



Integrating the planning and delivery of sustainable transport with new housing development

A report commissioned by Greener Journeys for the Transport Knowledge Hub

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Executive Summary

Introduction and approach

Integrated sustainable transport and new housing, when planned and delivered correctly, connect people and homes with jobs and social infrastructure. This 'typology' of development has the potential to deliver a range of benefits to people and places, and facilitate the delivery of key Government policy objectives, including: increased housing delivery, addressing affordability pressures, boosting economic productivity, and enabling clean and inclusive growth.

Delivering these policy objectives means exploiting opportunities for higher-density housing in locations that are, or could be, well served by high-capacity sustainable transport – such as bus and rail services – along with high quality public realm and walk and cycle links which create attractive and liveable communities.

However, all too often the planning and delivery of sustainable transport and new housing operate in silos. As a result, new housing development in England is often criticised for being car-dependent, isolated, and sprawling. Failure to integrate is a missed opportunity to help deliver the scale of new homes our country needs, and to maximise the economic, social and environmental benefits of both private and public investment in sustainable transport and new housing.

Our study for Greener Journeys has therefore sought to:

- Understand why sustainable transport and new housing are not as integrated as they could be through in-depth consultation with stakeholders across the sector, identifying the root causes or "barriers" to integration across the planning and delivery stages; and
- Identify a range of solutions that could help to overcome these barriers and present a number of practical proposals that could be considered by Local Government, Central Government and industry for taking forward those solutions.

The key barriers to integration

Stakeholders were consulted from all tiers of Local Government, as well as Local Enterprise Partnerships; Central Government; industry bodies; think-tanks; transport operators; private developers; and planning consultants. In total, we received input from 38 stakeholder organisations. The major identified barriers emanating from the consultation exercise are as follows:

Barrier 1: Statutory responsibility for local public transport, highways and housing is fragmented across Local Areas, resulting in plan-making and decision-making that often operate in silos

Statutory responsibilities for planning, delivering and managing housing, highways, and sustainable transport sit across different tiers of Local Government outside of Unitary Authority areas. Even within unitary authorities these responsibilities can rest with different teams which in some cases can report to different Cabinet Members of the Authority. It was felt by stakeholders, particularly two tier Local Authorities, that Transport and Planning Authorities/Departments can have differing priorities, resulting in housing and transport policies and plans that do not necessarily promote integration. Additionally, differing levels of ambition between neighbouring authorities was identified as a providing a challenge to delivering a strategic vision for new development across functional economic areas.

Barrier 2: National planning guidance does not go far enough to promote effective planning for sustainable transport alongside new housing developments

Stakeholders, particularly Local Government and transport operators, felt that the revised National Planning Policy Framework, as well as statute for Local Transport Plans, do not give Local Areas sufficient clarity to promote the provision of sustainable transport infrastructure with new housing.

In particular, Chapter 9 of the revised National Planning Policy Framework provided limited support for prioritising bus and rail as fundamental alternatives to car-based development. It was noted that the policy makes provision for developments to “offer a genuine choice of transport modes”, but it is ambiguous as to what determines “genuine choice”. Also, Paragraph 16 of the National Planning Policy Framework states that Local Plans should “be shaped by early, proportionate and effective engagement between plan-makers and communities, local organisations, businesses, infrastructure providers and operators and statutory consultees.” While this language was welcomed by stakeholders, many believed this did not go far enough to encourage meaningful engagement, particularly with bus operators. This means that whilst national policy encourages good practice, it does not always happen in reality.

This is compounded by the fact that Local Plans and Local Transport Plans have different purposes, are misaligned in their planning horizons, and are not held to the same standard of scrutiny. Housing policy is progressed through Local Plans, which are subject to Public Examination by an independent inspector and must identify development sites to meet local housing need and demonstrate these sites are deliverable. Meanwhile, Local Transport Plans are not subject to Public Examination and are often described as “aspirational” documents, with little focus on deliverability or how this will support projected housing growth.

At the planning application stage, the need for Local Areas to demonstrate how they will meet their housing targets, as well as providing a five-year land supply, often takes precedence over how development will be served by sustainable transport. Building new homes that are remote from public transport networks and employment hubs results in limited or no sustainable transport solutions. In addition, transport assessments of housing developments and their impacts are still very much focused on highway junction capacity and whether a “reasonable level of service” can be met.

This process does not fully consider the potential benefits of providing alternative sustainable solutions such as public transport and walking and cycling. Together these issues led to many stakeholders suggesting that housing delivery has become a “numbers game”, focused only on meeting targets, rather than ensuring the quality and suitability of places.

Barrier 3: Local Areas do not have sufficient long-term funding to plan strategically and deliver with certainty

Throughout our consultation exercise, the ability of Local Areas to be able to undertake long-term, strategic planning for major transport infrastructure was raised time and again as a major challenge to integrated planning of homes and sustainable transport. A lack of long-term capital funding certainty, as well as constrained revenue funding, together were identified as the key issue preventing this kind of strategic planning.

At present, most Local Authorities, outside Combined Authority areas, typically only have funding certainty over a maximum three year time horizon. This is in direct contrast to the funding frameworks that are now in place for strategic transport nationally – such as Highways England’s five-yearly Roads Investment Period. Fundamentally, the lack of funding certainty for local transport restricts Local Authorities’ ability to both plan for, and invest in, sustainable transport schemes that could be used to genuinely transform the norm of new housing development.

Added to this, local transport funding is disconnected from funding for complementary policy areas that support sustainable development, such as brownfield site regeneration and enabling infrastructure for housing, as well as budgets related to social, education and community transport. It is also still dominated by competition funding, which creates pressures on declining Local Authority resources and opportunistic ad-hoc decision-making that may not necessarily align with the Local Authorities’ preferred timing or priorities. This short-term, fragmented and reactive funding regime, in turn, is a disincentive to developers to design and develop new sites that accommodate sustainable transport provision, since there is no certainty that wider infrastructure connections are being planned or funded.

For revenue funding, the increasing constraints on Local Authority resources were raised as a major barrier by both public and private stakeholders to strategic planning. A 2018 report by the National Audit Office estimates Government funding for Local Authorities has fallen by a 49.1% in real terms from 2010-11 to 2017-18. These funding reductions have had a particular impact on their planning and transport departments, which have been cut back in the face of other statutory responsibilities. This has resulted in much of the work of local planners moving from being proactive to reactive at the local level, and reducing time and capabilities available for strategic planning.

Barrier 4: Current developer contribution mechanisms are insufficient to fund strategic sustainable transport and do not explicitly capture the uplift in land values associated with high-quality sustainable development

There are currently two main developer contribution mechanisms Local Authorities can use to fund necessary infrastructure provision at new development sites: 1) Section 106 Agreements and 2) the Community Infrastructure Levy. Developer viability drives how much Local Authorities can receive from developer contributions.

Many stakeholders believed that too much was expected of the current developer contribution mechanisms. These mechanisms were seen as relatively narrow and limited instruments that were primarily designed to fund mitigating infrastructure, rather than fund the kind of strategic sustainable transport infrastructure that provides high quality connectivity and could genuinely influence development typologies and uplift land values in the longer term, both at a specific site and across a wider area. As a result, and compounded by the pressure on Local Areas to deliver housing numbers, under the current system sustainable transport is often regarded, by both planners and developers, as a 'lower priority' item of mitigating infrastructure – given the need to also deliver social infrastructure, green infrastructure and affordable housing

Current mechanisms also generally fail to capture the windfalls of planning gain from changes in the use class designation of land (e.g., from agricultural to residential use). This uplift can often be received by landowners, rather than developers (which are the focus of current developer contribution mechanisms). This issue also features strongly in the literature, with repeated calls for mechanisms to capture this planning gain to landowners. This dates back to the Barker Review in 2004 and was recently considered in the MHCLG Select Committee's review of Land Value Capture in 2018.

Barrier 5: Current appraisal approaches do not address the holistic benefits of integrated sustainable transport and new housing development

This challenge was expressed by both Local and Central Government stakeholders. Appraisals generally take place at the individual scheme level, and generally seek to assess a narrow range of benefits directly within the transport or housing market, rather than the potential positive externalities to society and the economy as a whole. Appraisal experts discussed the need to find ways to value "place" – capturing the full range of possible amenity, environmental and social inclusion benefits of sustainable development, as well as the impact on the wider economy.

The timing of when economic appraisal takes place in the scheme development process also poses a challenge. In particular, stakeholders felt the appraisal of schemes can often be undertaken too late in the delivery cycle. Appraisal is typically undertaken on a scheme by scheme basis in response to specific development site plans. It is not, however, standard practice for assessing the potential benefits of integrated development at the strategic planning stage, such as deciding where to locate housing land and the type and density of that development, despite these spatial factors influencing the economic returns of development.

Appraising schemes as independent of area-wide development objectives can mean that appraisal outcomes fail to capture the true impact of a project, but also that schemes are less likely to come forward on a strategic basis.

Barrier 6: The design, pattern and location of new housing development lead to sustainable transport services being unfeasible

Many new housing developments in England are built under the assumption that the car will be the primary mode of transportation for residents, rather than sustainable transport being designed-in from the start.

There are a number of contributing factors as to why this occurs, as outlined through the range of barriers identified in our research. Principally, developers can largely be expected to respond to the planning context, which includes both the policies stipulated in the Local Plan, as well the transport network serving that development and future investment plans. Without a strong and clear spatial strategy, Local Planning Authorities are at risk of being resigned to 'easy win' sites that promise to deliver high housing numbers, but may not be well located for public transport provision

Where there are no alternative transport modes in place that offer reasonable levels of connectivity to economic and social infrastructure, developers will need to provide significant space for car road use and car parking if the developments are to uphold value. Where sustainable transport modes are typically more readily available, such as in more urban areas, less land is automatically provided for the private car by developers because it will not be such a significant pricing factor for house buyers in well-connected areas.

For transport operators, the resulting design, pattern and location of housing development can make public transport services – particularly bus operations – unviable. Since bus operators are not statutory consultees in the development of Local Plans, sites can be taken forward without a full understanding of whether it could be served by a bus, whether a route could be commercially viable in the long term, and what the cost would be to pump-prime bus services. Many bus operators highlighted that basic design principles, such as footpaths to bus stops, the distance to bus stops, and on-street parking provision, are often overlooked by planners and developers but are fundamental to the attractiveness and feasibility of providing bus services to new housing developments. Beyond the design of a new development, their location can also discourage the use of public transport, leading to an unviable service in the absence of public subsidy.



The call to action

Following the identification of these common barriers to integration, we have developed eight proposals to help overcome them and improve outcomes across the sector.

Funding and incentives

1. **Current capital and revenue funding for local transport and complementary policy areas consolidated into a longer-term, devolved budget to Local Areas to enable them to plan and invest on a more strategic basis**

Local Areas need longer term certainty and control over capital and revenue funding for local transport and enabling infrastructure. This would enable them to plan strategically; better align local funding with third party funding from developers and national agencies; and in turn deliver effective sustainable transport solutions that can be fully integrated with new housing development.

The National Infrastructure Commission has already recommended devolved transport budgets to Local Areas in five-year funding settlements. This could be taken even further, by combining transport and development-related grant funding into a single devolved pot. This would need to be in return for robust local governance and accountability arrangements, with agreement upfront, to an assurance framework that aims to ensure investments represent value for money and contribute to agreed policy objectives.

The forthcoming 2019 Spending Review presents an opportunity to fundamentally revise the way Local Areas are allocated capital and revenue budgets for transport and housing. Five yearly devolved funding packages, akin to the level of funding certainty provided to national bodies such as Highways England and Network Rail, would enable Local Areas to more effectively prioritise investment according to their strategic priorities.

2. **Local Areas capture a greater share of the increased land value resulting from changes in the use of land and public investment in high-quality sustainable transport, in order to help raise the overall level of investment in sustainable transport**

There is an extensive body of evidence in the literature that demonstrates better connected areas have higher land values relative to other locations in a particular economic geography, as do areas with higher levels of amenity provision and quality of place. This applies in particular to large new housing sites that require strategic infrastructure, wherein high-capacity and high quality sustainable transport provision can result in land value uplift in the longer term.

Current developer contribution mechanisms are not designed to capture this uplift from public investment, nor are current mechanisms equipped to address the “planning gain” to landowners from changes in the designation of land to residential use. Both issues result in a missed opportunity to raise additional funding for sustainable transport infrastructure.

New, context specific mechanisms are required that tap into this value, whilst also recognising the inherent timing challenges associated with value capture-based funding approaches. This requires the assessment of development viability to be more of an iterative process as the phasing of sites comes forward. It also requires a wider funding regime that enables pump priming infrastructure investment in the short-term.

Getting ‘buy in’ from landowners and developers requires Local and Central Government to demonstrate a commitment to sustainable transport over the long term. Commitment to significant, strategic sustainable transport can be demonstrated through upfront public sector investment. It can also be demonstrated through providing the appropriate lending mechanism from Government to pay for the large upfront infrastructure costs over an appropriate development period (as Homes England has begun doing). A consistent vision, and demonstrating commitment from Local and Central Government would help in addressing developers’ viability concerns and incentivise higher developer contributions to Local Areas to recoup some of the costs of investment in value-creating infrastructure.

3. **Local Areas are provided with the resources to fund the capacity and capability that are necessary to plan strategically**

Increasing constraints on Local Areas’ revenue budgets have undermined their ability to undertake genuine spatial planning and promote the integration of sustainable transport with new housing developments. At present, Local Authorities have the power to levy additional planning fees. While Central Government does not dictate what these funds can be used for, the level of fees are set by Government and are such that it can only cover the reactive discipline of development management, rather than upfront strategic planning. Local Areas need additional power to capture and retain revenue funding that more comprehensively supports the costs associated with plan-making activity and development management, as well as receive sufficient revenue funding as part of a longer-term, devolved budget from Central Government.

Policy and plan-making

4. Forthcoming National Planning Policy Guidance to clarify expectations for sustainable transport provision with new development and provide Local Areas with the necessary backing to put policy into practice

Forthcoming National Planning Policy Guidance could be more definitive in terms of explaining its expectations around sustainable transport provision in new developments. For example, in what constitutes a “genuine choice” of transport modes, there is an opportunity for guidance to explain the modal choice and quality and connectivity of service that residents should be able to expect. A clear definition would leave little room for interpretation by developers on the minimum expectation of sustainable transport provision in new developments. This would also give Planning Authorities stronger grounds to reject a development on sustainable transport issues without the fear of a threat of an appeals process, and helping to avoid the risk of housing delivery simply being a “numbers game”.

5. Local Areas develop spatial plans that integrate planning for transport, housing and employment land, and where appropriate over a single economic geography

At present the development of Local Plans and Local Transport Plans are separate activities and subject to different standards of scrutiny. This could be an integrated activity, fostering an alignment between the bodies responsible for transport and planning in terms of their strategic objectives and that development sites are aligned to existing and planned transport infrastructure. This integrated plan could reflect the interaction between transport and housing markets, and therefore where appropriate be developed jointly by authorities over a single economic area. There are positive examples of joint spatial plans and strategies being developed across the country, but this continues to be the exception rather than the rule.

Spatial planning could help to ensure that, as far as possible, housing is connected into the existing sustainable transport network, and that when providing new strategic infrastructure for larger greenfield sites, this ties in with a long term vision and strategy for sustainable transport across the Local Area. This could also promote more corridor-based development, where large scale housing is built around transport nodes along a public transport corridor in a sustainable way and meeting the transport needs of a growing community.

This is aligned to recommendations by the National Infrastructure Commission in its 2018 National Infrastructure Assessment, which states that “by 2021, metro mayors and city leaders should develop and implement long term integrated strategies for transport, employment and housing that will support growth in their cities”.

6. The potential benefits of integrated sustainable transport and housing development are considered at the earliest stages of the plan-making process and appraised holistically in terms of their economic, social and environmental impacts when determining value for money

Decision-makers often do not have the full appreciation of the potential benefits of integrated development. This is, in part, because funding, and therefore appraisal approaches, for transport and housing policy operate in silos. It is also due to the technical challenges associated with valuing the benefits of integrated transport and housing proposals, or “place-based” interventions. Added to this, appraisal is typically undertaken late in the development cycle, at the point at which specific schemes come forward, rather than at the plan-making stage when decisions are taken over land that should be allocated for housing or what transport policies or corridors should be prioritised.

Under a regime where Local Areas have longer-term, devolved and consolidated funding across transport and development-related spend, they could have greater flexibility to plan, appraise and prioritise schemes locally through a fully integrated approach. This would need to be supported by sufficient technical resource at a local level to undertake robust appraisal. Central Government would still have a role to play, particularly in the scrutiny of local process and evaluation of investment decisions. There is also a role for greater sharing of knowledge and good practice among Local and Central Government and scheme sponsors on “what good looks like” in appraisal terms, and the technical approaches available for undertaking such analysis.

7. Sustainable transport provision is designed-in from the outset in order to support the introduction of public transport services

Simple design principles, such as the provision of footpaths to bus stops, distances to bus stops, and on-street parking provision, are not routinely considered in the development of new housing sites. In addition, the location of new developments are often not strategically located to encourage the use of sustainable transport. The design of new housing developments and the location of new neighbourhoods are early and critical considerations that can be “make or break” for the provision of sustainable transport, and bus services in particular. Incorporating design principles to encourage sustainable transport need not be costly if it is design-in from the outset. This would allow for flexibility if and when public transport is introduced alongside new housing development.

This could be made possible through Local Areas engaging more closely with transport provider at the design stages of new developments, as well as a greater sharing of knowledge of good practice design principles between the public and private sectors.

8. Local Areas and transport providers work collaboratively to deliver innovative and cost-effective sustainable transport solutions for new housing

Sustainable transport solutions are not ‘one-size-fits-all’; they should be tailored to the community they serve and depend on a number of factors, including size of the development and the current quality and capacity of the transport network available. The future of mobility is changing with developments in technology, shifts in social preferences and changing demographics. This introduces opportunity for new solutions and products, such as digitalisation of information and payment systems, and new forms of demand-responsive transport. Through collaboration, Local Areas and transport providers could be well equipped to design and develop innovative sustainable transport solutions that are most appropriate for the local communities they serve. However, this collaboration would need to become more common practice. The ability for Local Areas to pursue more innovative funding or pump-priming of private sector solutions would be further strengthened by devolved budgets and greater revenue-raising powers.





CHAPTER 1

Introduction





Chapter 1: Introduction

The context for this study

Integrated sustainable transport and new housing, when planned and delivered correctly, connect people and homes with jobs and social infrastructure. By providing inclusive, well connected links between homes and jobs, sustainable transport can potentially provide significant social and economic benefits to people and places when successfully integrated with new housing development.

In the right delivery context, the positive benefits of integrated sustainable transport and housing mean it can contribute to the Government's key policy objectives of increased housing delivery and addressing affordability pressures, boosting productivity, and enabling clean and inclusive growth. Delivering these policy objectives means exploiting opportunities for higher-density housing in locations that are, or could be, well served by high-capacity sustainable transport – such as bus and rail services – along with high quality public realm and walk and cycle links which create attractive and liveable communities.

However, all too often the planning and delivery of sustainable transport and new housing operate in silos, which prevents this form of integrated, sustainable development coming forward. As a result, new housing development in England is often criticised for being car-dependent, isolated, and sprawling.

Failure to integrate is a missed opportunity to help deliver the scale of new homes our country needs and to maximise the economic, social and environmental benefits of both private and public investment in sustainable transport and new housing.

Purpose of this report

KPMG was engaged by Greener Journeys to identify the barriers to integrating sustainable transport within new housing developments, as well as identify potential changes to the current system that would support Local and Central Government, transport operators and developers to achieve better integration. This report sets out the findings of our study.

In order to arrive at the proposals discussed in this report, we have investigated the practical barriers to integrated, sustainable development through detailed consultation with stakeholders across Local Government, Central Government, the development sector and sustainable transport operators. Our approach to this stakeholder consultation exercise is set out in Chapter 2. We discuss why integrating housing and sustainable transport is relevant in a national context in Chapter 3. The findings of our study are presented in Chapter 4, where we set out the key barriers that were commonly cited by stakeholders and identify a range of potential solutions for overcoming these. Chapter 5 presents examples of good practice. Finally, Chapter 6 sets out eight proposals for changes to the current system which could collectively address the barriers identified and support better integration of sustainable transport with new housing.

Definitions used in this report

New **housing developments** are typically considered as private sector-led but regulated at a Local Area level by the English planning system. This study has not explicitly considered developments focused on social housing provision.

Local Government or Local Area is typically used to describe **Local Authority (LA)** areas with some transport and/or development planning powers. This ranges from two-tier authority areas (County Councils and District Councils), to Unitary Authority areas (including metropolitan borough councils) and **Combined Authority (CA)** areas. Local Government authorities responsible for transport planning are referred to in this report as **Local Transport Authorities**. Local Government responsible for development planning are referred to in this report as **Local Planning Authorities**. However, in more general or strategic terms, 'Local Government' or 'Local Area' is also used in this report to describe functional economic areas, **Local Enterprise Partnership (LEP)** areas, and city regions.

Central Government is also commonly referred to in our report and relates to the UK Government. Our study has focused on the English system given that transport and planning are devolved matters in Scotland and Wales. We also refer to specific departments within Central Government, including the Department for Transport (DfT), the Ministry of Housing, Communities and Local Government (MHCLG) and the Department for Education (DfE).

Sustainable transport is considered as any non-car transport mode that provides minimal additional impact on the existing road network whilst linking new housing developments to social and economic centres of activity. This can include corridor-based modes including road and bus, but also last mile and active transport solutions. We generally consider sustainable transport to include services and infrastructure able to provide a similar or better level of connectivity to the private car.

Planning and delivery are considered to be the two key components of the **delivery cycle**, encompassing initial development of **Local Transport Plans** and **Local Plans** (or sometimes referred to in our report as Local Development Plans) at the LA level; functioning of the private sector land and property industries and both the land and construction markets in building out development sites; as well as the public-private interactions in the development management process.



A photograph of a high-speed train at a station platform during dusk. The train is silver with a yellow front and is stopped at the platform. The platform has a yellow safety line. The sky is dark, and there are trees in the background. The text 'CHAPTER 2' is overlaid in white, with a horizontal line underneath it.

CHAPTER 2

Our approach



Chapter 2:

Our approach

In order to identify the key barriers in the current system and potential solutions for overcoming them, we conducted extensive stakeholder consultation with those closest to the issues, and who deal with the practical challenges of planning and delivery of both sustainable transport and new homes on a day-to-day basis. This included key actors involved in all aspects of the housing delivery cycle and transport infrastructure delivery and operation in England, across both the public and private sectors.

Before undertaking the stakeholder consultation exercise, we undertook an in-depth literature review to understand the trends of academic thinking, policy research, and practice guidance related to this agenda. Appendix A provides a bibliography of the evidence we have considered. This desk-based review informed the design of a consultation questionnaire (see Appendix B) structured around a series of key themes that emerged as consistent challenges to this form of integrated development. The key themes identified in the literature were:



Under each of these themes, we invited stakeholders to explain the specific, practical issues that they face which typically prevent their ability to achieve integrated planning and delivery of sustainable transport and new homes.

Between September 2018 and January 2019, we held one-to-one interviews and sought written evidence from stakeholders across Local Government, covering all tiers of LAs, as well as Local Enterprise Partnerships; Central Government (including the Department for Transport, the Ministry for Housing, Communities and Local Government, Homes England and the National Infrastructure Commission); industry bodies; think-tanks; transport operators; private developers and planning consultants. In total, we received input from 38 stakeholder organisations. See Appendix C for the full list of organisations that were consulted as part of our study.





CHAPTER 3

The case for change



Chapter 3: The case for change

Better integrated planning and delivery of sustainable transport with new housing presents a practical means of contributing to the delivery of a number of the Government's current policy priorities. It would also address the recommendations of a large stakeholder group of academics, policy campaigners, and the broader public with an interest in the relationship between the built environment and economic outcomes for people and places.

In this context, sustainable transport, if carefully planned and delivered, is seen as being able to play a unique role in influencing:

1. the number of new homes that can be delivered in a functional economic area;
2. the economic performance of places; and
3. the extent to which this represents both clean and inclusive, or 'sustainable' growth.

This chapter explores the relationship between sustainable transport and the delivery of these overarching policy objectives, as well as how the current system oftentimes does not deliver the potential benefits of this type of development.



The economic and policy context

1. Increasing the rates of house building

Increasing housing delivery has been identified as a key objective of Government, set out formally in the 2017 budget which set an explicit target to build 300,000 homes per year by 2020/21¹, derived from an assessment of housing need based on household formation rates and existing stock replacement requirements².

This followed the White Paper, 'Fixing our Broken Housing Market', published in January 2017, wherein the Government recognised the need for a step-change in current delivery rates – indeed the average number of homes completed in the latest 9 years for which data is available since the onset of the 2008 financial crisis, has been just under 154,000 per year, and with the target of 300,000 new additions last achieved in 1977³.

The White Paper established a range of measures to try and meet the target, including through the use of public transport to support development⁴. Whilst this housing needs assessment has since been revised (implying a downward revision to the number of homes required), the Government has maintained its policy target for the 2020s.

The White Paper recognises that housing has become a key policy issue, principally driven by affordability issues, but also by the growing awareness of the importance for individuals to be able to live near areas where they can access jobs and other opportunities, which provides a feedback mechanism into local house prices via demand to live in well located places. The affordability ratio of the median real house price in England to the median real wage has increased from a price of 3.5 times average annual salary in 1997 to almost 8 times the average annual salary by 2016, with significantly higher ratios in much of South East and South West England⁵.

A February 2018 poll of 2,500 adults by Kantar put housing affordability as the second highest public policy concern for voters behind investment in health care⁶. The White Paper builds upon many years of formal Government-appointed Commissions and independent research into the 'housing crisis' agenda.

This goes back to the Barker Review in 2004 that re-established the current aspiration of targets for supply to meet demand, through to the independent Lyons Commission review in 2014. Building on its own consultation work, the White Paper stressed "the particular scope for higher-density housing" in locations "well served by public transport". It also makes particular reference to the output of the National Infrastructure Commission (NIC) in stressing the importance of homes and transport infrastructure to be strategically planned together.

The planning of housing and sustainable transport together can provide a range of drivers that support the rate of delivery of new housing. Firstly, it can help to reduce the challenges associated with finding appropriate sites for new development by locating development in tandem with strategic transport infrastructure corridors. The provision of high-capacity sustainable transport infrastructure with new housing developments, particularly for major sites, can also support development at higher densities, and therefore an increased level of housing delivery. Both of these factors further mean that the overall need for development sites to meet housing targets are reduced in terms of geographical footprint, thus reducing the scale of area across which development management and community buy-in to new development needs to take place. This type of integrated approach may also facilitate a greater level of local support for developments that come forward, as Local Areas are better able to demonstrate how those developments contribute to local economic, social and environmental objectives, and the benefits this provides to local communities.

All of these factors should provide greater certainty and impetus to the planning and delivery of new housing, helping to ensure that development can come forward quickly and at scale so long as sufficient sustainable infrastructure provision is put in place.

¹HM Government, Autumn Budget, 22 November 2017

²House of Commons Library, September 2018, Tackling the under-supply of housing in England

³Office of National Statistics, Live Tables on House Building

⁴HM Government White Paper, January 2017, Fixing our Broken Housing Market

⁵Office of National Statistics, 2016, Statistical Release: Housing Affordability in England and Wales

⁶Kantar, 2018, Affordable housing a top priority for the British public

2. The economic performance of places

The particular 'typology' of development that comes forward also affects the economic success of the wider Local Area in which they are located – including productivity (output per worker) and in turn Gross Value Added (GVA) growth. The type and location of development affects the economic density a wider area can support by linking businesses to their labour markets and residents to employment opportunities.

There are methods available for analysing the wider economic impacts of transport that address how the 'connectivity' of a particular location can affect the size of the markets to which it has access and how, in turn, this can lead to agglomeration effects that support changes in productivity and GVA. The accessibility (or, as often referred to, 'access to economic mass') of a location is a function of the range and quality of transport connections to other places that are available to it, and the type and density of the markets that exist in those other locations. This accessibility is one of the key determinants of the value of land and the productivity of local economies.

Generally speaking, more and better transport options mean that: individuals have more opportunities to find and decide between employment opportunities; firms have more choice of labour and larger customer and supplier markets for their goods and services; competition and knowledge sharing and spillovers accelerate innovation; and there are usually more opportunities for individuals in social and civic life.

Whilst there is a growing understanding of these arguments in transport policy and appraisal⁷, they are less well understood for policy relating to housing, place and planning more generally. However, the location of housing affects the size and type of labour markets that firms in a wider area can access, with housing that is well located contributing to the economic performance and density of the employment destinations connected to it. In this sense, the places that better integrate housing with transport are more likely to optimise the potential benefits from the transport system and the wider economic impacts this can lead to. Broadly, development 'types' that facilitate as many people as possible to be able to access transport 'nodes', whether by new connecting infrastructure, or by locating developments in areas that are well served by the existing network, could increase the potential benefits that investment in both transport and housing can provide.

Since the financial crisis, UK annual productivity growth has been largely flat, and significantly below the long-term, pre-crisis trend of approximately 2% per annum. This has seen UK output per worker fall on average 15% below the G7 average of major industrialised nations; a phenomenon described by UK researchers as 'the productivity puzzle'.

The UK Government has sought to find solutions to the productivity puzzle, first in its 2015 "Fixing the Foundations Report", and most recently in its Industrial Strategy White Paper.

The Industrial Strategy sets out 'Places' and 'Infrastructure' as two of its key foundations for boosting productivity growth, recognising the role of agglomeration economics in supporting well connected labour markets. As set out by the LSE⁸, among others, effective density of labour markets and jobs, enabled by transport connectivity and housing supply, plays a key role in securing these economic benefits, with research suggesting that there is a 20:1 ratio between population growth and economic productivity growth within a defined geographical boundary i.e. on average, a 20% increase in population within a locally bounded area will lead to a 1% increase in productivity in that same area.

These findings align with those set out in our report for Greener Journeys in May 2018⁹, where we undertook analysis that reinforced the increasing recognition in planning and economic circles that integrated development can act as an economic enabler, by improving connections between homes and jobs via sustainable transport infrastructure.

The analysis used a Land Use and Transport Interaction (LUTI) model and indicated that new developments better connected with sustainable public transport could provide direct additional economic benefits in comparison with poorly connected developments, and that the economic benefits from integrated development could significantly outweigh the benefits of development without consideration of sustainable transport.

The analysis showed that hypothesised developments located in well-connected areas (urban regional centres), which have higher levels of accessibility, could generate up to 50% more positive economic impact in terms of employment and agglomeration effects (productivity) than development with relatively lower levels of accessibility (the urban fringe). It also highlighted that these potential benefits can be eroded by up to 10% due to the congestion effects associated with the increased resident population and broader economic activity it supports, unless this is offset by additional public transport capacity. The report broke new ground by taking account of both the typology and location of development as variables impacting potential economic outputs, whereas the majority of previous studies had only looked at location. The analysis implied that there is a role for planners and local leaders as enablers of economic benefits, as well as a role for sustainable transport in both shaping development and reducing the dis-benefits that can limit agglomeration economies, especially those of congestion and sprawl.

⁷DfT, May 2018, Transport Appraisal Guidance Unit A2.1: Wider Economic Impacts

⁸Whitehead, C. and Gordon, I., LSE, 2016, Why Else Is Density Important?, LSE Research

⁹Greener Journeys, May 2018, Sustainable Transport: The key to unlocking the benefits of new housing

3. Sustainable development that supports clean and inclusive growth

Sustainable transport is seen as the only way that population centres can be realistically grown and densified without overloading the existing transport network or leading to adverse environmental and economic impacts. Sustainability of new developments therefore fits closely into the context of the Government's Green Growth agenda, which explicitly prioritises seeking efficiencies within energy distribution and home energy use, and the switch to non-car, sustainable transport modes.

The creation of well-contained, sustainable communities with excellent sustainable transport provision is promoted by a wide coalition of advocates not traditionally aligned. These range from the Campaign to Protect Rural England and the Town and Country Planning Association, to urbanists seeking green-belt revision, and up to the United Nations through its Sustainable Development Goals to which the UK Government is committed and incorporates into its National Planning Policy Framework (NPPF). As presented by the design and planning consultancy, Urbed in their Wolfson Economics Prize (for proposals for new garden cities) winning entry, aside from enabling agglomeration effects, connectivity improvements, whether via better transport, greater density, or both, deliver a range of wider social and economic benefits focused on sustainable economic growth. These benefits are set out in detail by the RTPI in their 2018 Settlement Patterns, Urban Form and Sustainability report, and include: enhanced opportunities for social inclusion, greater learning and employment opportunities for residents, better community cohesion, and better environmental outcomes.

The broader social inclusion benefits of integrated and sustainable development have also been quantified through previous work for Greener Journeys by KPMG and the University of Leeds; an econometric study of 14,500 settlement locations in England which showed that a 10% improvement in connectivity (by local bus services) is associated with a 3.6% improvement in economic, social and environmental deprivation as measured by the Ministry of Housing, Communities and Local Government's Index of Multiple Deprivation.

Crucially, if the dis-benefits of congestion are to be avoided, these potential sustainability benefits can only be achieved through the provision of significant sustainable transport infrastructure which offers residents an attractive and viable alternative to the private car.



¹⁰Urbed, 2014, Uxcester Garden City: Second Stage Submission for the 2014 Wolfson Economics Prize

¹¹RTPI, 2018, Settlement Patterns, Urban Form & Sustainability

¹²KPMG, August 2016, A study of the value of local bus services to society



A way forward: integrating sustainable transport with new housing

The table below takes these three key government policy priorities and describes how the integration of sustainable transport with new housing can help to achieve these policy objectives and in turn the specific outcomes and benefits this could potentially deliver.

Table 1. Aligning the potential benefits of integrated sustainable transport and new housing to key policy objectives

Policy Priority	How – Enabling Factors	Outcomes – Characteristics and Potential Benefits
1. Increasing the rates of house building	<ul style="list-style-type: none"> — Facilitating new sites — Facilitating development at higher density — Upfront planning of strategic sites. Identified for their ability to integrate with new sustainable transport infrastructure 	<ul style="list-style-type: none"> — Greater supply leading to improved affordability — Development at density, reduces footprint of development (sprawl), facilitating greater density at more limited selection of sites
2. The economic performance of places	<ul style="list-style-type: none"> — Enables high capacity, high connectivity between development sites and economic hubs, which in turn enables development at density 	<ul style="list-style-type: none"> — Better access to jobs — Greater GVA through dynamic agglomeration — Density + connectivity delivers large labour markets for firms, attracting them to locate within the geography. Intensification of number of firms in Local Area delivers agglomeration benefits
3. Sustainable development that supports clean and inclusive growth	<ul style="list-style-type: none"> — Move individual trips from car-based to reduced impact modes — Reducing car-dependency and the impact of sprawl — Reducing emissions, and creating safer and more inclusive communities 	<ul style="list-style-type: none"> — Reduced accidents, congestion and emissions — Healthier, less sedentary lifestyles — Both development at density and the provision of sustainable transport reduce social exclusion via a range of factors, not least ensuring that deprived communities can access jobs and social infrastructure.

Source: KPMG

Clearly, the ‘enabling factors’ that facilitate the ‘policy priorities’ of integrated sustainable transport and new homes overlap in a range of areas. For example, development at density, better connectivity and reduced sprawl are all interrelated and usually occur together. Therefore, consideration of these ‘enabling factors’ provides a clearer practical picture of the definition of integrated sustainable transport and new housing, i.e. they are the physical criteria that need to exist for this development typology to be achieved, and which unlocks the potential benefits that deliver on the ‘policy priorities’.



The potential benefits of integrating sustainable transport and new housing development

The three key 'policy priorities' highlighted above also represent high level goals which are targeted in policy terms because they are considered to deliver a wider range of 'outcomes' and 'benefits' to individuals, the economy and society. It is clear that these outcomes and benefits will not be delivered by sustainable development in and of itself but that it would need to be brought forward as part of a specific development typology that is :

- Integrated with new housing developments;
- Well connected to economic centres of activity; and
- Influencing the form and scale of these new developments.

Nonetheless, despite the knowledge of these potential benefits, and that their realisation could be within grasp of those in the planning and development sector, the majority of new housing sites in England still fail to successfully integrate sustainable transport in any meaningful way.¹³ A large number of new housing developments in England are poorly connected to existing economic hubs and are by and large car-dependent. This view is borne out by research by the Royal Town Planning Institute (RTPI) which showed that over half of new housing permissions in a sample of English "city-regions" were considered to not be within 'easy access' of any sustainable transport options¹⁴.

There are a broad variety of reasons why new development in England may fail to deliver many of the outlined characteristics and associated benefits typified by integrated sustainable transport and new homes. Many of these are principally linked to the way that the planning and development systems have evolved over time to create the policy and practice regimes that exist today.

The implication of this is that new housing developments in England will not be capturing the potential economic benefits of well-connected communities as outlined above, and could consequently be delivering the dis-benefits of congestion and excessive travel times associated with car-dependency which, in addition to the benefits foregone, are forecast to cost the UK economy £62 billion between 2016 and 2026.¹⁵

Identifying the barriers to delivering sustainable transport with new housing

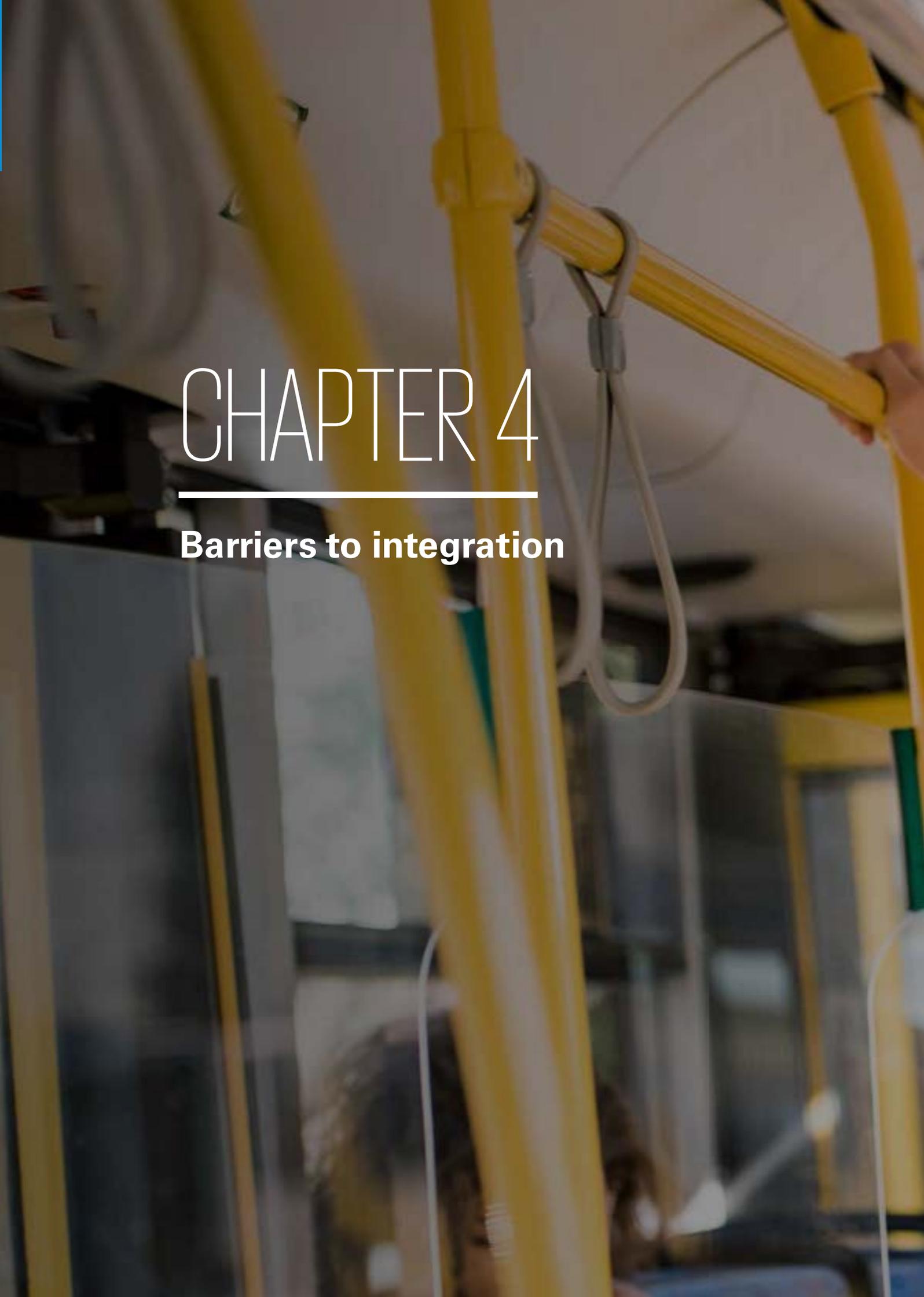
This chapter has set out the opportunities that exist, and potential benefits that could be realised, if integrated sustainable transport and new homes were to become typical of new development in England.

The next chapter identifies the specific, practical barriers identified through our stakeholder consultation exercise. These barriers were those repeatedly cited by stakeholders involved in day-to-day planning and delivery activities as preventing them promoting and delivering integrated development as common practice.

¹³Foundation for Integrated Transport, 2018, Transport for New Homes

¹⁴RTPI, 2017, Location of Development,

¹⁵Inrix, 2016, INRIX Reveals Congestion At The UK's Worst Traffic Hotspots To Cost Drivers £62 Billion Over The Next Decade



CHAPTER 4

Barriers to integration



Chapter 4: Barriers to integration

In this chapter we discuss six key barriers to the integrated delivery of sustainable transport and new housing that have been identified through our detailed stakeholder consultation exercise. 'Barriers' are defined as the key features of the delivery cycle for homes and transport infrastructure and operations which prevent sustainable transport being integrated into new housing developments. Given that good quality transport infrastructure is often identified as a solution to unlocking housing sites, much has already been written in the literature about the challenges to delivering transport and housing together.¹⁶

Figure 1 highlights how these barriers arise through the planning and delivery process. As will be discussed throughout this chapter, later barriers are often a consequence of earlier barriers. For example, without sufficient spatial planning (encompassed within Barrier 1), appraisers and decision-makers do not have the strategic context to consider and value the holistic benefits of integrated development (encompassed within Barrier 5), and the design and location of new housing development would not necessarily support the provision of sustainable transport, such as bus services (Barrier 6).

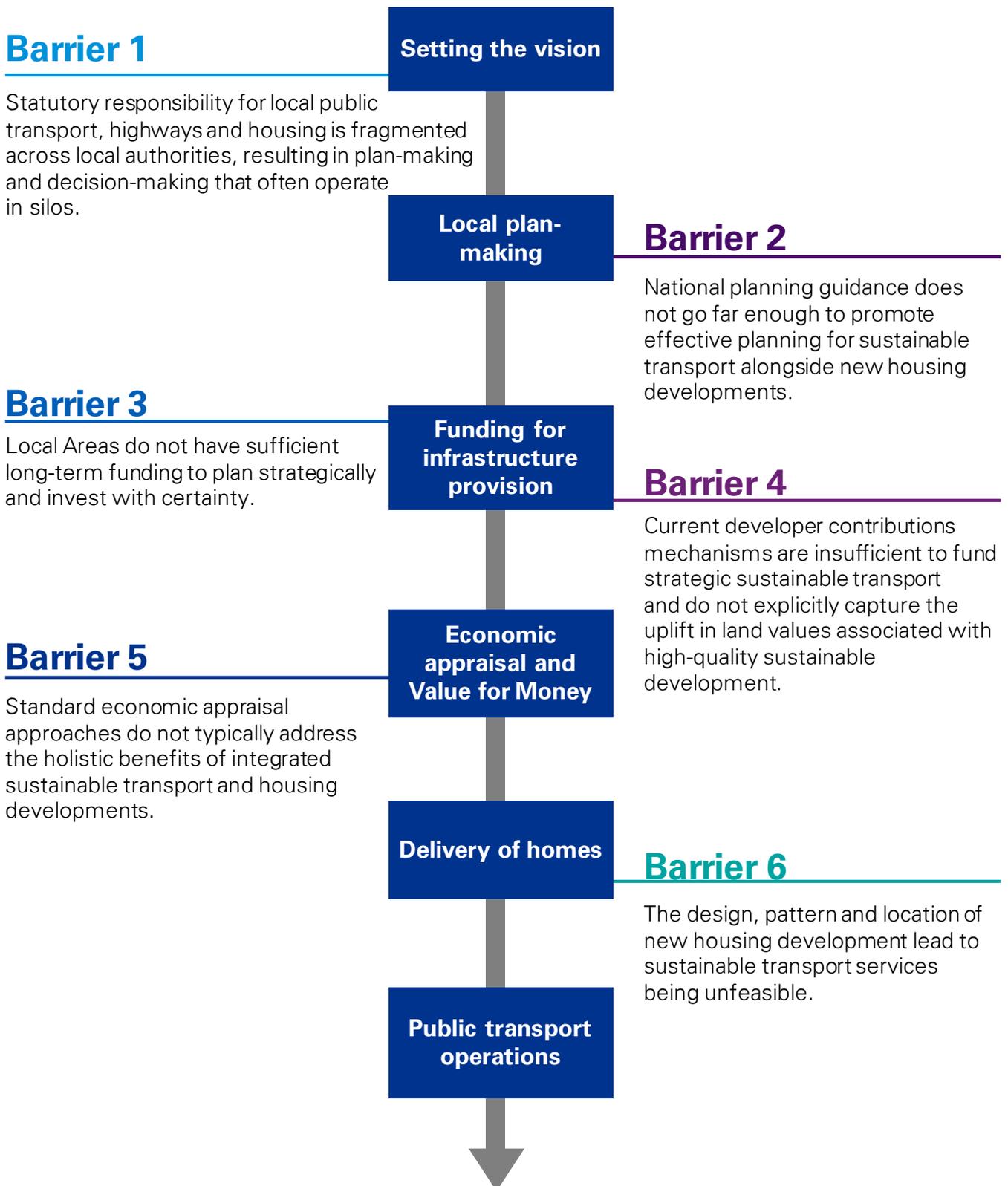
Against each of these main barriers we have identified a range of potential solutions, which are brought together into a series of proposals for change in Chapter 6. The barriers, solutions, and proposals for change are all a direct result of the findings of our in-depth stakeholder engagement exercise, as well as our review of existing literature on the subject.



¹⁶NIC and AECOM, 2017, Report for the National Infrastructure Commission: Cambridge-Milton Keynes-Oxford Arc

¹⁶RTPI Strategic Planning 2015, Effective Cooperation for Planning Across Boundaries

Figure 1. Key stages in the process of integrating sustainable transport and housing, and where the key barriers fall



Source: KPMG

In the remainder of this chapter, each of these six barriers are discussed in greater detail based on the range of related issues raised by stakeholders in our consultation exercise. Alongside each barrier we present a range of potential solutions wherever relevant. These solutions are then brought together in Chapter 6 into a number of major proposals for change.

Barrier 1:

Statutory responsibility for local public transport, highways and housing is fragmented across and within Local Authorities, resulting in plan-making and decision-making that often operate in silos.

The structure of Local Government and local transport and planning responsibilities in England are devolved amongst a variety of non-uniform bodies and structures; from Combined Authorities, Metropolitan Boroughs, Unitary Authorities, and District / County Authority arrangements, as well as non-statutory bodies like Local Enterprise Partnerships. Largely, different arrangements reflect different historical contexts of Local Areas and changing Central Government approaches to localism, which continue to be in-flux as part of the ongoing devolution agenda.

Siloed responsibilities and plan-making at the Local Authority level

Statutory responsibilities for planning, delivering and managing housing, highways, and sustainable transport sit across different tiers of Local Government outside of unitary authority areas. Even within unitary authorities these responsibilities can rest with different teams which in some cases can report to different Cabinet Members of the authority. These different authorities/teams may respond to different local and national policies and priorities, which can result in housing and transport policies and plans that do not necessarily promote integration of sustainable transport with new housing. This can also affect misalignment in funding and investment decisions, where development-related funding (e.g. s106 contributions) that could be available for delivering sustainable transport is typically secured by the Local Planning Authority, whilst transport investment priorities are set by the Local Transport Authority who are not necessarily part of those funding negotiations. Similar issues can arise for investment decisions over grant funding.

In our stakeholder consultation, the issues outlined above were seen as a particular point of contention in two-tier authority areas, where the priorities and formal plans of the Local Transport Authority (County Councils) did not always align with those of the Local Planning Authority (District Councils). A similar challenge was sometimes seen between CAs (responsible for some strategic transport and planning) and its constituent unitary authorities (responsible for local planning and highways).

Misalignment of ambition between neighbours and plan-making over administrative rather than economic geography

Stakeholders also identified particular challenges where district authorities differ in the level of "growth-ambition" from their County or CA partners or from neighbouring unitary authorities. This can severely hamper the planning and delivery of strategic sustainable infrastructure and housing across functional economic areas that do not fit easily within administrative boundaries, but which may be the most appropriate geography for developing spatial strategies that integrate sustainable transport and housing policies and plans.



Figure 2. Overview of the institutional landscape for the planning and delivery of new housing developments and sustainable transport

	Setting the vision	Local plan-making	Funding for projects
Central Government	<ul style="list-style-type: none"> — Sets national policy priorities (e.g. productivity gap, housing delivery) 	<ul style="list-style-type: none"> — MHCLG’s NPPF sets policy for developing local plans — DfT has guidance on Local Transport Plans — Help LAs determine housing need for their area 	<ul style="list-style-type: none"> — Allocates funding for national projects — Housing infrastructure to unlock housing potential — Review bids for funding
Economic Region (Combined Authorities, LEAs, Sub-national transport bodies)	<ul style="list-style-type: none"> — Develop strategic economic plan and local industrial strategies, which is the basis for infrastructure priorities at a regional level 	<ul style="list-style-type: none"> — Unitary / District Authorities responsible for developing Local Plans which outline how it will meet housing demand and designate land for housing developments — Unitary / District Authorities review planning applications and grant planning permissions — Sub-national transport bodies advise on priority transport investments within a region — Unitary / County Authorities, or CAs are responsible for transport strategy, planning and policy and producing Local Transport Plans 	<ul style="list-style-type: none"> — Devolved funding for infrastructure
Local Authorities (District Councils, County Councils, Unitary Authorities)	<ul style="list-style-type: none"> — Collaborating with neighbouring authorities to determine infrastructure priorities 		<ul style="list-style-type: none"> — Funding from Government competitive funding pots — Collecting contributions
Private Developers		<ul style="list-style-type: none"> — Developers acquire land where it is expected / is designated to the LA — Developers submit planning applications to the LA 	<ul style="list-style-type: none"> — Payers develop through Section 106 Community Infrastructure Levy to help fund local infrastructure developments
Transport Operators		<ul style="list-style-type: none"> — May be consulted in the development of Local Plans / Local Transport Plans, but not a statutory requirement 	

Source: KPMG

Mechanisms for infrastructure provision	Appraisals to determine value for money	Delivery of homes and infrastructure	Transport operations
<p>funding based on policy priorities (e.g. Infrastructure Fund housing) funds from CAs, LAs and pots</p>	<ul style="list-style-type: none"> — Appraising schemes to justify investments infrastructure and demonstrate value for money 	<ul style="list-style-type: none"> — Conducting the Housing Delivery Test, which measures net additional dwellings provided in an area against the homes required 	
<p>funding to CAs and wide capital budgets infrastructure provision</p>	<ul style="list-style-type: none"> — Appraising schemes to justify investments infrastructure and demonstrate value for money 		<ul style="list-style-type: none"> — CAs responsible for the coordination of public transport in the Economic Region. — CAs responsible for the maintenance of strategic road / high routes within their Key Route Network
<p>from direct Central Government allocations, or the bidding to the developer</p>		<ul style="list-style-type: none"> — Accountable to Central Government to meet housing demand 	<ul style="list-style-type: none"> — Where there is no CA, Unitary / County Authorities responsible for procuring public transport services — Unitary / County Authorities responsible for the maintenance of local road and highway network
<p>developer contributions Section 106 or Infrastructure Levy help mitigate the effects of new development</p>		<ul style="list-style-type: none"> — Designing and developing new housing neighbourhoods 	
			<ul style="list-style-type: none"> — Responsible for public transport operations

Potential solutions to Barrier 1

A shared local vision and the integration of Local Transport Plan and Local Plan activities

Stakeholders from both the public and private sectors suggested that a shared local vision of sustainable transport priorities and provision within new housing developments, consistency of that vision, and demonstration of commitment to it would permeate throughout the planning and development process. This shared local vision, if supported at senior political and officer level within local governance organisations, could help to: shape how Local Plans and Local Transport Plans are developed; shape how well different teams within Local Areas collaborate; facilitate cross-border and cross-institutional working within functional economic areas; impact how appraisers value the holistic benefits of the scheme; prompt developers to design their developments under the assumption that residents will want to use sustainable modes of transport; and facilitate the commercial viability of public transport operations in the long term.

Increased collaboration between LAs across an economic area

CA and LEP are boundaries are typically designed to cover a functional economic area which comprise multiple LAs and reflects the interaction between local housing and transport markets. There are opportunities for these sub-regional governance arrangements to promote spatial planning across administrative boundaries, particularly given their responsibility for developing Local Industrial Strategies (replacing Strategic Economic Plans) for their geographies, which are intended to identify investment priorities in strategic infrastructure at this sub-regional level. Local authorities within LEP or CA boundaries should therefore consider collaborating fully to align the sustainable transport priorities identified by these strategies with the planning for new housing developments, and reflect cross-boundary issues in Local Plans, developing joint cross-boundary plans where appropriate. This is discussed in more detail under Barrier 3 below.

Master planning and Supplementary Planning Guidance for specific sites

Master plans, including Design Codes and Guidance, and Development Briefs, take a holistic view of a site-specific settlement. This may go beyond housing and sustainable transport, and may take into consideration employment, green space, social infrastructure, public realm, and other amenities on site of a new housing development.

Stakeholders in both the public and private sector were supportive of master planning for major sites as a means of providing clarity and certainty over design principles and planning policies which promote sustainable development, and encourages buy-in around these among stakeholders, including private sector landowners and developers.¹⁷

Through the development of a master plan, Local Areas can work with housing developers, transport operators, and potential employers to create a place that addresses its population, economy, housing, and transport needs.

Whilst it is unrealistic and unnecessary for every new housing development to have a master plan, for strategic developments and major sites, local planning and transport authorities should consider working with relevant stakeholders to develop a master plan and set out specific design principles. Indeed, the revised NPPF emphasises the importance of developing design codes that build upon a design vision, such as a masterplan or development framework for a specific site or area. Design codes could provide specific, detailed parameters for the physical development of a site or area.

This aligns with findings in Sir Oliver Letwin's 2018 review of housing build out rates nationally, which recommends master plans and design codes for large development sites in order to "ensure both a high degree of diversity and good design to promote rapid market absorption and rapid build out rates".¹⁸

¹⁷The World Bank, 2015, Master Planning

¹⁸Rt Hon Sir Oliver Letwin MP, October 2018, Independent Review of Build Out

“Good design”, in this case, could encompass the design of layouts and densities of housing to interact with, and facilitate the use of, sustainable transport infrastructure. Recent high profile examples of master planning linked to sustainable transport investment include the HS2 Growth Strategy Master Plans developed by HS2 Phase 1 and Phase 2 cities, which are intended to fully maximise density and the growth opportunity around HS2 stations, and connecting these areas to the wider city region through local, strategic public transport.

At a local level, many LAs already make good use of development briefs and design codes to target good design and built environment principles at new developments. With better upfront plans for sustainable infrastructure, these could be made prescriptive so that developments are effectively designed to integrate with sustainable transport infrastructure in a way that enhances the potential benefits and catchment of a scheme. It would also provide an overarching additional level of guidance for different groups of stakeholders within local governance bodies to be ‘on the same page’ in terms of expectations from development plans.

Developing a master plan is resource-intensive exercise. As presented in this section, it requires LAs to: conduct extensive stakeholder engagement with developers, transport operators, and the general public; set specific design principles for the site which encompass the design of layouts and densities of housing; determine how the site will interact with, and facilitate the use of, sustainable transport infrastructure; and determine how the site will link to major economic centres in the region. Constraints on Local Government revenue budgets (as will be discussed in Barrier 3) limits their ability to undertake strategic and proactive planning activities, such as developing master plans. It was felt by Local Government stakeholders that more revenue funding could be provided by both Central Government and the private sector to incentivise the development of master plans for large, strategic developments sites.

Figure 3. Example of a shared vision reflected in spatial planning over a single economic area

In February 2017 the Greater Manchester Combined Authority (GMCA) released its Greater Manchester Transport Strategy 2040. The document sets out GMCA’s programme of transport interventions over 20 years. The strategy is supported by a five-year delivery plan which sets out the practical actions and priority investments that need to be taken to meet its long term goals. By 2040, the GMCA’s aims to have 50% journeys made by walking, cycling and public transport (compared to 39% of journeys at present).

In parallel, the GMCA has been developing its Spatial Framework, with its draft Plan for Homes, Jobs and the Environment issued for public consultation in January 2019. This is a strategic spatial framework which presents the CA’s plans for housing, employment, transport infrastructure, clean air and the environment over the next 20 years. It is estimated GMCA will need 201,000 new homes over the plan period.

GMCA’s Transport Strategy 2040 is reflected in its Spatial Framework. Both documents are tied to the same long term economic and population projections, and addressing how this will be accommodated from both a housing, employment and transport perspective. Specific features in the Spatial Framework include: prioritising brownfield land development and, in turn, planning for the majority of development to be on land within the urban area; maximising the use of brownfield land by building at higher densities in the most accessible locations; and reducing the footprint of new development on the Green Belt. As will be discussed later in Barrier 6, these features lend itself to the long term feasibility of sustainable transport.

Once public consultation is complete and strategic spatial plan is finalised, Local Authorities in GMCA will be responsible for developing Local Plans. These plans will provide more detailed policies at the local level and will be required to be in general conformity to the Spatial Framework.

Source: Greater Manchester Combined Authority. January 2019. The Greater Manchester Plan for Homes, Jobs and the Environment; Greater Manchester Combined Authority. February 2017. Greater Manchester Transport Strategy 2040.

Barrier 2:

National guidance does not go far enough to promote effective planning for sustainable transport alongside new housing developments.

The revised National Planning Policy Framework, as well as statute for Local Transport Plans, do not give Local Areas sufficient clarity to promote the provision of sustainable transport infrastructure with new housing development.

Lack of support for integrated sustainable transport and housing in the revised NPPF and guidance on Local Transport Plans

Chapter 9 of the revised NPPF discusses how sustainable transport should be promoted in Local Plans. Stakeholders in Local Government and bus operators felt that while Chapter 9 was a welcome improvement on the previous version of the NPPF, there was a strong focus on active transport and a prioritisation of accident impacts on roads, but limited support for explicitly prioritising bus and rail as fundamental alternatives to car-based development. It was noted that the policy makes provision for developments to “offer a genuine choice of transport modes”, although it is ambiguous as to what determined “genuine choice”. Stakeholders noted the opportunity for Government’s forthcoming National Planning Policy Guidance (NPPG) for Sustainable Transport (expected in the first-half of 2019) to clarify that “genuine choice” should comprise frequent, reliable and well-connected sustainable transport services that could offer a reasonable alternative to the car for most journeys.

In addition, Government guidance relating to Local Transport Plans, which dates back to 2009, sets out measures Local Authorities need to take to develop and implement effective Local Transport Plans. This guidance contains some good elements that encourage integration of sustainable transport with housing; for example that,

“[I]t is critical that transport and spatial planning are closely integrated. Both need to be considered from the outset in decisions on the location of key destinations such as housing, [...], to help reduce the need to travel and to bring environmental, health and other benefits”.¹⁹

However, as discussed below, while the measures set out by this guidance provide positive language that supports integration, Local Transport Plans no longer require updating in statute, resulting in ambiguity and sustainable transport being promoted to varying degrees across different Local Areas.



¹⁹Department for Transport, July 2009, Guidance on Local Transport Plan

Deliverability of Local Plans and Local Transport Plans are not held to the same standard of scrutiny and are typically misaligned in their planning horizons

A strong and recurring issue raised by both public and private stakeholders was that the quality of Local Plans and Local Transport Plans differs due to requirements in statute, and that generally there is mismatch in the timing and deliverability of projects between these plans.

In terms of housing delivery, Local Plans are a statutory requirement. Policies in Local Plans and spatial development strategies must be reviewed to determine whether they need updating at least every five years. Within Local Plans, planning authorities set out a strategy for meeting a specific level of housing need for a 15 year period that includes the allocation of a tranche of specific development sites that can be shown to be deliverable. According to the NPPF, in order to be considered deliverable, “sites for housing should be available now, offer a suitable location for development, and be achievable with a realistic prospect that housing will be delivered on the site within five years”. Plans are subject to Public Examination by an independent inspector and must identify development sites to meet local housing need and demonstrate these sites are deliverable. Stakeholders, particularly those in Local Government, highlighted that whilst transport provision is considered by the inspector, it is not explicitly a limiting factor to deliverability.

In terms of sustainable transport, while there is a statutory requirement on LAs to have a Local Transport Plan, the Local Transport Act of 2008 removed the requirement for these plans to be formally updated every five years, meaning there is now no formal requirement for ongoing assessment of plans or a formal monitoring procedure of plan relevance. Instead, Local Authorities are “accountable to their communities rather than to the [DfT] for both the quality of the transport strategies prepared and for ensuring effective delivery”.²⁰

Increasing constraints on Local Government resources (described in detail in Barrier 3) have compounded this issue. Furthermore, transport authorities have to demonstrate in their Local Transport Plans how projects will be paid for, such as through capital and revenue funding from Central Government, council tax, developer contributions and other sources. As will be discussed in Barrier 3, schemes set out in Local Transport Plans are often contingent on the availability of competitive funding pots provided by Central Government and the success of Local Authorities’ funding “bids” for these pots. This led Local Government stakeholders to describe Local Transport Plans as “aspirational” documents; that is, they typically contain schemes that transport authorities have prioritised, but often with no means to fund the project without successful achievement of grant awards. Overall, these challenges mean that plans for housing are continually refined and reformed, whilst those for the transport that should be integrating and informing development, either lag behind or are not updated at all.

Added to this, since the creation of Local Enterprise Partnerships in 2011, outside of CA areas, these bodies have been responsible for directing the majority of transport spending from Central Government, predominantly through the Local Growth Fund process which involved competitive bidding based on LEPs’ Strategic Economic Plans.

Whilst this has been regarded as a positive step towards ensuring that infrastructure investment is locally prioritised and scrutinised over a functional economic geography, it has further diluted the role of Local Transport Plans, which are not always integrated with SEPs.

SEPs have now been replaced by Local Industrial Strategies (LIS) which are under development across the country. Whilst the LIS concept is a positive one (developing a more evidence-based plan which reflects the local context and better integrates economic policies), there is a risk that this continues the misalignment with Local Transport Plans.

¹⁹Department for Transport, July 2009, Guidance on Local Transport Plan

²⁰Ibid

The pressure of housing numbers and the search for easy wins

The revised NPPF requires LAs to monitor progress in building out sites which have planning permission. Alongside the introduction of the revised NPPF, MHCLG released a top-down Housing Needs Assessment and the Housing Delivery Test, which measures net additional dwellings provided in a LA area against the LA data. Government is set to publish Housing Delivery Test results for each LA in England annually (every November).

Many Local Government stakeholders shared that they felt under significant pressure to meet housing targets set by Central Government, which can mean sustainable transport is ultimately deprioritised in the assessment planning applications, compounded by the relatively weak status of sustainable transport in the Local Plan-making process. This view of pressure to deliver against housing targets is supported by a recent report from the NAO (2019) noted that, as of February 2019, up to 50% of Local Authorities were deemed likely to fail the next Housing Delivery Test in 2020, facing potential penalties as a consequence. Furthermore, the need to demonstrate how authorities will meet their housing targets, as well as providing a five-year land supply, is often seen as taking precedence over the quality of development, and particularly over ensuring how the development will be served by sustainable transport. The threat of the appeals process means that LAs are often reluctant to reject a development on sustainable transport grounds, leading to sub-optimal outcomes in relation to the integration of housing and sustainable transport.

For example, at the planning application stage, transport assessments of housing developments and their impacts and benefits are still very much focused on highway junction capacity and whether a “reasonable level of service” can be met. This process does not fully consider the potential benefits of providing alternative sustainable solutions such as public transport (e.g. bus and rail) and active transport (i.e. walking and cycling). Building new homes that are remote from public transport networks and employment hubs results in limited or no sustainable transport solutions after the fact.

This led some Local Government stakeholders to suggest that housing delivery has become a “numbers game”, focused only on meeting targets, rather than ensuring quality of place.

Early engagement with stakeholders is encouraged in plan-making, but does not always happen in practice

Paragraph 16 of the revised NPPF states that Local Plans should “be shaped by early, proportionate and effective engagement between plan-makers and communities, local organisations, businesses, infrastructure providers and operators and statutory consultees.” While this language was welcomed by stakeholders, many believed this did not go far enough to encourage meaningful engagement. This view was particularly shared by stakeholders from the bus industry, who felt they were often not meaningfully engaged at the outset of the plan-making process. Coupled with resource pressures and tight timescales for local planning authorities (as discussed in Barrier 3 below), a lack of early engagement with these stakeholders results in a Local Plan, or site specific development plans, that are not always fully reflective of the sustainable transport needs of the local community and the benefits sustainable development can provide.



Potential solutions to Barrier 2

Integrated Local Plans and Local Transport Plans developed over a consistent time horizon and a single functional economic area

As a minimum, the timeframes set out for housing schemes in Local Plans and Local Transport Plans should be aligned, such that development sites can be planned in reference to future sustainable transport infrastructure. Taking this a step further, the development of an integrated spatial plan could bring together housing, sustainable transport and other planning elements (including economic development and environmental priorities) into one set of Local Plan documents. This integrated plan should reflect the interaction between transport and housing markets, and therefore where appropriate be developed by authorities on a cross boundary basis; reflecting the local functional economic area rather than administrative boundaries. An integrated spatial plan would then detail the specific transport interventions that aim to ensure that future development sites are integrated with sustainable transport solutions. This is aligned to recommendations by the National Infrastructure Commission (NIC) in its 2018 National Infrastructure Assessment, which states that “by 2021, metro mayors and city leaders should develop and implement long term integrated strategies for transport, employment and housing that will support growth in their cities”.

There are a number of positive examples across the country where cross-boundary spatial planning that integrates housing and transport is taking place, as shown in Figure 4. However, developing a long term spatial plan is a resource intensive process that requires Local Areas to align their housing and transport objectives within an appropriate economic area. As noted by the NAO (2019), less than half of Local Authorities have been able to maintain an ‘up to date’ Local Plan, often lacking the required skills and capacity to do this.

This raises an additional issue of limited resources and revenue funding for Local Areas to plan strategically (discussed in Barrier 3 below) and siloed decision making (as mentioned above in Barrier 1). These too would therefore need to be addressed in order to allow Local Areas to develop comprehensive and robust spatial plans.



Figure 4. Joint Spatial Plans progress across England

Joint Core Strategies and Joint Local Plans are examples of neighbouring LAs working together to create statutory plans and policies for strategic development over a single economic geography. Recent examples of this type of spatial planning include:

- **The Cheltenham, Gloucester and Tewkesbury Joint Core Strategy (JCS)**: Gloucester City Council, Cheltenham Borough Council and Tewkesbury Borough Council, and supported by Gloucestershire County Council, have developed a single JCS to develop strategic priorities across their functional economic area. The JCS was adopted in December 2017 and sets out how the area will develop up to 2031, including providing for up to 35,000 new homes.

In an a highly constrained area with extensive green belt, AONB, and heritage assets, the JCS provides a vision for development to come forward across the area sustainably, and to meet growth objectives whilst minimising the negative externalities of development. Sustainable transport, integrated with new housing, is identified as a key priority to ensure that development areas do not add significant additional congestion constraints at the major employment areas in Gloucester and Cheltenham town centres.

- **Greater Manchester Spatial Framework** (as referred to in Figure 3) is a joint plan between the ten LAs within the Greater Manchester Combined Authority. The draft GMSF was released for public consultation in January 2019, along with a draft transport delivery plan aligned to the GMSF and the city region's 2040 Transport Strategy. Being produced in conjunction with all 10 Local Authorities delivers early stakeholder buy-in to local objectives for future development within the CA area.
- **Oxfordshire Joint Spatial Plan** is being developed between the six Oxfordshire councils to deliver 100,000 homes by 2031, including the infrastructure required to support this growth and fully integrate with strategic growth corridor infrastructure, including East-West rail and the Expressway. Public consultation is currently underway, with the aim of depositing the final plan by 2020.

The Joint Spatial Plan underpins a Housing Deal funding agreement with Central Government which provides funding towards the required infrastructure needed to deliver the housing target, but also to consider growth beyond this period to 2050 as relevant to the longer-term planning needs of the growth corridor.

- Five Devon authorities are working to develop a **Greater Exeter Strategic Plan**, which would be a formal statutory document that provides the overall spatial strategy and level of housing and employment land to be provided up to 2040. The Plan will enable the 'Greater Exeter' area to take a holistic view of housing and employment need across the area, and plan for location of development and transport accordingly in order to ensure the sustainability of future development
- Seven Essex authorities have committed to develop a **South Essex Joint Strategic Plan** to deliver 90,000 homes over 20 years. A consultation is expected in spring 2019, with submission targeted in March 2020. The Local Authorities will complete a Statement of Common Ground which they hope will facilitate achieving funding deals with Government for major infrastructure requirements that can underpin the sustainable delivery of the overall housing target.
- The four West of England authorities are working together to produce a **West of England Joint Spatial Plan** which sets out housing and transport needs to 2036, in order to achieve sustainable growth. The plan was submitted to the Secretary of State in April 2018 and is currently under the examination stage.

Barrier 3:

Local Areas do not have sufficient long-term funding to plan strategically and invest with certainty.

A lack of long-term capital funding certainty, constrained revenue funding, and fragmentation of funding were issues raised by stakeholders time and again as a major challenge preventing the ability of Local Areas to undertake long-term, strategic planning for major sustainable transport infrastructure and to fully integrate the delivery of sustainable transport with new housing.

Short-term and fragmented budgets for local transport and related infrastructure

At present, most Local Areas outside Mayoral CA areas only have funding certainty over a maximum three year time horizon. This is in direct contrast to the funding frameworks that are now in place for strategic transport nationally – such as Highways England’s five-yearly Roads Investment Period. Fundamentally, this lack of funding certainty restricts Local Areas’ ability to plan for sustainable transport schemes that could be used to genuinely transform the norm of new housing development. As a result, strategic schemes, which inherently require a long-term view, cannot be incorporated into Local Plans, which in turn restricts the ability of the development management process to significantly push for new developments to incorporate sustainable transport in any meaningful way.

Added to this, and as noted by the NAO (2019), Central Government funding for sustainable transport can sit across multiple departments, creating disconnects in funding priorities and investment decisions, and misalignment with the investment priorities of local areas. This multitude of funding sources includes budgets related to education and community transport, as well as funding for complementary policy areas that support sustainable development, such as brownfield site remediation and enabling infrastructure for housing sites.

As a consequence of this short-term and fragmented funding landscape, developers cannot be reasonably encouraged to develop and design new sites for use of sustainable modes if the infrastructure connections required across the wider area are not being planned or funded.

Restrictive and reactive competitive bidding pots

Capital funding for strategic sustainable infrastructure is often only available from Central Government through a competitive bidding process. Competitive bidding processes are ostensibly designed to ensure that the ‘best’ schemes ‘rise to the top’, although they can have the adverse effect of encouraging reactive local planning and transport solutions which are not necessarily consistent with longer term economic, social and environmental objectives of the Local Area.

For example, whilst the Housing Infrastructure Fund was established to help pay for supporting infrastructure to unlock new housing developments, funding was largely allocated based on reactively unlocking existing housing schemes already relatively well designed, and not necessarily based on what the potential transport solutions for long term integrated development are in the area. This is an example of funding being allocated reactively at a much more advanced stage in the development process than would be the case with genuine upfront strategic planning of infrastructure and housing.

This issue is also partly a function of fragmented budgets relating to sustainable development within Central Government, meaning that Local Areas have to respond to the budgeting constraints of different departments, which can have a negative impact on the ability to strategically plan for the most locally important schemes. For example, MHCLG funding pots may be targeted at delivering housing, but the funding might be made available for transport schemes that perform an ‘unlocking’ role. At the same time, DfT and DfE will have other hypothecated ‘pots’ of money for certain types of schemes targeted at achieving specific policy goals. Whilst there is merit in targeting funding to national policy priorities, this kind of unconsolidated budgeting can make it difficult for Local Areas to invest in the major priorities identified as strategically important to local businesses and communities, and critical to driving local economic growth.

Constraints on Local Government revenue budgets

The integration of sustainable transport with new housing developments, and the scale of sustainable transport provision necessary to provide superior levels of connectivity to the private car (which in turn can offer increased density and housing delivery rates), requires essential upfront strategic planning at the plan-making stage. However, stakeholders across both the public and private sectors felt that increasing constraints on Local Government revenue funding has proved a major detriment to authorities' ability, in both capacity and capability terms, to undertake the kind of strategic and proactive planning that could help deliver sustainable transport integrated with new homes. Indeed, with such activity is becoming a 'nice to have' in the context of the pressure to delivery their statutory responsibilities.

Since the last recession, LA budgets have been increasingly constrained. A 2018 report by the National Audit Office estimates Government funding for LAs has fallen by 49.1% in real terms from 2010-11 to 2017-18²¹. This equates to a 28.6% real-terms reduction in local 'spending power' (considering Central Government funding and council tax). In terms of specific impact of cuts to planning functions, a separate NAO (2019) report also found a reduction in planning departments' budgets of 37.9% over the same period. Stakeholders in Local Government noted that funding reductions to LAs have had a particular impact on their planning departments. This is supported by RTP1 evidence that, in a sample of English LAs, there are now one third fewer planning policy staff and a quarter fewer development management staff than in 2010.²² With a continued strict implementation of timelines for planning application determination, this has resulted in much of the work of local planners moving from being proactive to reactive at the local level, and reducing time and capabilities available for strategic planning.

Funding constraints have also reduced local transport authorities' capacity and capabilities. Stakeholders suggested that much of the Local Transport Authority time and resources today are spent on bidding for government funding pots for infrastructure provision. This results in local transport authorities being reactive to Central Government policy, and limits the time that can be spent on planning and developing a strategic pipeline of transport infrastructure schemes.



²¹National Audit Office, March 2018, Financial sustainability of Local Authorities

²²RTP1, May 2018, Investing in Delivery: The state of resourcing of planning departments in the South East and North West of England

Potential solutions to Barrier 3

Long-term funding enables long-term planning and investment decisions

The integration of sustainable transport with new housing is most likely to be successful where transport infrastructure is strategically planned, across a whole Local Area, in advance of specific housing development proposals being put forward. Longer-term and more stable funding from Central Government could better support this forward-planning at a local level.

Long term funding for infrastructure provision also gives Local Areas the ability to leverage and pool grant funding with contributions from third parties, including from national agencies (such as Network Rail and Highways England) and developers. Committed funding for sustainable transport could signal to developers that sustainable transport schemes put forward by Local Areas are deliverable and enable them to develop housing oriented around sustainable transport infrastructure and services.

Local transport funding aligned to the spending cycles of national agencies could enable Local Areas to more closely collaborate with those agencies and provide local match funding (from grant and developer contributions) on joint investment priorities or connecting infrastructure, in turn driving a more efficient allocation of public sector funding.

Longer-term funding certainty, could also enable Local Areas, where appropriate, to borrow against future funding receipts (from both Central Government grant and developer contributions), helping to accelerate the delivery of key upfront infrastructure that can inform integrated, sustainable development.

Devolved grant funding for transport and enabling infrastructure consolidated across policy areas

Devolved budgets give Local Areas the flexibility to fund strategic infrastructure, without the limitation of set funding pots.

The National Infrastructure Commission has already recommended devolved transport budgets to Local Areas in 5-year funding settlements. This could be taken even further, by combining transport and housing-related grant funding (e.g. for brownfield site remediation, HIF-type funding, etc.) into a single devolved pot, and ensuring transport funding encompassed all forms of sustainable transport provision across policy areas (e.g. budgets related to education and community transport). The 'Devolution Deals' agenda, as set out in Figure 5, provides a blueprint for devolved, long term budgets to Local Areas for investment in strategic, long-term infrastructure programmes, in return for robust governance and decision-making arrangements.

Devolved funding would enable Local Areas to enhance the buying power of these multiple funding sources and deliver fully integrated solutions, and providing them with the foresight and confidence to align sustainable, integrated planning with expected future funding, including contributions from third parties. It would enable Local Areas to take a more portfolio-based funding approach to local infrastructure needs across a functional economic area, and facilitate the kind of corridor based development typically favoured by sustainable transport operators.

Nevertheless, and as also mentioned by the NIC, there would still be key roles for Central Government, together with sub-national transport bodies (such as Transport for the North and Midlands Connect) for coordinating funding and investment in major, transformational sustainable transport schemes which deliver inter-city and inter-region connectivity, which cannot be reasonably devolved to a single Local Area.

Furthermore, devolution of a consolidated, long-term budget for transport and enabling infrastructure to Local Areas would need to be accompanied by relevant checks and balances – such as investment principles and assurance methodologies agreed upfront between Central and Local Government, robust local governance and accountability arrangements, and evaluation of spend and value for money on a periodic basis.

Increased revenue funding and/or ability to raise revenues by local planning authorities

Government has recently enabled LAs to levy additional planning fees, and many developers are proactive at providing resource support to Local Planning Authorities. At present, these revenue sources are both generally used to cover the essential but reactive discipline of development management, rather than upfront strategic planning.

It is clear that in order to deliver on the objective of delivering sustainable transport infrastructure which: informs and shapes development; creates market demand for sustainable, commercially operational transport infrastructure; adds value to the development itself; and subsequently delivers and is able to capture the land value increment of its own investment, significant additional skills and resources are required in local planning departments. Many stakeholders in both the public and private sector have identified this as being the missing step between housing delivery being just 'a numbers game', and genuinely delivering the kinds of communities where people want to locate and that could increase the potential social and economic benefits for residents.

An increase in revenue funding to local planning authorities, either through Central Government or planning fees, could result in a boosted investment in resource and capabilities to undertake proactive and strategic planning. This means Local Areas would mean be better equipped to (i) develop genuinely integrated strategies and delivery plans; (ii) engage at an early stage with industry, particularly public transport providers and operators; (iii) put policy into practice in the review and approval of planning applications; and (iv) secure sufficient capital funding contributions from new developments for sustainable transport solutions and understand and appraise the potential benefits and value for money of such investments.

Figure 5. The devolution agenda since 2010 provides an example of longer-term, more flexible funding in return for robust governance and assurance.

To date, the Government has agreed city deals or devolution deals with ten CA areas, of which eight area mayoral CAs*:

- Cambridgeshire and Peterborough
- Greater Manchester
- Liverpool City Region
- North of Tyne
- Sheffield City Region
- Tees Valley
- West Midlands
- West of England
- North East
- West Yorkshire

CAs receive devolved multi-year grant funding from Central Government and some additional fiscal mechanisms for raising addition revenue locally (e.g. a Business Rates Supplement).

Most funding from Central Government comes through the Investment Fund Grant (IFG). These comprise up to 30-year deals wherein funding is provided to Local Areas on a 5-yearly basis and at the end of each funding period the authority's spending decisions and the outcomes delivered are subject to an independent review.

This has provided city regions with longer-term funding certainty and greater flexibility to invest funding in local priorities, in return for robust local governance and assurance processes that are agreed between local and central government at the outset.

Stakeholders shared that devolved powers and funding is a step in right direction to allowing Local Areas to plan strategically, invest with certainty and tailor investment to local needs.

**Source: House of Commons Library*

Barrier 4:

Current developer contribution mechanisms are insufficient to fund strategic sustainable transport and do not explicitly capture the uplift in land values associated with high-quality sustainable development.

Developer contributions are an important component for funding sustainable transport infrastructure. However, current developer contribution mechanisms were seen by stakeholders as insufficient to fund strategic sustainable transport infrastructure, which can be long-term and serve a wider Local Area as well as a specific housing site. Many stakeholders suggested that too much was expected of the current developer contribution mechanisms, and that their purpose is poorly understood outside of the planning and development sectors. Fundamentally, it was noted that these mechanisms are designed to mitigate development impacts, not provide funding for the kinds of strategic sustainable transport infrastructure that could genuinely influence or transform development typologies. They also generally fail to capture the windfalls of planning gain from use-class changes and strategic public infrastructure investment, and their effectiveness is highly dependent on local market conditions.

A development contributions regime that only mitigates

There are currently two main developer contribution mechanisms LAs can use to fund necessary infrastructure provision at new development sites: 1) Section 106 Agreements and 2) the Community Infrastructure Levy (CIL). There are also recent policy developments that have provided authorities with additional powers to levy an additional area-wide strategic infrastructure tariff and for CA areas, a supplement on business rates. MHCLG estimated £6.0 billion was collected through Section 106 planning obligations and CIL in 2016/17. This represented, in real terms, an increase of 50% since 2011/12²³. Each of these mechanisms present their own challenges to integrated delivery of sustainable transport and new homes.

Section 106 Agreements (S106) are negotiated between LAs and developers and are used to pay for infrastructure that is necessary as a result of a new development, such as a new school or junction improvements due to increased vehicular traffic. S106 agreements typically state upfront what contributions will be used for, and set “trigger points” for when the money will be paid (e.g. when the first house is sold).

An issue frequently raised by stakeholders was that, because S106 funding is attached to a specific development, it limits the ability to use funds raised on sustainable infrastructure projects that are dependent on wider connections for their success (for example, to economic centres). For small, dispersed settlements in particular, it is difficult for local planners to link strategic infrastructure to specific developments. S106 agreements are therefore used for the mitigation of very localised development impacts, rather than to fundamentally shape or improve how development comes forward or connects with other areas.

The CIL levy is a fixed charge (per square metre) on the development of new floor space. It was introduced in 2010 and was designed, in theory, to provide certainty and transparency around the scale of contribution; addressing the issues faced by potentially lengthy negotiations between LA planners and private developers that S106 Agreements can often require.

The money raised through CIL is intended to fund development related infrastructure across a broader geographic area, rather than a specific development, and thus reduces the need for development-by-development negotiations. Local CIL rates may vary by development type but should be based on the total cost of mitigating infrastructure that charging authorities²⁴ wish to fund at approved development plan sites.²⁵ Therefore, although CIL facilitates the pooling of funding for area-wide infrastructure, it is still in theory only to be spent against specific local mitigations, providing the same challenge as S106 in terms of not being sufficient to fund strategic infrastructure. The exception to this is the Mayoral CIL (MCIL) in the City of London which was developed as a hypothecated tax, additional to general CIL contributions, to specifically provide funding towards the strategic Crossrail scheme. MCIL applies to most new developments in London granted planning permission on or after 1 April 2012.

Fundamentally therefore, stakeholders shared a view of both S106 and CIL that developer contributions are responsive to the amount of development that comes forward, but do not typically support the kind of forward funding that could fundamentally alter how development comes forward, especially as charging authorities are also unable to borrow against future CIL receipts.

²³MHCLG, March 2018, Supporting housing delivery through developer contributions: Reforming developer contributions to affordable housing and infrastructure

²⁴In England, levy charging authorities are district and metropolitan district councils, London borough councils, unitary authorities, national park authorities, The Broads Authority, Mayoral

Development Corporations and the Mayor of London. In Wales, the county and county borough councils and the national park authorities have the power to charge the levy.

²⁵MHCLG, 2018, Guidance: Community Infrastructure Levy

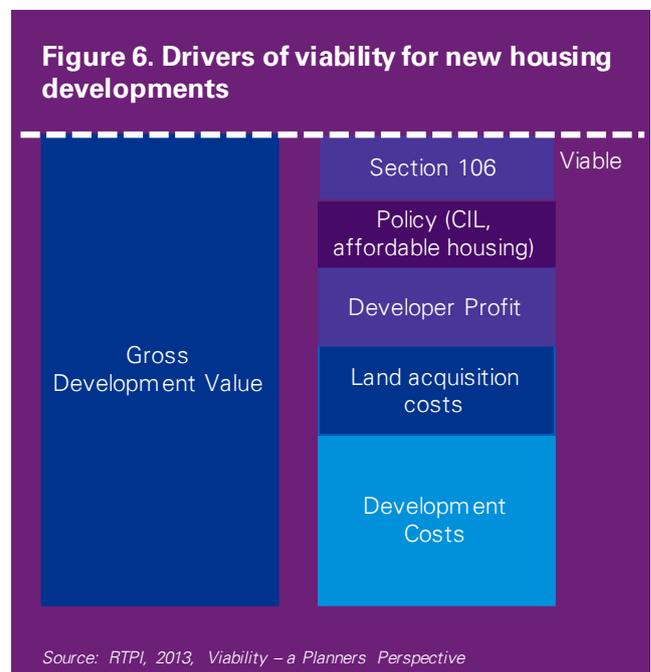
Local and Central Government have made a concerted effort to address the issues with developer contributions. This includes the independent review into CIL which Government commissioned in November 2015. The Review was published in February 2017 and found that CIL “was not as fast, simple, certain or transparent as originally intended”²⁶.

In the 2017 Autumn Budget, Government committed to legislative reforms to developer contributions, based on extensive consultation with LAs, industry, neighbourhood planning bodies, trade associations, and academics. The reforms were also intended to complement changes to the NPPF, which committed to making changes to viability and make the system of developer contributions more transparent and accountable. In October 2018, Government released a summary of their consultation responses and their views on the way forward. In this document, Government committed to lifting the pooling restrictions of S106, which addresses the limitation of S106 being attached to the specific development. Government also committed to introducing a Strategic Infrastructure Tariff (SIT) for groups of charging authorities, such as CAs, to levy to deliver cross boundary strategic infrastructure that benefits multiple authorities. Whilst this range of changes are a positive step forward, they represent relatively marginal reforms and stop short of introducing new mechanisms or approaches which fully reflect the long-term uplift in land values associated with strategic, high quality and high capacity sustainable transport provision.

Ongoing viability challenges

There are a number of elements that determine the viability of a development site (see Figure 6). The Gross Development Value (GDV) of a site is the total revenue a developer could obtain from the land. In the context of housing, it would effectively be the product of the number of dwellings developed on a site and the estimated value of those dwellings. A development is considered to be viable if the GDV is greater or equal to the cost to developing the site, assuming a “reasonable” level of developer profit, which is generally considered as a level of profit sufficient to provide some contingency to developers given the high upfront capital costs and long lag time of revenue from sales, as well as the historic high volatility of the market.

Developer viability ultimately drives how much LAs can receive from developer contributions. S106 Agreements are negotiated between developers and LAs, while other costs elements (i.e., development costs, land acquisition, policy, and expected profit levels for a developer) are fixed. If a development has high land acquisition costs (due to ‘hope value’ gained by land owners), high development costs (due to, say, site remediation from a brownfield development), and/or fixed CIL contributions, then S106 agreement contributions are often the items that are negotiated down. Stakeholders, particularly those in Local Government, highlighted that it is often sustainable transport provision that is the first item to be reduced (especially for example, where there are statutory obligations for funding other local infrastructure items, such as school places). Because of this, stakeholders believed that these contribution mechanisms were generally insufficient to fund significant, strategic sustainable transport either within or connecting development sites, as outlined previously.

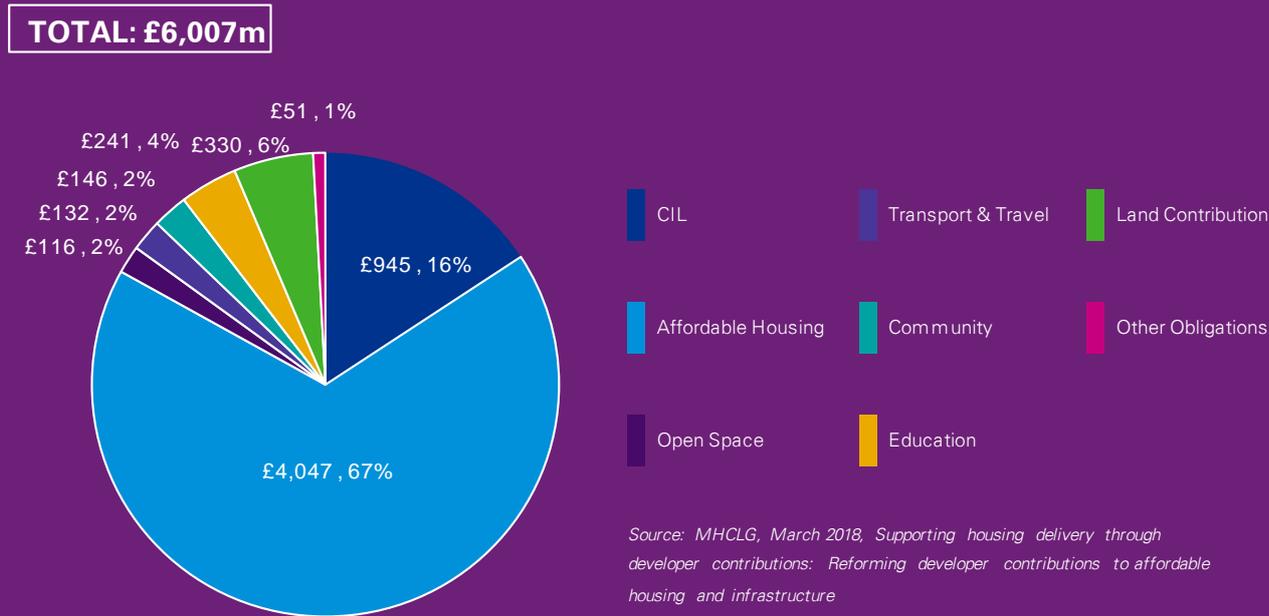


This is also apparent in data from MHCLG on developer contributions. Figure 7 presents the estimated value and percentage share of developer contributions collected in 2016-17. In total this was £6 billion. As demonstrated in Figure 7, about 2% or £132 million was spent on transport and travel. In 2005-06, £476 million (in 2016-17 real terms) was spent on transport and travel, representing over 9% of developer contributions²⁷. This represents a significant (71%) drop in transport spending from developer contributions over the last 11 years.

²⁶MHCLG, March 2018, Supporting housing delivery through developer contributions: Reforming developer contributions to affordable housing and infrastructure

²⁷MHCLG, March 2018, Supporting housing delivery through developer contributions: Reforming developer contributions to affordable housing and infrastructure

Figure 7. The estimated value and percentage share of developer contributions 2016-17 (£ million)



In our consultation, there were a range of practical challenges relating to development viability that were raised and debated by stakeholders in both the public and private sector which contribute to a relatively low proportion of developer contributions being directed towards sustainable transport. The challenges raised can be brought together into broadly one of four issues, as outlined below.

The first issue, which drives developer costs, relates to brownfield development. Generally, the cost to develop on a brownfield site is higher than on greenfield because of the additional site remediation required before developing on the land. This results in private developers selecting sites which are relatively poorly served by sustainable transport compared to brownfield locations that are already well connected to existing transport links. Conversely, however, it was also noted that not all brownfield sites are necessarily well connected to sustainable transport infrastructure, and that previous policies and funding pots targeted at brownfield remediation have seen housing sites targeted for development that may not be optimal from the perspective of delivering high-quality development.

A second issue raised, which again affects developer costs, regarded CIL and its impact on developer viability. Some LAs have hesitated to implement CIL on an area-wide basis out of fear it will make marginal development sites unviable. In MHCLG’s 2017 review of CIL, stakeholders shared similar concerns.²⁸

This was confirmed in the 2016 CIL Review Group where they found the main reasons cited by authorities for not implementing CIL was actual or perceived lack of viability, as well as their priority for affordable housing delivery (which cannot currently be funded through CIL) over and above infrastructure provision. Through viability modelling MHCLG found CIL has a limited additional impact on development viability and “does not make, on its own, a viable scheme unviable”.²⁹ However, there are certainly areas of the country that at times experience low or no expected growth in land values. In these cases, where developers have acquired land at residential-use prices, it is recognised it would be difficult to extract significant additional funding from developers.

A third issue raised, which drives land acquisition costs, was that the current planning system can result in windfall gains to landowners from policy changes to land use which are not captured (or recovered) under the current system. In particular, the designation of agricultural land for housing results in an uplift in land values – often referred to as ‘planning gain’.³⁰

Those in the development sector felt that there was a general lack of understanding across the sector that a large portion of land value uplift is lost in the planning process to landowners, and the current mechanisms to capture this uplift (i.e. CIL and S106) were insufficient. This issue also features strongly in the literature, with repeated calls for mechanisms to capture this planning gain to landowners which usually occurs from the allocation of agricultural sites for residential development. Notable calls for action on this issue go back to the Barker Review in 2004, and most recently the MHCLG Select Committee’s review of Land Value Capture in 2018.

²⁸MHCLG, 2017, The value, impact and delivery of the Community Infrastructure Levy

²⁹Ibid

³⁰Baxter, D. and Murphy, L, June 2018, A new rural Settlement: Fixing the affordable

When agricultural land is sold or optioned, it will often have an 'aspirational' or 'hope' value added to the existing use price if there is an expectation that in the future the land could become designated as a residential site in a Local Plan. The actual sale price can then often be many times the existing agricultural use value.³¹

As highlighted by IPPR in 2018, on average, over three quarters of the actual land-value uplift in a developed site is lost in this 'planning-gain' windfall to landowners from this expectation or designation of agricultural land for housing. This results in developers facing high land acquisition costs, and limits how much can be spent on developer contributions to LAs. Ultimately, there is a land value uplift not captured by current mechanisms which could help fund infrastructure provision in new housing developments. Indeed, the Treasury Select Committee launched an inquiry in early 2019 to examine its current business rates policy and to consider alternative mechanisms, such as a tax based purely on land values.³²

The fourth issue raised by stakeholders, which drives the GDV that could be earned from a site, was that viability assessments at the time of submission of a planning application do not necessarily reflect the actual GDV that could be realised once the relevant sustainable transport infrastructure is in place, which in the medium to longer term could drive a higher underlying price for the development (i.e. rent per square metre). There is much evidence in existing literature that strategically located transport drives higher land values and therefore GDV captured by developers, and as outlined previously, current mechanisms (s106 and CIL) do not explicitly address this value uplift. A report issued by TfL, to which KPMG contributed and which was drawn upon by the London Finance Commission,³³ examined the relationship between public transport infrastructure and property values and looked at the potential for infrastructure to be self-funding through land value uplift.

This work found that it might take as little as 1/3 of the impact of infrastructure on land values for infrastructure to be self-funding, but that this would mean capturing 1/3 of the impact not just at the point new development took place, but over the longer term. KPMG has also undertaken similar analysis for a range of cities outside of London. There remains, however, an inherent timing challenge in Land Value Capture-based funding. This is because the infrastructure investment is required upfront but the value uplift to the developer, and therefore their ability to contribute funding to that strategic infrastructure, is realised downstream.



³¹Ibid

³² Commons Select Committee, February 2019, New inquiry launched into the impact of Business Rates on business.

³³ Transport for London, February 2017, Land value capture.

Potential solutions to Barrier 4

New mechanisms that support more equitable sharing of the land value uplift resulting from planning gain and public investment in high-quality sustainable transport

There is an extensive body of evidence highlighting that better connected areas have higher land values relative to other locations in a particular economic geography, as do areas with higher levels of amenity provision and quality of place. However current mechanisms (s106 and CIL) are not explicitly designed to capture this value uplift. MHCLG released a parliamentary review entitled Land Value Capture in September 2018, which provides an overview of how existing taxes and charges, such as Section 106 and CIL, successfully (or unsuccessfully) capture increases in land values arising from the granting of planning permission, and how they might be improved to better serve this purpose. The review also considers the advantages and disadvantages of new methods of land value capture to address the value uplift from public investment in transport infrastructure which have been widely proposed by academics, industry experts and industry interest groups.

Equitably sharing the land value uplift with land owners, developers and Local Areas will give developers a level of viability to contribute more to sustainable transport; and give Local Areas more power to fund the strategic infrastructure set out in their plans. This requires more significant policy reform that moves beyond the recent changes to s106 and CIL and introduces new mechanism(s) that address the issue of planning gain and the unique timing issues of strategic sustainable transport in driving up the price of land. This reform would need to recognise that such mechanisms will need to be place and context specific, and be supported by a wider funding regime that addresses the inherent timing challenges of value capture-based funding; including the continued role of upfront public sector investment to pump prime development (which more longer-term, devolved funding to Local Areas, as outlined previously, would in part support).

Iterative Viability Assessments throughout the plan-making process

One of the key principles of upfront investment in sustainable transport infrastructure is that it can shape and inform future development. For example, sustainable transport infrastructure implemented in advance of development plans, could potentially enable developments to be delivered at higher density than traditional car-dependent developments, because network capacity is being 'built-in' to the development. This creates a virtuous circle where developers are able to reduce land allocated to car parking based on the fact that demand will be high for sustainable transport. In turn, the compounding of connectivity effects, and realisation of amenity benefits could raise the total development value which, with appropriate policies in place, could be partly used to offset initial infrastructure costs.

Whilst there is a recognition that developer contributions themselves can only contribute a limited amount to infrastructure costs, which is typically proved by viability assessments, there are grounds to propose that viability analysis should be a dynamic, cooperative and iterative process. This would help to reflect the role that public investment in infrastructure can play in raising land values, as well as just windfalls from land-use changes.

At present, viability assessments are usually fairly static in nature. They will present a view of current and future land values at current market precedents and development costs at a snapshot in time, typically before a development has commenced. Stakeholders, including developers, were keen to point out good practice processes to review viability assessments, at least on larger sites where development is generally phased. This enables both planners and developers to reassess how land value may have changed over time if, for example, the Local Area has invested in sustainable transport infrastructure in the intervening period between an initial planning application and a later phase of a development. In this scenario, there would be genuine grounds for reassessing value to determine if a greater level of contributions could fairly be sought at a more advanced stage of the development process.

Finally, it was also felt that more often than not, planning authorities were under-resourced and under-skilled to operate 'on a level playing field' with private developers when it comes to fully analysing and challenging technical forms of financial analysis like viability assessments. Therefore, if iterative viability analysis was to become the norm, Local Areas would also need to be well enough resourced for the process to be effective.



Barrier 5:

Standard economic appraisal approaches do not typically address the holistic benefits of integrated sustainable transport and housing developments.

This barrier was expressed by Local Government stakeholders and transport operators, as well as consultants interacting with the planning system on behalf of developers. Economic appraisals, which are undertaken as part of the business case development process, generally take place at the individual scheme level (i.e. for a transport or housing scheme, rather than considering these together), and typically focus on the direct benefits within the transport or housing market, rather than the broader economic benefits to society which can often be difficult to quantify and value.

The holistic impacts of integrated development are not valued

In the allocation of public resources, a five case business case is developed in line with HM Treasury Green Book guidance to establish the extent to which proposed investment represents Value for Money.³⁴ Within the economic case, an economic appraisal is used to assess the economic costs and benefits of proposed investment, and where these can be monetised, they are captured in a Benefit Cost Ratio or “BCR” (benefits / costs, or benefits bought per £ of public spending). The Value for Money assessment incorporates this BCR as well as those costs and benefits that are not possible to monetise and the overall strategic case for investment. Business cases for different proposed investments are then used by Government to allocate funding within an overall budget constraint, with a view to maximising Value for Money.

A key issue that was commonly cited throughout our engagement exercise was the challenge of appraising and valuing the benefits (and costs) of sustainable transport alongside new housing as a single intervention.

Stakeholders highlighted that the issue of siloed Central Government funding and in turn local investment decisions (as outlined previously in Barrier 3), results in the economic appraisal of schemes through the lens of department-specific policy objectives, rather than place-based objectives. Each Government department has its own appraisal guidance wherein the core BCR used in Value for Money judgements tends to focus on the benefits directly within the transport or development market, rather than the potentially broader range of economic benefits to society that could be associated with integrated, sustainable development.

Stakeholders noted the challenge in undertaking combined appraisal of sustainable transport and housing due to concerns over the double counting in the benefits that are valued, and the difficulty of valuing the broader potential benefits of sustainable transport in its own right, such as improved social inclusion.

An example of this can be seen with the Housing Infrastructure Fund (HIF), a funding pot owned by MHCLG. Stakeholders found in their bids to HIF that dependent developments (that is, developments requiring unlocking transport infrastructure, usually to mitigate transport impacts) could be supported for funding regardless of the type of transport scheme being proposed. This is because the focus of the fund was on how much housing could be unlocked by a site and was ambivalent of the type of transport used to bring forward the housing, or the most economically effective manner of developing the local economy.

More broadly, appraisal experts that we consulted discussed the need to find additional ways to value “place” and amenity benefits, which go beyond just housing and transport impacts. This was recognised by DfT and MHCLG colleagues and is a future research priority for both departments (further discussed below). The value of place was discussed in our stakeholder consultation as addressing how a scheme, incorporating both sustainable transport and housing, could unlock wider amenity benefits, economic growth and wider policy priorities such as environmental sustainability and inclusivity. These benefits could only be captured if a strategic view is taken of new development, which considers how integrating sustainable transport with new housing can alter the form and type of development to enhance potential economic benefits (and minimise economic costs) to society as a whole.

³⁴HM Treasury, The Green Book, 2018, Central Government Guidance on Appraisal and Evaluation

Timing of economic appraisal in the scheme development process

It is not, however, standard practice for assessing the benefits of integrated development at the strategic planning stage, such as deciding where to locate housing land and the type and density of that development, despite these spatial factors influencing the economic returns of development (as we outlined previously in Chapter 3). Appraising schemes as independent of area-wide development objectives can also mean schemes are less likely to come forward on a strategic basis, and that therefore the ultimate schemes and developments that come forward will be sub-optimal from a social, environmental and economic perspective.

For example, many funding pots, such as HIF, award funding at a point in time where the opportunity to influence development form and quality has already past. In the example of unlocking a junction because of the vehicular impact of a largely car-dependent development, the main issue is that the development has already advanced to this stage in a non-integrated, non-strategic form. A more strategic use of appraisal and funding would have been to intervene earlier in the planning and development process to search for alternative development methods – including alternative site allocation and strategic infrastructure provision, that could unlock better direct (e.g. connectivity), and wider (e.g. place-based effects) benefits, and more than likely reduce the need for significant down-the-line mitigations.



Potential solutions to Barrier 5

Capturing potential benefits of both housing and sustainable transport

Appraisals should, where possible, take a holistic view of the benefits of integrated, sustainable development; valuing the broad range of economic benefits (and costs) that are relevant to housing and sustainable transport whilst recognising that there are technical challenges and uncertainties to taking such a holistic view of the development. One of many challenges is incorporating land value uplift (as a result of the dependent housing development) into the core BCR for transport appraisal, because of a concern of double counting. This is currently being worked on jointly between DfT and MHCLG to understand to what extent land value impacts may already be incorporated in the transport user benefits valued as standard in DfT appraisal. Recently, DfT released a review of good-practice case studies to showcase the existing mechanisms within WebTAG that enable practitioners to account for a portion of the value of new development within transport appraisal where a transport scheme can be shown to 'unlock' this development.³⁵

In any development there is an interaction between the volume, density and connectivity of new housing supply. At present, HIF-type CLG methods might capture the benefit of the volume of new development as a function of land value, which in itself is a function of many factors, including things like connectivity. On the other hand, a WebTAG-based³⁶ DfT method would typically capture the connectivity benefits of a development as a function of the volume and density of new journeys created as a consequence of it. Neither of these approaches would account for the effects of 'place-based quality' factors.

To this end, DfT is currently developing its future five-year Appraisal and Modelling Strategy following a public consultation that concluded in late 2018.³⁷ In its consultation document, DfT shared its initial views on five key themes and priorities for improving its appraisal guidance to better support scheme promoters as they develop the economic case for transport interventions. This includes "people and place" and "transformational investments and housing". The consultation has been welcomed by stakeholders, and there is a strong desire for continued collaboration between Local Areas, MHCLG and DfT to address the appraisal methodologies outlined above.

Aligned views of what 'good' looks like

In order to encourage a holistic approach to appraisal, Local and Central Government policy-makers would need to have a joint view of what represents a 'good' integrated housing and sustainable transport scheme. This links back to Barrier 2, where national planning guidance does not clarify what it means to provide a "genuine choice" of sustainable transport alternatives to the private car. Without this it is hard to appraise housing schemes alongside strategic transport and for considered Value for Money judgements to be taken by decision-makers, including Central Government.

A 'good' integrated housing and sustainable transport scheme is context specific. A sustainable transport solution for a rural community will be different from a large city centre. This links back to the benefits of having devolved funding to Local Government (discussed in Barrier 1), which will enable Local Areas to use appraisal methodologies to guide their decisions on the most appropriate sustainable transport and housing solution, within their local context.

³⁵Department for Transport, 2018, Capturing Housing Impacts in Transport Appraisal

³⁶The DfT's web-based Transport Analysis Guidance (or, WebTAG) provides guidance on transport modelling and appraisal methods that are applicable for highways and public transport interventions. This guidance enable Central, Regional and Local Areas to build evidence to support business case development, and to inform investment funding decisions.

³⁷Department for Transport, June 2018, Appraisal and Modelling Strategy Informing Future Investment Decisions



Barrier 6:

The design, pattern and location of new housing development can lead to sustainable transport services being unfeasible.

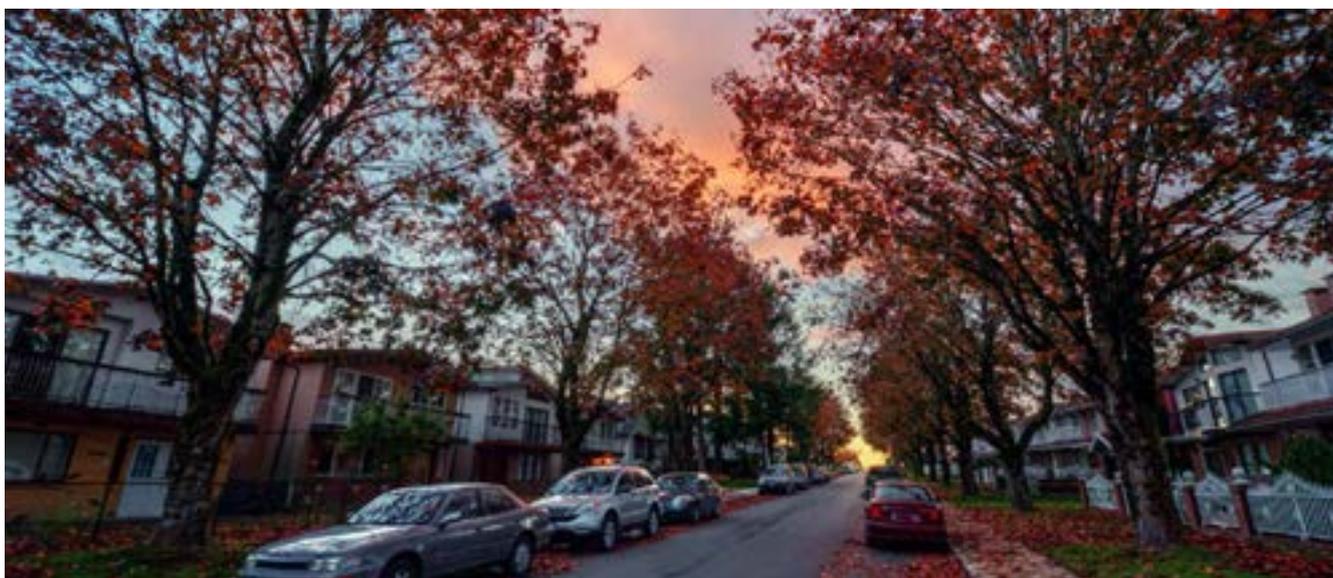
Stakeholders felt there were not enough “push” factors in national policy that explicitly target a reduction in car dependency in new housing developments. It was also felt that more could be done by Local Government to create “pull” factors that compel people to use sustainable transport over the private car, albeit whilst recognising the investment requirements this can create. A combination of the two results in the design, pattern and location of new housing development that does not encourage the use of sustainable transport. Without encouraging these behaviours at the outset, public transport services are unlikely to be viable in the long run.

A culture of car dependency

Many new housing developments across England are built under the assumption that car will be the primary mode of transportation for residents. This sentiment was shared by most stakeholders, where it was felt that most new housing developments in the country were car-centric.³⁸ There are a number of push and pull factors that contribute to why this occurs.

Push factors are policies that explicitly target a reduction in car dependency. An example of this would be a LA putting in place a policy that lowers the amount of permitted car park spaces per dwelling developed. The limitations of national planning policy, as discussed in Barrier 2, can, in part, contribute to car-centric housing developments. The pressure to deliver housing, in particular, was one of the main reasons LAs felt resigned to ‘easy win’ sites that deliver high housing numbers but do not necessarily encourage the use of sustainable transport. There was also fear, from a political standpoint, of introducing such policies that discourage car usage, particularly when it is difficult to demonstrate a long-term pipeline of sustainable transport that would provide an attractive alternative to car users.

Pull factors are what compel people to use sustainable transport over the private car. Where there are no alternative transport modes in place that offer reasonable levels of connectivity to economic and social infrastructure, developments will need to provide significant space for car road use and car parking if the developments are to uphold value. Where sustainable transport modes are typically more readily available, such as large cities, less land is automatically provided for the private car by developers because residents will value homes that are well connected to economic centres, and in these cases land for living spaces becomes relatively more valuable than land for car parking. Principally, developers can largely be expected to respond to the local planning context and market conditions, which includes both the policies stipulated in the Local Plan, as well the infrastructure already developed or in plan near a development site.



³⁸Transport for New Homes Association, July 2018, Transport for New Homes: Project Summary Recommendations.

The design of new housing developments and the location of new neighbourhoods do not encourage the use of public transport

Since transport operators do not need to be engaged early in the planning process by statute (as outlined previously under Barrier 2) and sustainable transport is not typically prioritised in the development management stage, it is no surprise that stakeholders shared the view that the design of new housing developments do not always encourage use of public transport. Many bus operators said basic design principles, such as the provision of footpaths to bus stops, distances to bus stops and on-street parking provision, were not taken into consideration in new housing developments, but are fundamental to whether it is then feasible to provide bus services to those developments.

Beyond the design of a new housing development, the location of these developments are oftentimes not strategically located to encourage the use of public transport. As previously mentioned, the pressure faced by LAs to meet its housing targets can result in selecting sites based on what is considered the easiest to unlock, and not necessarily based on what the potential transport solutions for long term integrated development are in the area. Isolated communities with essentially a “shuttle bus” to the town centre which do not exploit existing bus demand, are not considered commercially viable for bus operators, resulting in the need for public subsidy. Strategically located developments where there is an existing bus corridor that is already commercially viable at a marketable frequency can help bus operators leverage their existing demand. This allows operators to make their own investments in such corridors and take the risks involved in incrementally developing services. An example of a successful corridor-based development linked to existing transport nodes can be seen on the A420 in the Vale of the White Horse District between Swindon and Oxford, as set out in Figure 8.

Lack of consultation with sustainable transport operators at the plan-development stage

Linked to Barrier 2 discussed previously, since bus operators are not statutory consultees on Local Plans, sites can be taken forward without a full understanding of whether a site could be served by a bus, whether a route could be commercially viable in the long term, and what the cost would be to pump-prime bus services. There was general consensus among both public and private stakeholders that more could be done to facilitate collaboration between Local Areas and transport operators, with this engagement taking place at the earliest stages of Local Plan development.

Short-term demand risk in the early stages of housing build out

In the early stages of a housing development, there is insufficient demand for new bus services. However, without the provision of bus services at the outset, it is self-fulfilling that new developments would be car dependent as new residents’ will rely on the private car. Setting precedence at the early stages of development could also impact demand for bus services in the next phases of development, which is particularly relevant for more strategic and major housing sites.

Nonetheless, there are frequent and positive examples of ‘pump priming’ initiatives for bus services through short term public subsidy funded by Local Government and/or through developer contributions. However it was noted by stakeholders that such initiatives are only successful where housing development is well connected to the wider bus network – developments that are poorly located in connectivity terms will still tend to result in services being unviable in the medium term (as outlined previously). There is also a need for significant ‘pull’ factors to be in place to sustain high enough levels of demand in the medium and longer term. S106 or alternative funding should therefore be focused on delivering the elements of infrastructure that create demand for sustainable transport by delivering better connectivity and reliability.

Figure 8. Example of corridor-based development: A420 in the Vale of the White Horse District between Swindon and Oxford.

The A420 route forms the main corridor between these two major urban areas, and has supported a long-standing inter-urban bus service, No. 66, for many decades.

In 2006, a housing allocation of 400 dwellings was agreed and consented in Faringdon, Oxfordshire. Given the growth projections along the route, developer contributions were used to increase the level of frequency. This resulted in sustainable bus patronage growth. Given its success developers brought forward a significant number of sites along the corridor. Further funding from developer contributions was used towards pump-priming further enhancements to the No. 66 bus service.

In 2001, the No. 66 bus ran along the A420 corridor every hour. By 2021-22, it is anticipated bus frequency will be every 10 minutes.

Source: Stagecoach

Potential solutions to Barrier 6

A genuine presumption in favour of sustainable transport

The 2018 NPPF states that the planning system must contribute to sustainable development. Within the planning system, in order for a development to be sustainable there must be an economic objective, a social objective, and an environmental objective. In Chapter 2 of the NPPF it states that plan-making and decision-taking in the planning system should have a presumption of sustainable development. From a plan-making perspective, this means plans and strategic policies should actively seek opportunities to meet the development needs of the area, and support neighbouring areas where necessary. From a decision-making perspective, this means there should be no delays in approvals and granting permissions, subject to development proposals being up-to-date and plans are aligned to development plan policies.

A presumption in favour of sustainable development, as defined by the NPPF, is centred on meeting the housing needs of the area without delay. Taking this further, under a presumption of sustainable transport, new developments should be considering alternative modes of transport to reduce the demand on the road network and encourage people away from their dependence on privately owned cars. Interpreted this way, the presumption in favour of sustainable development, combined with the upfront, spatial planning mechanisms discussed previously, should help Local Authorities to explore and test a full range of sustainable transport solutions at the same time as identifying sites for housing. Indeed, the process of identifying sites and potential transport options should be a dynamic process through which the optimum combination of site size and location is matched with the most relevant transport option.

Encouraging a mode shift away from car through policy (a “push” factor) would more strongly incentivise developers and planners to consider how proposed developments can facilitate the use of sustainable transport by residents of new developments.

When local authorities demonstrate a commitment to sustainable transport through permanent structures, such as bus rapid transit or dedicated bike lines, this could prompt residents to use alternative forms of transport (a “pull” factor). As a result, developers would be compelled to incorporate sustainable transport to the design of new developments, under the assumption that residents will want to use sustainable modes of transport. This is demonstrated in the Luton Dunstable Guided Bus case study in Chapter 5.

As mentioned above, the forthcoming NPPG for sustainable transport provides an ideal opportunity for the importance of sustainable transport at new developments to be strengthened in the development management process. The process and inclusion for sustainable travel in planning applications and approval needs to be consistent across all LAs. This could address developers going to another Local Authority with less ‘onerous’ requirements in the development plans.

Changing the perception of bus

Although bus patronage in England, outside of London, has declined over the past 15 years, it continues to be the dominant public transport mode.³⁹ For many smaller economic regions in England, bus is the appropriate public transport solution to address growing communities. In order to encourage the provision of bus services, where it is the appropriate transport solution, there should be early and upfront engagement with bus operators. This engagement should take place at both the plan-making stage to LAs and development planning with private developers. Early engagement with operators could enable all parties to bring forward development in a way that is more likely to be successful demand for sustainable transport.

³⁹Department for Transport, July 2018, National Travel Survey: England 2017

Corridor-based development

Corridor-based development (or “string-of-pearls”) is where large scale housing developments are built along connected transport nodes of public transport corridor, usually from periphery to centre of an economic area. This was seen by many transport operators as a form of housing development that allows public transport to be commercially viable, as it supports key demand factors like journey times, and commercial factors such as catchments.. This enables sustainable transport services to ‘collect’ customers along a direct route towards a key area of importance (e.g. economic hub) without deviating extensively to slow down and reduce competitiveness against alternative modes. It could also encourage development to ‘cluster’ around transport nodes which reinforces connectivity and density to provide a market for services.

Designing-in sustainable transport at the outset

The provision of sustainable transport within new housing developments need not be costly to developers or Local Areas if good design is pursued from the outset. This applies to the design within developments as well as links into the wider transport network. Good practice examples show that where bus can perform as well as or better than other transport modes in connectivity terms, demand for services will naturally come forward via market mechanisms.

More could be done to spread knowledge of “best practice” in the design of new developments. The private sector could be well placed to help Local Areas understand how they can plan to achieve maximum demand from public transport services, such as Stagecoach’s design guide on buses and new housing development.⁴⁰ This guide was well received by other stakeholders consulted and was also referred to in the Chartered Institutions of Highways and Transportation Stagecoach UK Bus, 2017, *Bus Services & New Residential Developments: General Highways and Urban Design advice to applicants and Highway Authorities*.

Kick starter revenue funding for initiatives that incentivise behavioural change

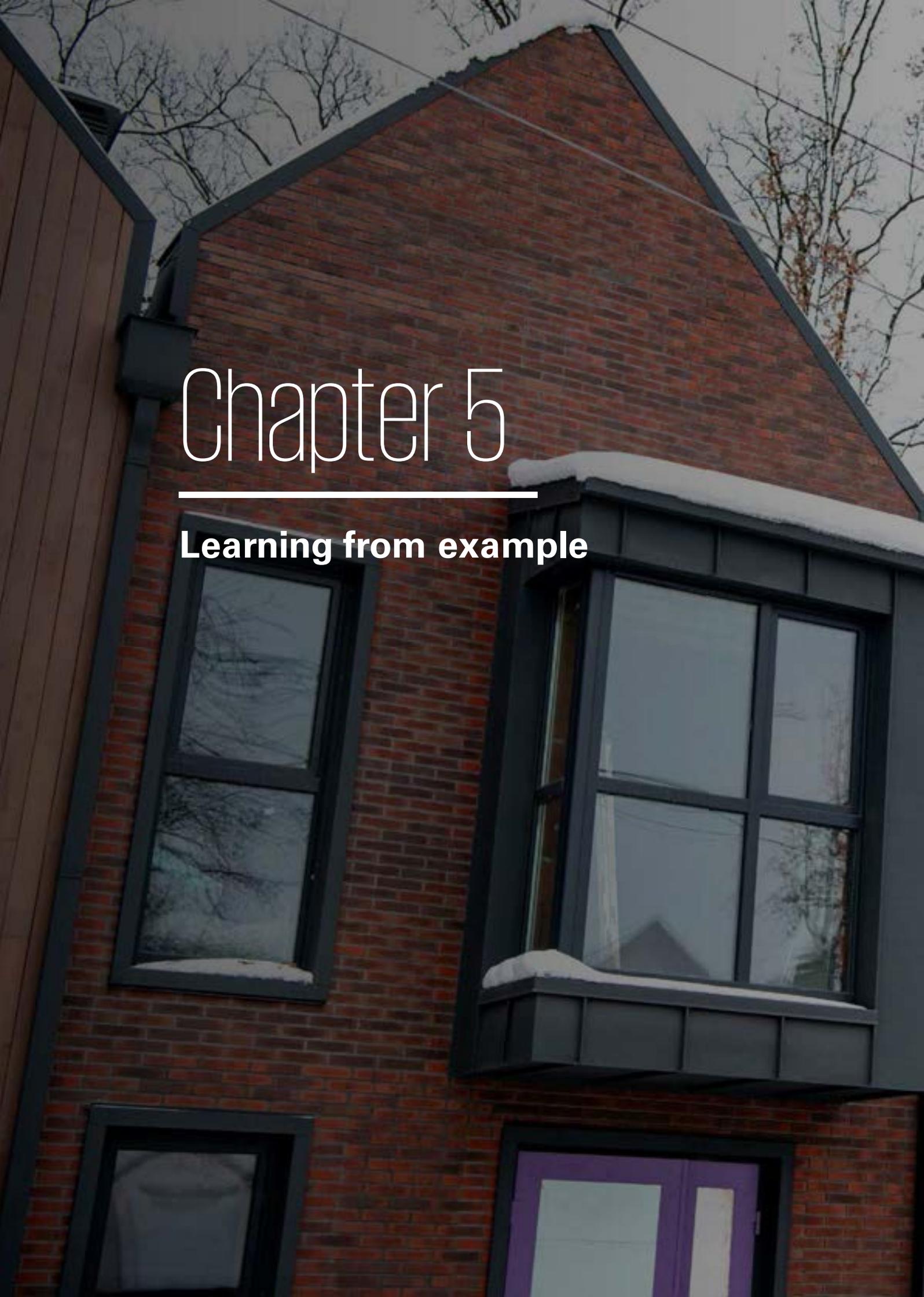
One way to encourage bus operations at the early stage of development is through kick-starter revenue that pump-primed bus services. This can be done through a range of initiatives, such as through the provision of permanent enabling infrastructure or by providing new residents with annual travel cards and bus schedule information. These initiatives should be place and context-specific, and developed collaboratively between Local Areas, developers and operators through early engagement in the development process.

Developers may be more incentivised to pump-prime services when there is a clear commitment from government to deliver the infrastructure provision, or there is already infrastructure in place to encourage sustainable transport. As evidenced in the A420 Swindon-Oxford corridor example, where developer contributions were used towards pump-priming the No. 66 bus service, setting sustainable transport behaviours early and facilitating the commercial viability of public transport operations in the long term.

Local Areas and bus operators working together to consider how technological changes can impact the use of sustainable transport and the design of new housing developments

Local Areas and developers will also need to consider trends and transformational technological changes that impact how residents use sustainable transport and, in turn, impact the design of new developments. Trends include younger people shifting away from private ownership, and baby boomers entering retirement age and more becoming more reliant on public transport to get around. Technology is developing to the point that sharing vehicles and planning journeys is becoming ever easier. Bike-sharing, car sharing and electric vehicle charging stations can be incorporated into the design of new developments and help provide the “last mile” solutions to residents.

⁴⁰Stagecoach UK Bus, 2017, *Bus Services & New Residential Developments: General Highways and Urban Design advice to applicants and Highway Authorities*.



Chapter 5

Learning from example



Chapter 5: Learning from example

Despite there clearly being an extensive range of barriers to the integration of sustainable transport with new housing, through our stakeholder consultation we also came across notable examples of good practice that had been able to overcome the most significant barriers. In this chapter we detail two specific case studies which provide background to the project and an explanation of the practical steps that were taken to overcome some of key barriers outlined previously in order to successfully integrate sustainable transport with new housing.

Case Study 1 – Luton-Dunstable Busway

Demonstrates:

- Sustainable transport provision influencing future housing development plans
- Creating the conditions through the planning system for market-driven delivery of sustainable transport

Project overview and the strategic context

The Luton - Dunstable guided busway cost £90m to construct and entered into operation in 2013, utilising the infrastructure left in place by the disused railway link between the two towns. The scheme was 90% funded by DfT and 10% funded through local contributions.

Figure 9. Luton to Dunstable Guided Busway



Note: the route is shown in green, bus stops as red circles, and key linked development sites as purple blocks.

Source: Luton Borough Council

To this end, the scheme was integrated into what was termed as a 'string of pearls' of development sites where a number of key sites, as shown in the diagram above were identified as potentially benefitting from the connectivity provided by the scheme. The LA worked with developers to ensure that soft and connecting infrastructure was included within sites in order to facilitate bus services to new developments and optimise the economic and financial benefits of the busway. Local planners worked with developers at sites to ensure a range of interventions. Many of these were design-focused in nature, such as ensuring that sufficient space was reserved within site boundaries for walls, or pedestrian cut-throughs to bus stops, although the scheme also fundamentally supported key sites as well. Four of the sites were major residential sites which contributed over 2,000 homes towards the Local Plan target of 30,000 by 2031.

At these sites, the LA worked with the developer to ensure that funding contributions were used to provide busway infrastructure at the development sites. Overall, 16 development sites were identified in total as being directly supported by the scheme, with bus stops or routes to be incorporated into their development plans⁴¹

Improving connectivity, creating demand

The busway significantly improved bus journey times between the towns of Dunstable, Houghton Regis and Leighton Buzzard and Luton, with the latter two having rail interchanges to London, and Luton Airport and key employment sites in east Luton. Crucially however, on the core section of the route, the scheme was also able to provide similar or better journey times than car transport on the heavily used A505 between Luton and Dunstable.

Journey times along the main route from Dunstable Town Centre to Luton Centre were slashed from 30 minutes to just 12 minutes with the scheme in operation whereas a typical car journey making the same journey can take up to 25 minutes at peak times.⁴²

Importantly, this connectivity means that demand for the service has come forward naturally over time via market mechanisms, i.e. that the bus is the most attractive means of transport for the travel route, and demand management policies or major "push" factors in the planning of specific development sites was not required.

Consequently, busway patronage has increased annually at a rapid rate since its opening. From just over 1.2m per annum in the first full year to over 3m per annum by 2018.⁴³

Delivering the infrastructure required

These impacts were largely achievable because of the unimpeded journeys that can be made on guided busway infrastructure, without the need to be constrained by normal road regulatory infrastructure, such as traffic lights, junctions, or speed limiting. The scheme therefore operating more closely to a light rail service than a traditional bus service, as is typically the case with bus rapid transit solutions.

Nonetheless, it is noted that although the ability to implement full guided busway infrastructure is clearly dependent on geographical contexts, the principles will apply in other cases, including typical bus priority measures, including monitored lane separation, priority signalling at junctions using automated detection equipment, and bus gates, many of which are part of the proposals for the Sprint network as discussed above.

Scheme benefits were further improved via incorporation into the new transport interchange being developed at Luton rail station as part of the Luton Town Centre Transport Scheme. It has been noted during stakeholder consultation that the interchange and last mile time 'costs' of transport interchange are a key hindrance to many sustainable transport schemes, as they can significantly slow down journeys in comparison to the private car. Integrated transport planning between schemes can therefore be essential to incentivise users. It was noted that the low 'time costs' of interchange, driven by frequency, reliability and destination choice, was one of the secrets to the popularity of highly integrated transport infrastructure such as the London Underground network.

Scheme evaluation

It is interesting to note that a draft scheme evaluation report for the Guided Busway in 2016, written for DfT, sought to test if house prices had decreased as a consequence of being located near the scheme. The assumption of this evaluation was therefore that the infrastructure would potentially be considered a form of blight by buyers in the housing market. The results of the analysis actually showed significant price rises post the scheme opening, which would tie in with the funding issues we set out in both Chapter 2 and Chapter 4, wherein well planned transport infrastructure integrated with places is a desirable feature which can lead to increased land values in the longer term.

⁴¹Luton Borough Council, December 2009, Luton Dunstable Busway: Major Scheme Full Business Case

⁴²Google Maps

⁴³Luton Borough Council, May 2018, Luton Dunstable Busway: Monitoring and Evaluation Report

Case Study 2 – Langley Sustainable Urban Extension and the SPRINT bus rapid transit network

Demonstrates:

- Alignment between Local Transport Authority, Local Planning Authority and private developers
- Integrating sustainable transport into housing development plans at the outset

Project overview and the strategic context

The Langley Sustainable Urban Extension (SUE) is one of the largest single residential developments in the UK. The site covers 274 hectares of land released from the Green Belt and is located north of Birmingham City. The Langley SUE site is adjacent to existing established residential areas, close to New Hall Valley Country Park, and is just west the M6 toll road. The area is well connected, with access to the strategic road network on A38 and M42, and public transport links, including local train stations.

The vision set out by Birmingham City Council (BCC) is for Langley SUE to be more than just a residential development. It is envisaged that this new neighbourhood will have integrated networks of green infrastructure, walking and cycling routes, public transport and utilities to create a cohesive, truly sustainable and healthy environment. This scheme is within the context of the considerable economic and population growth expected in Birmingham over the next 15 years, and as a result, BCC plans to deliver 51,000 new homes by 2031. Langley SUE will result in 6,000 new homes and is key to meeting BCC’s housing target.

In parallel to the Langley SUE development project, Transport for West Midlands (TfWM) is developing the Sprint Network; a limited stop rapid transit service with dedicated lanes, high quality infrastructure and tram like vehicles. The concept of the Sprint Network was developed as part of the HS2 Connectivity Package and forms a key part of the WMCA’s adopted Strategic Transport Plan “Movement for Growth”. The Sprint network complements Birmingham City Council’s Connected Strategy, which is working to relocate road space to sustainable modes of transport and allowing the more efficient movement of people across the city.”

The aim of Sprint is to provide priority for public transport through areas of congestion. It is expected that this will make journey times more dependable and attractive for passengers. The Sprint initiative aligns to the strategic objectives of West Midlands Combined Authority (WMCA) and TfWM to reduce greenhouse gas emissions, improve air quality, and invest in an efficient and resilient transport system to unlock economic growth across the West Midlands.

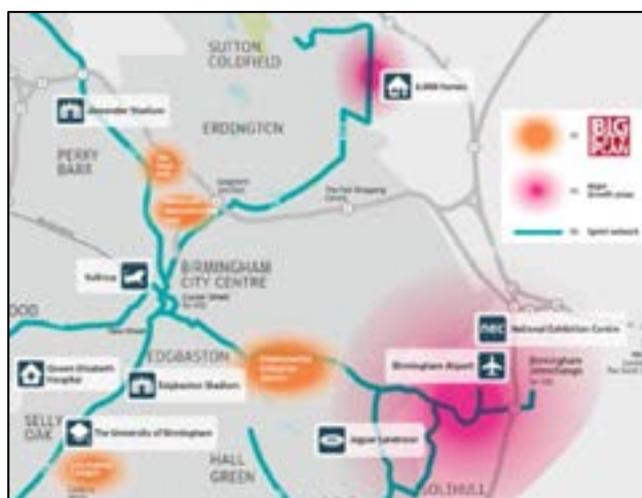
Sprint and local bus services will run through the Langley SUE site, and will be prioritised on transport corridors to provide people with a high quality, efficient way of getting from the development to Sutton Coldfield, the City Centre and other public transport interchanges.

TfWM is working collaboratively with BCC, Royal Sutton Coldfield Town Council and Langley site developers to ensure sustainable transport is integrated with the development.

The Sprint Sutton Coldfield to Birmingham route is strategically located to link to Langley SUE and a new 71 hectare employment site a Peddimore. The Sprint Sutton Coldfield to Birmingham route will have a journey time of 12 minutes or less between Sutton Coldfield and Langley, and 30 minutes or less between Langley and Birmingham.

Figure 10 presents the Sprint Sutton Coldfield to Birmingham route. As demonstrated in the figure, the route is strategically located to serve the 6,000 new homes to be developed at Langley SUE.

Figure 10. Sprint Sutton Coldfield to Birmingham route



Source: Transport for West Midlands, 2019, Sprint – For a better connected West Midlands

Demonstrating integrated sustainable transport and housing planning at the outset

BCC, as the Local Planning Authority, set the vision of Langley SUE in its Langley Supplementary Planning Document (SPD)⁴⁴. In the SPD, connectivity is set out as a key development principle of the site. The layout, design and management of connectivity across the Langley site will be focused on a movement hierarchy that promotes the most sustainable forms of transport including walking, cycling, and bus services.

Key to meeting BCC's goal of connectivity at the Langley site will be Sprint, as well as other local bus services. TfWM is the lead delivery organisation for Sprint on the Langley site, who are providing guidance to ensure that the primary routes into Langley SUE are able to accommodate Sprint (vehicles of 18m length) and bus services. TfWM design guidance and accessibility standards for Sprint and local bus services will need to be followed by developers.

Additionally, TfWM is responsible for developing a public transport strategy to demonstrate how Sprint will serve Langley SUE and the employment site at Peddimore. Through the strategy, TfWM will demonstrate public transport in the area will offer convenient, fast and accessible means of travel to key destinations, with suitably located stops.

Developers at Langley will need to demonstrate that the majority of the new homes will be within a 400m walking catchment of the proposed Sprint stops. Additionally, developers will need to liaise with TfWM, the promoters of Peddimore, and bus companies to ensure a coordinated and effective approach to support the phasing and delivery of public transport.

BCC, working with key stakeholders, including the Langley Sutton Coldfield Consortium,⁴⁵ other landowners, developers, and local communities will have an important role in overseeing and monitoring the quality and stages of the Langley SUE. It is intended that a joint approach to project management, communication and decision making will be put in place with key partners. This will include setting out the resources and skills required to deliver the agreed site-wide master plan during the life of its development, with project teams and working groups used to progress key topics.

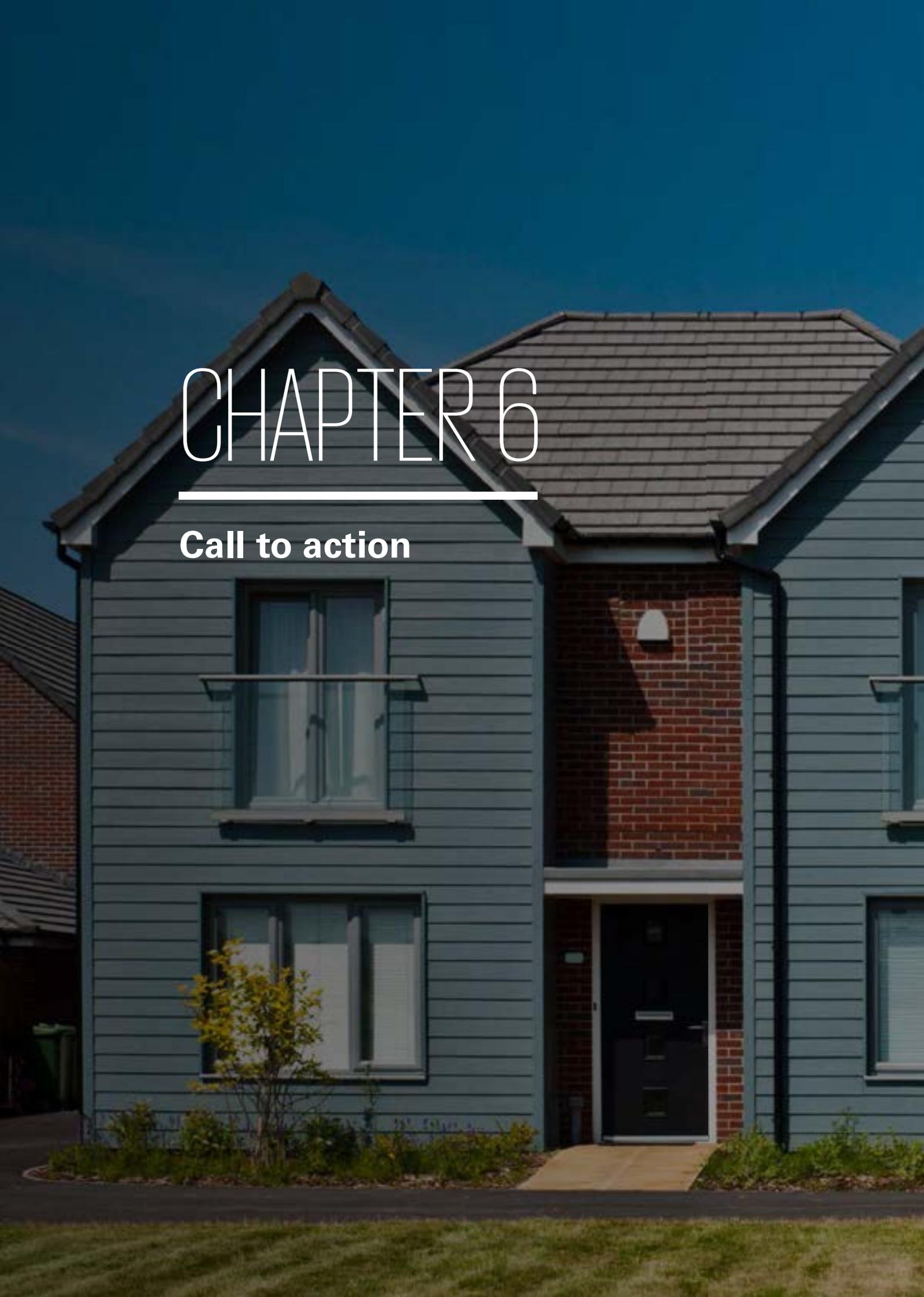
⁴⁴The draft SPD was released in September 2018 and completed consultation in October 2018

⁴⁵The Langley site is owned by several landowners and developers, the majority of which have formed the Langley Sutton Coldfield Consortium.



CHAPTER 6

Call to action





Chapter 6: Call to action

From the key barriers identified through our detailed stakeholder consultation exercise, as well as case study examples of good practice, we have developed eight practical proposals to Local and Central Government, as well as to private developers and transport operators, which should be taken forward in order to better integrate sustainable transport and housing and enhance the economic returns from investment in these policy areas.

Our “call to action” is as follows:

Funding and incentives

1. Current capital and revenue funding for local transport and complementary policy areas consolidated into a longer-term, devolved budget to Local Areas to enable them to plan and invest on a more strategic basis

Local Areas need longer term certainty and control over capital and revenue funding for local transport and enabling infrastructure. This could enable them to plan strategically; better align local funding with third party funding from developers and national agencies; and in turn deliver effective sustainable transport solutions that can be fully integrated with new housing development.

As previously mentioned, the National Infrastructure Commission has already recommended devolved transport budgets to Local Areas in five-year funding settlements. This could be taken even further, by combining transport and development-related grant funding (e.g., for brownfield site remediation, HIF-type funding, etc.) into a single devolved pot. Similar to current devolution deals, this would need to be in return for robust local governance and accountability arrangements, with agreement upfront to an assurance framework that aims to ensure investments represent value for money and contribute to agreed policy objectives.

The forthcoming 2019 Spending Review presents an opportunity to fundamentally revise the way Local Areas are allocated capital and revenue budgets for transport and housing. Considerations could include which existing funding pots could be consolidated; the level of funding that could be provided; and the appropriate economic area to parcel out funding.

Five yearly devolved funding packages, akin to the level of funding certainty provided to national bodies such as Highways England and Network Rail, would enable Local Areas to more effectively prioritise investment according to their strategic priorities.

2. Local Areas capture a greater share of the increased land value resulting from changes in the use of land and public investment in high-quality sustainable transport, in order to help raise the overall level of investment in sustainable transport

There is an extensive body of evidence that demonstrates better connected areas have higher land values relative to other locations in a particular economic geography, as do areas with higher levels of amenity provision and quality of place. This applies in particular to large new housing sites that require strategic infrastructure, wherein high-capacity and high quality sustainable transport provision can result in land value uplift in the longer term. However, current developer contribution mechanisms (S106 and CIL) are not designed to capture this, nor are current mechanisms equipped to address the “planning gain” to landowners (rather than to developers) from changes in the designation of land to residential use. Both issues result in a missed opportunity to raise additional funding for sustainable transport infrastructure. New, context specific mechanisms could tap into this value, whilst also recognising the inherent timing challenges associated with value capture-based funding approaches. This requires the assessment of development viability to be more of an iterative process as the phasing of sites comes forward. It also requires a wider funding regime that enables pump priming infrastructure investment in the short-term.

Getting ‘buy in’ from landowners and developers requires Local and Central Government to demonstrate a commitment to sustainable transport over the long term. Commitment to significant, strategic sustainable transport can be demonstrated through upfront public sector investment. It can be also demonstrated through providing the appropriate lending mechanism from Government to pay for the large upfront infrastructure costs over an appropriate development period (as Homes England has begun doing).

A consistent vision, and demonstrating commitment from Local and Central Government would help in addressing developers' viability concerns and incentivise higher developer contributions to Local Areas to recoup some of the costs of investment in value-creating infrastructure.

3. Local Areas provided with the resources to fund the capacity and capability that are necessary to plan strategically

Increasing constraints on Local Government revenue budgets have undermined their ability to undertake genuine spatial planning and promote the integration of sustainable transport with new housing developments. At present, LAs have the power to levy additional planning fees. While Central Government does not dictate what these funds can be used for, the level of fees are set by Government and are such that it can only cover the reactive discipline of development management, rather than upfront strategic planning. Local Areas need additional power to capture and retain revenue funding that more comprehensively supports the costs associated with plan-making activity and development management, as well as receive sufficient revenue funding as part of a longer-term, devolved budget from Central Government.

Policy and plan-making

4. Forthcoming National Planning Policy Guidance to clarify expectations for sustainable transport provision with new development and provide Local Authorities with the necessary backing to put policy into practice

Forthcoming NPPG guidance could be more definitive in terms of explaining its expectations around sustainable transport provision in new developments. For example, in what constitutes a "genuine choice" of transport modes, guidance could explain the modal choice and quality and connectivity of service that residents should be able to expect. A clear definition would leave little room for interpretation by developers on the minimum expectation of sustainable transport provision in new developments. It would also give Local Planning Authorities stronger grounds to reject a development on sustainable transport issues without the fear of a threat of an appeals process, and help to avoid the risk of housing delivery simply being a "numbers game".

5. Local Areas develop spatial plans that integrate planning for transport, housing and employment land, and where appropriate over a single economic geography

At present the development of Local Plans and Local Transport Plans are separate activities and subject to different standards of scrutiny. This could be an integrated activity, fostering an alignment between the bodies responsible for transport and planning in terms of their strategic objectives and that development sites are aligned to existing and planned transport infrastructure.

This integrated plan could reflect the interaction between transport and housing markets, and therefore where appropriate be developed jointly by LAs over a single economic area. There are positive examples of joint spatial plans and strategies being developed across the country, but this continues to be the exception rather than the rule.

This spatial planning could help to ensure that, as far as possible, housing is connected into the existing sustained transport network, and that when providing new strategic infrastructure for larger greenfield sites, this ties in with a long term vision and strategy for sustainable transport across the Local Area. This could also provide more opportunity to bring forward corridor-based development, where large scale housing is built around transport nodes along a public transport corridor in a sustainable way and meeting the transport needs of a growing community.

This is aligned to recommendations by the National Infrastructure Commission in its 2018 National Infrastructure Assessment, which states that "by 2021, metro mayors and city leaders should develop and implement long term integrated strategies for transport, employment and housing that will support growth in their cities".

6. The potential benefits of integrated sustainable transport and housing development are considered at the earliest stages of the plan-making process and appraised holistically in terms of their economic, social and environmental impacts when determining value for money

Decision-makers often do not have a full appreciation of the potential benefits of integrated development. This is, in part, because funding, and therefore appraisal approaches, for transport and housing policy operate in silos. It is also due to the technical challenges associated with valuing the benefits of integrated transport and housing proposals, or "place-based" interventions. Added to this, appraisal is typically undertaken late in the development cycle, at the point at which specific schemes come forward, rather than at the plan-making stage when decisions are taken over land that should be allocated for housing or what transport policies or corridors should be prioritised.

Under a regime where Local Areas have longer-term, devolved and consolidated funding across transport and development-related spend, they could have greater flexibility to plan, appraise and prioritise schemes locally through a fully integrated approach. This would need to be supported by sufficient technical resource at a local level to undertake robust appraisal. Central Government would still have a role to play, particularly in the scrutiny of local process and evaluation of investment decisions. There is also a role for greater sharing of knowledge and best practice among Local and Central Government and scheme sponsors on "what good looks like" in appraisal terms, and the technical approaches available for undertaking such analysis.

7. Sustainable transport provision is designed-in from the outset in order to support the introduction of public transport services

Simple design principles, such as the provision of footpaths to bus stops, distances to bus stops and on-street parking provision, are not routinely considered in the development of new housing sites. In addition, new developments are often not strategically located to encourage the use of sustainable transport. The design of new housing developments and the location of new neighbourhoods are early and critical considerations that can be “make or break” for the provision of sustainable transport, and bus services in particular. Incorporating design principles to encourage sustainable transport need not be costly if it is design-in from the outset. This would allow for flexibility if and when public transport is introduced alongside new housing development.

This could be made possible through Local Areas engaging more closely with public transport providers at the design stages of new developments, as well as generally greater sharing of knowledge of best practice design principles between the public and private sectors.

8. Local Areas and transport providers work collaboratively to deliver innovative and cost-effective sustainable transport solutions for new housing

Sustainable transport solutions are not ‘one-size-fits-all’; they should be tailored to the community they serve and will depend on a number of factors, including size of the development and the current quality and capacity of the transport network available. The future of mobility is changing with developments in technology, shifts in social preferences and changing demographics. This introduces opportunity for new solutions and products, such as digitalisation of information and payment systems, and new forms of demand-responsive transport. Through collaboration, Local Areas and public transport providers could be well equipped to design and develop innovative sustainable transport solutions that are appropriate for the local communities they serve, but this collaboration would need to become more common practice. The ability for Local Areas to pursue more innovative funding or pump-priming of private sector solutions would be further strengthened by devolved Local Area budgets and greater revenue-raising powers.





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An aerial photograph of a residential neighborhood at dusk. The houses are illuminated from within, showing warm interior lights. The roofs are dark, and the surrounding landscape is dimly lit. A gazebo is visible in the upper right quadrant. Several cars are parked in a driveway in the lower left. The overall atmosphere is quiet and serene.

APPENDIX



Appendix A: Bibliography

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Appendix B: Questionnaire used in our stakeholder consultation

In this Appendix we present the questionnaire used for our stakeholder consultation exercise. As mentioned in Chapter 2, the design of our questionnaire was based on a series of key themes that emerged from our in-depth literature review as consistent challenges to integrated development. The key themes identified in the literature were:

1. Funding and financing for infrastructure provision
2. Decision-making and governance arrangements
3. Appraisal methodologies and valuation methods
4. The planning system and planning processes
5. The development sector and land markets
6. Regulatory and delivery challenges for private transport operators

For each of these themes, stakeholders were asked: *What are the main barriers to better integrated planning and delivery of sustainable transport and housing within this theme? How can these barriers be overcome?* Stakeholders were asked to cite reference to real world examples where possible.

1. Funding and financing for infrastructure provision (including public and private finance)

Potential questions for consideration:

- What are the most effective capital and revenue funding arrangements (including both devolved and competitive grants, tax-raising mechanisms, and Government loans) to ensure sufficient transport infrastructure can be delivered with new housing developments?
- Are there new or alternative forms of revenue-raising, such as Land Value Capture, which could be employed to support additional funding for new transport infrastructure and housing delivery?
- In what scenarios are investments in new transport infrastructure generally viable and unviable in relation to private sector-led housing developments?
- What methods of raising capital are most and least effective for developing transport infrastructure at new housing sites?
- What role can private finance play in delivery of new transport infrastructure alongside housing developments?
- Is new sustainable transport provision viable even at relatively small sites? What is the most cost effective way to fund and finance sustainable transport at small sites?

2. Decision-making and governance arrangements (how do Local and Central Government structures and institutions impact on planning and delivery of housing and sustainable transport)

Potential questions for consideration:

- What is the best spatial level of governance for ensuring the integrated planning of housing and infrastructure?
- Do joint spatial strategies and national infrastructure planning offer significant benefits in relation to traditional planning at the LPA level?
- How effective are planners, developers, and other local leaders at selling the 'vision' and of the importance of integrated planning and delivery of sustainable transport and housing, and how could this be improved?
- Does the quantity and / or density of new development impact the ability to deliver new transport infrastructure at housing sites? i.e. how does the size and type of site influence the ability to deliver sustainable transport?
- What 'types' of development are most appropriate for delivering significant levels of transport infrastructure investment? What types of infrastructure should be delivered at different types of housing development?
- Does political decision-making generally help or hinder the planning and delivery of new transport infrastructure and the 'types' of development that support it?
- How can and how should Local Industrial Strategies play a role in ensuring that appropriate transport infrastructure is provided in future development?
- How effectively do planners and local decision-makers work with developers and infrastructure providers to ensure joined-up decision-making?
- Where does responsibility ultimately lie to ensure that appropriate, new transport infrastructure is incorporated within new housing developments?

3. Appraisal methodologies and valuation methods (linked to 1 and 2, how does the public sector funding system influence the planning and delivery of housing and sustainable transport)

Potential questions for consideration:

- Do current appraisal methodologies set out in DfT's WebTAG, MHCLG's Appraisal guide and HMT Green Book guidance generally support the integration of the planning and delivery of transport and housing?
- Are the dependent development forms of appraisal that are focused on the 'unlocking' effects of transport sufficient for assessing potential 'transformative' effects of fully integrated, upfront delivery of homes and sustainable transport? If not, how could this method be improved?
- Do current appraisal methodologies fully capture the economic and social benefits of integrated transport and housing, as well as evidence of wider impacts? If wider benefits that are not currently captured exist, how can these be better assessed?
- Who are the main beneficiaries of integrated housing and sustainable transport infrastructure?
- How is the value of integrated housing and sustainable transport infrastructure best explained? And subsequently, valued?

4. The planning system and planning processes (practicalities of delivering infrastructure with housing)

Potential questions for consideration:

- Does the NPPF and Local Plan system support effective joined up planning of housing and transport?
- How could Local Plans do more to support upfront delivery of transport infrastructure?
- How does the consenting regime impact the ability to deliver integrated sustainable transport infrastructure at new housing developments? Could other forms of planning provide more certainty and/or clarity for infrastructure provision?
- Is there enough communication within the planning process between relevant delivery and operational stakeholders?
- When is the best time in the delivery cycle to incorporate planning for transport infrastructure and operation?
- How should development 'type' ultimately influence the appropriate form of sustainable transport provision, and vice versa?

5. The development sector and land markets (market fundamentals of delivery and how to incorporate sustainable transport provision with private housing delivery)

Potential questions for consideration:

- Do developer and house builder development plans generally allow for sufficient transport infrastructure provision?
- Where in the development cycle should sustainable transport at housing sites be incorporated?
- How effective are developer contributions at meeting sustainable transport requirements?
- How does land acquisition and existing patterns of land ownership impact the ability to develop transport infrastructure at housing sites?
- Are there points in the development cycle at which value is 'lost' that could otherwise have contributed towards infrastructure development?

6. Regulatory and delivery challenges for private transport operators

Potential questions for consideration:

- How do local regulatory requirements for transport operation impact the ability to meet local demand from new developments? How do regulators (e.g. LPAs, PTEs, traffic commissioners) themselves help or hinder the delivery of sustainable transport at housing sites?
- How effective are considerations of operational requirements included in the plans for new housing development?
- When is the most effective time to include transport operators in the planning process?
- How will new technology change the form and type of transport that can serve new housing developments?
- In what scenarios should sustainable transport operations be subsidised?

Appendix C: Organisations consulted

- AECOM
- Arriva
- Chartered Institution of Highways and Transportation
- Cornwall Council
- Department for Transport
- First Group
- Go-Ahead Group
- Harrogate Borough Council
- Homes England
- Integrated Transport Planning Ltd.
- Lincolnshire County Council
- Liverpool City Region Combined Authority
- Living Streets
- Luton Borough Council
- Ministry of Housing, Communities and Local Government
- National Express West Midlands
- National Infrastructure Commission
- North East Local Enterprise Partnership
- North Yorkshire County Council
- Northumberland County Council
- Oxford Bus Company
- Peter-Brett Associates, now part of Stantec
- Prior and Partners
- Richborough Estates
- Royal Town Planning Institute
- Savills
- Stagecoach
- Stockton-on-Tees Borough Council
- Stratford-on-Avon District Council
- Transport for Greater Manchester
- Transport for New Homes
- Transport for the North
- Transport for West Midlands
- U&I
- Urban & Civic
- Urban Transport Group
- West Yorkshire Combined Authority
- Worcestershire County Council





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