and character of the local landscape

- Overlapping uses which provide activity and interest for mixed user groups
- Seasonality beauty and delight, subtle design features which enable a revealing of the site so that multiple visits will be an enduring pleasure
- Maximise potential for views over surrounding areas

Sketch analysis is shown for the proposed new spaces on the following two pages.



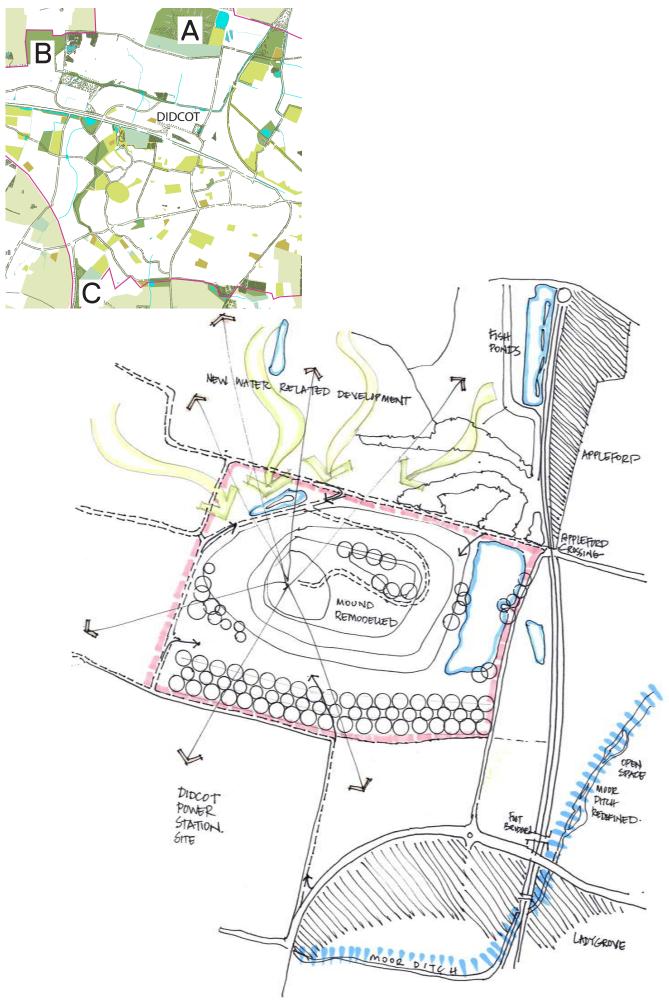
© City of Oaks Foundation at Wilkerson Nature Preserve Park



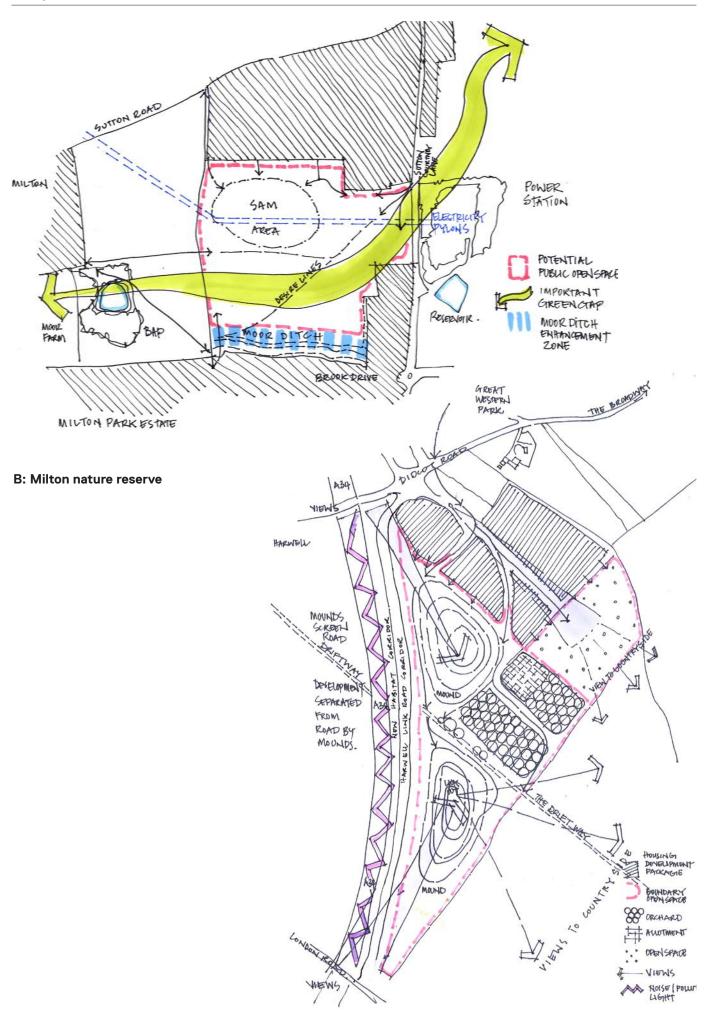
© The Sharing Solution by Janelle Orsi/E Doskow Attorney



Northalla Fields



A: Appleford landfill



C: Driftway Tumps

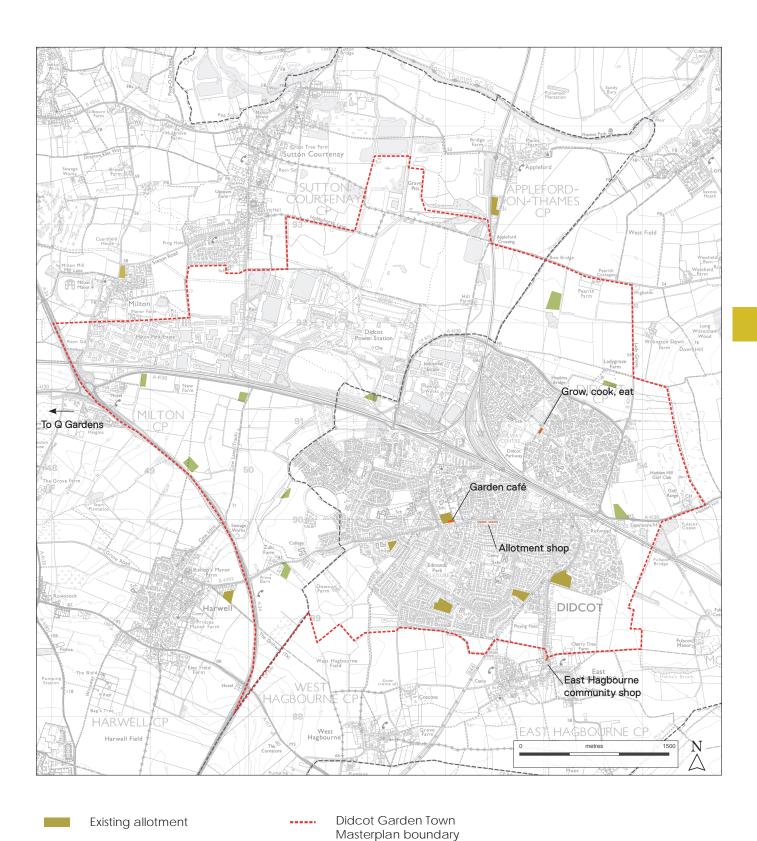
# 8.3.4 Landscape priority 3: promote growing of local food

"Our lives revolve around food. We nourish our bodies with it, but we also celebrate, entertain and express affection with it." Green Living



Food security – that is the ability of a community to feed itself – will become more important as populations grow, energy becomes more expensive and climate change has an impact on growing conditions. Didcot is in a rural area and has the potential to plan now to become more self-sufficient, with the subsequent benefits for food miles, food freshness, health and supply.

The status quo	Why this is necessary?	Where the garden town team assumptions come from
There is an active allotment society in Didcot. The Earth Trust is involved in education and the connection between food production and the rural environment. Local food production is not common. Sustainable Didcot and Sustainable Blewbury organisations show that local interest is growing.	Fresh, locally produced food reduces food miles, provides a resource for education and promotes community. Locally grown food is fresher more nutritious and reduces the need for imports (50 per cent from EU).	Desktop evaluation of the number of allotments and community gardens. Development of Sustainable Didcot – guerrilla gardening and community interest in local food. Consultation with allotment group.
How it can be improved and what the aspiration is	Is there enough in the masterplan and next steps?	Within existing planning policy or garden town policy
Provision of more allotments and associated facilities to cook, eat and sell locally grown food in local restaurants and cafés, farmers' markets and community shops help sustain local food production and boost local economy.  More education on benefits of local food, economic, budgetary, effect on food miles, nutritional benefit, exercise health and wellbeing.	The disposition and number of allotment sites has been set out in the masterplan to provide for the increased population of the plan period.  Agricultural land is largely in arable production. If markets can be established more local farmers may be persuaded to try market gardening, vegetable boxes etc. Bio science team can initiate new methods and micro vegetable growing.	Councils have a statutory obligation to provide allotments if there is sufficient demand. Existing allotments cannot be disposed of unless new ones are made.  South Oxfordshire District Council's core strategy states that agriculture makes a major contribution to the character of the district and local production needs to be supported to reduce food miles. Policy supports food enterprises, farm shops and farmers' markets.
How funding and initiatives can support this?	Research /consultation - Next steps	Quick wins
The Earth Trust provides courses and education for schools on the connection between the rural environment and food. Funding for the Earth Trust to extend their education reach will help promote interest. Funding for community worker or Sustainable Didcot to set up new allotments and community garden. Local events at community garden, 'bake off' and seasonal cooking festivals etc. can help promote ideas and benefits.	Develop community interest in local food growing. Initiatives to engage with existing allotment societies and Sustainable Didcot to promote local food production should be organised. Identify sites within villages to be included in neighbourhood plans for commercial market gardening by local landowners and farmers. Research potential for involvement of bio-science and landowner groups.	Opportunity for a new community garden at an unused site adjoining the Co-op on the Ladygrove estate.  Pop-up shop to sell local produce on Broadway. Also stalls within Saturday farmers' market to boost local interest. Use social media.



Local authority boundary

Figure 8.9 - Existing and proposed allotment sites

Proposed allotment



Wallingford Market Place

#### Promotion of local food

A local food economy is a key idea in the design of Didcot Garden Town. There are a host of reasons why local food is good for environment, economy, community and sustainability:

- Developing a local food economy reinforces the connection between our own lives and the rural environment
- Promoting understanding of the value of local food is important for children as well as adults. Food bought and grown locally is fresher and more nutritious because it hasn't been stored or transported miles and it tastes better
- Buying local food supports the local economy and rural land uses. Farmers who sell at farmers' markets can also provide produce for local restaurants and cafés
- The local economy is supported when new businesses are set up to sell local food, such as cafés and restaurants
- When local farmers grow food with sustainable agricultural practices they support biodiversity and help create habitats rather than eroding them
- Availability of locally grown food builds understanding of seasonal variety
- Involvement of local people in food

- growing builds community
- Gardening increases physical activity outside, and is good for overall health
- building community involvement supports well being and mental health

Didcot has thriving allotment societies and new allotments are proposed as part of the network of open space within the masterplan. Getting these new allotments off to a good start may take the services of a community liaison officer to promote interest in developing the new plots.

Once allotments become established they may produce more than holders can eat themselves. It is proposed that one of the pop-ups on Broadway is an allotment hub, providing support, advice and growing tips as well as selling surplus produce.

Other industries may be spawned through the local food growing industry - preserves and pickle making, and other types of baking and cooking which uses local produce, new cafés and restaurants which serve food grown locally can also become established.

In order to assess the viability of a local food growing economy expanding and monitoring the Didcot farmers' market will gauge its success. Didcot has an established science community including a bio-science community. The growing of micro vegetables is a major industry in Holland and is growing in the UK. Didcot is surrounded by high quality farmland, largely in arable use, although there was formerly a strong tradition of local fruit growing.

There is an agricultural college at Cirencester and bio-science within the local science community. Stakeholder engagement with these groups and initiatives to promote new agricultural diversity could also see the introduction of micro vegetables in the local area.

The masterplan proposes establishing a minimum of ten new community orchards within the town in the immediate plan period to help promote community involvement with local fruit growing. Locating orchards and allotments together helps to ensure their success. Monitoring the success of these orchards will be key to extending the initiative to neighbouring villages. The Earth Trust would be a helpful partner in this enterprise, supporting community groups with advice and guidance on methodology and helping to promote events such as apple day.



© Berkshire Buckinghamshire and Oxfordshire Wildlife Trust



Image mylightyearwarranty.com



© Koppert Cress Netherlands





Eden Project

# 8.3.5 Landscape priority 4: integrate new urban public space

"In order to create the kind of high-quality places we all want, a major cultural change is needed where the focus of everyone involved moves towards the wider context of what is already there and its all-important setting and context." Sir Terry Farrell



All successful towns need good quality, public urban space which citizens recognise as a place to meet, for shared activities like markets, celebrations or demonstrations. Well-designed spaces encourage people to visit, linger and interact. The garden town is an opportunity for Didcot to review its existing public spaces and to consider what new provision is needed as the town expands.

The status quo	Why this is necessary?	Where the garden town team assumptions come from
Didcot's public open spaces are very limited in location, size and design. Broadway is an important part of the town centre, but its public areas are limited to a footway to a one-sided street. Public space around the library, civic centre and fire station is also very limited and does not help to signal the civic functions of the buildings. Didcot Station has no sense of arrival and is flanked by open car parking without identity.	Well-designed public space is part of the composition of town centre development. Vibrant town centres need public space which relates to the uses and buildings nearby, providing appropriate scale, context and a canvas for public life. It is actively used open space which causes people to dwell in the town centre. Providing public spaces will help to make the town centre a destination.	Site assessment and evaluation of existing provision.  Design team initiatives and collaboration.
How it can be improved and what the aspiration is?	Is there enough in the masterplan and if not next steps?	Is it supported by existing planning policy or should it be in garden town policy?
With the garden town masterplan proposals to extend the quality of the town centre, new public spaces will support and underscore the function and sense of arrival at the heart of the town. Masterplan proposals will highlight zones where public areas should be enhanced but more detailed design of each of these zones will be necessary.	Detailed design of individual sites will be necessary to ensure that the public areas are developed with new uses and features to enhance the character and quality of the spaces. This will need to be developed in tandem with the building proposals.  Sketch concepts of the key spaces are included in this section.	Both district councils supports open space, sport and recreation and walking routes. Development is expected to make provision for open space and recreational facilities.  South Oxfordshire District Council's core strategy recognises deficiencies in existing open green space and leisure provision. Green space studies set out proposed strategy to meet targets. The garden town to increase density of town centre and requirements for public areas.
How could this be funded and supported?	Research/ consultation - next steps	
Sketch development ideas of plots such as Rich's Sidings, Baptist House and station square are part of the proposals. Public spaces should be funded as part of these development proposals. Broadway public areas could be council funded.	Detailed proposals for Rich's Sidings, station square and the town square will help consolidate the town centre.  New public space at these locations will contribute to the legibility of the town centre.	

As part of the masterplan proposals a strategy for the consolidation of the town centre has evolved. This is described in chapter 9. With the development proposals for Rich's Sidings, station square and the town square on Broadway the location of public spaces which are strategic to the legibility of the town centre has become clearer. These three spaces have been developed to sketch proposals and are linked by proposals for the Gateway Spine, the Garden Line and the Cultural Spine shown below in Figure 8.10.

The main requirements for the public spaces strategy in the heart of the town are to:

- create a positive arrival experience at the station
- improve the intelligibility and connection between the station and the town centre
- terminate Broadway in a positive way
- create a larger space for markets or social events close to the Cornerstone Arts Centre

Providing these new spaces will also play a key role in consolidating development in the core of the town. It will also allow more potential for diverse activities with a greater offer for people to enjoy both during the day and evening.

- 1. Rich's Sidings
- 2. Station square
- 3. Town square

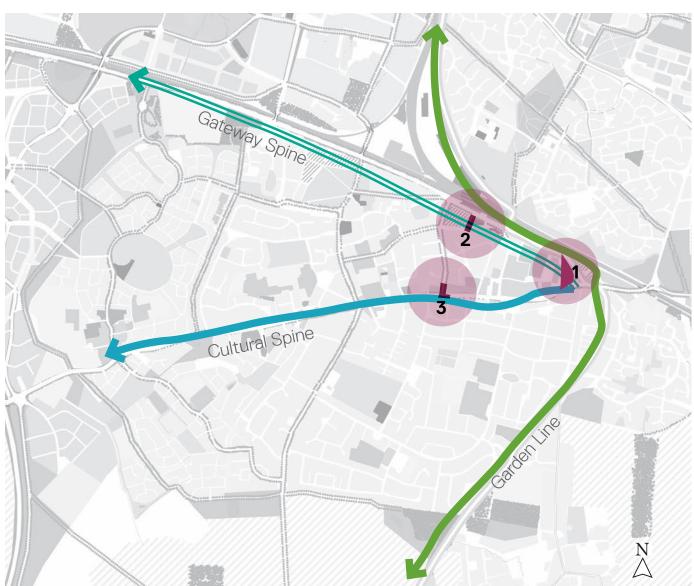


Figure 8.10 - Location of potential public spaces



## Rich's Sidings

This space will form both a more positive termination to Broadway and redesign the corner from Hitchcock Way, to Broadway, again creating greater legibility and integrating the station with the town centre.

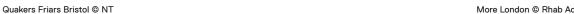
This space at the head of the pedestrian route from Station Road has the potential to form a strong node leading to a route north east across the railway and pedestrian and cycle routes south along the Garden Line. The public areas will form a focus for new buildings on this site as described

in chapter 9. It will have potential for new planted areas, a strong structure of trees which help to delineate the routes through it and a wider space in front of an arts building.



Rich's Sidings - a new layout for Broadway







More London © Rhab Adnam



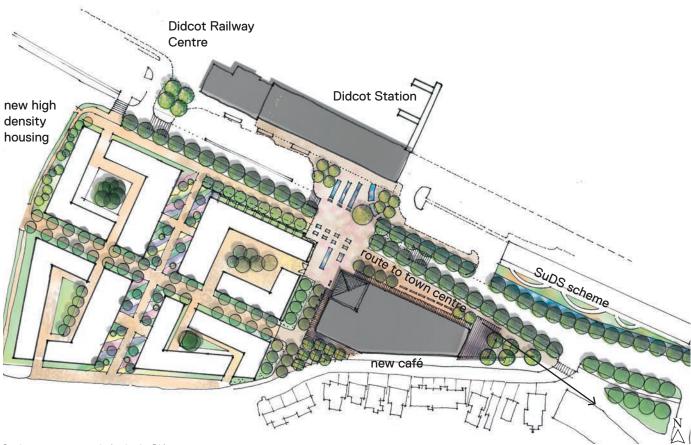
## Station square

The proposals for a station square will form a positive arrival point in Didcot, which immediately indicates the route towards the town centre. Running east-west through the space and forming a strong part of the sustainable blue green landscape

priorities - the SuDS scheme will be integrated into the space, with formal elements such as canals, fountains, rills or other designed water features which also perform an important function in accommodating surface water runoff. New planting will help to structure the space and direct visitors towards the town centre. The character of the

planting will also help to set the scene for the garden town itself, creating a strong setting to the arrival.

The route parallel with the railway will form part of the new cycle network and include a sculpture route or outdoor gym apparatus as part of a circular route around the town centre.



Station square - new arrival point for Didcot





© New Road Brighton NT © Iron Age Designs



## Town square

This will form a strong termination to the route past the Cornerstone Arts Centre with the potential to expand to accommodate markets or public events. It will also turn the corner into Broadway and form part of the series of spaces along this street giving it more coherence and underscoring its purpose as the key civic street.



Didcot town square



Kings Cross London, well used successful public space steps to the canal





Malmo Western Harbour integrates public space with soft space and water areas



Art, meanwhile uses and lighting are key to enhancing the public spaces as shown in examples on facing page:

- 1 Bristol's Gaol Steps has a multi-level pedestrian street at its heart, street trees, space for cafés to spill out and feature lighting provide diverse interest
- 2 Temporary uses at Boxworks by Temple Meads in Bristol supports small businesses with low rents in containers while the site is waiting to be developed
- 3 Dynamic and distinctive lighting in Eindhoven helps placemaking in a transformational town
- 4 The Kelpies in Grangemouth form an iconic and well-loved landmark

Gaol Steps Bristol © NT



Bristol Boxworks © NT



© Vermeer fotografie



© Sandor Bernath

Broadway new public spaces and street scene:



## 8.3.6 Landscape priority 5: protect key views

"The UK has only 13 per cent woodland cover, compared with an EU average of 37 per cent. Integrating trees and woodland into urban areas or farmland can bring great benefits such as urban cooling, shade and shelter, minimising run-off from fields, and reducing the impact of flooding." The Woodland



#### Trust

Didcot has the advantage of good quality rural landscape all around, in particular the AONB and Wittenham Clumps. It is important that new development considers the impact it has on these important windows to the wider countryside.

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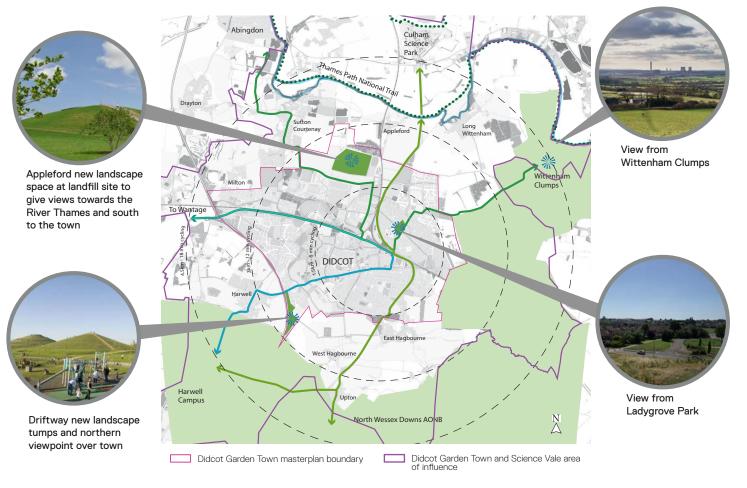
Didcot has a landscape context of surrounding lowland, which predominantly clay farmland. This agricultural landscape is often poorly furnished with larger blocks of woodland and in some districts the network of field boundaries are eroded with intermittent hedgerows. This has the effect of increasing the visibility of the town and built up land in local and wider views. While screening development is not the main requirement well sited planting is important in allowing new development to be absorbed into the wider landscape.

A detailed study of local views to help identify those key to the setting whether from Wittenham Clumps towards the River Thames or from streets which end in the agricultural landscape will help provide the baseline to a strategy for protecting and enhancing local views.

In a flat landscape such as Didcot providing opportunities for new views to orientate visitors and for local people to enjoy a prospect of the surrounding area is a key amenity.

As part of the proposed multifunctional landscape spaces within the green infrastructure strategy for the masterplan it is indicated that new high points or tumps will be included. On the landfill site west of Appleford this raised land is already evolving without a clear use or form. It is currently being grazed by sheep but not public access is provided. Adaption of the site to include public access, and provision of a detailed masterplan with proposals for multi-recreational uses and the added benefit of a great view of the surrounding area is part of the masterplan proposals.

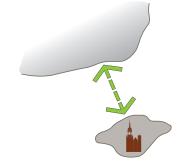
The site close to the Driftway to the south west corner of the town is currently in the reserve land for the potential southern perimeter road. This land has been included in the masterplan proposals for another landscape space and has potential for a new mounded form and look out point. Its landmark location, highly visible on the western approach via the A34 will also separate the impact of the road from adjoining residential areas.



# 8.3.7 Landscape priority 6: formalise green gaps

"Often it is the commonplace things, the locally abundant, the places and the wildlife on our very doorstep that we take for granted, that slip through our fingers."

Common Ground, Arts and Environmental Charity



The expansion of Didcot means that the town is growing into greenfield land towards surrounding historic villages which have their own separate identity. A decision needs to be made to protect the villages from coalescence with the town and to allow them to control their own development. The following section explores some alternatives.

The status quo	Why this is necessary?	Where the garden town team assumptions come from
There is currently a planning appeal in East Hagbourne which demonstrates the pressure on these sites.  Woodland on the fringes of Didcot is sparse and countryside may be well divided by streams, watercourses and hedgerows but larger woodland will have a beneficial effect in a number of ways.	Preventing coalescence between the villages and Didcot will protect the identity, character and diversity of the area. The villages have their own often historic environments which are separate from that of Didcot.  There is also a need to protect the best and most versatile farmland for food production.  Providing woodland in the periphery of the town can help absorb surface water run-off, attenuate flood flows and prevent flooding.	Review of the planning consents and applications for new housing on the periphery of Didcot. Pressure to build on land between the villages and the outskirts of Didcot is observed in development proposals coming forward to planning.  Evaluation in the field of landscape types and characteristics as set out in the landscape character assessment.
How it can be improved and what the aspiration is	Is there enough in the masterplan and next steps?	Within existing planning policy or garden town policy
The green gaps to the villages on the periphery of Didcot can provide not only a rural agricultural use but be part of the recreational use of the garden town. Routes through this landscape are key to link the town both to the villages and other settlements. Topography, natural features such as woodland and orchards provide three dimensional screens to separate the town from neighbouring villages.	The masterplan sets out the proposed buffers to the necklace of villages. These need to be verified on site, with a greater understanding of heritage assets of each village, extent of conservation areas and mapping the visual envelope of the settlement within the countryside.	South Oxfordshire District Council's vision says there is a need to maintain the general balance between the market towns and villages recognising the need to maintain the character of the district and to ensure that the character and distinctiveness of the towns and villages is maintained. Vale of White Horse District Council's core policy 44 states that key landscape features are to be protected and enhanced and core policy 37 relates to design and local distinctiveness.
How could this be funded and supported?	Research/ consultation -Next steps	
Funding initiatives to promote the planting of woodland is available from the Forestry Commission. Initiatives and funding for the planting of orchards are also available from the Tree Council.	The buffer zones must be mapped in more detail, a methodology is included in this section. Discussions with farmers to enable farmland to be diversified from strictly arable use with new initiatives for food production. Engagement with landowners and bio-tech science organisations to establish new ideas and projects for food production.	

#### The landscape setting

Assessment of the landscape character and quality of the setting of Didcot has shown that landscape assets of the area are very high. With the North Wessex Downs AONB to the south and east of the town, the River Thames floodplain to the north and large tracts of high quality farmland within the lower clayland landscapes to the south and east of the town. Integrated with this landscape is the pattern of villages, laid out with fields, orchards and woods and linked by a network of local footpaths and greenways.

The value of this landscape setting is not only set out in the landscape character assessment provided in Appendix L but is evident from public consultation undertaken as part of the garden town project. Many people have said that they like living in Didcot because of the immediate access to and visibility of the countryside.

In order to safeguard this important landscape setting, and to ensure that the development of Didcot is consolidated within the town's core, the garden town masterplan principles include the proposal of green buffers to the surrounding 'necklace of villages'. A recent planning appeal on land between Didcot and East Hagbourne was dismissed, reinforcing the role that open space plays in preventing the coalescence of Didcot and its

surrounding villages. Originally a green belt to the town was proposed but this may have had the effect of restricting growth, and would potentially be more detrimental to the villages as they could come under greater pressure for development.

Broadbrush principles were used to sketch the green buffers on the landscape masterplan (see Figure 8.12) using an evaluation of local topography and field structure, relationship with the village curtilage, contiguous land parcels and boundaries formed by vegetation. This approach is sufficient to establish the principle of the green buffer but further detailed study of each location should be carried out to ensure that each area is properly considered on its own merits.

In establishing the sufficient extent of each green gap the objective is to define a clearly defensible boundary to the landscape setting of the village using a baseline study to include the following tasks:

- Desktop analysis of Ordnance Survey maps to establish the parcels of land which relate to the village envelope on all sides
- Evaluation of the heritage assets, with a mapping of conservation areas, listed buildings and historic landscape features
- Review existing archaeological records and note any local

- designations or monuments
- Mapping of tree preservation orders and protected trees and woodland
- Mapping of biodiversity assets designated local nature reserves or other wildlife protection areas
- Evaluate landscape character assessment information
- Use visual assessment to analyse the visual relationship between parcels of land and check for intervening vegetation which may separate landscape compartments from the village. Where landscape compartments are contiguous and have a strong visual connection to the village in guestion the whole parcel of land should be included in the green buffer. Remnants of historic landscape structure are particularly vulnerable to loss and careful identification of these elements should be made by an experienced practitioner in the field and through mapped study.
- Topography: where landscape compartments are broken by a change in topography, which limits the visible land only that within the view should be included.

Once mapped and evaluated the extent and components of the green buffer should be included in the local neighbourhood plan of each village to ensure that this asset can be captured.



## Land uses within village green buffers

Much of the land in green buffers will remain in private ownership and in agricultural use. This land forms the mainstay of the tranquil, rural landscape which is in contrast to the built up, urban nature of the town.

A network of public footpaths and rights of way bisect this land, many are historic routes, part of the landscape structure for generations, connecting villages to farms and allowing stock to be moved between pastures at particular times of the year. The footpath network is a strong structuring element in the landscape and an existing recreational resource, with diverse routes connecting from lowland to the AONB.

Within the wider Didcot area, the peripheral landscape can be divided into three broad zones which relate to remnant landscape structure:

- 1) To the south and west of the town mapping indicates that orchards were a strong part of the agricultural land use, with many village-related orchards still to be found, especially around the Hagbournes, Upton and Harwell.
- 2) To the east and north east of the town there are fewer orchards and remnant woodland, includes Paradise and Long Wittenham Woods.



Figure 8.12 - Outline location of proposed green gaps to necklace of villages around Didcot Garden Town

3) To the north of the town, larger wooded areas are more often water related, with stands of willows and alders along the margins of gravel pits, lining the River Thames and other watercourses as well as regenerating scrub on landfill sites and more diverse woodland around Sutton Courtenay.

With this broad structure in mind the following section sets out the design guidance on increasing the landscape structure within the green buffers.

#### Orchards

Orchards are a particular landscape feature readily identifiable by the pattern of trees and regular rectilinear field parcels. Remnants of orchards are notable where there are established shelter belts found for example around Harwell village and East Hagbourne.

In restoring some of the amenity, diversity and character to the green buffers new orchards should be part of the mix where land ownership permits a change from larger scale farming. Planting new orchards will help to re-establish a traditional use within the green buffer which is beneficial on many levels, to the settled landscape structure, to local communities as an education resource and for local food, to wildlife and to help prevent flooding and increase air quality.

Community orchards are eligible for grant aiding through a number of bodies including the Tree Council, the Peoples Trust for Endangered Species and the Department for Environment Food and Rural Affairs. The Department for Communities and Local Government's guidance on community orchards provides a guide on setting up a community orchard and links to Common Ground's publication Community Orchards Handbook (Common Ground/Green Books 2011).

In Blewbury a new community orchard has been planted in the last couple of years and the benefits of this resource for local education, as part of the open space infrastructure, for wildlife, for community building with the benefits of growing, cooking and sharing local food are already being enjoyed.

Sites for new community orchards should be identified and plotted as part of the emerging local neighbourhood plans to ensure that sufficient space is safeguarded for this local use.

#### Woodland

Woodland resources around Didcot are relatively scarce. There are woods to the east at Paradise Wood and then at Wittenham Clumps. Remnant woods on larger field boundaries, along stream fringes and steeper level changes, are still found within the lower clayland landscape type. The landscape



© Flickr.com

priorities propose new woodland planting particularly on the eastern town fringes for the following reasons:

Amenity benefit - woodland can be part of a wider network of spaces for recreation within green buffers. It gives structure to the agricultural landscape, providing a three dimensional element and enclosure to the landscape. It gives shelter to adjoining fields and shade to visitors, it can also be a destination in its own right providing it is well-managed. woodland Interpretation of resources, woodland walks, tree top trails and organisations such



Illustrations of Cotswold water park

as 'Go Ape' can maximise the recreational value of woodland, while educational benefits to local communities can include rural craft courses, 'woodcraft' for children, ensuring that woodlands provide a truly multifunctional resource.

- Wildlife benefit mature native trees provide the best opportunities for wildlife. English oak supports the highest number of species. Diversity in the woodland structure with shrubs under higher canopy species, and a pattern of densely planted areas, glades and strong woodland boundaries. means that the maximum potential for wildlife can be supported. A network of managed hedgerows also connects woods providing routes for foraging and commuting species to protect the viability of habitats.
- Protecting soils Tree root zones bind soil together, protecting it from erosion. Trees return nutrients from leaf mould and decaying vegetation to the soil, protecting its fertility and promoting the activity of beneficial organisms which build soil structure.

Reducing flooding - trees take up moisture from the soil, absorb rain water and diffuse heavy rainfall. Woodlands also slow the rate of run off from uplands to lowland streams, the friction they create to the movement of water is beneficial, allowing time for water to percolate through soil replenishing water table levels.

Landscape structure of the flood-plain

The field structure to the north of the town has broken down entirely where land has been worked for gravel and remnant pits are left as open water giving this land a different character to that of the lowland farming landscape. And in terms of beneficial use to the garden town community it holds great potential for reimagining.

Restoring access across the landscape is high priority, re-establishing routes which link to the River Thames, Sutton Courtenay and the proposed footbridge to Culham. The masterplan includes a cycle track beside the Moor Ditch running north to Long Wittenham and others tracking across disturbed areas towards Sutton Courtenay. The patching together of these routes allows opportunities for new planting

to restore landscape structure but this should be carried out within the context of a specific masterplan design exercise to maximise the potential for recreation and new development which could respond to flooding likelihood.

Water based recreation, opportunities for wildlife and development which responds to the floodable zone would be truly innovative and create a new district with buildings floating above gravel pits well connected by rail at Appleford for example.

Where the gravel pits have already been filled and are left proud of the surrounding landscape these sites provide opportunities for creating new community parks as part of the need for accessible natural green space which is set out in the green infrastructure strategy. Examples of how filled land can be remodelled and recreated to make integrated landscape to new headquarters buildings as well as public space can be found at Prospect Park on the western side of London.



## Design guidance summary

- Map extent of each village green buffer zone using proposed methodology given above
- · Map potential orchard sites
- Set up community groups to manage new orchards
- Include woodland as part of landscape structure and network of vegetation connecting public rights of way.
- Include buffer zone and content in local neighbourhood plans
- Increase planting of water related vegetation to water course margins and redundant gravel pits
- Create a masterplan of the whole gravel extraction zone east of Sutton Courtenay to Appleford to include recreation uses, nature conservation benefits and improved access routes



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## 8.3.8 Landscape priority 7: integrate blue infrastructure

"Blue-Green Cities generate a multitude of environmental, ecological, socio-cultural and economic benefits."

Prof Colin Thorne, University of Nottingham, Blue-Green Cities Research Project 2013-2016



Blue infrastructure is a term which refers to the movement and uses of water in a landscape. A coherent plan brings an understanding of watersheds, flood risk and water attenuation to allow water to be controlled and used in a way that benefits communities, provides amenity and biodiversity and stops hiding water underground.

The status quo	Why this is necessary?	Where the garden town team assumptions come from
Many of the watercourses in Didcot have been artificially straightened, throttled by culverts and their amenity and wildlife value is reduced as a result. The amenity of the watercourses is largely absent from the landscape. Recent flooding can be partly attributed to the insufficient sizing of culverts or clogging of trash screens on culverts under the railway. New developments which must include SuDS schemes are not maximising the value of these facilities to benefit biodiversity or sufficiently slow flood flows.	Well integrated watercourses provide part of the diversity, character and interest of landscapes whether urban or rural.  Well planted, sinuous, natural water channels improve biodiversity and water quality as a result. Where space for waterways to overtop their immediate channel has been properly provided and sized sufficiently, flooding is not an issue to surrounding development or housing.	Desktop study of flooding data, observation of recent flooding events. AMEC surveys and research into flooding and water resource management (see chapter 5.3) Site survey of SuDS schemes implemented as part of new development e.g. Great Western Park.
How it can be improved and what the aspiration is	Is there enough in the masterplan and next steps?	Within existing planning policy or garden town policy?
Planning for water courses to be properly integrated into development will ease flooding and promote better water quality and diversity. New SuDS schemes which are well designed can also alleviate flooding, both in urban and more rural schemes while improving the amenity of the local area.	The masterplan makes some outline proposals for improving the Moor Ditch and new SuDS schemes at the station and on Station Road. SuDS schemes can provide more interest in the public realm and should be part of all new sustainable design proposals.	South Oxfordshire District Council core strategy says new development must incorporate measures that increase resilience to heavy rainfall events and the need for water conservation and storage.  Didcot Garden Town policy - blue infrastructure is driver to design on flooding constraints.
How could this be funded and supported?	Research/ consultation next steps	
The Environment Agency provides help and advice with detailed information on flooding, and design of watercourses. Funding for new schemes should be within development proposals.	Moor Ditch within Didcot A power station, east of the railway to Oxford and at Ladygrove north to the River Thames is priority for 'daylighting'. Better scrutiny of SuDS schemes within development proposals coming forward will determine if the design will promote biodiversity as well as providing a vehicle for flood flows. It should do both.	Collaboration with freshwaterhabitats.org.uk as a way into catchment hosting meeting - which includes local landowners.

The masterplan proposes that Moor Ditch be the subject of a new design scheme for its length between Milton Park and its confluence with the River Thames. (see also chapter 5.3)

This water course takes rainwater run-off arising in areas south of the railway in Great Western Park as well as draining areas of Didcot A power station, Ladygrove and Station Road. It is therefore a key watercourse for Didcot. With the development Didcot A power station an opportunity to redesign the channel making it sufficiently sized to provide not only a natural watercourse but accommodating a generous corridor for planting, cycle and pedestrian routes has real potential (see sketch on following page). Along with this development of North East Didcot which includes a floodable area

proposed for recreation and green space provides a real opportunity for the proper consideration of a natural braided channel within a wide and shallower floodable zone. The levels of the braided channel allow the water course to retreat in times of low flow to a concentrated and narrow wetland, while the higher level tributaries can be allowed to run dry. When water levels are high all the channels can be filled with water. This changing profile is an important characteristic of a natural watercourse and allows many types of habitat to be established within the watercourse environs. Floating, emergent and marginal vegetation can therefore establish within the channels with larger woody vegetation such as willows, alders and poplars used to delineate the watercourse helping to trace its course in the landscape.

SuDS along the gateway spine and at the station square should include water channels at footway level, which are planted with water tolerant species. Consideration of rills, art and elements which are playful and interpretative of the water environment will also be appropriate in station square.



© Tianjin Qiaoyuan Wetland Park

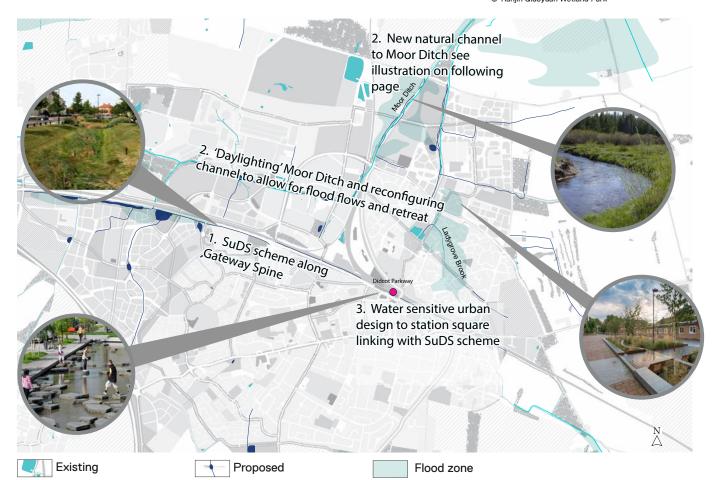
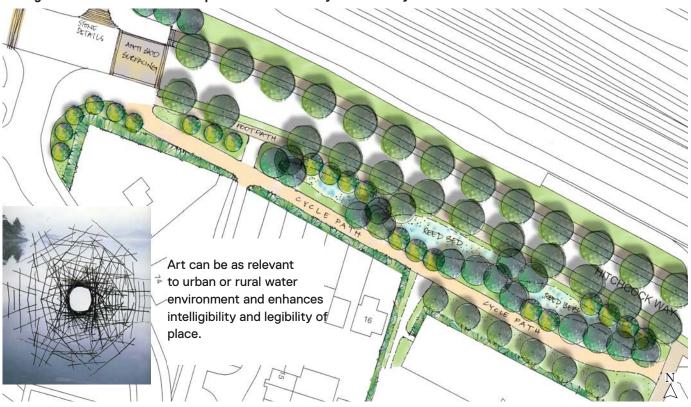


Figure 8.13 - Proposed blue infrastructure plan

Suggested blue infrsatructure projects for the locations identified in Figure 8.13 on the previous page

1. Gateway Spine SuDS scheme has potential to be part of the super cycle highway design, taking surface water run off and provide new amenity and identity to this street



2. Moor Ditch has potential for renaturalisation to improve biodiversity, amenity and water quality as well as accommodating flood flows



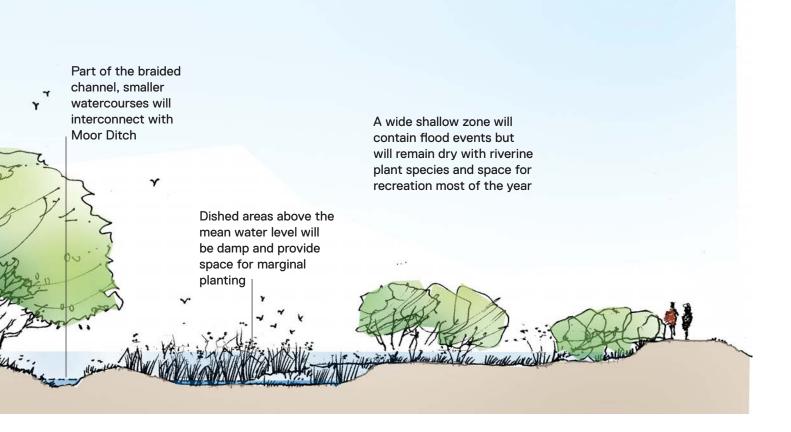
## 3. Urban SuDS schemes can be an integral part of urban design and landscape proposals



Image juanvillamayor.files.wordpress.com -Eco-district, Hammarby Sjostad, Stockholm Sweden

## 4. Station square has potential for water features and art installation, integrating water sensitive urban design





## 8.3.9 Landscape priority 8: upgrade the quality of existing green space

Parks and green spaces are an essential part of urban infrastructure. They should not be seen as merely 'nice to have'. However, there is an asymmetry in how they are valued: whilst people don't want to lose green spaces, this is not necessarily reflected in terms of willingness to pay for them. They are too often taken for granted and their value is poorly understood.



UCL Policy Briefing 2014 Valuing Urban Green Space: Challenges and Opportunities

The existing green space in Didcot is dull and one-dimensional resulting in it being underused. It is also often maintained in a monocultural way, with few opportunities for biodiversity and wildlife. The garden town is an opportunity to upgrade the quality of green space and make it more multi-functional.

The status quo	Why this is necessary?	Where the garden town team assumptions come from
Generally although the quality assessments of existing spaces appear to be adequate, it is not clear what these assessments are based on and whether they are up to date with current standards for external space. The green spaces appear to be dominated by mown ryegrass and sports fields. Opportunities	Making the most of the existing open spaces within Didcot will be a priority to enhance their amenity value, promote active use and the health and well- being of local residents.  Where spaces are well integrated into townscape, provide diverse activities and community events they are much	Desktop study of disposition of existing areas. Site assessment of external spaces. Review of standards and quality assessments provided in green infrastructure strategy.
for biodiversity and multi-functional use are not well demonstrated.  How it can be improved and what the aspiration is	more likely to be used on a regular basis.  Is there enough in the masterplan and next steps?	Within existing planning policy or garden town policy
Understanding the demand for activity which is appropriate to the demographic of Didcot will be key.  Providing space for many types of activity which enhances opportunities for people to meet and socialise helps to build community and underpins health and wellbeing in the local area.	Strategic proposals for existing spaces have been suggested in the green infrastructure strategy. More detailed design of individual spaces should be carried out to ensure that the use of the existing spaces is maximised.	NPPF*: Policy 73 requires the local planning authority to develop policies on robust and up-to-date need assessment for open space, sports and recreation facilities.  Policy 74 protects existing open space, sports and recreational buildings from development. South Oxfordshire District Council Core Strategy B1 and Vale of White Horse District Council states opportunities for biodiversity gain will be actively sought including connection of sites, habitat restoration, enhancement.
How could this be funded and supported?	Research/ consultation next steps	Quick wins
A change of regime will have a beneficial effect on the character of the existing spaces and greater quality impacts on community use and ownership. Demonstration of the need for alternative uses arising from the green infrastructure strategy and audit. Saved maintenance funds could be used for new facilities.	Detailed consultation with town council to demonstrate how modifying maintenance regimes can be more cost effective.  Setting up trust for existing green space management has potential to be funded by more diverse sources if benefit to health and well being can be proven. Individual masterplans to be created for each park with local consultation on requirements.	Changing management regimes can have a surprisingly tangible effect on the character of open space and consequent benefit to biodiversity. Very often more relaxed mowing regimes are cheaper to fund.

<sup>\*</sup> National Planning Policy Framework



Proposals for existing green space need to be created on a site by site basis and will require detailed consultation with local residents and user groups. Involvement of community groups in upgrading or changing much loved local spaces is essential to make sure new proposals are appropriate and well received by local residents. When local groups take ownership of spaces this is what makes them most successful. This is borne out by comments received in response to proposals to build on Ladygrove green space.

As part of the masterplan proposals a list of potential activities have been identified as follows:

## Urban open green space activities

- Formal or informal gardens
- Integrated children's play space
- · Discovery/ interpretation routes
- · Open spaces for dog exercising
- · Green gyms
- · Segway and rollerblade zones
- Cycle paths
- · Climbing walls and bouldering
- Skateparks
- · Guided walks
- · Allotments for fruit/ veg growing
- Kite flying and festival

- Jogging routes
- Picnic and barbecue spaces
- · Outdoor cinema
- · Children's parties
- Park run
- · Basketball hoops
- Scavenger hunts
- Safe cycle parking
- Cycle stations
- · Cafés or food vehicles
- · Dipping ponds
- Pocket park
- Wildlife strips
- Park runs
- Wildlife photography
- Teenage hangout areas shelters
- Model boating lakes
- Cemeteries

Didcot has only one cemetery and one churchvard burial ground. With increased population demand for burial space or locations for ashes disposal will become more critical. As part of the open space proposals innovative ways of providing for disposal of ashes should be included. Existing open spaces could include local columbaria to keep ashes from members of local community. Columbaria can be structures or earthworks with niches for retention of ashes. Spaces could be paid for in much the same way as local authority cemetaries, the design and character of these to be integrated into local parks.

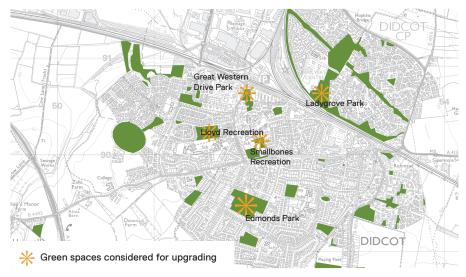


Figure 8.14 - Green spaces and those considered for upgrading

## 8.3.10 Landscape priority 9: re-green existing residential areas

"Scattered trees throughout a neighbourhood increase surface roughness, thereby reducing wind speeds by as much as 50 per cent."

GM Heisler, US Forest Service



"Not only do gardens improve our mood, but there is also evidence that horticulture can form part of the solution towards major health and well-being issues. The decline of the front garden aggravates environmental challenges, including flooding and reduced habitat for pollinators such as bumblebees and butterflies." Royal Horticultural Service (RHS)

The status quo	Why this is necessary?	Where the garden town team assumptions come from
Didcot has a green environment, with wide verged streets and plenty of trees and hedges. But many of the trees are poor quality and the palette of vegetation is narrow and undifferentiated between neighbourhoods.  How it can be improved and what the aspiration is  A programme of review of each existing district should be carried out. Evaluation of the character and quality of streetscapes and identification of the boundaries of neighbourhoods. A series of proposals to address street tree provision and maintenance. Evaluation	Character of streetscape is a key factor in underlining quality. Without the careful design of external realm housing can be unintelligible, difficult to navigate and nebulous. Urban design is key, but so is sensitive landscape design to distinguish districts.  Is there enough in the masterplan and next steps?  Changing the character of the existing streetscape is a key initiative to give immediacy to the masterplan priorities.	Site visits, review of on the ground landscape. Quality of maintenance and evidence of maintenance regimes. Observation of numbers of hard surfaced driveways, unimaginative streetscapes.  Within existing planning policy or garden town policy  National planning policy framework: policy 76 and 77 allows local communities to designate green areas of particular importance to them as local green space for special protection.
of hedgerows, their role and continuity. Review of hard surfacing of front gardens and community initiatives to change this incremental.  How could this be funded and	Research/ consultation next steps	Quick wins
council fund neighbourhood community landscape officer to implement local community projects to improve and biodiversity of front gardens.  Planting of orchard trees in streets could be part of orchard initiative funding available from Tree Council.	Neighbourhood by neighbourhood study to map out areas of similar streetscape character. Provide a series of strategies based on best existing landscape types augmented with new ideas. Community consultation on local ideas and requirements. Set out priorities for replanting.	Challenge existing maintenance regimes.

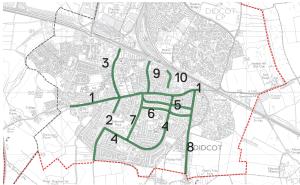


Figure 8.15 - Priority streets for landscaping

- 1 Broadway
- 2 Park Road
- Foxhall Road
- 4 Mereland Road and Queensway
- 5 Wessex Road
- 6 Kynaston Road
- 7 Newlands Avenue
- 8 New Road
- 9 Haydon Road
- 10 Station Road

## Restoring green neighbourhood character

Much of Didcot's housing was built post war and the core area has an arts and crafts feel. The generous dimensions of the streets lend themselves to accommodating large scale tree planting. Part of the green fabric of the streets is also formed by the preponderance of mature privet and other evergreen hedges. Continuity in the hedgerows has been eroded over time, and fencing replaces garden boundaries resulting in a patchy feel to street frontages

Most of the trees are flowering cherries, thorns or other small stature and relatively short lived species.

Another factor which affects the quality of streetscape is the paving of front gardens for car parking. This has

a detrimental effect not only on the green character of the street but also incrementally affects the quantity and speed of surface water run-off.

A districtwide analysis of streets and neighbourhoods with shared characteristics would result in strategy for renewing the quality of the existing garden town.

By identifying key characteristics which underpin the street character and grouping neighbourhoods by type it will be possible to replant trees, hedges and other features so that each neighbourhood was more distinct.

Community consultation and inclusion in the replanting programme will be key to its success and could be carried out on a district by district basis, with the success of foregoing schemes as exemplars to those coming later.



Strong groups of trees bring character and identity to streetscape as this example at the Circus in Bath



Trees in urban spaces make places to gather and provide punctuation to the streetscape.

## Opportunities for green roofs on buildings

In order to maximise the effect of local green infrastructure and to benefit rainwater filtration and retention in situ new initiatives to increase the number of green roofs can be made as part of the garden town planning policy. New policy to ensure that planning applications requiring flat roof extensions should be built with green roofs. This need not increase the construction costs but will have a beneficial effect contributing to the garden town ethos.

### Improving front gardens

A recent RHS initiative to restore soft spaces to front gardens contains useful advice on how to carry out this material change to local streetscape while also helping to retain rainwater in situ and reducing run off into Didcot's foul water system. Initiatives to implement the re-greening of front gardens will need to be well publicised and led by community officers to set out the benefits. The cost of these changes is likely to be borne by the householder. Older residents may need help implementing the changes. To reduce costs community growing initiatives could include starter kits of plug plants to help offset the cost of improving these street facing spaces.



More creative approaches to street greening can be distinctive as this Parisian example

# 8.3.11 Landscape priority 10: ensure good planting structure to new developments

"Residents in 'high greenery' environments were 3.3 times more likely to take frequent exercise than those in the lowest green category"

Forestry Commission 2010



Developers do not always appreciate the emotional and financial value that a good landscape environment can bring to a new community. It is often viewed as an unwanted cost and a last-minute addition using left-over space. Landscape design should be integrated with housing layout from the beginning of the design process to ensure that it has a useful function and creates places with character and beauty.

The status quo	Why this is necessary?	Where the garden town team assumptions come from
Landscape proposals in residential schemes coming forward are evident but seldom consider the connection to adjoining areas. Landscape buffer zones around housing are common and open space often provided at the periphery. Strong landscape structure is seldom seen on housing proposals mostly consented.	Integrated landscape makes a big difference to the quality of new housing. Character and quality of site setting provides essential cues for landscape design. Spaces within built environment provide an important focus for residential districts and is the place that new communities meet and meld. Connecting routes to adjoining areas to ensure proper integration of the new	Review of extant planning proposals, design and access statements. Evidence of emerging development on local sites.
How it can be improved and what the aspiration is	district is also fundamental.  Is there enough in the masterplan and next steps?	Within existing planning policy or garden town policy
Design reviews of housing proposals before submission of applications. Proper critique and discussion of what works and why to enable developers and their consultants to understand the value of design. Setting up design awards for schemes which champion good design. Publicising exemplar schemes. Letting developers know that poor design will not get planning consent. Follow through to make sure schemes are implemented as drawn.	There are plenty of proposals in the masterplan document, but these are not generally for new housing except a few high density areas within the town centre.  Further development of these proposals could form part of an exemplar scheme showing an alternative approach to urban design, with higher density, better connected and considered landscape spaces which are connected and strongly embedded in the adjoining areas.  Research/ consultation next steps	National planning policy framework: Policy 99 states that where there is new development in areas vulnerable to climate change, green infrastructure should be planned in to reduce risk South Oxfordshire District Council core strategy 3 requires all development to provide green infrastructure as well and enhance and manage the natural environment. Its core strategy G1 requires development funding to create a net gain in green infrastructure including biodiversity. Developers must show they have considered existing green infrastructure.
The set up and management of design review panels is usually funded by the local council. Panel members are often volunteer local professionals with good design and communication skills and a keen interest in their local town. The review panel is often good for community as well as design quality.	Setting up a design review panel in Didcot and publicising results will help to send a message to developers that good urban design is prerequisite. Regular design and continuing professional development for district officers in planning will help with decision making and confidence building on design matters.	

How planting underscores built environment character

In both the examples below planting within the space forms the focus for new buildings, one commercial, one residential. The top image is in Eindhoven the lower one is Concordia

in Cambridge. In Didcot too many of the housing estates around the town have informal or naturalistic planting usually at the periphery, which does not sufficiently reinforce the sense of place. Providing planting which is strongly aligned with more formal open space, giving purpose and focus to development is a more satisfactory response which can also aid legibility of the local area.

Where countryside meets new development areas buildings should address it, taking maximum amenity from the landscape setting.

Naturalistic planting can be included as woodland or water-related areas where reedbeds and swales are designed to maximise habitat diversity as well as mitigating flooding. The pattern and intensity of an orchard planting brings a different quality to the location, echoing older, productive landscapes.

Designing planting with different characters helps to increase the sense of place and legibility of a district. In the same way that street trees given a road rhythm and scale, formal planting can signal quality and match the character of a higher density built environment.



Eindhoven University of Technology Campus



Accordia Feilden Clegg Bradley

## 8.3.12 Summary of design guidance and future work

### Summary of design guidance

The garden town masterplan is not intended to be a rigid plan for the development of the town, but it provides an aspiration for the form and direction of its expansion. What it shows is that high quality design can be a catalyst for the regeneration of place and how particular examples could be developed. Coupled with this it illustrates how community involvement can generate interest and involvement in projects which build community and can alleviate the burden on the local authority.

In chapter 9 the next steps are given in some detail, illustrating how important the phasing of the masterplan will be with projects coming forward which continue to build momentum and confidence in the emerging garden town.

In descriptions throughout the document a series of quick wins have been identified along with medium and longer term projects, and it is this careful prioritising that will begin to give way to the success of the masterplan. The following list sets out a number of key steps that are critical to the ongoing delivery of the masterplan:

#### Design codes

The masterplan has set out the broad framework for growth, it is the quality of the projects that will be critical to its success. To ensure quality in design and detail, it is helpful for the masterplan to be accompanied by a set of design codes. This is particularly critical to the Didcot Garden Town masterplan given large areas of land have already gained consent setting their broad parameters. Design codes can assist in ensuring that the detailed delivery of the ensuing phases is of high quality. Most relevant to this chapter are:

## Public art strategy

The masterplan makes recommendations for the inclusion of public art as a means towards revitalising areas such as underpasses, public spaces, gateways and reinforcement of character areas.

### Public spaces strategy

In addition to public art, a public spaces strategy would help to set the standards for urban public space improvements across the town. Embedded within this would be a wayfinding and signage strategy to encourage intuitive wayfinding across Didcot.

#### Landcape strategy

The green infrastructure strategy underpins the masterplan proposals for the open space network across the garden town. Developing the standards, uses and design of those spaces will form the next steps to the masterplan, ensuring that they are well integrated and complementary to urban public space and an extension of the public realm. Public consultation will be key to the acceptability of new spaces and inclusion of local people's opinions in the development of this strategy.

## Neighbourhood re-greening strategy

Enhancing the character and quality of the existing town's landscape will quickly demonstrate the green assets in local communities. Providing a strategy for neighbourhood replanting will help to reinforce local identity and improve biodiversity. Set in place a strategy to re-green front gardens to help reduce flooding and make a positive contribution to the green credentials of the garden town.

### Blue infrastructure strategy

The blue infrastructure of masterplan needs to be developed into a comprehensive strategy which can be brought forward in stages as the land beside the water course in question, but especially Moor Ditch, is developed. Assessment of the potential for leisure use of the River Thames corridor can also contribute positively to the local environment. Planning positively for the enhancement of the water environment within the local River Ock catchment will bring improvements to amenity, environmental factors and reduce the likelihood of flooding.

Collaboration with the catchment host organisation to ensure consultation with everyone involved in the riparian zone will be essential.

### Research projects

Along with design projects a number of parallel initiatives need to establish ways of changing behaviour and promoting new methods of maintaining and sustaining the designed masterplan. These projects should set out the methodologies necessary to increase community involvement in activities and practice such as local food growing. They should also engage landowners and farmers to establish ways of motivating a change in agricultural practice close to the town.

Management of open space can be expensive and regimes are not carefully formed biodiversity can suffer. Establishing alternative methods of funding the maintenance of open space can contribute positively to the ongoing quality of the garden town.

## Feasibility studies

- A number of recommendations within the masterplan are subject to further detailed study to determine capacity and feasibility such as
- Cultural Spine study To
   determine the overall viability and
   to highlight key early win projects.
   This would be supported by a
   public realm strategy developed
   through engagement with local
   residents, the retailers and owners
   of identified opportunity sites
- Design briefs Development of Design Briefs for sites critical to the delivery of the Garden Town Masterplan to ensure eventual development adheres to the established priorities. These sites would include Rich's Sidings, Ladygrove East and Didcot A power station
- Design review panel sites The establishment of a Design Review Panel has already been considered. This would be helpful in the design development of a number of sites such as D-Tech, North West valley Park, Ladygrove East and also in the consideration of detailed phases of Valley Park and North East Didcot. Further description of the use of the review panel is included in chapter 9

#### Sustainability goals

As part of the next stage of implementing the garden town project, once a governance structure is put in place, the garden town board will be asked to consider defining a number of clear 'sustainability goals'. These should lead to the adoption of clear targets which will help determine when/ if these goals are being met.

