Planning New Communities: Finding the balance between private car use and sustainable transport

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Introduction

From concept designs to local authority planning documents, new schemes are envisaged around walking, cycling and public transport as the main modes of travel. This in turn, promotes more active lifestyles and reduces road congestion, contributing towards more sustainable places.

Since the 1990s, Government policy has supported sustainable travel by introducing a number of measures. This has meant land use and transport planning disciplines have been brought together to ensure a coordinated approach when creating new and sustainable communities. These measures have included the introduction of sustainability in Local Agenda 21 from the 1990’s, where the principle of ‘brownfield sites first, greenfield sites last’ was applied. Integrating land use and transport planning was presented in Planning Policy Guidance 13, with the aim of reducing the need to travel. A requirement to prioritise sites that are well connected by public transport was introduced in Planning Policy Guidance 3. More recently, the updated National Planning Policy Framework (NPPF, 2018) stated that “plans should give first consideration to land which has been previously developed and/or is well-served by public transport”\(^1\).

However, research suggests that the sustainable objective is more than often not achieved. New residential developments are built far away from existing transport infrastructure, instead encouraging travel by the private car. A number of reports have highlighted this disconnect including a study by the Royal Town Planning Institute (RTPI)\(^2\). The RTPI uncovered that more than half of new residential developments were located outside a reasonable walking or cycling distance to public transport nodes. The impact of this was reported by Transport for New Homes. Their report concluded that the majority of new developments were designed for travel by private car as the prominent mode.

With pressure to deliver more homes driving the approval of new developments in increasingly isolated locations or on the edge of towns, questions arise as to whether more could be done to bring the relationship between land use and transport planning closer together. Visions for new developments to promote active and sustainable lifestyles and less dependence on the private car may be more easily achieved. Despite these questions being raised many times before, it is clear that in most cases the relationship between land use and transport planning disciplines is now, perhaps more than ever, disconnected, resulting in the vision for more sustainable new developments not being fully realised.

As issues surrounding the disconnect between land use and transport planning are renewed across all parties, this report aims to contribute to this discussion. It will begin by gaining an understanding of some of the barriers in the relationship of the two disciplines that directly impact upon the process of creating new active and sustainable developments. Secondly, it will consider some key next steps to improve collaboration and ultimately create active and sustainable places.

In order to understand why the two disciplines of land use and transport planning are not cooperating at their full potential, this report draws upon various conversations with key stakeholders to help answer these questions. This is supported by a number of case studies where

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collaboration has proved successful. The report will conclude by assessing the opportunities of cross-industry collaboration throughout the process of planning and development of new communities.

**Methodology Statement**

The relationship between land use and transport planning has been reported upon extensively. There is an abundance of data highlighting key consequences resulting from a lack of collaboration between the two disciplines (as reported on further in this report). However, this only tells us so much. Whilst some of this data has been used as a basis for this research paper, it was considered important to hear the first-hand experiences of individuals working within the sector. It is hoped this will identify some of the challenges they face, barriers they encounter and understand from their perspective what could be done to achieve more collaboration to create new developments that promote sustainable travel.

This report has been prepared and based around the outcomes of a series of interviews, emails, telephone calls and roundtable discussions with a number of stakeholders from government departments, institutional bodies, professionals and researchers with backgrounds in both land use and transport planning disciplines. Discussions were open-ended to allow each of the stakeholders to freely raise the issues of greatest importance to them. From this, the top discussion points have been outlined and further researched in this report. These have been supported with a number of case studies, most often raised during discussion sessions, in order to learn from the successes and challenges of past projects.

A total of 12 participants, representing a variety of stakeholders from a number of bodies, participated in the discussions. Whilst it is acknowledged that every viewpoint cannot be fully represented in this study, this report aims to provide a representative view of the current situation, and the lessons that can be inferred from this.

**Location, Location, Location**

Each discussion with a stakeholder typically began with the presentation of the ‘Transport for New Homes’ report that concluded the findings from 20 site visits to new developments in the UK and 3 in the Netherlands. The report found that the majority of developments were designed to encourage travel by the private car rather than walking, cycling and public transport. When asked about why this was happening and how the relationship between land use and transport planning has impacted upon this, it quickly became clear that almost every stakeholder thought the primary cause of motivation to use the private car instead of active or sustainable modes, was the location of the development.

The UK is currently facing its largest housing shortfall in history. A recent House of Commons Briefing Paper\(^3\) stated that an average of 210,000 new homes is required each year until 2039 to meet demand. Whilst many parties agree that a large number of houses are needed, there is much more uncertainty around how this is going to be achieved.

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The Housing White Paper, ‘Fixing our Broken Housing Market’ acknowledges the importance of building the right homes in the right places.

“If we are to build the homes this country needs, we need to make sure that enough land is released in the right places, that the best possible use is made of that land, and that local communities have control over where development goes and what it looks like.”

One of the proposals in the report recognises that more land needs to be made available in order to build new homes, and that this will be provided primarily by brownfield sites. In particular, new high-density homes should be provided around existing public transport hubs. However, the report erodes this ambition to build on brownfield sites by later stating that the delivery of new homes could also be met by new settlements if ‘supported by the necessary infrastructure’.

The Lyons Housing Review\(^5\) refers to the contribution that Garden Cities and new towns could make to deliver the number of homes required. The Government soon announced that it would support the development of these new communities across the UK. So far, these have included Ebbsfleet, Bicester and North Essex, to name just a few.

These new developments are often in large, standalone areas to accommodate significant housing volumes and making it easier to reach housing targets. As such, they are usually located away from existing rail and bus networks, with limited pedestrian and cycle infrastructure. Therefore it is vital to provide such transport infrastructure up-front to deliver more travel choice and ultimately achieve the 21\(^{st}\) Century Garden City principle of providing “integrated and accessible transport systems, with walking, cycling and public transport designed to be the most attractive forms of local transport”\(^6\). This will also help to achieve mode share targets envisioned in the initial stages of the masterplanning process.

However, in reality the vision of creating a place where people travel by active and sustainable modes rather than the private car is not being achieved. The RTPI investigated the location of new developments and their proximity to transport nodes such as bus and rail stations. More than half of planning applications made between 2011 and 2017 were built in locations considered to be more than a reasonable walk or cycle from a public transport node.

Furthermore, it was found that the trend for car-dependent communities extends further than standalone locations. The Transport for New Homes report found that the majority of developments visited were built to encourage travel by car, rather than walking, cycling or public transport.

Both of these studies raise questions on whether new homes are being built in the right places, and how the relationship between land use and transport planning is proving to be a key subject.

The location of a new development and its impact on transport has been discussed in a number of studies. Figure 1 is one example of a study by Carey Curtis\(^7\) who compared the travel patterns of five

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\(^4\) Page 21 of DCLG (2017) \textit{Fixing Our Broken Housing Market}.
\(^5\) The Lyon Housing Review (2014) \textit{Mobilising Across the Nation to Build the Homes Our Children Need}.
\(^7\) Curtis (1996) Can Strategic planning contribute to a reduction in car-based travel? \textit{Transport Policy} 3: 12 55-65
housing sites in and around Oxford. It clearly shows that developments connected to public transport networks generate fewer car trips, compared with those located further away.

Figure 1 – Effect of Housing Location on Car Use

Furthermore, more general data on mode share from 2017 presented in Figure 2 shows that car trips are the primary mode of travel. The data also suggests that this has not changed significantly since 2002 when the National Travel Survey began to collect the data.

Figure 2 – Average Percentage of Trips by Mode in 2002 and 2017

However the consequences of the locations of these new developments go further than impacting upon travel behaviours. It also impacts upon wider sectors and disciplines. In 2017, the transport sector contributed the most greenhouse gas emissions equating to 27% of the total. Whilst all other sectors had actively reduced emissions since 1990, the transport sector has more or less remained the same. It is estimated that congestion in the UK costs the economy around £16million per year and could rise to £24million per year by 2030.

The argument for greater collaboration between land use planning and transport planning therefore is an issue of increasing national importance. The wider impacts of car-dependent developments

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8 From PTEG (2011) Thriving Cities, originally documented in Curtis (1996) (see footnote 7)
9 National Travel Data: NTS0409
10 DBEIS (2018) Table 1: UK greenhouse gas emissions by source sector
makes action to build places that encourage more travel by active and sustainable modes rather than private car, even more vital.

**Key Discussion Points**

As detailed in the methodology statement, stakeholders led discussions by highlighting, in their view, the issues key to delivering successful, sustainable places.

Given location was overwhelmingly nominated the primary driver of car-dependency in new developments, participants were typically then asked to provide reasoning on the factors behind poor location decisions, and how the relationship between land use and transport planning was impacting on this. The most persisting issues raised by stakeholders are shown in Figure 3.

![Figure 3 – Key Discussion Points with Stakeholders](image)

Discussions with stakeholders proceeded to be loosely structured around the three key themes shown below. These will now be explored in greater depth based on the outcome of these sessions.

- Policy (both at national and local levels)
- Design versus engineering
- Funding and delivery

**National Policy**

The history of land use and transport interactions in national policy has been complex. It was during the 1990s that calls for more integrated land use and transport planning began. Whilst is was felt by some of the stakeholders that the gap had marginally narrowed, it was clear that there was still a long way to go to improve collaboration between disciplines and positively impact upon the built environment and resulting travel behaviour.

The NPPF was produced in 2012 to consolidate the numerous Planning Policy Statements and Guidance materials into a simpler document. Most recently, an update of the NPPF was produced in July 2018 echoing the sentiment of the Housing White Paper, that developments should be located on brownfield sites or locations well-served by public transport. This has however, been largely
undermined by the number of sites brought forwards in locations considered to exceed a reasonable walk or cycle distance from public transport hubs. When asked for comment on how the updated framework could improve both the relationship between land use and transport planning and travel behaviour, the Government Department, Ministry for Housing, Community and Local Government (MHCLG) responded, stating that "the revised Framework makes the policy requirements and expectations on sustainable transport much clearer for plan makers and decision takers".

However, both NPPF documents produced are considered by some to be somewhat vague. Perhaps in part, this is due to the consolidation of previously detailed planning policy documents and replacement by a more general framework. After all, the framework reduced in size from around 1,300 pages in Planning Policy Statements and Guidance to just 65 in the NPPF introduced in 2012. With the loss of detailed guidance, questions arise as to whether this has contributed to the uncoupling of coordination between land use and transport planning.

Since the report by Transport for New Homes was produced, there have been a number of calls for a stronger national planning policy document to better integrate the two disciplines of land use and transport planning, prescribing new housing developments to be within close proximity to sustainable travel modes, with sufficient walking and cycling infrastructure.

Chief Executive of the RTPI, Victoria Hills, was quoted on BBC Radio 4 stating:

"We need a stronger national planning policy so that planners have powers to target development in the most sustainable locations. We need to see more development with higher density around stations so that you can deliver infrastructure, the walking, the cycling routes, the metros, the trams where people can easily access them".12

From a few of the conversations with stakeholders, it was interesting to hear that there appears to be a divide between the two government departments of MHCLG and the Department for Transport (DfT). This is especially apparent when it comes to developing new, standalone settlements. For example, new railway stations (typically backed by DfT) were not aligned with the locations of new developments (as overseen by MHCLG). As the transport infrastructure is not in place, sustainable travel cannot be fully utilised from day one. Government guidance on planning conditions also makes it more difficult to impose Grampian conditions, whereby a planning application is reliant on the completion of off-site works before commencing on the development itself. Instead, this results in new developments with a high percentage of new residents travelling by car.

This in turn, sets a poor example to the two disciplines of land use and transport planning further down the process at local authority level. An exception to this can be seen in Oxfordshire, with local authorities collaborating with national government to form the Housing and Growth agreement, ensuring that infrastructure is provided up-front and housing targets are met in later years. See Case Study 1 for further details.

In response to the Transport for New Homes report, some researchers of the paper will be meeting with a number of government departments (including Department for Transport, Ministry for Housing, Community and Local Government, HM Treasury and Department of Health and Social

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12 Victoria Hills speaking on BBC Radio 4 on 24th October 2018.
Care) to discuss the findings of the research, collaboratively finding solutions to build sustainable new developments.

**Case Study 1 – Oxfordshire Housing and Growth Deal**

In November 2017, the six Local Authorities of Oxfordshire (Oxford City Council, South Oxfordshire District Council, Vale of White Horse District Council, West Oxfordshire District Council, Cherwell District Council and Oxfordshire County Council) reached a Housing and Growth agreement with Government, which will provide £215 million investment over a five-year period to support the delivery of sustainable development.

In September 2018, it was announced that Oxfordshire had accepted a short-term flexibility arrangement in housing delivery targets in accordance with Paragraph 217 of the Draft NPPF which states:

"The Government will continue to explore with individual areas the potential for planning freedoms and flexibilities, for example where this would facilitate an increase in the amount of housing that can be delivered."\(^{13}\)

This will enable Oxfordshire to focus on developing Local Plans and a spatial strategy resulting in fewer applications being granted in the short-term. However, in the long-term, Oxfordshire have pledged to meet their housing target of 100,000 new homes by 2031, building these in the appropriate locations with well-connected public transport and walking and cycling infrastructure.

**Local Policy and Planning**

National Policy filters down to local authorities, from where new development is controlled through policies in Local Plans. Local authorities receive set targets for building new homes by national government, based on historic build-out rates. These housing targets are then delivered through the Local Plan, which sets a vision for the council's operating area and highlights land where development should be focused.

However, it has become apparent through discussions with stakeholders that transport should be considered a greater priority when choosing potential sites for development in the Local Plan. Ex-Transport Planning Society (TPS) Board Member, Alan Wenban-Smith, stated “transport should dictate housing, rather than housing dictating transport”. This has been a leading approach in many transit-oriented developments, in which land use and transport planners have worked together to regenerate a number of sites and areas. However, applying this to new developments can be trickier due to the number of additional factors involved; the complexities of developing on brownfield sites was raised during the roundtable with professionals, whilst current national policy promotes the building on greenfield land.

Some of the stakeholders raised concerns that the lack of discussions with relevant parties when choosing sites to develop, was in part due to a lack of resources in Local Authority planning.

\(^{13}\) Paragraph 217, page 63 of MHCLG (July 2018) National Planning Policy Framework
departments, often owing to a shortfall in personal and available funding. A researcher of the Transport for New Homes report, Jenny Raggett summarises that “planners often have good ideas and want to do the right thing but the environment to create such places is against them”.

It was James Harris, from the RTPI, that suggested a shake-up of the system to allow for greater collaboration between local authorities, public transport operators, walking and cycling organisations should be held at the earliest stage of plan-making. This collaboration should focus on outline options for the location of development; assessing each site against current provision of active and sustainable transport and planning infrastructure improvements, and setting out responsibilities for making the improvements needed to achieve sustainable patters of travel.

Despite a majority consensus from stakeholders regarding the greater involvement of key parties early in the decision-making process, walking and cycling charity, Sustrans, were clear to point out that their capacity for involvement is currently limited. In an email response to these propositions, they highlighted that, at present, they are unable to track planning applications for new developments, unless it impacts upon on their land or sections of the National Cycle Network. However, their position on how housing growth and planning policy can increase cycling and walking indicates “the design and location of where people live has a significant influence on how people travel”. In a clear parallel to round-table discussions with planning professionals, Sustrans are clear in suggesting “planners must work in collaboration with transport planners, public health professionals and developers to jointly plan and develop new housing developments”.

As outlined in this section of the report, transport does appear to be a consideration later in the process, whilst land use planning takes centre stage. It was considered that, in two-tier local government areas, combined authorities have represented one way of overhauling this. It allows the opportunity to align land use and transport planning as well as potential cross-boundary collaboration between all of the local authorities. This is evidenced by the Greater Manchester Combined Authority as explained in Case Study 2.

It is clear that there is a need for Local Authorities to assess transport as part of the search for sites, and wider collaboration is needed between various transport bodies (e.g. Sustrans, public transport operators etc). All groups within the study agree this would promote the need for well-connected, multi-transport mode developments; a more vital consideration in the decision-making process.

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14 Sustrans (No Date) Our position on how housing growth and planning policy can increase cycling and walking. Available at: https://www.sustrans.org.uk/our-position/planning-cycling-walking. Last Accessed: 8th December 2018.
**Case Study 2 – Greater Manchester Combined Authority**

The shift of powers from central government to new combined authorities has rapidly increased since inception of the first was combined authority in Greater Manchester in 2011. The Greater Manchester Combined Authority (GMCA) covers ten local authorities that make up Greater Manchester and has devolved powers, funding and responsibility for policies. This allows for a strategic approach to economic growth, planning and transport planning. “Combined authorities should foster collaboration and innovation with the extension of powers and freedoms for authorities that can lead and deliver”\(^{15}\).

GMCA developed a spatial strategy in 2016, and are in the process of refining this. This includes details on housing delivery, developed in collaboration with Transport for Greater Manchester (TfGM) which is delivering GMCA’s transport policies.

At present, one of the priorities for GMCA is to make Manchester a leading city for walking and cycling. The ‘Made to Move’ report recognises that new developments will play a crucial role to connect the communities with existing transport hubs and contribute to the widening of the existing network\(^{16}\).

**Design and Place vs. Engineering and Movement**

One of the interesting questions raised during the roundtable discussion with professionals was who should design the streets: urban designers or transport engineers? On the one hand, place needs to be an important feature of new developments, prioritising seamless movement for pedestrians and cyclists. However the importance of movement and adherence of design standards must also be recognised, so as not to over-complicate the design of roads for the users.

It was widely affirmed that urban designers and transport engineers follow a 'siloed' approach as independent disciplines. Urban design commonly takes place in the initial stages of new development planning, whilst transport engineers take over the latter stages. A more collaborative approach between the two disciplines could foster integrated thinking at the heart of the design of both place and movement.

One key issue that transport engineers encounter is an often outdated ‘national design standard’, that could contribute to the mono-style of new developments raised in the Transport for New Homes report. Some Local Authorities have taken it upon themselves to create their own design guidance, such as the Urban Design Compendium by Sheffield City Council - however not all local authorities are able to pursue this due to a lack of available funding and resources. It was generally felt by professionals involved in this study that national guidance needed to be updated, to allow urban designers and transport engineers some flexibility and freedom to create distinctive streetscapes, trailing new ideas that ultimately influence the ways in which people travel.

\(^{15}\) Page 6 of Grant Thornton (2017) Combined Authorities: Signs of Success.

\(^{16}\) Page 18 of GMCA Walking and Cycling Commissioner (2017) Made to Move
Poundbury (see below) was a successful example raised in the Transport for New Homes report with both place and movement at the forefront of design. The report highlights the promotion of walking and cycling above private car use, through urban design. Its revolutionary design of streets from long, straight roads to more irregular layouts, allow for greater permeability within new developments. This approach has now become mainstream and is implemented in many new developments built today.

**Case Study 3 – Poundbury, Dorchester**

Poundbury was considered in the Transport for New Homes report to be a clear outlier, highlighting the extent of good practice and effective place-making in having a positive impact on travel choices.

Poundbury was considered to be an experimental new town on the western edge of Dorchester. It was based around the principles set out by Prince Charles who was keen to create a place designed for people rather than the car.

Speaking with a professional who worked on the design and engineering of the highway network of the new development, it was said to be ‘encouraging’ to see people from every discipline represented – there was no detail left out.

This resulted in a highly permeable place where people can easily walk around the development, and do not feel dominated by the car. Parking is hidden in courtyards behind housing and the highway design is of irregular layout (shown in Figure 4) with cul-de-sacs to keep traffic levels low and connections for pedestrians and cyclists. This design has since been replicated in a variety of new developments.

**Finance and Delivery**

Securing funding to deliver transport infrastructure is a competitive process. Funds come from a number of sources including Section 106 agreements, Community Infrastructure Levy (CIL), government grants and loans. To ensure the delivery of transport infrastructure, schemes must align with national and local policy, and have strong evidence as well as stakeholder buy-in.

The Transport for New Homes report found that many of the new developments provided contributions via the aforementioned funding schemes to provide improved road infrastructure, rather than for the intended active and sustainable modes.

In its response to the NPPF 2018 consultation, the Transport Planning Society suggested that:

“Developers have become used to making S106 payments and funding highway access improvements. NPPF should engender a new mindset that promotes sustainable travel as a matter of normal principle and practice, and needs to put more pressure on developers to deliver.”

In terms of delivery, one discussion point at the roundtable with professionals questioned why walking, cycling and public transport infrastructure are often the first to be dropped from the list of such contributions. It was felt that the answer to this was likely because these are currently negotiable elements. Prioritisation is commonly awarded to road infrastructure improvements; often a key, and more immediately visible solution for the local community.

The impact of expanding the road network is clear; the analogy “build it and they will come” best describes common consensus. The prime example of this is the M25 motorway which originally sought to improve congestion within London and its Inner ring roads. Instead, the M25 exceeded its design capacity shortly after opening. It is now considered one of the most congested motorways in the UK.

During discussions with stakeholders, it was apparent that one of the key issues to delivering public transport was the greater good versus profit challenge. Outside London, public transport operators were reluctant to provide services unless they made a profit. Local Authorities gained more powers through the Bus Services Act, 2017, allowing them to influence bus routes and regulation. The effects of this however, have been difficult to pin point thus far. Government budget cuts have simultaneously meant that the majority of Local Authorities are spending less on supporting bus services. Between 2017 and 2018, approximately 300 bus services were reduced, altered or withdrawn in England and Wales.

Limitations of the Relationship

The question remains on how successful greater collaboration between land use and transport planning could be in tackling the reduction of private car use.

During the roundtable discussion, this question was posed to participants. The consensus was that on the one hand it should be a priority to bring both disciplines together to focus on new developments in locations that are truly accessible by public and active transport modes. Conversely, there are limitations on the extent to which collaboration will tackle the reduction of car use, to subsequently reduce emissions, congestion and all wider impacts.

The two disciplines should also look at future-proofing. The rise of electric and autonomous vehicles poses serious challenges for the future, particularly in terms of infrastructure requirements and associated impact on private car use. Whilst electric vehicles may dramatically reduce emissions at point of use with automation creating significant opportunity for shared ownership of vehicles, will the number of overall personal journeys reduce – or instead just change in characteristic?

Alan Wenban-Smith stated that 90% of the housing stock is existing, whilst the remaining 10% is considered new. It was his belief that the greatest impact of changing travel behaviour would be in altering existing attitudes by instead targeting existing housing stock. Whilst transport planners can

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18 TPS response to Question 21 in MHCLG Consultation March 2018: National Planning Policy Framework
take a lead in tackling many of the problems on the transport network, spatial planners still have a role to play. Any intervention in response to an existing transport planning problem might affect future patterns of new (re)development.

Conclusion

The argument to bring the relationship between land use and transport planning closer was a key focus for planning new development in the 1990s. However, this has been superseded in recent years by the housing crisis, and the need to deliver more homes has dominating UK headlines and planning policy.

Two compelling pieces of research highlight the issue once again and reawaken the case. The first, by the RTPI, claims over half of planning applications for large new residential developments fall outside of the recommended walk or cycle limits from public transport hubs. The second is by the Transport for New Homes group, following a visit to a number of sites across the UK and The Netherlands. They concluded that a majority of new housing developments are built primarily for travel using private cars rather than by sustainable means, contrary to the original vision set out in principle for these developments.

The disconnect between land use and transport planning is apparent here, but also shows that very little has been done to bring the two disciplines into alignment. This is particularly pertinent during the policy, planning and construction of new developments and attempts to promote more sustainable travel patterns. This research paper has sought to understand why more collaboration between disciplines is still not commonplace, despite repeated calls for this in the past. It has explored the required steps to bring the relationship closer in order to create places that meet sustainable targets set out in masterplan, local and national policy visions.

In order to understand the extent of this issue, interviews were conducted with a number of stakeholders, including government departments, institutional bodies, professionals and researchers with a background in both land use and transport planning disciplines. Through interview-based research, key discussion points were steered primarily though stakeholders; their own thoughts and resulting discussions have formed the basis of this report.

Many common views across industry professionals have been uncovered, with a clear overall consensus. Greater collaboration between land use and transport planners, as well as many other key stakeholders, has the potential to drive new developments with a strong focus on sustainable travel, particularly when tackled in the early stages of policy and planning.

Land use and transport planning are interlinked throughout the process of developing new communities. Yet with a shift in focus towards meeting housing targets, paralleled with limited priority on transport considerations, resulting developments often have a causal effect on the increase of private car use. This report has demonstrated that both land use and transport planning disciplines are better together – and best-practice case studies have exemplified the realities, and positive outcomes of cooperation. Industry professionals are optimistic that a closer relationship is viable, and often highly desirable, to develop communities that are truly active and sustainable.