BE A PIONEER

"CITIES HAVE THE CAPABILITY OF PROVIDING SOMETHING FOR EVERYBODY, ONLY BECAUSE, AND ONLY WHEN, THEY ARE CREATED BY EVERYBODY." JANE JACOBS, 1961

WOLFSON
ECONOMICS PRIZE
MMXIV
FINAL SUBMISSION

BARTON WILLMORE


QUALITY
HOUSING N°'S
SUSTAINABILITY
AFFORDABILITY
1
NATIONAL CAMPAIGN
REDUCES NATIONAL SCALE BUT INCREASES LOCALISM
CERTAINTY
GUIDING HAND
NATIONAL VISION
2
BUILDING POLITICAL CONSENSUS AT THE NATIONAL LEVEL
SCALABILITY
APOLITICAL
EMPIRICAL INPUTS
3
SIFTING TO ESTABLISH OPPORTUNITY AREAS
4
LOCAL GARDEN CITY COMMISSIONS
ROLE FOR ALL
SPONSORING AUTHORITY
LOCAL ENTREPRENEURS
DEMOCRATICALLY ELECTED
LEGACY
ROLE FOR ESTATES
PARTNERSHIP
5
ORGANIC GROWTH
NO ONE SIZE FITS ALL
NEW TOWN RETROFIT
6
SELF FINANCING
NATIONAL SKILLS DRIVE
BETTER RETURN OVER TIME
7

ROUTE MAP TO DELIVERY

"This Route Map encapsulates the process by which the Government, Local Authorities and local communities can work together to deliver exciting, beautiful and economically vibrant new Garden Cities.

All steps are required to deliver some 40 new Garden Cities in England over the coming 25 years – taking the 'short cuts' will reduce the scale of delivery across the country.

However, for those Local Authorities and communities keen to press on without awaiting national planning input, it's possible to move straight from Step 1 to Step 4, electing the Garden City Mayor and pressing on to site selection, and then from Step 5 to Step 8, progressing with local promotion."

WOLFSON ECONOMICS PRIZE MMXV

ACKNOWLEDGEMENTS

THIS SUBMISSION IS A COLLABORATION BETWEEN BARTON WILLMORE LLP AND SEVERAL, SPECIALLY CONVENED, CROSS-SECTOR THINK-TANKS. MEMBERS INCLUDED FORMER GOVERNMENT OFFICIALS, BUILT-ENVIRONMENT CHARITIES, PSYCHOLOGISTS, INSTITUTIONAL LAND OWNERS, ADVERTISING EXECUTIVES, CREATIVE MEDIA REPRESENTATIVES, AND EXPERTS ON TAXATION, PLANNING LAW AND SUSTAINABLE INFRASTRUCTURE. THE LEAD AUTHOR IS JAMES GROSS, DIRECTOR OF MASTERPLANNING AT BARTON WILLMORE.

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ISSUED 11 AUG 2014

WOLFSON ECONOMICS PRIZE MMXV

CONTENTS

NON TECHNICAL SUMMARY

BIG PROBLEMS REQUIRE BIG SOLUTIONS. BRITAIN NEEDS TO BE BUILDING SIGNIFICANTLY MORE HOMES, NOT JUST NOW, BUT FOR THE WHOLE OF THE NEXT GENERATION AT LEAST, AND, WERE IT POSSIBLE, YESTERDAY TOO.

In a March 2014 review of the Government Economist Kate Barker's 2004 Report into House Building and the Planning System, the Home Builder's Federation concluded that 10 years on, we have spectacularly undershot national housing targets by 954,000 homes, equal to the total number of households in Latvia[1].

With the Department for Communities and Local Government (CLG) forecasting an additional 5.8m new homes by 2033, the current shortfall of circa 1m homes per decade would require somewhere between the total number of households in Denmark and Switzerland[2] (circa 3m homes) to catch up. And then we need to keep going.

That's why our solution advocates a national transformation for Britain. The creation of enough new Garden Cities to meet both demand and shortfall. All in the idiom of a place that can continue growing organically for generations.

Most politicians, economists and development industry commentators would appear broadly in favour of Garden Cities as part of the solution. But few within the planning and house building fraternity seem to consider that their impact, even if they were to go ahead, would be widely felt. Other nay-sayers such as Simon Jenkins and Lord Rogers would have us reject the notion outright, citing the regeneration need of our existing cities as priority[3 & 4].

The public however have come out overwhelmingly in favour of New Garden Cities - 68% of 6,000 persons polled agree that building new Garden Cities would better protect the countryside from development than the alternatives.[5]

So who's right?

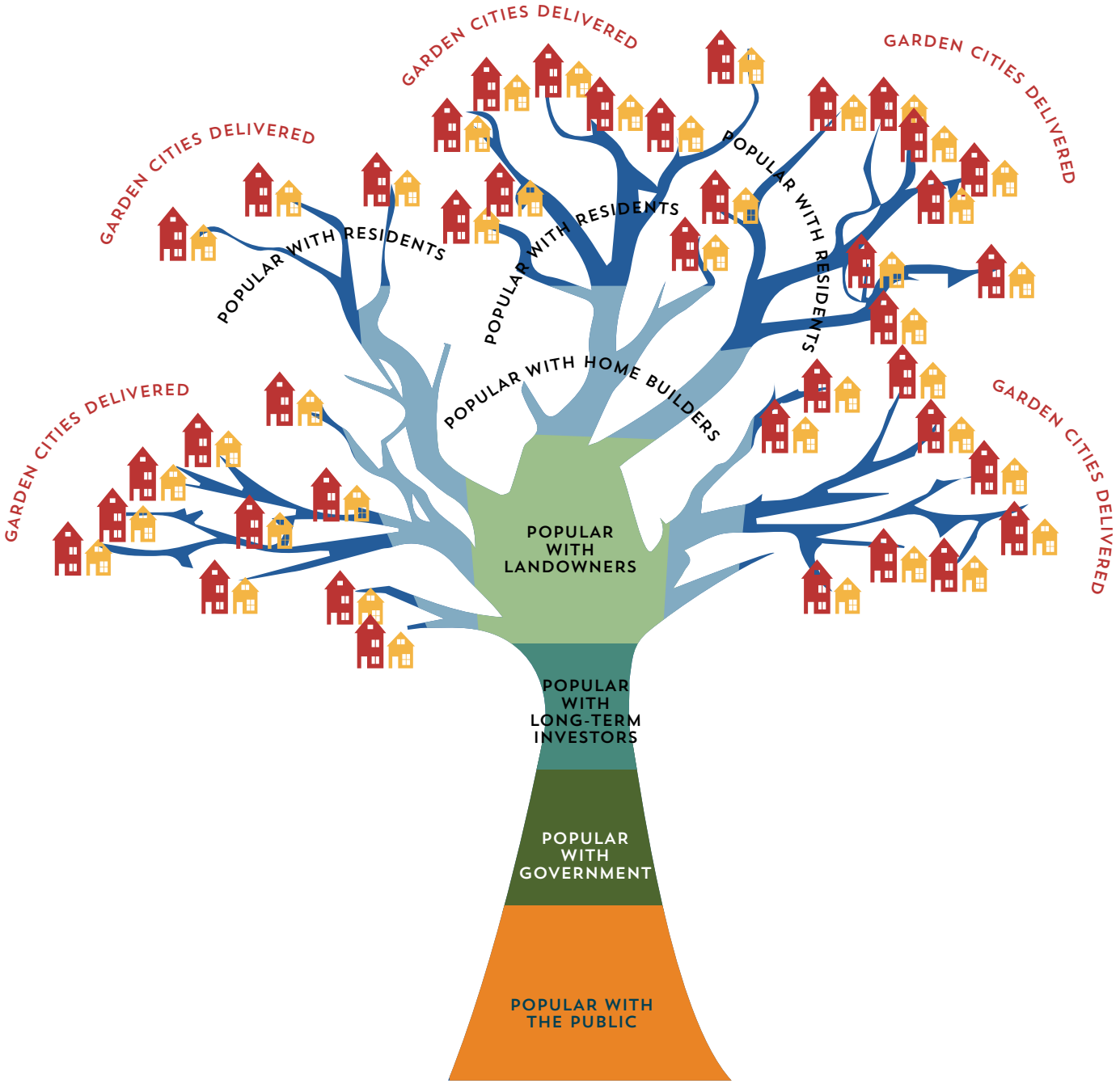
If executed at the right scale, in the right numbers and right locations, following historic settlement patterns and local vernacular, and not slavishly obeying some pre-determined concept, there is room to accommodate all of the above views.

This is especially important given the 3rd criteria of the prize question: "How would you deliver a new Garden City which is visionary, viable and popular?". Popularity in the context of the Wolfson Prize question is surely the ultimate arbiter of success. Meaningful popularity is more than a notion, it's something that must be known or felt.

Firstly we have begun **a national pro-development campaign**, by commissioning YouGov to undertake our own polling, investigating the 16-25 age group (The Young Minds) and recommending steps to reveal the true dangers associated with NIMBYism, and the opportunities new development will have on them and future generations.

The outcome of this campaign, which already includes creatives, marketers, advertising experts and psychologists, has been specifically set up to channel public concern against short-sighted prejudices and make Government take note.

By default, Garden Cities need to become **popular with Government itself**. By this we don't mean the current posturing on the topic, name-dropping already consented schemes, re-designated as Garden Cities. Popularity with Government for us means, driven by public opinion, launching a serious investigation into the broad locations of suitable areas for a **national wave of new Garden Cities.** This could be a National Spatial Plan, as per our initial submission, but equally presented as guidance for local authorities, mayoral candidates and others to bring forward Garden Cities from a grass roots position.



OUR GARDEN CITY MODEL

NON TECHNICAL SUMMARY

Steps to deliver new Garden Cities (including shortcuts allowing both national scaleability and local initiatives) are captured in our 10-point 'route map' adapted from our Primary Submission.

The relationship between Government and our **3rd market for popularity is about scale,** or more precisely **scalability and certainty.**

These are the two factors necessary to achieve **popularity with the patient capital vital to delivering** of Garden Cities in meaningful numbers.

Industry insiders suggest upfront promotional costs of Garden Cities may run to around £5m per instance. Even for the big investment houses, as purely private sector initiatives, these are sobering numbers unless accompanied by the certainty of Government support and the offer of a scaleable initiative where lessons learnt can be re-applied across the country.

Thus patient capital is acquired by means of a **trade** between Government support for substantial numbers of Garden Cities on the one hand (our submission suggests there may be national scope for 40 such cities), and the circa £250m peak debt which in our estimations is required to finance the critical infrastructure for every new Garden City of 50,000 homes.

Scalability and patient capital combine to provide the leverage and funding required to source land and sites in meaningful numbers. However this means ensuring that the Garden City model is **popular with landowners.**

This is perhaps one of the most critical aspects of city delivery. A Garden City project might stack up on paper, but in the absence of willing landowners the chances of it becoming a reality are slim. Our view is that the much discussed (by the TCPA and others) return to Compulsory Purchase Orders (CPO) as the primary mechanism for land acquisition is a poke in the eye for localism, landowners and local popularity. Instead we have constructed our viability model on the basis of **offering fair value to everyone**, but **best value to those who are prepared to share the risk**, investing in the legacy of the city. This means allowing those who may wish (or need) to exit the Garden City Enterprise early, to do so, but offering those who stay greater tax incentives (through reduced 10 year trust charges or inheritance tax) and an overall increased return of a further 100%.

Furthermore we recognise that there can be no 'one size fits all' solution to delivering Garden Cities. We have identified some of the larger institutional and historic landowners who might be interested in maintaining full control over the new city as it develops, but more likely the composition of land owners will be families and others whose interests may not always align.

As a consequence of this, and in response to the intricate nature of the British landscape, we have developed several (not exhaustive) models of Garden City typology.

Recognising the prevailing perception of **a new settlement as a stand-alone place**, our submission, both in terms of financial modelling but also with respect of the physical design of the template, focuses on this for phasing, funding and economic profile. However we consider other models to be equally valid in the right places. Hence in addition to the stand-alone model we have examined:

Extension – Already identified around major UK towns and cities in our Primary Submission, we recognise that extensions adjoining existing settlements can benefit from shared services, existing character and strategic infrastructure. These might be delivered in the form of a single adjacent settlement, or through a network of extensions, creating a 'green mantle' around an existing host town or city.

String – We are making a strong assumption, based on market economics, that most landowners when offered the choice of up-front land value, plus a significant return to be taken early or late depending on circumstances (our financial model assumes a split between these), will opt into the Garden City opportunity. We propose to use existing legislation to give Garden City Mayors, through the vehicle of Local Garden City Commissions, similar powers to Development Corporations and therewith CPO powers. However for reasons outlined above we have reservations around the popularity of this in the context of a national model for some 40 new cities. The 'string' model allows for the compound impact of a city to come forward through several connected centres, and is adaptable, to both environmental and landowner constraints.

NON TECHNICAL SUMMARY

Regeneration – Since 1947 there have been 27 New Towns in three waves of development. These generally shared characteristics of low density, wide roads, poorly connected and badly designed town centres. If popularity is key, and rebalancing the population brings urban regeneration effects, the New Towns, with their continued public sector ownership and near universal absence of 'beauty' are ideal candidates for regeneration as new Garden Cities. These may be smaller than their stand-alone compatriots but could result in earlier delivery, if meaningfully reinvented according to Garden City Principles.

Finally, as a consequence of the strands of popularity above, our model responds to the Garden City residents. We see this functioning as a collective, and that with time, both new and existing residents (commercial, residential, public sector – all persons living or working in a place) in the Garden City will come to identify themselves as such. We are confident in this for a number of reasons:

1. **Garden Cities are good for Britain.** We estimate the economic impact of a new Garden City of constructing 50,000 homes/115,000 persons to be approximately £69bn (see Step 7) based on the economic impacts of construction.
2. **Garden Cities will create new jobs in the thousands.** We know there is a construction skills shortage (http://www.citb.co.uk/news-events/uk-construction-skills-time-bomb/), but Garden Cities can develop skills well outside this sector. Construction is, however, the catalyst. Skills and training will be on hand to ensure at least one job per household is provided, plus we estimate that home working and other more flexible forms of employment will mean this figure is exceeded.
3. **Garden Cities will be affordable.** Who is not concerned how future generations will find a foot on the housing ladder given the current housing shortage? Asking the land owner for patience in exchange for an increased return allows the savings to be passed on to future residents. We have assumed property discounts in the Garden City of 20%. This can be topped up by shares in the city for those who can afford it but there is no obligation to invest if it's out of reach. On top of this our model assumes 10% larger properties than industry averages, offering more home for less investment. Reduction in risk for investors and house builders means more funding for the quality, size and specification of the build but with margins intact, making the proposition attractive to the home builders too.
4. **Garden Cities will be green.** The green credentials of the Garden City will extend to the existing populous. Our model factors in capital works to existing residents (based on the stand-alone model) to increase the energy efficiency of existing homes in or near the Garden City at zero cost to existing residents. New homes will meet Code for Sustainable Homes Level 4 as a minimum and green utilities will be provided and funded from 60 year concessions on the basis of low energy consumption. Furthermore the Garden City will be green in a conventional sense. In another **trade**, we consider densities in urban areas can be increased in exchange for resident managed green space – green beach huts (park-huts) for weekend recreation, and relaxation in a public green, managed by community associations whilst reducing the cost of parkland maintenance.

Our delivery mechanism for all of the above is simple – use the public voice to convince Government we **need to build our way out of the Housing Crisis**; allow for nationally-guided, locally-championed locations for growth to come forward, independent of the existing system of Local Plans, instead electing Garden City Mayors pioneering efficient teams to de-risk projects and involve land owners and communities through the mechanism of the Local Development Order (LDO); promote the de-risked schemes to a market looking for scale and certainty, **leaving the value of the land in the deal** wherever possible, passing this discount onto the future residents, giving them a vested interest in the place to earn a dividend themselves whilst improving the return for the patient land owner and institutional investor alike.

Viability, spatial and economic modelling in this submission are based on 'live' examples. The intention is to more fully explore these places as genuine Garden City candidates as part of a first wave. However a full list of over 40 locations has been created to inform the content of this study.

1. *http://www.hbf.co.uk/uploads/media/Barker_Review_10_years_on_-_24_March.pdf*
2. *Private households by Household Type, Measurement, Country and Year; UNECE Statistical Division; Accessed August 2014.*
3. *http://www.theguardian.com/commentisfree/2014/mar/17/ebbsfleet-garden-city-george-osborne-homes*
4. *http://www.bdonline.co.uk/rogers-rejects-call-for-more-garden-cities/5021586.article*
5. *Wolfson Economics Prize - Garden City Polling; Populus; June 2014*

VISION

"HIS AIM WAS THE CREATION OF SELF-SUFFICIENT SMALL TOWNS, REALLY VERY NICE TOWNS IF YOU WERE DOCILE AND HAD NO PLANS OF YOUR OWN AND DID NOT MIND SPENDING YOUR LIFE AMONG OTHERS WITH NO PLANS OF THEIR OWN."

US urban commentator Jane Jacobs on Ebenezer Howard and Garden Cities in "The Death and Life of Great American Cities" 1961.

Some felt the use of this quote in our Primary Submission was a little unfair, but it's important to note that the original Garden Cities were not without their critics.

Since being shortlisted, we've examined more closely how Garden Cities of the future should differentiate themselves from other places, how they can be replicated and delivered across the nation, and who's likely to locate themselves there.

Research we've drawn on, shows that far from having no plans of their own - and in contrast to Jacob's opinion of the original Garden Cities - the new Garden Cities will attract new residents from a pool of people possessing a strong entrepreneurial attitude[6].

A new wave of Garden Cities will encourage a rapid and widespread network of quality housing growth across the UK (although tailored here to the English planning system) and a huge resurgence in construction skills training. This will allow for a return to the quality of places that Britain was previously renowned for, creating generations of skilled craftsmen and tradespeople to drive stronger economic growth and preservation of our heritage across the country as a whole.

Returning to Jane Jacobs for a moment, she dedicated time to criticising the role of the planning profession for the creation of awful places, **determined by some, to be better for everybody**. However she also noted a vital ingredient in the evolution of great places:

> **"Cities have the capability of providing something for everybody, only because, and only when, they are created by everybody".**

Our submission elaborates on this premise and sets out a process for genuine local involvement in creating places. True participation in design, construction, governance and ownership of the new city, not merely workshops and consultation, can be delivered by creating a framework for planning that allows for a return to organic growth and mechanisms for cities to evolve naturally and beautifully.

Indeed this difference between pre-determined places, set out according to some omnipotent plan, and letting places create themselves (broadly the successful historical precedent that has formed almost every valued and cherished city on the planet) is a major distinction between Howard and Jacobs. Our submission sets out to unify the two and resolve this issue.

Thus we have created a model that gives national opportunity to those looking to become involved in the entrepreneurial spirit of the new Garden Cities, not just limiting ambition to the southeast. The drivers for places will be different. In some areas house price affordability will be the major issue; in others, economic regeneration.

Our model will show how to achieve a return to the creative process of evolving communities organically. This requires taking the best of what Howard and Jacobs have to offer, revising it to the context of post 1948 planning legislation, the present planning system and the current housing crisis to encourage **a new, dynamic generation of sustainable settlements that are simultaneously and uniquely city and garden, quintessentially British and wholly egalitarian.**

This vision is an ambitious one. We acknowledge the Prize Question which asks how you would deliver a new Garden City, but we consider that the chances of success are dramatically increased when the focus is shifted from a single location, to a mechanism for providing guidance on the best places to site new Garden Cities across the nation as a whole.

People need to be given a vision they can believe in. A single Garden City whether in the southeast or elsewhere will have a major local impact but offer comparatively little national benefit. By the time enough action and development has occurred in order to demonstrate the success of the model, the implications of the housing crisis will have become irreversible and building beautifully will no longer be a viable or available option at a meaningful scale.

6. *Public Preferences if Creating a New Community; Propernomics/ BST; 2014.*

VISION

This is the reality of the current housing crisis – our vision is for **a wave of beautiful cities**, but the alternative, either in the harsh municipal housing of the 1920's and 30's (thankfully somewhat softened today by mature landscapes) or the modernist archi-engineering of the 1960's, lies before us as evidence of reactive planning rather than pro-active place making. Poor quality and badly-located 21st Century urbanism awaits if the Government's hand becomes forced into emergency housing action as in the past.

As a reminder it is worth noting that the Government of 1919 also considered Garden Cities as a possible solution to the housing crisis of the day, but determined that they would be too slow to deliver the numbers required at the necessary pace. Instead limited aspects of the Garden Cities, set out in standards and guidance determined by Garden City architects Sir Raymond Unwin and Barry Parker were adopted through the Tudor Walters report[7] as the preferred mechanism.

In a climate where already-consented developments are being rebadged as Garden Cities in order to demonstrate progress, there is a risk that the opportunity to return to quality development is lost amidst a misplaced focus on leafy streets, low density housing and land acquired through Compulsory Purchase Order (CPO) powers.

In contrast our vision sets out how to build better, significantly increase outputs, design quality and grow local support.

A whole package for the nation but locally delivered is the smart way forward.

We are looking to rediscover the opportunity conceived by Ebenezer Howard in 1898. The parallels between the housing crisis of 1919 and today are stark. Then we built homes for heroes. Today's heroes could become the economic saviours of our nation, driving the economy through skills, construction and place-making, to reaffirm the British tradition of making beautiful places.

We want to be bolder than Howard, not just looking at a ring of new cities around London (although this has always formed part of our submission). Our analysis takes England as a whole (with potential to explore the model throughout the remainder of the Union also) and begins to map out **how Garden Cites could be delivered in the right places** across the spectrum.

The task of delivery is not to be under estimated. The Department for Communities and Local Government identified that some 5.8m new households will be required by 2033. Since 2008 when the figures were released, we have completed little more than 750,000 (figure i) of the total requirement yet we are a quarter of the way through this 25 year period. Further, the Home Builders Federation (HBF) report into the 2004 Barker Review a decade on concludes:

'Measured against the middle of Barker's three price inflation targets, **the shortfall of homes over the decade now stands at an estimated 953,000 homes.'**[8]

Thus the gap is ever widening and the need for new settlements with dedicated 'can-do' planning regulations, ever more pressing.

A wave of some 30-40 Garden Cities would make a fundamental difference to meeting the housing shortfall. Up to 40 cities, of circa 40,000 to 50,000 homes a piece, each delivering on average (up to) 3,000 new homes a year (figure ii) would provide the additional housing completions to reach the necessary 232,000 homes[9] required in England, per annum and address the outstanding shortfall.

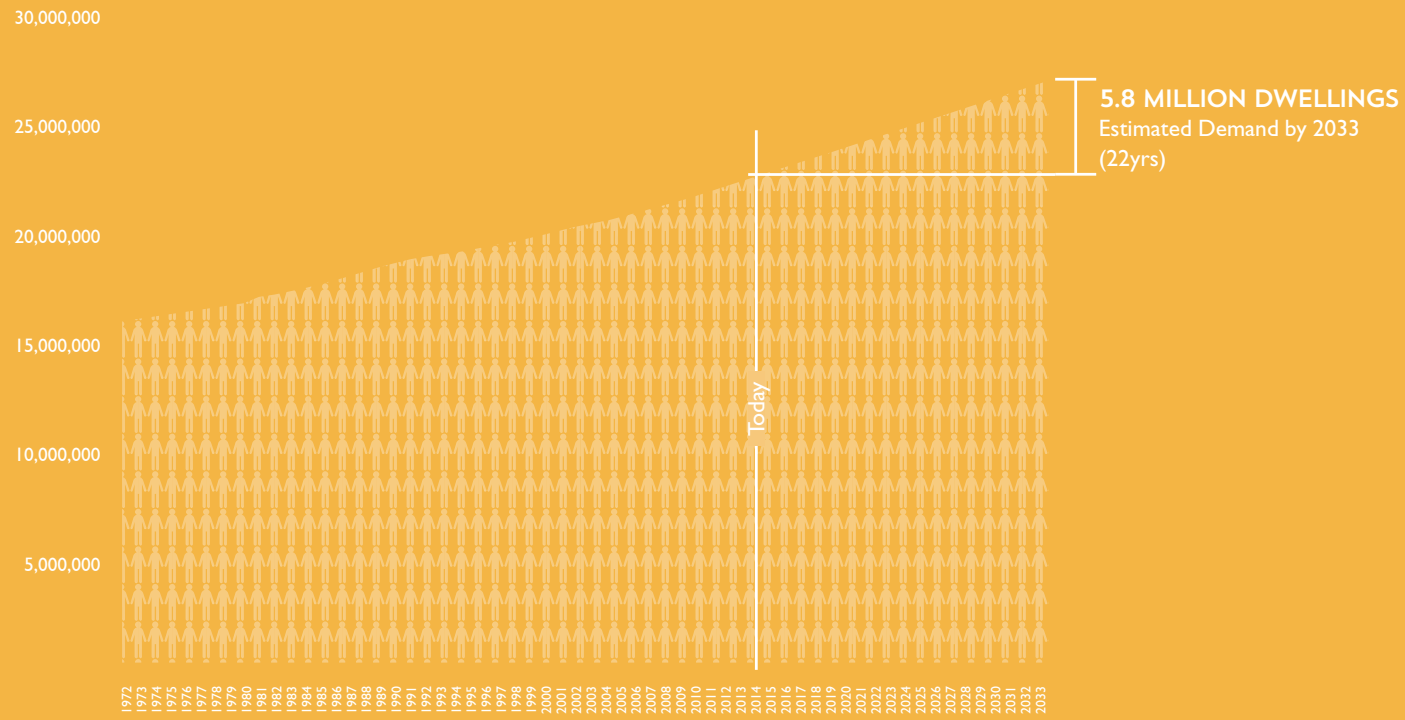
> **"The number of households in England is projected to grow to 27.5 million in 2033, an increase of 5.8 million (27 per cent) over 2008, or 232,000 households per year".**
>
> *Communities and Local Government, based on 2008 population predictions (Office of National Statistics)*

7. *Tudor Walters Report; Homes fit for Heroes; Lloyd George; 1919*

8. *Barker Review a decade on; HBF; March 2014*

9. *Communities and Local Government, based on 2008 population predictions (Office of National Statistics)*

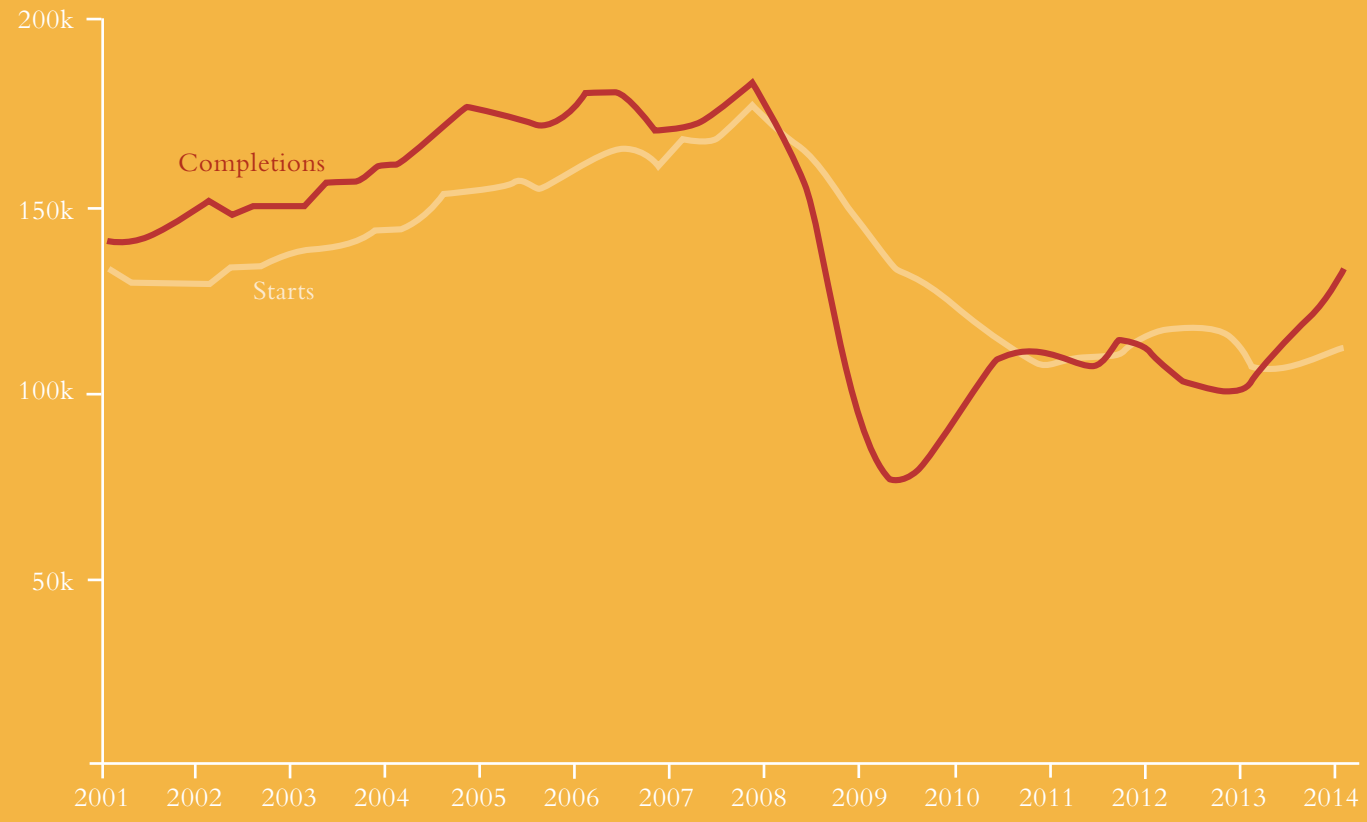
FIGURE I. POPULATION PREDICTIONS TO 2033



Source: Office of National Statistics

FIGURE II. COMPLETED HOMES LAGGING BEHIND

Rolling annual number of dwellings started and completed in England



Source: By Full Fact using DCLG live table on house building 222

NATIONAL GARDEN CITY OPPORTUNITIES MAP

Combining national data mapping with an understanding of local opportunities and appetite for economic growth will allow for the creation of a wave of Garden Cities across England driving jobs and skills, affordable housing and quality of life, creating a precedent for communities of the future.

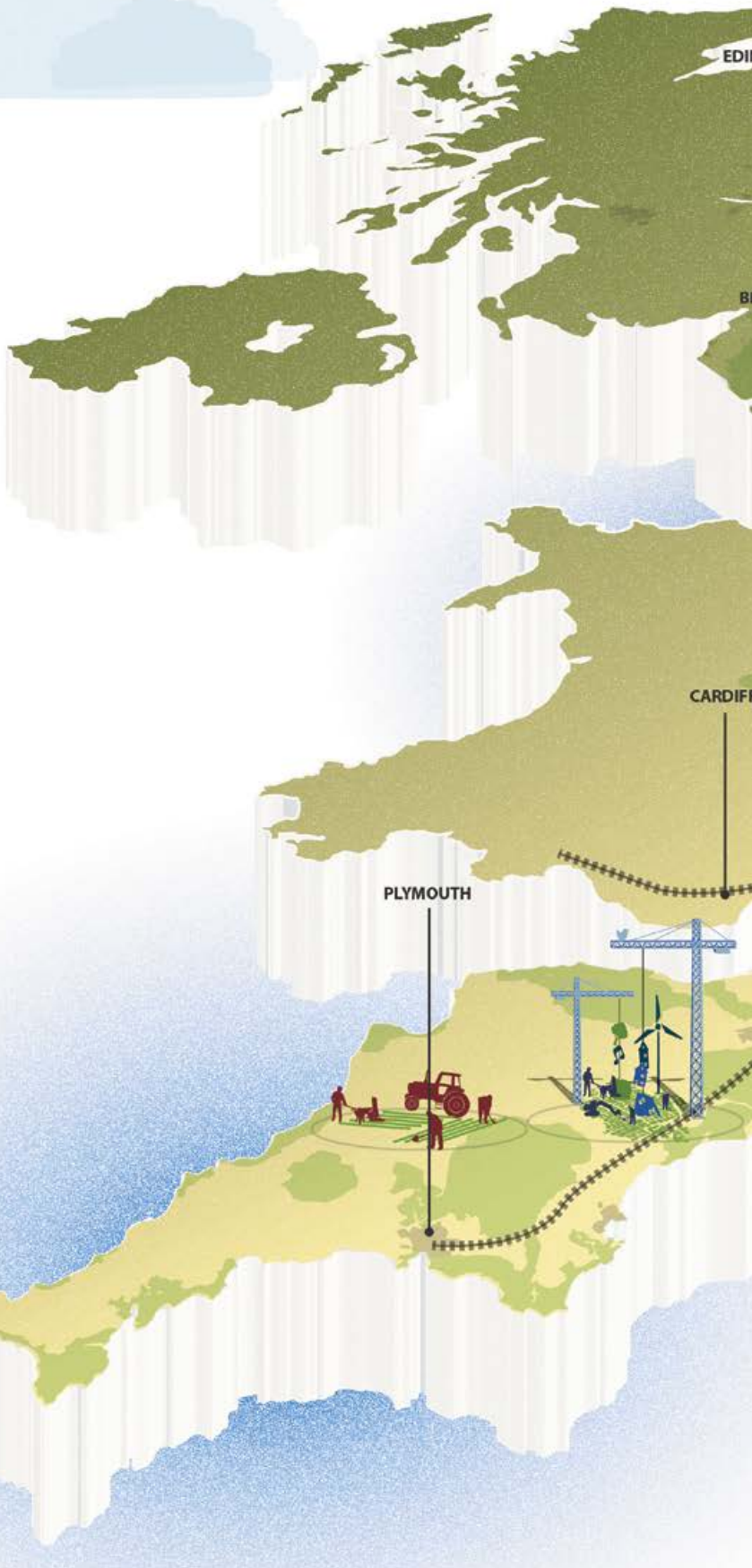
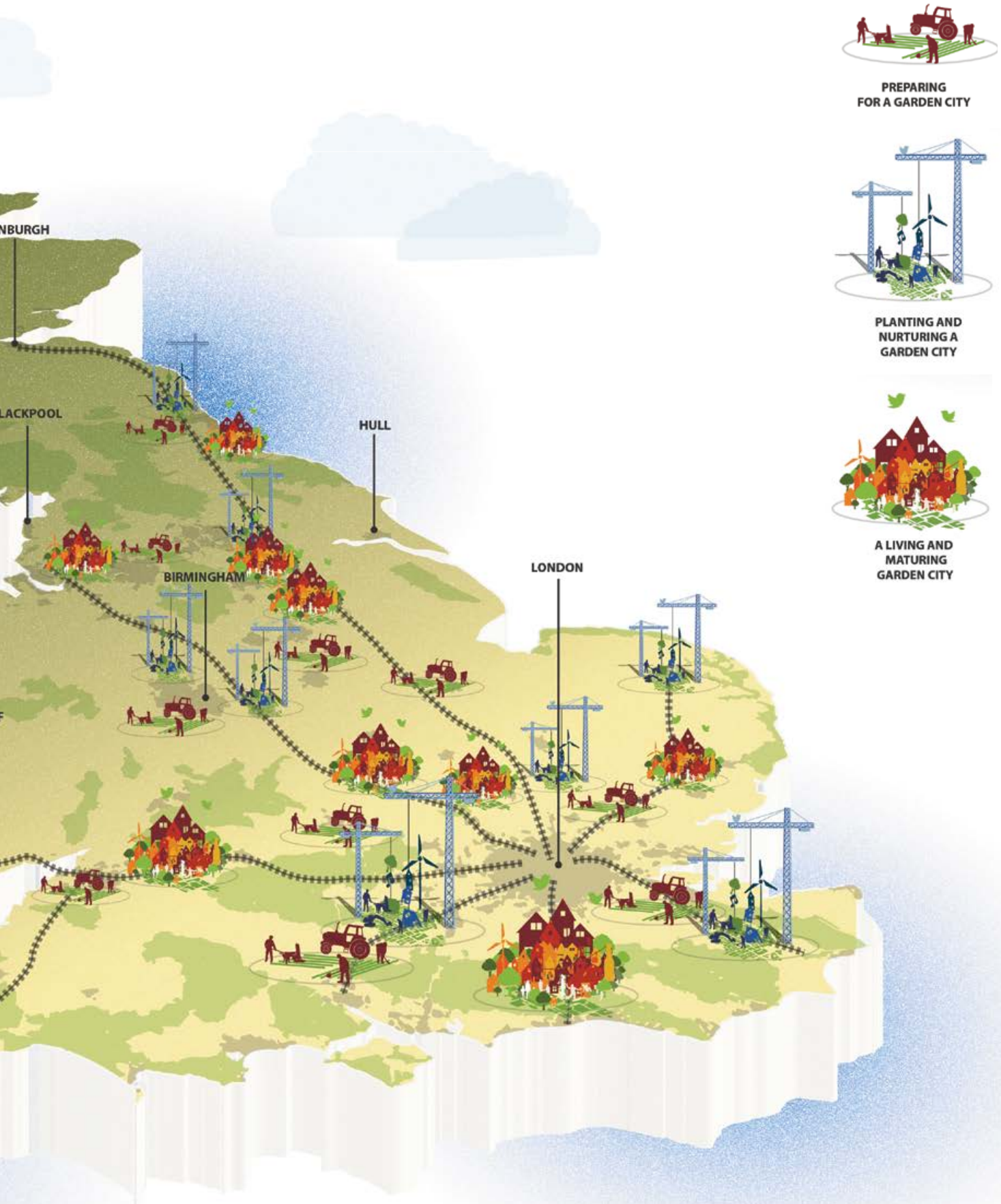


FIGURE III. NATIONAL GARDEN CITY OPPORTUNITIES MAP



PREPARING
FOR A GARDEN CITY

PLANTING AND
NURTURING A
GARDEN CITY

A LIVING AND
MATURING
GARDEN CITY

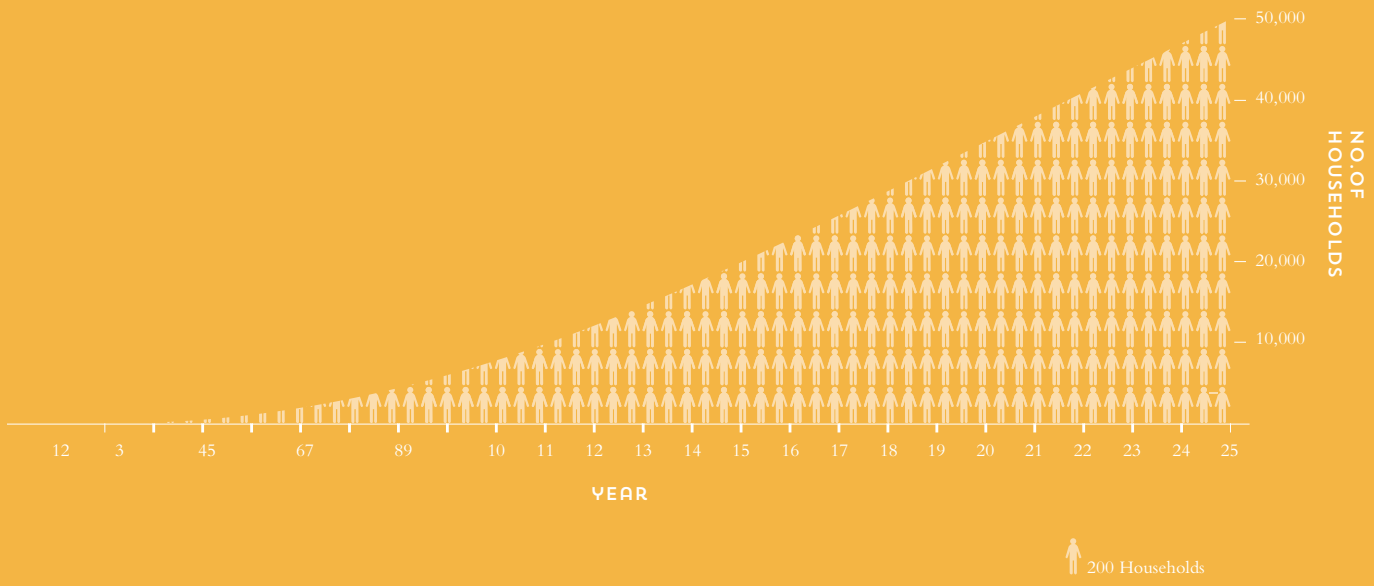
VISION

SUMMARY

Our vision for Garden Cities is as revolutionary in its own way as Howard's was to the Victorians. We must effect a step change in quality, a seismic shift in attitude and a revolution in the scale of delivery to really make a difference for the generations to come. A good measure is that the city be conceived in terms of the social experience it can offer, rather than against the house types for sale. Instead of being exclusively designed by 'experts' it will be encouraged to grow organically to a communal vision, owned by its residents and other stakeholders. It will celebrate the diversity of British culture and challenge the preconceptions of what a new city might be.

Our Route Map explains how this can be achieved to a greater or lesser extent at a national and local level, but engaging with the public is the nessessary starting point in any scenario.

FIGURE IV. TYPICAL PROFILE OF GARDEN CITY HOUSING COMPLETIONS



1 NATIONAL CAMPAIGN

STEP 1 ALONG OUR 'ROUTE MAP' BEGINS WITH THE PUBLIC - THE FUTURE RESIDENTS, PIONEERS AND GOVERNORS OF THE PLACES WE HOPE TO BUILD. WE NEED TO BEGIN BY ADDRESSING NATIONAL ATTITUDES TOWARDS CHANGE THAT ARE PREVENTING SUCH DEVELOPMENTS OCCURRING AT PRESENT.

In the UK today there is a very negative attitude towards development. Land allocations and proposals are 'challenged' and 'disputed', 'impacts' assessed and communities 'placated'. Developers, politicians and consultants seeking to promote development proposals frequently encounter negativity and distrust. **Communities feel that things are being done to them, rather than with or by them.** Little wonder then that the development industry is given a frosty reception.

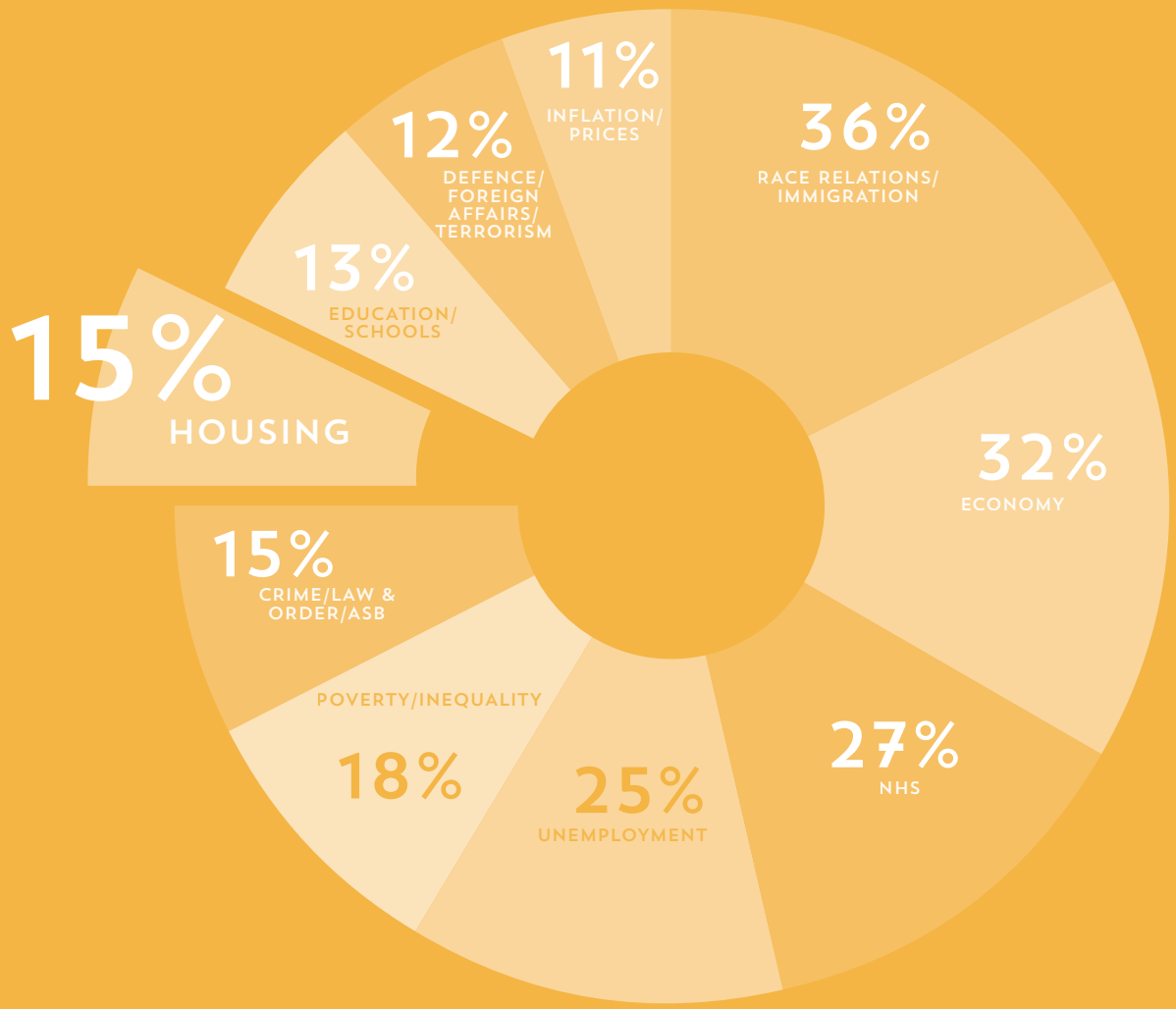
What is very clear is that few members of the community understand the impact which consistent under-delivery is having on them, the realities of need in the UK or indeed the benefits development can bring them and their family or the positive impacts it can have on their community or the UK as a whole. Even fewer people are sufficiently motivated by this information to vocally support development proposals.

Myths and untruths are spread about the sanctity and purpose of the Green Belt, about how much land house builders really control[10] and development industry profit margins, without taking the very considerable financial risks into account.

We wish to transform the development process into a positive one. Where transparency, and participation are the norm, and where the decision making process, leading to growth, is a genuine one. In these circumstances, we believe that the right kind of development, with the right level of involvement can become a desirable option when the demands for quality and delivery come from the community.

10. *Permissions to land: HBF: May 2014*

FIGURE 1.1. WHAT DO YOU SEE AS THE MOST/OTHER IMPORTANT ISSUES FACING BRITAIN TODAY?



Source: The Economist/ Ipsos Mori Issues Index; July 2014

80% OF HOMES ARE UNAFFORDABLE FOR THE AVERAGE WORKING FAMILY

(source: press release: shelter:june 2014)

25% OF 20-34 YR OLD (1.97MILLION) PEOPLE ARE LIVING WITH THEIR PARENTS

(source: Research report: shelter: July 2014)

46% IN 2010

↓

31% IN 2013 % OF PEOPLE WHO WOULD OPPOSE HOUSING IN THEIR AREA

(Source: public attitudes to new house building: DCLG: 2014)

NATIONAL CAMPAIGN

ESTABLISHING THE NEED FOR NEW HOMES

There have been a number of statistics released in recent months, seeking to bring the need for new homes and communities to the attention of the general public and tweak their social conscience. Although these statistics are starting to have an impact (See statistics presented on page 2), we believe there is a lot more we could be doing to build understanding and motivation.

By simply presenting the scale of the problem, people are unable to understand how the housing crisis affects them as individuals and therefore are not currently significantly concerned about the issue (See figure 1.1). Instead we believe an independent, transparent, and focused publicity campaign would enable us to;

UNDERSTAND
THE MOTIVATIONS OF THE GENERAL PUBLIC.

EDUCATE
AS TO THE IMPLICATIONS OF UNDER-DELIVERY AND THE REALITIES AND OPPORTUNITIES DEVELOPMENT OFFERS.

MOTIVATE
INDIVIDUALS TO VOICE THEIR THOUGHTS AND EXCITEMENT, AND EVEN BEGIN CONTRIBUTING TO DEVELOPMENT PROPOSALS THEMSELVES.

This Campaign would be the first and crucial step to not only Garden Cities but also development in general becoming something the public actively campaign for. In turn it can therefore become a localism agenda vote winner for all political parties.

Our view is that we need to begin by making the Campaign real and effective. On the 24th July we brought together an additional roundtable of Marketing, PR, Creative and Psychology specialists operating within and outside of the Property industry to inform this campaign and many of their ideas are reflected in our proposal[11].

WHO RUNS THE CAMPAIGN?

The heaviest criticisms of the current information being put forward in relation to the housing crisis, is focused upon the voices communicating the information. If these are at all perceived to be political, corporate, or anyone who will benefit financially from development, their opinion is often questioned and dismissed.

The Campaign therefore needs to be independent and unbiased. It cannot be led by the Government or a corporate body within the development field. Instead we are proposing it is established, funded and operated by **a cooperative of contributors,** all of whom may have something to gain from the campaign – be it branding association, opportunities or votes - but who are also all on an equal footing in terms of input and its success.

The Cooperative needs to include a diverse range of developers, housing associations, charities, local authorities, community groups, major brands, etc, but the steering group must be made up of a mixture of age groups and levels from these companies. The composition of the group and their views on development must also be open and transparently communicated from the outset.

11. *Full notes from the Campaign roundtable can be found in appendix 1.*

FIGURE 1.2. MOTIVATION PROFILES FOR THE KEY AGE GROUPS

THE YOUNG MINDS
16-25YRS

"HAVE AN ACTIVE SOCIAL CONSCIENCE"

"HUNGRY FOR ENTERTAINMENT AND INFORMATION"

"PASSIONATE AND VOCAL WHEN MOTIVATED"

"ARE CREATIVE & AMBITIOUS"

"DON'T NECESSARILY WANT TO OWN THEIR OWN HOME"

"DON'T UNDERSTAND THE ISSUES AND HOW THEY AFFECT THEM AS INDIVIDUALS"

"RESPECT AND TRUST NEEDS TO BE EARNED"

"SEEK FLEXIBILITY AND SELF EXPRESSION IN THEIR ACCOMMODATION"

"ARE SOCIALLY MOBILE – PHYSICALLY AND ONLINE"

"CARE ABOUT REPUTATION AND FASHION"

THE SQUEEZED MIDDLE
25-50YRS

"ARE ECONOMICALLY ACTIVE"

"HAVE MORE DISPOSABLE INCOME"

"ARE FRUSTRATED BY BUREAUCRACY"

"ARE TIME POOR"

"ARE FINANCIALLY DRIVEN"

"CARING (YOUNG FAMILIES OR ELDERLY PARENTS)"

"AWARE OF POOR DESIGN AND DEVELOPMENT"

"SPLIT INTO TWO CAMPS – THE HAVES(HOME OWNERS)AND HAVE NOTS (RENTERS)"

"DO NOT UNDERSTAND THE CONSEQUENCES OF REFUSING DEVELOPMENT"

THE GREY POUND
50+YRS

"ARE OFTEN TIME RICH"

"CONFIDENT & VOCIFEROUS"

"MAY BE AWARE OF CRISIS IN TERMS OF FAMILY MEMBERS"

"ARE CONCERNED ABOUT LEGACY - FAMILY AND COMMUNITY/ COUNTRY"

"ARE AWARE OF THE MISTAKES AND POOR DEVELOPMENT OF RECENT PAST."

"FINANCIALLY MOTIVATED"

"ARE CONCERNED ABOUT LONELINESS, ISOLATION & ILL HEALTH"

NATIONAL CAMPAIGN

THE CAMPAIGN BRIEF

The Cooperative's brief is to work together to understand the current position with regard to development attitudes in the UK, and deliver a pro-development campaign which reacts to this, highlighting the core fact that there is a critical economic need for immediate, increased and sustained growth within the UK.

The Campaign should consider the motivations of England's population through an integrated strategy – broadcast, print, outdoor, online and social channels. They will devise communications which build understanding around the **consequences of resisting (good and appropriate) development** and the potential benefits to communities provided by well designed places[12] while also equipping people with ways in which they can positively contribute to and participate in shaping their communities and economic growth for the country.

THE CAMPAIGN – UNDERSTAND

Action requires understanding. The roundtable discussion and our understanding of the market has suggested the motivation profiles of the key age groups shown in figure 1.2. These profiles are the first step in a critical understanding phase, which can be further advanced via unbiased and considered polling and engagement.

CAMPAIGN FOCUS

Through the roundtable discussions and subsequent consideration we found a number of similar motivations across the age groups but also a number of differences. The Young Minds offer a strong voice, an energy and enthusiasm and are the group who will gain the most from this proposed long-term plan. They also have the most to lose from a lack of action. This is an Economics Prize and The Young Minds (see figure 1.2) will become the economic drivers of the future. There is also a belief that the voice of youth carries the greatest weight with the public in terms of turning the opinions of The Squeezed Middle and The Grey Pound age groups, and therewith the politicians. In the first instance we therefore propose to bias the campaign towards this age group, albeit many of the channels and messages will still reach and motivate the Squeezed Middle and Grey Pound.

As a parallel exercise we suggest combining attention on the youth with a secondary focus on business. New Garden Cities represent an enormous opportunity for business growth. Beginning with skills and training relating to construction, extending to service industries and the support networks that underpin the anticipated entrepreneurialism, a push on business engagement will reinforce the economic argument. Consequently our economic assessment of the Garden Cities has a strong employment focus and local promotion to businesses is picked up in the location specific 'Step 8 – Local Promotion', of the Route Map.

EMERGING POLLING RESEARCH

To support the primary focus of the Campaign, we have undertaken some preliminary polling research to clarify the position and understanding of 16-25yr olds. Our research, undertaken via YouGov's weekly Omnibus poll, surveyed 1,000 people, asking them five key questions;

- What are your biggest concerns about your future?
- To what extent to do you agree that 'more homes need to be built in the UK'?
- Where would you ideally like to live?
- Do you ever think you will own your own home?
- What do you think would happen as a result of more homes being built in the UK?

Full statistical results from the research can be found in appendix 1, and some of the key statistics informing our Campaign going forwards are shown opposite. Further work in terms of understanding the blocks and motivations of this target group is required to inform the ultimate Campaign approach, but this provides an initial insight to support our thoughts and the proposals we set out here.

12. *CABE found that 85% of people agreed with the statement 'better quality buildings and public spaces improve the quality of people's lives'; The Value of Good Design; CABE/MORI; 2002*

66% OF YOUNG PEOPLE (16-25YRS) WHO DON'T CURRENTLY OWN A HOME BELIEVE THEY WILL ONE DAY.

THIS FALLS TO

47%

OF 25-39 YEAR OLDS WHO ARE NOT ALREADY ON THE HOUSING LADDER.

55% OF YOUNG PEOPLE (16-25YRS) AGREE THAT MORE HOMES NEED TO BE BUILT IN THE UK.

THIS AWARENESS OF NEED GROWS SLIGHTLY THROUGH THE AGE GROUPS RISING TO

61%

IN 55+ YR OLDS.

58% OF YOUNG PEOPLE (16-25) SAID THAT AN URBAN AREA WOULD BE THEIR IDEAL PLACE TO LIVE

44% OF YOUNG PEOPLE (16-25) BELIEVE THAT MORE HOMES IN THE UK WILL MAKE HOUSING MORE AFFORDABLE,

BUT

39%

BELIEVE IT WILL HAVE A NEGATIVE IMPACT ON THE ENVIRONMENT

36%

BELIEVE IT WILL LEAD TO MORE GENERIC PLACES

ONLY **24%**

BELIEVE IT WILL REDUCE HOMELESSNESS

ONLY **14%**

BELIEVE IT WILL CREATE NICER PLACES

NATIONAL CAMPAIGN

THE CAMPAIGN - EDUCATE

The 'Hard Sell' element of our Educate stage is aimed at highlighting discontent and appealing to the social conscience of individuals.

When faced with a social or environmental cause The Young Minds can be motivated towards an opinion and speak out. If communicated in a suitably emotive fashion, strong messages regarding the increasingly untenable prospect of home ownership, the continued dreadful living conditions some people face and the unfairness of minorities of voters campaigning against change, when housing need is so great, will begin to conjure discontent that will in turn encourage discussion and the search for an answer.

This element of the Campaign would develop the work Shelter and others have undertaken to date, moving issues beyond simple statistics (which many struggle to relate to) to translate them into real life stories – a far more powerful communication tool. The recent TSB Bank advertising campaign "local banking for Britain" uses this technique telling a story via animation in order to convey a complex, yet refined message (figure 1.4)[13]. Utilising a multi-channel approach, from TV to radio, outdoor advertising to You Tube and Twitter, we would seek to share content and seed discussions on points such as;

- Draw parallels between living conditions today and in Victorian times, undersupply and poor quality housing.
- Tell the story of people across the age group (16-25yrs) who are suffering as a consequence of a housing shortage; living in poor accommodation; living with parents; graduates leaving university with debt paying excessive rents; bringing up young families.
- Present the impact on those from all age groups/ socio-economic levels struggling to find a home, secure a decent quality of life, e.g. the impact of a long distance commute; the aged parent with resident professional children; the university lecturers who can never own a home close to their university,
- Highlight the struggle of the key workers, who are needed to support your life and the standards we've all come to expect on a day-to-day basis.

DISPEL COMMON MYTHS

Alongside the 'Hard Sell' element of the Campaign we also propose to educate people to dispel many of the common myths around development and open space within the UK – the **'Did you know..?' campaign.** Statistics alone are insufficient to sway opinion and further storytelling is required.

A series of short stories, sharp, honest and shareable that accurately present the myth and the reality is required. Fronted by young, known personalities alongside other young people, all of whom may or may not be sceptical about the issues tackled, the format is non-prescriptive to encourage creativity and variety. Livity's recent campaign launching "Top Boy" delivered a series of short videos directed at young people, that were shared widely through social media (figure 1.3).

Released in a phased fashion to build momentum, the films we are proposing would cover issues such as;

- Demonstrate the economic consequences for individuals of no development in a community
- What does growing housing need mean for a graduate today?
- How much of the UK is actually built upon? Are we really overcrowded or overdeveloped?[14]
- What is Green Belt? How is it used? How could it be put to better use?
- What are the real economic opportunities of development for you? Show the improvements and results possible.
- Explain the opportunity to influence – what can you bring/contribute?
- Simple explanations of how new Garden Cities will be more sustainable?
- Demonstrate the diverse range of self-build opportunities and the benefits of sweat-equity.

13. *Stills from the Joint creative agency and TSB bank; https://www.youtube.com/watch?v=z9g90L9-Dcc*

14. *Just 4% of land owned by Britain's larger home builders has an implementable planning permission but is still awaiting start on site; 'Permissions to land – debunking the land banking myth' ; HBF; May 2014*

NATIONAL CAMPAIGN

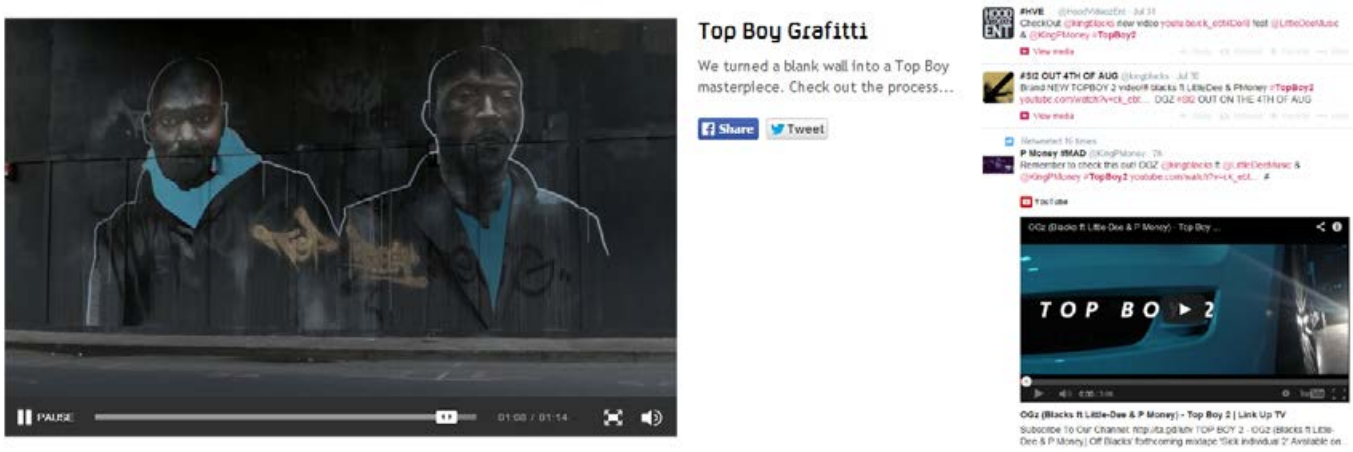


FIGURE 1.3. THE "TOP BOY" CAMPAIGN WAS LAUNCHED BY LIVITY, TARGETING YOUNG PEOPLE AND SUCCESSFULLY DROVE EXTENSIVE INTERACTION AND CONTRIBUTION VIA SOCIAL MEDIA © LIVITY/CHANNEL 4

FIGURE 1.4. "LOCAL BANKING FOR BRITAIN" TSB BANK ADVERTISING CAMPAIGN ©JOINT / TSB BANK

NATIONAL CAMPAIGN

CALL TO ACTION

These educational stages of the Campaign are proposed to drive the debate, build awareness and encourage people to contribute. An online platform is proposed to drive all of this activity and interaction to one place, offering Twitter feeds and YouTube Links, opportunities to submit to polls and easy access to further information. Engagement with this multi-media platform needs to be simple and quick, to capture and entertain the target audience but also continue the educational motive, while adding to the content.

THE CAMPAIGN - MOTIVATE

This phase of the Campaign is about building momentum. Entertainment and the building of a pro-development voice continue, but we now couple this with tangible actions. We want to answer the immediate questions arising – How can I help? How can I make this better? How can I contribute? What is in it for me?

Storytelling continues to be the key with this phase, but can be further brought to life through gamification, flash mobs, competitions, Vines, live events, etc.

The Young Minds need to begin to see how they can get involved. They need to understand the economics of place, how city building works, how their design ideas can influence architecture and places, how their business ideas could start a community, how their creative flair for street art could help to build a sense of identity, where there is none yet.

15. *The 'Making the City Playable' Conference is being held in Bristol on the 10-11th Sept 2014 and seeks to develop and drive activities that drive involvement , enthusiasm and momentum for cities across their population; www.makingcitiesplayable.co.uk*

16. *www.futurecities.org.uk*

NATIONAL CAMPAIGN

Some ideas on how to deliver this type of motivation could include;

- A competition that encourages The Young Minds to develop films and Vines that communicate more of their ideas about development.
- The development of a Sim City/Minecraft adaptation to enable players to build a new city/place through gaming with points/prizes for how well it has been delivered, communicating the benefits and opportunities, as well as limitations.
- External events that dramatise the issues and solutions and engage people, excite and inform; unusual city interventions such as those being discussed at the 'Making the City Playable' conference later this year[15].
- A 'Pioneers' drive – seek out young entrepreneurial people excited by the opportunities a new settlement offers them, nurturing and feeding their enthusiasm through workshops and events.
- Work with The Young Minds to develop built and open-space development solutions and ideas that answer their needs and inspire their engagement.
- Join up with the Future Cities debate[16] in order to demonstrate to The Young Minds technological opportunities in new cities/places.
- Encourage the emergence of a 'Hackathon' centred upon Future Cities and technology.
- Encourage crowd-funding initiatives – 'Kickstart' your own city and focus on city economics.

We want The Young Minds to be captivated by the opportunities these places present, to become excited by the prospect of development near them or even guided by them. Success will be measured by the extent that we see fierce competition over the locations of new development nationwide.

By creating 'noise' we not only highlight the issues to a broad audience within our target market but are also able to secure wider press coverage, marketing content and activity to heighten the profile of the campaign. The volume of noise required to turn the heads of The Squeezed Middle and The Grey Pound and change opinion countrywide is not underestimated, but we believe this has the beginnings of a valid, grass roots argument.

Once young people begin to take the lead and start driving their own new communities across England, the Press, Politicians and the increasingly isolated anti-development lobby will struggle to ignore them. This is our aim and the primary objective of the Campaign.

2 BUILDING POLITICAL CONSENSUS AT THE NATIONAL LEVEL

The issue for political parties of all persuasions is the same. The campaign is a call for action, but consensus needs to be developed on how to act.

It is not the legislative nature of the planning system that is at fault, but the way in which the system is implemented. After all, the legislation still exists for large scale development through the New Towns Act, Enterprise Zones, Local Development Orders, and Nationally Significant Infrastructure Projects (NSIPs) etc. However the culture of planning in the last 30+ years has focussed minds upon the small, least-contentious proposals meeting development needs. As a result, supply has been restricted, development un-mixed, house prices inflated, while landowners have extracted the majority of development value due to the limited supply of allocations. There has been little investment in opportunities beyond a 10 year window, due to the perceived risks involved.

Providing greater certainty of return on investment ('Patient Money') for the long-term by planning for the next 20-30 years (or more), provides the key to unlocking larger scale developments, including Garden Cities.

POLITICAL CYCLES

As part of our Primary Submission process, we organised a 'Think-tank' event comprising 20+ experts on various aspects of housing delivery, from institutional land ownership and social sustainability, to harmony in design and tax increment finance (see appendix 2 for details). The Think-tank considered the above constraints and concluded that we need to make Garden Cities less party political - give them the time needed to be championed, planned and then implemented without changes in political direction. We have since followed up with a second event looking at this in greater depth.

Long-term investment requires long term certainty in planning for development and in the funding of major infrastructure. A stable climate of Government backing for Garden Cities is therefore a key component of 'de-risking' the investment.

MEETING THE NEED

Meeting the need for 5.8 million additional homes by 2033 will require multiple Garden Cities while national policy backing will help to speed planning processes and thus the delivery of new homes. The local identification of Garden City sites may enable the start to a number of new Garden Cities in the coming decade – hence the potential 'bypass' of this stage in the Route Map. However, many more may be achieved if the principle of having new Garden Cities in specific broad locations is established at the national level.

Absent a National Spatial Plan, or some equivalent Parliamentary backing and each time a new Garden City proposal is challenged at a local level, it will be necessary for the related public inquiry to examine the case for new Garden Cities and the need for one in the broad location of the particular proposal – before going on to examine in more detail the specific boundaries and contents of the new Garden City proposal.

Parliamentary backing for new Garden Cities in principle and for specified localities for new Garden City schemes will settle the need for the proposal, enabling local choice to work by focussing on the identification of the specific scheme and the delivery of the development, rather than repeatedly re-arguing its need.

THE OBJECTIVES OF NATIONAL PLANNING FOR GARDEN CITIES

We envisage the requirement for **a mechanism to establish the framework for Garden Cities and major growth,** including infrastructure provision. The objectives of the selected mechanism will be to:

1. Secure commitment to national policy to deliver multiple new Garden Cities;
2. Secure commitment to the delivery of infrastructure of more than a local scale to support the delivery of the Garden Cities;
3. Identify the broad locations for new Garden Cities throughout England;
4. Identify and recommend/implement the legislative changes necessary to facilitate the establishment of Garden Cities (including Garden City Commissions – see Stage 4); and,
5. Support the establishment of Garden City Mayors and their remits in each of the identified broad locations to carry forward the steps identified from Stage 4 onwards.

The selected mechanism will need to identify broad strategic locations for Garden Cities according to the following criteria:

- Places where infrastructure already exists
- Proximate to economic drivers
- Away from environmental constraints
- Areas where there is demand for homes
- Large estates, public sector land holdings or areas where the two collide
- Local skills profile
- Opportunities to link to Higher Education

The mechanism will also need to identify spatial requirements and cross-sector implications (education, transport, energy, water) for each of the new Garden Cities across a 30-50 year horizon.

BUILDING POLITICAL CONSENSUS AT THE NATIONAL LEVEL

IDENTIFYING THE MECHANISM

The choice of mechanism will depend on the willingness of national Government to engage in the national level of planning. We envisage a range of potential mechanisms, outlined in Table 2.1.

PLANNING PRACTICE GUIDANCE

In the event that the Government is not able to adopt any of the mechanisms to secure a national approach to the identification and delivery of Garden Cities, it will still be necessary for guidance to be given to local authorities to assist in delivery. We envisage an addition to the national Planning Practice Guidance to advise local authorities on sponsoring and establishing the approach to Garden Cities described from Step 4 onwards of the Route Map.

The guidance should cover:

- The Government's vision for Garden Cities with reference to its wider social, environmental and economic objectives;
- The Government's expectation of what a Garden City should deliver in terms of design, open spaces, sustainability etc.
- The election of Garden City Mayors;
- Establishing Local Garden City Commissions;
- The process of devising and adopting Garden City Development Plans;
- The use of Local Development Orders and design frameworks to manage development; and,
- General guidance on the application of planning powers in ways which minimise risk and delay in the development of Garden Cities, accelerating the steps between adoption of the Garden City Development Plan and giving consent to build individual schemes;
- The use of incentives (bonds or shares) to aid the development of Garden Cities and provide a sense of ownership for all those involved/affected (not compensation).

BUILDING POLITICAL CONSENSUS AT THE NATIONAL LEVEL

		HOW ESTABLISHED	SUSCEPTIBLE TO GOVERNMENT CHANGE?	LEGISLATIVE CHANGE REQUIRED?	COMMENTS
OPTION 1	NATIONAL PLAN LED BY DCLG	Government instructs Civil Servants to prepare draft National Spatial Plan	Yes	Yes – introduce National Spatial Plan into Development Plan system	'Centralist' approach requiring significant investment of Civil Service time (with consultants) to draft Plan and take through Parliamentary approval.
OPTION 2	PEER-LED	Government appoints Peer (or Peers) to lead investigation into broad locations for garden cities	Yes – although intended appointment would be for 10 year term	No – Peer in advisory role to Government	This approach relies on identifying a suitable Peer or Peers to lead the process and prepare the report(s) – although implementation of the recommendations would rely on Government and Parliamentary support. Subject to the appointed person(s), it may not be within their field of expertise to advise on legislative changes.
OPTION 3	ROYAL COMMISSION FOR NEW GARDEN CITIES	Government establishes RC for specific purpose and potentially for specific timescale	No – once established RC persists until task or timescale completed	No – but recommendations and advice influential	An RC on New Garden Cities would have the ability to gather evidence, including from the broad localities under consideration and make recommendations to Government for policy adoption. In gathering evidence and preparing advice, the RC could also provide appropriate advice on legislative changes to support Garden City delivery. RCs tend to be slow-moving in gathering evidence and making recommendations – although time taken at this early stage may pay dividends in speeding the process of delivery as the Garden City programme is rolled out across the country.

TABLE 2.1. NATIONAL MECHANISMS TO IDENTIFY BROAD LOCATIONS FOR GARDEN CITIES

3 SIFTING TO ESTABLISH OPPORTUNITY AREAS

THE OPTIMAL LOCATION FOR A NEW GARDEN CITY

Whether as guidance, a clear National Spatial Plan or just to inform national debate, our Think-tank events have confirmed the need for an overview of the capacity of the country to absorb a wave of new Garden Cities.

In the context of three phases of New Towns, totalling 27 new or re-invented places, the notion that Britain should once again turn to new settlements to resolve the housing crisis is a logical one.

However either in parallel with, or in advance of local measures to identify sites, there is a firm belief amongst practitioners canvassed, that there needs to be a **location-led process** that provides a rationale in terms of identifying the most appropriate locations for growth.

Given that this is a submission to an economics prize, we have prioritised locations where Garden Cities are needed and likely to be economically successful, rather than simply where the planning process might find least resistance. We believe that a location must have the raw materials for economic success for it to function sustainably and deliver the social benefits inherent in the Garden City model.

Depending on the specific objectives and purpose of the new Garden City (Step 6 sets out models for each of these), **the location will highly influence the potential for success or failure.** In the right location the new settlement would be economically and socially viable and sustainable for the long term, making a positive contribution to economic growth, housing delivery, population re-balancing, regeneration or a combination of all of these. In the wrong location the opposite could be the result.

It is possible, using Geographic Information System (GIS) data to map and quantify relevant criteria so that a robust assessment can inform the guidance at a national level and decision making locally. In this chapter we present the results of an updated strategic 'sifting process', using GIS data, which identifies the areas of the country with the greatest potential to successfully deliver a new Garden City. The results of our 'sifting analysis' are presented in a series of maps and diagrams over the following pages with reference to other maps in the appendices.

The purpose of this exercise is to identify broad "Opportunity Areas" where a new Garden City is likely to be most successful, with reference to the identified objective (such as economic growth, housing delivery, population re-balancing or regeneration). The areas identified in our Opportunity Maps are the most suitable for meeting these objectives.

The sifting approach has followed a structured process:

1. Identify Strategic Housing Market Assessments (SHMAs)
2. Rank SHMAs according to the potential to attract commerce and industry
3. Rank the SHMAs according to housing supply / demand pressures
4. Exclude AONBs and National Parks
5. Map and rank areas of the UK by proximity to existing major strategic connectivity
6. Map existing cities and major towns and their 'zone of influence'
7. Map Universities and existing economic 'hot spots'
8. Map Local Skills profile of SHMA to identify areas with most potential

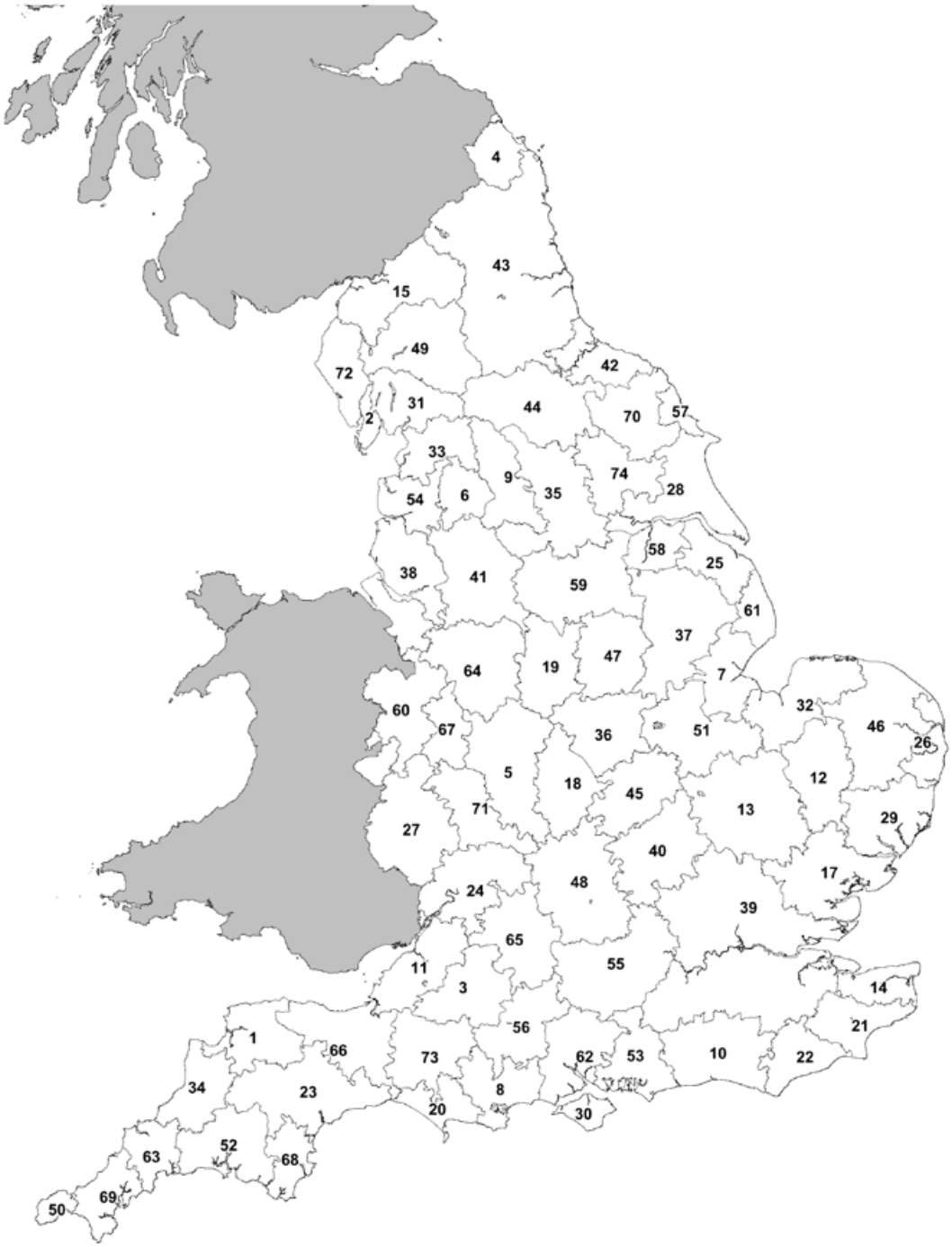
SIFTING TO IDENTIFY AREAS OF OPPORTUNITY FOR NEW GARDEN CITIES IN ENGLAND

IDENTIFY STRATEGIC HOUSING MARKET AREAS (SHMAs)

In defining broad areas we have sought to refine and examine the sifting criteria within established housing market area boundaries.

SHMAs are geographical areas which are relatively self-contained in terms of reflecting people's choice of location for a new home i.e. a large percentage of people settling in the area will have sought a house only in that area.

There are various definitions of SHMAs. We have utilised the strategic level SHMA which reflects commuting or travel to work patterns – by its very nature this level of SHMA will be drawn around key regional and sub-regional economic centres. This is considered an appropriate level with which to determine the broad location of a new Garden City and these have been used in the collation and analysis of data. Figure 3.1 shows the SHMAs.



1 Barnstaple
2 Barrow-in-Furness
3 Bath
4 Berwick-upon-Tweed
5 Birmingham
6 Blackburn & Burnley
7 Boston
8 Bournemouth
9 Bradford
10 Brighton
11 Bristol
12 BuryStEdmunds
13 Cambridge
14 Canterbury & Ramsgate
15 Carlisle
16 Chester & Birkenhead
17 Colchester
18 Coventry
19 Derby
20 Dorchester & Weymouth
21 Dover & Ashford
22 Eastbourne & Hastings
23 Exeter
24 Gloucester & Cheltenham
25 Grimsby
26 GtYarmouth & Lowestoft
27 Hereford
28 Hull
29 Ipswich
30 IsleOfWight
31 Kendal
32 KingsLynn
33 Lancaster
34 Launceston & Bude
35 Leeds
36 Leicester
37 Lincoln
38 Liverpool
39 London
40 Luton & MiltonKeynes
41 Manchester
42Middlesbrough
43 Newcastle
44 Northallerton
45 Northampton
46 Norwich
47 Nottingham
48 Oxford
49 Penrith
50 Penzance
51 Peterborough
52 Plymouth
53 Portsmouth
54 Preston & Blackpool
55 Reading
56 Salisbury
57 Scarborough
58 Scunthorpe
59 Sheffield
60 Shrewsbury
61 Skegness
62 Southampton
63 StAustell
64 Stoke-on-Trent
65 Swindon
66 Taunton
67 Telford
68 Torquay
69 Truro
70 Whitby & Malton
71 Worcester
72 Workington & Whitehaven
73 Yeovil
74 York

FIGURE 3.1. MAP SHOWING THE SHMAS OF ENGLAND

1. THE RANKING OF SHMAS ACCORDING TO THE POTENTIAL TO ATTRACT COMMERCE AND INDUSTRY

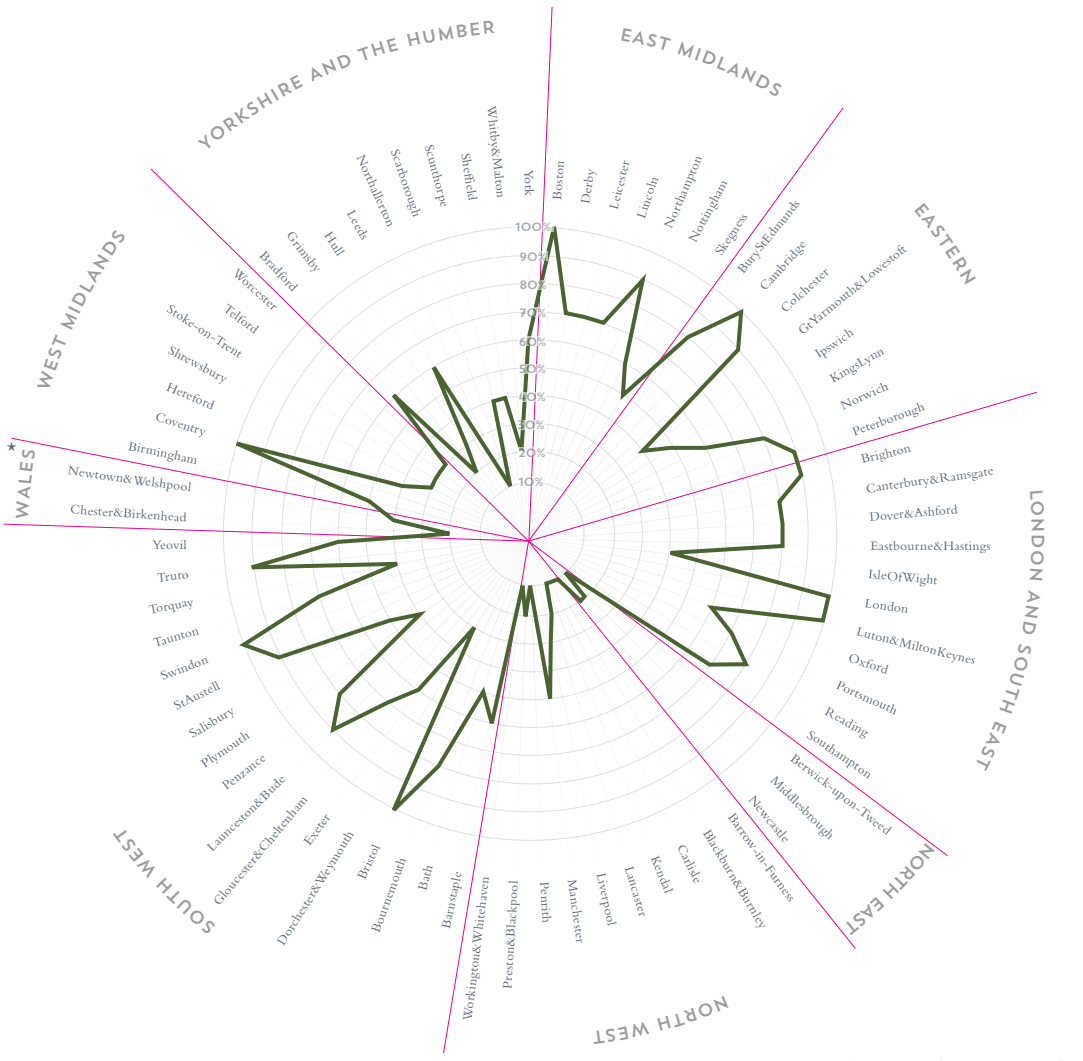
POPULATION GROWTH PROJECTIONS

The 2012-based Sub National Population Projections, produced by the Office for National Statistics (ONS), provide the latest official population projections through to 2037.

Assessing projected population growth across the SHMAs provides a more focused assessment of priority areas. **The English SHMAs with the highest levels of projected population growth (in absolute terms) are London, Birmingham and Manchester, along with the surrounding hinterlands.** Over the 25 year projection period, the combined population of these SHMAs is set to grow by more than 4 million, representing the majority increase in growth in English cities for the period.

Figure 3.3 presents a heat map of the predicted population growth between 2012-2037 and figure 3.2 presents this data by SHMA.

Note that the percentages on the chart below refer to the SHMA's ranking relative to the other SHMAs in the country – they do not relate to actual values. Authorities at 100% are those expecting the highest growth, whilst those at 10% are those expecting the lowest growth. This principal applies to all of the subsequent charts in this chapter.

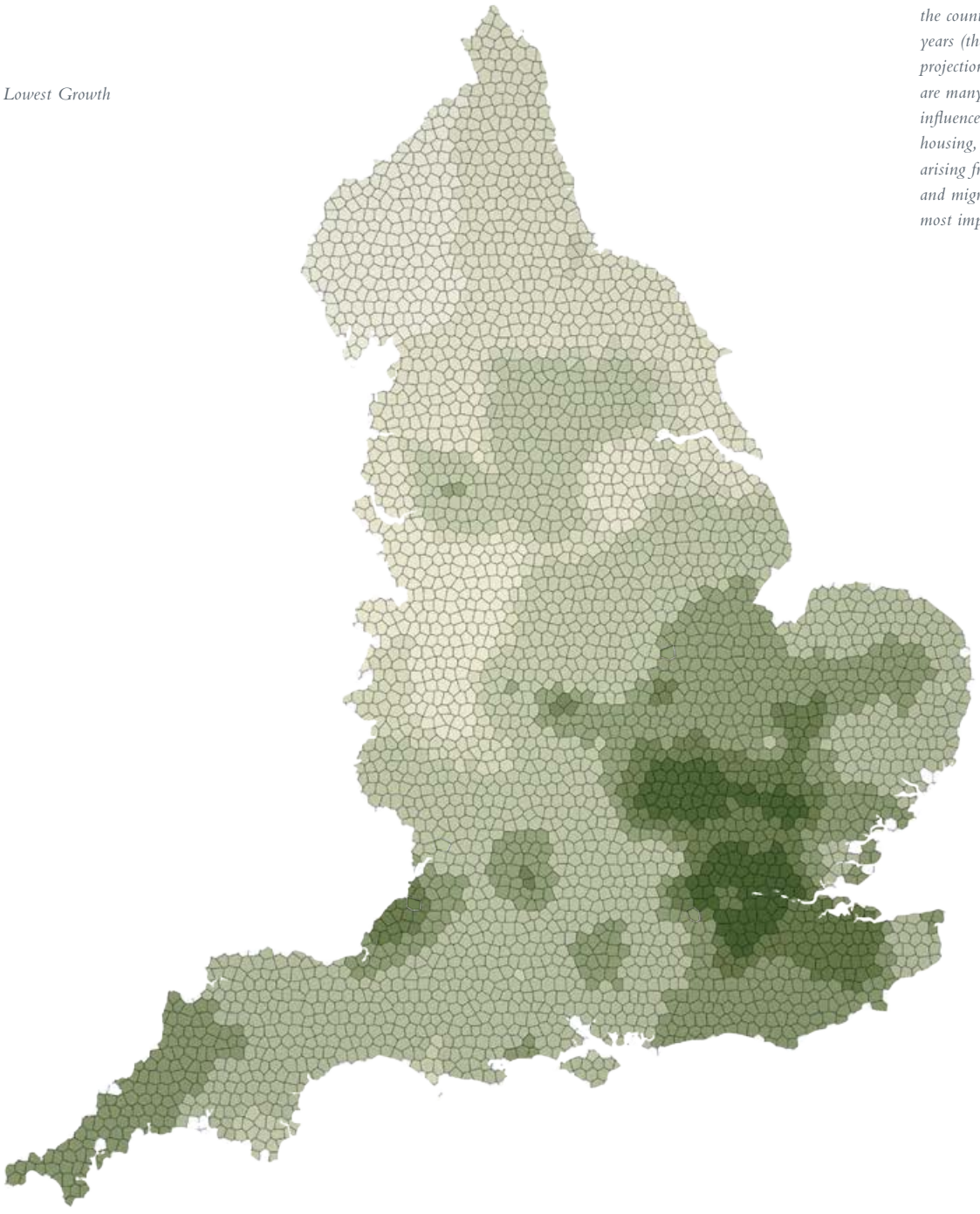


*Cross Border SHMAs only'

FIGURE 3.2. RADAR DIAGRAM OF POPULATION GROWTH BY SHMA AND REGION

Highest Growth

Lowest Growth

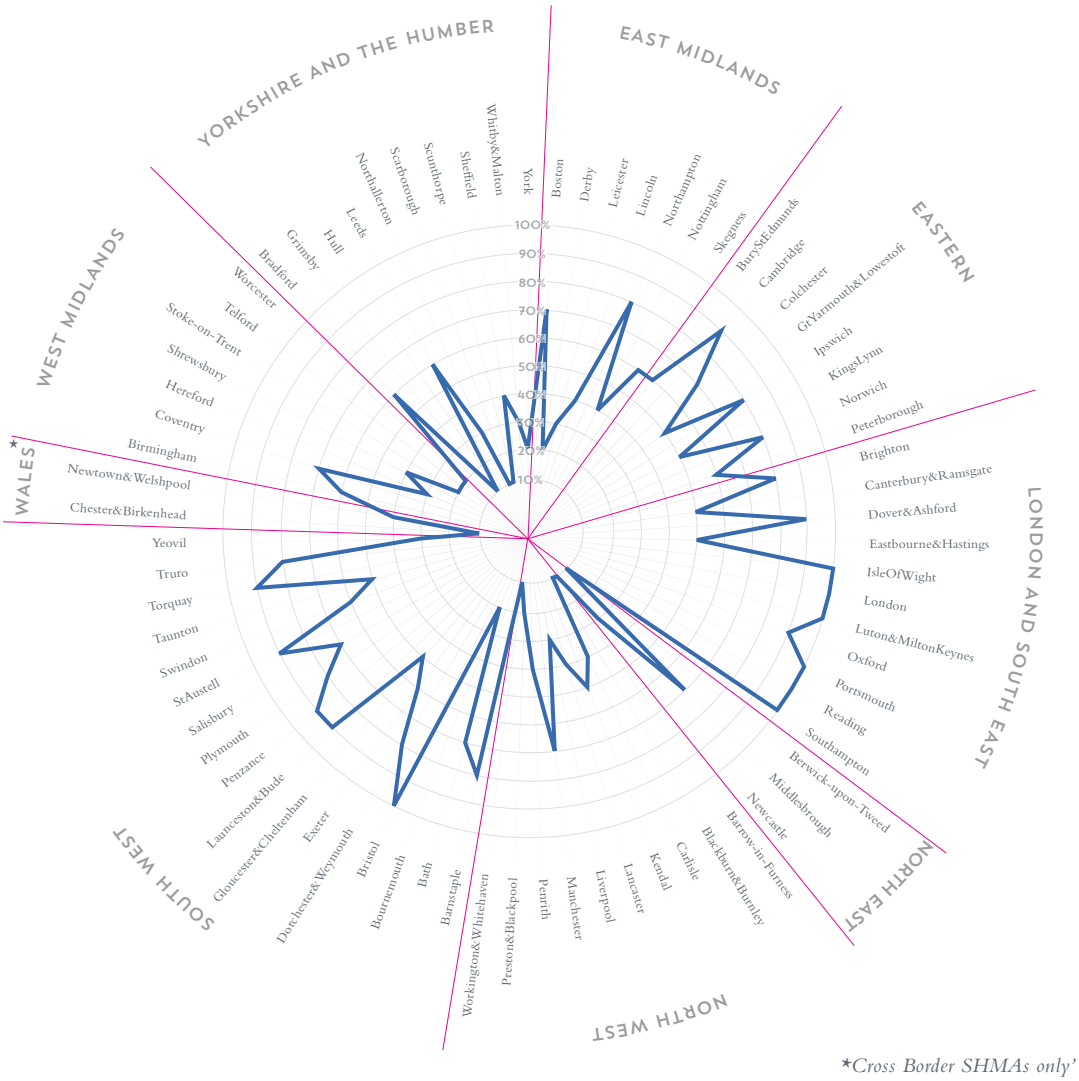


Data from the ONS 2012 Sub-National Population Projections has been used as a starting point for identifying how population growth might be distributed across the country over the next 25 years (the full extent of the projection). Although there are many other factors which influence the demand for housing, population growth arising from natural change and migration is one of the most important.

FIGURE 3.3. HEAT MAP OF POPULATION GROWTH

EMPLOYMENT GROWTH FORECASTS

Employment growth forecasts reveal the extent to which local economies are expected to grow over the coming decades. SHMAs which are forecasted to generate the largest numbers of jobs are likely to face the most severe housing market pressures. **Economic buoyancy and strong employment prospects attract net in-migration, boosting the local population and increasing competition for a limited supply of housing.** Again, the SHMAs demonstrating these characteristics most clearly include London, Birmingham and Manchester. Figure 3.5 shows total employment growth heat map and figure 3.4 presents this data by SHMA.

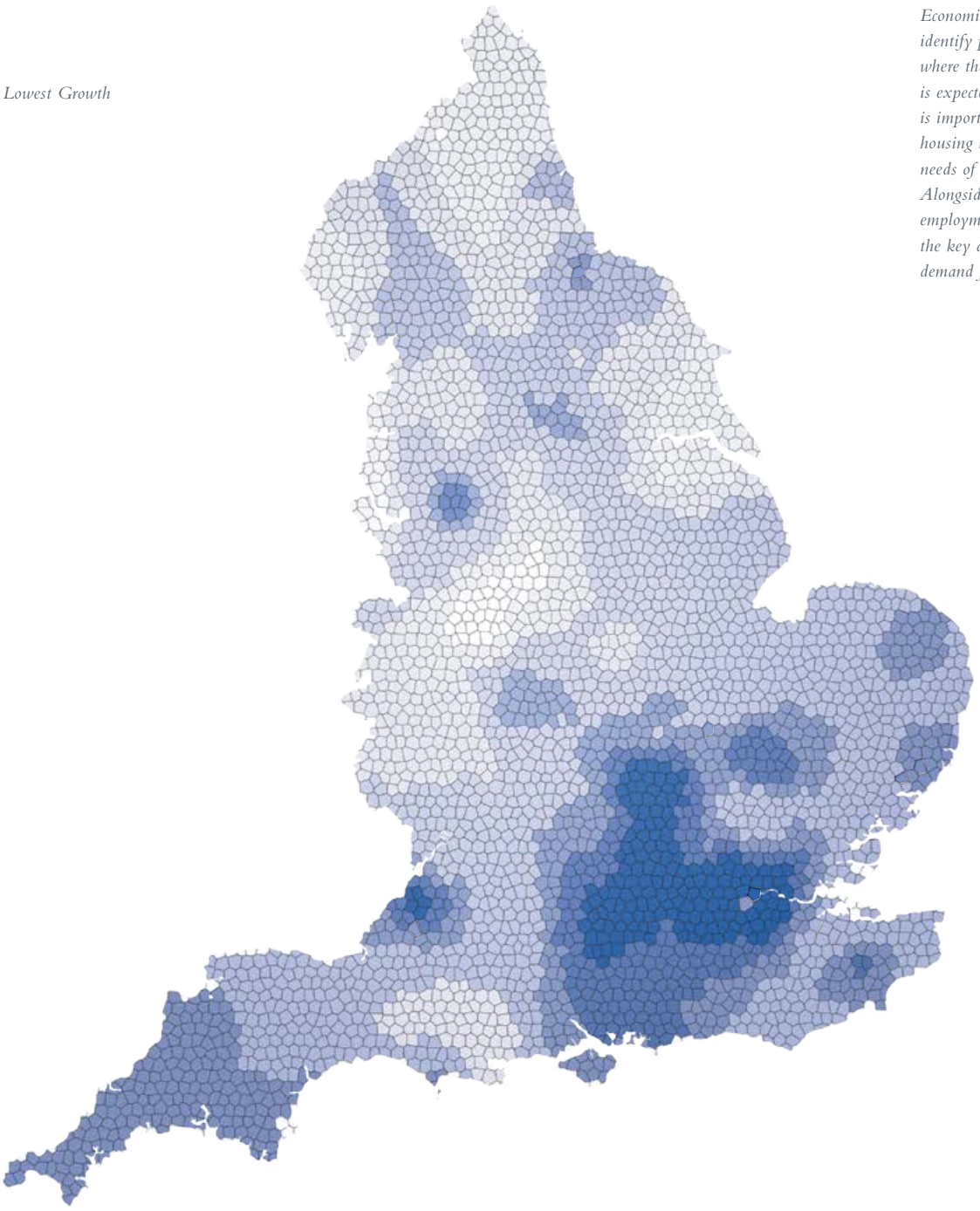


*Cross Border SHMAs only'

FIGURE 3.4. RADAR DIAGRAM OF EMPLOYMENT GROWTH BY SHMA AND REGION

Highest Growth

Lowest Growth



There is a strong link between the provision of housing and the realisation of economic growth potential. Employment growth forecast data from Experian Economics have been used to identify parts of the country where the demand for labour is expected to be highest. It is important that sufficient housing is built to meet the needs of a growing workforce. Alongside population growth, employment growth is one of the key determinants of future demand for housing.

FIGURE 3.5. HEAT MAP OF EMPLOYMENT GROWTH

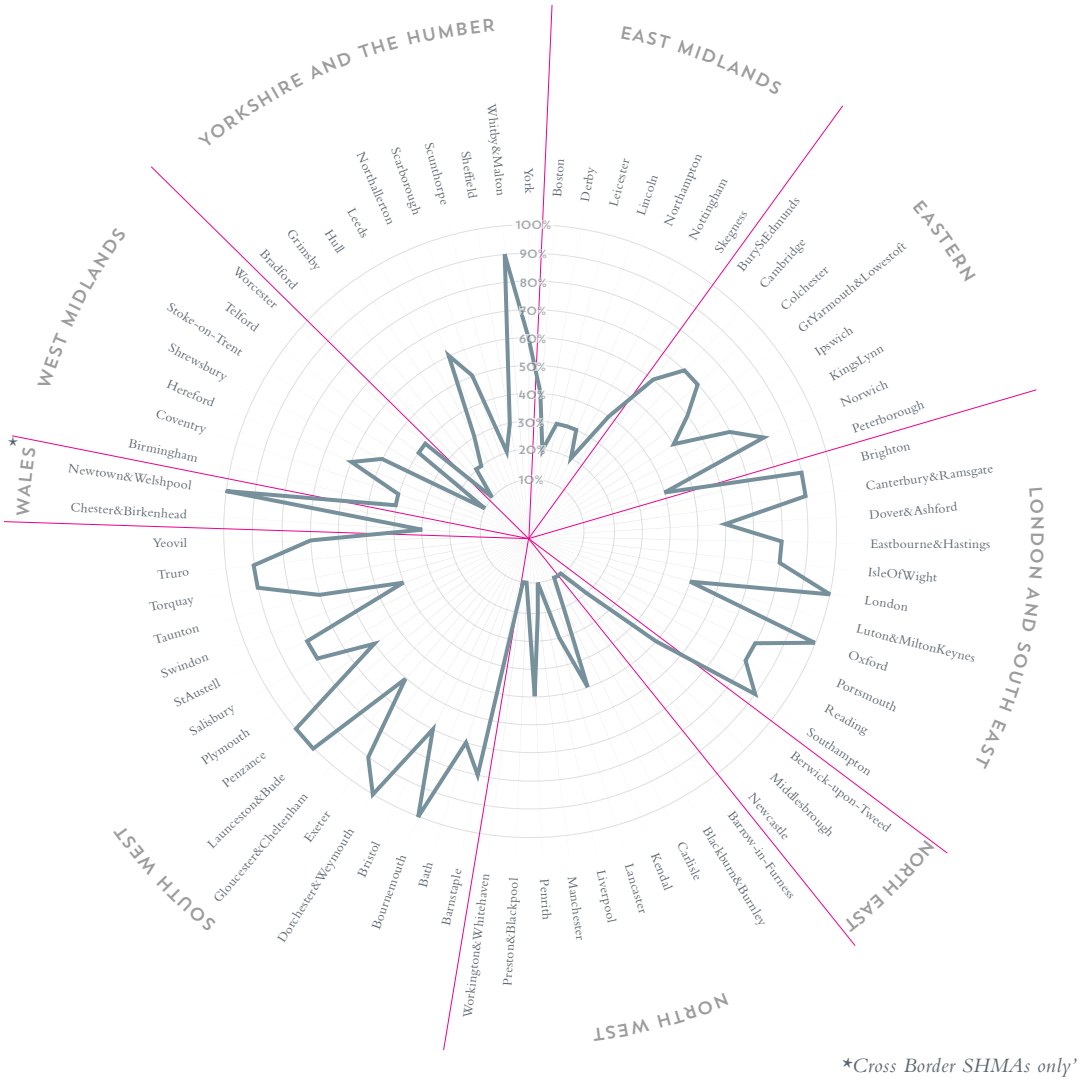
2. RANK SHMAS ACCORDING TO HOUSING SUPPLY / DEMAND PRESSURES

AFFORDABILITY

The establishment of a new settlement can help to improve affordability and widen access to the private housing market by providing a significant boost to the local housing supply.

Figure 3.7 presents a heat map of affordability pressures (measured by comparing local house prices and local earnings). An explanation of the methodology of calculating affordability pressures is set out in the appendices.

There is a very clear north / south divide in median house prices, with London, the South East, along with parts of the South West, and the southern and coastal parts of East of England displaying the highest median house prices. In addition parts of Worcestershire, Warwickshire, along with Leeds and Manchester show reasonably high house prices.

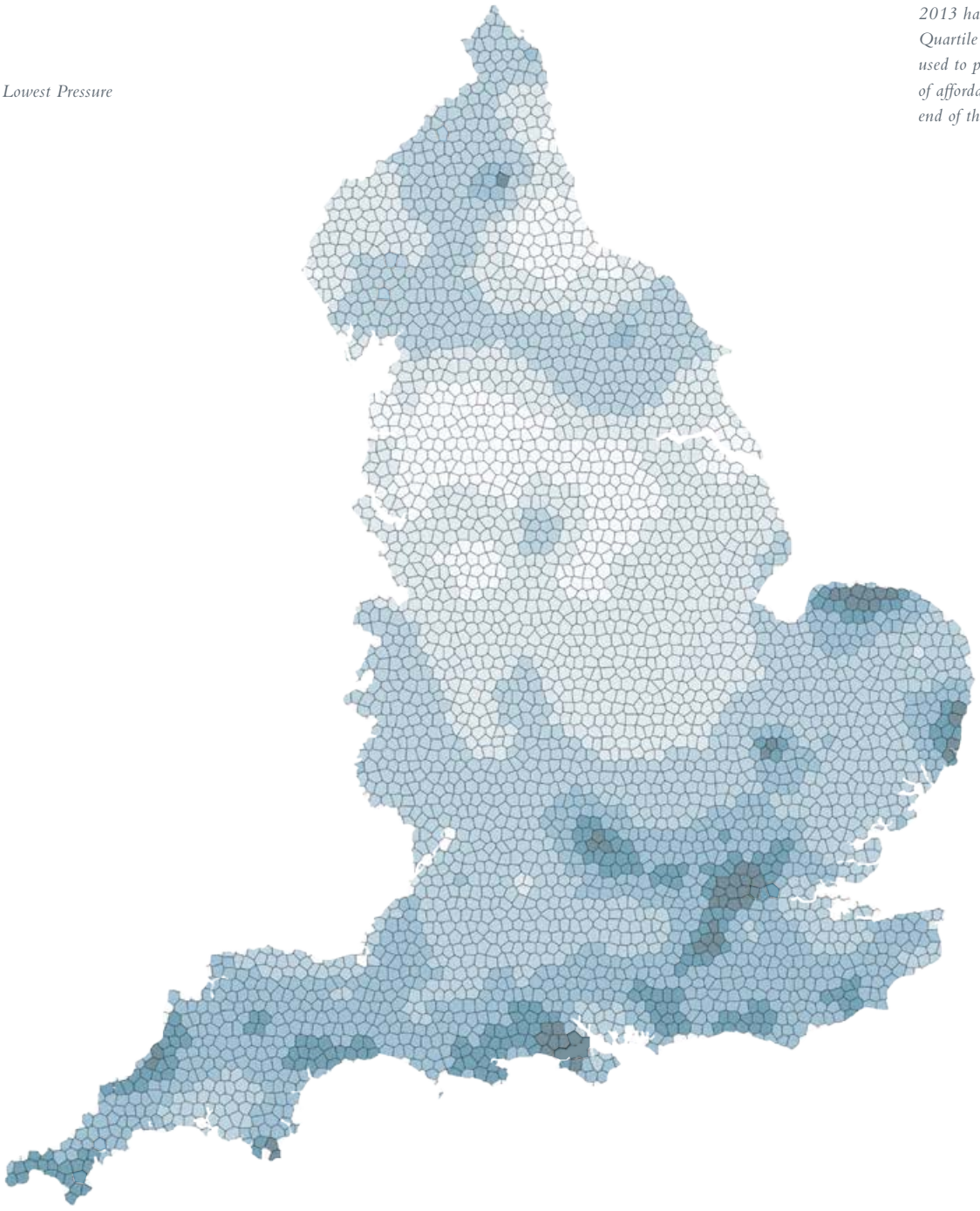


*Cross Border SHMAs only'

FIGURE 3.6. RADAR DIAGRAM OF EMPLOYMENT GROWTH BY SHMA AND REGION

Highest Pressure

Lowest Pressure



House prices, along with earnings, represent one half of the affordability equation (see appendix 3). In this case, Land Registry price paid data for the calendar year 2013 has been used. Lower Quartile prices have been used to provide an indication of affordability at the lowest end of the market.

FIGURE 3.7. HEAT MAP OF AFFORDABILITY PRESSURES

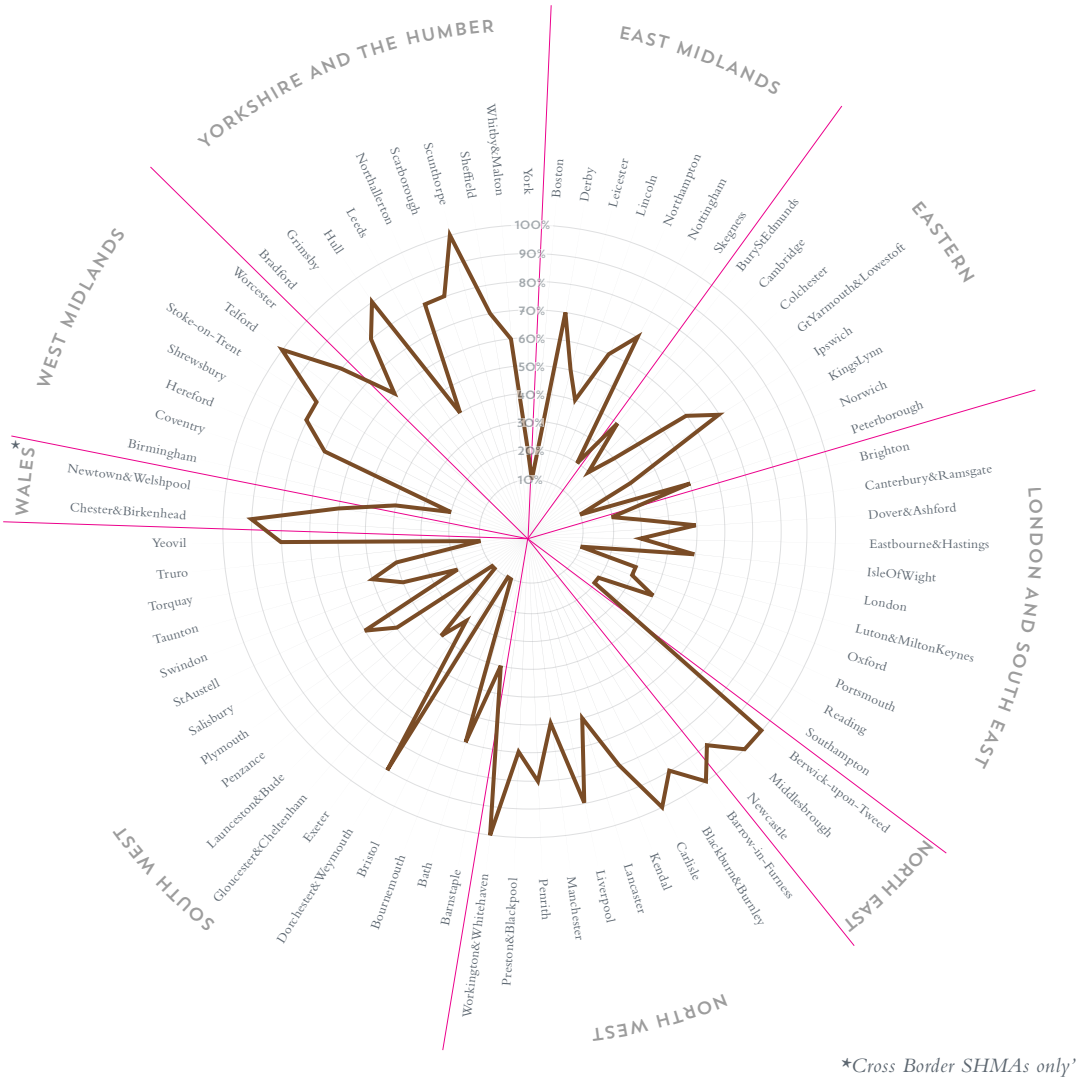
SOCIAL AND ECONOMIC ISSUES

As well as responding to and addressing immediate issues of housing supply and affordability, a new Garden City offers a potential solution to long term social and deprivation issues associated with areas of low population growth. Golany[17] identified the 'rational dispersion of population and of socio-economic activity' as one of the potential goals for a new settlement. In these locations a Garden City could act as a catalyst to facilitate greater levels of population growth, enabling a balanced and mixed community to develop and thrive.

The appendices set out details of the data and methodology (together with background plans) used to produce figure 3.9 - a summary heat map plan of the areas most in need of population and which would most stand to gain from socio-economic re-balancing; and figure 3.8 - the results by SHMA.

It is clear that areas within the North East and North West including those areas surrounding the Manchester and Leeds conurbations, along with Grimsby, Hull and Tees Valley show the greatest proportions of these lifestyle groups.

17. *Golany, Gideon. New-Town Planning: Principles and Practice. Wiley, 1976*



*Cross Border SHMAs only'

FIGURE 3.8. RADAR DIAGRAM OF EMPLOYMENT GROWTH BY SHMA AND REGION

Highest Need

Lowest Need

The extent to which a given location is likely to be in need of intervention to promote population rebalancing is a function of aged dependency growth (derived from the ONS 2012 Sub-National Population Projections) and the prevalence of Experian Mosaic Public Sector groups typically found in ex-industrial areas with high levels of state dependency.

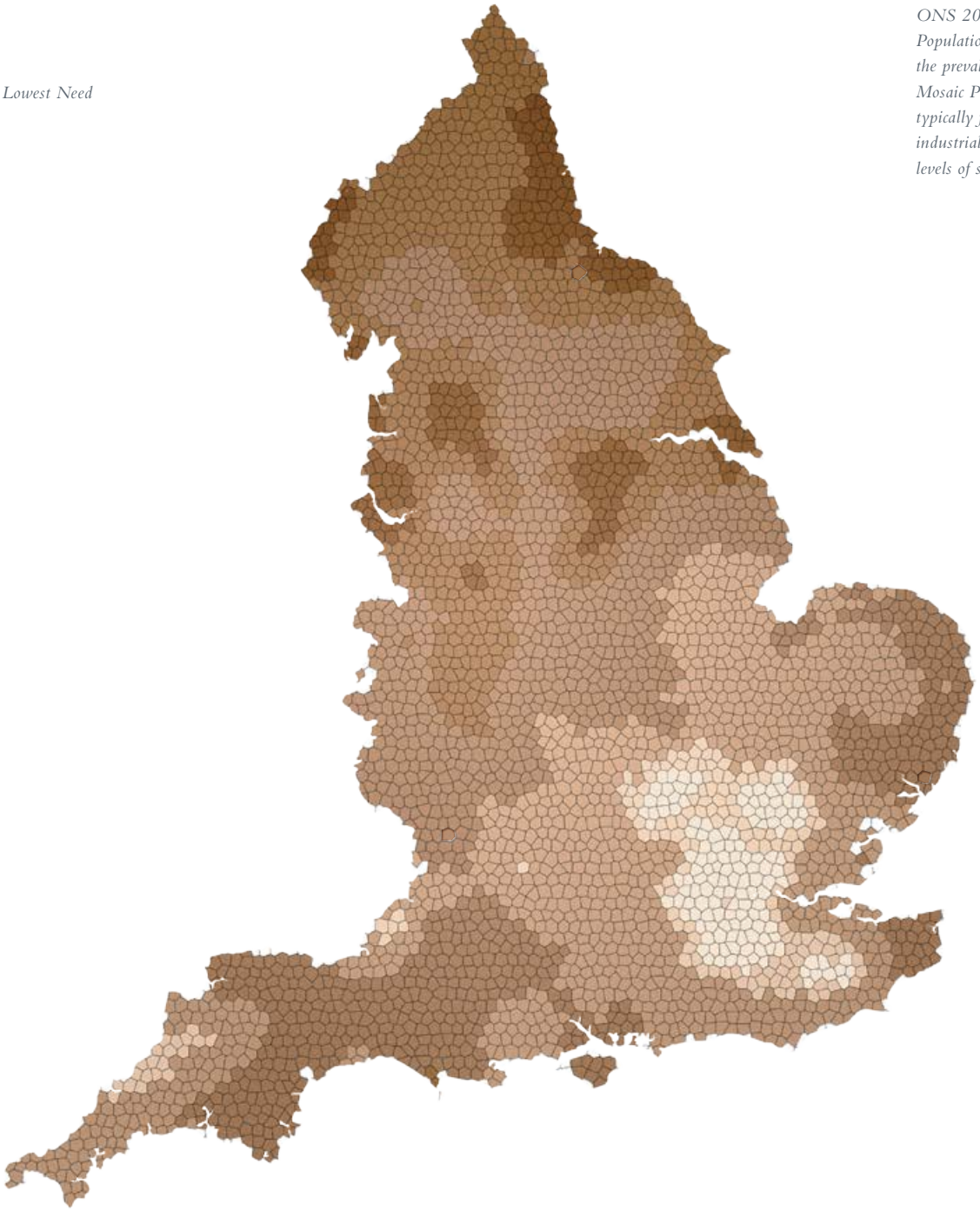


FIGURE 3.9. RADAR DIAGRAM OF POPULATION RE-BALANCING

3. AREAS OF OUTSTANDING NATURAL BEAUTY AND NATIONAL PARKS

Geographical constraints in the form of national designations such as Areas of Outstanding Natural Beauty (AONB), National Parks and Green Belts significantly impact upon potential Garden City locations. At a more detailed scale constraints such as flood plains will also rule out specific geographical areas.

At a national and regional level, Areas of Outstanding Natural Beauty and National Parks may be regarded as 'absolute constraints' to the development of a new Garden City. These are areas of the highest quality landscapes in the country and for this reason have been excluded from the sifting exercise. Figure 3.10 shows the location and extent of all the AONBs and National Parks in England.

For the purposes of this analysis and sifting, all Green Belt areas have been included. This is due to the qualitative variation in these designations and the potential, at a local level, for a Strategic Green Belt Review to identify areas of opportunity either within them, or partially including some areas. Figure 3.10 also excludes existing areas of built development (towns and cities).

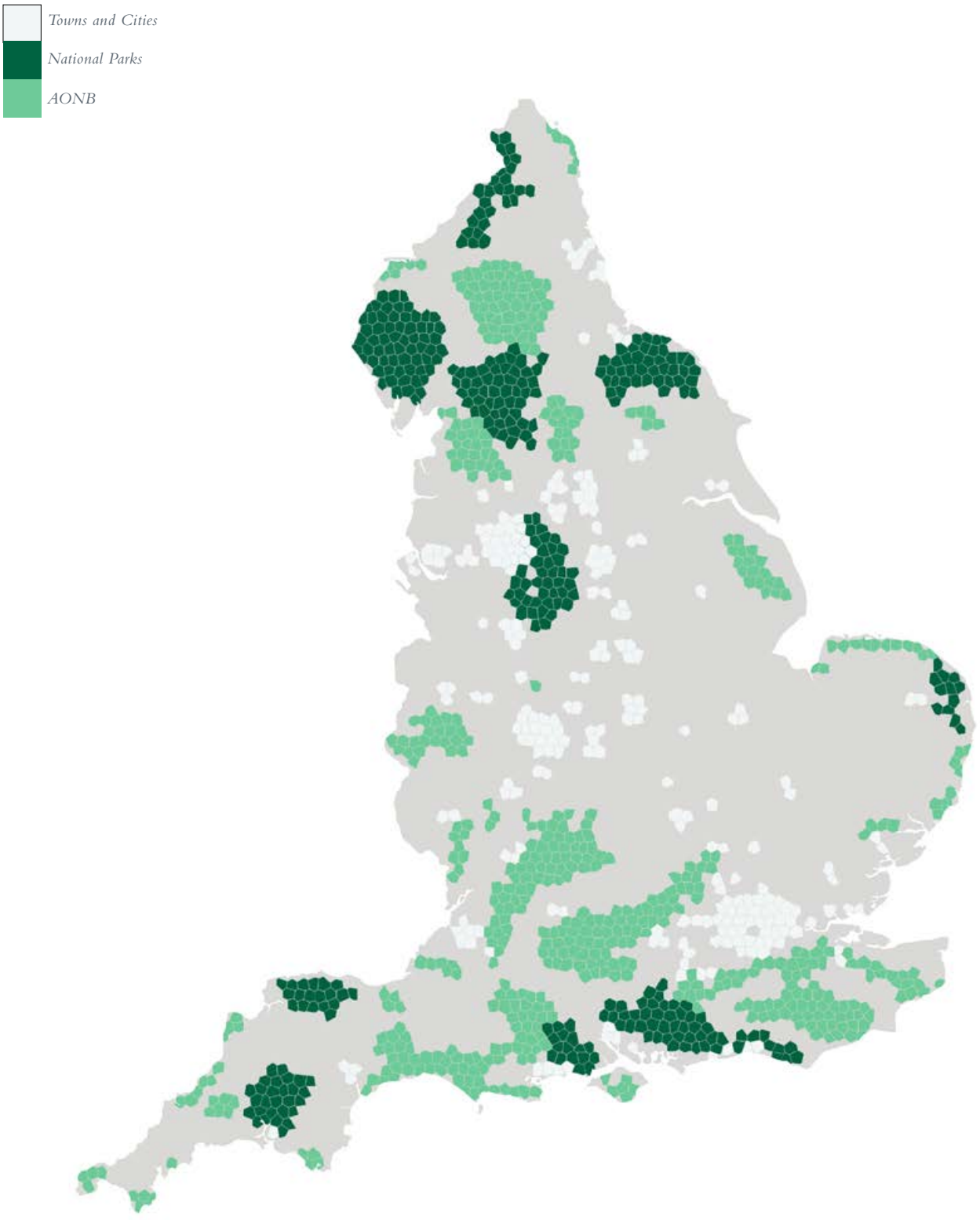
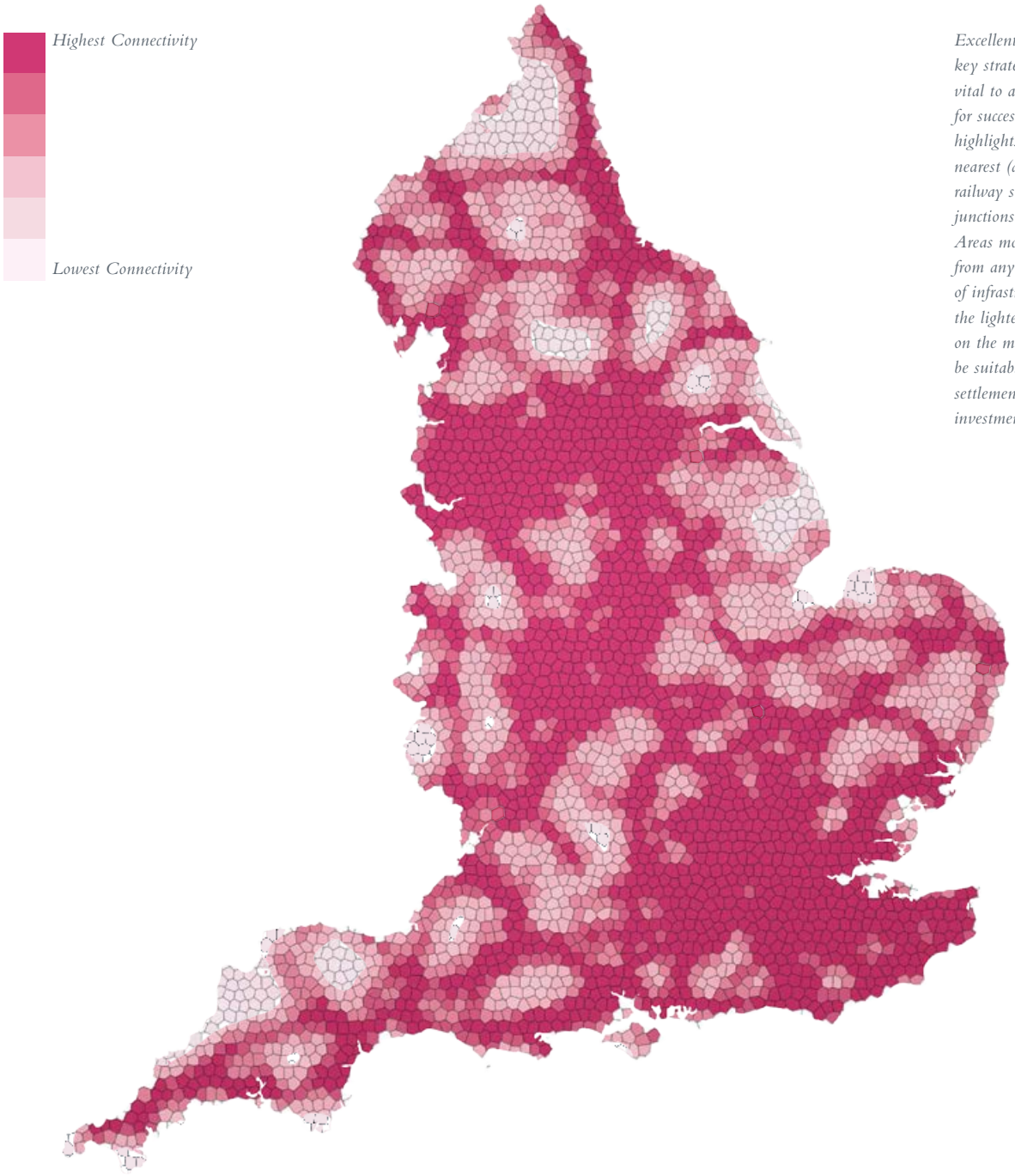


FIGURE 3.10. LOCATION AND EXTENT OF ALL AONB'S NATIONAL, PARKS AND EXISTING URBAN AREAS

4. MAP AND RANK AREAS OF THE UK BY PROXIMITY TO EXISTING OR PLANNED MAJOR STRATEGIC CONNECTIVITY

Drawing on one of the key ingredients of the most successful historic towns and cities, **it is important that new Garden Cities are accessible and well-connected.** In the UK this means that new settlements should be located close to a main line railway station (or close to a railway line with the potential for a station to be added), as well as within easy reach of a motorway or major 'A road'. Proximity to HS2 rail links would capitalise on investment in station infrastructure and the associated economic 'ripple effect'.

Figure 3.11 presents a heat map of strategic connectivity. This has been produced by calculating the distance from all parts of England (divided up into 5km grid squares) to each of the 'destinations' (railway stations, motorway junctions and entire trunk roads). The darkest shades on the plan are those closest to a railway station, a motorway junction or trunk road and the lightest shades are those that are furthest away from these.



Excellent connectivity with key strategic infrastructure is vital to a location's potential for success. The map highlights locations which are nearest (as the crow flies) to railway stations, motorway junctions and trunk roads. Areas more than 10km from any of these key pieces of infrastructure (shown as the lightest shade of pink on the map) are unlikely to be suitable for a major new settlement without significant investment in infrastructure.

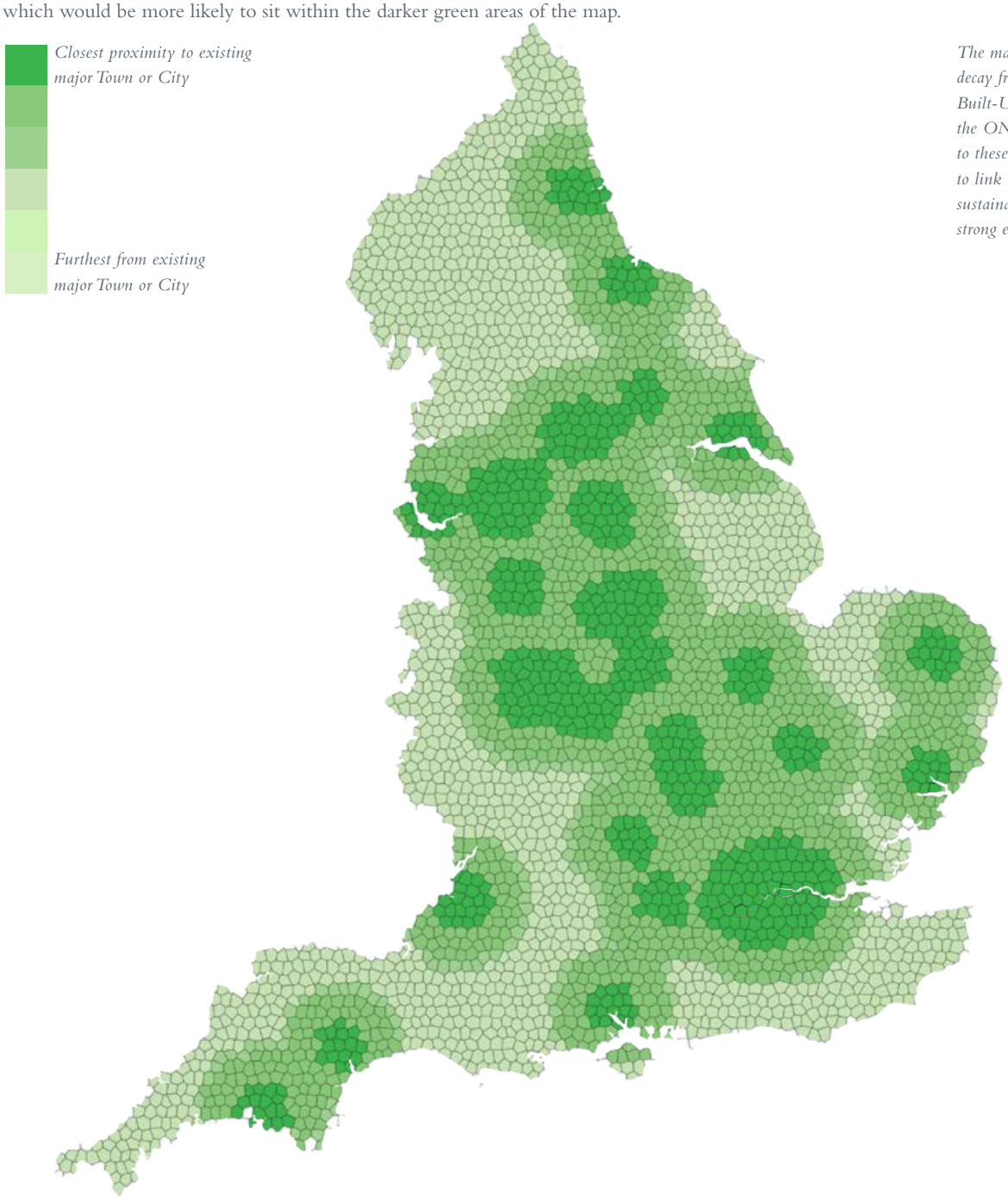
FIGURE 3.11. STRATEGIC CONNECTIVITY

5. MAP EXISTING CITIES AND MAJOR TOWNS AND THEIR 'ZONE OF INFLUENCE'

The successful creation of a self-contained new settlement depends on it being sufficiently separate from other existing cities and towns to become self-sufficient, but close enough that it will function as part of the hierarchy of settlements and benefit from additional industries and facilities provided in a 'higher order' existing city.

We have mapped the 20 largest cities and towns in the UK and added a 10 mile perimeter beyond the existing urban edge to each of these (in order to provide for a sufficient degree of separation). We have then identified areas closest to these perimeters to create a heat map (see figure 3.12) showing areas likely to benefit most from proximity to existing major towns and cities.

The validity of this data set depends on the typology of Garden City adopted. We set out alternatives to the stand-alone model in Step 6 which include typologies for city expansion, string of pearls and regeneration, all of which would be more likely to sit within the darker green areas of the map.



The map shows distance decay from England's top 20 Built-Up Areas, as defined by the ONS. Locations closest to these areas are more likely to link up successfully and sustainably with existing strong economic centres.

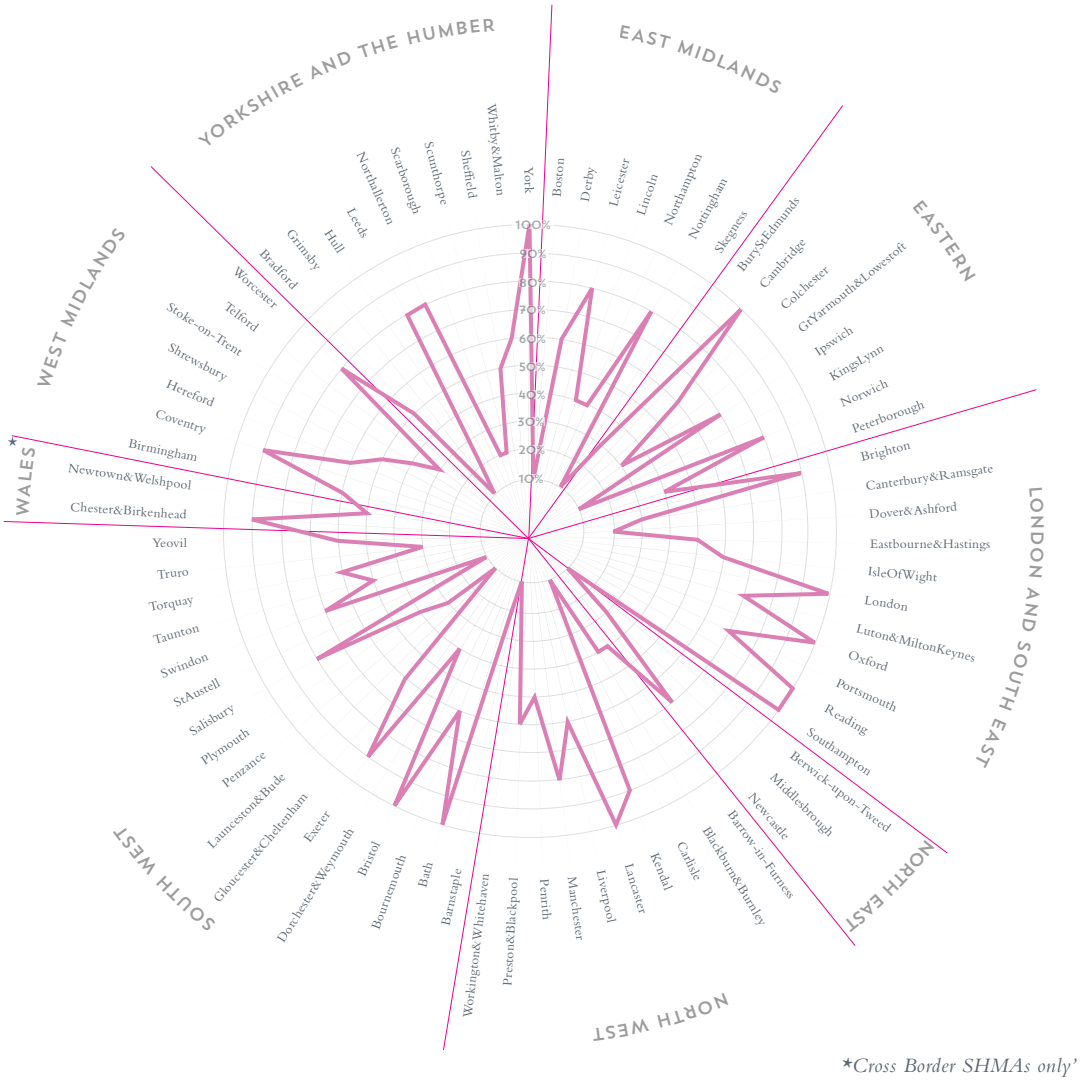
FIGURE 3.12. EXISTING CITIES AND MAJOR TOWNS

6. IDENTIFY CONCENTRATIONS OF 'SMART PEOPLE'

Our Think Tank events suggest that proximity to existing University towns or cities as well as existing economic growth 'hot spots' could strongly influence the potential success of a new Garden City because, as Glaeser (2012)[18] describes **there is the possibility of attracting 'smart people' which will enable the city to thrive.**

In appendix 3 a plan marks the location of all Universities in the UK as well as the main centres of innovation and economic growth hot spots. Another presents Mosaic data recording areas of the UK with the highest skill levels. Figure 3.14 and figure 3.13 combine this data to illustrate the areas of the country with the highest concentrations of 'smart' people.

18. *Triumph of the City; Glaeser, Edward; Pan Books; 2011*

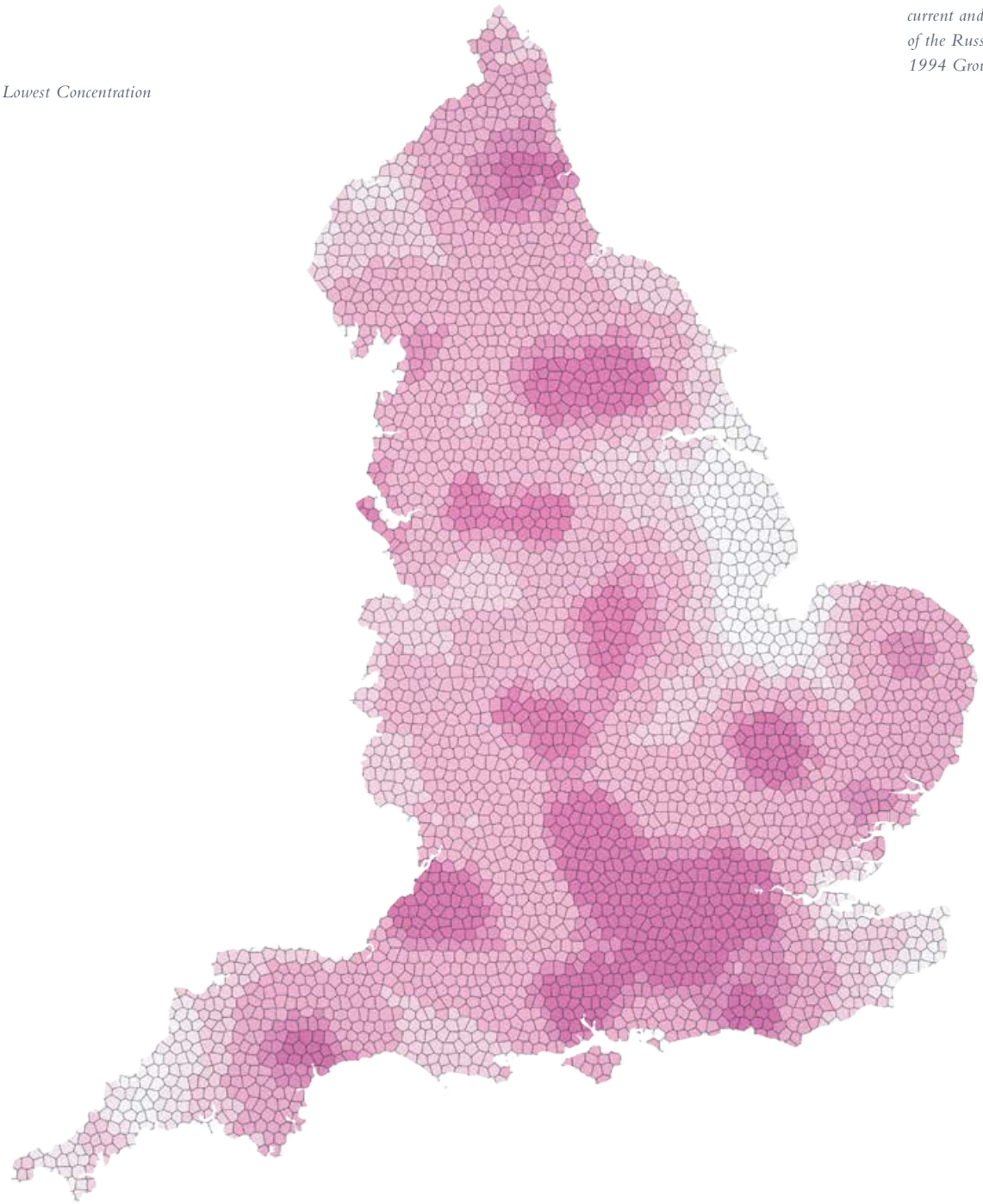


*Cross Border SHMAs only'

FIGURE 3.13. RADAR DIAGRAM OF 'SMART' PEOPLE BY SHMA AND REGION

Highest Concentration

Lowest Concentration



The likely concentration of 'Smart People' in a given location is a function of local skill levels (from the 2011 Census) and proximity to a top university (defined as current and former members of the Russell Group and 1994 Group).

FIGURE 3.14. 'SMART' PEOPLE

7. SIFTING OF ALL OF THE ABOVE TO IDENTIFY "AREAS OF OPPORTUNITY FOR NEW GARDEN CITIES"

The sifting of the various levels of GIS data has identified the potential for two types of Garden City: one that responds to and addresses areas of extreme housing delivery pressures and one that provides for socio-economic regeneration. The locations identified for each of these types are different and we have therefore presented them as two "Opportunity Maps". For both of these the sifting assessment using GIS data has identified areas of good connectivity, close to existing towns and cities in locations that are likely to be attractive for economic investment. Our socio-economic assessments have identified a north-south divide in terms of the issues potentially to be addressed by new Garden Cities. There are areas of the south where a Garden City would by highly likely to thrive economically, be self-sufficient and make a significant and long term contribution to housing supply. There are some areas of the north that have suffered population decline, where new Garden Cities could provide the opportunity to rebalance the population as well as provide a catalyst for economic growth. Taken together the two plans present the areas across the country with the most potential to successfully deliver a new Garden City. These are "Opportunity Areas" where local communities should be encouraged to come forward to identify opportunities within the specific SHMAs.

OPPORTUNITY AREAS TO ADDRESS HOUSING SUPPLY AND AFFORDABILITY PRESSURES

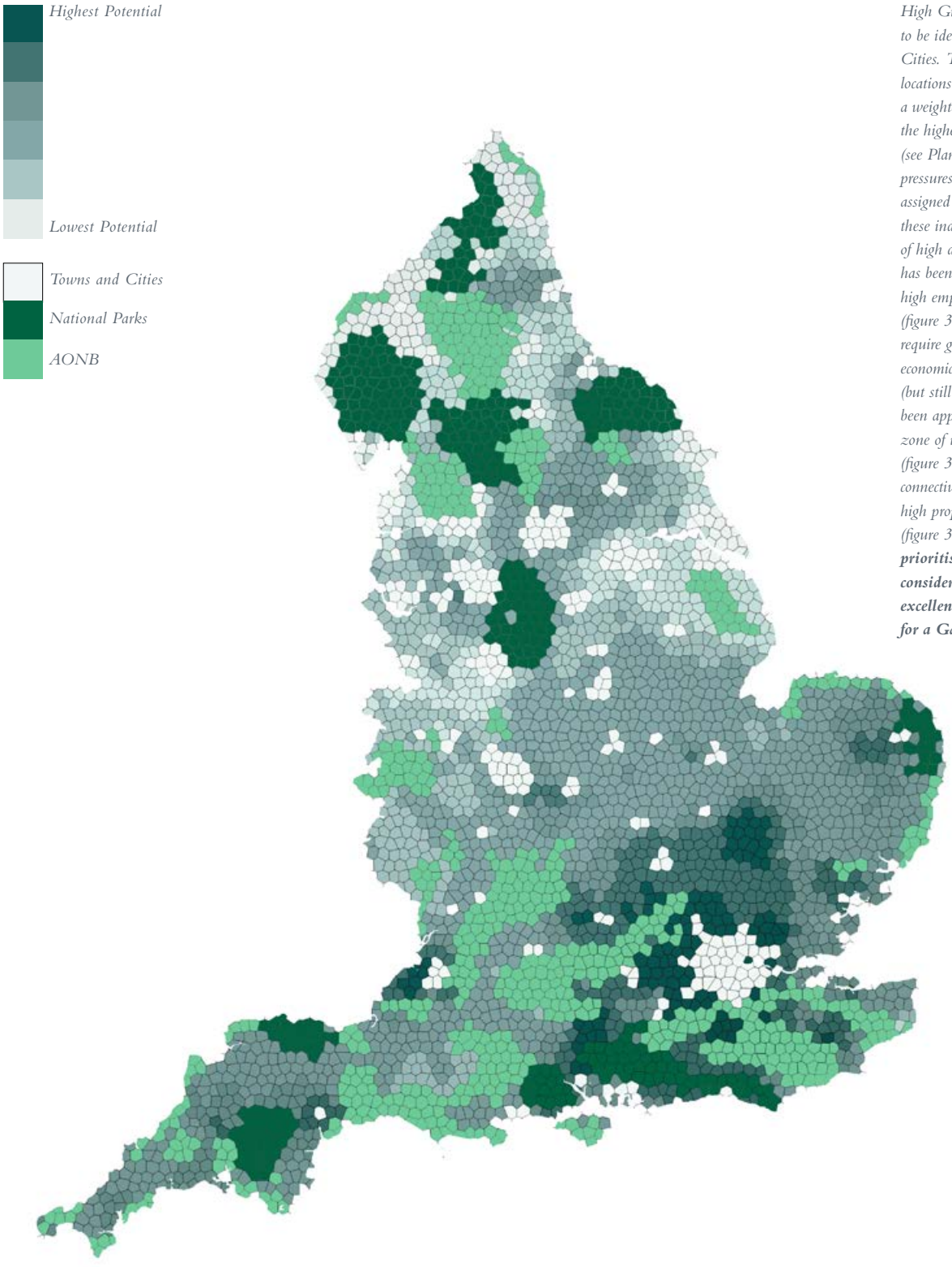
This plan shows the strategic areas of the country that offer the most potential to make a significant contribution to housing supply in the areas where it is needed most. The areas identified by the darker shades are those that, for reasons of good connectivity, proximity to existing towns and cities and economic growth potential would provide a fertile base for a new Garden City with the prime objective of delivering significant amounts of housing efficiently and effectively as part of a balance d community. These are the locations where a new Garden City would thrive and make the most significant contribution to housing supply and affordability issues. These areas are located predominantly within the south of England and concentrated around London and other major towns and cities.

Appendix 3 comprises a ranking of all the SHMAs in terms of their suitability and potential to deliver a Garden City of this type.

Figure 3.15 summarises the results of the modelling exercise (see map caption opposite for details). The SHMAs at 100% offer the strongest potential, whereas the SHMAs at 10% offer the weakest potential.

**Cross Border SHMAs only'*

FIGURE 3.15. RADAR DIAGRAM OF OPPORTUNITY AREAS BY SHMA AND REGION



High Growth areas are expected to be ideal locations for Garden Cities. The prioritisation of locations has been achieved through a weighted model. Locations with the highest Population Growth (see Plan 3.3) and Affordability pressures (figure 3.7) have been assigned the highest weight, as these indicators are key symptoms of high demand. Moderate weight has been applied to locations with high employment growth forecasts (figure 3.5), as these areas will require growth to achieve their economic potential. Finally, lower (but still significant) weight has been applied to locations within the zone of influence of a major city (figure 3.12), with strong strategic connectivity (figure 3.11) and high proportions of 'Smart People' (figure 3.14). ***The locations prioritised by this model are considered to demonstrate excellent potential as a location for a Garden City.***

FIGURE 3.16. OPPORTUNITY AREAS FOR NEW GARDEN CITIES WITH HIGH ECONOMIC GROWTH POTENTIAL TO ADDRESS IDENTIFIED HOUSING PRESSURES (OUTSIDE OF AONBS, NATIONAL PARKS AND EXISTING URBAN AREAS)

8. OPPORTUNITY AREAS WITH MOST POTENTIAL TO HOST A NEW GARDEN CITY

OPPORTUNITY AREAS TO ADDRESS IDENTIFIED SOCIO-ECONOMIC ISSUES

Our socio-economic assessment has identified areas where there is an ageing population as a result of young people moving away as defined by the 'Age Dependency Ratio'. The analysis of Experian's mosaic profile groups J, M and O has been used to clarify areas in particular need of the socio-economic investment that would accompany the creation of a new Garden City. These areas would be the ones most likely to benefit from an increased level of in-migration (typically of a younger population) to encourage a greater demographic profile of the area. As with the areas identified to optimise housing supply, the darker shades reflect the degree of connectivity (by rail and road); their proximity to existing towns and cities; the proportion of 'smart people' (from plotting top universities and areas with a high proportion of highly skilled people) and predicted levels of employment growth. These Garden Cities would also be economically self-sufficient. The sifting has then excluded areas identified as 'absolute constraints' (Areas of Outstanding Natural Beauty, National Parks and existing urban areas).

Appendix 3 comprises a ranking of all the SHMAs in terms of their suitability and potential to deliver a Garden City of this type.

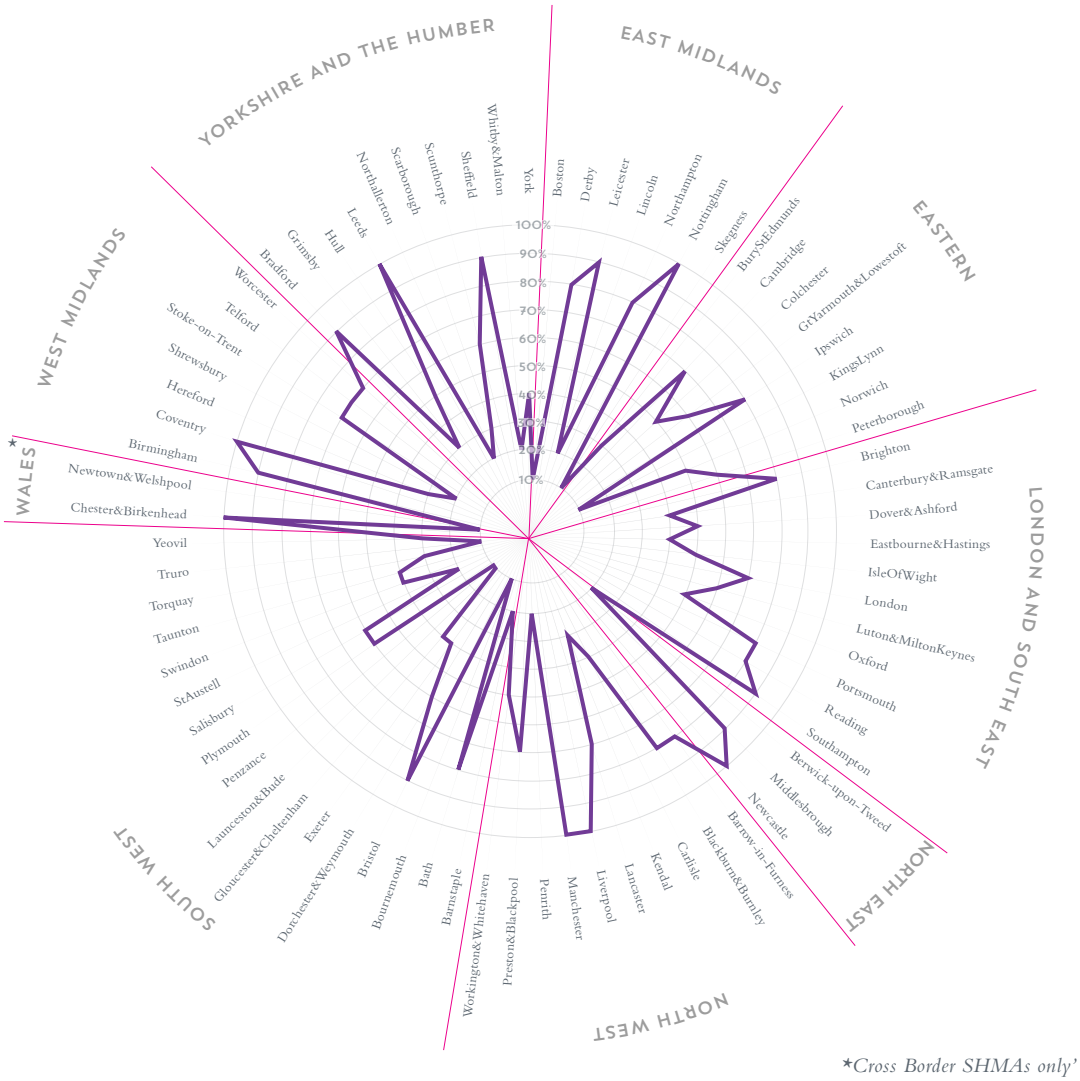
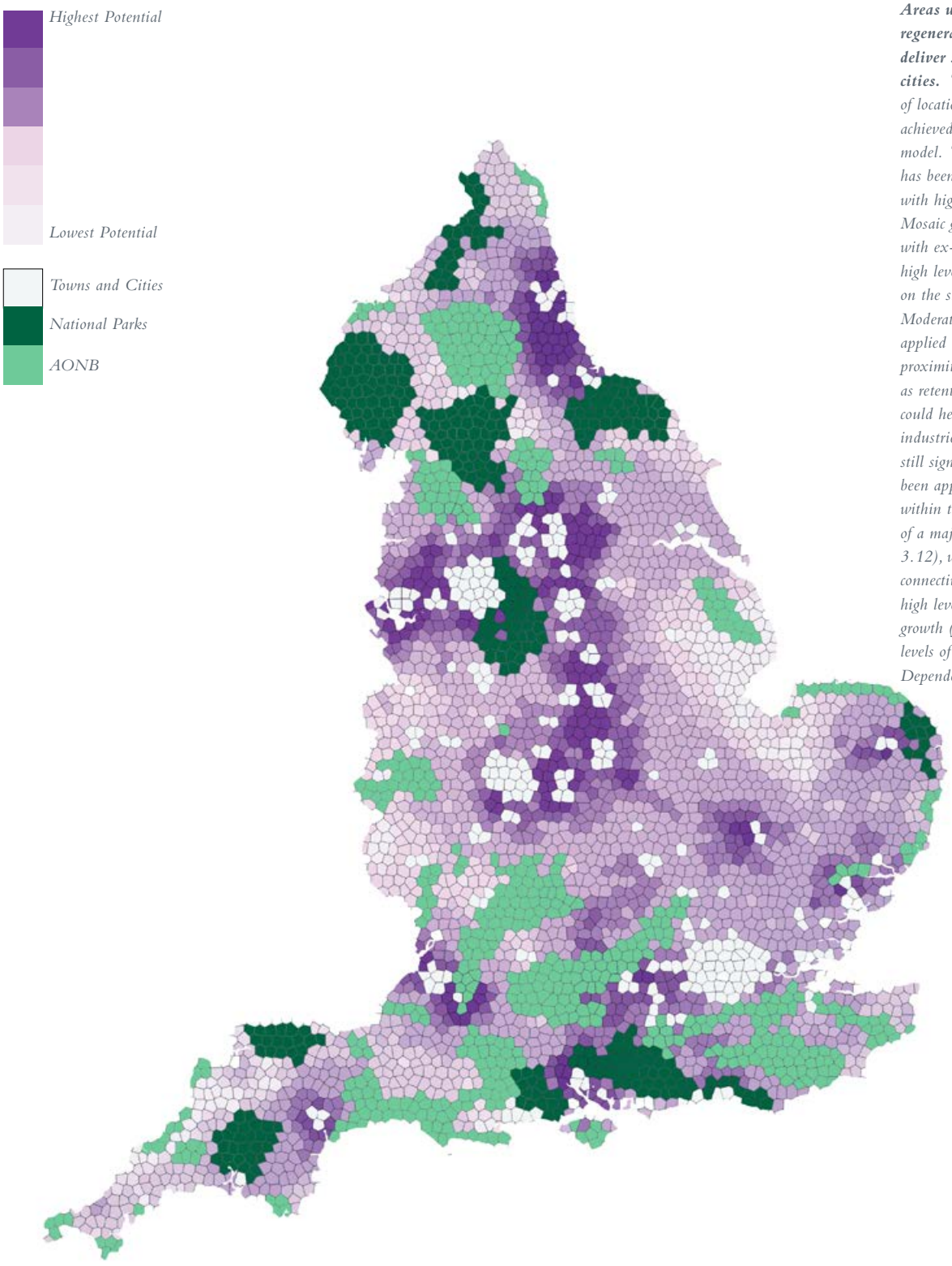


Figure 3.17 summarises the results of the modelling exercise (see map caption opposite for details). The SHMAs at 100% offer the strongest potential, whereas the SHMAs at 10% offer the weakest potential.

'Cross Border SHMAs only'

FIGURE 3.17. RADAR DIAGRAM OF OPPORTUNITY AREAS BY SHMA AND REGION



Areas with potential for regeneration could also deliver successful garden cities. *The prioritisation of locations has again been achieved using a weighted model. The highest weight has been assigned to locations with high proportions of Mosaic groups synonymous with ex-industrial areas and high levels of dependence on the state (appendix 3). Moderate weight has been applied to areas in close proximity to a top University, as retention of graduates could help sustain high value industries. Again, lower (but still significant) weight has been applied to locations within the zone of influence of a major city (figure 3.12), with strong strategic connectivity (figure 3.11), high levels of forecasted job growth (figure 3.5) and high levels of growth in Aged Dependency (appendix 3).*

FIGURE 3.18. OPPORTUNITY AREAS FOR NEW GARDEN CITIES WITH POTENTIAL TO ADDRESS A RANGE OF IDENTIFIED SOCIO-ECONOMIC ISSUES

4 LOCAL GARDEN CITY COMMISSIONS

Whether through this national 'sifting' process or simply through local communities volunteering to host a Garden City, local communities must be at the heart of the process in seeking to address the housing crisis in their areas.

The next critical stage, therefore, will be for local communities to take up these areas of opportunity and translate them into specific proposals. It is this stage that is pivotal in moving from a national (and local) problem to a local solution, led by local people.

The challenge will be to create delivery bodies that are representative of the local communities but which nevertheless have the focus to deliver the new Garden City and secure its implementation. We believe the only way to genuinely make this a local choice is for local communities to elect local leaders to represent them and plan for their Garden City. The increased role of **City Mayors** has long been an aspiration of the current Government, as well as academics and city champions. Indeed, Chancellor George Osborne recently called for a revolution in the way cities are governed, with a high-profile mayor replacing city council leaders – a strong recognisable city leader (June 2014):

> "There are big advantages in having an elected mayor to represent your city. To have someone democratically accountable to the whole city who can deal with issues like transport or economic development or fighting crime.....So I am putting on the table and starting the conversation about serious devolution of powers and budgets for any city that wants to move to a new model of city government - and have an elected Mayor"
>
> George Osbourne, Chancellor of the Exchequer, June 2014

Examples of leading elected Mayors in the UK include Boris Johnson, George Ferguson (Bristol) and Joe Anderson (Liverpool), all of whom are well known figures with a wide remit of influence to deliver meaningful change.

> "My pledges to the people of Liverpool .... 12 new schools, 5,000 new homes, attract investment & jobs [and] and cleaner, greener city"
>
> Joe Anderson, Liverpool City Mayor, elected May 2012

There is no reason why this same approach cannot be utilised for the creation of Garden Cities, in whatever form they may take across England (see Step 6).

THE IMPORTANCE OF ELECTORAL ACCOUNTABILITY

It is only through a wholly democratic approach to the delivery of Garden Cities that they will ever succeed, the lessons learnt from Regional Spatial Strategies, Eco-towns, etc, must be heeded - see table 4.1.

It's clear that, far from speeding up development, imposing requirements from a remote position, be it a national or regional body, risks a backlash to the process which is damaging to the ability to deliver development. **For Garden Cities to succeed – and at the scale that the housing needs demand – their planning and delivery must be put in the hands of local communities.**

On the other hand, leadership is essential if work is to progress with the focus required in order to achieve the timely delivery of these major development proposals. We therefore see the need for bodies to be led by strong, democratically accountable Mayors. This will **combine the best of the current approaches, making the delivery of Garden Cities across the country a locally-led and powerful force to help meet the housing crisis and deliver economic growth.**

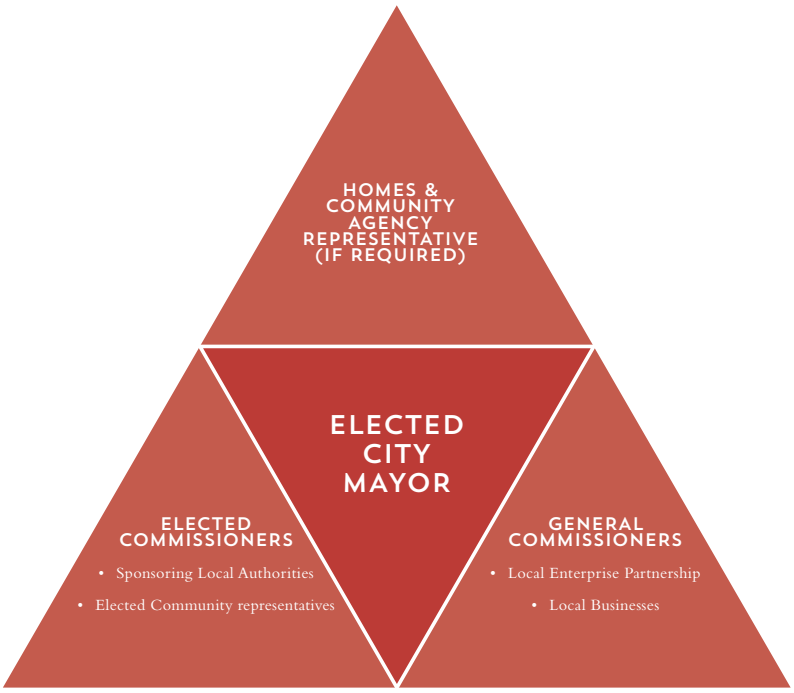


FIGURE 4.1. STRUCTURE OF THE LOCAL GARDEN CITY COMMISSION (LGCC)

LESSONS FROM THE REGIONAL STRATEGIES (RS'S): • Jointly prepared by elected politicians from Local Planning Authorities; • Development being considered across a wide area; • Local communities did not understand process; • Regional Assemblies detached from local communities; • Local communities disenchanted and isolated from the process ↓ • Resistance from local communities to accept RS requirements.	X
LESSONS FROM ECO TOWNS: • timescales from inception to confirmation too short; • Little engagement with local communities • No support or input from local communities ↓ • Excellent proposals abandoned and tainted	X
LESSONS FROM LOCAL PLANS: • Locally elected councillors tasked plan for housing and economic growth; • Local communities, deciding how and where to meet housing, economic and social needs in most sustainable way • Planning Inspectors provide check and balance to ensure Local Plans are "sound" ↓ • Democratically accountable Local Planning Authorities now planning for higher levels of growth than for decades	√
LESSONS FROM NEIGHBOURHOOD PLANS: • Local opportunity to plan and vote upon development within their communities; • Parish Councils and community groups giving time and resources to plan ↓ • Developments which have previously been resisted being brought forward	√

TABLE 4.1.

LOCAL GARDEN CITY COMMISSIONS

BE A PIONEER: THE CITY MAYOR

Consequently a national call should be made for pioneering Garden City Mayors in the identified areas of opportunity, seeking candidates from the local community to stand with a pro-growth remit to plan and deliver a Garden City. Local elections will be convened by the Local Authority in whose area the potential Garden City would be located; where more than one Local Authority area is involved, they would either work jointly or appoint one Authority as the **'Sponsoring Authority'** to convene the election on their collective behalf. The voting powers and electorate will be guided by the Sponsoring Authority (or joint Local Authorities); although national guidance might be forthcoming should the Government adopt the proposal for a Royal Commission at Step 2.

Example 1: if the Royal Commission were to identify significant housing need with a potential Garden City in County X, then candidate Mayors from across that County would be given the opportunity to stand for election and the residents of that county would be given the opportunity to vote.

Example 2: if a local authority volunteered a Garden City proposal, then candidate Mayors from across the Authority or group of Authorities would be invited to stand for election and the residents of that District, group of Districts or County would be given the opportunity to vote.

Given the need for the process of site selection, masterplanning and start to delivery, to be given adequate time the Mayor would be elected for an initial five years term, but with an expectation that the term could be extended by a further 5 years subject to success, as has been the case in London. The Mayor will have the remit to:

1. Establish a Local Garden City Commission (LGCC)
2. Through the LGCC, prepare and adopt a Garden City Master Plan or Development Plan

In order for the newly elected Mayors to learn from each other and draw upon best practice elsewhere, it is envisaged that the Garden City Mayors would meet on a regular (informal) basis to exchange ideas. This informal group would be supported individually and collectively by the relevant Government departments as well as by organisations such as the Town & Country Planning Association (TCPA).

THE LOCAL GARDEN CITY COMMISSION (LGCC)

The Commission would be set up by the Mayor from across the local residential and business community and would include representatives from the following organisations:

- Local business (2-3)
- The Sponsoring Local Authority (2)
- Local Enterprise Partnerships (2)
- Local Parish Councils or elected community representatives (2)
- Homes and Community Agency representative (1) (Subject to the HCA role with LGCCs – see below)

It is envisaged that approximately 8 - 10 Commissioners would be appointed, 50% of which would have an enterprise background, drawn from the LEP and the local business community.

The term of the Commission would be approximately 10 years, acting as an interim organisation until such time as the Garden City Estate (Step 10) is established and running effectively. However, in circumstances where the Commission is established with development management powers (determining planning and related applications), it may be appropriate for the Commission to have a longer life, until such time as these powers are invested in the Estate or re-invested in the Local Planning Authority for the area. (see Steps 9 & 10).

LOCAL GARDEN CITY COMMISSIONS

The **purpose of the Commission** would be to:

1. **Prepare a Development Plan** for the Garden City, working effectively with infrastructure providers and local stakeholders
2. **Secure the necessary consenting processes** for the Garden City to be delivered, including the approval of a Local Development Order and / or the grant of planning consent
3. **Establish the Garden City Estate** and its structure, offering the necessary support as necessary
4. **Utilise its Compulsory Purchase Powers** as necessary to deliver the necessary infrastructure

The Commission would provide the governance for the establishment of the Garden City and will appoint an Executive in order to ensure the necessary work is carried out. Initially, the Executive may comprise Officers seconded from the Sponsoring Authority (ies) but it is expected that increasingly, external staff appointments will be made. Funding the Executive will be an important part of financing the Garden City (see page 39).

The Garden City Development Plan will need to have the same status and process as Local Plans, as defined by the Planning & Compulsory Purchase Act 2004. As a result, the Commission would also be bound by the legal Duty to Cooperate. (An alternative, which comprises part of the 'ladder' to Step 8, would be for the Sponsoring Authority to incorporate the Garden City Development Plan within its own Local Plan, subject to the timescales being in step.)

As with any such organisation, step-in powers by the Secretary of State would need to be put in place in the event that the Commission failed to undertake the duties above effectively.

THE SPONSORING LOCAL AUTHORITY (IES)

For the Garden City to be effective and immune as far as possible from political change at the local level (as part of the de-risking process), **it will be important for the Garden City Mayor and Commission to have a large degree of independence from the Local Authorities for the surrounding area.** It is critical for the economic focus of the Garden City to be at the heart of the organisation, therefore led by members of the business community. In addition, a new organisation with a single role and purpose **(a Single Purpose Vehicle (SPV))** is likely to be less influenced by previous ways of working, decisions, attitudes or approaches. However, it is critical that the Local Authority is an active member of the Commission. This model is similar to the successful structure of Registered Social Landlords, which has a single purpose of providing affordable homes.

The benefit of this approach is that each Garden City Commission will be unique, according to the particular needs of the area, the wishes of the local community/electorate and the personalities of the Commissioners.

It is however inevitable that the existing Local Authorities, as representatives of the local communities and as Local Planning Authorities, will have a role in the establishment of the Garden City. Their involvement will change over time, depending on the scale of the Garden City. Reflecting on the current New Towns examples such as Harlow and Stevenage, some of the new settlements will grow to form their own Local authorities (although it will be important to avoid the sort of territorial challenges that have constrained the growth of these two New Towns). In others, the Garden City will grow to be a central component of the Local Authority but within a wider geographical area, such as Bracknell New Town within Bracknell Forest Borough in Berkshire.

The appropriate model will differ from location to location, although the latter is undoubtedly better able to accommodate continued growth of the Garden City and has the advantage of enabling the growth in tax base (including Council Tax and New Homes Bonus receipts) to be retained within the Sponsoring Local Authority – provided they recognise the necessity to invest part of this receipt in the emerging Garden City (for which it will form part of the funding for infrastructure and services).

It may be asked why a Development Corporation should not be set up, particularly as the New Towns Act 1981 remains in force, which allows for the establishment of such bodies. Development Corporations were however, set up as independent bodies (QUANGOs), reporting directly to Government, and are therefore far less democratically accountable. We recognise that a new model of Development Corporation is currently being established at Ebbsfleet, providing greater Local Authority involvement over its operation. Nevertheless, the Garden City Commission is considered a more democratic method of establishing the Garden City, offering single purpose but also involvement for the local communities and flexibility to adapt to local circumstances.

COSTS & FUNDING

It is envisaged that the costs of running the Commission would include the following:

- Salary Costs of Mayor
- Expenses to Commissioners
- Salary costs of the Mayor's support staff and/or Commission Executive
- Training & Development
- Consultancy, legal and other advice
- General running costs (premises, printing, finance, personnel)

The costs of the above are envisaged to be approximately £3-5m per annum (figure 4.2 for breakdown). Some cost savings may be secured through shared services with other bodies (e.g. LEP, Local Authority etc).

If necessary, Compulsory Purchase Powers would be utilised to unlock land purchase.

Funding the running costs would, in the early years, need to be through a loan, possibly from the Sponsoring Local Authority (ies) but more likely from central Government. Alternatively individual funders and promoters might be attracted to fund the commission in exchange for shares in the city. However, once the City Estate is up and running and the Garden City is implemented, generating value, the loan would be repaid through:

- New Homes Bonus accruing either to the Sponsoring Local Authority
- A Potential Shareholding Interest in the City Estate, from which a dividend would be paid
- The Use of Strategic Land & Infrastructure Contracts, linking the delivery of infrastructure to the enhanced value in the land.
- Tax Increment Financing

LEGISLATIVE CHANGES – AND A ROLE FOR THE HOMES AND COMMUNITIES AGENCY?

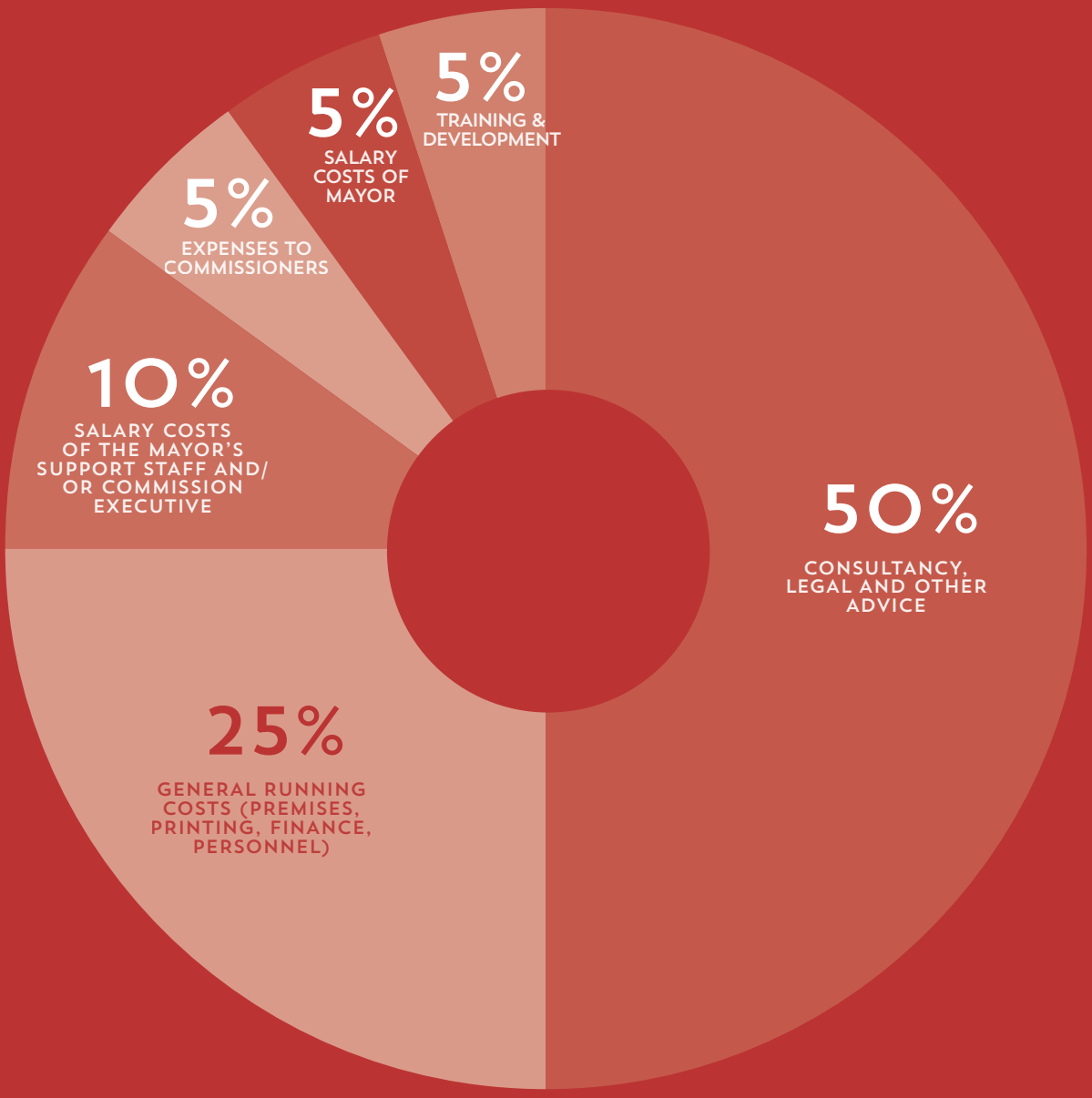
In order for the Commission to undertake its statutory duties, as outlined above, the Commission would require both plan-making and compulsory purchase powers from the outset. In due course it will also require the power to approve a Local Development Order. A further power that may be provided to the Commission would be that of making decisions on planning applications and other forms of planning consent - subject to whether these powers are retained by the Sponsoring Authority (ies) – see Step 9.

One option will be to make changes to the Town and Country Planning Act, or other legislation, to include LGCCs as bodies entitled to exercise these planning functions. This could be based on the provisions contained in the Localism Act 2011 in respect of Mayoral Development Corporations or the Local Government, Planning and Land Act 1980 in respect of Urban Development Corporations. If this approach was taken, a Ministerial Order would need to be made, conferring such powers on the Commission.

An alternative however, may be to make use of the existing power available to the Secretary of State for Communities and Local Government under section 13 of the Housing and Regeneration Act 2008, to make designation orders providing particular planning powers in an area to the Homes and Communities Agency. Were LGCCs to be established under the aegis of the HCA, this might (with appropriate legislative change as necessary) enable the HCA to nominate the Garden City Commissions to act in its place within the new Garden City areas. It might also provide a vehicle by which loans are made to the Commissions in order to appoint the Executives and meet their on-going costs, prior to the establishment of the Garden City Estates. In such a scenario, a representative of the HCA would be required to sit as a Commissioner on the LGCC.

FIGURE 4.2. BREAKDOWN OF LGCC COSTS AND FUNDING

IT IS ENVISAGED THAT THE COSTS OF RUNNING THE COMMISSION WOULD INCLUDE THE FOLLOWING:



5 SITE IDENTIFICATION & LANDOWNER COLLABORATION

One of the first tasks of the Mayor and Commission, irrespective of whether the Garden City opportunity has been identified in general terms by a national planning process (as in Step 3) or simply via local enthusiasm, will be to refine the general area of search into a specific site (figure 5.3).

The Mayor, as the primary and initial conduit for exploring local Garden City possibilities, needs to continuously earn the respect of the electorate at a grass roots level and engage with all sectors of the wider community, especially land owners. He or she needs to portray and champion the opportunity that Garden Cities provide - to deliver growth differently, better and more sustainably.

The advent of new Garden Cities provides an opportunity for communities to embrace a uniquely British idiom of place-making and redress the balance of poorly executed and badly mixed development, in favour of beautifully designed places.

It will be for the Mayor to frame the opportunity such that involvement with a Garden City becomes a badge of honour for Local Authorities, communities, landowners and investors alike. The target audience of a high percentage of patient investors creates a distinction between the true philanthropists and legacy-builders, and those looking to make a faster return from the sale of land.

Having identified the site, the acquisition of land will become the primary objective for the Local Garden City Commission and it is anticipated that this will be an interactive process.

However it will be critical to determine how landowners are to be incentivised to become involved in the enterprise of such an ambitious project.

OPPORTUNITY OF SCALE

The first factor incentivising landowners is scale, specifically, scale of opportunity. By our estimations, a new Garden City of circa 50,000 homes/115,000 persons will require a land take upwards of 6,000 acres / 2,500 hectares (not necessarily taking into account the requirements for a productive hinterland). This can be contrasted against land take for the original garden cities where Letchworth Garden City began as an estate of 3,500 acres / 1,400 hectares before acquiring a total estate of some 6,500 acres / 2,600 hectares into which it is now looking to expand[19].

Even amongst the larger landed estates (figure 5.1) there are few areas of contiguous ownership at this scale in areas that would be deemed suitable for a Garden City according to the sifting exercise set out in Step 3.

This then suggests that individual landowners in isolation are unlikely to have sufficient land holdings to deliver the city and will need to respond to calls to collaborate in order for land of the appropriate scale to come forward. Promotion without the impetus of the Local Garden City Commission will result in unsustainable development of too small a scale to afford the necessary infrastructure. Garden cities thus present unique opportunities for landowners to become more involved in strategic development.

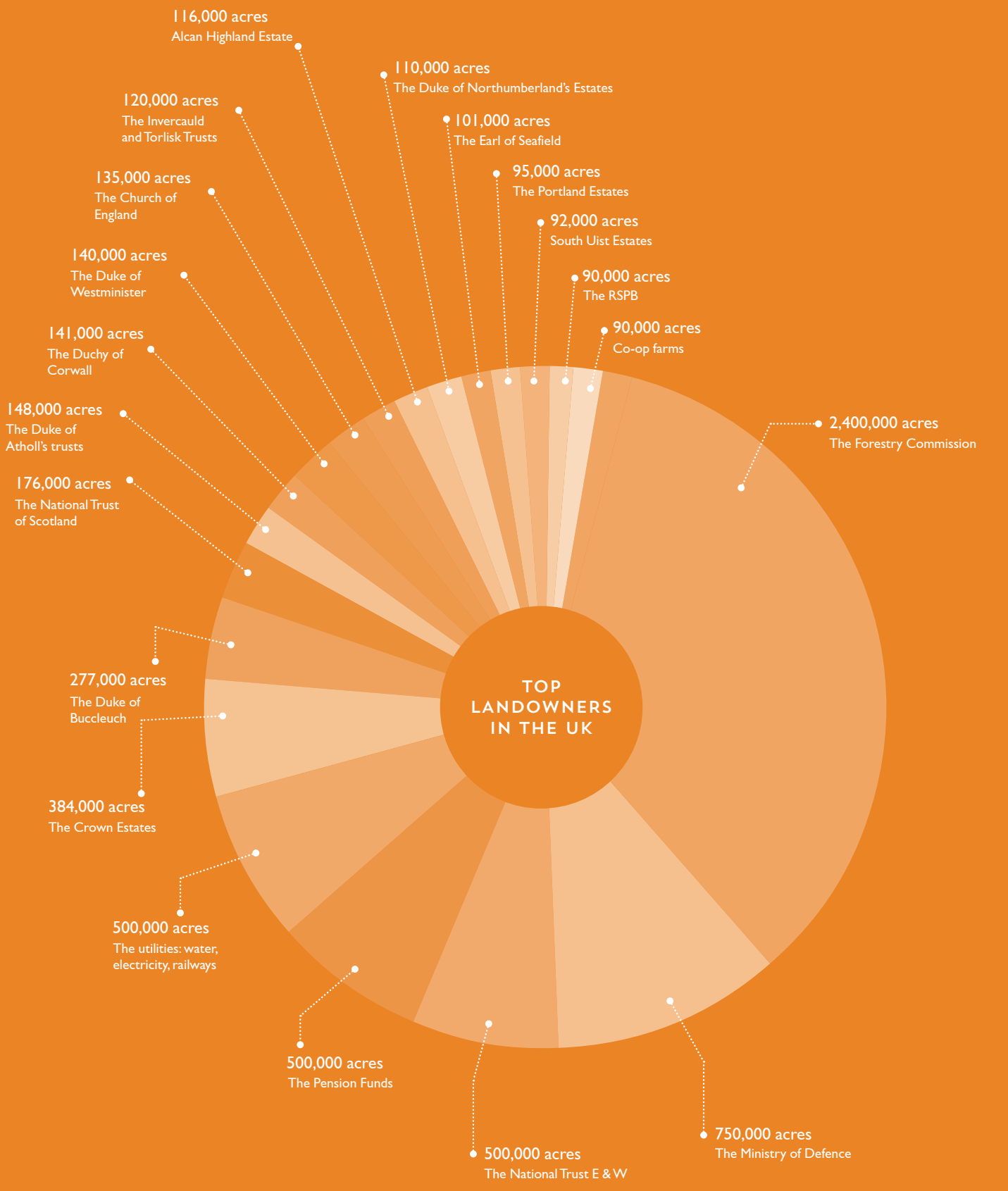
TAXATION AND VALUE

Our financial model (Step 7) assumes that half the landowners engaged in the new Garden City will wish to contribute their land in exchange for shares and deferred payment. This means, however, that approximately half of the original Garden City land 'investors' will wish to extract themselves from the enterprise once outline planning permission is granted or the Local Development Order is confirmed (i.e. at the point when the uplift in land value is achieved). Our financial model therefore allows for, and distinguishes between, those wishing to **leave their land in the deal** of the Garden City and accrue additional value over time, and those looking for an earlier exit.

All landowners would be incentivised through the payment of existing use value at the point where the Commission starts to acquire land or rights to land (i.e. upfront). Those owners whose land is involved in the initial stages of development would also benefit from more substantial payments at the early stage (and all others would so benefit as development progresses). However with the construction life of the Garden City lasting at least 25 years, most landowners would be significantly incentivised to continue using the land under licence (under preferential terms) in exchange for an existing use payment.

19. *Presentation to the TCPA Garden Cities Conference; John Lewis, Chief Executive of the Letchworth Heritage Foundation; May 2014*

FIGURE 5.1. TOP LANDOWNERS IN THE UK: SOURCE KEVIN CAHILL – WHO OWNS BRITAIN



SITE IDENTIFICATION & LANDOWNER COLLABORATION

In addition to this, certain tax relief opportunities may be available to those landowners seeking a slower rate of return, through the transfer of title to the Garden City Commission. The suggestion is that landowners would opt to remain as tenants and acquire a significant share in the new city by transferring their land into the Garden City Estate at existing use value (EUV, or at an agreed moderated uplift). Retaining this shareholding for a minimum two year period would enable tax relief to be obtained: this is a significant advantage, compared to holding the land as development value is realised – leading to a considerable uplift in value and incurring substantial capital gains tax on disposal.

Business property relief is available for a business or an interest in a business, for unquoted company shares and for controlling quoted company shares. 50% relief may be available for land and buildings used wholly or mainly in the owner's business. To qualify, the business itself must be wholly or mainly (i.e. more than 50%) a trading business (investment businesses do not qualify).[20]

A further factor in the land control structure is inheritance tax, which significantly affects landed estates[21]. The transfer of assets to the Garden City Commission or Estate, initially accounted for at minimal value, is expected to markedly reduce the liability, improving the incentive for the land owner to vest the land with the Garden City Commission Estate at an early stage.

As with the models of Garden Cities that we set out in the following chapter (Step 6), it is important to recognise that **there is no single solution to incentivising landowners.** Invariably whether as a trust or not, landowners are families, often of several generations who between them may own substantial tracts comprising a major component of a Garden City site. However different family members will have different pressures and demands on their assets.

Whilst the attraction of reduced tax implications in exchange for transfer of ownership and deferred income from the sale of the land may incentivise some family members - possibly the more mature generations, interested in legacy and longer term investments for their remaining relatives - others may be facing more immediate pressures or take into account the need to acquire additional agricultural land (for this may be the overriding existing land use) elsewhere.

Consequently the financial model used in calculating development viability must make allowances for these variations and reflect the individual circumstances of different landowners. The specifics of this are dealt with at Step 7 but they broadly seek to identify the right levels of initial payment, the value of transferred shares in the Garden City Estate, and the notion of any existing use value (EUV) payable without access to future share capital in the place.

These assumptions have all been based on extensive industry soundings taken from live strategic land acquisitions.

AVAILABILITY OF LAND

Typically there is a lot of scepticism around both the availability, or even the existence of sites sufficiently large to support new Garden Cities.

Commentators however, overlook some of the incentivisation factors identified above and under-estimate the value of legacy to large numbers of landowners.

In addition to this is the fact that strategic land buyers, Local Authorities and Regional Planning Authorities before them, have not, since the last round of New Towns in 1967 – 1970, considered the acquisition of land at the scale necessary for the development of new settlements.

Previous Government advice on the Eco-towns concluded by setting far too low a threshold to achieve meaningful sustainability, and the benefits to communities were limited as a result. **Land was often deliverable, insofar as it was within single ownerships, but invariably in the wrong place without access to strategic infrastructure.**

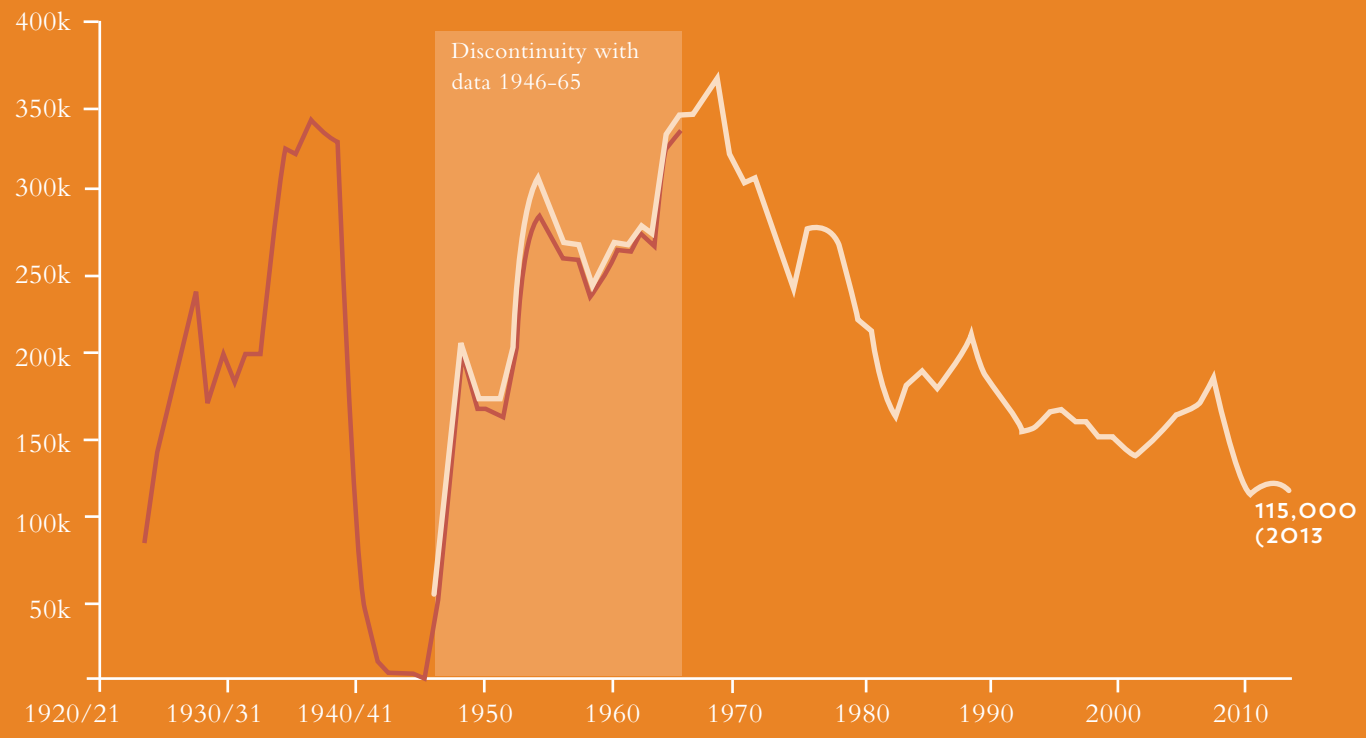
Garden Cities are in a different league. Firstly they are proven. Investors, landowners and members of the public can go and visit Letchworth or Welwyn if they want to see for themselves what the mature city might look like.

This is also a key determinant for investors and incentivising aspect for land owners: **the legacy product is available to view.**

20. *For many businesses involved in land, therefore, a crucial point in this regard is to establish whether the business is principally a trading business or principally an investment business. Assets held within the same structure as the business which are not used in the business do not qualify for relief and are considered "excepted assets".*

21. *For land held in trust this is calculated on the basis of 'interest in possession' (in other words income from the Trust from the estate as it arises). However if there is no income at the point of inheritance, the inheritance tax is charged on the tenth anniversary of the trust and it is for the trust as operator of the estate to generate sufficient income over the intervening 10 year period to meet this tax liability calculated on the basis of the value of assets at that date.*

FIGURE 5.2. HOUSE BUILDING SINCE THE 1920S
PERMANENT DWELLINGS COMPLETED IN ENGLAND AND WALES, 1924-2013



BY FULL FACT USING DCLG LIVE TABLES ON HOUSE BUILDING 244 AND 245 (POST-46) AND DATA PROVIDED BY CONSTRUCTION PRODUCTS ASSOCIATION (PRE-65)

Secondly as New Towns followed Garden Cities, so the new Garden Cities can follow the New Towns. It seems all too easily forgotten that there were three generations of New Towns. These three waves resulted in the creation of 27 new or expanded places. The notion of creating a wave of Garden Cities in similar or greater numbers should be in easier reach in today's society, although it would appear that many politicians (many of whom were not - or were barely - born at the time) have missed out on the sense of optimism and adventure represented by the 1960s and the high levels of house building achieved at the time. (see figure 5.2)

There are several examples of New Towns (and this may have been a determining factor in their location) where there are strong adjacencies with the historic institutional land owners including the Church Commissioners for England, The Crown Estate and the larger Pension Funds.

This would seem to reinforce our suggestion of the role that major estates could play in bringing land forward.

In addition, consideration would be given to surplus public sector land, identified on the Central Government (and it's agencies) register, part of e-PIMS (Electronic Property Information Mapping Service), administered by the Government Property Unit (GPU), part of the Cabinet Office. Although currently only available to public sector agencies, the GPU is looking at the benefits of land pooling public sector land with adjacent ownerships and access may be made to the database on a wider basis from the end of this year.

Access to this database could be made available under licence via the UK Land Registry - although this may need to sit within the remit of the evidence gathering arm of a Royal Commission or similar for data protection reasons.

NATIONAL GARDEN CITY OPPORTUNITIES MAP

Combining the sifting data from Step 3 with an understanding of local opportunities and appetite for economic growth will allow for the creation of a wave of Garden Cities across England driving jobs and skills, affordable housing and quality of life, creating a precedent for communities of the future.

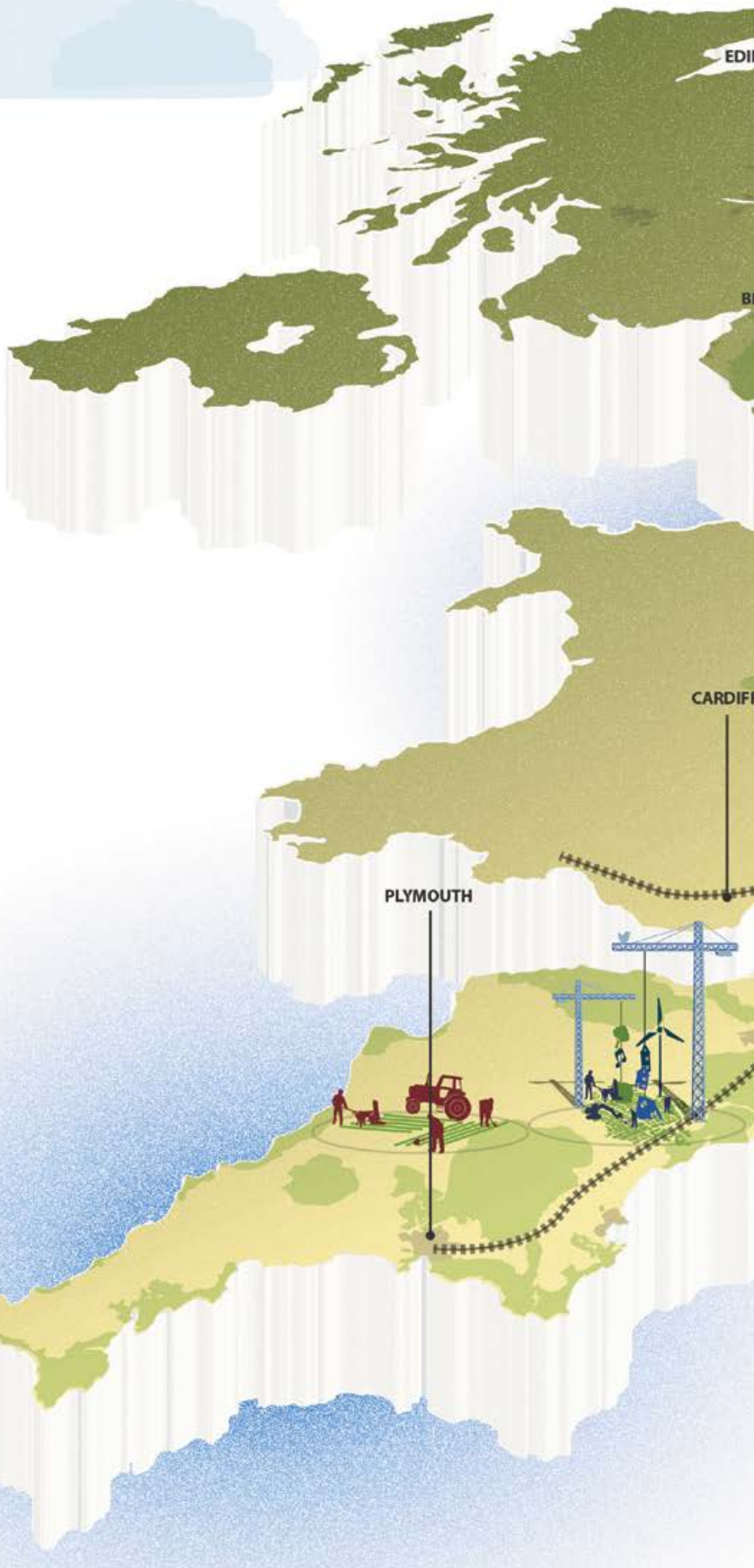
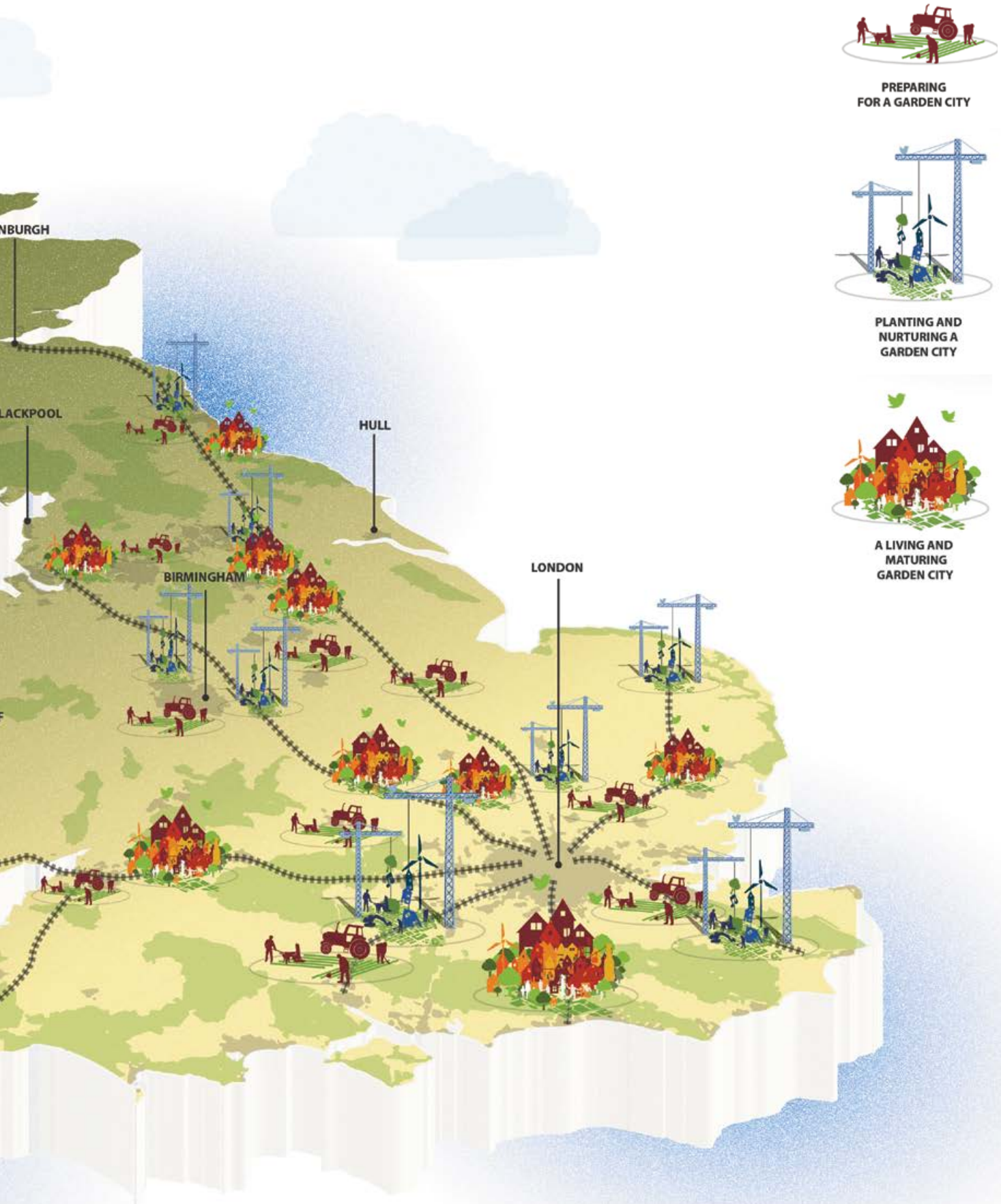


FIGURE 5.3. NATIONAL GARDEN CITY OPPORTUNITIES MAP

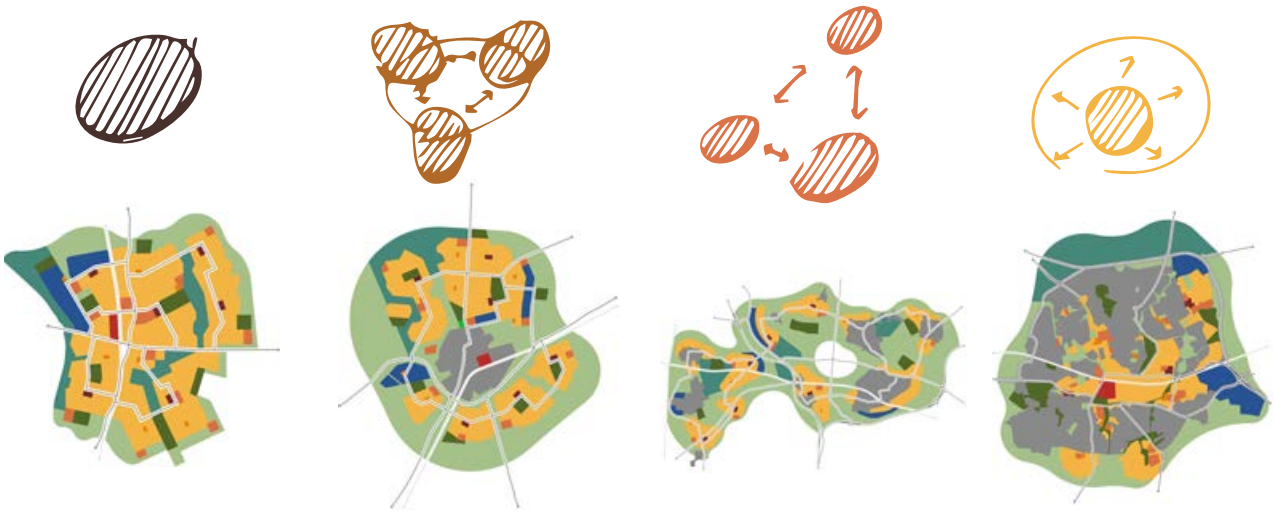

NBURGH
LACKPOOL
HULL
BIRMINGHAM
LONDON
PREPARING FOR A GARDEN CITY
PLANTING AND NURTURING A GARDEN CITY
A LIVING AND MATURING GARDEN CITY

6 GARDEN CITY TYPOLOGIES

ONE SIZE DOESN'T FIT ALL

If the new Garden City model is to be measured by its popularity then a key indicator of success will be how quickly and how well we can create a city that feels like home to a wide range of people with their various needs, wants and preferences. The key to this surely lies not in trying to make all the people fit a single model, but to make a model that adapts to a wide range of people and results in a choice of environments and lifestyles.

Our model is therefore developed not on a single spatial solution but on several typologies that can adapt to individual sites and local circumstances. We have identified four Garden City typologies that we believe encompass the majority of opportunities in the UK:



1. Stand-alone Garden City Model

2. Expansion Model

3. String of Pearls

4. Regeneration and Insertion

Some of these may challenge preconceptions of a new Garden City but each can deliver a place that holds true to the core Garden City principles and one where people choose to live. By expanding our definition of Garden Cities we multiply the opportunities to deliver huge numbers of new homes at a national level. Additionally we create mechanisms for upgrading areas of existing housing stock and improving the quality of life for many more people, offering them the chance to benefit from a Garden City lifestyle. There is more than one way to deliver a Garden City…

THE GENERIC GARDEN CITY MODEL

Our vision of a new Garden City is of a place conceived in terms of the social experience it can offer. It assumes organic growth over time with a series of village cells supporting small pioneering communities that gradually expand their social and business networks.

Local centres would begin life as shared spaces, housing temporary, pop-up amenities. These would gradually take root as finance is made available. Similarly, land for the town centre would be allocated early but developed gradually, with city-scale infrastructure such as a Town Hall, theatre space or library beginning in temporary locations, before finding their permanent home in the town centre.

To demonstrate how this vision can be made a reality we have created a "Generic Garden City Model" that identifies the community infrastructure necessary to support a population of this scale. It indicates when land must be made available to ensure those buildings, open spaces and employment opportunities are delivered in parallel with population growth. Step 7 takes the spatial assumptions and phasing from this model as the basis of establishing development viability.

The model is based on an average household size of 2.3 people[22] and the UK average socio-economic and employment profile[23]. It illustrates an approach that is broadly applicable across the UK but which must be adapted to local circumstances. In figure 6.3, we have used this model to illustrate growth of a typical UK standalone Garden City.

22. *ONS census data; 2011*

23. *BIS Economic paper No. 18, Industrial Strategy, UK Sector Analysis; Department for Business Innovation and Skills; September 2012*

24. *CABE, "Better Neighbourhoods: Making higher densities work", 2005*

SCALE

The model assumes an average net residential density of 40 dwellings per hectare (dph) providing a density curve with flexibility to include a comprehensive range of house types and sizes from 1 bed apartments to large detached villas. It assumes the creation of high density development around public transport nodes and lower densities in less accessible or visually sensitive locations. It also makes provision for areas of very low density, to account for scattered farmsteads which we consider an integral part of the Garden City Model. For comparison, the average density of London is 42 dph and Ebenezer Howard's original Garden Cities were conceived at 45 dph.[24]

Using the average UK figures we arrive at a total Garden City area, including all ancillary uses and green space, of 2,780.60 ha (6,870 acres). To provide an idea of scale, this is broadly comparable to Bath, Exeter, Lincoln and Wakefield, all of which have similar footprints and population sizes. (see figure 6.1 & 6.2)

BATH

Population 94,782
Area 25 sqkm

WAKEFIELD

Population 99,251
Area 30 sqkm

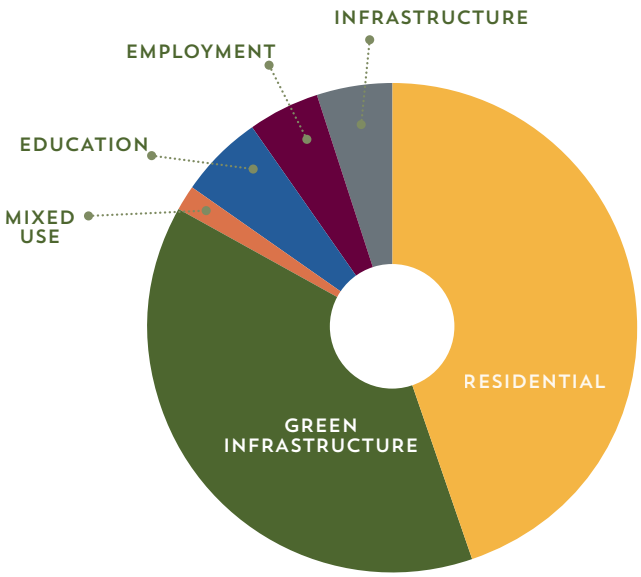
LINCOLN

Population 100,160
Area 33 sqkm

EXETER

Population 113,507
Area 29 sqkm

FIGURE 6.1. COMPARABLE CITIES WITH A SIMILAR FOOTPRINT AND POPULATION SIZE



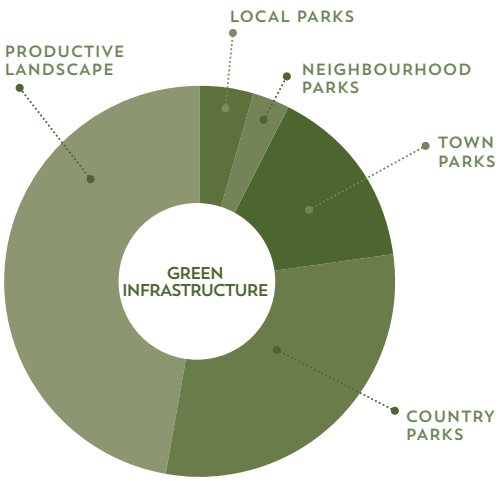


FIGURE 6.2. LAND USE SPLIT

1. STAND-ALONE GARDEN CITY MODEL

YEAR 5

YEAR 10

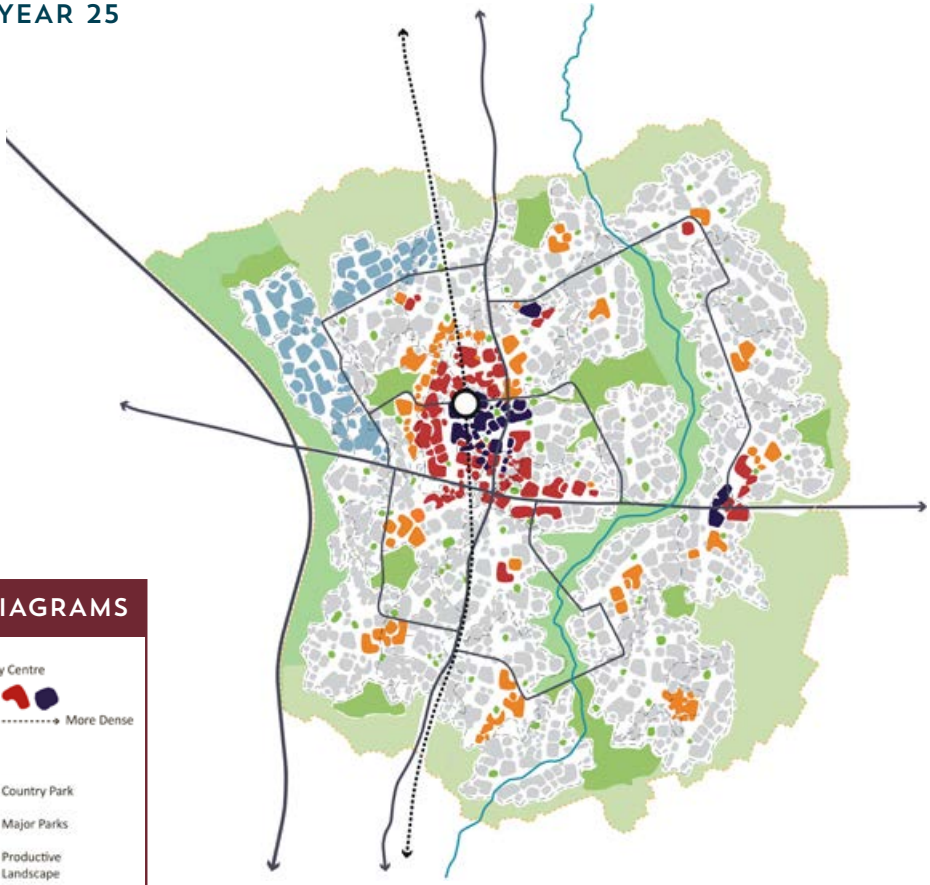
THE CONCEPT

The stand-alone model creates a completely new 21st century Garden City of 50,000 homes supporting a population of 115,000 residents over a build period of 25 years. This model offers the chance to plan for state of the art, future proofed infrastructure; create new, contemporary vernacular forms; and develop new traditions rooted in the place. It must be located where there is access to mainline rail and road infrastructure, and where enough land can be assembled to accommodate a sustainable town.

YEAR 15

YEAR 20

YEAR 25



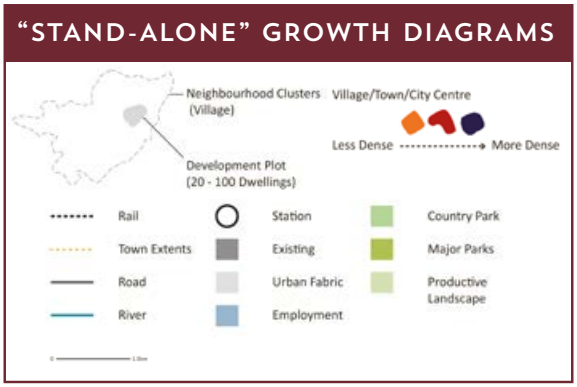


FIGURE 6.3. STAND-ALONE GROWTH DIAGRAMS

GARDEN CITY COMPONENTS

Garden Cities are not only about meeting housing targets; they are about meeting people's needs across their lifetimes. While providing large numbers of houses, they must also offer the numerous ancillary components needed to provide an attractive, stimulating, healthy living environment. Residents should stay because they choose to, not because they can't afford to leave. Pioneers must be supported as they seek to establish the earliest networks that will form the social backbone of the town and subsequent settlers must have confidence that the community infrastructure can and will grow to meet the needs of the expanding population. Figure 6.4 below indicates how our model will deliver an effective 'people climate' where land and facilities are delivered in tandem with the needs of the population.

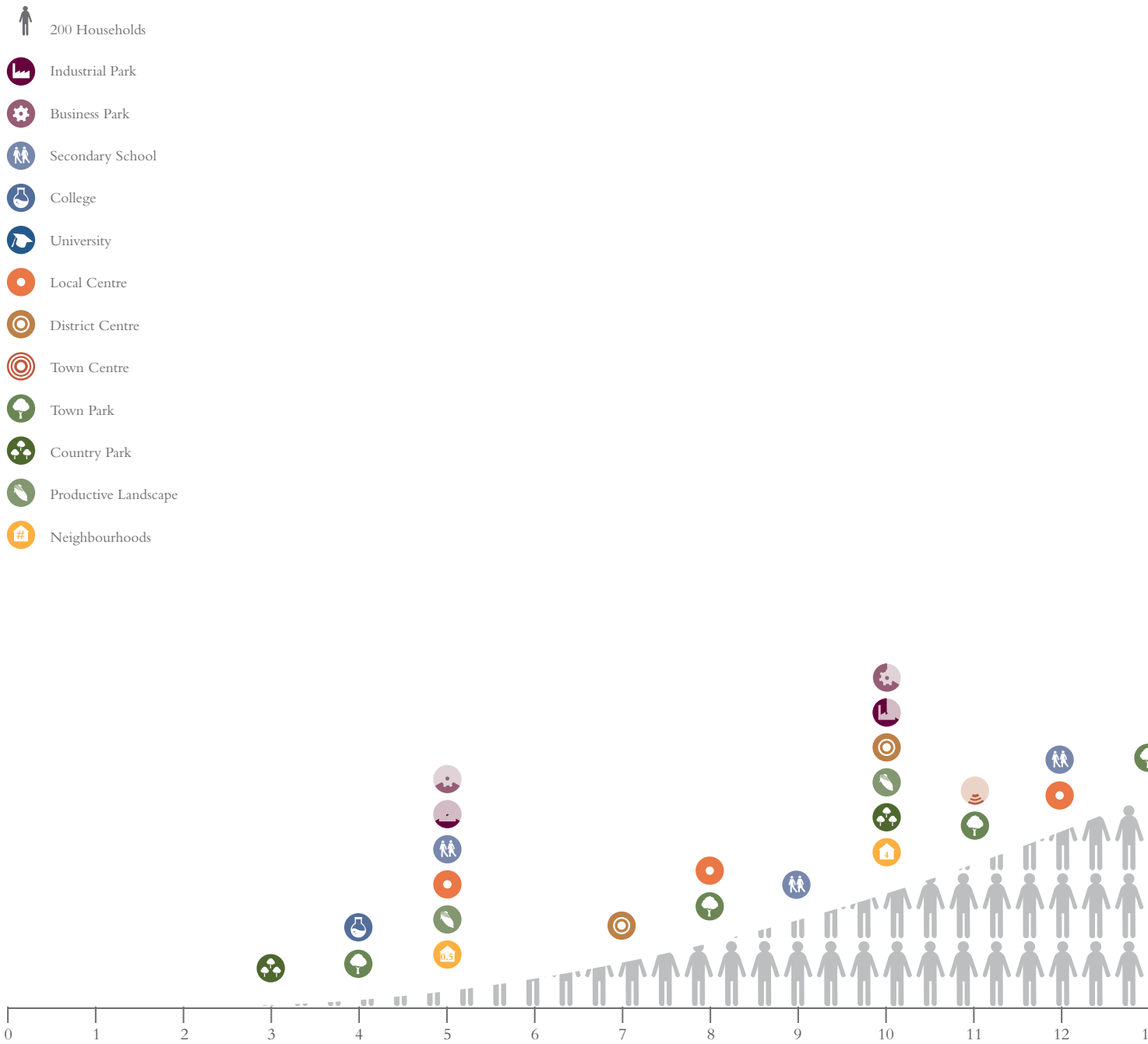
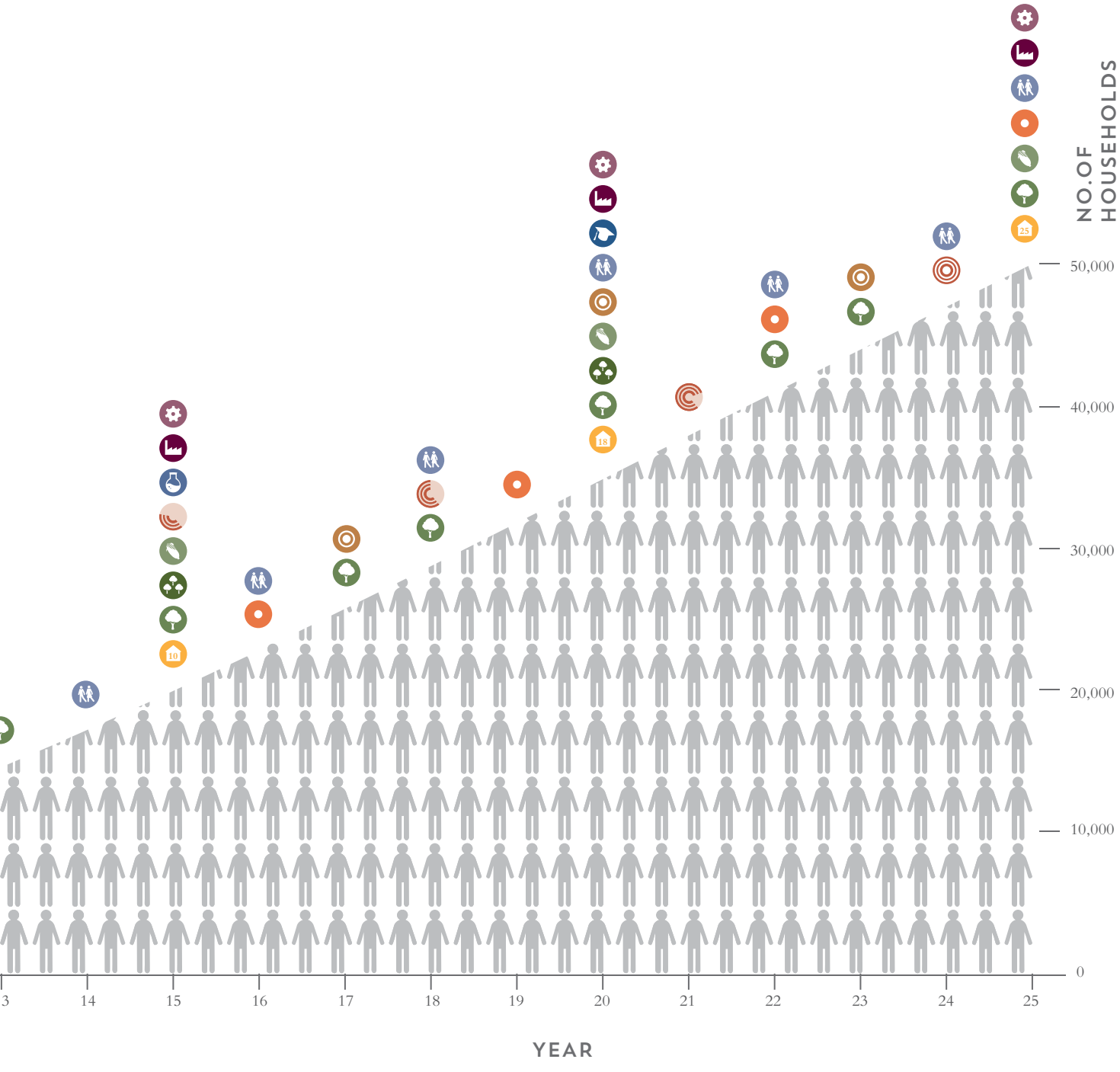


FIGURE 6.4. DELIVERY OF COMMUNITY INFRASTRUCTURE AS POPULATION GROWS

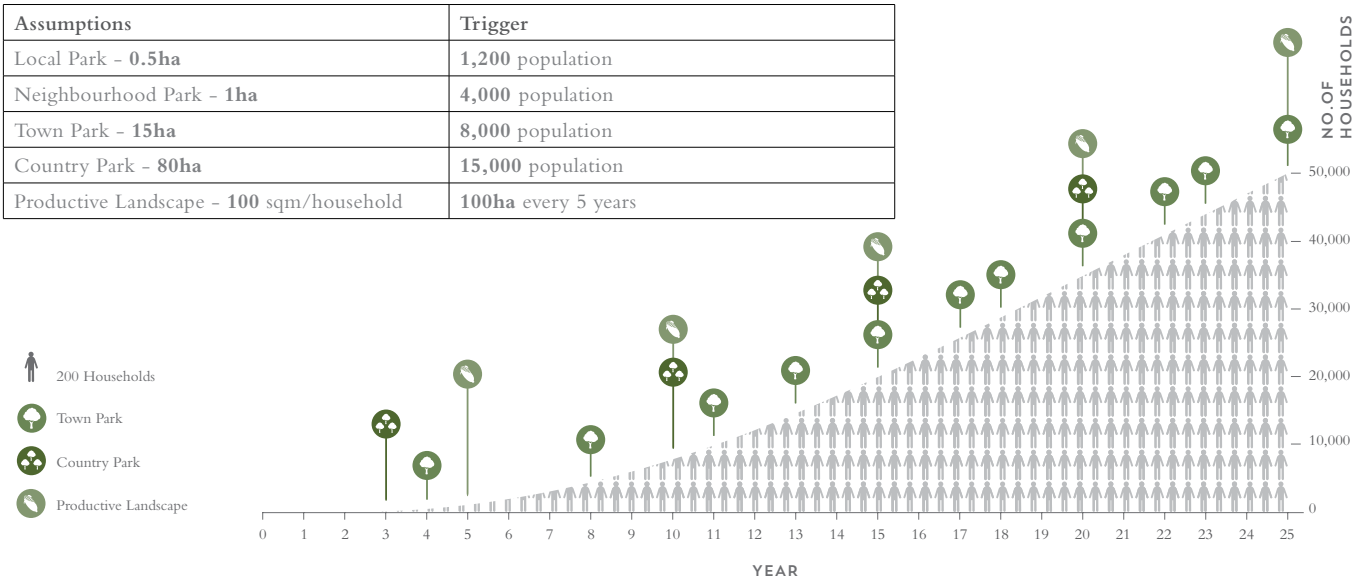

NO.OF HOUSEHOLDS
50,000
40,000
30,000
20,000
10,000
0
3
14
15
16
17
18
19
20
21
22
23
24
25
YEAR

GARDEN CITY TYPOLOGIES

OPEN SPACE

Ideally a Garden City should start with the 'garden' so our model allocates large tracts of public open space when the town is founded. Subsequent areas are allocated as the town grows to ensure everyone has convenient access to nature and our model allocates approximately 40% of the total area to green space. Country parks are natural areas designed around large scale landscape features such as woodlands, streams or heathland. Town nurseries can be established here, where street trees and planting can be grown for use in future phases. Productive landscapes encompass various scales of agriculture including early establishment of allotments and market gardens, where pioneers can grow food locally; 100 sqm per household is allocated to this use. There is a hierarchy of open space, starting with local and neighbourhood parks, relating to the local and district centres respectively, providing flexible green space with play facilities. Larger town parks broadly relate to town quarters, and at 15ha are large enough to include pitches and courts, large playgrounds, meadows and gardens. Each would be delivered ahead of neighbourhood completion. (see figure 6.5)

Assumptions	Trigger
Local Park - **0.5ha**	**1,200** population
Neighbourhood Park - **1ha**	**4,000** population
Town Park - **15ha**	**8,000** population
Country Park - **80ha**	**15,000** population
Productive Landscape - **100** sqm/household	**100ha** every 5 years



YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	T
GREEN INFRASTRUCTURE (HA)																											
Local park area per year (ha)			0.5		0.5	0.5	0.5	1.0	1.5	1.0	2.0	2.0	2.0	2.5	2.5	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	**50.0**
Neighbourhood park area per year (ha)			1.0			1.0	1.0		1.0	1.0	1.0	1.0	1.0	2.0	2.0	2.0	2.0	2.0	1.0	2.0	1.0	2.0	2.0	2.0	1.0	1.0	**30.0**
Town park area per year (ha)				15.0				15.0					15.0		15.0		15.0	15.0		15.0		15.0	15.0		15.0		**165.0**
Country park area per year (ha)				80.0							80.0					80.0					80.0						**320.0**
Productive landscape						100										100.0					100.0					100.0	**500.0**
Subtotal all POS per annum						**101.5**	1.5	16.0	2.5	2.5	**198.0**	3.0	18.0	4.5	19.5	**185.0**	20.0	20.0	4.0	20.0	**184.0**	20.0	20.0	5.0	19.0	**104.0**	**1065.0**
Cumulative POS per annum						**198.5**	200.0	216.0	218.5	221.0	**419.0**	422.0	440.0	444.5	464.0	**649.0**	669.0	689.0	693.0	713.0	**897.0**	917.0	937.0	942.0	961.0	**1065.0**	

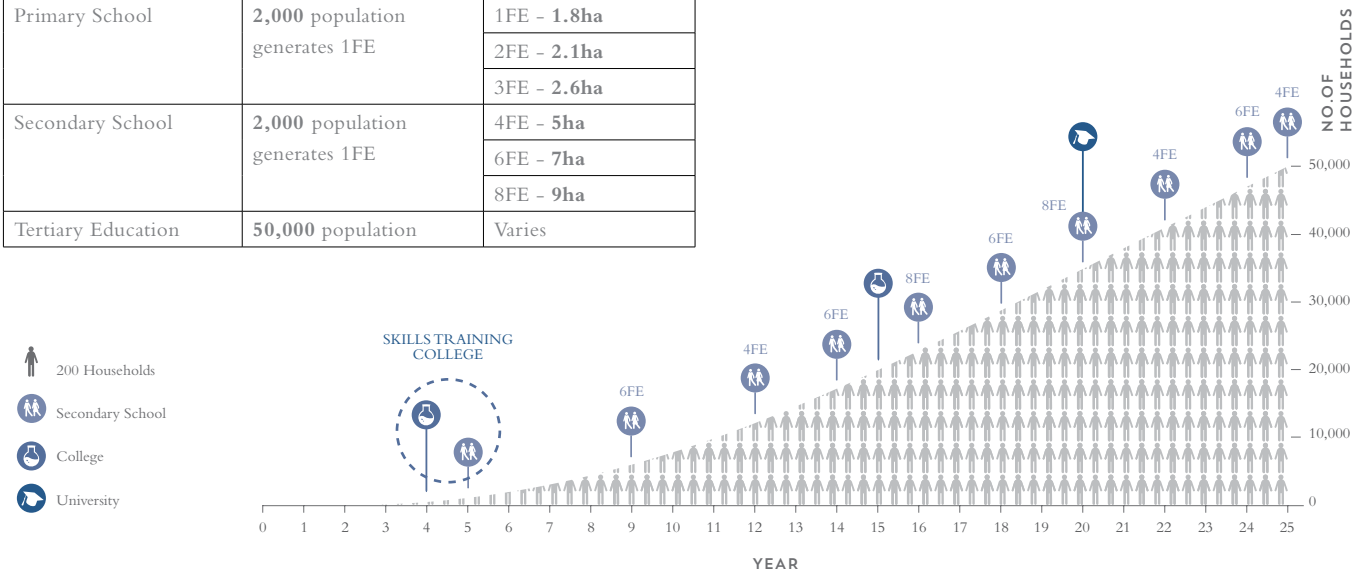
FIGURE 6.5. GREEN INFRASTRUCTURE PHASING

GARDEN CITY TYPOLOGIES

EDUCATION

The standalone model assumes there is no educational capacity available on site and that all infrastructure will need to be accounted for in the financial model. This will be phased over time with the size of the school required at each phase determined by the rate of build. The number of schools will be affected by the Garden City's changing population demographic as it develops so the final numbers may vary from place to place. Figure 6.6 shows how much land is typically allocated per year for education and the graph indicates how delivery of schools is matched to population growth.

Assumptions	Trigger	Site Area
Primary School	**2,000** population generates 1FE	1FE - **1.8ha**
		2FE - **2.1ha**
		3FE - **2.6ha**
Secondary School	**2,000** population generates 1FE	4FE - **5ha**
		6FE - **7ha**
		8FE - **9ha**
Tertiary Education	**50,000** population	Varies



YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	T
EDUCATION																											
PRIMARY SCHOOLS																											
No. primary schools needed per year						1	0	1	1	1	1	1	2	1	1	2	2	2	1	2	2	2	2	2	2	1	30
Cumulative primary schools				0	0	1	1	2	3	4	5	6	8	9	10	12	14	16	17	19	21	23	25	27	29	30	
SECONDARY SCHOOLS																											
No. secondary schools needed per year				0	0	1	0	0	0	1	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	1	10
Cumulative secondary schools				0	0	1	1	1	1	2	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	10	
TERTIARY EDUCATION																											
No. colleges each year					1											1					1						3
Land take all education per year (ha)			6.0	1.8	0.0	2.1	2.1	9.1	2.6	2.1	8.9	2.6	19.6	4.2	11.2	3.9	9.6	19.2	13.4	4.2	9.2	4.4	11.2	7.6	0.0	0.0	155.0
Cumulative education land (ha)			6.0	7.8	7.8	9.9	12.0	21.1	23.7	25.8	34.7	37.3	56.9	61.1	72.3	76.2	85.8	105.0	118.4	122.6	131.8	136.2	147.4	155.0	155.0	155.0	

FIGURE 6.6. PHASED INTRODUCTION OF SCHOOLS AND COLLEGES

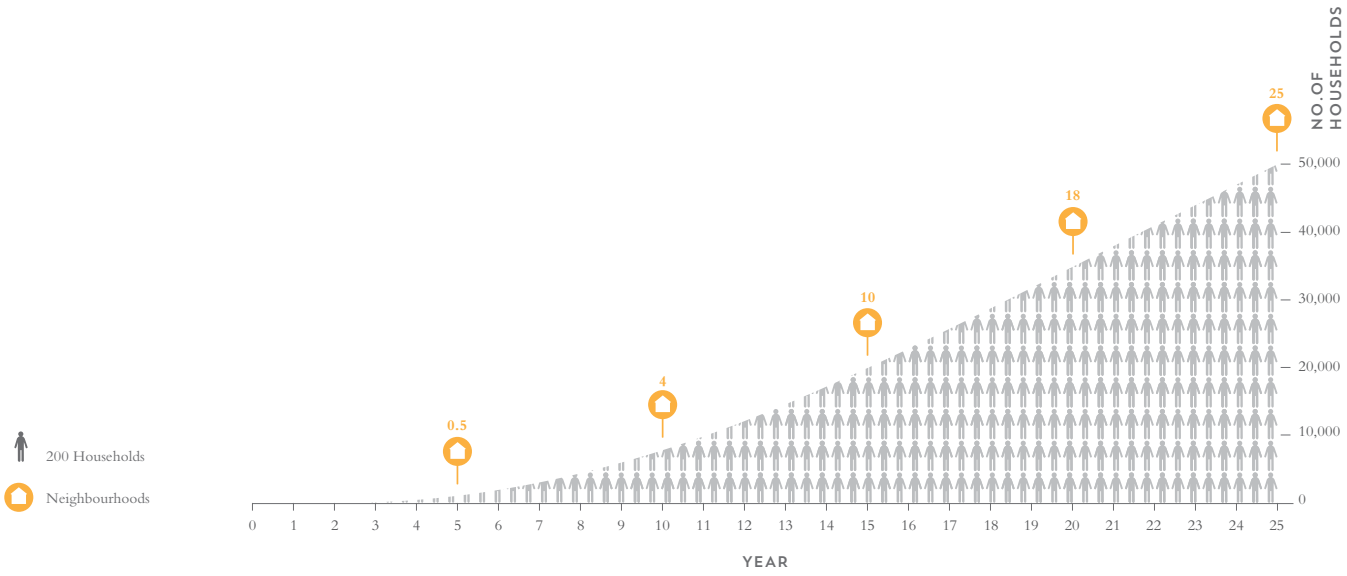
GARDEN CITY TYPOLOGIES

HOMES

Growth is initially slow, with a three year lead-in period to found the Garden City Commission, get land and permissions in place and establish the vision for the Garden City. By the end of year three, 100 homes will have been delivered, but by year 15 the build rate will have reached its peak of 3,000 homes per annum, utilising both traditional construction methods and off-site fabrication[25], a rate not dissimilar to those achieved in the New Towns. Figure 6.7 indicates the population growth curve we would expect in a typical Garden City over 25 years.

25. *http://www.theguardian.com/business/2012/nov/12/prefabs-britain-timber-frame-persimmon*

Assumptions	
Average Household Size	**2.3** people per household
Average Net Density	**40** dph
Average neighbourhood size	**2,000** homes on **50** ha



YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	T
RESIDENTIAL LAND																											
New homes per annum	-	-	-	100	300	600	750	1,000	1,500	1,750	2,000	2,000	2,000	2,500	2,500	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	**50,000**
Cumulative homes	-	-	-	100	400	1,000	1,750	2,750	4,250	6,000	8,000	10,000	12,000	14,500	17,000	20,000	23,000	26,000	29,000	32,000	35,000	38,000	41,000	44,000	47,000	50,000	
New population per annum	**-**	**-**	**-**	**230**	**690**	**1,380**	**1,725**	**2,300**	**3,450**	**4,025**	**4,600**	**4,600**	**4,600**	**5,750**	**5,750**	**6,900**	**6,900**	**6,900**	**6,900**	**6,900**	**6,900**	**6,900**	**6,900**	**6,900**	**6,900**	**6,900**	**115,000**
Cumulative population	-	-	-	230	920	2,300	4,025	6,325	9,775	13,800	18,400	23,000	27,600	33,350	39,100	46,000	52,900	59,800	66,700	73,600	80,500	87,400	94,300	101,200	108,100	115,000	
Net land take per annum (ha)	-	-	-	2.5	7.5	**15.00**	18.75	25.00	37.50	43.75	**50.00**	50.00	50.00	62.50	62.50	**75.00**	75.00	75.00	75.00	75.00	**75.00**	75.00	75.00	75.00	75.00	**75.00**	**1,250.00**
Cumulative resi land take (ha)	-	-	-	2.5	10.00	**25.00**	43.75	68.75	106.25	150.00	**200.00**	250.00	300.00	362.00	425.00	**500.00**	575.00	650.00	725.00	800.00	**875.00**	950.00	1,025.00	1,025.00	1,100.00	**1,250.00**	

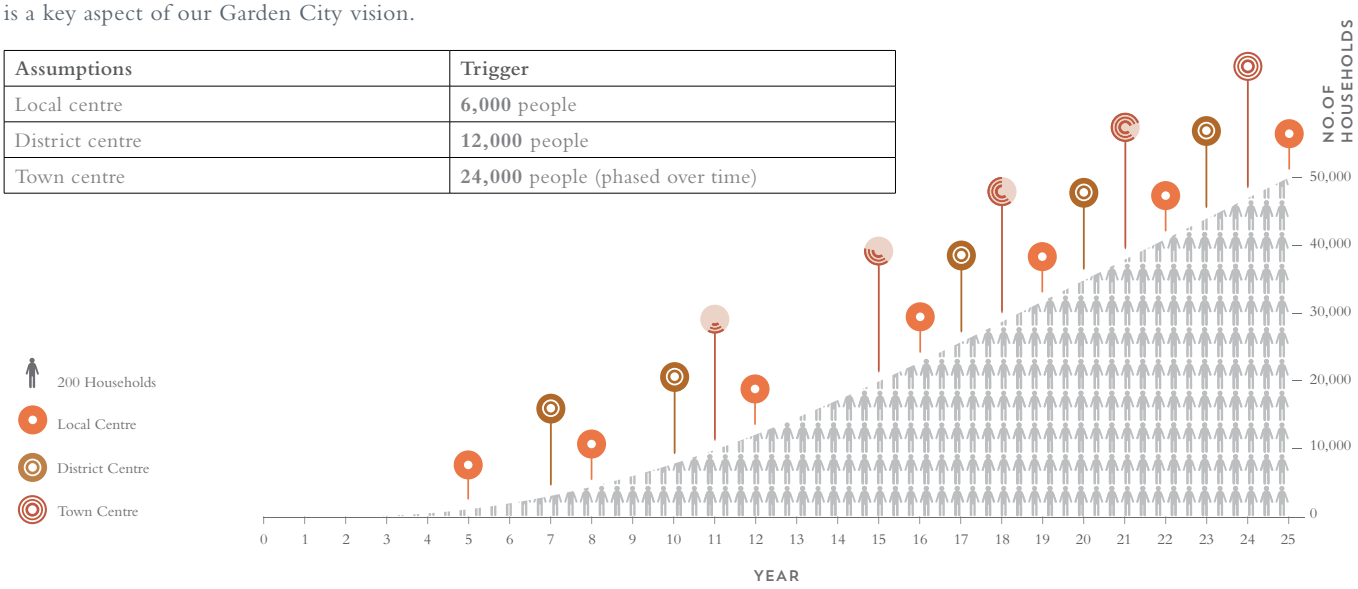
FIGURE 6.7. RESIDENTIAL LAND REQUIREMENTS AND HOUSING COMPLETIONS

COMMUNITY INFRASTRUCTURE

Figure 6.8 indicates the gradual build up of local, district and town centre facilities. Each centre has a spatial dimension as well as a demographic one, facilities are located to form catchment areas that allow the majority of citizens to reach them easily by walking, cycling and public transport.

In the early stages of development, pioneers will need to be creative in their use of space; the first neighbourhood hub for example could be co-located with the first schools and skills training college. This would offer a focal point with multipurpose space that, subject to proper management, the first residents can share with students. Facilities such as libraries, sports halls, pitches, cafes and auditoria can all be used by students and residents to minimise upfront costs whilst providing vital services. This cooperative attitude is a key aspect of our Garden City vision.

Assumptions	Trigger
Local centre	**6,000** people
District centre	**12,000** people
Town centre	**24,000** people (phased over time)



YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	T
MIXED-USE CENTRES																											
Local centre requirement				0.00	0.00	0.38	1.00	1.00	2.00	2.00	3.07	4.00	5.00	6.00	7.00	7.67	9.00	10.00	11.00	12.00	13.42	15.00	16.00	17.00	18.00	18.17	
Local centre land allocated (ha)								1.50				1.50				1.50			1.50			1.50			1.50		10.50
District centre requirement				0.00	0.00	0.00	0.00	1.00	1.00	1.00	2.00	2.00	2.00	3.00	3.00	4.00	4.00	5.00	6.00	6.00	7.00	7.00	8.00	8.00	9.00	10.00	
District centre land allocated (ha)						3.50			3.50			3.50				3.50			3.50			3.50					21.00
Town centre requirement				0.00	0.00	0.10	0.00	0.00	0.00	1.00		1.00	1.00	1.00	2.00	1.92	2.00	2.00	3.00	3.00	3.35	4.00	4.00	4.00	5.00	4.79	
Town centre land allocated (ha)									15.00																		15.00
Total land area per year (ha)			0.00	0.00	0.00	**5.00**	0.00	0.00	20.00	0.00	**0.00**	3.50	1.50	0.00	0.00	**3.50**	1.50	0.00	3.50	1.50	**0.00**	3.50	1.50	0.00	0.00	1.50	46.5
Cumulative land take (ha)			0.00	0.00	0.00	**5.00**	5.55	5.55	25.00	25.00	**25.00**	28.50	30.00	30.00	30.00	**33.50**	35.00	35.00	38.50	40.00	**40.00**	43.50	45.00	45.00	45.00	46.50	

FIGURE 6.8. PHASING AND BUILD OUT OF LOCAL CENTRES

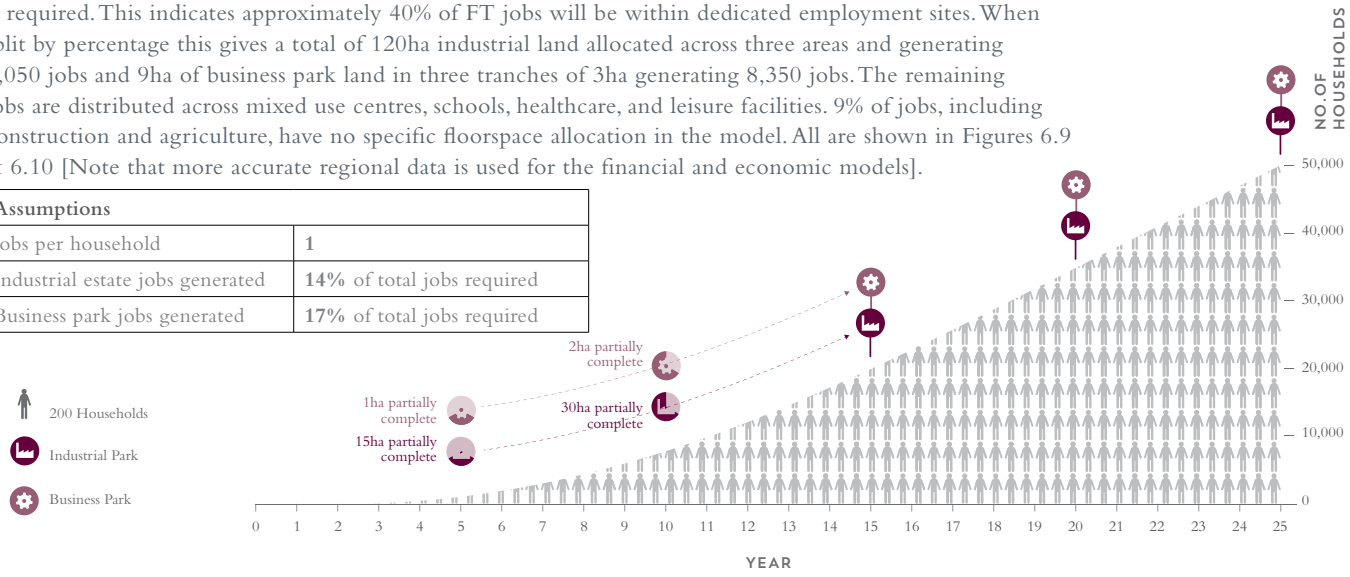
GARDEN CITY TYPOLOGIES

EMPLOYMENT

A balanced settlement using the standalone model requires the creation of 1 full time (FT) job per household and uses the existing UK employment profile[26] and standard UK employment densities[27] to allocate use class types to the sectors. This allows us to calculate how much floorspace is needed and therefore what site area is required. This indicates approximately 40% of FT jobs will be within dedicated employment sites. When split by percentage this gives a total of 120ha industrial land allocated across three areas and generating 7,050 jobs and 9ha of business park land in three tranches of 3ha generating 8,350 jobs. The remaining jobs are distributed across mixed use centres, schools, healthcare, and leisure facilities. 9% of jobs, including construction and agriculture, have no specific floorspace allocation in the model. All are shown in Figures 6.9 & 6.10 [Note that more accurate regional data is used for the financial and economic models].

26. *Shaping Neighbourhoods for Local Health and Global Sustainability, 2nd Edition, Barton, Grant & Guise; 2010*

Assumptions	
Jobs per household	**1**
Industrial estate jobs generated	**14%** of total jobs required
Business park jobs generated	**17%** of total jobs required



YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	T
ZONED EMPLOYMENT LAND (HA)																											
Total jobs required (all sectors)				100	400	1000	1,750	2,750	4,250	6,000	8,000	10,000	12,000	14,500	17,000	20,000	23,000	26,000	29,000	32,000	35,000	38,000	41,000	44,000	47,000	50,000	
Industrial estate jobs (14%)				14	56	141	247	388	599	846	1,128	1,410	1,692	2,045	2,397	2,820	3,243	3,666	4,089	4,512	4,935	5,358	5,781	6,204	6,627	7,050	**7,050**
Cumulative industrial land estate area (ha)				0.247	0.987	2.500	4.318	6.786	10.487	14.805	19.700	24.675	29.610	35.779	41.948	49.400	56.753	64.155	71.558	78.960	86.400	93.765	101.168	108.570	115.973	123.400	
Industrial land per year				0.25	0.74	1.50	1.85	2.47	3.70	4.32	4.90	4.94	4.94	6.17	6.17	7.40	7.40	7.40	7.40	7.40	7.40	7.40	7.40	7.40	7.40	7.40	**123.4**
Business park jobs (17%)				17	67	167	292	459	710	1,002	1,336	1,670	2,004	2,422	2,839	3,340	3,841	4,342	4,843	5,344	5,845	6,346	6,847	7,348	7,849	8,350	
Cumulative business park land area (ha)				0.017	0.067	0.167	0.292	0.459	0.710	1.002	1.336	1.670	2.004	2.422	2.839	3.340	3.841	4.342	4.843	5.344	5.845	6.346	6.847	7.348	7.849	8.350	
Business park land per year				0.017	0.050	0.100	0.125	0.167	0.251	0.292	0.300	0.334	0.334	0.418	0.418	0.500	0.501	0.501	0.501	0.501	0.500	0.501	0.501	0.501	0.501	0.500	**8.400**
Subtotal cumulative area (ha)				0.263	1.054	2.635	4.610	7.245	11.197	15.807	21.076	26.345	31.614	38.200	44.787	52.690	60.594	68.497	76.401	84.304	92.208	100.111	108.015	115.918	123.822	131.725	
Subtotals all employment land per year (ha)				0.260	0.790	1.600	1.980	2.630	3.950	4.610	5.300	5.270	5.270	6.590	6.590	7.900	7.900	7.900	7.900	7.900	7.900	7.900	7.900	7.900	7.900	7.900	**131.700**
Cumulative employment land (ha)				0.260	1.050	2.600	4.610	7.240	11.200	15.810	21.100	26.350	31.610	38.200	44.790	52.700	60.590	68.500	76.400	84.300	92.200	100.110	108.010	115.920	123.820	131.700	

FIGURE 6.9. EMPLOYMENT LAND PHASING AND LAND TAKE

GARDEN CITY TYPOLOGIES

27. *BIS economic paper No. 18, Industrial strategy UK sector analysis, Department for Business Innovation and Skills, September 2012*

Assumptions	
Employment profile	**Mirrors UK average**
B8 floor space	**Single Storey**
B1 floor space	**Three Storey**
Site efficiency	**40%**
Mixed use office jobs located within district and town centres & outdoor jobs	**No allocated floor space**

EMPLOYMENT LAND TAKE PER USE CLASS

USE CLASS	% SHARE	
Industrial Parks		
B8	11.5	14% jobs in industrial parks
B2	2.6	
Business Parks		
B1(c)	4.1	17% jobs in business parks
B1(b)	0.4	
B1(a)	12.2	
	31% total jobs allocated in employment zones	
Mixed use centres		
B1(a)	6.6	**27% jobs allocated in local/district centres**
A1	9.8	
A2	10.7	
Individual buildings		
Hospitality	6.3	**33% jobs in dedicated buildings**
Health & Community	18.1	
Education	8.7	
Outdoors		
Agriculture	2.5	**9% jobs outdoors**
Construction	6.5	

EMPLOYMENT LAND REQUIRED PER PERSON PER JOB

EMPLOYMENT TYPE	JOBS	JOB DENSITY (sqm)	FLOOR AREA (sqm)	STOREYS	LAND AREA (sqm)	CIRCULATION	GFA GROUND	LAND EFFICIENCY	TOTAL LAND TAKE (sqm)	HA PER JOB
Industrial (B2, B8)	1	70	70	1	70	0	70	40%	175.00	0.0175
Business Park (B1a)	1	10	10	3	3.3	20%	4	40%	10.00	0.001
Dedicated Employment Land										**0.0185 (185 sqm)**
Mixed use office (B1a)	1	12	12	2	6	20%	7.2	60%	12.00	0.0012
Financial services (A1)	1	19	19	2	9.5	0	9.5	50%	19.00	0.0019
Business services (A2)	1	16	16	2	8	20%	9.6	60%	16.00	0.0016
Mixed Use Employment Land										**0.0047 (47 sqm)**
TOTALS (all B uses)										**0.0232 (232 sqm)**

FIGURE 6.10. EMPLOYMENT LAND CALCULATIONS[27]

YEAR 5

YEAR 10

ALTERNATIVE TYPOLOGIES

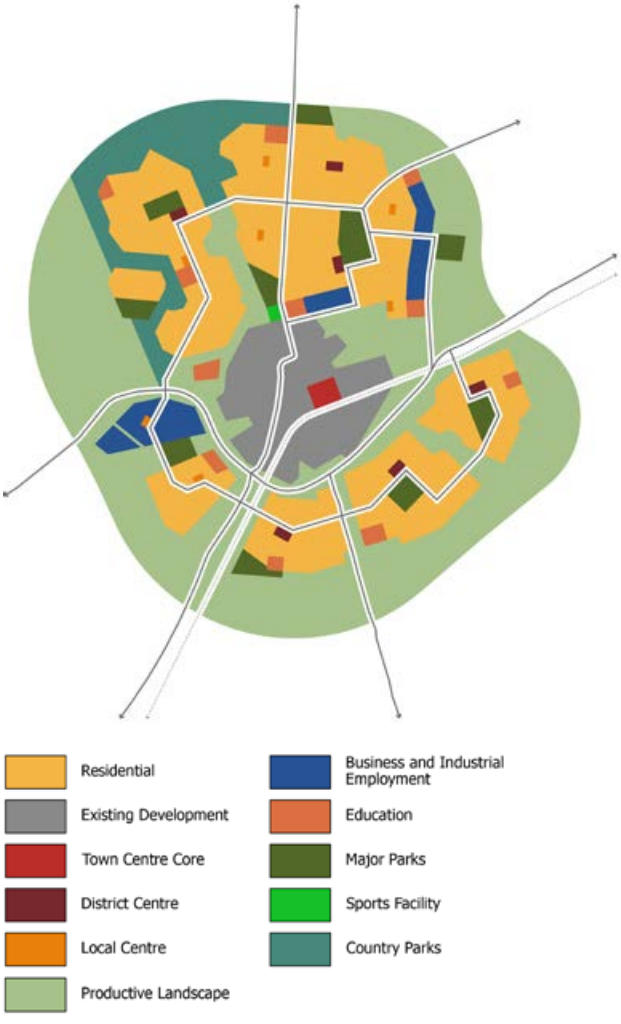
Each of the three other typologies grows from an existing place or places. They are still based on the figures from the generic model, but take account of existing conditions and components that are already in place. Ideally each typology would also provide 50,000 new homes but local circumstances may not permit development on this scale. The minimum target must therefore deliver significant growth with the total number of homes in the completed Garden City being not be less than 50,000.

2. GARDEN CITY EXPANSION MODEL

The expansion model is based on transforming existing settlements into Garden Cities by adding significant numbers of new homes, facilities and infrastructure. Expansion could range from a single large urban extension to smaller pockets of densification and expansion at the periphery. The model should result in a single settlement that is more economically and socially resilient because of its increased critical mass.

This approach is mutually beneficial: existing residents will benefit from new and upgraded infrastructure, more efficient and more frequent public transport, new and improved facilities and more choice of homes, schools, shops, leisure and jobs. New residents will find it easier to plug into a place with an existing community and established traditions.

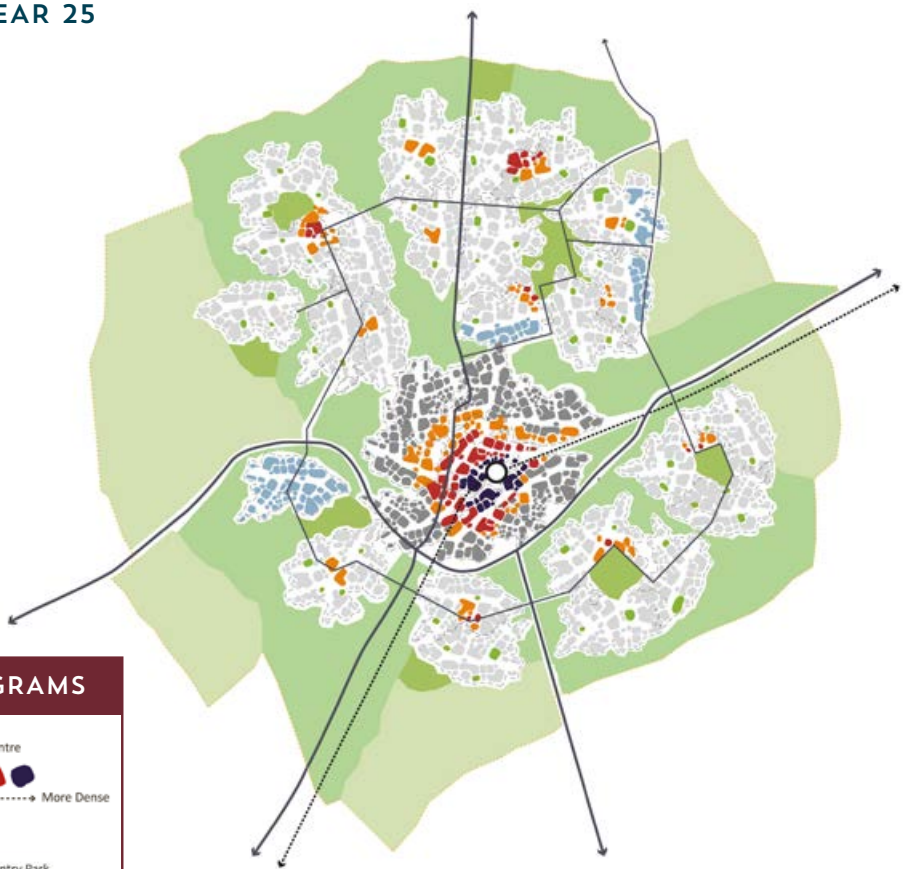
Again, patterns of organic growth are used, so new neighbourhoods emerge slowly over time. Densification and environmental improvements to the existing town fabric, if needed, are also undertaken gradually and in tandem with overall growth. The idea is to enhance, not to compete, so a Garden City Commission responsible for delivering this typology must carefully audit the existing place to ensure new development is complementary. Part of the proposed Estate Bond (see steps 7 and 10) would be used for these improvements; upgrading homes, greening streets and improving access to open space. (see figure 6.11)



YEAR 15

YEAR 20

YEAR 25



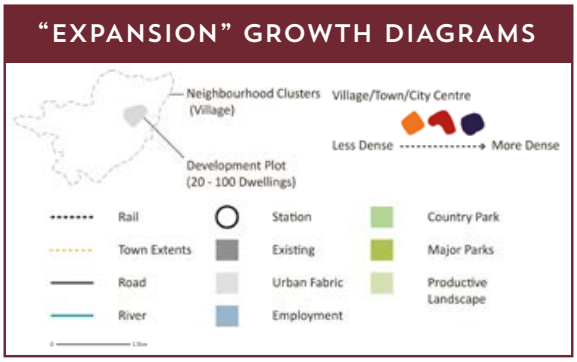


FIGURE 6.11. EXPANSION GROWTH DIAGRAMS

3. STRING OF PEARLS

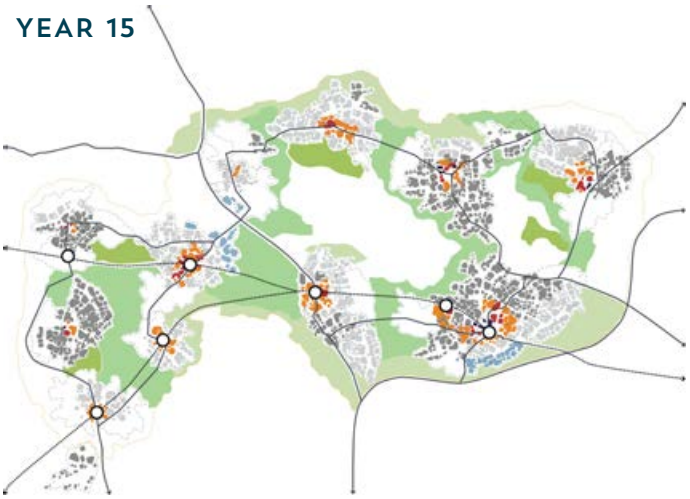
YEAR 5

YEAR 10

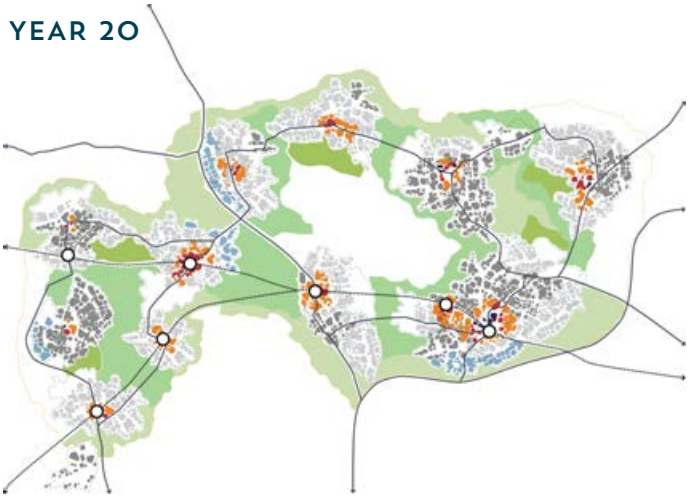
This model creates a Garden City from a string of "garden villages" separated by protected open space and linked by rapid transit, such as a train or metro system. This allows existing places to retain their character and play to their strengths, whilst new villages can supply the missing pieces required to create a sustainable settlement.

All residents would benefit from access to a wider range of facilities and opportunities and this model creates the opportunity to regenerate and rebalance settlements that are failing on their own. To qualify as a Garden City the whole must form an overall population of upwards of 100,000 people. (see figure 6.12)

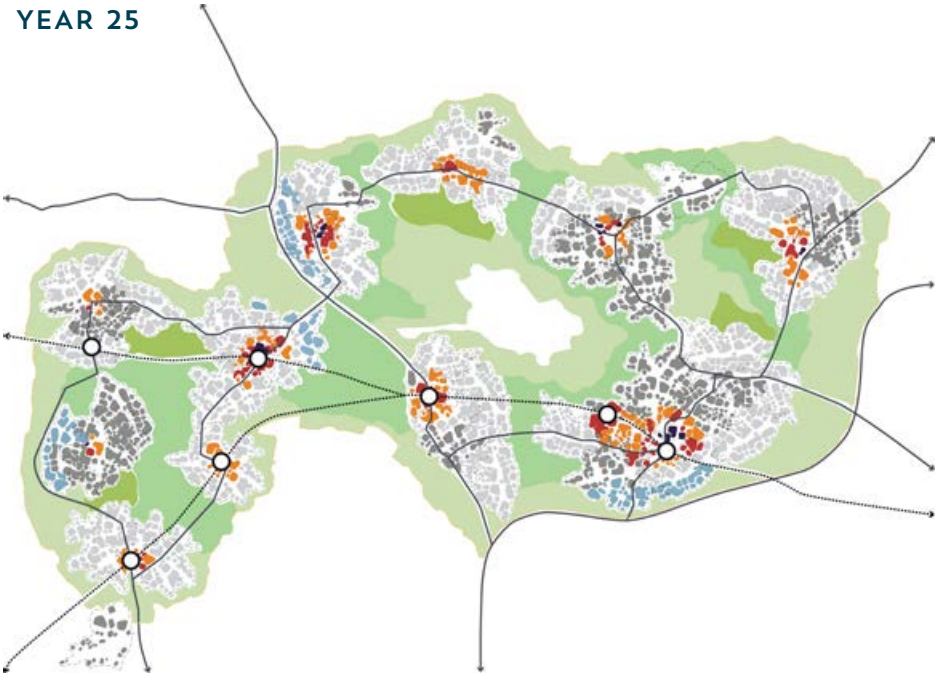
YEAR 15



YEAR 20



YEAR 25



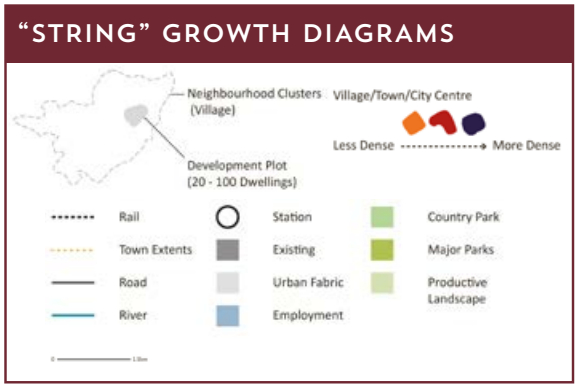


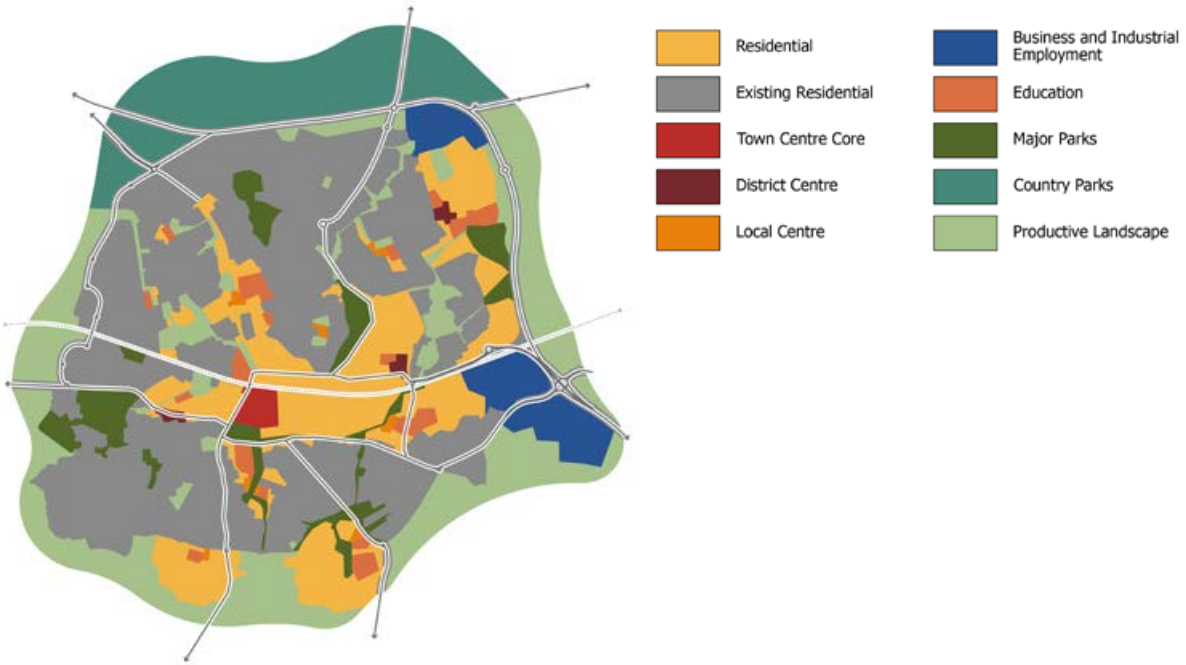
FIGURE 6.12. STRING GROWTH DIAGRAMS

4. REGENERATION AND INSERTION

YEAR 5

YEAR 10

This model recognises the potential of some existing towns to be transformed from sprawling, car-dependent towns into new Garden Cities by selective densification and regeneration. Many towns in the UK could benefit from this approach which would introduce more green spaces, a wider range of house types, balanced employment opportunities and better public transport; former a New Towns are good candidates for this model. The New Town would benefit from the architectural layering this would create and the community capital that would result from building a communal vision. By diversifying cultural amenities and creating more human scaled streets and spaces, we can attract new people to old places and create attractive and vibrant environments from the most unpromising of spaces.



CONCLUSION

There is more than one model for a Garden city – one size does not fit all. By expanding the definition of new Garden Cities to encompass the four typologies, and creating a generic model that can be adapted for each, we offer the potential for new house building on a massive scale that can radically reduce the housing deficit and result in a new British idiom of attractive, vibrant, healthy and sustainable places to live.

YEAR 15

YEAR 20

YEAR 25

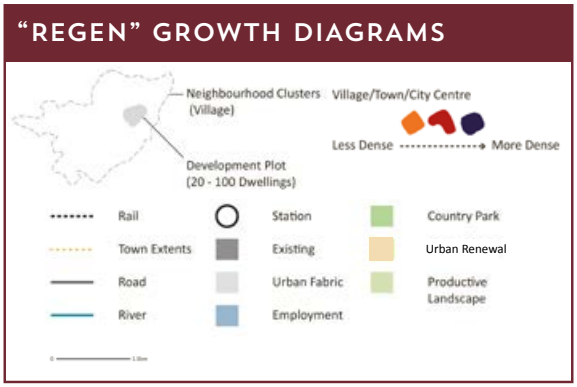


FIGURE 6.13. REGEN GROWTH DIAGRAMS

7 CITY VIABILITY & ECONOMICS

Each Garden City will face the same challenge in achieving the up-front funding required for planning, land acquisition, and infrastructure. The proposition is that this is achievable because of the unique opportunity for value growth created by this scale of place-making with a low risk profile for funders, generated by the appropriate planning and delivery mechanisms explored in Steps 2, 4 and 9.

In order to demonstrate the feasibility of this approach to Garden City creation, we have created a financial model, set out in the appendix 4 and table 7.3. The model is properly a viability model, on which we focus, although later in this section, we outline some of the powerful economic implications of the Garden City.

The guiding principles in developing our approach have been:

- **Adopt the Carrot not the Stick** – Create a positive incentive for landowners, developers and the local community to participate.
- **Change the risk profile** – Create a structure which allows institutional and pension fund investors (who have a natural appetite for long term investments) to be part of the infrastructure funding challenge.
- **Utilise the best of the current industry** – Recognise that, given the scale of the proposals, housebuilders and their supply chain will need to be part of the solution. Ensure that they are utilised in ways which fit their business model and strengths.
- **Create value –** Ensure that both the timing and quality of physical and social infrastructure are used to create value in the residential and commercial uses.

THE FINANCIAL CHALLENGE

The Garden City requires significant social and physical infrastructure to support its new residents and businesses. **The cost of this infrastructure (assessed in the appendix 4 & table 7.3) is estimated to be £1,066m** per Garden City, delivered over the 25 year period but with a weighting towards the early stages to ensure the early community is sustainable.

The Garden City also creates significant value as place-making takes hold and construction proceeds. **The development as a whole is viable over its programme period**, with revenues exceeding expenditure even after a return to landowners and developers.

The key financial challenge is therefore the peak funding requirement caused by early expenditure on planning, land and infrastructure ahead of first revenue. **The total peak funding sum is estimated to be £268m per City,** comprised broadly of:

- Planning costs[28]
- Land
- Schools / health / community buildings
- Highways / utilities / energy infrastructure
- Off-site works to upgrade existing buildings

The challenge is to create a proposition to raise these funds which has the right risk profile and returns to attract funders – to be achieved without compromising the position of other key participants, notably landowners, developers and house builders and current and future Garden City residents.

THE FUNDING PARTICIPANTS

Delivery of the Garden City will require a range of funding participants, both those currently active within smaller scale strategic developments and new entrants to the sector. Table 7.1 indicates (in broad chronological order) the participants we have identified as being required, their potential role and, based on consultation of relevant firms, expectations of risk and return.

The returns indicated in Table 7.1 – and which are built into the viability model - have been set at a level to positively attract participants into the Garden City delivery (i.e. they are at or slightly above returns available elsewhere in the market, notwithstanding the benefits of scale and brand offered by a Garden City). This will help to both create popularity and achieve the scale of delivery.

28. *Including the Mayor and LDDC establishment costs*

GARDEN CITY DELIVERY

PARTICIPANT	ROLE	REQUIREMENTS
FUNDING THE LAND ACQUISITION, PLANNING AND STRATEGIC INFRASTRUCTURE		
FUNDER (STRATEGIC INFRASTRUCTURE)	To fund land acquisition and infrastructure such as roads, schools, health facilities and community facilities.	• Low risk (no planning risk) • Long term yield on funds – **circa 7.5% based on proposed structure**
FUNDER (UTILITIES / ENERGY INFRASTRUCTURE)	Funding and delivery of new utilities (gas / electricity / water) and site-wide heating / energy systems.	• Low risk (RPI linked income based on infrastructure usage charges / energy sales) • 60 year concession **at circa 5.5% yield**
FUNDING THE DELIVERY OF NEW HOMES AND BUSINESS SPACE		
RESIDENTIAL PLOT HOUSEBUILDER	Funding work in progress of private residential dwellings	• "Oven-ready" land (no strategic infrastructure / planning). • **Circa 20% margin** on revenues where sales and build risk is taken, feeding this back into an upgraded quality of product.
COMMERCIAL PLOT DEVELOPER	Funding work in progress of retail / offices / light industrial buildings	• "Oven-ready" land (no strategic infrastructure / planning). • **Circa 15% margin** for speculative development.
PRIVATE RENTED SECTOR PLOT DEVELOPER	Acquiring private rented dwellings to hold within a long-term PRS fund	• "Oven-ready" land (no strategic infrastructure / planning). • **Net yield of 5%**
REGISTERED PROVIDER	Acquiring affordable homes and holding in perpetuity	• Long term guaranteed supply to achieve efficient operating costs per unit • No return as such (subject to acquisition price being supported by long term revenues)

TABLE 7.1. TYPICAL GARDEN CITY FUNDING MODEL

THE GARDEN CITY NEEDS TO BECOME A PREMIUM PRODUCT BUT UNIQUELY AT AN AFFORDABLE PRICE. THIS IS ACHIEVABLE WITH THE ECONOMIES OF SCALE PROVIDED FOR A CITY OF 50,000 HOMES WHICH WILL ATTRACT THE BEST INVESTORS.

THE SOLUTION

In order to generate this premium product, we foresee several elements to the approach:

SEPARATION OF STRATEGIC INFRASTRUCTURE & PLANNING FROM PLOT DELIVERY

Delivery of the Garden City will be split into two key elements, enabling each to be funded by a participant best suited to the risk / return profile:

- **Land, strategic infrastructure and planning** – delivered by a long term vehicle, funding & delivering serviced parcels of land and holding equity shares. Subject to the functioning of the Local Development Order in reducing planning risk, this would be a relatively low risk activity, generating sustainable returns over several decades.
- **Residential and commercial development** – delivery of the dwellings and business space within the serviced plots created by the long term vehicle. The risk profile of these activities is similar to that of a traditional development model, albeit this should reduce over time as popularity and recognition of the Garden City increases.

ESTABLISHMENT OF A GARDEN CITY DELIVERY VEHICLE (SPV)

A long term vehicle will be established to fund the land acquisition, strategic infrastructure and planning costs. The financial model indicates that this vehicle will have a **peak funding requirement of circa £268m.** The sources of this funding and returns supported by the financial model are indicated below:

- **Institutional / pension fund investors – up to £500m at a 7.5% yield**
- **Utilities / site-wide energy operators – up to £138m at 5.5% yield**
- **Community bond / shared equity investments – up to £550m at 7% yield**

Our feedback from the market is that the above returns would be attractive as would a relatively large overall investment size. The final number of investors under each category will depend on the eventual attitude to concentration of risk but is likely to be between 3 and 5.

The Estate/Community Bond represents a long term fund, initially raised via "crowd sourcing" a large number of small investments but in the longer term also receiving the 20% equity investment from home owners selecting this option (see details under Building Popularity below).

MAKING AN ATTRACTIVE OFFER TO LANDOWNERS

Land is key to the delivery of the Garden City. **The model adopted is to secure land almost entirely though consensual agreements,** (see Step 5) giving a positive incentive to landowners to invest. The table below summarises the land offer in broad terms:

UP-FRONT PAYMENT TO ENTER THE AGREEMENT	
£10,000 per acre (note – the land would continue to be used under licence by the landowner until drawn down for development)	
LANDOWNERS CHOOSING A FREEHOLD SALE AT THE TIME OF DRAWDOWN	**LANDOWNERS CHOOSING TO RECEIVE A LOWER INITIAL SUM AT DRAWDOWN PLUS A FUTURE RETURN SHARE**
£150,000 per acre	£100,000 per acre initially plus future payments totalling £198,000 per acre

TABLE 7.2.

Within the area under consideration, the values in Table 7.2 offer landowners a freehold sale offer comparable to market evidence and an option to leave equity in the scheme, assisting cash-flow of the Garden City and also generating a greater overall return for the landowner.

The model in table 7.3 & 7.4 also assists the strategic infrastructure vehicle by generating security based on the difference between the initial land payment and the market value of the land at the point of planning consent/granting of the LDO.

GIVING DEVELOPERS, HOUSEBUILDERS AND OTHERS THE INCENTIVE TO PARTICIPATE

At its peak the Garden City will deliver circa 3,000 homes and 30 acres of commercial space per year. This will require a range of plot developers, both traditional and new, to secure the markets and supply chain necessary for delivery. Whilst in the long-term the Garden City should begin to represent an increasingly attractive proposition, in the early stages the market will need clear incentives to become involved.

Given the above, the proposition for participants has been set at a level which consultation indicates is attractive to the market:

- **Housebuilders** – represented by the major national housebuilders and a range of regional and local builders. A return of 20% of gross development value has been allowed.
- **Commercial developers** – developers of retail, office and light industrial space will be active. A return of 17% of gross development value has been allowed.
- **Private rented developers** – to maximise operating efficiency we envisage that a limited number of firms will be involved, generating an initial net yield of 5% which will increase as more dwellings are delivered and operating costs diluted.
- **Registered providers** – a single registered provider will be involved from the outset, maximising operating efficiency, but bringing in a range of partner RPs as development progresses.

BUILDING POPULARITY WHICH REDUCES SALE / DELIVERY RISK

As explored more fully in Step 8, popularity with both the existing local community and new residents and businesses will support the launch of the Garden City and generate a stable long term delivery profile. This is important as payment of the return on up-front costs is dependent on the continuous development of plots. The financial aspects of the measures aimed at increasing popularity include:

- **A package of works to surrounding communities,** improving energy efficiency in the existing housing stock and no costs to existing residents and representing a £40m benefit
- An option for home purchasers to either:
    - **Buy at a 20% discount to market value**, with this value held within the long term Garden City vehicle as an equity share; or
    - **Buy at 100% of market value but with 20% of this sum invested in the Garden City** vehicle and paying an annual return of circa 7%

In addition, making better quality homes more affordable and at no cost to the public purse –combined with new employment and skill development – will all add to the popularity of the Garden Cities.

FINANCIAL OUTPUTS

Table 7.3 & 7.4 overleaf provide a breakdown and explanation of the detailed financial outputs derived from the modelling process, reflecting the assumptions and approaches above. Full tables, assumptions and additional modelling data is contained within appendix 4.

TABLE 7.3. FINANCIAL MODEL OUTPUTS

HOUSEBUILD INCOME			SUB-TOTAL	TOTAL
Private Residential Revenue				
1. Open Market Sale	1.1. Sales Revenue		£10,931,143,329	
	Less: Community Investment Share	20.00% of sales revenue	-£2,186,228,666	
	1.2. Capitalised Ground Rents (apartments only)		£8,878,814	
	1.3. Sales Associated Costs	3.50% of sales revenue and ground rents	-£382,900,775	
			£8,370,892,703	£8,370,892,703
2. Discounted Market Sale	2.1. Sales Revenue		£8,695,227,648	
	2.2. Capitalised Ground Rents (apartments only)		£8,878,814	
	2.3. Sales Associated Costs		-£304,643,726	
			£8,399,462,736	£8,399,462,736
3. Market Rent			£4,896,667,271	£4,896,667,271
4. Self Build Plots	4.1. Self Build Plots Revenue		£1,870,788,489	
	4.2. Plot Sales Associated Costs		-£28,061,827	£1,842,726,662
AFFORDABLE RESIDENTIAL REVENUE				
8. Social Rented Income			£2,188,396,681	
9. Affordable Rent Income			£2,481,451,119	
10. Shared Ownership Income			£5,500,281,876	
11. Shared Equity Income			£0	
			£10,170,129,676	£10,170,129,676
DEVELOPERS MARGIN				
14.1. Residential	Open Market Sale	20.00% of market sales	-£2,188,004,429	
	Discounted Market Sale	20.00% of market sales	-£1,740,821,293	
	Market Rent	20.00% of market sales	-£979,333,454	
	Self Build Plots	20.00% of market sales	-£374,157,698	-£5,282,316,873
	Social Rent	8.00% of build costs	-£188,666,679	
	Affordable Rent	8.00% of build costs	-£188,769,244	
	Shared Ownership	8.00% of build costs	-£262,327,695	
	Shared Equity	8.00% of build costs	£0	-£639,763,618
14.2. Non-Residential			-£27,915,611	-£27,915,611
TOTAL INCOME				£27,729,882,947
HOUSEBUILD EXPENDITURE			SUB-TOTAL	TOTAL
16. Build Cost	16.1. Open Market Sale		£4,941,737,627	
	16.2. Discounted Market Sale		£4,941,737,627	
	16.3. Market Rent		£3,427,382,577	
	16.4. Self-Build Plots		£0	
	16.8. Social Rented		£2,358,333,482	
	16.9. Affordable Rented		£2,359,615,556	
	16.10. Shared Ownership		£3,279,096,185	
	16.11. Shared Equity		£0	£21,307,903,053
20. Fees and non-build related contingencies	20.3 Professional Fees		£1,794,322,566	£1,794,322,566
TOTAL EXPENDITURE				£23,102,225,620
BALANCE BEFORE FINANCE				£4,627,657,327
22. Finance Cost	22.1 Development Finance		-£75,001,228	
	22.2 Land Finance		-£291,628,585	-£366,629,812
	Stamp Duty Land Tax		-£164,081,546	
	Purchasers Costs		-£75,432,381	-£239,513,927
RESIDUAL LAND VALUE				£4,021,513,588

GARDEN CITY DEVELOPER INCOME		SUB-TOTAL	TOTAL
13. Non-residential Income	Green Infrastructure	£0	
	Local Centre	£15,321,222	
	District Centre	£29,090,995	
	Town Centre	£17,118,260	
	Education	£0	
	Industrial Land	£116,676,919	
	Business Park	£7,896,675	
	Infrastructure	£0	£186,104,072
15. Land Receipts from Housebuilders			£4,021,513,588
TOTAL INCOME			£4,207,617,659
GARDEN CITY DEVELOPER EXPENDITURE		SUB-TOTAL	TOTAL
17. Site Wide Infrastructure			£1,066,838,064
18. Non Residential Build Cost	Green Infrastructure	Incl	
	Local Centre	N/A Land sale	
	District Centre	N/A Land sale	
	Town Centre	N/A Land sale	
	Education	£54,290,959	
	Industrial Land	Incl	
	Business Park	Incl	
	Infrastructure	Incl	£54,290,959
19. Statutory Costs		£0	
20. Fees and non-build related contingencies	20.1 Development Management Fee	£448,580,642	
	20.2 Development Contingency	£560,725,802	
	20.4 Site Wide Branding / Promotion	£20,000,000	
	20.5 Strategic Masterplanning Fees	£5,000,000	£1,034,306,443
21. Land Acquisition	21.1. Initial Land Payment	£55,551,447	
	21.2. Landowner - no profit share	£416,635,851	
	21.3. Landowner - profit share	£277,757,234	£749,944,531
TOTAL EXPENDITURE			£2,905,379,998
DEVELOPMENT RETURN (Shared by landowners and Community Funder)			£1,302,237,662

TABLE 7.4. DETAILED OUTPUT DESCRIPTIONS

HOUSEBUILD INCOME

This section is where the RLV is calculated from the House builder to GCVD.

1. Open Market Sale	1.1. Sales Revenue	The sales revenue is the total income from the Open Market Sales dwellings across the entire scheme.
	Less: Community Investment Share	This is the proportion of sales receipts which is in effect paid into the GCD vehicle to assist in funding the scheme itself.
	1.2. Capitalised Ground Rents (apartments only)	These are the ground rents which are sold for the private flats/apartments.
	1.3. Sales Associated Costs	These costs are deducted off any sales prices to ensure income is received net of any sales costs.

AFFORDABLE RESIDENTIAL REVENUE

8. Social Rented Income 9. Affordable Rent Income 10. Shared Ownership Income 11. Shared Equity Income	The affordable housing revenue is the money paid from Housing Associations or Registered providers to secure the affordable houses.

HOUSEBUILD EXPENDITURE

16. Build Cost		The average build costs are £110 per sq.ft plus a 5% contingency. This figure is an all-in figure with no other 'over and above costs' assumed. It is estimated that such build rates would be achievable for a healthy mix of housebuilders of varying size.
20. Fees and non-build related contingencies	20.3 Professional Fees	The professional fees for the whole scheme have been estimated at 8% of the of all-in build costs incl. infrastructure. These costs are cashflowed in line with general costs.
22. Finance Cost	22.1 Development Finance	This is the cost of borrowing required by the housebuilder in buying the land. The rate is on 4%.
	22.2 Land Finance	This is the cost of borrowing required by the housebuilder in building the houses. The rate is on 5%.
	Purchasers Costs	Purchaser's costs based on 1.5% of Land value + 20% VAT

GARDEN CITY DEVELOPER INCOME

13. Non-residential Income	Local Centre District Centre Town Centre	The income from the Local Centre, District Centre and Town Centre has been cashflowed as serviced land sales. This means that the Garden City Developer (GCD) has paid for and delivered the infrastructure necessary for a prospective purchaser/operator to buy the site and commence building.
	Industrial Land Business Park	The income from serviced Industrial and Business Park land has been cashflowed as serviced land sales in the same way the other serviced land has. Payment for the land is 60 days before start onsite.
15. Land Receipts from Housebuilders		The residential land is also sold by the GCD on a serviced basis in the same way as the non-residential land above. At present the income from the Residual Land Values (RLV) is paid by the various House Builders and Housing Providers to the GCD in three tranches, albeit there will need to be flexibility within this throughout any property cycle. The RLV is the amount of money the Housebuilder can pay the GCD for the serviced land value after they have paid their own costs and secured their own margin on the dwellings sold.

GARDEN CITY DEVELOPER EXPENDITURE

17. Site Wide Infrastructure		Site wide infrastructure has been cashflowed on an average cost per plot basis. The Cashflow is designed to reflect the high upfront costs of opening up a large strategic land site with no existing infrastructure onsite.
18. Non Residential Build Cost	GI and Retail Centres	Included within the site wide infrastructure costs.
	Education	The education costs have been calculated at £135,000 per acre with a 5% contingency and have been cashflowed to reflect both the upfront requirement for schools and the ongoing need for increased education capacity as the scheme progresses.
	N/A Land sale	Included within the site wide infrastructure costs.
20. Fees and non-build related contingencies	20.1 Development Management Fee	This is to management the development itself and is in effect the internal costs of the GCD running the project. The is calculated at 2% of all-in build costs incl. infrastructure.
	20.2 Development Contingency	This is the contingency for cost overruns and any unforeseen abnormals which may have arisen. It is calculated at 2.5% of the total development cost and cashflowed alongside the total development cost.
	20.4 Site Wide Branding / Promotion	This is to help market the site and encourage the general public to become aware of the scheme and how they can get in contact with the GCD.
	20.5 Strategic Masterplanning Fees	This is the total town planning costs in undertaking the necessary consultations and securing the relevant planning permissions for the scheme to be completed.
21. Land Acquisition	21.1. Initial Land Payment	This is the initial land payment from the GCD to the respective land owners on a per acre basis to secure an interest in the land.
	21.2. Landowner - no profit share	This is the freehold value of the land to be acquired on a gross acre basis payable to the land owner should they not wish to partake in any profit share from the future Garden City Corporation.
	21.3. Landowner - profit share	This is the initial payment for the land to be acquired on a gross acre basis payable to the land owner should they elect to take part in any profit share from the future Garden City Corporation.

KEY METRICS

Funding / Land Sales	Investment	Interest Rate / Yield	Profit Share
Institutional Investor Fund	£502,519,684	7.50%	£274,991,678
Community Fund / Equity Shares	£564,422,915	7.00%	£549,983,357
Utilities and Infrastructure Fund	£138,688,948	5.50%	
Private Rented Sector Provider	£4,896,667,271	5.00%	
Commerical Developers	£186,104,072	7.00%	

Land acquisition		
Landowner (£/acre)	Patient Money	Non-Patient Money
Initial payment	£10,000	£10,000
Land payment	£100,000	£150,000
Profit Share	£198,009	£0
Total	£308,009	£160,000

Tenure Split		
Homes	50,000	Split
Private	32,501	65%
Affordable	17,499	35%

Inflation	%
Sales	4.00%
Rental Inflation	3.00%
Build	4.00%

Profit Share		
Land Owner	40%	£520,895,065
Community Fund / Equity Shares	40%	£520,895,065
Institutional Investor Fund	20%	£260,447,532
	100%	£1,302,237,662

Site Wide Infrastructure Cost (Average)	£180,000 per acre
Upfront Infrastructure Cost	£135,335,299 Year 1 to 5
Peak Debt	£268,261,411

ACHIEVING ECONOMIC VIBRANCY OF THE GARDEN CITY

Making the Garden City work financially is only half the story. To create an economic success, each new place must have an economic pulse from day one. This means relating the activity surrounding the construction of the City to the economic agenda for the sustainable economy of the City. A range of mechanisms are available and are explored in Step 8; these include:

Creating a business and entrepreneurial mindset from the outset, allied to the creative process in the design, formation and operation of each Garden City;

Focussing on supporting home grown jobs, including in the construction process, which generates employment and business opportunities for local people and residents;

- **Fostering and capturing the pioneering spirit through self-build and other initiatives;**
- **Promoting a "buy local" campaign.**
- **Funding dedicated support for inward investment and generating 'industrial ecology'.**

DEVELOPING THE GARDEN CITY ECONOMY

The process of developing the economy of a Garden City must include thorough consideration of the stages outlined in figure 7.1.

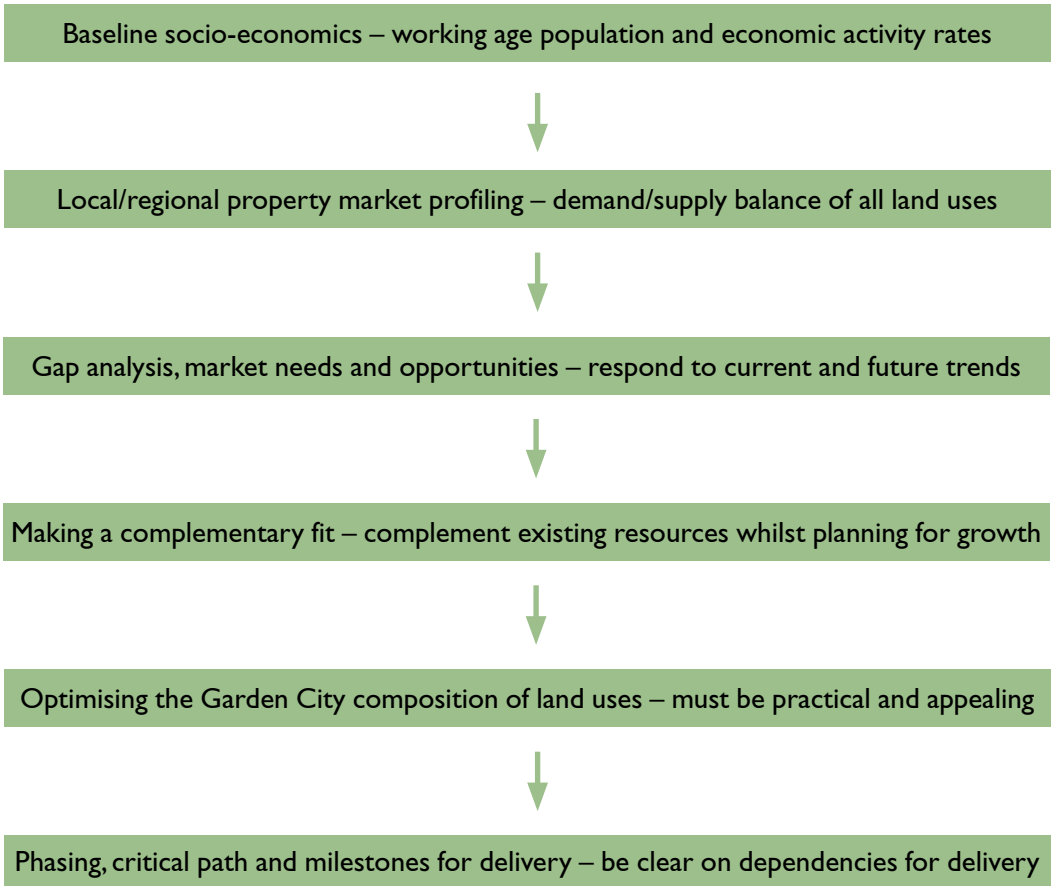


FIGURE 7.1. THE PROCESS OF DEVELOPING THE ECONOMY OF A GARDEN CITY

CITY VIABILITY & ECONOMICS

For each of the Garden City typologies (Step 6) we have evaluated the baseline characteristics of the local labour and property markets, using typical benchmark locations for each of the four examples. Using this data, we have modelled the employment requirements of a new population of residents.[29]

We also know from census data that a growing proportion of people are working from home at least some of the time. This is an important shift in society that may help the new Garden Cities to be more self-contained. **An independent survey by Propernomics for BST of 1,000 people on public preferences for new communities found that as many as 50% of respondents would consider starting or relocating a business in a new community with a fresh supply of homes and labour.** Even if half that number took up this opportunity, it demonstrates real potential to attract and stimulate economic activity, especially if businesses are directly involved in the design and specification of new communities.

Our baseline data also includes information on the ratio of commercial land uses in each typical location associated with our Garden City typologies. Further research tells us that different locations have potential shortages or surpluses of space in different uses, as well as strengths in particular sectors that could be spurs for economic growth. A process of gap analysis to identify market needs and opportunities, adds refinement to the projected land use mix.

The provision for health, education and other community facilities identified in Step 6 will also create local employment than can build up with the growth of the community. Allowing for this type of employment, we have attributed the balance to other types of job as shown in Table 7.5. By applying benchmarks for employment density and plot ratio from best practice guidance and research, it is possible to construct a land budget for each Garden City typology.

29. *Employment Densities Guide, 2nd Edition; 2010, Drivers Jonas Deloitte for OffPat & Homes & Communities Agency*

CITY VIABILITY & ECONOMICS

1. THE STAND-ALONE GARDEN CITY MODEL

The imagined site of Garden City Typology 1 (the "Stand-alone" solution) is in a location where the dominant commercial land use is industrial (factory and warehouse) property while the percentages of retail and office floorspace are relatively low in this area, reflecting the sub-regional market. The area has longstanding strengths in manufacturing but the local economy must adapt to global competition through innovation and development of appropriate skills. The development of the Garden City would attract not only fresh, net additional investment but also an expanded and more diverse set of skills to help the economy grow. It will develop its own "economic pulse" whilst complementing the surrounding area.

2. THE EXPANSION MODEL

This location is imagined to have a balance of commercial land uses that conform closely to the regional and national average. The existing town is therefore a model location where accelerated development is likely to follow the existing economic recipe.

The functionality and market appeal of the location needs to be at least maintained or improved. Consideration must be given to the continued, efficient operation of infrastructure and community facilities in order that growth is smoothly accommodated. The area has some out-commuting so we should plan to harness the Garden City's critical mass to reduce reliance on commuting to another major city. However, we must be realistic in responding to labour market pressures where good infrastructure enables local people to work further afield, reflecting economic realities and creating an opportunity for local businesses in the Garden City to capture the spending power of residents even if that wealth is earned elsewhere.

3. THE STRING OF PEARLS MODEL

The imagined location for Typology 3 has an above average share of factory floorspace but one of the area's larger settlements has evolved and developed a high proportion of office space. This suggests that the area can successfully diversify its economy. The Garden City will reinforce this by expanding the labour force and the pool of skills available. The mix of land uses in the "string of pearls" model must be designed so that individuals have a choice of places to work and need not necessarily commute from one end of the string to another.

4. THE REGENERATION MODEL

The imagined location has a markedly higher percentage of offices in its overall stock of commercial property at 43% compared to its surrounding region (22%) and all other locations studied. Care will be needed to ensure that the new development does not oversupply offices. Local market analysis should test the balance of demand and supply of offices and other commercial uses to ensure the additional development is complementary.

Factory space is a correspondingly low proportion of commercial property stock in this area at 8% compared to a regional average of 28% and England at 34%, a deficiency that new development could correct. On the other hand, the current ratio reflects the sectoral strengths of this particular area (Information & Communication, Finance & Insurance, Professional & Other Private Services) so the masterplanning work should consider the economic opportunities these sectors offer new residents.

The proportion of retail floorspace closely matches all benchmark locations but the existing town centre is the subject of a major and very necessary regeneration programme. It could be a significant advantage to the existing settlement if a new customer base is created to support retail demand and help the town centre thrive.

CITY VIABILITY & ECONOMICS

TABLE 7.5. PREDICTED JOB TYPES ACCORDING TO GARDEN CITY TYPOLOGY AND REGIONAL LOCATION

SCOPING JOBS AND EMPLOYMENT SPACE REQUIREMENTS FOR EACH GARDEN CITY TYPOLOGY	STAND-ALONE		CONVERSION		EXPANSION		STRING OF PEARLS	
Baseline socio-economic analysis	number	%	number	%	number	%	number	%
All usual residents	108,131	100%	113,205	100%	127,114	100%	751,485	100%
Age 16 to 74	80,718	75%	83,116	73%	91,510	72%	560,849	75%
Of those, economically active	56,418	70%	65,137	78%	68,564	75%	389,929	70%
TESTING POPULATION GROWTH – WHAT IF...								
Add to the population	115,000		115,000		115,000		115,000	
Assume same % aged 16 to 74	85,905	75%	84,295	73%	82,685	72%	85,905	75%
Assume same % economically active	60,043	35%	66,061	43%	61,952	39%	59,725	41%
Less % working from home (census data)	-9,607	16%	-7,927	12%	-8,673	14%	-4,181	7%
Less say 33% for jobs in schools, health, hotels etc (assumption)	-20,014		-22,020		-20,651		-19,908	
Jobs to accommodate in the uses below:	30,422		36,113		32,628		35,636	
USING THE CURRENT RATIO OF COMMERCIAL LAND USES IN EACH DISTRICT:								
Retail	2,447	8%	6,346	18%	5,794	18%	5,076	14%
Offices	1,702	6%	15,686	43%	4,711	14%	7,371	21%
Factories	12,587	41%	2,888	8%	12,086	37%	11,139	31%
Warehouses	11,063	36%	9,875	27%	8,867	27%	11,158	31%
Other "bulk classes"	2,624	9%	1,319	4%	1,171	4%	892	3%
	30,422	100%	36,113	100%	32,628	100%	35,636	100%
EXPRESSED AS FLOORSPACE (SQ M) USING THE ASSUMED EMPLOYMENT DENSITIES SHOWN:								
Retail at say	46,484	19	120,568	19	110,087	19	96,449	19
Offices	20,423	12	188,231	12	56,536	12	88,456	12
Factories	453,139	36	103,955	36	435,079	36	401,013	36
Warehouses	774,379	70	691,251	70	620,663	70	781,026	70
Other	123,319	47	61,995	47	55,014	47	41,911	47
	1,417,744		1,166,001		1,277,378		1,408,855	
MOVE TO NEXT STAGE OF TESTING MARKET GAPS, COMPLEMENTARITY AND PHASING OF PROVISION TO MEET NEEDS OVER TIME								

ECONOMIC IMPACTS OF CONSTRUCTION

While the Garden Cities are expected to generate substantial long-term employment as they develop and in their 'final states' (at 50,000 dwellings), significant economic activity will arise from day one with construction activity. We have therefore sought to explore what the construction activity alone might contribute to the economy of each Garden City.

According to government data[30]: "The construction industry has a large supply chain, almost all of which is sourced within the UK. It is estimated that for every £1 spent in construction at least 90% stays in the UK[31]. The sector is characterised by high levels of fragmentation. Analysis carried out for BIS by EC Harris (2013) has shown that for a 'typical' large building project – that is, in the £20 - £25 million range - the main contractor may be directly managing around 70 sub-contracts of which a large proportion are small – £50,000 or less. For a regional project, the subcontract size may be even smaller."

This suggests that there could be good opportunities for small businesses within the overall construction project supply chain which would be of potential benefit in stimulating economic growth.

According to the UK Contractors Group and the Confederation of British Industry (CBI)[32] every £1 spent on construction activity generates a total of £2.84 in total economic activity (i.e. GDP increase). It will be a key objective for each Garden City to capture as much local economic benefit and employment as possible.

The indirect and induced economic impacts of construction are especially strong because the construction industry uses a wide range of inputs from many industries to produce its goods and services.

30. *"Page vii, UK Construction - An economic analysis of the sector"; Department of Business, Innovation and Skills; July 2013.*

31. *Construction in the UK Economy – the Benefits of Investment; LEK Consulting; 2013*

32. *"Construction bridging the gap"; CBI; June 2012*

ECONOMIC ACTIVITY	CONSTRUCTION RELATED SPENDING IMPACT		NATURE OF IMPACT
	MULTIPLIERS		
Direct economic impact	1	£24,398,641,037	Materials, wages & profits
Indirect economic impact	1.09	£26,594,518,729.93	Supply chain impacts
Induced economic impact	0.75	£18,298,980,777.47	Increased incomes & expenditure
Total economic activity	2.84	£69,292,140,544	Increase in GDP

TABLE 7.6.

PUBLIC SECTOR INCOME	MULTIPLIERS APPLIED TO CONSTRUCTION SPENDING	
	MULTIPLIERS	
Income tax and NI	0.12	£2,927,836,924.40
Benefits savings	0.23	£5,375,924,524.93
Corporation tax	0.01	£243,986,410.37
Total	0.36	£8,547,747,859.70

TABLE 7.7. PUBLIC SECTOR INCOME BENEFITS

The same research shows that every £1 spent on construction activity provides significant financial returns to the Treasury in tax income and benefit savings. This is summarised in table 7.7 above.

It can be seen that each Garden City will make a substantial contribution to the local and national economies through the construction activity alone, albeit that this contribution would be spread over the 25 year life of the construction period.

In terms of construction jobs, appendix 6 sets out a short calculation of the estimated job creation for each Garden City, suggesting a total of 463,100 man years of work in the principal elements of each – equivalent to an average of 18,500 constructions jobs per year for each Garden City (but with significantly more jobs in some years, depending on the phasing of construction).

Consequently development of a wave of Garden Cities will be a massive driver of economic activity and construction skills for the UK. The skills will range from traditional crafts to high technology work – build it well and build it smart. A combination of British craftsmanship, modern building techniques and materials will establish a new generation of construction expertise and built heritage.

8 LOCAL PROMOTION

In the context of a successful National Campaign and in the light of the growing engagement of City Mayors, anti-development sentiment will give way to an established understanding of the issues and opportunities arising from the growth of new Garden Cities. The Young Minds' strength of voice and excitement of opportunity should alter the mindset of The Squeezed Middle and The Grey Pound and carry them along on a wave of positive momentum. This movement within the key voting age groups can be further supported by the increased traction of the Campaign with business, who are in support of the growth opportunities and strategies for skilled labour associated with the Garden Cities.

With specific locations for Garden Cities identified through Local Garden City Commissions and landowners, a clear view will be reached of the exact communities and individuals the Garden Cities will be near. It is therefore critical that we maintain popularity, not only by continuing the National Campaign but also by engaging directly with the communities to whom the opportunity for a Garden City has come knocking.

Forging an understanding of the unique opportunities provided by the Garden City becomes a task for all those signed up to the concept. This is extended to landowners, local entrepreneurs, educators, conservationists and environmentalists.

The neighbourhood planning process has shown how, with local responsibility for planning the future of a place, communities can respond positively. It's true not all voices will fall into this camp but the key will be to capture the momentum and enthusiasm from local supporters and work with them to campaign locally, setting out the benefits of Garden Cities. Real issues and genuine fears will need to be met with professionalism, but with local people calling for the Garden Cities, the pendulum of popular opinion will have swung in favour of growth.

The economic projections and viability study that features in Step 7 must be communicated via a fully open book approach to the community. If the Local Garden City Commission is going to espouse the virtues and benefits of the Garden City, it needs provide full disclosure on the development appraisal to those who will be supporting it – the local shareholders.

TO THE COMMUNITY THIS MEANS...

Certainty and a clear vision – Certainty around where a settlement is heading and what it wants to achieve is essential when securing long term investment from businesses and communities. Visioning exercises are already taking place for towns and cities across the UK and this would be a critical element of the Garden Cities appeal for all parties.

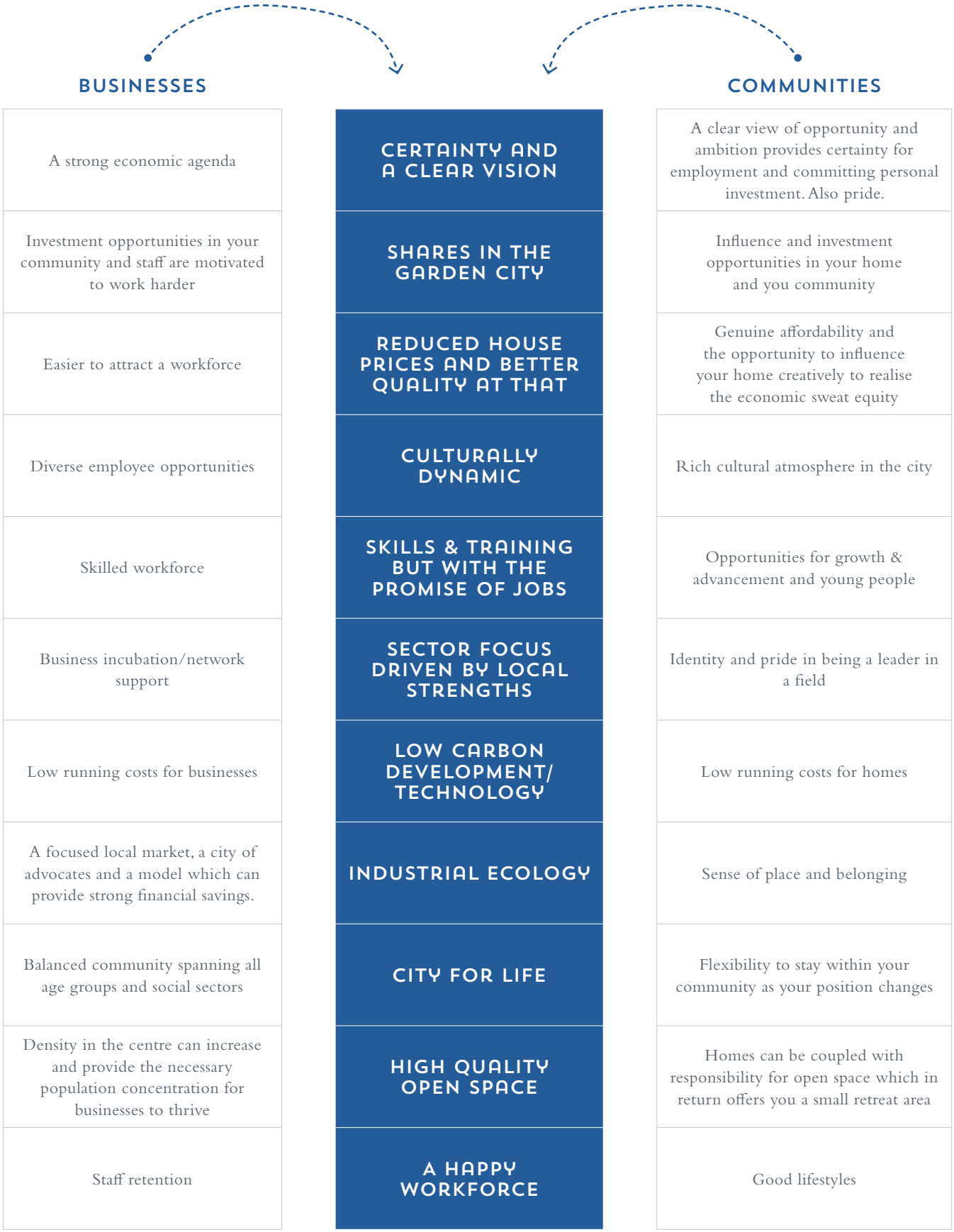
Shares in the Garden City – By offering businesses and the wider populace of a place the opportunity to invest in their community, we are able to offer them an opportunity to steer what happens in their home city and to directly benefit from these decisions. When financially invested, people are motivated to work harder; time investment impacts directly on their quality of life. If well communicated they will begin to see and understand the benefits of their contributions as they are translated into reduced costs for residents within the city and through reduced municipal taxation.

This is an option open to everyone; even if they cannot initially afford to invest, there will be opportunities to step in and receive benefits down the line. Via this model there is the opportunity for home owners and those up or down-sizing to acquire further shares and build up their investment in the Garden City.

Reduced house prices and better quality at that – Through the Garden City framework we are able to offer genuinely affordable homes – a 20% reduction in price, available to everyone. With the models proposed, shared ownership is possible but also financial models in place to encourage the increase of the percentage holding for the occupant. Through facilitated self/custom build, community build projects and the services support (for example insurance, lending and purchasing) for this type of activity, we are able to offer homeowners greater flexibility of choice and therefore greater potential savings through varying degrees of sweat equity.

Culturally dynamic – Cultural diversity brings life and personality to a place, making it attractive to potential residents, employers and visitors. It also provides balance across the social economic groups within a town, enabling it to meet all its employment needs.

FIGURE 8.1. WHAT ARE WE SELLING?



LOCAL PROMOTION

A business & entrepreneurial mindset from the beginning – At this scale it is possible to ensure that flexible and varied business accommodation is embedded within each phase of development within the Garden City. This ensures that jobs for the community are available on site from the outset, particularly given the scale of development being delivered.

Foster & capture the pioneering spirit – By nurturing creativity and the pioneering spirit, self build (a method of delivery not hugely popular in the UK currently - see figure 8.2) and custom build approaches can be supported, which in turn can help root the community, providing a sense of civic pride and self-reliance alongside a tendency for self-employment and business formation. Entrepreneurs and pioneers are encouraged and supported from the outset via strong support networks and an open mindset from supporting services, i.e. Insurance, investors, etc.

Sector focus driven by local strengths – By focusing in on specific sectors and strengths it enriches the skills and training on offer and positions the city as a potential leader in a given field. This drives investment and opportunity. For the community it provides pride. For example in Worcester, the city is known for porcelain and thermostatic boilers. The community is equally proud of these industries and it has provided an identity and focus for the city.

Skills & training but with the promise of home grown jobs – By providing strong skills & training opportunities within the Garden City, support and networks for employees and employers can be set up to create a truly smart, sustainable city. Linking in with regional employment strengths and higher education establishments can provide employment opportunities that fit with the demographics and skills base but also evolve over time. By completing an audit of transferable skills from dormant professions, new businesses can support growth industries which capitalise upon these strengths, weave these industries and skills into higher education and provide long term certainty and identity for the Garden City.

Industrial ecology – The city is of a sufficient scale to drive an 'Industrial Ecology' model[33]. When given the opportunity people are inclined to support local businesses. This can be enhanced by not only encouraging 'Buy Local' but also growing, making, assembling, distributing and recycling locally. This follows examples such as Professor Mark Miodownik's Institute of Making[34], or the establishment of a community 'Hackspaces' to repair technology.

Low carbon development/technology – In a new settlement, new technology rolled out across built form and infrastructure provides the opportunity to deliver a highly smart, sustainable city that is well connected and considered in terms of efficiency. Large scale building also offers significant reductions in construction costs, through Modern Methods of Construction and Pre-fabrication processes. Embedding all of these technologies within the built form and open space, enables significant reductions in running costs for both businesses and homeowners.

A city for life – Through the Estate Bond, residents' money is invested in the community as much as their home. It is therefore possible to have more achievable mobility. The Grey Pound can look to downsize from their family home to sheltered accommodation more easily within the Garden City, without the need to leave their established community.

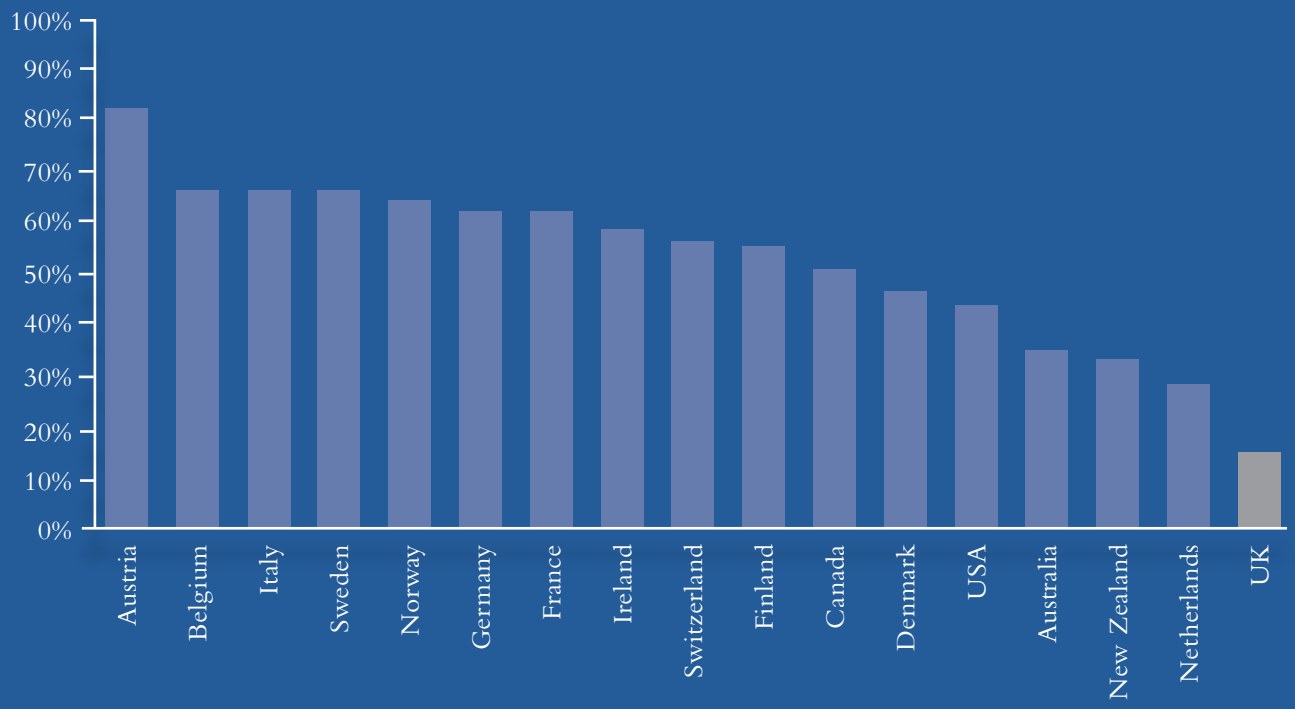
High quality open space – To further invest in the place in which they live, a voluntary open space programme for residents can be set up. People can volunteer to look after a specific area of open space for the community in return for a rural retreat within that area. Mimicking the outstanding popularity of allotments and beach huts in recent years, this programme enables volunteers to be rewarded with their own small retreat in the countryside or by the sea. By offering this and increased quality and accessibility to the countryside and open managed public space it is possible to increase the density for people in the city centre, thereby enhancing the economic opportunity here for businesses and growth.

A contented workforce – All of these factors combine to offer employers and individuals a happier lifestyle. Through the reduction of commuter times, facilitated working from home, educational support and opportunity, combined with the individual's opportunity to invest in Garden City success, the workforce within the Garden City should be well balanced and happy.

33. *Although the best known example of this globally is reported to have occurred organically and not by design, suggesting it is more about the creating of the environment for collaboration, rather than actively seeking compatible uses that is going to achieve greater effect: http://www.symbiosis.dk/en/system*

34. *http://www.instituteofmaking.org.uk/*

FIGURE 8.2. PROPORTION OF ALL HOMES DELIVERED BY SELF-BUILD - ILLUSTRATION TAKEN FROM 'AN ACTION PLAN TO PROMOTE THE GROWTH OF SELF BUILD HOUSING' REPORT 2011



LOCAL PROMOTION

MARKETING THE GARDEN CITY

The benefits of the Garden City are limitless. The headline number of new jobs created, economic impacts and the opportunity for affordable housing as validated by the development model are all genuine and deliverable.

These need to be clearly and continuously marketed at a local level and more widely in order to capitalise on the opportunity.

With a plan for up to 40 locations, there is likely to be competition between locations for who can build the best Garden City, and who can make the most progress fastest.

This is our aim, to shift the nation from 'if' and 'whether' we should be building Garden Cities and instead emphasise how quickly, how well and whose is the best, offering the best facilities, best quality homes, and the best return on the investment.

The notions of the **big sell:** promoting the site locally to gain support and attract pioneers; and, the hard sell: promoting the site regionally, nationally or even globally to secure the high quality employers, retailers, funders and service providers who will support the growth and long term well-being of the growing population, both remain valid.

THE BIG SELL

Thus the Mayor's continued aim, and also that of the early adopters as residents and businesses must be to build trust in the hearts and minds of local people, **seeding the idea of the Garden City** in the community. The existing community needs to believe in the vision to grow a new community out of the aspirations and commitment of local people, whilst welcoming growth and investment from outside.

A robust engagement strategy will still be required to identify the composition of the existing community around which the Garden City is to evolve and communicate openly with them. Key tasks will include:

- **Careful identification of, and outreach to all members of the community. Young, old, all ethnicities, etc.**
- **Provision of a range of creatively considered engagement channels to suit the challenges of diverse work life balances in the existing community.**
- **Identification of local 'pioneers' – willing, active believers to foster supporting 'grass roots' initiatives.**

Through this engagement the Mayor and Commission will seek to build upon the momentum already secured, kickstarting the community – using the competition ideas coming forward from The Young Minds Campaign to begin to weave ideas and inputs into the Garden City proposal and show young people how they might be realised if they are driven.

THE 'HARD' SELL TO BUSINESSES

The Mayor and Garden City Commission must also court business and commercial interests to establish a mix of uses at the earliest opportunity. There is a lot to play for and a lot to offer in the Garden City.

Strategies to combine the advantages of a future population with core skills, promoting the anticipated contentedness of the workforce with a high degree of locational satisfaction and the existence of well connected serviced sites will be key drivers for business.

The message of organic growth and the opportunity for business to shape the place in the same way as the future residents, will allow businesses to become pioneers and have a major role in the future identity of the place.

This may lead to the benefits for marketing that come from becoming a 'branded city', defined in part by what its industry can provide. In the same way that Bourneville had Cadbury and Newbury has Vodafone, where is the next Virgin or John Lewis Garden City?

All this helps with the inter-competitiveness between the Garden Cities. **For businesses the risks come from not being involved**, rather than the reverse, but with 40 locations the field will be a strong one with opportunities for all.

Consequently as the identity of place and community begin to evolve, there will be all sorts of additional benefits and messages which can inform the wider brand and campaign, in order to present a resilient sound investment, as well as a great opportunity for a high quality of life, employment and education.

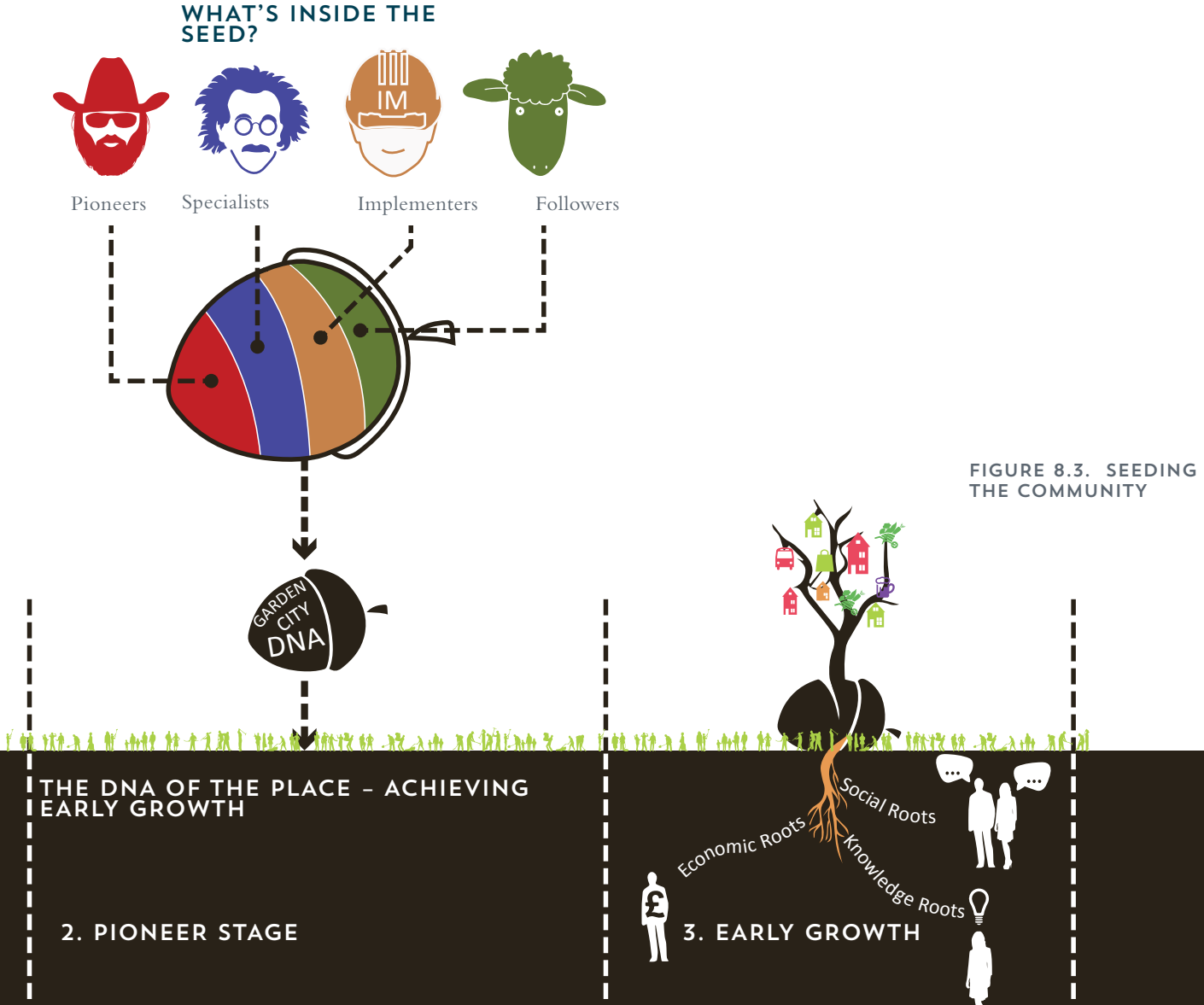


FIGURE 8.3. SEEDING THE COMMUNITY

9 PLANNING FOR FLEXIBLE, ORGANIC GROWTH

With the principle of development established, local campaigns place and a delivery vehicle set up, the Local Garden City Commission (LGCC) would need to prepare a Garden City Development Plan (GCDP), identifying the location, broad framework for evolving land use and rudiments of design.

The aim is to **de-risk the planning process,** and in turn provide a greater level of confidence to the development community (including national/regional housebuilders/developers and local companies and individuals) that they can begin to build within a relatively pre-defined timetable without the uncertainty and significant costs associated with having to take a parcel of land through the current planning process, which may or may not deliver a planning permission.

Whilst we advocate the preparation of a National Strategic Plan or a Royal Commission on Garden Cities, either of which will set the context for housing, economic growth and infrastructure across the country, our 'Route Map' to delivery is flexible enough to allow by-passing certain route points, if deemed expedient. For example, a Local Authority (or group of authorities) may decide they wish to host (or sponsor) a Garden City and not wait for the preceding route points to be concluded. The Route Map allows for the immediate setting up of the Commission who can then get to work in promoting and developing the key documents that would underpin the Garden City in their identified locality. The commission could request plan-making powers from the Secretary of State (SOS) for Communities and Local Government under Section 13 of the Housing and Regeneration Act 2008 (figure 9.1). Alternatively, if the commission were a subsidiary of the Homes & Communities Agency (HCA) (as discussed in Section 4), plan-making powers would already exist.

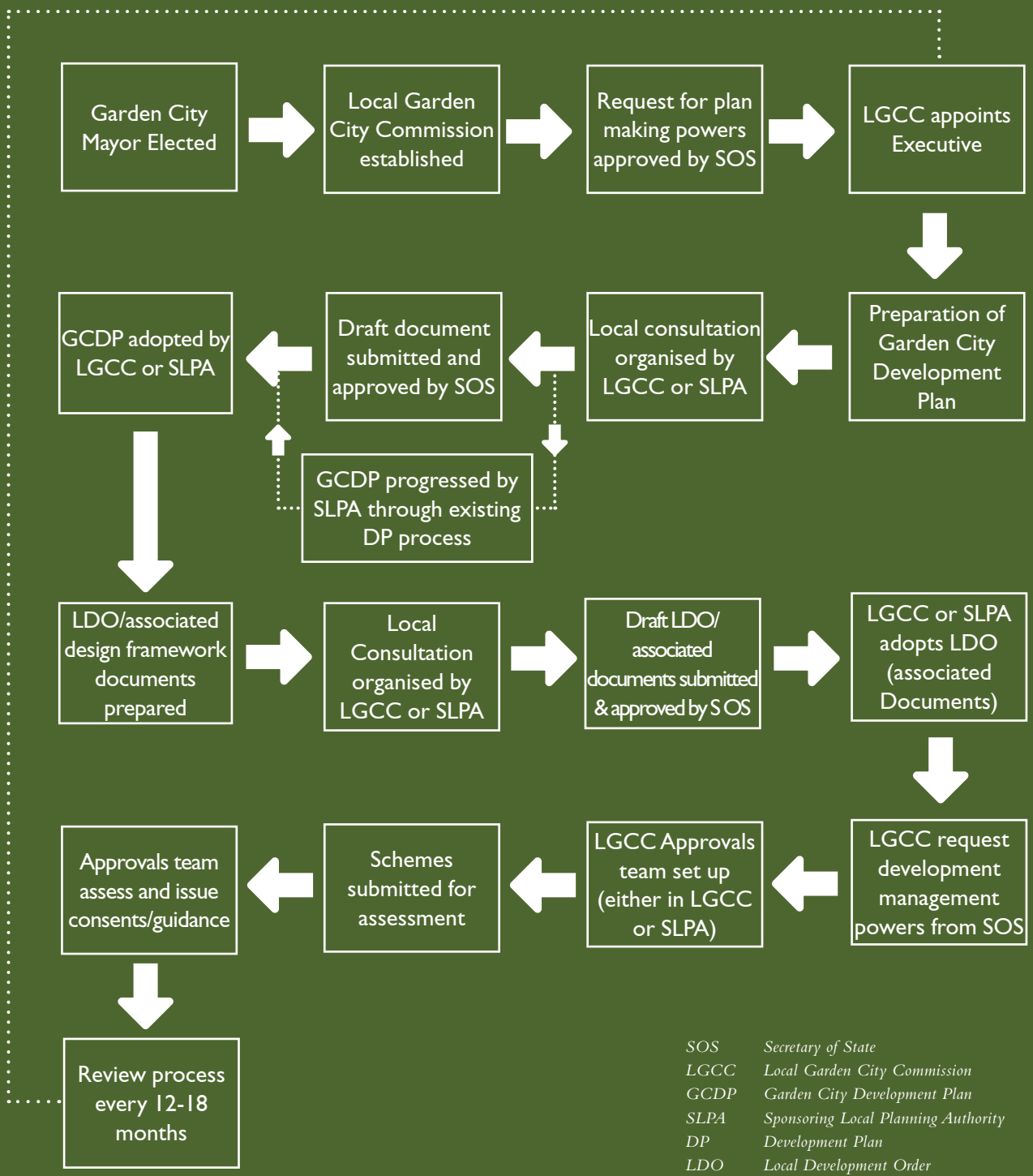
In order to define the specific siting of a Garden City, a GCDP providing the overall master plan for the Garden City, is required. This would provide the Development Plan provisions for the Garden City but delivery would depend on the development management regime being applied in a flexible manner. Flexibility will replace or reduce planning risks that might arise if the Garden City development relied upon a sequence of outline planning permissions, reserved matters approvals and clearance of pre-commencement planning conditions, all of which extend the time from approval of the principle of development to the delivery of housing.

A range of existing tools can be applied that already exist in current legislation and are significantly under-utilised. These 'delivery' tools, can make a significant contribution (whether in terms of setting the quality level required, disposition of uses and their relationships to each other or speed of delivery) to the day-to-day delivery of Garden Cities on the ground. These include:

- **Local Development Orders (LDOs)** which enable the traditional planning permission process to be bypassed through the implementation of Orders that permit certain types of development. They control the form and quality of development through the associated use of design requirements and compliance with the GCDP. If the proposals comply with the necessary plans, there is no need for additional detailed planning consent. Under existing legislation however, the issuing Local Planning Authority (LPA) can withdraw an LDO at any stage, therefore to provide certainty and give appropriate powers to the commission, (of which the local planning authority are Board Members), a change to secondary legislation will be required.
- **Area Action Plans (AAPs)** which comprise policies and requirements relating to specific developments given statutory weight (S38(6)) whereby all development shall be in accordance with the AAP/Plan unless material considerations determine otherwise. An AAP could form part of the GCDP.
- **Enterprise Zones (EZs)** that focus on economic growth. They allow for tax relief for specified developments as well as deemed consent for pre-determined developments, within identified parameters. Although typically commercial, investigations could determine how an EZ could be applied to a Garden City to afford tax relief for investors and promote accelerated housing growth.

On this basis, we conclude that there are sufficient tools within the existing planning system, which if used more creatively and effectively could enable the granting of a flexible planning permission for a Garden City.

FIGURE 9.1. OVERALL PROCESS



SOS *Secretary of State*
LGCC *Local Garden City Commission*
GCDP *Garden City Development Plan*
SLPA *Sponsoring Local Planning Authority*
DP *Development Plan*
LDO *Local Development Order*

PLANNING FOR FLEXIBLE, ORGANIC GROWTH

The draft GCDP could be taken through the existing plan-making process by the sponsoring authority (ies) and sit alongside other Development Plan documents. Alternatively, (and potentially the default position), plan-making powers would be given to the LCCG who would then undertake the necessary work to prepare, consult and adopt the draft GCDP. Whichever route is chosen, it would allow all interested parties including local residents, local businesses, interest groups (i.e. local wildlife/civic groups) etc. to become involved and have their say in shaping the GCDP so that it truly reflects local circumstances. The draft GCDP would be subject to Environmental Assessment under the European Habitats Directives.

LDO LED APPROACH

Once the GCDP is adopted, we believe an LDO devised by the Garden City Commission is an appropriate, locally based vehicle that could help deliver its key objectives, involving key personnel from individual local member organisations (which would include members/officers from the local authorities affected/local community groups etc.). They would have the authority to supplement their work and knowledge base through commissioning pieces of work by external consultants, where deemed appropriate. This is an approach that is also being advocated by Chancellor George Osborne who (at a recent Mansion House speech) announced that English LPAs will be required to put 'development orders' on over 90% of brownfield sites that are suitable for housing – effectively circumventing much of the planning regime. The Mayor of London (Boris Johnson) is also looking to establish housing zones in London which will reduce 'red tape' including the need for planning permission in these zones through the use of LDOs, and provide upfront infrastructure to help kick-start new development.

This is not to say that the other vehicles identified (or a combination thereof) could not equally be deployed to help deliver the Garden City.

For our vision of a Garden City LDO, it should set out the broad framework for consideration of planning applications submitted in an LDO area and also control the form and quality of development.

The LDO would be supported by:

- **An overall framework masterplan** to identify disposition of uses across the entire identified Garden City boundary area including key infrastructure, such as, connections, open spaces, water courses, utilities etc.
- **A Development Specification document** setting out the overall vision of the proposed development envisaged across the identified Garden City area, and sets out the general quantity of development that may arrive within each parcel of development land.
- **A Design Code document** setting out performance based requirements for any future planning submissions(s) if they are to be considered acceptable. This could include a matrix detailing height/width/length parameters, distance control parameters, information on treatment of public areas including roads/pavements/open spaces etc., (though this would be not be overly prescriptive so as to allow individuality and new materials to come forward).
- Details regarding the level of information required to accompany subsequent submissions for approval including the level of fee that would be levied.
- Details of the process for considering schemes submitted under a LDO.

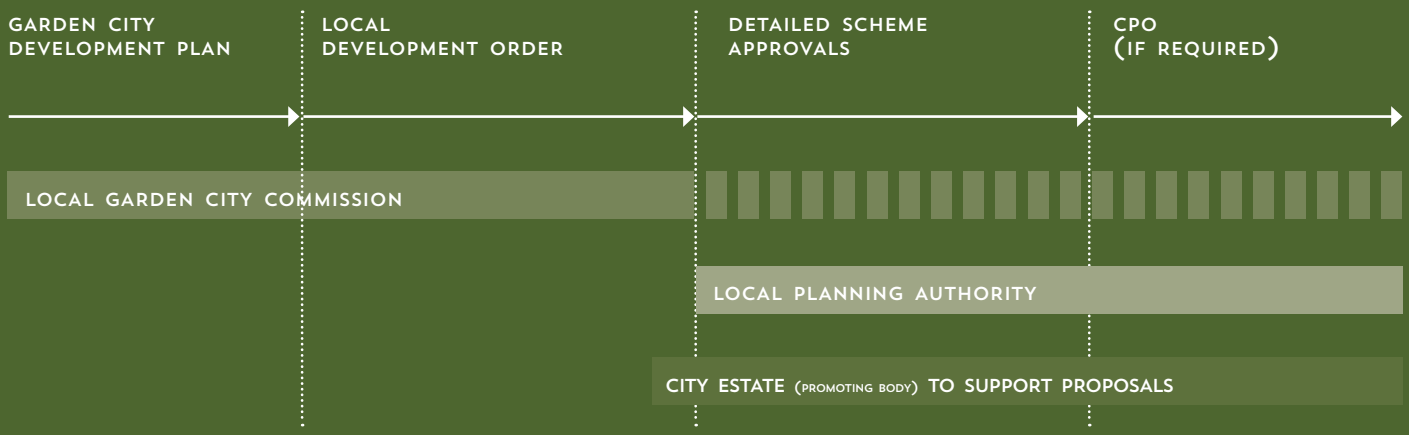
One of our key objectives for the LDO is to ensure all those interested in the building process have the opportunity to become involved including custom build developers and individual self-builders. The LDO and associated documents outlined above would therefore need to be sufficiently flexible to deal with such provisions possibly through identifying areas for such projects.

We have investigated possible design framework examples from the UK, and further afield in Europe, and believe the **German Bebauungsplan Plan (B-Plan)** approach is ideally suited to this aspect of delivering of Garden Cities. It is often referred to as a model for the use of design codes in England with the quality of recent housing developments being cited in support of the effectiveness of the B-plan (see opposite).

A workshop organised by the Planning Advisory Service gathered information from a number of pilot Councils who have set up LDOs in their area and from this derived some good practice tips[35] that we would also look to follow.

35. *http://www.pas.gov.uk/top-tips*

FIGURE 9.2. PLANNING TIMELINE



The B Plan

In both Freiburg and Potsdam, the local authorities shared an aspiration to create new settlements of high ecological value and to avoid low-density, land hungry suburbanisation. Freiburg is unique in terms of an extraordinarily engaged local authority, which, together with an active general public, provided the driving force behind the Vauban project. Freiburg City was in the fortunate position to be able to acquire the land and therefore retain crucial control over the development. In Potsdam, the local authority also maintained a high degree of involvement throughout the development process at Kirchsteigfeld by forming a legal partnership with the master developer.

In practice, B-plan sets out the use for land and buildings, designate land on which development may take place and areas that are reserved for infrastructure. The B-plan is also permitted to address issues such as plot sizes, building lines, building heights, roof forms, areas for communal facilities, affordable, sheltered or assisted housing, areas of private and public open space, the maximum number of dwellings, and ecological requirements. The key mechanisms to control urban form are: site coverage, maximum building height, and the Baufenster. The Baufenster sets out the area within which any development has to be located. It is defined by two different boundary conditions: Baulinie (build-to line) and Baugrenze (building boundary). The former describes the line on which a building has to be located and the latter the maximum footprint it may occupy.

In Vauban a number of objectives had been established at the outset and the B-plan was tailored to ensure their delivery: offering housing opportunities to young families, creating a variety of built form, encouraging mix of tenure and unit sizes and counteracting suburbanisation. The plan gives little guidance on the architectural approach, and it only uses the highly prescriptive ‘build-to’ line along the main avenue, with a more flexible building line requirement elsewhere. However, it prescribes detailed plot sizes and is very specific about environmental targets. Mandatory plot sizes are significant, because, when sold as small sites, they allow small-scale developers/individuals to become involved and so promote a variety of architectural designs. Each developer appointed an architect, and the result is variety in design and the feeling of a naturally grown built environment.

PLANNING FOR FLEXIBLE, ORGANIC GROWTH

Once drafted the LDO and associated documents would be subject to local consultation organised by the LGCC. Once any proposed changes following the consultation stage have been incorporated the draft LDO would be submitted to the Secretary of State before being adopted.

Figure 9.1 shows the overall process from the election of the Garden City Mayor through to setting up the LDO and the approval of detailed schemes. Once adopted, it is important that a dedicated team is set up to examine and determine individual schemes that may come forward. We envisage that an approvals team would be set up by the LGCC and include both directly employed staff complemented by those on secondment from member organisations (i.e. the LPAs). Alternatively, the sponsoring authority (ies) could undertake the development management role under their existing powers. A key aim of the approvals team would be to deal with all submissions within 13 weeks and any associated conditions within 8 weeks.

The GCDP and the LDO (plus the associated documents) would be subject to regular review, every 12-18 months for example, to ensure the key Development Plan objectives are being delivered and to identify areas that may need to be adjusted through changes to the LDO, which would then go back through the review/consultation process. This is good practice and should ensure that the documents are current and can accommodate changes to building and sustainability practices and/or national or local planning policy objectives as well as the organic growth direction taken by the Garden City at any particular point in time.

In addition, powers of intervention by the Secretary of State would be allowed in the event of non-performance, as is the case with LPAs and Development Corporations through existing legislation (if the Garden City Commissions were a subsidiary of the HCA, then these powers would already exist).

PLANNING FOR FLEXIBLE, ORGANIC GROWTH

WHAT CHANGES WOULD BE REQUIRED TO THE NEW TOWNS ACT 1981, TO ENABLE A NEW DEVELOPMENT CORPORATION (GARDEN CITY COMMISSION) TO ASSEMBLE LAND USING CPO AND DELIVER A GARDEN CITY IN ENGLAND?

The New Towns Act 1981 identifies the use of Development Corporations for the purpose of compulsory purchase. However, these have fallen out of fashion. Therefore, if LGCCs are to be empowered for CPO, the 1981 Act will need amending to allow them to be established by ministers and then become more accountable, so as to finance, build and manage Garden Cities e.g. by providing for some of their members to be appointed onto the commission by the constituent local authorities.

In practice we think that the Act would also need to be modernised so that it both takes into account subsequent legislative changes in relevant areas (e.g. the Human Rights Act 1998) and is also able to deal with today's policy issues such as localism, good design, sustainable development and equality.

As part of the process in establishing the GCDP, and the powers available to deal with detailed schemes that may come forward, the scenario described above provides for two options. If the Mayor/Secretary of State determines that the LGCC is to be the local planning authority, for the whole or any portion of the [Garden City], for the purposes of plan-making and/or determining detailed schemes then changes could easily be made existing legislation as set out below:-

(a) Part 3 of the Town and Country Planning Act 1990,
(b) Part 2 of the Planning and Compulsory Purchase Act 2004, and
(c) Part 3 of that Act.

10 THE FUNCTIONING CITY

The planning framework for the Garden City – the LDO, is probably more proactive than any planning tools available under current legislation, save for the use of the Enterprise Zone which although considered, requires amendments to primary legislation for its application to Garden Cities.

However the LDO does, (perhaps) despite appearances, share a critical philosophy of the Garden Cities, namely the extent to which it is a **model built on trust and ambition.**

It is almost ironic that the same institutional investors who are calling out for certainty and scaleablity from Garden Cities, should be drawn to a tool that requires a belief in the future residents to meet the required grade of quality; but that is the essence of the LDO model.

However, the whole Garden City is a place built on common purpose. Whether displayed by those same investors who put up the funds to finance the initial land purchase; the land-owner prepared to wait longer for a better return; the local population who have put their hope in their trusted Garden City Mayor to deliver; and the early adopters who have set out to prove, whether through self, custom or cooperative-build that someone can make a go of this place.

The ingredients of a great place are all there, but it requires **a belief in common purpose** in terms of accepting the deliverability of Garden Cities at the scale we advocate is necessary to unlock both institutional investment and national support for the cause.

Our 1st Round submission introduced the 3rd 'handover' in the life of the Garden City – **the founding of the Garden City Estate** following on from the Local Garden City Commission and whatever (if any) mechanism identified by Government to promote the growth of Garden Cities nationally.

This model, drawn from the stewardship of the Great Estates remains our preferred vehicle for governance and management for the Garden City, although as referred to in Steps 4 & 9, there is a scenario worthy of consideration that entertains the transition of the Garden City Estate into an autonomous local authority as was the case with a number of the New Towns.

Figure 10.2 sets out the broad timelines for returns on investment, this also identifies the creation of a community infrastructure bond (the Estate Bond from our initial submission) as a fundamental plank of the operating structure of the Garden City Estate.

As previously suggested, our recommendation is for the Estate to be founded under the mantle of the City Mayor and Commission. Thereafter executive staff of the Garden City Commission might transfer to the executive of the Estate and there is the potential for the Mayor to assume an ambassadorial role.

The Estate would function on the basis of a Management Board and support staff.

Members of the Estate who would sit on the Management would be comprised of:

1. **Elected members:** local community (existing and new) representatives; local planning authority representatives; and
2. **Non-elected members:** Landowners; Garden City Developer; potentially Affordable Housing providers and Utility companies.

In all cases the objectives of the Estate would remain:

3. To manage the "Estate Bond" from which the community would benefit in both the long and short term;
4. To secure a dividend from which existing and new community members can personally benefit. This may assist in overcoming concerns over loss of property value etc.;
5. To enable the community to work with the landowners and the Garden City Developer for the long-term to plan, deliver, manage and grow the city; and
6. To establish estate management guidelines and principles to safeguard appropriate regimes for maintenance and renewal of buildings and amenities.

FIGURE 10.1. GARDEN CITY ESTATE STRUCTURE

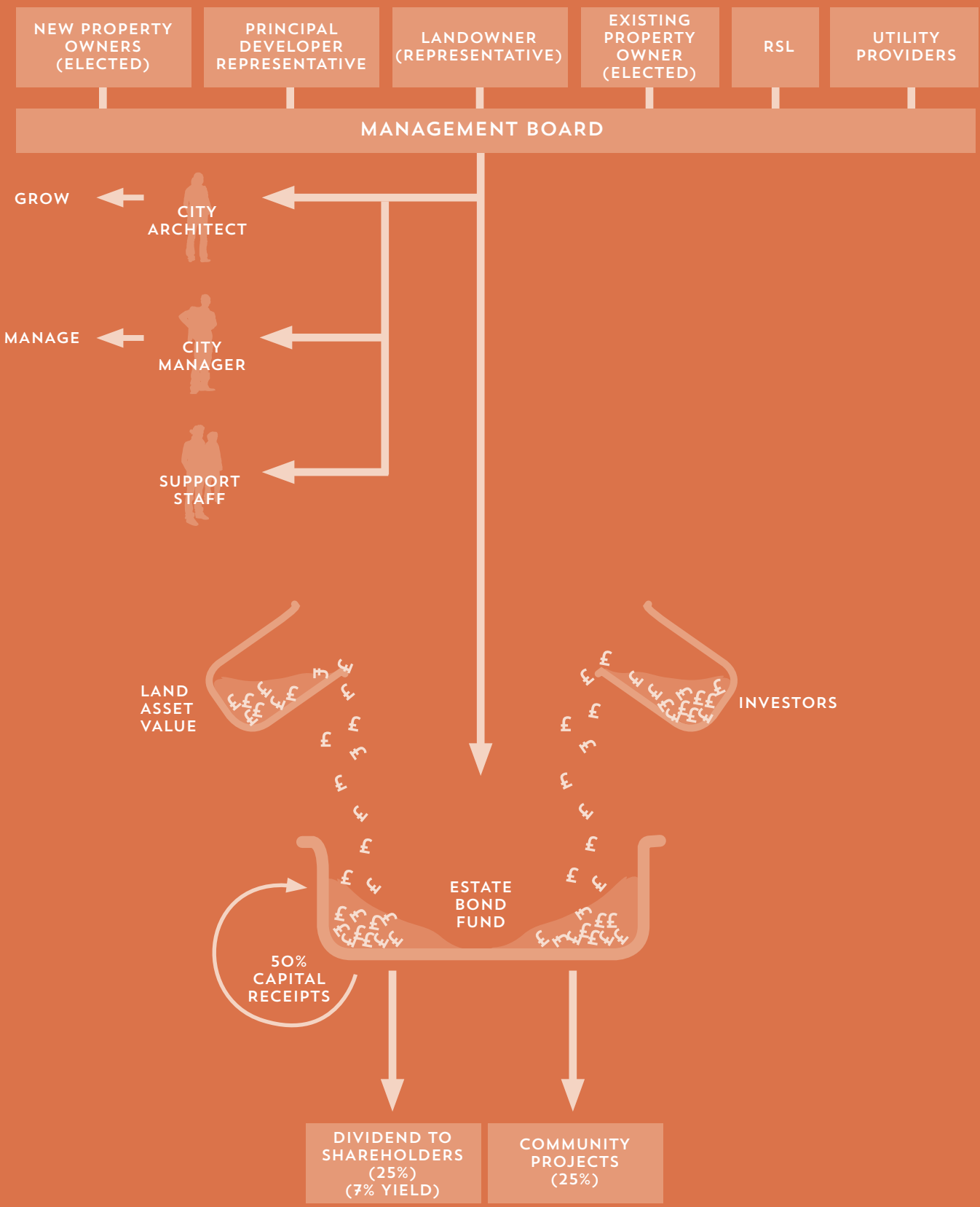
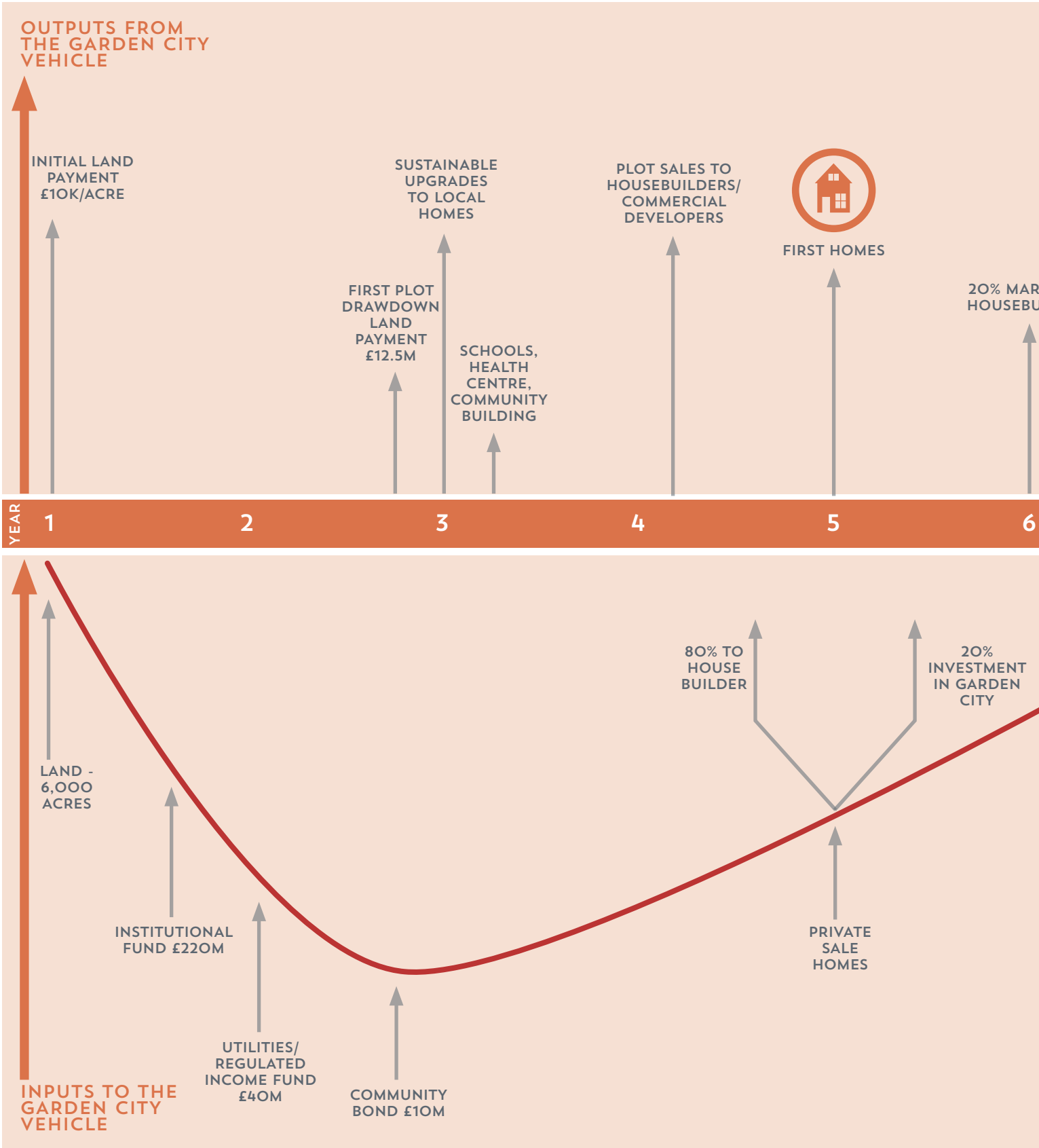
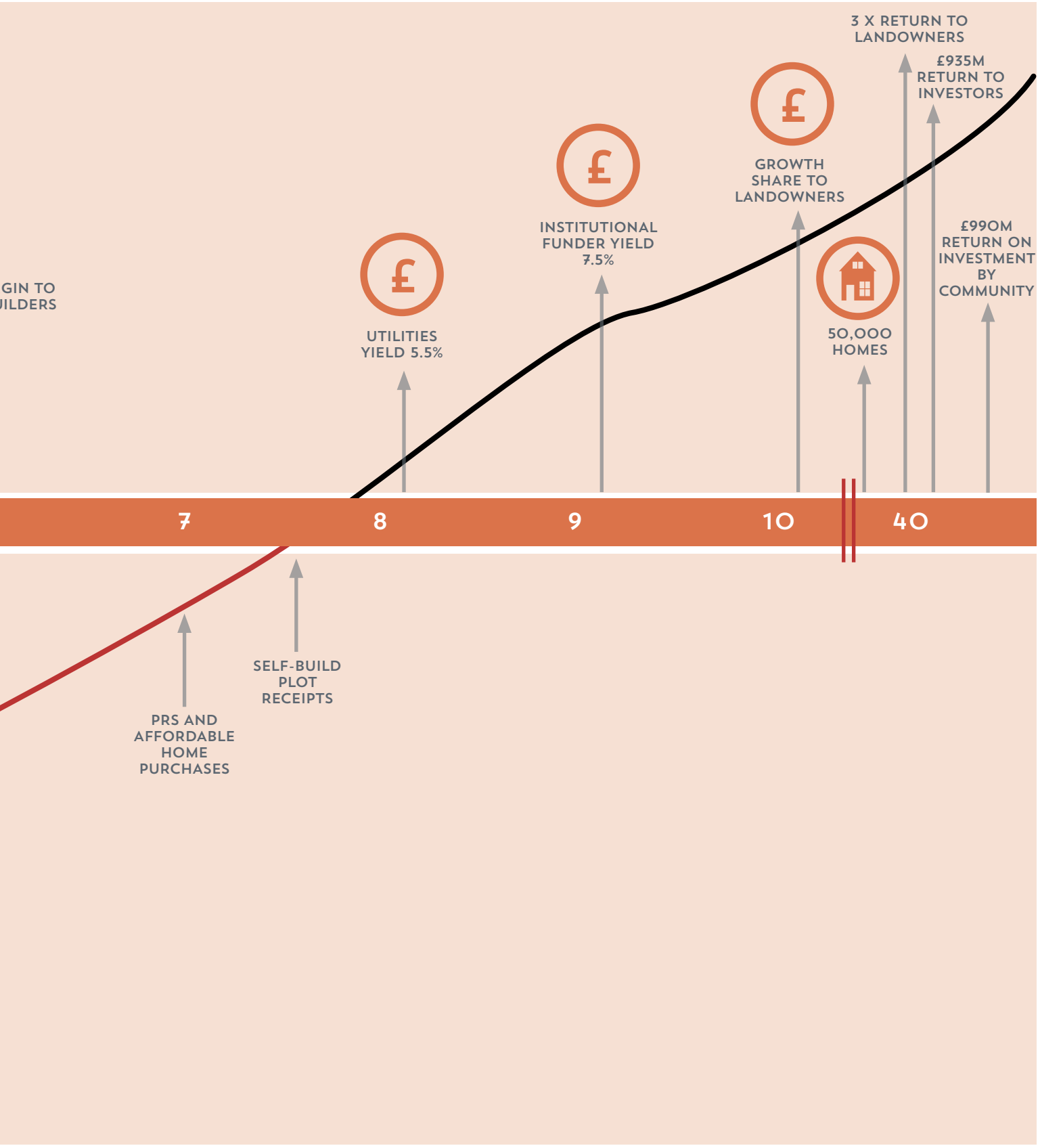


FIGURE 10.2. BROAD TIMELINES FOR RETURNS ON INVESTMENT




3 X RETURN TO LANDOWNERS
£935M RETURN TO INVESTORS
£990M RETURN ON INVESTMENT BY COMMUNITY
GROWTH SHARE TO LANDOWNERS
INSTITUTIONAL FUNDER YIELD 7.5%
UTILITIES YIELD 5.5%
50,000 HOMES
GIN TO
ILDERS
7
8
9
10
40
PRS AND AFFORDABLE HOME PURCHASES
SELF-BUILD PLOT RECEIPTS

THE FUNCTIONING CITY

When planning the Garden City, existing property owners would be offered a shareholding proportionate to their property value (this would need to be determined by Council Tax band for ease of reference). If taken up, affected property owners would have:

- **A financial stake in the Garden City -** to a value of say £10,000 invested in the Estate Bond;
- **Voting rights and a stake in how the Garden City evolves.**

If property owners decided to sell their property and not be involved, the shareholding interest would be retained in the property so new purchasers could take advantage of it.

If property owners decided to sell their property and not be involved, the shareholding interest would be retained in the property so new purchasers could take advantage of it.

The shareholders in the Estate would include (see figure 10.1):

- **Garden City Developer,** who, if different from the landowner, would fund the promotion, planning and infrastructure costs in exchange for either a return envisaged at circa 40% of total profit (see Key Metrics in Step 7) or a shareholding value equivalent;
- **Landowner,** those land owners not wishing to invest in the profit share would receive a land payment of circa £150,000 acre on drawdown. Those landowners willing to place their land interests into the Estate in exchange for a shareholding will receive £100,000 per acre on drawdown and up to circa £198,009 per acre as a profit share over the length of the scheme. In the short-term, the landowner receives less capital value, but with tax incentives this could be attractive. Alternatively, the landowner could sell their retained interest to an investor, who would purchase the shareholding interest in return for a future dividend;

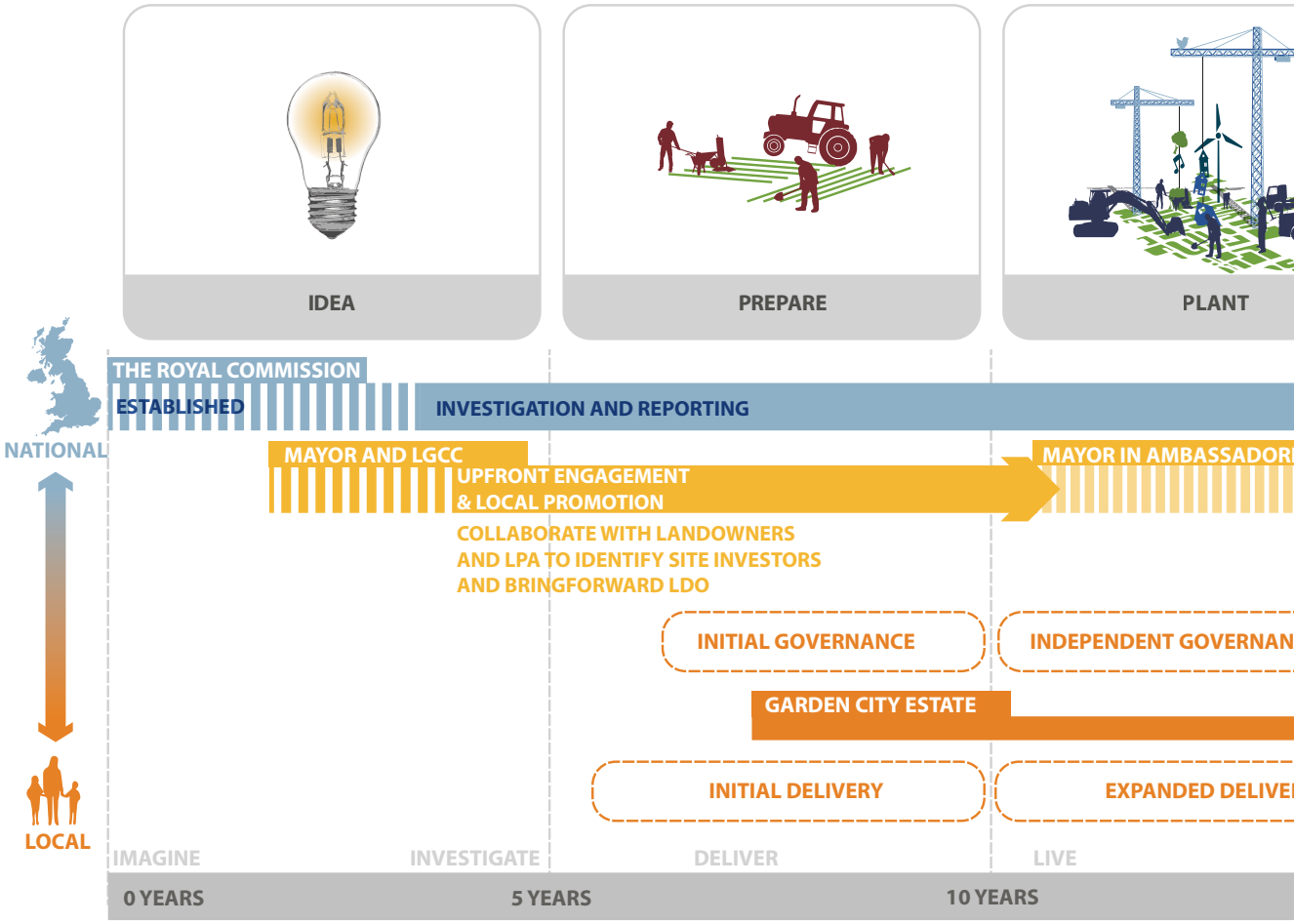


FIGURE 10.3. THE GARDEN CITY ESTATE TIMELINE

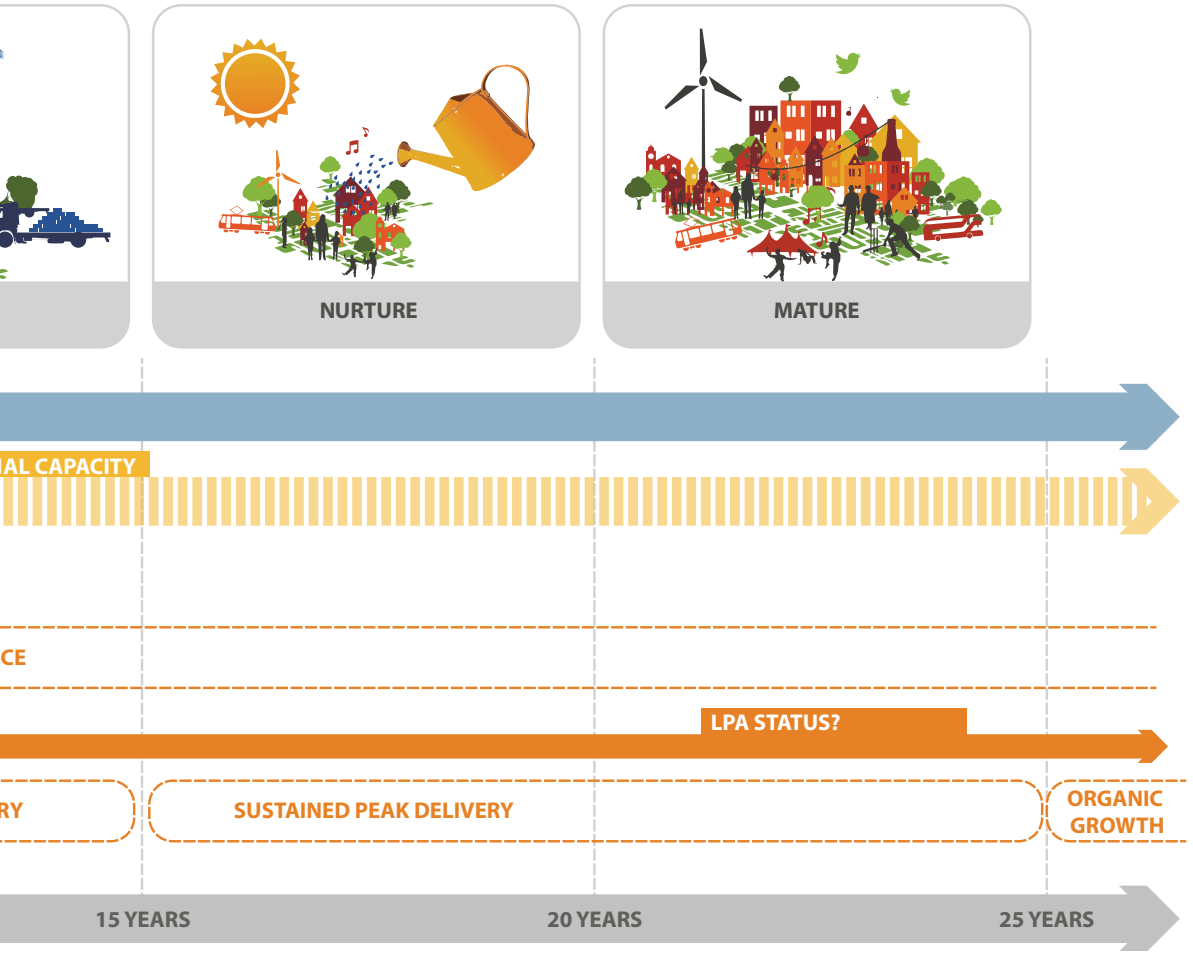
THE FUNCTIONING CITY

- **Existing property owners** (i.e. the affected existing community) would be given 1 share to a value of (say) £10,000 at the outset, which would increase in value as land is sold for development;
- **New property owners** would each be given 1 share to retain an interest in the longer-term planning, delivery and management of the City. There is also an option for occupiers to pay into the Bond in place of estate management charges, this payment could be up to 20% of their purchase price, which would offer a yield of circa 7%;
- **An affordable housing provider** would benefit from discounted land and would work alongside the Estate to bring forward affordable housing; and
- **An appointed utility partner** would partner with the Estate to deliver community infrastructure requirements, e.g. reservoirs, waste water treatment, energy plants. A shareholding interest could off-set their risk and ensure their long-term interest.

The Garden City Estate would subsequently comprise local shareholders and be regulated by an internal Management Board appointed by the principal shareholders and elected representatives from the existing and new community.

In addition to the Management Board, the Estate would appoint key staff.

1. **City Architect** - to advise and implement the Community's wishes (via the Estate) working on area design and architecture across the Garden City, developing standards and maintaining design quality throughout all phases.
2. **City Manager** - to implement the communal spaces and support local enterprise through encouraging development and commercial interests e.g. by promoting the establishment of local shops and business re-location opportunities and cross-subsidising community assets of value etc.



CONCLUSION

We believe that Britain is in a crisis, gripped by a malaise of unaffordable housing, some of the smallest newly built dwellings in Europe and facing commuting patterns that mean we spend longer getting to work than anyone else.

In the two post-war periods where we faced similar crises, Government took urgent action resulting in 'Homes for Heroes', the New Towns and the 1960's modernist housing drive.

Before these two efforts came Sir Ebenezer Howard and his 'Garden Cities of To-morrow' which resulted in the much valued and beautifully matured settlements of Letchworth and Welwyn Garden City.

In contrast, both the current and previous Administrations have presided over some of the lowest annual housing completion statistics since the First World War, 100 years ago almost to the day.

But it's not Government that's suffering. As in Howard's day, it's the people.

Although there are some that believe otherwise, the Planning System is not broken. We have at our disposal some of the most sophisticated and thoroughly considered planning legislation on the planet. We have a track-record of building some of the most valued townscapes in existence, and as a nation we have a disproportionately high number of world-class architects. So why aren't we building world-class places for people to live in?

The answer generally comes down to 2 issues – Land and fear, or more precisely **fear of change.**

Bizarrely we have reached a stage in the evolution of this great nation, where for a minority of individuals we've grown quite enough – thank you.

Irrespective of the huge numbers of persons for whom a reasonable mortgage on a modest property is now desperately out of reach, the notion that we should not only release more land for much needed homes, but do so continuously, year on year, is anathema to many.

The (reportedly) common perception is that land in Britain is scarce, and not only scarce, but also universally bio-diverse whereas the reality is quite different.

Looked at forensically, much less of the country is constrained than is generally thought. We have conducted our own sifting exercise, layering countless levels of GIS data to find land in plentiful supply, well located next to services and infrastructure, where business is likely to locate and invest in skills and training. Few of these areas however are currently being brought forward for development.

Coming out of the worst economic crisis the world has seen since the 1920's and 1930's, investors are naturally cautious. Low risks, especially reputational, are the order of the day. Hoards of placard-waving NIMBYs are on nobody's Christmas list, but is this an inevitability for all development or a product of our culture and the residue of having built badly in the past?

Whereas industry standards of design and sustainable construction have risen enormously over the last 15 years, there are still some who would believe we couldn't build ourselves out of a paper bag, let alone out of a housing crisis. Yet this is what it's going to take if we're going to have any chance of catching up with the housing shortfall of almost 1 million homes, which has built up over the last 10 years alone.

Garden Cities, based on Howard's original vision but updated and re-invented for the 21st Century contain so many of the answers to the current crisis, it's almost unbelievable that the initiative has not been seized on previously. The media is full of Garden City stories on an almost weekly basis (and daily in the trade press) and we are past the point of no return if we want to make a difference for future generations.

That's why our strategy thinks big. Grab the momentum created by Government and others to date and speed it up.

Face off **tomorrow's generation of home-owners** against the comfortably well off NIMBYs, and expose the implications of resisting development today for the families of tomorrow.

Why should we be content with a position that sees Britons paying more than anyone else for homes in Europe but have to settle for some of the smallest spatial standards? The nation is gripped with near fervour over the self-build 'phenomenon' but again we build fewer of these homes ourselves than any of our continental neighbours. Our submission allows for **whole communities** to start building cities for themselves, attracting pioneers and entrepreneurs to take a share in the governance of the place and the quality and beauty of the environment.

One Garden City might make a difference, but it is hard to see who's going to build it. The days of Howard when land could be acquired cheaply were lost with the advent of the Town and Country Planning Act in 1947. These days the mere sniff of 'strategic' interest in land purchase sends hope values rocketing.

The amount of land needed for a Garden City is simply too expensive to acquire at such values and those with pockets that might be deep enough are amongst the most risk averse investors in the market.

What's needed to make Garden Cities a 21st century reality is **scale** and **certainty.**

Scale in terms of the number of projects, (we're suggesting around 40 broad areas of opportunity) to be identified on sites by locally and democratically elected Mayors, providing the scale for the industry and patient investors to respond to, but with the required certainty only achieved by confirming Government backing which goes beyond the 'warm words' we've heard to date.

The Planning System already has at its disposal all the tools necessary to provide Local Garden City Commissions with the powers required to designate flexible planning zones (Local Development Orders) for large sites, guided by a national body, perhaps a Royal Commission, to investigate the best and most sensible locations for new settlements. Other bodies such as the HCA have far reaching planning and CPO powers, but we want Garden Cities to be an accolade earned and fought for locally, rather than something imposed from outside and grabbed by third parties to deliver.

Willing landowners need to be complicit in the siting of Garden Cities. We have undertaken extensive financial modelling that shows we can offer landowners more in the long term than accepting the 'King's Shilling' early on and exiting without a legacy. This simple construct, achieved through the unique position of Garden Cities (as new settlements) being the only form of development large enough to render sites sustainable, and thus the 'only buyer in town', ensures that the patient deal is the **best deal.**

Furthermore, without the spectre of aspirational land values, but with the reduced planning speculation that an LDO or similar planning framework can bring, the risk can be ploughed back into the financial model, allowing for improved build quality, reduced purchase costs and larger units.

Where housing is still out of reach, the leverage of patient capital, allows for the Garden City Estate to share ownership with residents, who in turn invest in their own city, receiving a dividend over time and a stake in the place.

All this is only available at scale. Our submission sets the bar high for Britain.
It's time we took a leap of faith.

APPENDICES

APPENDIX 1

FULL YOUGOV POLLING RESULTS

YouGov What the world thinks

Building Houses

Fieldwork Time: 01st - 03rd August 2014

Conducted by YouGov
On behalf of Barton Willmore

YouGov What the world thinks

BACKGROUND

This spreadsheet contains survey data collected and analysed by YouGov plc. No information contained within this spreadsheet may be published without the consent of YouGov Plc and the client named on the front cover.

Methodology: This survey has been conducted using an online interview administered to members of the YouGov Plc GB panel of 350,000+ individuals who have agreed to take part in surveys. Emails are sent to panellists selected at random from the base sample. The e-mail invites them to take part in a survey and provides a generic survey link. Once a panel member clicks on the link they are sent to the survey that they are most required for, according to the sample definition and quotas. (The sample definition could be "GB adult population" or a subset such as "GB adult females"). Invitations to surveys don't expire and respondents can be sent to any available survey. The responding sample is weighted to the profile of the sample definition to provide a representative reporting sample. The profile is normally derived from census data or, if not available from the census, from industry accepted data.

YouGov plc make every effort to provide representative information. All results are based on a sample and are therefore subject to statistical errors normally associated with sample-based information.

For further information about the results in this spreadsheet, please contact YouGov Plc (+44)(0)207 012 6231 or email omnibus@yougov.com quoting the survey details

EDITOR'S NOTES - all press releases should contain the following information

All figures, unless otherwise stated, are from YouGov Plc. Total sample size was 2316 adults. Fieldwork was undertaken between 01st - 03rd August 2014. The survey was carried out online. The figures have been weighted and are representative of all GB adults (aged 16+).

NOTE: All press releases or other publications must be checked by YouGov Plc before use. YouGov requires 48hours to check a press release unless otherwise agreed.

- YouGov is registered with the Information Commissioner
- YouGov is a member of the British Polling Council

Any percentages calculated on bases fewer than 50 respondents must not be reported as they do not represent a wide enough cross-section of the target population to be considered statistically reliable. These have been italicised.

Barton Willmore
Building Houses
GB Sample : 01st - 03rd August 2014

YouGov What the world thinks

	Total	Gender		Age					Social Grade		Region						
	Base	Male	Female	18-24	25-39	40-54	55+	18 - 25 years old	ABC1	C2DE	North	Midlands	East	London	South	Wales	Scotland
ABH_q1. Which ONE, if any, of the following would you say is your BIGGEST concern about your future?																	
Unweighted base	2316	1129	1190	293	469	736	969	301	1259	1059	539	345	185	314	492	149	293
Base: All GB Adults aged 18 plus	2316	1126	1190	343	563	935	866	360	1274	1042	570	380	222	296	530	116	201
Having a job that is well paid	7%	8%	5%	12%	9%	7%	2%	14%	5%	8%	8%	6%	2%	10%	5%	9%	7%
Having a job that is fulfilling	9%	9%	8%	23%	12%	8%	1%	23%	8%	9%	9%	9%	7%	13%	7%	5%	13%
Having enough disposable income to socialise/ enjoy life	29%	27%	31%	14%	15%	28%	45%	13%	30%	28%	28%	25%	30%	23%	29%	25%	32%
Being able to afford to live in an area that I want to live in	10%	12%	10%	10%	12%	10%	9%	11%	10%	10%	10%	12%	10%	10%	13%	6%	4%
Being able to own my own home	7%	7%	7%	9%	13%	6%	2%	10%	8%	5%	6%	6%	4%	9%	8%	8%	6%
Being able to provide for my family	20%	20%	20%	16%	27%	26%	12%	16%	18%	22%	21%	16%	26%	16%	16%	20%	21%
Other	7%	6%	6%	3%	6%	7%	9%	3%	8%	5%	6%	8%	4%	9%	6%	9%	7%
Don't know	2%	2%	2%	5%	1%	2%	2%	5%	1%	3%	2%	2%	2%	1%	3%	5%	1%
Not applicable - I don't have any concerns about my future	10%	10%	9%	7%	4%	6%	17%	7%	11%	9%	9%	13%	7%	10%	9%	5%	11%
ABH_q2. To what extent do you agree or disagree with the following statement?																	
"I think that more homes need to be built in the UK"																	
Unweighted base	2316	1129	1190	293	469	736	969	301	1259	1059	539	345	185	314	492	149	293
Base: All GB Adults aged 18 plus	2316	1126	1190	343	563	935	866	360	1274	1042	570	380	222	296	530	116	201
Strongly agree	31%	38%	24%	26%	27%	29%	37%	27%	30%	32%	31%	26%	30%	38%	30%	23%	33%
Tend to agree	31%	30%	32%	26%	33%	32%	30%	28%	32%	30%	30%	31%	26%	31%	28%	39%	36%
Neither agree nor disagree	17%	16%	19%	21%	20%	17%	14%	21%	16%	19%	20%	17%	13%	12%	20%	20%	15%
Tend to disagree	11%	9%	14%	13%	10%	10%	11%	12%	12%	9%	10%	13%	14%	9%	12%	9%	6%
Strongly disagree	6%	6%	6%	4%	5%	6%	6%	4%	7%	6%	5%	7%	9%	6%	6%	6%	4%
Don't know	4%	3%	5%	8%	5%	4%	1%	8%	4%	4%	4%	4%	6%	5%	3%	2%	3%
ABH_q3. In which ONE, if any, of the following places would you ideally like to live?																	
Unweighted base	2316	1129	1188	293	469	736	969	301	1259	1059	539	345	185	314	492	149	293
Base: All GB Adults aged 18 plus	2316	1126	1190	343	563	935	866	360	1274	1042	570	380	222	296	530	116	201
Inner city	5%	6%	5%	9%	8%	4%	3%	9%	5%	5%	5%	4%	2%	10%	2%	5%	5%
Urban area, but not inner city	15%	17%	13%	24%	21%	10%	11%	23%	16%	15%	13%	14%	10%	20%	14%	11%	15%
Suburban area	17%	18%	16%	25%	20%	14%	13%	26%	18%	15%	19%	12%	15%	18%	18%	15%	18%
Village or small town	42%	37%	46%	25%	35%	46%	52%	25%	45%	38%	44%	43%	52%	24%	46%	43%	40%
Rural area	17%	19%	16%	9%	14%	22%	20%	9%	16%	21%	14%	26%	18%	11%	17%	22%	20%
Don't know	3%	3%	4%	7%	4%	5%	1%	7%	2%	6%	4%	2%	3%	5%	3%	7%	2%

Government Region											Working status						
North East	North West	Yorkshire and the Humber	East Midlands	West Midlands	East of England	London	South East	South West	Wales	Scotland	Working full time	Working part time	ALL WORKERS (NET)	Full time student	Retired	Unemployed	Not working/ Other
92	244	203	163	182	185	314	291	201	148	293	1069	258	1347	184	537	83	185
97	271	201	182	168	222	296	312	218	116	201	1083	273	1356	185	497	91	189
10%	7%	9%	7%	5%	2%	10%	5%	6%	9%	7%	9%	4%	8%	17%	0%	12%	4%
3%	12%	9%	6%	12%	7%	10%	6%	3%	5%	13%	10%	11%	10%	24%	1%	10%	4%
31%	32%	22%	28%	29%	35%	23%	28%	31%	25%	32%	24%	35%	26%	12%	44%	24%	32%
6%	11%	10%	12%	11%	10%	10%	11%	15%	6%	4%	10%	12%	11%	9%	9%	6%	10%
7%	4%	9%	6%	6%	4%	9%	10%	6%	6%	5%	10%	4%	9%	0%	2%	10%	2%
28%	22%	18%	20%	16%	25%	16%	17%	20%	29%	21%	23%	22%	23%	21%	10%	8%	28%
3%	6%	7%	8%	4%	4%	9%	6%	6%	9%	7%	8%	3%	6%	3%	10%	9%	6%
-	2%	4%	2%	2%	2%	1%	2%	2%	5%	1%	2%	2%	2%	3%	2%	2%	4%
11%	5%	14%	12%	14%	7%	10%	9%	10%	5%	11%	8%	6%	8%	4%	23%	10%	8%

92	244	203	163	182	185	314	291	201	148	293	1069	258	1347	184	537	83	185
97	271	201	182	168	222	296	312	218	116	201	1083	273	1356	185	497	91	189
24%	34%	26%	29%	28%	24%	30%	27%	35%	23%	33%	31%	24%	29%	21%	39%	23%	37%
28%	32%	26%	29%	32%	29%	31%	30%	25%	39%	30%	32%	28%	31%	33%	29%	39%	30%
22%	16%	23%	17%	18%	13%	12%	19%	20%	20%	15%	17%	23%	18%	19%	13%	24%	18%
9%	11%	8%	11%	14%	14%	8%	15%	9%	9%	8%	10%	11%	11%	17%	12%	3%	7%
13%	3%	9%	9%	5%	9%	6%	6%	7%	6%	4%	8%	9%	7%	5%	6%	4%	6%
7%	3%	9%	9%	3%	6%	9%	3%	3%	2%	3%	4%	5%	5%	5%	1%	10%	3%

92	244	203	163	182	185	314	291	201	148	293	1069	258	1347	184	537	83	185
97	271	201	182	168	222	296	312	218	116	201	1083	273	1356	185	497	91	189
1%	5%	8%	2%	7%	2%	10%	2%	2%	5%	5%	6%	5%	6%	7%	3%	13%	3%
10%	14%	13%	15%	14%	10%	20%	12%	17%	11%	15%	15%	11%	14%	30%	12%	13%	14%
15%	16%	22%	8%	18%	10%	18%	20%	13%	15%	18%	19%	19%	19%	21%	12%	10%	12%
61%	40%	42%	40%	39%	52%	24%	46%	45%	40%	40%	39%	46%	41%	27%	53%	26%	46%
11%	16%	11%	25%	23%	16%	11%	16%	20%	22%	20%	16%	15%	16%	7%	19%	16%	21%
2%	4%	5%	2%	3%	3%	5%	3%	2%	7%	2%	3%	4%	3%	9%	1%	11%	5%

Marital Status					Children in Household						Social Media (monthly or more)			
Married/ Civil Partnership	Living as married	Separated/ Divorced	Widowed	Never Married	0	1	2	3+	ALL WITH CHILDREN IN HOUSEHOLD (NET)	Refused	Facebook	LinkedIn	Google+	Twitter
881	225	185	67	440	1663	270	218	82	570	83	1293	296	137	463
856	235	160	63	460	1581	298	257	94	648	87	1275	247	142	461
3%	6%	6%	3%	9%	5%	11%	7%	9%	9%	11%	7%	8%	6%	8%
4%	10%	3%	3%	14%	8%	13%	10%	3%	11%	16%	9%	10%	4%	12%
32%	27%	36%	54%	24%	35%	18%	15%	14%	16%	22%	31%	26%	32%	25%
9%	11%	14%	5%	14%	11%	11%	8%	8%	9%	14%	9%	10%	14%	11%
4%	9%	1%	1%	13%	7%	6%	7%	4%	6%	2%	7%	11%	5%	10%
29%	25%	17%	5%	8%	12%	24%	47%	50%	42%	6%	20%	18%	17%	21%
8%	5%	6%	5%	7%	6%	3%	4%	2%	3%	4%	6%	8%	6%	7%
2%	2%	3%	1%	2%	2%	0%	2%	3%	1%	7%	2%	2%	3%	1%
12%	4%	10%	23%	8%	12%	3%	3%	6%	4%	18%	9%	8%	11%	7%

881	225	185	67	440	1663	270	218	82	570	83	1293	296	137	463
856	235	160	63	460	1581	298	257	94	648	87	1275	247	142	461
33%	30%	26%	21%	28%	33%	28%	26%	24%	26%	24%	32%	26%	36%	31%
31%	29%	27%	29%	33%	33%	38%	34%	29%	35%	20%	29%	24%	40%	32%
18%	20%	29%	20%	17%	17%	15%	16%	24%	17%	20%	18%	12%	15%	14%
10%	12%	9%	27%	9%	11%	10%	11%	6%	10%	14%	11%	9%	4%	12%
7%	6%	9%	2%	6%	7%	5%	6%	7%	6%	4%	5%	6%	3%	6%
3%	4%	1%	2%	7%	3%	4%	4%	10%	5%	19%	4%	3%	1%	4%

881	225	185	67	440	1663	270	218	82	570	83	1293	296	137	463
856	235	160	63	460	1581	298	257	94	648	87	1275	247	142	461
3%	6%	0%	7%	9%	5%	5%	5%	-	4%	14%	5%	7%	4%	6%
10%	14%	16%	21%	23%	15%	19%	15%	10%	16%	7%	15%	17%	14%	20%
15%	17%	16%	12%	21%	16%	18%	19%	19%	19%	17%	18%	17%	17%	21%
48%	45%	43%	38%	27%	44%	37%	38%	48%	39%	28%	41%	40%	44%	33%
22%	17%	21%	23%	12%	19%	18%	17%	17%	17%	16%	17%	18%	19%	17%
2%	2%	1%	5%	8%	2%	4%	6%	5%	5%	14%	3%	1%	4%	3%

ABH_q4.
For the following question, if you already own a home, please select the "Not applicable" option.

Do you think you will EVER own your own home?

Unweighted base	2316	1126	1189	293	458	706	859	901	1259	1056	529	345	185	314	492	148	293
Base: All GB Adults aged 16 plus	2316	1126	1190	343	563	695	806	960	1274	1042	570	360	222	296	530	118	201
Yes, I do	25%	27%	23%	84%	30%	24%	6%	83%	23%	27%	30%	21%	23%	25%	26%	22%	22%
No, I don't	16%	13%	18%	15%	21%	19%	16%	16%	13%	23%	20%	14%	13%	21%	17%	22%	18%
Don't know	8%	8%	9%	17%	13%	7%	3%	17%	6%	11%	5%	13%	7%	15%	7%	6%	7%
Not applicable - I already own a home	49%	47%	50%	5%	35%	51%	75%	5%	57%	38%	44%	52%	57%	40%	50%	50%	53%

ABH_q5.
In general, which, if any, of the following do you think would happen as a result of more homes being built in the UK? (Please select all that apply)

Unweighted base	2316	1126	1189	293	458	706	859	901	1259	1056	529	345	185	314	492	148	293
Base: All GB Adults aged 16 plus	2316	1126	1190	343	563	695	806	960	1274	1042	570	360	222	296	530	118	201
It would make housing more affordable	47%	52%	42%	45%	46%	49%	49%	44%	50%	44%	51%	42%	42%	50%	44%	49%	54%
It will have a negative impact on the environment	33%	34%	33%	40%	33%	34%	31%	39%	36%	31%	30%	34%	39%	32%	38%	29%	29%
It will create nicer places to live	11%	13%	9%	15%	14%	9%	10%	14%	10%	12%	15%	7%	9%	14%	8%	13%	12%
It will lead to more generic places/ towns (i.e. places losing their character)	36%	35%	38%	36%	37%	34%	38%	36%	40%	33%	29%	40%	49%	31%	42%	34%	33%
It will reduce homelessness	30%	32%	28%	25%	26%	28%	41%	24%	29%	32%	28%	29%	34%	32%	29%	30%	37%
It will create more environmentally sustainable homes	21%	25%	18%	19%	17%	21%	25%	19%	24%	19%	24%	19%	20%	21%	20%	16%	27%
It would put a strain on amenities (e.g. transport, schools etc.)	45%	45%	46%	35%	37%	49%	54%	35%	49%	46%	35%	55%	60%	39%	52%	32%	35%
None of these	2%	3%	2%	4%	3%	2%	2%	4%	2%	3%	3%	1%	3%	3%	2%	2%	2%
Don't know	7%	6%	7%	9%	9%	8%	4%	9%	5%	9%	8%	6%	3%	9%	5%	11%	6%

Cell Contents (Column Percentage)

92	244	293	163	182	185	314	291	201	148	293	1089	258	1347	154	537	83	185
97	271	291	182	198	222	296	312	218	116	201	1083	273	1356	185	497	91	188
35%	24%	35%	21%	21%	23%	25%	20%	23%	22%	22%	20%	23%	26%	67%	6%	22%	14%
18%	21%	22%	14%	14%	13%	21%	17%	17%	22%	18%	15%	18%	15%	16%	14%	41%	37%
4%	6%	6%	10%	10%	7%	15%	6%	8%	6%	7%	9%	10%	10%	15%	2%	17%	7%
48%	50%	37%	55%	49%	57%	40%	49%	52%	50%	53%	47%	50%	47%	2%	77%	20%	43%

92	244	293	163	182	185	314	291	201	148	293	1089	258	1347	154	537	83	185
97	271	291	182	198	222	296	312	218	116	201	1083	273	1356	185	497	91	188
37%	56%	50%	40%	44%	42%	50%	40%	49%	49%	54%	49%	40%	47%	45%	50%	38%	43%
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10%	7%	8%	6%	7%	3%	8%	6%	4%	11%	6%	8%	11%	7%	3%	2%	22%	10%

881	225	185	67	440	1663	270	218	82	570	83	1293	296	137	463
856	235	160	63	480	1581	296	257	94	648	87	1278	247	142	461
13%	31%	14%	7%	33%	21%	38%	36%	35%	36%	21%	26%	27%	20%	32%
11%	15%	35%	18%	25%	17%	18%	19%	23%	19%	20%	19%	13%	21%	20%
4%	6%	8%	5%	16%	8%	12%	8%	7%	10%	12%	9%	7%	13%	9%
67%	48%	42%	72%	26%	56%	34%	36%	34%	36%	47%	46%	53%	47%	38%

881	225	185	67	440	1663	270	218	82	570	83	1293	296	137	463
856	235	160	63	480	1581	296	257	94	648	87	1278	247	142	461
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4%	7%	7%	6%	12%	6%	6%	5%	13%	6%	17%	7%	4%	6%	7%

SUMMARY OF 16-25YR OLD BUILDING HOUSES POLLING RESEARCH 4 8 14

YouGov
What the world thinks

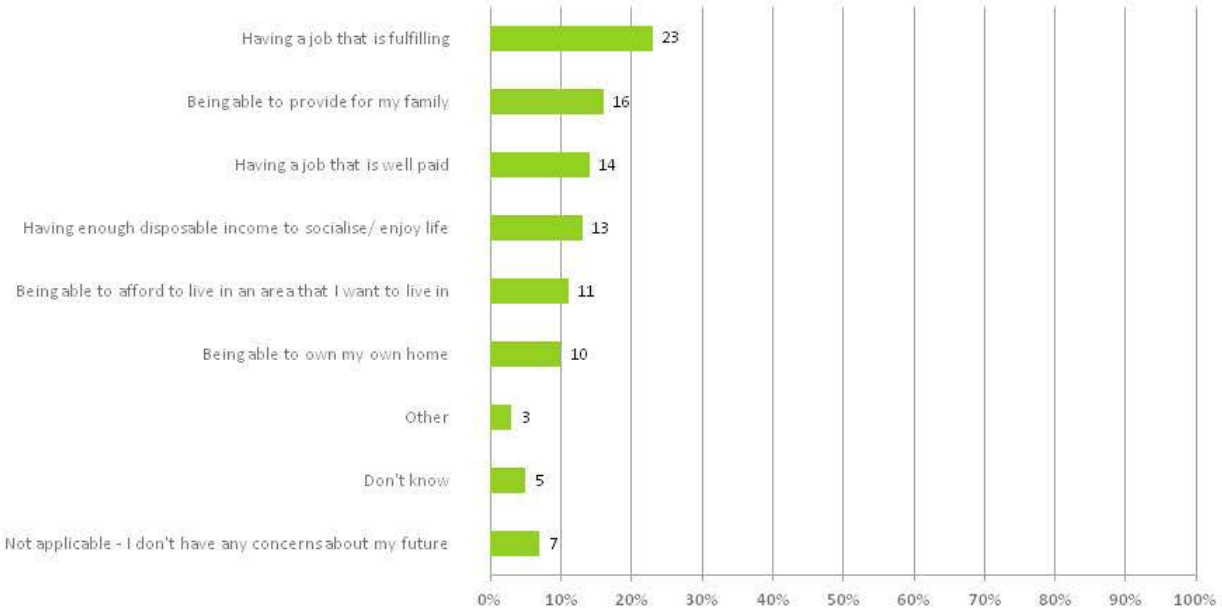
Building Houses

On behalf of Barton Willmore

BARTON WILLMORE

Building Houses

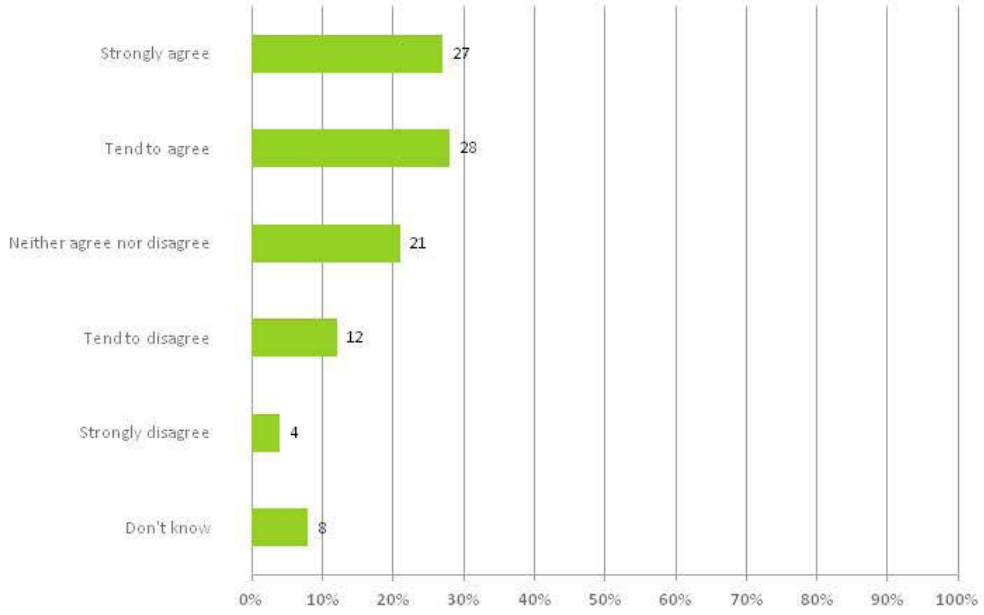
ABH_q1. Which ONE, if any, of the following would you say is your BIGGEST concern about your future?



Base: All GB Adults aged 16 - 25 (360)

Building Houses

ABH_q2. To what extent do you agree or disagree with the following statement?
"I think that more homes need to be built in the UK"

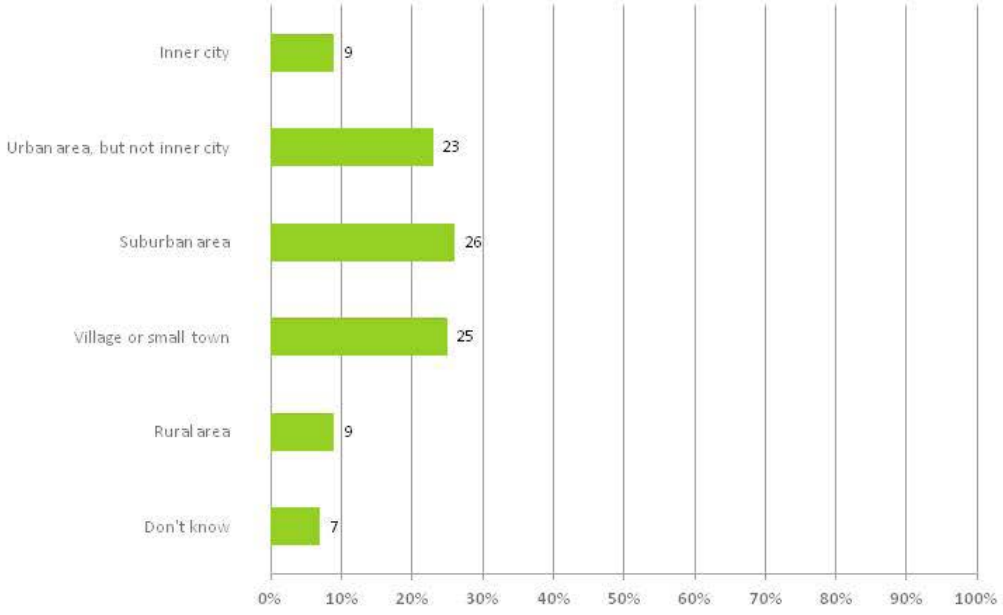


Base: All GB Adults aged 16 - 25 (360)

YouGov What the world thinks

Building Houses

ABH_q3. In which ONE, if any, of the following places would you ideally like to live?

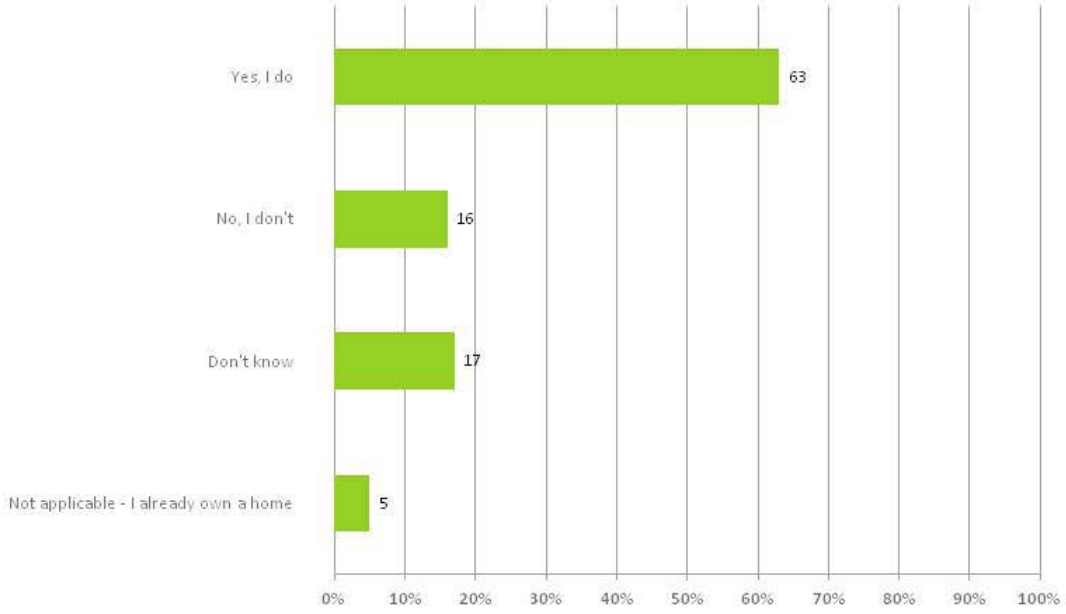


Base: All GB Adults aged 16 - 25 (360)

YouGov What the world thinks

Building Houses

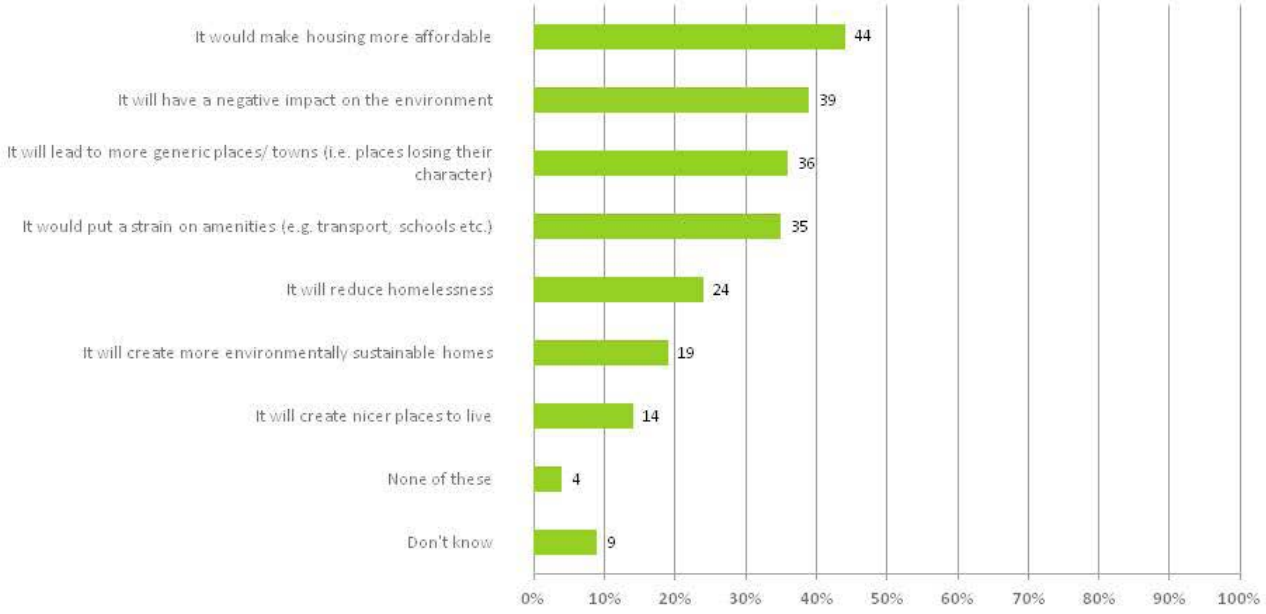
ABH_q4. For the following question, if you already own a home, please select the "Not applicable" option. Do you think you will EVER own your own home?



Base: All GB Adults aged 16 – 25 (360)

Building Houses

ABH_q5. In general, which, if any, of the following do you think would happen as a result of more homes being built in the UK? (Please select all that apply)



Base: All GB Adults aged 16 - 25 (360)

SUMMARY OF YOUGOV POLL BUILDING HOUSES 4 8 14

YouGov
What the world thinks

Building Houses

On behalf of Barton Willmore

BARTON WILLMORE

Building Houses

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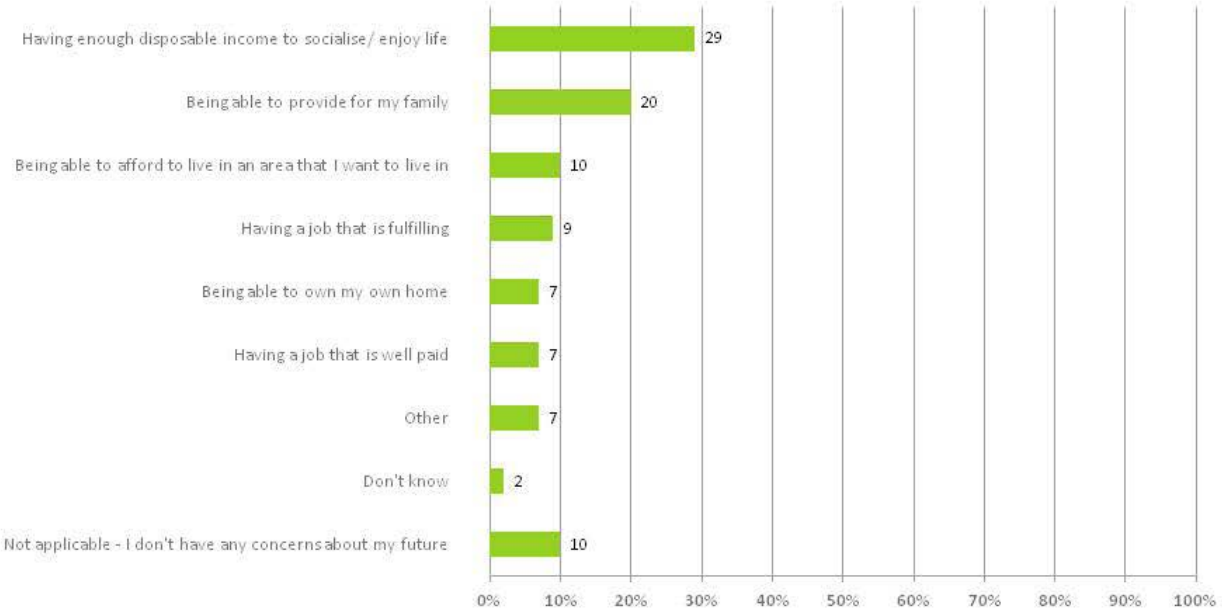
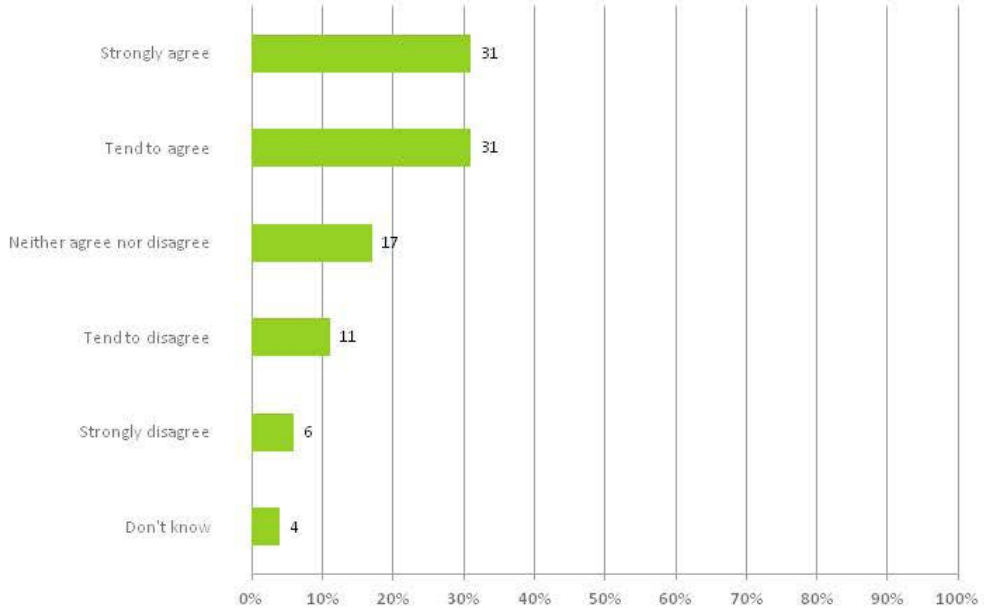


Base: All GB Adults aged 16 plus (2316)

WOLFSON ECONOMICS PRIZE MMXV

Building Houses

ABH_q2. To what extent do you agree or disagree with the following statement?
"I think that more homes need to be built in the UK"



Base: All GB Adults aged 16 plus (2316)

YouGov What the world thinks

Building Houses

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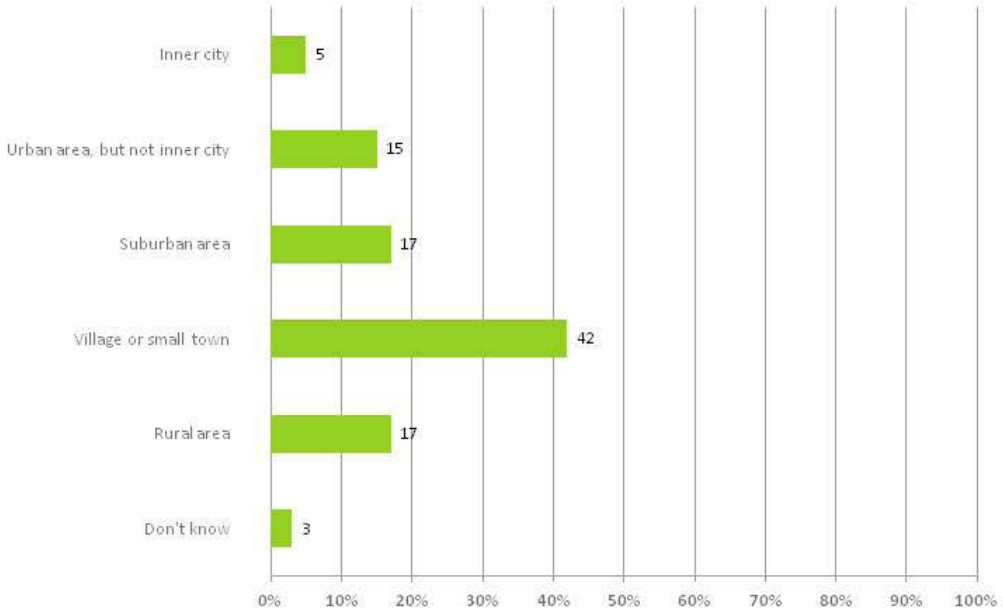

Base: All GB Adults aged 16 plus (2316)

YouGov What the world thinks

Building Houses

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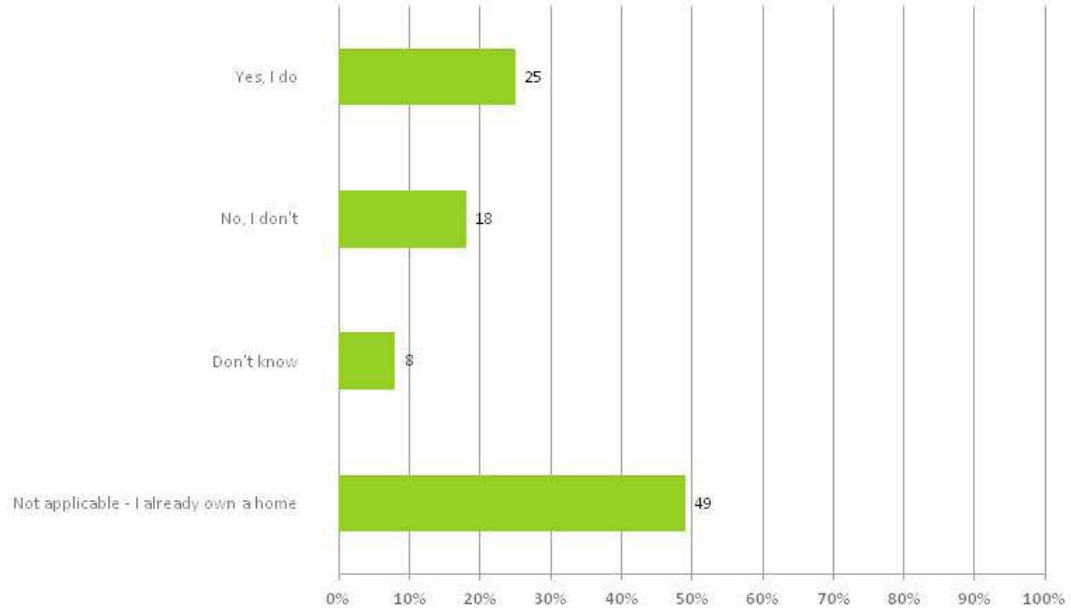

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YouGov What the world thinks

Building Houses

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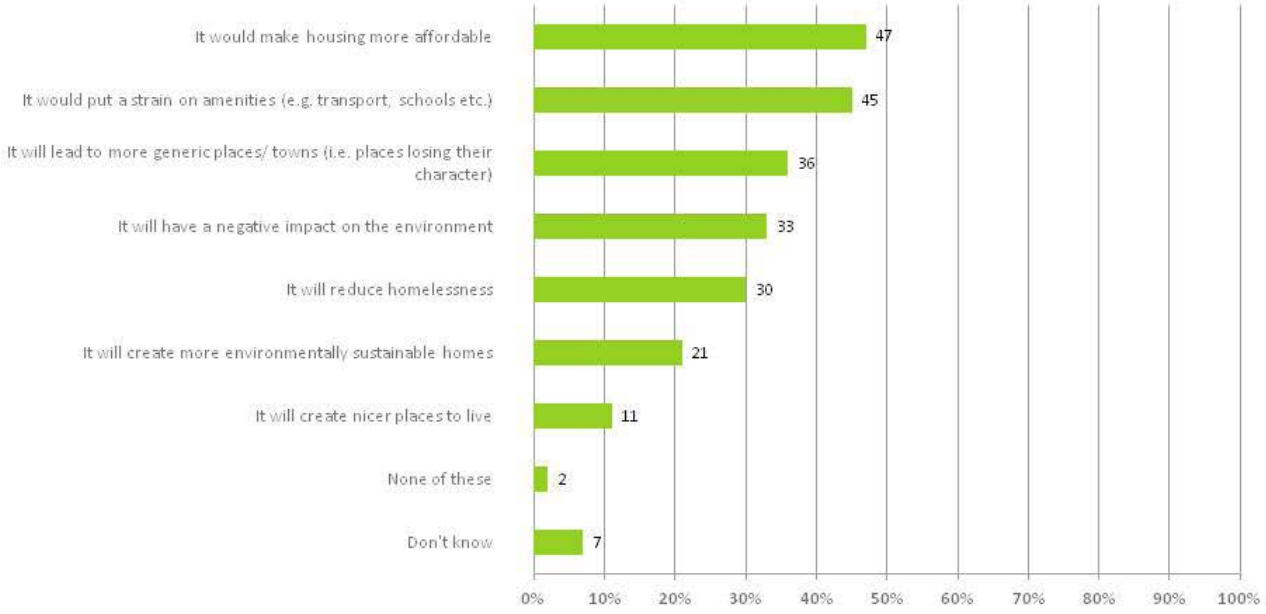


Base: All GB Adults aged 16 plus (2316)

YouGov What the world thinks

APPENDIX 2
THINK TANK 1

HELD ON TUESDAY 21ST JANUARY 2014
SUMMARY OF THE DISCUSSION

WELCOME AND PRESENTATIONS

MXS welcomed delegates to the think tank and introduced JG who presented our current knowledge on the Wolfson Prize, followed by illustration of a number of different spatial models supported by KP who focused on aspects of location selection.

INTRODUCTIONS

JG invited delegates to introduce themselves and raise any initial issues, points of discussion they would like to see raised during the morning.

A variety of early issues were raised for consideration for discussion during the morning with the primary topics addressing:

- Applying lessons from the Eco-towns
- Achieving quality
- De-risking the planning process
- Scale – towns and villages rather than cities?
- Reducing peak debt to enable scheme delivery
- Functioning with grant or public sector support
- Adopting some of the radical social innovations from the original garden cities
- Role for public sector land
- Opportunities provided by 'tottering' [failing] towns
- Managing political support

INITIAL ROUND TABLE DISCUSSION

HC Opened with the lessons he had learned from the Eco-Town experiences, noting that providing a community with genuine (and indeed simple) choice was a critical component of successful schemes. Such choices might include (using a 6,000 project at Fareham as an example) asking the local populous whether they would like to see want lots of little urban extensions or one new community?

HC noted that the only 4 Eco-towns that survive as live projects do so because they have LPA backing and such political buy-in is needed from the start. For example at Bicester, the focus was on the identification of benefits to the existing community, helping to build local legitimacy.

TA noted that in his view the mismatch between the aspirations usually at outline stage for a high quality scheme, and the reality of what is actually delivered results in the loss of aspirations quality and replacement with house builders' concern about reaching short-term objectives and de-risking costly/complicated aspects of projects. This is ironic given the demand for details at the outline stage and the relatively level of interest in design at the detailed or reserved matters stages.

TA suggested a different approach, working with land-owners as active participants in the delivery process and focusing on the delivery of serviced sites.

However RS countered that land owners had been led into believing in hope and aspirational values for land and as such when push comes to shove might be more closely aligned with the financial views of the house builders. Notwithstanding this, he cited comments made recently by Lord Heseltine that more 'Buccaneer' spirit is required from private individuals/industrialists to lead on this issue.

THINK-TANK ATTENDEES

FOR BARTON WILLMORE:

James Gross
Masterplanning Director
Mark Sitch
Senior Planning Partner
Robin Shepherd
Planning Partner
Kathryn Anderson
Urban Design Director
Jenni Montgomery
Business Development Director
Kevin Parker
Urban Design Director

EXTERNAL ATTENDEES:

Ritu Rajashekar
KLH Sustainability
Henry Cleary OBE
Ex DCLG
Tom Aylmer
Darley Developments
Iain Gilbey
Pinsent Masons
James Watts
KPMG
Sir Paul Clarke
Ex Duchy of Lancaster
Ben Bolgar
Prince's Foundation for Building Community
Andy Cameron
WSP
Tony Reddy
Reddy Architecture
Michelle Hannah
EC Harris
Bob Beaumont
Affinity Sutton
Saffron Woodcraft
Social Life/Young Foundation
John Weir
Church Commissioner's
Richard Guise
Context 4D
Nick Keeble
Development Intelligence

PC queried the practicality of a land-owner led model due to the Leasehold Reform Act which maintains the position that everyone has the right to buy land and property under enfranchisement laws. As such this particular act would need to be reformed if land-owners were to take a position as private landlords on longer leases as well as put up significant land holdings as part of a project which they might be in danger of losing down the line [as opposed to maintaining in a trust going forward].

IG suggested there were more compatible forms of tenure that could resolve this issue and that there were a number of investors giving new consideration to leasehold and private rented sector models (PRS).

PC noted the difficulty of responding on a city scale [both in terms of popularity and deliverability] and suggested refocusing on garden towns and garden villages. Either way no single form of tenure should be used, whether 20 year leases, private rented, a mix is required.

RG suggested that the location of a new Garden City could be informed by the regeneration needs of one or more 'tottering towns' so that they could receive the benefits of new investment and growth.

IG suggested that there were three mechanisms to address popularity as getting local support is key:

1. Re-invigorating a tottering town

2. Establishing garden cities as a long-term political high-priority

3. or ignoring the populous and riding roughshod over the process via a mechanism such as NSIP

NK responded that bribery of sorts, as mentioned in terms of proper compensation in the Prize brief was worthy of consideration, but did not dismiss IG's point 3 of progressing new settlements by Government diktat.

IG responded that philanthropic (benign - PC) dictatorship of the original garden cities would not be adopted by the Government [note the original garden cites were private initiates not carried forward by the Government of the time of instead adopted the Tudor Walters Report – garden cities were seen as too slow and too prescribed as a form of delivery].

NK expanded on some of the root issues with scheme popularity (of any scale), citing fear of change as the major factor. This fear, either of change for change's sake, or of defined issues such as perceptions of house price reduction is hard to counter unless matched with positive benefits.

(NK) People have got to get something out of development, relating to HC's opening point. In the US tax mechanisms are used to capture taxes from development and plough these directly back into the communities where development is taking place. Benefits can be direct or indirect but must be clearly identified.

IG queried how such new settlements are to be progressed through the planning system if there is no regional planning structure unless NSIP is used. Housing must go in the right location and the local planning system should not be used to determine where housing should go.

AC suggested looking at locations which don't feature large existing populations [although still in proximity to urban centres and infrastructure]. Elsick estate is one such example where the City of Aberdeen required a location for circa 8,000 new homes and the large estate in fairly close proximity to the City proved a viable location in a single ownership. A review of similar land holdings and their proximity to urban centres could yield other such candidates.

IG noted his concern on how the infrastructure for anything of city scale is to be delivered. The CIL mechanism removes the direct link between development and strategic associated infrastructure, an issue made worse by the fact that not having delivered strategic infrastructure for many years, the UK LPA's no longer have the skills required to manage and procure this effectively or timed to the demands of development.

SA spoke of sites which already had strategic infrastructure, in particular large MOD sites, which have some operational role but of which large portions are under utilised. These may in isolation not be large enough (citing RAF Waterbeach in Cambridge, PC noted Minley Manor in Hampshire) to locate a new city but land pooling with the likes of the Church Commissioners and the Crown Estate might yield some adjacent opportunities for acquisition or collaboration.

JG noted a discussion with a senior HCA executive who has suggested the discounting of land to provide an investment fund which in turn could be recycled to provide infrastructure. SA indicated this could be of interest.

(SA) There is national target for the HCA to deliver 100,000 new homes by 2015, and as part of this there is an ongoing Strategic Land and Property review with a view to identifying sites. This is an exercise and a target that will transcend political boundaries and which will be going live at the end of the year as a public data resource.

BBo sought to remind the group that we should be looking at grand properties and bespoke single houses as well as new estates as great places are combination of these but queried whether the skills rally exist to make such places anymore. Investors should be sought who take a long-term view to place creation, noting L&G's recent announcement to invest £5bn in 5 sites in the UK as new settlements. Figures from Poundbury suggest an uplift of up to 40% [source?] over adjacent property values as an incentive for long-term investment.

JW seemed to support this statement noting that few new developments of a distinctive nature exist in the UK today and that this is a genuine issue.

JG noted on the topic of popularity and investment, whether new garden cities could be delivered as enterprise zones and capture future uplifts in business rates as well as offer personal tax relief investment opportunities for affected local residents as an incentive?

JW suggested such an approach would be too sophisticated for the majority of people to understand, and echoed NK point that fear of change is the main driver for local people opposed to development. Developments should either hidden out of sight, or imposed. Bribes of £10,000 per household are not going to be effective.

IG suggested more important is to establish the principle of the City and seek investors and the population to buy into major delivery.

RS queried whether or not DevCo's Development Corporations were therefore coming back en vogue?

IG gave examples DevCo's at Old Oak Common where the principle had already been accepted, noting Docklands/ Olympics/ Milton Keynes. These could seemly be applied to green field sites but are a good idea for rescuing 'tottering towns'.

RG shifted the debate back onto distinctiveness, which can also be viewed from a perspective of sustainability [the most distinctive places sustaining themselves over long periods]. Coupling 'tottering towns' together with new university campuses (of which there seems to be an endless supply) [reference Swansea University's alliance with the Coed Darcy development] or technical universities could secure popularity by attracting votes and opportunities from younger families. The 'tottering town' could supply the social and physical distinctiveness attractive in traditional places.

SA noted that people do like distinctiveness!

JW offered commentary on a study undertaken before he joined the Church Commissioners where he suggested people were most drawn to traditional (mock Tudor!) homes including features such as a garage and chimney but not a functioning fire.

IG suggested house builders find it hard to get funding for much else.

RG countered with a lot of people will buy distinctiveness and that people only want what they know.

BREAKOUT GROUP - ECONOMIC VIABILITY

Iain presented the need for 'patient money', recognising that the house builders (by their nature) do not have patient money. It is more of a conveyor belt, and they look to make sure there is no on-going liability once they have built the last house. The market does not deal with sustainability, but profit.

There are three sources of patient money:-

1. Via Government tax revenue, but perhaps this will not be popular with The Treasury
2. Pension funds and alike (L&G, for example), who are likely to be more patient
3. Landowners, whether public sector (including the HCA), the Church Commissioners, The Crown Estate and Estate owners.

There is a need to de-risk the front end, which ties back in to the planning process and certainty (see below).

Could the land be given at a discount to the house builder, who then puts in the infrastructure early? Tom, the landowner could take that role, but who is going to take on the planning risk role/ sponsor? Who has the risk money?

JW - James made the observation that the rate of return is such that no one really interested in long term investments. Michelle felt that the private rented sector could provide one element of patient money.

It was agreed there would be a need for a range of patient money, perhaps reflecting the different stages in the process – planning and then delivery in its simplest form. A basket of funders to take on the different elements of investment, depending on the risk they were willing to take, was referred to. Could an institutional funder look 10 years ahead?

IG - Iain then explained that patient money was Stage One, and helping to de-risk the planning was Stage Two. This could be de-risked in a number of ways.

1. The NSIPS regime and its provisions for the use of CPO could be applied (MXS made the point this was not now, but could be post May 2015 Election). It is recognised this route currently provides for infrastructure. Iain said that we all talk about a housing crisis, but not an infrastructure crisis.
2. Do we create a Development Corporation or use the New Towns Act, to provide some sort of body to deal with planning? Both would be bold.
3. To submit a hybrid planning application – part outline and part full for Phase 1. An Enterprise Zone, LDO would be more around delivery and require a supportive LPA (for example, Thurrock).

MS - MXS asked whether there was any merit in the LPA have an element of ownership and therefore return, and could they keep separate their planning and property functions? Could an LPA have a vote on the Steering Group or Board? John, among others was not keen on this idea.

JW - John, felt the NSIPS route was open to challenge and could be seen as riding rough shot over the community. Was this a benign dictatorship? This created a tension with localism. N Economic viability and governance and speed could perhaps be achieved, but it would not be popular under this route.

Time was a factor and it was recognised we needed to maximise popularity. In terms of site selection, could we look to where the Estates are and set these against the problem with housing? This could become quite complicated.

This needs to be fed in to Treasury.

JW - John referred to 'picking on a bird with a broken wing'. We need to de-risk the process, and end with a stable yield on private dwellings. Do we simply end storing up toxic debt? Can they secure a loan?

TA - Tom felt the tottering town approach provide for less economic risk, but we still needed some planning status to de-risk planning. MXS consider this could more difficult to deliver with the likelihood of an array of difficult landowners involved. Land pooling could become difficult.

Could a body buy out the land? There was a figure between the development value and the existing use, which could buy the land at, rather than best value. This would need either one or both i.e. a patient landowner or patient money.

There was no real political will to invest in 'clever' tax relief mechanisms.

The way forward needs to be determined, to a large part, by the choice made; whether a New Garden City, large SUE or tottering town. Iain felt a freestanding new settlement could end up being a dormitory town to London. This affects the economic viability.

BREAKOUT GROUP - GOVERNANCE

JG - opened the session, reading some of the initial questions posed in the pre think tank paper distributed to delegates. In particular the group was asked to focus on the types of independent (private or otherwise) bodies who might assume responsibility for the governance of the new settlement and whether or not this might include historic or institutional estates?

TR - queried whether or not there might be role for a responsible minister in Government to take on a lead role; however the mood of the group suggested that whoever is to take the grief for new settlements needs to be the primary beneficiary, which suggests this role is not for Government.

PC - spoke of managing community interest downstream, and ensuring that the community and the land owners are sufficiently incentivised throughout the process of growth. There needs to be a mechanism whereby wealth created in the new city is re-captured.

(PC) - Perhaps the best place to start would be with the existing residents, and consider these as stakeholders in the community. Once mechanism might be to identify local needs and address these through a H.I.D (Housing Improvement District, as opposed to a B.I.D. Business Improvement District) [although this has been used elsewhere via the Pathfinder programme].

BB - cited his own organisation's experience of setting up not for profit (NFP) vehicles ploughing the profits from private development, undertaken by the RP/RSL back into affordable housing and development infrastructure.

SA - spoke of how a wider role for public sector ownership could be considered providing the public sector [or any such body] with the capital assets from which to derive receipts to re-invest in the community. An example of the is at Milton Keynes where the former New Towns Commission (HCA) has transferred its remaining stake in the town back to the local authority and that this is an approach that could be followed in other New Towns.

BB - gave an example of a NFP scheme in action at Chichester where income from the project is being reinvested into the scheme

PC - noted that this seemed to be a pre-requisite to achieving buy in from local community but that investment needed to be captured within communities as a whole [including the existing residents].

HC - noted the difficulties with prejudicing governance arrangements by losing popularity before a real scheme has even begun. Miles Gibson the Prize Director has confirmed the judges will be looking for a location but this is likely to compromise popularity and a fair hearing, as well as not allow sufficient time to consider constraints.

RS - questioned who was going to be responsible for providing these benefits, whether this would fall to a developer?

PC - suggested 2 'classes' of ownership, the first being those residents already in the vicinity of new development who might be gifted a £10k initial share in the development – no return would be calculable on this but it would infer voting rights, additional opportunities for investment at an undetermined rate of return would also be available. New residents could also opt into the share scheme [at the same £10k / share?].

JG - noted a similar mechanism promoted by Terry Fuller (invited to the think tank but who could not attend). He has suggested discounting development by the cost of the land (encouraging take up) but taking this discounted sum and issuing bonds (within the scope of the HCA) at a 6-7% rate of return to encourage investment to capture local investment in a fund that would be used to finance scheme infrastructure. Although this suggestion is targeted at the post-retirement generation looking to down-scale with a decent level of equity, it could be expanded to more diverse communities.

BB - noted that communities with a vested interest in the place tend to be well run, clean and better functioning.

RS - questioned how this would work in practice, how any assets would be realised?

TR - thought that an agency of sorts would need to manage such an enterprise and would have the patience to wait for a long term income. This would seem to be a model that could be applied to existing cities.

HC - cautioned the use of holding Letchworth up as a model as it had to be financially rescued after the private sector sought to wrestle control from the general community of the governing body by acquiring votes/shares and safeguards would be needed against this.

HC - noted the example of Peterborough which has been quite progressive with recent developments splitting private/public infrastructure and cited schemes where only major roads and secondary schools were in public ownership.

HC - suggested dusting down new town legislation as a delivery mechanism, and cited examples of development where even the likes of the CPRE were represented on boards. The general approach might consider a hands off approach for the public sector and instead seek an enlightened land owner. Issues will be how much land/assets can be given away and what rateable income should be applied. It will be necessary as part of any submission to state where the boundaries between public and private/ independence governance should be drawn.

PC - suggested a key focus for continued stewardships of estates would be the ongoing agricultural management of strategic open space.

JG - noted that utilities providers were in the market for the private provision of supplying sewage treatment, water supply gas and electricity to new development.

PC suggested land owners might be prepared to take on additional service provision.

HC - considers that a new model of co-operation between landowners and councils is required to overcome fear and distrust of local authority management

TR - suggested encouraging land owners as parties to the development of new settlements by identifying tax relief on specific community benefit activities

PC - repeated the point form the main discussion which concerned the issue of Tenure and leasehold reform as well as questioning the attraction of managing large scale residential

BB - suggested that RSLs/RPs could assume this role and there was currently no problem attracting funding/bonds, indeed these were commonly oversubscribed.

SA - considered that landowners are not reinvesting in major residential schemes at the moment.

SA - also noted the language of any submission would need to be punchy, full of sound bites and easily transferred to Policy if it was going to have any effect, and queried the role for an Advertising agency partner

PC -suggested that the submission or strategy look at the House of Lords for a champion/sponsor, someone who can run across election period into at least a 10 year span of involvement.

HC - noted that the next Government Minster to pick up the role of planning and housing delivery will have a huge legacy problem. Of particular concern are options for London which currently include high cost brown field or liberalisation of land availability [Green Belt review]. There are external pressures being brought to bear from both landowners and funds.

PC - noted that the process should be made apolitical, suggesting Labour continue to support Dev Co's, the Liberals Garden Cities and there remains a backlash from Tory back benchers.

SA - suggested considering opportunities focused on the link to HS2 – Northern extension, and commented on whether there should be a northern focus, capturing new votes from Labour supporters.

PC - considered the concept of City ownership might be an attraction to Labour

SA - noted the case of Peel Holdings investment at Ellesmere Port.

PC - reminded the participants that Ed Milliband had been a former chancellor of the Duchy of Lancaster and as such should understand landowner requirements

HC - noted the lessons that could be drawn from the Growth points, e.g. Tamworth

- Strong economic Aspirations
- University
- UTC
- National infrastructure

BB - explained that there is more support for affordable housing grants away for London when an economic case can be made.

PC - suggested a push on MOD land.

RS - spoke of the convoluted experience of Gov Disposals

TR - refocused on London as key global city to stay

- Competitive
- Affordability
- Quality of life
- 80,000 net loss PA

TR - stated that new towns and cities should be focused transport network as per US Transit Oriented Development (TOD)

TR - suggested a focus on knowledge economy workers but queried how to get them to

To move to towns and whether those towns want to grow. Is it possible to reverse urbanisation?

PC - noted that there was still a great deal of fluidity of population in the UK. Perhaps a Greenbelt Commission should be set up to review to role of the Green Belt and its ability to support growth, noting that LPA's don't understand rural issues.

BREAKOUT GROUP - POPULARITY

The team agreed that the discussion should focus on how to promote / sell New Garden Cities to a wide audience and on what would be popular in terms of the Vision. Interestingly, (and without prompting from the facilitator), much of the discussion focused on using existing towns. This is possibly indicative of the group's feeling that Green field development is difficult to make popular in the UK. In the latter part of the discussion the focus switched to Greenfield and the group talked about how to get buy-in from communities and what developments need to offer in order to make them popular in the long term. Main points as follows. (Note that most points were discussed by the whole group. Initials attributed to the group member who initially raised the point.):

SW - Proper consultation is essential to win people over. General agreement from the group that consultation must be inclusive and engaging in the long term. Start very early in the process. Don't tell people about what you've already designed; ask them what they want to see and find out what would benefit them. This was a topic that the group returned to throughout the discussion, emphasising the need for innovative methods to reach people and bring them on board. Also the need to engage over the long term; start early and continue through the process and beyond.

RG - Places with inherent character and social need seem a good fit with creating places that are popular both in the short and long term. General discussion around existing places and popularity. Residents of declining towns benefit from inward investment and improved life chances in the long term. In the short term, capitalising on existing infrastructure (eg train stations) and cultural assets (sports teams, music venues etc.)can help to attract incomers.

SW - Think about what people really want; jobs, good schools and good housing. If you want a place to be popular then it must provide these 3 basic things.

BB - Why don't people like the standard housebuilder product? Something like 70% (?) of people would prefer not to buy new build houses – why not?

NK - Need to broaden engagement.

The people who turn up to consultation events aren't always the people you need to speak to. Make an effort to ID the population. Really get under the skin of a place. Not just the standard 'hard to reach' groups but also the people in the middle with everyday issues but little time.

NK/BB -Need strong leadership with vision and long term political will.

The group talked about planning policy cycles and the problems of 5 year plans in delivering a large scale development like an NGC. Concluded that 15 years was the minimum timescale a plan should be in place, possibly outside of the 'normal' system. Also required a new/improved delivery body such as the New Towns Commission but with a very local focus.

BUILD BIGGER, BETTER HOUSES

RG - Britain has the meanest new house sizes in Europe. Many people prefer to buy old houses because the rooms are bigger, the gardens are bigger (so if you extend you don't build over the whole garden) and there is more storage. New Garden Cities need to deliver similar quality. Look to the Georgian/Victorian 'rated' system where streets have lots of houses of the same plan but with different external detailing and opportunities to personalise. Also shouldn't be afraid to create some streets with much bigger homes and some with smaller. Mix up the density and massing much more. Average UK density is 42dph but this reflects a huge variety.

A NEW TOWN NEEDS A 'GENERATOR'

RG - Towns are mixed places, they don't consist solely of housing; the housing is there in support of other uses. New towns therefore should not be housing led. They need something to drive growth such as a university (suggest a technical college teaching skills) and big employment. People want jobs so starting with those would be more popular. (Although need to avoid building employment campus that isn't urban).

CONNECTIVITY IS HUGELY IMPORTANT; TOWNS NEED TO BE WALKABLE

RR - The groups discussed connectivity generally and agreed that the concept needs to extend to walking, cycling and public transport but also digital connectivity (SmartCity) and social networks. [SW] Must embrace Smart City ideas. This is a huge opportunity to ensure everyone is digitally connected and places are hardwired for sustainability.

NK - "Positive bribery"; the notion that people will like something if there's something in it for them.

We shouldn't rule out bribery - there may be incentives that can be offered to people that don't only benefit the individual but also the developers and the town in general. NK gave an example: People don't like change. With the current system you are effectively consulting your opposition because the people you are consulting are those who will be most affected by the change and therefore will be those most likely to object. Perhaps you could offer those people a discount on buying a new home in the new neighbourhood? That way you would be offering them something but also helping to seed the new neighbourhood with established members of the community.

NGCs need to have great parks

BB - The group discussed the original garden cities and the idea of creating green, leafy places. Agreed that a large town park is essential. Something similar to central park in NYC (on an appropriate scale) where the quality of the landscape and the layout allow you to feel you are in a much bigger space that you really are. Also discussed the need for diversity of public space in terms of character and scale.

RR - Diversity should be extended to all aspects of the town and include diversity of opportunity.

The town should welcome diversity and offer a wide range of opportunities in terms of jobs, homes, education, leisure, lifestyle.

NK/SW - Money/funding; needs to be a mechanism to give money directly to the governing authority.

This is partly a point about bribery; the notion that planning authorities may be in favour of a new town if they know they will get good amounts of funding (from the land receipts or from build profit if not possible from the public purse. BB pointed out that this is a typical approach in the US and is quite successful in encouraging growth. The other aspect of this is ensuring that there is enough money in the pot to support the community in the long term.

BB -What if the NGC were designed as a resort? Could that help with quality and popularity?

The example of Bath was discussed where developers built beautiful, quality buildings around a spa because they were showing off to one another. Could that form of friendly competition coupled with enhanced value brought by the resort aspect work? The group agreed it could be a good model given the right site. Then went on to discuss how the 'right' site could be created…

BB/RG - Use the landscape to create value and also function

Investing in the landscape to create a beautiful setting can also improve sustainability. For example, it is possible to use water in ways that make it functional as well as beautiful, (balancing, SUDs, habitat, leisure, energy creation, add value etc).

RG - The form of the submission could take the form of a prospectus for the town. With illustrations of how it could be.

SW - Need to find innovative affordable housing models

The group agreed that affordable housing would be fundamental to the success of a NGC (but left the economics to the group looking at viability).

SW - Return to long term lease/management along the lines of traditional estates but move away from top down governance

The group agreed they liked the idea of the 'estate' or 'trust' model, (modern version, Argent at Kings Cross because it implies long term investment and a vested interest in creating something of quality). Bourneville and Port Sunlight both cited as good examples. It was agreed that these could to resonate better with the public than the normal developer approach of build and run.

NK -Speed up the process. Need to aim for a timescale of 5yrs from concept to build. Remove long term uncertainty, get things moving quickly. Current system takes too long and is hampered by political cycles.

RR/SW - We should think of it this way; we are not selling new towns we are selling opportunities. Conceive of the new town as a social experience.

This needs to offer a similar sort of step change to that offered by the original garden cities – but one which is appropriate to the 21st century. These towns should be opportunities for people to improve their quality of life. Opportunities for innovation in housing types and tenures, in ways of working, in infrastructure and management of place and in governance and localism. Involve people early, design for their long term well being. Think about how people will live and what they will need to live well.

THINK TANK II

WOLFSON THINK TANK II – 3RD JULY 2014

James Gross (JG) introduced the debate, thanking the previous Think-tank participants for their inputs and welcoming new participants to the event.

He explained that the event would focus of a limited number of aspects of the Stage II submission considering:

1. The National Campaign
2. The National Spatial Plan and Building Political Consensus
3. Revised Sifting of Potential Locations
4. Financial Models and Viability
5. Templates for Garden City Typologies

Miles Gibson (MG) Director of the Wolfson Prize, then presented an overview of the Prize to date, providing an overview on how contestants were shortlisted, some of the content of other entries, including the light bulbs and highly commended entries, as well as explaining what the judges are looking for, for the final stage.

MG reminded the participants that this is an economics prize and the focus for this next stage needs to be on both the economic model and the viability model in support of showing how a new Garden City can be delivered. He also reminded the room that the prize criteria include that of popularity and that there is an expectation that new garden cities are 'locally driven'.

JENNI MONTGOMERY (JM) – THE NATIONAL CAMPAIGN

JM provided a short presentation focusing on the notion (already underway) to set up a pro-development Think-tank, but using a wider pool of representatives than the property industry. The media and creative types are the initial contacts but others may also be helpful in kicking off a pro-development (not just limited to GC's) campaign.

JM touched on the need to understand the psychology of those against development, in particular a lack of understanding of benefits and the emphasis placed on the perception of financial threat (reduced house prices) around development, as well as the need to identify mechanisms and angles to increase social pressure on NIMBY's and raise awareness of housing crisis issues.

JM also focused on the target audience for the campaign, noting both the generations not yet considering housing, but also those trapped in the middle in the 'upgrade trap'.

In response the floor came back with the following:

Henry Cleary (HC)	Although one of the other shortlisted finalists, Shelter's role in terms of promoting awareness around housing should be used to national advantage.
	Other than in their promoted site on the Hoo peninsula, they have no local mandate but do have a role in supporting growth.
Iain Gilbey (IG)	It is important not to overlook local nuance (regional) in terms of appetite and enthusiasm for GC's
	Is there a division in appetite between the SE and NE?
Miles Gibson (MG)	WEP Garden City Polling suggests that regional patterns not strikingly different and that there is support for GC's across the country as a whole, somewhat stronger among ageing populations
	It is important to consider the psychology of Anti-development lobby
Paul Clarke (SPC)	The psychology may rest with the lack of trust with local authorities (to deliver)
	Lack of trust with housebuilders (to provide quality homes)
	Education of housebuilders is necessary step
	We should look to establish evidence (supported by figures) of what people want (in terms of housing aesthetic and quality)

John Weir (JW)	People see localism as a sham
	Neighbourhood plans are seen as being steam-rollered through
	Slow speed of neighbourhood plans to actually delivery anything – people are just along for the ride and not interested in seeing anything happen or the plans stop
Simon Ward (SW)	Any approach should begin with asking the people – citing a survey of 1,000 residents in the southeast who came out as a significant minority in favour of new settlements over dispersed growth
	Answers from the bottom up
Andy Cameron (AC)	Who will the public trust?
Mark Sitch (MXS)	We should give renewed focus to the role of local estates as trusted local parties and landowners
Robin Shepherd (RS)	Efforts should be placed on overpowering the Nimbys
SPC	One tool might be the involvement of using Not-for-Profit (NfP) organisations (e.g. Shelter)
	Nimbyism can be countered if development is infrastructure Led
Richard Guise (RG)	A key question is how to engage younger people?
Kirsten Henson (KH)	On this topic it's worth referencing a recent event in Dagenham - Inspire
	This features active engagement of young people with facilitation
	It was successful when young people were forced into groups and asked to undertake a task with clear objectives of achieving growth and regeneration
RG	These are issues and objectives for the National Curriculum
MXS	Engagement with the RTPI young planners and similar groups within other institutes could be useful
SW	Noted an industry survey of 1,000 people which showed support for private rented opportunities, Student and graduate housing and 'Sweat-equity' - self build
JM	Voiced caution around people's mistrust of statistics
RS	Repeated SPC's comment around LPA's and of lack of trust
	Queried whether there might be a role for the LGA to help run the national campaign?
MG	Considered that the LGA would need to canvas members and that they were unlikely to come out in support
	The key task needs to be in making the electorate say 'yes'
	This requires forensic examination of the NIMBY
	Why do they object to change?
	What are their attitudes, values? What the role and view of the landowner?
	We should reflect on and potentially change the principles of Garden Cities
Nick Keable (NK)	(on NIMBYs) - any change is assumed to be bad
	Look for the people who will want new development
HC	Referred to his 'Lightbulb' submission calling local referenda into support for GC's
	There is a need for change meaning home seekers are brought into the voting process
JW	All this is based upon the continued assumption of home ownership

ROBIN SHEPHERD – THE NATIONAL SPATIAL PLAN (NSP)

RS introduced the notion of the NSP as a cycle, beginning and ending with a national vision for Britain in/to 2050

This is a vision that needs to set and map infrastructure and economic growth including but not limited to housing in equal measure

However unlike other members of the UK, is planning for all the resi and associated infrastructure too difficult in England?

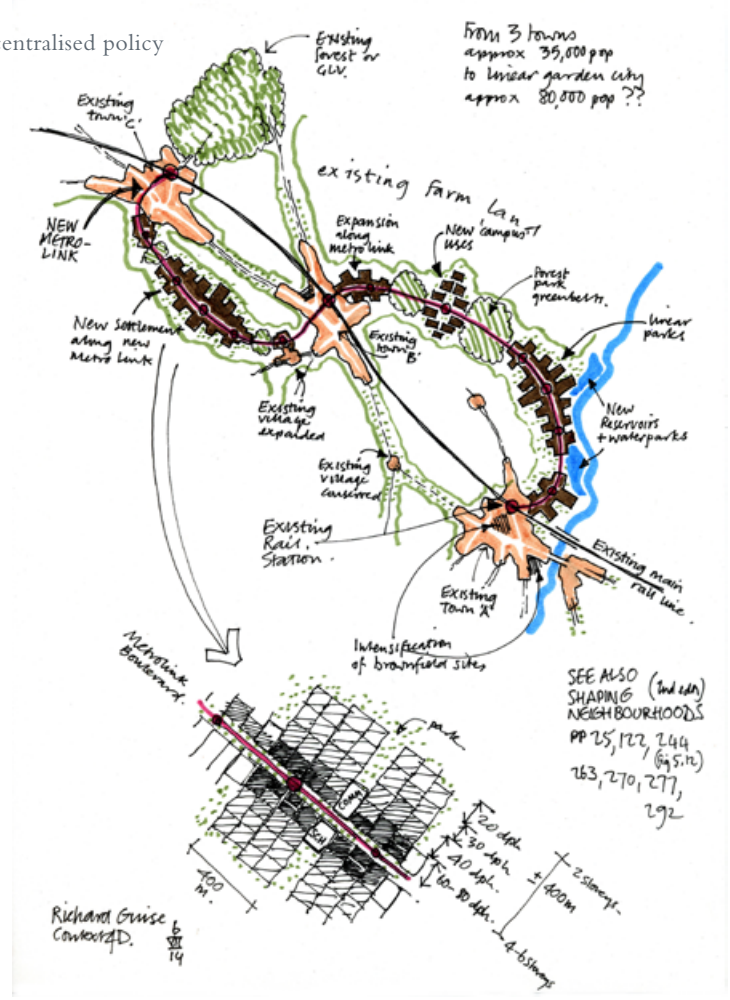
Do we need some kind of figurehead such as a Cities Minister?

RS reminded the floor of the previous proposals for this vehicle to site within the House of Lords but noted that come comments had been received suggesting this would not be viewed as having sufficient democratic mandate.

In this context is a National Plan appropriate – could something that is simultaneously bottom up, with some guidance from government work?

SPC	Reminded the floor of the previous session where we discussed the need to get away from the 5 year political cycle to a 10/15yr cycle.
Robbie Owen (RO)	Referenced his work advising Sir John Armitt, ex head of the ODA as part of a review into NSIPs and infrastructure planning
	He suggested whether a National Garden City Assessment could feature as part of the NSIP process and interface with the National Infrastructure Commission, planning growth for the next 5 years.
	There may be some opportunity for crossover between the Lyons Review, and Armitt Review. However RO agreed that there is suspicion around National Plans
NK	Suggested looking at what does a settlement need?
	What do you need to deliver a Garden City?
NK	reminded the participants of the housing crisis under Prime Minister Harold Macmillan which saw direct action from Government, but that in contrast, today's crisis seems not to be taken very seriously.
	There is a very serious housing crisis but this is lacking in political coverage or prioritisation
RS	Repeated the need for someone to take ownership of this perhaps a Garden City Minister?
IG	Noted concern that the process must not be top-down in isolation
	There might be a role for specific infrastructure plans – but separate to a National Plan
	There is concern that we won't win the prize if we continue to promote a National Plan
SPC	The need for a Plan needs to arise from the electorate
SW	A Pro-development campaign is likely to work best in the local context
	Need a strong local dimension
	With concrete issues and locations to respond to
HC	We should consider adopting the middle position – maps and plans are helpful and should not be discounted as part of the GC process
	There may be a role to work directly with agencies such as the DOT and EA, all of whom have their own national investment plans

RO	In the context of the National Infrastructure Strategy [not sure if this means as part of Sir John Armitt's recommendations? JG] there are 7 or 8 sector plans, one of which could be housing but fits in with the NIS.
NK	We need to respond to popularism, looking at people's top 5 issues nationally and getting housing as part of this
KH	How about voting by App or iPhone votes which attract the youth vote by more accessible means?
MG	There was a good entry to the Prize called "Britain's got capital" which advocated a National competition for a new capital for the UK.
	How about turning development on its head and create a competition for something people want?
	Who would like a slice of economic growth?
	PPR - £16B Relief from owning your own homes
	National benefits to the NIMBY
MXS	How about an intra-LPA competition?
KA	This is how the Eco-cities programme worked in France, where growth was the major factor, and cities took pride in being shortlisted.
JM	We still need to focus on getting cities in the right locations
MG	Competition could focus on de-risking investment and be coupled to 'planning-light' zones
RO	Housing under NSIP to de-risk highly centralised policy
	Massively empower local government



RICHARD GUISE SKETCHES FROM THINK TANK II

KEVIN PARKER (KP) - REVISED SIFTING OF POTENTIAL LOCATIONS

Kevin focused his presentation on the spatial patterns arising out of the updated and expanded sifting process we have been running into identifying the best locations for new GC's.

Looking at Population growth in both percentage and absolute terms there is a central corridor running the length of England from the Pennines southwards where growth is focussed.

This can be cross referenced against areas of owner occupation in industrial areas, where elderly people are in receipt of state support and areas of benefit need.

The sifting now includes some 300 layers of Mosaic data on demographics and social profiles and considers change in ration of these which can be mapped against transport hubs, depravation and take into account major constraints as before.

KH	The notion of transport and infrastructure as the primary drivers is key. The Olympic Park is a good example of growth where transport is there or coming. In the context of London, and admittedly with significant funding, id had the effect of repairing broken city fabric. But in next door Newham, the London Borough with the youngest population people are still leaving now.
	Transport, addressing and deprivation and the big cleanup are key drivers.
	The Olympics worked due to several factors notably the existence of a Planning Delivery Team (PDT) where power taken away from the LPA
	LLDC – offering land but not housing thus keeping the value of the land and offering investors a 100 year lease
	Balfour Beatty schools and housing finance model
	Smart City
IG	Old oak Common Development Corporation. Considered locally by some in LBHF to be a bad thing
	Getting GC's to be seen as a "good thing" which will be the role of GC mayor's plus need to promote their own roles
	Unrest and conflict will need addressing
KH	Start by telling [creating with locals JG] the story to get local buy-in high level decision
	HMA level decision making with local engagement
SPC	Strong leadership of Olympic Park and project reinforces the need for champions and leadership at all levels – national and local
KH	Olympics worked as there was a deadline for innovation and delivery
	We can do the same again
	Parallel planning system could be a solution to the housing crisis

RG	Mapping needs to take into account [it doesn't at present JG] public transport commitments or those in the pipeline
	Repeated KH's comment on the need for a secondary [parallel JG] planning system
	Transport examples of:
	Varsity Line
	Cross Rail
	HS2 and 3
	Beyond Welwyn Garden City
	Local support can be unlocked by engaging young people but cities still need to be placed where the economics are going to take off
MG	A reminder that the Olympic Park was Infrastructure led
	Echoes an approach and submission from Professor Peter Hall
	Echoes of Frank Pick and Metropolitan line extension
	Land value uplift and capital for infrastructure – a smarter way is needed
RO	Are we still considering TIF - Northern Line Extension to Battersea?
AC	Ashford was also infrastructure led – how about considering new stations on existing lines?
NK	Does the mapping [could it/ JG] take account of transport capacity?
SW	Don't forget to consider broadband as infrastructure
KH	Also flexi-working – as the economic pulse of a Garden City today
MG	A reminder that at Letchworth garden City only 8% of residents commute into London [and it's only a 33min commute on the fast train JG]

MICHELE HANNAH (MH) - THE GARDEN FINANCIAL MODEL

MH presented the structure and assumptions [to date JG] for the GC financial model. The model is based on a gradual increase in the value of land from existing use value (EUV) to development land, and then beyond to allow for further uplift.

Revenues will exceed cost if considered across a longer time frame – how do we get investors to buy into this? It is not a model well suited to house builders and current risks are a poor fit with institutional investor tolerance levels.

Removing the upfront costs associated with peak debt will be 1 issue.

Potential solutions include providing a share for local stakeholders, investigating land owner tax breaks, considering borrowing against future usage charges for energy infrastructure and the role of PRS.

The model needs to separate funding sources to break down peak debt and construct the mechanics of the community share model and explore funding that could be raised via this route.

SW	We should be assuming 30% affordable housing - big mix and intermediate homes too
JW	Residual appraisals will differ in Durham/Kent. The Model should allow for [demonstrate JG] regional variation
Chris Wheaton (CW)	Peak debt is huge
	House-builder not set up to fund
MH	Planning powers [flexible planning tools JG] should be used to de-risk
	Physical and community infrastructure can be delivered through upfront capital investment of infrastructure providers
	We need to focus landowner and investor incentivisation around improved and identified returns
	For a 20,000 unit scheme [50,000 persons JG] – peak debt sits at around £100m – £200 million
	But who's going to invest?
	De-risking key
	5-25yr return
	We might consider extend pool of investors, considering e.g. Sovereign Wealth
	We should run a risk profile and match this to investors
SPC	Incentivisation could be achieved via the removal of the 10 year trust charge
	Funding peak debt [what are the options? JG]
	PRS – upfront cash injection
	000's of units are needed to attract interest
BB	PRS does it work outside the southeast?
	How about shared ownership – it's a proven model
KH	Crowd funding – have we considered this [There was a 'lightbulb' prize winner that investigated this JG]
	Community buy-in and participation could be increased through this route

MH	Perhaps we should be focusing our efforts on the 'Inbetweeners' i.e. those betwixt renting and owning
SW	It will be necessary to test assumptions around PRS
IG	Is this not just a relatively standard model, geared towards working at higher-end values only?
	A major thrust and focus to this working, needs to be on the de-risking of planning
	Make it clear for the submission
	Timing and peak debt both need further explanation
	Assumes a quicker planning process (2-3 years!) [I suggest this is unrealistically short JG]
CW	Investors need certainty
IG	Certainty and reduced risk
MH	The model as presented is bespoke, flexible and capable of adapting to changes such as different densities and scales
AC	Do we have a view on what is the right size for a Garden City?
Alex Robinson (AR)	When it comes to delivery we will still be reliant on house builders for delivery
	This helps reduce exposure and allows the reclaiming of debt finance back from housebuilders
SPC	Does the model include commerce? MH - Yes
KH	How about the opportunity for local investment to provide pension and "nest" funds for the community [already considered but needs greater explanation JG]
Ben Bolgar (BB)	Also consider elderly care and paying for elderly care
KH	We should be investigating how to create a 'place for life'
RS	This would allow for a greater number of self and community investors fostering local ownership
MG	Smarter ways of investing the city "you are the owner of the city"
IG	Share in the city
	Discount for shares in life cycle
	Choice for investment e.g. school
RO	We also need to consider models of land tenure
	Leasehold - how to authorise GC's, not common hold
	No existing tools for land ownership control
SPC	Short term lease may offer some scope?

KATHRYN ANDERSON (KA) GARDEN CITY TYPOLOGIES

KA presented 5 potential GC typologies

1. Stand alone settlement

2. Large urban extension

3. Smaller [sic] peripheral extensions

4. Satellite villages working with an existing place

5. Urban infill regeneration

2 and 3 are similar variations of an extension theme.

Examples of number 1 are places such as Welwyn GC and Letchworth and latterly places such as Bracknell.

Edinburgh Newtown is a good example of number 2

Number 3 could be York, 4 Birmingham and 5 Manchester, although interestingly Bracknell could be reinvented as a number 5 too.

The issue is how many to run with and are these sufficient, scaleable and viable?

RG	There might be some value in developing a GC App to allow development of these typologies – e.g. Sim City APP, Minecraft etc [allowing for the opportunity to follow the virtual with the physical JG]
Saffron Woodcraft (SWo)	We need to focus on the issue of quality
MG	Is it worth thinking about quality of place as the USP?
	Reference to the Andres Duany/Turnberry entry which demonstrated that LGC and WGC were deviations from an ideal which was not fulfillable but this didn't matter, rather this was the 'application of an ideal'.
	Could this be made attractive in today's age of Crowd Funding, applying discounts and community shares?
	It will all assist in making the NIMBYs feel uncomfortable, but we need to move away for the perception of GCs as bourgeois and not something young and funky
BB	Argument about 2 or 3, these are variations of the same
RG	The polycentric string of pearls seems to have merit, alongside the failing place of 5

THINK TANK III

PRO-DEVELOPMENT CAMPAIGN – ROUNDTABLE 24TH JULY 2014

ATTENDEES;

Jenni Montgomery	Business Development Director, Barton Willmore
James Gross	Design Director, Barton Willmore
Kelly Caulfield	Marketing Manager, Barton Willmore
Simon Ward	Director Propenomics
Kate Hart	Director, Keeble Brown
Denise Chevin	Freelance Property Journalist
Margaret Wagner	Director, RAPP
Rob Hughes	Head of Culture, Creature
Carol Rothwell	Practising Psychologist
Jonathan Henley	Property Marketing Consultant

ADDITIONAL INPUT FROM;

Colin Wiles	Freelance Reporter
Ben Yallop	Brand & Deliver

Jenni Montgomery (JM) introduced the discussion by providing all with an overview of the housing crisis, and the Wolfson prize challenge we are responding to. She outlined the brief for the pro-development campaign as it currently stands;

'Develop a pro-development campaign that will respond to both blocks and motivations of England's population in order to tackle anti-development sentiment that remains countywide. The campaign will not only seek to build understanding of the issues but also motivate individuals to speak out and begin to contribute positively to shaping their communities.'

To set the scene JM also outlined some key current statistics regarding NIMBYism across the country, some common current misconceptions about development and some recent survey activity by Populus around understanding of the housing crisis and support for Garden Cities as a solution.

JM did however make it clear that at this point we are still considering the campaign as being a pro-development campaign that merely supports Garden Cities as one potential solution.

The format of discussion focused upon breaking down our target audience into three age groups in order to understand whether the block and motivations of these age groups differed and would therefore affect the campaign approach.

YOUNG PEOPLE (16-25)

JM

People in this age group span everything from students, apprentices and graduates to job seekers, the homeless and to smaller degree first time buyers. What Blocks and Motivations do this group face and react to?

Denise Chevin (DC) and others agreed that the primary motivation of a person in this age group is employment – to find a job, develop a career path. Find something which excites them.

Margaret Wagner (MW) discussed the question of whether young people are conditioned to buy homes. As an American she has been surprised by how hung up on homeownership we are as a nation and questioned whether this actually was something young people want.

Carol Rothwell (CR) pointed out the importance of friends. The need for housing isn't a personal concern of young people – they are transient and fleet of foot, so why would they be concerned about communities and housing delivery. It doesn't – as they perceive it – affect them.

Kate Hart (KH) pointed out how renting is not rewarding for people in Britain, it is short term, and often seen as merely paying off someone else's mortagage. There is little scope of putting your stamp on a property or really developing a 'home' via renting, hence there is this pressure to get on to the property ladder.

Rob Hughes (RH) questioned whether people in this age bracket know what Garden Cities are, or identify with the concept. Many would not see this name as an attractive offer.

MW proposed the idea that you could build a discontent – it will act like a catalyst for young people through which they will see that they can make a difference. The student loans protesting and riots are perhaps an example of this. A lot of this was also driven and shared through social media, and understanding builds quickly through shared information.

CR - Young people want to share. What accommodation do they move to post student accommodation when they want to continue sharing and build the communities within the buildings potentially – Graduate housing might be an option.

RH - They are eagerly developing an environmental and social conscience at this stage in their life. They are interested in forming opinions on things that affect them or that are 'wrong'. Do not want to be feeding a corporate world, making developers richer and do not want badly designed homes – more acutely aware of impressions and style. What is cool and what is not. They do things for the social good – and personal opportunity. Development presented as making the environment better is welcomed.

CR – Agreed with Rob and added that young people are quick to point out the mistakes their parents have made. Recommended reading on this subject was 'Rich Dad, Poor Dad'.

KH questioned the notion of a comprehensive pro-development campaign. Surely we would have to admit that there has been bad development and there could still be. How can we stop all bad development?

RH- perhaps this is about admitting there has been bad development – in the aim of transparency – but also acknowledging that unless we do act there could still be more. This needs to be the call to action – r at least this call to action needs to be very clear as part of the campaign. In Hugh Fernley-Whittingstall's Fish Fight campaign the call to action was 'to eat Pollock' instead of other fish. There was a change of habit required as well as a need to raise awareness of the problem.

Simon Ward (SW) – highlighted some statistics recently undertaken which demonstrate the young persons appetite for entrepreneurial opportunities and how they see they emerging from new communities. Clarify!

RH – We need to be encouraging these people that Garden Cities or new communities are their opportunity to create their own future – feed their aspirations and ambitions but do so transparently. We want to build but you can tell us what to build. We can crowd source ideas and funding, we can search for the contributors through social media – what can you add and why?? Band Camp and The Good Gym are great examples of young people demonstrating their social conscience and being rewarded with something they want. Band Camp organised by orange, encouraged voluntary service with rewards of concert tickets. The Good Gym – Post your workout plans and they will match it with a good deed. Vanity and

MW – This could be a great way to build enthusiasm and momentum, but the rules of the game need to be set up, a basic construct which still allows everyone to be different.

JG – Perhaps we could clarify some definite myths in the campaign - The % of the country that is developed, amount of development we could accommodate on brownfield, the details around biodiversity of greenbelt land.

KH – If we tell a story about development as an enabler and really clarify the benefits individuals can gain from being part of a community, building their own environment, directing where investment goes, etc. Really demonstrate development as an enabler, an improver. Challenge the perception of development with reality.

MW – Cannes Lions Film Award Winners – worth taking a look at how a 'story' can be told.

MW – What about tapping into their world and their activities host a Hack-a-thon – community programme building and problem solving feed this into the creation of a garden city? Sim City, Minecraft and Lego!

RH – Make it entertainment! Young people don't necessary believe in voting because they can go direct to politicians – they tweet them and feel like they can access them if they wanted too?

SQUEEZED MIDDLE

CR – The main question for people in this age group – one I am in too – is when do I enjoy my life?

Jonathan Henley (JH) – In the end resisting development is a victimless crime – tell the story and relay the consequences of your refusal.

KH and RH – Important that we know who owns the campaign. It can't be the developer or the Government. Instead a Co-Operative would have a stronger message and force people to get involved if they believe in the campaign but certainly not own it.

CR – JM mentioned the crisis of the late 1940's in her opener, and it's a good point as in 1948 there was hope and optimism, confidence and growth. There was a perceived need population wide and a need for a new cause to support. This is far less apparent today. There is less perception of the crisis or motivation to act. And yet there is still a lot of austerity. What would encourage us to treat this as a crisis – slums?

CR – This age group feel strongly about things being spoilt. The 150's and 60's building drive went wrong and they are acutely aware of this. There is a lot of negativity therefore associated with development amongst this age group. It has spoilt things. On the flip side self sufficiency is something they did back in the 60's its not a reality. It is appealing to the young but is it really realisti for this age group?

CR – We must also remember that this is about building a home. Building houses or building homes? People want homes. This could be your home. This might give them more to fight for.

MW highlighted the established 'Co-Op city' close to New York – A self sustaining vibrant community set up in the 60's on the back of this movement but which is now struggling to maintain a flow of young people. It's not the dream of how people want to live.

RH – But there is something still very appealing about 'Nirvanaville' – being close to nature, living in a community, sharing, as long as it doesn't mean dull and mediocre.

SW – Is this about a Did you realise…? Campaign. We have various 'Did you realise phrases?

The Nimby is not the enemy - how amazing this could be, utopian, realistic, won't cause harm

MW – Why can we have proactive planning. Planning as a positive process. Today all it is well known for is negative - slowing and blocking development.

CR – We need to make whatever we are asking this age group to do easily achievable. They are time poo unless, we are talking retirees, so this can not be a not a bureaucratic beast. But they do want their voices heard and being heard reduces my frustrations!

RH – What about utilising a group such as Theatre Delicatessen/Secret Productions. They are drama groups and creatives who are paid to squat, create live events, experiences, in places. They create intrigue and build respect and profile

KH – it's also another draw – if you get in early and you can influence this. Or if you are not a pioneer you might at least get excited about the opportunities they present.

OLDER PEOPLE

KC - Have time on their hands, love improving their community. (Friends groups/local parish councils)

CR – Is this changing? Older people are starting to want to live closer to towns, people, amenities etc. Loneliness is a big obstacle!

KC - older people bring depth and sincerity to communities

JG - Ill health/accessibility/all inclusiveness

APPENDIX 3

METHODOLOGY FOR IDENTIFYING "AREAS OF OPPORTUNITY"

There are a range of macro socio-economic considerations relevant to the location decision. These, together with strategic constraints such as areas of extreme topography and areas of high quality landscape enable an initial sifting exercise to identify broad areas of England most suitable for a new Garden City. Within these "Areas of Opportunity", at the local level, there will be a series of constraints and opportunities that will inform the actual location (the approach to this is set out in Step 5).

In order to assess housing need on an unconstrained basis, our approach has deliberately excluded consideration of local planning considerations and even Local Authority boundaries and focused on 'Strategic Housing Market Areas', reflecting the broader areas within which need could be met. These areas are defined broadly by patterns of employment and commuting and comprise areas within which people are likely to search for a new home whilst in the same job.

The following criteria have been applied to identify "areas of opportunity" at a national and regional scale.

- Economic and social (areas with the strongest potential for economic growth)
- Housing supply and demand (based on Strategic Housing Market Areas)
- Physical and geographical (including national and regional constraints such as National Parks and AONBs)
- Strategic connectivity (rail, road, air)
- Availability of resources (such as water, energy etc.)
- Places where strategic infrastructure already exists or is planned
- Proximate to economic drivers (including higher order settlements)
- Opportunities to link to Higher Education
- Local skills profile

For each of these criteria (with the exception of 'absolute constraints' such as AONBs and National Parks) a range has been identified and presented in the form of a 'heat map' using GIS data. For example, strategic connectivity has been mapped to show a gradation between those areas of optimum connectivity and those with poor strategic connectivity. Where appropriate, the data is also presented by SHMA in the form of a 'Radar Diagram' for each of the criteria.

This mapping then enables amalgamation of the data to identify the "Opportunity Areas", which is again presented in the form of a "Heat Map" accompanied by a summary radar diagram and a table ranking the SHMAs with the most for potential for new settlements of various scales.

The Sifting approach has followed a structured process:

1. Identify Strategic Housing Market Areas
2. Rank SHMAs according to the potential to attract commerce and industry
3. Rank SHMAs according to housing supply / demand pressures
4. Exclude AONBs and National Parks
5. Map and rank areas of the UK by proximity to existing major strategic connectivity
6. Map existing cities and major towns and their 'zone of influence'
7. Map Universities and existing economic 'hot spots'
8. Map Local Skills profile of SHMA to identify areas with most potential
9. Combine all of the above to identify "Areas of Opportunity for new Garden Cities"
10. Rank SHMAs/LPAs according to their potential to host a new garden city

LOCATIONAL CRITERIA FOR THE LOCATION OF NEW SETTLEMENTS – LITERATURE REVIEW

In order to identify a set of robust criteria on which to base the location decisions at a national level, it is useful to review work that has been undertaken by others on this topic. The following key themes have emerged from an initial literature review.

WELL-CONNECTED

A number of authors confirm that in order to be attractive to industry and business, and therefore economically sustainable, a new settlement should be well connected. In "The Spatial Economy" Fujita et al (1999) (1) describe through an economic model how a transportation hub is a point of especially good market access and therefore likely to be a place at which

> "A NEW CITY EMERGES WHEN THE POPULATION IS LARGE ENOUGH".

The main function of the hub is described as

> "CATALYTIC, PROVIDING SOME CONTINUING ADVANTAGE OVER OTHER [SETTLEMENTS] DURING THAT CRITICAL PERIOD WHEN THE ECONOMY'S GROWTH HAS MADE THE EMERGENCE OF A NEW CITY NECESSARY".

The DCLG Prospectus for 'Locally-led Garden Cities' (April 2014) (2) also refers to the need for good strategic connectivity,

> "IT IS ESSENTIAL THAT THERE IS GOOD ACCESS TO EITHER EXISTING OR PLANNED INFRASTRUCTURE TO PROVIDE CONNECTIVITY TO THE REST OF THE COUNTRY. WHILST ROAD AND RAIL CONNECTIVITY WILL BE KEY, THE INTER-CITY BUS NETWORK COULD ALSO BE CONSIDERED AS AN ALTERNATIVE".

In Sociable Cities, the legacy of Ebenezer Howard, Hall and Ward (1998) (3) identify 12 key strategic policy elements for new sustainable 'Social Cities'. One of these is that development should be clustered around transport nodes and another refers to top-quality transport linkages and that the high speed rail network is important in this respect.

In Achieving Sustainable Urban Form (2000) (4) , Titherirde et all state that various factors influence attractiveness to employers including the proximity to other higher order cities and the proximity to motorway and train routes.

A key factor to the potential success or failure of a new garden city is therefore the degree to which it is connected strategically to other cities by road and rail. Those with the best connectivity are likely to offer the most potential.

WITHIN THE 'ZONE OF INFLUENCE' OF A HIGHER ORDER CITY

A number of commentators refer to the role that the existing hierarchy of settlements plays in the potential success of a new settlement. Fujita et al (2001), use economic models to explore and predict the emergence of new cities. They explain that cities tend to naturally form a hierarchy of city types with higher order cities containing a wider range of industries and that when a new "frontier city" emerges it functions as part of that hierarchy but they explain that for the frontier city to be successful it needs to be far enough away from the neighbouring city. Hall and Ward (1998) make a similar point, suggesting that "developments should be sited sufficiently far from existing large scale settlements to guarantee, as far as possible, self-containment". They suggest that "as a rule of thumb, the minimum distance for intensive large-scale development should be roughly the location of the Mark Three new towns, that is 50-90 miles from London".

A strategically well-connected location, close to but separate from, an existing city seem to be the main physical drivers to decisions relating to new settlement location.

STRONG GROWTH POTENTIAL

There may, of course, be locations that are well-connected and within the zone of influence of a higher order settlement but that, because of regional economic or demographic factors offer limited potential for growth. The DCLG Prospectus for 'Locally-led Garden Cities' (April 2014) lists economic considerations to be applied to potential sites, including: "evidence that scheme responds to issues of local affordability and that there is strong growth potential over the medium to long term as well as evidence that the location is fundamentally viable over time and does not give rise to unusually high land or infrastructure costs

As well as factors such as housing supply pressure and strong economic growth, there are other potential influences on the success of a new settlement. In Triumph of the City (2012) (5) , Edward Glaeser states that all successful cities have something in common "To thrive, cities must attract smart people and enable them to work collaboratively". He explains that different cities have found different ways to attract talent: Hong Kong and Singapore as bastions of economic freedom; Boston, Minneapolis and Atlanta through their universities; Dubai and Paris for the quality of life that attracts skilled people and; Chicago by lowering barriers to construction so it becomes a cheaper place to live. One of the ideas from our think tank event was that University Towns and Cities should be considered as potential locations for the New Garden City for the reasons above.

Using GIS data based on Strategic Housing Market Areas is possible to map areas with the strongest economic growth potential for industry, commerce as well as housing in order to rank areas with the strongest opportunity to make a significant contribution to economic growth and housing supply. We have also mapped university locations as part of the 'sifting exercise'.

THE CREATION OF BALANCED COMMUNITIES

From our literature review it is evident that the provision of a large amount of new housing in the form of a new town requires a corresponding delivery of a range of employment, facilities and services of an appropriate scale to ensure that the town is economically viable and sustainable for the long term. Titheridge et al, explain how all of the various models of sustainable urban form (including the creation of new settlements) are based on the proposition of creating 'balanced communities with a good range of facilities, services and job opportunities so that enforced dependence on the car and long distance travel are minimised. The Town and Country Planning Association (TCPA) refer to the need to provide a variety of employment opportunities within easy commuting distance of homes as well as integrated and accessible low-carbon transport systems including settlements linked by rapid transport providing a full range of employment opportunities.

According to Fujita et al, concentrations (such as cities) form and survive because of 'agglomeration economies', in which spatial concentration itself creates the favourable economic environment that supports further or continued concentration. Producers want to be near customers but if there are already similar producers there this also offers a large market because of the demand that producers and their workers generate.

Self-sufficiency in terms of providing a balance between employment and housing should be a key objective for the new garden cities at all scales and making the location as attractive as possible to a high number of major employers is key to this.

Using GIS mapping we have identified areas with the strongest potential for commercial economic growth.

SUMMARY

The ability to attract smart people as well as industry and business is fundamental to the delivery of a balanced and sustainable new garden city. Locational factors likely to influence this are strategic connectivity (by road, rail and air), proximity to higher order settlements (existing cities and major towns), proximity to existing centres of industry, commerce and/or higher education.

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EXPLANATION OF AFFORDABILITY METHODOLOGY AND RESULTS

The establishment of a new settlement can help to improve affordability and widen access to the private housing market by providing a significant boost to the local housing supply. Over the decade between 1997 and 2007 (pre-recession) house prices across the UK soared; the median house price for England in 2007 was three times the median price in 1997, whilst earnings increased by just 45% over the same period. Although affordability improved slightly during the recession due to falling house prices, acute affordability problems can still be observed across much of the UK. See Plan 11 – Lower Quartile House Price House price map

There is a very clear north / south divide in median house prices, with London, the South East, along with parts of the South West, and the southern and coastal parts of East of England displaying the highest median house prices. In addition parts of Worcestershire, Warwickshire, along with Leeds and Manchester show reasonably high house prices.

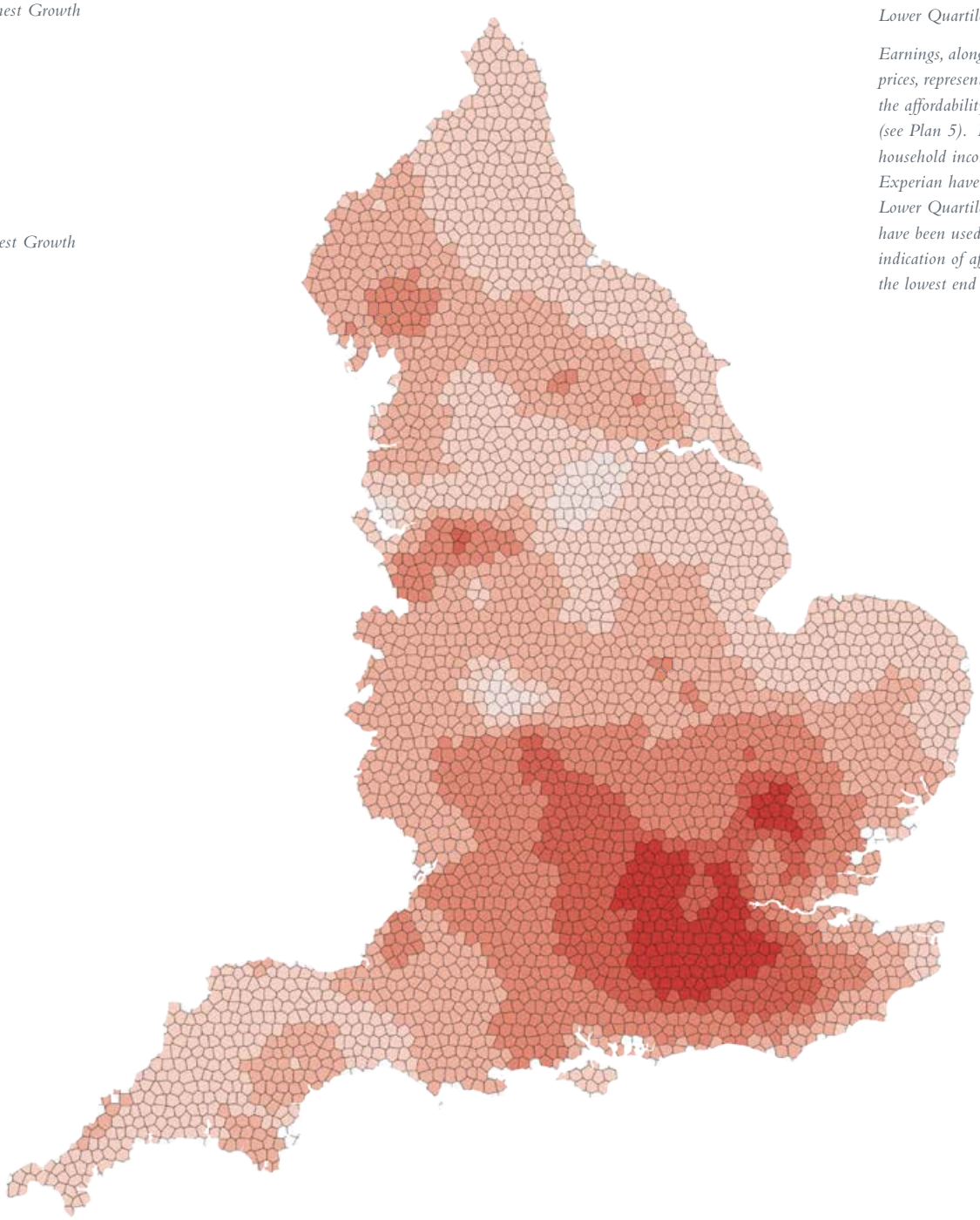
As with median house prices, earnings are highest in the South albeit there is a less noticeable divide with the North. See Plan 12 – Household Income Map

The relative affordability of housing is measured by comparing local house prices against local earnings, typically based on lower quartile values. London, the South East and South West display the highest affordability issues, along with coastal areas of East England, in addition to more rural pockets of the Midlands and parts of the North East and North West.

The affordability measure assessed within this exercise establishes the relative affordability of areas based on current incomes and house prices. However, it should be borne in mind that those areas which are set to experience high levels of population and employment growth are likely to see affordability worsen in the coming years. See Plan 13 – Lower Quartile Affordability Map

Highest Growth

Lowest Growth



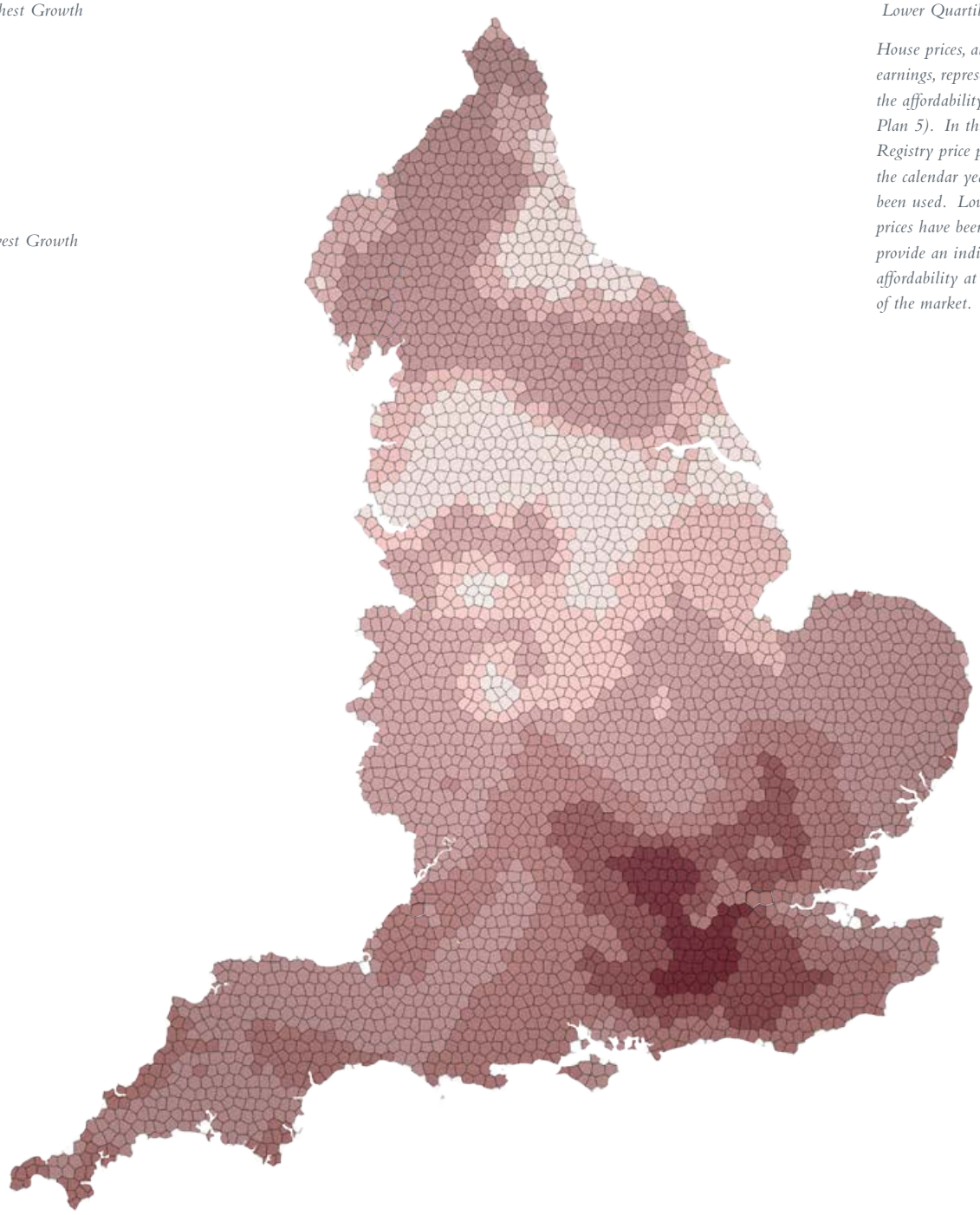
Lower Quartile Earnings

Earnings, along with house prices, represent one half of the affordability equation (see Plan 5). In this case, household income data from Experian have been used. Lower Quartile earnings have been used to provide an indication of affordability at the lowest end of the market.

HOUSEHOLD INCOME MAP

Highest Growth

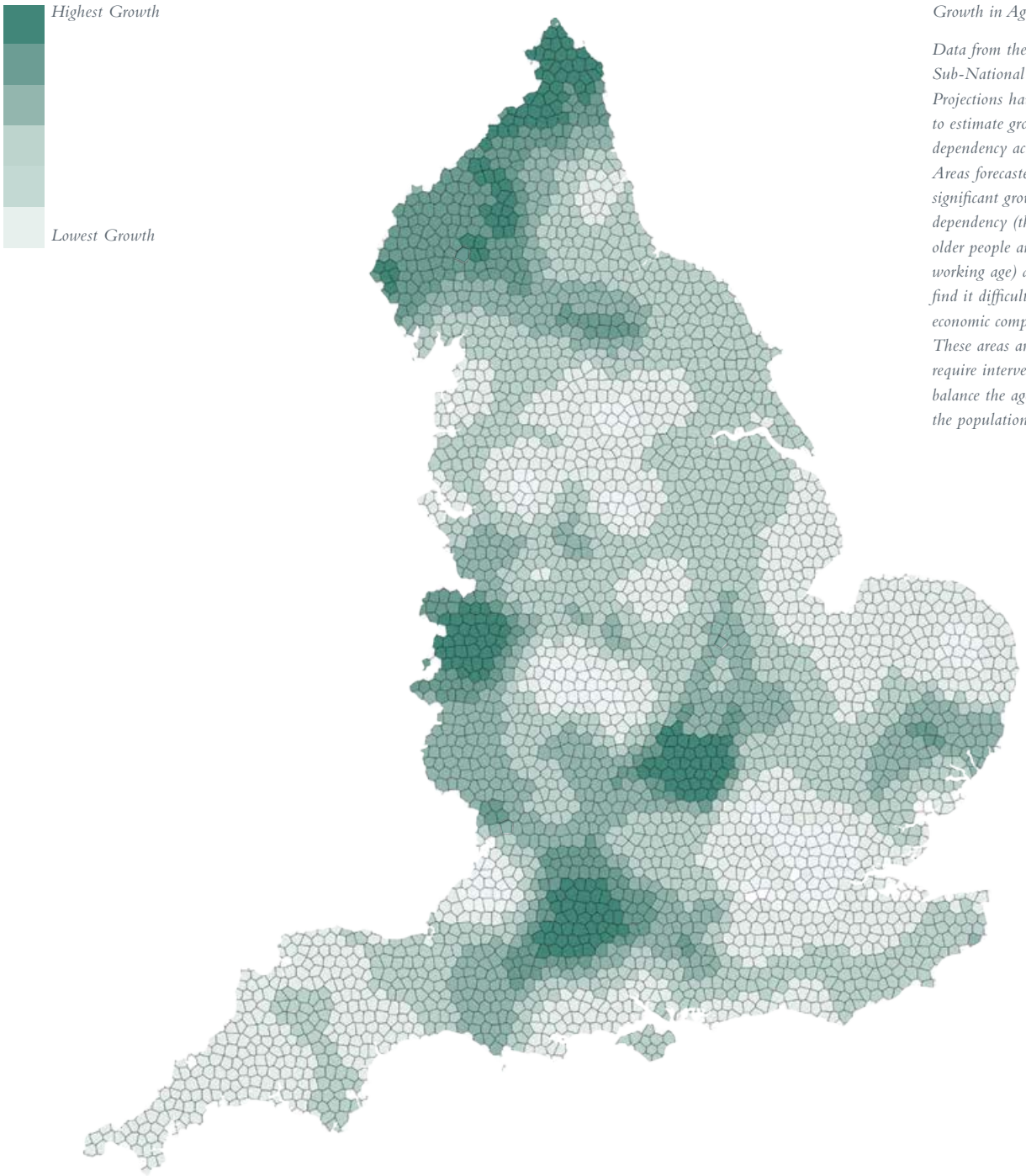
Lowest Growth



Lower Quartile House Prices

House prices, along with earnings, represent one half of the affordability equation (see Plan 5). In this case, Land Registry price paid data for the calendar year 2013 have been used. Lower Quartile prices have been used to provide an indication of affordability at the lowest end of the market.

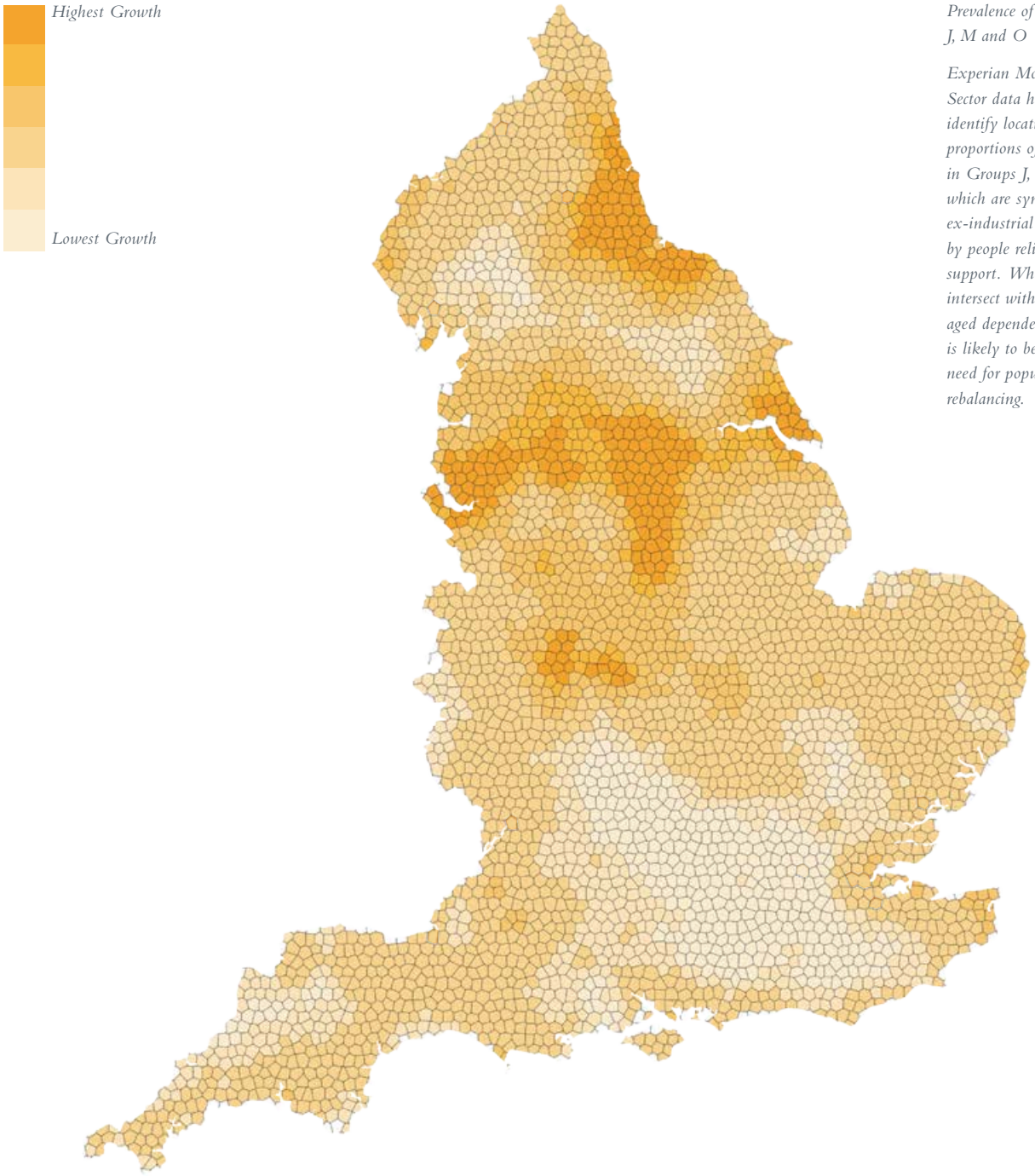
LOWER QUARTILE HOUSE PRICE HOUSE PRICE MAP



Growth in Aged Dependency

Data from the ONS 2012 Sub-National Population Projections have been used to estimate growth in aged dependency across the country. Areas forecasted to experience significant growth in aged dependency (the ratio between older people and people of working age) are likely to find it difficult to maintain economic competitiveness. These areas are likely to require intervention to re-balance the age structure of the population.

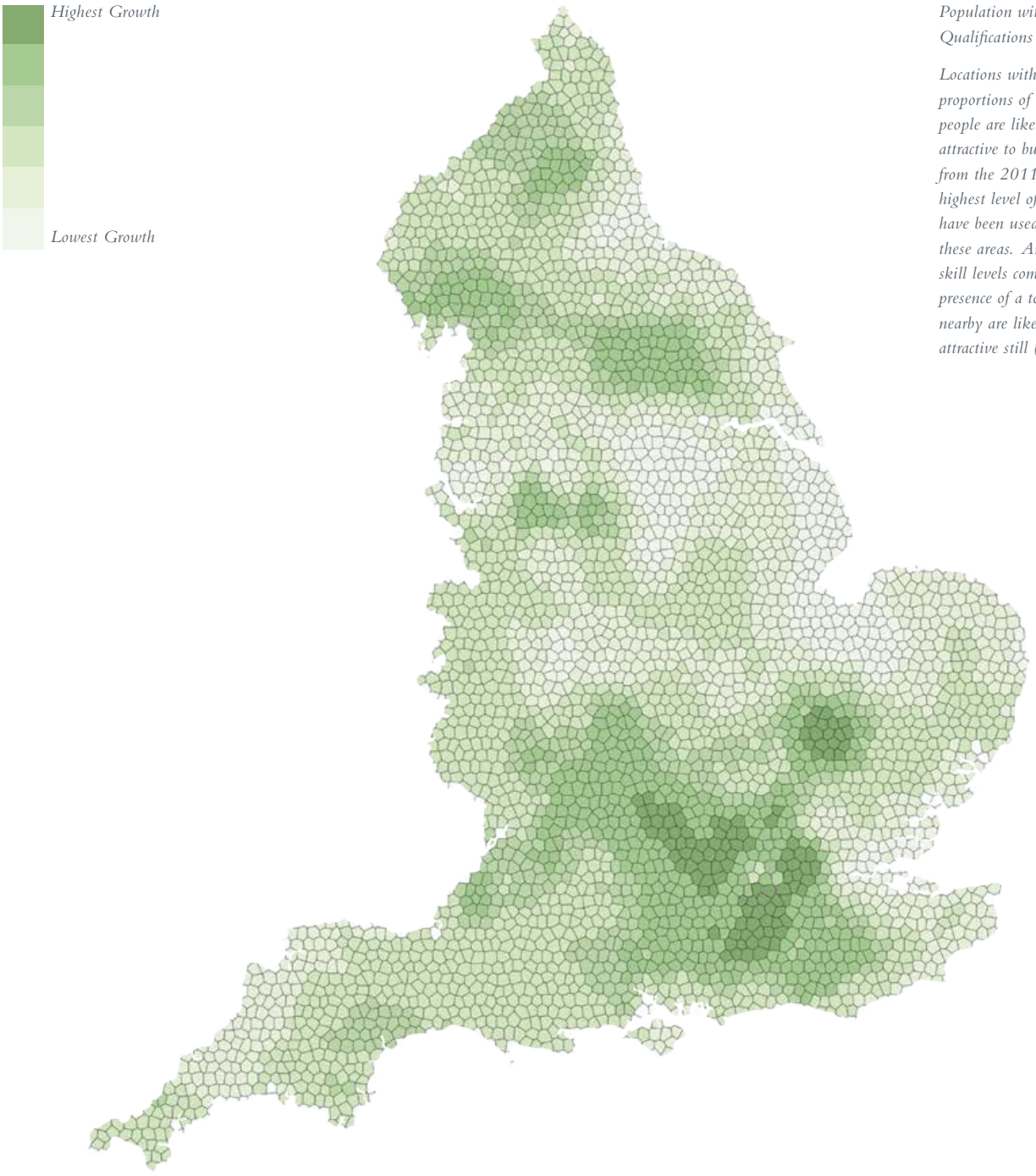
GROWTH IN AGE DEPENDENCY



Prevalence of Mosaic Groups J, M and O

Experian Mosaic Public Sector data have been used to identify locations with high proportions of households in Groups J, M and O, which are synonymous with ex-industrial areas populated by people reliant on state support. Where these areas intersect with areas of high aged dependency growth, there is likely to be a substantial need for population rebalancing.

PREVALENCE OF MOSAIC GROUPS J, M AND O



Population with Level 4+ Qualifications

Locations with high proportions of highly skilled people are likely to be attractive to businesses. Data from the 2011 census on highest level of qualification have been used to identify these areas. Areas with high skill levels combined with the presence of a top university nearby are likely to be more attractive still (see Plan 9).

POPULATION WITH LEVEL 4+ QUALIFICATION

EXPLANATION OF SOCIAL AND ECONOMIC ISSUES METHODOLOGY AND RESULTS

It is important that the social and deprivation issues associated with areas of low population growth are considered and in these locations it may be necessary to provide a catalyst such as a Garden City to facilitate greater levels of population growth, enabling a balanced and mixed community to develop and thrive. Golany (1976) (6) identified the 'rational dispersion of population and of socio-economic activity' as one of the potential goals for a new settlement.

AGED DEPENDENCY RATIO

The population of the Country is ageing, but the extent of ageing differs significantly between areas, with urban areas typically displaying a younger demographic profile, than more rural and coastal areas of the Country.

A consideration when prioritising locations in need of further housing is the extent to which its population is ageing – achieved through a measure of the number of people age 65 and over compared against the number of people aged 15 – 64 (typically termed the working age population). This measure is termed the 'aged dependency ratio', and a significant uplift in this ratio in areas which are projected to experience small gains in total population could signify issues – particularly in respect of that areas ability to growth its local economy (with limited or no growth in its labour force).

$$\text{AGED DEPENDANCY RATIO} = \frac{\text{NUMBER OF PEOPLE AGED 65 \&OVER}}{\text{NUMBER OF PEOPLE AGED 15-64}} \times 100$$

Whilst this is a fairly crude measure which ignores the fact that people will work beyond state pension age, it provides a useful benchmark in identifying areas at risk, and potentially in need of greater levels of in-migration (typically of a younger population) to encourage a greater balance in the demographic profile of the area. See Plan 7 – Dependency Map – absolute change in ratio (appendix)

Based on analysis of the ONS 2012-based sub national population projections we can establish the likely extent of change in the profile of the population across the Country (assuming current trends in population change continue). There is a distinct pattern between those housing markets which are projected to experience high levels of population growth (and as such low increases in the aged dependency ratio, and those areas with lower projected levels of population growth (and higher rates of change in the aged dependency ratio).

This is of particular concern in areas which are already facing high levels of social deprivation, and to that end we have reviewed the 'Mosaic' lifestyle classifications of areas across the Country to draw out those localities most vulnerable.

MOSAIC

Experian's Mosaic categorises the population based upon social, economic and demographic characteristics. This is particularly useful as a shorthand way of identifying the general characteristics of a given area. Mosaic Public Sector was produced primarily with local government applications in mind and consists of 15 Groups and 69 Types.

The following three Mosaic groups correlate with areas of low population growth, higher levels of deprivation, and an increased Aged Dependency Ratio.

- Group J: Owner occupiers in older-style housing in ex-industrial areas
- Group M: Elderly people reliant on state support
- Group O: Families in low-rise social housing with high levels of benefit need

It is clear that areas within the North East and North West including those areas surrounding the Manchester and Leeds conurbations, along with Grimsby, Hull and Tees Valley show the greatest proportions of these lifestyle groups. See Plan 8 – Mosaic Map.

HMA RANKINGS

HIGH GROWTH

Rank	HMA
1	London
2	Brighton
3	Southampton
4	Bristol
5	Reading
6	Cambridge
7	Oxford
8.5	Portsmouth
8.5	Luton&MiltonKeynes
10	Coventry
11	Norwich
12	Colchester
13.5	Truro
13.5	Exeter
15	Eastbourne&Hastings
16	Penzance
17	Canterbury&Ramsgate
18	Launceston&Bude
19	Salisbury
20	Bournemouth
21	Torquay
22.5	Dover&Ashford
22.5	Bath
24	StAustell
25	Northampton
26	IsleOfWight
27	Dorchester&Weymouth
28	Swindon
29	Leeds
30	York
31	Peterborough
33	Gloucester&Cheltenham
33	Ipswich
33	Plymouth
35	Manchester
36	Birmingham
37	BuryStEdmunds
38	Taunton
39	Barnstaple
40	Leicester
41	Boston
42	Nottingham
43	Newtown&Welshpool
44	Bradford
45	GtYarmouth&Lowestoft
46	Derby
47	Whitby&Malton
48	Yeovil
49	KingsLynn
50	Worcester
51	Sheffield
52	Hereford
53	Lincoln
54	Chester&Birkenhead
55	Northallerton
56.5	Kendal
56.5	Lancaster
58	Shrewsbury
59	Middlesbrough
60	Liverpool
61.5	Penrith
61.5	Telford
63	Skegness
64	Newcastle
65	Stoke-on-Trent
66	Preston&Blackpool
67	Blackburn&Burnley
68.5	Scarborough
68.5	Scunthorpe
70	Hull
71	Berwick-upon-Tweed
72	Barrow-in-Furness
73	Carlisle
74	Grimsby
75	Workington&Whitehaven

REGENERATION

Rank	HMA
1	Manchester
2	Nottingham
3.5	Coventry
3.5	Liverpool
5	Chester&Birkenhead
6	Leeds
7	Newcastle
8	Bristol
9	Middlesbrough
10	Leicester
11	Birmingham
12	Sheffield
13	Bradford
14	Southampton
15	Derby
16.5	Northampton
16.5	Blackburn&Burnley
18	Bath
19	Portsmouth
20	Brighton
22	Reading
22	Ipswich
22	Barrow-in-Furness
24.5	Worcester
24.5	Stoke-on-Trent
26	Lancaster
27	Telford
28	Cambridge
29.5	London
29.5	Preston&Blackpool
31.5	Luton&MiltonKeynes
31.5	Dorchester&Weymouth
33.5	Plymouth
33.5	Scunthorpe
35	Peterborough
36.5	Salisbury
36.5	GtYarmouth&Lowestoft
39	Colchester
39	Hull
39	Workington&Whitehaven
41.5	Oxford
41.5	Dover&Ashford
43	Norwich
44	IsleOfWight
45.5	York
45.5	Exeter
47	Eastbourne&Hastings
48	Taunton
49	Canterbury&Ramsgate
50.5	Gloucester&Cheltenham
50.5	Carlisle
52	Swindon
53	Torquay
54.5	Kendal
54.5	BuryStEdmunds
56	Yeovil
57	Scarborough
58	Grimsby
59	Hereford
60	Lincoln
61	Northallerton
62	Shrewsbury
63	Barnstaple
64.5	Whitby&Malton
64.5	Berwick-upon-Tweed
66	Penrith
67	StAustell
68	Boston
69	Truro
70	Bournemouth
71	KingsLynn
72	Penzance
73	Newtown&Welshpool
74	Launceston&Bude
75	Skegness

CHART 1 – POP GROWTH

REGION	HMA	SCORE
East Midlands	Boston	100%
East Midlands	Derby	70%
East Midlands	Leicester	70%
East Midlands	Lincoln	70%
East Midlands	Northampton	90%
East Midlands	Nottingham	60%
East Midlands	Skegness	50%
Eastern	BuryStEdmunds	80%
Eastern	Cambridge	100%
Eastern	Colchester	90%
Eastern	GtYarmouth&Lowestoft	40%
Eastern	Ipswich	50%
Eastern	KingsLynn	60%
Eastern	Norwich	80%
Eastern	Peterborough	90%
London and South East	Brighton	90%
London and South East	Canterbury&Ramsgate	80%
London and South East	Dover&Ashford	80%
London and South East	Eastbourne&Hastings	80%
London and South East	IsleOfWight	40%
London and South East	London	100%
London and South East	Luton&MiltonKeynes	100%
London and South East	Oxford	60%
London and South East	Portsmouth	70%
London and South East	Reading	80%
London and South East	Southampton	70%
North East	Berwick-upon-Tweed	10%
North East	Middlesbrough	20%
North East	Newcastle	20%
North West	Barrow-in-Furness	10%
North West	Blackburn&Burnley	10%
North West	Carlisle	10%
North West	Kendal	10%
North West	Lancaster	20%
North West	Liverpool	30%
North West	Manchester	50%
North West	Penrith	10%
North West	Preston&Blackpool	20%
North West	Workington&Whitehaven	10%
South West	Barnstaple	60%
South West	Bath	50%
South West	Bournemouth	80%

REGION	HMA	SCORE
South West	Bristol	100%
South West	Dorchester&Weymouth	30%
South West	Exeter	60%
South West	Gloucester&Cheltenham	70%
South West	Launceston&Bude	90%
South West	Penzance	80%
South West	Plymouth	40%
South West	Salisbury	50%
South West	StAustell	90%
South West	Swindon	100%
South West	Taunton	70%
South West	Torquay	40%
South West	Truro	90%
South West	Yeovil	50%
Wales	Chester&Birkenhead	20%
Wales	Newtown&Welshpool	40%
West Midlands	Birmingham	50%
West Midlands	Coventry	100%
West Midlands	Hereford	40%
West Midlands	Shrewsbury	30%
West Midlands	Stoke-on-Trent	30%
West Midlands	Telford	30%
West Midlands	Worcester	30%
Yorkshire and the Humber	Bradford	60%
Yorkshire and the Humber	Grimsby	20%
Yorkshire and the Humber	Hull	30%
Yorkshire and the Humber	Leeds	60%
Yorkshire and the Humber	Northallerton	20%
Yorkshire and the Humber	Scarborough	10%
Yorkshire and the Humber	Scunthorpe	40%
Yorkshire and the Humber	Sheffield	40%
Yorkshire and the Humber	Whitby&Malton	20%
Yorkshire and the Humber	York	60%

APPENDIX 4

Wolfson Economic Prize

1 Key Inputs and Cashflow Assumptions

The below table includes all the financial inputs and accompanying cash flow assumptions along with their reasoning.

1.1 Revenue Inputs and Cashflow Assumptions

Income Items	Value	Cash Flow Assumption	Reasoning
Open Market Sales Revenue	£220 per sq.ft.	Housing Delivery Starts 6 months before the respective phase infrastructure completes (assumed 1 year per phase for infrastructure). Housing delivery varies from 100 per year in year 3 to 3,000 per year from years 15-25. Sales of houses subsequently commence 1 month prior to the respective phase's residential build finishing.	The house build programme starts to deliver housing in year 3 (100 Nr.). This increases to x300 Nr. the following year and 600 Nr. the year after. By year 7 1000 Nr. are being delivered and by year 10 2000 Nr. dwellings are being delivered per year. This level of delivery increase is due to the anticipated 'place making' occurring and increasing the desirability of the Garden City. This momentum is compounded due to multiple tenure types (and therefore effective tenure prices) being available and combining with 'place making' to increase uptake. The Sales Value is below the average UK new build house price average (of circa £260 per sq.ft). The Sales Value lies within a range of values for the midlands and much of the south of England of circa £200 - £250 per sq.ft.
Capitalised Open Market Sale Ground Rents	Annual Rent £100 per unit capitalised by 5.5% Yield minus Purchasers Costs 5.8% & Vendors Costs 1.5%.	In line with sales of Open Market Sale apartments (flats).	Each assumption has been benchmarked and tested for calculating ground rents in schemes of this nature. We have seen these figures achieved in large urban extensions which are the closest comparable to Garden Cities.
Open Market Sales and Marketing Budget	2% of market sales revenue and ground rents.	In line with market sales revenue and ground rent revenue.	Benchmarked cost assumption for a development of this type. There is scope for efficiencies to be driven into these costs due to economies of scale and potential instruction lengths.
Open Market Sales Agents Fees	1.5% of market sales revenue and ground rents.	In line with market sales revenue and ground rent revenue.	Benchmarked cost assumption, there is scope for efficiencies to be driven into these costs due to economies of scale and potential

			instruction lengths.
Community Investment Share (from Discounted Market Sale dwellings)	**20% of eligible Open Market Revenue reinvested into the community.**	**In line with discount market sale completions.**	**The 20% figure is seen to be both of interest to potential investors (residents) whilst being a big enough percentage to secure a sizable fund across the whole Garden City.**
Discounted Market Sales Revenue	**£175 per sq.ft.**	**In line with respective residential sale completions.**	**This assumption has been benchmarked against other large Urban Extensions. The discount level is 80% of Open Market Sale value.**
Capitalised Discounted Market Sale Ground Rents	**Annual Rent £100 per unit capitalised by 5.5% Yield minus Purchasers Costs 5.8% & Vendors Costs 1.5%.**	**In line with sales of Discounted Market Sale apartments (flats).**	**This assumption has been benchmarked against other large Urban Extensions.**
Discounted Market Sales and Marketing Budget	2% of market sales revenue and ground rents.	In line with market sales revenue and ground rent revenue.	This assumption has been benchmarked against other large Urban Extensions. There is scope for efficiencies to be driven into these costs due to economies of scale and potential instruction lengths.
Discounted Market Sales Agents Fees	1.5% of market sales revenue and ground rents.	In line with market sales revenue and ground rent revenue.	This assumption has been benchmarked against other large Urban Extensions. There is scope for efficiencies to be driven into these costs due to economies of scale and potential instruction lengths.
Capitalised Market Rent Income	**Gross Monthly Rent ranging from £660-£980 per dwelling, minus 15% Management costs, 5% Routine repairs & maintenance, 10% Major repairs. The Net Annual rent is then Capitalised by a 5.5% Net Rental Yield to arrive at the capitalised value.**	**Cashflowed 90 days before start onsite with payments of 30% upfront, 30% evenly over build period and 40% on practical completion.**	**This is based on ongoing research and costing of how the Build to Rent method of development could work in the UK, along with benchmarking from other countries where this specific tenure offer is already operating.**
Self Build Plot Sales	**Serviced land sale (average £100k per plot)**	**In line with respective residential sale completions.**	**Self-builders would acquire the land, benefitting from all infrastructure. The self-builder would finance their own building works, with an option for deferred land payment if this assist.**

Self Build Plot Sales Agents Fees	1.5% of Self Build Plot revenue.	In line with Self Build Plot revenue.	This assumption has been benchmarked against other large Urban Extensions. There is scope for efficiencies to be driven into these costs due to economies of scale and potential instruction lengths.
Social Rent Revenue	£135 per sq.ft.	Cashflowed 90 days before start onsite with payments of 10% upfront, 25% start onsite, 54% evenly over build period, 10% on practical completion and 1% after practical completion	Market tested assumption with Housing Associations and Registered Providers benchmarked against Urban Extension schemes and equates to 61% of Open Market Sale value.
Affordable Rent Revenue	£153 per sq.ft.	Cashflowed 90 days before start onsite with payments of 10% upfront, 25% start onsite, 54% evenly over build period, 10% on practical completion and 1% after practical completion.	Market tested assumption benchmarked against Urban Extension schemes and equates to 70% of Open Market Sale value.
Shared Ownership Revenue	£175 per sq.ft	Cashflowed 90 days before start onsite with payments of 10% upfront, 25% start onsite, 54% evenly over build period, 10% on practical completion and 1% after practical completion.	Market tested assumption benchmarked against Urban Extension schemes and equates to 80% of Open Market Sale value.
Shared Equity Revenue	£167 per sq.ft	Cashflowed 90 days before start onsite with payments of 10% upfront, 25% start onsite, 54% evenly over build period, 10% on practical completion	Market tested assumption benchmarked against Urban Extension schemes and equates to 76% of Open Market Sale value.

		and 1% after practical completion.	
Non Residential Revenue – Green Infrastructure	£0 income	N/A	No material income envisaged at this point.
Non Residential Revenue – Local Centre	£25k Annual Rent £/acre capitalised by a 7% Yield minus 5.8% purchasers costs, no rent free periods.	Cashflowed payment 100% upfront, 60 days before Start on Site.	Benchmarked against similar Urban Extension schemes.
Non Residential Revenue – District Centre	£25k Annual Rent £/acre capitalised by a 7% Yield minus 5.8% purchasers costs, no rent free periods.	Cashflowed payment 100% upfront, 60 days before Start on Site.	Benchmarked against similar Urban Extension schemes.
Non Residential Revenue – Town Centre	£25k Annual Rent £/acre capitalised by a 7% Yield minus 5.8% purchasers costs, no rent free periods.	Cashflowed payment 100% upfront, 60 days before Start on Site.	Benchmarked against similar Urban Extension schemes.
Non Residential Revenue – Education	£0 income	N/A	No material income envisaged at this point.
Non Residential Revenue – Industrial Employment	£15k Annual Rent £/acre capitalised by a 7% Yield minus 5.8% purchasers costs, no rent free periods.	Cashflowed payment 100% upfront, 60 days before Start on Site.	Benchmarked against similar Urban Extension schemes.
Non Residential Revenue – Business Park Employment	£15k Annual Rent £/acre capitalised by a 7% Yield minus 5.8% purchasers costs, no rent free periods.	Cashflowed payment 100% upfront, 60 days before Start on Site.	Benchmarked against similar Urban Extension schemes.
Residential Developers Margin – Private Housing (Open Market Sales, Discounted Market Sale, Market Rent, Self Build Plots)	20% of Revenue	Cashflowed in line with sales.	Benchmarked assumption for the House Builder when there are no other influences on sale income. There is scope for this margin to decrease as the scheme de-risks over time.
Residential Developers Margin – Affordable Housing (Social Rent, Affordable Rent, Shared Ownership, Shared	8% of Build Costs	Cashflowed in line with build completions.	Benchmarked assumption for the House Builder when there are no other influences on sale income. There is scope for this margin to decrease if the respective plots can be sold forward to or are bought directly by a registered

Equity)			provider.
Non Residential Developers Margin – on all income	15% of Non-Residential Income	Cashflowed in line with sales.	Benchmarked assumption when there are no other influences on sale income.
Land Receipts	Residual Land Payments from House Builders	Cashflowed 40% 90 days prior to start on site, 30% 1 year after start on onsite (SoS), 10% 2 years after SoS & 20% on practical completion.	Benchmarked & tested assumption against similar strategic land schemes however these terms can be flexible to suit market conditions.
Land Finance Rate	4% per annum	On all cumulative quarterly deficits	Benchmarked against similar schemes.
SDLT Thresholds	Purchase Price of Development Parcels Greater than £500,000 - 4%, Greater than £250,000 3%	In line with Development Parcel Purchase's.	HMRC set the rates.
Purchasers Costs	1.5% +20% VAT (1.8% total)	In line with Development Parcel Purchase's.	Benchmarked against similar Strategic Land schemes.

1.2 Revenue Inputs and Cashflow Assumptions

Expenditure Items	Value	Cash Flow Assumption	Reasoning
Open Market Sales Build Cost (Code 4)	£110 per sq.ft + 5% contingency	In line with respective build period	Based on average PLC Housebuilder costs plus uplift for increased design and material costs. This level would appeal to a variety of different sized house builders allowing the delivery targets to be realised with multiple construction and sales point's onsite.
Discounted Market Sales Build Cost (Code 4)	£110 per sq.ft + 5% contingency	In line with respective build period	Based on average PLC Housebuilder costs plus uplift for increased design and material costs. This level would appeal to a variety of different sized house builders allowing the delivery targets to be realised with multiple construction and sales point's onsite.
Market Rent Build Cost (Code 4)	£110 per sq.ft + 5% contingency	In line with respective build period	Based on average PLC Housebuilder costs plus uplift for increased design and material costs. This level would appeal to a variety of different sized house builders allowing the delivery targets to be realised with multiple construction and sales point's onsite.
Self Build Plot Sales	£0	Costs to service land within Strategic Infrastructure	No over and above costs beyond the strategic infrastructure costs, all estate roads are costed for, allowing for a fully serviced plot.
Social Rent Build Cost (Code 4)	£110 per sq.ft + 5% contingency	In line with respective build period	Based on average PLC Housebuilder costs plus uplift for increased design and material costs. This level would appeal to a variety of different sized house builders allowing the delivery targets to be realised with multiple construction and sales point's onsite.
Affordable Rent Build Cost (Code 4)	£110 per sq.ft + 5% contingency	In line with respective build period	Based on average PLC Housebuilder costs plus uplift for increased design and material costs. This level would appeal to a variety of different

			sized house builders allowing the delivery targets to be realised with multiple construction and sales point's onsite.
Shared Ownership Build Cost (Code 4)	£110 per sq.ft + 5% contingency	In line with respective build period	Based on average PLC Housebuilder costs plus uplift for increased design and material costs. This level would appeal to a variety of different sized house builders allowing the delivery targets to be realised with multiple construction and sales point's onsite.
Shared Equity Build Cost (Code 4)	£110 per sq.ft + 5% contingency	In line with respective build period	Based on average PLC Housebuilder costs plus uplift for increased design and material costs. This level would appeal to a variety of different sized house builders allowing the delivery targets to be realised with multiple construction and sales point's onsite.
Strategic Infrastructure Cost	£110,000,000 which equates to circa £22k per dwelling	In line with number of dwellings built per phase (year). At present it is assumed that all phases take 1 year to build its infrastructure and 1 year to sell its respective houses.	Benchmarked against large strategic land schemes. Assumes significant designated supply chain capabilities can be secured to facilitate the Garden City construction plan.
Non Residential Build Cost – Green Infrastructure			Benchmarked against large strategic land schemes.
Non Residential Build Cost – Local Centre			Benchmarked against large strategic land schemes.
Non Residential Build Cost – District Centre			Benchmarked against large strategic land schemes.
Non Residential Build Cost – Town Centre			Benchmarked against large strategic land schemes.
Non Residential Build Cost – Education	£135,000 per acre + 5% contingency	Cashflowed in line with education build phasing from	Benchmarked against large strategic land schemes.

		land budget	
Non Residential Build Cost – Industrial Employment			Benchmarked against large strategic land schemes.
Non Residential Build Cost – Business Park Employment			Benchmarked against large strategic land schemes.
S106 costs	£0k per dwelling	In line with number of dwellings build per phase (year)	Assumed that the S106 costs would be zero as all infrastructure and contributions required to make the scheme acceptable in planning terms will be provided as part of the all-encompassing scheme, therefore no offsite solution will be sought and no S106 is payable.
Development Management Fee	2% of all-in Build Costs incl. Infrastructure	Cashflowed in line with build and infrastructure costs	Benchmarked against large strategic land schemes.
Development Contingency	2.5% of total development cost	Cashflowed in line total development costs	Based on benchmarks for strategic land schemes
Professional Fees	8% of all-in Build Costs incl. Infrastructure	Cashflowed in line with build and infrastructure costs.	Based on benchmarks for strategic land schemes
Site Wide Branding	£20,000,000	Total Budget is cash flowed pro rata with gross land developed per year	Benchmarked against large strategic land schemes.
Strategic Masterplanning Costs	£5,000,000	Planning is assumed to take 24 months for site promotion, followed by 36 months for pre planning through to obtaining planning permission. Each subsequent phase is expected to take a year to secure	Benchmarked against large strategic land schemes.

		planning. Total Budget is cash flowed pro rata with gross land developed per year	
Initial Land Payment	£10,000 per Gross Acre	Paid upfront	Payment used to secure a legal interest in the land.
Land Owner – no profit share	50% of land owners @ £200,000 per acre		
Land Owner – profit share	50% of land owners @ £100,000 per acre		
Development Finance	5% per annum	50:50 Debt: Equity funding, all interest payable on cumulative quarterly deficits	Benchmarked against large strategic land schemes.
Land Finance	5% per annum	50:50 Debt: Equity funding, all interest payable on cumulative quarterly deficits	Benchmarked against large strategic land schemes.

WOLFSON ECONOMICS PRIZE MMXV

Wolfson Economic Prize

Garden City - Financial Model

EC HARRIS BUILT ASSET CONSULTANCY AN ARCADIS COMPANY

Land use

	Acres	Hectares
Area	5,555	2,781

	Acres	
Land use mix	%	Nr
Residential acres	56%	3,089
Non-residential acres	44%	2,466
Total	100%	5,555

	Residential		Non-Residential Acres		Density	
Phase	Acres	Hectares	Acres	Hectares	Density per hectare	Homes
Phase 1	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2	0.00	0.00	17.61	7.88	0.00	0.00
Phase 3	6.18	2.50	134.77	102.04	40.00	100.00
Phase 4	18.53	7.50	7.36	3.23	40.00	300.00
Phase 5	37.07	15.00	158.61	114.94	40.00	600.00
Phase 6	46.33	18.75	14.93	6.79	40.00	750.00
Phase 7	61.78	25.00	58.99	31.87	40.00	1,000.00
Phase 8	92.66	37.50	73.21	30.88	40.00	1,500.00
Phase 9	108.11	43.75	26.21	11.86	40.00	1,750.00
Phase 10	123.55	50.00	312.03	225.28	40.00	2,000.00
Phase 11	123.55	50.00	43.46	19.09	40.00	2,000.00
Phase 12	123.55	50.00	95.35	47.59	40.00	2,000.00
Phase 13	154.44	62.50	41.82	19.18	40.00	2,500.00
Phase 14	154.44	62.50	80.37	42.28	40.00	2,500.00
Phase 15	185.33	75.00	304.10	215.57	40.00	3,000.00
Phase 16	185.33	75.00	82.05	43.20	40.00	3,000.00
Phase 17	185.33	75.00	106.77	53.21	40.00	3,000.00
Phase 18	185.33	75.00	82.76	35.49	40.00	3,000.00
Phase 19	185.33	75.00	68.04	37.53	40.00	3,000.00
Phase 20	185.33	75.00	303.71	214.91	40.00	3,000.00
Phase 21	185.33	75.00	81.16	42.84	40.00	3,000.00
Phase 22	185.33	75.00	86.20	44.88	40.00	3,000.00
Phase 23	185.33	75.00	56.29	25.28	40.00	3,000.00
Phase 24	185.33	75.00	59.30	33.50	40.00	3,000.00
Phase 25	185.33	75.00	171.30	121.32	40.00	3,000.00
Total	3,088.75	1,250.00	2,466.39	1,530.64	40.00	50,000.00

Residential use

	Tenure Mix Allocation								Affordable Housing Mix Allocation					
Phase	Open Market Sale	Discounted Market Sale	Market Rent	Self Build Plots	Spare 1	Spare 2	Spare 3	Total	Social Rent	Affordable Rent	Shared Ownership	Shared Equity	Spare 4	Total
Phase 1	20%	20%	15%	10%	0%	0%	0%	65%	10%	10%	15%	0%	0%	35%

	Tenure Mix Numbers								Affordable Housing Mix Numbers					
Phase	Open Market Sale	Discounted Market Sale	Market Rent	Self Build Plots	Spare 1	Spare 2	Spare 3	Total	Social Rent	Affordable Rent	Shared Ownership	Shared Equity	Spare 4	Total
Phase 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phase 3	20	20	15	10	0	0	0	65	10	10	15	0	0	35
Phase 4	60	60	45	30	0	0	0	195	30	30	45	0	0	105
Phase 5	120	120	90	60	0	0	0	390	60	60	90	0	0	210
Phase 6	150	150	113	75	0	0	0	488	74	75	113	0	0	262
Phase 7	200	200	150	100	0	0	0	650	100	100	150	0	0	350
Phase 8	300	300	225	150	0	0	0	975	150	150	225	0	0	525
Phase 9	350	350	263	175	0	0	0	1,138	174	175	263	0	0	612
Phase 10	400	400	300	200	0	0	0	1,300	200	200	300	0	0	700
Phase 11	400	400	300	200	0	0	0	1,300	200	200	300	0	0	700
Phase 12	400	400	300	200	0	0	0	1,300	200	200	300	0	0	700
Phase 13	500	500	375	250	0	0	0	1,625	250	250	375	0	0	875
Phase 14	500	500	375	250	0	0	0	1,625	250	250	375	0	0	875
Phase 15	600	600	450	300	0	0	0	1,950	300	300	450	0	0	1,050
Phase 16	600	600	450	300	0	0	0	1,950	300	300	450	0	0	1,050
Phase 17	600	600	450	300	0	0	0	1,950	300	300	450	0	0	1,050
Phase 18	600	600	450	300	0	0	0	1,950	300	300	450	0	0	1,050
Phase 19	600	600	450	300	0	0	0	1,950	300	300	450	0	0	1,050
Phase 20	600	600	450	300	0	0	0	1,950	300	300	450	0	0	1,050
Phase 21	600	600	450	300	0	0	0	1,950	300	300	450	0	0	1,050
Phase 22	600	600	450	300	0	0	0	1,950	300	300	450	0	0	1,050
Phase 23	600	600	450	300	0	0	0	1,950	300	300	450	0	0	1,050
Phase 24	600	600	450	300	0	0	0	1,950	300	300	450	0	0	1,050
Phase 25	600	600	450	300	0	0	0	1,950	300	300	450	0	0	1,050
Total	10,000	10,000	7,501	5,000	0	0	0	32,501	4,998	5,000	7,501	0	0	17,499

Residential Bed Types

	Flats						Houses							
Bed Type	1B2P F	2B3P F	2B4P F	3B5P F	4B6P F	Spare 1	2B3P	2B4P	3B5P	3B6P	4B6P	5B7P	6B8P	Spare 2
Flat / House	F	F	F	F	F	F	H	H	H	H	H	H	H	H

PRIVATE 65%

Open Market Sale 10,000 homes

Bed Type Mix Nr		Flats						Houses							
Phase	Total	1B2P F	2B3P F	2B4P F	3B5P F	4B6P F	Spare 1	2B3P	2B4P	3B5P	3B6P	4B6P	5B7P	6B8P	Spare 2
Total	10,000	501	501	501	501	0	0	492	1,000	3,000	1,000	1,000	752	752	0

Discounted Market Sale 10,000 homes

Bed Type Mix Nr		Flats						Houses							
Phase	Total	1B2P F	2B3P F	2B4P F	3B5P F	4B6P F	Spare 1	2B3P	2B4P	3B5P	3B6P	4B6P	5B7P	6B8P	Spare 2
Total	10,000	501	501	501	501	0	0	492	1,000	3,000	1,000	1,000	752	752	0

Market Rent 7,501 homes

Bed Type Mix Nr		Flats						Houses							
Phase	Total	1B2P F	2B3P F	2B4P F	3B5P F	4B6P F	Spare 1	2B3P	2B4P	3B5P	3B6P	4B6P	5B7P	6B8P	Spare 2
Total	7,501	382	752	752	752	0	0	354	752	2,253	752	752	0	0	0

Self Build Plots 5,000 homes

Bed Type Mix Nr		Flats						Houses							
Phase	Total	1B2P F	2B3P F	2B4P F	3B5P F	4B6P F	Spare 1	2B3P	2B4P	3B5P	3B6P	4B6P	5B7P	6B8P	Spare 2
Total	5,000	0	0	0	0	0	0	232	253	2,501	1,000	501	382	131	0

AFFORDABLE HOUSING 35%

Social Rent 4,998 homes

Bed Type Mix Nr		Flats						Houses							
Phase	Total	1B2P F	2B3P F	2B4P F	3B5P F	4B6P F	Spare 1	2B3P	2B4P	3B5P	3B6P	4B6P	5B7P	6B8P	Spare 2
Total	4,998	253	0	499	499	0	0	245	752	1,499	499	499	253	0	0

Affordable Rent 5,000 homes

Bed Type Mix Nr		Flats						Houses							
Phase	Total	1B2P F	2B3P F	2B4P F	3B5P F	4B6P F	Spare 1	2B3P	2B4P	3B5P	3B6P	4B6P	5B7P	6B8P	Spare 2
Total	5,000	253	0	501	501	0	0	237	752	1,501	501	501	253	0	0

Shared Ownership 7,501 homes

Bed Type Mix Nr		Flats						Houses							
Phase	Total	1B2P F	2B3P F	2B4P F	3B5P F	4B6P F	Spare 1	2B3P	2B4P	3B5P	3B6P	4B6P	5B7P	6B8P	Spare 2
Total	7,501	1,131	382	752	0	0	0	348	382	3,754	752	0	0	0	0

Shared Equity 0 homes

Bed Type Mix Nr		Flats						Houses							
Phase	Total	1B2P F	2B3P F	2B4P F	3B5P F	4B6P F	Spare 1	2B3P	2B4P	3B5P	3B6P	4B6P	5B7P	6B8P	Spare 2
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Residential Net and Gross Areas

Efficiency (Net:Gross) 80%

	Flats						Houses							
Bed Type	1B2P F	2B3P F	2B4P F	3B5P F	4B6P F	Spare 1	2B3P	2B4P	3B5P	3B6P	4B6P	5B7P	6B8P	Spare 2
Flat / House	F	F	F	F	F	F	H	H	H	H	H	H	H	H
Net Internal Area	55.0	67.1	77.0	94.6	108.9	0.0	67.1	91.3	105.6	110.0	117.7	141.9	166.1	0.0
Gross Internal Area	68.8	83.9	96.3	118.3	136.1	0.0	67.1	91.3	105.6	110.0	117.7	141.9	166.1	0.0

PRIVATE

Open Market Sale 10,000 homes

Net Internal Area		Flats						Houses							
Phase	Total	1B2P F	2B3P F	2B4P F	3B5P F	4B6P F	Spare 1	2B3P	2B4P	3B5P	3B6P	4B6P	5B7P	6B8P	Spare 2
Total	1,047,573	27,555	33,617	38,577	47,395	0	0	33,013	91,300	316,800	110,000	117,700	106,709	124,907	0
Gross Internal Area		Flats						Houses							
Phase	Total	1B2P F	2B3P F	2B4P F	3B5P F	4B6P F	Spare 1	2B3P	2B4P	3B5P	3B6P	4B6P	5B7P	6B8P	Spare 2
Total	1,084,359	34,444	42,021	48,221	59,243	0	0	33,013	91,300	316,800	110,000	117,700	106,709	124,907	0

Discounted Market Sale 10,000 homes

Net Internal Area		Flats						Houses							
Phase	Total	1B2P F	2B3P F	2B4P F	3B5P F	4B6P F	Spare 1	2B3P	2B4P	3B5P	3B6P	4B6P	5B7P	6B8P	Spare 2
Total	1,047,573	27,555	33,617	38,577	47,395	0	0	33,013	91,300	316,800	110,000	117,700	106,709	124,907	0
Gross Internal Area		Flats						Houses							
Phase	Total	1B2P F	2B3P F	2B4P F	3B5P F	4B6P F	Spare 1	2B3P	2B4P	3B5P	3B6P	4B6P	5B7P	6B8P	Spare 2
Total	1,084,359	34,444	42,021	48,221	59,243	0	0	33,013	91,300	316,800	110,000	117,700	106,709	124,907	0

Market Rent 7,501 homes

Net Internal Area		Flats						Houses							
Phase	Total	1B2P F	2B3P F	2B4P F	3B5P F	4B6P F	Spare 1	2B3P	2B4P	3B5P	3B6P	4B6P	5B7P	6B8P	Spare 2
Total	702,071	21,010	50,459	57,904	71,139	0	0	23,753	68,658	237,917	82,720	88,510	0	0	0
Gross Internal Area		Flats						Houses							
Phase	Total	1B2P F	2B3P F	2B4P F	3B5P F	4B6P F	Spare 1	2B3P	2B4P	3B5P	3B6P	4B6P	5B7P	6B8P	Spare 2
Total	752,199	26,263	63,074	72,380	88,924	0	0	23,753	68,658	237,917	82,720	88,510	0	0	0

Self Build Plots 5,000 homes

Net Internal Area		Flats						Houses							
Phase	Total	1B2P F	2B3P F	2B4P F	3B5P F	4B6P F	Spare 1	2B3P	2B4P	3B5P	3B6P	4B6P	5B7P	6B8P	Spare 2
Total	547,704	0	0	0	0	0	0	15,567	23,099	264,106	110,000	58,968	54,206	21,759	0
Gross Internal Area		Flats						Houses							
Phase	Total	1B2P F	2B3P F	2B4P F	3B5P F	4B6P F	Spare 1	2B3P	2B4P	3B5P	3B6P	4B6P	5B7P	6B8P	Spare 2
Total	547,704	0	0	0	0	0	0	15,567	23,099	264,106	110,000	58,968	54,206	21,759	0

AFFORDABLE HOUSING

Social Rent 4,998 homes

Net Internal Area		Flats						Houses							
Phase	Total	1B2P F	2B3P F	2B4P F	3B5P F	4B6P F	Spare 1	2B3P	2B4P	3B5P	3B6P	4B6P	5B7P	6B8P	Spare 2
Total	492,458	13,915	0	38,423	47,205	0	0	16,440	68,658	158,294	54,890	58,732	35,901	0	0
Gross Internal Area		Flats						Houses							
Phase	Total	1B2P F	2B3P F	2B4P F	3B5P F	4B6P F	Spare 1	2B3P	2B4P	3B5P	3B6P	4B6P	5B7P	6B8P	Spare 2
Total	517,344	17,394	0	48,029	59,007	0	0	16,440	68,658	158,294	54,890	58,732	35,901	0	0

Affordable Rent 5,000 homes

Net Internal Area		Flats						Houses							
Phase	Total	1B2P F	2B3P F	2B4P F	3B5P F	4B6P F	Spare 1	2B3P	2B4P	3B5P	3B6P	4B6P	5B7P	6B8P	Spare 2
Total	492,931	13,915	0	38,577	47,395	0	0	15,903	68,658	158,506	55,110	58,968	35,901	0	0
Gross Internal Area		Flats						Houses							
Phase	Total	1B2P F	2B3P F	2B4P F	3B5P F	4B6P F	Spare 1	2B3P	2B4P	3B5P	3B6P	4B6P	5B7P	6B8P	Spare 2
Total	517,903	17,394	0	48,221	59,243	0	0	15,903	68,658	158,506	55,110	58,968	35,901	0	0

Shared Ownership 7,501 homes

Net Internal Area		Flats						Houses							
Phase	Total	1B2P F	2B3P F	2B4P F	3B5P F	4B6P F	Spare 1	2B3P	2B4P	3B5P	3B6P	4B6P	5B7P	6B8P	Spare 2
Total	683,111	62,205	25,632	57,904	0	0	0	23,351	34,877	396,422	82,720	0	0	0	0
Gross Internal Area		Flats						Houses							
Phase	Total	1B2P F	2B3P F	2B4P F	3B5P F	4B6P F	Spare 1	2B3P	2B4P	3B5P	3B6P	4B6P	5B7P	6B8P	Spare 2
Total	719,546	77,756	32,040	72,380	0	0	0	23,351	34,877	396,422	82,720	0	0	0	0

Non residential use (on-site)

Phase	Total Acres	Green Infrastructure	Local Centre	District Centre	Town Centre	Education	Industrial Land	Business Park	Infrastructure
Phase 1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2	17.61	1.85	0.00	0.00	0.00	14.83	0.00	0.00	0.93
Phase 3	134.77	117.37	0.00	0.00	0.00	4.45	0.61	0.04	12.30
Phase 4	7.36	0.62	3.71	0.00	0.00	0.00	1.83	0.12	1.09
Phase 5	158.61	125.40	0.00	8.65	0.00	5.19	3.66	0.25	15.47
Phase 6	14.93	1.85	0.00	0.00	0.00	5.19	4.57	0.31	3.01
Phase 7	58.99	19.77	3.71	0.00	0.00	22.49	6.10	0.41	6.52
Phase 8	73.21	3.09	0.00	8.65	37.07	6.42	9.15	0.62	8.22
Phase 9	26.21	3.09	0.00	0.00	0.00	5.19	10.67	0.72	6.54
Phase 10	312.03	244.63	0.00	0.00	0.00	21.99	12.19	0.83	32.39
Phase 11	43.46	3.71	3.71	8.65	0.00	6.42	12.19	0.83	7.95
Phase 12	95.35	22.24	0.00	0.00	0.00	48.43	12.19	0.83	11.66
Phase 13	41.82	5.56	0.00	0.00	0.00	10.38	15.24	1.03	9.61
Phase 14	80.37	24.09	0.00	0.00	0.00	27.68	15.24	1.03	12.33
Phase 15	304.10	228.57	3.71	8.65	0.00	9.64	18.29	1.24	34.01
Phase 16	82.05	24.71	0.00	0.00	0.00	23.72	18.29	1.24	14.09
Phase 17	106.77	24.71	0.00	0.00	0.00	47.44	18.29	1.24	15.09
Phase 18	82.76	4.94	3.71	8.65	0.00	33.11	18.29	1.24	12.82
Phase 19	68.04	24.71	0.00	0.00	0.00	10.38	18.29	1.24	13.42
Phase 20	303.71	227.33	0.00	0.00	0.00	22.73	18.29	1.24	34.11
Phase 21	81.16	24.71	3.71	8.65	0.00	10.87	18.29	1.24	13.69
Phase 22	86.20	24.71	0.00	0.00	0.00	27.68	18.29	1.24	14.28
Phase 23	56.29	6.18	0.00	0.00	0.00	18.78	18.29	1.24	11.80
Phase 24	59.30	23.47	3.71	0.00	0.00	0.00	18.29	1.24	12.59
Phase 25	171.30	128.49	0.00	0.00	0.00	0.00	18.29	1.24	23.28
Total	2,466.39	1,316	26	52	37	383	305	21	327

WOLFSON ECONOMICS PRIZE MMXV

EC HARRIS BUILT ASSET CONSULTANCY AN ARCADIS COMPANY

Wolfson Economic Prize

Garden City - Financial Model

GARDEN CITY DEVELOPER CASHFLOW														Year
			Years	55										
			Quarterly Cashflow											
			Period	1	2	3	4	5	6	7	8	9	10	11	
			Year	2018	2018	2018	2018	2019	2019	2019	2019	2020	2020	2020	
			Start	01/01/2018	01/04/2018	01/07/2018	01/10/2018	01/01/2019	01/04/2019	01/07/2019	01/10/2019	01/01/2020	01/04/2020	01/07/2020	01/
			End	31/03/2018	30/06/2018	30/09/2018	31/12/2018	31/03/2019	30/06/2019	30/09/2019	31/12/2019	31/03/2020	30/06/2020	30/09/2020	31/
INCOME															
13. Non-residential Income			£186,104,072	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	
Residual Land Value			£4,026,606,273	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	
TOTAL INCOME			£4,212,710,345	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	
EXPENDITURE															
17. Site Wide Infrastructure			£1,066,838,064	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	
18. Non Residential Build Cost			£54,290,959	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	
19. Statutory Costs			£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	
20. Fees and non-build related contingencies			£448,580,642	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	
21. Land Acquisition			£749,944,531	£0	£0	£0	£0	£0	£0	£0	£55,551,447	£0	£0	£0	
TOTAL EXPENDITURE			£1,871,073,554	£0	£0	£0	£0	£0	£0	£0	£55,551,447	£0	£0	£0	
TOTAL BALANCE			£2,341,636,791	£0	£0	£0	£0	£0	£0	£0	-£55,551,447	£0	£0	£0	
CUMULATIVE BALANCE				£0	£0	£0	£0	£0	£0	£0	-£55,551,447	-£55,551,447	-£55,551,447	-£55,551,447	-£5
FUNDING															
Utilities and Infrastructure Fund	13%		£138,688,948	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	
Quarterly balance after Utilities and Infrastructure Receipt				£0	£0	£0	£0	£0	£0	£0	-£55,551,447	£0	£0	£0	
Sum for finance			£1,374,958,392	£0	£0	£0	£0	£0	£0	£0	-£55,551,447	-£56,553,100	-£57,573,028	-£58,611,564	-£5
Community fund utilised	£10,000,000			£0	£0	£0	£0	£0	£0	£0	-£10,000,000	-£10,000,000	-£10,000,000	-£10,000,000	-£1
Remaining sum for finance				£0	£0	£0	£0	£0	£0	£0	-£45,551,447	-£46,553,100	-£47,573,028	-£48,611,564	-£4
Community fund equity shares available				£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	
Community fund equity share utilised				£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	
Remaining sum for finance				£0	£0	£0	£0	£0	£0	£0	-£45,551,447	-£46,553,100	-£47,573,028	-£48,611,564	-£4
Institutional investor fund utilised				£0	£0	£0	£0	£0	£0	£0	-£45,551,447	-£46,553,100	-£47,573,028	-£48,611,564	-£4
	Annual	Qtr													
Community fund interest costs	7.00%	1.71%	-£26,099,543	£0	£0	£0	£0	£0	£0	£0	-£170,585	-£170,585	-£170,585	-£170,585	-£
Community fund equity interest costs	7.00%	1.71%	-£417,263,730	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	
Institutional investor interest costs	7.50%	1.82%	-£662,004,074	£0	£0	£0	£0	£0	£0	£0	-£831,068	-£849,343	-£867,951	-£886,899	-£
Cumulative after finance			**£1,374,958,392**	**£0**	**£0**	**£0**	**£0**	**£0**	**£0**	**£0**	**-£56,553,100**	**-£57,573,028**	**-£58,611,564**	**-£59,669,048**	**-£6**

1 to 5													Last Year			
12	13	14	15	16	17	18	19	20	21	22	23	24	213	214	215	216
2020	2021	2021	2021	2021	2022	2022	2022	2022	2023	2023	2023	2023	2071	2071	2071	2071
/10/2020	01/01/2021	01/04/2021	01/07/2021	01/10/2021	01/01/2022	01/04/2022	01/07/2022	01/10/2022	01/01/2023	01/04/2023	01/07/2023	01/10/2023	01/01/2071	01/04/2071	01/07/2071	01/10/2071
/12/2020	31/03/2021	30/06/2021	30/09/2021	31/12/2021	31/03/2022	30/06/2022	30/09/2022	31/12/2022	31/03/2023	30/06/2023	30/09/2023	31/12/2023	31/03/2071	30/06/2071	30/09/2071	31/12/2071
£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0
£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0
£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0
£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0
£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0
£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0
£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0
£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£2,200,734	£0	£0	£0	£0
£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£2,200,734	£0	£0	£0	£0
£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	-£2,200,734	£0	£0	£0	£0
,551,447	-£55,551,447	-£55,551,447	-£55,551,447	-£55,551,447	-£55,551,447	-£55,551,447	-£55,551,447	-£55,551,447	-£55,551,447	-£55,551,447	-£55,551,447	-£57,752,181	£2,341,636,791	£2,341,636,791	£2,341,636,791	£2,341,636,791
£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0
£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	-£2,200,734	£0	£0	£0	£0
,669,048	-£60,745,825	-£61,842,248	-£62,958,674	-£64,095,469	-£65,253,005	-£66,431,659	-£67,631,817	-£68,853,872	-£70,098,223	-£71,365,276	-£72,655,446	-£76,169,890	£1,374,958,392	£1,374,958,392	£1,374,958,392	£1,374,958,392
,000,000	-£10,000,000	-£10,000,000	-£10,000,000	-£10,000,000	-£10,000,000	-£10,000,000	-£10,000,000	-£10,000,000	-£10,000,000	-£10,000,000	-£10,000,000	-£10,000,000	£0	£0	£0	£0
,669,048	-£50,745,825	-£51,842,248	-£52,958,674	-£54,095,469	-£55,253,005	-£56,431,659	-£57,631,817	-£58,853,872	-£60,098,223	-£61,365,276	-£62,655,446	-£66,169,890	£0	£0	£0	£0
£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	-£2,177,537,510	-£2,186,228,666	-£2,186,228,666	-£2,186,228,666
£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0
,669,048	-£50,745,825	-£51,842,248	-£52,958,674	-£54,095,469	-£55,253,005	-£56,431,659	-£57,631,817	-£58,853,872	-£60,098,223	-£61,365,276	-£62,655,446	-£66,169,890	£0	£0	£0	£0
,669,048	-£50,745,825	-£51,842,248	-£52,958,674	-£54,095,469	-£55,253,005	-£56,431,659	-£57,631,817	-£58,853,872	-£60,098,223	-£61,365,276	-£62,655,446	-£66,169,890	£0	£0	£0	£0
170,585	-£170,585	-£170,585	-£170,585	-£170,585	-£170,585	-£170,585	-£170,585	-£170,585	-£170,585	-£170,585	-£170,585	-£170,585	£0	£0	£0	£0
£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0
906,192	-£925,837	-£945,841	-£966,210	-£986,950	-£1,008,069	-£1,029,573	-£1,051,470	-£1,073,765	-£1,096,468	-£1,119,585	-£1,143,124	-£1,207,243	£0	£0	£0	£0
,745,825	-£61,842,248	-£62,958,674	-£64,095,469	-£65,253,005	-£66,431,659	-£67,631,817	-£68,853,872	-£70,098,223	-£71,365,276	-£72,655,446	-£73,969,155	-£77,547,718	£1,374,958,392	£1,374,958,392	£1,374,958,392	£1,374,958,392

WOLFSON ECONOMICS PRIZE MMXV

Wolfson Economic Prize

Garden City - Financial Model

EC HARRIS BUILT ASSET CONSULTANCY AN ARCADIS COMPANY

Financial Inputs

INCOME

1. Open Market Sale

1.1. Sales Revenue

Default sales price £220 £/sqft

	Flats						Houses							
Bed type	1B2P F	2B3P F	2B4P F	3B5P F	4B6P F	Spare 1	2B3P	2B4P	3B5P	3B6P	4B6P	5B7P	6B8P	Spare 2
General factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Average £/sqft	£220	£220	£220	£220	£220	£220	£220	£220	£220	£220	£220	£220	£220	£220
Net internal area (ft2)	592	722	829	1,018	1,172	0	722	983	1,137	1,184	1,267	1,527	1,788	0
Value £/unit	£130,244	£158,898	£182,342	£224,020	£257,884	£0	£158,898	£216,206	£250,069	£260,489	£278,723	£336,031	£393,338	£0

Community Investment Share 20%

Value Factor	% Uplift
Phase 1	100%
Phase 2	100%
Phase 3	100%
Phase 4	105%
Phase 5	105%
Phase 6	105%
Phase 7	105%
Phase 8	110%
Phase 9	110%
Phase 10	110%
Phase 11	110%
Phase 12	115%
Phase 13	115%
Phase 14	115%
Phase 15	115%
Phase 16	120%
Phase 17	120%
Phase 18	120%
Phase 19	120%
Phase 20	120%
Phase 21	125%
Phase 22	125%
Phase 23	125%
Phase 24	125%
Phase 25	125%

1.2. Capitalised Ground Rents (apartments only)

Blended annual rent (£/unit)	£100
Yield	5.50%
Purchaser's costs	5.80%
Vendor's costs	1.50%

	Flats						Houses							
Bed Type	1B2P F	2B3P F	2B4P F	3B5P F	4B6P F	Spare 1	2B3P	2B4P	3B5P	3B6P	4B6P	5B7P	6B8P	Spare 2
General Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Blended annual rent	£100	£100	£100	£100	£100	£100	£0	£0	£0	£0	£0	£0	£0	£0
Flat / House	F	F	F	F	F	F	H	H	H	H	H	H	H	H
Yield	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%
Capitalised Value	£1,818	£1,818	£1,818	£1,818	£1,818	£1,818	£0	£0	£0	£0	£0	£0	£0	£0
Purchaser's costs	5.80%	5.80%	5.80%	5.80%	5.80%	5.80%	5.80%	5.80%	5.80%	5.80%	5.80%	5.80%	5.80%	5.80%
Vendor's costs	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%
Value C/F	£1,685	£1,685	£1,685	£1,685	£1,685	£1,685	£0	£0	£0	£0	£0	£0	£0	£0

1.3. Sales Associated Costs

Sales and marketing budget	2.00%	of market sale revenue and ground rents
Sales agents fees	1.50%	of market sale revenue and ground rents

2. Discounted Market Sale

2.1. Sales Revenue

Default Sales Price £175 £/sqft 80% of Open Market Value

	Flats						Houses							
Bed type	1B2P F	2B3P F	2B4P F	3B5P F	4B6P F	Spare 1	2B3P	2B4P	3B5P	3B6P	4B6P	5B7P	6B8P	Spare 2
General factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Average £/sqft	£175	£175	£175	£175	£175	£175	£175	£175	£175	£175	£175	£175	£175	£175
Net internal area (ft2)	592	722	829	1,018	1,172	0	722	983	1,137	1,184	1,267	1,527	1,788	0
Value £/unit	£103,604	£126,396	£145,045	£178,198	£205,135	£0	£126,396	£171,982	£198,919	£207,207	£221,711	£267,297	£312,883	£0

Value Factor	% Uplift

2.2. Capitalised Ground Rents (apartments only)

Blended annual rent (£/unit)	£100
Yield	5.50%
Purchaser's costs	5.80%
Vendor's costs	1.50%

	Flats						Houses							
Bed Type	1B2P F	2B3P F	2B4P F	3B5P F	4B6P F	Spare 1	2B3P	2B4P	3B5P	3B6P	4B6P	5B7P	6B8P	Spare 2
General Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Average rent £/unit	£100	£100	£100	£100	£100	£100	£0	£0	£0	£0	£0	£0	£0	£0
Flat / House	F	F	F	F	F	F	H	H	H	H	H	H	H	H
Yield	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%
Capitalised Value	£1,818	£1,818	£1,818	£1,818	£1,818	£1,818	£0	£0	£0	£0	£0	£0	£0	£0
Purchaser's costs	5.80%	5.80%	5.80%	5.80%	5.80%	5.80%	5.80%	5.80%	5.80%	5.80%	5.80%	5.80%	5.80%	5.80%
Vendor's costs	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%
Value C/F	£1,685	£1,685	£1,685	£1,685	£1,685	£1,685	£0	£0	£0	£0	£0	£0	£0	£0

2.3. Sales Associated Costs

Sales and marketing budget	2.00%	of market sale revenue and ground rents
Sales agents fees	1.50%	of market sale revenue and ground rents

3. Market Rent

Management costs	15.00%
Routine repairs and maintenance	5.00%
Major repairs	10.00%

Net rental yield 5.00%

	Flats						Houses							
Bed Type	1B2P F	2B3P F	2B4P F	3B5P F	4B6P F	Spare 1	2B3P	2B4P	3B5P	3B6P	4B6P	5B7P	6B8P	Spare 2
Gross Monthly Rent £/unit	£725	£885	£1,015	£1,247	£1,435	£0	£885	£1,203	£1,392	£1,450	£1,551	£1,870	£2,189	
Gross Annual Rent £/unit	£8,700	£10,620	£12,180	£14,964	£17,220	£0	£10,620	£14,439	£16,701	£17,397	£18,615	£22,442	£26,269	£0
Management costs	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%
Routine repairs and maintenance	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Major repairs	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Net annual rent (£/unit)	£6,090	£7,434	£8,526	£10,475	£12,054	£0	£7,434	£10,108	£11,691	£12,178	£13,030	£15,709	£18,389	£0
Net rental yield	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
Capitalised rental income	£121,800	£148,680	£170,520	£209,496	£241,080	£0	£148,680	£202,152	£233,815	£243,557	£260,606	£314,189	£367,771	£0

Value Factor	% Uplift

Payment Profile Upfront date 90 days before start on site

Use type	Upfront	Evenly over build	Practical Completion	Total
Market Rent Receipts	30.00%	40.00%	30.00%	100.00%

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4. Self Build Plots

4.1. Self Build Plots Revenue

Default Sales Price £72 £/sqft 33% of Open Market Value

	Flats						Houses							
Bed type	1B2P F	2B3P F	2B4P F	3B5P F	4B6P F	Spare 1	2B3P	2B4P	3B5P	3B6P	4B6P	5B7P	6B8P	Spare 2
General factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Average £/sqft	£0	£0	£0	£0	£0	£0	£72	£72	£72	£72	£72	£72	£72	£72
Flat / House	F	F	F	F	F	F	H	H	H	H	H	H	H	H
Net internal area (ft2)	592	722	829	1,018	1,172	0	722	983	1,137	1,184	1,267	1,527	1,788	0
Value £/plot	£0	£0	£0	£0	£0	£0	£52,003	£70,758	£81,841	£85,251	£91,218	£109,974	£128,729	£0

Community Investment Share 0%

Value Factor % Uplift

4.2. Plot Sales Associated Costs

Sales and marketing budget 0.00%
Sales agents fees 1.50%

8. Social Rented Income

8.1. Social Rent Income

Default Offer Price £135 £/sqft 61% of Open Market Value

	Flats						Houses							
Bed Type	1B2P F	2B3P F	2B4P F	3B5P F	4B6P F	Spare 1	2B3P	2B4P	3B5P	3B6P	4B6P	5B7P	6B8P	Spare 2
General Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Average £/sqft	£135	£135	£135	£135	£135	£135	£135	£135	£135	£135	£135	£135	£135	£135
Net Internal Area (ft2)	592	722	829	1,018	1,172	0	722	983	1,137	1,184	1,267	1,527	1,788	0
Average offer price £/unit	£79,923	£97,506	£111,892	£137,467	£158,247	£0	£97,506	£132,672	£153,452	£159,845	£171,035	£206,201	£241,367	£0

Payment Profile Upfront date 90 days before start on site

Payment Profile	Upfront	Start on Site	Evenly over build	Practical Completion	12 months after PC	Total
Social Rent Receipts	30%	20%	40%	9%	1%	100%

Value Factor % Uplift

9. Affordable Rent Income

9.1. Affordable Rent Income

Default Offer Price £153 £/sqft 70% of Open Market Value

	Flats						Houses							
Bed Type	1B2P F	2B3P F	2B4P F	3B5P F	4B6P F	Spare 1	2B3P	2B4P	3B5P	3B6P	4B6P	5B7P	6B8P	Spare 2
General Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Average £/sqft	£153	£153	£153	£153	£153	£153	£153	£153	£153	£153	£153	£153	£153	£153
Net Internal Area (ft2)	592	722	829	1,018	1,172	0	722	983	1,137	1,184	1,267	1,527	1,788	0
Average offer price £/unit	£90,579	£110,506	£126,811	£155,796	£179,347	£0	£110,506	£150,361	£173,912	£181,158	£193,839	£233,694	£273,549	£0

Payment Profile Upfront date 90 days before start on site

Payment Profile	Upfront	Start on Site	Evenly over build	Practical Completion	12 months after PC	Total
Affordable Rent Receipts	30%	20%	40%	9%	1%	100%

Value Factor % Uplift

10. Shared Ownership Income

10.1. Shared Ownership Income

Default Offer Price £175 £/sqft 80% of Open Market Value

	Flats						Houses							
Bed Type	1B2P F	2B3P F	2B4P F	3B5P F	4B6P F	Spare 1	2B3P	2B4P	3B5P	3B6P	4B6P	5B7P	6B8P	Spare 2
General Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Average £/sqft	£175	£175	£175	£175	£175	£175	£175	£175	£175	£175	£175	£175	£175	£175
Net Internal Area (ft2)	592	722	829	1,018	1,172	0	722	983	1,137	1,184	1,267	1,527	1,788	0
Average offer price £/unit	£103,604	£126,396	£145,045	£178,198	£205,135	£0	£126,396	£171,982	£198,919	£207,207	£221,711	£267,297	£312,883	£0

Payment Profile Upfront date 90 days before start on site

Payment Profile	Upfront	Start on Site	Evenly over build	Practical Completion	12 months after PC	Total
Shared Ownership Receipts	30%	20%	40%	9%	1%	100%

Value Factor % Uplift

10.2. Capitalised Ground Rents (apartments only)

Blended annual rent (£/unit) £0 £/unit *Freehold sold so no ground rents to Community*
Yield 5.50%
Purchaser's costs 5.80%
Vendor's costs 1.50%

	Flats						Houses							
Bed Type	1B2P F	2B3P F	2B4P F	3B5P F	4B6P F	Spare 1	2B3P	2B4P	3B5P	3B6P	4B6P	5B7P	6B8P	Spare 2
General Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Average rent £/unit	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0
Flat / House	F	F	F	F	F	F	H	H	H	H	H	H	H	H
Yield	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%
Capitalised Value	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0
Purchaser's costs	5.80%	5.80%	5.80%	5.80%	5.80%	5.80%	5.80%	5.80%	5.80%	5.80%	5.80%	5.80%	5.80%	5.80%
Vendor's costs	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%
Value C/F	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0

10.3. Sales Associated Costs

Sales and marketing budget 0.00%
Sales agents fees 0.00%

11. Shared Equity Income

11.1. Shared Equity Income

Default Offer Price £0 £/sqft 0% of Open Market Value

	Flats						Houses							
Bed Type	1B2P F	2B3P F	2B4P F	3B5P F	4B6P F	Spare 1	2B3P	2B4P	3B5P	3B6P	4B6P	5B7P	6B8P	Spare 2
General Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Average £/sqft	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0
Net Internal Area (ft2)	592	722	829	1,018	1,172	0	722	983	1,137	1,184	1,267	1,527	1,788	0
Average offer price £/unit	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0

Payment Profile Upfront date 90 days before start on site

Payment Profile	Upfront	Start on Site	Evenly over build	Practical Completion	12 months after PC	Total
Shared Equity Receipts	10%	25%	54%	10%	1%	100%

Value Factor % Uplift

11.2. Capitalised Ground Rents (apartments only)

Blended annual rent (£/unit) £0 £/unit *Freehold sold so no ground rents to Community*
Yield 5.50%
Purchaser's costs 5.80%
Vendor's costs 1.50%

	Flats						Houses							
Bed Type	1B2P F	2B3P F	2B4P F	3B5P F	4B6P F	Spare 1	2B3P	2B4P	3B5P	3B6P	4B6P	5B7P	6B8P	Spare 2
General Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Average rent £/unit	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0
Flat / House	F	F	F	F	F	F	H	H	H	H	H	H	H	H
Yield	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%
Capitalised Value	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0
Purchaser's costs	5.80%	5.80%	5.80%	5.80%	5.80%	5.80%	5.80%	5.80%	5.80%	5.80%	5.80%	5.80%	5.80%	5.80%
Vendor's costs	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%
Value C/F	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0

11.3. Sales Associated Costs

Sales and marketing budget 0.00%
Sales agents fees 0.00%

13. Non-residential Income

13.1. Capitalised values

Use type	Land Sale £/acre	Yield	Purchasers Costs	Capitalised Value £/acre	Discount	Discount £/value
Green Infrastructure	£0	7.00%	5.80%	£0	0	£0
Local Centre	£25,000	7.00%	5.80%	£336,429	0	£0
District Centre	£25,000	7.00%	5.80%	£336,429	0	£0
Town Centre	£25,000	7.00%	5.80%	£336,429	0	£0
Education	£0	7.00%	5.80%	£0	0	£0
Industrial Land	£15,000	7.00%	5.80%	£201,857	0	£0
Business Park	£15,000	7.00%	5.80%	£201,857	0	£0
Infrastructure	£0	7.00%	5.80%	£0	0	£0
Not used 2	£0	7.00%	5.80%	£0	0	£0
Not used 3	£0	7.00%	5.80%	£0	0	£0
Not used 4	£0	7.00%	5.80%	£0	0	£0
Not used 5	£0	7.00%	5.80%	£0	0	£0
Not used 6	£0	7.00%	5.80%	£0	0	£0
Not used 7	£0	7.00%	5.80%	£0	0	£0

Value C/F	Green Infrastructure	Local Centre	District Centre	Town Centre	Education	Industrial Land

14. Developers Margin

14.1. Residential

Private	%	
Open Market Sale	20%	of revenue
Discounted Market Sale	20%	of revenue
Market Rent	20%	of revenue
Self Build Plots	20%	of revenue
Spare 1	20%	of revenue
Spare 2	20%	of revenue
Spare 3	20%	of revenue

Affordable Housing	%	
Social Rent	8%	of build costs
Affordable Rent	8%	of build costs
Shared Ownership	8%	of build costs
Shared Equity	8%	of build costs
Spare 4	8%	of build costs

14.2. Non-Residential

	%	
Non-residential	15%	of non-residential revenue

15. Land Receipts from Housebuilders

15.1. Land receipts from housebuilders

Payment Profile	90 days prior to SoS	After 12 months	Second Anniversary from SoS	Practical completion
Housebuilder land receipt profile	40%	30%	0%	30%

Land finance rate	4.00%

15.2. SDLT Threshold Values

Greater than	£500,000	4.00%
Greater than	£250,000	3.00%

15.3. Purchasers Costs

	Rate	VAT	Cost
Purchasers Costs	1.50%	20.00%	1.80%

Payment Profile | Upfront date | 90 | days before start on site

Use type	Upfront	SoS	Evenly over build	Practical Completion	Total
Green Infrastructure	100.00%	0.00%	0.00%	0.00%	100.00%
Local Centre	100.00%	0.00%	0.00%	0.00%	100.00%
District Centre	100.00%	0.00%	0.00%	0.00%	100.00%
Town Centre	100.00%	0.00%	0.00%	0.00%	100.00%
Education	100.00%	0.00%	0.00%	0.00%	100.00%
Industrial Land	100.00%	0.00%	0.00%	0.00%	100.00%
Business Park	100.00%	0.00%	0.00%	0.00%	100.00%
Infrastructure	100.00%	0.00%	0.00%	0.00%	100.00%
Not used 2	100.00%	0.00%	0.00%	0.00%	100.00%
Not used 3	100.00%	0.00%	0.00%	0.00%	100.00%
Not used 4	100.00%	0.00%	0.00%	0.00%	100.00%
Not used 5	100.00%	0.00%	0.00%	0.00%	100.00%
Not used 6	100.00%	0.00%	0.00%	0.00%	100.00%
Not used 7	100.00%	0.00%	0.00%	0.00%	100.00%

Business Park	Infrastructure	Not used 2	Not used 3	Not used 4	Not used 5	Not used 6	Not used 7

Payment Profile | Delayed | 60 | days after last sale

Private	In line with sales	Last sale	Delayed payment	Total
Open Market Sale	100%			100%
Discounted Market Sale	100%			100%
Market Rent	100%			100%
Self Build Plots	100%			100%
Spare 1	100%			100%
Spare 2	100%			100%
Spare 3	100%			100%

Affordable Housing	in line with sales	Last sale	Delayed payment	Total
Social Rent	100%			100%
Affordable Rent	100%			100%
Shared Ownership	100%			100%
Shared Equity	100%			100%
Spare 4	100%			100%

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EXPENDITURE

16. Build Cost

16.1. Open Market Sale

Build rate (Code 4) £/ft2 on GIA	£110		Contingency on Build	5%
Cost Factor	% Uplift	Base £/ft2	Contingency	CF £/ft2

16.2. Discounted Market Sale

Build rate (Code 4) £/ft2 on GIA	£110		Contingency on Build	5%
Cost Factor	% Uplift	Base £/ft2	Contingency	CF £/ft2

16.3. Market Rent

Build rate (Code 4) £/ft2 on GIA	£110		Contingency on Build	5%
Cost Factor	% Uplift	Base £/ft2	Contingency	CF £/ft2

16.4. Self-Build Plots

Build rate (Code 4) £/ft2 on GIA	£0		Contingency on Build	5%
Cost Factor	% Uplift	Base £/ft2	Contingency	CF £/ft2

16.5. Spare 1

Build rate (Code 4) £/ft2 on GIA	£0		Contingency on Build	5%
Cost Factor	% Uplift	Base £/ft2	Contingency	CF £/ft2

16.6. Spare 2

Build rate (Code 4) £/ft2 on GIA	£0		Contingency on Build	5%
Cost Factor	% Uplift	Base £/ft2	Contingency	CF £/ft2

16.7. Spare 3

Build rate (Code 4) £/ft2 on GIA	£0		Contingency on Build	5%
Cost Factor	% Uplift	Base £/ft2	Contingency	CF £/ft2

16.8. Social Rented

Build rate (Code 4) £/ft2 on GIA	£110		Contingency on Build	5%
Cost Factor	% Uplift	Base £/ft2	Contingency	CF £/ft2

16.9. Affordable Rented

Build rate (Code 4) £/ft2 on GIA	£110		Contingency on Build	5%
Cost Factor	% Uplift	Base £/ft2	Contingency	CF £/ft2

16.10. Shared Ownership

Build rate (Code 4) £/ft2 on GIA	£110		Contingency on Build	5%
Cost Factor	% Uplift	Base £/ft2	Contingency	CF £/ft2

16.11. Shared Equity

Build rate (Code 4) £/ft2 on GIA	£110		Contingency on Build	5%
Cost Factor	% Uplift	Base £/ft2	Contingency	CF £/ft2

16.11. Spare 4

Build rate (Code 4) £/ft2 on GIA	£0		Contingency on Build	5%
Cost Factor	% Uplift	Base £/ft2	Contingency	CF £/ft2

17. Site Wide Infrastructure

Default average infrastructure cost (£/acre) £180,000

				Site Specific Works									
Phase	Acres	Default replaced	Cost £/total	Utilities and Energy	Social infrastructure	Strategic Roads	Offsite improvement works	Works 5	Works 6	Works 7	Works 8	Works 9	Non-specific works
Total	5,555	£192,045	£1,066,838,064	£20,000,000	£40,000,000	£20,000,000	£40,000,000	£0	£0	£0	£0	£0	£946,838,064

18. Non Residential Build Cost

18.1. Non Residential Build Cost

Use type	Rate £/acre	Contingency	Cost £/acre
Green Infrastructure	£0	5.00%	£0
Local Centre	£0	5.00%	£0
District Centre	£0	5.00%	£0
Town Centre	£0	5.00%	£0
Education	£135,000	5.00%	£141,750
Industrial Land	£0	5.00%	£0
Business Park	£0	5.00%	£0
Infrastructure	£0	5.00%	£0
Not used 2	£0	5.00%	£0
Not used 3	£0	5.00%	£0
Not used 4	£0	5.00%	£0
Not used 5	£0	5.00%	£0
Not used 6	£0	5.00%	£0
Not used 7	£0	5.00%	£0

Value C/F	Green Infrastructure	Local Centre	District Centre	Town Centre	Education	Industrial Land	Business Park	Infrastructure	Not used 2	Not used 3	Not used 4	Not used 5	Not used 6	Not used 7

19. Statutory Costs

19.1. Section 106 costs

Default average S106 cost (£/unit) £0

				Site Specific Works									
Phase	Units	Default replaced	Cost £/total	Contribution 1	Contribution 2	Contribution 3	Contribution 4	Contribution 5	Contribution 6	Contribution 7	Contribution 8	Contribution 9	Non-specific contributions
Total	50,000	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0

20. Fees and non-build related contingencies

20.1 Development Management Fee	2.00%	of all-in build costs incl. infrastructure
20.2 Development Contingency	2.50%	of total development cost
20.3 Professional Fees	8.00%	of all-in build costs incl. infrastructure
20.4 Site Wide Branding / Promotion	£20,000,000	total budget

Phase	Acres	Apportioned Cost £/acre
Total	2,781	£20,000,000

20.5 Strategic Masterplanning Fees £5,000,000 total budget

Phase	Acres	Apportioned Cost £/acre
Total	2,781	£5,000,000

21. Land Acquisition

21.1. Initial Land Payment	£10,000	£/acre		
21.2. Landowner - no profit share	50%	of land owners	£150,000	£/acre
21.3. Landowner - profit share	50%	of land owners	£100,000	£/acre

22. Finance Cost

22.1 Development Finance

		Annual Rate	Qtr Rate
Debt	50%	5.00%	1.23%
Equity	50%	0.00%	0.00%

22.2 Land Finance

	Annual Rate	Qtr Rate
Land Finance	4.00%	0.99%

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Wolfson Economic Prize

Garden City - Financial Model

EC HARRIS BUILT ASSET CONSULTANCY AN ARCADIS COMPANY

Programme

Project start date 01/01/2018 Programme length 45 years

Site Promotion 24 months Start 01/01/2018 End 01/01/2020

Pre-planning

Initial pre-planning period 24 months

Housebuild delivery 3 months before infrastructure delivery ends

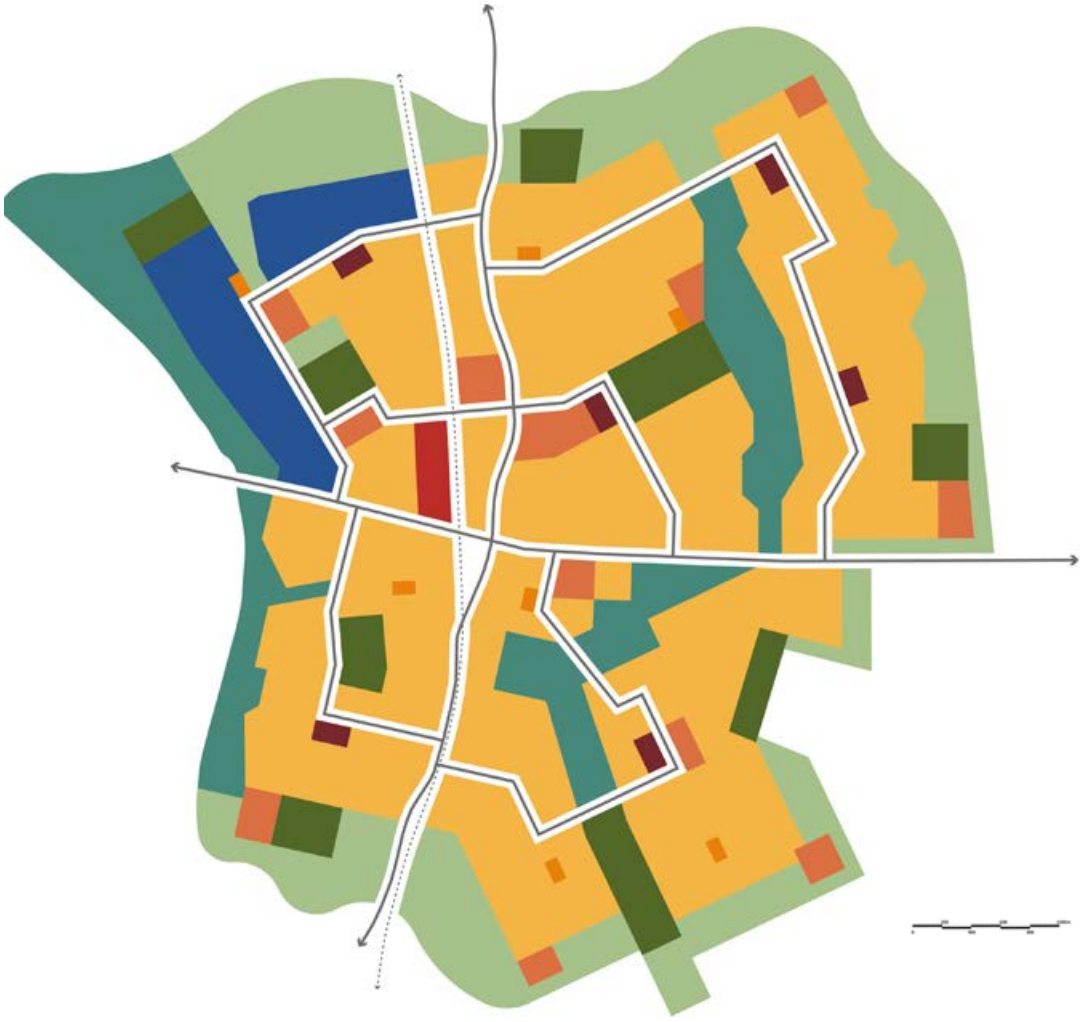
Sales commences 2 months before construction ends

Summary	Start	End	Start	End	Start	End	Start	End
	02/01/2020	16/07/2063	01/01/2022	15/07/2064	02/01/2022	16/04/2065	03/01/2022	15/05/2071

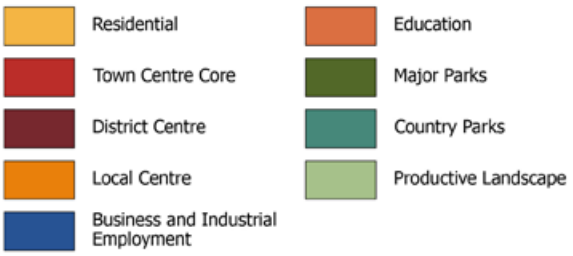
	Homes					Pre-Planning Period			Infrastructure Delivery			Housebuild Delivery		20	Market Sales	
Phase	Private Sale	Private Rent	Affordable	Acres	Months	Start	End	Months	Start	End	Build rate	Start	End	Private	Start	End
Phase 1	0	0	0	0	24	02/01/2020	01/01/2022	0	01/01/2022	01/01/2022	0	02/01/2022	02/01/2022	0	03/01/2022	03/01/2022
Phase 2	0	0	0	18	12	02/01/2022	02/01/2023	12	02/01/2023	02/01/2024	0	03/01/2024	03/01/2024	0	04/01/2024	04/01/2024
Phase 3	50	15	35	141	12	03/01/2024	02/01/2025	12	02/01/2025	02/01/2026	100	03/10/2025	03/10/2026	50	03/08/2026	18/10/2026
Phase 4	150	45	105	26	12	03/10/2025	03/10/2026	12	03/10/2026	03/10/2027	300	05/07/2027	04/07/2028	150	04/05/2028	18/12/2028
Phase 5	300	90	210	196	12	05/07/2027	04/07/2028	12	04/07/2028	04/07/2029	600	05/04/2029	05/04/2030	300	03/02/2030	05/05/2031
Phase 6	375	113	262	61	12	05/04/2029	05/04/2030	12	05/04/2030	05/04/2031	750	05/01/2031	05/01/2032	375	05/11/2031	28/05/2033
Phase 7	500	150	350	121	12	05/01/2031	05/01/2032	12	05/01/2032	04/01/2033	1,000	05/10/2032	05/10/2033	500	05/08/2033	05/09/2035
Phase 8	750	225	525	166	12	05/10/2032	05/10/2033	12	05/10/2033	05/10/2034	1,500	07/07/2034	07/07/2035	750	07/05/2035	21/06/2038
Phase 9	875	263	612	134	12	07/07/2034	07/07/2035	12	07/07/2035	06/07/2036	1,750	07/04/2036	07/04/2037	875	05/02/2037	28/09/2040
Phase 10	1000	300	700	436	12	07/04/2036	07/04/2037	12	07/04/2037	07/04/2038	2,000	07/01/2038	07/01/2039	1,000	07/11/2038	06/01/2043
Phase 11	1000	300	700	167	12	07/01/2038	07/01/2039	12	07/01/2039	07/01/2040	2,000	08/10/2039	07/10/2040	1,000	07/08/2040	06/10/2044
Phase 12	1000	300	700	219	12	08/10/2039	07/10/2040	12	07/10/2040	07/10/2041	2,000	09/07/2041	09/07/2042	1,000	09/05/2042	08/07/2046
Phase 13	1250	375	875	196	12	09/07/2041	09/07/2042	12	09/07/2042	09/07/2043	2,500	10/04/2043	09/04/2044	1,250	08/02/2044	23/04/2049
Phase 14	1250	375	875	235	12	10/04/2043	09/04/2044	12	09/04/2044	09/04/2045	2,500	09/01/2045	09/01/2046	1,250	09/11/2045	23/01/2051
Phase 15	1500	450	1050	489	12	09/01/2045	09/01/2046	12	09/01/2046	09/01/2047	3,000	10/10/2046	10/10/2047	1,500	10/08/2047	08/11/2053
Phase 16	1500	450	1050	267	12	10/10/2046	10/10/2047	12	10/10/2047	09/10/2048	3,000	11/07/2048	11/07/2049	1,500	11/05/2049	09/08/2055
Phase 17	1500	450	1050	292	12	11/07/2048	11/07/2049	12	11/07/2049	11/07/2050	3,000	12/04/2050	12/04/2051	1,500	10/02/2051	10/05/2057
Phase 18	1500	450	1050	268	12	12/04/2050	12/04/2051	12	12/04/2051	11/04/2052	3,000	12/01/2052	11/01/2053	1,500	11/11/2052	09/02/2059
Phase 19	1500	450	1050	253	12	12/01/2052	11/01/2053	12	11/01/2053	11/01/2054	3,000	12/10/2053	12/10/2054	1,500	12/08/2054	10/11/2060
Phase 20	1500	450	1050	489	12	12/10/2053	12/10/2054	12	12/10/2054	12/10/2055	3,000	14/07/2055	13/07/2056	1,500	13/05/2056	11/08/2062
Phase 21	1500	450	1050	266	12	14/07/2055	13/07/2056	12	13/07/2056	13/07/2057	3,000	14/04/2057	14/04/2058	1,500	12/02/2058	12/05/2064
Phase 22	1500	450	1050	272	12	14/04/2057	14/04/2058	12	14/04/2058	14/04/2059	3,000	14/01/2059	14/01/2060	1,500	14/11/2059	11/02/2066
Phase 23	1500	450	1050	242	12	14/01/2059	14/01/2060	12	14/01/2060	13/01/2061	3,000	14/10/2060	14/10/2061	1,500	14/08/2061	13/11/2067
Phase 24	1500	450	1050	245	12	14/10/2060	14/10/2061	12	14/10/2061	14/10/2062	3,000	16/07/2062	16/07/2063	1,500	16/05/2063	13/08/2069
Phase 25	1500	450	1050	357	12	16/07/2062	16/07/2063	12	16/07/2063	15/07/2064	3,000	16/04/2064	16/04/2065	1,500	14/02/2065	15/05/2071
	25000	7501	17499	5555												

APPENDIX 5

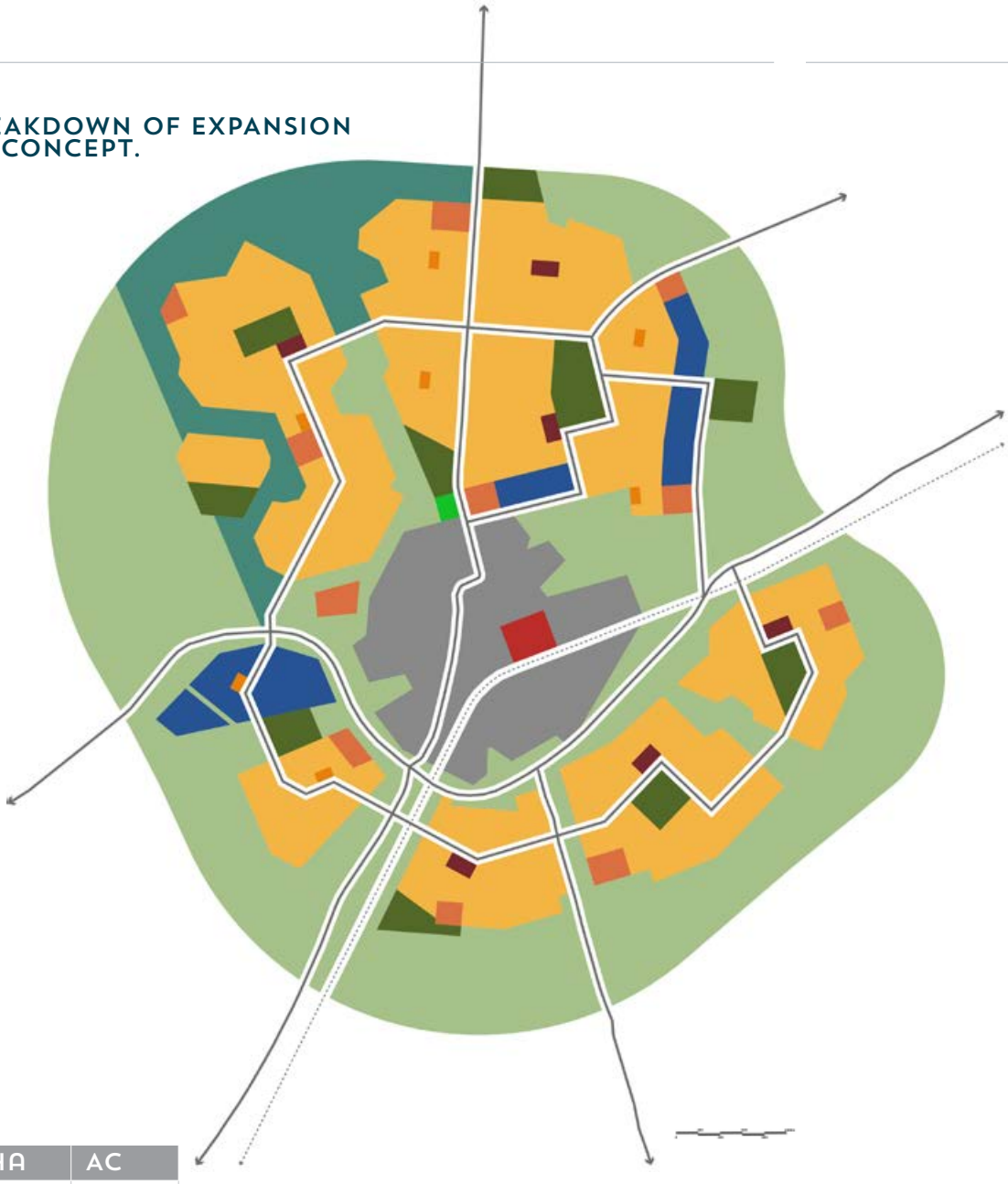
LAND USE BREAKDOWN OF STAND-ALONE GARDEN CITY CONCEPT.



AREA	HA	AC
Residential	1250.00	3088.82
Town Centre Core	15.00	37.07
District Centre	21.00	51.89
Local Centre	10.50	25.95
Employment	131.70	325.44
Education	91.00	224.87
Major Parks	165.00	407.73
Country Parks	320.00	790.74
Productive Landscape	550.13	1359.41
TOTAL	2554.34	6311.91

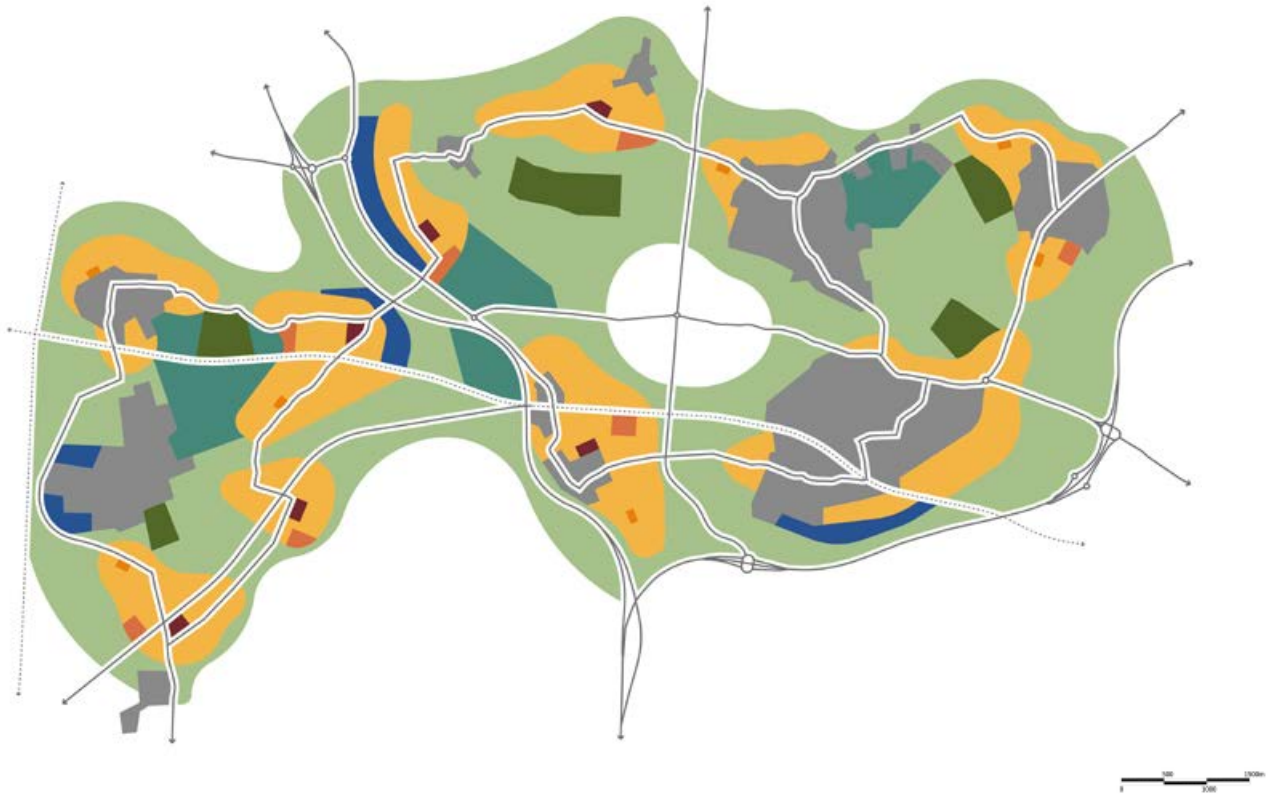


LAND USE BREAKDOWN OF EXPANSION GARDEN CITY CONCEPT.



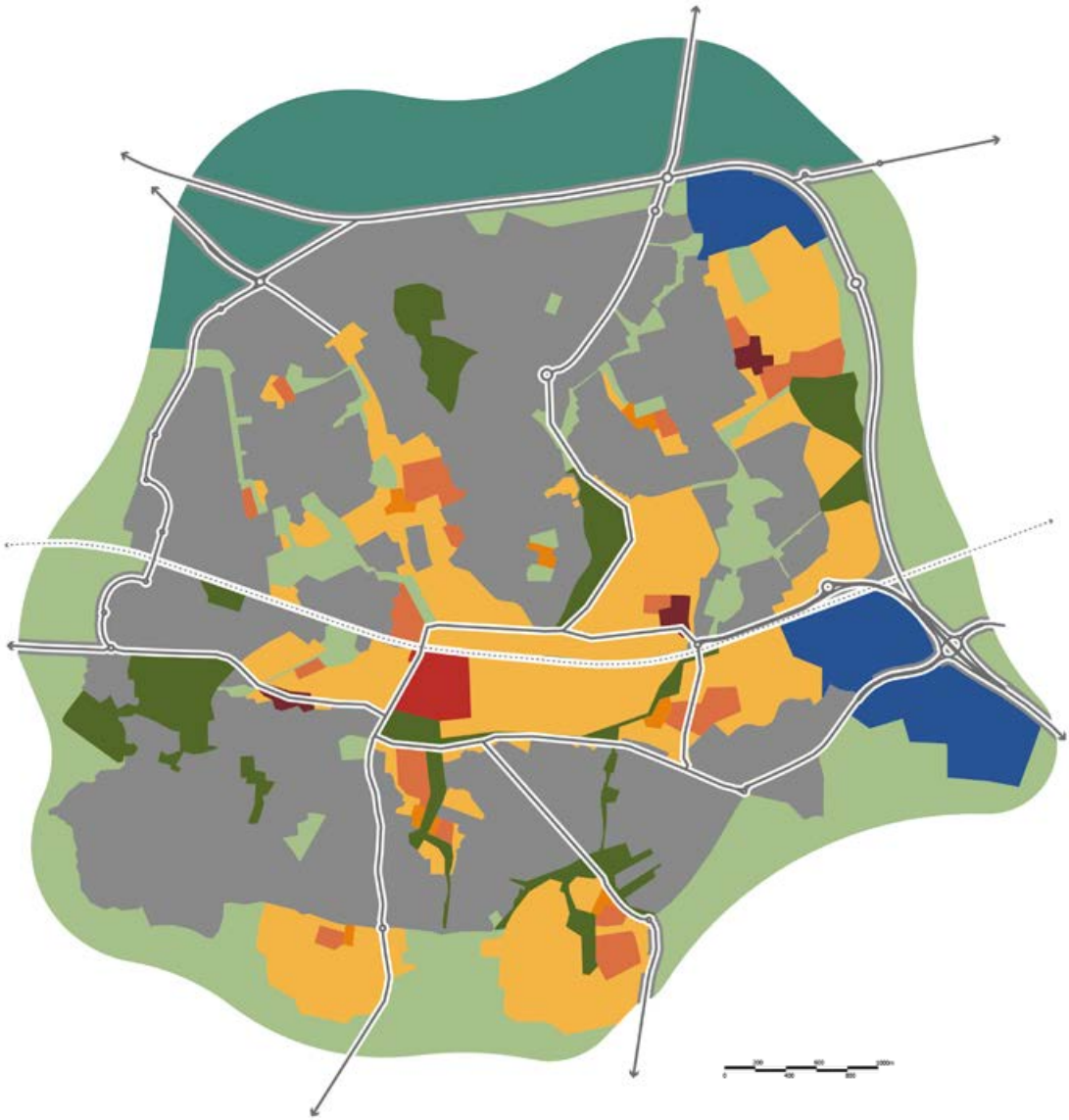
AREA	HA	AC
Residential	1250.00	3088.82
Existing Residential	349.20	862.89
Town Centre Core	15.00	37.07
District Centre	21.00	51.89
Local Centre	10.50	25.95
Employment	131.70	325.44
Education	76.00	187.80
Major Parks	165.00	407.72
Sports Facility	4.00	9.88
Country Parks	320.00	790.75
Productive Landscape	1932.65	4775.67
TOTAL	4275.05	10563.88

LAND USE BREAKDOWN OF STRING OF PEARLS GARDEN CITY CONCEPT.



AREA	HA	AC
Residential	1171.13	2893.93
Existing Development	851.17	2103.28
Town Centre Core	0.00	0.00
District Centre	21.00	51.89
Local Centre	10.50	25.95
Employment	131.70	325.45
Education	41.00	101.31
Major Parks	165.00	407.72
Country Parks	320.00	790.74
Productive Landscape	2798.32	6914.80
TOTAL	5509.83	13615.07

LAND USE BREAKDOWN OF REGENERATION & INSERTION GARDEN CITY CONCEPT.



AREA	HA	AC
Residential	500.00	1235.53
Existing Development	1426.56	3525.10
Town Centre Core	18.85	46.58
District Centre	11.91	29.43
Local Centre	12.16	30.06
Employment	131.70	325.44
Education	66.45	164.19
Major Parks	165.00	407.73
Country Parks	320.00	790.75
Productive Landscape	623.19	1539.93
TOTAL	3275.82	8094.73

WOLFSON ECONOMICS PRIZE MMXV

MASTER SHEET STANDALONE

Assumptions
- average household size: **2.3** people per household
- population density: **407** people / sq km (ONS census 2011)
- ★ average net density: **40** dph
- ★ 6 acre standard: **2.43** ha per 1000 pop. **0.002** ha per person
- ★ pitches per 1000 ppl: **1.2** ha
- infrastructure (roads): **5** % of total site area
- ★ assumes employment rate: **1** job per household

Lead in time

THRESHOLDS

	Population	homes		Yr.	0	1	2	3	4	5	6	7	8	9	10	11	12	1
			Residential															
			new homes per annum		-	-	-	100	300	600	750	1,000	1,500	1,750	2,000	2,000	2,000	2,500
			cumulative homes		-	-	-	100	400	1,000	1,750	2,750	4,250	6,000	8,000	10,000	12,000	14,500
			new population per annum		-	-	-	**230**	**690**	**1,380**	**1,725**	**2,300**	**3,450**	**4,025**	**4,600**	**4,600**	**4,600**	**5,750**
			cumulative population		-	-	-	230	920	2,300	4,025	6,325	9,775	13,800	18,400	23,000	27,600	33,350
★			net land take per annum (ha)		-	-	-	2.50	7.50	**15.00**	18.75	25.00	37.50	43.75	**50.00**	50.00	50.00	62.50
			cumulative resi land take (ha)		-	-	-	2.50	10.00	**25.00**	43.75	68.75	106.25	150.00	**200.00**	250.00	300.00	362.50
			Green Infrastructure (ha)															
	1,200	500	Local park area/yr (ha)	0.5			0.5		0.5	0.5	0.5	1.0	1.5	1.5	2.0	2.0	2.0	2.
	4,000	1,739	Neighbourhood park area/yr (ha)	1.0			1.0			1.0	1.0		1.0	1.0	1.0	1.0	1.0	2.
	8,000	3,478	Town park area/yr (ha)	15.0				15.0				15.0			15.0		15.0	
	15,000	6,522	Country park area/yr (ha)	80.0				80.0							80.0			
			Productive landscape	100.0	sqm per household					100					100			
			Subtotal all POS per annum			1.5	95.0	0.5		**101.5**	1.5	16.0	2.5	2.5	**198.0**	3.0	18.0	4.5
			Cumulative POS per annum			1.5	96.5	97.0		**198.5**	200.0	216.0	218.5	221.0	**419.0**	422.0	440.0	444.5
			GI typologies															
			POS facilities [ignore]															
			LEAP (400 sqm 5 x equipment)	[assumes one per loc														
			NEAP (1000 sqm 8 x equipment)															
			Pitches (football/rugby x 3)															
			Cricket															
			MUGAs															
			Track & field	15.0														ared with
			Allotments [included in other POS]															
			Mixed use centres															
	6,000	2,609	Local centre requirement	1.5	[assumes 1 yr lag]			0	0	0.38	1	1	2	2	3.07	4	5	
			Local centre land allocated (ha)						1.50			1.50				1.50		
	12,000	5,217	District centre requirement	3.5	[assumes 3 yr lag]			0	0	0	0	1	1	1	2	2	2	
			District centre land allocated (ha)							3.50			3.50			3.50		
	24,000	10,435	Town centre requirement					0	0	0.10	0	0	0	1	0.77	1	1	
			Town centre land allocated(ha)	15	[assumes land is allocated in total and built over time]								15.00					
			Total land area per year (ha)				0	0	0	**5**	0	0	20	0	**0**	3.5	1.5	
			Cumulative land take (ha)				0	0	0	**5**	5	5	25	25	**25**	28.5	30	
★			**Community infrastructure**	[all facilities phased over time]														
★	4,000	1,739	Community building					temp meeting place										
★	6,000	2,609	Pub/café															
★	5,000	2,174	Post office															
★	1,500	652	Local shop/foodstore															
			Major foodstore															
			Comparison retail										local businesses					
★	24,000	10,435	Sports / Leisure centre								temp share		permanent facility with 6FE SS					
			Cinema										single screen in arts building					
			Library													temp facility		
			Place of worship										temp ecumenical centre			ecumenical centre		
		???	Cemetary															
			Health	[assume included in town centre]														
★	10,000	4,348	GP surgery								temp facility							
	25,000	10,870	Health centre		included in town centre land													
	50,000	21,739	Urgent care / polyclinic															
	100,000	43,478	Hospital		looking for stats on catchments													
			sub totals all health per year															
			Administration	[included in town centre]														
			Fire station (2 tenders)	[tenders can be phased]														
★	15,000		Police station										temp facility			station can expand		
			Town Hall													temp facility to expand		
			Social services								allocated office space					bespoke building		
			Education															
★	Population	homes	**Primary Schools**															
	2,000	800	nursery [assumed included with PS]															
	2,000	800	PS forms required per year					0	0	1	1	1	2	2	3	3	3	
			cumulative FE					-	0	1	2	3	5	7	10	12	15	18
			PS starts (assume 3yr lag)				1FE			2FE	2FE	2FE	3FE	2FE	1FE,2FE	3FE	3FE	2*2FE
			Total PS land allocated per year	ha	-	-	-	1.8		2.1	2.1	2.1	2.6	2.1	3.9	2.6	2.6	4.2
	2,000	870	Primary school (1FE)	1.8														
	4,000	1,739	Primary School (2FE)	2.1														
	6,000	2,609	Primary School (3FE)	2.6														
			No. Pschools per year							1	0	1	1	1	1	1	2	
			Cumulative Pschools					-	-	**1**	1	2	3	4	**5**	6	8	9
			Secondary school															
	2,000	870	SS forms required					0	0	1	1	1	2	2	2	2	2	3
			cumulative FE					0	0	1	2	3	5	7	9	12	14	17
			SS starts (assumes 3 yr lag)			4FE					6FE				4FE		6FE	
			Total SS land allocated per year	ha		5.0						7.0			5.0		7.0	
	4,000	1,739	SS 4FE (600 pupils)	5							[shared campus with tech college]							
★	6,000	2,609	SS 6FE (900 places) required	7														
	8,000	3,478	SS 8FE (1200 places)	9														
			No. Sschools per year					-	-	1	-	-	-	1	-	-	1	-
			Cumulative Sschools					-	-	**1**	1	1	1	2	**2**	2	3	3
			Teriary education															
			Tertiary starts			CC	[shared site with SS]										CC	
★			Total tertiary land allocated/yr			1											10	
	50,000	21,739	Community college (CC)	10														
★	80,000	34,783	University/tertiary college (TC)	15														
			No. collleges each yr						1									
			Land take all education per year (ha)				6.0	1.8	0.0	**2.1**	2.1	9.1	2.6	2.1	**8.9**	2.6	19.6	4.
			Cumulative education land (ha)				6.0	7.8	7.8	**9.9**	12.0	21.1	23.7	25.8	**34.7**	37.3	56.9	61.
		% jobs	**Employment land (ha)**	total jobs required				100	400	1000	1,750	2,750	4,250	6,000	8,000	10,000	12,000	14,500
★		14	Industrial estate jobs					14	56	141	247	388	599	846	1,128	1,410	1,692	2,045
			Cumulative industrial estate area					0.24675	0.987	2.5	4.318125	6.785625	10.48688	14.805	19.7	24.675	29.61	35.7787
			Industrial land per year					0.25	0.74	**1.5**	1.85	2.47	3.70	4.32	**4.9**	4.94	4.94	6.1
		17	Business park jobs					17	67	167	292	459	710	1,002	1,336	1,670	2,004	2,422
			Cumulative business park area					0.017	0.067	0.167	0.292	0.459	0.710	1.002	1.336	1.670	2.004	2.422
			Business park land per year					0.0167	0.0501	**0.1**	0.12525	0.167	0.2505	0.29225	**0.3**	0.334	0.334	0.417
			subtotal cumulative area (ha)					0.263	1.054	2.635	4.610	7.245	11.197	15.807	21.076	26.345	31.614	38.200
			Subtotals all emp land / yr (ha)					0.26	0.79035	**1.6**	1.98	2.63	3.95	4.61	**5.3**	5.27	5.27	6.5
			Cumulative employment land (ha)					0.26	1.05	**2.6**	4.61	7.24	11.20	15.81	**21.1**	26.35	31.61	38.2
			Cumulative jobs per year					31	123	**308**	539	847	1,309	1,848	**2,464**	3,080	3,696	4,466
			Industrial parks	varies 35-50ha							[15ha partial complete]					[30ha partial complete]		
			Business parks	average 3ha							[1ha partial complete]					[2ha partial complete]		
			Mixed use office [included in mixed	use area]														
		6.6	Mixed use office jobs					7	26	66	116	182	281	396	528	660	792	957
			Cumulative mixed use office area					0.031	0.124	0.310	0.543	0.853	1.318	1.861	2.482	3.102	3.722	4.498
			Mixed use land per year [NB: ignore this, its included in the centres]					0.031	0.09306	**0.2**	0.233	0.310	0.465	0.543	**0.6**	0.620	0.620	0.77
			TOTAL ALL LAND USES PER YEAR				7.50	99.56	8.79	**125.2**	24.33	52.73	66.55	52.96	**262.2**	64.37	94.37	77.75
			CUMULATIVE TOTALS PER YEAR				7.50	107.06	115.85	**241.0**	265.36	318.09	384.65	437.61	**699.8**	764.15	858.51	936.26
		5 %	Infrastructure area per year				0.4	5.0	0.4	6.3	1.2	2.6	3.3	2.6	13.1	3.2	4.7	3.9
			Infrastructure (cumulative)				0.4	5.4	5.8	12.1	13.3	15.9	19.2	21.9	35.0	38.2	42.9	46.8
			TOTAL BUILT AREA BY YEAR (Ha)				7.88	104.54	9.23	131.44	25.54	55.37	69.88	55.61	275.28	67.59	99.09	81.68
			TOTAL BUILT FOOTPRINT cumulative				7.88	112.42	121.65	253.09	278.63	334.00	403.88	459.49	734.76	802.35	901.44	983.12

WOLFSON ECONOMICS PRIZE MMXV

13	14	15	16	17	18	19	20	21	22	23	24	25	Totals	
	2,500	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	50,000	total homes
	17,000	20,000	23,000	26,000	29,000	32,000	35,000	38,000	41,000	44,000	47,000	50,000		
	5,750	**6,900**	**6,900**	**6,900**	**6,900**	**6,900**	**6,900**	**6,900**	**6,900**	**6,900**	**6,900**	**6,900**	115,000	total pop.
	39,100	46,000	52,900	59,800	66,700	73,600	80,500	87,400	94,300	101,200	108,100	115,000		
	62.50	**75.00**	75.00	75.00	75.00	75.00	**75.00**	75.00	75.00	75.00	75.00	**75.00**	**1,250.0**	total resi land take
	425.00	**500.00**	575.00	650.00	725.00	800.00	**875.00**	950.00	1,025.00	1,100.00	1,175.00	**1,250.00**		
5	2.5	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	50.0	total LP (ha)
0	2.0	2.0	2.0	2.0	1.0	2.0	1.0	2.0	2.0	2.0	1.0	1.0	30.0	total MP (ha)
	15.0		15.0	15.0		15.0		15.0	15.0		15.0		165.0	total MP (ha)
		80.0					80.0						320.0	total CP (ha)
		100					100					100	500.0	ha
	19.5	**185.0**	20.0	20.0	4.0	20.0	**184.0**	20.0	20.0	5.0	19.0	**104.0**	**1065.0**	total GI ha
	464.0	**649.0**	669.0	689.0	693.0	713.0	**897.0**	917.0	937.0	942.0	961.0	**1065.0**		

CC

hared with TC

6	7	7.67	9	10	11	12	13.42	15	16	17	18	19.17		
		1.50			1.50			1.50			1.50		**10.50**	ha
3	3	4	4	5	6	6	7	7	8	8	9	10		
		3.50			3.50			3.50					**21.00**	ha
1	2	1.92	2	2	3	3	3.35	4	4	4	5	4.79		
													15.00	ha
0	0	**3.5**	1.5	0	3.5	1.5	**0**	3.5	1.5	0	0	**1.5**	**46.5**	ha
0	30	**33.5**	35	35	38.5	40	**40**	43.5	45	45	45	**46.5**		

athletics field with country

town centre facility with pool

town centre multi screen

safeguard land to expand into hospital

council offices, services and chambers

3	3	4	4	4	4	4	4	4	4	4	4	4		
4	21	25	29	32	36	40	44	47	51	55	59	62		
	2*2FE	1FE,2FE	3FE	2*2FE	1FE,3FE	2*2FE	2*2FE	1FE,3FE	2*2FE	3FE				
2	4.2	3.9	2.6	4.2	4.4	4.2	4.2	4.4	4.2	2.6	-	-	**65**	ha
													5	1FE
													18	2FE
													7	3FE
1	1	2	2	2	1	2	2	2	2	2	2	1	**30**	Pschools
9	10	**12**	14	16	17	19	**21**	23	25	27	29	**30**		
3	3	3	3	3	3	3	3	3	3	3	3	3		
7	20	23	26	30	33	37	40	44	47	51	54	58		
	8FE		6FE		8FE		4FE		6FE	4FE				
	7.0		7.0		9.0		5.0		7.0	5.0			**64**	ha
													4	4FE
													4	6FE
													2	8FE
	1	-	1	0	1	0	1	0	1	0	1	1	**10**	SSchools
3	4	**4**	5	5	6	6	**7**	7	8	8	9	**10**		

TC [uni/poly]

				15									**26**	ha
													2	CC
													1	TC
		1					1						**3**	colleges
2	11.2	**3.9**	9.6	19.2	13.4	4.2	**9.2**	4.4	11.2	7.6	0.0	**0.0**	**155.0**	ha
1	72.3	**76.2**	85.8	105.0	118.4	122.6	**131.8**	136.2	147.4	155.0	155.0	**155.0**		
0	17,000	20,000	23,000	26,000	29,000	32,000	35,000	38,000	41,000	44,000	47,000	50,000		
5	2,397	2,820	3,243	3,666	4,089	4,512	4,935	5,358	5,781	6,204	6,627	7,050	**7,050**	industrial jobs
5	41.9475	49.4	56.7525	64.155	71.5575	78.96	86.4	93.765	101.1675	108.57	115.9725	123.4		
7	6.17	**7.4**	7.40	7.40	7.40	7.40	**7.4**	7.40	7.40	7.40	7.40	**7.4**	**123.4**	total ha industrial
2	2,839	3,340	3,841	4,342	4,843	5,344	5,845	6,346	6,847	7,348	7,849	8,350		
2	2,839	3,340	3,841	4,342	4,843	5,344	5,845	6,346	6,847	7,348	7,849	8,350		
5	0.4175	**0.5**	0.501	0.501	0.501	0.501	**0.5**	0.501	0.501	0.501	0.501	**0.5**	**8.4**	total ha business park
0	44.787	52.690	60.594	68.497	76.401	84.304	92.208	100.111	108.015	115.918	123.822	131.725		
9	6.59	**7.9**	7.90	7.90	7.90	7.90	**7.9**	7.90	7.90	7.90	7.90	**7.9**	**131.7**	total all employment land
0	44.79	**52.7**	60.59	68.50	76.40	84.30	**92.2**	100.11	108.01	115.92	123.82	**131.7**		
5	5,236	**6,160**	7,084	8,008	8,932	9,856	**10,780**	11,704	12,628	13,552	14,476	**15,400**		
			[50ha complete]					[35ha]					[35ha]	
			[3ha complete]					[3ha]					[3ha]	

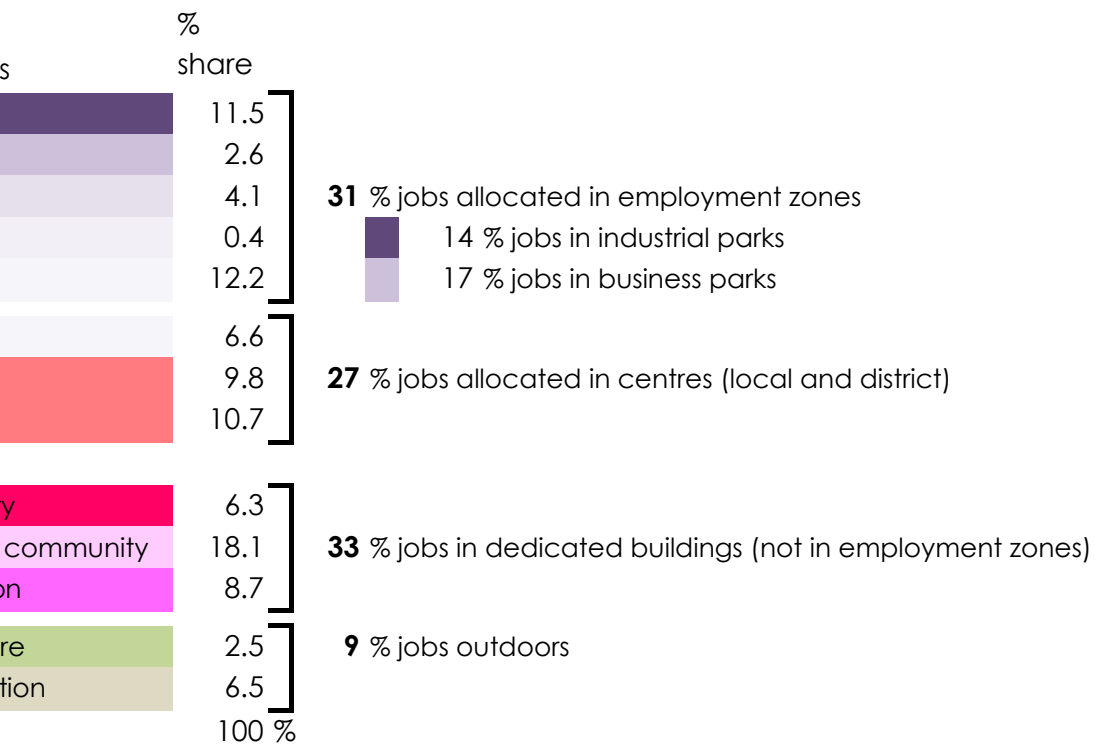
7	1,122	1,320	1,518	1,716	1,914	2,112	2,310	2,508	2,706	2,904	3,102	3,300	3,300	mixed use office jobs
3	5.273	6.204	7.135	8.065	8.996	9.926	10.857	11.788	12.718	13.649	14.579	15.510	15.51	ha
6	0.776	**0.9**	0.931	0.931	0.931	0.931	**0.9**	0.931	0.931	0.931	0.931	**0.9**	**15.51**	ha
9	99.79	**275.3**	114.00	122.10	103.80	108.60	**276.1**	110.80	115.60	95.50	101.90	**188.4**	**2,648.2**	
0	1,036.09	**1,311.4**	1,425.39	1,547.50	1,651.30	1,759.90	**2,036.0**	2,146.81	2,262.41	2,357.92	2,459.82	**2,648.2**		
9	5.0	13.8	5.7	6.1	5.2	5.4	13.8	5.5	5.8	4.8	5.1	9.4		5% allowance for roads etc.
3	51.8	65.6	71.3	77.4	82.6	88.0	101.8	107.3	113.1	117.9	123.0	132.4	132.4	total ha roads etc
4	104.78	289.07	119.70	128.21	108.99	114.03	289.91	116.34	121.38	100.28	107.00	197.82	132.41	ha infrastructure per yr
2	1,087.89	1,377.0	1,496.66	1,624.87	1,733.87	1,847.90	2,137.81	2,254.15	2,375.54	2,475.81	2,582.81	2,780.64	2,780.6	ha total built footprint

UK GVA and employment by sector (2011)

* (Source: BIS economic paper No. 18, Industrial strategy UK sector analysis, Departent for Business Innovation and Skills, Septem
* (Source: Employment Densities Guide, 2nd Edition; 2010, Drivers Jonas Deloitte for OffPat & Homes & Communities Agency)

		employment		use class	* Density sqm/person		Use clas
		thousand	* % share				
Low -med tech manufacturing	Food, beverges & tobacco	399	1.3	B1(c)	47		B8
	Metal, plastic & non-metal mine	584	1.9	B1(c)	47		B2
	Other manufacturing	566	1.8	B2	36		B1(c)
	Shipbuilding	32	0.1	B8	70		B1(b)
	total	1581	**5.1**				B1(a)
Med - high tech manufacturing	Chemicals	119	0.4	B1(c)	47		B1(a)
	ICT & precision instruments	138	0.4	B1(c)	47		A1
	Automotive	133	0.4	B2	36		A2
	Aerospace	112	0.4	B2	36		
	Machinery, electrical & transpor	412	1.3	B8	70		hospitalit
	Pharmaceuticals	38	0.1	B1(c)	47		health &
	total	952	**3**				educatio
Other production	Agriculture, forestry, fishing	409	1.3				agricultu
	Mining & quarrying	61	0.2				construc
	Utilities	327	1				
	Construction	2036	6.5				
	total	2833	**9**				
Knowledge services	Communications	227	0.7	B1(a)	10		
	Digital, creative & information	1174	3.7	B1(a)	12		
	Financial services	1116	3.6	A2	16		
	Business services	2235	7.1	A2	16		
	Research & development	125	0.4	B1(b)	36		
	Education	2722	8.7			(assume an average	
	total	7599	**24.2**				
Other services	Hotels & re *hotel			C1	2	employees per bedr	
	*restaurant	1990	6.3	A3	18		
	Retail	3070	9.8	A1	19		
	Transport, storage, distribution	3183	10.1	B8	80		
	Real estate	417	1.3	B1(a)	12		
	Admin & support services	2432	7.8	B1(a)	10		
	Public admin & defence	1654	5.3	B1(a)	12		
	Health & social care	4079	13	D1	36	???	
	Community, social & personal se	1591	5.1	D2	65	(assumed based on	
	total	18416	**58.7**				

ber 2012)



e per school)

oom

sport, cinema, cultural attractions)

APPENDIX 6

CONSTRUCTION EMPLOYMENT

According to research by the Homes & Communities Agency(FN38) on the number of jobs to be associated with construction projects, £1m of construction investment requires 10.6 to 32.6 "man years" of work for different types of construction. CLG assessments quote 10 to 30.8 man years as illustrated in the following table:

TYPE OF CONSTRUCTION	NUMBER OF WORKERS REQUIRED OVER ONE YEAR TO DELIVER £1M OF CONSTRUCTION INVESTMENT
New housing	19.9
Infrastructure	13.9
Public non housing	10.7
Private industrial	10.0
Private commercial	16.6
Housing repair/maintenance	30.8
Non housing repair/maintenance	29.7

SOURCE: HCA, "CALCULATING COST PER JOB, BEST PRACTICE NOTE" (2011) AND CLG RE JOB GROWTH IMPLICATIONS OF NEW HOUSING AND PRESENTED AT NHF CONFERENCE (2013)

Whilst these are not precise benchmarks these assessments provide some guide to potential construction employment. Applying these to the anticipated construction value of the generic Garden City, indicates the following man-years to be generated:

	CONSTRUCTION VALUE [SOURCE: APPENDIX 3]	MAN YEARS
Housing	£21,307,903,053	424,027.27
Education	£54,290,959	580.91
SW Infrastructure	£1,066,838,064	14,829.05
Commercial	£601,128,000	9,978.72
Industrial	£1,368,480,960	13,684.81
	TOTAL	463,100.77

The resulting number of jobs might be calculated by taking the 25 year period and averaging job creation over this period. However, this is likely to under-estimate the scale of construction employment each year within the development period since there will be significant peaks in construction. As a guide, we have therefore divided the man years figure both by 25 (to provide the average) and by 5 and 10 (to reflect the potential peaks):

ESTIMATED NUMBER OF CONSTRUCTION JOBS	JOBS
Man years	463,100
Jobs if divided by 5 years	92,620
Or if divided by 10 years	46,310

Just as the construction expenditure will have indirect and induced effects (as explained above), so too will the construction employment. Research for the National Housing Federation suggests that the construction sector has an employment multiplier of up to 2.51 for indirect and induced impacts (i.e. times 1.51 for net additional jobs). The knock-on consequence of the construction jobs through the economy is therefore to support a further 27,971 jobs (on average).

Multiplied by the envisaged wave of 40 Garden Cities, this suggests the creation of some 740,000 construction jobs (directly) and a further 1.1m further jobs through the construction of the Garden Cities – a substantial contribution to national employment and the national economy.

COMMENTARY ON ADJUSTMENTS FOR NET ADDITIONALITY

Leakage effect: The construction industry tends to be project-led by nature which means that labour mobility can be high. However, if working on the scale of a Garden City there is a real opportunity for local people to be involved, especially once an initial phase of infrastructure and homes has been established. Mitigation measures on large construction projects generally include initiatives to help encourage the use of local labour and to develop construction skills within the community and this is a very natural opportunity for a Garden City project.

Displacement effect: Construction work does not ordinarily create displacement by stopping construction elsewhere. However, there is a risk that a large scale project could inflate the market for construction labour and materials. On the other hand, capacity for growth can be created over time, consistent with government objectives to grow the economy through private sector activity; development of a Garden City could be a strong stimulus of the economy that helps to meet this objective.

Multiplier effect: Literature reviews and guidance indicate that the construction sector has above average multiplier effects for expenditure and employment effects compared to investment within other sectors; this has been reflected in the figures above.

Persistence effect: Development of a Garden City is a major investment for the long term. Whilst it might be said that construction work is finite, development on this scale will create long term opportunities through successive phases of development. Furthermore, ongoing work will persist through management, repair and maintenance. In addition, some of the multiplier effects will support the profitability and longevity of businesses in the supply chain as a long term consequence of the construction phase. Similarly, the development of construction skills amongst apprentices and others will have a strong persistence effect that will help establish long term careers and earnings. With jobs as well as a homes, the Garden City can thrive as an economically active and productive place where prosperity is forged.

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