LDĀDESIGN

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NEW COMMUNITY NORTH OF FAREHAM

CONCEPT MASTERPLAN OPTIONS STUDY

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CONTENTS

VERS 4.0
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FIG 1.1 AERIAL PHOTOGRAPH

1.0 INTRODUCTION

LDA Design and Parsons Brinckerhoff (PB) have worked closely with Fareham Borough Council (FBC) to prepare this Concept Masterplan Options Study Report for the New Community North of Fareham (NCNF), previously known as Fareham Strategic Development Area (SDA).

The Purpose of the Study is set out below, followed by a Definition of what is meant by a Concept Masterplan Option and an outline of the Study Process. Constraints and Opportunities affecting the scale and form of the New Community, and the resulting Capacity and Mix of development are discussed in Section 2. The NCNF Vision is reaffirmed in Section 3, along with the broad structuring Framework, before Masterplan Principles and the four Masterplan Options are described in Section 4. The Transport Solutions that sit alongside the Masterplan Options are outlined in the following section, and Sub-Options that address development variables are discussed in Section 6. Finally, the Delivery section outlines the key factors that will need to be addressed as the New Community is planned in more detail.

PURPOSE OF THE STUDY

The planning policy basis for building a new community north of Fareham is established in FBC's Core Strategy, adopted September 2011[1]. Policy CS13 states:

> "Permission will be granted for the development of a Strategic Development Area to the north of Fareham following the adoption of an Area Action Plan and the preparation of a comprehensive masterplan for the development. The development will include provision for between 6,500- 7,500 dwellings, unless it is found that this level of housing cannot be delivered without adversely affecting the integrity of protected European conservation sites. If any potential adverse effects cannot be avoided or adequately mitigated, the level and scale of development would need to be reduced accordingly to ensure that there are no adverse effects on the integrity of any European sites. The development will also provide supporting environmental, social and physical infrastructure, retail and employment floorspace to both support the development and to contribute towards meeting the development objectives of the South Hampshire Sub-Region. The new community will aim to be as self-contained as possible, whilst complementing and supporting the established town centre of Fareham and adjoining settlements."
>
> The high level development principles are summarised below:
> - An inclusive, cohesive community
> - Exemplar of sustainable design and resource efficiency
> - High level of self-containment
> - Provide all supporting environmental, social and physical infrastructure
> - Provide pre-school, primary and secondary schools
> - Provide a connected network of Green Infrastructure
> - Avoid coalescence with neighbouring villages
> - Maximise opportunities for sustainable travel
> - Provide a range of housing types, sizes and tenures
> - Provision of Sustainable Urban Drainage Systems (SUDS)
> - Minimise impacts on the strategic road network.

The purpose of the Concept Masterplan Options Study is to move the policy and principles embedded in Policy CS13 forward towards delivery of the new community, setting out what this might mean for the size, shape, content and character of the development and informing an understanding of the infrastructure requirements, planning issues and investment decisions that need to be addressed before comprehensive development can be brought forward.

The Masterplan Options set out in this Report are for public consultation. Views expressed by consultees on the four options presented will inform selection of a Preferred Option that will become the basis of an Area Action Plan (AAP) for the NCNF. The AAP itself will constitute a framework within which planning applications for development within the NCNF can be brought forward and determined.

THE CONCEPT MASTERPLAN OPTIONS: DEFINITION AND APPROACH

The aim of preparing a Concept Masterplan is to build an understanding of the capacity of a site, the likely distribution of land uses and the extent of the site area necessary to provide the required scale and components of development. That information allows a more in-depth appreciation of the probable implications of growth on the environment, communities, economy and infrastructure, and it advances knowledge about the structure and key principles that will need to be applied to create a community of the required scale, form and nature. The Concept Masterplan is really a framework within which a more defined masterplan can be formed.

A Concept Masterplan is therefore a strategic tool. It is prepared on the basis of available evidence of the constraints and opportunities that influence development, an understanding of the objectives and aspirations of the main relevant stakeholders and a recognition of the issues that are likely to impact upon the successful implementation of the development. It is an illustration that tries to convey some of the above considerations.

A Concept Masterplan is not a detailed layout plan. The scale of different land uses is realistic, but the locations are illustrative. The plan does not attempt to define internal plot boundaries and roads nor to pinpoint where different land uses should be located or the shape of public open spaces. Where it is important to define a particular land use in a particular location or a specific design component, that will be made clear in the Masterplan Principles, which will ultimately inform AAP policy.

The Concept Masterplan in this Report is represented at three levels:
- The Structuring Framework - the Vision and Framework for the NCNF will start to establish, in the broadest sense, what the form and nature of the NCNF should be, providing a structure within which all Options and Sub-Options will be drawn.
- The Concept Masterplan Options – the broad options for development of the NCNF, drawn to illustrate, test and consult upon the most fundamental issues:

namely the extent of development, the quantity and mix of development and transport solutions.

- The Sub-Options – drawn to test other variables which could be applied to any of the Concept Masterplan Options, such as possible locations for the secondary school site and District Centre, and variations in residential densities.

MASTERPLANNING PROCESS

The process has not been undertaken in isolation: it has followed an integrated approach, building on established and emerging evidence in technical reports and consultation outcomes, drawing inputs from stakeholders and landowners, working closely with FBC's NCNF team and feeding into more technical assessment work and further public engagement. It is therefore part of a wider coordinated process of moving the new community forward.

Specifically the masterplanning work has responded to:

- The adopted Core Strategy policy, existing evidence reports and previous work on vision and options;
- Emerging evidence including Eco-Opportunities, Green Infrastructure, Landscape, Demographics and Economic studies and strategies
- Liaison with principal landowners
- Stakeholder events, including FBC's youth conference and school visits.

Four stakeholder events were held during the concept masterplanning work:

- The intention of the first workshop was to review and reaffirm the Core Strategy vision and objectives for the NCNF and to outline what the character of the new community should be.
- Attendees at the second workshop were asked to draw a Concept Masterplan for the NCNF using a matrix of options prepared by the design team as a starting point.
- A third workshop was held with stakeholders and service providers to discuss the implications of projected demographics for the NCNF on infrastructure requirements and phasing.
- At the final stakeholder workshop the attendees were asked to comment on the emerging Concept Masterplan Options and corresponding Transport Solutions.

The outputs of the events have helped to reaffirm the Vision, define the Masterplan Principles and shape the Masterplan Options.

FIG 2.1 LOCATION PLAN

2.0 CONSTRAINTS, OPPORTUNITIES AND CAPACITY

SITE CONTEXT

The broad 'area of search' that encompasses the NCNF covers approximately 442 ha of open countryside located to the north of the existing urban area of Fareham, approximately a mile south of the South Downs National Park and 15 miles east of the New Forest National Park as the crow flies. The 'area of search' for the new community used in defining Core Strategy policy is indicated in figure 2.1.

The site's broad landscape context is defined by the valley of the River Meon to the west, by the heavily wooded 'Forest of Bere' landscape to the north, by the rolling, chalk downland landscape of Portsdown Hill and the minor valley of the Wallington River to the east, and by the M27 and the urban area of Fareham to the south. The site is predominantly used for arable farming with some light industrial and commercial buildings, and a small park and ride at M27 Junction 11. There are also farmsteads and few isolated residential properties within the study area. An independent school, Roche Court, lies within the broad area of search and is located to the east of the A32, the school and its grounds are not being considered by FBC for NCNF development. The NCNF Landscape Study[2] should be referred to for a more detailed description of the site and the surrounding landscape setting.

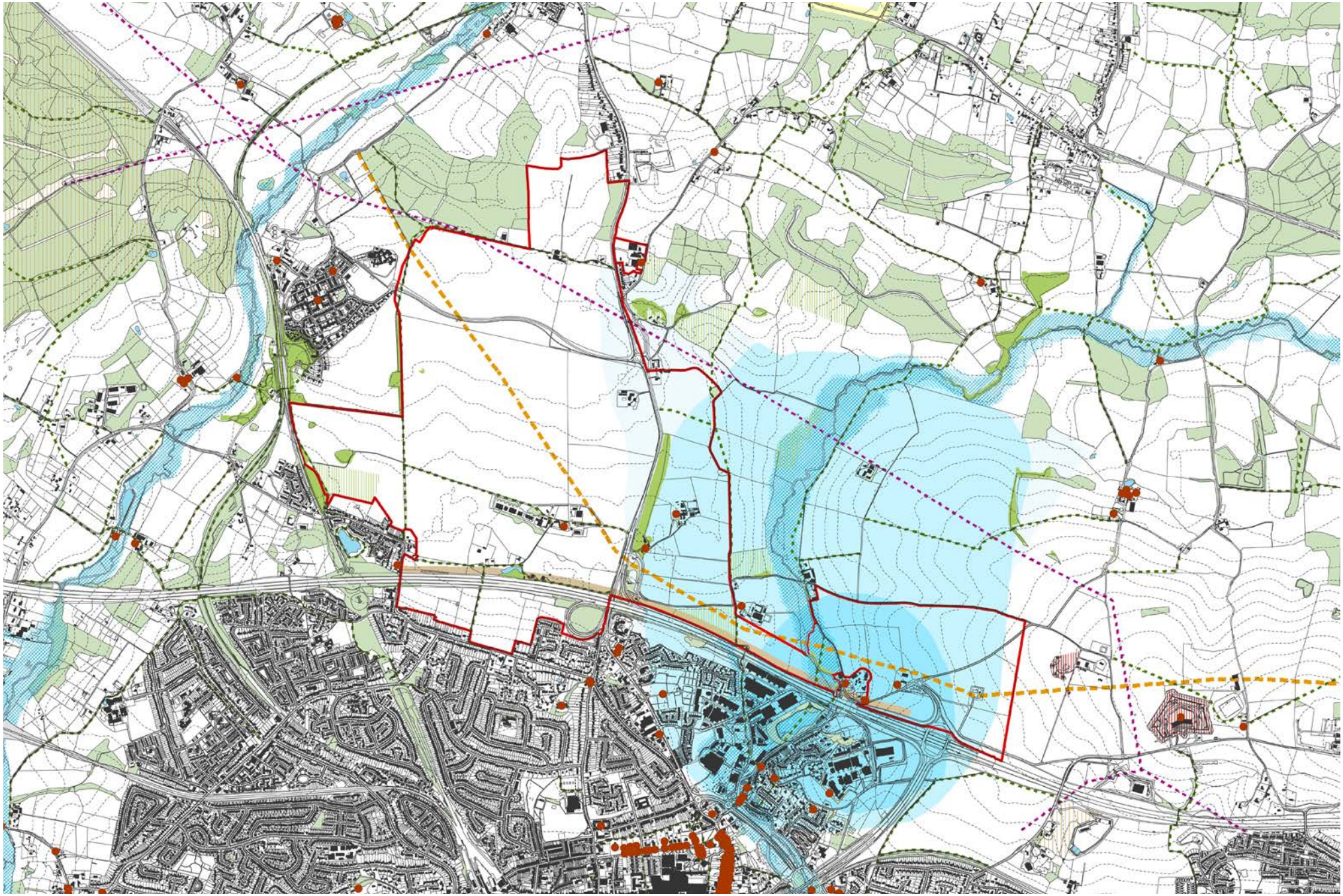
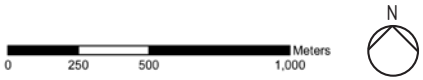


FIGURE 2.2 SUMMARY CONSTRAINTS PLAN

CONSTRAINTS LEGEND:

- LISTED BUILDING
- NATIONAL PARK
- PUBLIC RIGHT OF WAY
- OVERHEAD ELECTRICAL CABLES
- SCHEDULED MONUMENTS
- HIGH PRESSURE GAS PIPELINE
- SSSI
- GROUND WATER SOURCE PROTECTION ZONE 1
- GROUND WATER SOURCE PROTECTION ZONE 2
- GROUND WATER SOURCE PROTECTION ZONE 3
- AREAS OF ECOLOGICAL IMPORTANCE
- EA FLOOD ZONE 3
- EA FLOOD ZONE 2
- NOISE POLLUTION/AIR QUALITY ASSESSMENT ZONE (40M)



SITE CONSTRAINTS

There are a number of key constraints which have a direct effect on the capacity of the NCNF study area these are illustrated on figure 2.2. Details of the constraints were provided by Fareham Borough Council and are well documented in earlier capacity studies produced by David Lock Associates[3,4]. These studies along with ongoing discussions with FBC and key stakeholders have defined the following list of site constraints which have informed the development of the concept masterplanning options.

Gas Pipeline
A gas pipeline runs diagonally across the site from the north-west corner to the south-east and, due to Health and Safety standards, has direct implications for development of the NCNF study area. For the purpose of this study a 6m exclusion zone has been assumed for all forms of development and a 195m exclusion zone assumed for facilities with high occupancy which are difficult to evacuate in an emergency, such as schools and hospitals. Reference should be made to the HSE's PADHI guidelines[5].

Overhead Power lines
An exclusion zone will be required either side of the power lines. Technical studies at more detailed planning and design stages will establish the distance required but for the purpose of the masterplanning options a buffer of 40m either side of the power lines has been assumed. If the power lines were relocated underground along the same alignment, the set back would reduce to 3m on each side.

Buffer to Funtley
To protect the identity of Funtley a minimum buffer of 50m has been assumed to the north/eastern edge of the village adjoining the NCNF. This buffer will be larger in most places due to existing green infrastructure around the village.

Buffer to Wickham
While the main residential neighbourhoods of Wickham are located 0.5miles to the north of the area of search, some ribbon development has extended south along the A32 resulting in the risk of a perceived coalescence of Wickham and the NCNF. A landscape buffer between Wickham's existing residential properties along the A32 and the developable area of the NCNF is an important element of the concept masterplan options. Existing tree planting should be maintained and opportunities for augmenting the planting should be considered.

In addition, the ridge to the northern most point of the site is significant as it provides visual separation between urban areas of Wickham and Fareham.

Development in the concept masterplan options has been set back from this ridge to maintain the visual separation provided by the ridge.

Listed Buildings
There are a number of listed buildings within the broad NCNF study area including Roche Court which is a Grade II Listed Building located to the east of the A32, a number of Grade II* Listed farmhouses at Dean Farm and a Grade II Listed farmhouse called Downbarn at Junction 11. Of these, only Dean Farm lies within the land area considered to have development potential. It is assumed that the farmhouses will sit within an employment area and it will be possible to protect their character and setting within the landscape structure of that area.

The landscape setting of Roche Court will need to be considered as part of the concept masterplanning work and a buffer around Roche Court has been assumed which allows these buildings to retain an association with the parkland character of land around the Wallington Valley. There are also a number of Listed Buildings which fall outside but in close proximity to the site boundary, potential impacts of the NCNF on the character and setting of these buildings will need to be considered at more detailed planning stages.

Water source protection zones
A groundwater Source Protection Zone (SPZ) is located within the eastern half of the SDA. A SPZ denotes an aquifer that is used for public potable water supply and activities within the SPZ are controlled by the Environment Agency to reduce contaminations risks.

While the SPZ does not necessarily preclude development the following guidance is provided by the Environment Agency in 'Groundwater Protection: Policy and Practice' [6]. In summary, it is generally not permitted to discharge surface water runoff from roads, vehicle parking or public amenity areas to SPZ1, although it is permitted to discharge surface water runoff from these areas to SPZ2 and SPZ3 through the use of sustainable drainage systems (SuDS). The use of deep soakaways within all areas of a SPZ for surface water disposal will also generally not be permitted.

Within all areas of the SPZ, the EA will object to high risk developments (such as loading areas, service yards, chemical storage areas, garage forecourts, lorry parks, scrap yards etc) discharging surface water runoff to ground unless the site has been subject to risk assessment and acceptable effluent treatment is provided. Best practice suggests these types of development are not appropriate within the SPZ due to potential risks.

Flood Zones
Indicative Flood Map shows a strip of land around 150 metres wide along the Wallington River valley within flood zone 2 and 3. This is categorised as medium and high risk of fluvial flooding. Residential development is considered to be 'More Vulnerable' and should not be located within higher risk flood zones. Other forms of development including commercial, retail and community facilities are considered to be 'Less Vulnerable' and could be located within the high risk flood zones. However, considering the availability of land that is not considered to be at flood risk, it is recommended that all development is located outside of the identified flood zones in accordance with National Planning Policy.

Areas of high landscape sensitivity
As identified by the NCNF Landscape Study[2], the areas of highest landscape sensitivity are located at the extreme north of the NCNF area (north of Heytesbury Farm) and the far eastern side of the area (especially to the east of the Wallington River valley). While these areas are not excluded from the developable area their inherent sensitivity to change will require specific design responses, the NCNF Landscape Study makes recomendations for integrating development into these areas. The concept masterplan options have also explored the possibility of excluding the sensitive sites to the east from the NCNF development partially due to the difficulty of integrating development into this landscape.

These areas also include two Scheduled Monuments which are located outside the site boundary to the east, Fort Nelson and World War II Heavy Anti Aircraft Gunsite at Monument Farm. The presence of these sites re-inforces the need for a detailed design response which respects the constraints in this area.

Areas of Ecological Importance
There are two Areas of Ecological Importance within the site boundary as shown on the constraints plan, it is assumed that development will be excluded from these areas and that they will be integrated into the wider green infrastructure network. Further detailed surveys will be required to understand the measures needed to mitigate against potential impacts on protected species. The green infrastructure framework provides a network of green spaces and routes which connect known site of biodiversity value.

Noise and air quality
A minimum exclusion zone of 40m has been assumed from the M27, further noise mitigation measures can be developed at detailed planning stages which might include use of planting, built form and landform to mitigate against noise and air quality issues.

Existing woodland and hedgerows
Areas of woodland and Ancient Woodland have been removed from the developable area and it is assumed that significant hedgerows and individual trees will be incorporated into the development subject to more detailed survey information.

Despite the constraint list above the majority of the NCNF study area is relatively unconstrained for development. Large parts of the study area are intensively farmed which result in poor vegetation cover, large areas of low ecological value and a limited number of recreational routes. The NCNF Landscape Study[2] defines the majority of the site as visually enclosed and provides recommendations for how development can be integrated into the existing landscape.

EUROPEAN HABITAT SITES

In addition to the on-site constraints above the Concept Masterplan Options must consider potential indirect impacts on the European protected sites. The Habitat Regulations Assessment for the North of Fareham SDA Area Action Plan: Baseline Data Review Report was prepared by Urban Edge Environmental Consulting in May 2012[7] and provides a review of evidence to inform the HRA process. It is not a screening statement but forms the baseline against which screening and detailed assessments will be prepared.

The protected sites:
- Chichester and Langstone Harbours SPA/Ramsar;
- New Forest SAC/SPA/Ramsar;
- Portsmouth Harbour SPA/Ramsar;
- River Itchen SAC;
- Solent and Isle of Wight Lagoons SAC;
- Solent Maritime SAC; and
- Solent and Southampton Water SPA/Ramsar.

The potential impacts:
- Air pollution associated with development primarily as a result of emissions from traffic generated by residential and commercial developments.
- Population growth associated with development brings with it the threat of additional visitor pressure on European sites.
- Water abstraction for the increased population.
- Water pollution associated with development can impact on the qualifying features of designated sites, through waste water discharges.
- Development may result in the actual or functional loss of areas outside European site boundaries which are nonetheless important to the integrity of the sites.

The Concept Masterplan Options must explore possible mitigation measures against these potential impacts.

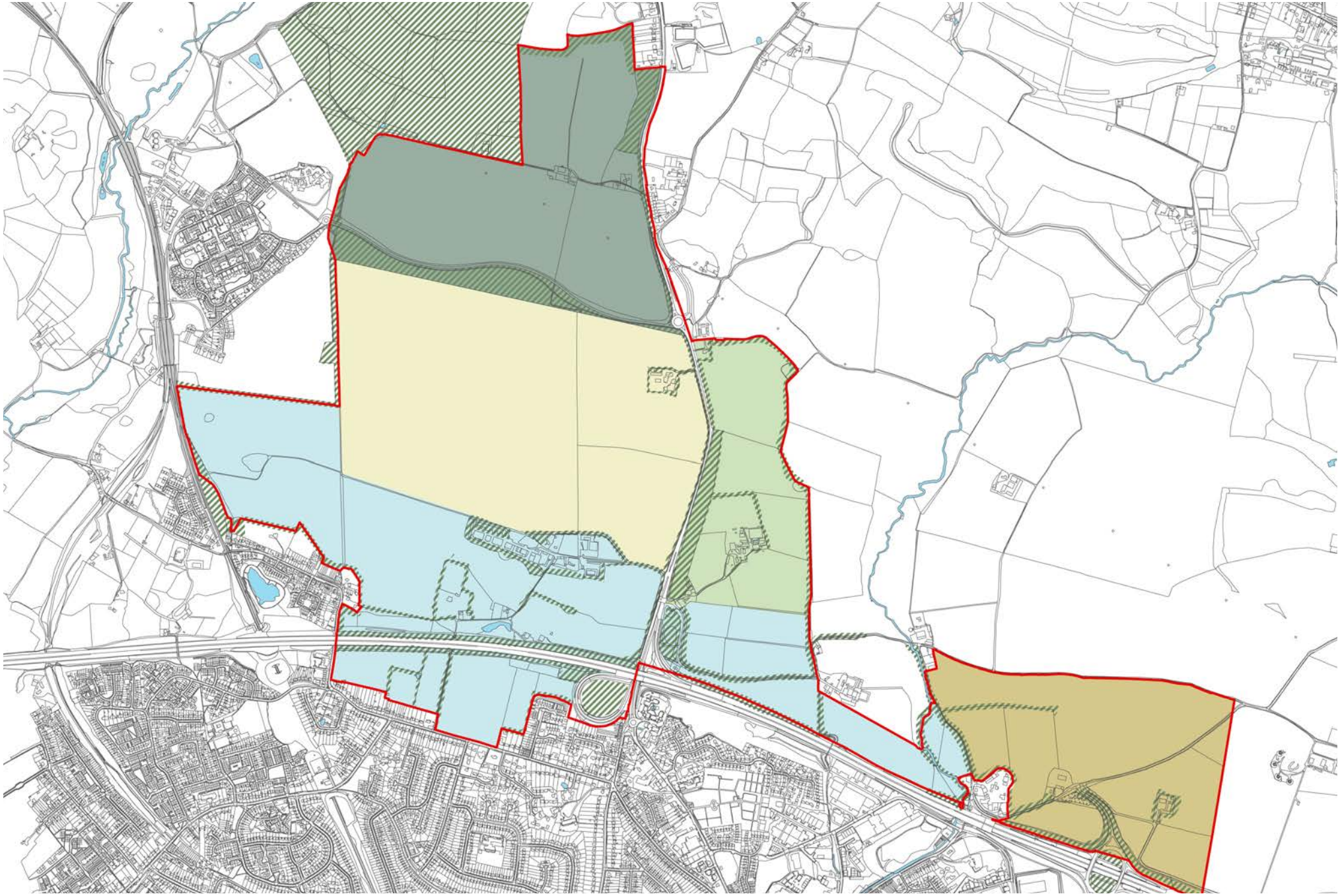


FIG 2.3 LANDSCAPE RESPONSE

LANDSCAPE RESPONSE LEGEND:

EXISTING VEGETATION: REINFORCE AND INCORPORATE WITHIN NEW LANDSCAPE STRUCTURE WHERE POSSIBLE

WOODLAND MOSAIC: DEVELOPMENT SET WITHIN A FRAMEWORK OF LARGE-SCALE BLOCKS AND BELTS OF WOODLAND, WITH AN ENCLOSED, INTIMATE AND 'ASSARTED' CHARACTER.

DOWNLAND: DEVELOPMENT SET WITHIN A MORE OPEN FRAMEWORK OF LINEAR PLANTING AND LARGE-SCALE OPEN SPACE WITH AN EXPANSIVE 'DOWNLAND' CHARACTER.

PARKLAND: PARCELS OF DEVELOPMENT SET WITHIN A 'DESIGNED' LANDSCAPE OF GRASSLANDS, CLUMPS, BELTS AND AVENUES OF TREES SET WITHIN OPEN GRASSLAND, WITH A COUNTRY ESTATE OR 'CAMPUS' CHARACTER.

PARKLAND (WETLAND/RIPARIAN VARIANT): AS ABOVE BUT WITH A MORE COMPLEX AND SMALL-SCALE, ENCLOSED RIPARIAN/WETLAND CHARACTER.

PARKLAND (DOWNLAND VARIANT): CHARACTERISED BY PARCELS OF DEVELOPMENT CONTAINED BY BANKS OR PERIPHERAL PLANTING, SET WITHIN A SIMPLE, OPEN, DOWNLAND LANDSCAPE.

LANDSCAPE STUDY

The NCNF Landscape Study[2] focuses on the area identified as the NCNF Area of Search and its immediate surrounding context. The purpose of the Landscape Study is to identify the key characteristics and sensitivities of the landscape and visual amenity within and surrounding the NCNF study area, and to provide clear development principles and recommendations to ensure that these factors are taken fully into account and respected in the development of masterplan options and a Green Infrastructure Strategy for the area.

The NCNF Landscape Study[2] identifies land to the extreme north and to the east as being of higher landscape and visual sensitivity to development. The NCNF Landscape Study identifies distinct zones within the NCNF defined by local variations in character and sensitivity and draws together the key development considerations and landscape responses recommended for each of the zones. It shows where existing vegetation will play an important role in restricting views and integrating new development within the landscape - these areas of vegetation should be reinforced and incorporated into a new landscape framework where possible. It also shows the recommended design response to be applied to new development in each area, in order to ensure the development reflects local landscape character. Figure 2.3 summarises the landscape response.

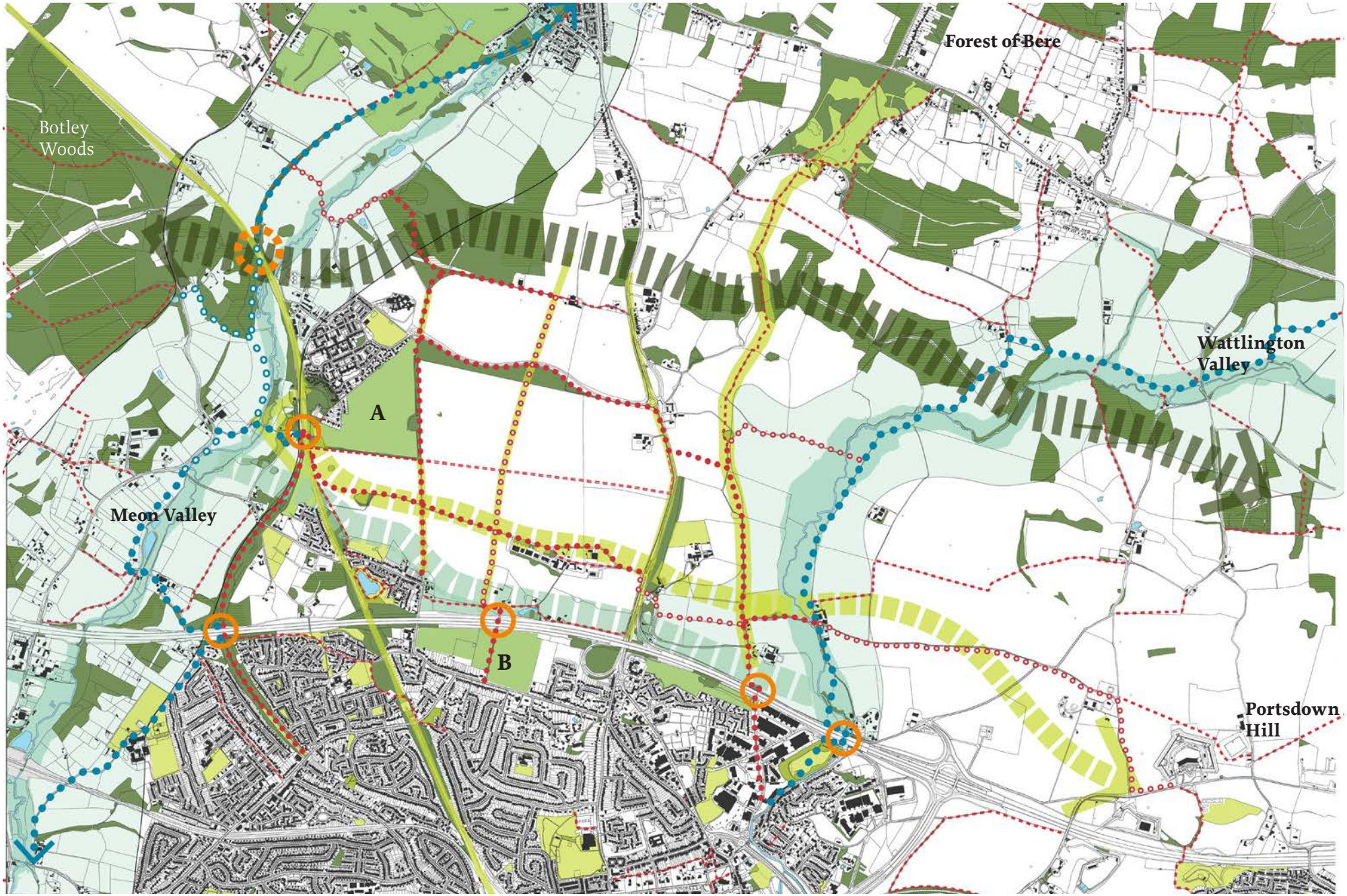


FIG 2.4 GREEN INFRASTRUCTURE STRATEGY

Sustainable Movement Network

BLUEWAYS - EXISTING AND ENHANCED
BLUEWAYS - NEW

GREENWAYS - EXISTING AND ENHANCED
GREENWAYS - NEW

'GREEN STREETS' AND COUNTRYSIDE CONNECTOR - EXISTING AND ENHANCED
'GREEN STREETS' AND COUNTRYSIDE CONNECTOR - NEW
(NOTE: ONLY 1 KEY GREEN STREET IS ILLUSTRATED - OTHERS WILL FORM PART OF MORE DETAILED DESIGN)

Biodiversity Network

KEY WOODLANDS

FLOODPLAIN

EXISTING/PROPOSED GREEN SPACE

STRATEGIC HABITAT CORRIDOR - THE WOODLAND LINK

STRATEGIC HABITAT CORRIDOR - THE GRASSLAND LINK

STRATEGIC HABITAT CORRIDOR - THE WETLAND LINK

THE CORRIDOR CONNECTORS

Other GI Projects and Initiatives

1. THE MEON VALLEY AND WALLINGTON VALLEY PROJECTS

2. THE MEON VALLEY TRAIL RAILWAY CROSSING

3. BRIDGES AND TUNNELS

A 5. KNOWLE TRIANGLE

B 6. FAREHAM COMMON

PROJECT 4- ADVANCED PLANTING IS NOT ILLUSTRATED

0 250 500 Meters 1,000

N

GREEN INFRASTRUCTURE STUDY

Green Infrastructure is a network of green spaces and connected environmental systems which serve a variety of functions including biodiversity, recreation, food production and climate change adaptation in built areas. The 'New Community North of Fareham Green Infrastructure Strategy'[8] (GI Strategy) provides a broad, over-arching strategic framework for Green Infrastructure (GI) which will contribute to shaping the planned growth area to the north of Fareham. It seeks to ensure a proactive approach to environmental planning where landscape and GI are a fully integrated part of masterplanning and design.

The GI Strategy sets out the vision and principles that the GI should achieve within the NCNF, defines the conceptual spatial GI framework for the area and establishes the strategic initiatives and projects that should be facilitated through development. The main components of the spatial GI framework are summarised by figure 2.4 and include:

- Strategic habitat connections which connect the NCNF to the surrounding landscape, they draw elements of the surrounding landscape into the NCNF and include a 'wooded link' to the north, a 'grassland link' linking the centre of the study area with Portsdown Hill and a 'wetland link' which links the Meon and Wallington River corridors.
- Strategic network of footpaths, cycleways and recreational routes
- Additional GI projects and initiatives

GI projects are indicated in figure 2.4 opposite, focussed on enhancing off-site connections and corridors, making better use of existing open spaces, and introducing planting of woodland blocks and structure planting (Project 4) in advance of development to establish a strong landscape structure within which the new community can be developed.

The GI Strategy also provides a summary of the open space requirements based on local planning policy and reference to other national standards where applicable. The NCNF Green Infrastructure Study[8] should be referred to for more details. The GI strategy does not dictate a specific masterplanning outcome; however, the principles set out by the strategy should be applied to any masterplanning options being considered.

ECO-OPPORTUNITIES

The NCNF Eco-Opportunities Study[9] was undertaken in parallel and informed the concept masterplanning options. The Study has been prepared to explore the opportunities available to achieve sustainable design aspirations focussing on four key environmental sustainability priorities:

- Energy demand and efficiency
- Water supply and treatment
- Climate change and adaptation
- Building materials

The social and economic aspects of sustainable development are not covered by the eco-opportunities study. However, in order to meet the Core Strategy aspirations for sustainability the concept masterplan options will need to test social and economic aspects of sustainable design through the distribution and connectivity of land uses, phasing and viability of the development.

The eco-opportunities identified the following guiding principles and recommendations for the masterplan. While not all principles are directly relevant to the development of the concept masterplan options, the options should not preclude the implementation of the principles below at more detailed masterplan stages:

- Higher density development can be preferable, terraced housing and apartments have lower space heating demands as they have lower external surface area;
- Establish a mix of uses within phases, higher residential densities and a compact block and street layout to enhance the viability of district heating;
- Incorporating large semi and detached housing can offer greater space for on plot micro generation;
- The layout of blocks and streets should provide shelter from the prevailing wind direction and avoid wind acceleration;
- Green infrastructure network should be established which provides planting throughout to reduce heat island effect by providing cooling through shading and evapotranspiration, tree planting can be used to reduce indoor and outdoor temperatures;
- The layout should allow for integration of SUDS and rain water harvesting to reduce the risk of flooding, water shortages and avoid or manage unacceptable harm to natural watercourses and groundwater;
- The site generally slopes towards the south, the masterplan should therefore maximise the opportunities for solar gain through passive design presented by the site's aspect. Buildings should be orientated so that roof space and one main façade is within 30° of south;
- Identify a site suitable for an energy centre; taking into account associated noise and fuel deliveries, the site will ideally be located near to other employment uses as the centre would be run as a commercial operation. Depending on the type of energy centre the site will need to be up to 4ha in size;
- Provision of commercial space within the main parcel of land to the west of the A32 is encouraged from a sustainability perspective;
- Some separation should be provided between commercial buildings and the motorway to reduce air quality and noise issues which would in turn restrict the possibility of natural ventilation;
- The masterplan layout should work with the existing landform wherever possible to minimise the need for earthworks;
- Avoid a vision or urban design approach which is too prescriptive on the appearance of the development which may prevent innovative approach to design or materials;
- Identify a 14ha. site for a solar farm or areas where a wind farm could be located.

The creation of a new community will involve the coordinated phased delivery of land use development, transportation provision and other infrastructure. The NCNF also provides an opportunity to improve the transport network and deliver additional facilities for residents of Fareham and the wider region.

Access to the Strategic Road Network

The 'Emerging Transport Strategy' (2010 TfSH)[10] supports the development of the NCNF and assumes a new link road from the A32 to Junction 11 as a main connection to the M27 and A27. The strategy envisages that Junction 11 will require capacity improvements in the form of additional roundabout lanes and full signalisation to manage slip lane queuing. Although significant work has been undertaken on the engineering aspects of this improvement, should this scheme move forward, further work is required to establish a preliminary scheme design in consultation with stakeholders, particularly TfSH, the Highways Agency and Hampshire County Council.

Various designs have been proposed for the A32 link road, most notably presented in the Fareham SDA A32 Option Study (Mott Gifford)[11] which assessed the engineering viability of seven alternatives. All of these assumed a 40mph dual lane configuration which formed an edge to the new urban area. A further study by David Lock Associates[12] assessed the landscape and environmental impact of these alternatives and concluded that the new road presented landscape and environmental concerns, along with high construction costs in the order of £40m. More recently, other designs have been suggested including the use of a central spine road of 30mph design speed. This configuration would be more cost effective but still presents landscape and environmental impacts in the area near Junction 11.

Another possibility, as an alternative to the new A32 link to Junction 11, is to focus on an improved Junction 10, providing highway access closer to the heart of the new community. It would require the installation of new west facing slip lanes to Junction 10 and other capacity and road safety improvements.

Prior to this masterplanning study, little work was undertaken on the upgrade of this junction and no formal studies have been identified by the client team, except recent preliminary work undertaken by landowners to support access strategies for their own land holdings. So PB has undertaken some initial conceptual work to illustrate the spatial requirements and broad highway engineering implications of access at this point. Two potential schemes have been drafted:

Scheme A would utilise the current A32 / M27 underpass with new slip lanes constructed on the westside, allowing full westbound motorway access. Given the need to manage high volumes of turning traffic, large traffic signal junctions would be needed to the north and south of Junction 10. Given the high number of movements to the north, a signalised box gyratory may offer the best solution for managing conflicting traffic movements, whilst maximising road safety. As this junction would be seen a gateway to the new community, the urban design of the whole area should be considered including the junction's relationship with surrounding built form and landscape. The large central space of the gyratory could be utilised as a gateway development or landscaping opportunity.

Scheme B would provide new west facing slip lane into the western part of the NCNF development area. This configuration would simplify the junction requirements near the A32 / M27 underpass, but would result in the need to provide a new grade separated link under (or maybe over) the M27. This type of structure costs circa £15m and the benefits of this option would need to be assessed against the cost-benefit of Scheme A. The scheme would also necessitate a spine road running east-west along the bottom mid portion of the NCNF, but this could double as an employment access road or the bottom leg of the BRT loop / spine street.

Further feasibility work needs to be undertaken at the Preferred Options stage to better understand and assess the highway engineering and traffic modelling implications of these design concepts.

Access and Street Network Planning

The NCNF will need to maximise connectivity to the local road network in order to operate efficiently, by providing a choice of routes and diluting traffic flow. The AAP will need to ensure that multiple points of access are achieved to avoid creating problems for movement by each modes i.e. cars all converging on busy collector and distributor roads; buses unable to take direct routes; and cycling and walking becoming circuitous, illegible or conflicted.

A network of local spine streets should access each of neighbourhoods within the NCNF, including lateral movement across the A32 to ensure connectivity. The spine streets will need to address:

- Route directness – making an efficient network which creates direct links between neighbourhoods and supports the network of lower order streets and connections;

FIG 2.5 AERIAL VIEW OF M27 JUNCTION 10

- Modal continuity – the spine streets would also provide direct, continuous and rapid access for the BRT Eclipse and other buses. Some lower order streets should be continuous to allow longer distance movement for slower modes (walking and cycling); and
- Sharing space – bringing traffic and place functions together through good street design and development frontage along routes.

Street networks will also need to complement GI connections through and beyond the NCNF.

Public Transport
The successful delivery of the BRT will offer a high quality public transport alternative to the car, significantly improving the environmental sustainability of the new community.

Feasibility work undertaken by HCC indicates the BRT will need to access the NCNF via the A32 underpass. The masterplan team have assumed a loop system around the NCNF to ensure penetration to each of the local neighbourhoods with the NCNF so that each neighbourhood has rapid access to Fareham, Gosport and Portsmouth.

Bringing BRT nodes to the centre of each local centre will also maximise the pedestrian movement from surrounding neighbourhood catchments - the longest walk distance to a BRT hub, should be no more than 5 – 10 minutes (400 – 800m).

Experience from other parts of Hampshire and elsewhere highlights the benefits of providing mixed land use, good public realm and other facilities near bus stops. This allows multiple activities to take place, thus minimising off site travel and maximising bus user experience.

Maximising BRT ridership and thus bus revenue will be essential in securing the longer term financial sustainability of the BRT and will need to be considered further at the preferred masterplan stage.

Local Links
Providing access to areas on the fringe of the NCNF will be an important element of the site planning. The NCNF will offer new services and facilities to these areas and vice versa. Therefore, careful consideration needs to be given to opening up car access to these areas, but clearly, walking, cycling and bus access routes will be essential elements in making the site work as a whole place. Movement to fringe areas by green modes will also improve the travel containment of the NCNF.

Other Transport Planning Considerations
The provision of a Smarter Choices strategy will be necessary at Preferred Option stage to ensure that access by green modes is maximised and impacts on the wider transport network are minimised. This approach forms a core part of the TfSH Transport Strategy[10] which seeks to Reduce, Mange and Invest.

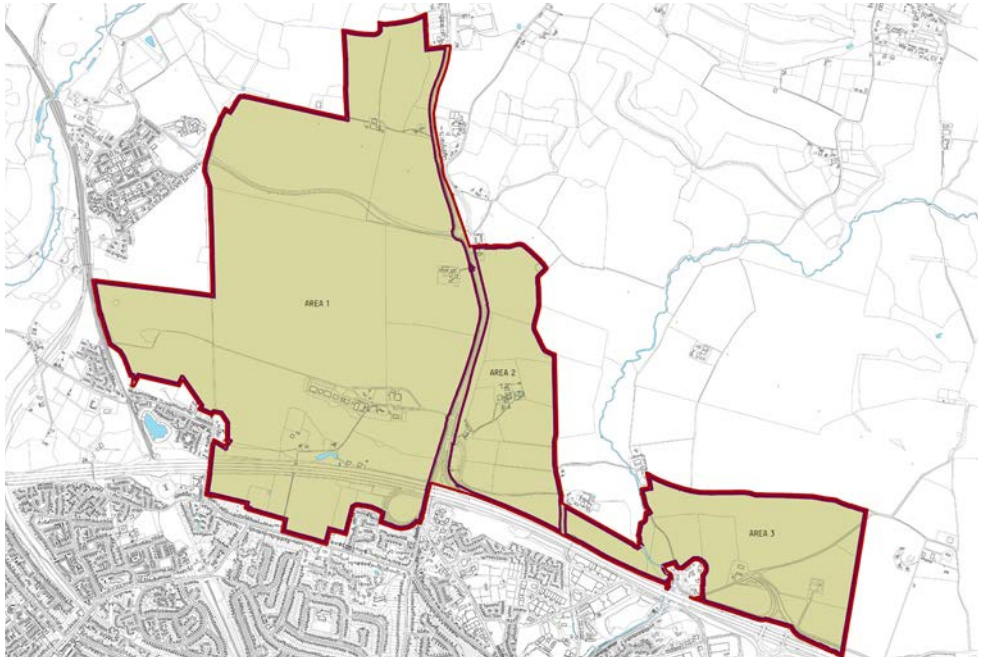
Although only a proportion of the new employment space will be freight-generating uses, it will be important to plan effectively for freight movements at the Preferred Options stage.

CAPACITY FOR DEVELOPMENT

The following plans are a spatial interpretation of the constraints and opportunities outlined above. They have been developed to define the parts of the site which are considered suitable for development and are used to establish the capacity of the NCNF study area.

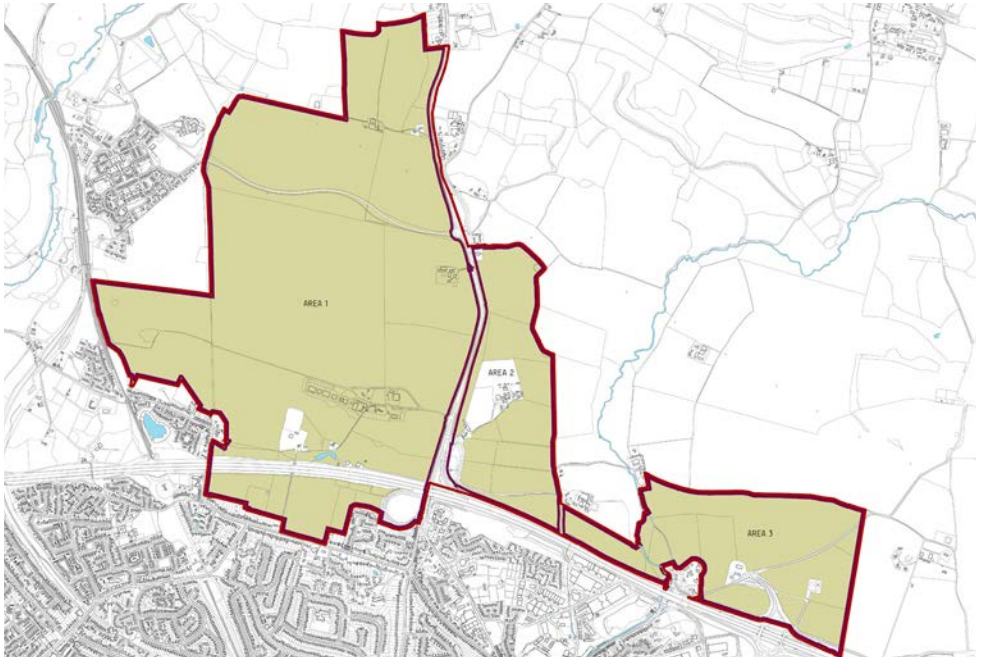
Capacity plan 1.

Total area of search: 442.29 ha.



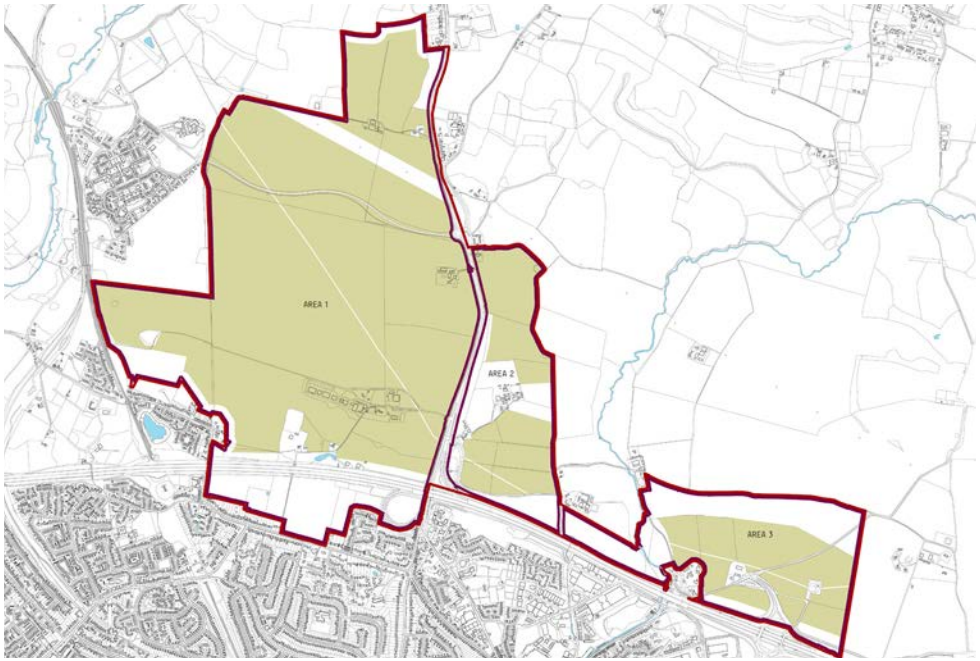
Capacity plan 2.

Previously developed land, including Roche Court is excluded from development land, leaving 402.92 ha. Other existing employment land has been left in the developable area as initial discussions with landowners suggest that some intensification of these sites should be possible. These sites will form an integral part of the NCNF and should be used to help to achieve the aspiration of self-containment and to achieve the balance of job to number of houses within the NCNF.



Capacity plan 3.

Other absolute constraints to development removed to establish the developable area: 311.78 ha. Gas main, buffer to Funtley, Wickham and Roche Court, overhead power lines, 'Areas of Ecological Importance' and land north of the ridgeline adjacent to Nine Elms Lane (near Junction 11) all removed from the developable area.



DEVELOPMENT MIX

The Concept Masterplan Options have been developed with the intention of establishing a balance between the number of houses, employment floorspace, open space provision, community centres and education facilities in order to maximise the potential for self-containment within the NCNF. The following standards have been referred to and assumptions made in order to help establish the balance of land uses within the remaining developable land.

Housing Densities
For the purpose of the testing the capacity of the concept masterplan options average housing densities of 35 and 38 dwellings per hectare were agreed with the client team and used for all calculations. Further consultation and testing at detailed design stage should seek to establish an optimal density which balances place making, energy, public transport, marketability considerations as well as ensuring efficient use of land. Implications of alternative residential densities on overall site capacity are tested in the following sections.

Employment provision
A ratio of 12.1sqm of employment space per house has been used to calculate appropriate level of employment provision for each of the options. This is consistent with the PUSH Economic Development Strategy[13] ratio which required 121,000sqm of employment for 10,000 dwellings. A maximum plot ratio of 0.3 has been assumed for the employment areas, this leaves enough space within development plots for structural planting and potentially on-site SUDs in keeping with the proposed character of these parts of the plan. The employment floorspace shown in each option does not take into account school sites or retail associated with the centres.

Discussions during the stakeholder events identified an existing land use pattern of employment clusters located along the A32 and broadly alongside, but not connected to, the M27which provides the opportunity for the Concept Masterplan Options to build on established and successful employment centres.
In addition to the employment floorspace referred to above, there will be other employment within associated with schools, retail and District Centre activities and people working from home in the NCNF.

Open Space provision
The GI shown on the Concept Masterplan Options is consistent on all options and based on the NCNF Green Infrastructure Study[8] which seeks to provide a continuous strategic network of multifunctional GI which connects the NCNF to the surrounding landscape. There may be parts of the constrained land which are suitable for providing elements of the GI. However, the developable land will also inevitably be relied upon to provide some of the open space and GI associated with the development. The NCNF GI strategy provides a summary of the open space requirements based on local planning policy and reference to other national standards.

Education provision
For the purposes of the masterplanning exercise, it is assumed that one primary school will be required for every 1,500 - 2,000 new dwellings and that a secondary school will be required for 5-6,000 new homes. Therefore once number of houses goes beyond 6,000 homes the Concept Masterplan Options assume that four primary schools and one secondary school will be required.

In reality, the level of provision will be dependent on strategic education decisions that take account of current schools capacity and the current and planned distribution patterns for schools and wider population growth.

District Centre
The District Centre will be a crucially important component in creating a self contained community. The scale and content of the Centre will be determined by FBC's Retail Study[14] which is due to report in the Autumn 2012. That will enable the Preferred Option to define the size, form and character of the Centre in more detail and that key principles can then be set out in the AAP.

In the Concept Masterplan Options, the land take for a District Centre has not been removed from the land budget calculations for housing numbers since it is assumed that there will be dwellings in the Centre and that the average residential density achieved within the Centre will not compromise the site wide target density.

3.0 VISION AND FRAMEWORK

INTRODUCTION

The NCNF is a strategic development proposal that will provide for a significant proportion of the Borough's housing need over the next two decades. The purpose of this study is to establish a clear Vision for what kind of place the new community is, a Framework to guide development and a series of Masterplan Options that respond to the requirements of the Core Strategy[1].

The Vision and the Framework underpin all the potential development Options. Its intention is to establish a very clear set of underlying development and place-making principles based upon a fundamental understanding of its natural setting, its relationship to Fareham and other nearby settlements and a description of the factors that will shape its identity. At this stage the masterplan remains conceptual, but its purpose is to act as a brief for all future more detailed masterplanning work, and as an overarching vision for the NCNF going forward.

A NEW COMMUNITY- THE BACKGROUND

A new community is not a new idea. In the modern era, Britain has pioneered the concept of new communities and the history of planning and development of them stretches back over a century to the Garden City movement initiated by Sir Ebenezer Howard at the very end of the 19th Century and at the beginning of the 20th Century. Although the circumstances for developing new communities now is very different from then, the aim of capturing the best qualities of the English landscape within a new urban model has a very strong resonance with the challenges of delivering a sustainable new community in the south Hampshire countryside.

Howard's idealised Garden City was intended to support a population of over 30,000, nearly twice the population of this new community and with a required land take of more than five times that required for the NCNF. Letchworth first commenced in 1904 and then with Welwyn, commenced in 1919, became the only Garden Cities built and it was not until the end of World War Two and the urgent need to re-house communities ravaged by the Blitz that the New Towns Act 1946 came into being. In England alone, the New Towns programme resulted in twenty towns, the majority of which were expansions of existing settlements. Most of the New Towns that were completed were very large scale and most had planned populations of between 25,000 and 50,000 and many became the subject of fierce debate both at the time and in subsequent years about the imposition of highly stylised architecture, the principles of urban design and social experimentation. Many of the these towns are themselves in the process of change some 50 years or more after their inception and there are a number of very useful lessons to be learnt from both the Garden Cities and the English New Towns that will be helpful to the development of the plan for the NCNF.

In many ways the debate about the future of new communities has now come full circle. In the first decade of the 21st Century the emergence of the Eco-Town, like that proposed at Whitehill Bordon, became the model for delivering low to zero carbon communities of the future, but a number of the planned Eco-Towns have fallen by the wayside either through lack of funding, lack of political support, delivery issues or a combination of all three. In this second decade the debate has been widened to include the idea of new garden cities. The Town and Country Planning Association's report on Re-imagining Garden Cities for the 21st Century published in 2011[15] highlights the big shift from central and regional to local and neighbourhood as an opportunity to "reconnect with communities and convey to them the benefits of comprehensively planned new settlements" and "to replicate the collaborative spirit of the Garden Cities" as a way forward. Significantly, this approach and this line of thinking has become embodied in the recently published National Planning Policy Framework[16] which states that:

"The supply of new homes can sometimes be best achieved through planning for larger scale development , such as new settlements or extensions to existing villages and towns that follow the principles of Garden Cities."

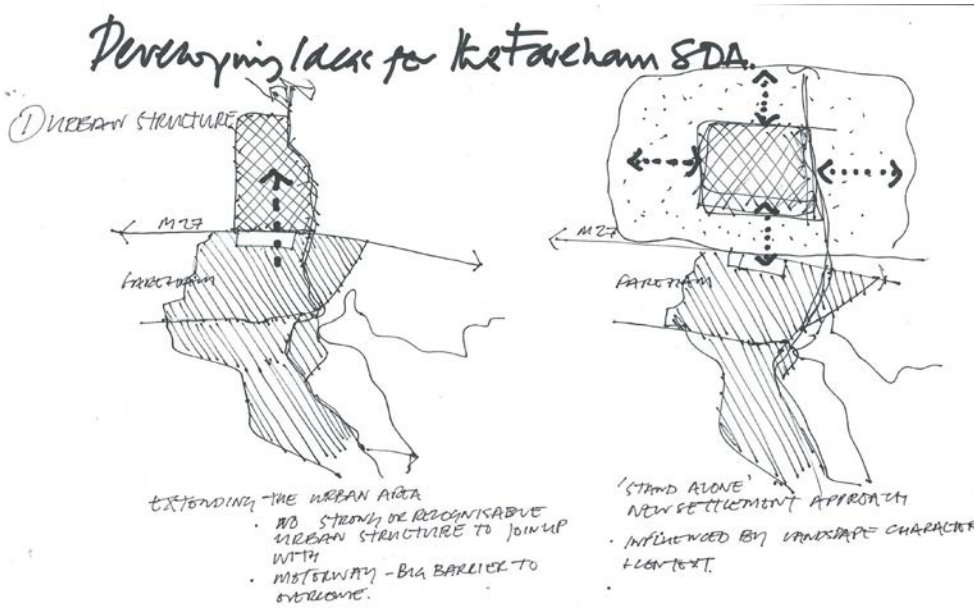
It is clear that the new community could easily capture the design principles of a re-imagined Garden City or even express the individuality and identity of a New Town but it is important to note that although it is large in scale and a new community, it is neither a city nor is it a town. Unlike a Garden City or a New Town this new community will be reliant on Fareham for its higher functioning activities such as higher end shopping, its cultural, entertainment and arts requirements. The new community will take the form of a green satellite to Fareham, a standalone place with its own highly distinctive character that derives from its landscape setting, rather than an attempt to artificially extend or replicate the urban character of its parent, Fareham . This approach is not new either. Craig's plan for Edinburgh New Town was a deliberate move away from the mediaeval origins of the Old Town and largely driven by commercial goals. Other more recent examples might be Poundbury and its relationship with Dorchester. There is much to be learnt too from less successful models such as Peterborough's new town structure as an extension to its historic town core.

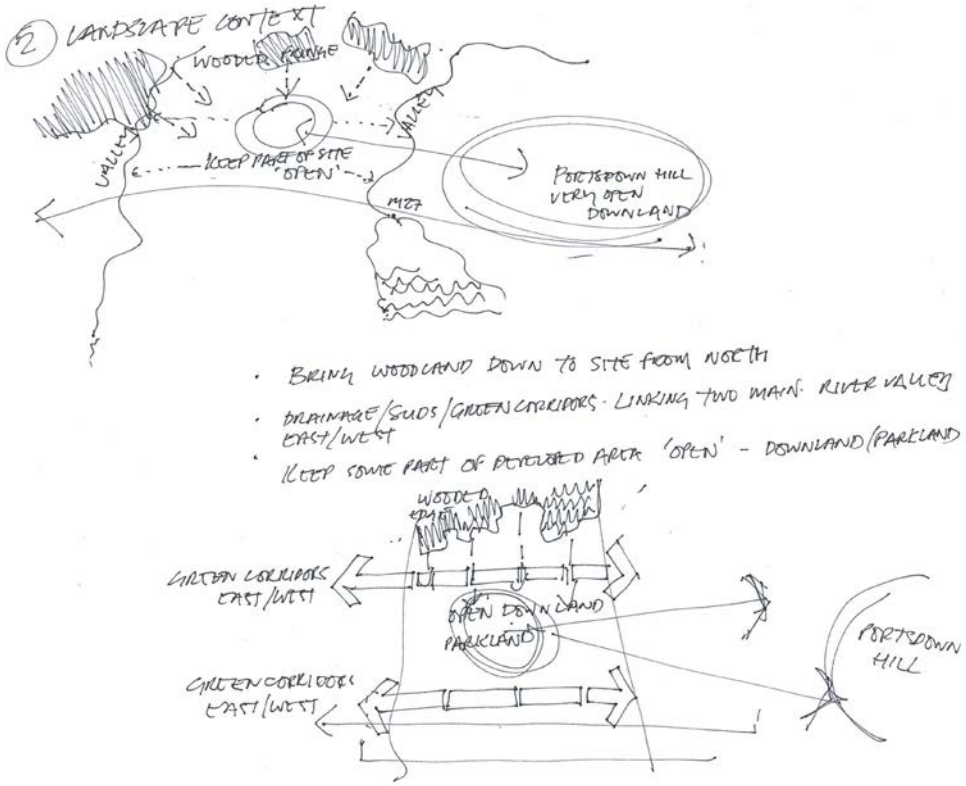
WHAT KIND OF PLACE SHOULD THE NEW COMMUNITY BE?

The fundamental questions are about what kind of place we should be planning for, from where it should draw its inspiration and what form should it take? The first test in this analysis is to define the relationship of the new community to Fareham itself and to examine whether the new community could ever be considered as an extension to the town. The conclusion of this analysis is that this would be very difficult to achieve. Three factors conspire to make this difficult: The first is the barrier created by the M27 motorway - both the physical divide it creates between the existing town to the south and the area for growth to the north, and the immediate impact of the motorway on the new community in any new development built right up against it. This sense of physical separation is further reinforced by the motorway embankment.

The second factor is the pattern of settlement along the northern edge of the town, particularly around Fareham Common, where it would be very difficult to knit together existing and new development with a new network of connecting roads. The urban pattern and form of Fareham is not easily extended to the north.

The third and final factor is topography. The land falls away into a shallow valley immediately to the north of the town and this, when combined with the other two factors, reinforces the sense of separation. The new community therefore, must be conceived as a stand-alone development, physically apart from Fareham but connected by road via the A32 and further connected by bus routes and a network of pedestrian and cycle links.





VISION

The starting point for the Vision for the new community is the Core Strategy[1] policy and principles. Through the course of the Concept Masterplan Options Study those principles have been questioned and reaffirmed, and in some cases embellished to provide a clearer picture of the identity of the new community, an identity that will be shaped much more by the countryside and landscape character around it than by the urban character of Fareham given its standalone position.

The Core Strategy vision has been developed further to achieve the following:

- Captures the essential qualities of the surrounding countryside and the characteristics of the landscape typologies that are typical of this part of Hampshire;
- Brings together these landscape typologies and a new built environment in a way that creates a great place, is unique to this location and is highly distinctive;
- Delivers low carbon emissions and beneficial climate change adaptation;
- Delivers the future requirements for a sustainable new community from renewable energy to local food production, water management and sustainable drainage; and
- Protects natural systems and environmental capital and delivers a net gain in the quality of the environment.

Taken together these objectives conjure up a vision for a place that is very richly layered and diverse.

The starting point for the Framework and Options is therefore an understanding of the big landscape typologies, in other words, the big influences that will root the character of this place in its location. This approach fits very well with the re-imagined Garden City for the 21st Century, the idea of a new community living in a sustainable way, set within its own Hampshire landscape. The concept of the green satellite community. Done well, this is sufficient to place the NCNF firmly on the National map.

THE STRUCTURING FRAMEWORK

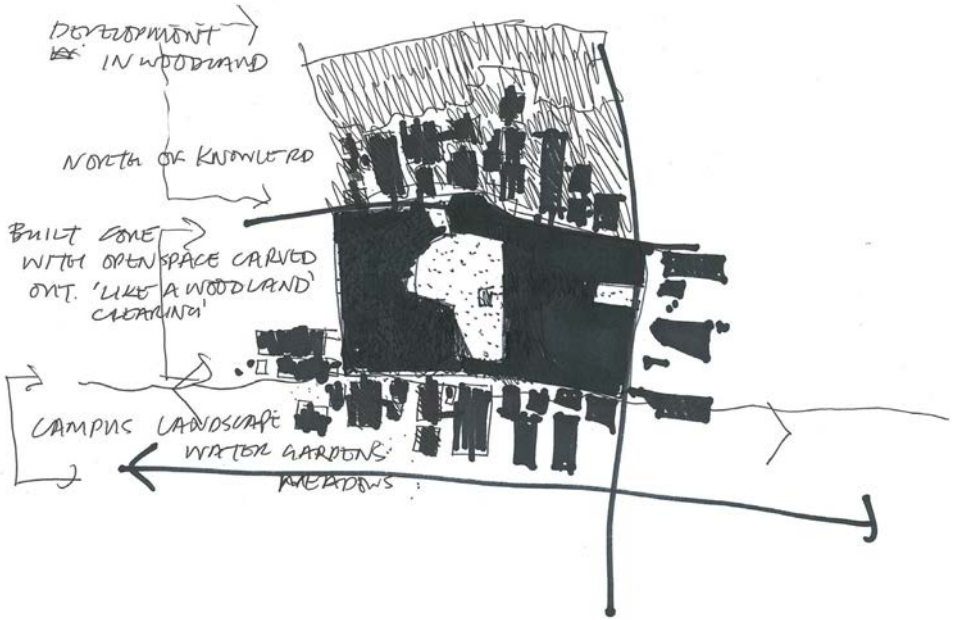
The GI Strategy prepared in parallel with Concept Masterplan provides the context for the future pattern of development and its relationship with wider environment. It starts to explore the relationship between future development and growth in the Borough and the area's natural environmental limits, highlighting the critical environmental assets and how they fit together. The mosaic and patterns of river valleys, farmland, woodland and open countryside makes a huge contribution to the biodiversity value and attractiveness of this part of Hampshire. One of the key sustainability aims is to ensure that the new community does not erode the environmental capital and that the new community itself it makes its own contribution to the quality of the environment and quality of life.

The GI Strategy also helps inform the concept for the NCNF and an approach that could be the re-imagined Garden City or the green satellite. The traditional Garden City approaches that are familiar from Welwyn and Letchworth both started with the imposition of a formal plan on the landscape, typically a big axial plan defining the centre and the main avenues, breaking down in scale beyond the centre into the curved roads and drives that recall the character of a country lane. In the conceptual plan for the NCNF we have deliberately avoided an imposed or a formalised plan. Rather than impose a stylised or abstract idea of a market town or a Hampshire version of a Garden Suburb for example, the concept provides a large organising Framework that defines the parameters for development and

the big moves. Although this structuring Framework is quite rigid, its aim is to deliberately set up a series of encounters between the new community and its surrounding and underlying landscape character. For this reason the Framework has to be quite rigid to reflect the underlying and surrounding landscape, but it will create a very diverse set of design conditions which in turn will generate a wide range of design responses as the masterplan is developed.

CHARACTER

The GI Strategy and the Landscape character work highlights three broad bands or landscape typologies that cross the site from east to west. These reflect the wider landscape types that extend well beyond the site and immediately set up a relationship between the new community and those landscape typologies. The three broad bands are described as follows:

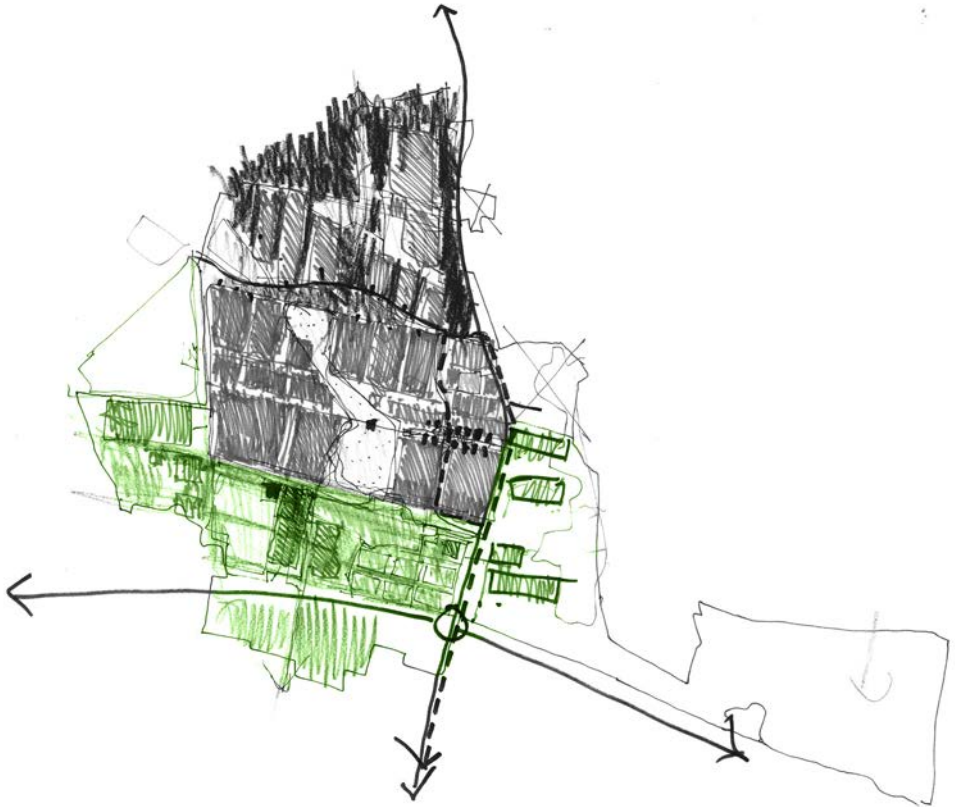


WOODED

Extending north from Knowle Road to the northern perimeter of the developed area the Woodland Band reflects the dominance of the woodland character. The opportunity here is to create a whole series of neighbourhoods and places that are predominantly wooded in character. This sets up the opportunity for creating assarted places, settlements in clearings, cut out of dense woodland or places marked by orchards or coppices. This in turn highlights the possibilities for a different architectural language from timber houses to treehouses. A high percentage of woodland cover in this part of the site will limit capacity and might suggest some very low density typologies, but it might conversely also create opportunities for some high density typologies closer to Knowle Road and located within a newly planted woodland setting setting. There will be great opportunities to link up and extend woodland walks and cycleways from the wider network and to set up opportunities for woodland recreation and play, localised wood fuel, composting, local food growing and so on.

BUILT CORE

The central band of the site we refer to as the Core. Its underlying landscape typology is the open chalk grassland that is typified by Portsdown Hill. The great challenge here is how to create any sense of openness when the area is to be largely built upon. The only solution to this is to carve out of the developed area a large open area in the centre, big enough in scale to create a sense of openness within it and with extensive views beyond the site to make it feel airy and expansive. For this to succeed there needs to be relatively high density development surrounding it with tight knit streets and spaces that suddenly open out into a big park or downs to emphasise their openness. The parkland or downs should also form part of the District Centre experience, punctuating or marking one end of the high street. The opportunity here is also to recreate a very rich chalk downland as a biodiversity centrepiece to the new community.

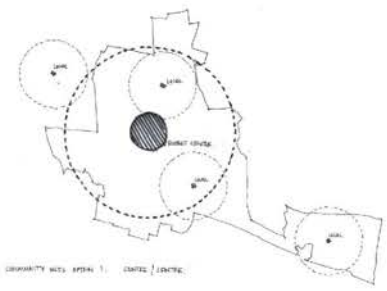


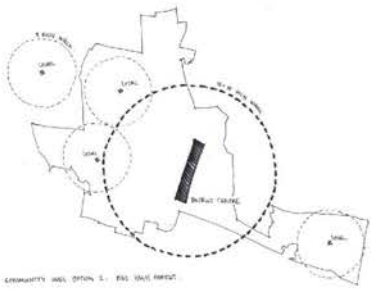
CAMPUS

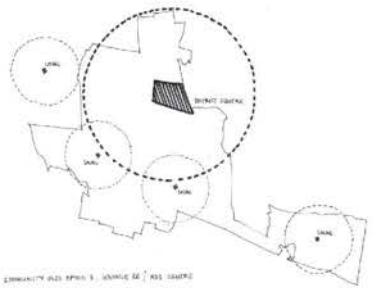
The southernmost band across the site is the area referred to as the Campus. It is characterised by a mosaic of wetlands, meadows and water bodies that reflect its low lying topography and the need to accommodate flood attenuation in this part of the site. This area provides the natural drainage connection to both the Meon Valley and the Wallington Valley and the opportunity for linking watercourses, both man-made and natural, and waterbodies to the much bigger water catchment network and the coast. There is a great design opportunity to incorporate water, meadow, wetlands green roofs, water storage and water recycling as part of the design language for this part of the site.

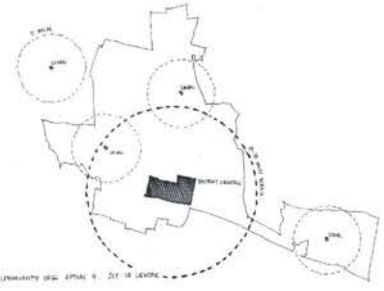
STITCHING THE THREE BANDS TOGETHER

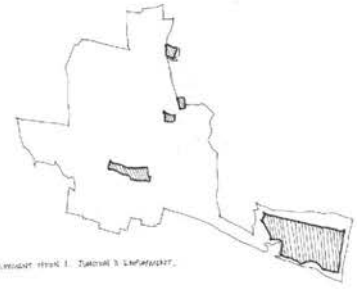
These broad character bands roughly run east-west and the framework structure allows for a number of important north-south connections and where these connecting pieces cross over from one character band to another it provides yet another opportunity to play with the urban character or the green infrastructure network to create diversity and richness. This will include green corridors, footpath/ cycleways, sustainable urban drainage networks, the BRT route and street and road corridors. The Framework provides a wide variety of design conditions which will each demand a creative and considered response.

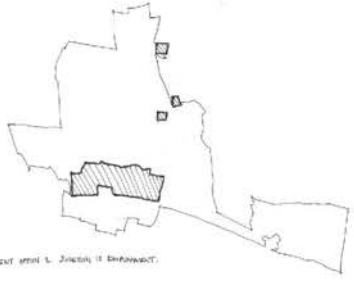


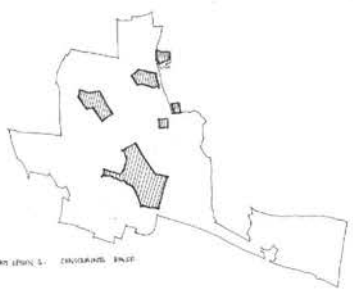


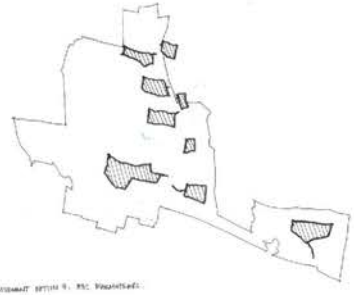


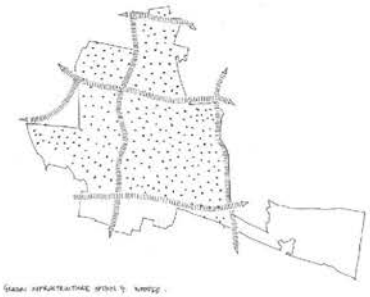


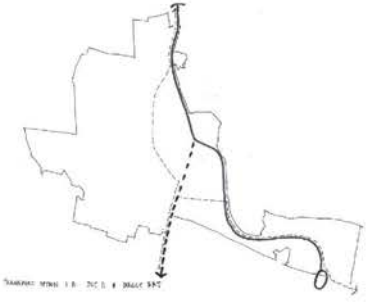


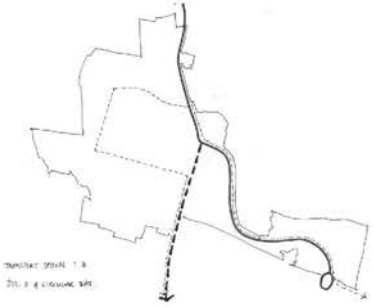


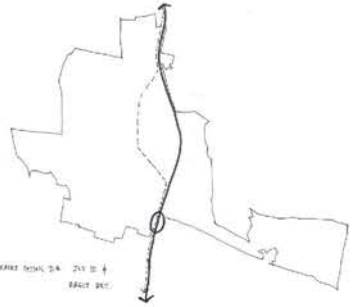


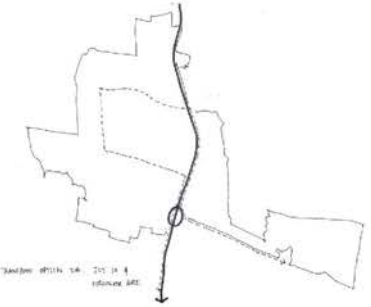












4.0 CONCEPT MASTERPLAN OPTIONS

MASTERPLAN PRINCIPLES

In addition to the principles set out in the vision and structuring framework above, the following general masterplan principles have been applied to all of the Concept Masterplan Options with the intention of achieving the Core Strategy objectives for the NCNF and the recommendations of the NCNF landscape[2], GI[8] and Eco-opportunities studies[9].

Land use mix

- All options seek to achieve a balance in the mix of land uses; the number of schools, local centres and the amount of employment floorspace shown are based on the number of houses within the options in order to maximise the potential for self containment within the NCNF. Self containment is a key principle of the NCNF as set out in the Core Strategy, if achieved this will reduce traffic movements and potentially help to mitigate air quality impacts on the European conservation sites.

Land use distribution

- Land uses are distributed to encourage movement away from the use of the private car. Schools, community centres and employment uses are located near to public transport routes and along the green infrastructure network to allow attractive opportunities for walking and cycling.
- Local centres and primary schools have been located at the heart of residential areas of the plan with the intention of minimising walking times to these facilities and encourage sense of community within distinct parts of the NCNF.
- The rationale for the location of the district centre is covered in more detail in section 6.0 – sub options.
- Each option shows an extension to the employment centres already established along the A32, at Dean, Charity and Albany farms (although Albany Farm is not included in Option 4). This will help to re-enforce a locally distinctive land use pattern and encourage shared infrastructure to allow new employment uses to become established early and gradually. This approach to mixing land uses was also recommended in the NCNF Eco-opportunities study[9].
- While not shown on the plan it is anticipated that a potential energy centre could be located within the employment centre at Dean Farm. There are benefits to co-locating these uses as the energy centre operates as a commercial venture and would create jobs, may have similar access requirements and may not be an ideal neighbour to residential uses.
- A buffer between the employment centre and the M27 has been shown in all options to allow opportunities for the buildings to be naturally ventilated rather than be being 'sealed air conditioned boxes' to deal with noise and air quality issues as recommended by the NCNF Eco-opportunities Study[9].
- While the concept masterplan options do not show detailed street layouts they do avoid aligning major infrastructure items with the prevailing wind directions as recommended by the NCNF Eco-opportunities Study[9].

Landscape and Green Infrastructure

- The concept masterplan options have been directly informed by the NCNF Landscape Study, the vision and structuring framework set out the approach to establishing a distinctive place of high quality and character for the New Community driven by the surrounding landscape.
- The green infrastructure (GI) shown in each option is based on the principles set out in the NCNF GI Study[8]. This is one interpretation of these principles,

however the GI Strategy leaves enough flexibility to allow a range of masterplanning outcomes.

- The distribution of the GI network has been drawn to incorporate and connect existing areas of mature vegetation, sites of biodiversity value, recreational routes and existing population centres.
- A local recreational resource is provided as part of the GI strategy with the intention of reducing pressure from additional visitor numbers on the European conservation sites. The local recreational resource includes a network of onsite open space and pedestrian and cycle routes which connect into the existing rights of way and points of interest in the surrounding landscape.
- The distribution of different types of open space i.e. formal, informal, play etc. will be determined at more detailed planning stages.
- The buffer required to protect the setting of the Listed Buildings at Roche court is shown to the east of the main body of the school to allow the building to retain its association with the remnant parkland and pastoral Wallington River Valley.
- Planting has been shown to the northern and eastern boundaries of the development around Roche Court in accordance with the recommendations of the NCNF Landscape Study[2].
- Woodland planting is shown to the ridge along the northern boundary of the site to strengthen the woodland back drop of the area as recommended in the NCNF Landscape Study[2].
- Landscape buffers have been shown to protect the setting of Knowle, Funtley and Wickham as described in section 2.0 in order to re-enforce the existing identity of the area.
- The GI network shown will also be important in reducing heat island effect providing cooling to indoor and outdoor temperatures.
- While not shown on the plan at the concept masterplanning stage, it is anticipated that the SUDs will be incorporated within the GI network. The potential sustainability benefits of SUDs are outlined in the NCNF Eco-opportunities Study[9]. SUDS will also play an important role in place making, biodiversity value and are potentially important in mitigating against water management impacts on European conservation sites.

Character

- Each of the masterplan options adopt the three broad character areas described in section 3.0. The vision and framework sets out how a character for the NCNF can be established which is based on the underlying landscape. This will ensure the new community has a strong and distinct sense of place and identity unique to the NCNF which will be crucial in instilling a sense of local pride and community. The idea and overarching identity of the place should inform decisions at all stages of masterplanning and design. The vision and framework deliberately avoids guidance on architectural style or layout, allowing flexibility for innovative approaches to design of buidings, streets and spaces to maximise the environmental performance of the NCNF.

Movement

- Each Option includes a BRT route which extends through the main residential neighbourhoods of the NCNF.
- The BRT uses the GI network to provide a distinctive, green route which does not use the strategic road network but instead links with pedestrian and cycle routes withn the NCNF.
- Employment sites, education facilities and community centres are consistently located along the BRT route and the green infrastructure network with the intention of encouraging sustainable modes of transport and alternatives to the private car.
- The principles of the transport solution are covered in more detail in section 5.0.

Delivery

There are two fundamental challenges to delivering development within the NCNF. The first is meeting the objectives of the Core Strategy[1]. The second is ensuring the associated infrastructure costs do not undermine the viability of the scheme. Within a comprehensively planned development, commercial viability will be the driver behind delivering the new community.

The concept masterplan options not only aim to minimise cost but also seek to maximise the values associated with the NCNF by:

- Establishing a clear and strong vision which can be used to establish a distinctive,unique, marketable and high quality development in the NCNF.
- Recognising value enhancers. The mix of uses, access to strategic transport corridors and a high quality GI network with strong links to the existing landscape resource have all been developed with the intention of adding value to the NCNF.
- Building flexibility into the development mix to allow opportunities to respond to changing market demand and projected demographics over time, for example by using residential density ranges and identifying employment sites which are capable of accommodating a range of employment types.

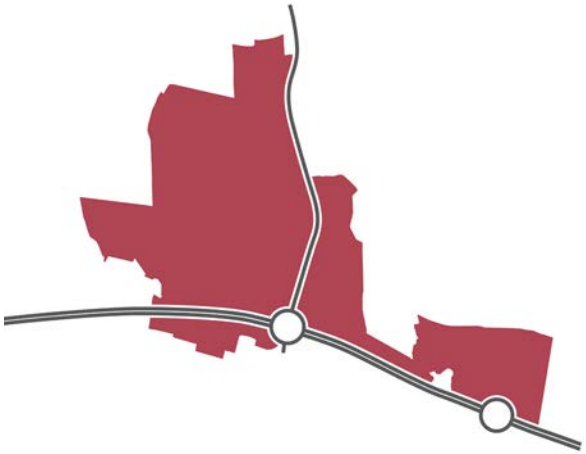
Opportunities for minimising cost through phasing, efficient design and management of infrastructure will need to be developed at all stages of planning and design. The following measures have been taken within the concept

masterplan options:

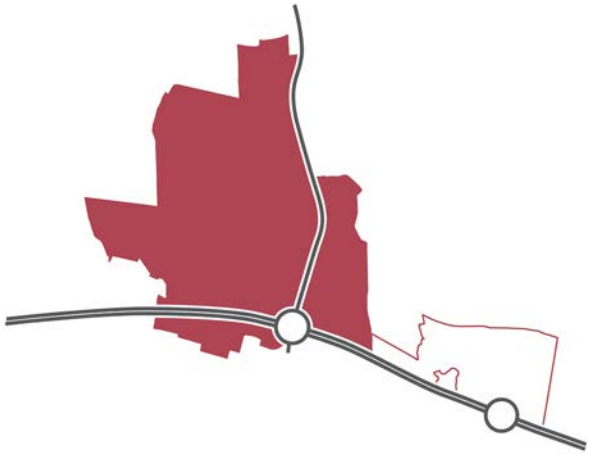
- The concept masterplan options work with rather than against the existing landuse patterns, strategic transport corridors and landscape structure of the area.
- Options for making a more compact NCNF which reduce the amount of strategic infrastructure required and avoid development on more sensitive land have been explored.
- The BRT route runs through the green infrastructure network giving more flexibility over the phasing of this aspect of the NCNF.
- The vision, structuring framework and concept masterplan options avoid prescriptive descriptions of the layout or architectural style of buildings leaving flexibility to incorporate innovative approaches and passive design solutions which help to meet carbon compliance and climate change adaptation targets.

MASTERPLAN OPTIONS

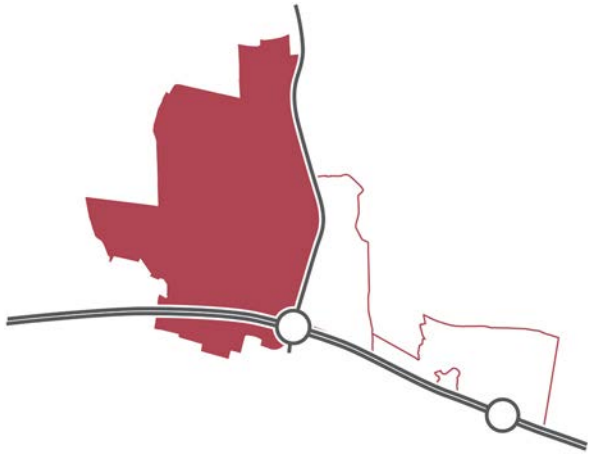
Four main options have been prepared for consultation and testing. Each of the options adopts the NCNF vision and framework set out above in section 3.0 as the starting point. The options have been drawn to test the most significant issues i.e. development extents, quantum and strategic transport solution. Other variations such as the location of schools, district centre, density etc. which can be applied to any of the four main options are explored further in section 5.0. The four main concept masterplan options being tested can be summarised as follows:



OPTIONS 1 AND 2:
THE MAJORITY OF THE LAND USES ARE FOCUSSED ON LAND TO THE WEST OF THE RIVER WALLINGTON WITH AN ADDITIONAL EMPLOYMENT AREA AT JUNCTION 11. THE STRATEGIC TRANSPORT SOLUTION FOR THIS OPTION WOULD EITHER REQUIRE A NEW LINK ROAD CONNECTING THE A32 TO JUNCTION 11 (OPTION 1), OR NO NEW A32 LINK BUT IMPROVEMENT TO BOTH MOTORWAY JUNCTIONS (OPTION 2).



OPTION 3:
A MORE COMPACT NCNF FOCUSSED ON LAND WITHIN THE STUDY AREA TO THE WEST OF THE RIVER WALLINGTON REMOVING DEVELOPMENT AT JUNCTION 11. THIS OPTION REQUIRES IMPROVEMENTS TO JUNCTION 10 TO SUPPORT THE NEW COMMUNITY.



OPTION 4:
A MORE COMPACT NCNF FOCUSSED ON LAND TO THE WEST OF THE A32 ONLY. THIS OPTION REQUIRES IMPROVEMENTS TO JUNCTION 10 TO SUPPORT THE NEW COMMUNITY.

FIG 4.1 CONCEPT MASTERPLAN OPTION KEY

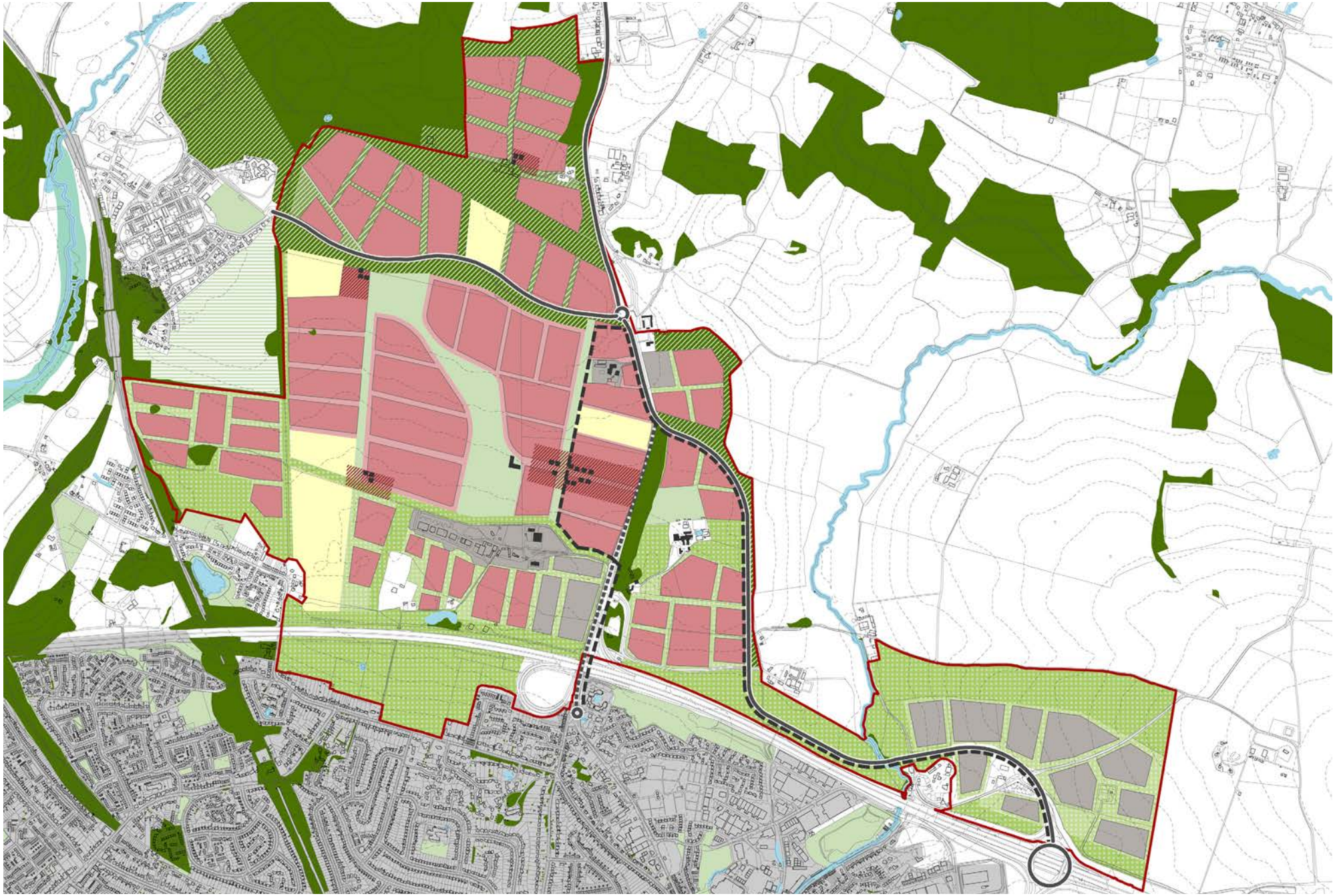


FIG 4.2 CONCEPT MASTERPLAN OPTION 1

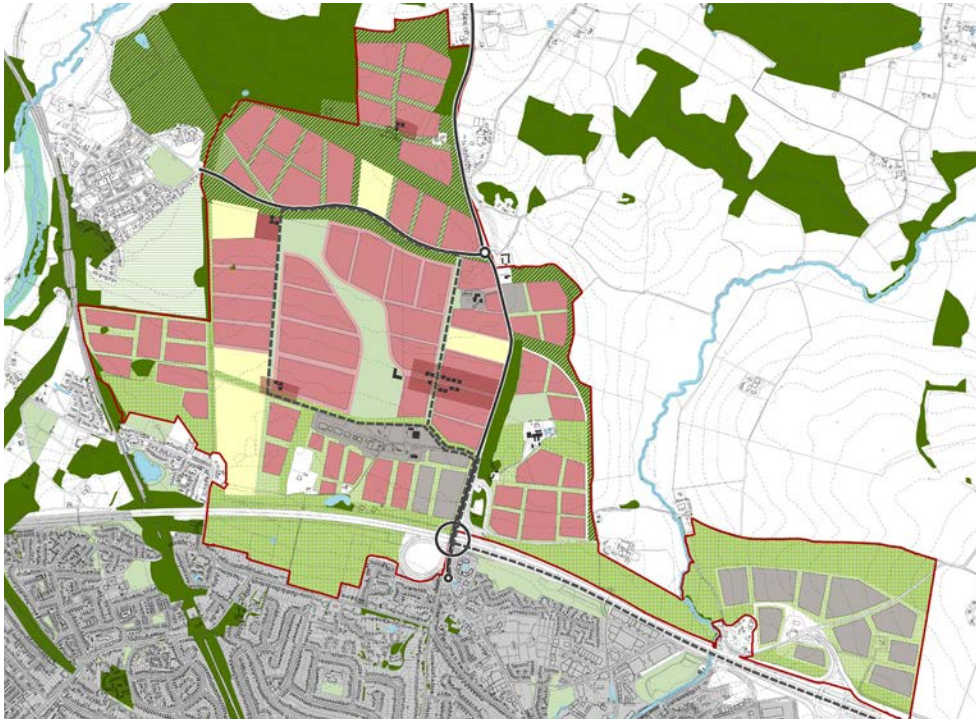


FIG 4.3 OPTION 2 - (TRANSPORT VARIANT)

LEGEND:

- RESIDENTIAL AREAS
- EMPLOYMENT AREAS
- SCHOOLS
- CENTRE
- PROPOSED BRT ROUTE
- STRATEGIC ROADS
- GREEN INFRASTRUCTURE WITHIN 'WOODED' CHARACTER AREA
- PROPOSED GREEN INFRASTRUCTURE WITHIN 'BUILT CORE' CHARACTER AREA
- PROPOSED GREEN INFRASTRUCTURE WITHIN 'CAMPUS' CHARACTER AREA
- PROPOSED GREEN INFRASTRUCTURE WITHIN THE KNOWLE BUFFER
- EXISTING AREAS OF WOODLAND

OPTIONS 1 AND 2

- The only distinction between Option 1 and Option 2 is a new Link Road conecting the A32 directly to Junction 11;
- Includes land to the east and the west of the A32 and land around junction 11 of the M27;
- Capable of delivering around 6650 homes and 80,500sqm of floorspace in the employment areas based on the assumptions above;
- Includes 4 primary schools and a secondary school;
- Includes a district centre and 3 smaller local/neighbourhood centres, potentially with an additional centre in the employment area around junction 11;
- Provides a green infrastructure network as set out by the NCNF GI Study[8];
- Appropriate provision of open space in line with Core Strategy[1] polices;
- Includes two options for the strategic transport solution either; primarily focussed around junction 10 with junction 11 used for the associated employment site or focused on junction 11 with a re-directed A32 diverting traffic away from junction 10;
- Includes two options for the BRT route;
- Provides the largest capacity of all the options;
- Requires development on land at junction 11 which is more sensitive from a landscape and visual perspective and is within the Water Source Protection Zone;
- Employment sites and housing are separated potentially reducing the sense of a compact and self-contained NCNF;
- If residential densities are increased to 38dph this option is capable of delivering 7250 homes and 87,700sqm employment.

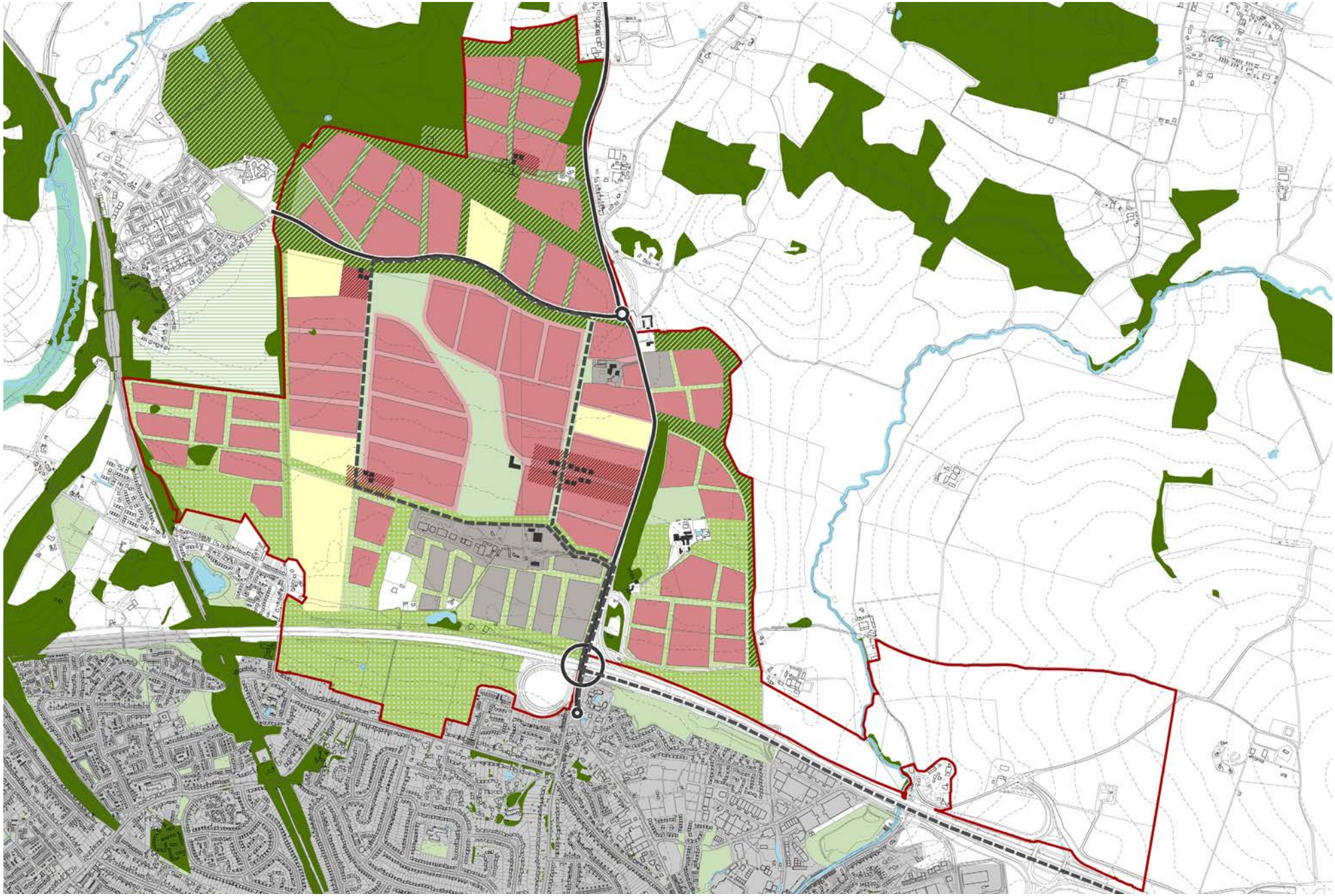


FIG 4.4 CONCEPT MASTERPLAN OPTION 3

OPTION 3

- The NCNF includes land to the East and west of the A32, but doesn't include any development at junction 11 of the M27;
- Is capable of delivering around 6300 homes and 76,200sqm of floorspace in the employment areas based on the assumptions above;
- Provides 4 primary schools and a secondary school;
- Includes a district centre and 3 smaller local/neighbourhood centres;
- Green infrastructure network as set out by the NCNF GI strategy[8];
- Appropriate provision of open space in line with Core Strategy[1] polices;
- The strategic transport option focusses on improvements to junction 10;
- Includes BRT route shown running alongside the green infrastructure network and past each of the centres and schools;
- A reduced capacity compared to option 1/2;
- Does not rely on sensitive land at junction 11 to deliver the employment space;
- Focuses on establishing a compact and self-contained settlement;
- Relies on junction 10 improvements providing the capacity required;
- If residential densities are increased to 38dph this option is capable of delivering 6850 homes and 82,850sqm employment.

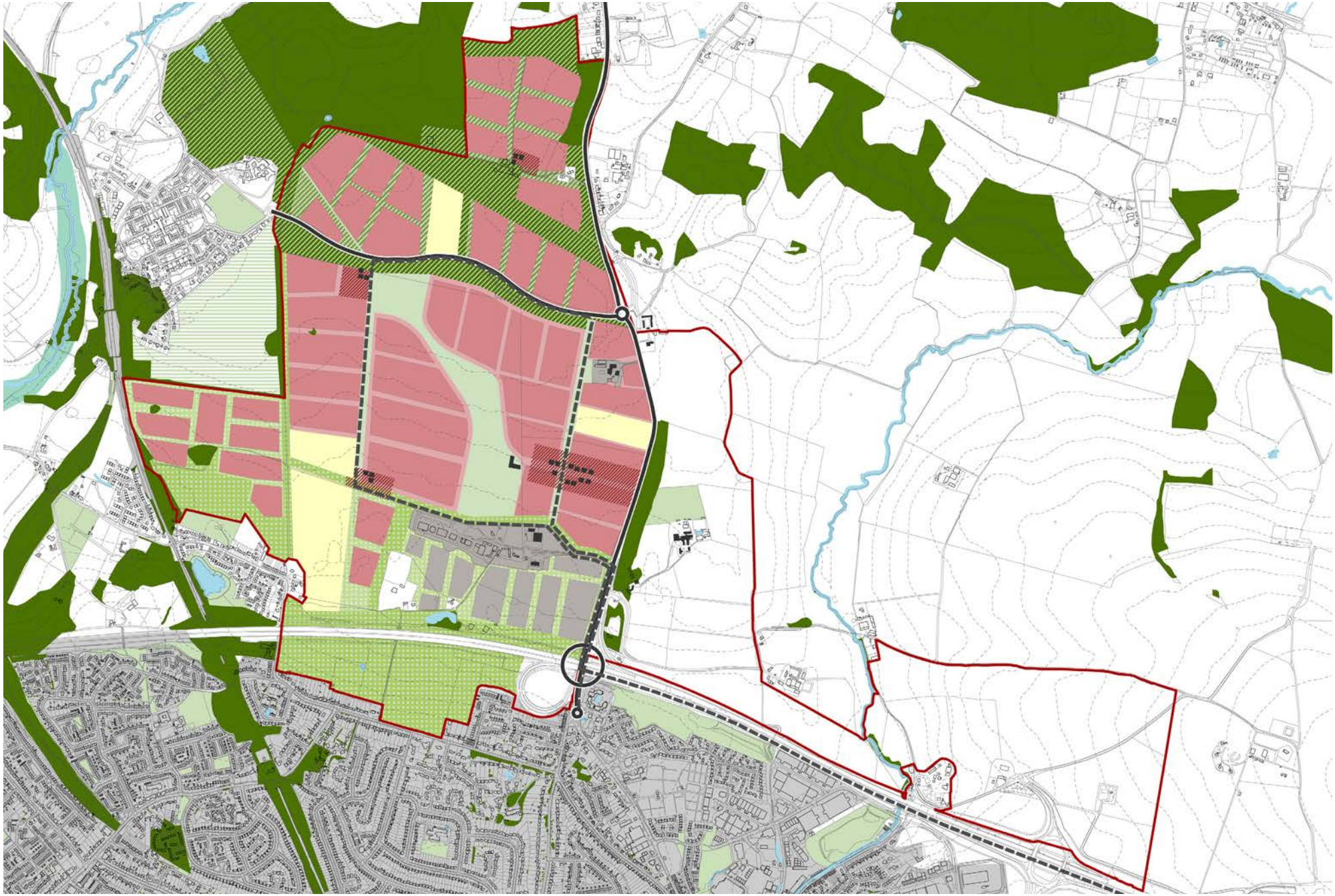


FIG 4.5 CONCEPT MASTERPLAN OPTION 4

OPTION 4

- The NCNF includes land to the west of the A32 only, with no development east of the A32 or at junction 11 of the M27;
- Is capable of delivering around 5400 homes and 65,300sqm of floorspace in the employment areas based on the assumptions above;
- Provides 3 primary schools and 1 secondary school;
- Includes a district centre and 3 smaller local/neighbourhood centres;
- Green infrastructure network as set out by the NCNF GI strategy[8];
- Appropriate provision of open space in line with Core Strategy[1] polices;
- The strategic transport option focusses on improvements to junction 10;
- Includes BRT route shown running alongside the green infrastructure network and past each of the centres and schools;
- A reduced capacity from option 1/2 and 3;
- Does not rely on land to the east of the A32 which is more sensitive from a landscape and visual perspective;
- Focusses on establishing a compact and self-contained settlement;
- Relies on junction 10 improvements providing the capacity required;
- If residential densities are increased to 38dph this option is capable of delivering 5900 homes and 71,400sqm employment.

5.0 TRANSPORT SOLUTIONS

TRANSPORT PRINCIPLES

The concept masterplan options do not include details of street layout and hierarchy. However, the transport solutions have been developed within the context of the following principles which should inform more detailed planning and design stages of the NCNF.

Land use and transport are fundamentally linked, and this is illustrated in many planning policy documents over the past decade or so. Policy recognises that transport is not a means to an end – its sole purpose to serve development. It therefore follows that the pattern of land use has a significant bearing on the need for transport infrastructure. Transport planning should therefore form an integral part of the planning process and not an afterthought.

Experience suggests that achieving a well connected and compact development of necessary critical mass is essential in delivering facilities which can be accessed locally by sustainable modes. This approach to creating a compact place maximises access to local services and provides a highly walkable neighbourhood that supports public transport. NCNF should adopt an approach to planning for homes and jobs that creates a more balanced place where workers and residents create the need for multiple services and facilities.

Street network planning should select appropriate street types and movement hierarchy. All trips by whatever mode should be given multiple route choice to create a flexible network for all users. NCNF should deliver a well connected network and a move away from single vehicle oriented access. This approach to spatial planning will be particularly important given the constrained nature of South Hampshire and current levels of traffic congestion.

Based on sustainable planning principles and recent evidence from other places, we have developed a series of principles to guide the transport and land use strategy. These high level principles will be used as a basis for assessing the various options later in this strategy.

Land Use Diversity - A diverse mix of land uses will be vital to a successful NCNF. At the highest level, matching population and employment levels will offer patterns of local living and working. In addition, matching growth with local conveniences, retail goods, community facilities and recreational/ leisure amenities all within acceptable walking distances will increase people's propensity to use these facilities, and maximise opportunities for social and economic exchange. As well as improving mode share and reducing travel distance, a diverse mix of well-positioned land uses can ultimately create a sense of belonging and civicness. The more compact the area, the greater the opportunity to support other uses such as new schools, health care and leisure activities with

further benefits of travel containment ensuing.

Public Transport - The relationship between development density and public transport mode share is well established. The greater the population within a walkable catchment of public transport services, the greater the uptake of movement by this mode. It is therefore critical that BRT and bus routes are able to penetrate new development areas through well connected street networks. It is also critical that the area penetrated by public transport is as compact as possible to offer the best opportunity for increasing demand through dense pedestrian networks, thereby increasing viability and quality of the service offered.

Movement & Street Network Planning - Traditional hierarchical networks have been proven to create problems for movement by all modes: cars all converge on busy collector and distributor roads; buses are unable to take direct routes; and cycling and walking is generally circuitous and illegible. NCNF should be served by well considered hierarchies of streets, each of which serves multiple functions of movement and place, focusing on:

- Route directness – making an efficient network for all modes, created through connected and permeable grids of appropriate size street to suit each mode;
- Modal continuity – allowing travel by any mode, on a continuous network for fast and slow modes, allowing varying degrees of prioritisation; and
- Sharing space – bringing movement and place functions together in an inclusive and balanced approach to contemporary street design.

Creating balanced Streets - NCNF street planning will need to assess link (movement) and place (land use context) functions for all streets. This way, the competing complex demands for all types of movement, land use needs and context are considered and given due regard. The resulting street design is ultimately more fit for purpose and serves a multiplicity of movement and place needs as opposed to just traffic.

THE TRANSPORT SOLUTIONS

For each Masterplan Option, the key features of the transport solution are identified and the advantages and disadvantages are outlined.

Some transport issues are common to all Masterplan Options and simply reflect the scale of growth of the New Community and the inevitable effects on the surrounding transport network, including the M27 and more local roads. Traffic modelling work using the Sub-Regional Transportation Model is being undertaken to build a more complete understanding of the nature and extent of those effects. Those effects might necessitate the introduction of transportation measures that maximise the sustainability of the New Community and minimise potential negative impacts.

Bus Rapid Transit (BRT) services would be extended into the NCNF. Operating on a loop, it would allow rapid travel to Fareham, Gosport and Portsmouth. All of the Masterplan Options facilitate the BRT scheme and will provide a critical mass of development that will help to make the scheme commercially viable in the long term. The larger the scale of development, the more commercially viable the BRT, assuming the cost of BRT provision to be constant across all options.

All transport solutions under all Masterplan Options will include a package of 'Smarter Choices' to ensure that walking and cycling are maximised, along with other green travel initiatives such as car sharing. This could include pedestrian and cycle links to Funtley, Knowle, Fareham Common, north Fareham and rural areas to the east and north.

MASTERPLAN OPTION 1

Full site development and emerging transport solution as in the Core Strategy

PLAN KEY
PURPLE - MOTORWAY IMPROVEMENTS. RED - PRINCIPAL ROUTE. ORANGE - LOCAL ROUTE. YELLOW - WALKING, CYCLING AND BUS CONNECTION. GREEN - BRT WALKING CATCHMENT

Transport option 1
This Transport Option supports development around Junction 11 with a new link road connecting the A32 to Junction 11. This solution will require improvements at Junction 11 to cater for the extra traffic. Improvements would also be needed at Junction 10 to manage additional traffic flow and improve road safety. The Bus Rapid Transit (BRT) Eclipse service would follow the new link road and connect the new housing with the new employment development at Junction 11.

Advantages
- Overall containment within the new community will be high due to the mix of land uses and extent of employment land.
- This solution will reduce the importance of the existing A32, as traffic will divert onto the new link road, which may allow for the possibility of turning this into a local road, rather than a major route as at present.
- The new link road would improve access to the M27 for traffic travelling west towards Southampton via Junction 11. At present it is not possible to travel westwards from Junction 10 without first travelling to Junction 11 to gain access to the westbound carriageway.

Disadvantages
- The new link road would be expensive; with potentially significant environmental impacts so it would need to be carefully managed.
- Providing the principal access to the new community via Junction 11 will create significant traffic impact at a single point on the road network, making it more difficult and costly to manage potential impacts on the surrounding network when compared to a more dispersed access solution.
- The greatest impacts are likely to be highest on the M27 and A27, although potential impacts on other roads would also need to be mitigated. The nature of these works will be determined by further traffic modelling.

MASTERPLAN OPTION 2

As Option 1 but without the A32 link road to Junction 11

PLAN KEY
PURPLE - MOTORWAY IMPROVEMENTS. RED - PRINCIPLE ROUTE. ORANGE - LOCAL ROUTE. YELLOW - WALKING, CYCLING AND BUS CONNECTION. GREEN - BRT WALKING CATCHMENT

Transport option 2
This Transport Option is the same as Option 1 but without a link road to Junction 11. Capacity at Junction 10 would need to be improved, possibly making this an 'all-moves' junction, which allows traffic movement in any direction. This would overcome the current lack of a westbound movement at that junction. Further work will need to be carried out to work out the best way to design this new junction. Without all-moves capability at Junction 10, traffic heading west (and coming from the west) would need to use Junction 11 to turn around which might have a significant impact on the operation of the M27. Improvements might still be necessary at Junction 11 to allow for the additional traffic generated by the new community.

Advantages
- Option 2 is expected to cost less than option 1, although how much less depends on how Junction 10 would be designed.
- The absence of a new road means that there is less of an environmental impact compared to Transport Option 1.
- Traffic would access the development area at two separate points, rather than only Junction 11, which may help reduce the impact of the additional traffic by dispersing it over a wider area.
- New development to the east of the existing A32 would be better related to the adjacent open countryside without the separation of the major new A32 link road.

Disadvantages
- This solution would require significant improvements to both Junctions 10 and 11.
- Although walking, cycling and Bus Rapid Transit connections would be provided between the eastern and central part of the new community, overall it would feel more divided and there is a significant risk that many working at the Junction 11 employment area would use cars to get to work, creating more car trips.
- The existing A32 would remain as a busy main route, removing the opportunity to make it a more 'local street'.
- It is possible the existing A32 may require some work to overcome the impact of higher traffic flows and to enable connections between the main development and the smaller site to the east.

MASTERPLAN OPTION 3

Partial development east of the A32 but no employment area at Juntion 11

PLAN KEY
PURPLE - MOTORWAY IMPROVEMENTS. RED - PRINCIPLE ROUTE. ORANGE - LOCAL ROUTE. YELLOW - WALKING, CYCLING AND BUS CONNECTION. GREEN - BRT WALKING CATCHMENT

Transport option 3
Transport Option 3 focuses traffic on Junction 10 via the existing A32. As with the Transport Option 2, this will require substantial improvements to Junction 10 to enable west facing movements on the M27. There are various options for the design of the improvements to Junction 10 and further work will need to be carried out to determine the best solution. Some improvements may be required to Junction 11, but these are likely to be more minor than in Option 1.

Advantages
- Better access to the motorway for traffic wishing to travel west.
- The overall development is more compact, with no need to provide costly road links between the main development area and land at Junction 11.
- Reduces traffic impacts on Junction 11 and there will be no impact on Portsdown Hill which will remain unaffected by the development and associated traffic.

Disadvantages
- Providing the main access to the new community via Junction 10 creates significant traffic impact at a single point on the road network, making it more difficult and costly to manage potential impacts on the surrounding roads when compared to a more dispersed access solution.
- The A32 will be a very busy road. As this option involves development on both sides of the existing A32, this may result in a divided community as the opportunity for transforming the road into a pedestrian friendly street would be greatly reduced

MASTERPLAN OPTION 4

NCNF development limited to the west of the A32

PLAN KEY
PURPLE - MOTORWAY IMPROVEMENTS. RED - PRINCIPLE ROUTE. ORANGE - LOCAL ROUTE. YELLOW - WALKING, CYCLING AND BUS CONNECTION. GREEN - BRT WALKING CATCHMENT

Transport option 4
The main feature of this Option is that development would be provided only to the west of the existing A32, resulting in a smaller development site. The transport solution would be similar to Option 3.

Advantages
- The reduced scale of the development would have less impact on the strategic and local road networks.
- The community is focused entirely on the west of the existing A32 which means that the community would not be divided by a main road.

Disadvantages
- The smaller scale of the development means that there would be less money paid by developers to help fund infrastructure needs.
- A smaller development might reduce the amount of retail and other services provided on-site, meaning more people would make trips off site to access those services.
- A smaller development may reduce the potential number of passengers on the Bus Rapid Transit and may make it unviable to extend this service to the new community.

6.0 SUB OPTIONS

INTRODUCTION

The sub-options below have been drawn to test and consult on variables which could be applied to any of the concept masterplan options. The sub options explore:

- Options for increasing the residential capacity of the NCNF;
- The location of the district centre; and
- The location of the secondary school site.

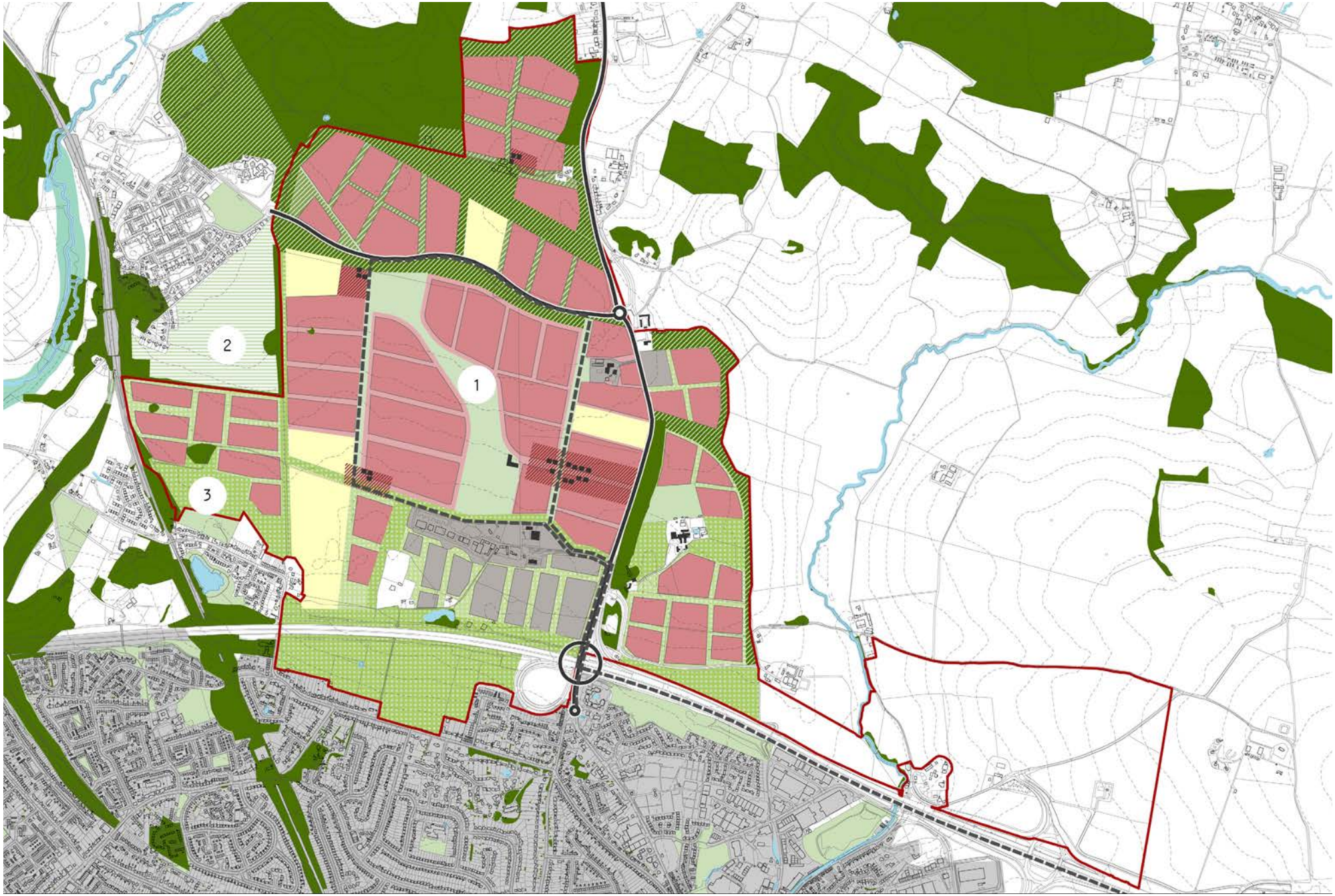


FIG 6.1 SUB OPTION - OPTIONS FOR INCREASING THE RESIDENTIAL CAPACITY OF THE NCNF

SUB OPTION - OPTION FOR INCREASING THE RESIDENTIAL CAPACITY OF THE NCNF

The following options for increasing the capacity of the NCNF have been tested through the concept masterplanning work.

1. Central park
In order to achieve additional housing numbers, the option of reducing the size of the central park was explored. Reducing the size of the park by 10% allows an additional 50 homes. However, the central park will play an important role in the identity of the development and in the provision of amenity and park space reducing its size may affect its ability to perform these roles.

2. Knowle triangle
Two alternative options for Knowle triangle were tested.

Secondary school site:
- Accommodating either the whole secondary school site or just the playing fields on this land;
- This option retains a 150m buffer to Knowle;
- Reduces the provision of semi natural green space associated with the NCNF;
- Requires careful integration of the ancient woodland.

Housing:
- There is potential to accommodate 310 homes on this land;
- This option retains a 150m buffer to Knowle;
- Reduces the provision of semi natural green space associated with the NCNF;
- Requires careful integration of the ancient woodland.

3. Funtley buffer
- Potential for an additional 150 homes on the land to the north of Funtley;
- Retains a 50m buffer to Funtley;
- Relies on appropriate mitigation to allow development on the 'Area of Ecological Importance' north of Funtley.

4. Increase the average density
An average residential density range of 35-38 dwellings per hectare (dhp) has been assumed throughout the masterplanning work as a reasonable basis for capacity testing. If the average densities are increased up to 40dph and that average is applied across the whole NCNF, the following housing numbers could be achieved:
- Option 1/2: 7500 homes
- Option 3: 7200 homes
- Option 4: 6100 homes

This would still allow a range of densities within the NCNF. For example, there might be areas of the community developed at 30dph where constraints or opportunities make it desirable to do so; and equally there will be areas developed at 50+dph perhaps to take advantage of proximity to community facilities or public transport routes.

Areas of higher residential densities can be preferable from an environmental sustainability perspective as they can better sustain decentralised energy supply, and terraced houses and apartments typically have lower space heating demand as set out in the Eco-Opportunities Study.

But average residential density must also realistically reflect market demand and commercial models, and higher density development should not be encouraged simply to get housing numbers up if that were then to result in other disadvantages.

The pro and cons of differing average densities should be investigated further at the Preferred Option stage, with reference to both some very good and very bad examples of high and low average density development in the UK.

5. Reduce the quantity of employment to provide more housing land
The Masterplan Options assume a consistent ratio between employment floorspace and housing numbers, so the proportion of jobs to homes remains constant and at a level that represents a good degree of self-containment. But it is possible to adjust that ratio so that less employment space is required, allowing additional land for housing development, whilst acknowledging that would result in less self-containment.

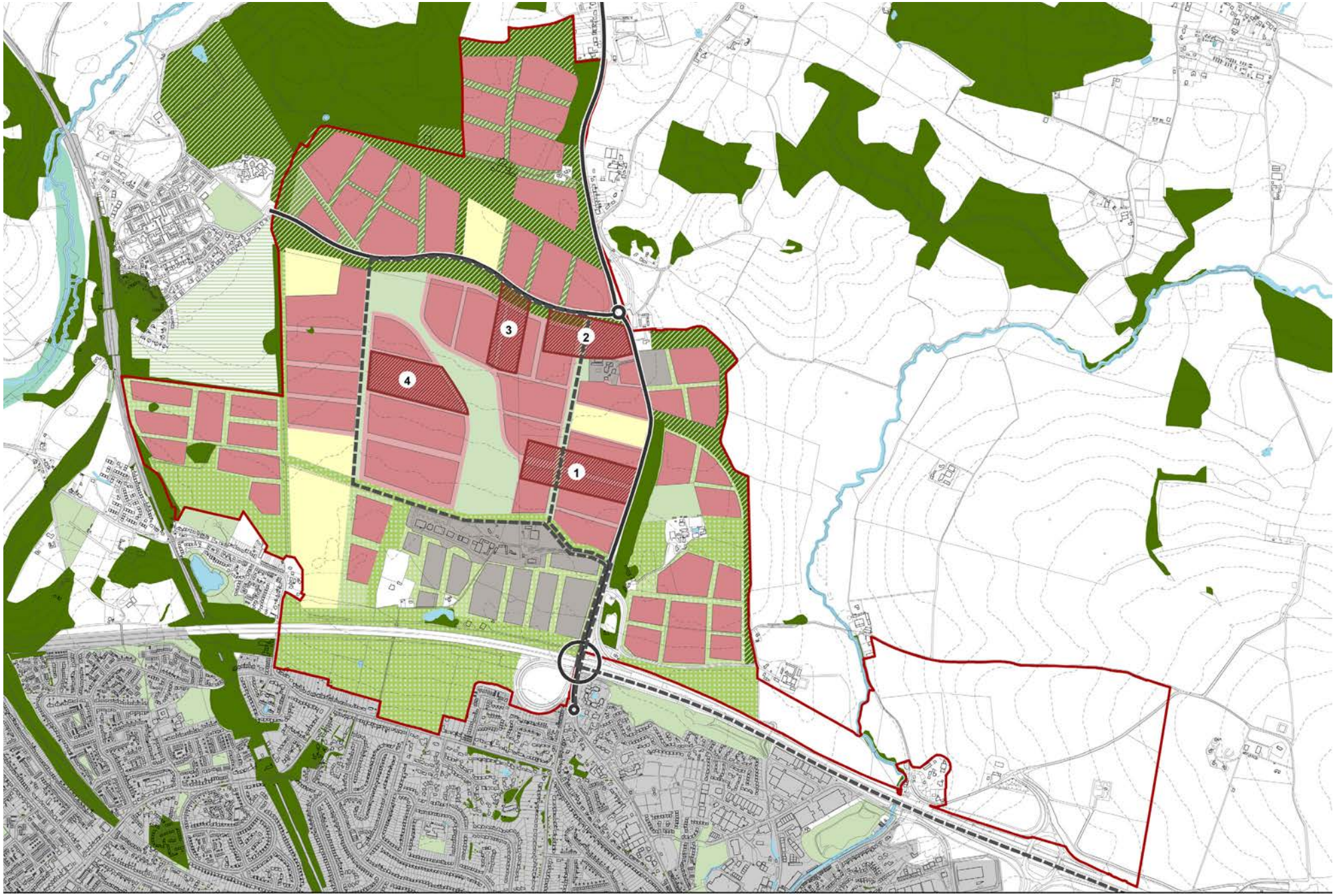


FIG 6.2 SUB OPTION - CENTRE LOCATION

SUB OPTION - CENTRE LOCATION

Location	Accessibility	Commerciality	Community	Deliverability	Conclusion
DC1 A32	• Peripheral to much of the NCNF, especially if no building east of A32 • Close to major employment areas • Accessible from likely early phases • Very accessible from the A32 • Well suited to a bus loop	• Best fit with phased housing delivery • Passing trade from A32/Knowle and Wickham residents • Visibility is likely to appeal to a foodstore operator • Proximity to existing and future employment is advantageous • Proximity to north Fareham likely to increase viability	• Visibility on the edge of the development helps to establish the NCNF and give it presence and identity early on • Edge location acts as a shop window to the NCNF, provides an opportunity to 'look into' the new settlement • Potential for strong link between the DC and the core open space	• Attractiveness to a foodstore makes early delivery more likely • No need for substantial new road infrastructure to open up the site	Advantage of visibility and access from A32 and proximity to both employment and core open space
DC2 Knowle Road/A32	• Peripheral to much of the NCNF the development, especially if no development east of A32 • Close to small employment areas • Accessible from likely early phases • Very accessible from the A32 • Well suited to a bus loop	• Good fit with phased housing delivery • Passing trade from A32 and Wickham residents • Passing trade from Knowle residents, but limited value • Likely to appeal to a foodstore operator • Proximity to Wickham likely to increase viability	• Visibility on the edge of the development helps to establish the NCNF and give it presence and identity early on • Edge location acts as a shop window to the NCNF, provides an opportunity to 'look into' the new settlement • Only a distant relationship to core open space	• Attractiveness to a foodstore makes early delivery more likely • No need for substantial new road infrastructure to open up the site	Advantage of visibility and access from A32. Some advantage of Wickham passing trade, but outweighed by distance from employment and core open space
DC3 Knowle Road	• Fairly central to land west of A32 • Early phase housing development anticipated closer to the A32, making this site relatively inaccessible initially • Well suited to a bus loop	• Passing trade from Knowle residents • Proximity and passing trade makes it potentially damaging to the viability of Knowle services	• Proximity to Knowle and relatively discrete location make it less effective at establishing an early identity for NCNF • Potentially a strong relationship with core open space	• Partial loss of structure planting	No real advantage over DC2
DC4 Geographic Centre	• Geographic centre makes this the most accessible on foot/cycle for residents – no more than c 1km from all areas west of the A32 • However, poor accessibility during early phases of development • More accessible from Funtley than other options • Less obviously suited to a bus loop	• No commercial advantage from passing trade • Less likely to be attractive to a foodstore operator	• Central location suggests strong community core, but the centre is 'hidden' within the development making it less effective as a hub • Later delivery undermines its role as the core of the community • Potential strong relationship with open space and secondary school • Brings more traffic into the centre	• Phasing of delivery difficult, requiring substantial infrastructure early on, or delivery in a later stage	Most accessible in the long term, but significant disadvantages in terms of delivery

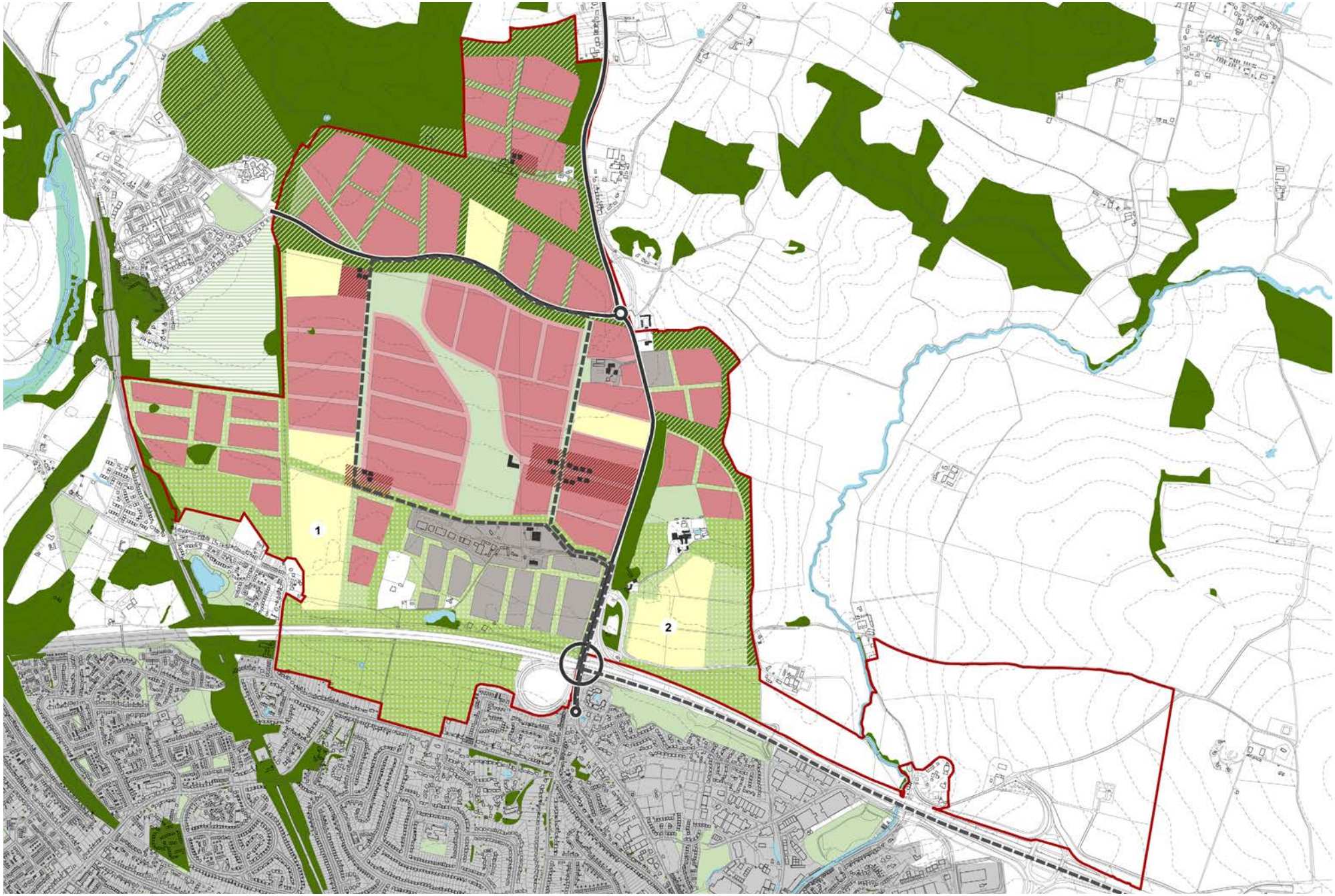


FIG 6.3 SUB OPTION - SECONDARY SCHOOL LOCATION

SUB OPTION - SECONDARY SCHOOL LOCATION

Location 1

- Located along the proposed BRT route;
- Can be designed to have good vehicular connections to the A32 via the internal road network;
- Is located along the strategic green infrastructure network, allowing attractive pedestrian and cycle links to the majority of the housing in the NCNF;
- Is within walking distance of the preferred district centre location;
- Is located close to the M27, potential impact on the ability for the buildings to be naturally ventilated due to noise issues.

Location 2

- Located along the A32 with good vehicular links;
- Located along the proposed BRT route;
- Is within easy walking distance of the preferred district centre location;
- In place making terms, it can be delivered at any point in the residential phasing
- On the opposite side of the A32 to the majority of the housing and the district centre;
- The school could form part of an education campus with Roche Court, with the potential benefit of some shared facilities such as sports pitches;
- This option assumes that school playing fields are acceptable in close proximity to the gas pipeline and that the school building can be located an appropriate distance from the pipe within the site shown;
- Is located close to the M27, potential impact on the ability for the buildings to be naturally ventilated due to noise issues.

7.0 DELIVERY

Implementing development on the scale proposed in the Core Strategy, over the time scale envisaged (up to 2031), is recognised as being 'ambitious' in the North of Fareham SDA Viability Assessment (Core Strategy Stage, BPS 2010)[17] document. In part that reflects the extent of the new community and the scale of investment required, but also the capacity of the industry to deliver an average of 500 homes per year when there are now relatively few house builders in the market place, and most house builders would build closer to 50-100 homes per year in a single location.

GOVERNANCE AND COORDINATION

FBC has recognised that it must take a strong lead if the NCNF is to be built out in accordance with Core Strategy timescales. When the Core Strategy was adopted it was anticipated that the PRUPIM development consortium, comprising the Prudential and one of the principal landowners, would lead the masterplanning work to inform the AAP, ultimately leading to an application for a comprehensive plan for the NCNF as a whole. With the withdrawal of the Prudential, the respective landowners are currently pursuing proposals in parallel with one another, raising the possibility of separate applications for the site and the corresponding risk of inconsistencies, inefficiencies and conflicted interests. There is a strong possibility that, as a consequence of that situation, a compromised plan would be proposed for a new community that would not meet its full potential. In that context, the AAP has a crucial role to play as the central coordinating framework that ties individual development proposals and investments together into a cohesive whole.

In support of a more coordinated approach to delivery, FBC has now established a governance structure including a Strategic Board, Standing Conference and a Landowners Liaison Group as a means of coordinating delivery of the NCNF. These bodies need to remain very closely involved in the ongoing development of the Preferred Option and AAP.

VIABILITY

A broad brush viability assessment has been undertaken, to assess the relative viability of the Masterplan Options.

Key assumptions

Relatively modest adjustments to value or cost assumptions can result in significant shifts in viability due to the multiplying effect of the scale of development but, at this conceptual stage in the process, it is not appropriate, and is potentially misleading, to attempt to define assumptions in detail, because there remain many undetermined factors. The assessment is therefore necessarily very general. Accordingly, the results that emerge do not necessarily accurately represent the picture as revealed by a more detailed viability appraisal, but they do serve to provide a strategic overview and comparison of Options on a like for

like basis. A full appraisal is being commissioned by FBC to be prepared iteratively with the emerging Preferred Option.

Key assumptions at this concept stage include the following:

- Gross Development Value (GDV) is derived from an assumed average house value for market housing only (ie excluding affordable and employment land). It is further assumed that the average house value will reduce as residential density increases (assumed £10,000 less for each point increase in dwellings per hectare).
- For the purposes of this exercise, affordable housing and employment land are assumed to have zero value (ie the cost of provision is equal to their value).
- Net Development Value (NDV) is calculated by subtracting the cost of constructing market housing and the cost of infrastructure provision from GDV.
- Net Developable Area (NDA) for the purposes of this exercise is GDA less strategic GI and less employment land – ie the elements of a scheme that would normally be expected with residential development.
- Target Viability is NDA multiplied by an assumed land value for residential development only, which allows for associated infrastructure such as affordable housing, transport connections, schools and public open space, but excludes employment areas.
- Infrastructure costs have been identified by FBC for Option 1. That Option includes the A32 Link Road and works to Junction 11, but excludes the major works to Junction 10 required by the other options. The net additional cost over and above the major works to Junction 10 are identified separately.
- A blended area-based cost per hectare, excluding the net additional cost of the A32 Link Road/Junction 11, has been calculated for Option 1 and applied, pro rata, to the other options. The net additional cost has then been applied only to Option 1. Infrastructure includes all transport, strategic GI, schools, utilities and community infrastructure associated with the NCNF, but excludes employment provision which is assumed to be neutral.

Viability

On this strategic basis, the broad brush viability assessment suggests the Net Development Value falls short of the Assumed Target Viability level for each of the Concept Masterplan Options. That is to say, the value of the site once construction and infrastructure costs have been taken into account is not as high as the value that a landowner would expect to receive for their land. That suggests either the assumed target land value will need to be reduced, or that some of the infrastructure costs will need to be funded from a source other than the landowner/developer, or a combination of the two, to ensure that the land is brought forward for development.

At this broad brush stage, Option 2 is more viable than Option 1 reflecting the working assumption that the difference between the two is the construction of the A32 Link Road.

Option 3 and 4 are more viable than Option 1/2 reflecting the considerable cost of the infrastructure necessary to deliver Junction 11 for employment development, with no additional return based on the assumptions in this assessment.

The performance of Options 3 and 4 is very similar and at this strategic level there is nothing to choose between them, but the higher the proportion of market housing, the better the viability.

The assessment has covered a number of scenarios for comparison, including a range of housing densities from 35 to 38 dph and for 40% and 30% affordable housing provision. On the whole, changing the density makes little difference to the overall viability because the additional value from a higher number of homes is likely to be largely countered by the slightly reduced average house price. Reducing the proportion of affordable units makes a more substantial and positive difference to viability, but needs to be considered against policy requirements.

In reality there will be many factors that could make viability more marginal, including downward revision of value assumptions, upward revision of cost assumptions and refinement of development proposals that increase infrastructure requirements. Equally, further work might result in the converse situation, making development more viable.

Mechanisms for funding development are changing rapidly at the moment to reflect current difficult market conditions and these too may introduce new means of reducing costs and/or generating revenues, from on-site energy provision or community-owned development for example, and these will need to be explored further through the Preferred Option stage.

The concept masterplanning exercise has attempted to design out unnecessary infrastructure, to design in maximum value and to design the NCNF in a way that can be delivered with a positive cash flow, and the Preferred Option will need to continue to focus on that approach.

Cash flow and development phasing

One of the most significant factors in determining viability is management of cash flow. In simple terms, wherever possible, the accumulated value of sales

across the delivery programme should at all times be sufficient to cover the cost of providing infrastructure, including not only construction cost but also the cost of financing construction. To achieve that 'positive cash flow', appropriate phasing of development is crucial.

Phased implementation should minimise upfront infrastructure provision and maximise early house sales. Early development should therefore make best use of existing infrastructure. For example, using the A32 and Knowle Road and therefore minimising the need to construct a distributor road through the NCNF until later phases. Accordingly, early phases of development are expected to be adjacent to the A32, perhaps at three points: close to the junction with Knowle Road and Charity Farm; close to Dean Farm; and on land further north towards Wickham.

Other phasing considerations include:

- Development should gradually extend westwards from the A32, and north and south from Knowle Road.
- The distributor road that extends southward from Knowle Road and westward from Dean Farm can be delivered in stages to open up further development land. The point in time at which both arms need to be connected up will be determined by junction capacity and dual access transport planning considerations.
- Early provision of strategic planting to establish major GI and to reduce visual impact on sensitive landscapes. Development to the east of the A32 could follow in a later phase once that planting has become established.
- The District Centre should be established early on - initially functioning as a smaller scale local centre that also benefits from passing trade, and growing in line with development to become a larger centre serving the whole NCNF.
- The central public open space at the heart of the NCNF should be established early as a coalescing feature, although investment in its facilities can be delivered over time in line with development.
- Buffers to Knowle and Funtley prevent development as 'extensions' to those settlements, removing opportunities to benefit from their infrastructure early in the process. It is therefore assumed that development will gradually extend from the core of the NCNF towards those villages.
- Implementing the BRT in the first phases offers the considerable advantage of embedding sustainable travel patterns within the community from an early stage. The cost of implementation would be substantial, both in terms of construction and the likely necessity of subsidy in early phases while patronage is low, and so the sustainability advantages of early implementation will need to be weighed against the financial consequences of delaying its implementation until later phases.
- Local centres and schools should be delivered in step with development.

These points are reflected in the very simple Phasing Plan shown in figure 7.1. It has not been possible to engage with the Highways Agency through the course of the Concept Masterplan Options work and so it is not clear how much development, if any, can be carried out before expensive works are required to the M27 junctions. If work to Junction 10 and/or 11 is required very early in the process, with or without a new A32 Link Road, it will have a very significant impact upon cash flow and is likely to necessitate some form of public sector funding. Similarly, if major utilities work is required upfront. The overall infrastructure package and funding options are being considered by FBC in parallel with the development of the Preferred Option and will inform these decisions.

The NCNF will be a sustainable standalone settlement and so must accommodate everything that a community requires to meet its essential needs. That will obviously necessitate the provision of a wide range of community facilities and services. The 'shopping list' of essential and desirable items required by FBC for delivery with the development will be extensive. As an integral part of the viability appraisal work for the Preferred Option, it will be necessary to review the long list of requirements and possibly make some hard decisions regarding priorities in order to make the development as a whole more viable.

FURTHER EVIDENCE AND PREFERRED OPTION

FBC is also progressing delivery of the NCNF by commissioning further work necessary to inform and support both the AAP and subsequent applications. These include:

- infrastructure funding and viability evidence
- retail study
- traffic modelling
- economic strategy

These, alongside feedback from public consultation on the Concept Masterplan Options, will inform preparation of a Preferred Option development proposal and corresponding planning policy for inclusion in the AAP.

POLICY

Prescriptive policy should be kept to a minimum in the AAP, limited to delivering only the core principles that are fundamental to achieving a new community of the form, nature and quality agreed upon through the process. Policy should reflect the sort of principles emerging in Section 3 of this Report and will constitute a firm masterplan structure upon which development proposals can be overlaid. The AAP should therefore represent a Flexible Framework rather than a rigid plan.

PHASE 1

PHASE 2

PHASE 3

FIG 7.1 PHASING PLAN

PHASE 4

PHASE 5

APPENDIX A – REFERENCES

1. Fareham Local Development framework Core Strategy, *Fareham Borough Council* (2011).

2. NCNF Landscape Study, *LDA Design* (2012).

3. Fareham SDA Capacity Analysis Study, *David Lock Associates* (2009).

4. Refining the Fareham SDA Capacity Analysis, *David Lock Associates* (2009).

5. PADHI, *Health and Safety Executive* (2011).

6. Groundwater Protection: Policy and Practice, *Environment Agency* (available on EA website).

7. The Habitats Regulations Assessment for the North of Fareham SDA Area Action Plan: Baseline Data Review, *Urban Edge Environmental Consulting* (2012).

8. NCNF Green Infrastructure Study, *LDA Design* (2012).

9. NCNF Eco-opportunities Study, *LDA Design* (2012).

10. North Fareham SDA Emerging Transport Strategy, *Transport for South Hampshire* (2010)

11. Fareham SDA A32 Realignment Options Identification, *Mott Gifford* (2009).

12. Fareham SDA A32 Realignment Options Sensitivity Appraisal, *David Lock Associates* (2009).

13. PUSH Economic Development Strategy, *DTZ* (2010)

14. Retail Study, *FBC* (Expected Autumn 2012)

15. Re-imagining Garden Cities for the 21st Century, *TCPA* (2011)

16. National Planning Policy Framework, *Communities and Local Government* (2011)

17. Fareham Borough Council Strategic Development Area Viability Assessment, *BPS* (2010)

APPENDIX B – WORKSHOP SUMMARIES

WORKSHOP 1

Date: 2nd March 2012

Organisations represented:

- Fareham Borough Council
- Hampshire County council
- Transport for South Hampshire
- Atlas

Summary
The purpose of the event was to convey to attendees the importance of good design in the NCNF; to agree the fundamental social, economic and environmental objectives that will underpin future development proposals for the land allocation in North Fareham; and to show how these might be translated into a vision and plan for the site.

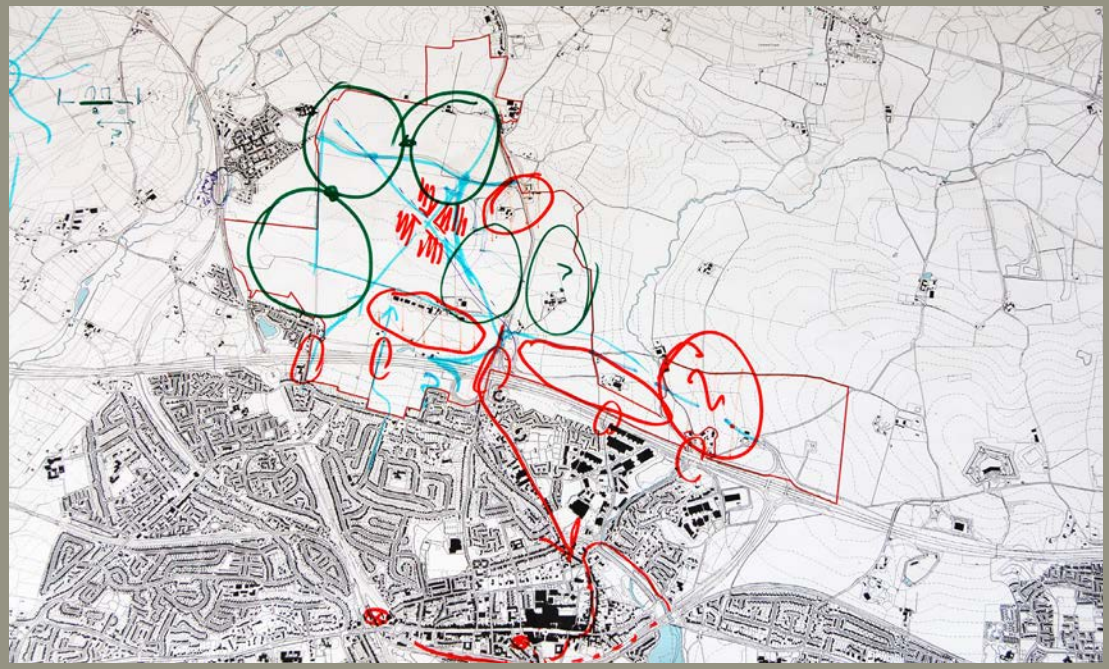
Following a brief introduction to the project from *LDA Design*, the attendees were split into small groups to undertake tasks in two separate sessions:

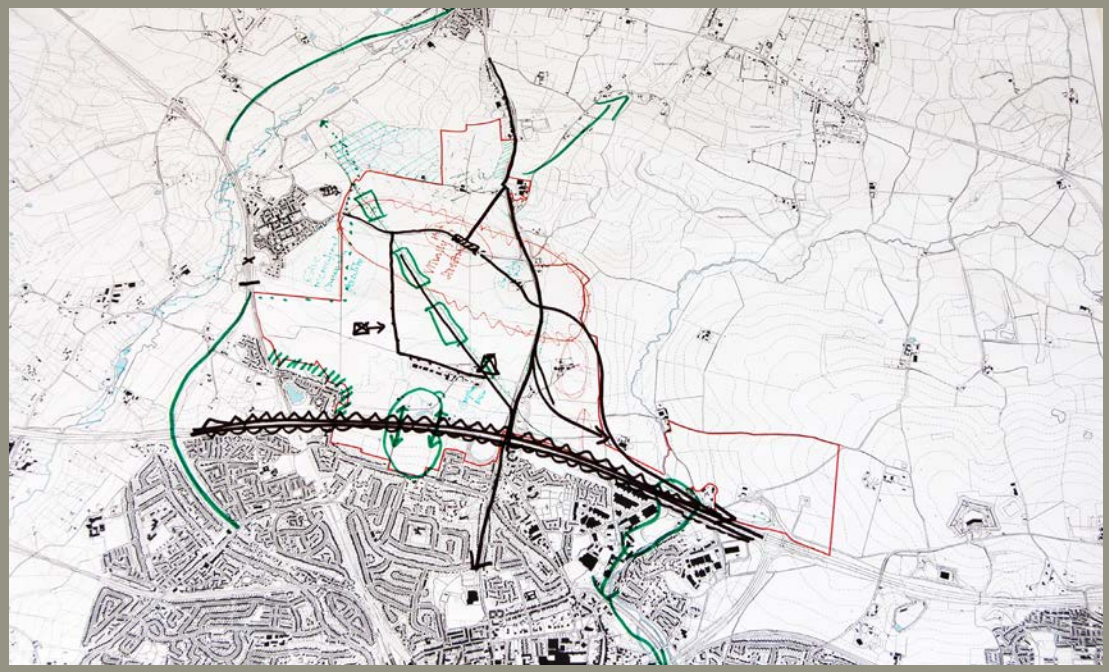
Session 1:
In session 1 the attendees were asked to review, interpret and build on the principles in the Core Strategy. The following observations, objectives and principles were raised by the groups:

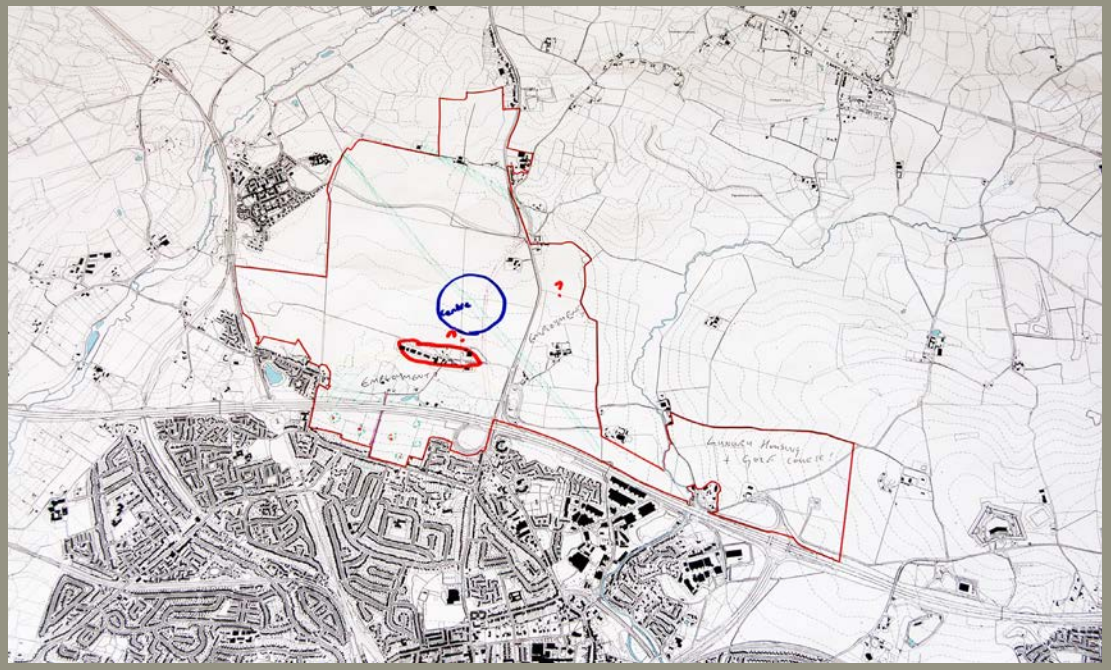
- The principle of self-containment would be difficult to achieve. The NCNF should be planned to provide opportunities and encourage people to use local facilities and work locally. With the right provision of facilities the NCNF could be become self-contained in terms of education.
- Employment uses should be integrated within residential areas as far as possible to help make targets of working locally more achievable. New employment provision should build on the existing successful uses and models already established in the NCNF. However, the precise form and location of the employment areas should be flexible to allow for a range of possible employment types.
- Work should be undertaken to understand the demand for and how home working could be encouraged to help achieve job creation. It was suggested that the provision of employment space should not result in the need to increase residential densities.
- Incentives for employment uses will need to be provided to help the NCNF compete with nearby enterprise zones.
- Employment uses provided in the NCNF should also be easily accessible from existing neighbourhoods by public transport routes as well as pedestrian and cycle routes.
- More emphasis should be placed on public transport (BRT) so that trips that are made beyond the NCNF are made by sustainable modes of transport, BRT would therefore need to be high quality and attractive. The BRT route will also need to be carefully planned to give maximum access to BRT stops without having to take an unnecessarily convoluted route which extends journey time.
- The idea of running the BRT route along the alignment of the gas main to provide a direct route though the centre of the NCNF was discussed. However, the restrictions around the gas main may then limit residential densities and prevent community and education uses being located near it which are required to support the service.

- Green infrastructure should be multi-functional and useable and should be integrated through the site linking with and taking its character from the surrounding landscape. Green Infrastructure should also be used to link new and existing neighbourhoods.
- The identity of the NCNF should be driven by the surrounding Hampshire landscape. The character of the landscape changes across the site and this should be referenced in the plans for the area using features such as topography and distinctive landscape character types.
- Broad design principles regarding the character of the NCNF should be included in the AAP with perhaps a greater level of detail going into a set of design codes.
- The principle of 'exemplar of sustainable design and resource efficiency' is an extremely ambitious principle in the true sense of the word exemplar especially in light of other infrastructure requirements such as road and motorway improvements needed on site. On-going work may find one particular aspect of sustainable design or resource efficiency which is particularly relevant to the site or the context which the NCNF could focus on delivering to an exemplary standard.
- It was suggested that the NCNF should be considered as a group of smaller settlements set within a landscape structure rather than a single large settlement.
- Housing types should be mixed together to encourage inclusive communities.
- The Concept masterplan options should carefully consider how development might be delivered at Junction 11, obviously has very good strategic road connections but is slightly removed from the NCNF and is the area is more sensitive from a landscape and visual point of view.

Session 2:
In session 2 the attendees were asked to apply the ideas and objectives from the first session onto a plan, deciding where things should go and how they should work together. The following plans were produced by the attendees during the second session.







WORKSHOP 2

Date: 13th March 2012

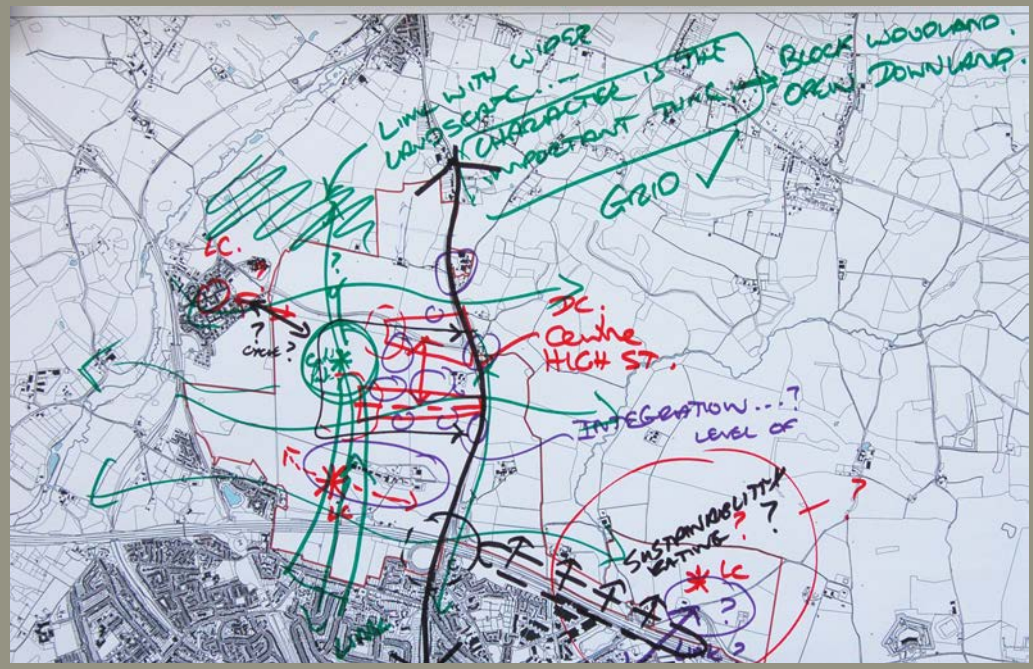
Organisations represented:

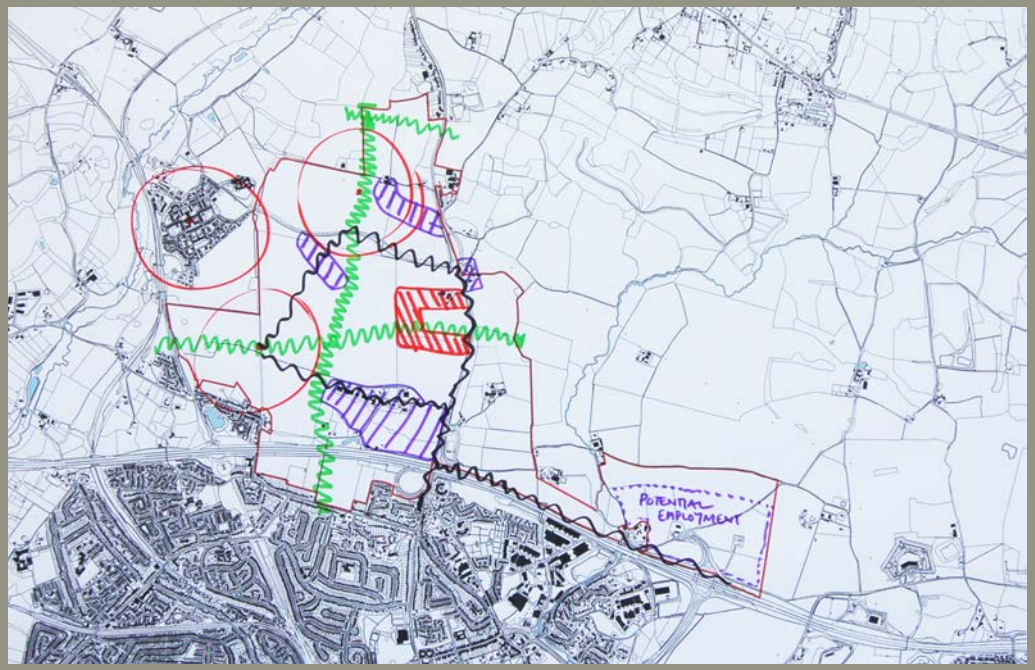
- Fareham Borough Council
- Hampshire County council
- Transport for South Hampshire
- Atlas
- Environment Agency
- Natural England
- Highways Agency
- Winchester City Council
- Forestry Commission
- Hampshire and Isle of Wight Wildlife Trust

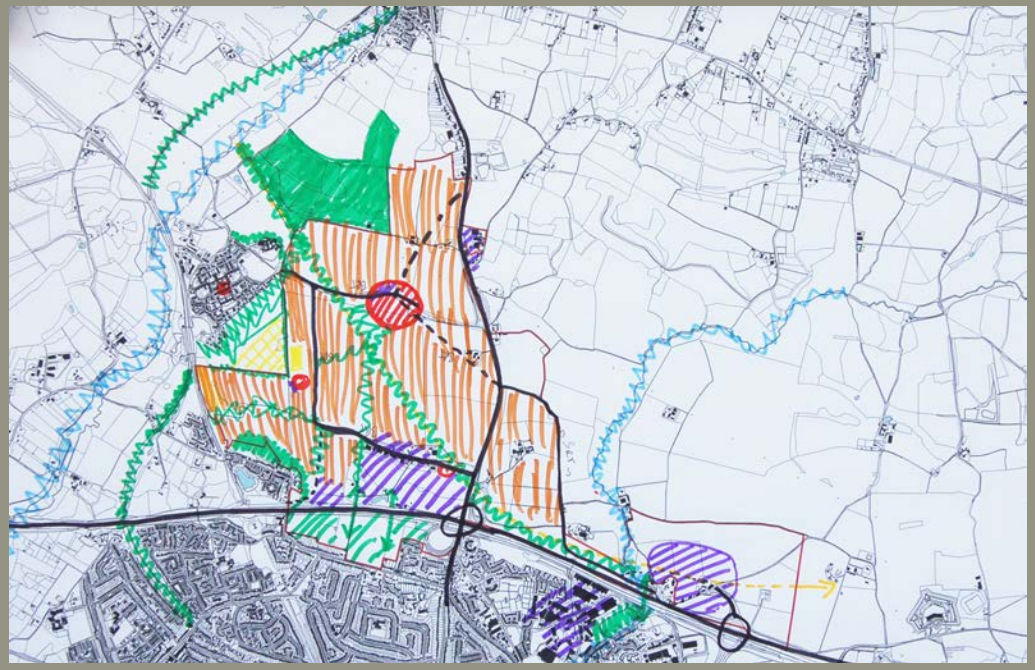
Summary:
Following an introduction which summarised the site context and constraints, attendees at the second workshop were asked to draw a Concept Masterplan for the NCNF using a matrix of options prepared by the design team as a starting point. The matrix provided four approaches to:

- Distributing the employment uses.
- Providing Green Infrastructure.
- Providing a strategic transport solution.
- Locating the community centres.

The groups produced and presented the following plans at the workshop:




POTENTIAL
EMPLOYMENT



WORKSHOP 3

Date: 18th April 2012

Organisations represented:

- Fareham Borough Council
- Hampshire County council
- Transport for South Hampshire
- Atlas
- Environment Agency
- Natural England
- Highways Agency
- Winchester City Council
- Forestry Commission
- Hampshire and Isle of Wight Wildlife Trust
- Southern Water
- Portsmouth Water
- Albion Water
- Southern Gas Networks
- Scottish and Southern
- Hampshire Constabulary
- Hampshire Fire and Rescue

Summary:
A third workshop was held with stakeholders and service providers to discuss the implications of projected demographics for the NCNF on infrastructure requirements and phasing.

Following an introduction from Cambridge Econometrics on the projected demographics for the NCNF an informal open discussion was held to understand the principles of infrastructure provision in the context of viability. Requirements, phasing and location of the following infrastructure items were discussed:

- Education and pre-school
- Healthcare
- Affordable housing
- Sports and leisure
- SUDs and drainage
- Energy
- Public transport (including BRT)
- Employment/housing balance
- Other infrastructure

WORKSHOP 4

Date: 9th May 2012

Organisations represented:

- Fareham Borough Council
- Hampshire County council
- Transport for South Hampshire
- Atlas
- Environment Agency
- Natural England
- Highways Agency
- Winchester City Council
- Forestry Commission
- Hampshire and Isle of Wight Wildlife Trust
- Southern Water
- Portsmouth Water
- Albion Water
- Southern Gas Networks
- Scottish and Southern
- Hampshire Constabulary
- Hampshire Fire and Rescue

Summary:
At the final stakeholder workshop the attendees were briefed on the emerging concept masterplan options. This included a description of the vision and structuring framework for the NCNF explaining the underlying development and place making principles which apply to all the concept masterplan options. It also included a summary of the recommendations from the Green Infrastructure study which again applied to all concept masterplan options. Finally, five concept masterplan options which varied in the extent of development shown, the mix of land uses and the strategic transport solution were presented to the group.

The presentation was followed by an informal question and answer session providing the design team with useful feedback which was used to make appropriate amendments to the concept masterplan options before preparation of the exhibition material for the public consultation.

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