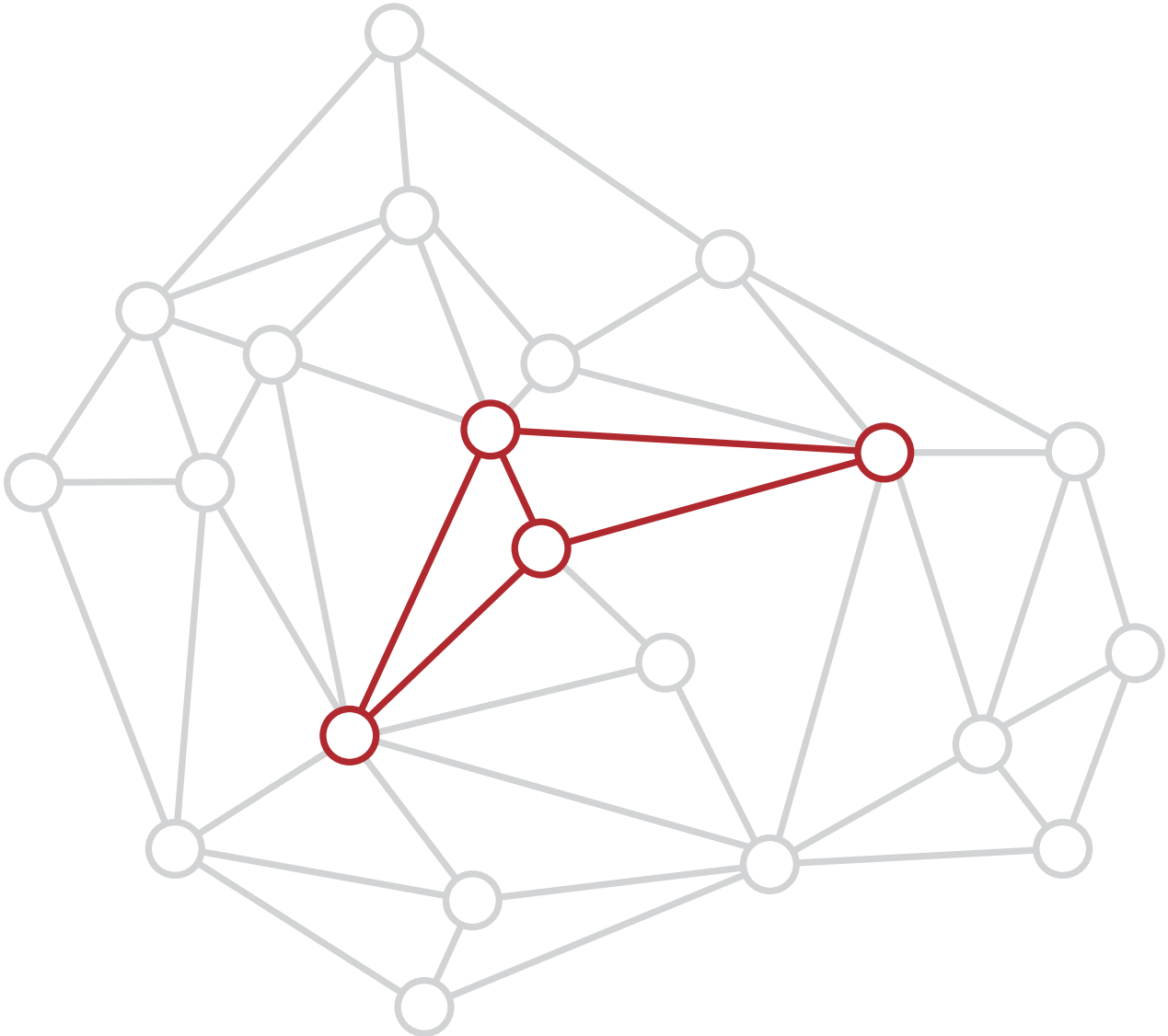
REPORT FOR THE NATIONAL INFRASTRUCTURE COMMISSION: CAMBRIDGE-MILTON KEYNES-OXFORD ARC



AECOM

CONTENTS

1. EXECUTIVE SUMMARY

1.1. Introduction

1.1.1. In May 2017, the National Infrastructure Commission (NIC) commissioned AECOM to research the planning and delivery of growth within the Cambridge- Milton Keynes-Oxford Corridor ('the Corridor').

1.1.2. The scope of AECOM's research is to investigate the barriers to housing and infrastructure delivery across the Corridor, i.e. those factors which are delaying or preventing development from coming forward, and to assess the effectiveness of the 'levers', in terms of policy, strategy or approach, that can help to accelerate or unlock growth.

1.1.3. In so doing, this report aims to help the NIC to understand more clearly how the Corridor can be transformed into the world-renowned centre for science, technology and innovation forming the NIC's vision for the area.

1.1.4. The NIC's Transformational Scenario requires 23,000-30,000 homes per year to be developed across the Corridor to 2050. Table 3 of this report shows that between 2007 and 2017, a total of 102,790 dwellings were completed across the corridor, an average annual completion rate of 10,279. This means that the transformational scenario, requiring 23,000-30,000 dwellings per year, would require development at two to three times the current rates.

1.1.5. A literature review and case study research exercise were undertaken to understand the Corridor's existing planning and delivery context, with reference to the wider national and international context. These research exercises focus on practical examples, case studies and other relevant data that help build an understanding of the issues that this study seeks to address. The emerging conclusions of the research were tested and verified at two stakeholder workshops.

1.1.6. The study indicates that there are multiple barriers and levers which influence the progress of development. Barriers and levers have been identified by multiple parties and exist across at different geographies, in a range of locations and from a variety of perspectives within the Corridor and across the national planning and development context.

1.1.7. A summary of the key barriers and levers to development arising from the research is set out below.

1.2. Barriers

Leadership and Governance:

1.2.1. A lack of co-operation across local authority boundaries is perceived to be a significant barrier, with previous attempts to establish corridor-wide initiatives regarded as possessing too many partners and objectives, being dominated by the public sector and focused only on the property elements of development.

Planning Policy:

1.2.2. There is a lack of spatial planning policy above local authority level to provide a strategic perspective set out a vision for transformational growth; the evidence gathering process for Local Plans is sometimes regarded as inadequate; requiring unnecessary detail and constant updates, typified by little interaction between disciplines with data collected at different and often 'illogical' scales. In addition, land availability site thresholds are deemed to be too large and Neighbourhood Plans too restrictive, resulting in unnecessary barriers to potential windfall sites.

1.2.3. Additionally, the Duty to Co-Operate is in many cases insufficient as a lever for strategic planning across boundaries, and indeed in some cases has become a barrier.

Planning Consenting:

1.2.4. There are capacity issues within Local Authority Planning departments, which are reported to be under-staffed or under- skilled. These capacity issues are exacerbated by inconsistency and over complexity in planning obligations, contributing to a long consenting process which ultimately slows delivery.

Infrastructure development:

1.2.5. Although many facets and examples of Infrastructure development barriers exist, the majority stem from a lack of forward planning and funding of infrastructure slowing delivery, with developers bearing too much of the upfront costs and therefore exposing larger sites to too much risk.

Funding and delivery:

1.2.6. There are insufficient numbers of actors active in the housing market, with too much emphasis on private sector land acquisition and not enough focus on the public sector's release of surplus land. Furthermore, there is a lack of flexibility in CIL, both in overall calculation and transparency, and restrictions on pooling of S106 contributions which limits upfront infrastructure funding opportunities.

1.3. Levers

Leadership and Governance

1.3.1. Leadership and Governance levers were identified in the literature review to include positive, collaborative and strategic planning across local authority boundaries; the use of Statements of Common Ground instead of the 'Duty to Co-operate' and devolution deals for Local Planning Authorities with ambitious growth targets. Overall however, the literature review highlights the need for a single, pan-corridor organisation, mechanism or process that integrates the public and private sector with planning for housing, transport, skills, employment, and utilities; such a body would need to have fiscal autonomy, a single vision, and a strong, marketable brand.

1.3.2. Another important leadership and governance lever comprises long-term planning and thinking by political leaders beyond plan periods and political cycles. This can offer significant benefits in terms of accelerating delivery and creating positive perceptions of growth.

1.3.3. At Basingstoke, taking the long view beyond the current planning period unlocked appropriate funding and support from central government. In a virtuous circle, this funding then accelerated those locally-led initiatives to plan for growth and infrastructure over a longer time horizon, thus offering certainty to developers and investors that shorter-term political change will not derail growth aspirations.

Planning Policy:

1.3.4. A spatial planning policy framework would establish the strategic planning direction at the 'larger than local' scale. In addition, there was also an identified need for central government to intervene in circumstances where Local Authorities were slow to implement an adopted Local Plan and a reduction in size of SHLAA site thresholds; amongst other smaller recommendations.

Planning Consenting:

1.3.5. The literature review suggests the increased use of Planning Performance Agreements to enhance certainty with development timescales and therefore speed delivery; an aim also potentially achieved through the greater use of Local Development Orders and Permissions in Principle. There were also calls to allow examiners the ability to find a Local Plan 'Partially Sound', potentially avoiding delay and a reduction in development ambition from plans which risk being found unsound.

Infrastructure development

1.3.6. The upfront funding of infrastructure, including all typologies from utilities and transport to community facilities, is ubiquitously regarded as a method of increasing a development's rate of delivery. This infrastructure provision could potentially take the form of more comprehensive broadband, internet and mobile coverage commensurate with levels found within the Corridor's international competitors, thereby encouraging economic development in the Corridor.

1.3.7. There is also a desire to offset upfront infrastructure costs against future revenue streams through appropriate mechanisms, such as the Home Building fund or revolving Infrastructure funds. In addition, clear links between developer contributions and individual sites/ developers was seen as useful, increasing transparency and clarity between infrastructure investments and planning, was also highlighted as a lever.

1.3.8. With infrastructure requirements cited so frequently in the literature review as a key barrier to unlocking key housing sites, Growth and Infrastructure Frameworks (GIFs) have an important role to play in highlighting necessary infrastructure requirements to unlock development and how they might be funded. Though GIFs do not in themselves guarantee the forward funding of infrastructure, they are a vital step along the path to doing so, because infrastructure funding can only be unlocked once infrastructure costs for any particular site or wider area have been assessed in an independent, transparent and consistent way.

Funding and Delivery:

1.3.9. In addition to increasing funding within the Corridor for infrastructure development, there is potential to apply innovative mechanisms, such as TIF, bespoke Land Value Capture and an open data approach to the Land Registry to aid delivery. There are also calls for greater use of CPOs, DCOs and the provision of Development Corporation powers to assemble land at scale and place, with potential alternatives to existing Planning Gain capture (CIL and Section 106) such as an updated and bespoke Milton Keynes Tariff. In addition, there is an identified need to encourage institutional investors, particularly where this can provide early cash flow, or for Local Authorities to play a more active role in development, potentially through incentives to SME construction firms.

1.3.10. In the centre of the Corridor, Milton Keynes was England's fastest-growing city for much of the 2000s. The delivery and funding levers it employed in order to accelerate development include the forward funding of infrastructure by means of a well-designed tariff model, and an ability to stimulate competition among rival house builders so that no single builder had a monopoly.

1.3.11. The Milton Keynes Tariff demonstrates that section 106 was flexible enough to develop a tariff permitting consistent and certain infrastructure contributions that greatly accelerated the speed of dwelling delivery. While the tariff was in operation, development certainty and hence completions in Milton Keynes were significantly higher than across England as a whole.

1.4. Quantifying the impact

1.4.1. Having identified the key levers with the potential to significantly accelerate housing development across the Corridor, AECOM then sought to quantify their impact by testing their real-life application. Useful in this goal were the range of nine development typologies developed by 5th Studio in separate work for the NIC; this allowed for much clearer understanding of which levers were most appropriate in a range of locations, classified into three categories: 'urban intensification' (development within existing urban areas) 'linked places' (urban extensions and similar-scale development) and 'autonomous places' (new greenfield settlements).

1.4.2. A sample of completed and 'in progress' developments within the UK and abroad were gathered in order to establish average annualised housing completion rates by development typology. Dwelling completions per year were calculated and then cross-referenced by development size in hectares to ensure consistency of comparison and contextual understanding. Secondly, once a differential in delivery rates was established between typologies and developments, broad-scale levers existing within the most 'successful developments' were identified.

1.4.3. To ensure consistency two types of average delivery rates (in dwellings per year) were calculated, respectively including and excluding the lead-in time before the delivery window proper.

1.4.4. The research showed that successful developments tend to exhibit certain levers which are fundamental to efficient delivery of development at scale and efficiency. This is particularly relevant for new towns, which have the greatest impact in terms of delivering at higher rates of completions. Of the top ten best performing sites for dwelling completions per annum in the sample, eight were English New Towns. This suggests that there are key levers present within these developments which enable consistently high rates of delivery.

1.4.5. Governance structures in particular acted as accelerating levers in New Towns, including New Town Development Corporations, infrastructure delivery, land value capture and land assembly and masterplanning structures.

1.4.6. AECOM's research also showed that in certain circumstances, urban intensification can also deliver development extremely quickly. However, these circumstances tend to be limited in their geographic applicability.

1.4.7. For example, both the Vauxhall Nine Elms Battersea (VNEB) and King's Cross developments in central London were identified, with broad political support, as Opportunity Areas within the London Plan (governance and leadership); were subject to masterplanning (planning policy and planning consenting); were both developed at high densities due to excellent existing and new public transport infrastructure; and were funded by innovative mechanisms such as tax increment financing (land value capture) and development tariffs. Finally, they are both located in a particularly strong housing market area (Central London) which has been attractive to foreign investors. This meant that development corporations were not considered necessary - although both benefited from significant public sector investment in infrastructure.

1.4.8. However, by contrast new towns are likely to be less constrained geographically and politically. Whilst urban intensification may be more 'efficient' within its very specific contexts, they are not realistically able to deliver at the scale required for the transformational scenario aimed for by the NIC.

1.4.9. It therefore seems that the bulk of the growth required by that scenario could be achieved only by development within the Autonomous Places category- in other words, by identifying locations for multiple new towns and new cities.

1.4.10. If these new settlements were delivered on the scale of Milton Keynes at speeds consistent with its fastest development phase, then ten to fifteen new cities would be required across the Corridor between 2017 and 2050. Between the range of ten and fifteen, the exact number of new settlements needed would depend on the extent to which they could be complemented elsewhere by ongoing (albeit accelerated) delivery of typologies in the Urban Intensification and Linked Places categories.

1.4.11. In summary, there are identifiable levers which appear frequently across those developments which have quantifiable successful outcomes, including:

- Statutory bodies with the ability to create plans for specific growth outcomes. Development corporation models provided strong leadership in European urban extensions as well as in English new towns;
- Land assembly, which enables effective value capture, ensuring that development comes forward proportionate to the scale of infrastructure funding and delivery. Both joint ventures and development corporations have been successfully able to undertake this level of strategic planning. Infrastructure and housing can be planned together, as was the case in European transport based urban extensions and Hong Kong metro-led development;
- Masterplanning, ensuring competition and driving innovation to ensure quality and speed by providing for a range of developers or community groups to develop on a single site;
- Significant infrastructure investment, informing and providing clarity on delivery, funding and timing of infrastructure provision; and
- Land value capture mechanisms, enabling funding of the infrastructure investment. Local and central government support for mechanisms such as TIF and the Milton Keynes Tariff were essential for creating certainty for wider stakeholders and investors.

1.5. Scenario-based assessment

1.5.1. The key levers that emerged from the research may be set out in terms of three potential scenarios which involve varying levels of intervention.

1.5.2. In broad terms, the scenarios reflect an overarching message: if a transformational scale of delivery is to be achieved the scale of ambition will need to be matched by the scale of intervention. In this context the focus of the scenarios is on a small number of levers that are considered most likely to have the biggest impact.

1.5.3. It is clear from the case studies and workshops in particular that the 'business as usual' levers being used with varying success across the Corridor at present, helpful though they may be at smaller scales, are unlikely to be enough for the step-change required. Sustained intervention is likely to be needed from central government and others, and radical new ideas previously untested in an English context may be required.

1.5.4. The accelerated delivery in larger developments rests on a combination of factors including the selection of sites with fewer physical constraints, the economies of scale achievable, relatively less complex landownership patterns, and a public/private delivery model that can leverage the strengths of each partner and unlock simultaneously multiple barriers to delivery, perhaps most importantly the forward funding of key infrastructure. In combination, these factors were powerful enough to make places like Milton Keynes and Almere the fastest-growing towns in England and Europe respectively.

1.5.5. However, all development typologies will be needed to achieve a transformational scale of growth and the application of a range of levers; the delivery scenarios include levers with the potential to accelerate the development of the smaller-scale typologies as well as levers facilitating larger scale developments.

1.5.6. The three scenarios range in order from lowest to highest intervention, with the first scenario having the fewest levers and/or the least degree of intervention and the third the most. All scenarios assume a degree of intervention higher than any 'business as usual' model.

1.5.7. Considerations in relation to the deliverability of the scenarios are:

- the political constraints applying nationally and across the Corridor;
- the capacity or resources available to government and Corridor stakeholders to drive transformational change; and
- the ability of each scenario to build certainty of delivery among institutional and overseas investors.

1.5.8. There is likely to be a trade-off between the more politically acceptable, smaller-scale interventions that have a lower probability of delivering transformational growth and the more politically difficult interventions that offer greater potential for achieving the higher levels of growth.

1.5.9. As all scenarios have the aim of delivering a transformational scale of growth across the Corridor, it is considered that there are recommended levers common to all scenarios as follows:

- a Corridor-wide strategic governance body is established ;
- a spatial strategy is prepared for the transformational growth of the corridor;
- all efforts to accelerate growth should build on and carry forward the quality of place that contributes to the Corridor's existing success;
- the strategic governance body has adequate access to and/or oversight of the resources, skills and materials required to deliver 23,000-30,000 dwellings per year over the development period; and
- the Housing White Paper reforms are implemented in full across the Corridor.

1.6. Conclusion

1.6.1. Large scale new settlements or major urban extensions are likely to be a key part of any spatial solution in meeting the ambitious annual corridor transformational housing target.

1.6.2. The level of development that will be needed requires significant public and private sector resources. At its height, Milton Keynes Development Corporation had over 2,500 dedicated staff with over 40 different house builders operating within the City. Given the recent public sector cutbacks and private sector amalgamations, this level of resourcing will be challenging, particularly given that a proportion of the additional dwellings will be delivered through the urban intensification and linked places categories- which by their very nature are usually, per housing unit, more resource-intensive to deliver than new settlements.

1.6.3. Refining the 'business as usual' approach to planning and delivery will not achieve a transformational scale of growth. Rather, innovative approaches are needed which minimise the impact of the barriers and maximise the impact of the levers.

Leadership, governance and planning policy

1.6.4. An important first step to achieving a transformational scale of housing growth is quickly bringing forward allocations through the planning system. This has been made more challenging by the abolition of any regional planning process.

1.6.5. A comprehensive, innovative solution encompassing both plan making and governance is required, with a corridor-wide spatial plan identifying locations for transformational growth. A public sector-led governance structure will need to be established to deliver the plan. Ideally, this governance structure should also be responsible for preparing the spatial plan; however, the timescales needed to achieve this may render this impossible.

1.6.6. In the longer term a Corridor-wide coordination body and the combined authorities for all three sub areas should oversee the implementation of the spatial plan. Alongside the combined authorities, bespoke public agencies similar to Development Corporations will need to be established to bring forward large new settlements within their areas.

Planning consenting

1.6.7. The time taken to achieve major planning consents can be lengthy. To address this problem, use of LDOs could be considered. Urgent consideration of how and where LDOs could be used should be progressed as part of the spatial planning process and incorporated in planning policy.

Infrastructure

1.6.8. A fundamental pre-requisite of achieving buy in from local authorities and local communities to transformational growth is to demonstrate how the required strategic and local infrastructure is to be delivered. This infrastructure planning has to be integrated with the spatial planning process.

1.6.9. The delivery of East –West Rail and the Oxford-Cambridge Expressway underpin the overall growth strategy, releasing new development opportunities and increasing existing property values and business rates. Certainty over their delivery will enable developers to bring forward large-scale development, which will underpin the revenue generated by public transport users (often referred to as 'fare box' revenue).

1.6.10. Because the delivery of the strategic infrastructure and housing growth is a classic chicken and egg situation, with one not happening without the other, central government will need to establish certainty over the early delivery of this infrastructure (funding and operation within the next 10 years) so that investment is spurred and transformational growth occurs.

1.6.11. This could be state-funded, or an institutional or sovereign investor could finance all/part of this infrastructure if the criteria detailed in paragraph 7.7.26 of this report can be met.

1.6.12. It is, however, acknowledged that significant funding contributions for hard and soft infrastructure will need to be financed through increased land value capture, infrastructure levy or TIF mechanisms. Current land value capture mechanisms, such as s106 or CIL arrangements, do assist to an extent in the delivery of infrastructure. However, frequently they fail to generate the level of funding receipts required or are not capable of funding the infrastructure at the required time.

1.6.13. In many instances the problem is not one related to the overall profitability of the scheme, but a cash flow issue relating to significant but necessary expenditure commitments.

Delivery and funding

1.6.14. New approaches are needed to ensure a sufficient proportion of land value uplift is captured to finance such investment. Effectively, spatial planning allocations trigger enhanced land values, and given the scale of new housing and employment allocations anticipated across the Corridor, maximising the funding of infrastructure through this route is vital. The most effective approach to land value capture historically has been through the New Town programme.

1.6.15. This programme, however, required large scale public sector investment to prepare serviced land areas that had been purchased at existing use value (EUV). Although this model would certainly deliver long term positive land receipts across the corridor, it is unlikely that central government would provide the level of public funding required to service greenfield development.

1.6.16. Equally, it seems that, as a result of subsequent case law, there is no longer the ability to acquire land under the New Towns Act at EUV. As an alternative, consideration could be given to a process that involves the public sector entering into direct relationships (including though legal agreements or even joint ventures) with large landowners to share in enhanced land value receipts at the point where the plan making process identifies large residential led land allocations.

1.6.17. Were such relationships to be established, the infrastructure provision could then be delivered by the public sector agencies or through their JVs, financed through prudential borrowing or by using sources such as pension fund-backed bonds, with both parties sharing in in the long term uplift in land values once the cost of infrastructure has been paid for via a land charge.

1.6.18. Other funding sources that could be maximised to implement the public sector/JV led infrastructure delivery model include:

- Private sector, institutional and overseas investment in infrastructure provision; currently state-owned enterprises (SOEs), high net worth individuals/ private investors, and sovereign wealth funds are investing in development enabling infrastructure projects;
- Infrastructure levy or TIF type models able to overcome the forward funding cash flow problem associated with providing key enabling infrastructure;
- Income streams being used to finance public infrastructure bonds; these are significantly more complex and time consuming to set up, and mechanisms would need to be established for government to provide guarantees to any public sector forward funding infrastructure scheme.

1.6.19. The current structure of the house building industry remains a barrier to accelerating growth. The industry's business model discourages rapid housing development. It is therefore vital to encourage new types of housing providers to enter the market, including new variants of housing association, whilst also encouraging large scale new self-build initiatives linked to modular, pre-fabricated, and/or off-site construction techniques.

1.6.20. The government believes that self-build housing could make a significant contribution to increasing overall dwelling completion rates and is already encouraging councils to increase the supply of self-build opportunities.

1.6.21. At the same time, the public sector could pro-actively develop JV arrangements with the private sector to deliver transformational growth. In particular, these could be used for bringing forward large individual publicly owned portfolios of sites.

1.6.22. Finally, where this is possible, the public sector again has the opportunity through the implementation of the recommendations in the Housing White Paper to undertake its own building program. Such opportunities need to be maximised.

1.6.23. The deployment of all of these delivery and funding levers needs to be supported by targeted construction training programs to provide the skilled workforce required.

Table 1. Possible scenario for intervention, based on levers assessed to have the greatest potential to accelerate delivery

Theme	Key Levers
Leadership and Governance	• Corridor wide Governance - Corridor board is established on formal basis with statutory powers, for example similar to Greater London Authority
	• Sub Area Governance - each Sub Area becomes a combined authority area, including Swindon, with a strong commitment to growth in the Corridor
	• Local Enterprise Partnerships (LEPs) - Combined Corridor LEP is formed and prepares a Corridor wide Strategic Economic Plan
Planning Policy	• Corridor Spatial Plan - Corridor-wide plan is informed by comprehensive evidence base and forms part of the development plan for the Corridor; allocates sites for the development needed
	• Sub Area Plans - Statutory spatial plans are prepared for each Sub Area replacing existing Local Plans
	• Planning Freedoms Scheme - Housing land supply requirement changed to period of whole Plan
Planning Consenting	• Integration of housing and infrastructure consenting - NSIPs must demonstrate maximisation of associated development opportunities, including through development corporations
	• Maximise use of LDOs to achieve consent in particular for public sector and JV led development - alternative consenting routes: Permissions in Principle (PIP) and Local Development Orders (LDOs)
Infrastructure Development	• Clarity provided on delivery, funding and timing of East-West Rail and Ox-Cam Expressway and other key infrastructure, with completions in 2020s; strong cross-party support
	• Upgrade to A420 on scale of Oxford-Cambridge Expressway, new station(s)on Great Western main line and accompanying dwelling growth in new settlements larger than 10,000 dwellings
Delivery and Funding	• Development corporations - linear development corporations established along the routes of key strategic infrastructure
	• Public/private delivery models - Large (5-10,000 dwelling) JVs established in multiple locations across corridor to deliver growth at locations identified by Corridor-wide plan (similar to Opportunity Areas in London) spurred by full open data on location and scale of all public and private landholdings
	• Innovation/competition in construction sector - to stimulate competition among housebuilders and incorporate modular construction and self-build
	• Creating certainty for investors - Through larger-scale intervention, government provides significant certainty, spurring national and international investment across the Corridor on a large scale
	• Land value capture - Development corporations able to buy land at existing use value
	• Establishment of free zone - Entire Corridor is free zone for the duration of the development window

2. INTRODUCTION

2.1. This commission

2.1.1. In May 2017, the National Infrastructure Commission (NIC) commissioned AECOM to research planning and delivery of growth within the Cambridge-Milton Keynes-Oxford Corridor ('the Corridor'), specifically providing advice and analysis on:

"the extent to which infrastructure issues present barriers to the delivery of major new housing and commercial developments within the Cambridge – Milton Keynes – Oxford and Northampton Growth corridor; and

the extent to which identified barriers to delivery might be removed or reduced:

- *by improving local practices within the constraints of existing policy frameworks; and*
- *through changes to local/national policy; and*
- *the most effective options for accelerating different types of development in different places*."

2.1.2. This study represents the final report of AECOM's research into these questions.

2.2. The NIC and its analysis of the Oxford-Milton Keynes-Cambridge Corridor

2.2.1. The NIC was set up by the Government in October 2015 to advise on national infrastructure spending. Its organisational aim is to provide the UK government with impartial, expert advice on major long-term infrastructure challenges.

2.2.2. In March 2016, the NIC was asked to consider how to maximise the potential of the Corridor as a single, knowledge-intensive cluster that competes on a global stage, protecting the area's high quality environment, and securing the homes and jobs that the area needs.

2.2.3. As part of this process, it published a Phase 1 Call for Evidence over summer 2016, which received responses from interested parties across the corridor and beyond.

2.2.4. In November 2016, the NIC published an Interim Report for the Corridor accompanying the Government's announcement in the Autumn Statement of funding for East-West Rail and the Oxford-Cambridge Expressway.

2.2.5. The Interim Report set out the NIC's vision for the Corridor as 'a world-renowned centre for science, technology and innovation'. It noted that the Corridor is home to 3.3 million people and 'some of the most productive, successful and fast-growing cities in the United Kingdom'.

2.2.6. It further stated that East-West Rail and the Oxford-Cambridge Expressway represent a 'once-in-a-generation' opportunity to develop a multi-modal transport spine for the corridor, 'delivering substantial national benefits and providing a foundation for the area's long-term development'.

2.2.7. The Interim Report goes on to note that 'through joined-up planning, these schemes also have the potential to unlock major new sites for housing, to improve land supply, and to enable the development of well-connected and sensitively designed communities.'

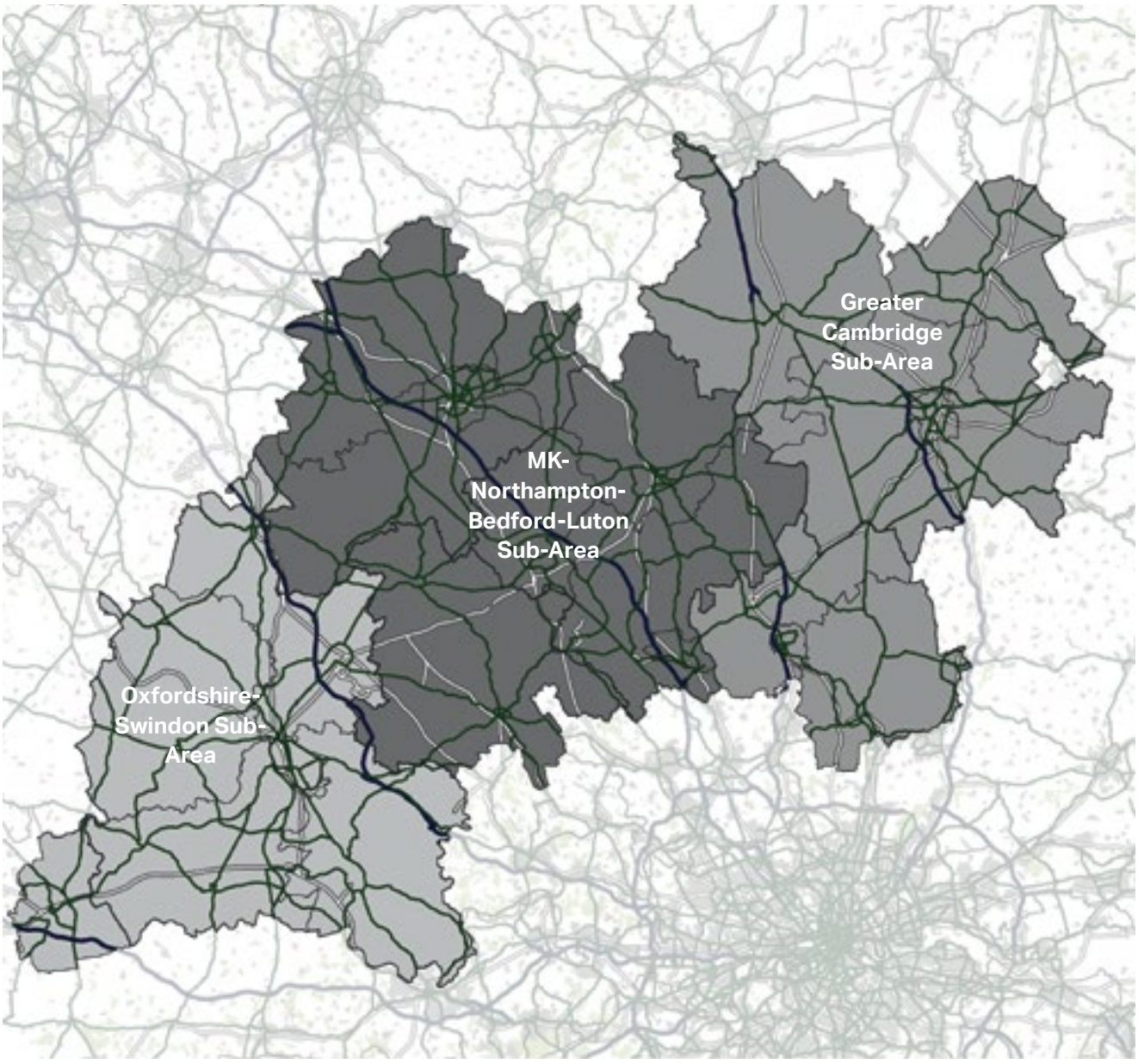


Figure 1. The Oxfordshire-Swindon; MK-Northampton-Bedford-Luton; and Greater Cambridge sub areas, as defined for the purposes of the study's analysis.

2.3. The scale of the challenge

2.3.1. The Interim Report sets out clearly the NIC's vision for the Corridor. Alongside this, it identifies the scale of the challenge in achieving this vision, with a focus on the existing and potential barriers on the path towards transformational growth. These are stated to be:

- A lack of sufficient and suitable housing, which presents a fundamental risk to the success of the area. Two of the least affordable cities in the UK lie within the corridor, and the area as a whole has consistently failed to build the number of homes it needs, putting sustained growth at risk. The housing shortage is already increasing costs for businesses and diminishing their ability to attract employees at all levels – including the recruitment and retention of globally mobile talent;
- The chronic under-supply of homes is made worse by poor east-west transport connectivity. The report calls on the government to commit to prompt delivery of the East West Rail project and the Oxford-Cambridge Expressway; and
- No joined-up plan for housing, jobs and infrastructure exists across the corridor. Without this, it will be left behind by its international competitors. The report calls on local authorities, Local Enterprise Partnerships, government departments and national delivery agencies to work together to develop proposals for the joint governance arrangements required to deliver infrastructure and housing.

2.4. Scope and aims of this Study

Study context

2.4.1. The NIC has structured its ongoing Corridor study work into two phases. Phase 1 included the Call for Evidence, a number of detailed reports on the Corridor's economy, property market, funding and investment context and transport networks published alongside the Interim Report, and concluded with the Interim Report itself. The second phase of the study started in 2017 and includes this commission.

2.4.2. In commissioning this study, the NIC made it clear that it should analyse and take forward the existing Corridor evidence base, including, but not limited to the documents and reports referenced above that were published alongside the Interim Report, namely:

- The responses to the Phase 1 Call for Evidence ;
- Data submitted by the six Local Enterprise Partnerships along the Corridor ;
- Cambridge Econometrics and SQW's Corridor Economic Analysis ;
- Metro Dynamics' Funding and Investment Analysis ;
- Savills' Property Market Analysis ; and
- Arup's Transport Analysis.

2.4.3. For the purposes of the analysis reports listed above, the NIC formulated three scenarios of different scales of intervention; in ascending order these were named Baseline (Business as Usual), Incremental (Meeting Local Need) and Transformational (Maximising Growth). All analysis was therefore carried out across these three scenarios.

2.4.4. For this commission, however, the NIC has instructed AECOM to assume the Transformational (Maximising Growth) scenario only. As such, neither the Baseline (Business As Usual) nor the Incremental (Meeting Local Need) scenarios have been considered.

2.4.5. The Transformational Growth scenario entails the delivery of between 23,000 and 30,000 homes per year across the corridor between 2017 and 2050.

Study scope

2.4.6. The scope of the research is to investigate the barriers to housing and infrastructure delivery across the Corridor, i.e. those factors which are delaying or preventing development from coming forward, and to assess the effectiveness of the 'levers', in terms of policy, strategy or approach, that can help to accelerate or unlock growth.

2.4.7. In so doing, this study will help the NIC to understand more clearly how the Corridor can be transformed into the world-renowned centre for science, technology and innovation forming the NIC's vision for the area.

2.4.8. The Corridor and its boundaries are inherently vague and consideration of infrastructure schemes, housing markets, TTWAs and governance issues might suggest a range of different and competing boundaries and definitions. However, for the purposes of this study the definition of the Corridor comprises; twenty-two local planning authorities (LPAs) divided into three sub-areas:

- Greater Cambridge;
- Oxfordshire-Swindon; and
- The Milton Keynes-Northampton-Bedford-Luton sub area.

2.4.9. Table 2 and Figure 2 below show the authorities within the scope of this study and the sub-area that each falls within.

Table 2. The Local Planning Authorities and Sub-Areas forming the Oxford-Milton Keynes-Cambridge Corridor

Local Planning Authority	Type of authority	Corridor Sub-Area
Cherwell	District	Oxfordshire-Swindon
Oxfordshire	County	Oxfordshire-Swindon
South Oxfordshire	District	Oxfordshire-Swindon
Swindon	Unitary (Borough)	Oxfordshire-Swindon
Vale of White Horse	District	Oxfordshire-Swindon
West Oxfordshire	District	Oxfordshire-Swindon
Aylesbury Vale	District	Milton Keynes-Northampton-Bedford-Luton
Bedford	Unitary (Borough)	Milton Keynes-Northampton-Bedford-Luton
Central Bedfordshire	Unitary	Milton Keynes-Northampton-Bedford-Luton
Daventry	District	Milton Keynes-Northampton-Bedford-Luton
Luton	Unitary (Borough)	Milton Keynes-Northampton-Bedford-Luton
Milton Keynes	Unitary (Borough)	Milton Keynes-Northampton-Bedford-Luton
Northampton	Borough	Milton Keynes-Northampton-Bedford-Luton
South Northamptonshire	District	Milton Keynes-Northampton-Bedford-Luton
Wellingborough	District	Milton Keynes-Northampton-Bedford-Luton
Cambridge	City	Greater Cambridge
East Cambridgeshire	District	Greater Cambridge
East Hertfordshire	District	Greater Cambridge
Huntingdonshire	District	Greater Cambridge
North Hertfordshire	District	Greater Cambridge
Stevenage	Unitary (Borough)	Greater Cambridge
South Cambridgeshire	District	Greater Cambridge

Source: Definition of Corridor from 'The Property Market within the Cambridge- Milton Keynes-Oxford Corridor' (Savills, 2016)

Figure 2. A map showing the 22 Local Authority areas which form the Oxford-Milton Keynes-Cambridge Corridor

2.5. About this study

Aim of study

2.5.1. This report has three primary research questions to address:

1. What are the barriers to housing and infrastructure delivery within the Corridor;
2. What are the levers that can overcome these barriers; and
3. What are the most effective options for accelerating different types of development in different places?

2.5.2. For the purposes of this report, the following definitions have been used:

- A **barrier** is defined as a development or planning issue, which is slowing or preventing the delivery of new development.
- A **lever** is defined as an intervention in the planning and development process which has the potential to accelerate or increase delivery of new development.

2.5.3. Barriers and levers considered in this report fall within the five key themes:

- Leadership and governance
- Planning policy
- Planning consenting
- Infrastructure development
- Funding and delivery

Structure of the report

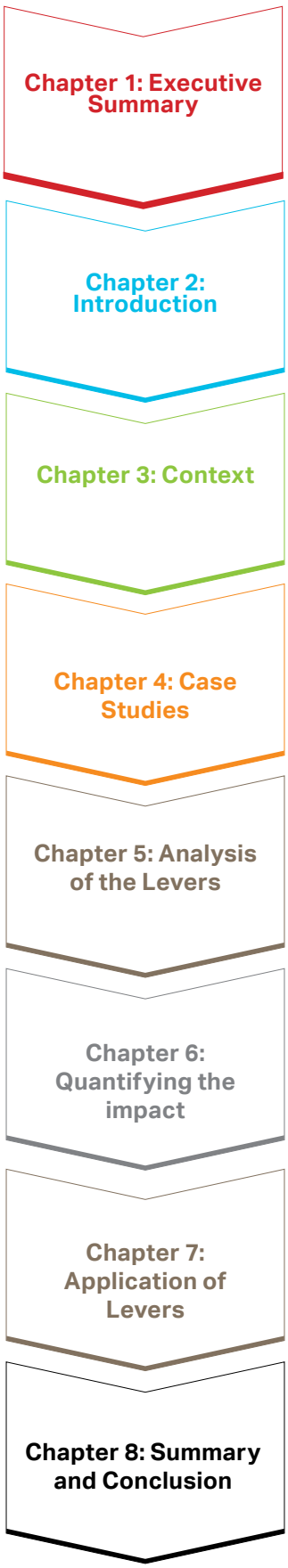
2.5.4. Following this introductory chapter, the remainder of this study is divided into two main parts, and six chapters.

2.5.5. Part A: Baseline – sets out a review of the baseline situation across the Corridor as a whole, drawing on existing and new evidence gathered by AECOM and others. This includes a literature review, a series of case studies and the outputs of a project workshop to which Corridor stakeholders were invited.

2.5.6. Part B: The Future seeks to draw from and build on Part A to set out how the NIC's ambitious vision for the Corridor might be realised. The conclusions of Part B were informed by a further stakeholder workshop.

2.5.7. The study is accompanied by a number of appendices which provide further details of the evidence base which supports the conclusions.

2.5.8. A full outline of the structure of this study appears on the opposite page.



Introduction

Outlines the scope of the commission, the scale of the challenge proposed and sets out the structure of the report.

Context

Comprises a review of existing literature on barriers and levers within the Corridor and beyond, and seeks to classify those barriers and levers by when and where they apply or can be deployed.

Case Studies

Sets out the summary results of a case study analysis complementing the review of existing literature by investigating practical examples of barriers and levers within the Corridor, within the English planning system as a whole, and outside of England.

Analysis of the Levers

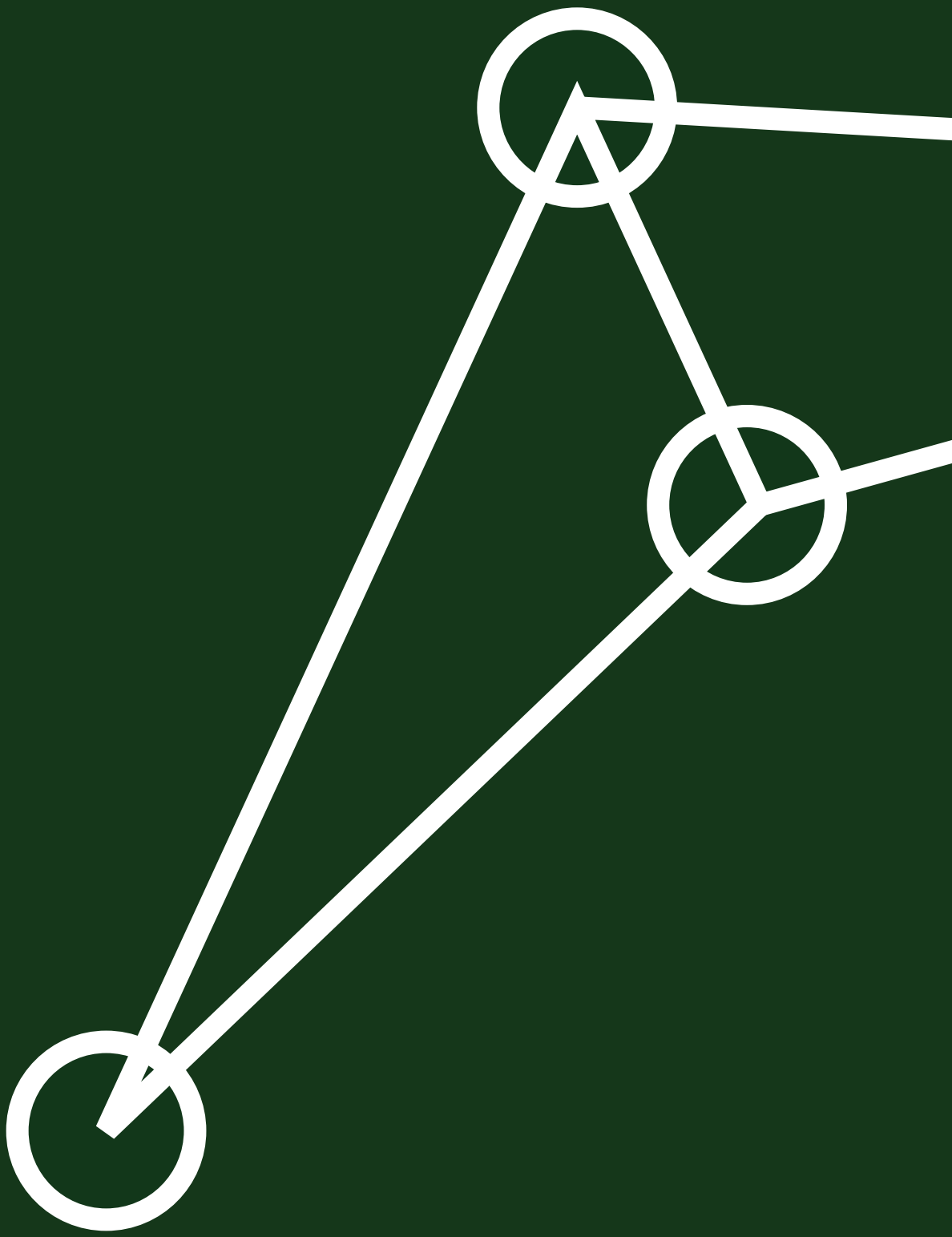
This chapter of the report considers further the potential for the levers identified to deliver a transformational level of growth across the Corridor.

Quantifying the Impact

The purpose of this chapter is to complement the analysis by adding a quantitative assessment of how lever application, allowing for differing urban typologies and geographies across the Corridor, might increase the rate of housing delivery from its current level towards that required to meet the transformational growth scenario.

Application of Levers

This chapter provides a series of recommendations in relation to the key levers to achieve a transformational level of growth across the Corridor. The key levers are set out in terms of three potential scenarios which involve varying levels of intervention.



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PART A: THE BASELINE

AECOM

3. BASELINE CONTEXT

3.1. Existing completion rates

3.1.1. As a starting point for the baseline, the scale of change envisaged has been quantified. As noted in the Introduction, the Transformational Scenario requires 23,000-30,000 homes per year to be developed across the corridor to 2050. Table 3 shows the dwelling completion rates by Corridor local planning authority and sub-area over the last ten years (2007-2017). It should be noted that this period included a major recession. However, given the timescale the NIC is planning for, it is likely that there will be several economic cycles including recessions in this timeframe as well.

3.1.2. Table 3 shows that between 2007 and 2017, a total of 102,790 dwellings were completed across the corridor, an average annual completion rate of 10,279. This means that the transformational scenario, requiring 23,000-30,000 dwellings per year, would require completion rates two to three times current completion rates.

Table 3. Dwelling completion rates across the Corridor, 2007-2017.

Local Planning Authority	Average annual dwelling completions 2007-2017	Completions in most recent year (2016-7)	Completions in peak year	Peak year	Average annual dwelling completions as % of Corridor average
Cherwell	409	1,030	1,030	2017	87.5
Oxford City	256	240	620	2009	54.8
South Oxfordshire	382	590	590	2017	81.8
Swindon	844	1,000	2,030	2008	180.6
Vale of White Horse	522	720	740	2016	111.7
West Oxfordshire	267	500	520	2008	57.1
OXFORDSHIRE-SWINDON SUB-AREA AVERAGE	447	4,080	4,420	2008	95.7
Aylesbury Vale	867	1,160	1,160	2017	185.6
Bedford	608	950	950	2017	130.1
Central Bedfordshire	870	1,390	1,390	2017	186.2
Daventry	225	730	730	2017	48.2
Luton	264	260	740	2012	56.5
Milton Keynes	1,338	1,230	2,500	2008	286.4
Northampton	574	470	1,060	2008	122.9
South Northamptonshire	268	580	580	2017	57.4
Wellingborough	117	200	300	2016	25
MILTON KEYNES-NORTHMAPTON-BEDFORD-LUTON SUB-AREA AVERAGE	570	6,970	6,970	2017	122.0
Cambridge	528	860	1,020	2014	113.0
East Cambridgeshire	297	140	740	2008	63.6
East Hertfordshire	315	500	570	2016	67.4
Huntingdonshire	604	520	770	2012	129.3
North Hertfordshire	150	380	380	2017	32.1
South Cambridgeshire	371	520	720	2015	79.4
Stevenage	203	360	370	2008	43.4
GREATER CAMBRIDGE SUB-AREA AVERAGE	353	3,280	3,280	2017	75.6
CORRIDOR AVERAGE	**467**	**14,330**	**14,330**	**2017**	**100**

Source: DCLG

3.2. Literature review

3.2.1. This study builds on existing work carried out by the NIC as well as other relevant literature. A literature review has been undertaken to understand the Corridor's existing planning and delivery context, with reference to the wider national and international context.

3.2.2. The literature review focuses on practicable examples, case studies and other relevant data that help build an understanding of the issues that this study seeks to address.

3.2.3. The outputs of the literature review have been used throughout to inform subsequent chapters, with citations provided where appropriate.

3.2.4. Sources such as articles in the planning and general press, and shorter papers, have been consulted as appropriate and are cited in the report where necessary; the sources listed in Appendix A should not be considered exhaustive.

3.2.5. In addition to the full list set out in the aforementioned Appendices, a summary of the key barriers and levers to development arising from the literature review is set out below.

Principal Barriers

- Leadership and Governance: A lack of co-operation across local authority boundaries appears to be a significant barrier. Previous attempts to establish corridor-wide initiatives had too many partners and objectives, were dominated by the public sector and focused only on the property elements of development.
- Planning Policy: A lack of spatial planning policy above local authority level means a strategic vision for transformational growth is missing. The evidence gathering process for Local Plans is regarded as inadequate, requiring unnecessary detail and constant updates. In addition, site size thresholds for land availability assessments are deemed to be too high and Neighbourhood Plans too restrictive, resulting in unnecessary barriers to potential windfall sites.
- Planning Consenting: There are capacity issues within Local Authority Planning departments, which are reported to be under-staffed or under-skilled. This issue is exacerbated by inconsistency and over-complexity in planning obligations, contributing to a long consenting process which ultimately slows delivery.
- Infrastructure development: A lack of forward planning and funding of infrastructure slows delivery, with developers bearing too much of the upfront costs and therefore exposing larger sites to too much risk.
- Funding and delivery: There are too few actors in the housing market, with too much emphasis on private sector land acquisition and not enough focus on the release of surplus public land. There is a lack of flexibility and transparency in CIL, and restrictions on pooling of S106 contributions have further limited upfront infrastructure funding opportunities.

Principal Levers

- Leadership and Governance: The literature review highlights instances of positive, collaborative and strategic planning across local authority boundaries; Statements of Common Ground will replace the 'Duty to Co-operate' and may help accelerate growth. Devolution deals are being implemented for Local Planning Authorities with ambitious growth targets. Overall, the literature review highlights the need for a single, pan-corridor organisation, mechanism or process that plans for housing, transport, skills, employment, and utilities; such a body would need to have a degree of fiscal autonomy, a single vision, and a strong, marketable brand.
- Planning Policy: A consistent approach to policy evidence would help, including a new methodology for housing need calculation. A spatial planning policy framework is needed to establish the strategic direction at the 'larger than local' scale. Central government should intervene in circumstances where Local Authorities are slow to implement an adopted Local Plan.
- Planning Consenting: The increased use of Planning Performance Agreements would enhance certainty and therefore speed delivery; this aim also has the potential to be achieved through the greater use of Local Development Orders and Permissions in Principle. If examiners had the ability to find a Local Plan 'partially sound', this would potentially avoid delay in the process.
- Infrastructure development: The upfront funding of infrastructure is among the most important levers for accelerating development. Better quality broadband, internet and mobile coverage, on a par with international competitors, would spur economic development across the Corridor. Upfront infrastructure costs could be offset against future revenue streams through mechanisms such as the Home Building fund or revolving Infrastructure funds. More transparency on the relationship between developer contributions and individual sites would facilitate the delivery of infrastructure within the planning process.
- Funding and Delivery: There is potential to develop innovative mechanisms and approaches, such as TIF, bespoke Land Value Capture and an open data Land Registry, to aid delivery. Greater use of CPOs, DCOs and the provision of Development Corporation powers to assemble land at scale and pace, would also spur growth. Alternatives or upgrades to CIL and Section 106, such as a new Milton Keynes-style Tariff, should be used. Institutional investors may be able to provide early cash flow on large-scale developments. Local authorities could play a more active role in development delivery, either through building their own homes or through incentives to SME construction firms.

4. CASE STUDIES

4.1. The purpose of the case studies

4.1.1. A series of case studies are presented in Appendix F to demonstrate how barriers and levers of relevance to the study work in practise. Case studies apply to specific sites or in some cases to schemes and strategies. The case studies illustrate barriers, levers and in some cases both, reflecting the previously mentioned interrelationship between them.

4.1.2. The case studies illustrate development in all three sub-areas of the Corridor, as well as England beyond the corridor, and outside England. Figure 3 Figure 4 and Figure 5 below illustrate all individual case studies and where they are located or apply.

4.1.3. In total, 21 case studies are presented in Appendix F. The barriers and levers set out in the case studies inform Part B of this study alongside those already identified through the literature review. In some cases, the case studies show the practical operation or application of the barriers and levers shown in Appendix A-E; in other cases, they highlight additional barriers and levers not previously captured.

4.1.4. The case studies indicate levers have been applied in practice and to what extent they were successful, with reasons for success or failure.

4.1.5. Additionally, where possible, the quantitative impact of the levers illustrated through the case studies is captured. This data informs Chapter 6 (Quantifying the Impact), which aims to demonstrate which levers have the potential to accelerate development to the greatest extent.

4.2. Summary of findings from case studies

4.2.1. The case studies of developments and strategies from across the Corridor, England and internationally highlighted a number of barriers and levers that are relevant for this project. This chapter provides a narrative of those key lessons, with full details of each of the case studies provided in Appendix F. This narrative uses the same broad classification of barriers and levers used throughout this study, namely leadership and governance, planning policy, planning consenting, infrastructure and delivery and funding.

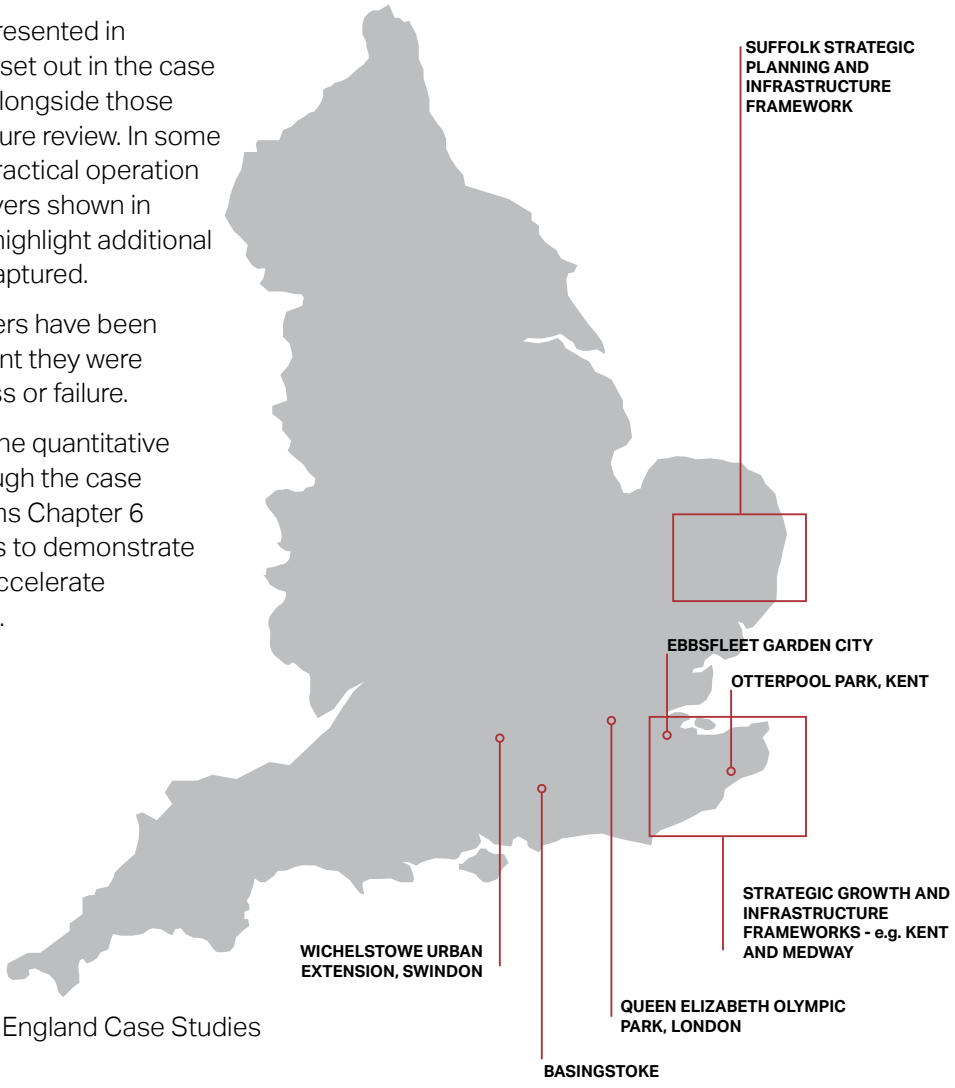


Figure 3. The locations of the England Case Studies

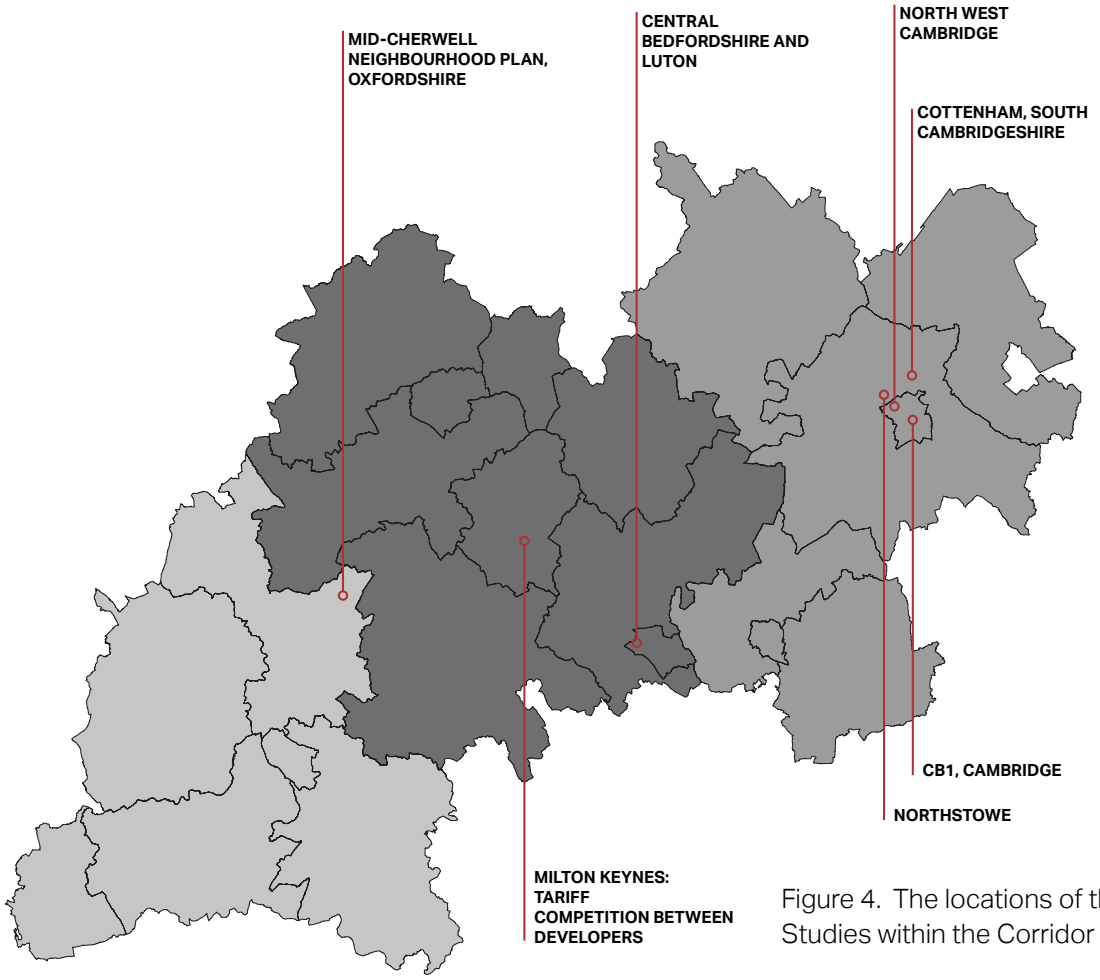


Figure 4. The locations of the Case Studies within the Corridor

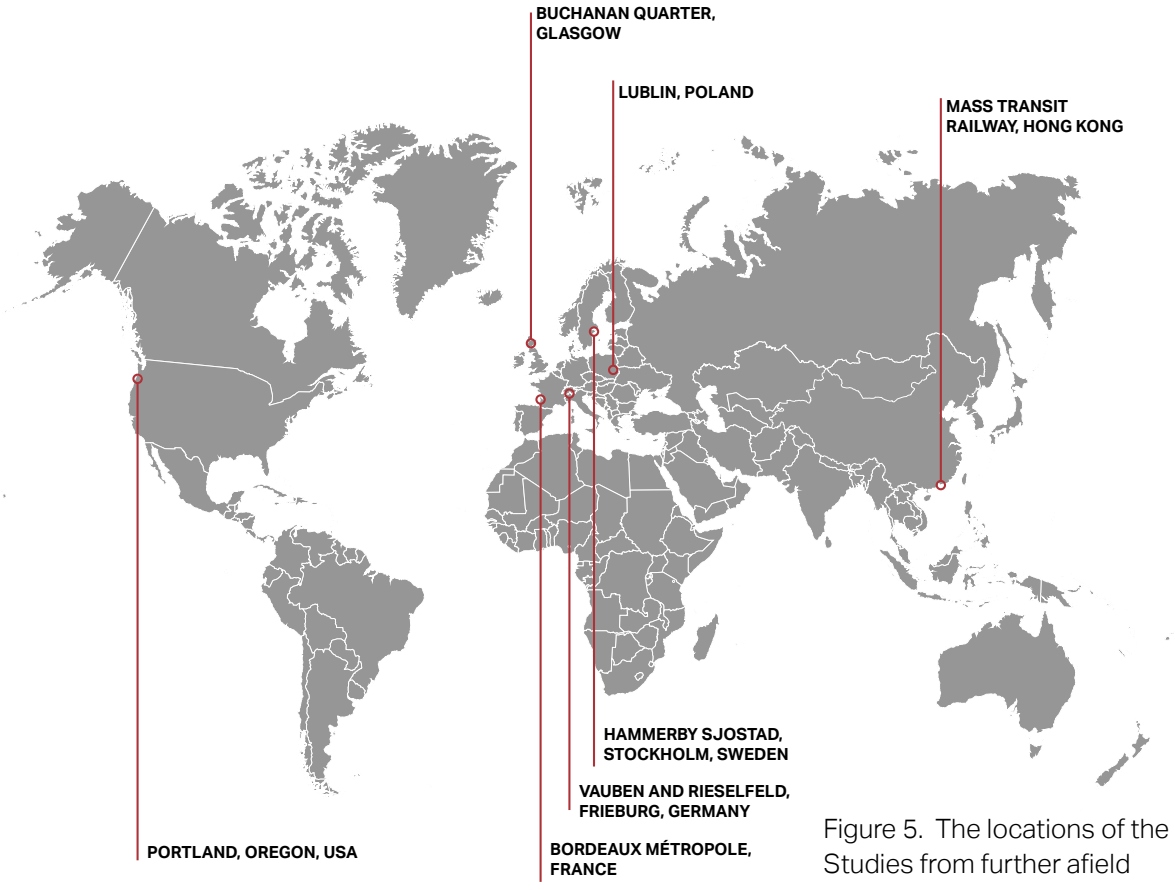


Figure 5. The locations of the Case Studies from further afield

4.3. Leadership and governance findings from case studies

4.3.1. There is a lack of "larger than local" governance structures in England (outside of London) However, multiple examples show what can be achieved when individual local authorities come together to form appropriate leadership and governance structures.

4.3.2. For example, **Portland** in Oregon, is internationally famous for its city-wide strategic approach to planning and design. Voluntary co-operation between individual cities making up Greater Portland led to the establishment of a Regional Planning Authority comprising elected representatives from each city, which gradually developed greater responsibility for governance and planning of issues unable to be covered by any single city.

4.3.3. A similar approach was tested at **Lublin, Poland,** but with fewer powers on the part of the regional planning body and more remaining at the city level, progress has been slower than in Portland. This shows that aggregated or strategic organisations overseeing a larger area tend to succeed to a greater extent when they are given more powers.

4.3.4. Another important leadership and governance lever comprises long-term planning and thinking by political leaders beyond plan periods. This can offer significant benefits in terms of accelerating delivery and creating positive perceptions of growth. At **Basingstoke,** taking the long view beyond the current planning period unlocked appropriate funding and support from central government. In a virtuous circle, this funding then accelerated those locally-led initiatives to plan for growth and infrastructure over a longer time horizon, thus offering certainty to developers and investors that shorter-term political change will not derail growth aspirations.

4.3.5. Within the Corridor, the MK Futures 2050 initiative led by **Milton Keynes** Council is taking a similar approach.

4.4. Planning policy findings from case studies

4.4.1. The Duty to Co-Operate is in many cases insufficient as a lever for strategic planning across boundaries, and indeed in some cases has become a barrier. One well-known example from the Corridor is **Central Bedfordshire**, who are now embarking on their third attempt at developing their first Local Plan (the authority having been established only in 2009), the previous two attempts having both failed on Duty-to-Co-Operate issues whereby the adjoining urban area of Luton differed with Central Bedfordshire Council on the quantum of and approach to releasing land from the local Green Belt in Luton in order to meet Central Bedfordshire's identified needs.

4.4.2. Here, therefore, the high bar set by a Duty to Co-Operate, with no sub-regional or regional planning structure to force the two local authorities to agree on how to meet need when significant planning constraints exist, has resulted in a single Local Plan taking eight years (and counting) to be implemented.

4.4.3. Elsewhere, key inner urban sites are being used across the Corridor to deliver denser development, but care needs to be taken in terms of execution and quality of place, given the visibility and high profile of such locations. **CB1** in Cambridge is a salutary example of how a highly-visible development, forming a gateway to the city, failed in its execution on numerous criteria. Nevertheless, in the narrower terms of the principle of delivering new dwellings on underused central brownfield sites, it should be regarded as more of a success.

4.4.4. Significant planning policy barriers to development across the corridor include Green Belt. The example of **Cottenham** in Cambridgeshire shows that in some cases, the inflexibility of application of Green Belt policy can act as a significant barrier to development, holding back delivery of new dwellings on otherwise suitable sites that have political support. There is, perhaps, an opportunity here for a more nuanced approach that can free up development in selected, suitable locations across the Corridor that are currently Green Belt.

4.5. Planning consenting findings from case studies

4.5.1. Often, a key barrier to planning consents is local opposition. The case of **Upper Heyford Airfield** in Cherwell, Oxfordshire, demonstrates an innovative method for ensuring that such opposition can be neutralised. Here, Dorchester Estates, as the developer of a strategic site in a rural area that had the potential to be opposed by local people, thus delaying delivery, took the bold and unusual proactive step of asking residents if they would support development if it were consented through a 'strategic-scale' neighbourhood plan encompassing around a dozen villages, and directing all of their identified housing needs to the single airfield location. Local residents agreed this was a suitable and sensible approach and as such, thousands of dwellings are now being delivered at Upper Heyford faster than they otherwise would have been.

4.5.2. In other cases, a recognised barrier to the consenting process is a lack of capacity in local authorities. This was overcome in **North West Cambridge** by means of a planning performance agreement, whereby Cambridge University, as the developer of a site of sub-regional strategic importance on the edge of the city, effectively had the resources to pay for a unit of dedicated planners within Cambridge City Council to ensure that development would not be stalled through consenting capacity constraints. Though the development was slowed by unrelated issues, including of Green Belt release, the planning performance agreement effectively acted as a lever to accelerate development.

4.6. Infrastructure findings from case studies

4.6.1. With infrastructure requirements cited so frequently in the literature review as a key barrier to unlocking key housing sites, **Strategic Planning and Infrastructure Frameworks (SPIFs)**, and **Growth and Infrastructure Frameworks (GIFs)**, have an important role to play in directing growth to the most effective locations to utilise the infrastructure capacity that exists or is planned across an area.

4.6.2. In a similar role to the former structure plans, these collaborative frameworks encourage the wide range of infrastructure providers to work outside silos with the relevant planning authorities to identify both the priority infrastructure requirements for an area but also the most appropriate locations for growth in a single joined up process. This ensures planning in a proactive manner as opposed to a reactive manner which will inevitably lead to inefficient infrastructure demands.

4.6.3. For example, the **Suffolk SPIF** takes the benefits offered by the existing GIF model, and adds further value. In SPIFs, infrastructure informs the location of housing and vice versa because it is all planned through a single conversation. This also offers the potential to better integrate economic and employment planning with planning for housing and infrastructure, ultimately resulting in more sustainable, deliverable development across a wider strategic area. In many ways, such an approach effectively resembles an (albeit non-statutory) structure plan for the entire county, and offers the potential to be expanded across an even wider area, such as the Corridor.

4.7. Delivery and funding findings from case studies

4.7.1. In the centre of the Corridor, **Milton Keynes** was England's fastest-growing city for much of the 2000s. The delivery and funding levers it employed in order to accelerate development include the forward funding of infrastructure by means of a well-designed tariff model, and an ability to stimulate competition among rival house builders so that no single builder had a monopoly.

4.7.2. The Milton Keynes Tariff demonstrates that section 106 was flexible enough to develop a tariff permitting consistent and certain infrastructure contributions that greatly accelerated the speed of dwelling delivery. While the tariff was in operation, development certainty and hence completions in Milton Keynes were significantly higher than across England as a whole.

4.7.3. Application of the tariff was simplified by the presence of extensive suitable greenfield land, shortening the planning lead-in time and increasing certainty on infrastructure costs. The tariff was set at a level high enough to deliver identified requirements but low enough not to harm viability. At the same time, there were a relatively limited number of landowners and strong policy and financial support for the tariff model from central government. However, since 2015, pooling restrictions on section 106 contributions have been introduced by the government in an effort to stimulate takeup of the alternative model of CIL, meaning the tariff can no longer be levied.

4.7.4. Equally important in the speed of delivery at Milton Keynes was an ability to stimulate competition among individual house-builders. The house-building market in England is dominated by a small number of larger operators- indeed, it has been described as an oligopoly- and as such, some sites, particularly the largest ones that are in the hands of a single builder, can take many years to develop as it is in the developer's interest to generate demand by with-holding supply.

4.7.5. This situation was avoided at Milton Keynes through public-sector control of the land-holding process, originally through a development corporation model but into the 1990s and 2000s after the development corporation had been wound up through English Partnerships (now the Homes and Communities Agency). English Partnerships limited the size of the land parcels sold to individual developers, and ensured the presence of SME housebuilders alongside the larger companies. As such, competition was stimulated and supply was increased as housebuilders rushed to be the first to offer their completed products to the market.

4.7.6. This model at Milton Keynes, whereby the public sector owns land that is developed by the private sector, bears significant similarity to (though is not identical with) a Joint Venture (JV). In a JV, a public sector landowner establishes and enters into a special purpose vehicle with a private developer to develop a specific site. JVs have a long and effective history as a delivery mechanism, and are particularly useful in bringing forward development at a scale that a private landowner or development might consider too commercially risky. Within the Corridor, both **Northstowe** in Cambridgeshire and **Wichelstowe** at Swindon were delivered in this way. In both cases, however, development was slowed- in the case of Wichelstowe, as detailed in the case study, the factors slowing development were more related to infrastructure and had little to do with the JV itself.

4.7.7. At Northstowe, by contrast, infrastructure, in the shape of the Cambridgeshire Guided Busway, was delivered unusually early, and the factors slowing

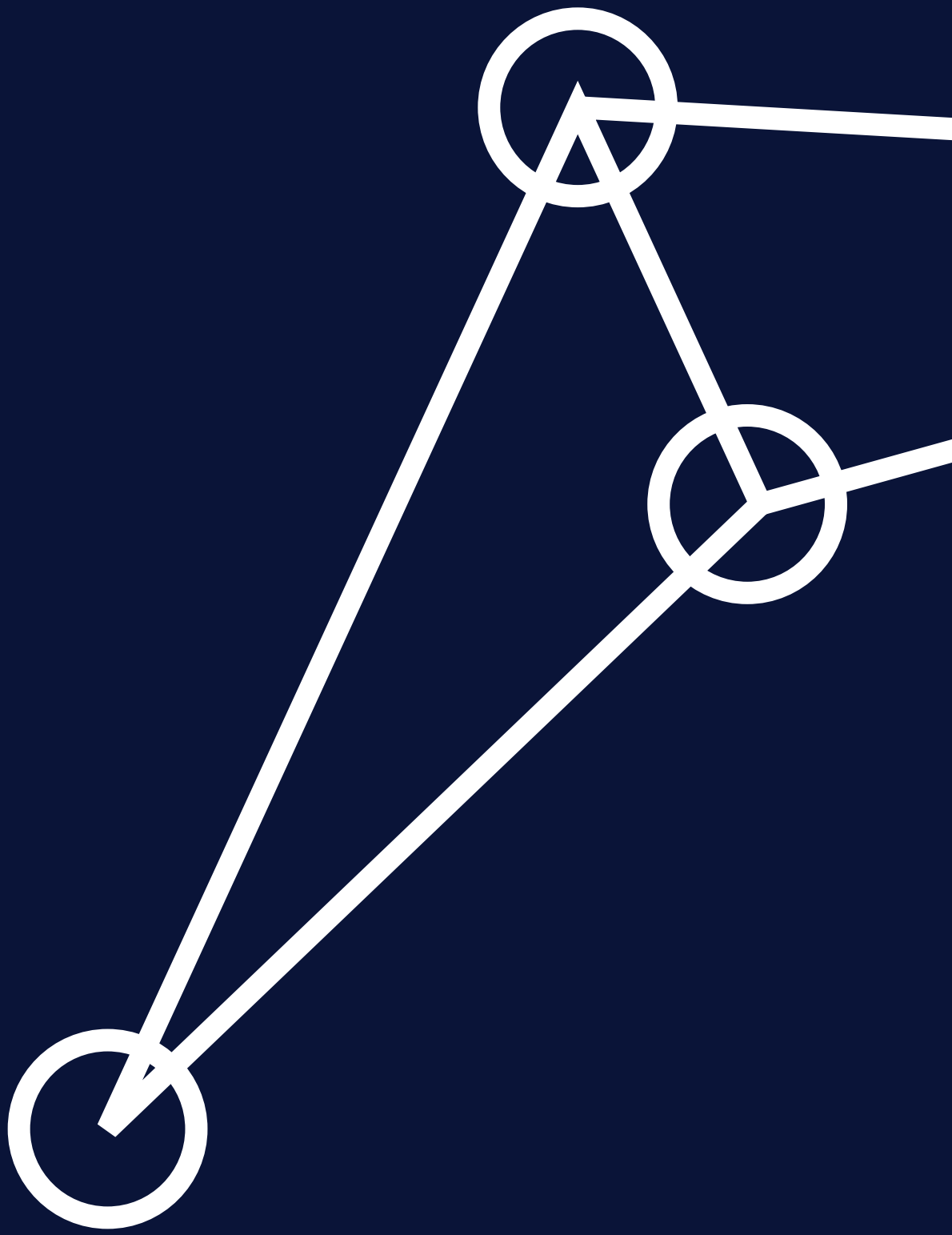
development were relevant to the JV model itself, acting as a lesson for successful application of other JVs. Here, in the context of the 2009-10 recession and the resulting agenda of public sector austerity, the HCA offered the land at too high a price and in too limited a volume to the private sector housebuilders. This shows that for a JV to work, it must be based on a sound and shared appreciation of development viability on both sides of the arrangement.

4.7.8. A more unusual approach to delivery is being tested at **Otterpool Park** in Shepway in Kent. Here, the local authority was able to purchase land for a new garden village of 10,000 people at its current use value by carefully keeping its intentions confidential until a sufficiently large pool of land was in its ownership. This shows that there is potential for land acquisition by the public sector to deliver large-scale development without the need to establish a development corporation. Though certainly innovative, the disadvantage of this approach is that absolute confidentiality has to be maintained over an extended period, which also tends to put a cap on the scale of development; and its viability is limited in locations where development hope value is already high. This suggests that such an approach might work but only for relatively smaller new settlements in unconstrained locations at the Corridor's periphery, and not for urban extensions, where hope value would be too high. Likewise, the closer to high-value locations such as Oxford, Cambridge and Milton Keynes, the less likely such an approach would be to work.

4.7.9. At **Ebbsfleet** the Government has established a Development Corporation to help increase the pace and quantum of development within a series of strategic sites that have been slow to come forward. This has involved the use of planning consenting powers and targeted public investment in infrastructure to reduce the burden on private sector developers.

4.7.10. The **London Legacy Development Corporation** used affordable housing as a key lever to accelerate delivery of a new large mixed-use quarter at the Olympic Park in London. The affordable housing element for a larger scheme was delivered earlier than originally planned in order to provide greater variety of product to the developer market while securing the potential for land value uplift in the future. This is a useful example of a lever that can be applied by a public sector landowner such as a delivery corporation that might not take place where a site is in private sector hands. The key at the Olympic Park was securing a large-scale outline application initially, which confirmed the principle of development, while still having the freedom to vary the timing and format of reserved matters, including the affordable housing element.

4.7.11. Finally, **Buchanan Quarter** in Glasgow is an example of an innovative but straightforward approach to application of Tax Increment Financing (TIF), another enabling mechanism for development used extensively in the USA. TIF is a funding model whereby the forecast future tax income from development is offset against the costs of development. The application of TIF is likely more limited in the UK than in the US because it requires significant fiscal devolution to the local level to be applied. However, in the context of a new devolution agenda for local government, there is the potential for more widespread use of TIF as a lever to accelerate development across the Corridor and elsewhere.



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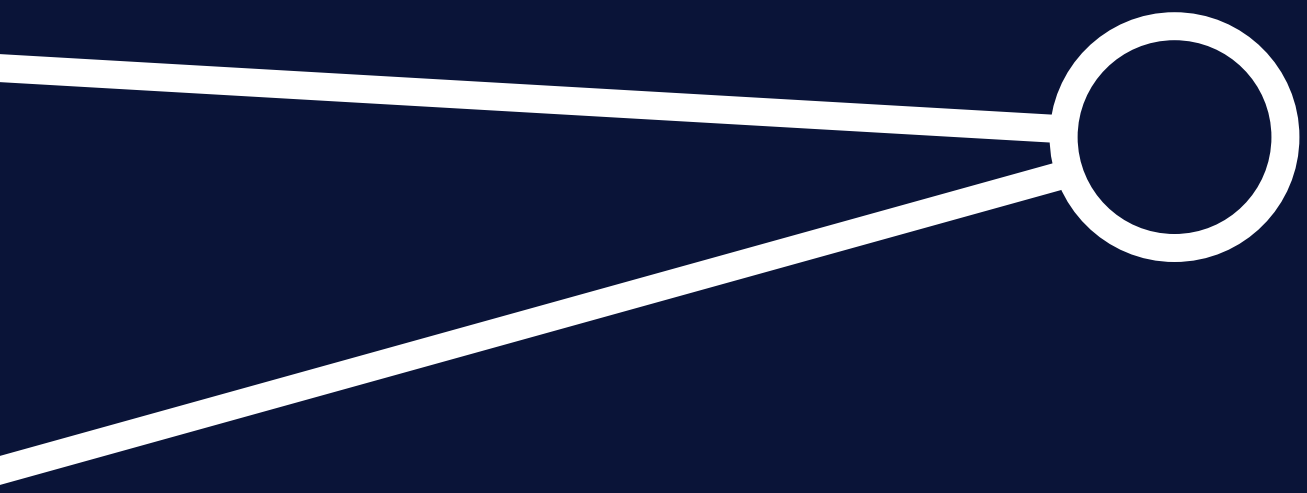


PART B: THE FUTURE

AECOM

5. ANALYSIS OF LEVERS

5.1. Introduction

5.1.1. This chapter of the report explains and assesses the different types of levers that are considered likely to have the most potential to overcome barriers and increase or accelerate development within the Corridor.

5.1.2. The assessment of which levers are most likely to accelerate development is based on the literature review, a series of case studies and both stakeholder workshops, as outlined in the Appendices. The potential applicability of the levers to different typologies of development is also assessed.

5.1.3. The potential levers to be applied to future development in the Corridor have been grouped into five themes, as set out below. Levers are considered broadly in order of their likely importance or relevance to increasing or accelerating delivery. Further consideration of the specific application of levers to development in the Corridor is set out in Chapter 5.

- **Leadership and governance levers**: These levers relate to the governance structures that influence delivery of development including local planning authority governance, sub regional collaborative structures, LEPs and project and site specific governance structures including development corporations, joint ventures and project boards
- **Planning policy levers**: These levers are those associated with spatial strategies, development plans and planning guidance. Planning policy levers can operate at a variety of scales from national, regional / sub-regional, local down to site specific. These can be statutory and non-statutory.
- **Planning consenting levers**: These levers are associated with the planning consenting process, including the established applications process for housing development and related infrastructure as well as Local Development Orders (LDOs), and Development Consent Orders (DCOs) for Nationally Significant Infrastructure Projects (NSIP) etc.
- **Infrastructure development levers**: These levers relate to the planning and delivery of infrastructure, including transport and utilities infrastructure required to unlock or catalyse growth.
- **Funding and delivery levers**: These levers relate to funding and delivery mechanisms and models including government, support and incentives and private sector led approaches.

5.2. Spatial Typologies

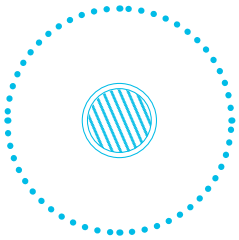
5.2.1. In a separate project commissioned by the NIC, 5th Studio identifies nine individual development typologies, with three of each typology appearing in three broader spatial categories. These typologies are a useful way of thinking about the role of different types of development that can be applied to a range of locations across the Corridor. Discussion and analysis in this chapter considers how the levers could best be applied to each of the categories and/or typologies, grouped as follows and illustrated in Figure 6

- Urban Intensification;
- Linked Places; and
- Autonomous Places.

Figure 6. 5th Studio's nine spatial typologies and three categories

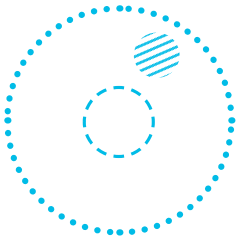
Urban Intensification Category

Centre Intensification



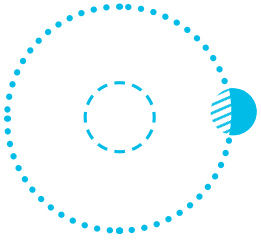
- Reappraisal and redevelopment of land within existing centres
- Making the most of existing infrastructure and connectivity
- Residential alongside civic, cultural and commercial uses
- Opportunities differ by location in the corridor

Suburban Intensification



- Typically low density areas but challenging to deliver coordinated intensification across many individually owned plots
- Some opportunities exist across housing estates, underused green space and around road infrastructure

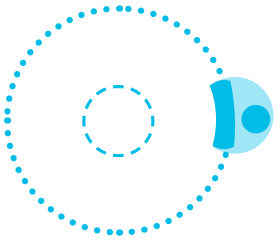
Edge Intensification



- Retrofitting single land use and low density areas on the edge of towns and cities such as business parks, retail parks and leisure areas

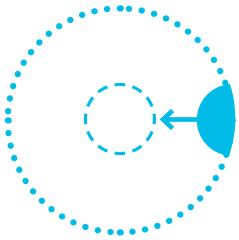
Linked Places Category

Strong Edge and Satellite



- Satellite settlement that is distinct from but closely linked to a neighbouring existing centre
- Own identity, sense of place, and basic local facilities, as well as having a primary connection to the centre

Urban Extension



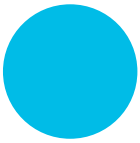
- Direct extension to an existing town or city that is well integrated and connected to an existing centre
- Part of a compact city model, not simply suburban development
- Possible with Green Belt release or in locations with no Green Belt

New Small Settlement

- Garden villages with their own identity, services and facilities, potentially deliverable because of their modest scale
- Reliance still placed on other settlements for higher order employment and services
- Transport connectivity to other settlements is a key issue
- Suitable for a 'beads on a string' approach along major transport infrastructure

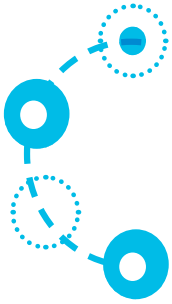
Autonomous Places Category

New Town



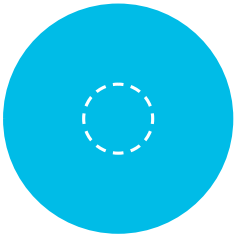
- A larger new settlement with potential to be served by its own railway station
- Higher degree of self-containment compared to a new small settlement/ garden village but with a strong relationship with nearby towns and cities

String City



- A series of linked medium-scale settlements that operate together as a city
- Potentially formed of a ring of settlements around a green heart or other shared amenity
- Not to be confused with the 'beads on a string' new small settlements

New City



- A new city the size of Milton Keynes
- A new regional centre acting as a major transport node
- Potential location at the intersection of East-West Rail and HS2

Source: 5th Studio

5.3. Leadership and Governance Levers

5.3.1. Table 4 below considers the applicability of leadership and governance levers across the Corridor, in particular the potential for greater co-ordination between local authorities. At present there is no statutory planning governance above the local authority level, following the Government's abolition of Regional Spatial Strategies in 2011 and introduction of the 'Duty to Cooperate'. The Duty to Cooperate requires LPAs to work together in relation to cross-boundary planning issues such as housing need. For example, in Oxfordshire, the work of the Oxfordshire Growth Board fulfils the Duty, enabling Oxford's unmet housing need to be distributed across neighbouring local authority areas. Whilst the Duty Cooperate has had some success, in its current form it is unlikely to be able to facilitate transformational levels of growth now being considered for the Corridor.

5.3.2. A strategy for the Corridor which aims to achieve a higher level of growth than has previously been considered is likely to require a greater degree of cooperation between LPAs and potentially new forms of leadership and governance specifically tasked with setting a target for and overseeing the delivery of higher levels of growth in the Corridor. In this context the key levers set out in Table 4 relate to leadership and governance at a higher than local level.

5.3.3. Clear leadership and governance especially at the local level is important to the delivery of the urban intensification category of intervention. The role of effective partnership working between public and private sector is likely to continue to be important in bringing forward complex sites whether through effective discussions and cooperation in the planning process as set out above or more formal arrangements for delivery including joint ventures where shared or multiple land ownerships exist.

Table 4. Leadership and Governance Levers

Lever	Applicability to Corridor
Sub Regional Governance	A new Corridor-wide or Sub Area governance structure has the potential to provide vision, leadership and consistency in oversight of growth across the Corridor including an integrated approach to different technical and delivery initiatives. The key role of such an organisation would be setting out the level of growth required across the Corridor as well as the spatial strategy to achieve it. A Sub Area based approach to governance could be achievable as a development of existing structures in Oxfordshire and Cambridgeshire, whilst a Corridor-wide structure is likely to require a more radical approach. Various options exist in relation to the role of such organisation, from locally-led partnerships to a Government-appointed body that has oversight of the Corridor. Similarly, various options exist in relation to the powers of a new governance body, for example in relation to whether it simply provides a basis for collaboration with all formal planning powers remaining with local authorities or whether a new body is granted a strategic planning role similar to Mayoral planning powers in London. A Corridor-wide or Sub Area spatial framework could be a basis for a strategic and cross-sectoral planning process and leadership including setting a strategic policy direction and growth levels as well as identifying major development opportunities across the Corridor.
Urban Development Corporation and New Town Corporation	Case studies set out in this report show that major new communities including the New Towns in the UK have been delivered by Development Corporations. Development Corporations have historically been set up by Central Government. New Town Development Corporations have overseen the development of New Towns whilst Urban and Mayoral Development Corporations have dealt with the regeneration of existing urban areas. Development Corporations are typically granted planning and development powers via an Act of Parliament including plan-making and development consenting powers as well as compulsory purchase powers. Development Corporations can now also be established locally. Section 16 of the Neighbourhood Planning Act 2017 has amended the New Towns Act 1981, so that the Secretary of State can transfer the overseeing of new town development corporations established under that Act to one or more local authorities covering the New Town area. The SoS can also now make further Regulations for how a local authority should then go about overseeing the New Town's development. The Development Corporation model has clear potential to be used in the Corridor, particularly in relation to delivering new settlements as set out in the Autonomous Places typology. Development Corporations are able to address multiple sites and operate across local authority boundaries, as evidenced by previous examples including the London Thames Gateway Development Corporation.

Lever	Applicability to Corridor
Duty to Co-operate	The Duty to Cooperate was introduced by Government following the abolition of Regional Spatial Strategies to ensure that LPAs and County Councils cooperate in relation to strategic planning issues. The Duty Cooperate is considered to be effective in some locations, for example the work of the Oxfordshire Growth Board provides the basis for collaborative working in relation to housing needs that cannot be fully met within the tightly drawn Oxford City boundary. However, the Duty to Cooperate relies on voluntary cooperation of the relevant local authorities which means disagreements – for example about the amount and location of growth to be accommodated - may exist. In addition the Duty to Cooperate in itself does not provide a basis for strategic plan making or decision making which remains primarily at the local level.
Local Enterprise Partnership (LEP) boundaries	The Corridor currently includes multiple LEPs. Given the emphasis on delivery growth and infrastructure within the Corridor, there could be benefit in aligning LEP structures to the Corridor Sub Areas and/or establishing a Corridor-wide LEP working group. This could help align local economic planning and funding streams to Local Plans and potentially a Corridor focussed economic growth strategy as part of a Sub Area or Corridor spatial policy framework.
Statement of Common Ground	The Duty to Cooperate sets a requirement for LPAs and County Councils to collaborate on strategic planning matters as set out above. The Housing White Paper sets out the Government's intention to consult on introducing a Statement of Common Ground to the Local Plan examination process to ensure that a partnership approach is followed. A strengthened Duty to Cooperate for the Corridor could be beneficial to ensure to ensure all LPAs collaborate effectively in the context of a wider growth strategy for the Corridor. A new governance structure or structures for the Corridor could provide a forum for increased collaboration.
Public sector co-ordination	A single point of contact for the public sector in the context of developing new communities in the Corridor could be valuable. The organisation that comprises that single point of contact, and the governance level they sit at, will depend on which of the multiple options for Corridor governance are used.

5.4. Planning Policy Levers

5.4.1. Table 5 below reviews the various planning policy levers could be used to facilitate delivery of development in the Corridor and indicates their potential relevance to the three broad spatial development typologies outlined above.

5.4.2. Applicable across all three spatial typologies is the potential for stronger direction from Central Government on the overall levels of growth to be achieved in the Corridor in parallel with infrastructure delivery.

5.4.3. Whilst locally-led growth will remain important across the Corridor and elsewhere to achieve transformational growth, this would require a very significant uplift in housing delivery in the Corridor which could be guided and supported by clear strategic direction, setting the ambition for the level of growth to be achieved. This would not only include supporting key infrastructure projects as currently planned, but also indicate the anticipated level of growth that should be planned for in parallel. As part of this, policy allocations to support the creation of new settlements - Autonomous places - are likely to support higher levels of delivery across the Corridor. This explored in detail in chapter 6.

5.4.4. In general, existing policy levers are capable of delivering urban intensification linked places, but there is scope for those levers to be applied more effectively or differently to enable development on land that is not currently allocated for development. Existing policy assumptions may need to be challenged and more innovative forms of urban design and place-making used to maximise the potential of existing places within towns and cities across the Corridor.

5.4.5. The Government's Garden Village programme has influenced planning policy approaches in the Corridor. As part of any Corridor-wide spatial development plan there is potential to plan for and allocate land for additional linked places including new small settlements that are well-connected to existing settlements and transport nodes.

Table 5. Planning Policy Levers

Lever	Applicability to Corridor
Strategic Spatial Plan	A Corridor-wide spatial framework which sets out development aspirations for the area including the level of growth and infrastructure required building on the work of the NIC to date could be a valuable planning policy lever to guide future growth. This is consistent with Recommendation 1 of the NIC's Interim Report. Whilst the Planning and Compulsory Purchase Act 2004 allows the preparation of joint Local Plans, under current legislation a higher level strategic framework would not form part of the development plan but would be a non-statutory plan with planning weight and influencing local planning policy. Corridor Sub Area spatial strategies could be less complex to deliver than a Corridor wide Strategic Plan given existing governance structures and relationships. The Oxfordshire Growth Board for example is already discussing the potential for a strategic plan covering Oxfordshire. However, the overall level of growth to be planned for would still need to be established. Alternatively, a new body with plan making powers could be tasked with preparing a statutory plan on a similar basis to the Mayor of London and the London Plan. A key difference with past Regional Planning models would be alignment to a specific economic geography – the Corridor - rather than a County or regional structure. This top-down statutory approach is likely to require new legislation to deliver. In parallel with a Corridor wide or Sub Area Strategy, there is the potential to prepare and publish area specific planning policy guidance. Working within the context of a wider spatial strategy, individual areas could be allocated for development, most likely those areas that are directly affected by proximity to new Corridor-wide transport infrastructure. The individual areas could be comparable to the Opportunity Areas in London, with potential to deliver over 2,500 new homes along with other supporting facilities and infrastructure. A selective and targeted approach as above as part of a Corridor Spatial Strategy is likely to be most appropriate and achievable, with the majority of smaller and less complex sites to be guided by existing local policy.
Integrated Evidence Base	A planning policy evidence base for the Corridor, which includes a consistent approach to assessing housing need as well as employment and infrastructure requirements. A shared evidence base including the use of consistent methodologies for data gathering, analysis and forecasting would provide support for effective cross-boundary planning and development, responding to identified development needs.
Planning freedoms granted to LPAs	Planning freedoms may include financial freedoms such as being able to set planning application fees locally, retain business rates and stamp duty receipts locally. Financial freedoms could help fund development including infrastructure. They could also include the ability to be freed from the need to demonstrate a five-year land supply. Freedoms granted to local authorities could form part of a deal with Government that includes investment in infrastructure and a commitment to higher growth.
Site Allocations Process	To deliver additional growth in the Corridor, all types of development at a variety of scales will be needed. Planning policy needs to allocate a range of sites to ensure delivery across the Local Plan period. Higher levels of growth envisaged under the transformation scenario are likely to require a particular emphasis on new settlements (Autonomous Places).

Lever	Applicability to Corridor
Central Government Intervention	As proposed in the Housing White Paper, there is a strong case for greater Government involvement in local plan making where there has been significant delay in the Local Plan process and to avoid issues of unplanned growth. This could apply in the Corridor where local authorities in the Corridor fail to produce up to date plans to provide for future growth.
Land Ownership	The Housing White Paper set out a Government commitment to reform of the Land Registry to provide greater transparency in relation to land ownerships. Specific to the Corridor, relevant land ownerships could be investigated and published as part of the evidence base for a strategic spatial framework. This could provide greater transparency in the development process and encouragement to collaboratively develop sites. This approach could also be developed in the Corridor as part of the One Public Estate initiative, a wider initiative developed by the LGA and the Government Property Unit to promote and support development of publically owned land to deliver economic growth (new homes and jobs), deliver more integrated, customer-focused services and generate efficiencies, though capital receipts and reduced running costs.
Transport Oriented Development (TOD)	Urban intensification is likely to be linked to development around existing or new transport nodes which provide opportunities for improved transport interchange, over-station development, mixed use development and increased development densities. This could occur across all three categories of development but would rely on new infrastructure to be delivered within the Linked and Autonomous Places category of development.
Development Density	Urban intensification locations are likely to present opportunities for greater mix of land uses and density of development than have previously been considered. Where appropriate increased expectations in relation to density of development could be established within Corridor-specific policy guidance.
Green Belt Review	The Green Belts around Oxford and Cambridge are significant constraints on growth, in particular for the linked places typology, especially urban extensions. There remain significant political and community barriers to release of Green Belt land, although equally there are examples in the Corridor where selective release of Green Belt land has facilitated new development (see North West Cambridge case study) and where communities favour limited Green Belt release (see Cottenham case study). Growth on a transformational scale has the potential to necessitate further review of Green Belt land in the corridor. The Housing White Paper reaffirms the Government's commitment to protection of Green Belt land but in line with the NPPF there remains scope for review as part of the Local Plan process and release of Green Belt land in exceptional circumstances; with the development needs of the Corridor capable of constituting exceptional circumstances. A corridor-wide spatial strategy informed by an up to date and consistent Green Belt review could provide further context for selective release of Green Belt land. However the satellite and new small settlement typologies could have potential to be delivered within the context of existing Green Belt constraints. Equally many parts of the Corridor are not affected by Green Belt, including much of the MK-Northampton-Bedford-Luton Sub Area.

Lever	Applicability to Corridor
New Small Settlements	The Government's Garden Villages programme generated has a high level of interest from LPAs as indicated by the submissions made to CLG in July 2016. There is the potential for further support to be given to new settlements under this programme to include potential for larger settlements - Garden Towns - where appropriate. This could be through extending the existing programme to provide additional Government funding and resources. There is also potential for the NPPF and/ or PPG to be amended to include stronger support for new communities.
Area Design Codes	Area wide or strategic design codes are likely to be helpful in planning for high quality development major new communities – potential new Garden Villages, Towns and Cities - and could potentially be produced as part of area specific policy guidance within the context of a Corridor or Sub Area spatial strategy. Detailed design codes can also be developed at the development consenting stage to help ensure quality of development. With an emphasis on delivering numbers of new homes, design codes also needs to ensure that development is viable.
Social Contract	A commitment to high quality green infrastructure including informal and informal open space as part of planning for new communities is important aspect of any major development proposal. A social contract could form part of the remit of a new body or Development Corporation tasked with delivering new communities within the Corridor.
Housing need assessment	This lever, as recommended by the Local Plans Expert Group (LPEG) in March 2016, points to a need for a more consistent approach to calculation of housing need. The NIC's Interim Report also states that the current approach to Strategic Housing Market Assessments may under-estimate housing need. Adoption of a more consistent methodology could potentially result in increased housing projections. This lever could be applied as part of a consistent approach to assessing housing need in the Corridor as part of a shared evidence base. For the Corridor and/or for each Sub Area housing need could be assessed consistently as part of the evidence base for a new spatial strategy.
Local Plan Review	A guideline for Local Plans to be reviewed every five years is already set out in national planning guidance. Local Plans can also be found sound subject to a five year review. This could be altered to become a regulatory requirement.

5.5. Planning Consenting Levers

5.5.1. Effective planning consenting is important to achieving timely planning permissions. Often cited as a cause of significant delay in the development process, successive Governments have recognised previously the barriers that exist in this stage of the planning and development process and has sought to provide additional levers to overcome those barriers, as well as introducing punitive measures for under performance by Local Planning Authorities under the Growth and Infrastructure Act 2013.

5.5.2. In the context of delivering sustainable development as required by the NPPF, the planning consenting process is expected to consider and resolve a wide range of technical and environmental issues. The scope of evidence to be submitted, for example in relation to Environmental Impact Assessment (EIA) have become increasingly complex and costly over time, requiring applicants to procure specialist expertise to address each topic area. At the same time, resourcing within local planning authorities has been stated to be a significant constraint and planning departments have faced significant budget cuts in recent years, particularly since 2010.

5.5.3. The Government's Housing White Paper includes various measures to support consenting, including raising planning application fees. The role of existing good practice, including the use of Planning Performance Agreements (PPAs), is expected to continue to be important to provide additional resources during the planning application process and help to ensure timescales are adhered to. However, barriers in relation to consenting for major new settlements – autonomous places - can potentially be overcome through introducing Development Corporations as described elsewhere.

5.5.4. In addition new forms of consenting for major developments and infrastructure have been introduced and are available, including Permissions in Principle (PIP), Nationally Significant Infrastructure Projects (NSIPs), Local Development Orders (LDOs) and Neighbourhood Development Orders (NDOs).

Table 6. Planning Consenting Levers

Lever	Applicability to Corridor
Increased LPA capacity through Government funding	Additional resources from Government to support LPAs – for example through funding and expertise - within the Corridor could assist with timely delivery of consents. Whilst a case could be made for increasing funding to planning departments across the board, it is likely in the current economic and political climate that this may not be possible. Targeted funding to assist with particular strategies and projects within the Corridor could, however, be politically expedient and be a more cost effective means of supporting growth. Funding could be used to increase officer resources and bring in specific additional expertise in infrastructure, design and development viability for example. This approach is already being used through the HCA and could be extended to support further growth in the Corridor.
Planning Performance Agreements (PPAs)	Planning Performance Agreements (PPAs) are increasingly becoming standard practice for major applications, setting out agreed timescales and actions between developers and LPAs. PPAs are typically also the basis for providing pre application advice fees to LPAs which can provide for additional LPA funding and resources including officer time.
Permissions in Principle	Permissions in principle were introduced in April 2017 for brownfield (previously developed) land appearing on a brownfield register. Permissions in principle apply to residential-led development and allow the use and amount of development to be agreed with a minimal amount of up front information compared to the established planning application route. Permissions in principle require a subsequent technical details consent before development can proceed.
Greater use of Local Development Orders	Local development orders (LDOs) allow a local planning authority to grant consent for development in a particular area as an alternative to the conventional developer-led planning application route. The Growth and Infrastructure Act 2013 removed the requirement for the local planning authority to submit the order to the Secretary of State before adoption for consideration of whether to intervene. This has been replaced by a requirement for notification.

Lever	Applicability to Corridor
Commitment to specific delivery rates	Planning permissions granted under the Town and Country Planning Act 1990 (as amended) normally only specify the date by which a development should be commenced. Developments can be commenced and permissions made valid in perpetuity through minimal works on site. Agreements to delivery rates (i.e. dwelling completions) could be introduced as planning obligations. It is likely that such obligations could not impose an absolute requirement to deliver within a specified timescale, rather a 'reasonable endeavours' or 'best endeavours' clause would be appropriate. For Development Corporations the means of incentivising delivery could be ensuring that there are multiple house tenures, types and sizes being developed in parallel and the promise of being given priority on further development phases or plots within a wider area, an approach that was followed successfully in Milton Keynes.
Housing mix and delivery requirements	Multiple house types, tenures, developers and/or sales offices as requirements for larger sites. As above there is potential to use planning conditions and obligations in parallel with other measures to encourage and accelerate delivery on major sites. This could include ensuring multiple plots with different developers, house types and tenures are commenced in parallel. However, flexibility may also be important in relation to established policy requirements given likely high cost of infrastructure requirements.

5.6. Infrastructure Development Levers

5.6.1. This section considers the applicability of infrastructure development levers to assist in the delivery of development in the Corridor. In general, the introduction of major new transport infrastructure such as East West Rail and the Expressway to an area is likely to assist in unlocking development sites. In particular increasing connectivity and capturing associated land value uplift can support a greater variety of land uses and higher densities of development. There are examples throughout the Corridor where integrated transport improvements could support urban intensification, including in the West End area of Oxford City Centre.

5.6.2. In terms of local and site specific infrastructure, whilst urban intensification sites may have significant on-site and local infrastructure costs, these typically can be delivered on site as part of the development or via existing mechanisms including Section 106 and CIL. However, constrained sites which have very high infrastructure costs clearly could benefit from additional targeted policy and funding interventions to support infrastructure delivery. In contrast, the scale of developments envisaged under the Autonomous Places spatial typology are likely to have more significant infrastructure requirements, including large upfront costs. This issue could be addressed by linking them closely to new strategic transport infrastructure being planned at national level.

Table 7. Infrastructure Development Levers

Lever	Applicability to Corridor
Corridor wide connectivity Initiatives	Alongside major transport infrastructure within the Corridor such as East West Rail and HS2, a focus on a combination of smaller scale transport infrastructure interventions has the potential to improve the connectivity of the corridor as a whole and allow multiple development areas (across the delivery typologies) to benefit from a joined up corridor wide transport network. Example initiatives might include: -Expanded use of Park and Ride and Bus Rapid Transit around existing towns and new urban areas -Corridor wide Super Cycle Route -Multi-modal public transport improvements such as corridor wide integrated Oyster-card style ticketing -Incentivised changes in commuting habits such as car pooling
Nationally Significant Infrastructure Projects (NSIPs)	The NSIP process, which currently allows residential development of up to 500 units to be delivered alongside infrastructure, could potentially be expanded to enable delivery of major residential development in the Corridor directly related to infrastructure projects, including new residential communities.
Strategic Infrastructure Delivery Plans	Linked to the earlier lever considering a Corridor Spatial Framework, this could be supported by a corridor wide infrastructure delivery plan which prioritises the strategic infrastructure investment required to unlock new development sites and support intensification of existing areas. Silo-based infrastructure delivery and service planning can be prevented through strategic infrastructure delivery plans which bring all necessary parties together to forward plan on the same development trajectory. Oxfordshire Growth Board is completing an Oxfordshire Infrastructure Strategy. Cambridgeshire and Peterborough are considering the development of a strategic planning and infrastructure framework. Therefore the centre of the Corridor would benefit from a complimentary strategic infrastructure plan which would effectively bind together the work covering Oxfordshire and Cambridgeshire to provide a Corridor wide prioritisation of infrastructure to deliver housing and economic growth.
Strategic utility planning	Utilities infrastructure delivery and funding is largely the responsibility of the relevant utility companies, with connections to services for new sites also funded by through site developers. For future development, it will be important to clarify the procedure by which these utility companies consider development sites and how these are included within their own programme and investment strategies. In the absence of Regional Spatial Strategies and County Structure Plans, service providers (particularly utility providers) are often unclear on the long term sub regional pattern of growth which they need to plan for. This could be addressed as part of Strategic Infrastructure Delivery Plans.

Lever	Applicability to Corridor
Earlier connection to key utilities	Utility Providers are regulated by OFGEM and OFWAT; in principle, neither regulator supports installing new infrastructure on a speculative basis, rather they are reactive to providing supply services to new developments once a scheme has received consent. However, if a robust business case that gives a good level of certainty that development will take place in a definite timescale is put to the Regulators, advance funding may be approved. This is an unsatisfactory situation and changes in the way utility services are provided, though outside the direct scope of the current study is an important issue for the NIC to consider further.
Innovative revenue generating models to fund public transport schemes	Public transport capacity is a critical factor in the ability of an area to accommodate additional housing and economic growth. In an era of limited public sector funding, the use of innovative methods to generate additional revenue to help fund necessary public transport capacity improvements is essential. An example would include a town, city or region wide workplace parking levy allowing revenue to be collected and used, for example to finance improvements to the bus rapid transit system or rail network.
Utilisation of Mutli Utility Service companies (MUSCos)	Infrastructure service delivery can be argued in certain circumstances to be uneconomical, inefficient, and unsustainable. Multi-Utility Service Companies, or MUSCos, present an alternative approach to utility provision for small to large scale developments. They provide a single point of service to multiple utilities with opportunities for economies of scale and cost savings as well as for overall coordination both for construction and for maintenance.
Maximising efficient use of existing infrastructure capacity	Utilising existing infrastructure capacity in appropriate locations will enable housing and economic growth to be brought forward at a faster pace than in greenfield sites with no existing assets to draw from. Where existing utility capacity, social infrastructure service provision and transport connections already exist this must be maximised as a driver of site selection. Delivery of new physical infrastructure measures should only be considered after demand management approaches have been employed on existing infrastructure to maximise capacity A focus on public transport capacity, making the most of existing rail network, utilise park and ride models can act as an effective lever for development.

Lever	Applicability to Corridor
Infrastructure and service innovation	It could be argued that without innovative delivery methods and strategic alliances the considerable infrastructure investment required to support growth will not be delivered to the scale and timing necessary. Technology can reduce the need to build new infrastructure (by using smart technology to better manage the existing capacity of available assets) and can also lower the cost of infrastructure delivery (through for example, increased standardisation and offsite modular construction, automation and use of robotics and new construction materials). Further examples of Innovation potentially improving infrastructure capacity to support growth include autonomous vehicles, real-time traffic management, digital rail management, smart energy grid management, smart metering and improved storage and renewable energy technologies.
Co-location and integration of services	Social infrastructure plays an integral role in the support of existing and new communities. Large scale housing development generates the need for a range of social infrastructure services to meet the needs of its new residents. Co-locating and integrating facilities enables efficient land use, joined up service delivery and supports a reduction in car use where social infrastructure hubs are located within or adjacent to public transport hubs and walking and cycle routes.
Greater transparency in infrastructure investment	Criticism of existing CIL charging includes a lack of certainty about delivery of infrastructure and a lack of direct link between the Regulation 123 infrastructure list and individual development schemes. Establishing a more direct and transparent link between financial contributions from development to key infrastructure required to facilitate growth is likely to be an important aspect of any future tariff or reformed CIL operating in the Corridor for major new development.

5.7. Funding and Delivery levers

5.7.1. This section considers the applicability of funding and delivery levers to development in the Corridor. Funding of infrastructure associated with new development is currently a significant challenge and barrier to increased levels of growth. Levers set out below include a range of options to secure earlier funding in the development process including for the public sector particularly to fund up front infrastructure, which is likely to be essential to achieving transformational .growth in the Corridor.

5.7.2. A key issue in relation to delivery is the capacity and willingness of the commercial property industry to deliver at higher rates than at present. New delivery arrangements and structures, as well as innovation and new technologies are likely to be needed, particularly to develop larger new settlements (autonomous places). Affordable housing is also a key issue in relation to development viability. New approaches, including greater flexibility in policy, as well as a more proactive role for the public sector are likely to be needed.

5.7.3. Sites that fall within the definition of the urban intensification typology may be either publicly or privately owned or, more likely, may be in multiple ownership. Delivery of complex sites in multiple ownership may therefore require interventions in relation to land assembly.

5.7.4. Whilst it should only an option where agreement cannot be reached on future development plans, increased use of CPO powers assisted by being able to deploy the right resources and expertise may have potential to speed or unlock delivery or urban sites.

Table 8. Funding and Delivery Levers

Lever	Applicability to Corridor
Tariff-style alternatives to S106 and CIL	Current CIL Regulations prohibit the pooling of contributions collected via Section 106 beyond five developments. This restricts the introduction of development tariffs outside of CIL, and has the potential to be revised so that future tariff payments can facilitate borrowing. Under current legislation, a development tariff for the Corridor would need to be brought forward as a CIL charge which would need to be agreed locally and encompassed within local CIL charging schedules for each LPA. This could prove time consuming and complex to adopt consistently across the Corridor. Therefore a Corridor-specific development tariff would need to be introduced on similar lines to the Milton Keynes tariff (see case study) or a reworked form of strategic CIL tied to specific infrastructure similar to the Mayoral CIL in London. Current CIL legislation is being reviewed by Government at the time of writing.
Joint Ventures	Joint Ventures (JVs) between public and private sector have an important role in delivering new development, including urban extensions and new small settlements, which collectively comprise the 'linked places' category of the spatial typologies. JVs have been proven to be effective at increasing the scale of development that individual private developers are willing to take on in terms of cashflow and overall financial risk. However, there is a limit above which JVs tend not to be deployed, for reasons of cashflow and risk, even with the certainty provided by the public sector landownership. Larger scale settlements therefore need additional governance typically in the form of development Corporations.
Institutional investment in housing development	To significantly increase the scale and speed of housing delivery in the Corridor, additional investment and innovation in the development sector is likely to be required, including from new investors who are not currently active in the UK development sector. This may include new SMEs, international investors and sovereign wealth funds. Private Rented Sector (PRS) development can provide an attractive long term investment opportunity and is likely to form a significant part of the tenure mix across the Corridor.
Affordable housing delivery and phasing	Affordable housing policy requirements can be reduced in early phases of major development so as to secure increased cash flow in early phases and help address upfront costs including infrastructure delivery. This approach mirrors the approach used by the London Legacy Development Corporation (LLDC) where affordable housing requirements were reduced in early phases of development, instead providing increased numbers of homes for private rent.

Lever	Applicability to Corridor
Public sector house building	Past evidence is that higher rates of housing delivery have only been achieved when the public sector has been building homes in significant numbers alongside the private sector. In addition large scale new settlements have only been delivered with public sector backing. It is therefore widely agreed that the public sector should be encouraged to increase its development activity. The Government's Housing White Paper includes 'backing local authorities to build' and proposes tools to support this objective including 'exploring potential for bespoke deals with authorities in high demand rates, which have a genuine ambition to build'. The white Paper indicated that a deal of this kind could include supporting and coordinating infrastructure provision at a higher rate in return for a commitment to local growth. This kind of deal could have particular applicability in the Corridor, given the strength of the property market. Additional planning freedoms, for example in relation to retention of tax receipts locally and increased borrowing, could also support increased development by local authorities and housing associations. See also Accelerated Construction programme below.
Compulsory Purchase Orders	Local authorities have in some instances been reluctant to use Compulsory Purchase Orders (CPO) to force land assembly and delivery. As set out in the Housing White Paper, the Government is planning to prepare new guidance to support increased use of CPO on stalled sites. Whilst CPO should only be an option where agreement cannot be reached on future development plans with landowners, increased use of CPO powers assisted by being able to deploy the right resources and expertise may have potential to speed or unlock delivery of sites. CPO powers could be used in the Corridor by local authorities or potentially by a Development Corporation tasked with delivering development in a specific location.
Devolution deals/ funding to proceed only where Local Plans provide for sufficient growth	Investment in infrastructure within the Corridor could potentially be tied to commitments to higher growth through Local Plans, including higher housing delivery targets consistent with a Corridor-wide or Sub Area evidence base and spatial strategy.
Higher planning fees and central funding	Planning fees are currently set nationally and fee levels are due to be increased by 20% during 2017. Additional fees are typically payable to LPAs via the pre application planning process and through Planning Performance Agreements. Whilst there may be a case for further increasing planning fees nationally, a 20% increase is already due to be introduced and a further increase may not be helpful to all areas of the country especially where development viability is more challenging. Therefore a Corridor- specific approach may be more appropriate, with potential for additional fees to be charged via the pre application and PPA process.

Lever	Applicability to Corridor
Financial incentives to communities	Under the current CIL regulations, local authorities must allocate at least 15% of levy receipts to spend on priorities that should be agreed with the local community in areas where development is taking place. This can increase to a minimum of 25% in certain circumstances. This means that CIL receipts are already paid in part to parish and town councils. Through further reform of the CIL regulations and / or other forms of development tariff there may be potential for further financial incentives for existing local communities. However, this would need to be balanced against the priority to meet the costs of infrastructure required for new development. Other incentives could also be explored including greater use of land value capture to help secure delivery of new infrastructure directly benefiting existing communities.
Fiscal Autonomy	The Business Rates Retention (BRR) scheme was introduced in April 2013 and provides the opportunity for councils to retain a proportion of business rates revenue as well as growth on the revenue that is generated. The scheme could be used to meet the cost of infrastructure as and when the revenue is received, or it could be used to raise finance to meet up-front infrastructure costs. Under the BRR scheme, local authorities are able to pool together on a voluntary basis to generate additional growth and smooth the impact of volatility in rates income across a wider economic area. Business rates would generate funds which could be used to pay for a range of needs. Their use to help meet the funding of infrastructure would need to be carefully considered against other funding objectives. Under current Government plans local authorities will retain 100% of business rates within the sector by the end of this Parliament, but how the system will operate is not yet clear. Its design and the implications for certainty of longer term income may impact on local authorities' willingness to invest in longer term projects such as infrastructure.
Municipal Bonds	Bonds allow local authorities to raise substantial sums of capital immediately, on the basis of promises to repay the capital with interest at a specified point in the future. Local authorities' borrowing limits will be related to the revenue streams available to them, which influence their ability to repay the debt. Local authorities are prevented by law from using their property as collateral for loans. It would be possible for a local authority or another delivery body to issue bonds as part of a TIF process. Money would be obtained up-front by selling the bonds (instead of approaching financial institutions), and they could be repaid by the additional tax revenues resulting from the public investment. As of 2016, a new UK Municipal Bonds Agency has been established. It is owned by some 56 shareholding local authorities. The purpose of the agency is to facilitate the issuing of bonds by smaller local authorities, and to obtain a competitive price for their bonds within the conventional bond market in order to reduce councils' capital costs over the long term.

Lever	Applicability to Corridor
Tax Increment Financing	TIF schemes were approved by the 2010-1015 Coalition Government as a new mechanism for forward funding infrastructure and capital development. Tax Increment Financing allows local authorities to capture the value of uplifts in local taxes (business rates) that occur as a result of infrastructure investment. Specifically it enables local authorities to borrow against the value of the future uplift in order to deliver the necessary infrastructure. Tax increment financing schemes in England have so far been based on business rate revenues, as this is the only local authority tax the revenues of which are likely to be directly affected by infrastructure projects. Borrowing for Tax Increment Financing schemes falls under the prudential system, allowing local authorities to borrow for capital projects against future predicted increases in business rates growth, provided that they can afford to service the borrowing costs out of revenue resources. However, such borrowing can only take place if local authorities and developers have a degree of certainty about the future tax revenue streams and whether there are sufficient guarantees that they will be retained within the authority. The Buchanan Quarter case study is an example of TIF in a Scottish context.
Government's Accelerated Construction programme	The Accelerated Construction programme provides a tailored package of support to ambitious local authorities who would like to develop out surplus land holdings at pace. The potential support ranges from the HCA carrying out Accelerated Construction on LA land to the HCA offering direct support and expertise. The HCA could also help to broker conversations between local authorities in geographical areas where there are parcels of land that could work as a package.
Higher level of New Homes Bonus	The New Homes Bonus (NHB), which commenced in 2011, creates an incentive for local authorities to deliver housing growth in their area. It is based on central government match funding the Council Tax raised for new homes and properties brought back into use, with an additional amount for affordable homes, for the six years following development to ensure that the economic benefits of growth are returned to the local area. This can, however, be viewed as a reallocation of funding that was previously allocated to local authorities through the Central Government Local Authority Financial Settlements. From 2015 NHB included a requirement that some resources are pooled to support LEP growth plans.
Incentives to SME construction firms	The UK house building industry is dominated by a small number of major housebuilders; this was a major theme of the literature review and is addressed in depth by the Government's recent Housing White Paper. Incentives for SME construction firms including loans and land to deliver on smaller sites and/or on individual development parcels on large schemes could help potentially accelerate delivery, support new business development and encourage construction and design innovation.

Lever	Applicability to Corridor
Increase construction sector capacity (workforce expansion, effective training, investment in advanced off-site construction methods	Investment in training and skills within the Corridor alongside research and development into advanced construction could support innovative forms of delivery, particularly in relation to new settlements where economies of scale are likely to exist to facilitate innovation, including modern methods of construction. Longer term consideration could be given to education and training facilities to be provided within major new development.
More effective targeting of infrastructure funding	A Corridor or Sub Area spatial strategy linked to an infrastructure study could provide a basis for improved targeting and prioritisation of infrastructure funding.

6. QUANTIFYING THE IMPACT

6.1. Introduction

6.1.1. This chapter considers case studies of development in the UK and overseas to determine how levers have been applied in practice, how they relate to each typology, and which levers or combination of levers have been applied to the fastest- delivering developments. The quantitative analysis of the case study data provides an additional perspective on the effectiveness of levers and different development typologies that achieve the highest growth rates.

6.1.2. As outlined previously, achieving the transformational scenario would require more than doubling the housing development rate in the Corridor, from the annual average completion rate within the last 10 years of approximately 10,000 dwellings per year up to 23,000-30,000 dwellings per year.

6.1.3. As indicated by the preceding analysis of barriers and levers, there are a significant number of development-specific variables which can affect the overall quantity and rate of housing completions in any given context. The analysis in this chapter does not seek to perform a statistical analysis on individual levers and barriers. However, it does seek to identify the levers that were common to the fastest and most productive developments. It also considers the relationship between the rate of delivery and the development typology and the development size in hectares.

6.2. Approach

6.2.1. The approach follows a two stage process. First, a sample of completed and 'in progress' developments within the UK and abroad were gathered in order to establish average annualised housing completion rates by development typology. Dwelling completions per year were calculated and then cross-referenced by development size in hectares to ensure consistency of comparison and contextual understanding. Secondly, once a differential in delivery rates was established between typologies and developments, broad-scale levers existing within the most 'successful developments' have been identified, i.e. those that were the best performing for:

- **Overall dwelling completions**
  - Measuring which typologies / levers have the likelihood of delivering the highest overall quantum of new housing within individual developments, regardless of speed.
- **Dwelling completions per annum**
  - Identifying levers or types of development that deliver housing at the fastest rate, regardless of overall quantum or scale of development
- **Dwelling completions per hectare**
  - Identifying the density of development, regardless of speed, enabling development types to be compared for their spatial efficiency.
- **Dwelling completions per hectare per annum**
  - Incorporating speed and density into dwelling completions analysis, regardless of the overall number of dwellings delivered.

6.2.2. This analysis enables a relationship to be postulated between the application of broad categories of lever and relative speed and scale of development, with relative speed defined as build rate by area, and scale in terms of the overall quantum of development.

6.2.3. This analysis provides a useful context for the potential role that different typologies and different levers can play in delivering new housing most effectively.

6.2.4. A sample of 65 developments of varying typology from across the UK and internationally has been analysed. Developments have been selected based on available data from the following sources:

- A Report into the Delivery of Urban Extensions by Hourigan Connolly on behalf of Gladman Developments (February 2014)[1];
- Start to Finish: How Quickly do Large-Scale Housing Sites Deliver? by Nathaniel Lichfield and Partners (November 2016)[2]; and
- Good Cities, Better Lives: How Europe Discovered the Lost Art of Urbanism, by Peter Hall and Nicholas Falk (September 2013, Routledge)[3];
- Local Authority Annual Monitoring Reports
- Other online data and independent research by AECOM where relevant, including consultation with stakeholders, subject matter experts and relevant bodies, including the Royal Town Planning Institute (RTPI).

6.2.5. There was inconsistency between the primary data sources in terms of measuring development speed because in some cases it was measured from the time when development was first conceived or promoted and in some cases from the completion of the first dwelling(s). To ensure consistency two types of average delivery rates (in dwellings per year) have been calculated for the case studies, as follows:

- Average delivery rate including the lead in time, which represents the number of years between the official start of a development project (e.g. a new town designation or, for smaller sites, a site allocation or publication of developer intentions) and the actual start of the housing delivery in terms of the first dwelling completion(s).
- Average delivery rate including only the delivery window. The delivery window is defined as the period between the first dwelling completion(s) and development completion- or, for developments still ongoing, the last available data on completions and the time limit of that data if not 2017. This rate therefore takes into account only the speed of building itself.

6.2.6. For many of the post-war new towns, data on the lead-in time, which in some cases was seventy years ago, is not readily available. A conservative assumption of a four year lead-in time has therefore been used in all the post-war new town case studies, which was the length of the planning lead-in time for Milton Keynes.

[1] Available online at http://info.ambervalley.gov.uk/docarc/docviewer.aspx?docguid=2a7a7fa9904041b48dea86a7a11cdab6 . Note that, despite its name, the report includes data on a range of typologies alongside urban extensions, including town centre intensification, edge intensification, strong edge plus satellite, and new small settlements

[2] Available online at http://lichfields.uk/content/insights/?article=start-to-finish-how-quickly-do-large-scale-housing-sites-deliver

[3] The Annual Monitoring Reports are on the relevant local authority websites. Among the most important of the other online data was information on the New Towns programme in England from Invincible Green Suburbs, Brave New Towns: Social Change and Urban Dispersal in Post-War England (Clapson, 1998) at https://books.google.co.uk/books?id=QQy8AAAAIAAJ

6.3. Analysis

6.3.1. Figure 7 below shows that New Towns, within the 'autonomous places' category, has the highest rate of annual delivery of new completions. New towns have delivered on average 743 dwellings a year including lead-in time, and 839 dwellings a year over the delivery window.

6.3.2. New small settlements, which are in the 'linked places' category share some features of 'autonomous places' and could potentially be considered as small new towns in some cases. These new small settlements have delivered 106 new dwellings a year on average including lead-in time, and 185 new dwellings during the delivery window.

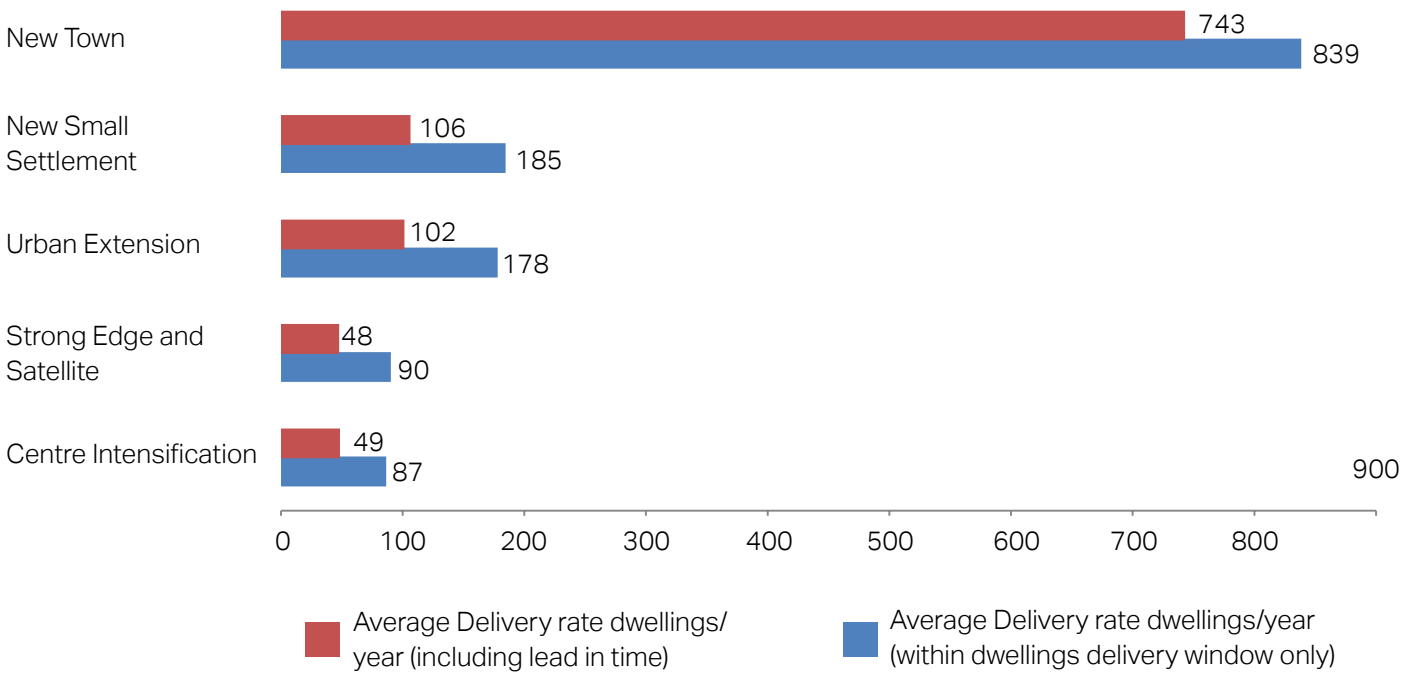
6.3.3. A large part of the difference will be the scale of development in terms of area. The average size of new small settlements in the sample is 267 hectares, compared to new towns which are on average 3,300 hectares in size.

6.3.4. The centre intensification category shows the lowest annual rate of completion within the delivery window, delivering 87 homes on average.

6.3.5. It is worth nothing that town centre sites may face significant barriers to delivery in the planning stage because of their need to integrate into an existing urban environment, but due to the fact that surrounding infrastructure is usually already well provided, once planning and financing is in place, they can often be built at high density and quickly. Edge intensification may face significantly more barriers, especially to delivering at higher density given townscape considerations and lower levels of infrastructure typically available.

6.3.6. The low rates of annual delivery in these categories shown in Table 9 are therefore largely driven by the typically small overall scale of these types of development.

Figure 7. Average annual housing completions by development typology



6.3.7. Table 10 shows that centre intensification developments are actually relatively 'efficient' in terms of the number of homes that they deliver when time and density are considered in addition to overall size. Indeed, the Vauxhall Nine Elms Battersea (VNEB) development in London, which can be considered a centre intensification type development is delivering 'efficiently' (at high speed and high density), and over a larger area than typical for this type of development (227 ha). VNEB has not been included in the data analysis as the economic, geographic and political contexts are unique and more relevant to central London than anywhere in the corridor.

6.3.8. Furthermore, it is unlikely that there are enough developable centre intensification opportunities in the corridor for this typology to make a major contribution to overall development rates. Nevertheless, the VNEB development is discussed later in the chapter as many of the levers applied in the development are those that would be considered success-inducing for purposes of this study.

6.3.9. The other typologies in the linked places sub category, urban extensions and strong edge + satellite models, follow new towns and new small settlements in terms of delivery rates, with the 'urban extension' model delivering 178 average completions per year during the delivery phase. The lead in time also appears to be consistently longer than for new towns with lead in windows of up to fourteen years (this was the case at Didcot West in South Oxfordshire).

6.3.10. Urban extensions are a widespread typology built across the UK in recent years, often characterised by low density housing and supporting development types making use of existing infrastructure on the fringes of settlements. As the Hourigan Connolly work in particular shows, these projects can be slowed by planning policy and consenting barriers such as extensive development negotiations.

6.3.11. As a result, low delivery rates are not uncommon and the responsibility for and funding of infrastructure, including transport interventions and new amenity space, is in many cases not clear for many years. Examples of urban extension models in Europe experience more success, especially during the delivery window, as they are often driven by high density, transport focussed masterplans, although lead-in periods can still be significant.

6.4. Understanding levers within development typologies

6.4.1. A deeper analysis of completion rates by development across the case studies provides an additional perspective which enables the most successful developments to be analysed against their underlying levers. Successful developments tend to exhibit certain levers which are fundamental to efficient delivery of development at scale and efficiency. This is particularly relevant for new towns, which have the greatest impact in terms of delivering at higher rates of completions.

6.4.2. Table 9 shows that of the top 10 best performing sites for dwelling completions per annum in the sample, 8 of which are English New Towns. This suggests that there are key levers present within these developments which enable consistently high rates of delivery.

6.4.3. This accords with the assessment of the key levers presented in the previous section for accelerating delivery, particularly related to governance structures i.e. the presence of a New Town Development Corporation, infrastructure delivery, land value capture and land assembly and masterplanning structures.

6.4.4. As mentioned above, the VNEB development, a centre intensification typology, is also forecast to deliver a high rate of homes over the next 10 years. Although VNEB is not a new town and does not have a development corporation, several key levers have been applied to help drive fast development rates which are consistent with those employed in new towns.

6.4.5. In particular, the area was identified as an Opportunity Area within the London Plan (governance and leadership); it was masterplanned (planning policy and planning consenting); its high density is facilitated by the Northern Line Extension (infrastructure), it is funded by means of tax increment financing (land value capture) and a development tariff. In addition it is also worth noting that the VNEB area is located in a particularly strong housing market area (Central London) which is attractive to foreign investors and this is one reason why a development corporation has been unnecessary.

Table 9. Fastest delivery rates during the delivery window

Development Area	5th Studio Typology	Average delivery rate (completions per year)
Almere	New Town	2,158
Telford (until 1991)	New Town	2,069
Milton Keynes	New Town	1,749
Basildon (until 1991)	New Town	1,509
Redditch (until 1991)	New Town	980
Runcorn (until 1989)	New Town	915
Washington (until 1989)	New Town	911
Crawley (until 1991)	New Town	835
Stevenage (until 1991)	New Town	772
Ijburg	Urban Extension	750

Source: AECOM 2017

Table 10. Highest density of housing delivery (in dwellings per hectare)

Development Area	5th Studio Typology	Density (dwellings per hectare)
King's Cross	Centre Intensification	74
IJburg	Urban Extension	55
Hammarby	Urban Extension	54
Marks Farm, Braintree	Urban Extension	44
Middlemore Farm, Daventry	Strong Edge + Satellite	39
West of Blyth	Urban Extension	38
St David's 2	Centre Intensification	34
Dickens Heath	Strong Edge + Satellite	30
Centenary Quay	Centre Intensification	27
Bracknell (until 1991)	New Town	26

Source: AECOM 2017

6.4.6. In terms of the highest density of dwellings completed per hectare, as shown in Table 10, the King's Cross redevelopment has the highest figures. Although, King's Cross had many of the same levers in place as VNEB, including strategic land assembly, broad political support for a strong masterplan, and extensive pre-existing infrastructure provision, it has been deemed a relevant case to include in the data because it is a transport hub, which is a characteristic that could be shared by areas within the Corridor given potential future transport infrastructure investment.

6.4.7. Whilst it is worth noting as above that central London locations will generally exhibit exceptionally high demand and good connectivity if economic demand exists in an area there is potential for similar kinds of high density development within the Corridor under the transformational scenario.

6.4.8. The IJburg (Amsterdam) and Hammarby (Stockholm) urban extensions are also worth noting in the context of Table 10. As with the VNEB area, both of these models, whilst not New Towns in terms of typology, do display the same levers identified as being essential to successful delivery and as seen in New Towns. In particular, density is informed in both cases by new tram lines (infrastructure) running through the heart of a masterplanned and assembled site (planning policy). Although there were long lead-in times for the projects, this was partly a response to the need to ensure wide political and stakeholder buy in (leadership and governance). Planning procedures, enabled by masterplanning and land assembly, were implemented to ensure that development was delivered by a diverse range of partners (planning consenting) in order to maintain high build rates and ensure quality of development.

Table 11. Highest rate of dwellings per year and per hectare during delivery window

Development Area	5th Studio Typology	Completions per hectare per year
Symphony Court, Brindley Place	Centre Intensification	6.8
St David's 2	Centre Intensification	6.7
King's Cross	Centre Intensification	5.7
West of Blyth	Urban Extension	5.4
Centenary Quay	Centre Intensification	4.8
Orchard Park	Urban Extension	4.2
Trumpington Meadows	Edge Intensification	4.0
Queen Elizabeth Park, Guildford	Edge Intensification	3.8
Marks Farm, Braintree	Urban Extension	3.7
Ingress Park	Urban Extension	3.6

6.4.9. Table 11 above shows that the centre intensification and urban extension models perform best for dwellings completed per annum, per hectare, throughout the delivery window. For centre intensification models this is likely a function of the fact that they can benefit from existing town centre infrastructure provision which enables concentrated density of development. Density and speed of development will likely go hand in hand at these sites if they are focused on apartments rather than housing. i.e. more housing units will come forward simultaneously for each building than with housing sites.

6.4.10. Table 12 adds broader context to the previous analysis by showing overall quantum of development regardless of the lifetime or size of the development. In these cases, it is again the new town cases which have delivered the highest overall numbers of housing. Although this is somewhat obvious, it is nonetheless relevant to note that, via the levers that they have applied, they have been able to offer a level of certainty to providing a high and consistent volume of development, with all the associated amenities and infrastructure in place to make successful places.

6.4.11. Importantly, new towns are likely to be the least constrained typology geographically and politically, and whilst other typologies may be more 'efficient' within very specific contexts, such as high density urban redevelopments within existing town centres, realistically other typologies are not able to deliver at the scale required for the transformational scenario in this project.

Table 12. Total dwellings delivered (or expected)

Development Area	5th Studio Typology	Total dwellings delivered
Almere	New Town	88,466
Milton Keynes	New Town	80,461
Basildon	New Town	57352
Telford	New Town	47667
Crawley	New Town	33398
Stevenage	New Town	31672
Harlow	New Town	29298
Hemel Hempstead	New Town	26142
Redditch	New Town	22542
Bracknell (until 1991)	New Town	19735

6.5. Increasing rates of delivery

6.5.1. In terms of increasing the quantitative rate of annual housing completions per hectare a range of levers can be deployed.

6.5.2. There is potential for the urban intensification category to continue to contribute to overall development levels on a small scale and on an ad hoc basis, as towns and cities across the Corridor continue to undergo regeneration and redevelopment on a 'business as usual' basis. This kind of mixed use densification should continue to be encouraged and streamlined by the planning system, including by the application of the recommendations of the government's recent Housing White Paper.

6.5.3. Within the Linked Places category, urban extensions and edge / satellite developments have relatively low rates of annual delivery. These are usually relatively small in scale compared with the Autonomous Places category (144 hectares on average in the cases assessed). They could therefore in theory deliver a high total rate of development if a large number were developed simultaneously at the edges of or close to existing urban areas. However, there are limitations to the quantum of developable land available in satellite, edge and particularly urban extension models that would limit the ability of these typologies to deliver enough new homes to significantly contribute to transformational growth. Such limitations would include green belt and the requirement for new infrastructure within existing settlements.

6.5.4. The New Towns and New Small Settlements typologies have the first and third highest rates of annual completions. For new towns this is a partly a consequence of being developed at a much larger scale in terms of development area than other typologies. This means that identification of appropriate unconstrained locations for large-scale development of autonomous places through effective plan-making is a key lever.

6.5.5. New small settlements typically deliver at a lower rate than New Towns due to their smaller physical size but could make a significant contribution if a large number are developed concurrently in appropriate locations. For example, they could be an appropriate typology to use in cases where there are constraints limiting the scale of growth or at the urban edge itself.

6.5.6. All forms of development, especially new settlements, require a significant amount of infrastructure investment. New towns offer the advantage of economies of scale and efficiency in terms of infrastructure investment because they can be built at higher densities and in a consolidated area away from existing development and its constraints.

6.5.7. It therefore seems that the bulk of the growth required by the transformational scenario could be achieved only by development within the Autonomous Places category- in other words, by identifying locations for multiple new towns and new cities. If these new settlements were delivered on the scale of Milton Keynes and at speeds consistent with its fastest development phase, then ten to fifteen new cities would be required across the Corridor between 2017 and 2050. Between the range of ten and fifteen, the exact number of new settlements needed would depend on the extent to which they could be complemented by ongoing (albeit accelerated) delivery of the more conventional typologies in the Urban Intensification and Linked Places categories.

6.5.8. Outside the UK, the Urban Extension typologies tend to deliver much more quickly. For example, developments such as Orestad in Denmark, an urban extension of Copenhagen and Hammarby in Sweden, an extension of Stockholm, can deliver between 490 and 600 new homes annually. This accelerated speed compared to the UK case studies is as a direct consequence of the levers deployed, as discussed in relation to Table 10 above.

6.6. Evaluation

6.6.1. To summarise the key findings of this chapter, the research suggests that:

- new greenfield settlements, in particular larger settlements, have the potential to deliver the greatest number of dwellings at the fastest rate;
- urban extensions can in some cases deliver densities equivalent to city centre intensification schemes; and
- intensification schemes can deliver quickly over smaller areas – often by focusing on apartments and other types of small dwellings, but due to their size can make only a small contribution to overall housing need.

6.6.2. The study also highlights that there are identifiable levers which appear frequently across those developments which have quantifiably successful outcomes. In particular, the following levers are likely to have the greatest impact in terms of delivering the transformational growth scenario:

- **Statutory bodies** with the ability to create plans for specific growth outcomes, as seen at Vauxhall Nine Elms Battersea through the London Plan and Opportunity Area designation. **Development corporation** models have been present in providing strong leadership in English new towns as well as European urban extensions.
- **Land assembly** is a key component of new towns and cities in the UK and of the European urban extensions. Upfront land assembly enables effective value capture and ensures that development comes forward proportionate to the scale of infrastructure funding and delivery. Both **joint ventures** (Cranbrook) and **development corporations** (Milton Keynes and other new towns) have been successfully able to undertake this level of strategic planning. With this model of proactive planning, **infrastructure and housing consenting** can be planned together as has been seen in the European transport based urban extensions and Hong Kong metro-led development.
- **Masterplanning** informs how development should come forward in the European urban extensions, in particular that it will be competitive and drive innovation to ensure quality and speed by providing for a range of developers or community groups to develop on one site.
- **Significant infrastructure investment** underpins developments at Vauxhall Nine Elms Battersea, Hong Kong, Hammarby, IJburg, and Hafen City (Hamburg). This transport infrastructure informs the density of development at these sites. Upfront provision of infrastructure is instrumental for developers and other stakeholders for **providing clarity on delivery, funding and timing of infrastructure provision**.
- **Land value capture mechanisms** were deployed at Battersea, Milton Keynes, and Cranbrook, as well as the international examples. The land value capture schemes enable funding of the infrastructure investment. Local and central government support for the TIF (Vauxhall Nine Elms Battersea), RIF (Cranbrook) and SLIC (Milton Keynes roof tax) were essential for **creating certainty** for wider stakeholders and investors.

7. APPLICATION OF LEVERS

7.1. Introduction

7.1.1. This chapter provides a series of recommendations in relation to the key levers to achieve a transformational level of growth across the Corridor. The key levers are set out in terms of three potential scenarios which involve varying levels of intervention.

7.1.2. The scenarios are supported by discussion that explores the potential for deployment of each of the most important levers in further detail, including whether there is a need for primary legislation.

7.1.3. In broad terms, the scenarios reflect an overarching message: if a transformational scale of delivery is to be achieved the scale of ambition will need to be matched by the scale of intervention. In this context the focus of the scenarios is on a small number of levers that are considered most likely to have the biggest impact.

7.1.4. It is clear from the case studies and workshops in particular that the 'business as usual' levers being used with varying success across the Corridor at present, helpful though they may be at smaller scales, are unlikely to be enough for the step-change required. Sustained intervention is likely to be needed from Central Government and others, and radical new ideas previously untested in an English context may be required.

7.1.5. The spatial typologies set out by 5th Studio have assisted in structuring the scenarios, whereby those levers most associated with Autonomous Places (and, to a lesser extent, Linked Places) are considered relatively more important for achieving a transformational scale of growth than Urban Intensification.

7.1.6. The accelerated delivery in larger developments (Autonomous Places) rests on a combination of factors including the selection of sites with fewer physical constraints, the economies of scale achievable, relatively less complex landownership patterns, and a public/private delivery model that can leverage the strengths of each partner and unlock simultaneously multiple barriers to delivery, perhaps most importantly the forward funding of key infrastructure. In combination, these factors were powerful enough to make places like Milton Keynes and Almere the fastest-growing towns in England and Europe respectively.

7.1.7. At the same time, the evidence suggests that the typologies within the urban intensification and linked places categories could be delivered using existing levers, but that there is potential for their more efficient and widespread deployment. Full implementation of measures within the Government's recent Housing White Paper could help in this regard, offering the opportunity to build on the Corridor's better-than-average completion rates.

7.1.8. All development typologies will be needed to achieve a transformational scale of growth and the application of a range of levers. This point is reflected throughout this section; both the delivery scenarios and the following section include levers with the potential to accelerate the development of the smaller-scale typologies as well as levers facilitating larger scale developments.

7.2. Scenarios

7.2.1. The three scenarios range in order from lowest to highest intervention, with the first scenario having the fewest levers and/or the least degree of intervention and the third the most. All scenarios assume a degree of intervention higher than any 'business as usual' model. The scenarios are structured around the five themes used for analysis of barriers and levers throughout this report:

- Leadership and governance;
- Planning policy;
- Planning consenting;
- Infrastructure development; and
- Delivery and funding.

7.2.2. Other approaches exist and have been deployed in certain locations. For example the Chinese government led the delivery of 100,000 dwellings per year in the new city of Shenzhen during the 1980s and 1990s, probably the fastest rate of dwelling delivery the world has ever seen, and equivalent to a new Milton Keynes roughly every ten months.

7.2.3. Such an approach has been excluded from consideration, not just because this pace of development is only achievable under very different political and economic circumstances, but also because the resulting quality of place is likely to suffer. In any case, growth this rapid is not necessary based on the scale and timeframe envisaged for Corridor development; however, it is useful to reference at least briefly as an illustration of the upper limit of what it is physically possible to deliver in certain circumstances.

7.2.4. Considerations in relation to the deliverability of the scenarios are:

- the political constraints applying nationally and across the Corridor;
- the capacity or resources available to government and Corridor stakeholders to drive transformational change; and
- the ability of each scenario to build certainty of delivery among institutional and overseas investors.

7.2.5. There is likely to be a trade-off between the more politically acceptable, smaller-scale interventions that have a lower probability of delivering transformational growth and the more politically difficult interventions that offer greater potential for achieving the higher levels of growth.

7.2.6. As all scenarios have the aim of delivering a transformational scale of growth across the Corridor, it is considered that there are recommended levers common to all scenarios as follows:

- a Corridor-wide strategic governance body is established ;
- a spatial strategy is prepared for the transformational growth of the corridor;
- all efforts to accelerate growth should build on and carry forward the quality of place that contributes to the Corridor's existing success;
- the strategic governance body has adequate access to and/or oversight of the resources, skills and materials required to deliver 23,000-30,000 dwellings per year over the development period; and
- the Housing White Paper reforms are implemented in full across the Corridor.

7.3. Leadership and governance

7.3.1. The research suggests that new forms of leadership and governance are required across the Corridor. These arrangements need to be at a spatial scale sufficient to drive transformational and strategic growth.

7.3.2. This conclusion verifies the recommendation of the NIC's Interim Report, which states:

'local authorities, Local Enterprise Partnerships, government departments and national delivery agencies should work together to develop proposals for the joint governance arrangements required to deliver co-ordinated planning'.

7.3.3. Development corporations should also be a fundamental element of Corridor governance. This is consistent with previous studies commissioned by the NIC- for example, the Savills Property Market report stated:

'the corridor is heavily dependent on large sites to deliver new homes and workspace'

'Urban Development Corporations are potentially a very significant part of the delivery of transformational growth in the corridor.'

7.3.4. Scenarios for the application of Leadership and Governance Levers are set out in Table 13.

Table 13. Leadership and Governance Scenarios

	Scenario 1- Minimal intervention	Scenario 2 - Medium intervention	Scenario 3- High intervention
Corridor wide Governance	A Corridor board is locally led and established on voluntary / semi-informal basis	A Corridor board is established and has a status (in legislation or otherwise) but few formal powers	A Corridor governance body is established on formal basis with statutory powers, for example similar to Greater London Authority
Sub Area Governance	As existing; Cambridgeshire remains only combined authority in Corridor; duty to cooperate remains	Each Sub Area has a governance arrangement and commitment to growth agreed with the Corridor board	Each Sub Area becomes a combined authority area, including Swindon, with a strong commitment to growth in the Corridor
Local Enterprise Partnerships (LEPs)	LEPs remain as existing and are key Corridor stakeholders	LEP structures are aligned to Corridor Sub Areas	Combined Corridor LEP is formed and prepares a Corridor wide Strategic Economic Plan
Political acceptability	**Highest**	**Medium**	**Medium to low**
Probability of delivering transformational growth	**Lowest**	**Medium**	**Highest**

Corridor Governance and LEPs

Overview

7.3.5. There is an appetite among many local authorities for 'larger than local' governance across the Corridor. This reflects a general recognition that current governance structures across the Corridor are not able to deliver higher levels of growth and coordinated infrastructure planning. This is a clear finding not only from the project workshops but also from other evidence and data. For example, this is the stated position of the Fast Growth Cities Network . Likewise, many Corridor stakeholders have pointed to the work of the Milton Keynes and South Midlands (MKSM) Growth Area in the early 2000s, a Sub Regional planning initiative covering the centre of the Corridor that was considered to be a key lever for the rapid growth achieved in the area at that time.

7.3.6. By contrast, the Duty to Cooperate has had limited or partial success as a lever to accelerate growth; case studies and other evidence suggest that in fact it has become a barrier to development in certain locations compared with previous strategic planning approaches, particularly in urban areas such as Oxford, Cambridge and Luton where administrative boundaries are tightly drawn. Though few are arguing for a return to unelected regional assemblies or Government Offices for the Regions, it remains the case that a strong strategic perspective is required and is currently lacking.

Deployment

7.3.7. There is a widespread understanding and acceptance that a new strategic form of governance, for example, a Corridor-wide board, could retain democratic accountability if it includes representatives from both local and central government alongside delivery agencies and service providers, thus enabling such a board to have both a 'bottom-up' and a 'top-down' component.

7.3.8. On this basis, organisations that could be represented on (or at least work closely with) any Corridor-wide board include DCLG, the Treasury, DfT, NIC, HCA, PINS, utility and infrastructure providers (including Network Rail and Highways England), the Land Registry, the LEPs, public sector landowners, and the local authorities. There is the potential for the board to have an independent chair.

7.3.9. Ensuring a wide cross-section of Corridor stakeholders in this way would maximise the chances of achieving an integrated strategic vision for the Corridor and would entail integration of evidence across administrative boundaries. In this regard, it would need to ensure as a guiding principle a new openness on data, including greater transparency on landownership, infrastructure costs, and best practice approaches.

7.3.10. As is clear from the suggested composition of any Corridor-wide co-ordination and oversight body, strategic leadership and governance would be largely (though not entirely) public-sector led. This is considered both appropriate and necessary at this scale. In turn, the actions at this level would set the scene, and enhance certainty, for private sector investors and developers.

7.3.11. Other routes to larger than local governance are also possible. For example, informal partnerships, in some cases involving shared services, already exist between many local authorities. Likewise, there are also formal, locally-constituted joint committees between local authorities (such as in North Northamptonshire).

7.3.12. The problem with these less formal arrangements is that they are inconsistent across the area and any one of the local authorities is free to disengage at any point and for any reason. This relative weakness of structure is likely one factor in why the evidence does not tend to highlight such arrangements as particularly strong drivers of growth. It is therefore difficult to see how they could deliver transformational growth across the Corridor.

7.3.13. By contrast, though the concept of formal combined authorities is relatively new, existing devolution deals show strong potential to be game-changers in terms of unlocking infrastructure funding and co-ordinating development across boundaries.

7.3.14. Combined authorities - similar to the GLA in London - can 'lock in' partners to collective, integrated decisions on transport, infrastructure and land use planning at scale. They have a degree of fiscal autonomy and offer confidence to investors, developers and utilities in terms of long-term planning horizons. They bring together local planning authorities with LEPs, thus integrating planning and economics. New combined authorities can be developed with the need for new legislation or local government reorganisation, and do not always need to incorporate a directly-elected mayor . This means that combined authorities can sidestep the ongoing debates in Oxfordshire and Northamptonshire about unitary versus two-tier authorities; both have the potential to join a combined authority.

7.3.15. In such a scenario, the Corridor board would leave all but the most strategic planning to the sub-regional combined authorities, thus freeing itself up to cover other areas - for example, it could function, should it wish, as a sub-national transport body or economic growth board.

7.3.16. Working in partnership, central government, the Corridor board and the combined authorities could between them determine the most appropriate delivery models for large-scale development in different parts of the corridor- for example, development corporations in certain locations, joint ventures in others and a wider range of smaller-scale mechanisms in and around existing settlements. These delivery models are discussed in more detail under the Delivery and Funding Levers section below.

Legislative Framework

7.3.17. A strategic Corridor-wide body could be established without the need for new legislation if it were non-statutory. However, this approach would be reliant on cooperation and collaboration from all partners which could reduce its effectiveness and leave it more vulnerable to changes in government compared to a body with formal planning powers.

7.3.18. However, a statutory Corridor-wide body with strategic planning powers similar to the GLA is likely to need new legislation and an elected component. This could create challenges in relation to the appetite for this type of elected organisation across the Corridor similar to the challenges that were faced in relation to the Regional Assemblies in the early 2000s.

7.3.19. A potential way to address this is to ensure that, even if it is itself non-statutory, any Corridor wide board comprises a 'thin' layer of co-ordination and oversight based firmly on statutory structures for each Sub Area. For the purposes of the Corridor, this would means building on the existing combined authority in the Greater Cambridge Sub Area and encouraging the on-going efforts to tackle the well-documented and on-going governance issues in Oxfordshire by means of a new combined or unitary authority (ideally including Swindon) and b) establishing a combined authority to cover the MK-Northampton-Bedford-Luton Sub Area.

7.3.20. If a) and b) were to be established, the entire Corridor would be subject to statutory Sub Area governance, leadership and planning, which could unlock multiple barriers to growth with a single intervention.

7.3.21. While the incentives for local authorities to form combined authorities are clear, certainty of delivery could be enhanced further through the threat of government intervention where necessary. The Growth and Infrastructure Act 2013 sets a relevant

precedent by giving the Secretary of State the power to designate any local authority that is not 'adequately performing its function of determining planning applications' as underperforming, allowing planning applications to be submitted directly to the Planning Inspectorate.

7.3.22. In the same way, there could be potential for legislation to be amended so that the same power applies on the planning policy side. If, for example, any individual local authority is holding up a statutory plan for the whole of its Sub Area, and in turn for the whole Corridor, then the Secretary of State could be justified in intervening in the national interest

Development Corporations

Overview

7.3.23. Based on the finding that the largest-scale developments, effectively new cities on the scale of 10,000 dwellings or more, provide the greatest opportunity to accelerate development to a level, one or more development corporations would need to be established across the Corridor. Development corporations are a tried and tested means of developing and implementing an agreed masterplan, overseeing the provision of strategic infrastructure and then managing the sale of individual land parcels on to developers and housebuilders.

7.3.24. In terms of suitable land free from major physical constraints, the areas along the emerging routes of East-West Rail and the Oxford-Cambridge Expressway offer particular opportunities to develop new settlements of over 10,000 dwellings, making development corporations would be particularly appropriate in this part of the Corridor.

7.3.25. However, development corporations, as the key lever to deliver the Autonomous Places category of intervention, tend to be treated with some scepticism in the English context. Their advantages - the fact that they can insulate large-scale development from the waxing and waning of political agendas, and that they enable strong top-down implementation, have tended also to be seen as politically unpalatable. There is, however, the potential for the amendment to the Neighbourhood Planning Act 2017 referenced in the planning consenting levers section above, to address this issue to some extent by facilitating the delivery of 'locally-led' development corporations.

7.3.26. There are multiple models for development corporations, each of which has their pros and cons, as set out in Appendix H.

7.3.27. Of the models that can be deployed, the

Homes and Communities Agency powers to designate model appear never to have been used, likely because it has been seen as too top-down a model for the era of localism that began with the election of the coalition government in 2010, less than two years after its enabling Act was passed.

7.3.28. Similar concerns about a lack of local accountability were a factor in the equally underused New Towns Act 1981, but this could well change with the Neighbourhood Planning Act 2017 giving it new life. It is therefore the Urban Development Corporation model that has been used most recently, specifically within London since 1980 and at Ebbsfleet since 2014.

7.3.29. If growth in the Corridor is to be delivered at the speed and on the scale proposed, it is essential that any model of development corporation has the power to acquire land at its existing use value (EUV), effectively enabling the land value uplift resulting from its designation for development to be captured by the corporation at an early stage. Without such powers, it would be too expensive for the corporation to acquire land for development and its ability to function as a delivery vehicle would be severely compromised.

7.3.30. In England there has also been a regrettable tendency not to give development corporations enough time to drive the speed of development needed. For example, MK Development Corporation was wound up in 1992, only 25 years after it was established. London Docklands Development Corporation lasted only 18 years.

7.3.31. Large-scale delivery vehicles need to be given the time as well as the land to do their jobs. Arguably, Milton Keynes' growth could have matched or exceeded the rate seen at Almere if the development corporation had continued into the 1990s and 2000s. This could partly explain the scepticism expressed at the workshops that even if new cities are the fastest model of delivering growth, they still seem to take fifty rather than thirty years to deliver.

7.3.32. In terms of the governance of the development corporations, to maximise local accountability, there should be representation on a corporation board from relevant local and County authorities alongside government and its delivery agencies to ensure a mix of top-down and bottom-up perspectives.

7.3.33. This was the model used at both Milton Keynes and Ebbsfleet, 47 years apart. Under the 2017 Act, relevant local authorities could be invited or encouraged to form development corporations in locations deemed suitable for city-scale growth by either combined authorities or the pan-Corridor board referred to in the leadership and governance levers section above. The relationship between the plans produced by development corporations and more strategic plans could be similar to that in London between the London Plan and Opportunity Area Planning Frameworks.

Legislative Framework

7.3.34. The literature review and other data gathered through the research show that it is the issue of the powers to acquire land at EUV that is most likely to be problematic for new development corporations . While the law is clear elsewhere, such as in Germany , for example, that land can always be purchased by a new town delivery vehicle at EUV, in England the situation is not as clear. Though the post-war New Town Corporations, established under the now repealed New Towns Act 1946, regularly acquired land at EUV, this ability was subsequently challenged legally, and this has, in the words of the Town and Country Planning Association (TCPA), 'tended to lead to more generous settlements on the amount of hope value that has been paid to landowners' ever since. The Human Rights Act 1998 further enhances the probability of such outcomes, though as legislation originating in Europe, there is potential for it to be amended or even repealed post-Brexit.

7.3.35. The current situation is that case law permits a development corporation to acquire land at 'no

scheme value' (NSV) rather than EUV. The difference between NSV and EUV, and the extent to which NSV is inflated by hope value, has been an unresolved issue ever since, and without there having been application of land acquisition powers by a development corporation since the 1981 Act, the extent to which land acquisition at NSV is a barrier is largely untested.

7.3.36. Though the development corporation legislation has now been updated by Section 16 of the Neighbourhood Planning Act 2017, neither the Act nor the Regulations that implement it address the issue of the value at which a development corporation can acquire land, despite the issue having been raised in Parliament at the time the amendment was being debated. This can only be regarded, for the purposes of achieving transformational development in the Corridor, as a missed opportunity, though it may be that an NSV approach turns out not to be a significant barrier to the large-scale deployment of development corporations.

7.3.37. One possible way around NSV could be to address it through the approach described in the planning consenting levers section above whereby an amendment to enable city-scale development within major new transport corridors could 'piggyback' on the legislation required to enable the transport infrastructure. In other words, the ability for development corporations along the route of East-West Rail and/or the Oxford-Cambridge Expressway to purchase land at EUV could be made explicit in the legislation.

7.3.38. This would enshrine the European-style model of new town delivery promoted by the finalists in the Wolfson Economic Prize 2014 competition that sought to answer the question 'How would you deliver a new garden city which is visionary, economically viable, and popular?' It would also facilitate the funding of significant new infrastructure through land value capture rather than via the Treasury. More details on land value capture as a lever are provided below.

7.3.39. The various Acts and other legislation that prescribe development corporations and their establishment set no specific limits on their size, scale, or number.

7.3.40. This means that a linear development corporation along the length of new or upgraded transport infrastructure could be permissible under existing legislation. Such an approach has some similarities with the Delhi Mumbai Industrial Corridor Development Corporation (DMICDC) in India, which developed a Perspective Plan in 2009 as a strategic spatial vision along the 1500-kilometre road and rail corridors connecting Delhi and Mumbai. The DMICDC is a special purpose vehicle of central government and used the Perspective Plan to identify 'nodes' for the development of manufacturing-based new towns, each with their own masterplan to be developed by the relevant State government.

7.3.41. The DMICDC shows that if a linear approach were taken, there is value in some kind of two-tier structure, with a more strategic perspective or plan then informing more detailed plans at specific identified locations.

7.3.42. A further option, for which there is at least one precedent in England, is the potential to simplify delivery through multiple separate red-line areas for new settlements under the control of a single development corporation. This is how Welwyn Garden City and Hatfield were developed due to their proximity, but naturally complexity would increase the more areas there are under the control of a single corporation and the further apart from one another they are.

7.4. Planning policy levers

7.4.1. The research indicates that the three key planning policy levers to deliver transformational growth are:

- Corridor-wide and sub-regional strategic plans;
- Planning freedom schemes; and
- Ongoing improvements to the English planning system in general

7.4.2. Scenarios for the application of key planning policy levers are set out in Table 14.

Table 14. Planning Policy Scenarios

	Scenario 1- Minimal intervention	Scenario 2 - Medium intervention	Scenario 3- High intervention
Corridor Spatial Plan	Corridor spatial plan is an agreed high level vision with limited weight as material consideration; site allocations carried out in Sub Area and Local Plans	Corridor spatial plan is a material consideration informed by evidence and has weight as a material consideration; indicates broad locations for growth	Corridor-wide plan is informed by comprehensive evidence base and forms part of the development plan for the Corridor; allocates sites for development needed.
Sub Area Plans	Local Plans prepared by LPAs have priority taking account of Corridor spatial plan	Local Plans have priority but are prepared collaboratively or jointly according to Sub Areas	Statutory spatial plans are prepared for each Sub Area replacing existing Local Plans
Planning Freedoms Scheme	Local authorities select which freedoms are applied for	Housing land supply requirement changed to 10 years	Housing land supply requirement changed to period of whole Plan
Political acceptability	**Highest**	**High to medium**	**Medium to low**
Probability of delivering transformational growth	**Lowest**	**Medium**	**Highest**

Strategic Plans

Overview

7.4.3. In terms of strategic planning, a range of options exist. A Corridor-wide plan or strategy could be formulated on behalf of a Corridor board that would be non-statutory, but a material consideration- along the lines of a Growth and Infrastructure Framework in the local plan system. In order to carry weight, any such non-statutory framework would need to be supported by the statutory plans of the local authorities or the combined Sub Area authorities set out above. The Corridor-wide plan may or may not have the power to allocate sites for the scale of development needed. Where it does not, sub-area plans covering the whole of the Corridor would need to have this power; otherwise, the approach would be unchanged from the present situation, where in all of the Corridor other than Cambridgeshire only Local Plans have this ability.

Deployment

7.4.4. Any strategic spatial plan, statutory or otherwise, would carry forward another of the key recommendations of the NIC's interim report, which stated:

'local authorities, Local Enterprise Partnerships, government departments and national delivery agencies, should work together to develop an integrated strategic plan for infrastructure, housing and jobs across the corridor'.

7.4.5. The key requirement of the strategic spatial plan would be to allocate strategic development land for the 23,000-30,000 dwellings per annum needed to achieve transformational growth and that are not already accounted for by existing Local Plans across the Corridor. In so doing, it would need to be underpinned by a coherent, consistent shared evidence base, including Objectively Assessed Need for housing, transport, employment and all other infrastructure. Experience strongly suggests that the higher the strategic level at which sites can be allocated, the greater the chance of accelerated delivery, in large part because of the additional certainty provided to all stakeholders. This is why Scenario 3 permits site allocation at the level of the pan-Corridor spatial strategy.

Legislative Framework

7.4.6. Any Corridor-wide plan or strategy that is a material consideration without being statutory would not require new legislation. As an alternative, however, legislation could be amended to enable a Corridor-wide regional spatial plan on a similar basis as the London Plan (which was established by to Statutory Instrument implementing the Greater London Authority Act 1999).

7.4.7. There are of course pros and cons associated with either option, not least that a statutory spatial plan could face the political obstacle of being perceived as the re-introduction of regional structures. However, the former non-statutory option is likely to not carry enough weight to deliver the transformation required, despite the significant resources likely required for it to be developed.

Planning Freedoms Scheme

Overview

7.4.8. The concept of the Planning Freedoms Scheme (PFS) could be a further important lever to accelerate growth, but is relatively new (having only been introduced by section 154 of the Housing and Planning Act 2016). It was referenced as potentially important by Metro-Dynamics in its Finance and Investment Workstream report for the NIC, which explains that PFS provides an ability to 'dis-apply or modify specified planning provisions in order to facilitate an increase in the amount of housing in the planning area concerned'.

7.4.9. In other words, national planning rules contained in, or made under, any Act of Parliament may be relaxed by a PFS. PFSs can be requested of central government by local planning authorities or urban development corporations in contexts where there is a need for a significant increase of housing and the PFS will help deliver that housing.

Deployment

7.4.10. Among the planning rules having the potential to be relaxed through PFSs is the requirement to demonstrate a five-year supply of housing. This could be highly relevant for the Corridor because a PFS could be negotiated that allows a focus on housing supply later rather than earlier in the plan period.

7.4.11. At present, the NPPF (paragraph 47) requires local authorities to identify and update annually a supply of specific deliverable sites to provide five years worth of housing against their housing requirement. Where such a five-year supply has not been identified, speculative and/or 'windfall' development is more likely to be approved.

7.4.12. As such, the requirement to maintain a five-year supply of specific deliverable sites is resource-intensive because time and money need to be spent in constantly updating and defending the local authority position against speculators and developers, particularly when identified supply is very close to the five-year mark. Evidence suggests the five-year requirement also has the unfortunate side effect of forcing local authorities to concentrate on short-term planning for smaller sites at the expense of longer term planning for higher-capacity sites.

7.4.13. An arrangement whereby a local authority could be freed from the requirement to focus as intently on the 0-5 year supply of land in return for demonstrating a higher housing target on larger sites for years 6-10 and beyond could help accelerate the delivery of strategic-scale development. As such, application of this lever has the potential to change the development pattern across the whole Corridor away from smaller and onto more strategic sites.

7.4.14. The status quo, exacerbated by the five-year requirement, is that many local authorities struggle to deliver 'medium-sized' developments (generally corresponding to the Linked Places category of intervention- around 1,000-10,000 dwellings). However, in return for allocating sufficient land from year 6 of the planning period onwards to deliver these larger developments, a more lenient approach could be taken in respect of the 0-5 year land.

7.4.15. At the same time, smaller, urban authorities, where the five-year land requirement is less of a barrier due to a shortage of any kind of developable land, could apply for different PFSs under the Act- for example, those offering opportunities to streamline the planning and delivery of city centre transport infrastructure such as an ability to pool section 106 contributions.

7.4.16. As PFSs need to be applied for by individual LPAs, it may be helpful for the NIC and other strategic Corridor stakeholders to determine exactly which freedoms local authorities in different parts of the Corridor are asking for and the reasons behind their thinking. The freedoms aspired to may extend beyond the planning system itself. For example, some authorities may be seeking access to funding and delivery mechanisms such as land value capture or local tax retention; others may aim for relaxation of the regulations governing their activities in spheres such as affordable housing provision, land acquisition or the permitted relationship with central government and its delivery agencies.

Legislative framework

7.4.17. PFSs are just one example of multiple and ongoing changes that have been made and are being made to legislation affecting the planning system in England. Although many of these changes are relatively recent, some have the potential to be considered powerful levers to unlocking housing growth across the Corridor and beyond. In particular, the recent Housing White Paper 'Fixing Our Broken Housing Market' (2017) appears to have been well-received- most workshop participants, both on the local authority and developer side, considered that its proposals should be embedded in full within forthcoming legislation.

7.4.18. While the proposals in the White Paper would not, in AECOM's view, be sufficient on their own to support transformational growth across the Corridor, anything with potential to speed the 'business as usual' interventions should be welcomed; marginal and cumulative improvements certainly also have a role to play.

7.5. Planning consenting levers

7.5.1. Planning consenting levers might be considered less transformational than some of the others described in this section, on the basis that some form of consenting will always exist. Nevertheless, levers do exist that could deliver more dwellings through the consenting regime. A theme that has been a constant throughout this study is the lack of integration between planning for infrastructure and housing, and the extent to which this is a barrier. One key lever to overcome this could be better integration of housing and infrastructure consenting.

Table 15. Planning Consenting Scenarios

	Scenario 1- Minimal intervention	Scenario 2 - Medium intervention	Scenario 3- High intervention
Integration of housing and infrastructure consenting	Current NSIP cap of 500 dwellings remains	NSIP guidance cap removed to permit unlimited dwellings	NSIPs must demonstrate maximisation of associated development opportunities, including through development corporations
Alternative consenting routes: Permissions in Principle (PIP) and Local Development Orders (LDOs)	Limited use of LDOs; continued focus on conventional consenting routes	Increased use of LDOs to secure consent for development	Maximise use of LDOs to achieve consent in particular for public sector and JV led development
Political acceptability	**Highest**	**High to medium**	**Medium to low**
Probability of delivering transformational growth	**Lowest**	**Medium**	**Highest**

Integrating housing and infrastructure consenting

Overview

7.5.2. This lever would have the effect of increasing the certainty of new city-scale development in the Corridor by integrating it directly with the new transport infrastructure, requiring new city-scale development to be provided as a condition of consent for the new transport infrastructure and vice versa. By decisively linking new housing to new infrastructure and vice versa, the 'chicken and egg' cycle that has been such a barrier to housing delivery in the past can be broken.

7.5.3. There are multiple advantages of such an approach over the alternative of consenting the transport infrastructure and new housing separately. Firstly, it brings a much greater degree of certainty on the amount, location and timing of strategic growth for all stakeholders, including local authorities, central government and private sector, institutional or sovereign investors (see delivery and funding levers section below for more details).

7.5.4. Secondly, it can lead to cost savings for central government, whereby land value can be captured from those investing in the city-scale growth and used to pay for the ongoing provision of transport (and other necessary city-wide) infrastructure via a revolving infrastructure fund, reducing the long-term capital expenditure borne by taxpayers.

Deployment

7.5.5. Though large-scale deployment of this lever is untested in England, a step in this direction has already been taken; Section 160 of the Housing and Planning Act 2016 amends Section 115 of the Planning Act 2008 such that consent for housing can be granted alongside a Nationally Significant Infrastructure Project (NSIP); both East West Rail and the Oxford-Cambridge Expressways will form NSIPs under the Act.

7.5.6. Additionally, ongoing planning for Crossrail 2 across London and the South East is taking a similar approach; the business case for the new railway rests on value capture from new development along its route that can at the same time ease the evidenced housing shortage across London and the South East. Such an approach could be cited as a relevant precedent.

7.5.7. The housing to be delivered alongside an NSIP must, according to the guidance accompanying the Act, be 'on the same site, next to, or close to the relevant infrastructure development, or otherwise associated with it'.

Legislative framework

7.5.8. The guidance accompanying the Act sets an upper cap of five hundred homes as the maximum development permitted under Section 160, thus appearing to rule out the possibility of city-scale development for the time being. The guidance explains that the cap was deliberately set out in the accompanying guidance rather than the Act itself to 'ensure that the flexibility being provided to allow an element of housing to be consented under the 2008 Act does not undermine the local planning process and the wider responsibilities for local authorities to plan for housing needs in their area'.

7.5.9. This means there is nothing in the 2016 Act itself to prohibit city-scale developments accompanying NSIPs and therefore, if the regulations could be changed to permit more than 500 dwellings alongside NSIPs it is only the guidance, rather than the primary legislation that would need to be updated.

7.5.10. The update to the guidance needed to provide new cities as a fundamental part of the East-West Rail and Oxford-Cambridge Expressway package could take one of two forms:

- a) the cap of 500 dwellings could be removed from the guidance, with nothing replacing it; or
- b) the guidance could provide for the establishment of locally-representative development corporations (under Section 16 of the Neighbourhood Planning Act 2017) alongside or instead of the cap of 500 dwellings.

7.5.11. The advantage of a) would be its simplicity; however, it would be politically more difficult, as the certainty that any development accompanying an NSIP would have a clear maximum size (and that such a limit of 500 dwellings provides for relatively small-scale development) would disappear. As such, approach b) would be, albeit slightly more complex, likely more acceptable politically.

7.5.12. However, if it was considered for any reason that legislative support for the provision of new city-scale development alongside NSIPs is too significant a change to make other than through primary legislation, there is the possibility of c) a third approach. This would be to add a clause to any future East-West Rail and/or Oxford-Cambridge Expressway Act that provides for either a) or b) in the context of these specific transport projects only, effectively 'piggy-backing' onto new legislation that would be required for delivery in any case.

7.5.13. Of the three options, it is likely that c) would be the most politically acceptable as it would ensure no wider applicability (if, for example, locations outside the Corridor were concerned about the precedent's impact on their own strategic infrastructure projects). However, as a caveat on the application of this lever, it is worth noting that combining a major transport scheme with a major residential development project in a single consent has the potential to be complex. If this lever were to be deployed, the resulting consenting process would need to be very carefully designed to minimise the risk of confusion and complexity.

Other planning consenting levers

Overview

7.5.14. In terms of other consenting levers, a range of options already exist to achieve consents for major schemes in addition to the well-established planning application routes (outline applications followed by reserved matters, detailed applications or 'hybrid' approaches).

Deployment

7.5.15. For example, greater use of Permissions in Principle (PIPs), Development Consent Orders (DCOs) and Neighbourhood Development Orders (NDOs) could be deployed for smaller sites to support accelerated levels of delivery in the Corridor. It is likely such approaches may prove particularly attractive where the public sector is taking a more proactive role in delivering development.

Legislative framework

7.5.16. The legislation already exists for this lever to be effectively deployed in multiple appropriate contexts across the Corridor. No compelling evidence requiring amendment of existing or the development of new legislation has been found.

7.6. Infrastructure development levers

7.6.1. The evidence reviewed is clear; there needs to be much greater clarity on the delivery, location and timing of strategic transport and other supporting infrastructure. This would unlock a multiplicity of development opportunities at a range of scales on both privately and publically owned land, in particular where infrastructure can be forward-funded (see also delivery and funding section below).

7.6.2. Scenarios for the application of infrastructure development levers are set out in Table 16.

Clarity on the delivery, location and timing of infrastructure

Overview

7.6.3. Like many of the other key levers, this reflects and amplifies the recommendations of the NIC's Interim Report. Certainty for Corridor investors and developers can only come with clear signals from infrastructure funders, including central government, on the strategic road and rail schemes, as well as the other transport infrastructure that the corridor requires. At present, multiple larger sites, including urban extensions, are stalled because they need infrastructure funding and certainty to be delivered.

Table 16. Infrastructure Development Scenarios

	Scenario 1- Minimal intervention	Scenario 2 - Medium intervention	Scenario 3- High intervention
Clarity on delivery, funding and timing of key infrastructure	Clarity provided on delivery, funding and timing of East-West Rail and Ox-Cam Expressway and other key infrastructure with completions in 2040s; little or no cross-party support	Clarity provided on delivery, funding and timing of East-West Rail and Ox-Cam Expressway and other key infrastructure, with completions in late 2030s; some evidence of cross-party support	Clarity provided on delivery, funding and timing of East-West Rail and Ox-Cam Expressway and other key infrastructure, with completions in 2020s; strong cross-party support
Unlocking infrastructure and growth west of Oxford	Strategic infrastructure provided is all at Oxford and points east; no major A420 upgrade	Upgrade of A420 and new developments of up to 10,000 dwellings in Oxford-Swindon corridor as a result	Upgrade to A420 on scale of Oxford-Cambridge Expressway, new station(s) on Great Western main line and accompanying dwelling growth in new settlements larger than 10,000 dwellings
Political acceptability	**Highest**	**High to medium**	**Medium to low**
Probability of delivering transformational growth	**Lowest**	**Medium**	**Highest**

Deployment

7.6.4. The devolution agenda referenced previously has been successful in unlocking funding for and certainty of infrastructure delivery. This clarity could be linked closely to the strategic planning and 'planning freedoms' levers mentioned above as part of a quid pro quo between combined authorities (or other 'larger-than-local' planning structure) and central government. This could strengthen even the less formal larger-than-local structures by linking funding and infrastructure to delivery- i.e. central government giving certainty on strategic infrastructure interventions if local government increases certainty of housing delivery and vice versa.

Legislative framework

7.6.5. The legislation already exists for this lever to be effectively deployed. No compelling evidence requiring the amendment of existing or the development of new legislation has been found.

Unlocking infrastructure and growth west of Oxford

Overview

7.6.6. Research indicates that the Corridor west of Oxford has significant untapped capacity for housing that could be unlocked if the A420 to Swindon is upgraded to the same capacity as the Oxford-Cambridge Expressway. This is the most spatially-specific of the levers considered fundamental to transformative growth, but is included because the development it could unlock is of sub-regional importance, and it would be difficult to achieve delivery rates of 23,000-30,000 dwellings per year without including development in this area alongside that between Oxford and Cambridge. It has long been clear that Oxfordshire, in particular its central area, is a highly constrained location for growth in terms of, for example, Green Belt, extensive flood plan, affordability and transport congestion.

7.6.7. Both workshops, the case studies and the literature review highlighted the role that Swindon and unconstrained land within the A420 corridor between it and Oxford could play in balancing growth within the Oxfordshire sub-region. In this corridor, land free from strategic constraints but with road and in some cases rail access appears to exist on a similar scale to the opportunities around Milton Keynes.

Deployment

7.6.8. As in other locations, the delivery of the upgraded A420 could be made contingent on the delivery of large-scale growth at Swindon and vice-versa through a devolution-style deal between central government and a combined authority including Oxfordshire and Swindon. As roads are costly, and difficult to make attractive to private sector investors if they are to be toll-free, a revolving infrastructure fund could be an effective way to recoup the costs of upfront provision. Infrastructure development levers to unlock growth in this part of the corridor need not be limited to the highways network; a new station on the Great Western main line east of Swindon could be a relatively low-cost, high-impact lever for new city-scale development.

Legislative framework

7.6.9. The A420 is a local authority rather than a trunk road, so could be upgraded without the need for an NSIP. However, it may be determined that development of the Swindon-Oxford part of the Corridor justifies a future westward extension to the proposed Oxford-Cambridge Expressway rather than or in addition to upgrade of the existing road. If this were the case, it would need to be progressed as an NSIP, in the same way as the current Expressway proposals.

7.7. Funding and Delivery levers

7.7.1. This category includes more levers than any other, reflecting the wide range of options available in terms of delivering and funding large-scale development. The key levers under this heading are considered to be public/private delivery models, forward funding infrastructure and stimulating competition and innovation in the construction sector, creating certainty for investors, land value capture, and the potential for the establishment of a free zone.

7.7.2. Scenarios for the application of delivery and funding levers are set out in Table 17.

Table 17. Funding and Delivery Scenarios

	Scenario 1- Minimal intervention	Scenario 2 - Medium intervention	Scenario 3- High intervention
Development corporations	Up to five development corporations established in suitable locations across the Corridor	Up to ten development corporations established in suitable locations across the Corridor	Linear development corporations established along the routes of key strategic infrastructure
Public/private delivery models	Uplift in number of local JVs of up to 5,000 dwellings established spurred by clarity on location and scale of public-sector land	As Scenario 1 with uplift in number of local JVs of up to 10,000 dwellings established spurred by Corridor and sub-regional planning frameworks	Large (5-10,000 dwelling) JVs established in multiple locations across corridor to deliver growth at locations identified by Corridor-wide plan (similar to Opportunity Areas in London), spurred by full open data on location and scale of all public and private landholdings
Forward Funding of Infrastructure	Uplift in developments where infrastructure is forward funded by local partners	As Scenario 1; plus uplift in development where infrastructure is forward funded by central government	Large scale central government forward funding of infrastructure in multiple locations across the Corridor

	Scenario 1- Minimal intervention	Scenario 2 - Medium intervention	Scenario 3- High intervention
Innovation/competition in construction sector	Amendment of NPPF and appropriate legislation to give much stronger policy support for this lever (assuming implementation of the Housing White Paper)	All schemes on public sector land required to stimulate competition among housebuilders and incorporate modular construction and self-build	As Scenario 2 and all schemes larger than 500 dwellings required through planning to stimulate competition among housebuilders and incorporate modular construction and self-build
Creating certainty for investors	Existing attractiveness of Corridor for investment enhanced by light-touch, low cost action on part of Government; some uplift in investment as a result	Through medium-scale intervention, government provides significant certainty, spurring national and international investment across the Corridor on a greater scale	Through larger-scale intervention, government provides significant certainty, spurring national and international investment across the Corridor on a large scale

Public/private delivery models

Overview

7.7.3. Alongside the development corporation model explored in the leadership and governance section above are alternative mechanisms also based on public ownership-private delivery. This kind of delivery method is often (but not always) referred to as a joint venture (JV). JVs could have a role to play for the medium-scale development, including urban extensions and new small settlements, which collectively comprise the 'linked places' category of the spatial typologies.

Deployment

7.7.4. JVs have been proven to be effective at increasing the scale of development that individual private developers are willing to take on in terms of cashflow and overall financial risk. The evidence from the literature, the workshops and the case studies is very clear, however, that this scale is finite.

7.7.5. Although there is no theoretical upper limit on the size of JVs, there remains a practical limit above which they tend not to be deployed. This limit is driven not only for the same reasons of developer cashflow and risk, even with the certainty provided by the public sector landownership, but also because in most cases, the scale of public sector landholding limits their scale, because public landowners other than development corporations lack the powers to purchase additional land at existing use value. Though the Shepway case study showed one example where the public sector was able to purchase land at EUV, it was only able to do so by concealing its intentions. The opportunities to do this, particularly in an area like the Corridor that already benefits from developer confidence, are relatively rare.

7.7.6. These factors explain why a boundary of approximately 10,000 dwellings appears to have emerged in practice forming the upper effective limit of the JV model and the lower limit of the development corporation model (at the same time, and for similar reasons, the upper limit for private-sector only development tends to be around 5,000 dwellings).

7.7.7. In this sense, JVs are complementary to, rather than a replacement for, development corporations, which evidence shows in any case are significantly faster at delivery. With this in mind, to achieve transformational growth, land will have to be identified for development in locations that can only be delivered through a development corporation.

7.7.8. Nevertheless, JVs will have a crucial role to play in terms of delivering the multiple smaller urban extensions and new settlements away from the new development-corporation led cities that will be required. Though historically slower at delivering completions than development corporations, evidence shows JVs deliver faster than the private sector alone.

7.7.9. These include, for example, locations further from the new transport infrastructure to be provided or where physical and/or political constraints indicate development scale cannot exceed around 10,000 dwellings and/or no political appetite for a development corporation model. Additionally, the Savills Property Market report for the Corridor notes that in terms of its ability to accelerate growth, 'public sector land enabling and release will be most effective in accelerating housing supply if it is focused on markets with little or no private sector supply. This lends itself to a focus on new settlements, including garden towns and villages.'

7.7.10. The Metro-Dynamics report also commissioned by the NIC includes a more detailed explanation of the varying scales of integration achievable in a range of JV models, coming to the perhaps unsurprising conclusion that the greater the level of risk either part is willing to bear, the greater the

potential development returns. The model to deploy will depend on site and location-specific factors in each case. One lever that could accelerate growth on all public landowner, private developer models would be far greater transparency on local authority landholdings, following the lead set by central Government with its Government Property Finder. In order for this to occur, the Land Registry should be required to open up data on public landownership as part of the One Public Estate initiative.

Legislative framework

7.7.11. The legislation already exists for this lever to be effectively deployed. No compelling evidence requiring the amendment of existing or the development of new legislation has been found.

Forward funding of infrastructure

Overview

7.7.12. The greatest single benefit of the public ownership-private delivery model is its ability to forward-fund infrastructure, thus accelerating development. The importance of this lever in delivering the transformational growth envisaged cannot be overstated, and it can be applied not only to the JV and the development corporation models of delivery but to almost any developable public-sector owned land on a scale large enough to need significant new infrastructure. Forward funding of infrastructure always needs to be provided by the public sector initially, even though it can be effectively recouped at a later date. The larger the scale of development, the more likely it is that the funding needed is from central government or its agencies rather than at local level.

Deployment

7.7.13. Examined in detail through a case study, the Milton Keynes tariff is perhaps the best-known example of the successful application of this type of lever. The tariff has an excellent track record, it and similar predecessor levers having contributed to an average of 1,863 new homes per year being delivered at MK between 2001 and 2011 even after the development corporation was wound up.

7.7.14. As the analysis shows, the tariff effectively comprises a revolving infrastructure fund replenished by pooled developer contributions, but achieving results thanks to its simplicity and transparency, which in turn engendered developer confidence, thus creating a virtuous circle. Development at Milton Keynes was always on a large scale and as a result the initial forward funding was always provided by a central rather than a local government body (in this case, the Development Corporation and its successors English Partnerships and the Homes and Communities Agency).

Legislative framework

7.7.15. Though application of the tariff is no longer possible thanks to the pooling restrictions on section 106 contributions introduced through the CIL Regulations 2010 , either the planning freedoms scheme discussed previously in the planning policy levers section or an amendment of those regulations (probably as an output of the Government's ongoing review of CIL and its operation) have the potential to resurrect the tariff relatively quickly. On a smaller scale, forward funding of infrastructure and/or revolving infrastructure funds are both permissible under existing legislation and can be deployed through the joint venture model, either using local authority or Homes and Communities Agency funds.

Stimulating competition and innovation in the construction sector

Overview

7.7.16. The urgent need to stimulate competition and innovation in the housebuilding market is a very significant lever in its own right, and includes, as set out in previous sections, the use of multiple housebuilders competing on a single site, new approaches to skills and training, self-build, greater use of SME housebuilders and modular methods of design and construction, all of which have been demonstrated by case studies and other evidence to accelerate dwelling completions.

Deployment

7.7.17. Again, in terms of transforming this issue from a general policy aspiration into practice as an effective lever for growth, it is within the public ownership/ private delivery and the development corporation models where this lever has the greatest prospects of delivering transformational development.

7.7.18. This is because it can only be implemented by means of action from outside the house building market itself. Though there may also be options for application through a JV, this will depend on which JV model is used. In any JV where the private sector delivery partner has exclusive development rights across the entire site, it will be much harder if not impossible to apply this lever. However, other models of JV, for example where a master developer is involved, would permit multiple house builders on site, and/or ensure some land is retained in public ownership; here, the task would be easier.

7.7.19. There has been growing recent recognition on the part of central government of the importance of competition and innovation in housebuilding, not least the Self-build and Custom Housebuilding Act 2015. On similar lines, the HCA's Accelerated Construction Programme opens up publically-held sites to SME housebuilders and modular housing on an exclusive basis.

7.7.20. However, additional steps could be taken within the Corridor to apply this lever more widely. One such step could be to make it a condition of operation for development corporations within the Corridor through new or amended legislation- for example, as part of Regulations that enact relevant sections of the bills for East-West Rail and the Oxford-Cambridge Expressway that enable city-scale development, as explored in the infrastructure development levers section above.

Legislative framework

7.7.21. Local planning policy for strategic-scale development on publically-owned land outside development corporation control could require this delivery lever to be employed before entering into any JV or other agreement with developers. A necessary enabler for any such policy would need to be amendments to the National Planning Policy Framework (NPPF), which would have the advantage of not requiring primary legislation.

7.7.22. The NPPF, adopted in 2012, pre-dates to some extent the government's recognition of the potential importance of this lever, and as such, it does not at the time of writing mention self-build, custom-build, modular housing, the SME sector or stimulating competition among housebuilders. Though the recent Housing White Paper highlighted this collection of levers, it does not explicitly state that the NPPF could or should be updated in these terms; instead it considers (paragraph 3.18) the potential for amendments to legislation.

Creating certainty for investors

Overview

7.7.23. The necessity of creating certainty for investors in the corridor is of vital importance, both as a lever for growth in its own right and as an output or by-product of the successful deployment of other levers.

7.7.24. Building investor certainty as an output of other levers is a clear intention of the NIC's Interim report, which sought three funding commitments from Central Government on East-West Rail and the Oxford-Cambridge Expressway as a response to the many corridor stakeholders who pointed in the NIC's Phase One Call for Evidence to uncertainty over the timing and funding of key infrastructure as a major barrier to growth across the Corridor.

Deployment

7.7.25. Such commitments to the funding and timing of key infrastructure will require cross-party support, as was achieved for HS2 and other key infrastructure projects; it seems to be this certainty of delivery, as well as a generally favourable international perception of the UK as an investment destination that was rewarded by large-scale investment from the likes of the Chinese and Qatari governments. However, the majority of HS2 will be funded by UK taxpayers, so there is a risk that creating certainty for investors nevertheless can entail significant upfront spending commitments.

7.7.26. In order to help make the case for any such upfront spending, it is considered that there are five key elements that need to be in place from an institutional or sovereign investor's perspective in order for certainty to be created for a large-scale investment proposition like the Corridor:

- Ensuring a relevant offer to capital - known as the investment thesis, this is the fundamental element of engendering certainty and comprises a strong business case backed by evidence-based research into relevant trends and projections;
- There needs to be credibility of sponsorship both in terms of the sponsoring party itself (in this case, most likely to be central government) and an appropriate level of co-investment from that party;
- Capability and competence needs to be demonstrated though a strong track record of delivery and execution;
- Realistic and likely commitments on timing are required, for the medium and long term; this will help reassure investors on the timescales for their return on investment; and
- Innovative features or mechanisms that permit investment to be future-proofed; this is particularly relevant in the case of the Corridor, with a relatively long delivery window and the uncertainty of the post-Brexit economy.

7.7.27. Once appropriate commitments to funding and timing have been provided by central government, and key Corridor partners are satisfied that there is more than a reasonable chance that the five points above can be demonstrated convincingly to investors, the Corridor should be promoted and marketed nationally and internationally as an investment opportunity for institutional, sovereign and other large-scale private sector investors, thus minimising the impact on UK taxpayers.

7.7.28. The necessity of creating certainty for Corridor investors reflects the fact that throughout this study, it has been made clear that the post-war model of exclusive public funding of large-scale infrastructure is becoming significantly less popular politically, at least under the current government. To this extent, it is expected that Corridor authorities would expect a degree of sovereign, consortium, institutional and other private-sector investment in development corporations and new housing development alongside strategic transport infrastructure. This would help answer the question of who pays for development corporations, providing reassurance to government that they would not be exclusively publically-funded.

7.7.29. It seems clear that the approach mentioned previously of making city-scale development to be delivered by development corporations a necessary pre-condition of strategic transport infrastructure could have a significant positive impact in terms of creating investor certainty. Referring back to the five points above, it could be seen to be an innovative mechanism to future-proof investment; it would demonstrate credibility, capability and confidence. As the new towns start to be built out at a relatively earlier stage than large-scale accumulation of fare box revenues from transport infrastructure, it is likely that such a combined scheme would provide guaranteed returns faster, and hence form a far more attractive proposition to investors, than the railway alone.

Legislative framework

7.7.30. Though investor confidence can be generated in principle as part of the normal operation of government on the basis of existing legislation, there is naturally a strong correlation between new primary legislation and generating confidence and certainty for investors. This is particularly the case in locations like the Corridor, where a step-change in investor certainty and confidence can really only be achieved through new legislation, for example on major infrastructure projects, having the effect of translating aspirations for growth into implementable reality.

Land Value Capture

Overview

7.7.31. Two mechanisms indirectly using land value capture as a lever were explored above, namely the ability of development corporations to buy land at existing use value and by means of a tariff model of infrastructure funding. However, the power of land value capture as a mechanism in its own right to forward fund development is increasingly being recognised. In their Finance and Investment Workstream, for example, Metro-Dynamics stated that 'the high demand for housing, coupled with increasing land values in the Corridor, provide a new opportunity to think differently about ways of capturing value created by planning permissions and infrastructure investment (planning gain).'

Deployment

7.7.32. If transformational development is to be achieved, there is a case for the introduction of a land value charge as part of the ongoing review of planning gain arrangements. In order not to deter investment in the Corridor, the charge could apply across the whole of the English planning system (even if separate arrangements were to apply within development corporations or tariffed areas), with the potential for it to be lowered to some extent within the Corridor during the projected development window. This would act as a spur to developers and investors (on the assumption that a new land value charge inside the Corridor, even if lower than outside it, is still preferable to the status quo of no charge inside or outside).

7.7.33. The advantage of a land value charge is that it would address the discomfort expressed by some developers at the second workshop over an alternative scenario of local authorities being permitted, through the devolution agenda or otherwise, to levy land taxes on a more ad hoc or incremental basis.

7.7.34. However, the charge may need to be designed in such a way as to minimise the risk that local authority landholders are able to grant themselves permission for development and capturing uplift for themselves. There is also the potential to link charging powers to housing allocation or delivery, with consistently under-performing authorities forfeiting their ability to levy the charge.

Legislative framework

7.7.35. A flat charge of the type described would require primary legislation and accompanying regulations. However, this may not be perceived as a barrier to deployment to the same extent as other interventions that might require new legislation in a context where:

- infrastructure levies are being reviewed in any case (for example, the replacement for CIL that is currently being investigated would itself need new primary legislation);and
- the case for a better mechanism to capture land value in the planning system has been acknowledged for many years (certainly pre-dating the focus on the Corridor), and, as such, there is likely to be a degree of cross-party support for such legislation.

Free Zone

Overview

7.7.36. The designation of a tax-free zone is a final example of a lever that could significantly accelerate growth. Such a lever is untested in an English context, not least because EU membership effectively outlawed their designation in any member state. However, there is the potential for one to be declared post-Brexit; the approach of Special Economic Zones used to stimulate the world's fastest-ever housing and employment growth at Shenzhen and subsequently applied to other locations in southern China has much in common with a free zone and demonstrates the potential strength of the concept as a lever for growth.

Deployment

7.7.37. A tax-free zone does not imply freedom from other taxes, such as council taxes or even the potential land value charge mentioned above. It is rather an economic designation whereby all goods entering the zone are exempt from tax. The first ever free zone was around Shannon Airport in the 1950s, relying on its status at the time as a legally grey area between Europe and the USA. However, the zone had to be wound up when Ireland entered the EU.

7.7.38. Nowadays, Jebel Ali in Dubai (also known as Jafza) is a highly successful free zone; it is analogous to a sovereign area that sets its own tariffs free from the tax regime prevailing in the rest of the United Arab Emirates.

7.7.39. Free zones work best when raw materials or components are imported into them, manufactured or assembled there, and then the completed product is exported. Evidence, including the Corridor economic analysis completed for the NIC by SQW, shows that high-tech manufacturing and engineering, as well as biotechnology, are among the sectors most likely to benefit and grow from this approach, and that with its good access to international ports and airports at Southampton, Felixstowe and Heathrow, this could give the Corridor a significant economic boost post-Brexit.

Legislative framework

7.7.40. One disadvantage of the Free Zone approach would be that primary legislation would be needed, and even this legislation would have to wait until the Brexit process was complete.

8. SUMMARY AND CONCLUSION

8.1. High Intervention Scenario

8.1.1. The research summarised in this report has demonstrated that achieving a transformational level of average annual growth of between 23,000 and 30,000 homes across the corridor to 2050 is a highly ambitious target requiring a step change in approaches to delivery from both public and private sectors. This would be particularly difficult if it were to be delivered using only what is currently permissible within existing legislation and regulations.

8.1.2. To achieve the required scale of growth, the annual delivery rates achieved over the last 10 years will need to be at least doubled. Based on the speed of housing development seen in Milton Keynes during the 1980s, 1990s and 2000s, the equivalent of 10-15 new cities of 51,000 dwellings each would need to be developed at the same time across the Corridor over a thirty-year period to deliver the homes not already allocated in local plans .

8.1.3. This research has considered a range of precedents, including some from overseas. For example during the 1980s and 1990s, Almere in the Netherlands was the fastest-growing city ever seen in Europe. With very few planning constraints and a number of levers applied along the lines of those explored by this study, the result was a rate of 2,500 dwellings per year. Even if the same rate of growth can be achieved in the Corridor over a thirty-year period, the equivalent of between eight and twelve new cities of 63,000 dwellings each would need to be developed.

8.1.4. As demonstrated in Chapter 6 of this research, although the delivery of this number of new settlements across the Corridor seems unlikely, it remains the case that large scale, new city type autonomous settlements or major extensions to existing urban areas are likely to be a key part of any spatial solution in meeting the ambitious annual corridor transformational housing target.

8.1.5. Furthermore, this level of development illustrates the significant scale of public and private sector resources that will be required to deliver these growth targets. At its height, Milton Keynes Development Corporation had over 2,500 dedicated staff with over 40 different house builders operating within the City. Given the recent public sector cutbacks and private sector amalgamations, this level of resourcing will be challenging, particularly given that a proportion of the additional dwellings will be delivered through the urban intensification and linked places categories- which by their very nature are usually, per housing unit, more resource-intensive to deliver than new settlements.

8.1.6. The analysis of barriers and levers has indicated that refining the 'business as usual' approach to planning and delivery will not achieve a transformational scale of growth. Rather, innovative approaches are needed which minimise the impact of the barriers and maximise the impact of the levers. This will involve addressing the following key questions:

- How are the locations for the transformational growth across the Corridor going to be quickly identified?
- What organisational mechanisms are required to oversee the delivery of transformational growth?
- How can the infrastructure be funded and provided in a timely fashion to deliver this scale of growth?
- How can this transformational scale of growth be built given current capacity limitations in the construction sector?

Leadership, governance and planning policy

8.1.7. One of the first key challenges is to determine how quickly over the next few years the Corridor can mobilise to meet the transformational average annual housing growth target over the 30 year period. As this report demonstrates, an important first step to achieving this is quickly bringing forward locations for this growth through the planning system. This has been made more challenging by the abolition of any regional planning process.

8.1.8. A comprehensive, innovative solution encompassing both plan making and governance is required. This could entail a corridor-wide spatial plan identifying the locations for transformational growth, to be developed as soon as possible, ideally by 2020 at the latest. A public sector-led governance structure will need to be established to deliver the plan.

8.1.9. Ideally, this governance structure should also be responsible for preparing the spatial plan; however, the timescales needed to achieve this may render this impossible. Consequently, it may be necessary for the NIC, with assistance from DCLG and other government bodies such as the HCA, to form an interim organisation working with the current governance structures across the Corridor to quickly agree a spatial allocation for each of the three sub-areas alongside a commitment to bring forward a corridor-wide integrated spatial plan (or a series of joined-up spatial plans).

8.1.10. This objective is made more achievable by the fact that the Oxfordshire-Swindon sub area has come together under the leaders group and Cambridgeshire is already a combined authority. Across the rest of the Corridor, the MKSM initiative is a relevant precedent.

8.1.11. Such action would not preclude the establishment in the longer term of a Corridor-wide coordination body and the combined authorities for all three sub areas, as envisaged in the high intervention scenario, to oversee the implementation of the spatial plan. Alongside these three combined authorities, bespoke public agencies similar to Development Corporations will need to be established to bring forward any autonomous settlements within their areas.

8.1.12. It is recognised that this timetable for establishing a corridor wide spatial plan position by 2020 is very ambitious, and may not be achievable. However, if the transformational annual growth target is to be met, a significant number of new sites will have to be achieving housing completions by the early 2020s.

8.1.13. In recent years, developers and landowners across the Corridor have been preparing significant development opportunities. In this sense, they will need little encouragement to submit planning applications before the spatial plan is adopted. In such instances the NIC or other government bodies could potentially have an important role to play in acting as the key interface between public sector authorities and private sector developers in advising on how these applications are progressed.

8.1.14. Given no regional plan-making process currently exists to bring forward allocations, achieving allocations through planning approvals instead may be the only practical way to achieve the transformational annual housing targets in the shorter term.

Planning consenting

8.1.15. As detailed in Chapter 6, the time taken to achieve major planning consents can be lengthy. To address this problem, use of LDOs could be considered. Urgent consideration of how and where LDOs could be used should be progressed as part of the spatial planning process and incorporated in planning policy.

Infrastructure

8.1.16. A fundamental pre-requisite of achieving buy in from local authorities and local communities to transformational growth is to demonstrate how the required strategic and local infrastructure is to be delivered. This infrastructure planning has to be integrated with the spatial planning process.

8.1.17. The delivery of East –West Rail and the Oxford-Cambridge Expressway underpin the overall growth strategy. They will undoubtedly release new development opportunities as well as increasing existing property values and business rates across the Corridor. Certainty over their delivery will enable developers to bring forward large-scale development, which in turn will underpin the revenue generated by public transport users (often referred to as 'fare box' revenue).

8.1.18. Because the delivery of the strategic infrastructure and housing growth is a classic chicken and egg situation, with one not happening without the other, central government will need to establish certainty over the early delivery of this infrastructure (funding and operation within the next 10 years) so that investment is spurred and transformational growth occurs.

8.1.19. Recent large scale transport projects, such as Crossrail 1, have been funded by central government, alongside loans raised from the PWLB . The cost of the loan is funded through fare box revenue and contributions from a mixture of mayoral infrastructure levy, business rate increases, CIL and capital receipts from transport orientated development (TOD). Alternatively, as detailed in Chapter 7, it may also be possible to identify an institutional or sovereign investor to finance all/part of this infrastructure if the criteria detailed in paragraph 7.26 of this report can be met.

8.1.20. It is, however, acknowledged that significant funding contributions for hard and soft infrastructure will need to be financed through increased land value capture, infrastructure levy or TIF mechanisms. Current land value capture mechanisms, such as s106 or CIL arrangements, do assist to an extent in the delivery of infrastructure.

8.1.21. However, frequently they fail to generate the level of funding receipts required or are not capable of funding the infrastructure at the required time. This results in either development delays and/or a need for top-up public funding. This latter point is a frequent barrier in delivering the linked places and autonomous places typologies and there are many examples from the literature review and the case studies where developments been delayed as a result. Many developer led schemes cannot forward-fund necessary enabling infrastructure such as major road upgrades or flood mitigation measures.

8.1.22. In many instances the problem is not one related to the overall profitability of the scheme but a cash flow issue of the timing of a significant but necessary expenditure commitment.

Delivery and funding

8.1.23. We believe new approaches are needed to ensure a sufficient proportion of land value uplift is captured to finance such investment. Effectively, spatial planning allocations trigger enhanced land values, and given the scale of new housing and employment allocations anticipated across the Corridor, maximising the funding of infrastructure through this route is vital. As demonstrated in Chapter 7, the most effective approach to land value capture historically has been through the New Town programme.

8.1.24. This programme, however, required large scale public sector investment to prepare serviced land areas that had been purchased at existing use value (EUV). Although this model would certainly deliver long term positive land receipts across the corridor, as set out in Chapter 7, it is believed to be unlikely that central government would provide the level of public funding required to service greenfield development. Equally, it seems that, as a result of intervening case law, there is no longer the ability to acquire land under the New Towns Act at EUV.

8.1.25. As an alternative, consideration could be given to a process that involves the public sector entering into direct relationships (including though legal agreements or even joint ventures) with large landowners to share in enhanced land value receipts at the point where the plan making process identifies large residential led land allocations.

8.1.26. Were such relationships to be established, the infrastructure provision could then be delivered by the public sector agencies or through their JVs, financed through prudential borrowing or by using sources such as pension fund-backed bonds, with both parties sharing in in the long term uplift in land values once the cost of infrastructure has been paid for via a land charge.

8.1.27. Proactively pursuing such an approach during the plan making process could significantly accelerate delivery across the Corridor as anecdotal evidence indicates that there are a number of organisations with significant land holdings across the corridor including the Oxford and Cambridge colleges and a number of other major private sector landowners, including farmers.

8.1.28. Other funding sources that could be maximised or even incorporated as part of the funding solution for the public sector/JV led infrastructure delivery model include:

- Foreign investment in infrastructure provision; currently state-owned enterprises (SOEs), high net worth individuals/private investors, and sovereign wealth funds are investing in development enabling infrastructure projects
- Infrastructure levy or TIF type models able to overcome the forward funding cash flow problem associated with providing key enabling infrastructure. This approach has been used by TfL where these revenue streams, along with others such as business rates, are used to provide an income stream to finance PWLB loans.
- Alternatively, income streams could be used to finance public infrastructure bonds; these are significantly more complex and time consuming to set up, particularly if across multiple local authorities, and mechanisms would need to be established for government to provide guarantees to any public sector forward funding infrastructure scheme.

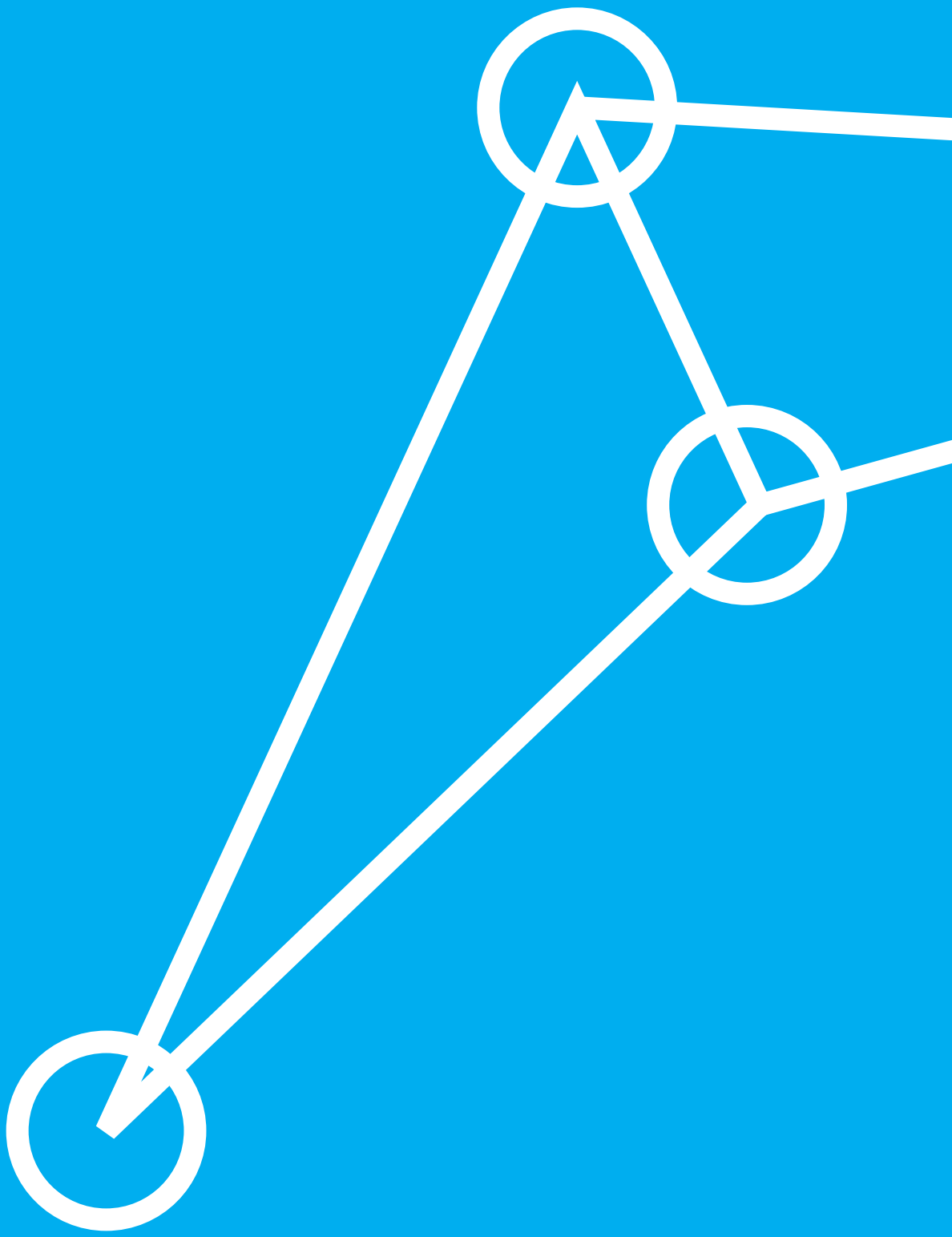
8.1.29. This study demonstrates that the current structure of the house building industry remains a barrier to accelerating growth. The business model the industry generally adopts effectively discourages rapid housing development. It is therefore vital to encourage new types of housing providers to enter the market, including new variants of housing association, whilst also encouraging large scale new self-build initiatives linked to modular, pre-fabricated, and/or off-site construction techniques.

8.1.30. The government believes that self-build housing could make a significant contribution to increasing overall dwelling completion rates and is already encouraging councils to increase the supply of self-build opportunities. This approach could potentially have a significant local impact and could also be used to deliver larger housing schemes including linked places typologies. One example in the Corridor is at Bicester where a self-build scheme for 2,000 units has been undertaken through a modular housing model.

8.1.31. At the same time, it will be important for the public sector to proactively develop JV arrangements with the private sector to deliver transformational growth. In particular, these could be used for bringing forward large individual publicly owned portfolios of sites (the recent 50:50 JV announced between Lend Lease and the London Borough of Haringey is an excellent example.

8.1.32. Finally, where this is possible, the public sector again has the opportunity through the implementation of the recommendations in the Housing White Paper to undertake its own building program. Opportunities for this need to be maximised.

8.1.33. The deployment of all of these delivery and funding levers needs to be supported by targeted construction training programs to provide the skilled workforce required. This could be particularly important in mitigating the medium-term effects of Brexit on the supply of overseas workers into an industry currently experiencing labour force shortages. These existing shortages could be compounded over the period to 2050 by the demand for construction workers on large-scale infrastructure projects such as HS2, HS3 and Crossrail 2.



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APPENDICES

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APPENDIX A: LITERATURE REVIEW

Key findings: barriers and levers to growth and development

The literature review indicates that there are multiple barriers and levers which influence the progress of development. Barriers and levers have been identified by multiple parties and exist across different geographies, in a range of locations and from a variety of perspectives within the Corridor and across the national planning and development context.

It is clear from the literature review that it is more helpful to consider barriers and levers at the same time than it is to separate the analysis into first barriers, then levers. This approach recognises the fact that barriers and levers are to some extent interrelated. In other words once a barrier has been identified, a lever to address it tends to be formulated, but then in some cases that lever itself becomes a barrier that needs an entirely new lever to unlock it and so on.

For example, when the Community Infrastructure Levy (CIL) was introduced in the 2000s, it was hailed as a lever able to accelerate delivery of infrastructure to support housing growth that would address the shortcomings of Section 106 as a planning obligation. However, ten years later, CIL is now itself widely seen as a barrier, and the recent report of the CIL review group identifies a new Local Infrastructure Tariff (LIT) as a new lever.

Appendix B sets out the barriers and levers identified by the point during the development process that they apply. For the purposes of the assessment, this process has been divided into plan-making and consenting elements. Appendix B then shows the barriers and levers identified that apply specifically to the Corridor as a whole and also assesses the three sub-areas (see Table 2) which comprise the Corridor.

In assessing all barriers and levers, a number of important issues emerged that it is helpful to note before consulting the Appendices:

- Reflecting the interrelationship between them described above, there is a degree of correspondence between the barriers and levers identified in the same section of each table;
- However, there is not necessarily a direct, one-to-one correlation in every case, as some barriers can be addressed by more than one lever and some levers address multiple barriers;
- There are not always clear boundaries between one barrier/lever and others- as such, some very closely related barriers/levers are shown together;
- The identification of a barrier does not guarantee the existence or the feasibility of a corresponding lever, for a variety of possible reasons;
- In many cases, a single, highly specific issue could be a barrier or a lever depending on how it is assessed (e.g. a lack of quality bus connection between Milton Keynes and Cranfield University as a barrier, or provision of such a service as a lever). In such cases, to avoid repetition, it has not been listed twice;
- No detailed assessment of timeframe has been made, meaning in some cases significant progress may already have been made in addressing some barriers (e.g. uncertainty over runway capacity in the South East) and in applying some levers (e.g. Cambridgeshire Guided Busway is already in operation).
- It was considered important to highlight opportunities to learn from the mistakes of the past and to assess the future potential of infrastructure or strategies that may already exist or at least have been committed; and
- Multiple organisations with very differing agendas responded to the Call for Evidence. There is therefore potential for some actors within the Corridor to dispute the existence or the scale of barriers or levers identified by other parties and/or internal contradiction.

Table 18. Synopsis of literature reviewed

Name	Author	Publication year	Available online?
Cambridge, Milton Keynes and Oxford Future Planning Options Project (Draft)	5th Studio	2017	No
Cambridge, Milton Keynes, Oxford, Northampton Growth Corridor	SQW [1]	2016	Yes
Cambridge-Milton Keynes-Oxford Corridor: Interim Report	NIC [2]	2016	Yes
Cambridge-Milton Keynes-Oxford Corridor: Transport Workstream	Arup [3]	2017	Yes

Synopsis	Implications for this study
Report commissioned by NIC to identify and assess different types of development that could deliver significant new housing across the corridor, drawing on domestic and international examples and best practice. Also draws conclusions and makes recommendations as to the most appropriate forms of housing development to meet housing needs and supporting jobs and growth.	The 5th Studio report is urban design and development typology focused. It complements this commission by understanding the practical mechanisms for delivering the development typologies proposed and the scope for different approaches depending on the typologies and locations assessed.
Report assesses economic rationale for infrastructure investment in the Corridor. An economic framework is developed which explains the key drivers of and constraints on growth and specialisations and investigates the nature of the inter-relationships between the four main urban centres that comprise the Corridor. The focus is primarily, but not exclusively, on the knowledge-intensive sectors that make the study area worthy of special attention.	Provides geographical definition of the Corridor used by this study; gives clarity on the types of employment sectors and rates of growth that can be expected in the Corridor over the study period. This ensures AECOM's analysis of how to achieve growth is underpinned by a strong case supporting the link between housing and infrastructure growth and demonstrates the scale of growth that will need to be planned for.
NIC seeks to maximise the potential of the Corridor as a single, knowledge-intensive cluster that competes on a global stage, protecting the area's high quality environment, and securing the homes and jobs that the area needs. The interim report presents the Commission's assessment of the key challenges facing the Corridor. The Commission's central finding is that a lack of sufficient and suitable housing presents a fundamental risk to the success of the area.	The Interim Report sets the context for this commission, with reference to its central finding that a lack of suitable and sufficient housing presents a fundamental risk to the Corridor's success. In particular, the AECOM report needs to investigate mechanisms for integrating planning for housing alongside the infrastructure and jobs already proposed for the area.
Report investigating transportation infrastructure and its interaction with housing, finance and economic activity across the Corridor. In so doing, it provides a contextual overview of current transport use, mapping of the strategic and economic cases for transport investment in the corridor, and a reflection on how these cases meet the identified challenges. It then presents a view of a future transport package for the corridor depending on either an "incremental" or a "transformational" growth scenario, focussing on the contribution that transport can make to unlocking housing sites, and the opportunities for agglomeration benefits.	Provides key element of the transport evidence base, which in turn gives clearer understanding of current and potential future travel patterns, thus allowing for more accurate spatial analysis of key relationships between places across the Corridor. Additionally, sets context for an integrated approach, effectively planning in a way to ensure transport, housing, economic growth and other infrastructure are addressed together

Name	Author	Publication year	Available online?
Finance and Investment Workstream	Metro-Dynamics 4	2017	Yes
Responses to Cambridge-Milton Keynes-Oxford Phase 1 Call for Evidence	Various [5]	2016	Yes
Strategic Planning in the Cambridge-Milton Keynes-Oxford Corridor: A Discussion Paper	NIC [6]	2017	Yes
The Property Market Within the Cambridge-Milton Keynes-Oxford Corridor	Savills [7]	2016	Yes
Uxcester Garden City	Urbed [8]	2014	Yes

Synopsis	Implications for this study
Report assesses current public funding trends and the potential to attract additional investment into the Corridor, setting some of the building blocks for a strategic investment and delivery plan. This includes consideration of current and future infrastructure requirements, the extent to which existing local value capture mechanisms could be used, other possible funding options, current impediments to development and investment across the Corridor; and any required changes to governance and planning	This report has the most similar scope of all previous studies of the Corridor as this commission, and as such is highly relevant. Part of the terms of reference will be to understand the spatial implications of the (non-spatial) conclusions of the Metro-Dynamics report, effectively synthesising it with the 5th Studio work to understand how the levers to accelerate development, about which the Metro-Dynamics work provides vital details, could be applied in a range of locations.
1144 pages of evidence submitted by interested stakeholders from across the Corridor setting out a wealth of key spatial and non-spatial evidence, data, opinions and proposals	The responses are relevant to any assessment of barriers to and levers for housing and infrastructure growth across the corridor- they have also helped select relevant case studies
Discussion paper intending to help progress debate on how local authorities, local enterprise partnerships, government departments and national delivery agencies can work together to develop and deliver an integrated strategic plan for infrastructure, housing and jobs across the Corridor. It considers what partners within the corridor might achieve through more integrated strategic planning and the scope and function of any new strategic plan(s). It also considers the models of governance that might enable integrated planning and collective decision-making on infrastructure priorities – whilst ensuring that local democratic accountability is preserved.	Though this paper is a starting point for a debate on strategic planning across the Corridor rather than a conclusion on the issue, it remains relevant for this study because the terms in which the NIC is framing and starting the conversation about larger-than-local planning provides an initial indication of what the NIC sees as possible and/or desirable in terms of future pan-Corridor governance structures.
Report reviews the residential and commercial property markets within the Corridor and whether these markets are functioning in a way that is consistent with the growth ambitions and potential of the area. It considers whether government interventions, including investment in new and improved transport infrastructure, could unlock and accelerate new employment space and homes to realise the growth potential of the corridor.	Report is valuable to the study in terms of spatial analysis and definitions; by reviewing the residential and commercial property markets within the Corridor, the Savills work provides firm evidence of how different parts of the corridor work in different ways, and barriers to growth in one part of the Corridor may not apply in other parts, meaning that the levers to be applied will differ as well.
Winning submission for the 2014 Wolfson Economics Prize, in response to the question "How would you deliver a new garden city which is visionary, economically viable, and popular"? Describes an imaginary city surrounded by Green Belt which is nonetheless able to double its size through Garden City extensions.	Uxcester was based primarily on Oxford, and thus has a high degree of relevance for the Corridor. Demonstrates a number of ideas for the delivery of large-scale housing and infrastructure in such a context, though some of its assumptions have been questioned subsequently by central government and the RTPI.

Name	Author	Publication year	Available online?
A New Approach to Developer Contributions	CIL Review Group [9]	2016	Yes
A Report into the Delivery of Urban Extensions	Hourigan Connolly [10]	2014	Yes
Bridging the Infrastructure Gap: Financing Infrastructure Investment to Unlock Housing	Centre for Progressive Capitalism [11]	2016	Yes
Delivering Large Scale Housing: Unlocking Schemes and Sites to Help Meet the UK's Housing Needs	RTPI [12]	2016	Yes
Fixing Our Broken Housing Market	Department for Communities and Local Government [13]	2017	Yes

Synopsis	Rationale for review
The Government commissioned a review of CIL and this is the final report of the review group. The report examines the relationship between CIL and Section 106 in the delivery of infrastructure, the impact of CIL on development viability, the exemptions and reliefs from CIL; the administrative arrangements and governance associated with charging, collecting and spending CIL; the ability of CIL to fund and deliver infrastructure in a timely and transparent way, the impact of the neighbourhood portion on local communities' receptiveness to development; and the geographical scale at which CIL is collected and charged.	The function of CIL and its financial and institutional relationship to alternative planning obligations is of key relevance to any study assessing barriers and levers to housing and infrastructure delivery across the Corridor
Study considers the factors associated with bringing forward major urban extensions of 500+ dwellings, with a focus on specific case studies from each of the English regions, including many from within the Corridor. It then concludes with an overall assessment of the timescales for bringing forward urban extensions and rates of delivery once development gets underway.	This is a centrepiece of the literature on barriers to delivery of housing in the English planning system, and covers key developments across the Corridor as part of its case studies. It therefore clarifies if any of the barriers identified are specific to the Corridor or a certain part of it.
Study examining operation of land value capture across the world and assesses the extent to which similar mechanisms could be applied in England, citing the uplift in land values guaranteed to landowners by the 1961 Land Compensation Act as a specific barrier, and calls for it to be amended	As part of a wider review of mechanisms including land value capture as levers to accelerate housing and infrastructure delivery, the identification of the 1961 Act as a specific barrier is helpful and informs thinking on potential levers
This RTPI policy paper addresses the barriers to and levers for the delivery of large scale housing from the perspective of the planning profession. The barriers and levers thus identified are somewhat different from those in other assessments	To ensure that this review is fully comprehensive, it is important to assess the full range of barriers to and levers for accelerated delivery of housing and infrastructure and this study is important in that it identifies some that are not covered in the rest of the literature
Government Housing White Paper proposing a wide range of solutions to improve the housing market across England, including ideas for new Government policy to accelerate housing development	Up-to-date, future oriented assessment of the potential at central government level for new legislative and policy levers to unlock sites for housing and infrastructure development through the planning system

Name	Author	Publication year	Available online?
Garden Cities, Towns and Villages	House of Commons Library [14]	2017	Yes
Land Value Capture	TfL [15]	2017	Yes
Land Value Capture and Infrastructure Delivery through SLICs	TCPA [16]	2012	Yes
New Homes on Public Sector Land: Accelerating Delivery	Telereal Trillium [17]	2016	Yes
Start to Finish: How Quickly do Large-Scale Housing Sites Deliver?	NLP [18]	2016	Yes

Synopsis	Rationale for review
Sets out the contribution that garden cities, towns and villages could make to solving the undersupply of housing in England; uses Ebbsfleet as a recent example of a Garden City delivered via a Development Corporation	Provides detail on the key benefits of garden settlements as a typology; gives evidence for the largest garden settlements as likely not able to be delivered by the private sector housebuilders on their own; gives updates on recent legislative changes to assist in the delivery of locally-led garden cities
Study of land value capture from the perspective of new transport infrastructure. As the funding requirement grows, general taxation cannot keep up and alternative funding sources such as land value capture are needed. This report investigates ways in which the Government could work together with the Mayor of London and Transport for London (TfL) to improve the ability to capture land value uplift to fund transport investments in London.	Though the report is written in a London context, it explicitly references the potential for land value capture to be applied to other major transport infrastructure across England, meaning that there is the potential for LVC to be used to fund East-West Rail and the Oxford to Cambridge Expressway.
Brief summary of how Strategic Land and Infrastructure Contracts, or SLICs, can be used to capture value from land, with reference to the MK Tariff as a key example of a SLIC	Useful because it refers to the Milton Keynes tariff, a key lever applied in the Corridor in the past to accelerate housing and infrastructure delivery.
Report responds to Government targets to release land for 160,000 new homes. Contains a focus on the optimum mechanisms for land release to achieve that rapid delivery, whilst recognising the very wide range of circumstances that are encountered in practice, with regard to landowner's objectives and capabilities, the size and complexity of each site, and local market conditions.	Assessing the barriers and levers to housing and infrastructure development on public sector land is an important and relevant issue in the context of the Corridor. The fact that this report, unlike much of the rest of the literature, is written from the developer perspective gives it additional value by ensuring a focus on practical delivery.
Research presenting evidence on speed and rate of delivery of large-scale housing based on sites across England and Wales outside London. It concludes that more land needs to be released and more planning permissions granted; planned housing trajectories should be realistic; spatial strategies should reflect that building homes is a complex business; greenfield sites come forward faster than brownfield; large sites can deliver more homes per year over a longer time period; and that, where viable, affordable housing, build to rent and self-build supports higher rates of delivery.	One of a number of research reports highlighting levers to accelerate housing and infrastructure delivery across larger sites, as well as identifying the barriers holding delivery back.

Name	Author	Publication year	Available online?
Strategic Planning: Effective Cooperation for Planning Across Boundaries	RTPI [19]	2015	Yes
Tackling the under-supply of housing in England	House of Commons Library [20]	2017	Yes
The Milton Keynes Tariff: An Overview of the Infrastructure Tariff and How It Works	English Partnerships/ Milton Keynes Partnership[21]	2007	Yes
Urban Extensions: Assessment of Delivery Rates	Savills [22]	2014	Yes

Sources used in table:

1. SQW: https://www.gov.uk/government/publications/the-national-infrastructure-commissions-interim-report-into-the-cambridge-milton-keynes-oxford-corridor

2. NIC: https://www.gov.uk/government/publications/the-national-infrastructure-commissions-interim-report-into-the-cambridge-milton-keynes-oxford-corridor

3. Arup: https://www.gov.uk/government/publications/the-national-infrastructure-commissions-interim-report-into-the-cambridge-milton-keynes-oxford-corridor

4. Metro-Dynamics: https://www.gov.uk/government/publications/the-national-infrastructure-commissions-interim-report-into-the-cambridge-milton-keynes-oxford-corridor

5. Various: https://www.gov.uk/government/publications/the-national-infrastructure-commissions-interim-report-into-the-cambridge-milton-keynes-oxford-corridor

6. NIC: https://www.gov.uk/government/consultations/strategic-planning-and-governance-in-the-cambridge-milton-keynes-oxford-corridor

7. Savills: https://www.gov.uk/government/consultations/strategic-planning-and-governance-in-the-cambridge-milton-keynes-oxford-corridor

8. Urbed: http://urbed.coop/sites/default/files/URBED%20Wolfson%20Submission.pdf

9. CIL Review Group: https://www.gov.uk/government/publications/community-infrastructure-levy-review-report-to-government

10. Hourigan Connolly: http://info.ambervalley.gov.uk/docarc/docviewer.aspx?docguid=2a7a7fa9904041b48dea86a7a11cdab6

Synopsis	Rationale for review
Report investigates planning activity across Council boundaries and concludes that it brings major benefits, but should be locally-designed. Also considers that unless sufficiently wide in scope, there is a risk it will not add value- and the best examples of strategic planning go beyond simple land use.	Overview of practical examples of cross-boundary planning and the benefits it offers is useful when considering the potential for strategic planning across the Corridor
Briefing paper that provides general overview of the high level of demand and low level of supply of housing in England. It considers key trends in housing supply in the UK and goes on to focus on some of the key barriers and potential solutions to increasing supply.	Another good overview of key barriers to and levers for housing development across England, written for the benefit of policymakers.
Short paper produced at the time of major expansion of Milton Keynes during the 2000s. Explains in detail the Milton Keynes Tariff as a mechanism for capturing land value to be invested into infrastructure, and its application across the town.	The Milton Keynes Tariff is among the best-known and most respected examples of planning obligations in recent use, and is of course directly relevant to the Corridor in terms of location. As it achieved its primary goal of increasing developer certainty, it therefore played a critical role as a lever in the acceleration of delivery.
Report assesses the pace of delivery of large scale development in order to establish how these sites contribute to five year housing land supply and the implementation of development plans. It considers how long it takes for an urban extension to progress through the planning system, and once construction has started, the rate at which new housing units are delivered. It tracks the progress of 84 urban extensions through the planning system over the last 25 years.	Useful overview of the barriers to delivery of housing and infrastructure on sites in a wide range of contexts over a long timeframe. Again, value is added by the fact that Savills tend to approach the issue from a developer perspective.

11. Centre for Progressive Capitalism: http://progressive-capitalism.net/wp-content/uploads/2016/06/Bridging-the-infrastructure-gap-June-2016.pdf

12. RTPI: http://www.rtpi.org.uk/media/630969/RTPI%20large%20scale%20housing%20report.pdf

13. DCLG: https://www.gov.uk/government/publications/fixing-our-broken-housing-market

14. House of Commons library: http://researchbriefings.parliament.uk/ResearchBriefing/Summary/SN06867

15. TfL: https://www.london.gov.uk/sites/default/files/land_value_capture_report_transport_for_london.pdf

16. TCPA: https://www.tcpa.org.uk/Handlers/Download.ashx?IDMF=e3bf9430-11ab-469b-8852-64aa303e8496

17. Telereal Trillium: http://www.telerealtrillium.com/cms/cms_files/high_res_final.pdf

18. NLP: http://lichfields.uk/media/1728/start-to-finish.pdf

19. RTPI: http://www.rtpi.org.uk/media/1230885/RTPI-Strategtic%20Planning-Brochure%20FINAL%20web%20PDF.pdf

20. House of Commons library: http://researchbriefings.parliament.uk/ResearchBriefing/Summary/CBP-7671

21. English Partnerships/Milton Keynes Partnership: http://www.eurim.org.uk/activities/psd/snsproc/MKPTariffBrochure.pdf

22. Savills: http://www.barrattdevelopments.co.uk/~/media/Files/B/Barratt-Developments/materials-and-downloads/savills-delivery-rates-urban-extensions-report.pdf

APPENDIX B: BARRIERS AND LEVERS BY STAGE IN DEVELOPMENT PROCESS

Plan-Making Process			
Stage 1 Build local plan evidence base	Stage 2 Local plan developed	Stage 3 Local plan examined	Stage 4 Local plan adopted
Stage 1 barriers	Stage 2 barriers	Stage 3 barriers	Stage 4 barriers
-SHMAs not quantifying/ meeting genuine housing need -ELRs inconsistent in coverage and methodology and no connection to EZs; as a result, in certain locations too little employment supply -Government housing projections based on past (suppressed) supply -Lack of integration between infrastructure, utilities, transport, economic and land use evidence -Evidence of underestimation of infrastructure need -SHLAAs have too high a site size threshold -Uncertainty on forward demand and supply due to Brexit	-Lack of co-operation across boundaries/ Duty to Co-Operate not working; it is only a negative mechanism -Lack of connection between land use, utilities and economic planning; LEP boundaries unclear/overlap -Green Belts restrict land available for housing and increase infrastructure costs -Lack of capacity in LPA planning depts. -Areas with no Local Plan in place allow neighbourhood plans to be adopted that allow for limited or no growth -Slow speed of planning process	-Pace of change in policy and legislation provides less certainty to LPAs in terms of whether or not their plan is sound -Plan-making process has to restart, causing years of delay, if a Local Plan is found unsound at examination	-Over 40% of local authorities have an adopted plan that does not meet projected growth in households in their area -Where no up-to-date plan has been adopted, lack of certainty for developers

Table 19. Barriers applying to the development process in England, including the Oxford-Milton Keynes- Cambridge corridor, drawn from the literature review.

Consenting Process			
Stage A Land acquisition/investment	Stage B Pre-application stage	Stage C Application determination	Stage D Permission implemented
Stage A barriers	Stage B barriers	Stage C barriers	Stage D barriers
-Developers having to bear increasing levels of up-front infrastructure spend, with barriers highest on the largest sites -Insufficient investors active in the housing market -Too great a reliance on private sector land acquisition and development -Public land disposal is slow, limited and too expensive	-Lack of certainty/trust between LPAs and developers -Under-staffed/ under-skilled planning departments -Lack of trust between developers and local communities -Multiple public sector stakeholders to deal with -Onus on developer to licence any protected species	-Complexity/ inconsistency of planning obligations -Limitations on pooling of s106 contributions -Lack of CIL flexibility -Lack of CIL fund raising ability -Lack of CIL transparency -Onerous planning conditions -Slow speed of determination process, not just for standard permissions, also for Transport and Works Act Orders and Development Consent Orders -Standard public sector transport assessment methodology (e.g. WEBTAG) fails to demonstrate sufficiently wider economic benefits of scheme	-Slow rate of build on larger sites, in some cases as profit-maximising strategy -Poor levels of service/delays in utilities and infrastructure provision -Small number of major players dominate construction market -Building at scale still exposes developers to financial risk, so few incentives to invest in innovative/more productive methods -Too little public sector delivery of dwellings, meaning peaks and troughs in cyclical private developer market

Plan-Making Process			
Stage 1 Build local plan evidence base	Stage 2 Local plan developed	Stage 3 Local plan examined	Stage 4 Local plan adopted
Stage 1 levers	Stage 2 levers	Stage 3 levers	Stage 4 levers
-LPEG/consistent approach to housing need calculation -Strategic transport infrastructure funded and planned for, potentially using innovative mechanisms such as TIF, public sector bonds or LVC -City centre and intra-urban transport strategies -Strategic and cross-sectoral evidence base integrating land use, economic growth, infrastructure, transport and utilities, with inputs from developers and land promoters -NPPF/PPG to require sites of half a hectare or less to be identified through SHLAA -Neighbourhood plan housing need targets to be determined by LPA -Potential for new household projections methodology not based on past supply constraints -Strategic/consistent approach to assessment of employment land demand and supply	Obligation for positive, collaborative and strategic planning across boundaries- Statement of Common Ground to replace DtC -Green Belt review, either strategic or local, either comprehensive or selective -Devolution deals/funding to proceed only where local plans provide sufficient housing -Strategic and cross-sectoral planning process and leadership integrating land use, economic growth, infrastructure, transport and utilities, and able to allocate sites -More logical LEP boundaries -Local plans to support housing growth as element of Nationally Significant Infrastructure projects -Higher planning fees and central funding to increase LPA planning capacity -National planning policy giving more explicit support to new settlements -National planning policy to require higher densities at key transport nodes -Government may require utilities planners to take account of development proposed by land use plans -Potential for restructuring of utilities regulatory regime and market structure to allow for greater responsiveness	-Housing White Paper and subsequent legislation seeks to update system in single 'hit' to reduce pace of change/ provide certainty over longer period -Examiners need to ensure local plans allocate wide range of site sizes so no reliance on limited range of larger sites -Allow examiners to find a plan partially sound, and adopt the sound part, thus avoiding years of delay due to only one part of a plan being found unsound	-Require local plans to be reviewed every five years -Central government intervention where local authorities are slow to adopt plans

Table 20. Levers applying to the development process in England, including the Ox-MK-Cam corridor, drawn from the literature review.

Consenting Process			
Stage A Land acquisition/investment	Stage B Pre-application stage	Stage C Application determination	Stage D Permission implemented
Stage A levers	Stage B levers	Stage C levers	Stage D levers
-Greater willingness to offset upfront infrastructure costs against future revenue through appropriate mechanisms (e.g. Home Building Fund, revolving infrastructure funds) -Securing early cash flow via upfront sale of affordable units to RSLs -Strategic spatial framework clearly identifying land/sites prioritised for development -Greater use of Local Development Orders -Planning freedoms granted to LPAs through deals with central government to streamline consenting process -Greater use of planning CPOs to assemble land at scale and pace -Make landownership more transparent to discourage land banking/an open data Land Registry -Encourage institutional investment in the rental market, particularly where this can provide early cashflow for larger sites -Deferred land payments or joint venture structures with landowners -Strategic planning to prioritise larger sites in strong markets, as there is evidence delivery is significantly faster in this context -Local authorities and housing associations to play more active role as developers and house builders	-Greater use of planning performance agreements to enhance certainty and trust -Strategic governance/ planning and/or a 'one front door' approach can help reduce the complexity of interactions with public sector -Financial incentives to communities to offset the negative externalities of development -Permissions in Principle could speed this process -Onus could be on LPA to licence protected species strategically -LPAs to apply area-wide design codes to enhance developer certainty -Uxcester 'social contract' whereby for every hectare of land developed, another becomes public open space	-Planning gain alternatives to s106 and CIL, e.g. updated MK tariff -Development or New Town Corporation powers; in particular, the 2017 Neighbourhood Planning Act, making it easier to establish locally-led New Towns -Potential for MCIL/ RCIL to be expanded/ developed -Tax Increment Financing -Land Value Capture -Municipal Bonds -Greater transparency/ clarity in infrastructure investment and planning, linking contributions more clearly to individual sites/developers -Greater fiscal autonomy for councils so they retain a greater share of tax flows from development and growth -Government funding to increase LPA capacity would speed consenting process	-Incentives to SME construction firms, including loan and land, both pre-and post-consent -Service level agreements with utilities companies -Multiple house types, tenures, developers and/or sales offices as requirements for larger sites -More incentives for innovative delivery, including modular and self-build -More effective targeting of infrastructure funding -Increase construction sector capacity, including workforce expansion, effective training and facilitate investment in advanced off-site construction methods -Government's Accelerated Construction Scheme (ACS), whereby on public land, public sector underwrites market risk to increase build-out rates; but most effective in markets with little or no private supply -Higher level of New Homes Bonus -Earlier connection to key utilities, with timing having been determined by appropriate forward planning

APPENDIX C: BARRIERS AND LEVERS BY LOCATION WITHIN CORRIDOR

Oxford-Cambridge-Milton Keynes Corridor as a whole
Oxford-Cambridge-Milton Keynes Corridor barriers
-Previous corridor-wide work had too many partners, too many objectives, too property-oriented and too great a government/public sector dominance
-Lack of certainty over speed and delivery of East-West Rail and Oxford-Cambridge Expressway
-Economic development hindered by complex local political and delivery structures, meaning potential inward investors are unsure who to approach
-Highways England slow to consider potential of demand management measures and autonomous vehicles across the Corridor
-Long-term uncertainty on future of airport capacity in the South East
-Too little collaboration and co-ordination between most universities/higher education sector across the Corridor and the business community, missing an opportunity to increase social capital and skills
-Risk of Corridor being planned as a single NE-SW entity, whereas functionally radial links also need to be recognised; the Corridor is only one side of a Golden Triangle between Oxford, Cambridge and London
-Lack of formal, public, agreed definition of Oxford-Milton-Keynes-Cambridge growth corridor

Oxford-Cambridge-Milton Keynes Corridor as a whole
Oxford Cambridge Milton Keynes Corridor levers
-Needs to be a focussed vision with a small number of deliverable and schemes
-Needs to be a single pan-Corridor organisation, mechanism or process that integrates public sector and private sector, planning for housing, transport, skills, employment, and utilities; such a body would have fiscal autonomy, a single vision, and a strong, marketed brand
-More joined-up delivery between local government, central government and national delivery and infrastructure providers and regulators
-Strategic intervention should play to partners' strengths, e.g. public sector focus on place and transport, private sector focus on innovation
-Prioritisation of HCA funding to the Corridor to allow for infrastructure and affordable housing delivery
-Devolution deals that result in the creation of a pan-corridor/sub-regional Transport Authority breaking down existing road and rail silos, allowing for independent, multi-modal transport assessment based on potential for modal interchange
-Improving connectivity at either end of Corridor south to Southampton and east to Felixstowe will stimulate key high-tech employment sectors
-Extending the remit of NIC beyond an advisor to central government into a delivery co-ordinator
-More comprehensive broadband, internet and mobile coverage commensurate with levels found within the Corridor's international competitors
-Delivery of better quality orbital road infrastructure (Oxford-Cambridge Expressway)
-Delivery of better quality orbital rail infrastructure (East-West Rail)
-Improving Connectivity study (2014, Network Rail) investigating options for improving quality through 'Swiss-style' timetabling
-Ensuring a more cross-boundary approach to infrastructure planning, as seen in the recent Kent Infrastructure Study
-Transformation of enterprise zones into US-style 'innovation districts', incorporating greater mix of uses (education, housing, retail alongside employment) and accessibility than traditional business-park model
-Potential for new road and rail routes to be planned on basis of good locations for housing, including public sector landholdings
-New technologies such as SPARC, allowing Oyster-style card readers to be retrofitted into any car, train or bus
-Overcoming Green Belts as barriers by integrating need assessment between Green Belt-constrained settlements and multiple nearby towns beyond the Green Belt able to function as satellites for growth and connected radially to those settlements

Oxford sub-area	Milton Keynes sub-area	Cambridge sub-area
Oxford sub-area barriers	Milton Keynes sub-area barriers	Cambridge sub-area barriers
-Oxford Green Belt and inconsistent approach to review and release of land through Local Plan process - Political differences between LPAs preventing full coordination of planning strategy across Oxfordshire under duty to cooperate-Lack of orbital rail and road capacity linking to MK and Cambridge sub-areas -Two overlapping LEP boundaries (Oxfordshire/South East Midlands) increases number of public sector stakeholders and reduces certainty on responsibilities -City centre transport congestion in Oxford -Governance arrangements in Oxfordshire under considerable pressure; general agreement that the current system of two-tier local government may not be the most cost effective approach, nor able to deliver service reforms and strategic growth at scale required	-Lack of orbital rail and road capacity linking to Oxford and Cambridge sub-areas -Three overlapping LEP boundaries (Northamptonshire, South East Midlands, Buckinghamshire Thames Valley) increases number of public sector stakeholders and reduces certainty on responsibilities -Relatively poor workforce skills in Northamptonshire -Some evidence of poor workforce skills in Milton Keynes -Relatively poor schools in MK/ Luton/Bedford/Aylesbury -Weak higher education/R&D track record in Northamptonshire -2015 CIL regulations ended operation of MK Tariff -Electricity connection/provision for new development noted as particular constraint in Northamptonshire -Lack of north-south road connections through Buckinghamshire between MK, M40 and M4 corridors	-Cambridge Green Belt --Lack of orbital rail and road capacity linking to MK and Oxford sub-areas -Overlapping LEP boundaries (Greater Cambridge and Peterborough and Hertfordshire) increases number of public sector stakeholders and reduces certainty on responsibilities -City centre transport congestion in Cambridge -Past planning proposals/strategies failed to reflect functional scale of Greater Cambridge area (extends into Suffolk and Essex too), so Corridor boundaries need to be permeable -Delivery of Northstowe hindered by expensive public land disposal process, financial structures and accounting - New settlement of Cambourne not well-connected to transport or employment -Lack of connectivity and congestion at Girton Interchange NW of Cambridge (M11/A14/A428)

Oxford sub-area	Milton Keynes sub-area	Cambridge sub-area
Oxford sub-area levers	Milton Keynes sub-area levers	Cambridge sub-area levers
-Potential for Oxfordshire unitary authority and / or Oxfordshire –wide strategic plan to ease pressure and co-ordinate strategic planning building on work of Oxfordshire Growth Board - Use of University and college owned sites and land holdings to provide for staff and key worker housing needs as well as general housing needs -Integrated City Centre transport strategy for Oxford including redevelopment of Oxford Station and surrounding sites-Demand management measures in Oxford have unlocked parking space to allow University expansion -Garden Town status for Didcot -Didcot Growth Accelerator Enterprise Zone -Science Transit- development of Oyster card-style multi-modal public transport network across Oxfordshire, comprising heavy rail, light rail and premium bus building on existing scheme -Improved Park and Ride service in Oxford	-Precedent of MK Tariff (2006-2015) to speed growth of MK -Quality intra-urban transport within MK and Northampton -Inter-urban transport improvements MK-Northants-Bedford -West Coast Main Line capacity post HS2 -Future potential for Tariff at MK urban extensions - Milton Keynes' 2050 Vision a clear and thorough attempt to set out a long-term strategy for MK -Potential for better transport connection between MK and Cranfield University -MK:IT university as new hub for STEM higher education and improving local skills -Awarding of Garden City status to Aylesbury -DfT funding for A418 Corridor study across Buckinghamshire -Development of link/ring road around Aylesbury -A421 corridor improvements needed in Buckinghamshire (particularly SW of MK) -Northampton Waterside Enterprise Zone -Aylesbury Vale Enterprise Zone -Luton Airport Enterprise Zone -University of Northampton Waterside Campus expansion -MK:Start data infrastructure initiative -MK Park and Ride service	-Integrated city centre transport strategy for Cambridge, linked to the three planned new stations and based on restructuring existing as well as expansion -Rail capacity and connectivity improvements post Crossrail 2 -Pressure from the business community and education sector, working in partnership with the public sector, enabled and promoted a growth vision for Cambridge and South Cambridgeshire -Mayoral Combined Authority for Cambridgeshire and Peterborough is opportunity to develop investment strategy and funding, integrating sectors, plans and evidence bases -Planning for Greater Cambridge should extend across Cambridgeshire into north Herts (Royston) and also outside NIC corridor into Essex (Saffron Walden) and Suffolk (Haverhill); develop polycentric city region of c. 500K population -Potential to develop Greater Cambridge ring road -Cambridgeshire Guided Busway connecting Northstowe, Science Park, City Centre and Addenbrookes -Alconbury Enterprise Zone -Cambridge Compass Enterprise Zone -Strong, effective park and ride service in Cambridge

Table 21. Barriers and levers applying specifically to sub-areas within Ox-MK-Cam corridor, drawn from the literature review

APPENDIX D: BASELINE WORKSHOP

This project was informed by two workshops, one as part of Part A- The Baseline, and one as part of Part B- The Future. The first of these workshops is the Baseline Workshop. It was scheduled towards the end of the drafting and data-gathering for Part One and was intended primarily to validate, test and challenge the evidence and data from the literature review and the case studies in terms of the barriers and levers identified.

A multiplicity of barriers and levers was identified from many different sources through the literature review, but these had the potential to be subjective and contradictory.

The Baseline Workshop had the aim of developing a potentially more objective assessment as a foundation for Part B of the project. Among its key aims is to come to a collective understanding and conclusion on which are the most important barriers and levers to consider if transformational growth is to be delivered across the Corridor.

For a relative assessment of the importance of levers, the features to consider include:

- Frequency of identification during the workshop, and presence in group summaries;
- Which parties/stakeholders/organisations have greatest potential to apply or facilitate key levers;
- Feasibility of application (including track record of those that have been applied); and
- How levers differ by location (both across the Corridor and by development context).

Attendees

The first workshop had a total of 36 participants, including members from local authorities, planning consultancies, developers, central government and Universities. Organisations represented included:

- Anglian Water;
- Axis Land;
- Aylesbury Vale District Council;
- Barton Willmore;
- Bedford Borough Council;
- Central Bedfordshire Council;
- David Lock Associates;
- DLP;
- Garden Cities LLP;
- Gardner Planning;
- Gladman Developments;
- Milton Keynes Council;
- Northampton Borough Council;
- Oxford Brooks University;
- Oxford City Council;
- Oxford University;
- Oxfordshire County Council;
- Royal Town Planning Institute;
- Rushmoor District Council;
- Savills;
- Snapdragon Consulting;
- South Oxfordshire District Council;
- Strategy Planning Associates;
- Strutt and Parker;
- Studio ST;
- Swindon Borough Council;
- Turley; and
- URBED.

There were also members of the public who were present in a personal capacity.

Structure of baseline workshop

- Introductory presentation by the National Infrastructure Commission
- Presentation by AECOM of the scope of commission, alongside the barriers and levers identified thus far;
- Structured Discussion around the five key themes of Planning Policy; Planning Consenting; Leadership and Governance; Infrastructure; and Funding and Delivery. Key facilitators circulated between the five groups, the participants of which were chosen to represent different industries and sub areas of the corridor.
- Feedback from each group, highlighting the most important factors discussed throughout the workshop. This was used to supplement the notes taken by the group facilitators and aid the perceived importance of each barrier and lever.

Questions for structured discussion

A: Planning policy theme

A1 How do local plan policies across the Corridor and in its sub areas slow or speed housing delivery?

A2 How effective is national planning policy and legislation at enabling transformational development across the Corridor and in its sub-areas? Is there a requirement for reform?

A3 To what extent do local planning authorities across the Corridor have the policy tools /ability, including joint working, to accelerate delivery rates?

A4 How can the planning evidence base, including joint working, enable positive, long term decisions around infrastructure and housing growth across the Corridor?

A5 What is or should be the role of the Planning Inspectorate, Examinations in Public and/or the appeals system to accelerate growth across the Corridor?

B: Planning consenting theme

B1 How does the consenting process slow or speed development rates across the Corridor and its sub-areas?

B2 How could or should the Corridor's local planning authorities ensure timely determination of planning applications?

B3 How can support for growth among local communities across the Corridor be achieved?

B4 What are, could or should be the role of planning obligations such as section 106 and CIL in accelerating growth across the Corridor and its sub-areas?

B5 What is, could or should be the role of affordable or non-market housing provision in accelerating housing and infrastructure growth across the Corridor and its sub-areas?

C: Leadership and governance

C1 What mechanisms/structures/institutions/processes are a) currently in place, b) needed in future to plan strategically across the Corridor and its sub-areas?

C2 If you were in charge of the Corridor's future development, what do you consider would be the quickest wins you would put in place first to accelerate growth?

C3 How can appropriate senior leadership and governance best achieve collaboration and co-operation between stakeholders across the Corridor and its sub-areas?

C4 What could or should be the roles of larger publicly-funded bodies (Homes and Communities Agency, National Infrastructure Commission, Local Enterprise Partnerships, Land Registry, central government) in driving growth across the Corridor and its sub-areas?

C5 Which delivery vehicles and designations have greatest potential to deliver transformational growth across the Corridor and its sub-areas: Development Corporations, New Town Corporations, Garden City status, City Deals, Devolution Deals, Enterprise Zones or others?

D: Infrastructure

D1 Assuming the funding and delivery of East-West Rail and the Oxford-Cambridge Expressway, what other strategic/inter-city transport projects would do most to support housing and economic growth across the Corridor and its sub-areas?

D2 What kind of approach to local and/or intra-city transport, including cycling and walking, would do most to support housing and economic growth across the Corridor and its sub-areas?

D3 How can utility (energy, water, communications) planning and delivery best support housing and economic growth across the Corridor and its sub-areas?

D4 How can the Corridor's world-class higher education sector best support housing and infrastructure growth?

D5 To what extent can innovative social infrastructure delivery support housing growth across the Corridor and its sub-areas?

E: Funding and delivery

E1 Which of the multiple models of upfront infrastructure provision to unlock housing sites are a) being used at present and b) could be used most effectively in future across the Corridor and its sub-areas?

E2 To what extent will Brexit impact the rate of housing, employment and infrastructure growth across the Corridor and its sub-areas?

E3 What are the most effective methods/applications of Land Value Capture for facilitating higher rates of development across the Corridor and its sub-areas, giving reasons for your answer?

E4 What role can or should the development industry and/or the construction industry play in accelerating delivery across the Corridor and its sub-areas?

E5 To what extent can innovative approaches such as self-build, modular build, and building SME capacity in the construction sector help to accelerate growth across the Corridor and its sub-areas?

Outputs of baseline workshop

The workshop has been presented according to the five workshop table themes identified in chapter 2, with each section highlighting the perceived barriers and levers within those themes. To avoid repetition, similar responses in the workshop outputs have been aggregated and discussed with those occurring most frequently identified first.

Leadership and Governance

Barriers

The most significant barrier identified within the Leadership and Governance category was the lack of a strategic planning vision at the 'larger than local' scale. As a result, Local Authorities are perceived to be provided with little direction or framework within which to operate beyond the Local Plan process. This culminates in varying levels of attention being paid to the 'vision' element within emerging Local Plans, leading to a reduced delivery rate and scale of housing delivery ambition below the Corridor's potential.

Another significant barrier highlighted at the first workshop was the lack of perceived 'appetite' at the local and National political scales for any further intervention in the planning system. It was also reiterated that political changes, such as General Elections, the Referendum and Brexit negotiations, were being used as an excuse to delay any forthcoming policies and legislation.

Levers

In direct response to the identified lack of strategic planning, the most frequently occurring lever within the Leadership and Governance section called for a 'larger than local' strategic vision to be established for the Corridor. This would help encourage a 'direction of travel' and help unite different scales, from Local Authorities and house builders to Parish Councils and members of the community, to be brought onto the same page. As part of this, relationships between actors within the Corridor were often thought to be more important than many of the planning policies currently in place.

As a result, this desire for an overall vision for the Corridor was associated with calls for a governance structure to be established across the Corridor; although this varied between a unified Transport Authority or Growth Board, to a desire for the NIC to take an increased role as a facilitator of growth. In addition, suggestions were also divided as to whether this governance structure should be comprised of existing leaders or a collection of new individuals as a full time exercise. Furthermore, it was also highlighted that any future planning framework would need to avoid a prescriptive or top down structure to decision making which would infringe upon the sovereignty of the Local Authorities. However, what was consistent was that effective leadership is essential to achieving any vision beyond current delivery rates. This was dual fold; with a consistent ambition of delivery aiding Local Authorities during the formation of their Local Plans, whilst simultaneously providing access to new funding and revenue streams or providing a framework and public face to bid for existing funding opportunities on behalf of the entire Corridor.

Planning Policy

Barriers

The biggest barrier associated with establishing effective planning policy across the Corridor was the movement of Objectively Assessed Need figures and population projections for high growth areas. This meant that the scale of housing delivery was constantly changing and potentially undermined existing planning policy. Furthermore, this also fed into the idea that the methodology for producing the Local Plan evidence base is too mechanical, producing unnecessary documentation in some circumstances with some scales of evidence gathering also seen to be complicated and undermined by Travel to Work patterns. Discussion of commuting patterns more generally also introduced the role of London's housing growth needs and its relationship with the growth ambitions across the Corridor; which was already perceived to be too large, incorporating extensive areas and therefore disparate needs.

An equally frequently occurring barrier highlighted within the Corridor however was the overall levels of resourcing in Planning Departments. The lack of capacity and under provision of planning resources was deemed to be significant in its own right, although it was also inherently related to the above point about the production of unnecessary evidence bases detached from the overall vision of emerging Local Plans.

Levers

The most frequently occurring lever in the Planning Policy theme which received widespread support was the movement towards aligning Local Plan Timetables. This could potentially be accompanied by national 'best practise' guidelines and clarity on desired contents for emerging Local Plans. Aligning Local Plan timescales would also allow for better future proofing and consistency of plans across Local Authority boundaries which would remain 'current' for longer as a result. This would also help to ensure an effective mix between detail and strategy in Local Plans, with a shared accountability across boundaries for ambitious development visions. This would also aid the construction of a joint evidence base across the Corridor and expand the potential for evidence to be collected at more 'logical' scales, such as across Functional or Housing Market Areas.

A second lever within the Planning Policy theme was the desire for a combined strategic infrastructure and housing document which links infrastructure delivery with broad areas identified for future housing growth. This was related to the increased need for a coherent vision for the Corridor highlighted within the Leadership and Governance theme but would potentially act as an element of planning policy at the larger than local level, either as a statutory or non-statutory document.

A third lever which emerged to address the lack of capacity in Planning Departments across the Corridor was the wider implementation of PPAs, although this was recognised as a small first step in tackling the overall skills shortage. As a result, to tackle the overall resourcing extra initiatives were desired to encourage the development of the next generation of planning resources, notably though apprenticeships.

Planning consenting

Barriers

Many of the comments made during the first workshop highlighted elements within the planning process more generally as barriers to delivery rates across the Corridor. The most prominent of these were critiques levelled at the 'Duty to Cooperate' which was deemed as insufficient for its desired purpose. This was also deemed to be more acute in the Corridor due to much of the future growth in the Corridor's Local Authorities being proposed for the edges of jurisdictions, with potential impacts of development extending beyond political borders.

A second barrier within the planning consenting theme more generally was the examination process itself, where the 'stakes' of the process were deemed to undermine the growth ambitions of the Local Authorities who may not wish to risk their plan being found unsound, multiple years of work being undermined and establishing a process of "planning by appeal".

A third barrier within the planning consenting theme was the discontinuity between Regional and Local need for housing. Whilst it was widely appreciated that this view was fairly general and did not appreciate nuances or particular examples, many participants felt that there was a need to encourage Parish Councils and local communities to deliver increased development in their localities for the benefit of the Corridor. A second smaller element highlighted within this process was not just allocating a sufficient number of sites, but also the correct 'type' of site; with parcelling and division of larger sites inherently related to house building models and delivery rates.

A final barrier also highlighted previously was the overall issues of resourcing in planning departments. This is related to the increased role of a planning officer in recent years which exacerbates existing resourcing challenges. As part of this, the level of information required to determine a planning application was sometimes perceived to be extraneous and unnecessarily lengthening the consenting process. Furthermore, some outline consents for larger sites were also seen to be too restrictive and delaying large amounts of development through 'over-conditioning'.

Levers

One of the most consistent levers associated with the planning consenting theme was a need to bring elements of examination of Local Plans earlier in to the process to reduce the impact of an 'unsound' judgement reducing the growth ambition of Local Plans. This was suggested to take the form of 'Duty to Cooperate' advice being given at the outset as a standard process, beyond the recent examples where this is taking place, or the implementation of a higher level spatial framework across the Corridor as highlighted earlier.

A second lever identified was the emergence of a partial sound ruling to reduce instances where Local Plans are being delayed during the adoption process or run the risk of not meeting five year land supply targets and generating a need for an additional call for sites process. This partial sound ruling was seen as suitable for specific site allocations although it was regarded as unsuitable for wider policies related to OAN figures or other foundational measures of policy.

A third lever which could be implemented through the planning consenting process which emerged from the first workshop was the establishment of a consistent examiner across the Corridor who was aware of the overall vision and ambition of the Corridor to deliver additional growth. This would also result in the potential to establish a consistent examiner for proposed developments across Local Authority boundaries and encourage the emerging Duty to Review process, although this necessitates alterations to the existing Planning Inspectorate framework.

Infrastructure Development

Barriers

The overarching barrier identified in the first workshop under the infrastructure theme was the lack of adequate forward funding for infrastructure projects across within the Corridor. This ranged from examples given where specific infrastructure was tied to developments through conditions, which can potentially cause subsequent delays in delivery rates on those sites, to nationally significant pieces of infrastructure, such as the East West Expressway or rail route, which are essential to unlock larger development sites. In addition, there was an overall sense that many Local Authorities are operating 'reactively' and are unable to proactively plan for future development with specific regard to the provision of utilities.

Levers

The provision of Infrastructure was seen as a way of generating funding which could be captured through rising land values and was regarded as the key lever for unlocking housing development areas and the capital required to deliver them. Furthermore, there were widespread calls for key pieces of infrastructure which would have a significant impact on UK plc to be centrally funded and delivered outside of the Local Planning remit to speed their delivery. Ultimately, the most significant lever identified was the greater coordination of infrastructure funding, planning and housing delivery mechanisms to increase the certainty of project delivery and the associated timelines. This would contribute to more effective plan making, as well as saving time and ensuring investor certainty throughout the planning delivery process.

Delivery and Funding

Barrier

The final theme discussed at the first workshop was centred on issues of funding and delivery and in a similar manner to infrastructure, many of these comments were based on ensuring greater levels of forward funding and changes to existing revenue sources.

The most frequently occurring barrier in this regard was the scale and rate of the growth ambitions of the Corridor. Whilst many different types of historic development, such as the New Town of Milton Keynes, were perceived capable of delivering the desired number of homes, these New Towns utilised significant political capital and had many years between conception and delivery.

A second barrier identified was the increasing reliance on Land Value Capture as a funding mechanism for housing delivery, which is diminished in the Corridor due to the proliferation of options on the land surrounding established centres. This also introduced the reality that there is significant pressure to sell the land to the highest bidder, which may cause resulting viability issues for developers and an overall reduction in the delivery of affordable housing.

Furthermore, although there are time requirements associated with the planning consenting process, the associated S106 agreements can take many additional years to determine. As a result, it was reported in the first workshop that there are a significant number of extant permissions across the Corridor which are dependent on Infrastructure delivery which has experienced delay.

Levers

One of the highlighted levers within the Funding and Delivery theme was the need to relax restrictions on the pooling of CIL receipts and limits on a Local Authority's ability to borrow against secured or future CIL receipts. Other funding mechanisms, such as a bespoke version of the Milton Keynes Tariff, were also suggested as potential revenue streams. Further to this, there were also calls for ring fenced funding, notably from the New Homes Bonus, to be utilised for planning purposes. Other funding mechanisms mentioned during the workshop included: Revolving

Funds on a five year cycle; City Deal processes; RDA gap funds; the Public Works Loan Board; Growth Funds; Housing Infrastructure Funds and other low cost loans; borrowing against business rates as well as invoicing House Builders only at the point of sale.

However, what these initiatives all have in common is the upfront provision of funds which can be used to accelerate housing delivery through the provision of infrastructure. There were many references to the so called 'European Model' and it was also highlighted that there was a need for a level of governance to act as the public face for the Corridor, reiterating the advantages of the Mayoral system with its CPO powers. As a result, the funding and delivery theme also called for an overarching body to deal with land assembly, infrastructure, housing and development in the wider sense, reflecting the "one stop shop" aspect of Milton Keynes and aiding housing delivery.

APPENDIX E: FUTURE WORKSHOP

The workshop commenced with a brief facilitated discussion on how to deliver a transformational scale of development across the Corridor. This was aimed at 'warming up' participants and airing general views ahead of the more structured discussion forming the main part of the workshop.

The structured discussion was themed around development typologies. In separate work commissioned for the NIC, urban designers 5th Studio have developed a range of nine development typologies that could be applied with appropriate local modification to a range of locations across the corridor. The nine typologies are sub-divided into three groups of three typologies each, named respectively 'Urban Intensification', 'Linked Places' and 'Autonomous Places'.

The nine typologies formed a logical structure for the workshop (and indeed, for the whole of Part Two of this report), with participants encouraged to discuss and comment upon the levers that could be used to deliver and fund each one.

Workshop participants were provided with an illustration and brief description of each typology. A more detailed description for each typology, as well as a case study of application for each one, can be found in 5th Studio's 'Cambridge, Milton Keynes and Oxford Future Planning Options Project', to be published by the NIC.

After a brief presentation introducing participants to the nine delivery typologies, attendees were invited to nominate the levers they would use to deliver each one. They were free to choose their own levers, but to help prompt and focus the discussion, a list of levers forming key development funding and delivery mechanisms was provided to each table. This list, which emerged from AECOM's literature review as the most likely mechanisms that could be applied to each of the typologies, is set out as boxed text below.

List of levers provided to participants

Planning obligations (CIL, LIT, Tariff…)

Planning obligations including 06, Community Infrastructure Levy (CIL), and the Local Infrastructure Tariff (LIT) proposed to replace CIL are designed to capture some of the land value benefits from planning gain and public infrastructure investment that occur when a site in private ownership is given planning consent.

These kinds of obligations can constitute either flat taxes on development related to authority- wide infrastructure requirements, or agreements worked out between developer and Council based on an assessment of site specific infrastructure needs, or various combinations of both.

Tax Increment Financing

Tax Increment Financing (TIF) is a mechanism for capturing the growth in economic activity resulting from public investment in infrastructure. In many cases, but not all, this will be from transport infrastructure investment and related increases in economic activity consequential to improved connectivity and wider economic benefits, including agglomeration effects.

TIF has been applied in many countries globally, and in a handful of cases in the UK, including in Scotland connecting the M9 to commercial land in Falkirk, and in London for the Northern Line extension to Battersea Power Station. In the Northern Line example, non-domestic tax rates from businesses newly locating around the new stations will help to part fund infrastructure costs.

Devolution and localism agenda

National governments since 2010 have sought to emphasise localism over regional and central decision-making and funding.

Examples of mechanisms that have been designed to deliver this agenda include Local Growth Deals for Local Enterprise Partnerships, City Deals, and most recently Devolution Deals for Combined Authorities with metro mayors. These agreements have devolved certain policy responsibility to varying degrees, particularly for local transport and housing. There has been some concurrent devolution of funding mechanisms, including business rate retention.

New Town/Urban Development Corporations

New Towns and Urban Development Corporations were used as central government led and funded delivery vehicles throughout the post war era to enable a more strategic and proactive form of development than would otherwise have been possible at local authority level.

These models of delivery enable key aspects of planning and development, including land assembly, infrastructure provision, and housing to be planned and delivered at scale and density, with easier capture of land value increases.

As the agenda has shifted to local decision-making, these models of development have started to be seen as too centrally-led and as such have been used less frequently in recent years with some notable exceptions (e.g. Ebbsfleet). However, the 2017 Neighbourhood Planning Act permits for the first time the concept of locally-led New Towns and Garden Cities, where the process can be led by one or more local authorities, while still allowing for the fact that support from central government agencies is needed to deliver at this scale.

Revolving Infrastructure Funds (RIF)

Revolving Infrastructure Funds are, like TIF and developer contributions, a mechanism that can help public bodies capture the land value windfall to the private sector arising from the public servicing of a development site with infrastructure.

The objective of a RIF, and the reason why it is described as 'revolving', is that value capture mechanisms extract the maximum return from an initial public sector investment in infrastructure, and that return can then be 'revolved' to spend on additional infrastructure spurring further development, and so on.

The Milton Keynes Tariff and the RIFs operated by some of the former Regional Development Agencies provide some successful examples of these schemes, including the RIF operated by the South West RDA which facilitated development at Cranbrook in East Devon.

Making best use of public sector land

Land in public sector ownership is freer from market pressures and the risk of market failure than privately-held land. As such, it can provide a highly effective mechanism for shaping and guiding development by ensuring that the land value benefits of infrastructure provision can be captured to pay for infrastructure provision. Many successful continental European examples of high quality, sustainable development are underpinned by public sector land assembly and then applying value capture mechanisms.

Strategic use of public sector land can enable greater certainty on planning for large-scale housing and infrastructure, including how it will be funded. It can help spur both the early provision of infrastructure and the accelerated delivery of housing to an often greater extent than on privately-owned land. As local authority housing development has reduced in scale over recent years, the housing on such sites has been more often delivered by private-sector house builders.

Innovations in the construction sector

Multiple studies have highlighted a lack of innovation in the construction sector for various reasons, and compared with other industry sectors of a similar scale, that there is a relative lack of SME activity within it. Both of these are considered, including by the recent Housing White Paper, a barrier to housing growth, and they are related to the high capital costs of entry into the land acquisition sector which leads to a lack of competition.

However mechanisms including new technologies, such as modular and custom build schemes, can help spur the entry of SMEs and self-builders into the market, which would have the potential to accelerate delivery. Even on sites where there is no demand for modular or custom build schemes, there could be new requirements for multiple builders to compete against one another to complete and sell new dwellings, particularly on larger sites. This is a mechanism that has been proven to speed delivery rates.

Outputs

The comments and opinions provided by workshop attendees were captured. This section presents those views in two parts- firstly, those that emerged from the more general facilitated discussion on delivery before participants had been introduced to the 5th Studio typologies, and secondly those that emerged from the structured discussion based on those nine typologies.

Outputs from facilitated discussion

The facilitated discussion resulted in a wide range of comments on levers for delivery. These have been edited to minimise repetition and ensure relevance, and structured into the same themes that were used for classification at the first workshop. As can be seen, these comments do not differ significantly from, the levers previously identified through the literature review, case studies and first workshop.

- Planning policy levers
- Planning consenting levers
- Leadership and governance levers
- Infrastructure development levers; and
- Funding and delivery levers.

Under each theme, bullet points have been used rather than summary text as it is considered that the former ensures a more direct way of reporting participant's thoughts, though in some cases the bullet points have been lightly edited for clarity.

Planning policy levers

- A pan-corridor assessment of housing need to an agreed methodology would provide a consistent, certain evidence base for delivery
- Agreements between central government and local authorities to specified levels of local authority delivery, incorporating rewards as incentives
- Simplification of planning process
- New Town Corporations had a proven ability to deliver upfront infrastructure and develop a vision to attract investors
- A clear spatial plan of areas for growth and areas to be protected will help achieve buy-in and certainty, as well as helping address cumulative impacts of development

Planning consenting levers

- Commitment to specific delivery rates as part of section 106 agreements
- Consider incentives for Corridor's existing population of over 3 million people to accept transformational level of growth

Leadership and governance levers

- Ensuring a pan-corridor governance structure will provide vision, guidance and consistency in terms not only of development but also of delivery mechanisms, and hence certainty among investors to enable an accelerated delivery rate
- Enable stakeholders to see the value and opportunity associated with transformational scale of development
- Early engagement with and buy-in of Corridor politicians
- Involvement of Local Economic Partnerships alongside local planning authorities to ensure integration of housing and economic development

Infrastructure development levers

- Enhanced connectivity across the corridor will boost delivery
- Plan for employment provision and infrastructure in a co-ordinated way to minimise expansion constraints
- Car pooling (as practiced in Milan) can incentivise changes in commuting habits
- Integrated Oyster-style ticketing for multi-modal public transport
- Focus on much smaller infrastructure interventions alongside East-West Rail
- Better road and rail infrastructure/connectivity between Swindon and Oxford
- Co-ordination of major new infrastructure such as East West Rail and HS2 with existing and other planned infrastructure interventions
- Employment land provision is a key lever; jobs generate demand for housing, and housing demand spurs more rapid development

Funding and delivery levers

- One Public Estate initiative, whereby a range of public sector landowners collaborate and co-ordinate approaches to landholdings, including accelerating delivery of development on them, likely to help overcome historic under-use of public sector landholdings
- Joint ventures between developers and landowners
- Compulsory Purchase Order is helpful as a lever in areas of higher development value, but less so otherwise.
- Tax Increment Financing works best where there is a strong market
- Innovations in construction, with recent demonstrations of zero carbon houses whose foundations can be laid in just eight hours
- Significant central government funding to back transformational levels of growth, considering national and international importance of providing transformational development

Outputs from structured discussion

The structured discussion had as its aim the matching of each of the nine typologies to the most appropriate delivery lever. In some cases, participants stated that it was not possible to disaggregate levers by individual typology, only by each of the three typology groups (urban intensification, linked places and autonomous places). This has been reflected in the write-up of findings below.

Urban Intensification group of typologies

Across all typologies in the urban intensification group, CPO powers were highlighted as among the most important delivery tools. This is because the land needed is much more likely than in other typologies to be in smaller, multiple ownerships, needing to be assembled for larger-scale redevelopment. A mayoral model, i.e. a city deal or other kind of local devolution arrangements, is seen as an enabler of CPO, in other words there is the potential for combining two levers in these cases.

Likewise, the flexible application of receipts from planning obligations (for example, through ending the pooling restrictions on section 106 contributions) is considered an appropriate lever for delivering this group of typologies.

It was also considered that urban intensification was too small-scale in most cases to justify the establishment of a development corporation, but that revolving infrastructure funds could have an important role to play, as could the marketing of opportunities to potential investors. Innovations in the construction sector such as modular housing are also considered potentially appropriate for this group of typologies. Finally, the potential for this kind of development to be delivered through a Neighbourhood Plan was also mentioned. For example, Central Milton Keynes is a neighbourhood plan area.

Centre Intensification

This typology is considered to be the most expensive of those assessed, with the lowest return in terms of development quantum (particularly given the scale of change needed). However, it benefits from the potential to connect to a high density of existing infrastructure (for example, the case study presented to participants was of the area around Oxford station), and is also seen as a natural partner for multiple other typologies in less inner areas, as well as being likely politically easiest to achieve. Opportunities for inner urban redevelopment as a result of the shrinking retail role of town centres were also highlighted.

It was pointed out that land in inner urban locations is potentially more likely to be in public sector ownership than land elsewhere, meaning that making best use of public sector land, including such measures as, for example, joint ventures between the landowner and developers could be appropriate.

Suburban intensification

It was widely recognised that this is among the most difficult of the typologies to deliver due to the extensive private landownership in suburban areas resulting from their primarily residential function and this pattern been encouraged further over many years by means of right to buy policies.

However, the example of the London Plan, with its Opportunity Area Planning Frameworks (OAPFs) was highlighted as one potential planning policy lever to deliver this typology. This is because many of the OAPFs in London cover more suburban, residential areas.

Edge intensification

Though participants highlighted no lever specific to this typology, they did point to the importance of connecting infrastructure in locations at the edge of a larger settlement, where transport links to the settlement centre would be important. This highlights the potential, as noted above, of a revolving infrastructure fund to help deliver such a typology by unlocking suitable land at the urban edge that may otherwise lack transport connections.

Linked Places group of typologies

It was considered that development within the linked places group was starting to be on a large enough scale to enable a tariff approach as a lever, similar to the Milton Keynes tariff, which had a good track record of rapid and predictable housing delivery until it was unable to be applied due to section 106 pooling restrictions. It effectively fed pooled section 106 contributions into a revolving infrastructure fund.

Linked Places as a group need, as their name suggests, significant infrastructure investment to link them effectively to one another and to existing settlements (while taking careful account of cumulative demand-side impacts). This further suggests that revolving infrastructure funding could be appropriate at this scale. Again, depending on their location, there is potential for linked places to be delivered through making best use of public sector land, again with the possibility of the public-sector landholder establishing a joint vehicle with a private sector development partner.

Strong Edge and Satellite

Transport connections between the strong edge and the satellite were highlighted as being particularly important for this typology. As such, any mechanism that can deliver an integrated regional-scale transport mechanism was considered relevant. A relevant example is Northstowe, which was delivered alongside the Cambridgeshire Guided Busway linking it directly and reliably with Cambridge city centre.

Urban Extension

An advantage of urban extensions is that they are seen as able to change perceptions of an existing place for the better. However, one participant noted that land value capture is considered more difficult to achieve for urban extensions (without expanding on the reasons for this judgement). Urban extensions are also considered more politically easy to achieve if they can bring new services and facilities to the existing urban area.

New Small Settlement

Though no lever specific to this typology was highlighted, the general comments above on Linked Places indicate that many of the same considerations apply to this typology as to the other Linked Places.

Autonomous Places group of typologies

Some participants felt that to achieve a transformational scale of development, autonomous places as an entire category would take too long to deliver, pointing to the fact that even though Milton Keynes is generally recognised as an example of rapid development, it still took more than forty years to reach the city scale it is now.

Additionally, it was highlighted that autonomous places should not be seen as a panacea- recent experiences in Spain show that they can be left unfinished if there is insufficient political commitment to or economic support for their development.

A final barrier to this typology group was highlighted by some participants who noted the significant change in political acceptability of new towns now compared to the 1960s, where a stronger consensus applied on the role of the public sector in terms of large-scale housing delivery

However, others saw autonomous places as the only real way to deliver the scale of infrastructure and indeed housing needed to transform the Corridor in line with the NIC's vision for the UK's Silicon Valley.

A further benefit of autonomous places was considered to be a greater ability to design transport infrastructure for modes other than the private car, and the opportunity to develop a new housing offer completely independent of what currently exists across the Corridor.

In terms of delivery, it was considered that the LPA needs to an extent to be 'insulated' from the challenge of delivering such a large-scale development over a long time-frame. This suggests the setting up of delivery vehicles, such as Urban or New Town Development Corporations, may be a necessary precondition for development.

This would also reflect the fact that, as witnessed in the protected development at Ebbsfleet, private developers are usually unwilling to take the risk of leading development at the scale needed in the Autonomous Places category.

As such, they would need to be delivered by the public sector via a locally-led public sector delivery vehicle that can sell ready-serviced parcels of land to individual house-builders. However, even here, development rate will still depend on the speed at which the delivery vehicle is able to acquire and assemble privately-owned land, and to a lesser extent on the capacity of the public sector in terms of expertise and other resources.

New Town

Some participants considered that the benefits of autonomous places were linked to critical mass and that therefore, the smaller-scale typologies in this group, including New Towns, were less preferable to what could be offered by New Cities. However, as noted above, the example of Ebbsfleet demonstrates clearly that a strategic delivery vehicle rather than the private market would be the only way to deliver even this smallest-scale of the autonomous places.

String City

The importance of linking development with transport infrastructure connecting the places on the 'string' was highlighted, as well as linking the new settlement itself to existing places.

New City

No specific delivery mechanism was highlighted for this typology, other than the more general comments above on the necessity of New Town and Urban Development Corporations for delivering this scale of housing growth.

APPENDIX F: SPEED OF DELIVERY FOR COMPARATOR DEVELOPMENTS

Development	Region or country	Lead in Time (years)	Dwelling delivery window (years)	Number of dwellings
King's Cross	London	7	13	2,000
Centenary Quay	South East	5.5	4	335
St David's 2	Wales	5	5	304
Symphony Court, Brindley Place	West Midlands	2	3	143
Queen Elizabeth Park, Guildford	South East	3	6	525
Trumpington Meadows	East	8	1.5	160
Priors Hall, Corby	East Midlands	9	4	159
Shenzhen	China		21	3175355
Cambourne	East of England	12	16	3,819
Kings Hill	South East	6.5	19	2,876
Cranbrook	South East	5	5	1200
Red Lodge	East of England	10	11	1,192
Almere	Netherlands	5	41	88,466
Milton Keynes	South East	4	46	80,461
Basildon (end date: 1991)	East of England	4	38	57352
Telford (end date: 1991)	West Midlands	4	23	47586
Crawley (end date: 1991)	South East	4	40	33398
Stevenage (end date: 1991)	East of England	4	41	31672
Harlow (end date: 1991)	East of England	4	40	29298
Hemel Hempstead (end date: 1991)	East of England	4	40	26142
Redditch (end date: 1991)	West Midlands	4	23	22542
Bracknell (end date: 1991)	South East	4	38	19735
Runcorn (end date: 1989)	North West	4	21	19208
Washington (end date: 1989)	North East	4	21	19125
Corby (end date: 1991)	East Midlands	4	37	14560
Skelmersdale (end date: 1985)	North West	4	20	12148
WGC (end date: 1986)	East of England	4	34	9217
Peterlee (end date: 1987)	North East	4	35	9185
Hatfield (end date: 1986)	East of England	4	34	7999
Aycliffe (end date: 1989)	North East	4	38	5130
Ebbsfleet	South East	0	3	677
Dickens Heath	West Midlands	4.5	13	1,700
Great Denham, Bedford	East of England	11	12	835

Table 22. Barriers and levers applying specifically to sub-areas within Ox-MK-Cam corridor, drawn from the literature review

Typology	Average delivery rate dwellings/ year in delivery window	Average delivery rate dwellings/total (delivery window + lead in time) years	Area (Ha)	Completions per hectare	Completions per year (delivery window) per hectare	Completions per year (delivery window + lead in time) per hectare
Centre Intensification	153.85	100.00	27	74	5.7	3.7
Centre Intensification	83.75	35.26	12.5	27	6.7	2.8
Centre Intensification	60.80	30.40	9	34	6.8	3.4
Centre Intensification	47.67	28.60	7	20	6.8	4.1
Edge Intensification	87.50	58.33	23.18	23	3.8	2.5
Edge Intensification	106.67	16.84	26.46	6	4.0	0.6
Edge Intensification	39.75	12.23	238.9	1	0.2	0.1
New City	151207.38	151207.38				0.0
New Small Settlement	238.69	136.39	417	9	0.6	0.3
New Small Settlement	151.37	112.78	262	11	0.6	0.4
New Small Settlement	240.00	120.00	176.00	7	1.4	0.7
New Small Settlement	108.36	56.76	211.72	6	0.5	0.3
New Town	2157.71	1923.17	12700.00	7	0.2	0.2
New Town	1749.15	1609.22	8,850	9	0.2	0.2
New Town	1509.27	1365.53	3165.00	18	0.5	0.4
New Town	2068.96	1762.44	7793.00	6	0.3	0.2
New Town	834.95	759.04	2449.00	14	0.3	0.3
New Town	772.49	703.82	2456.00	13	0.3	0.3
New Town	732.46	665.87	2558.00	11	0.3	0.3
New Town	653.56	594.15	2392.00	11	0.3	0.2
New Town	980.07	834.88	2914.00	8	0.3	0.3
New Town	519.33	469.87	753.00	26	0.7	0.6
New Town	914.68	768.33	2930.00	7	0.3	0.3
New Town	910.71	765.00	2145.00	9	0.4	0.4
New Town	393.53	355.13	1871.00	8	0.2	0.2
New Town	607.41	506.17	1670.00	7	0.4	0.3
New Town	271.10	242.56	1747.00	5	0.2	0.1
New Town	262.44	235.53	950.00	10	0.3	0.2
New Town	235.26	210.49	948.00	8	0.2	0.2
New Town	135.01	122.15	1248.00	4	0.1	0.1
New Town	225.67	225.67	450	2	0.5	0.5
Strong Edge + Satellite	130.77	97.14	57	30	2.3	1.7
Strong Edge + Satellite	69.58	36.30	256	3	0.3	0.1

Development	Region or country	Lead in Time (years)	Dwelling delivery window (years)	Number of dwellings
The Wixams	East of England	10.5	7	827
Middlemore Farm, Daventry	East Midlands	5	12	717
Wichelstowe	South West	12.5	7	715
Berryfields, Aylesbury	South East	5	4	245
IJburg	Netherlands	5	24	18000
Hammarby	Sweden	4	18	10800
Hafen City	Germany	4	24	6000
Orestad	Denmark	11	6	2925
Poundbury	South West	5	9	1723
Broughton Gate/Brooklands, Milton Keynes	South East	3	6	1,691
Eastern Expansion Area Milton Keynes	East of England	5	6	1,609
NE Carterton, West Oxfordshire	South East	12	14	1,499
Marks Farm, Braintree	South East	2	12	1,329
Jennets Park	South East	5	8	1,263
Loves Farm	East	6	6	1261
Weedon Hill, Aylesbury	South East	3	8	892
Orchard Park	East	6	6	852
Pondholton Farm, Braintree	South East	9	13	849
Ingress Park	South East	8.5	7	752
West Kempston, Bedford	East of England	11	5	580
West of Waterlooville, Hampshire	South East	11	6	526
Horley North East Sector, Reigate and Banstead	South East	13	6	467
Lawley Village, Telford and Wrekin	West Midlands	2	6	417
Hunts Grove	South West	5	4	400
Lyde Road	South West	12	4	393
Didcot West, South Oxfordshire	South East	14	1	386
Picket Twenty, Test Valley	South East	5	4	325
Lightmoor Village, Telford and Wrekin	West Midlands	12	7	301
North East Bridgwater	South West	2	6	301
Clay Farm	East of England	5	3	288
West of Blyth	North East	9	7	164
Clay Farm	East	11	2	156
Farndon Road, Harborough	East Midlands	7	6	114
MRT- Hong Kong	China	Unknown	18	100000

Typology	Average delivery rate dwellings/ year in delivery window	Average delivery rate dwellings/total (delivery window + lead in time) years	Area (Ha)	Completions per hectare	Completions per year (delivery window) per hectare	Completions per year (delivery window + lead in time) per hectare
Strong Edge + Satellite	118.14	47.26	384	2	0.3	0.1
Strong Edge + Satellite	59.75	42.18	18.29	39	3.3	2.3
Strong Edge + Satellite	102.14	36.67	309	2	0.3	0.1
Strong Edge + Satellite	61.25	27.22	205.4	1	0.3	0.1
Urban Extension	750.00	620.69	330.00	54.55	2.3	1.9
Urban Extension	600.00	490.91	200	54	3.0	2.5
Urban Extension	250.00	214.29	240.00	25.00	1.0	0.9
Urban Extension	487.50	172.06	310	9	1.6	0.6
Urban Extension	191.44	123.07	127.4	14	1.5	1.0
Urban Extension	281.83	187.89	402.01	4	0.7	0.5
Urban Extension	268.17	146.27	400	4	0.7	0.4
Urban Extension	107.07	57.65	99.01	15	1.1	0.6
Urban Extension	110.75	94.93	30.19	44	3.7	3.1
Urban Extension	157.88	97.15	101	13	1.6	1.0
Urban Extension	210.17	105.08	59.05	21	3.6	1.8
Urban Extension	111.50	81.09	37.16	24	3.0	2.2
Urban Extension	142.00	71.00	33.81	25	4.2	2.1
Urban Extension	65.31	38.59	49.02	17	1.3	0.8
Urban Extension	107.43	48.52	29.86	25	3.6	1.6
Urban Extension	116.00	36.25	137	4	0.8	0.3
Urban Extension	87.67	30.94	209	3	0.4	0.1
Urban Extension	77.83	24.58	58.39	8	1.3	0.4
Urban Extension	69.50	52.13	148.77	3	0.5	0.4
Urban Extension	100.00	44.44	108.52	4	0.9	0.4
Urban Extension	98.25	24.56	32.19	12	3.1	0.8
Urban Extension	386.00	25.73	112.5	3	3.4	0.2
Urban Extension	81.25	36.11	113.46	3	0.7	0.3
Urban Extension	43.00	15.84	82.34	4	0.5	0.2
Urban Extension	50.17	37.63	140.92	2	0.4	0.3
Urban Extension	96.00	36.00	109	3	0.9	0.3
Urban Extension	23.43	10.25	4.31	38	5.4	2.4
Urban Extension	78.00	12.00	57.27	3	1.4	0.2
Urban Extension	19.00	8.77	23.45	5	0.8	0.4
Urban Extension	5555.56	5555.56	n/a	n/a	n/a	n/a

APPENDIX G: CASE STUDIES

OTTERPOOL PARK, KENT

DEMONSTRATES THAT CURRENT GOVERNMENT PLANNING POLICY PERMITS THE RELATIVELY RAPID DESIGNATION AND IMPLEMENTATION OF A NEW SETTLEMENT, WHERE POLITICAL AND SPATIAL CIRCUMSTANCES ALIGN TO MAKE DELIVERY POSSIBLE.

Context

Shepway District Council had intentions to utilise the disused Folkestone Racecourse to provide 820 homes. The site was allocated in the draft core strategy in 2012 but was subsequently removed by the inspector due to a lack of demonstrable housing need.

Once this need had been justified through supplementary studies, supported by the local MP and Minister, Damien Green, Shepway Council began the process of acquiring a large land holding in the vicinity to the former racecourse. This was done without disclosing the full intentions of the council in an attempt to keep land values low enough to ensure the viability of a future large scale development.

The Council were successful in this process and once they had assembled a significant portion of the land announced the intention to build a garden town on the site, to be named Otterpool Park. This would comprise of up to 12,000 dwellings along with all supporting infrastructure.

However, due to the 'closed door' approach required to keep land values from rising, many residents felt they had not been fully consulted and this generated local opposition to the scheme.

DEVELOPER TYPE

Public land, bought pre 'hope value', combined with surrounding private land ownership.

DEVELOPMENT TYPE

New Garden Community

TOTAL HOMES DELIVERED

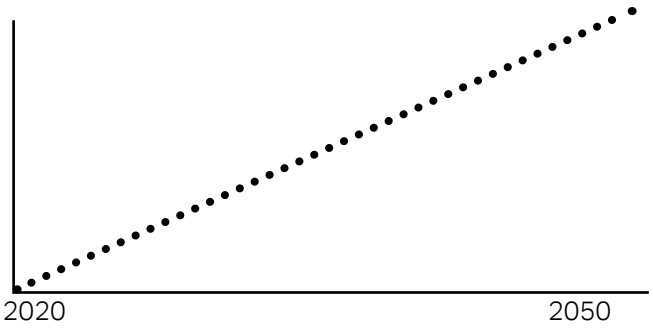
12,000

TOTAL COST

£5.2m for 357 acres of land

FUTURE HOUSING DELIVERY

Planned at 400 per annum (12,000 over a 30 year period)



PROJECT LIFECYCLE

MILESTONE 1:

January 2012: First draft Core Strategy including designation (subsequently withdrawn)

MILESTONE 2:

November 2015: Hobbs Parker sent the memorandum of sale confirming that the council's bid to buy the land at Otterpool Manor Farm had been successful.

MILESTONE 3:

May 2016: Shepway District Council outline ambition to create a new garden settlement.

MILESTONE 4:

December 2016: Programme of engagement on the masterplanning process begins.

MILESTONE 5:

April 2017: The Stage 1 Feasibility and Capacity Study, prepared by Arcadis, was published on the Otterpool Park website.

LESSONS LEARNT:

- Independently assessed need for housing used to justify council actions
- Low land values assisted acquisition of developable land
- Required a Council willing to take a gamble by delaying public engagement to ensure viability

Otterpool Park, Kent

Context

Shepway District in Kent (in and around Folkestone) is located at a comparable distance from London (about 50 miles) as many places in the Corridor. It has fast, direct links to London via the HS1 train line and the M20 motorway.

In 2012, Shepway District Council submitted a draft Core Strategy to the Planning Inspectorate that included an allocation for 820 new homes at the now disused Folkestone Racecourse. The 820 homes would have formed a new settlement. However, the Inspector at the time considered that insufficient housing need had been demonstrated (bearing in mind the recessionary context at the time) and deleted the allocation.

Circumstances of development

However, the subsequent adoption of the National Planning Policy Framework and initial indications that the next Strategic Housing Market Assessment (SHMA) for Shepway would demonstrate a much higher level of need, together with a local regeneration agenda, convinced the Council to take a more proactive, ambitious approach. Behind the scenes, but with the support of local MP and Minister Damien Green, it extended its proposals for a new garden town beyond the boundaries of the former racecourse. As such, it started assembling a large land-holding in the vicinity through purchasing land from private landowners.

In order for the land to be purchased at existing use values, the Council had to keep its land assembly activities highly confidential. It was only in 2016, when a large enough 'core' of public-sector owned land had been successfully assembled by purchase at prices that did not incorporate excessive hope value that the Council was able to unveil the more ambitious scale of its proposals- a proposed new Garden Town called Otterpool Park, located in the M20 and HS1 corridor between Folkestone and Ashford and including up to 12,000 dwellings alongside supporting infrastructure including community facilities.

The Council subsequently submitted a successful bid to Central Government for Otterpool Park to be designated as a Garden Town; this status was achieved in November 2016, and ensures Central Government policy and financial support in return for an ambitious implementation timeline. Clearly, the Garden Town status could not have been achieved without the assembly of land by the public sector.

One negative aspect of the designation of Otterpool Park as a garden village is the feeling among local communities that they were not consulted at an early enough stage, reflecting the fact that, by necessity, the land assembly and initial masterplanning work had to be kept confidential so that public sector land acquisition did not become prohibitively expensive. As such, the garden village suffers from considerable local opposition. The Council (which is Conservative-led, with a large majority) clearly sees this as an acceptable and unavoidable price to pay for implementation. When challenged by local residents' groups on a lack of consultation, the Council has defended its approach by citing the Local Government Act 1972, which allows for confidential activity of this nature to be exempted from public scrutiny provided that "the public interest in maintaining the exempt information outweighs the public interest in disclosing the information".

Lessons for the Corridor

The case of Otterpool Park demonstrates that current government planning policy permits the relatively rapid designation and implementation of a new settlement, where political and spatial circumstances align to make delivery possible.

In the case of Shepway, the following favourable circumstances applied:

- A clear, demonstrable, independently-assessed need for housing that justified positive action on the part of the council to address the issue;
- Relatively low land values for the local context (the second cheapest in Kent after Thanet) , facilitating land assembly
- Extensive land away from existing settlements with good access to a major motorway junction and railway station, thus performing well against the NPPF and incorporating relatively lower hope value than had the land been adjacent to an existing town or city;
- Clear and consistent political support from a local MP who is part of central government and who has enjoyed large local majorities at successive elections;
- A willingness on the part of the Council, bolstered by its own large majority in local elections, to take a gamble that anger among local residents at a lack of consultation and at extensive 'behind the scenes' activity was a price worth paying for the growth opportunities embodied by the garden village (indeed, it could be argued that local anger was inevitable, whatever the Council's approach- if the alternative approach of full openness had been employed, there could have been anger at the Council spending too much public money in land acquisition); and
- The fact that the Council was successful in keeping its plans confidential for the period needed, so that extensive public sector land could be acquired without paying a premium for hope value.

Where could this be applied within the Corridor?

Within the Corridor, a similar approach could be used to deliver new garden towns, but this would likely only work in locations where:

- There is a strong evidence base (particularly in terms of past under-delivery, and/or need for regeneration) supporting significant new growth;
- Land values are relatively low, suggesting more peripheral parts of the corridor, in particular places more distant from Oxford and Cambridge but connected to or able to be connected to them;
- Significant hope value does not apply, i.e. away from existing large settlements and away from the publically-announced routes of new infrastructure such as East-West Rail and the Oxford-Cambridge Expressway;
- Existing road and rail infrastructure would support growth, or where the new settlement is on a scale or in a location where there is a high level of certainty that new transport infrastructure could be provided
- Local authorities decide or can be convinced that the political and economic benefits of garden-town scale growth outweigh concerns among nearby communities at a (necessary) lack of transparency in the land assembly process (noting pragmatically that, in the current system, there is generally opposition to new garden towns in the countryside no matter what the process for delivering them)

Quantifying the benefits

Between 2007 and 2017, Government statistics show a total of 1,430 dwellings were completed in Shepway, in other words an average of 143 per year. It is the Council's intention for Otterpool Park's 12,000 homes to be delivered over a 30 year timescale. This would represent an annual uplift of 280% over the 'background' completion rate, although it should be noted that Shepway's rate of dwelling completions in recent years has been unusually low (only 41% of the average for an English local authority over this period).

EBBSFLEET GARDEN CITY, KENT

THE FIRST DESIGNATION OF A DEVELOPMENT CORPORATION TO DELIVER A "LOCALLY-LED" GARDEN CITY OF UP TO 15,000 HOMES AROUND THE EBBSFLEET INTERNATIONAL HIGH SPEED RAIL (HS1) STATION IN KENT.

Context

On 16th March 2014 the then Chancellor of the Exchequer George Osbourne announced proposals for a 'locally-led' garden city of up to 15,000 homes creating a new community at the Ebbsfleet, Northfleet, and Swanscombe areas of North Kent.

To achieve this, the Government has established the Ebbsfleet Development Corporation to coordinate investment and drive forward development. The Development Corporation will develop a shared vision and master plan for the Garden City reflecting the views of local people. The Development Corporation will eventually have planning powers over its designated areas.

The Garden City comprises six strategic sites covering an area of 1,026 ha with existing planning consent for some 11,000 new homes and a range of commercial uses including a new commercial centre around the HS1 station. These schemes have been in the pipeline since the 1990s although have been slow to come forward in some instances due to viability or technical constraints.

To assist in catalysing Ebbsfleet Garden City, Government has made up to £250 million of infrastructure funding to kick start the development.

DEVELOPER TYPE

Private land ownerships with Development Corporation in place with planning consenting and some spending power.

DEVELOPMENT TYPE

New Garden City

TOTAL HOMES DELIVERED

Up to 15,000 - existing consent for some 11,000. 700 delivered to date (October 2017).

TOTAL COST

£250m made available by central government.

FUTURE HOUSING DELIVERY

5,100 new units anticipated by 2020/21

PROJECT LIFECYCLE

October 1994: Government announces intermediate station on CTRL (HS1) line at Ebbsfleet)

1996: Kent Structure Plan allocates eastern quarry for mixed use development. Outline planning consent received for Ebbsfleet Valley Site.

May 1999: Bluewater Shopping Centre opens adjacent to Ebbsfleet.

2002 - 2004: various outline planning applications submitted and consented for sites within the Ebbsfleet area.

2007: Residential development begins in Springhead Quarter

November 2007: Ebbsfleet International Station opens for International High Speed Services

December 2009: High Speed domestic services commence providing 17 minute connection to London St Pancras.

March 2014: Government announces proposals for 15,000 home Garden City at Ebbsfleet.

April 2015: Ebbsfleet Development Corporation Established

Autumn 2015: £310 million announced in Autumn spending statement

September 2016: EDC Implementation Framework launched

October 2017: 600 homes completed.

LESSONS LEARNT:

- Development Corporation as a vehicle for Government spending has been successful in the short term in unlocking housing growth - although at height of housing market.
- Significant housing target for next five years.
- Reliant on private sector delivery with public sector support - has been vanguard for government initiatives such as Help to Buy (and resultant increases in house prices)
- Limited ability for Development Corporation to control development due to lack of land ownership

Ebbsfleet Garden City, Kent

Context

The designation of an International Railway Station and establishment of the Thames Gateway Planning Framework in the mid-1990's led to the allocations of a number of major mixed use residential sites through regional and local planning policies.

A number of planning permissions have been granted during the past 20 years, although a limited amount of development has taken place.

The Labour Government's 2003 Sustainable Communities Plan identified Ebbsfleet and Eastern Quarry as the location for 10,000 new homes, 5.5 million square feet of commercial space and 2 million square feet of retail, leisure, community and supporting space. Despite this designation, slow progress was made in developing the sites.

In March 2014, as part of Budget, the Government announced ambitious plans to establish a new Development Corporation to drive forward plans for a new garden city at Ebbsfleet, capable of providing up to 15,000 new homes based predominantly on brownfield land or former quarries. At present consent exists for some 11,000 new homes, and nearly 1,000,000 sq metres of non residential floorspace.

Circumstances of development

The main aim of the development corporation is to increase the pace, quantum and quality of development - although the majority of the land is controlled by a number of private sector land owners and developers.

EDC is tasked with interpreting the principles of the Garden City tradition to meet the circumstances of today, and the needs for long-term stewardship of public spaces and facilities into the future.

Despite the previous policy designations, planning consents, and the fact that much work has been done on the area by key stakeholders, development has been slow. This has been in part due to the following factors:

- The complex nature of sites and requirement for significant site preparation of ex-industrial or quarry land and impact on development viability;
- The scale of infrastructure required to unlock development sites and impact on development viability; and
- A lack of co-ordination in infrastructure provision, particularly related to utilities and transport infrastructure between some of the development sites.
- The EDC has been established to tackle these challenges, to bring forward infrastructure, and accelerate development of a high quality Garden City at Ebbsfleet.

As of October 2017 some 700 homes have been completed across three of its strategic sites.

Ebbsfleet DC have assisted in facilitating this increased pace through its development management powers and through spending on government money on specific pieces of infrastructure required to unlock development (that would otherwise have been a burden on the developers). This has included;

- Provision of a connecting bridge, that was affecting the viability of one of the strategic sites.
- Strategic investment in utility upgrades including £30 million investment in the provision of electricity sub stations and connections.
- £45 million investment in improvements to junctions on the A2.
- Establishing Ebbsfleet as a "Healthy New Town" as part of the wider government initiative.
- Facilitating disposal of HCA owned sites within the EDC boundary.
- Funding of an information centre within the International Station.
- Community and stakeholder engagement
- Provision of a single implementation framework to fully understand the extent of development, and investment required to support it.

Lessons for the Corridor

The designation of a Development Corporation to facilitate development at Ebbsfleet has had a clear impact in increasing the quantum of development underway and is the only current example of a Development Corporation outside of London. EDC has demonstrated the following successes that could be applied elsewhere in the Corridor:

- Consolidating a series of strategic sites into a single development concept ("The Garden City") which crosses two borough boundaries.
- Capitalising on long term investment in High Speed Rail - although sites around the station are yet to come forward.
- Removing infrastructure burdens from developers through targeted investment in strategic infrastructure.
- Providing a single development authority that takes an overview across all major sites.
- Providing clear leadership and promotion for the whole area - rather than individual development sites.

However, the EDC has the following issues that could facilitate a greater increase in the success of development:

- A lack of control over land - and ability to act as developer. While EDC has CPO powers there is a lack of political will to use them.
- The model is very different (and of a much smaller scale) than previous development corporations/new town corporations.
- As permission is already in place for the majority of development the ability to guide development - and importantly capture land value - has been missed.

Where could this be applied within the Corridor?

Within the Corridor, the use of Development Corporations could be used in a variety of contexts. In particular:

- Where there are collections of large strategic sites that are not being delivered.
- In the development of new settlements (potentially utilising a greater range of DC powers than at Ebbsfleet)
- Around new stations (on HS2 or the Oxford-Cambridge line) to ensure that the benefit of these locations is realised from the outset.

Quantifying the benefits

Over the past two years housing completions at Ebbsfleet have increased significantly from less than 200 to over 700. However, this continues to fall short of the target of more than 1,000 per year to 2021.

As investment made by EDC is realised the development quantum is projected to increased. Time will tell as to whether the five year target of 5,100 new homes will be met - this is reliant on private developers and the state of the housing market.

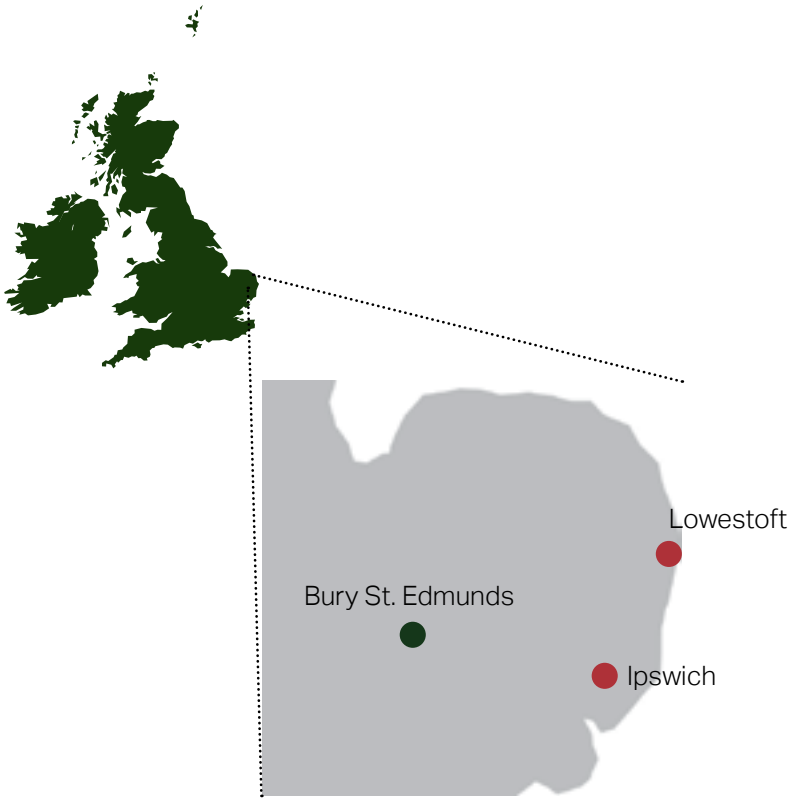
SUFFOLK STRATEGIC PLANNING AND INFRASTRUCTURE FRAMEWORK

A COUNTY-WIDE DOCUMENT WHICH IDENTIFIED BROAD LOCATIONS FOR HOUSING AND THE INFRASTRUCTURE REQUIRED TO UNLOCK THEM, ENCOURAGING COOPERATION BETWEEN SECTORS.

Context

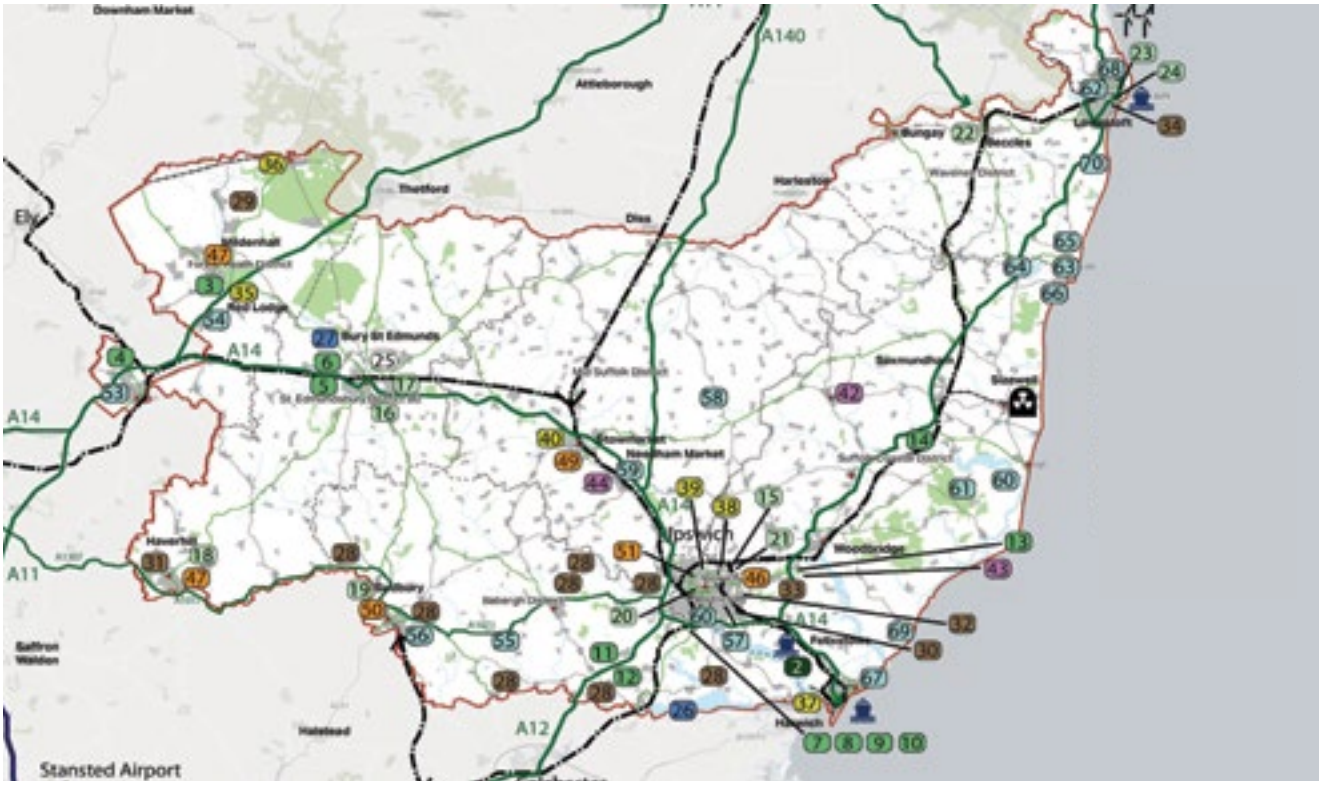
The Suffolk Strategic Planning and Infrastructure Framework (SPIF) required seven local authorities to co-operate across their boundaries to create a County-wide infrastructure strategy. This required consideration and appreciation of respective planning policies within all of the following :

- Ipswich Borough Council;
- Babergh District Council;
- Mid Suffolk District;
- Suffolk Coastal;
- Waveney District Council;
- Forest Heath Borough; and
- St Edmundsbury Borough Council.



The effective phasing of infrastructure is an essential component in housing delivery. The Suffolk SPIF allows neighbouring authorities to have cross border discussion about future growth across the County.

Unlike most infrastructure plans, which are developed after housing plans are made, the SPIF brought the two processes together, allocating broad locations for both housing and infrastructure, ensuring neither is planned in isolation.



PROJECT LIFECYCLE

MILESTONE 1:

October 2016: Stakeholder and Spatial Priorities Workshop

MILESTONE 2:

December 2016: Spatial Scenarios and Preferred Option Development

MILESTONE 3:

June 2016: Recommended option confirmed and submitted

LESSONS LEARNT:

- Collective inputs into a single document created a collaborative communication process
- Wider scale planning led to higher ambition and increased growth targets

- Rail Network
- Strategic Road Network
- Local Road Network
- Active Modes
- Gas
- Electricity/Power
- Waste
- Potable Water
- Waste Water
- Flood and Coastal Management

Suffolk Strategic Planning and Infrastructure Framework

Context

As part of Suffolk's ongoing Strategic Planning and Infrastructure Framework (SPIF), the seven local authorities across the County are collaborating to ensure more effective cross boundary planning outcomes through continued dialogue and cohesive infrastructure planning. The Suffolk SPIF is a vision for managing and delivering growth across Suffolk, looking beyond current local plan periods to 2050. To inform this process AECOM was commissioned by the Suffolk Authorities to identify county-wide growth and spatial strategy options, and infrastructure priorities.

The study, separated into a technical evidence base and a preferred growth and spatial scenario report, responds to two key government priorities: ensuring a duty to cooperate across administrative boundaries; and providing facilitating infrastructure to unlock housing development and employment growth.

Methodology

Previous Strategic Infrastructure Frameworks have understood that effective phasing of infrastructure is a fundamental driver of housing delivery. However, the SPIF model extends this traditional approach by recommending broad locations for housing development which are determined in the context of the local economy and forecast changes to this, together with environmental considerations and transport and infrastructure modelling. The study also considered an aspirational level of growth, reflecting the ambition of the Suffolk authorities to maximise the economic and quality of life potential of Suffolk; using strategic planning to help drive investment and sustainable development. Possible funding and delivery interventions, including those available to the public sector, were identified too.

The document therefore sets out an ambitious but sustainable growth agenda which capitalises on Suffolk's comparative advantages and helps the authorities prioritise strategic infrastructure projects which can help unlock future development. The final output exists as a non-statutory document in the evidence base for future local plan decision making.

Lessons for the Corridor

The utility in a county-wide Strategic Planning and Infrastructure Framework lies primarily with establishing a consistent cross boundary vision which can be used to manage growth across planning boundaries and beyond the current plan period. This helps ensure that a wide range of infrastructure providers, from strategic road and rail to utilities provision, are aligned to the requirements of planned growth levels and the anticipated funding measures which underpin them. This therefore allows for more pragmatic and less reactionary planning which can span Housing Market and Functional Economic Areas without being restricted by local political boundaries. The SPIF can also help manage the relationship between the heritage and environmental assets with the future growth agenda, creating a spatial distribution which recognises the contributions these assets provide to the local and wider economy, rather than as a localised constraint to growth.

Planning at this scale also helps alleviate the vacuum left from regional planning by supplementing the work of Local Enterprise Partnerships, which in Suffolk consist of the overlapping New Anglia LEP and the Greater Cambridgeshire Greater Peterborough LEP, coinciding with their Strategic Economic Plans and crucially incorporating housing distribution into economic projections.

By incorporating a holistic overview to planning in this way the SPIF prevents each discipline and authority from acting in isolation. Whilst the document does not exist within the formal planning framework, the production and refinement of the document created a productive dialogue between a wide range of actors in a formative process whereby decision-makers interacted and collaborated. There are numerous benefits to bringing everyone to the same table, such as creating more efficient outcomes, but these also extend to delivery with cross-border interaction stimulating investor confidence.

Where could this be applied within the Corridor?

The NIC are looking for initiatives which can help consolidate growth agendas over a large area which incorporates multiple local authorities. The implementation of a Strategic Planning and Infrastructure Framework would allow ambitious cross-boundary projects such as orbital or radial routes to be established. This is because a piece of work with the scope of SPIF allows a high-level blueprint to be established which sets objectives and timelines.

Furthermore, although the SPIF does not allocate specific sites for development, the process can help identify specific growth locations which could be used as part of the Duty to Co-operate dialogue between neighbouring authorities. This can help with individual Local Plan preparations but also help retain long term planning goals beyond non-concurrent preparation processes.

QUEEN ELIZABETH OLYMPIC PARK, LONDON

DEMONSTRATES ACCELERATED HOUSING DELIVERY CAN BE ACHIEVED THROUGH PRIORITISING THE AFFORDABLE HOUSING ELEMENT FOR A LARGER SCHEME.

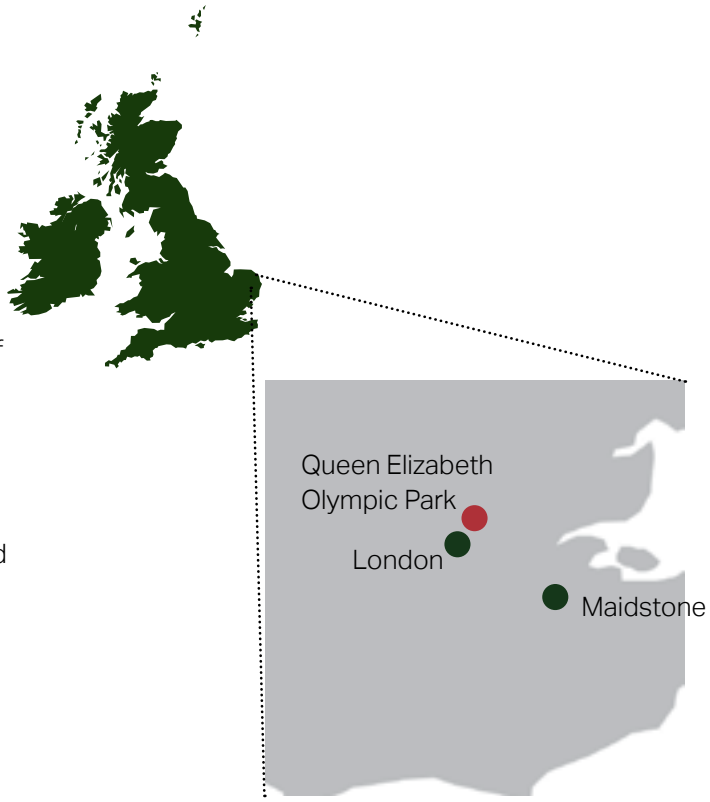
Context

Formed in 2012, the London Legacy Development Corporation aimed to ensure the London 2012 Olympic games were used to create and enhance a new built environment in East London. To do this, LLDC created the Legacy Communities Scheme, a framework which set out plans for the development of new neighbourhoods across the Olympic Park.

LLDC sought to accelerate the creation of East Wick and Sweetwater, a total of 1,600 homes, to be completed by 2023, six years ahead of schedule.

In order to do this, the Legacy Corporation designated a larger number of these homes as 'homes for rent', making them available more quickly and reducing the impact of market saturation, reducing overall prices.

The intention to bring forward delivery of these sites will means that development is now intended to commence in 2015/2016, resulting in completions approximately six years earlier than anticipated by the LCS planning permission and viability assessment. This also reduced the affordable housing target for particular phases, although the site wide target remains unchanged. These units will remain secured as PRS for at least ten years, with future provision dependent on an ongoing development partner selection process.



DEVELOPER NAME

The Legacy Communities Scheme

DEVELOPER TYPE

Olympic Legacy Development

DEVELOPMENT TYPE

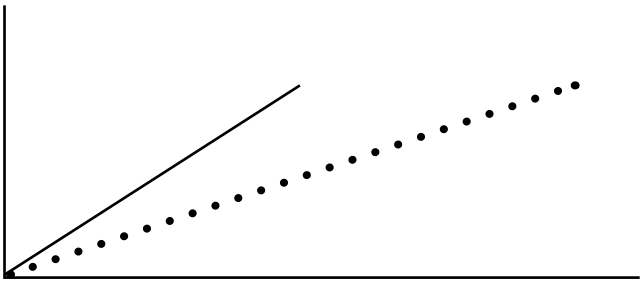
'Neighbourhood' developments

TOTAL HOMES DELIVERED

6,780

HOUSING DELIVERY

1,600 homes completed six years earlier than they otherwise would have been.



PROJECT LIFECYCLE: PRE-PLANNING

MILESTONE 1:

September 2012: Outline planning permission granted

PROJECT LIFECYCLE: POST-PLANNING

MILESTONE 1:

2015: First residents move into Chobham Manor

MILESTONE 2:

2021: Original targeted move in day

MILESTONE 3:

2025: Commitment to retain PRS until 2025, with potential to extend

LESSONS LEARNT:

- Designating a proportion of homes for PRS enables the advanced delivery of homes
- Measures to prevent market saturation can hinder delivery of homes

Queen Elizabeth Olympic Park, London

Context

The Legacy Communities Scheme (LCS) sets out the London Legacy Development Corporation's (Legacy Corporation) proposals for comprehensive, phased mixed use development expected to be implemented between 2013 and 2031. It comprises a total of 763,500sqm of floorspace which includes 641,817sqm of residential floorspace, delivering up 6,780 new homes.

The LCS was granted planning permission on 28 September 2012 subject to conditions and a Section 106 (S106) agreement (LPA ref 11/90621/OUTODA). Chobham Manor, the first neighbourhood on the Park including 850 homes, received its first residents by 2015. Following on from the successful animation of the Park since its opening and to assist in meeting the increased housing targets for London, in 2013 the Mayor of London announced that the Legacy Corporation would bring forward development within the next neighbourhoods of the Park earlier than envisaged in the LCS Planning Permission, to accelerate the delivery of housing within the Queen Elizabeth Olympic Park.

The Legacy Corporation sought to accelerate the creation of the East Wick and Sweetwater neighbourhoods to include 1,600 homes completed and fully occupied by 2023 rather than 2029 as originally planned.

East Wick will be in the north-west of the Park, next to Hackney Wick, framing the edge of the parklands with a primary school and community centre at its heart. The East Wick neighbourhood will provide townhouses, maisonettes, mews, studios and flats. Sweetwater will be in the south-west of the Park, near Old Ford and is set to create studios, flats and family homes with private gardens and communal green space alongside the Lea Navigation canal

Circumstances of development

In order to accelerate the delivery of these properties, the Legacy Corporation will require development partners to provide many more homes for rent in these new neighbourhoods. With a substantial element of the scheme to be designated as homes for rent, homes can be made available more quickly as it takes away the risk of competing against homes for sale in the wider area.

The broad objectives for this second major phase of the LCS are summarised as below:

- Deliver homes, and the appropriate supporting community and commercial uses, at a pace which maintains momentum across the Park and contributes towards meeting London's housing need;
- Provide high quality, accessible, sustainable and well-managed housing on the Park;
- Provide a proportion of private rented sector (PRS) housing, delivered to a high standard of design and management;
- Ensure that the LCS continues to deliver the social, economic and environmental regeneration of the surrounding communities during construction and beyond; and
- Create a vibrant new place that is connected with existing communities in Hackney Wick and Fish Island, as well as emerging communities on the Park.

These objectives produce a number of synergies, for example:

1. The introduction of PRS provides the Legacy Corporation with an opportunity to deliver homes into the market at an accelerated rate. It also will provide a variety of housing stock and choice to support the vision of delivering new homes for London within a fantastic parkland setting and will by its nature, produce a revenue stream whilst retaining a capital value.
2. The Legacy Corporation has an opportunity to develop an asset, on a scale that is attractive to the institutional sector, potentially helping to establish innovative approaches to leveraging public sector land that could support the delivery of housing and support the creation of a new institutional asset class that is an appealing proposition for investors.

The Legacy Corporation firmly believes that bringing forward housing delivery is beneficial in meeting local and regional housing need across all tenures. Accelerating the delivery of LCS housing will particularly assist the London Borough of Tower Hamlets in meeting their London Plan housing target which has been missed over several preceding years.

The intention to bring forward delivery of these sites will mean that development is now intended to commence in 2015/2016 which results in completions approximately six years earlier than anticipated by the LCS planning permission and viability assessment. As set out above the revised phasing of development would reduce viability since the scheme would not have the benefit of six years of house price inflation and the originally assumed benchmark land values for both PDZ4 and PDZ5 would not be achieved. The site wide affordable housing target has a result been dropped by 4% from 35% to 31%, but the minimum site-wide target remains unchanged at 20%. The site-wide family housing target (3 beds+) has been increased from 40% to 42%.

In viability terms the Private Rented Sector (PRS) provides a workable solution to achieve the Legacy Corporation's objectives to accelerate delivery and to create diverse mixed tenure communities. The inclusion of a significant amount of PRS brings the following benefits:

- As a non-competing private residential tenure it enables the delivery of much needed homes to be accelerated without flooding the market with units for sale and putting sales values at risk;
- It is broadly similar in viability terms when compared to a whole private sale scheme which would attract a discount on sales values in order to enable accelerated delivery to account for the extra supply to the market and also reflects the sales risk in developing at such a pace; and
- It encourages accelerated development. It is extremely difficult to enforce accelerated development of private sale flats on a developer as it attracts significant risk which ultimately impacts on the marketability and value of the site. PRS therefore provides a workable solution by introducing a private tenure product that can be marketed alongside private sale without affecting values.
- The introduction of PRS also impacts on land values as the return is lower than that for market sale units.

The units in question will remain as PRS for at least 10 years in line with the Mayor's Housing Covenant (which recommends that PRS is secured). The intention is that the units will be delivered by an institutional investment partner (to be confirmed through the development selection process that is ongoing).

Lessons for the Corridor

The case of the Queen Elizabeth Olympic Park demonstrates accelerated housing delivery can be achieved through prioritising the affordable housing element for a larger scheme in order to provide greater variety of product to the developer market while securing the potential for land value uplift in the future.

In the case of the Queen Elizabeth Olympic Park, the following favourable circumstances applied:

- An original outline planning permission which was segmented by individual delivery zones and therefore capable of being varied without rendering the overall outline permission unworkable;
- A political commitment to accelerated delivery and a facilitating agent (in this case the LLDC) who took the risk to create the pre-conditions for accelerated delivery through securing amendments to the outline permission prior to developer procurement;
- Clear recognition on the part of partner organisations (including the relevant London boroughs) of the need and benefits from accelerated delivery.

While accelerated delivery meant that six years of house price inflation would be sacrificed in terms of overall site viability and development cashflow, the impacts of this were mitigated by the following outcomes:

- As a non-competing private residential tenure it enables the delivery of much needed homes to be accelerated without flooding the market with units for sale and putting sales values at risk;
- Faster delivery of product as PRS does not hold the same risk of marketability and value of the site for developer and provides a workable solution by introducing a private tenure product;
- Holding the product as PRS for 10-years provides a guaranteed rental income over this period and the prospect of a future value 'spike' if and when the units are released onto the open market;
- Introducing an institutional PRS investor into the developer pool widens housing choice and opportunities to access home ownership (especially if 'staircase' arrangements are put in place at the end of the 10 year period).
- PRS product through a PRS investor allows the conditions for longer-lease periods than normal private rented stock, so providing greater short to medium term stability for the tenants.

Where could this be applied within the Corridor?

Within the Corridor, a similar approach could be used to accelerate delivery where:

- There is strong evidence of affordability pressures and/or a high level of demand for rental properties;
- There is a commitment among public sector partners to accelerated growth and a recognition of how it could be delivered through a stronger commitment to Buy-To-Let;
- Sites are larger, meaning a) a lesser impact on viability and b) capable of being sub-divided into specific locations where delivery could be accelerated, as this mechanism need not and indeed should not apply to the whole site;
- Institutional investors (either local or national) have demonstrated or are capable of demonstrating interest in buy-to-rent as a revenue stream;
- The site is in private sector ownership, as this mechanism does not require public-sector landholding to proceed, though of course could also be delivered on public-sector land if necessary;
- LPAs or other authorising organisations are willing to be flexible to accelerate growth, for example in the case of LLDC there was a small drop in the overall proportion of affordable housing and a small change in the proportion of family housing to secure faster development. This kind of outcome was only possible thanks to an open conversation between the LPA and the landowner on viability, despite no publically-available (or 'open-book' approach) to viability.

Quantifying the benefits

As noted above, this mechanism resulted in 1,600 homes being completed six years earlier than they otherwise would have been. Although this is the direct, short term benefit, the mechanism has a longer-term, less quantifiable benefit in increasing the viability and deliverability of the remainder of the site, significantly reducing the chances that the remaining 5,270 dwellings will not be delayed.

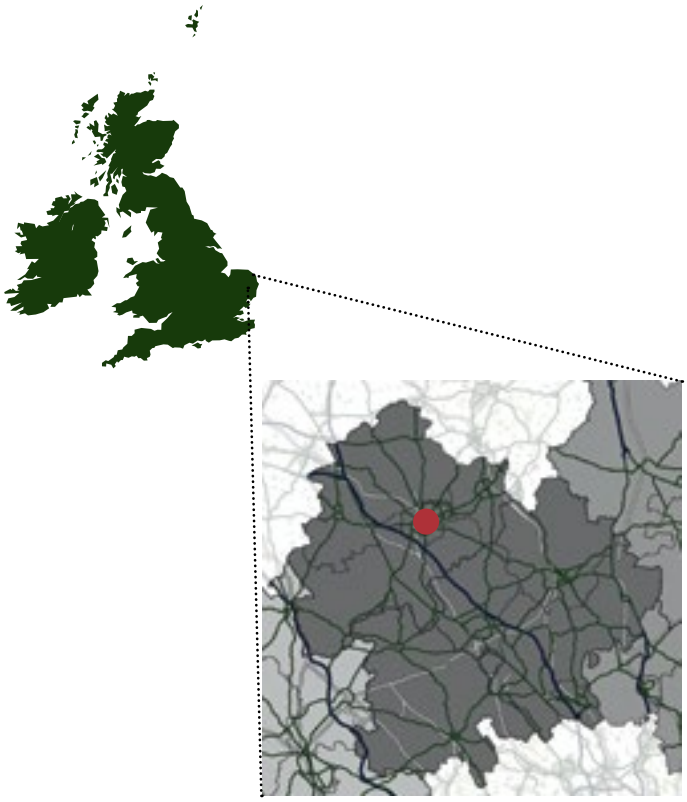
MILTON KEYNES TARIFF

DEMONSTRATES THAT SECTION 106 WAS FLEXIBLE ENOUGH TO DEVELOP A TARIFF PERMITTING CONSISTENT AND CERTAIN INFRASTRUCTURE CONTRIBUTIONS THAT GREATLY ACCELERATED THE SPEED OF DWELLING DELIVERY.

Context

The Milton Keynes tariff was first introduced in 2004. The tariff comprised of a Strategic Land and Infrastructure Contract (SLIC) whereby S106 contributions were standardised into a per dwelling and commercial hectare tariff. This allowed Milton Keynes to capture a proportion of the land value in a simplified manner, reducing potential negotiation delays. These contributions could also be provided 'in kind' with developers constructing key pieces of infrastructure in lieu of monetary payments.

The phasing of the payment structure allowed for developers to pay 25% of their contribution upfront, with the remainder paid upon completion of each dwelling. This had the simultaneous effect of reducing the level of pre-construction cost and increasing the certainty of development finances; preventing unnecessary delays to delivery. This forward funding of infrastructure was made possible through loans via the HCA against the value of the remaining 75% of development receipts.



The implementation of a tariff based system demonstrated the clear ambition and development support from within the Local Planning Authority. Although one factor amongst many, the Milton Keynes tariff contributed to a rate of delivery over 235% the background rate in Milton Keynes.

The Milton Keynes tariff has since been withdrawn due to pooling restrictions on s106 contributions implemented as part of the CIL framework.

DEVELOPER NAME

Multiple developers

DEVELOPMENT TYPE

New Town

TOTAL HOMES DELIVERED

3,172

TOTAL COST

£18,500 per dwelling and £260,000 for each hectare of commercial land developed

HOUSING DELIVERY

2007- 2017 3,172 dwellings completed. This was 235% higher than the background rate.

PROJECT LIFECYCLE: PRE-PLANNING

MILESTONE 1:

January 1967: Milton Keynes designated as a new town

MILESTONE 2:

January 2004: Deputy Prime Minister John Prescott announces the ambition to double the population of Milton Keynes by 2026

MILESTONE 3:

June 2004: Milton Keynes Partnership Committee formed

PROJECT LIFECYCLE: POST-PLANNING

MILESTONE 1:

November 2007: Milton Keynes Urban Development Area Tariff Supplementary Planning Document released

MILESTONE 2:

April 2015: Milton Keynes Tariff ceases to have effect due to CIL legislation.

LESSONS LEARNT:

- Simplifying the S106 contribution process can aid the delivery of homes
- Forward funding of infrastructure enables faster delivery rates, although this was underpinned by central government loans against the development receipt value.

Milton Keynes Tariff

Context

For many years, Milton Keynes was the pre-eminent example in England of a large town that was able to grow rapidly thanks to a pro-growth mindset fostered by the town's history as a new settlement, founded on a greenfield site in the 1960s.

A key factor in Milton Keynes' rapid growth into the 2000s was the Milton Keynes Tariff, a delivery mechanism formulated by Milton Keynes Council (MKC) and first applied in 2004. The tariff, one example of a mechanism known as a Strategic Land and Infrastructure Contract, or SLIC, entailed standardised contributions by dwelling (£18,500 each) and by hectare of commercial land (£260,000) provided by each developer.

The tariff is therefore a relatively simple way of capturing a proportion of the land value accruing to developers as they provide new housing and employment land.

Circumstances of tariff application

The vehicle used for the Tariff was a standard section 106 agreement, which at the time offered great flexibility of application depending on the needs of the individual LPA applying it. In Milton Keynes, payments were allowed to be received 'in kind' where specified infrastructure could be provided by the developer, for example if they owned the land where it was to be provided.

Developers were allowed to pay 75% of the tariff on completion, which exposed them to less cashflow risk. Additionally, a Growth Prospectus was published by the Milton Keynes Partnership (MKP), a sub-committee of English Partnerships that was charged with delivering growth. The Growth Prospectus itemised clearly strategic and local infrastructure requirements by growth area, fulfilling a similar function as the Section 123 list would later do for Community Infrastructure Levy (CIL).

One crucial difference between the tariff and standard s106 negotiations was, therefore, the certainty for developers. This level of certainty in turn sped infrastructure delivery, which was in turn noted by central government. MKC's 'reward' from government for consistent application of the tariff was forward funding of infrastructure via the Homes and Communities Agency against expected tariff receipts (in other words, acting as the 'banker' for the tariff). This funding would likely not have been offered if there had been less certainty about future income streams.

The Milton Keynes Tariff can no longer be levied, as, from April 2015, updated CIL regulations no longer permit more than a total of five Section 106 contributions to be pooled together in the way the Tariff was.

It should be noted that, unlike many other mechanisms for speeding development delivery, the Tariff did not rely on extensive land for development in public sector ownership, working just as well on land controlled by developers and house builders.

Developer contributions were index-linked, collected in phased payments and need not be paid in full until as many as 15 years after permission is implemented, which helps ensure cash flow is not an obstacle to implementation.

Development in the tariff areas performed particularly well in relation to other areas during the significant recession between 2008 and 2010. This is very likely a result of the added certainty provided by the tariff, which, in addition to its other benefits, appears to help ensure development is 'recession-proof'.

Lessons for the corridor

The Milton Keynes Tariff demonstrates that section 106 was flexible enough to develop a tariff permitting consistent and certain infrastructure contributions that greatly accelerated the speed of dwelling delivery. Over the period 2007-2015, when the tariff was in operation, development completions in Milton Keynes were 358% higher than across England as a whole.

In the case of Milton Keynes, the following favourable circumstances applied:

- A 'pro-growth' mindset on the part of the local planning authority;
- Extensive suitable greenfield land, simplifying master planning and increasing certainty on infrastructure costs (though the master planning and costing process to ensure the tariff was set at a level high enough to deliver identified requirements but low enough to be viable were still necessarily intensive);
- A relatively limited number of landowners and developers, shortening the timeframe for buy-in to the Tariff;
- Strong financial support from central government, via the Homes and Communities Agency (at the time, English Partnerships), likely facilitated by English Partnership's long track record of landownership and development at Milton Keynes.

Where could this be applied within the Corridor?

Within the Corridor, a Milton Keynes-style tariff cannot currently be applied due to the pooling restrictions on section 106 contributions. Therefore, legislative change would be needed before it could be re-introduced. If and when this happens, the tariff could be used in a wide range of locations across the corridor; compared to many other interventions it is relatively spatially insensitive. It could be applied:

- irrespective of whether or not there are extensive public sector landholdings;
- in locations with multiple landowners, though common sense indicates that for viability reasons the ideal scenario is probably one with a range of larger landowners;
- as part of a deal (whether a City Deal or otherwise) whereby the HCA or another arm of government can provide significant upfront infrastructure funding to unlock development as a quid pro quo for the certainty of a future income stream from receipts
- even on some smaller sites, as it was shown to be viable for sites as small as ten dwellings or one hectare;

Quantifying the benefits

The tariff first came into operation in 2007 and applies to 1,317 hectares of land within Milton Keynes. Between 2007 and 2017, Milton Keynes completed around 9,000 dwellings in the city but outside the tariff area (approximately 8,750 hectares), giving a development density rate of 1.02 dwelling completions per hectare over this period. However, within the tariffed areas over the same period, 3,172 dwellings were completed on 1,317 hectares, a rate of 2.4 completions per hectare, in other words the development rate was 235% higher than the background rate in comparable parts of Milton Keynes; and the background rate was itself significantly higher than the England average.

NORTHSTOWE, CAMBRIDGESHIRE

A NEW TOWN 8KM NORTHWEST OF CAMBRIDGE. LOCATED ON A DECOMMISSIONED AIRBASE, THE SITE IS BEING PROMOTED BY HCA AND GALLAGHER ESTATES.

Context

The site and the associated disused railway conversion to rapid transit line were adopted in the 2003 Cambridgeshire Structure Plan as well as the 2006/7 South Cambridgeshire Core Strategy. The Northstowe Area Action Plan was adopted in 2007.

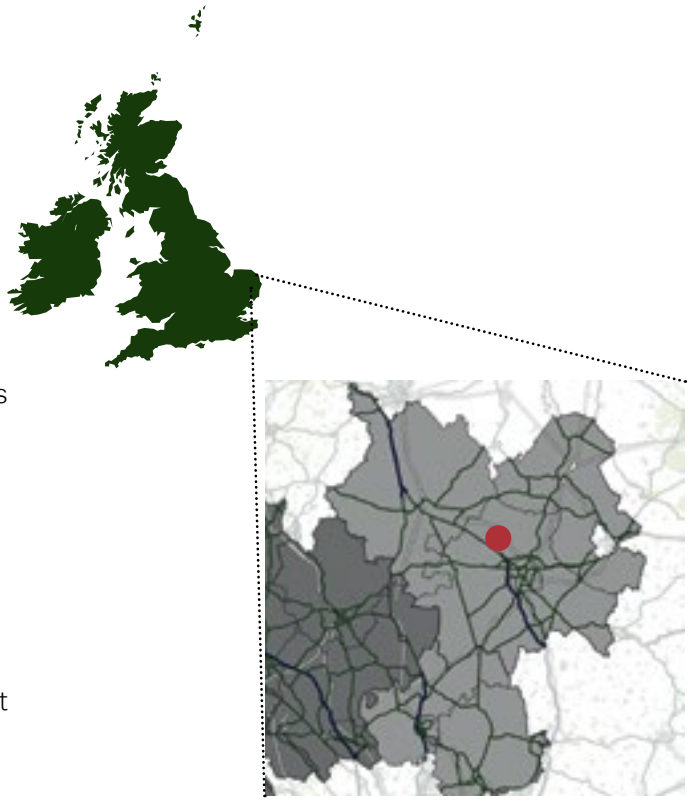
The original outline application for 8000 homes was submitted by Gallagher Estates in 2005 but then withdrawn in 2007. A further application for 9500 homes was submitted jointly with English Partnerships (now disbanded) in 2007. This was left undetermined and stalled in the economic downturn.

Upon handover to the HCA in 2009/10, the process was restarted, boosted by Northstowe successfully reaching the second stage of Eco-Town Demostrator Projects.

In 2012, the Northstowe Development Framework was approved and adopted for the entire development site, including the airfield and surrounding areas.

The Phase 1 outline application for the initial 1500 homes was submitted and approved in 2014 for land adjacent to the decommissioned airfield. This phase will also include a primary school, road improvements, local centre and community facilities. A further £30 million was also secured through legal agreements. Work began in 2015.

A Phase 2 outline application for 3500 homes on the airfield site was granted permission in principle in 2015.



DEVELOPER NAME

HCA and Gallagher Estates

DEVELOPER TYPE

Joint promotion between the HCA (an executive non-departmental public body, sponsored by the Department for Communities and Local Government) and Gallagher Estates a private firm.

DEVELOPMENT TYPE

New Town development

TOTAL HOMES DELIVERED

9,500-10,000 total, with work underway for Phase 1 of 3,500

PROJECT LIFECYCLE: PRE-PLANNING

MILESTONE 1:

2003: Northstowe allocated in structure plan

MILESTONE 2:

2005: Outline application submitted for Northstowe

MILESTONE 3:

2007: Northstowe Area Action Plan adopted

MILESTONE 4:

2008: Site transferred to the HCA

MILESTONE 5:

2012: Phase 1 Application submitted

PROJECT LIFECYCLE: POST-PLANNING

MILESTONE 1:

April 2014: Planning Permission granted for Phase 1

MILESTONE 2:

2017/8: Highways Improvements implemented

MILESTONE 3:

2018: Secondary School scheduled to open

Northstowe, Cambridgeshire

Context

Northstowe is a new town development located on the decommissioned Oakington Airfield, around 8km northwest from Cambridge. Over the sites lifetime it has acted as a post-war airfield, army base as well as an immigration centre. In 2008, the site was handed to the Homes and Communities Agency to be prepared for redevelopment.

Northstowe is intended to be an example of sustainable design, encouraging the use of public and active transport options while maintaining a locally distinctive characteristic. Promoted by Gallagher Estates and the HCA in partnership the new town will be delivered in a phased approach, with the outline application for the first stage of development approved in principle in 2015. Although a delayed delivery, the necessary works for the first 3,500 homes are underway.

Circumstances of development

The site was adopted in the 2003 Cambridgeshire Structure Plan, as well as the 2006/7 South Cambridgeshire Core Strategy and the Northstowe Area Action Plan. As part of this redevelopment and the commitment to more sustainable development the site is intended to be connected via a new rapid transit system making use of the disused St Ives and Cambridge rail line, this was adopted in the 2003 and 2006/7 plans as well.

The original outline application was submitted by Gallagher Estates for 8000 homes in 2005 but was withdrawn in December 2007. Outline application was jointly submitted by Gallagher and the then English Partnerships (now disbanded) in 2007 for approx. 9500 homes. However this was undetermined by South Cambridgeshire District Council which when combined with the economic downturn resulted in the development stalled. HCA restarted the process again when it took over the ex-MoD site in 2009/10, bringing the site forward as joint promoters with Gallagher.

In 2010 Northstowe, now in the second round of identified eco-towns was awarded £365,000 to fund studies and a capital grant of £1,135,000 for two Eco-Town Demonstrator Projects. The government funding was intended to investigate sustainable energy technology and an exhibition space at the Guided Park and Ride site (RTS).

The Northstowe Area Action Plan had originally stated that there would be the delivery of 4,800 homes by 2016 but none have been completed. The reasons for this include the recession but also a widespread recognition that the land disposal process to the private sector housebuilders was at too slow a speed, too limited a volume and at too high a price (likely influenced by the agenda of public section cost savings and value maximisation following the election of the 2010 Coalition government and its agenda of austerity).

The Northstowe Development Framework was approved and adopted in 2012 for the whole Northstowe site – the airfield and surrounding areas. The outline application for housing development submitted in 2014 to Gallagher for land adjacent to the original airfield site for phase 1 of development was granted permission. This is to include 1500 homes, a primary school, road improvements, local centre and community facilities and £30million for further community facilities through legal agreements. Work began in 2015.

2015 – outline consent was granted in principle for the development of 3,500 homes on the airfield site including a town centre, 3 schools, a new road link to the Guided Busway (RTS), as well as a further £73million for community facilities. Housing mix in phase 2 to include 40% as starter homes and 10% affordable rented properties.

Lessons for the corridor

In the case of the Northstowe development, the following circumstances applied:

- The site is being delivered through a joint promotion including the HCA (English Partnerships before it disbanded) which gives the development a level of certainty and political support. However, the HCA inadvertently slowed development by offering the land to the private sector at too limited a volume and too high a price.
- The development has been identified and adopted in the both the Cambridgeshire Structure Plan (County Council) and the South Cambridge Core Strategy (District Council) giving the development support from both tiers of local authority. As well as this both the AAP and Development Framework for the whole site have also both been approved and adopted.
- The development delivery timeline suffered as a result of the economic downturn as well as the undetermined decision from South Cambridge DC on the original outline application.
- The overall development timeline has been long and slow in part caused by the delays mentioned taking around 12 years for works to begin on site. However, the first phase is underway.
- Reaching the second round of the Eco-Town identification process and receiving government funding provides political support and public interest in the new town development.
- Planning and developing a new town around a dedicated public transport system that redevelops existing transport infrastructure supports a more sustainable transport offer and prevents the development being completely reliant on cars strengthening the towns offer.
- A strong council position has resulted in substantial contributions secured through legal agreements which can be put towards the delivery of community facilities.

Where could this be applied within the Corridor?

Within the Corridor, a similar approach could be used to deliver new garden towns, but this would likely only work in locations where:

- There is a single or few large landholdings coming together to deliver a single development, in particular bodies such as the HCA
- There is support from the Local Authority or indeed Central Government for a large scale development written into plans, where the site is not already identified in a desire to support
- There is currently or potential for a public transport system connecting the development to larger settlements
- The developer is more resilient to market fluctuations, ensuring that projects will be delivered and to the standard that was initially intended.

Quantifying the benefits

As no dwelling completions had occurred as of late 2016 at Northstowe, it is not possible to quantify the benefits. However, in South Cambridgeshire's most recent Annual Monitoring Report, the development is earmarked to deliver an additional 10,000 dwellings over and above the 4,625 allocated on other sites, thus a 216% uplift.

WICHELSTOWE URBAN EXTENSION, SWINDON

DEMONSTRATES THAT A LACK OF EARLY COMMITMENT TO UP-FRONT INFRASTRUCTURE FUNDING CAN BE A SIGNIFICANT BARRIER TO URBAN EXTENSION-SCALE DEVELOPMENT.

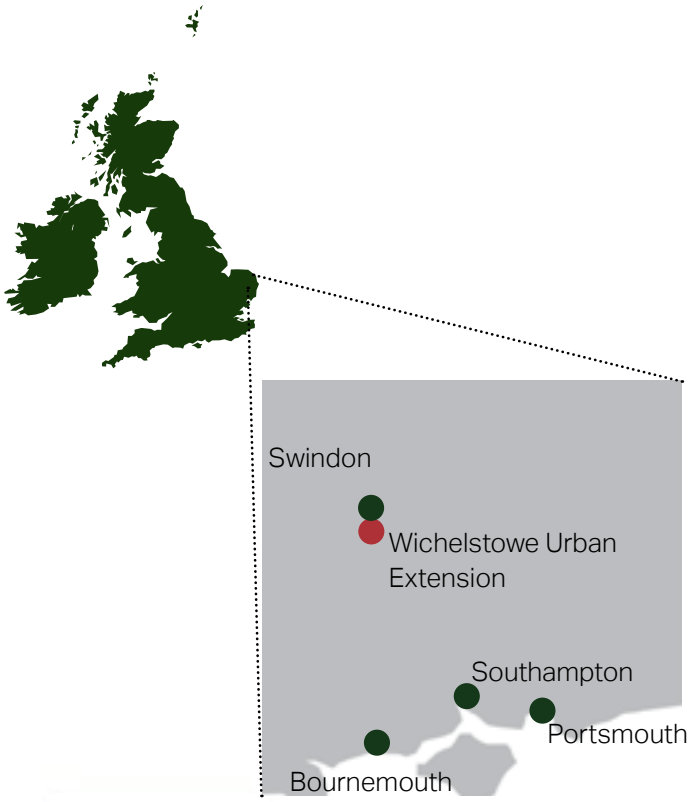
Context

Wichelstowe is an urban extension to the south of Swindon. The 310 hectare site was first proposed in the late 1990's but the first masterplan was unveiled in 2005 and was subsequently deemed unviable. A revised masterplan was submitted in 2012 with much less supporting infrastructure in an attempt to encourage developer appetite, although concerns over deliverability remained.

Swindon Borough Council obtained funding from central government to forward fund infrastructure under the Local Growth deal, including improvements to Junction 16 on the M4, and a new access road connecting the proposed development with the opposite side of the motor way.

Swindon Borough Council, as the land owner, entered into a joint venture with a house builder to cover the cost of infrastructure within the development. This had the dual benefit of increasing certainty and financial security for Taylor Wimpey whilst simultaneously reducing associated costs for the Council.

Whilst the development did eventually come forward, this was dependent on central government loans to help increase potential developer's perception of the site's viability. As a result, although significant barriers were circumvented, this required external support alongside the Local Planning Authority's targeted intervention.



DEVELOPER NAME

Swindon Borough Council and Taylor Wimpey

DEVELOPER TYPE

Joint Venture

DEVELOPMENT TYPE

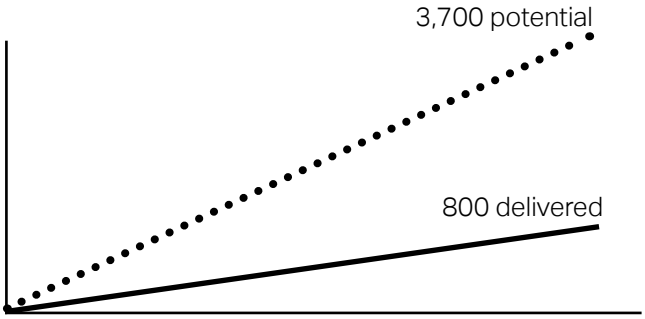
Urban Extension

TOTAL HOMES DELIVERED

800, although potential for 4,500 over the same period

HOUSING DELIVERY

80 homes per annum (2007-2017)



PROJECT LIFECYCLE: PRE-PLANNING

MILESTONE 1:

Late 1990's: Wichelstowe Urban Extension first proposed

MILESTONE 2:

2005 first masterplan submitted but rejected on viability concerns

MILESTONE 3:

2012: Revised masterplan submitted, but rejected by developers as unviable.

MILESTONE 4:

2015: Local Growth funding awarded

PROJECT LIFECYCLE: POST-PLANNING

MILESTONE 1:

2008: Work on East Wichel commenced

MILESTONE 2:

April 2009: First home in East Wichel occupied

MILESTONE 3:

July 2011: East Wichel Community Primary School opened

MILESTONE 4:

April 2014: Waitrose opens

Wichelstowe urban extension, Swindon

Context

Wichelstowe is a major mixed-use urban extension south of Swindon of around 310 hectares that was first proposed in the late 1990s but where construction is on-going as of 2017. The development is a good case study of both the barriers that hold back major development and the levers that can be applied to unlock it.

A 2005 masterplan intended to result in rapid delivery had to be substantially revised because its proposals were unviable due to infrastructure costs. This resulted in a revised masterplan being adopted in 2012, which entailed significantly less ambitious supporting infrastructure in an attempt to improve viability. However, developers maintained that even the 2012 masterplan remained unviable. In response, Swindon Borough Council (SBC) obtained funding from central government under the Local Growth Deal and the Growing Places Infrastructure fund for transport improvements.

As such, residential development is now proceeding, alongside local centres, primary and secondary schools, open space, community facilities, an outstanding 12.5 hectare employment allocation for an advanced technology park and low carbon R and D facilities.

Circumstances of development

A combination of the government funding for key transport improvements (an upgrade to M4 Junction 16 and an access road connecting two parts of the development on either side of the motorway) and the Borough Council's securing of a new Waitrose store as the anchor for the new extension created a critical tipping point, giving a lever for development. SBC state that although they are grateful for the central government funding that eventually unlocked Wichelstowe, it took several years to secure, and would not have been enough on its own. It was the provision of the Waitrose that neutralised concerns over viability, by providing the confidence that there was a demand for higher-value housing in the area.

The original landowner in the area was SBC but due to the costs of infrastructure provision, it was not able to dispose serviced plots to the house builder market, as financial analysis showed that the receipts from the land, even including hope value, would have been insufficient to cover infrastructure costs.

As such, SBC decided to enter into a joint venture (JV) with a house builder. The great advantage of the JV was that it de-risked development for both parties. SBC provided land, the house builder committed to paying for on-site infrastructure, and both parties shared the costs of strategic infrastructure, though as noted previously, these costs were reduced from what they otherwise would have been through Government funding commitment.

The approach of a JV thus increased viability and certainty for the house builder at the same time as reducing costs for SBC.

Lessons for the corridor

The case of Wichelstowe demonstrates that a lack of early commitment to up-front infrastructure funding is a significant barrier to urban extension-scale development. However, it also demonstrates that targeted, site-specific actions on the part of LPAs can significantly increase market perceptions of viability.

In the case of Wichelstowe, the following favourable circumstances applied:

- A clear understanding on the part of the Borough Council of the targeted actions that would enhance developer perceptions of site viability (in this case, securing a new Waitrose);
- Wichelstowe's excellent transport connections, with a direct link to the nearby M4 motorway, a new Park and Ride site and an express bus link to Swindon town centre;
- Extensive public-sector owned land;
- A willingness on the part of both the Council and a house builder to enter into a Joint Vehicle arrangement.

Where could this be applied within the Corridor?

Within the Corridor, a similar approach could be used to deliver urban extensions where:

- Government or other relevant parties are able to commit early and unconditionally to up-front infrastructure funding, as the example of Wichelstowe shows that the JV alone, though a necessary pre-condition for unlocking development, was not on its own sufficient;
- There is significant public-sector owned land, as otherwise the LPA does not have significant enough leverage over the pace at which development is unlocked;
- land for large-scale urban extensions has been identified and is available, meaning this approach is less likely to work for cities constrained by Green Belt designations but could be more suitable for places like Milton Keynes, Northampton, Bedford and Aylesbury;
- An LPA is able to intervene proactively, in a cost-effective way, to improve market perceptions and enhance development viability in locations historically associated with a lower-quality housing offer. In the case of Wichelstowe, this involved securing a Waitrose but in other locations this could include, for example, environmental improvements, securing funding for new schools, leisure facilities or a commitment to a step change in urban design quality, as happened at the similar New Hall development in Harlow, Essex.
- There is good accessibility and connectivity; in the case of Wichelstowe this was provided by the M4 and the development's proximity to Swindon Town Centre, but in other locations, rail access could be a key element.

Quantifying the benefits

Between 2007 and 2017, Government statistics show a total of 8,430 dwellings were completed in Swindon; over this time period, and included in this figure, 800 dwellings were completed at Wichelstowe, comprising the eastern area only. If infrastructure funding commitments that were eventually secured had been in place earlier, then the whole of Wichelstowe could have been developed in this time period, namely 3,700 additional dwellings in central and western parts of the site. This would have equated to a potential completions uplift over this ten-year period of 44%.

CENTRAL BEDFORDSHIRE AND LUTON

DEMONSTRATES HOW A SINGLE SITE CAN UNDERMINE AN ENTIRE LOCAL PLAN THROUGH PERCEIVED FAILINGS IN THE DUTY TO CO-OPERATE.

Context

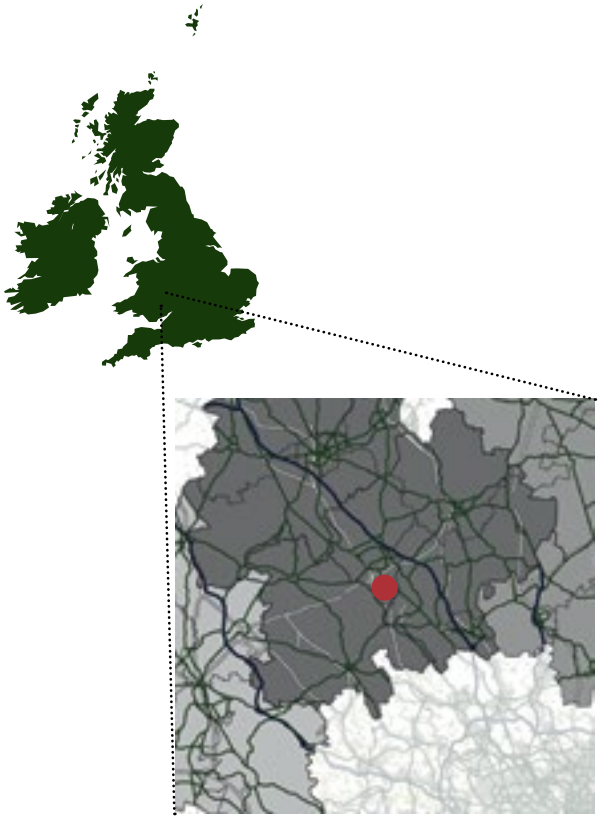
Central Bedfordshire was created from the merger of Mid Bedfordshire and South Bedfordshire District Councils on 1st April 2009. Nearby Luton is a densely populated town surrounded by Green Belt and the Chilterns Area of Outstanding Beauty, and shares approximately 80% of its boundary with Central Bedfordshire.

The October 2015 update of the Strategic Housing Market Assessment for Luton and Central Bedfordshire identified a need for 17,800 additional dwellings within Luton for the period 2011-2031. Luton's own capacity estimates at this time identified capacity for approximately 6,000 dwellings in Luton over the same period.

Site HRN1, shown with Luton's boundary depicted in red, was allocated and given planning permission by Central Bedfordshire in June 2014. The site comprises 262 hectares of Green Belt land for release. The two authorities disagreed over the delivery of affordable housing on the site, with Central Bedfordshire citing viability issues and Luton asking for retail provision on the site to be reduced.

The Development Strategy, which was the main development plan for the Central Bedfordshire, was formally withdrawn by the Council on 19th November 2015. This followed the Inspector's recommendations from February 2014 which found that the Council had failed in its Duty to Cooperate, with particular regard to Luton's unmet housing need.

This was subsequently appealed, with Central Bedfordshire arguing that the Inspector conflated the test for the duty to cooperate with the test of soundness. They also argued the margin of appreciation given by inspectors when determining whether a local authority has complied with the duty to cooperate were not applied. Both of these grounds were dismissed and Central Bedfordshire began work on a new Local Plan, launched in February 2016.



DISPUTE TIMELINE

MILESTONE 1:

April 2009: Central Bedfordshire established as Unitary Authority

MILESTONE 2:

June 2014: Site HRN1 given planning permission

MILESTONE 3:

July 2014: Luton Borough Council file a claim for judicial review.

MILESTONE 4:

October 2014 Central Bedfordshire submitted its Local Plan for examination by the Secretary of State

MILESTONE 5:

February 2015 Inspector letter rules Central Bedfordshire have not complied with the Duty to Cooperate

MILESTONE 6:

February 2016 a new Central Bedfordshire Local Plan was launched.

BUCHANAN QUARTER, GLASGOW

THE DEVELOPMENT OF A MAJOR MIXED-USE DEVELOPMENT AND SURROUNDING PUBLIC REALM AND INFRASTRUCTURE, FUNDED BY THE NEW MECHANISM OF TAX INCREMENT FINANCING (TIF).

Planning context

Buchanan Quarter consists of a major new retail and leisure mixed-use extension in Glasgow City Centre, including major improvements to the public realm and infrastructure. The Scottish Government funded this new development by Tax Increment Financing (TIF). This helped facilitate development by borrowing against projected increases in local tax revenues generated as a consequence of the development.

The case of Buchanan Quarter demonstrated that an innovative but straightforward approach to assessing the economic impact of a new development facilitated the use of TIF as a mechanism to accelerate development in Glasgow.

Within the corridor, TIF is best applied to locations such as Milton Keynes with the highest market perceptions of future growth, as well as having land for large-scale development already being identified and available. TIF has the potential to accelerate development across many parts of the Corridor where growth has historically been, and continues to be, constrained through a lack of infrastructure investment.

DEVELOPER NAME

Land Securities

DEVELOPER TYPE

Property Developer

DEVELOPMENT TYPE

Regeneration

Commercial

TOTAL RETAIL SPACE CREATED

65,000sq m

TOTAL COST

£300 million

PHASING DELIVERY PROJECTED

Phase 1 completion: June 2014

Phase 2 & 3 completion: October 2015

PROJECT LIFECYCLE: PRE-PLANNING

MILESTONE 1:

2012 Scottish Government approved TIF

MILESTONE 2:

November 2014 Application received & validated

MILESTONE 3:

January 2015 Application Granted

PROJECT LIFECYCLE: POST-PLANNING

MILESTONE 1:

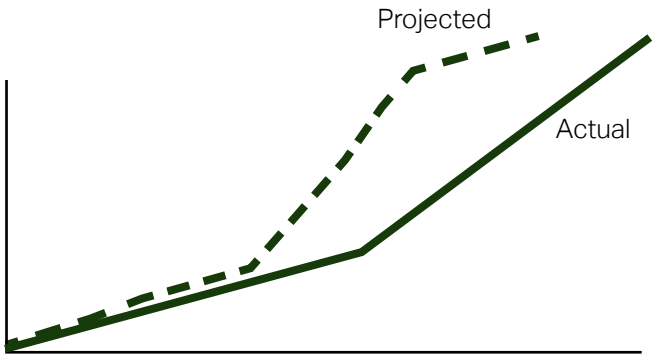
Phase 1 (March 2013- June 2014)

MILESTONE 2:

Phase 2 (March 2013- October 2015)

MILESTONE 3:

Phase 3 (June 2014 - October 2015)



Buchanan Quarter, Glasgow

Context

In 2012, the Scottish Government approved Tax Increment Financing (TIF) as a mechanism to fund the redevelopment of the Buchanan Quarter in central Glasgow.

Buchanan Quarter consists of a major new retail and leisure led mixed-use extension to the existing Buchanan Galleries together with substantial improvements to the surrounding public realm and infrastructure. This includes improved access to Queen Street Station and Glasgow Royal Concert Hall, introduction/improvement of pedestrianised areas and installation of public art.

TIF is a funding mechanism to facilitate development by borrowing against projected increases in local tax revenues generated as a consequence of the development. TIF works on the principle that the supply of new or improved infrastructure can lead to new development and to an increase in the value of surrounding property, both of which serve to increase the level of property taxation in the area. Financing debt issued to pay for the project by utilising increased tax revenues may be over a long term time period of 25 years. This approach is well established in the USA and is being taken forward by the Scottish Government as a means of meeting infrastructure costs associated with the delivery of regeneration projects.

Developing the case for TIF as a funding mechanism

The development of the case for using TIF relied on the economic impact arising from redevelopment in terms of employment and floorspace creation. In calculating this impact, economists took so-called 'catalytic impacts' into account, alongside consideration of conventional multiplier and displacement effects. Catalytic impacts relate to the ability of the scheme to trigger other development and economic growth by creating an augmented environment for regeneration, growth and investment. For example, the sequence of separate but collectively powerful investments in Birmingham city centre over the last 20-30 years comprise catalytic impacts.

The case for TIF relied on impact assessment of data, including retail demand studies, other literature review and stakeholder consultations at different geographies and over the short, medium and long terms. This enabled an estimate of 30% floorspace displacement to use for TIF income estimations in the short-term, reducing further in the long term. Over the long term, the scheme's Gross Value Added (GVA) was estimated at around £177 million per annum.

Lessons for the corridor

The case of Buchanan Quarter demonstrates that an innovative but straightforward approach to assessing the economic impact of a new development facilitates the use of TIF as a mechanism to accelerate development. Making the case for TIF allows local planning authorities to borrow significant sums of money with the aim of levering in additional private finance many times larger than the original public sector loan.

In the case of Buchanan Quarter, the following favourable circumstances applied:

- A commitment by Glasgow City Centre to an innovative way of financing development that allowed the scheme to go ahead despite challenging economic circumstances (the scheme was approved in the period of slow growth immediately following the 2009-10 global recession;
- An innovative approach to economic impact analysis that enabled the full value of the scheme to be understood across multiple geographies and timescales, which bolstered the case for the scale of borrowing on the part of the City Council and leveraged more private investment;
- An understanding on the part of the Scottish Government of the benefits of TIF as a mechanism, based on case studies of successful application at scale overseas (in Albuquerque, New Mexico, for example, TIF is being used to fund an urban extension with an end population of 100,000); and
- A positive assessment on the part of politicians at both LPA and national level to commit of future levels of growth and demand within Glasgow City Centre over the long term.

Where could this be applied within the Corridor?

Within the Corridor, a similar approach could be used to deliver development and supporting infrastructure where:

- Expectations of future tax income are positive, meaning TIF is best applied in locations such as Milton Keynes with the highest market perceptions of future growth
- Land for large-scale development has been identified and is available, meaning this approach is less likely to work for cities constrained by Green Belt designations but could be more suitable for places like Milton Keynes, Northampton, Bedford and Aylesbury;
- National and local government are able and willing to commit to TIF as a mechanism, understanding, for example, the difference between TIF and local business rate retention (LBBR) which has the potential to work at cross-purposes with it, meaning a defined zone within which TIF alone applies may need to be designated;
- A detailed and comprehensive assessment of development impact capturing catalytic impacts alongside more standard approaches can be carried out, that makes a strong enough financial case to unlock significant public sector loans and engender a requisite level of confidence among private investors of expected future tax streams

Quantifying the benefits

In theory, the benefits of TIF as a delivery mechanism are extremely significant. It has the potential to accelerate development across many parts of the Corridor where growth has historically been, and continues to be constrained, through a lack of infrastructure investment. Based on the assessed extent to which infrastructure constraints are cited as a barrier to housing growth, it is estimated that large-scale application of TIF could unlock thousands of houses and hundreds of hectares of employment land across the corridor; examples from overseas demonstrate that, given the right political and investment climate, there is no theoretical limit on the scale of schemes that could be financed through TIF.

COTTENHAM, SOUTH CAMBRIDGESHIRE

A PARISH COUNCIL CHALLENGING CONVENTIONAL WISPOM THAT COMMUNITY OPPOSITION TO GREEN BELT RELEASE IS A CONSTANT.

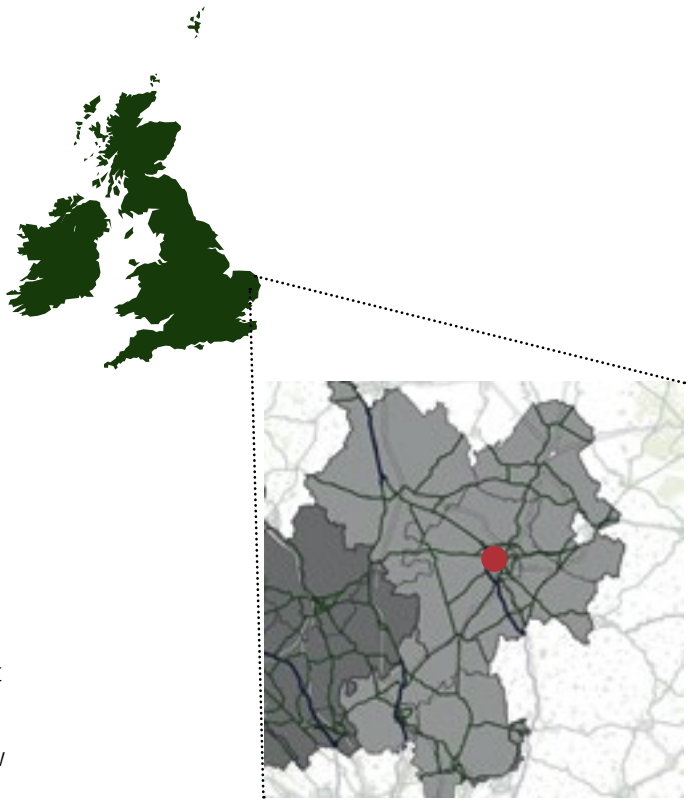
Context

The 2011 Localism Act introduced Neighbouring Planning, allowing parishes, town councils or neighbourhood forums across England to develop and adopt legally binding development plans for their neighbourhood areas. Neighbourhood plans can identify and allocate sites for new development including housing, employment, business use, leisure and other forms of development. They can also protect and safeguard land for future uses such as open space.

Cottenham Parish Council decided to take a positive approach to address housing development within the village through allocating sites for development. This was supported by the Local Planning Authority, who agreed not to allocate sites within the village, instead providing Cottenham with a dwellings target and allowing the Neighbourhood Plan to allocate sufficient land to meet the target.

However, even though the Neighbourhood Plan is now at an advanced stage, the allocation of land is being hampered by the Cambridge Green Belt. National policy is still very far from the point of permitting neighbourhood planning to make even minor amendments to Green Belt boundaries, even where there is local support to do so.

Minor adjustments to Green Belt policy could reflect the fact that some communities want the power to make small-scale alterations to Green Belt boundaries.



AUTHORITY NAME

Cottenham Parish Council

AUTHORITY TYPE

Neighbouring Planning Group

DEVELOPMENT TYPE

Site Allocation

Residential

PROJECT LIFECYCLE

MILESTONE 1:

November 2015 Cottenham approved as a Neighbourhood Area

MILESTONE 2:

May 2017 Site Assessment conducted

MILESTONE 3:

May 2017 Pre-Submission Draft Released

Cottenham, South Cambridgeshire

Context

Cottenham is an attractive village about four miles north of Cambridge, with significant housing demand and affordability pressures as a result of the overheated housing market within the Greater Cambridge area generally and specifically due to the village's accessibility to central Cambridge.

The Parish Council decided to take a positive approach to addressing housing development in the village by developing a neighbourhood plan that allocated sites for development. South Cambridgeshire District Council, as local planning authority, agreed not to allocate sites in the village, instead providing Cottenham with a dwellings target and allowing the Neighbourhood Plan to allocate sufficient land to meet that target.

The Neighbourhood Plan is now at an advanced stage but allocation and development of land is delayed by the Cambridge Green Belt, which extends onto land immediately south of the village. Though the NPPF allows Community Right to Build Orders on Green Belt land, and the Housing White Paper proposes further amendments to permit Neighbourhood Development Orders on Green Belt land, such development needs to be 'not inappropriate' for the Green Belt and as such, differs very little from standard planning permissions for recognised Green Belt development such as sports pitches.

In other words, national policy is still very far from the point of permitting neighbourhood planning to make even minor amendments to Green Belt boundaries, even where there is local support for doing so.

The Green Belt as a barrier to development delivery

The parish council was keen for the sites allocated to be within walking distance of village centre services, shops and facilities. This would result in a sustainable pattern of development, discouraging excessive reliance on the private car as a means of transport and thus reducing carbon emissions.

Several of the most suitable sites for development, which are located very close to the village centre, are of low existing environmental quality and have limited heritage impact and no flood risk. However, because they are located in the Green Belt, they cannot be allocated for development unless the Green Belt boundary is reviewed through the South Cambridgeshire Local Plan process. This would take several years, and would need to go through a Local Plan Examination in Public, where exceptional circumstances would need to be demonstrated, because a new Local Plan that does not release the Green Belt in question is on the point of being adopted.

The highly inflexible approach to Green Belt in national planning policy is predicated on the perhaps outdated assumption that any changes would be politically toxic. There is an implicit assumption on the part of Government that communities living in or near Green Belt, without exception, wish it to be protected from development on a permanent basis. The example of Cottenham shows clearly that there are circumstances where this is simply not the case.

In particular, with the advent of neighbourhood planning, many communities are beginning to better understand and appreciate the benefits of new development and in this context there could be the potential for Green Belt policy to be made more flexible and responsive to the intense need for housing and infrastructure.

Cottenham are lobbying for a more pragmatic approach to Green Belt, where, if it can be demonstrated that the local community would support selective release, a limited proportion of Green Belt could be released through neighbourhood plans to meet evidenced housing and infrastructure need rather than always having to be done infrequently through the Local Plan process. AECOM is aware of other neighbourhoods in Green Belts across England, with a similar preferred approach to Cottenham. In some cases, such villages, unlike Cottenham, are entirely surrounded by Green Belt, meaning the delivery of much-needed housing and local infrastructure is even more constrained.

It should be noted that such an approach would be likely to enjoy political support from communities currently near to but outside the Green Belt that are currently more attractive to developers as a result of the inflexibility of Green Belt policy elsewhere, despite performing more poorly in terms of sustainable location than other settlements where Green Belt is a major constraint. To give an example from within the Corridor, in Central Bedfordshire, Dunstable, Leighton Buzzard and Flitwick are all highly sustainable locations for growth given their public transport connections and their range of services and facilities. However, as all are constrained by the Metropolitan Green Belt (here, a full forty miles away from London), development is being channelled to less sustainable, more poorly-connected smaller settlements outside the Green Belt such as Silsoe and Shefford.

Lessons for the corridor

The case of Cottenham demonstrates that in an era of neighbourhood planning, which has helped foster more positive attitudes to development on the part of many local communities, the inflexibility of Green Belt policy is a significant barrier to meeting local housing and infrastructure requirements. Minor adjustments to Green Belt policy could reflect the fact that some communities want the power to make small-scale alterations to Green Belt boundaries. Where a village in the Green Belt wanted to allocate sites but preferred not to do so by amending Green Belt boundaries, that option would be open to it.

It is important to state that the case of Cottenham does not demonstrate a case for wholesale change or cancellation of existing Green Belt policy. Rather, it demonstrates the potential for a more pragmatic approach in the following circumstances:

- Clear evidence in the shape of the neighbourhood plan or other consultation process that a local community feels identified housing and infrastructure requirements outweigh the benefits of retaining selected land as Green Belt;
- Where such needs are identified at a time when a Local Plan Review is many years distant and/or the LPA has indicated a political unwillingness to review boundaries itself;
- Where release of selected Green Belt parcels would not compromise the purposes of remaining Green Belt land in national policy;
- Where the Green Belt land to be released is well-located for sustainable forms of development and/or other environmental constraints do not apply;
- Where there is a demonstrable and widely-accepted need for new housing and infrastructure across a wide area, such as in the Oxford-Cambridge Corridor; in this way, the Corridor could act as a pilot area for such a policy amendment if the Government were politically nervous about rolling it out nationally.

Where could this be applied within the Corridor?

Within the Corridor, a similar approach could be used to deliver development where the above circumstances apply:

- Within neighbourhood plan areas containing land within or adjacent to the Oxford Green Belt
- Within neighbourhood plan areas containing land within or adjacent to the Cambridge Green Belt
- Within neighbourhood plan areas with land within or adjacent to the Metropolitan Green Belt, which within the Corridor covers much of Central Bedfordshire and North Hertfordshire

Quantifying the benefits

DCLG advises that around half of all neighbourhood plans are allocating sites for development, which demonstrates the way in which the neighbourhood planning process is encouraging a more positive attitude to growth than perhaps was assumed previously. Across England, as of June 2017, 2,103 neighbourhood plan areas have been designated, meaning roughly 1,050 will allocate sites, with this set to increase in future.

A change to neighbourhood planning policy, if applied across England could provide the opportunity for an estimated 300 neighbourhood plans to make minor amendments to Green Belt boundaries, based on assumptions of the proportion of the 2,103 neighbourhood plans adopted or in progress across England that have Green Belt land within their area.

Although the quantitative scale of the intervention may be smaller than other potential levers in terms of development delivered, its qualitative impact would be significant. It would send a positive signal to developers and planners that the Government is serious about accelerating housing and infrastructure growth within the Corridor and this would in turn create a more pro-growth climate, providing greater certainty for investors and developers more generally after many years of restrictive policy contributing to under-delivery and braking economic growth.

STRATEGIC GROWTH AND INFRASTRUCTURE FRAMEWORKS

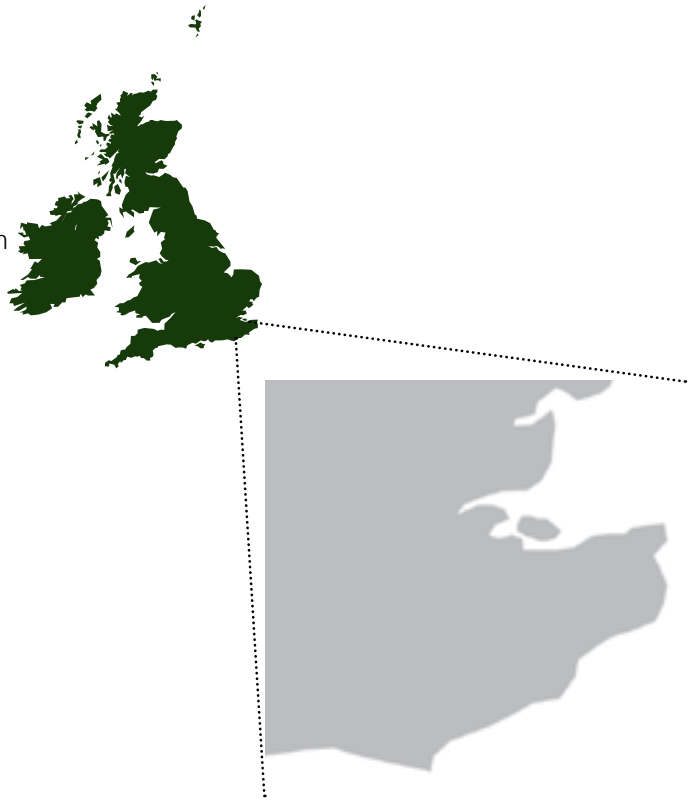
A RANGE OF STRATEGIC GROWTH AND INFRASTRUCTURE FRAMEWORKS HAVE BEEN COMPLETED BY PROACTIVE COUNTY COUNCILS IN THE SOUTH EAST

Planning context

The timely delivery of infrastructure is a fundamental requirement to accelerate housing and economic growth. Ensuring that the wide range of infrastructure service providers are aligned to the requirements of planned growth and that the necessary finances are in place is a challenge faced by all local and sub regional planning authorities.

A number of proactive authorities in the south east have recently sought to tackle this challenge through the development of strategic growth and infrastructure frameworks, an innovative approach to plan making at a more strategic scale than Local Plan. These include:

- Kent and Medway Growth & Infrastructure Framework
- Surrey Infrastructure Study
- West Sussex Infrastructure Study
- Greater Essex Growth & Infrastructure Framework
- Oxfordshire Infrastructure Strategy



AUTHORITY NAME

Various South-East Local Planning Authorities

AUTHORITY TYPE

Public

PROJECT TYPE

Future infrastructure provision

Strategic Growth and Infrastructure Frameworks

Context

These documents all seek to establish the emerging infrastructure requirements to support growth over a long term planning horizon, in some cases as far as 2040. With these strategies, the relevant joint planning authorities also aims to shape and influence investment approaches and plans at the national, sub-regional and local level. At present a strategic view of growth distribution and infrastructure provision tends to be lacking across these areas with each local authority at different stages of their Local Plan preparation and infrastructure provided by a host of different service providers working to differing planning horizons.

Each of these strategies seek to provide a review of housing and economic growth forecasts and an understanding of the social and economic growth drivers and distribution of development across the county. They each cover a number of infrastructure categories: transport, education, health and social care, emergency services, utilities, waste, flood defences and drainage, green infrastructure. They have been informed by comprehensive engagement activities bringing together a wide range of project stakeholders including the local authorities and relevant infrastructure providers.

Each strategy focuses on the scale and location of housing and economic growth, the key infrastructure issues which require solutions, the identified priority investment projects that will enable the required growth, the necessary investment and likely funding gap and the recommended funding options for consideration moving forward.

Lessons for the corridor

A number of common findings can be drawn from these strategic studies:

- In the absence of the Regional Spatial Strategies and County Structure Plans, service providers (particularly utility providers) are unclear on the long term sub regional pattern of growth which they need to plan for.
- Service planning in silos can be prevented through strategic infrastructure frameworks which bring all the necessary parties together to forward plan on the same development trajectory.
- Particular importance in understanding the bordering authority's issues and countywide infrastructure requirements
- Prioritised infrastructure needs to be targeted at the most appropriate locations to deliver the most value for society, the economy and the environment
- Mainstream and developer funding (both S106 and CIL) are unable to adequately finance the infrastructure identified as necessary to support growth.
- Alternative funding sources and innovative approaches to delivery are necessary to tackle the gap in future funding.

Strategy	Period	Years	Homes Planned	Population Increase	Job Increase	Infrastructure Costs (£million)	Funding Gap
Kent and Medway Growth & Infrastructure Framework	2011-2031	20	188,200	413,900	135,800	£7,100	32%
Surrey Infrastructure Study	2015-2030	15	47,053	60,991	59,000	£5,400	60%
West Sussex Infrastructure Study	2015-2030	15	48,930	63,300	n.a	£2,500	31%
Greater Essex Growth & Infrastructure Framework	2016-2036	20	179,660	298,700	79,000	£10,400	43%
Oxfordshire Infrastructure Strategy	2016-2040	25	123,500	267,000	101,000	£9,000	n.a
Suffolk Strategic Planning & Infrastructure Framework	2016-2050	35	87,000	x	45,000	£4,500	n.a

Table 23. Highlights from a range of Strategic Growth and Infrastructure Frameworks

Where could this be applied within the Corridor?

- Oxfordshire Growth Board are completing the Oxfordshire Infrastructure Strategy and are likely to build upon this with a Joint Spatial Strategy
- Cambridgeshire and Peterborough are considering the development of a strategic planning and infrastructure framework
- Milton Keynes Sub Region would benefit from a complementary spatial strategy and strategic infrastructure framework which would effectively bind together the work covering Oxfordshire and Cambridgeshire to provide Corridor-wide strategic planning to deliver housing and economic growth.

MID-CHERWELL NEIGHBOURHOOD PLAN, OXFORDSHIRE

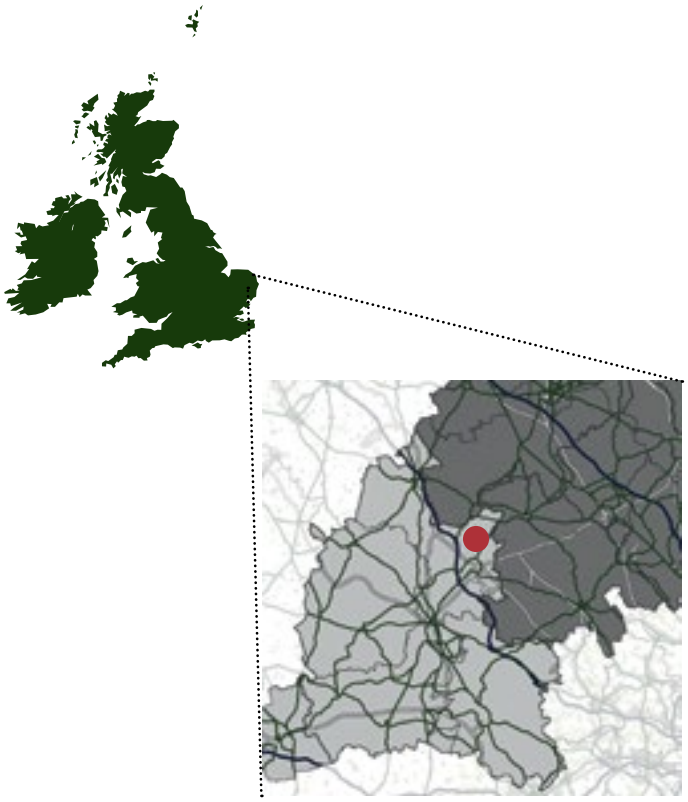
A NEIGHBOURHOOD PLAN ACROSS A NUMBER OF PARISHES TO PRODUCE A JOINT PLAN, FUNDED BY A MAJOR DEVELOPER.

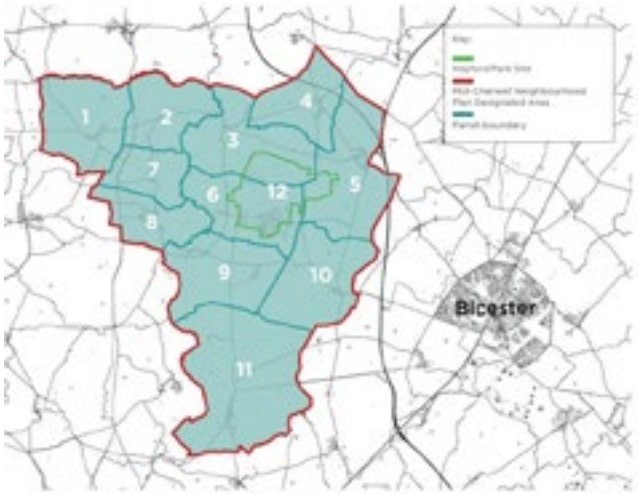
Context

The 2011 Localism Act introduced Neighbouring Planning, allowing parishes, town councils or neighbourhood forums across England to develop and adopt legally binding development plans for their neighbourhood areas. Neighbourhood parishes can join up to produce these plans jointly across multiple boundaries. Mid-Cherwell achieved this through a major landowner partnering with eleven parishes.

The landowner's strategy in bringing the neighbourhood groups together was to achieve community support for its proposals to deliver a total of 2,600 new dwellings in the area by 2031. The mechanism employed by the landowner to deliver their site while minimising local opposition was ambitious, bold and innovative.

Such an approach could be used within the Corridor at large, where there are underused brownfield sites where a new village could be delivered.





AUTHORITY NAME

Mid-Cherwell Neighbourhood Forum

AUTHORITY TYPE

Neighbourhood Planning group

DEVELOPMENT TYPE

Site Allocation

Residential

TOTAL HOMES DELIVERED

2,600 by 2031

PROJECT LIFECYCLE: PRE-PLANNING

MILESTONE 1:

April 2015 Designated as a Neighbourhood Plan Area

MILESTONE 2:

February - June 2016 Consultation events

MILESTONE 3:

March 2017 Draft policies published

Mid-Cherwell Neighbourhood Plan, Oxfordshire

Context

When the Government introduced the neighbourhood planning system in 2011, it allowed neighbouring parishes to produce joint plans across multiple boundaries.

One of the most ambitious neighbourhood plans in England in terms of collaboration is in the Corridor, at Mid-Cherwell. Here, a major landowner initiated the neighbourhood planning process by inviting eleven parishes to produce a joint neighbourhood plan, with landowner funding.

The landowner is Dorchester Estates, who own the large brownfield site of Upper Heyford Airfield. Dorchester's strategy in bringing the neighbourhood groups together was to achieve community support for its proposals to deliver a total of 2,600 new dwellings on the site by 2031. Dorchester has a seat on the neighbourhood forum alongside the key parish councils.

As the area is within easy commuting distance of Oxford, housing need is high, and the advantage of the large-scale neighbourhood plan is that the housing need across all the villages can be diverted to a new settlement at a single brownfield site in single ownership, rather than a dispersed, less sustainable, and less politically popular model of growth where new houses are added piecemeal to each village by a multitude of developers and infrastructure provision is made much more difficult.

Circumstances of development

The mechanism employed by Dorchester to deliver their site while minimising local opposition (which had the potential to be sustained and well-resourced, given the demographic profile of the area) was ambitious, bold and innovative.

However, it worked only because the timing was right. If neighbourhood plans had already been significantly progressed or adopted across the villages already, it may not have worked and indeed those neighbourhood plans could have worked at cross-purposes to Dorchester's objectives.

The Upper Heyford site is not without its own constraints; for example there are listed buildings and a conservation area on site thanks to the crucial role the airfield played as a USAF base during the 20th century. However, by securing local support, Dorchester have helped to accelerate the development process nonetheless.

Lessons for the corridor

As such, the case of Upper Heyford demonstrates that there is the potential for local political opposition to be neutralised as a barrier to growth. In this case, the lever was Dorchester frontloading the neighbourhood planning process to ensure accelerated development of a new settlement because it has the support of the local community. However, the broader principle is that development can be unlocked and accelerated by providing an incentive to local communities to support growth.

The lever was successful at Upper Heyford because:

- The timing of the Dorchester proposals coincided well with the take-up of neighbourhood planning across the area;
- The site comprised extensive, underused brownfield land in a single ownership suitable for a new settlement away from existing dwellings;
- There was a relative lack of commercial rivals promoting large-scale development elsewhere in the neighbourhood plan area, which would have had the potential to obstruct Dorchester's ambitions.

Where could this be applied within the Corridor?

Within the Corridor, a similar approach could be used in locations where:

- There are large, disused or underused brownfield sites in the countryside (within the Corridor, there are many former airfields but also former brickworks and other ex-industrial and MOD land), where a new village could be delivered;
- Neighbourhood planning would be an appropriate mechanism for housing delivery (therefore likely more suitable in rural locations, particularly those closest to major settlements like Oxford, Cambridge and Milton Keynes, where housing need is demonstrably high and parishes have a local plan allocation to fulfil)
- The brownfield site is in a single landownership. It is not necessary for the landowner to lead the process or bring the neighbourhood planners together as Dorchester did at Mid-Cherwell; the site can be made subject to a Local Development Order, which provides planning permission for certain classes of development and which has the potential to simplify the planning process, giving added certainty to the landowner that the site could be developed.
- This approach would likely be most suitable only for new villages. For the larger or more complex sites (e.g. multiple ownerships, contaminated land and so on), it is likely that the local authority and/or the LEP would need to take a greater role in the delivery process.

Quantifying the benefits

Between 2007 and 2017, Government statistics show a total of 3,980 dwellings were completed in Cherwell, in other words an average of 398 per year. It is Dorchester's intention for Upper Heyford's 2,600 homes to be delivered over a 15-year timescale. This would represent an uplift of 30% over the 'background' completion rate.

BASINGSTOKE

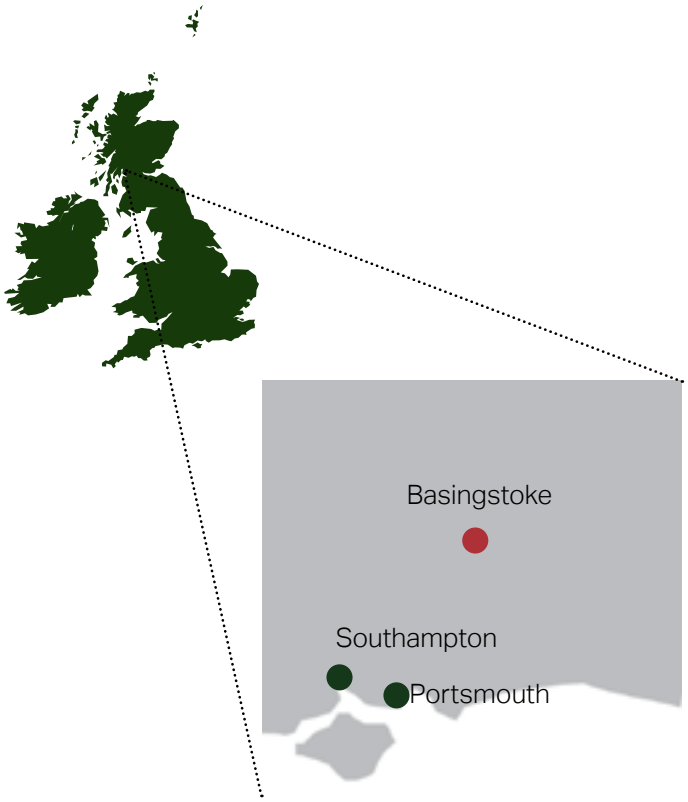
AN AMBITIOUS VISION FOR LONG-TERM PLANNING, UP TO 2050, TO ALLOW FOR LARGE SCALE EXPANSION TO MEET HOUSING AND ECONOMIC NEEDS.

Context

In 2013, Basingstoke and Deane Borough Council started on a planning for more growth long-term timescale to 2050. They had concluded that by 2020 the spatial layout of Basingstoke would preclude further infill and brownfield development. Additionally, because Basingstoke was expanded significantly in the 1970s + 80s, much infrastructure would become obsolete at the same time.

In 2016 the Borough Council officially launched Horizon 2050, the growth plan based on the baseline work, as a joint initiative with Hampshire County Council and the M3 Local Enterprise Partnership. The alignment of all three organisations played a significant role in helping to alleviate resistance from key stakeholders unused to planning over such a long time period, including rail and education.

Interestingly, some of the greatest resistance to the joint vision for long-term planning has come from central government departments other than DCLG. This indicates that a more joined-up approach across government may be required if locally-led long-term planning for housing and infrastructure is to be supported as a lever to accelerate development.



AUTHORITY NAME

Basingstoke and Deane Borough Council

AUTHORITY TYPE

Public

DEVELOPMENT TYPE

Urban Extension

Mixed use

PROJECT LIFECYCLE: PRE-PLANNING

MILESTONE 1:

2013 LPA commissioned studies

MILESTONE 2:

2016 Horizon 2050 launched

Basingstoke

Context

Basingstoke and Deane Borough in Hampshire is located at a comparable distance from London (about 50 miles) as many places in the Corridor. It has fast, direct links to London via train lines to Waterloo and the M3 motorway.

In 2013, the Council concluded that by 2020 the spatial layout of Basingstoke precluded further infill and brownfield development. Additionally, the fact that Basingstoke was designated for large-scale expansion in the 1970s and 80s meant that, in common with many new and expanded towns of the period, a range of different infrastructure supporting the expansion was reaching final capacity at the same time and would not collectively be able to support future growth.

Circumstances of development

As a result, the Council decided that long-term planning was needed for the next phase of Basingstoke's growth. It was concluded that this entailed looking at 50 year horizon, well beyond a single plan period or even two such periods. The 50 year vision initially focused on the infrastructure required to support growth projected for the first 20 to 30 years, including rail, highways, and utilities.

AECOM was commissioned at this stage to help establish where future growth in Basingstoke would be concentrated and the infrastructure implications of this growth. The studies gave the Local Planning Authority a baseline on which to review the existing Local Plan and visibility for the next Local Plan period (2025-2050). Analysis of the implications of growth and the most suitable locations for that growth was supported by DCLG funding, which accelerated the process by avoiding the need for the work to be funded by the Council itself, and thus bringing political considerations into the process of establishing feasibility.

Lessons for the corridor

The case of the long-term vision for Basingstoke demonstrates that appropriate funding and support from central government can accelerate locally-led initiatives to plan for growth and infrastructure over a longer time horizon, thus offering certainty to developers and investors that shorter-term political change will not derail growth aspirations. Within the Corridor, the MK Futures 2050 initiative led by Milton Keynes Council is taking a similar approach.

In the case of Basingstoke, the following favourable circumstances combined to allow for long-term growth:

- A vision, boldness and willingness on the part of Council officers, the County Council and the Local Enterprise Partnership to recognise the positive impacts of growth;
- The fact that large-scale expansion of Basingstoke in the 1970 and 1980s meant that a holistic approach needed to be taken to large-scale infrastructure renewal, concentrating the minds of those looking to plan for the next period;
- The clear evidence of significant local demand for housing and employment land;
- Political boundaries favourable to growth that allow all large-scale expansion of Basingstoke to take place within its own LPA;
- Extensive publically owned land surrounding the existing settlement, allowing for greater control of the location and phasing of growth; and
- The relative lack of large scale physical or planning constraints at Basingstoke compared to nearby competing locations, such as flood risk, AONB, natural designations and Green Belt.

Where could this be applied within the Corridor?

Within the Corridor, a similar approach could be used to deliver new settlements or extensions to existing towns. This would have the greatest potential to work in locations where:

- There are local circumstances supporting the need to take a long-term view, such as, for example, uncertainty among developers or investors caused by frequent political changes of control;
- Political boundaries within or around the location where growth is planned minimise the number of planning authorities that would need to sign up to the long-term vision;
- A relative absence of large-scale physical or planning constraints;
- There are extensive public landholdings, which facilitates the implementation of a long-term vision- however, with appropriate co-operation from private sector landowners, this is not a necessary pre-condition; or
- A new or expanded town finds that a significant range of infrastructure dating from the original development or expansion needs strategic renewal, thus encouraging a holistic view to be taken

Quantifying the benefits

Though it is early days for the long-term vision for Basingstoke, it has already helped facilitate the achievement of planning permission for the town's largest greenfield development for a generation, at Manydown (Phase 1 includes the construction of 3,400 homes and a new district centre). The recently-adopted Local Plan allocates significantly more greenfield land, with, at the time of writing, an additional 7,000 homes in the pipeline across a range of extensions. Most importantly, upfront infrastructure funding has been secured Basingstoke's designation as a Garden Town, a reward on the part of central government for the Borough's willingness to consider the benefits of growth over the long-term.

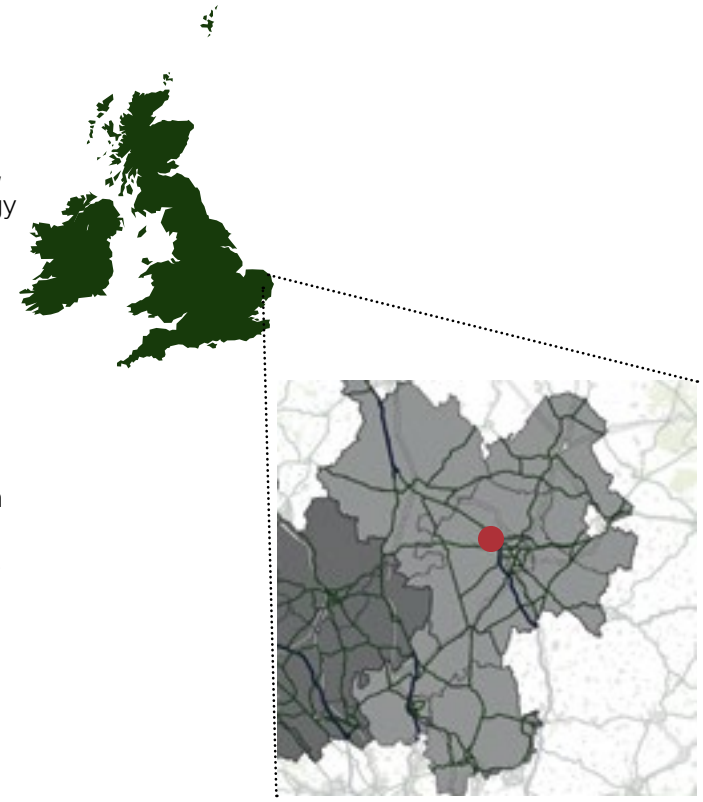
NORTH WEST CAMBRIDGE

LARGE SCALE EXPANSION OF THE UNIVERSITY OF CAMBRIDGE TO ACCOMMODATE A MIXED-USE SUSTAINABLE DEVELOPMENT ON A 140 HECTARE SITE, HAMPERED BY LPA CAPACITY CONSTRAINTS.

Context

In 2011 a hybrid planning application was submitted for the largest ever expansion of the University of Cambridge. Historically located within the Green Belt, the site was de-designated through the Core Strategy process with the implementation of an Area Action Plan for the site.

North West Cambridge demonstrates that effective working across local authority boundaries can result in key planning constraints, in this case Green Belt land, being unlocked to allow for crucial education-led growth of regional and national importance. It also shows, however, that capacity constraints within LPAs can have the effect of neutralising levers such as planning performance agreements that otherwise speed growth.



DEVELOPER NAME

The University of Cambridge

DEVELOPER TYPE

University

DEVELOPMENT TYPE

Mixed-use expansion

TOTAL HOMES DELIVERED

1,475

TOTAL COST

£1bn

PROJECT LIFECYCLE: PRE-PLANNING

MILESTONE 1:

2002 Appointed EDAW/AECOM to promote the site to be removed from Green Belt in the Core Strategy

MILESTONE 2:

October 2009 North West Cambridge AAP adopted

MILESTONE 3:

September 2011 Hybrid planning application submitted

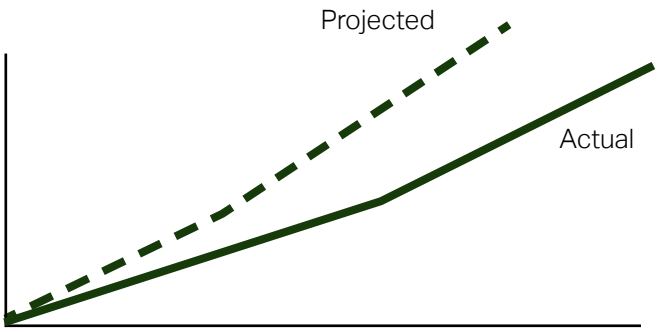
MILESTONE 4:

August 2012 Planning permission granted

PROJECT LIFECYCLE: POST-PLANNING

MILESTONE 1:

July 2017 First students moving into the new accommodation



North West Cambridge

Context

North West Cambridge represents the largest plans for expansion of the University of Cambridge in its 800 year history, and includes a mixed-use sustainable development of University research and teaching facilities, affordable housing for university staff, student housing, market housing, community facilities and public open space on a 140-hectare site. The proposals will meet the university's development needs for the next 30 years or more, plugging a fundamental gap in affordable housing in Cambridge for its University staff and students.

Historically located within the Green Belt, the site was de-designated through the Core Strategy process with the implementation of an Area Action Plan for the site. A Hybrid planning application was submitted in September 2011 with the two local planning authorities (Cambridge City Council and South Cambridgeshire District Council) resolving to grant planning permission in August 2012. Reserved matters applications for Phase 1 were swiftly submitted following outline consent, with the prioritisation of enabling works and site wide infrastructure. Phase 1 construction is now nearing completion, with the first residents moving in in July 2017. The planning strategy for Phase 2 is currently underway, drawing on lessons learnt from Phase 1.

Circumstances of development

The University of Cambridge appointed EDAW/ AECOM in 2002 to lead the promotion of the site for development through the Core Strategy process to unlock the site from the Green Belt and secure policy support through an AAP. The North West Cambridge AAP was adopted in October 2009, which was followed by an intensive masterplanning process underpinned by a phased build out of the site. A hybrid planning application was submitted in September 2011 and the two local planning authorities resolved to grant planning permission in August 2012.

Outline consent was quickly followed by the submission of a Section 73 application to amend heights in the local centre to create more headroom for retail uses.

Around thirty reserved matters applications have been approved for Phase 1, front ended with enabling and infrastructure packages submitted immediately following the signing of the Section 106 Agreement. Strong local support and the trust of the local planning authorities, built up over many years of collaborative working, meant all reserved matters have been approved within the requisite 13 weeks. A rapid period of discharging conditions to meet the fast paced nature of the construction programme on site has ensured that the first residents of student accommodation and key worker housing can move into their new homes in July 2017.

On the granting of outline consent, all parties signed a formal Planning Performance Agreement (PPA). This set out firm commitments between the University and the Local Planning Authorities in relation to the regularity of meetings, deadlines for sharing material prior to meetings and deadlines for planning officers to feedback comments to the University team. It also committed the University to submitting 'ghost' planning applications prior to formal submissions for each reserved matters application which ultimately smoothed the determination process and ensured each application was determined within the requisite thirteen weeks. Most importantly, the PPA provided a commitment to resourcing the North West Cambridge project across all disciplines (urban design, landscape, drainage, environmental health and sustainability). This resourcing obligation guaranteed a consistency of personnel throughout Phase 1; a factor which has been hugely beneficial to the University in gaining consents.

Although it worked very well initially, as resources have tightened within both Councils, their commitments to the PPA have lessened. For instance, they have suggested that ghost planning applications are no longer required. However, this has ultimately led to unresolved issues and extensive comments during the determination process. They have also failed to meet response times on ation that is shared with them, all of which has a knock on effect on programme. The University continues to push for enforcement of the PPA.

Lessons for the corridor

North West Cambridge demonstrates that effective working across local authority boundaries can result in key planning constraints, in this case Green Belt land, being unlocked to allow for crucial education-led growth of regional and national importance. It also shows, however, that capacity constraints can have the effect of neutralising levers such as planning performance agreements that otherwise speed growth.

In the case of North-West Cambridge, the following circumstances applied:

- Two local authorities (Cambridge City and South Cambridgeshire) with a long and impressive track record of joint working;
- A shared commitment to accelerate the growth and development of Cambridge University as a key regional and national asset, even if this entailed the review of Green Belt boundaries;
- A recognition that for a large, complex planning process over a number of years, a Planning Performance Agreement with the master developer would be an effective lever to accelerate growth; but all in the context of
- Reduced Government funding to local authority planning departments, meaning that capacity constraints risked slowing the development by undermining the Planning Performance Agreement.

Quantifying the benefits

The University is nearing completion on the construction of Phase 1, which entails 700 homes for qualifying University and College Staff, 325 post-graduate student rooms and 450 market homes, alongside a 3 Form Entry Primary School, Community Centre, Nursery, Supermarket, Hotel and retail units. The first students are moving into the post graduate accommodation for Girton College in July 2017. The 'braking' effect of the capacity constraints noted remain to be seen but it seems likely that future phases of development will be slowed as a result.

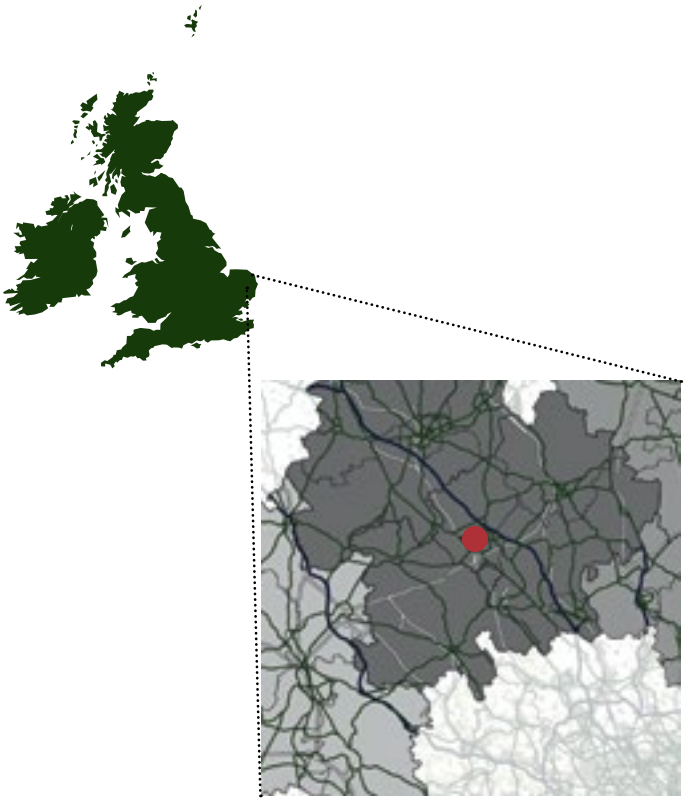
MILTON KEYNES, COMPETITION BETWEEN DEVELOPERS

COMPETITION BETWEEN DEVELOPERS AT KEY SITES ENSURED A FASTER GROWTH RATE AT KEY SITES IN MILTON KEYNES.

Context

A separate case study highlighted the important role played by the Milton Keynes Tariff in speeding the delivery of new homes and supporting infrastructure, including employment land, at Milton Keynes in recent years.

However, a range of other factors combined to ensure the authority's growth rate was so much higher than average (a total of 12,440 completions 2007-2017, 274% above the average completion rate for the Corridor as a whole and 361% above the completion rate for England). Among the most important of these factors was competition among developers at key sites.



Milton Keynes, Competition between developers

Circumstances of development

At Milton Keynes, the Eastern Expansion Area in particular (capacity 4,000 units) demonstrated very rapid rates of development, achieving 791 completions after three years of construction and an average of 268 homes per year even in the recessionary period of 2008 to 2014. The major factor driving this was the high levels of competition between multiple developers across this large site.

The rapid progress of the Eastern Expansion Area and other key sites through the planning process in a local authority which was already delivering high numbers of new dwellings suggests that the appetite for development and resource for dealing with major applications within Milton Keynes also plays an important role. Milton Keynes was allocated funding as part of the 2003 Sustainable Communities Plan, comprising central government grants aimed at progressing major development sites more rapidly.

The Eastern Expansion Area was allocated in the Milton Keynes Local Plan (2005) and a related SPG for development of up to 4,000 dwellings. Outline planning applications were submitted from 2004 onwards, and were subject to an infrastructure agreement requiring improvements to Junction 14 of the M1 prior to the completion of the 550th dwelling.

Development was significantly accelerated by Milton Keynes's approach of providing serviced parcels to developers with roads already built- a model sometimes referred to as enabling 'oven-ready' sites. This reduced the development lead time, thus accelerating annual delivery rates. Monitoring data from the Council shows that around twelve builders were active on site at any one time, in competition with one another to sell homes to the market as quickly as possible. A primary school was provided early with revenue from the Milton Keynes tariff, thus making the area even more attractive to the market and building certainty of sales revenues on the part of housebuilders.

On other major sites in Milton Keynes, similar approaches were used. In the Western Expansion Area, the annual rate of completions was accelerated by opening up the site from both ends, creating two distinct housing areas for separate developers, again competing against one another.

Within the Eastern Expansion Area, Broughton Manor Farm/Broughton Gate was brought forward by Gallagher Estates. Gallagher's approach of parcelling the development up resulted in nine different housebuilders on site within a period of little over a year. That development was substantively (1400 of 1500 units) built out in a little over six years despite the recession.

At Brooklands, the larger part of the Eastern Expansion Area, Places for People took a different approach, controlling the delivery of the housing by sub-contracting build and using their own brand. This was less effective, with only just over 350 completions achieved over largely the same period. Eventually, Places for People entered into a form of joint vehicle with Barratt/David Wilson Homes to accelerate development, which seems to have helped. Last year, 236 completions were delivered, with 300 likely in 2017.

Lessons for the corridor

The case of the Milton Keynes Eastern Expansion Area demonstrates that fostering competition between house-builders by parcelling up a large site is a proven way to accelerate delivery. The development rates achieved in this location were so relatively fast that it has been used many times as a case study as well as this one.

In the Eastern Expansion Area, the following favourable circumstances applied:

- A 'pro-growth' mindset on the part of the local planning authority;
- Extensive suitable greenfield land, minimising physical constraints to development and enabling rapid build;
- The local planning authority having provided an 'oven-ready' site by ensuring the early provision of key infrastructure such as roads
- Funding from central government as part of the Sustainable Communities plan, alongside the certainty of infrastructure revenue from the MK Tariff (see related case study)
- A strong and early commitment on the part of landowners and developers as well as the Council to parcel up the site among multiple house-builders, potentially incentivised by the way the MK tariff was designed to discourage 'land-banking'

Where could this be applied within the Corridor?

Within the Corridor, an approach that fosters competition among multiple smaller housebuilders to accelerate delivery could apply where:

- Land values are higher, which evidence shows tends to accelerate delivery on larger sites
- National or local planning policy has been updated to support SME housebuilders and encourage their entry to the market along the lines of the policy approach outlined in the recent Housing White Paper;
- Local planning authorities take a positive, pro-active approach to a range of delivery methods across a larger site to discourage a single developer controlling it all- for example, earmarking smaller parcels for self-build or modular construction;
- Large sites have been allocated that are not in a single ownership- indeed, the potential for accelerated delivery through fostering competition among more than one landowner could be a material consideration in the allocation process
- Financial or policy incentives (in the case of the Eastern Expansion Area, this included the MK Tariff) exist to discourage land-banking and/or slow delivery

Quantifying the benefits

The first completions on the Eastern Expansion Area, which is 707 hectares in extent, occurred in 2008. By 2017, 2,459 new dwellings had been completed, in other words a completion rate over nine years of 3.47 completions per hectare. Though the Milton Keynes tariff applied to the Eastern Expansion Area alongside other development zones across the city, the Eastern Expansion Area's completion rate is still higher than for the tariffed area average over the same period (which was 2.4 completions per hectare).

Thus, fostering competition between housebuilders at the Eastern Expansion Area appears to have contributed to a completion rate 145% higher than the tariffed area average and 340% higher than the Milton Keynes town-wide average over the same period (itself significantly higher than the Corridor and England averages).

MTR (MASS TRANSIT RAILWAY), HONG KONG

DEVELOPMENT MODEL FOR THE RAPID TRANSIT SYSTEM WITHIN HONG KONG

Context

MTR owns and operates the majority of Hong Kong's (incorporating Kowloon and the New Territories) rapid transit system, with more than 5 million daily commuters using its train lines. MTR has exceptional operational efficiency, receiving 186% of its running and maintenance costs from fare box revenue, which compares to around 50% for the New York City Subway. Consequently, ticket price rises are proportionately below inflation and below real income rises.

The first line opened in 1979. Since then the population of Hong Kong has grown by over 2 million people to 7.3 million people by 2015, with a population density over 6,300 people per square kilometre.

MTR (Mass Transit Railway), Hong Kong

Circumstances of development

In addition to high demand for its services and cost efficiency, the MTR also operates a "rail plus property" business model, in which the majority of its profit is derived from urban development at and immediately around its stations.

MTR purchases land around existing or new stations from the city government at existing use value. This land is then either developed by the MTR's property organisation, or MTR sells or leases it to the private sector for development, with both methods enabling significant value capture by MTR following the change in land value post infrastructure investment.

MTR also often engages in profit sharing space arrangements with private developers, such as hotels or retail outlets leasing or buying its land in the vicinity of stations, which provides ongoing revenue for maintenance and future infrastructure provision.

Tying property development to infrastructure development effectively makes housing development a necessity, both for MTR and developer partners – and at scale. Demand is high close to stations, which increases property value, whilst also reinforcing ridership demand.

Eleven MTR property development packages have been tendered out over the past three years and are currently undergoing planning, design or construction. They will provide approximately 18,000 residential units over the next 4-6 years. From the point of tender to the point of occupation, this will equate to 2000-2600 new homes per year, directly at MTR enabled sites around stations in the short-medium term. 15,000 further new homes are also currently being assessed for development viability within the same timeframe.

Historically, development packages enabled by the MTR between 1995 and 2013 are estimated to have provided 100,000 additional homes, equating to 5,600 homes per year on average, which by comparison is significantly higher than any rate of building by any single developer organisation within London (as a similar sized metropolis).

Lessons for the corridor

This development model differs significantly from land value capture initiatives traditionally seen in the UK, Europe USA or Australia, which are usually levy or bond based and seek to capture value from development after provision of infrastructure, and after land value benefits have been largely realised by private landowners.

The model is viable because of the high density of development typical of Hong Kong, and high demand for rapid transit between its conurbations. Over 3 million people (over 40%) of the population live within 500m of an MTR station, with car ownership rates lower than 6 per 100 residents.

High levels of public land ownership also facilitate the model, which reduces the costs of land acquisition. In areas of high and diversified private ownership of land, such as within many Western cities, high costs of compulsory purchase can make costs prohibitive for such forms of transport oriented development.

Where could this be applied within the Corridor?

A Development Corporation type model on virgin territory (agricultural land) or land from a large single landowner (University) could make this model viable with new infrastructure. The challenge is that high density is acceptable and required in HK, and is needed in order to pay off high costs and provide enough demand revenue. In a relatively less densely populated area, with less demand for high density, this could be more challenging. However, an ambitious Transport Oriented Development new town(s) model could be one solution.

Quantifying the benefits

Higher rates of viable development at high density, compared with typical land acquisition and development models.

VAUBAN AND RIESELFELD, FREIBURG, GERMANY

URBAN EXTENSIONS TO THE CITY OF FREIBURG TO CREATE 5,700 NEW LOW ENERGY HOMES

Context

Freiburg is a city in south west Germany with two recent urban extensions; Vauban (construction began in 1998 and concluded in 2010) and Rieselfeld (construction started in 1994 and concluded in 2010). Vauban and Rieselfeld were developed on the southern and eastern fringes of Freiburg respectively, connected to the wider city via a tram link. At the centre of the city is Germany's oldest university, giving the city its reputation as a bustling knowledge economy.

Both urban extensions were developed to meet the demand for more housing. Both sites were brownfield- 72 hectare Rieselfeld, an old sewage works and Vauban a 38 hectare former French army barracks. Rieselfeld involves 3700 low energy homes (a completion rate of approximately 230 homes per year) with a strong focus on green open spaces. Vauban involves 2000 low energy homes (a completion rate of approximately 150 homes per year), parking free residential streets, and reduced car use. The tram was essential to informing development at both sites. In Vauban, the existing tram network was extended as part of the development such that all households are within 5 minutes of a tram stop, providing a connection to the city centre within 15 minutes. There is combined heat and power throughout the developments with connection to a district heating system, and considerable use of solar power.

Vauban and Rieselfeld, Freiburg, Germany

Circumstances of development

The municipality in Vauban and Rieselfeld either already owned all the land on the sites or purchased it.

The Vauban site had low value land which the municipality serviced with infrastructure upfront and disposed of in small plots to small builders and cooperatives (or Baugruppen). The Baugruppen were potential residents, architects, and financiers who coordinated themselves into groups to submit a preliminary design.

There were also limits on the number of plots a single group could buy, encouraging small builders and cooperatives. As a result, more than 170 different projects were undertaken with about 20% of the plots developed by cooperatives . This allowed many builders to operate at once, allowing construction work to proceed rapidly as well as encouraging visual variety in the developments. Bids were selected on the basis of quality, and assessed against criteria favouring families with children, the elderly, and Freiburg residents, and the price determined as a proportion of the expected sales value. Prices of the houses delivered were 25% lower than the usual price (in Freiburg).

In Reiselfeld, a master planning design competition was held to select developers. Over a hundred developers were involved, and 20% of the sites were developed by cooperatives. The municipality borrowed money from banks via a trust to pay for basic infrastructure and for planning purposes and recovered this when the sites were sold. Development on both sites was anchored on community participation, for instance through the use of cooperatives which commissioned blocks of houses as well as managed and designed communal areas.

Leadership was provided by each of the municipalities over nearly two decades with buy-in from the local and city governments. This allowed the creation of a strong team which provided direction, consistency, and confidence to stay committed to quality development even through changes in external political and economic circumstances. However, supplementary bodies were often created to assist planning, for instance in Vauban where a forum involving the community was key to ensuring that the social structures were developed hand in hand with the physical infrastructure.

Lessons for the corridor

- The sale of small plots of land to groups of residents and developers, architects and residents created improved variety and quality of demand, and pace of delivery. Involvement of potential occupiers, who had a long term interest in the development, encouraged the creation of a community from the start.
- Both areas had high housing need and, thanks to the tram development, were within close proximity of the centre of Freiburg which has strong demand as an attractive place to live. A strong leadership role played by the municipalities over long periods of time provided consistency and continuity which was important to deliver the targets.

Where could this be applied within the Corridor?

- Where there is a large amount of local authority owned land, or available land in single ownership.
- The knowledge economy of the corridor could provide a suitable environment to introduce a bottom up planning and development model like the one seen in Freiburg. This is because architects and building professionals can act as enablers in public engagement and create demand for more sustainable and innovative living environments.

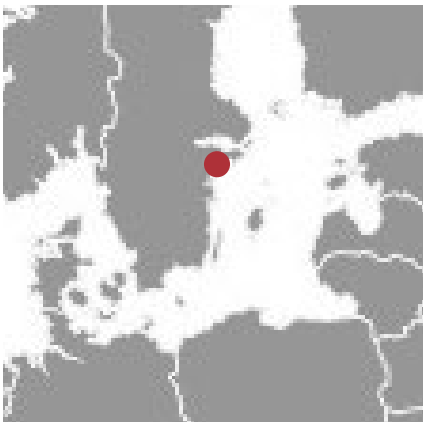
HAMMARBY SJOSTAD, STOCKHOLM

REDEVELOPMENT OF AN EXISTING BUILT UP INDUSTRIAL AREA TO HOUSE THE FIRST ECO-CITY DISTRICT WITHIN STOCKHOLM

Context

Hammarby Sjostad (Hammarby Lake City) is a municipality in south east Stockholm which is undergoing major redevelopment. Prior to the redevelopment, the area was largely an industrial zone within a dilapidated neighbourhood.

The initial plan for the area was to develop it into an ecological sports arena and athlete's village for the 2004 Olympics.



Hammarby Sjostad, Stockholm

Circumstances of development

Following Stockholm's failed Olympic bid, a masterplan for the Games was altered to redevelop the area instead into the first eco-city district in Stockholm, as a response to rising housing demand. Work began on the 160 ha district in 1999. Eventually there will be 11,000 residential apartments (a density of 68.8 residential units to the hectare over the whole land area) by the end of 2017, a completion rate of over 550 homes a year. This build out rate is ten times faster than Greenwich Millennium Village, a similar site in the UK.

The project aimed to develop Hammarby Sjostad as an extension of and connection to the inner city of Stockholm. In order to do so, the physical infrastructure of the development mimics that of Stockholm's urban centre. The existing radial mainline network (Tunnelhana) of Stockholm was strengthened through the construction of a new orbital tram extension (Tvarbanan) which passes through the main axis of the Hammarby Sjostad development. With four tram stations running through central Hammarby Sjostad, most residents are within 5 minutes of the interchange with the Tunnelhana. There is also access to alternative transportation such as schemes for carpooling and bicycle sharing, new bus routes, a night bus service, and a ferry service.

The development integrated various strands of otherwise disconnected infrastructure into a 'closed loop' from the early stages of the planning process. The closed loop arrangement meant that the different types of infrastructure, particularly water, energy, and waste fed into each other creating a virtuous circle of converting waste products into energy or disposing them in a sustainable manner.

For instance, installed solar panels could provide some of the energy required for heating the apartment blocks and the water cycle would convert sewerage from the apartments into heat and bio gas for use in district heating and public transport vehicles. This arrangement was possible because of close collaboration between the local authority, water and energy companies.

The project team consisted of representatives from the offices of city planning, roads and real estate, environment, as well as the companies providing water, energy, and waste handling. However, the process was led by the local authority which had purchased the land from private landowners and acquired the necessary technical capacity through the multidisciplinary nature of the team. This helped the targets to remain realistic, avoiding disputes and delays to the development process.

The development made use of a mixture of over thirty public and private construction partners for building the individual apartment blocks. This number is attributable to the masterplan which involved slicing large sites into serviced parcels which were offered to a variety of developers housing associations/ companies, usually with overall design guidelines, allowing multiple developers to operate at once and development to start without delay. Moreover, the resulting competition in delivery improved quality and variety for buyers. Developers provided a wide range of tenure and housing types including for sale, co-ownership, and rentals. This variety and flexibility in arrangements simplified decision making for residents, secured demand, and allowed construction work to proceed rapidly.

The funding sources for the project consisted of the City of Stockholm, Stockholm Transport, the National Road Administration as well as

private sector leveraged funding. In addition, major funding allocations were distributed by the national government through the Local Investment Program (LIP), a subsidy designed to encourage environmentally sustainable local development. Financial investment from public sources amounted to 0.5 billion euros, while the private sector contributed 3 billion euros . Initial planning was carried out using public funds while transport and environmental infrastructure was paid for upfront using long term financing, with recovery from tax and fare box revenues. The land which was acquired by the City was paid for as it was sold on. From these land sales to the development sector, the initial investment in basic infrastructure, planning, and land assembly was recovered.

Lessons for the corridor

The Hammarby Sjostad development demonstrated the benefits of a holistic approach to infrastructure service provision.

In the case of Hammarby Sjostad the following favourable circumstances applied:

- Proactive efforts by local authorities to understand housing and population trends and projections to bring high quality housing onto the market at a time when demand was increasing
- Interdisciplinary coordination between agencies at all levels as well as cooperation between the public and private sector actors
- Integrated and cross-sectoral approach where land use, utilities and economic planning are connected and go hand in hand
- Environmental and social sustainability embedded into the development plan
- Foresight and willingness of the city with regards to land acquisition allowing it to purchase land in private ownership at prices above market value to expedite the acquisition process and better coordinate the various aspects of the master plan
- Project design capitalising on the site's proximity to the natural surroundings such as Hammarby waterfront by positioning buildings to maximise light and views of waterfront and green spaces
- Use of competition between the contractors involved in the project to drive up quality and innovation across delivery
- Use of incentives such as the LIP subsidy to encourage development and the achievement of environmentally sustainable outcomes

Where could this be applied within the Corridor?

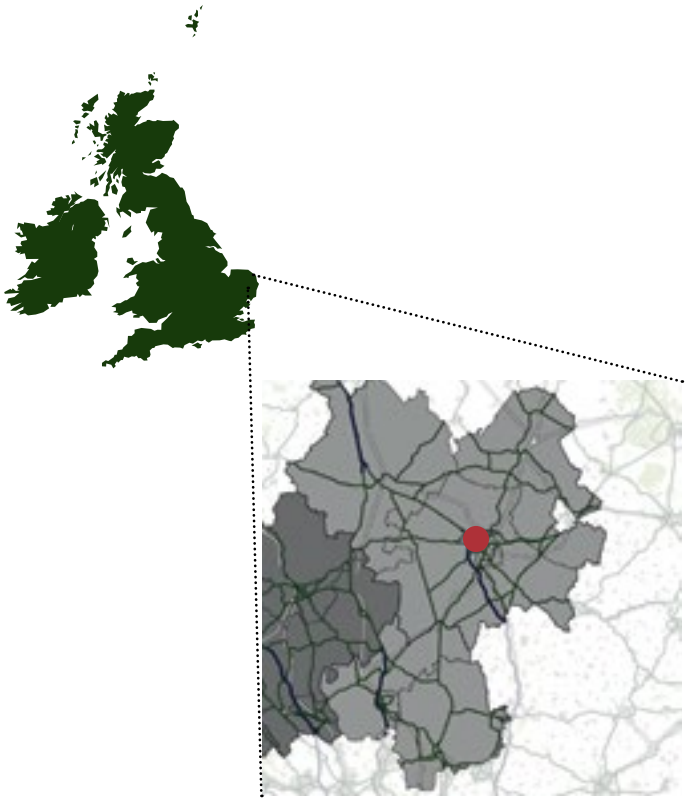
Within the Corridor, a similar approach could be used to deliver urban extensions to city centres. This would likely work in locations which are in the outskirts of an urban centre in the corridor but which are or can be well connected to it. This makes it easier to integrate the transportation system and technologies for water and energy into existing city infrastructure.

CB1, CAMBRIDGE

HIGH DENSITY MIXED USE TRANSPORT INTERCHANGE ON A KEY CITY CENTRE BROWNFIELD SITE TO INCLUDE RESIDENTIAL, EMPLOYMENT AND LEISURE.

Context

The Cambridge 2006 Local Plan identified the station area for a major change, seeking to develop a high density mixed use transport interchange on a key city centre brownfield site. The site was identified and supported within the Local Plan, and there was council and policy support for the redevelopment which assisted in the delivery. There were however, several instances whereby the council's decision making position was weakened which contributed to lower obligations, and decreased affordable housing delivery which reduces the perceived success and value of the development.



DEVELOPER NAME

Ashwell Property Group/Brookgate Ltd in conjunction with Network Rail Property

DEVELOPER TYPE

Private

DEVELOPMENT TYPE

Regeneration

Mixed use

TOTAL HOMES DELIVERED

650

TOTAL COST

£725m

PROJECT LIFECYCLE: PRE-PLANNING

MILESTONE 1:

2004 Station Area Development Framework Adopted

MILESTONE 2:

2004 Outline plan originally envisioned

MILESTONE 3:

2006 Outline plans fail to secure permission

MILESTONE 4:

2006 Site identified in Cambridge Local Plan

MILESTONE 5:

2008 Outline planning permission granted

CB1, Cambridge

Context

The station area in Cambridge was identified in the 2006 Local Plan as an area for major change, seeking to develop a high density mixed use transport interchange on a key city centre brownfield site. The site was earmarked to include residential (approx. 650 units), employment, a hotel, leisure and cultural facilities, civic uses as well as community facilities. As part of the development areas of green/open space were intended for inclusion as well as increased access to Hill Road. A strong emphasis is placed on the quality of space, architecture and connectivity. The majority of the site is located within the central conservation area and includes several cultural and historic assets as well as the grade II listed station building.

The Station Area Development Framework was adopted as SPG in April 2004 matching the vision and aspirations for the site.

Intended quantum:

- 726 residential units (40% original intent but reduced to 30% affordable homes)
- 1,250 student units
- 53,560m2 Class B1a (office) floor space
- 5,255m2 Class A1/A3/A4 and/or A5 (retail) floor space
- 6,658m2 polyclinic
- 86m2 D1 (art workshop) floor space
- 1,753m2 D1 and/or D2 floor space - gym, nursery, student/community facilities
- 7,466m2 hotel
- A new transport interchange and station square
- New/improved private and public spaces.

Circumstances of development

Beginning in 2004, the then developer Ashwell Property Group appointed Richard Rogers Partnership to develop the outline plan for a 10Ha site around the train station in Cambridge. It was originally envisioned to be a new transport interchange with affordable housing, a health clinic and a heritage centre incorporating a historic grain silo as a cultural centre.

Initial outline plans failed to secure permission in 2006 but were later resubmitted in 2008 successfully receiving permission with minor amendments to the original plan, 4 years after the Station Area Development Framework was adopted. The original intent was that contributions from the development would allow for wide spread improvements but as works were carried these deliverables and obligations were successfully renegotiated using the financial crisis as the justification. Importantly the provision of affordable housing was reduced from 40-30% which was approved by the council.

As part of the development, plans to demolish a Victorian terrace to make way for an office development were submitted and initially refused permission; the plans received much public objection. However, upon appeal the plans were granted permission which resulted in the council paying legal fees amounting to around £300,000 weakening their position.

The project has had a long and contentious history, both within planning but also with the original developer Ashwell Property Group Ltd going into administration in 2009. Although a new development company - Brookgate Ltd - was established with members of the original team the manner by which this occurred was not received well publically. Upon successful outline plan approval the masterplanning/ architectural team Richard Rogers Partnership were removed from the project and a range of architects selected for detailed design.

As well as the above, in 2010, the historic grain heritage asset burned down which resulted in the loss of the cultural facility, and ultimately allowed for this site to be redeveloped into luxury apartments instead taking the affordable housing provision down from 40% to 30%.

Lessons for the corridor

In the case of the CB1 development, the following circumstances applied:

- The site was identified and supported in the Local Plan with the development framework being adopted as and SPG there was council and policy support for the redevelopment which could have assisted in the delivery.
- There were however several instances whereby the council's decision making position was weakened which contributed to lower obligations, and decreased affordable housing delivery which reduces the perceived success and value of the development.
- A less favourable economic climate resulted in changes to that which was delivered, with reduced beneficial assets created for the residents of the immediate area and Cambridge as a whole.
- Vulnerabilities of the original developer were exposed and the development was put at risk as a result.
- The need to deliver something on the site may have resulted in a lower quality development than that which was intended in the Local Plan, Development Framework and the original outline application.
- The approval process and overall development process was/is lengthy which has resulted in the slow delivery of homes and jobs.

Where could this be applied within the Corridor?

Within the Corridor, a similar approach should be avoided, but in particular:

- For urban or more centralised locations which are strategically important, the perceived shortcomings of development can be learnt from. In the case of CB1 it is can be considered one of the gateways to Cambridge which requires a strong vision enforced by the planning authority.
- In instances where there is a more urgent need to deliver a site, due to its profile or more generally in terms of housing supply and employment land supply.
- Corridor wide, all planning authorities should seek to avoid weakening their decision making position and enforce the intended vision.

Quantifying the benefits

Between 2007 and 2017, Government statistics show a total of 6,890 dwellings were completed in Cambridge, in other words an average of 689 per year. CB1 provided 726 units over an eight year timescale. This would represent an uplift of 12% over the 'background' completion rate.

Voluntary cooperation and regional planning body (previously the Council of Governments COG), Portland, USA

Context

Voluntary cooperation and establishment of a Regional Planning Authority with responsibility for planning or solving a specific issue at the regional level.

Circumstances of government structure

An elected members regional authority - the only elected members authority of its type in the US - which when it was first formed in 1977 had a more focused and narrow mandate to be responsible for land use regulation and management under the regional planning council as well as solid waste disposal and the administration of the local zoo under the metro service council. It has since developed good working relationships with local authorities which has resulted in its increased mandate to be responsible for a stadium, exhibition centre, regional parks, cemeteries and marine facilities.

The council is made up of representatives from all cities/towns within the Portland metro, but these representatives come together to consider the wider area rather than seek to specifically promote any individual's city/town's needs. Having these elected members allows for accountability for the decisions that are made which ensures local needs are kept at the forefront of the Authority's priorities.

Through the successful implementation and development of the regional authority, fiscal disparities are some of the lowest in the US. Portland Metro as a region is, however, relatively homogenous which may have supported the success of the regional authority.

Lessons for the corridor

- The establishment of a Regional Planning Authority has the potential to result in some duplication of existing roles which would require comprehensive clarification of the mandate of the body.
- Regional Planning Authorities are challenging to sustain in instances where there is a lack of sufficient power to enforce plans and strategies across the area. Therefore in instances where the new body will take over certain planning powers, the authorities need to support and facilitate this.
- In order for this to be as successful as it was in the Portland area, an agreed joint vision and mandate is required from all involved authorities as well as the ability for this new body to enforce this.

Could this be successful within the Corridor?

Within the Corridor, a similar approach could apply for regional governance to ensure successful delivery of development and infrastructure across the corridor:

- This approach would allow the authorities within the corridor to determine the responsibilities of the body, such as strategic infrastructure delivery which would allow for a clearer approach to its delivery across the corridor.
- The Regional Planning Authority can be established to provide an advisory role across all municipalities independent of the municipalities themselves; rather than taking over any specific planning powers the body would become a statutory consultee. l
- The body would provide a means to ensure that all authorities within the corridor are working towards the same vision for the future.

Voluntary cooperation among municipalities, Lublin Poland

Context

Voluntary cooperation among municipalities including the establishment of a forum for coordinated efforts, with decisions needing endorsement from each municipality.

Circumstances of government structure

A cooperation agreement between municipalities exists that is mainly related to regional economic development. However, while there is ongoing cooperation, there is not the organisational structure in place that would deem it to be a governance body.

Lublin and its neighbouring authorities have begun to act more in line with a metropolitan area approach, a process which is envisaged to be complete by 2030 according to the governmental plan. However, one of the major barriers to faster formation of a coordinated metropolitan area is a less than favourable economic environment in the region.

The Lublin Development Strategy 2013-2020 reinforces the aspiration to develop the city's metropolitan characteristics, and to prioritise the formation of a single functioning regional economic unit.

The cooperation agreement's main objectives are:

- To break through infrastructural barriers
- To increase regional competitiveness and economic growth
- To ensure effective spatial development and improved public transport.

The proposed Lublin governance structure will include three levels of city management: city-wide level (responsibilities beyond the municipal authority such as university development and transport), sectoral level (through local government and community partnerships), and districts level (smaller-scale).

Lessons for the corridor

- The process for the formation of this style of metropolitan area council of governments can be slow and inefficient with long negotiations depending on the individuality of interests.
- Due to the nature of voluntary cooperation as well as establishment of the framework decision making can also be slow, with long negotiations.
- In order for this to be effective it is crucial that good working relations exist and there is a universal agreement of a shared vision across the corridor.

Where could this be applied within the Corridor?

Within the Corridor, a similar approach could apply for regional governance to ensure successful delivery of development and infrastructure across the corridor:

- Where there are large private and university land holdings with their own priorities and interests, management of development may add an additional layer of complexity.
- For individual authorities within the corridor it may be a preferable option for development management as it allows each authority to remain responsible for their geographical area with limited/ no direct decision making from an independent authority or regional governing body sitting above the authorities.
- In instances where full cooperation and strong working relationships exist the municipalities will be engaged and willing to develop strategies and make decisions that will benefit the corridor.
- The region will have a shared vision that each individual authority will contribute towards a more coherent and strategic approach to decision making.
- Through a corridor wide cooperative decision making process which ensures continued engagement between authorities, a stronger stand can be taken to ensure that development occurring in the corridor has wider benefits.

Voluntary cooperation among municipalities, Bordeaux Métropole, France

Context

Voluntary cooperation with responsibility for both planning and service delivery in some form, usually through a public agency or corporation.

Circumstances of governance structure

The Bordeaux Métropole forms 27 municipalities and is an intercommunal structure containing the city itself and its suburban areas. The Bordeaux Metropole has a number of functions it is responsible for, including economic functions, research, university and cultural functions.

The Métropole developed a single shared vision and goal to be achieved by 2030 through the engagement of all municipalities within the corporation - ensuring that all were working towards the same outcome. Underpinning the shared vision were 5 values:

- Solidarity metropolis (between people and bodies of different scales)
- Exciting metropolis (promoting creativity, innovation and economic performance)
- Sober metropolis (mindful of efficient resource use)
- Sensitive metropolis (promoting cultural and environmental assets, and their effect on health and wellbeing)
- Unique metropolis (respecting the identities of each municipality while defining common heritage for the region).
- The Métropole does not have metropolitan status, but has formed a Community council with 120 elected officials from the 27 municipalities.

Lessons for the corridor

- Gaining consensus through a voluntary cooperation approach can be a lengthy process and may require long negotiations depending on the individual interests of the authorities.
- In the case of Bordeaux Métropole, gaining a consensus through voluntary agreement and the establishment of the Community Council allows for a shared longer term vision to be developed which is supported across the region.
- Through the creation of the Community Council made up of representatives from all municipalities, decisions of a strategic nature can be made in a coherent and streamlined manner.
- In establishing a new body across the corridor, there may be some duplication of roles unless the body's mandate is clearly set out and services are consolidated where appropriate.
- Consideration should be given to the possibility of added complexity when establishing a body of this type with multiple responsibilities and how onerous this may be.

Where could this be applied within the Corridor?

Within the Corridor, a similar approach could be used to deliver strategic plans, bearing in mind the following points:

- The corridor has considerably less authorities when compared to Bordeaux Métropole so establishing voluntary cooperation will be a more streamlined process.
- There is the added advantage of combining service provision and planning which will boost the strength and ability of authorities to strategically plan in cooperation and achieve shared goals.
- With the body operating at a level above the individual authorities decisions can be made with the wider corridor in mind rather just individual interests.

APPENDIX H: DEVELOPMENT CORPORATION MODELS

	Home and Communities Agency powers to designate	New Town Corporation (NTC)	Urban Development Corporation (UDC)	Mayoral Development Corporation (MDC)
Example	Power not used at time of writing	Milton Keynes Development Corporation	Ebbsfleet Development Corporation	London Legacy Development Corporation
Enabling legislation	Housing and Regeneration Act 2008	New Towns Act 1981	Local Government Planning and Land Act 1980	Localism Act 2011
Planning authority	HCA	Secretary of State	Urban Development Corporation	Mayoral Development Corporation
Planning powers	Plan making and development management powers	Development management to implement an approved masterplan	Development management to implement an approved masterplan	Plans making and development management to implement an approved masterplan
Consultees at establishment	Local planning authorities, local communities and local businesses	Local planning authorities	Local planning authorities, local communities and local businesses, and any other person	Local planning authorities, local communities and local businesses, and any other person
Delivery pros relative to other DC models	Enable rapid delivery of housing where HCA is the landowner; CPO powers	Designation can be an effective solution where no voluntary agreement to develop can be reached among local stakeholders; CPO powers	Seen as more politically accountable than HCA or central government-driven model; CPO powers	Seen as more politically accountable than HCA or central government-driven model; CPO powers
Delivery cons relative to other DC models	Of the four models, likely considered the least politically palatable (see notes below)	Possibility of public inquiry having to be held if sufficient opposition to proposals to designate	Lacks plan-making powers; may not hold land interests	Lacks plan-making powers; may not hold land interests

Table 24. Development Corporation Models