



Creating Garden Communities

A NEW SET OF PRINCIPLES FOR MODERN TIMES

Foreword



In response to the Government's announcement at the start of 2017 to use garden cities and towns as a way of supporting much-needed housing delivery across 14 key regions in the UK, Stantec launched a series of blogs to review the original principles of the garden city movement and discuss how these should be updated to be relevant to modern times.

Whilst the Government has been supporting garden settlements as one answer to the housing crisis, we wanted to investigate what is a 'garden settlement'? How does it differ from the original vision of a garden city, and what does this tell us about how to deliver better new communities? Each blog looked at a different key principle in making garden cities relevant to modern times including the benefits they offer and the challenges that stand in the way of their delivery.

At Stantec, we have significant experience of working on such developments including Kilnwood Vale in Crawley, Aylesbury Woodlands and, perhaps most notably, Ebbsfleet where we have been involved for over 25 years. We pride ourselves on creating communities where people want to live and, as garden settlements offer a unique opportunity to do this, the questions and issues surrounding them are close to Stantec's heart.

We hope this collection of pieces will contribute to a better understanding of how garden style communities can provide sustainable places where people want to live, work and play — as well as contribute to meeting future housing needs.

"Stantec has been a key part of the team delivering Countryside's scheme at Springhead Park, now part of the Ebbsfleet Garden City, bringing their extensive knowledge and expertise on a range of transport and infrastructure issues associated with one of the largest projects in the South East."

Mike Lambert, Countryside Properties

Garden cities: redefining the principles for modern times



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If the much touted new garden cities, towns and villages are to be considered as successful as the originals at Letchworth and Welwyn, then perhaps we need ensure that in a few decades' time it is clear that they have stood the test of time, and delivered on the promises that we set for them. They will need to effectively deal with the problems and challenges of the day, create places where people can live, and want to live, and remain models of what can be achieved.

It is clear, therefore, that a new set of principles needs to be developed to define what the 21st century garden settlements are about – and that they should be built for today, and not reference a past that isn't where we live.

This first blog piece in our Creating Garden Communities series sets the scene for us to explore what these principles might be, how they could be developed and how we create a workable framework to deliver Garden Settlements that subscribe absolutely to Howard's ethos – namely that they provide a complete and wholesome place to live, by striking out on a "road to peaceful reform" of the way we build communities and society.

It must be acknowledged that the core issue around these new settlements centres around land ownership and the vagaries of "value capture". In simple terms, how do you manage to acquire land at a cost that is low enough for you to then catch and re-direct the value created by development into supporting the local community.

From the very beginning of the Garden City movement it is fair to say that Ebenezer Howard didn't really solve this problem either. In "Garden Cities of To-morrow" Howard sets out the reality that if Garden Cities are to be successful, and go beyond his experimental settlements at Letchworth and Welwyn then he considers Government will need to be involved. He recognises that landowners typically want to profit from their land, and, although he was able to acquire land at agricultural values this was essentially because his true intent was hidden from the vendors.

He operated in a world that before the 1947 Town and Country Planning Act — the legislation that created the modern world of planning that we understand today. The Act meant that, for the first time, planning permission was required for development, and owners could no longer do as they pleased with their assets. Along with this came the requirement for a development plan to be prepared — and so “hope value” became a concept for landowners to embrace if the planning authority were to smile on their particular corner of the country.

In fact, the late Forties and early Fifties did deliver a system that may well have been more conducive to the development of Garden Settlements and the like, as land values were managed centrally. The post-war need to re-build the country meant that there was support for local authorities to gain land related powers beyond the approval of planning permissions. They could be developers in their own right, or use compulsory purchase to buy land and then lease it to developers to ensure that development took place.

The Act established the situation that development values were vested in the state, and a £300m fund was available to compensate landowners where development was earmarked. Hence, land could be purchased at existing use value and once permission was granted the “Development Charge” was levied by District Valuers based on the difference between the initial price and the final value of the land.

But over the decades of relative prosperity that followed, this centralised approach diminished, and a much more open market system of dealing with land developed, to culminate in the system we see today.

As a result, the principles of hope value and the general knowledge that land is valuable to those that hold it remains a fundamental challenge for the Garden Settlements.

The way things work at Letchworth, with Howard having ploughed back what we would today call “developers profit” into community trusts and direct benefits, is a fantastic model, but must be considered unrealistic today. It is naïve to base an entire National strategy around Victorian altruism or compulsory purchase.

HOW DO THE NEW GARDEN SETTLEMENTS SEEK TO RESOLVE THIS ISSUE?

Perhaps we need to take a more philosophical leaf out of Howard’s book. He was, after all, a visionary pragmatist. Re-reading “Garden Cities of To-morrow” in a more critical light is enlightening. At face value Howard talks about green spaces, and allotments. He talks about industrial zones, and homes for the blind and orphaned children. It can start to read like a

socialist utopia rather than a study of urban or community planning.

But consider beyond face value, and Howard’s real drive becomes clearer — he wanted to solve the problems of the day. He talks about the urban poor, and how they live in appalling and unsanitary conditions, but he also talks about the rural destitute, reliant on seasonal work and subject to the vagaries of bad weather and a bad harvest. Howard identifies both as needing a place to live, that makes provision for the sort of lifetime health and food security that people at the time needed.

HOW DOES THIS TRANSLATE TO THE EARLY 21ST CENTURY?

If we can start to identify the critical social challenges of our society and solve them, then maybe we will be invoking the spirit of Howard’s “visionary pragmatism”.

WHAT IS IT THAT PREVENTS PEOPLE LEADING THE LIVES THAT THEY WANT TO LEAD TODAY?

The societal challenges we face are different to those Howard observed, and can perhaps be encapsulated under four broad headings:

- **Economic affordability** — the ability of society as whole to live and work in a sustainable way — meaning having a mix of land uses with communities in them that are complete and fully functioning. This is about someone’s ability to buy or rent a property close to where they have their livelihood (whether this is work-based or not), and also about the opportunity for businesses to locate in places where there is a vibrant employment economy and easy access to market for their products.
- **Movement** — our ability to meet and manage the demand for travel, so that there is choice, but also social responsibility in allocating resources to movement. There is a need to make necessary travel available, reliable and affordable (for example for health and education purposes which benefit society), but it also needs to recognise that there may be more sustainable ways of managing this — digital connectivity that removes the need to travel, differential costs to reflect the impacts of movement, in a holistic context.
- **Culture** — ensuring that education, art, sport, heritage and leisure pursuits are available and can be grow, develop and remain relevant, as these are the cornerstones of civilisation.
- **Health & utility** — maintaining the health and wellbeing of society as a whole, and for the individual through the provision of appropriate facilities for care, education and access to knowledge.



Addressing these issues, directly targeted at those within society who don't have the resources to do so would seem to be closest to Howard's principles. But this all needs to take place in a fundamentally different context to the one that Howard addressed. His was a philanthropic approach to help those who could not help themselves – they were typically uneducated, and may well have had little appreciation of what life could have been. Howard was a crusader for those who didn't know what they were missing.

The task we face is very different – we are challenged by a society that is uniquely and comprehensively aware of what is going on around it. People in the UK are well educated, have access to information technology on an almost universal basis, and are able to dream and aspire to a lifestyle with a sophistication and level of fulfilment that was most likely unimaginable to Howard. All of this is positive, and must be considered progress and an improving social picture.

But, for the Garden Settlements it means a radically different approach is needed to develop a set of core principles that address the challenges set out above. Making housing affordable for the entire cross-section of society is an absolute necessity for any such settlement. There must be places for key workers, manual workers, the elderly, the young, those who are wealthy and those who are not, those who are capable and those who are not. Perhaps instead of being tenure blind the settlements will be "tenure celebratory" – providing a level of quality across every type of housing that is self-evident and fit for purpose.

Transport networks may well need to be developed that are holistic, and potentially based on societal need rather than wealth. The human need to explore means that movement will always be both a need and a want. This means that it may well also be under capacity pressures in a modern society. The Garden Settlement

may need to manage this to ensure that needs are prioritised over whims and desires to explore. Achieving a balance around a sensible equilibrium of provision will be important for the Garden Settlements.

Culture is the hallmark of a civilised and stable society. The opportunity to improve oneself, learn new things and experience the world in a different way through the arts needs necessarily to be at the heart of any community. The Garden Settlements must address this directly, alongside the quality of their environments, and must be able to deliver equity of access to these opportunities, without undue cost or favour.

And they must, of course, be the healthiest places to live, with thought having gone into not only physical health, with places to exercise and play, but also to address mental health issues around stress, aging and dealing with those who want or need to live a different lifestyle to the norm.

Perhaps the 21st century Garden Settlement needs to be less hung up on how the land is acquired or held, and how the proportion of green space is made up, and whether there are community trusts or whether everyone has an allotment. Perhaps it would be better to consider more carefully what we are seeking to achieve, what problems we want to address, and then use the absolute best of 21st century technology and resources to develop the solutions to them.

Planning policy challenges of the garden city model



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Garden Cities, Towns and Villages should provide an opportunity to create great places where people will want to live and work. The policy and planning challenges to achieving that ambition, however, are markedly different now than when the original Garden Settlements were being planned 100 years ago.

The supporting literature relating to the latest wave of Garden Settlements is peppered with ambitious phrases such as ‘a Garden Village/Town/City of national significance’, ‘flagship development’, ‘exemplar scheme’, and ‘opportunity to deliver lower-density executive style homes.’ There is also great emphasis on extensive networks of connected green infrastructure and generous provision of open space. We commend and support all of those aspirations – but wonder if they will be enough to get these projects across the line.

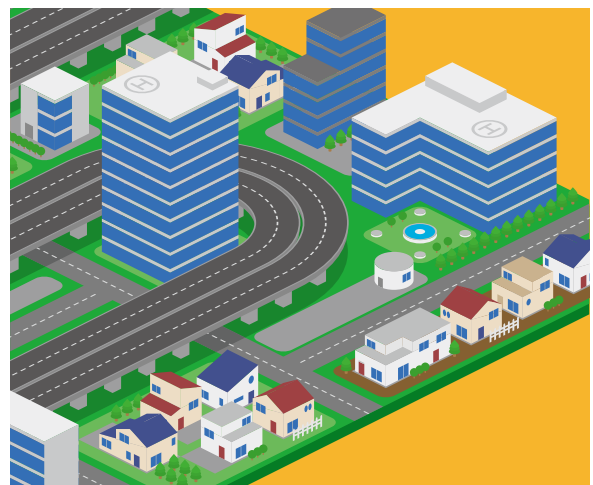
Today, there are myriad planning and policy challenges to overcome – many of which simply did not exist in the pre-1947 era – as well as numerous competing demands on available funds. Many of these are inter-connected issues that need to be contended with in tandem, such as:

- **Land ownership** – we know of a Garden Village that has some 70 or 80 different individual landowners, despite being at the lower end of the size spectrum for Garden Settlements at around 1,600 dwellings. That creates a whole range of challenges in terms of logistics surrounding engagement, creating a commonly shared vision, expectations regarding land value, and so on.
- **Design standards** – these should be set high, but the ‘Garden’ badge can’t be a licence for requirements that are unduly onerous or so prescriptive that they undermine viability and deliverability. Resolving this balance is a challenge in any case – and more so for the Garden Settlement where expectations are elevated.

- **Density** — residing in a low-density community within a green and pleasant land is the utopia that most people would aspire to, given the choice. The present-day reality, however, is that land resources are much more scarce and valuable than when Howard was around.
- **Achievable sales revenues** — some parts of the country command much higher sales revenues than others, where there are effectively value ceilings. In some parts of the North of England, for instance, it can be difficult to achieve £200 per sq. ft whereas receipts in excess of double that level can be commanded elsewhere. When the full complement of affordable housing is factored in, along with the need for significant supporting infrastructure (schools, medical facilities, roads, drainage systems and the like) — as well as a plethora of other requirements from various agencies — this can seriously jeopardise scheme viability where achievable sales revenues are relatively low. The question then is whether the ‘Garden’ aspiration is just one more requirement that takes its place alongside the rest.
- **Funding the supporting infrastructure** — even the smallest Garden Settlements are sizeable, at approximately 1,500 dwellings upwards, and funding the required infrastructure may be inherently challenging and complex. One (or maybe a handful) of developers will inevitably have to go first; others who follow may therefore achieve higher sales revenues when the Garden Settlement has taken more shape. The concept of the ‘Placemaker Premium’ — where higher values occur for later phases of development when the location has its own status and gravitas — is already appearing in viability work we are involved in. Which parties should fund what infrastructure, and when, may require imagination and courage. Developers of early phases may need to provide ‘over-sized’ infrastructure. Some form of ‘roof tax’ and an equalisation mechanism may be required. So coverage and clawback will need to be factored in.
- **Environmental Impact Assessment** — the scale of the Garden Settlements means they will invariably be EIA developments. Whilst not impossible, undertaking a single EIA for the whole village, town or city would be extremely challenging and so developers will need to consider voluntarily submitting an Environmental Statement for their phase of development.

Howard benefitted from a world where he could pursue his ideas relatively unencumbered by the bureaucracy of things like planning permission. Hence, the concepts of the early Garden City movement in terms of physical planning, development process, governance and management were driven by thoughts that were mainly idealistic.

The ‘Garden Settlement’ term probably needs to have a different practicable application now. A balance needs to be struck between quality and deliverability, within a planning context that is infinitely more demanding than a century ago.



Garden cities and movement: achieving ‘good growth’



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The Creating Garden Communities series began with my colleague Tim Allen suggesting we should be re-evaluating the basic tenets of the garden city movement to ensure that the new raft of garden city development now being pursued stands the test of time.

Tim’s essential concern was that, if the original garden city movement had been established to address the perceived concerns about housing around 100 years ago, surely we should be basing our current plans around the issues that are relevant to today’s challenges? His challenge was for us to consider the issues of economic affordability, movement, culture, health and utility as being some of the relevant issues to be considered, but of course there is much overlap, as well as other matters that demand attention. Here we consider these issues from a movement perspective, although as you will soon see, it’s not as simple as that!

It is already becoming a hackneyed phrase, but I quite like the idea of ‘good growth’. It suggests that we are allowed to be ambitious about growth, but want the product of our imagination and effort to be ‘good’ — presumably in economic, environmental and social terms — in balance. This phrase also chimes with what I see many of our developer clients looking to achieve — not only do they see this as providing a social good — but they see this as a strategy which leads to long term value (and return) for them.

Research currently being undertaken by the Foundation for Integrated Transport (Transport for New Homes) has been looking at the relationship between the level of car dependency of sub-urban or rural housing development, (where most garden city development will be), and the quality of the resultant community. Emerging conclusions suggest that future outcomes such as levels of employment, provision of local facilities and amenities, and the quality of community cohesion are detrimentally affected if the default means of travel is the car — i.e. not good growth.

The trouble is that this debate has not really moved on since the launch of PPG13:Transport in 1994 where progress started to be made, but was a victim of the NPPF cull in 2012. Even though we have been through changes in policy and guidance over the years, the essential process of assessing the movement implications of development haven't fundamentally changed. Whilst we do now see the assessment of non-car modes being considered before the assessment of traffic impact, housing projects are still asked to assess a future world in which traffic growth continues inexorably, and that developers are pushed to agree to mitigation proposals that take account of the worst congestion case by decision makers influenced by public opinion that is (rightly) concerned about the impacts of car use — and who see better provision for cars as the answer.

Paradoxically however, the answer does not lie in more and better provision for cars. The answer lies in better provision for the movement needs of the community that is going to be living in the new housing — not measured in terms of highway capacity — but in terms of access to employment, education and other amenities — as well as issues such as road safety, health and wellbeing which are fast rising up the agenda.

Our future planning also needs to take into account what is actually happening to patterns of movement on the ground. As has recently been highlighted by the Independent Transport Commission in its research into Travel Trends (and reported in our All Change publication) the growth in travel by car has become disconnected from economic growth (so called 'peak car' has been reached). We are still seeing some growth overall as a result of a growing population, and changes in some demographics and the 'Amazon' factor. Most interestingly however is the substantial reduction in car use amongst young men (and to a lesser extent — young women) between 17 and 34 — 47% less!

We can all have a guess as to why this is, and most of us would identify increasing use of technology, opportunity cost of motoring, availability of alternatives, the growth of the sharing economy, and increasing urbanisation as key factors. It raises some interesting questions — such as — will this cohort of young people retain their patterns of movement as they get older — and will the next cohort have even more pronounced moves away from private car use as technology and Mobility as a Service begin to take off? How do we plan for a future when we don't know what it's going to look like — and why do we insist on planning for the worst case when planning for the future?

What would happen if we planned for the best case? Professor Peter Jones OBE of University College London has expressed his view that we need to 'turn transport planning on its head' — to move away from the modified 'predict and provide' methodology in common use now, towards a process of 'vision and validate' — to move away from forecasting in an uncertain future towards backcasting to provide greater certainty of reaching a future we actually want to deliver.

I have blogged before that I agree with this. However, this needs to be accompanied by an appreciation that we need a multi-faceted approach. For example, if you ask a local resident if they want a future housing scheme to accommodate increasing car use, you are very likely to get a positive reply. If you ask a resident what is more important — protecting future car use, or clear air to breathe, or safe roads for their children, or having a local shop — you may get quite a different answer. Of course — these choices are not binary — but we have to see transport as part of delivering 'good growth' and not as one single issue which is disconnected from everything else.

This is not some theoretical issue which we can spend time debating, reviewing and reworking. Time is of the essence. We are now working to deliver vast quantities of housing — in middle England — in urban extensions and garden settlements — where the temptation is to continue planning for the worst case, rather than the best case. This needs to change if we are to find better ways of delivering better communities. The Garden Settlement movement should be leading the movement.

Garden cities: lighter, faster, cheaper



Andrew Clarke

Let me transport you to an industry a bit more relaxing than planning and infrastructure development. It's a bit more chilled out. Less competitive. Let's say it's Formula 1 motor racing. And you have your dream job of designing the winning car. You're wondering how to achieve better results ... and then you have a stroke of inspiration.

It occurs to you that if you shave weight off the chassis and make the components lighter, your car goes faster. Less weight means you can redesign the suspension. Again, you've cut weight, so your car goes faster. Because the car is lighter, you need lighter brakes, and the weight saving makes your car go faster. And so on. You realise with mounting satisfaction that you've locked yourself into a virtuous cycle. A sense of confidence and professional mastery suffuses your body. Well done you.

A nice daydream, for sure. But maybe we need a piece of that daydream for the garden city programme. At the start of this series my colleague Tim Allen identified affordability – that is, being able to afford to live near where you work – as one of the key challenges that garden cities have got to help us solve. And it might just be that, if we are smart, we can use some upcoming innovations to help us make the whole programme lighter, faster and cheaper – but still deliver superb outcomes.

First up, land use. There's a common misconception that a garden city is low density, but that's not really right. (It is about land value capture, but that is a different story). The point is that we've got to use land efficiently. Newhall in Harlow is a great example of what can be achieved. The courtyard house typology is the main innovation, using square plots rather than the traditional rectangle. That gets the development to 52 dwellings/ha using a built form that looks a lot like a detached home. It doesn't feel cramped. More public open space can be created using the land savings. And the higher density feeds back into transport infrastructure savings, given that distances are shorter and public transport is more viable.

That's an obvious enough starting point. But it kick-starts our virtuous cycle. We keep it going by taking the flab out of transport infrastructure. How? Professor Peter Jones at UCL has a convincing answer. Jones has pointed out that we're still in the game of predicting and providing: predicting transport demand using modelling, and then trying to provide the infrastructure the models say is needed. The snag is that we're no good at predicting: past models have consistently over-estimated demand. Nor are we any good at providing: we usually run out of money and political support before we get close. And even where we do manage to "provide", we never go back to check if the infrastructure is being used by those it was intended to facilitate — or if it has simply been clogged up by people making unnecessary journeys. The whole thing is a busted flush, says Jones, and that's only going to get more obvious in an environment of continuing public sector austerity and radical uncertainty about the effects of technology on transport demand and supply.

Sounds bad? It isn't: it's a huge opportunity. Instead of predicting and providing, we need to start in a different place. We need to work out what society we want to live in, and build the connectivity that delivers that vision (think healthy, socially cohesive, compact, local). Seen that way, we get a radical connectivity rethink — and could dramatically cut costs. That bypass might no longer be needed. Big junction? No thanks. A sea of parking in front of every building? Not in a world of driverless cars. And could the 11m wide estate road we now think we need be reduced to something more akin to a rural lane, as long as we had a decent cycle route? Quite possibly, yes. (In that environment, the kids might even start to play out again).

Our garden city is already starting to feel quicker to build, nicer to be in, more sociable, and more affordable. There is no need to stop here. We can get more agile on building technologies. The point has been made elsewhere that if we made cars the same way we made houses, we'd deliver a bag of parts to the owner's driveway, and then bolt together the whole thing in the customer's garage (except that would be silly). We need to bring housing into the modern era: when modern methods of construction get to scale, they could dramatically cut housing build costs whilst boosting quality.

Then, we know that new technology for householders can also further offset costs. Tesla will sell you solar roof tiles which form part of the built fabric of the house. It's cheaper because you don't need a roof and solar panels: they are one and the same thing. You install a powerwall that will allow you to store the resulting energy. Householders can sell it back to the grid, and make a few quid. This isn't a thing you do in five years' time. You can buy this stuff today.

At this point, you're really starting to roll. If you've got solar roofs and powerwalls, do you need gas grid connections? No: you save the money, and don't even bother to install them. (The grid will be decarbonised, with a nuclear base load). And if we're not doing gas, we can also strip out some other costs too. Combined heat and power systems are looking pretty questionable in terms of carbon abatement costs and air quality. Take them out. Whilst you're at it, if you insulate houses properly you don't need a central heating system: certainly in flats, you could get away with a couple of electric wall heaters (nip along to Argos — they're thirty quid each). There's a couple of thousand pounds saved per home.

Happier, cleaner, quieter, more sociable — as well as more affordable. We think that the success of garden cities is going to be about getting this virtuous cycle really starting to spin. Partner it up with the big one — land value capture — and we'll have a revolution.



The disruptive 4th Industrial Revolution and its impact on garden cities



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Just before the country plunged into the overwhelming disruption of the Second World War, Sir Anderson Montague-Barlow was asked by the Chamberlain Government to undertake a commission to appraise the geography and impact of industrialisation across the UK.

Behind the commission was a contemporary rationale that industrial manufacturing was paramount to the gross domestic product of the nation, but that its current geography created a range of social problems. There was an underlying belief that its future growth would be founded on providing quality new homes for workers.

When the commission reported, its primary recommendation was for the decentralisation of industry from the existing congested cities. The recommendations of the commission became a blueprint for the idea of decentralising populations which later evolved into the post-war Better Britain campaigns.

Fast forward to today, and the apple that is our new Industrial Strategy: Building a Britain Fit for the Future, released on the 27th November 2017, does not fall too far from the same tree: the British Industrial Strategy will help the UK to address the issues of low productivity and regional disparity of prosperity, and 'propel Britain to global leadership of the industries of the future' as the UK seeks its future outside of the EU.

Whilst the nature of the industrial opportunity is different, the rationale and needs are not too dissimilar. The Industrial Strategy heralds a 4th Industrial Revolution that will sweep the globe, as a range of new technologies fuse the physical, digital and biological worlds in a way that will impact all disciplines, economies, and industries.

A 4th Industrial Revolution will be truly disruptive, and the UK needs to be ready for it. In the November Budget, the Chancellor announced a range of fiscal measures looking to prime the 4th Industrial Revolution.

Yet it would appear little attention has been made to the intrinsically disruptive nature of what is heralded as the 4th Industrial Revolution on housing and the geography of growth. In the same Budget, measures were announced to support housing growth which, despite other measures to support devolution and economic rebalancing, many believe is likely to continue the concentration of housing growth in the South East.

EMBRACING THE 4TH INDUSTRIAL REVOLUTION

So what is the 4th Industrial Revolution, and what does it mean for a typical garden settlement?

Klaus Schwab, Founder and Executive Chairman of the World Economic Forum, set out in his book *The Fourth Industrial Revolution* some critical technology driven mega-trends he saw occurring across the globe that are impacting on economic growth and political governance. And that are coming with an unprecedented velocity, breadth and depth.

This is a technology revolution that will alter entire economic and political systems.

Schwab breaks these trends down into:

- Physical technology (autonomous and electrified cars, robotics, 3D printing)
- Digital systems (the internet of things, digital currency)
- Biological (genomic, materials)

He suggests that our future cities, under this revolution, could be built from new biosynthetic materials that have been 3D printed under controlled conditions in specialist manufacturing facilities.

Energy will be delivered through secure zero-carbon generation. Cities will be autonomous where movement, health monitoring and education are managed through a single digital platform. Even biological ecosystems could be genetically modified to

be drought and flood resistant, with urban forms that support natural wildlife evolved to cope with severe climate change.

This is a future vision that the 4th Industrial Revolution could deliver, and one which the recent Chancellor's budget has just underpinned. There are some negative technological impacts too, that may be part of the revolution, and may create a much more subversive element. The dissemination of information around the globe, and the challenges of verifying what may be true, what may be false and what may be misrepresented, will be part of the change. Reliability of data streams will be core to the 4th industrial revolution, and the management of access and influence will dictate how well these new urban places are able to function.

This vision though does not deal with how city growth creates 'place' which forms the basis of societal interaction. The policy framework associated with the 4th Industrial Revolution therefore needs to be agile to ensure people and society are at the centre of the outcomes rather than dictated to by technology.

HOW DOES THIS IMPACT POLICY DIRECTION NOW AND HOW DOES THIS AFFECT GOVERNMENT PLANS FOR GARDEN CITIES?

Humankind is global, but the differing nature of societies operating at the local level has always brought its challenges, whether this be economic or cultural — how much more will this be if technology is allowed to further erode what we understand as society. What does this mean for housing and economic policy at the national and city region level? And how are we expecting new settlements to respond to the opposing pressures of technological progression and the need to encourage growth which results in healthy, productive societies?

Perhaps we need another 'Barlow Commission' to fully explore this? As the Deputy Chair of the National

Infrastructure Commission, Sir John Armitt, pointed out in a key note speech at the 2017 National Infrastructure Planning Association Dinner last week, a national spatial plan is needed to ensure that infrastructure investment supports growth in the most effective way; and as pointed out in the Final Report of the Industrial Strategy Commission, also in November 2017, Place Matters.

The breadth and depth of the 4th Industrial Revolution changes the entire system through which we will plan growth. The capacity to pre-fabricate buildings - 3D printing houses in a controlled manufacturing environment, could change the construction industry's current local and regional service model, to a national model based around national manufacturing facilities. This technology should, ultimately, be cheaper and result in a better product — potentially within greater variation and consumer choice. The development of such a national industry will bring economic wealth to the city region who is able to accommodate it.

As the Barlow commission reported, this centralisation does not necessarily need to be in the existing urban realms. This may need to be an entirely new City Region — and if the UK isn't at the forefront of competing for and developing these markets, this industrial revolution could be anywhere on the planet.

The UK should be well placed in the international market. Hence, this single centre for home manufacturing could be here — we could be a global centre for home manufacturing. But we would need to act now — putting other short term distractions aside, to participate in this new race for economic productivity.

A 'city region' created on a flexible policy framework to enable mega-trends such as advanced manufacturing, 3D printing and new materials will be at the centre of global trade in home creation.

Rather than building 200,000 homes a year for the UK, the global output requirement would be far greater.

A million homes for Europe every year, for example, will create a multi-billion new economy that will need labour, infrastructure and investment underpinning it.

The garden cities, towns and villages we are planning now should be the laboratories where we hone the skills and techniques we need, and build the businesses that will carry this revolution forward.

WHERE WILL SUCCESS BE THEN?

Klaus Schwab suggests that such a successful city region will need to be founded on ultrafast communication networks, zero-carbon energy and infrastructure that will determine its ability to attract talent.

This poses an interesting question. If the, quite literal, balance of power (renewable power in this instance) is in Scotland and the North, not the South East; the scope to grow manufacturing capacity and labour force is in Scotland and the North, and the availability of land is in Scotland and the North; why has the Government focused its attention on housing growth and garden cities in the South?

It may be that this current housing strategy is too traditional, too backward facing, too much about projecting forward the trends and economic growth patterns of the past, and may miss the fundamental opportunity of the future.

If the Chancellor really wants Britain to lead the 4th Industrial Revolution, it might be an idea to dust off the Barlow Commission findings, and work out exactly where the UK wants the 4th Industrial Revolution to happen, and why.

Then we can plan amazing, exciting, desirable new garden settlements — from cities to villages, that will not just respond to a need, but will create, sustain and lead a new economic renaissance.



The healthy garden city



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With the connections between place, mobility, health and wellbeing now increasingly present in our policy conversations are we finally catching up with the Garden City pioneers?

In “Garden Cities of To-Morrow” Sir Ebenezer Howard identifies a key objective of the Garden City as “To find for our industrial population work at wages of higher purchasing power, and to secure healthier surroundings and more regular employment.”

Even without the archaic language of Howard’s 1902 manifesto – and a whole range of political, economic and social sub texts – the message was clear. Born out of the Victorian era’s increased understanding and support for improving the health of the nation the role of the ‘better place’ becomes central, in particular in connection with working conditions and quality of life.

Town planning has a long history of making public health a core factor in spatial choices and improving urban design. In fact, much current planning practice is derived from public health professionals designing cities for healthier lives, from the original Garden Cities to the current rethinking of urban living across the world. The Town and Country Planning Association, which was founded by Howard, continues to make the case for greater integration to achieve healthy outcomes in planning and urban design.

Having reviewed a few recent policies and initiatives, I think we are at the moment when the integration of health, wellbeing, place and mobility is finally becoming mainstream, as Howard advocated. However, before we celebrate there are also some fundamental matters to address – taking and sharing responsibility, winning community support, securing long term funding.

The consultation on the draft London Mayor’s Transport Strategy, for example, places considerable weight on delivering ‘Healthy Streets’ as a necessary

precursor to growth. Our review welcomed the policy direction to support health and transport integration, but we did suggest it could miss the target by focussing primarily on physical activity. Increased cycling and walking activity will undoubtedly help the health agenda, for example by reducing obesity, improving heart conditions and reducing respiratory diseases from improved air quality as people switch from cars. My hope is that general wellbeing, mental health and quality of life of Londoners will also be improved through the advent of 'Healthy Streets', as what London leads with is often adopted across a wide range of urban environments, including the emerging garden communities.

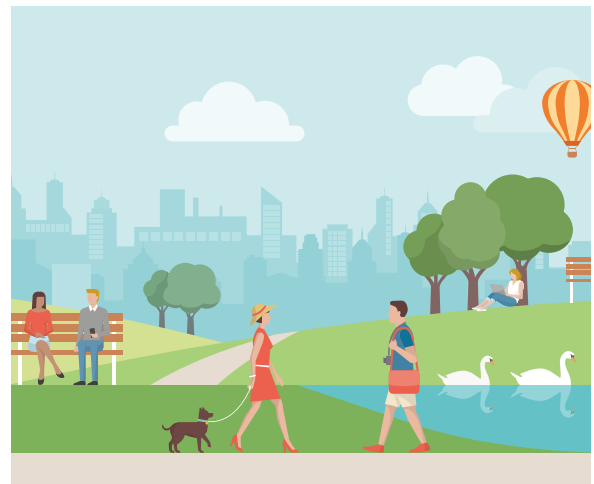
To secure Government funding there is greater recognition of the need to value health benefits, and recent advice to transport planners (in WebTAG) sets out a better method to estimate the health benefits of walking and cycling interventions. In our 2016 CIHT report, we emphasised the need for improved project appraisal approaches to identify and measure health benefits better, making them a key factor in infrastructure spending decisions, so we welcome the recognition of our recommendations by the DfT. In particular, we encourage both transport planners and town planners to work with colleagues in Public Health and the NHS more, as they are years ahead of us in effectively measuring the physical and mental health impacts of interventions.

Similarly, measuring the benefits beyond the basic qualitative health impacts usually identified in Environmental Impact Assessments is now being challenged as new quantitative approaches emerge from health professionals and academics. We are still a long way from properly valuing wider wellbeing and mental health benefits, often characterised as 'hard to do', but in the context of greener and friendlier garden city spaces it becomes even more essential for making the case beyond the economic benefits.

This positive movement to greater integration comes in the context of continued local authority austerity pressures impacting on infrastructure, transport and social care expenditure, while the government is planning a major NHS and social care review, which will inevitably impact on spatial planning choices. In the NHS, the focus on Sustainability and Transformation Plans (STP) encourages greater integration and coordination through partnerships, but in the resulting restructuring we have seen potential negative impacts on access to healthcare, as services are concentrated in fewer, larger (and often less conveniently located) facilities. NHS organisations across England were asked to jointly develop plans for the future of health services in their area, working with local authorities and other partners — this is welcomed, but in our reviews very few STPs are taking access, mobility and travel impacts seriously.

Looking back over 100 years, Howard advocated placing healthcare at the centre of his garden cities, with local doctors seen as essential — yet this proven localism could potentially be unpicked with the STP led changes in healthcare planning. The NHS commitment, as part of its Healthy New Towns project, to work with ten major developments (two of which Stantec is involved with at Ebbsfleet and Barton Park) to integrate health and care services into their masterplanning process, is a more positive sign of joined up thinking, and clearly in line with Howard's thinking.

As with 'sustainable', and 'smart' ultimately, we need to guard against health and wellbeing as becoming increasingly meaningless adjectives in the 'big policy toolkit'. If health (and particularly mental health) is just another tick box in the garden city formula we also may miss a chance to fundamentally reassess, for the current age, the links between place, mobility, health and wellbeing — links that the Garden City pioneers understood well.



Garden cities: do they have a future?



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The garden settlement movement remains on the tip of the tongues of anyone involved in trying to meet the governments growth agenda – especially in respect of housing. There is now a heady number of city, town and village proposals around the country – all vying to be seen as both innovative and different in their approach to solving the problem.

But the context is a bit mixed.

A good number of these proposals were put forward by local councils as part of funding bids to be part of the first wave of new garden villages. Government chose ones that, for the most part, were already in local plans in one form or another, leaving a long list of schemes high and dry. In the case of some chosen proposals, Councils then backed away from the idea, and landowners were left to decide whether to press on regardless or abandon the plan.

In an added twist of the knife, some schemes were in green belt areas, leaving the argument open about whether attracting some Government funding would have been a “Very Special Circumstance”.

Meanwhile, public opinion in many places seems to have moved quite decisively against the larger scale developments that urban extensions and garden settlements represent.

All of this means that the purity of Howard’s original vision, that the garden city movement would resolve fundamental social and community problems for both city and country dwellers, is lost. The reputation of the garden settlement as a mechanism for delivering much needed growth in a sustainable and attractive way, with a long-term legacy that would endear it to the local and wider community, is, arguably, being damaged.

Irrespective of whether the NPPF ends up supporting garden city principles or not, the fact remains that the concept is at something of a crossroads. It would be easy to stop at this point, and conclude negatively that the whole idea has become so watered down that it is at risk of becoming a brand that promoters simply hang their schemes onto, whatever they are.

But we are more optimistic than this. We think that some of the schemes that don't really meet the principles will fall away. Those that are left will likely align more closely with the garden city principles, and be promoted by people who are able and willing to move the game on.

These schemes will become exemplars for the future, with some of them including the sort of creative thinking that will be required to achieve the capture of value uplift for the good of the long-term community — including residents, businesses and even landowners.

Community land trusts are becoming more commonly discussed, and so is creative ways to embed Mobility as a Service and truly demand-responsive, multi-modal transport networks.

SO WHAT DOES THIS MEAN FOR THE GARDEN CITY MOVEMENT?

After some careful thought, we think there is even greater scope for a "call to arms" for those who are able to commit to incorporating some, or all, of the garden city principles into their proposals. There is a need for the industry to come together and applaud each and every effort to implement these important parameters.

Maybe there is merit in the various promoters electing to come together — to get behind the idea of a movement in a more joined up way. This could mean some hard conversations about the way that the market responds to change, and the pace with which principles could become the norm. But that debate now needs to be had — we need the right people, in the right place, with a genuine spirit of collaboration if the garden settlement ideal is to be realised up and down the country.

And we will need to be clear about the principles that we think apply to our 21st century garden settlements.

From our work to date, we think these should be around:

- A practical way to achieve a balance between land owner value and the funding of social and infrastructure assets for the long term
- Embedding adaptable and resilient approaches to transport and energy, that can adapt to future change and create long-term revenue streams for everyone's benefit
- Emphasis on a community where daily life can be accomplished locally — so housing, employment, retail, education and cultural opportunities are all considered in terms of their accessibility. They might not necessarily be on site — but they are available enough to create an active and prosperous economy
- An approach to design which supports healthy lifestyles and strong communities, encourages walking and cycling, participation, leisure activity and cultural opportunities
- Creating a sense of place and community in which the future community has a sense of engagement in its conduct and operation.
- Doesn't have to be green or low density housing with gardens and allotments!

These principles need to be applied with pragmatism, and through a culture of sharing and iterating design ideas to balance the emphasis required by the different elements of them. We see such an approach as being good for both the promoters of development and the future communities that will be living and working there.

The industry probably needs to respond to this aspiration itself. It would be difficult for Government to achieve this from the top down. But if those of us involved can drive it, it would be to the benefit of improving the quality and value of development, as well as creating some great examples of getting it all right, all in one place.

"Ere long, I trust we shall meet in Garden City."

Sir Ebenezer Howard

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