



RTPI Urban Design Network Conference

New Towns

Practical Delivery and Lessons Learned

Patrick Clarke

14th November 2024

Poor quality design in urban extensions



Disconnected from a rich urban tradition



New design-led approaches to deliver more and better homes

CON 76
Llewelyn-Davies

A association with
Urban Investment Partnership
London Research Centre
South



Sustainable Residential Quality: new approaches to urban living

DETR
Department for Transport

LPAC
LONDON PLANNING AND DESIGN REVIEW BOARD

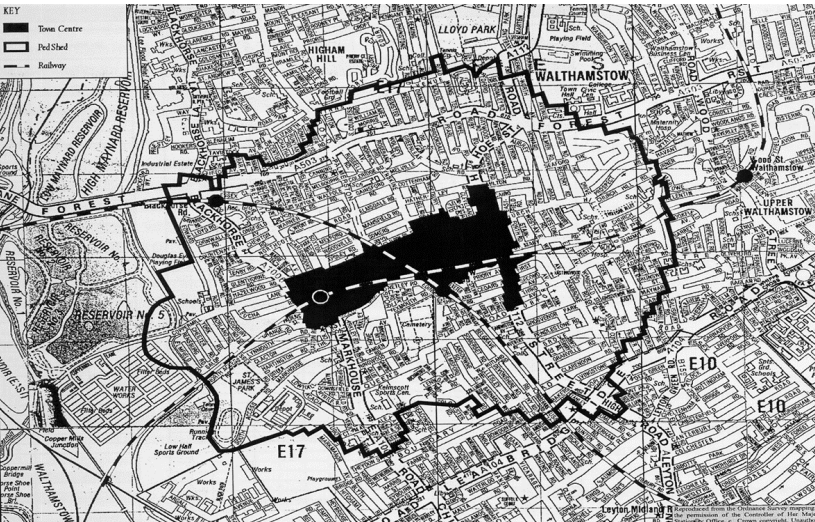
Sustainable Residential Quality (SRQ) is a new approach to urban housing potential aimed at getting the most out of our cities and brownfield sites.

The SRQ report which was published in January 1998, shows how we can be more positive and creative in planning urban housing.

Imaginative design, new ways of thinking about planning and transport, and better urban management can help us get more housing potential out of the towns and cities, and more than that, they can do it in a way that improves the urban environment, and makes patterns of living more sustainable.

The Government has explicitly endorsed this approach in the February statement on Planning for the Communities of the Future and so the SRQ study can help authorities to adopt a more creative approach towards future urban housing.

This leaflet introduces the SRQ work, outlines its main findings, and gives contact details for further information.




Sustainable Residential Quality
Exploring the Housing Potential of Large Sites

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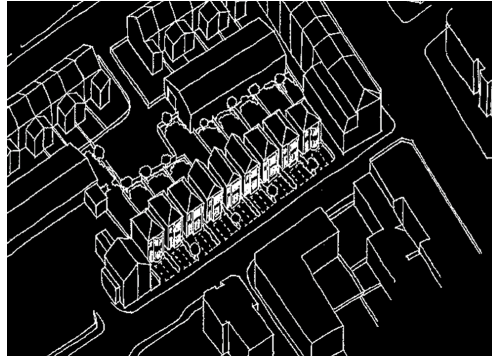
DETR
Department for Transport

THE HOUSING CORPORATION

London Transport



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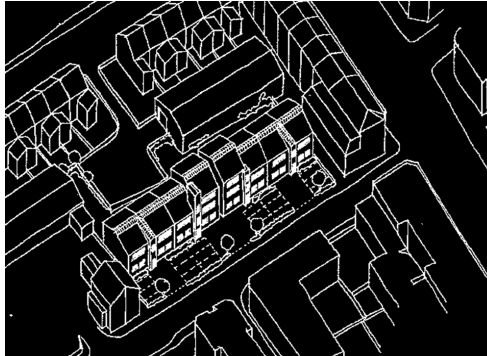
MAYOR OF LONDON

The London Plan
Spatial Development Strategy for Greater London



February 2004

Llewelyn-Davies

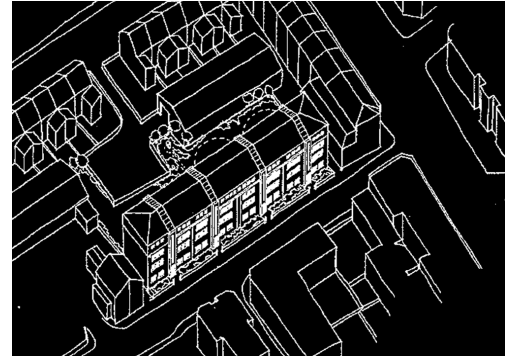


PPG 3

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REGIONS

Planning Policy Guidance Note 3:
Housing

HOU 30-17



A new vision & resources to support better practice



BY JOHN INGRAM
ENVIRONMENT EDITOR

THE DAYS of sprawling standardised executive housing estates are numbered, it was announced yesterday.

Instead, developers will be encouraged to create communities around squares and greens. They will be asked to emulate the densely packed, but popular, squares and terraces that date from the Georgian and Victorian eras.

Ministers believe this change - coupled with more thoughtful design - will spark an urban renaissance that will save large areas of the countryside from being concreted over.

They also want residents to be given more input into the

Georgian squares can help save countryside

Nick Raynsford at the British Housebuilder Awards run by The Express.

The policy will be scrutinised by housebuilders who will have to build up to 3.8 million new homes in England alone by 2021. The Government is committed to building 60 per cent of these homes on 'brownfield' - previously developed - land.

But many Britons still dream of a place in the country, and 100,000 leave cities every year.

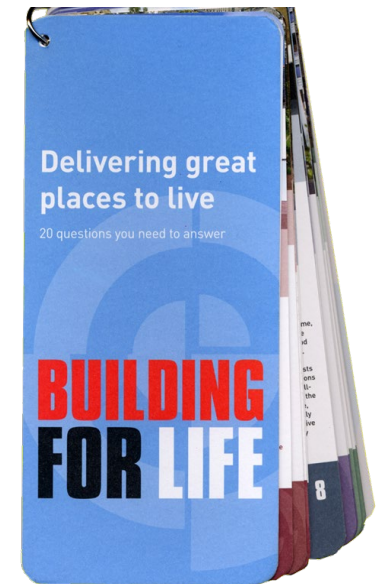
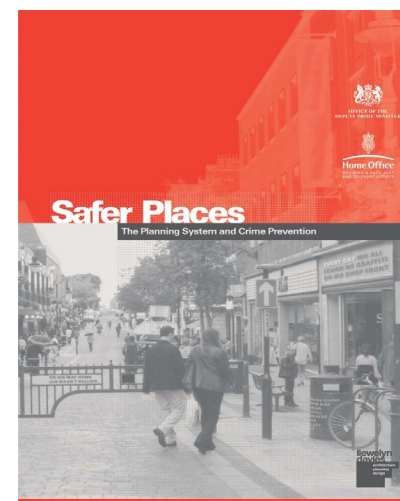
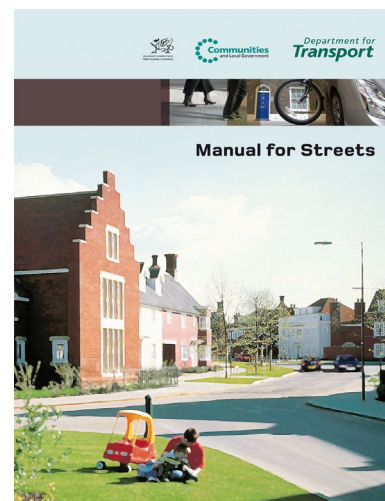
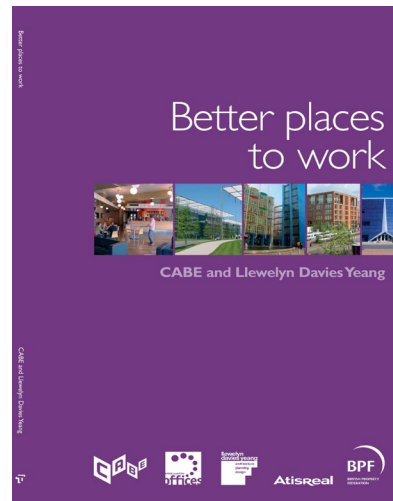
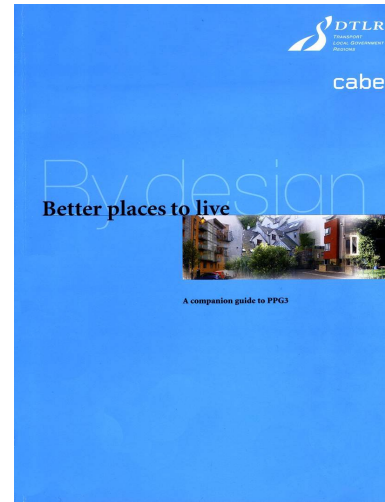
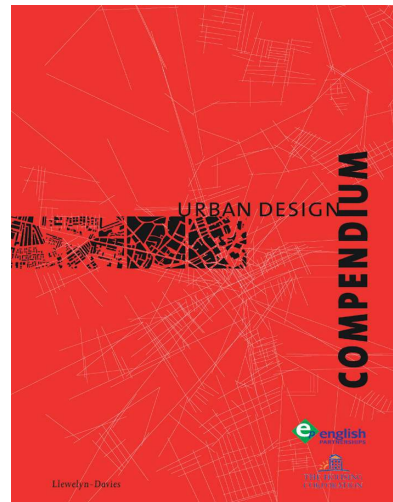
Last night the House Builders' Federation gave the move a cautious welcome, but warned

paying through their noses to buy Georgian and Victorian terraces which often have dwelling densities of about 80 or more per hectare. The fact that they have stood the test of time shows that the designers got it right in delivering the sort of homes people actually want and find attractive."

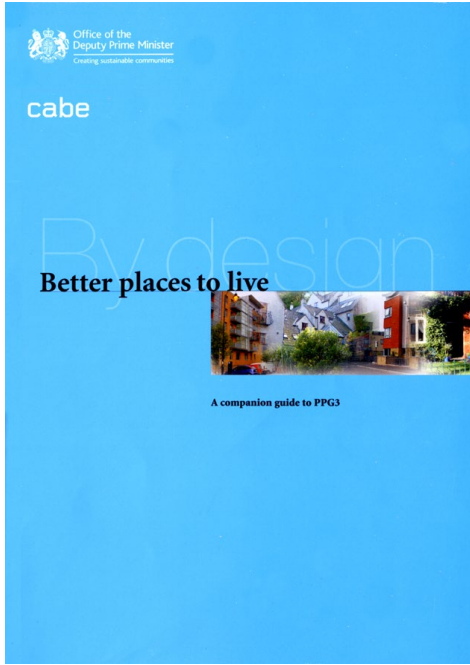
He also criticised estates built all round the country by large housebuilding firms without regard for local designs. He said: "We do not want the same boxes in Devon that you see in Norfolk. They should be appropriate to their location and more sensitive to the environment."

Mr Raynsford said examples of good developments were Prince Charles' Poundbury development outside Dorchester in Dorset and the Mill-

HECTOR BREEZE



Better Places to Live – a companion guide to PPG3 on Housing



Movement	A movement framework which is safe, direct and attractive to all users
Mix	A rich mix of housing opportunities
Community	A sense of neighbourhood and community ownership
Structure	A coherent structure of buildings, spaces, landscape and routes for movement
Layout	Street layout and design which is appropriate to use and context
Place	Attractive and clearly defined public and private spaces
Amenity	Pleasant gardens and private amenity space
Parking	Convenient but unobtrusive car parking
Safety	A safe and secure environment
Space	Well planned homes which provide space and functionality
Adaptability	Housing which is robust and adaptable to changing requirements
Maintenance	An environment which can be well maintained over the long-term
Sustainability	Housing designed to minimise resource consumption
Detail	Well considered detailing of buildings and spaces



Attributes of successful and sustainable residential environments

Principles of layout and design illustrated by case studies

Perimeter blocks

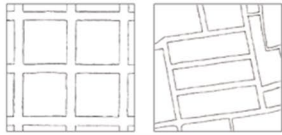
The perimeter block structure has proved to be robust over time. In particular, perimeter blocks can provide for:

- good connections to the surrounding area (see Chapter 3);
- efficient use of land;
- a clear distinction between the public and private realms;
- a legible environment;
- good natural surveillance of the street with windows and doors facing outwards.

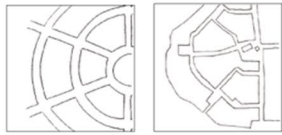
Forms of perimeter blocks

The perimeter block can take a wide variety of forms including:

- regular rectangular or square blocks based on a grid;
- concentric grids designed to promote access to local centres or public transport routes;
- irregular layouts with a more 'organic' character.



Regular blocks Jesmond, Newcastle



Concentric blocks Poundbury, Dorchester



Irregular blocks Thorley Lane, Bishops Stortford

The case studies show that these basic forms are not mutually exclusive. Poundbury, for instance, combines an organic character with a concentric grid layout focused on the local centre.

Different forms of perimeter block can impart different characters to the streetscape. Compare, for example, the formal character of Jesmond, Newcastle with its uniform street widths and building heights, with the more intimate character of Thorley Lane, Bishops Stortford and its more variable building line. However, despite these differences of character, the underlying benefits of the perimeter block remain.



Regular - almost a 'grid iron' - layout of blocks in a suburban context. Jesmond, Newcastle



Concentric blocks arranged to promote access to a local centre. Poundbury, Dorchester



An irregular block structure providing an 'organic' and intimate character. Thorley Lane, Bishops Stortford

The arrangement of dwellings within the block structure

A characteristic of perimeter blocks is that dwellings face outwards towards the edge of the block and the public realm and there is a continuity in the relationships between the fronts and backs of dwellings.

The arrangement of dwellings within the block structure and their relationship to the street and to other building elements are influenced by the plan form of the dwellings themselves (for example, wide frontage/shallow plan; narrow frontage/deep plan; or square plan). The orientation of windows is also an important consideration, particularly in relation to the treatment of block corners.

Shallow and square plan dwellings provide greater opportunities to create varied street layouts and are much better suited to informal 'organic' layouts than deep plan dwellings. Both Thorley Lane, Bishops Stortford and Poundbury, Dorchester show how a continuous but varied building line can be created with a mix of dwelling frontages, garden and garage walls.

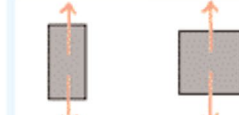
By contrast, the historic case study areas (Canning Street, Jesmond and Stanstead) show how narrow-frontage, deep plan forms can be utilised in predominantly straight runs of terraces with continuous building frontages to provide a very land-efficient layout in terms of both development density and the ratio of dwellings to street length.



A mix of square and shallow plan dwellings provides a continuous street frontage. Rolls Crescent, Manchester

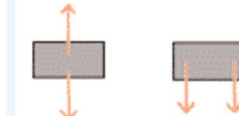
Different dwelling plans

Houses



Narrow frontage, deep plan with through aspect

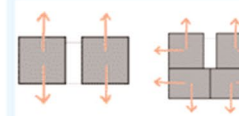
Square plan with through aspect



Wide frontage, shallow plan with through aspect

Wide frontage, shallow plan with single aspect

Apartments



Square plan with through aspect

Square plan with corner aspect



Narrow frontage, deep plan dwellings provide generous internal space and use land efficiently. Stanstead Road, Lewisham

Poundbury, Dorchester

Built 1980 onwards	Developer Duchy of Cornwall CG Fry & Son Morris Builders, Gannons Trust
Lead designer Lewis Rice Alan Suttie and Associates	Local authority West Dorset District Council

Overview

Poundbury forms a planned urban extension on the western edge of Dorchester. The 188 hectare site adjoins existing housing on the east and agricultural land to the south and west, a bypass lies to the north. Phase One is 7.5 hectares in

size; our area of detailed analysis within this phase is one hectare and is mainly composed of three and four bedroom terraced and detached houses.



The site

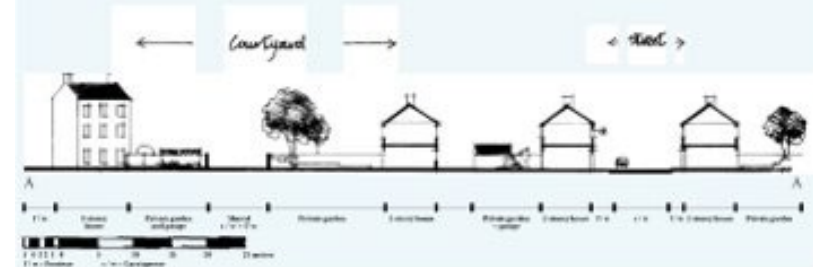
Area of detailed analysis Photo position

Evaluation

The scheme demonstrates the successful application of a number of urban design principles:

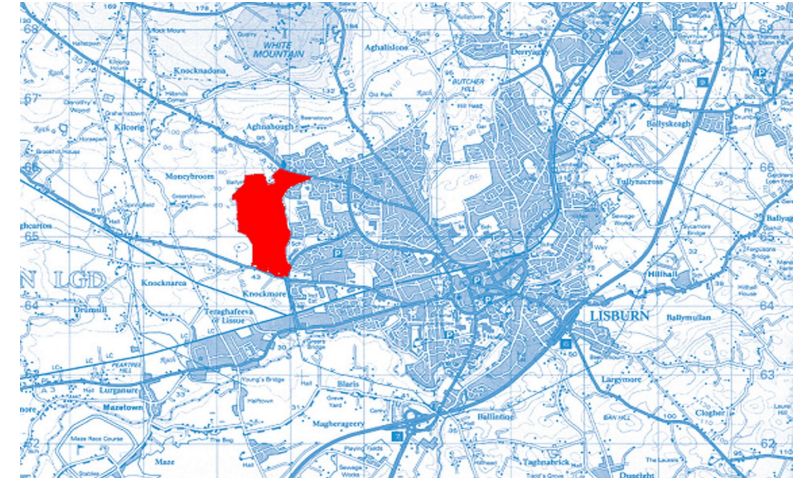
- Continuous street facades, largely uninterrupted by parking bays or garages. Cars are parked within internal courtyards, on street or in bays located in residents' back gardens. This reinforces the distinction between public and private space with building facades built along the back-of-pavement line.
- Street lighting and signage, and, more importantly, road geometry, demonstrate a creative response to local authority standards. There is very little segregation of pedestrians and vehicles, but vehicle speeds are kept low by the careful alignment of streets.

- Social housing is well integrated with private housing in terms of both location and external appearance;
- Traditional materials have been used consistently throughout the scheme;
- There are responsive levels of maintenance and visual surveillance of the private and public realms. The former is achieved by covenants imposed on homeowners and the latter by on-site management control. There is little evidence of vandalism or crime.

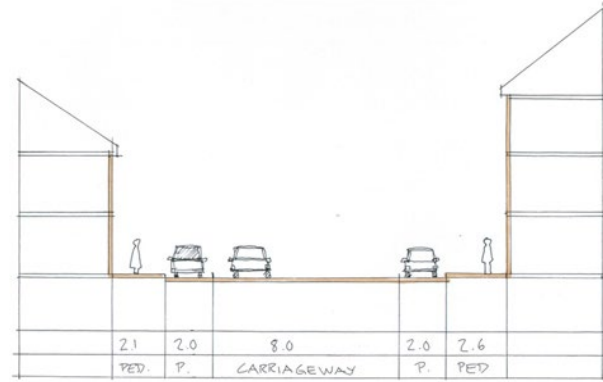
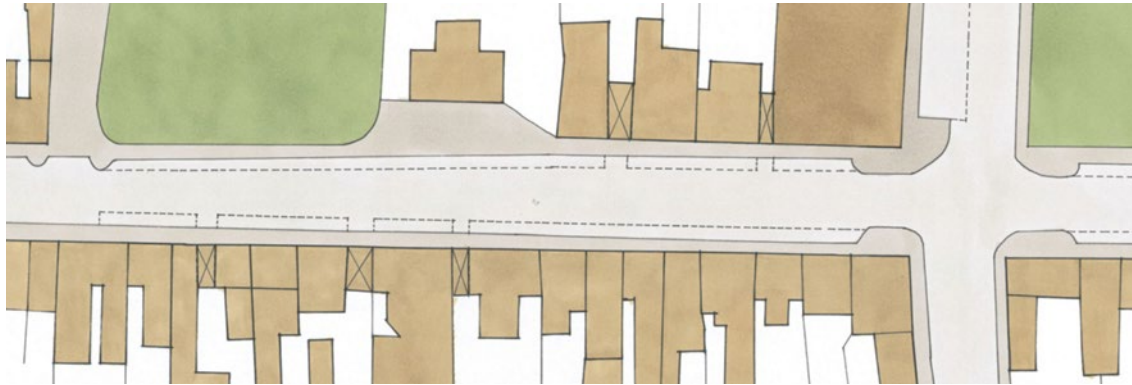


Woodbrook, Brokerstown Village, Lisburn

- 85 ha greenfield site
- Allocated in Local Plan
- Master Plan for 1,800 homes
- Phase 1: 340 homes



Woodbrook - creating a 21st Century village character



Woodbrook – collaborative working with stakeholders



Study visit to Poundbury



Collaborative workshops facilitated by the Prince's Foundation

Woodbrook – concept masterplan



Concept masterplan



Brokerstown Village Masterplan and Woodbrook (Phase 1)

Managing vehicle speeds by street design and biomass district heating



Woodbrook Eco-village, Lisburn



Visit of Professor Li. Shirong, President CIOB



WELBORNE
GARDEN VILLAGE

WELBORNE

GARDEN VILLAGE

DESIGN AND ACCESS STATEMENT

DECEMBER 2018



AECOM

Welborne Garden Village - Landowner commitment to quality place-making

- South East Plan, PUSH and FBC – concept of new town; Southwick Estate approached... not the other way around
- Local landowner with vision
- Long term involvement...governance
- Legacy and place-making a key driver



Welborne Garden Village – vision and objectives



Learning from exemplar projects

A new range of exemplar projects showcasing high quality design



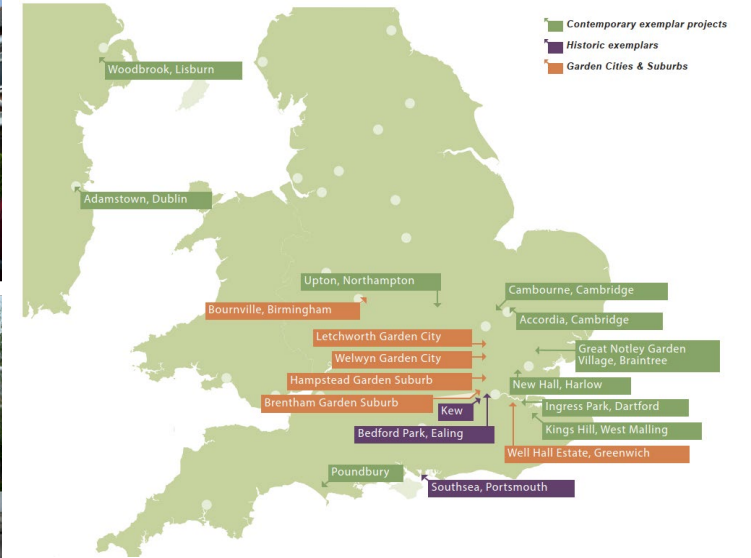
Poundbury

New Hall

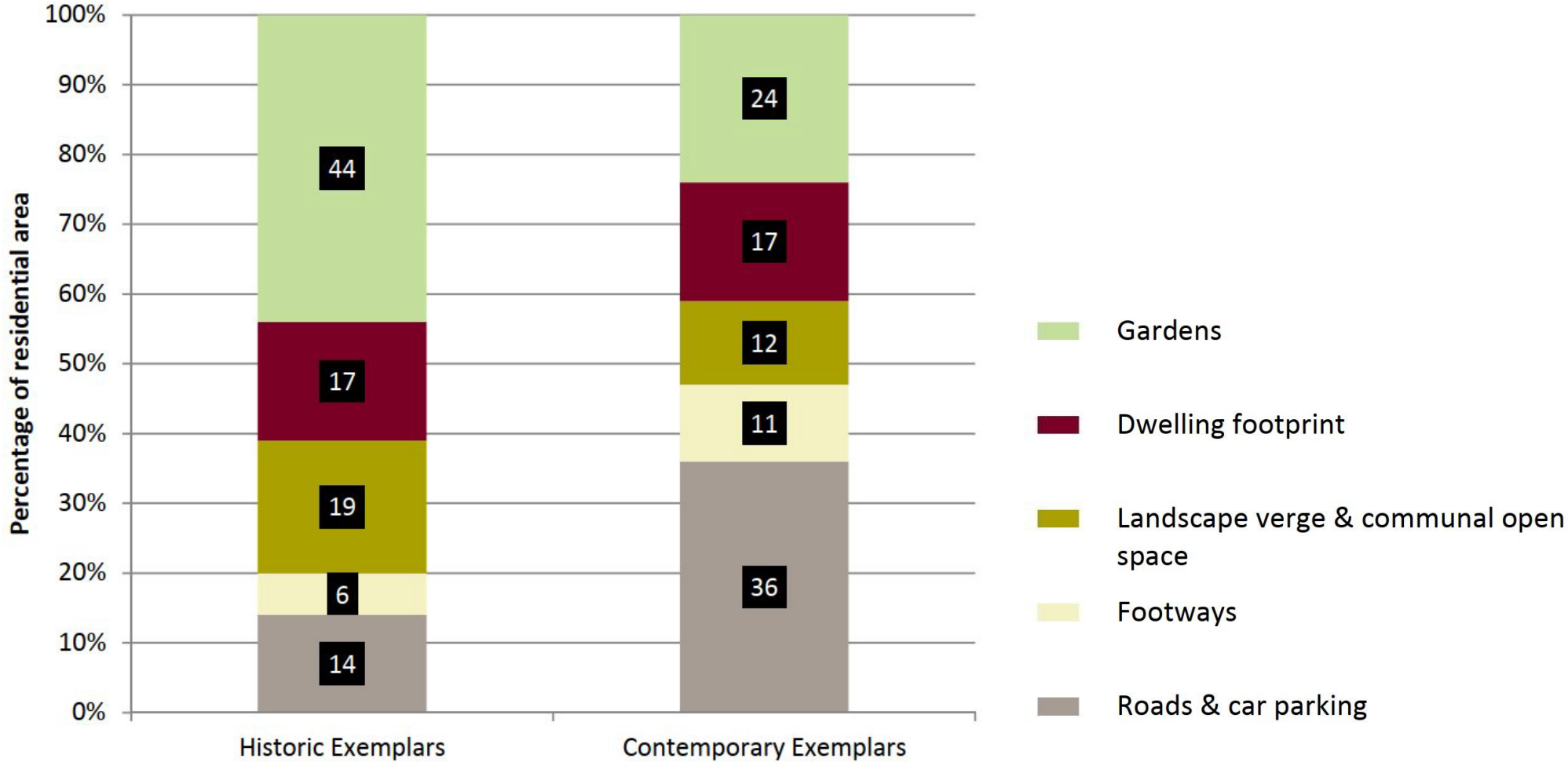
Upton



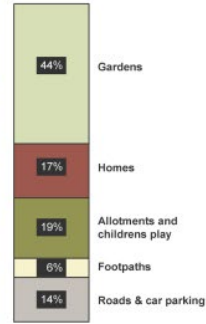
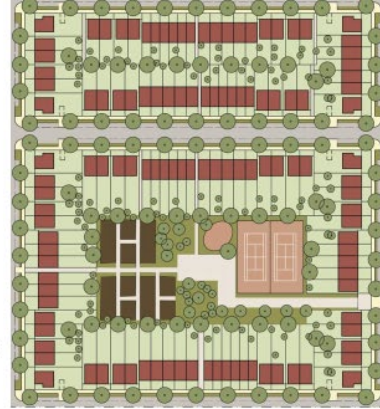
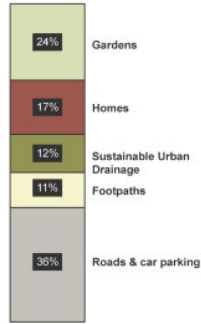
Kew



Detailed analysis of land use budget for selected projects



Supporting the case for Garden City Planning principles



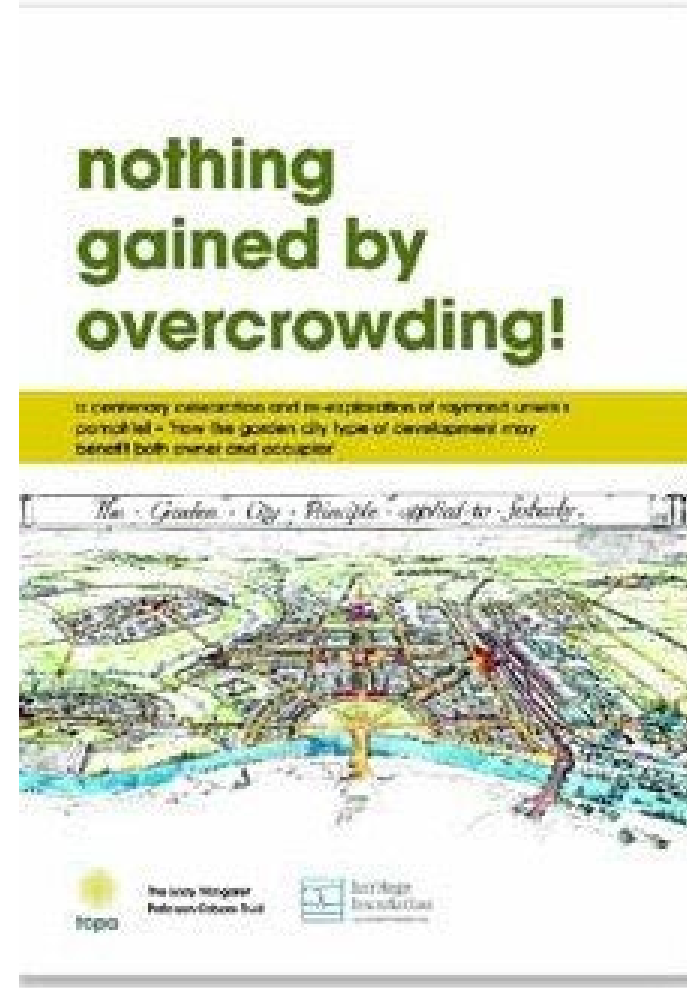
Scheme A – typical rear parking court layout

4 hectares, 137 homes, 34 dwellings per hectare, 1.5 parking spaces per home



Scheme B – re-interpretation of Garden City approach

4 hectares, 120 homes, 30 dwellings per hectare, 1.3 parking spaces per home



Testing housing capacity with reference to Brentham Garden Suburb, Ealing



180 Homes
24 Flats
Area= 5.19 ha
Density= 39 d/ha

354 Homes
Area= 11.26 ha
Density= 31.5 d/ha

“...a small, yet inspiring, piece of English town planning (that) will help to encourage others, be they developers, planners or concerned members of the public, to see the lasting benefits of planning at a human scale, of the enduring relevance of building crafts and the importance of artistry in our architecture, if places of Brentham’s quality are to be built again”.

HM King Charles

Foreward to Brentham: A history of the pioneer garden suburb 1901-2011, Aileen Reid (2000)



Garden Village approach to placemaking

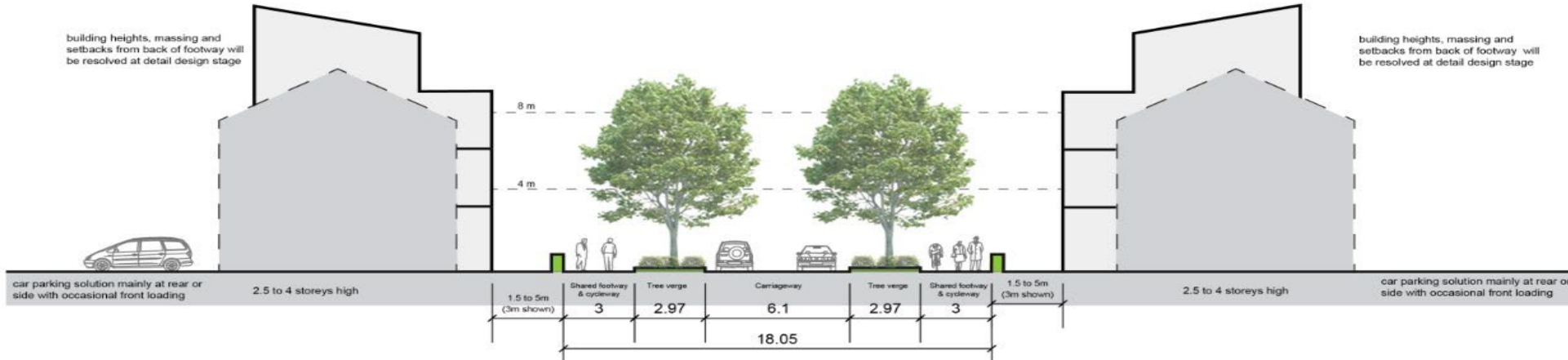


Key to examples

- 1 Village Centre
- 2 Village Green
- 3 Primary School
- 4 Dashwood Boulevard
- 5 Dashwood Park



Tree-lined streets that are well designed



1 Appropriately sized front gardens



2 Generous footpaths and street verges



3 Green verge with integrated parking



4 Tree-lined streets



Welborne Garden Village – Illustrative Masterplan

- 400 hectares (1,000 acres)
- 6,000 homes
- 100,000 sqm employment space
- District and Village centres
- Secondary school and 3 primary schools
- 150+ ha of green infrastructure
- Major up-grade to Junction 10 on M27



Welborne Garden Village - more detailed design development



CGI image of Welborne Village Centre
(credit - Ben Pentreath)



CGI image of Dashwood Avenue
(credit - Ben Pentreath)



Welborne Garden Village – early phases of delivery on site



Image: Miru3D Visuals



Image: Miru3D Visuals



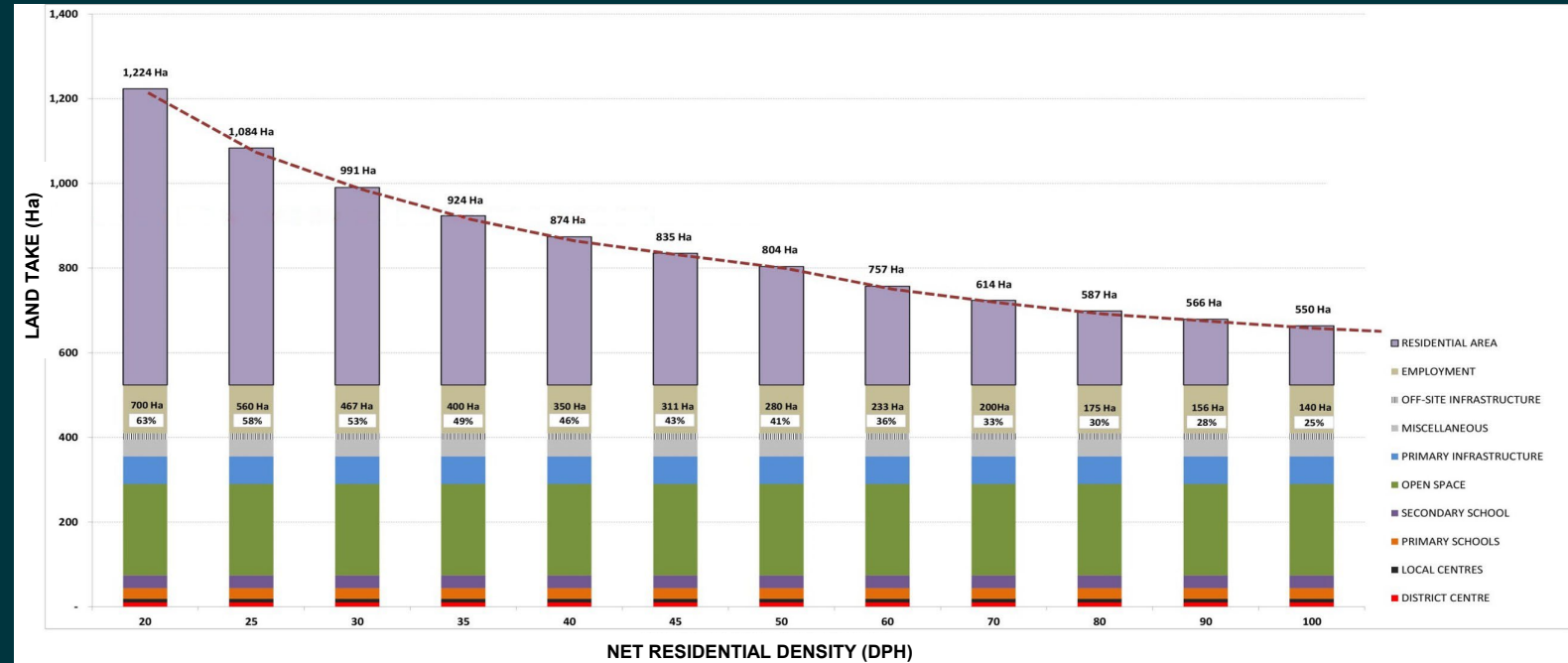
Some practice lessons

- A clear vision of the character of the place you want to create is helpful and especially where it resonates with a local building tradition
- This requires strong landowner/developer buy-in from the outset (and may not be appropriate before an end developer is in place)
- Departing from standard design solutions, particularly for street design, requires in-depth and prolonged engagement
- Independent design facilitation can be effective in bringing different stakeholders on a shared journey.

Understanding residential density at different spatial scales

- Residential density cannot be viewed in isolation from the need for supporting facilities and the demands for other urban land uses;
- The demand for such facilities, and the area required to accommodate them arises more from population... than from the density of development;
- The significance of residential density on the overall urban land requirement decreases as the proportion of non-residential uses increase.

DETR, The Use of Density in Urban Planning 1998 pp. 60-61



Indicative land requirements for a new community of 15,000 homes at different residential densities

Some practice lessons

- Residential development parcels should not be treated as a 'residual' land use after all other land requirements have been met
- The character and quality of residential development is fundamental to the long-term success of a community and must be planned for positively
- Residential land areas provide most of the land value needed to fund infrastructure provision and this is key to project viability
- Established approaches to meeting social infrastructure standards based on population may mitigate against increasing residential density and capacity.

Ebbsfleet Garden City



View of Ebbsfleet Central Station Area



View of Eastern Quarry and part of the Ebbsfleet Green site



The landfill site
Adjacent to the station area, the topography and views afforded by the existing landfill area creates the opportunity for a new central park.



Blue Lake
Opportunity to open Blue Lake for public access and water-based recreational activity.



Archaeological assets
The Ebbsfleet Central area is of great historical importance in English history and prehistory. The 'Ebbsfleet Elephant' (pictured above) was discovered here in 2004.



Water and topography
Opportunity to maximise potential of existing land form and water bodies in Eastern Quarry (as shown by the western lake above) in order to enhance amenity and value of the new residential environment.

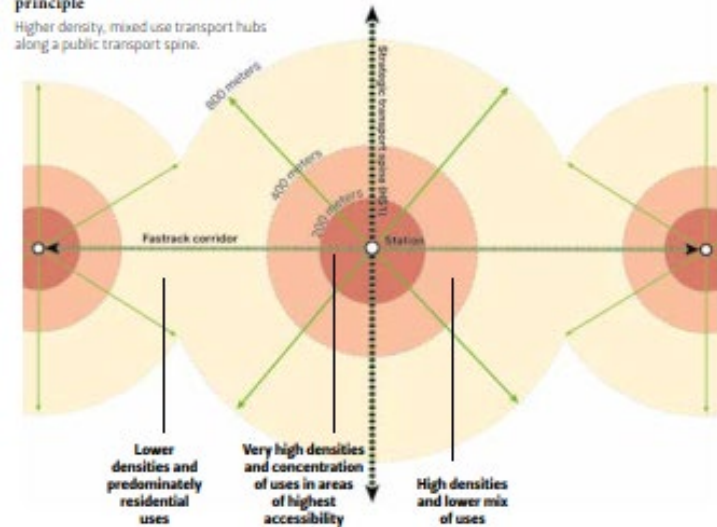


Chalk cliffs and woodland
Chalk cliffs and woodland surround the site, creating a unique landscape and a dramatic backdrop for the new Garden City.

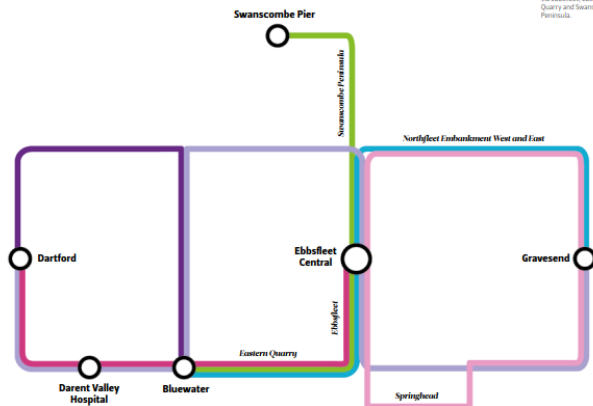
Ebbsfleet Garden City - movement

"Transit Orientated Development" principle

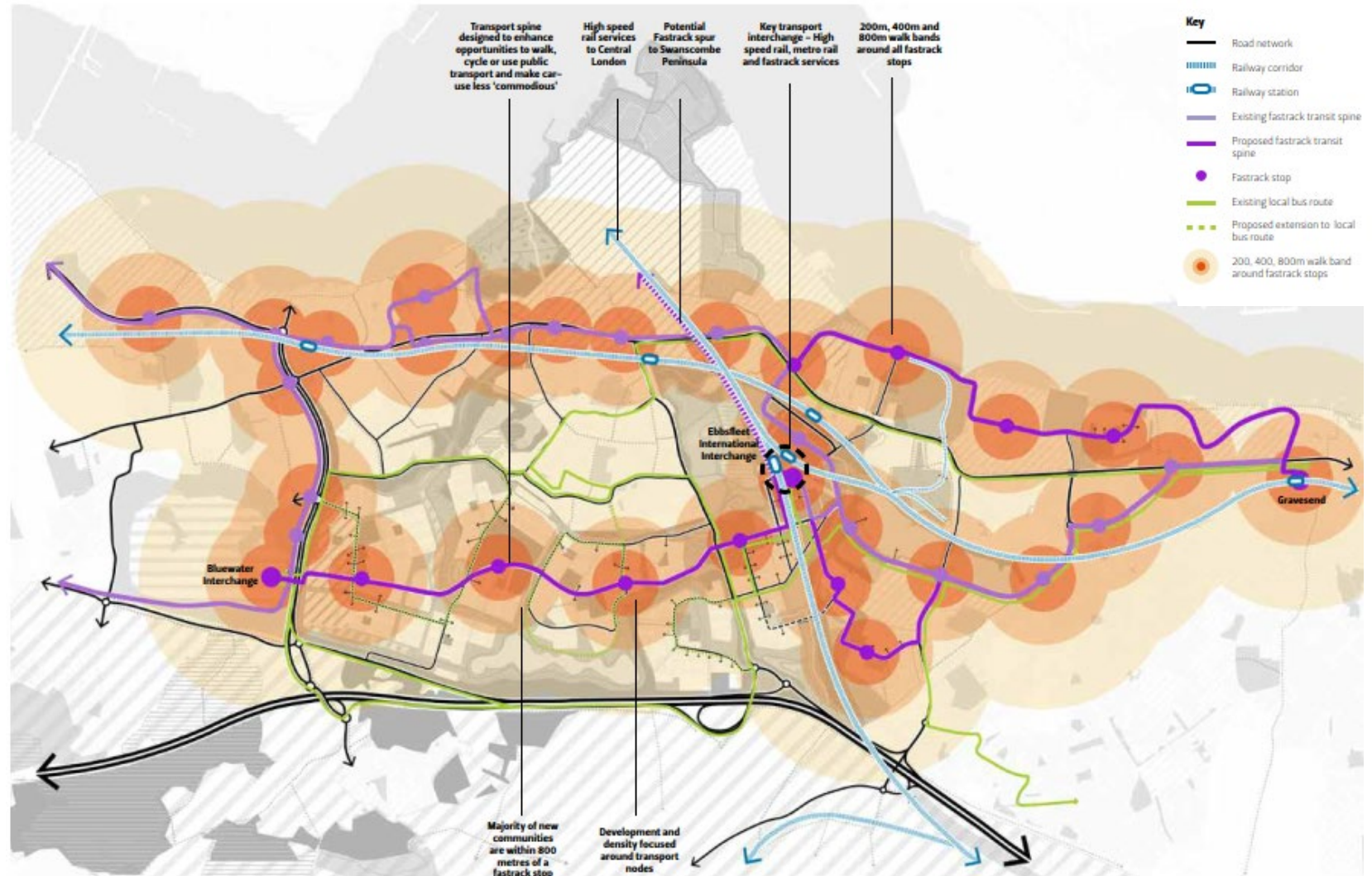
Higher density, mixed use transport hubs along a public transport spine.



- Route A
- Route B
- Route C
- Route D
- Route E
- Route F



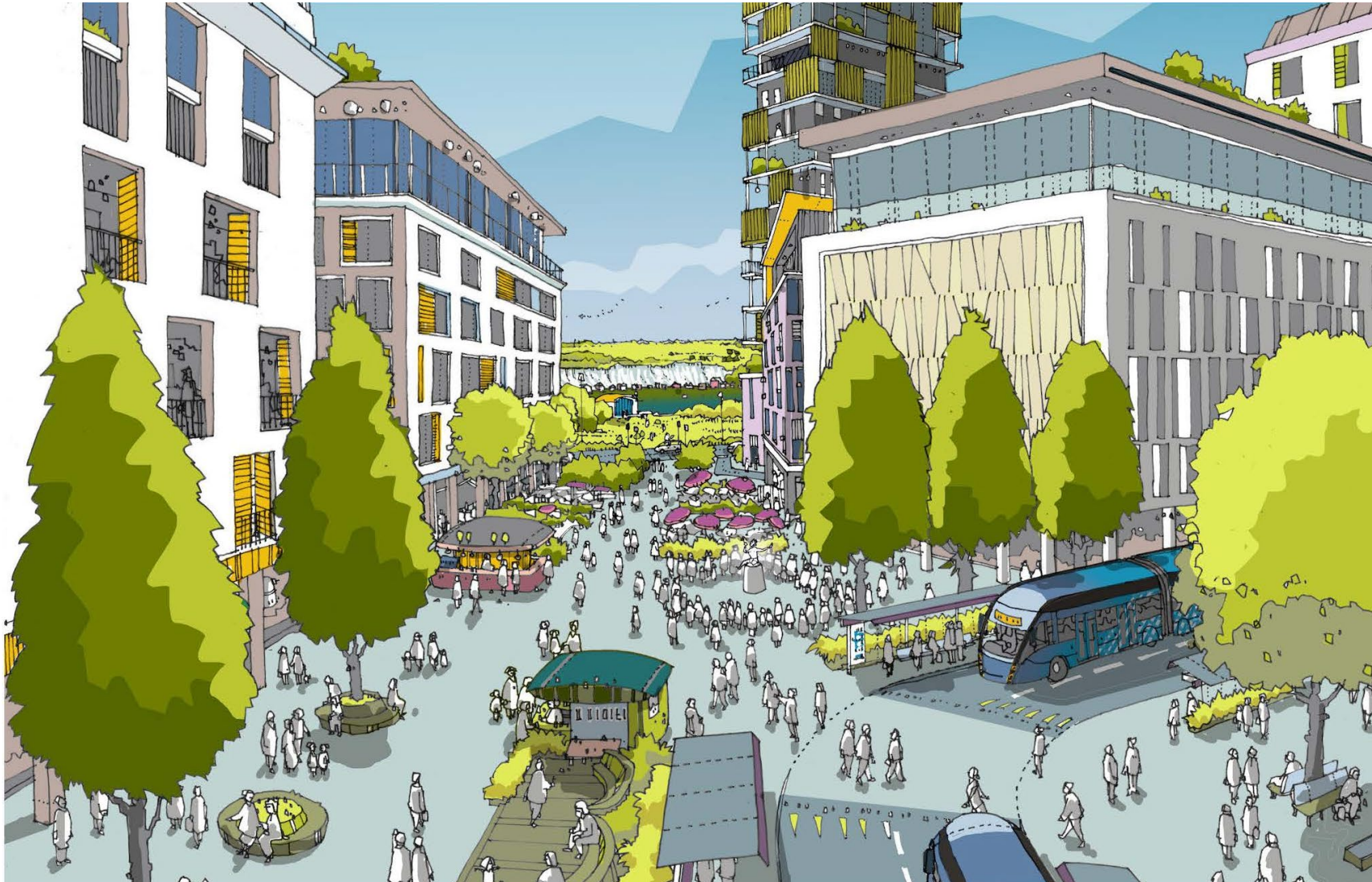
Illustrative Fastrack Network
Establishing a connected network between Gravesham and Dartford, via Ebbsfleet, Eastern Quarry and Swanscombe Peninsula.



Ebbfleet Garden City – the integrated framework Masterplan



Ebbsfleet Garden City – Ebbsfleet Central



Illustrative perspective drawing showing high density mixed-use development at Ebbsfleet central

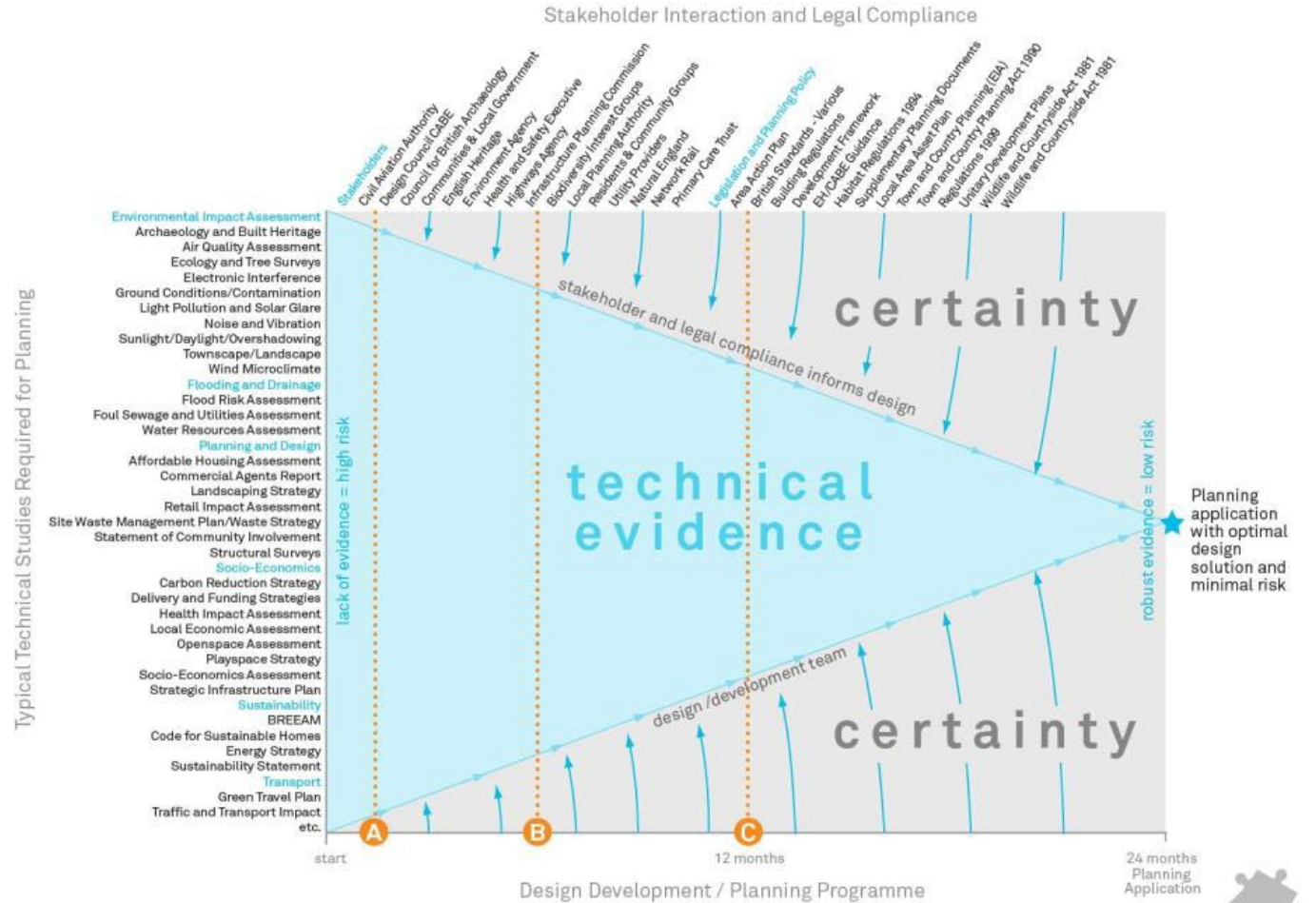
Some practice lessons

- Ebbsfleet shows the benefit of planning around established and high-quality public transport infrastructure. This enables a sustainable urban structure with higher densities based on good transport accessibility;
- In many other places uncertainty over the level and quality of public transport creates significant uncertainty and makes it difficult to optimise the full potential of strategic sites;
- This issue is exacerbated by the inter-relationships between car parking provision, density and placemaking.

Practice Lesson: Integrated multi-disciplinary working for complex projects

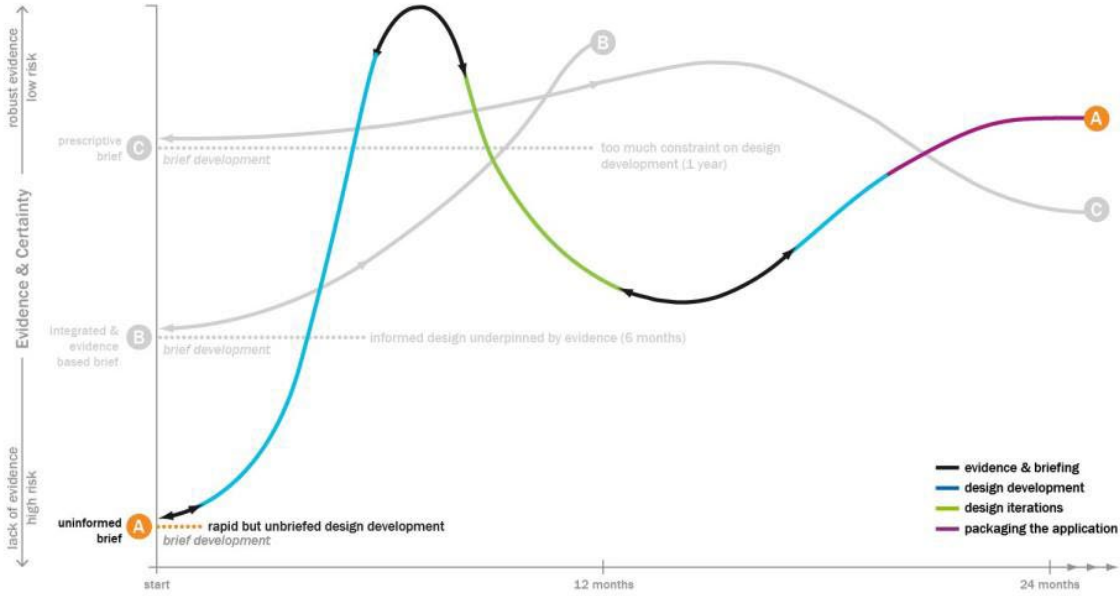


A new **i**ntegrated & **e**vidence based approach to delivering development



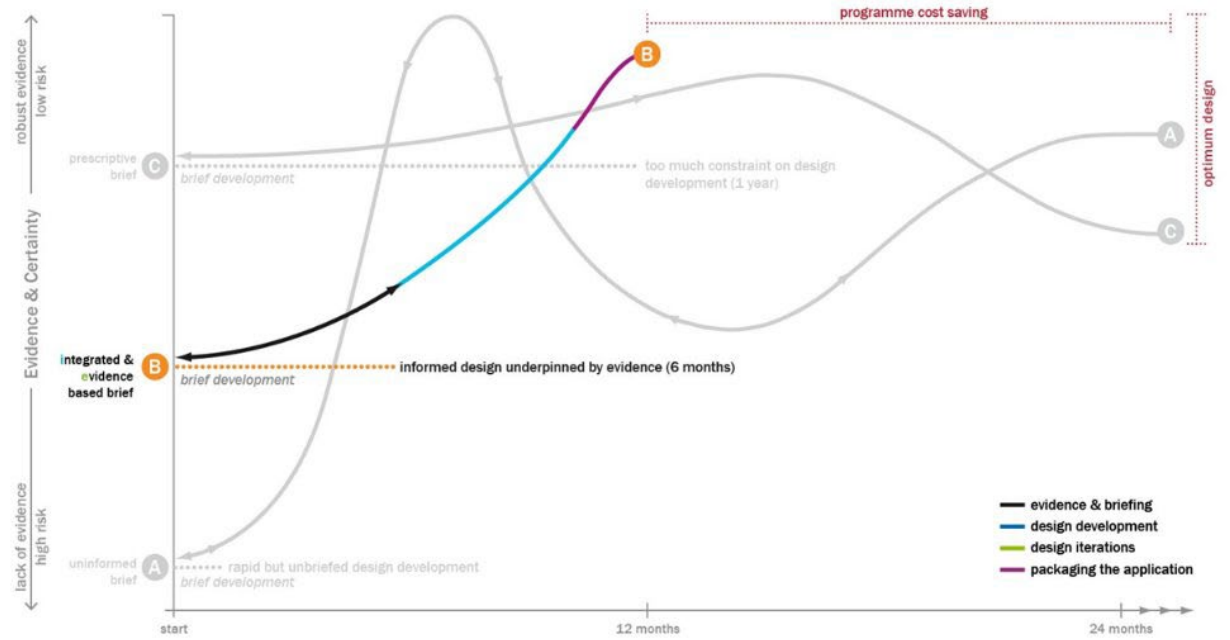
de-risking the masterplanning process

Practice Lesson: 'Front-loaded' technical evidence to enable smoother design process



- A uninformed brief (2 years)**
 - Slow
 - Costly
 - High risk
- B integrated & evidence based brief (1 year)**
 - Quicker
 - Best commercially
 - Less risk of challenge
 - Deliverable
 - Informed Design Development
 - Robust planning submission
- C prescriptive brief (2 years)**
 - Slow
 - Costly
 - Not innovative enough
 - Too belt & braces
 - Low risk

added value - the integrated & evidence based approach to masterplanning

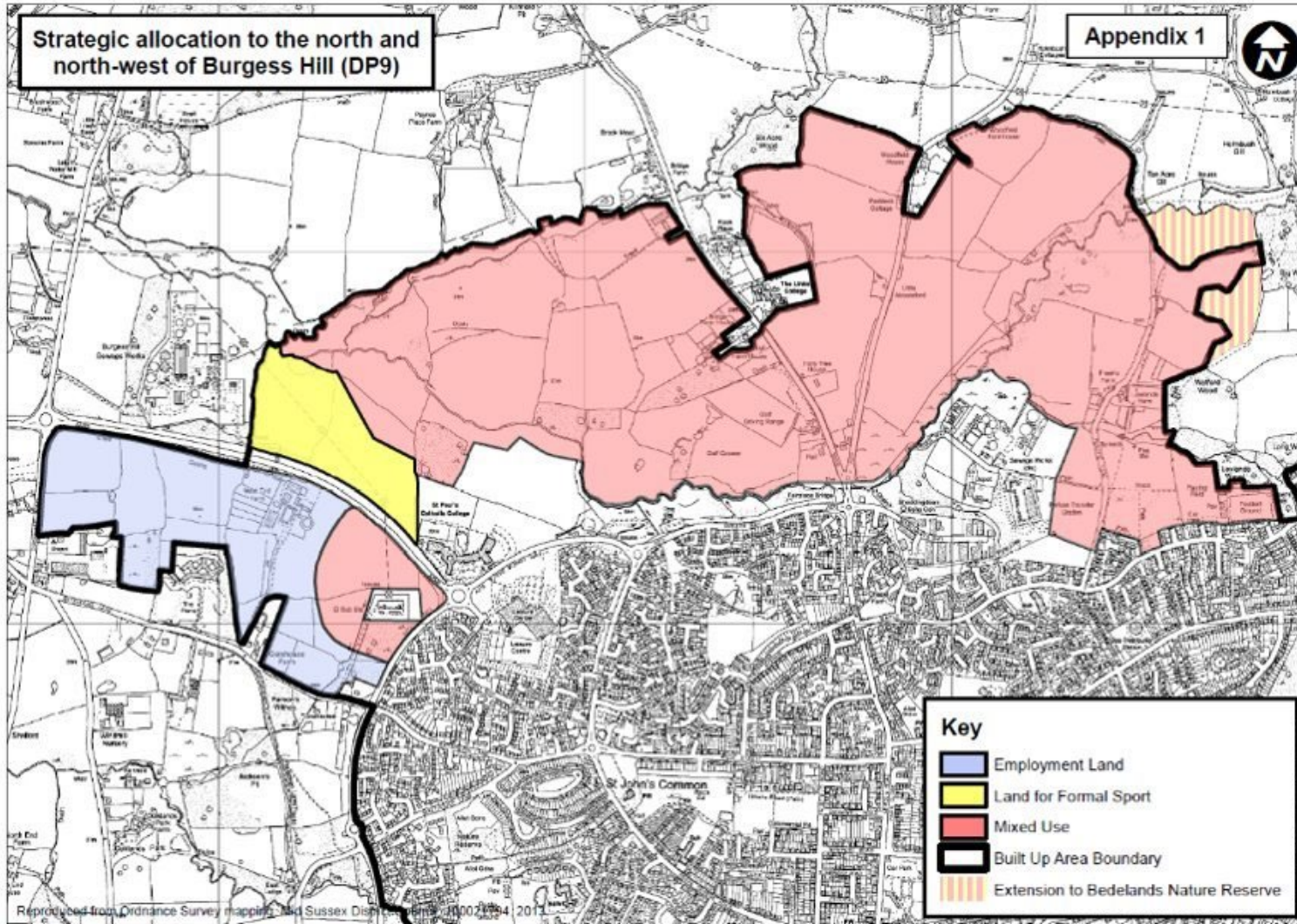


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added value - the integrated & evidence based approach to masterplanning



Brookleigh (Northern Arc), Burgess Hill - strategic investment by Homes England



CASE STUDY
Master developer

In July 2018, Homes England acquired land around the Northern Arc in Burgess Hill to deliver more than 3,500 homes, alongside schools and leisure facilities.

The site, which has been identified as a location for major housing delivery for over 10 years, had been stalled due to the complexities of land ownership and the need for upfront strategic infrastructure delivery.

We have worked closely with Mid Sussex District Council, the landowners and the site promoter to acquire the land. As the land owner for the whole site, we will invest in the required infrastructure and release the first phases of development early.

“Despite Burgess Hill’s huge potential to deliver more than 3,500 homes, development of this site had been stalled for over 10 years due to the complexities of land ownership and the need to deliver significant upfront infrastructure. We are delighted that Homes England has intervened to unlock this site”.

Councillor Garry Wall
 Leader of Mid Sussex District Council



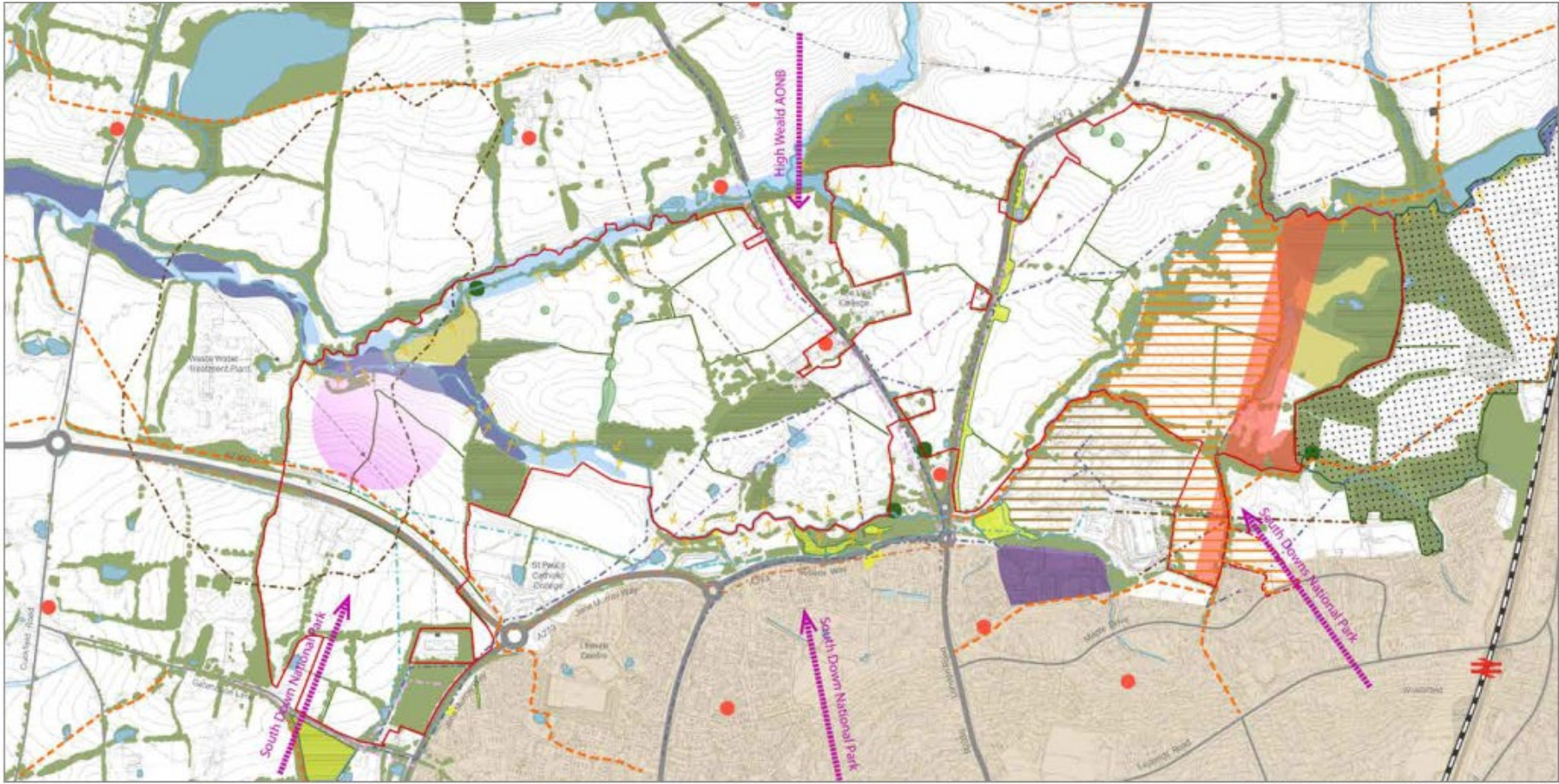
Strategic Plan
 2018/19 – 2022/23
 Making homes happen

Brookleigh – Integrated Masterplanning approach

- Masterplanning & urban design
- Town planning
- Community infrastructure
- Education
- Transport
- Highways
- Landscape
- Ecology
- Arboriculture
- Heritage and archaeology
- Flood and drainage
- Ground conditions
- Infrastructure
- Cost management
- Viability
- Economy
- Sustainability



Brookleigh - site issues and constraints plan

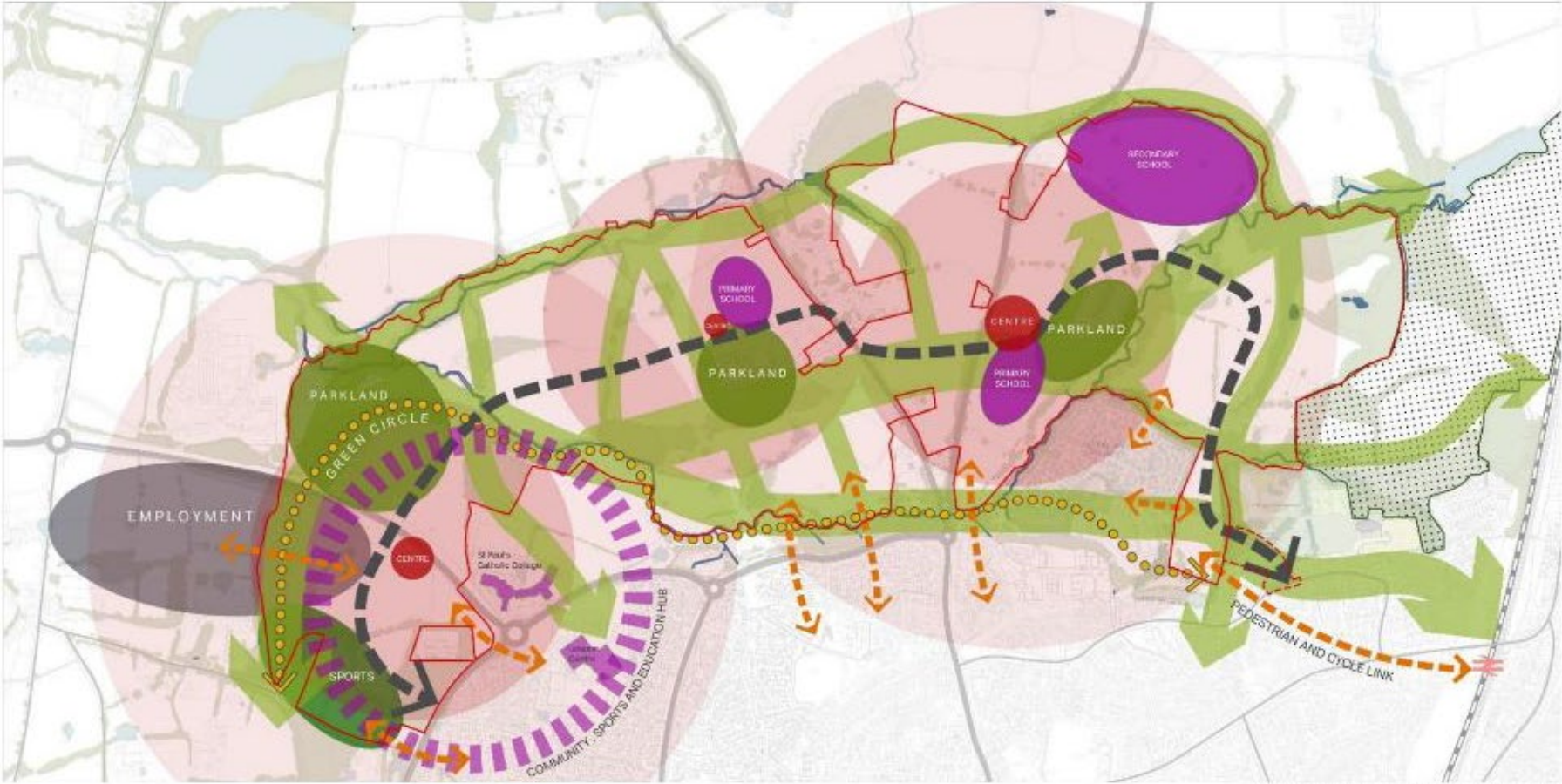


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KEY						
Site boundary	Existing road	Woodland	Tree Preservation Order	Flood zone 3	HV powerline	Rising main
Land for Freeks Farm site access and open space	Railway line	Ancient woodland	Likely high value trees	Flood zone 2	Virgin media	Water main
Freeks Farm - outline application boundary	Public Right of Way	Unimproved grassland	Veteran trees	Archaeological area	BT	Steep topography
Consented development	Business park	Local nature reserve	TPO individual trees	Listed buildings	Gravity sewer	Theoretical long distance views
	Existing settlement	Hedgerows	Water courses	Odour contour	Gas line	Theoretical area of high visibility



Brookleigh - site opportunities plan



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KEY			
Site boundaries	Pedestrian and cycle routes	Green corridor	400m - 5 minutes walk-band
Land for Freaks Farm site access and open space	Green Circle	Centre for Community Sports	
Existing road	Neighbourhood centres	Employment	
Railway line	Education	Local nature reserve	
Northern Arc Avenue	Parklands	800m - 10 minutes walk-band	

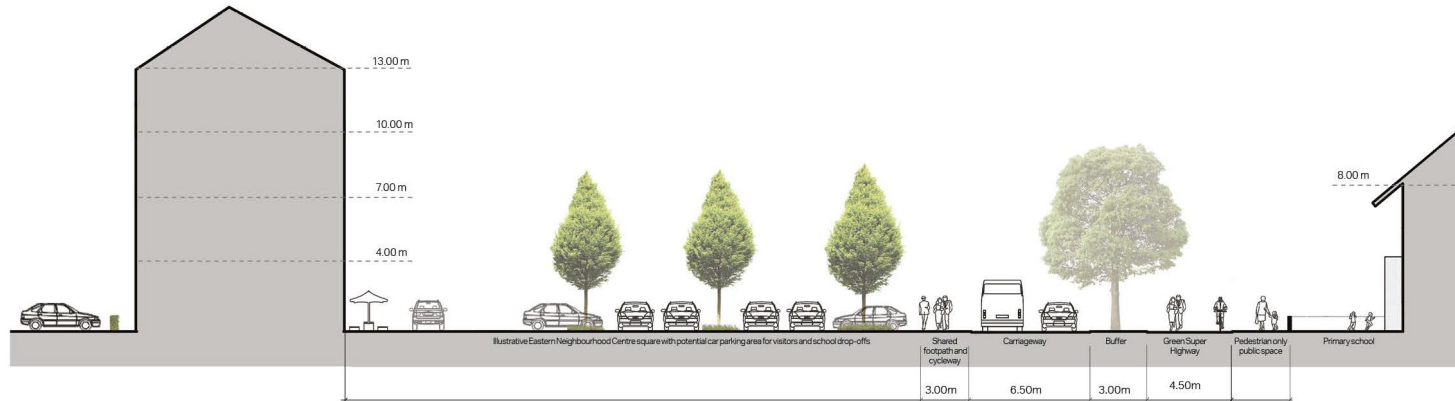


Brookleigh - approved Masterplan



KEY					
Site boundary	Woodland	Grassland	Vehicular bridge	Cycle and pedestrian route	Water main (400mm)
Land for Franks Farm site access and open space	Ancient woodland veteran tree buffer	Flood zone	Pedestrian bridge	Green circle	Gas main (250mm)
Residential area	Parkland	Local nature reserve	Proposed primary road	Green super highway	Overhead cable and pylons
Employment land	Centre for Community Sports	Veteran trees	Proposed secondary road	Public Rights of Way	Primary school with an indicative layout
Ancient woodland (hatched)	Natural green space	Indicative layout of neighbourhood centre	Proposed tertiary road	Mitigated odour corridor	Secondary school with an indicative layout

Brookleigh – Design Guide illustrative material

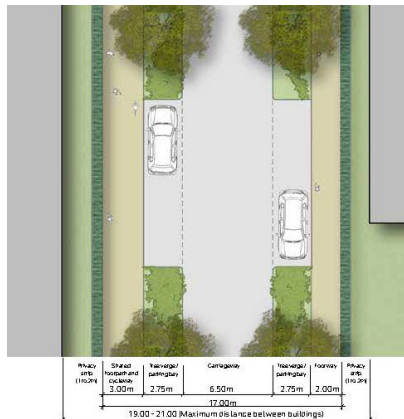
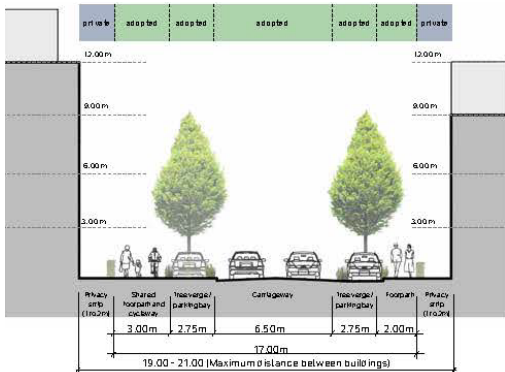
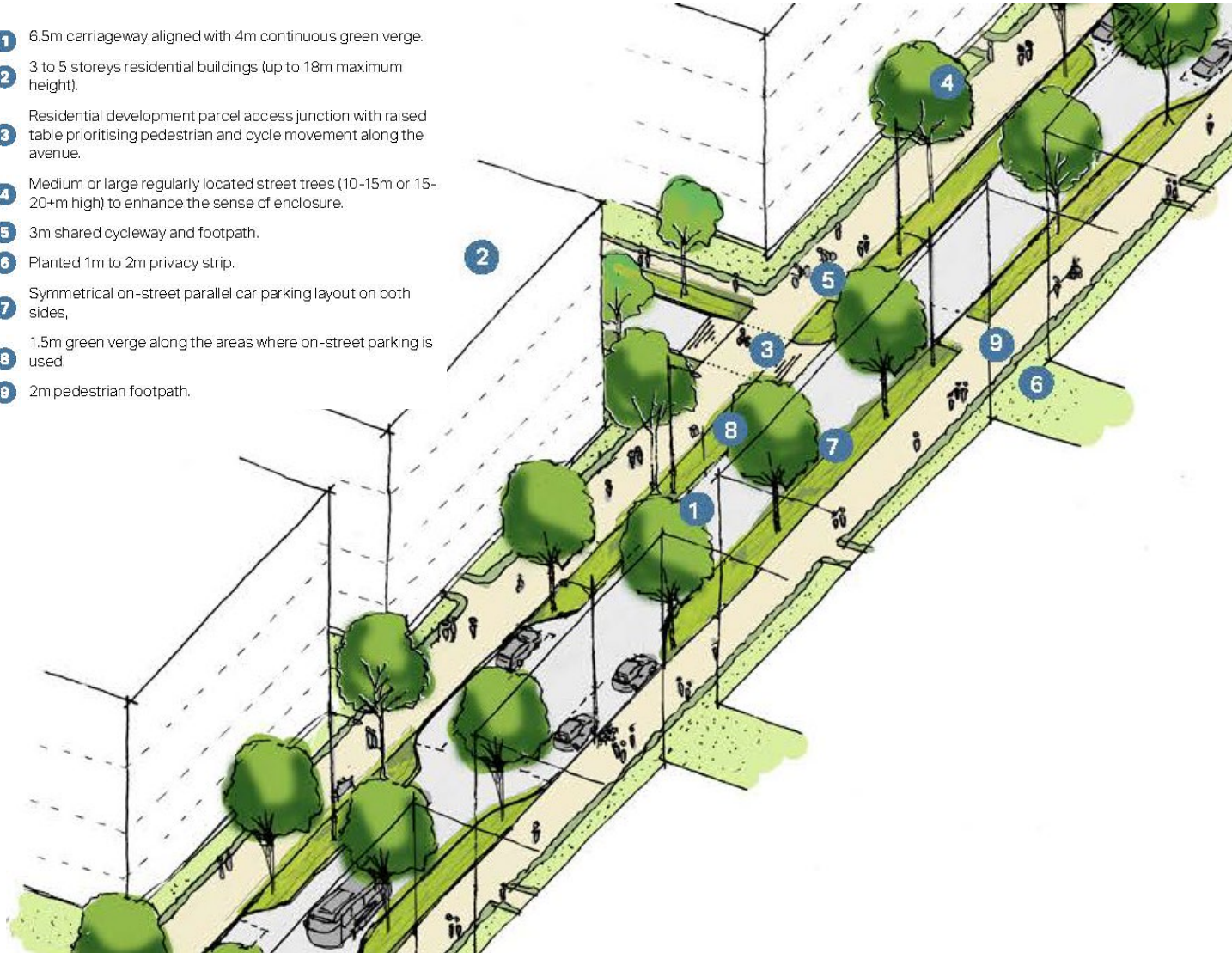


Eastern neighbourhood centre

Northern Arc Street Design and Adoption Manual



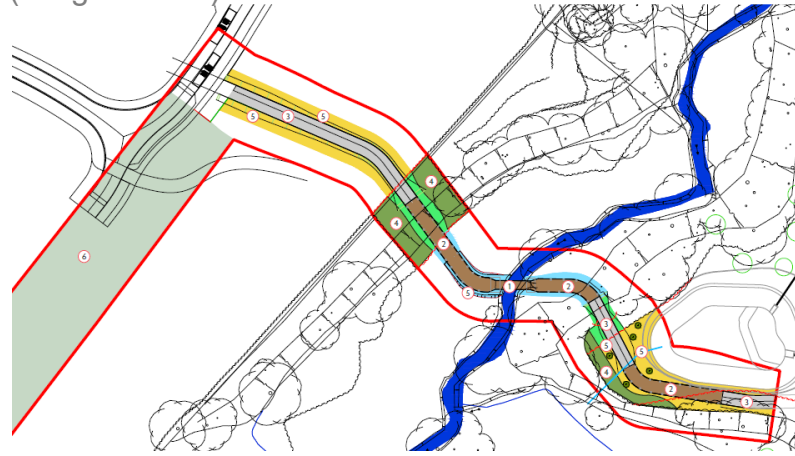
- 1 6.5m carriageway aligned with 4m continuous green verge.
- 2 3 to 5 storeys residential buildings (up to 18m maximum height).
- 3 Residential development parcel access junction with raised table prioritising pedestrian and cycle movement along the avenue.
- 4 Medium or large regularly located street trees (10-15m or 15-20+m high) to enhance the sense of enclosure.
- 5 3m shared cycleway and footpath.
- 6 Planted 1m to 2m privacy strip.
- 7 Symmetrical on-street parallel car parking layout on both sides,
- 8 1.5m green verge along the areas where on-street parking is used.
- 9 2m pedestrian footpath.



Brookleigh – detailed design development



CGI of Secondary School
(image: Atkins)



Green super highway detail
(image: Regenco)



Framed view towards Secondary School (image: Bellway)



CGI view of homes along Northern Arc avenue
fronting Eastern Neighbourhood Park
(image: Bellway)

Brookleigh - early phases of infrastructure and housing delivery



Eastern Neighbourhood Centre, Access Junction on Isaac's Lane

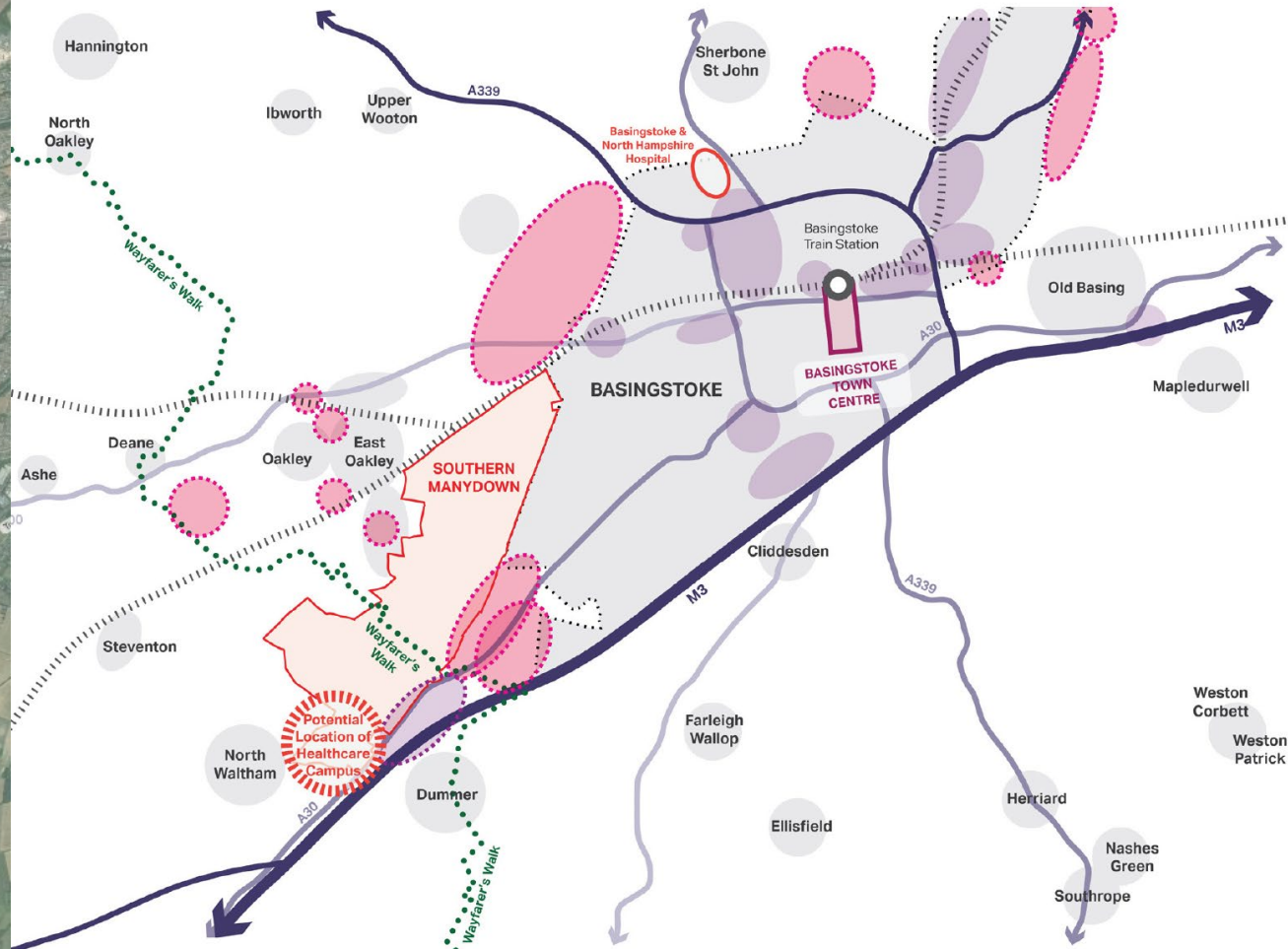
Some practice lessons

- 'Front-loading' the masterplan process with technical evidence and engaging stakeholders early is effective in reducing project risk and can enable better and faster delivery
- A staged approach to fixing design detail is very important. Too much detail too early limits future flexibility, but too little detail allows dilution of design quality

Manydown, Basingstoke - a strategic opportunity

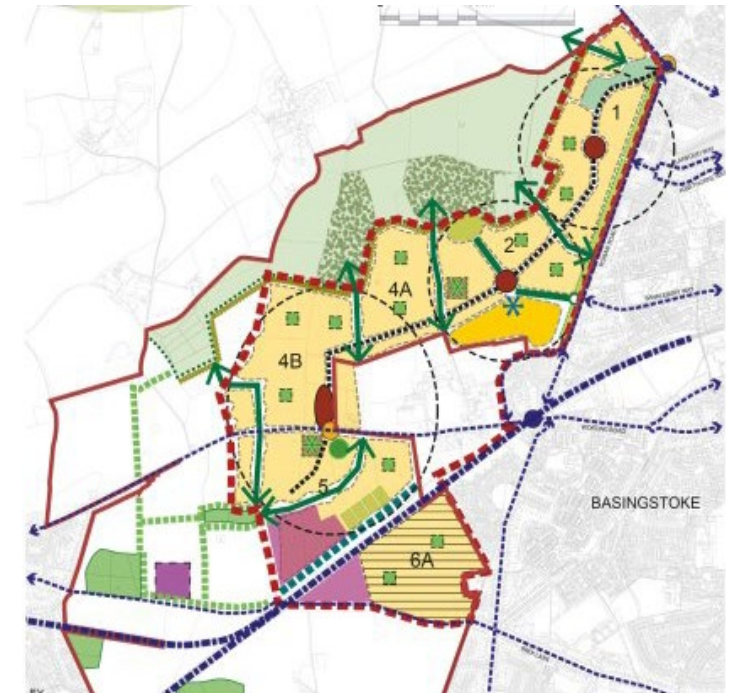
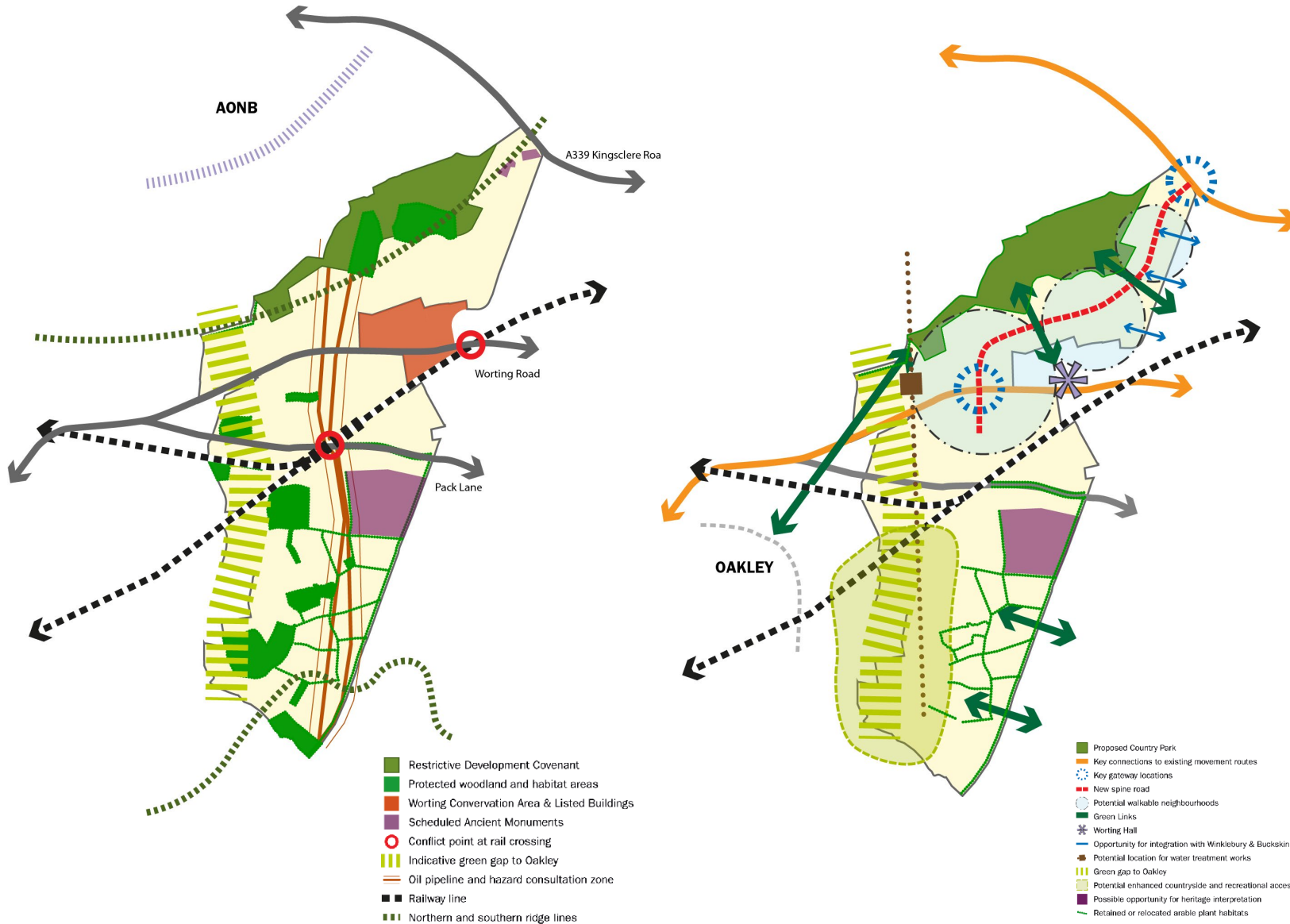


Strategic context for growth

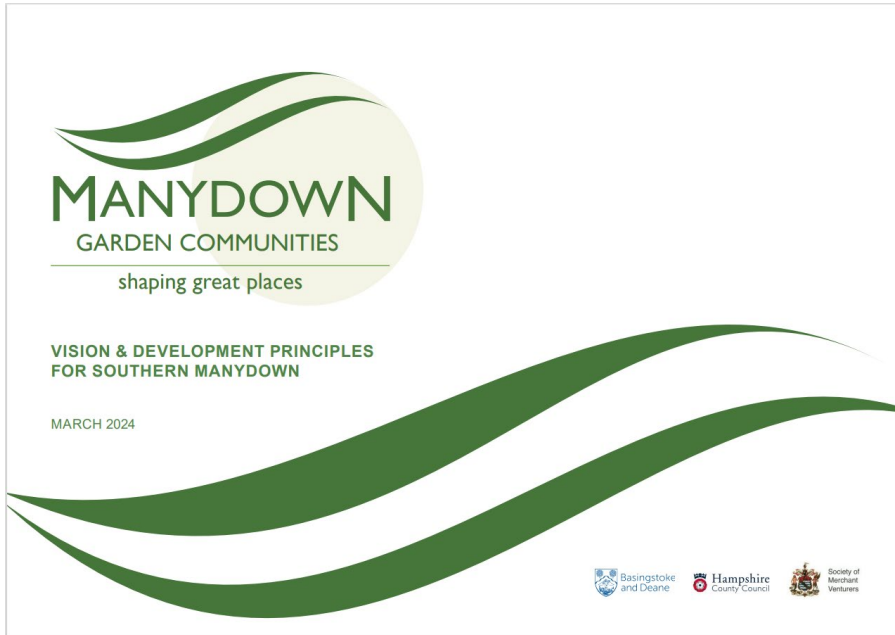


West of Basingstoke Context

Analysis of constraints and opportunities informing site allocation

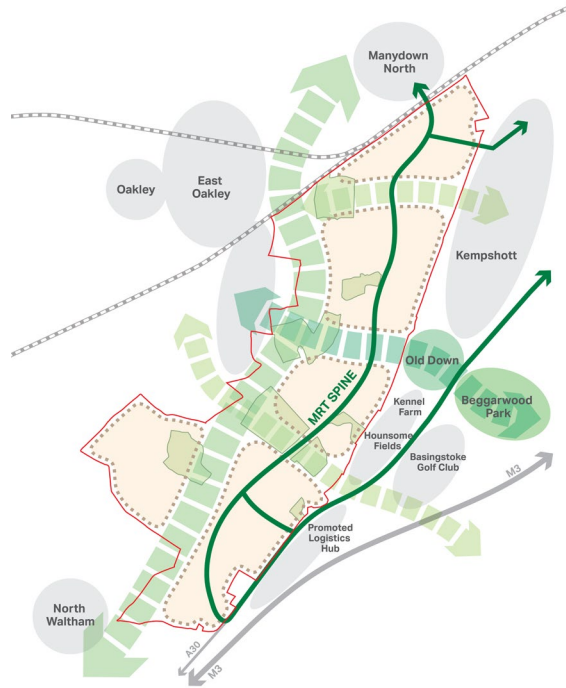


Southern Manydown – Vision & Development Principles



Development principles

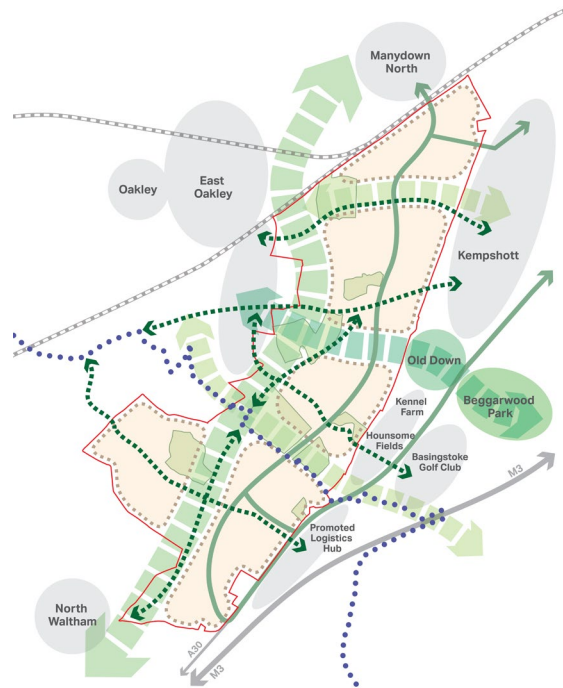
Key Masterplan Drivers



Sustainable movement



Green setting, ecology and biodiversity

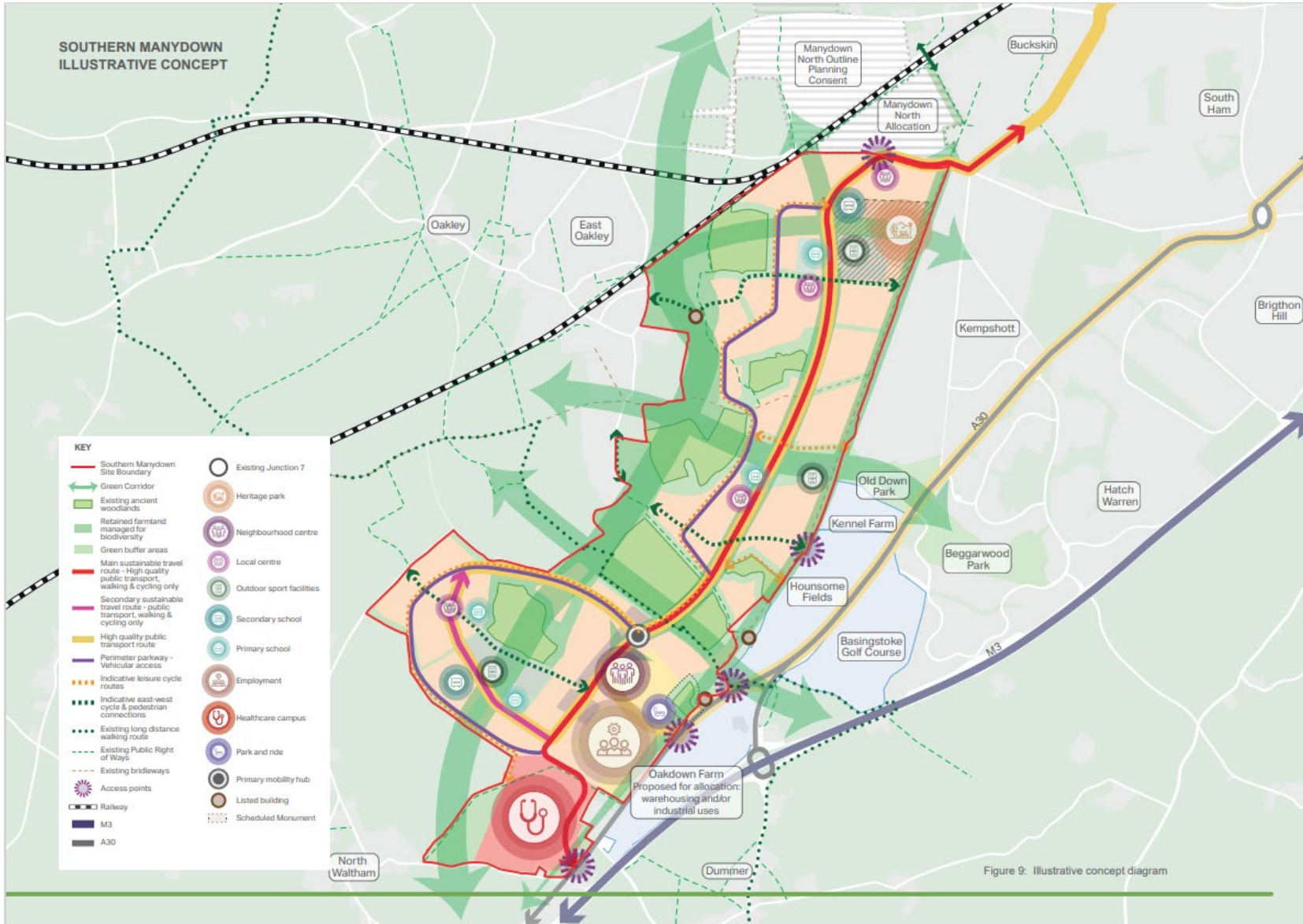


Connecting communities



Walkable neighbourhoods

Southern Manydown – Illustrative Concept Masterplan



Masterplanning new towns will always be complex



Welborne Outline Planning Application 2017

Delivering New Communities

A Technical Guide to Project and Programme Management for Local Authorities



TCPA Guide to Delivery New Communities

Executive summary

The delivery of large-scale new communities is a colossal task. Such developments are complex, long-term projects that require commitment from across the political, economic, corporate and planning divisions of the local authorities that help to deliver them. Success depends on robust programme management so that the new communities can be holistically planned and delivered. That in turn is reliant on a dedicated team with a breadth of expertise, and a culture of positive collaboration that builds trust among a wide range of stakeholders.

TCPA Guide to Project and Programme Management, sponsored by AECOM

Design is key to creating and delivering new towns

- Laying the foundations for delivering places over 10, 20, 30+ years
- Creating the character and quality of places to leave an inter-generational legacy



Brentham Way, 1910



Brentham Way today

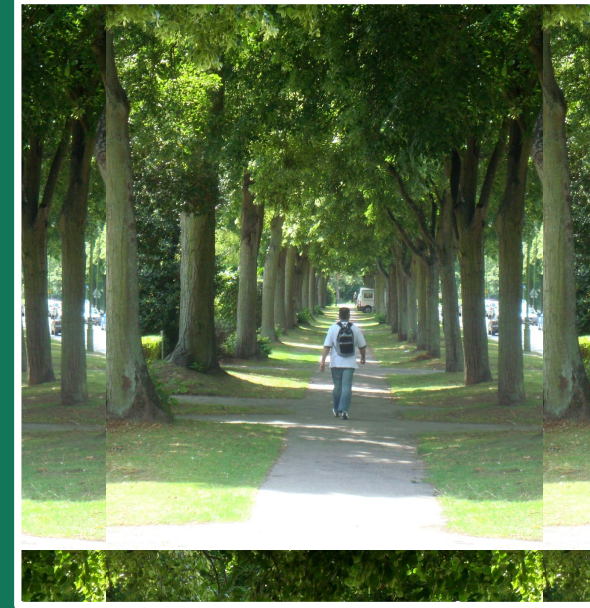
Next generation of new towns can draw on a substantial body of knowledge



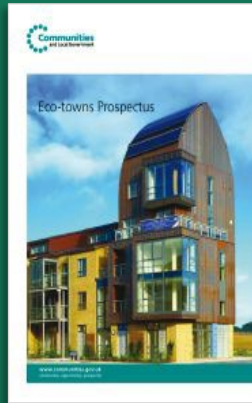
New urbanism



Eco-towns



Garden communities





RTPI Urban Design Network Conference

New Towns

Practical Delivery and Lessons Learned

Patrick Clarke

14th November 2024