University of Hertfordshire UH

Better places: new settlements with transport that works

Outcomes from the study tours of Freiburg and Cambridge organised by the University of Hertfordshire December 2025 and February 2026

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Introduction

The UK Government is committed to building 1.5m homes in England during this Parliament. Part of this target is to be delivered through a new generation of New Towns – large scale new developments, either as standalone towns or as extensions to existing settlements. A New Towns Task Force was established to recommend potential locations and set out ways these towns can be delivered as best practice in creating large scale new settlements. The task force reported in September 2025 and its report is here: https://www.gov.uk/government/publications/new-towns-taskforce-report-to-government/new-towns-taskforce-report-to-government.

Waterbeach (Cambridge Cycling Campaign)

Transport is a key issue addressed in the report. There is substantial literature showing that much of the current new housing development in the UK is located and designed in ways that require significant car use[1]. This adds to traffic congestion on existing roads and hence harms local economies and potentially the economy as a whole. It also entrenches social exclusion for those without car access and adds to carbon emissions.

The University of Hertfordshire and its Smart Mobility Unit have a long track record of working with the Innovation Academy[2], a social enterprise organisation in Freiburg in southern Germany, helping students and researchers review best practice in planning and in transport-related and sustainable developments. Freiburg is recognised globally as an exemplar for sustainable urban development, especially the districts of Vauban and Riesenfeld, and UH staff used them as examples in a RTPI report on futureproofing new towns[3]. In discussion with officials at the Department for Transport, it was agreed that a study tour to Freiburg, followed by one in the UK to review practice in this country, would be helpful in enabling the Government to respond to the Task Force report and to understand better how to accommodate growth through the creation of healthy and sustainable communities.

As a result, a visit was arranged by the Smart Mobility Unit to Freiburg, hosted by the Innovation Academy, in December 2025. To allow comparisons with UK experience, a follow up visit to urban extensions and new settlements in the Cambridge area and in Harlow was held in February 2026. A number of officials from the Department for Transport (DfT) and the Ministry of Housing, Communities and Local Government (MHCLG) joined these visits. This report is intended to draw out the lessons learned and the implications for urban extensions and New Towns in England, especially in relation to transport. We are also able to draw on the report of another study tour to French cities, undertaken almost at the same time[4], which allows some further comparison.

1 https://www.transportfornewhomes.org.uk/reports/building-car-dependency/; https://www.transportfornewhomes.org.uk/reports/what-is-being-built-in-2025/; https://www.rtpi.org.uk/new-from-the-rtpi/new-housing-fails-to-move-away-from-car-dependency-report-finds/ https://www.createstreets.com/steppingofftheroadtonowhere/

2 https://www.innovation-academy.de/en/

3 https://www.rtpi.org.uk/policy-and-research/futureproof-new-towns-international-lessons-on-how-to-build-flexible-and-adaptable-new-towns-in-england/3-case-study-freiburg/

4 https://www.createstreets.com/projects/towns-and-trams-what-britain-can-learn-from-frances-tram-led-housing-model/

Light rail in Vauban (Steffen Ries, Innovation Academy)

Freiburg Im Breisgau

Background

Freiburg is the fourth largest city after Stuttgart, Mannheim and Karlsruhe in the German state of Baden-Württemberg. The city itself has a population of about 240,000; the greater Freiburg metropolitan area ("Einzugsgebiet") has just under 650,000.

Located at the southwestern foothills of the Black Forest, the city serves as a leisure/tourist entry-point to the Black Forest area and the major wine-growing region of Baden. Founded in the 11th century, a large part of the historic city centre (except the Münster) was destroyed during WW2 and subsequently built back to the original medieval plan giving a view of a historic centre while the buildings are in fact newer.

Freiburg's history changed between French and German administrations, and this is reflected in the subsequent phases of building and developments. It includes the French army base of Vauban which is plays critical part in the story of sustainable development. The city has a high standard of living and has built a strong reputation for its track record in advanced environmental practices, embodied in local housing projects such as the creation of the sustainable district of Vauban.

Freiburg's vision of sustainable and viable communities stems from the popular push back against plans for a nuclear power plant in the 1970's and decisions on urban transport, including pedestrianising part of the city centre and the decision to keep and invest in the city's trams. There was also the experience of the Weingarten development which became a dysfunctional area ("sink estate") with significant social problems. All of these led to an expectation of citizen involvement in key planning decisions, which have influenced subsequent developments in the city.

Freiburg as a Green City

In the 1970s plans were made for the development of a nuclear power plant in Wyhi near Freburg. This sparked protests from Freiburg residents, community groups, wine growers and local farmers who occupied the site and conducted a strong campaign against the development until 1975 when the plans were dropped. The protest is considered to be one of the formative elements of the

wider German anti-nuclear movement. It also led to local innovative thinking around sustainable energy solutions - the old Freiburg football stadium was the first to incorporate solar panels funded by season tickets holders who received a return in the form of match tickets. The stadium has been subsequently re-built after a citizens' vote, again using solar panels[5].

This success led to the local vision of Freiburg having a "Green City" ethos informing the Vauban plans and later developments.

Weingarten and the Social Cost

In the north of Freiburg, the Weingarten development of just over 11,000 residents was established in the early 1960's. It was characterised by a series of tower blocks, concrete walkways and underground car parks which are recognisable in many developments of that era. Transport connectivity was poor and the area suffered from lack of upkeep leading to deterioration of the built fabric, social issues and vandalism, underground car parks that were dark and dangerous and the closing/withdrawal of local services. Residents suffered from "postcodeism", discrimination against those coming from that area. Those who could move away did so, reinforcing the cycle of decline. This illustrates the long-term consequences of separating housing delivery from transport planning, which is an issue in UK extensions (see below).

The city's experience of the problems with Weingarten was a critical factor in contributing to a determination by the authorities and citizens that further developments for the city should create mixed, positive and socially cohesive communities.

In fact, measures have been taken to address Weingarten's problems. Connections to the city's tram network were added in 1984 and 2004. After that, since 2006 Weingarten has been undergoing a process of refurbishment of the area and buildings[6]. Some tower blocks have been upgraded to "Passivhaus" (very high energy efficiency) standards, engaging residents in the design process to map out their accommodation needs and incorporating individuality into each block. Green spaces improved with play and exercise equipment, and there are now better walkways, lighting, security and the refurbishment of the underground car parks. There will also be connections to the new recreational facilities at the Dietenbach development.

In considering the later urban extensions in Freiburg, the experience of Weingarten and the problems it created for the city must be borne in mind as a motivation for the city to do better in future. In particular on transport,

Tram connection to Riesenfeld from the start (Stadt Freiburg)

Weingarten exemplified a failure to integrate public transport with urban planning; until the mid-1980s in Freiburg (as elsewhere) the focus was more on individual motorised transport and in neighbourhoods like Weingarten tram connections only arrived 10-20 years after completion. Subsequent new extensions marked a change in this approach. In particular, Rieselfeld aimed to avoid the mistakes made in Weingarten (lack of infrastructure, social and architectural homogeneity).

Freiburg's new urban extensions

Three urban extensions are considered to be the key exemplars of good practice in Freiburg's evolution as a green city. Two major extensions to Freiburg have been built, at Vauban (around 5,500 residents) and Rieselfeld (11,000 residents). The third, Dietenbach, is under construction and planned when finished to house around 15,000 residents. These were the focus of the study visit.

Vauban

Vauban's transformation began in the late 1990s as a "sustainable model district". It was built on the site of a former French Army base. In 1992 the base was due for demolition, but some of the vacant spaces had been taken over by squatters and community activists who came together as the "Forum Vauban" to develop the site in a sustainable and eco-friendly way with an emphasis on being car-free. On the site of around 40 hectares, plans were re-drawn to save and refurbish some of the original barrack buildings, the open square and mature trees to form a hub for the development of

5 https://www.esylux.com/service/esylux-services/esyworld/artikel/how-the-europa-park-stadion-in-freiburg-is-readying-itself-for-the-energy-future
6 https://www.freiburg.de/pb/1835635.html

Vauban communal car parking (Steffen Ries, Innovation Academy)

a new community. Plots were allocated to 'Baugruppen' (community-led) groups whose bids were assessed against criteria favouring families with children, older people and Freiburg residents. Some Baugruppen were formed by architects, others by prospective residents planning varying elements of self-build. Some of the other plots were sold to private developers. Another part of the site was developed for student dormitories for the University of Freiburg. Vauban is a high density but low-rise development, with an overall density of 95-135 dwellings per hectare (for comparison, many UK suburban extensions are delivered at 25–35 dph). This high density goes with good space standards of 32.9 sq metres per person and 92.5 sq metres per apartment[7].

This mix of interested groups gave rise to the variety of built forms include housing cooperatives, co-ownership, self-build and live/work accommodation, the mix of use of materials, built form, flexible spaces etc gives the area varied sights lines and interesting aspects. Other innovations at the time included Passivhaus principles, solar panels, shared streets and car-free zones. Some individual projects, with a focus on community, also offer shared domestic spaces including bookable party rooms, guest accommodation and shared washing/drying facilities, leading to more effective use of living spaces. Developments with the potential for incorporation of flexible spaces which can grow or be reduced according to residents' circumstances create the opportunity for futureproofing. One part of the development is a "Solar Settlement"[8], a development of 59 "PlusEnergy" (energy positive) homes. These can produce a positive energy balance with any surplus sold back to the city's grid.

Transport in Vauban:

Vauban's planning was based on the concept of "filtered permeability" or "filtered mobility". This describes a road network that favours walking and cycling and "filters out" car use. Most local streets are crescents and cul-de-sacs and there are only a limited number of through routes for cars. The streets connect to a network of pedestrian and bike paths across the whole neighbourhood which means that cycling and even walking can be much faster than driving.

Other incentives to reduce car use included a central tram line with a frequent and regular service running from one end of the site to the far end and connecting with the main city trams and buses, and also the availability of car clubs and car sharing. This has helped reduce car ownership and increase the use of public transport.

Another key innovation in Vauban was the disaggregation of parking costs from accommodation costs through the creation of two communal two-storey resident car parks at the outer edges of the site. Residents can purchase a property but if they wish to own a car there is an additional charge for space in the shared garage parking. There is very limited on-street parking – cars are allowed to stop to pick up/ drop off but not to stay for any length of time (more details on the parking provision in Vauban is below). The result has been that car ownership and car use in Vauban is low. In 2025, car ownership was 222 per thousand people[9]. Older statistics suggest that most journeys are made by bike or on foot[10].

Rieselfeld

This area was planned around the same time as Vauban and embeds some of the innovations from there along with other new ideas. Built on a former sewage farm, the site was owned by the City. It has an area of 320 hectares of which around 80 hectares was developed with the rest being retained as natural green space. It now has a population of over 10,000 people. Development started in the early 1990's and continued in phases until 2010[11].

Development costs were offset by raising funds from the sale of the site with the project coordinated by the City building department under a newly founded group called "Projektgruppe Rieselfeld". The development of the site was undertaken by commercial building contractors and private property developers. In order to create a mixed community, each investor was only allowed to build 40 housing units in one area, which equals three building plots.

7 https://stadtteil-vauban.de/en/vauban-in-numbers/
8 https://en.wikipedia.org/wiki/Solar_Settlement_at_Schlierberg
9 https://www.freiburg.de/pb/site/Freiburg/get/params_E-369397302/2463694/Stadtbezirksatlas%202025.pdf
10 For comparison, the figure for Freiburg as a whole is around 382/1000. This is considered low by German standards, where car ownership is nationally 590/1000. An equivalent sized English city (around 250,000 people) is Derby, where car ownership is 360-400 cars per 1000 people; the average for England is 439 and for the UK is 600.
11 https://www.freiburg.de/pb/site/Freiburg/get/params_E1706564130/347967/Rieselfeld_en.pdf

A tram line and bus services were introduced at the beginning of the development. Key infrastructure including community facilities, schools and faith spaces as well shops were put in at the start of the project to create a community for the first residents and developed over time as the build phases were completed. Some plots were allocated to the concept of “Baugermeinschaft”, a form of co-created design, where a group of potential residents worked with architects on the overall composition and layout of the space according to the residents’ needs and wishes. Other buildings have been designed with future flexible use in mind to accommodate changes in need with a changing population mix (e.g. nurseries that could become centres for older people), and within sub-districts there is a mix of social/private accommodation along with developments to cater for specific care needs. The development is relatively high density, with apartment blocks of 3-5 stories around courtyards, with some houses. Overall density is around 76 dwellings per hectare.

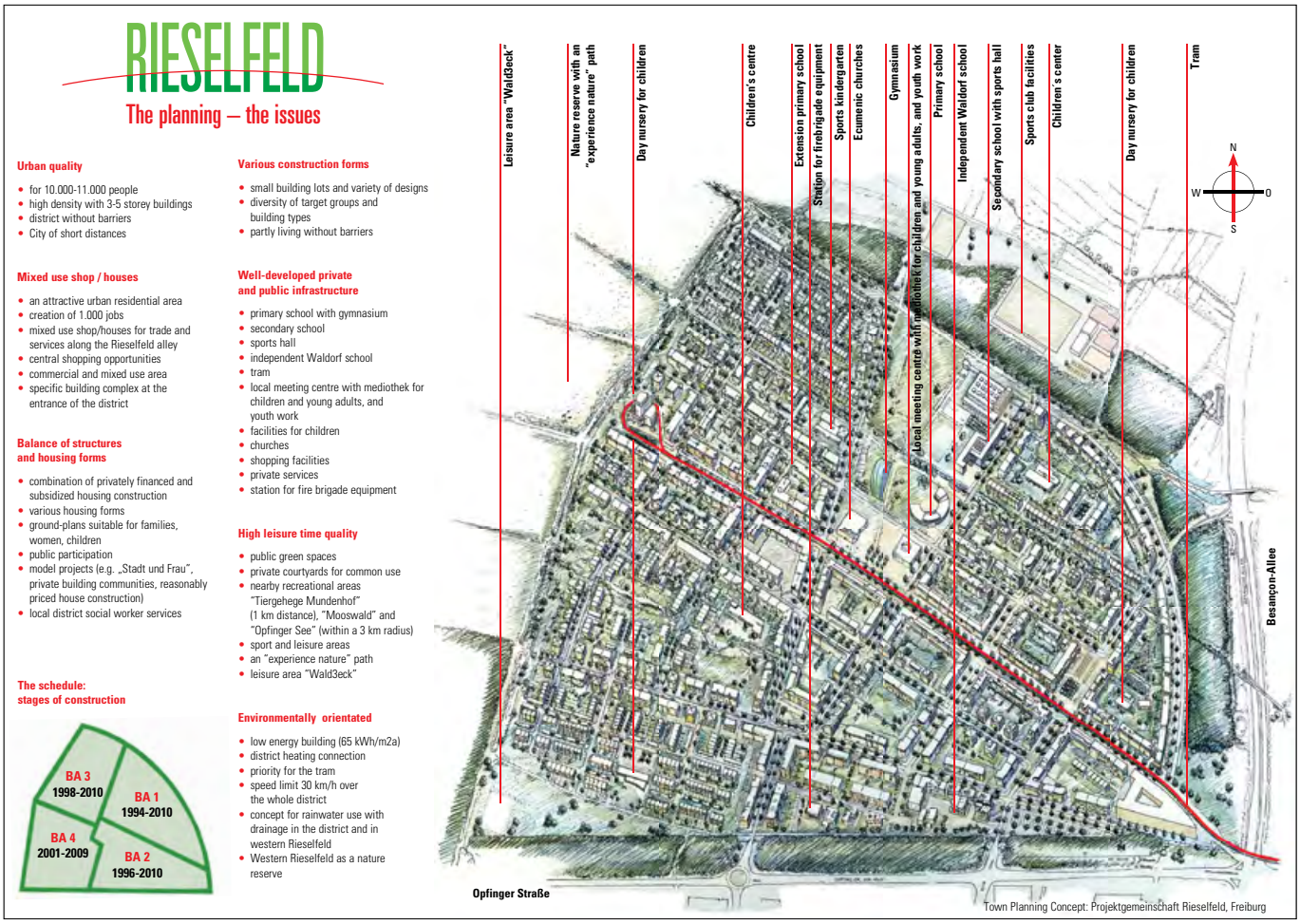
Transport in Rieselfeld:

As noted already, Rieselfeld was built around an extension to the city’s tram network. A tram line runs through the centre of the development with three stops designed to give good access for every part of the development. Some stops also function as interchanges for bus services to the surrounding areas.

In order to encourage the use of public transport, building density is highest near the tram/bus lines and car routes are focussed on the outer site areas. Although there is parking on some of the residential roads, there are also some underground car parks, both commercial and within some of the residential developments. There is a general speed limit of 30 kph, priority for pedestrians and cyclists, and several “play streets” in which children at play have priority. As in much of the rest of Freiburg, there are car clubs across the development. Among the detailed features, delivery access to the main supermarket involves a one-way routing, to avoid trucks having to reverse and hence produce noise from their reversing indicator, making night-time deliveries less intrusive.

Dietenbach

This is the newest area of planned development with the aim of expanding the city of Freiburg with a carbon neutral development of around 6,500 apartments for



A plan for Rieselfeld (Projektgemeinschaft Rieselfeld, Freiburg)

Play street in Rieselfeld (Stephen Joseph)

Buses connecting with trams at Rieselfeld (Stephen Joseph)

a population of around 15,000. At the time of our visit, groundwork was underway and development of the first phase of the 108-hectare site was being started.

This development has not been without controversy. The city has been trying to balance the needs of creating additional accommodation for Freiburg's increasing population and retaining the existing farmland/ environmental quality of which the city is proud. This has taken time. The decision to create a new district in principle was taken by the city council in 2012, and the decision to go for Dietenbach specifically was taken in 2015. After further work on environmental issues, in 2018 the council took the decision in favour of an urban development measure (which allows for compulsory purchase). There was however a city referendum in 2019, which resulted in a 60% vote in favour of the new district. The land was acquired by the city through the compulsory purchase powers.

Plans are based around a series of 5 Quarters "Quartierlandschaft Dietenbach" with block developments and formation of local neighbourhoods with clear and different identities[12]. A "green backbone" running the length of the site allows for flood prevention measures as well as leisure facilities and habitat preservation. Each block includes a square, shared garage, kindergarten and other facilities along with walking/cycling routes. The development has higher density along the main tramline and around central community hubs, and tapers off into lower-density, ground-oriented "garden quarters" toward the edges.

In order to deliver the carbon neutral element, sustainable energy plans are based around use of solar thermal and photovoltaic, along with communal heating systems. Building elevations and orientation are designed to maximise solar input and storage incorporated within each neighbourhood. There is a strong vision to deliver this development using the lessons gained from the past as well as new innovations in order to continue contributing to Freiburg's Green City reputation.

A consistent vision over time has led to the embedding of expectations that developments will continue to follow and improve upon sustainable and low carbon practices and a strong emphasis on community engagement and involvement during the planning process along with input through "Baughermeinshaft" and "Baugruppen" has given a sense of having agency for the communities involved in and impacted by new developments. The Baugruppen model demonstrates how design governance and resident-led development can support long-term stewardship, a theme also highlighted in recent UK research on futureproofing new towns[13].

Transport in Dietenbach:

As with Vauban and Rieselfeld, a tram extension will be completed at the earliest phase, and higher density development placed near the line. The neighbourhood garages developed in Vauban will also be used here, and car sharing/car clubs will play a significant role, along with priority routes for cyclists and pedestrians.

Other developments:

There are other smaller developments across Freiburg which reflect the principles used in Vauban and Rieselfeld. For example, a city centre site is seeing 91 apartments built with 28 parking spaces with electric charging stations, 6 motorcycle parking spaces, 200 bicycle parking spaces in/next to the buildings and parking

12 https://www.freiburg.de/pb/495838.html
13 https://www.rtpi.org.uk/policy-and-research/futureproof-new-towns-international-lessons-on-how-to-build-flexible-and-adaptable-new-towns-in-england/

spaces for cargo bikes and special bikes, as well as 24 visitor bicycle parking spaces on the street[14]. A mixed use commercial and residential development on an old rail goods yard is also under way ("Güterbahnhof north"), for about 3500 residents and 5000 jobs, and this too has a tram running through it and a cycle route network[15]. Another residential development, "Kleineschholz", will see around 500 residential units built as affordable housing near the city centre[16].

Transport in Freiburg: the wider context

The Freiburg extensions share some common features, which are relevant in considering lessons for new towns in the UK.

- Tramlines at the centre of new developments, delivered in the first phase, with developments built around them. Bus services from surrounding areas feed into these lines. Higher density development is focused around the tram corridors[17]
- Street layouts that prioritise public transport, cycling and walking over car traffic, with good active travel networks linking the extensions into the rest of Freiburg
- Shared transport provision: hire bikes are readily available across the urban extensions and there are also car club vehicle stations in them
- Car parking for residents in the new developments is managed and limited, though spaces are available. There is not much on-street surface parking, though there is some parking for people with disabilities
- High residential densities and mixed-use neighbourhoods that support viable public transport and reduce journey lengths.

Cycle route in Freiburg (Stadt Freiburg)

To inform UK practice, it is useful to understand why and how these features have been developed. Before and during our visit, we compiled a list of questions on the framework for transport planning, funding and delivery within which Freiburg operates, with input from the officials joining the visit. The Innovation Academy gave us very helpful and detailed responses to these questions. It is useful to include these points in considering the ways in which the Freiburg extensions have been funded and delivered.

Housing development and financing in Germany

First, it is worth noting that housing provision and roles are rather more mixed than in the UK. When it comes to plot development, there are private sector developers, and much of Rieselfeld was built by them, but some of these are small companies rather than the larger housebuilders that dominate the UK housebuilding scene. There is also a tradition of building co-operatives, and around 60% of Vauban and 25% of Rieselfeld was built by them. There is also a municipal housing association, Freiburger Stadtbau, which manages around 13000 units across the city and promotes sustainable housing principles[18]; it also manages the district garages.

However, the masterplanning and land assembly function preceding new development in Freiburg is almost always by the local council.

The ability for a municipal authority to create an "Urban Development Measure" (SEM) enables the community to counter housing shortages by developing a whole new area. This instrument serves to make building land in the development area available for purchase at the current use value, i.e. the value prior to it being allocated for housing in the local development plan, and so uninfluenced by development gain. Unlike the UK, the only way land can get planning permission is if it is allocated for housing in the local plan. After purchase and preparation of the area, the plots can be sold at the market value for developed areas to any person or company who commits to develop the plot in accordance with the plans. The difference between undeveloped and developed values finances the measure. No profit may be made. Should individual owners resist the purchase, the local authority can apply compulsory purchase powers within the boundaries set by the Urban Development Measure, with compensation to the landowners. The amount of compensation is determined by an expert opinion and corresponds to the value without the

14 https://www.freiburger-stadtbau.de/presse-medien/pressemitteilungen/details/artikel/91-neue-wohnungen-entstehen-am-behoerdenareal
15 https://business.freiburg.de/en/the-company/finding-areas-or-rooms/gueterbahnhof-north
16 https://www.freiburg.de/pb/1417623.html
17 It should be noted that none of the urban extensions have any stations or services on the heavy rail network. There is in fact a main rail line near Vauban, but although there is a desire for a station there, we were told that there is no capacity on the line for one, and that this is not expected to be provided for some years.
18 https://www.freiburger-stadtbau.de/

urban development. In the case of Dietenbach, the compensation amount was €15/m²; negotiations are allowed to avoid the costs of compulsory purchase, and in the Dietenbach case almost all owners accepted after negotiations.

The financing of developments was with commercial finance or a rotating public loan facility. The high value of initial development phases, and the low input cost of land, meant limited market borrowing was needed. The municipality can borrow as much as it thinks prudent; there is no state- or federally- imposed cap.

Provision and funding for public transport

In Germany there is federal and state funding available for rail-based urban public transport, and also subsidies for operating costs. The Municipal Transport Financing Act (GVFG) dating back to the 1970s allows for this; funding is provided for, among other things, the construction or expansion of transport routes for trams/light rail. The funding rate is up to 75% of capital cost, depending on the measure. Project planning costs are also subsidised with a surcharge (usually 10%). This funding has been increased in the last few years as part of the federal climate protection programme[19]. Alongside this federal funding, the states in Germany (in Freiburg's case Baden-Württemberg) co-finance public transport schemes. Around 15% of the cost of the trams remains with the municipality. These costs are classified as development costs and are refinanced through land prices; land is purchased at current use values, through compulsory purchase if necessary, and the increase in land values is used to provide the funding for public transport and other infrastructure.

In terms of operating costs, German trams are often net profitable due to the dense demand surrounding them. Where subsidies are required, profits from municipal utilities are used as cross-subsidy. Local taxes may be used to provide subsidy – these include local corporation tax; local property tax; local VAT; and local tourist taxes.

Federal operating subsidy is provided to the states according to federal budget formulas and passed down through the relevant bodies – this is not ringfenced by mode but available for any public transport[20].

Approval of a new transport or tram scheme

In Germany as in the UK, planning permission is required for a new transport scheme. The competent authority is usually the relevant district government or regional council

Bike sharing Freiburg – one of 800 shared bikes with over 100 stations (Stadt Freiburg)

(Regierungspräsidium), depending on the federal state. The procedure covers technical and structural planning, the surrounding area, environmental impact, interference with land, nature, property, etc. As a rule, all relevant public and private interests are considered. The resulting "planning approval or plan approval decision" replaces many individual approvals—such as exemptions under nature conservation law or approvals for interventions in the soil or environment etc.

However, depending on the scope of the project and its impacts, other approvals or assessments may also be required. Municipalities, districts, counties, and, if applicable, neighbouring municipalities must be involved, especially if their land, infrastructure, or responsibilities (e.g. road construction) are affected. For larger projects, public participation is required. Environmental approvals may also be required, but this is often part of the documentation for the planning approval process, for example by drawing up a landscape conservation plan (LBP). Building permits may be needed if land needs to be rezoned, repurposed, or parts of it compulsory purchased; the planning approval process forms the basis for this. Whenever possible, Freiburg attempts to utilise urban development measures for larger projects and acquire the land in advance as it has in Vauban and Dietenbach.

The overall picture is that in Freiburg and in the rest of Germany the approval system for new transport infrastructure such as trams is clear. A single planning approval process by the relevant district council or regional government gives planning permission, and although there may be other requirements many of these are rolled into this approval process. Consultation with other authorities and with the public and environmental protection agencies also seems to be part of this process.

19 https://www.bundesregierung.de/breg-en/issues/climate-action/climate-friendly-transport-1795842
20 By contrast, in the UK revenue funding from central government for local public transport is modally specific – see below.

Delivery and operation of public transport and other transport services

In delivering a new tram scheme, the city council invites bids and awards contracts. The municipal transport companies – in Freiburg's case VAG Freiburg - are responsible for building and operating the trams[21]. VAG Freiburg, which is fully owned by the city council, also manages bus services, in some cases through contracting to private operators, in other cases running the services itself. It is also responsible for the bike sharing "Frelo" scheme (the operator is Nextbike).

There are two major car-sharing providers in Freiburg with approximately 600 vehicles across the city. Parking spaces for car sharing are designated in new developments as part of the planning process. Providers pay a fee to the city.

The city of Freiburg is part of a wider "Freiburg Regional Transport Association" (RVF), with the surrounding district councils Landkreis Emmendingen and Landkreis BreisgauHochschwarzwald. The RVF's main objective is to develop network mobility in the Freiburg region; the bus services linking Rieselfeld with the surrounding communities are part of this.

Parking

In discussion about Freiburg's experience, and particularly Vauban, there has been less attention paid to the underlying context the city and those promoting the urban extensions were working within. On our visit, it became clear that the package of transport measures in Vauban and Rieselfeld were in fact required in order to address the requirements of a federal law on parking standards.

Car club car – one of 160 in Freiburg (Stephen Joseph)

Germany has in general for many years required parking provision in new housing. Under an older federal law dating from pre-war times, there was a requirement for all new residential developments to have a minimum parking space ratio of at least 1 space per apartment/dwelling.

In order for a development to be allowed with a significantly lower parking space ratio, a mobility plan is required that demonstrates how this can work. Shared transport solutions (car clubs and bike sharing), good public transport connections, and bicycle parking facilities play an important role in this. Rieselfeld had to meet the 1 space per household parking provision, but near the centre of the development along the line of the tram route this was reduced to 0.8, with the mobility plan being used to allow for this departure from the federal standards.

Across the development in Rieselfeld, there are 4000 parking spaces for residents, and an extra 20% of parking to provide mainly for visitors. Much of this is provided in underground garages below the housing, so there is little surface parking, even in the lower density areas towards the edge of the development with family houses with gardens. Some of the visitor parking is on street, but with permits required for its use during weekdays. This provision of underground car parking is common in new housing in German cities.

Vauban's approach sidestepped the minimum parking standards. Its planning allowed for a lower amount of parking; across the area parking ratios range from 0.5 to 1.0, with the average around 0.6. However, as already noted there is no parking next to the housing blocks and instead the district has two multi-storey car parks. This means that residents still have access to parking spaces, but the parking is not immediately outside or under the houses and flats. To buy a parking space in car parks, residents must pay €25,000, in addition to the cost of their home. Because of the legal requirements for parking provision, a site was reserved for a third multi-story car park, but this has not been built and the area reserved for it is currently a park and a play area. However, those who don't have cars have to pay €3,500 towards the cost of this car park should it be needed.

This general approach is being followed in new developments, Kleineschholz is planned with 0.3 parking space ratio and for Dietenbach the target is 0.5. In Dietenbach cars will be parked exclusively in neighbourhood garages, and car sharing will play an important role in both districts.

21 https://en.wikipedia.org/wiki/Trams_in_Freiburg_im_Breisgau

Conclusions and summary from Freiburg

Freiburg has been able to create significant urban extensions and is building more, both on reused brownfield land within the city and as major urban extensions on greenfield land at the edge of the city.

The key transport features in these developments include:

- High quality public transport, mainly extensions or new lines on the city's existing tram network. Critically, these have been delivered as part of the initial phase of these developments, giving those moving into new developments good public transport
- High quality active travel networks, with priority in these extensions given to cycling and walking and good provision for cycle parking
- Shared transport provision: the city's existing car clubs have stations in the developments and there are also hire bikes available
- Car parking and car access is managed and controlled, for residents and visitors. Car parking is available but not always next to housing developments and in Vauban is disaggregated from housing costs.

As we have noted, there are historical and cultural reasons for the way Freiburg has developed, in particular its attachment to environmental protection dating back to the 1970s.

However, there are three specific points of relevance to the UK.

First, Freiburg pursued this approach having learned from the **failure of a previous 1960s urban extension**, Weingarten, which was built as tower blocks and underground car parking, with limited public transport and local services. This was perceived as having led to large social costs and issues, and therefore there was a determination to do new urban extensions differently.

Second, an old Federal law sets **minimum parking standards** for new housing developments, and this meant that Freiburg had to develop its own **mobility plans** to show how its extensions did not need to provide for these minimum levels of parking or to mitigate these minimum standards. This was one of the motivations for the range of transport measures proposed.

Third, the **regulatory and financial environment has been supportive** for Freiburg in pursuing this approach, especially for the tram lines. Federal and state funding is available for the capital and operating costs for trams. In addition, the city is able to capture the increase in land value in a new development to fund trams (among other infrastructure). This "urban development measure" or SEM includes the outline permission for the city extension. A range of local taxes and profits from local utilities provides other revenue sources. In regulatory terms, it has also been relatively straightforward to get planning approval for the tram lines; a single "plan approval decision" rolls together many individual approvals including environmental considerations.

It should also be noted that the Freiburg developments are relatively high density but low rise. This density supports the access to and provision of public transport and the active travel network.

Cambridge South station (Network Rail)

Cambridge and Harlow

In order to compare recent UK experience with the practice in Freiburg, a further study tour was arranged in February 2026. This went to various new developments in and around Cambridge, including a trip on the guided busway to Northstowe, and it also looked at a development in Harlow.

Cambridge

Cambridge has seen high economic growth and employment expansion in recent years, with the Cambridge Science Park and Biomedical campus. Alongside this, there have been new housing developments in and near Cambridge, some on former Green Belt or greenfield land.

Developments on the edge of Cambridge include Trumpington, Eddington and Waterbeach. There have also been new settlements at Northstowe, which is eight miles north-west of Cambridge and Cambourne, nine miles west of the city.

With the developments in Cambridge, there has been a coherent attempt by local planners and councillors, supported by civil society groups, to maintain and promote high environmental quality. Some of the developments avowedly look to the Freiburg models, especially Vauban which has been visited by those involved in the planning and development process. In particular, the Marmalade Lane cohousing development[22], which has won awards, closely follows Freiburg principles with co-design, shared spaces and community gardens/ facilities along with sustainable energy installation such

22 https://www.wearetown.co.uk/marmalade-lane/

as heat pumps/solar PV (photovoltaic cells) and energy efficient construction and insulation.

The institutional structure for decisions on housing and transport in and around Cambridge is complex. The local authorities formally responsible for planning are Cambridge City Council and South Cambridge District Council; these have come together to create the "Greater Cambridge Shared Planning Service" and are developing a joint Greater Cambridge Local Plan. Transport is also a shared responsibility; the Cambridge and Peterborough Combined Authority has the strategic transport powers and is the Local Transport Authority for the Cambridgeshire and Peterborough area. The directly elected mayor of the CPCA sets the overall transport strategy for Cambridgeshire and Peterborough, as part of the Local Growth Plan. Cambridgeshire County Council is the highway authority and also delivery partner for the CPCA[23]; it produces local transport strategies, described as "child strategies" for the CPCA's growth plan and transport strategy[24].

These bodies come together in the Greater Cambridge Partnership (GCP). This brings together the local authorities in Cambridge – the two district councils, the county council and the CPCA - with the University. It was set up in 2014 as part of the Cambridge City Deal; it acts as the main delivery body for the city deal to bring investment to infrastructure, housing and skills[25].

Transport is a key part of the GCP's work. It has a sustainable transport programme which includes new public transport investment, a "city access programme", travel hubs, and an active travel network including 12 "greenways"[26]. This programme acts as the framework for developing transport in and around Cambridge and for the housing developments in the city.

The Government has said it wants to go further to increase growth and development around Cambridge. A "Cambridge Growth Company" was set up in 2024 as a subsidiary of Homes England, to "unlock and accelerate development"[27]. The Growth Company has been involved in progressing a number of transport developments supporting housing plans around the city, including assembling funding. The Government now wants to take this further and after consultation has decided to set up a development corporation for the city-region[28].

Cambridgeshire guided busway (Roger French)

Transport in Cambridge

As in Freiburg, there has been investment in public transport infrastructure to serve new developments; in Cambridge this has taken the form of the Cambridgeshire Guided Busway. Many of the new developments are on or near the busway. Built primarily on a former railway alignment, it links Cambridge, St Ives, Huntingdon, the M11 and the new Northstowe development with 16 miles (25km) of dedicated track in two sections and bus lane road operation. This makes it the longest guided busway in the world. Proposed in 2001 as part of a multi-modal study looking particularly at Cambridge and the A14, it started operating in August 2011 connecting key sites such as Addenbrookes hospital, the science park and the Trumpington park and ride.

The guided part of the busway is constructed in concrete sections. It is used by standard buses specially adapted with additional wheels which follow the kerbs on the guided sections without the need for driver steering. It has a cycleway alongside much of it, but because of crashes (including three deaths), fencing is being built to separate the busway from the cycleway and while this is being constructed bus speed limits have been reduced.

The project was controversial, with pre-opening delays and overspends leading to a review in 2010. In the first year 2.5 million trips were made, 40% higher than predicted; by 2024/5 usage was at 3.7 million, around 8,000 passengers each day.

23 https://cambridgeshirepeterborough-ca.gov.uk/what-we-deliver/
24 https://www.cambridgeshire.gov.uk/residents/travel-roads-and-parking/transport-plans-and-policies/cambridgeshire-transport-strategies
25 https://www.greatercambridge.org.uk/about-us
26 https://www.greatercambridge.org.uk/sustainable-transport-programme
27 https://thecgc.org.uk/
28 https://www.gov.uk/government/news/new-regeneration-body-to-boost-jobs-homes-and-infrastructure-across-greater-cambridge; https://www.gov.uk/government/news/greater-cambridge-gets-regeneration-body-to-accelerate-growth

Various extensions are being planned for the busway to serve new developments and corridors around Cambridge, including a route to Cambourne, a new settlement currently without any major public transport infrastructure. This busway project was the subject of a public inquiry in 2025 (there was local opposition to it, in particular because of its impact on an orchard on the route) and a decision is expected in 2026. Other busway extensions are proposed, including as part of the Cambridge South East Transport programme (CSET)[29].

There has been continual debate about the busway – some argue that to reach its full potential the walking/cycling track alongside it should be upgraded, connectivity to local villages should be improved and there should be better links with other transport modes. There have also been periodic suggestions that the route should be changed to or supplemented by a light rail system; the current Mayor is exploring this and has appointed a Light Rail Commissioner to advise him on this[30].

A further change to the operation of the busway and of bus services in Cambridgeshire generally may come with a move towards a franchised system. The current operation is based on the deregulated model which gives the operators of bus services considerable freedom in deciding what routes to run and what fares to charge. Under a franchised model, the Cambridgeshire and Peterborough Combined Authority and the elected Mayor would decide what route network should run and what fares should be charged (as happens in London and now Manchester). There has been consultation on the proposal to move to a franchised system, and after an independent review the Mayor has decided to go ahead with this in stages[31].

There are other new public transport developments. A new station was built at Cambridge North in 2017, primarily to serve the Cambridge Science Park and further development is planned around this. Another new station has been built at Cambridge South to serve the Addenbrookes Hospital and Cambridge Biomedical campus; we saw this station on our visit and it opened in June 2026. A new station is also planned for Waterbeach (see below).

In addition, the East-West Rail Project is being planned to link Cambridge with Oxford, Milton Keynes and Bedford. In relation to new towns proposed by the New Towns Task Force, it will serve Tempsford (an area between Cambridge and Bedford) and an expanded Milton Keynes and will also serve Cambridge South station and Cambourne[32].

Active travel – especially cycling – is an important element in Cambridge's travel provision and development. Cambridge has high levels of cycling, possibly among the highest in the UK. 22% of all journeys are by bike, with much higher levels and shares in peak hours – one in three residents say they cycle to work. A network of cycle routes has been created to cater for this, and this is being extended. This includes bridges and innovative "CYCLOPS" junctions where cyclists and pedestrians are segregated from other road traffic. New developments are expected by local planning authorities to provide good cycle facilities, and the cycle network is planned to extend into these developments, including through the GCP's 12 "greenways" already noted.

In our study tour, we looked particularly at four developments: Trumpington, Eddington, Waterbeach and Northstowe.

Trumpington

Trumpington is at the southern fringe of Cambridge. There are in fact two developments here: Great Kneighton (2,250 dwellings) and Trumpington Meadows (1,200 dwellings). There is a park and ride at Trumpington (current terminus of the busway), and it is close to the Cambridge Biomedical Campus and the new Cambridge South station. There are local facilities and shops on site, including the Clay Farm Community Centre which has a medical practice within it. The developments here are mainly private sector but 40% of the housing is classed as affordable.

Trumpington primary school with cycle parking (Stephen Joseph))

29 https://www.greatercambridge.org.uk/sustainable-transport-programme/public-transport-schemes/cambridge-south-east-transport
30 https://cambridgeshirepeterborough-ca.gov.uk/news/two-leading-transport-figures-appointed-to-drive-cambridgeshire-and-peterborough-connectivity-ambitions/
31 https://cambridgeshirepeterborough-ca.gov.uk/news/mayor-to-deliver-bus-franchising-through-phased-approach-following-independent-review/
32 https://eastwestrail.co.uk/

Eddington

This is a development in the north-west of Cambridge. It is on former farmland owned by the University of Cambridge and is being built by the University to provide affordable housing for students and university staff. Around 3000 houses have already been built, with a total of 5600 planned, and there is also a lot of commercial development on the site. It is being built with very high environmental quality and sustainability in mind, with rainwater recycling, a district heating network and solar panels/cells. Local facilities are included, with a community centre at the heart of the development. The density in Eddington is around 90 dwellings per hectare, rising to 108 in the second phase.

The University as the freeholder and developer has had a lot of control over the development and insisted on these high environmental standards. This extends to transport: the development is designed around cycling and walking with car access limited[33].

There is another residential development next to Eddington called Darwin Green, which has 1593 homes with a further 1000 planned[34].

Waterbeach

Waterbeach new town is a 560-hectare site, identified by South Cambridgeshire District Council in the Local Plan of 2018 as suitable for up to 11,000 new homes. Part of the site is a former RAF base. It is to the north of the existing Waterbeach village.

Its development is in two parts. The western portion of the site, where the former RAF barracks were, is owned by the Ministry of Defence and is being developed by their development partner, Urban and Civic, which secured planning consent in 2019 for 6,500 homes there.

The eastern part, earmarked for 4,500 homes, has outline planning permission and is being developed by the Waterbeach Development Company, a joint venture between Aquila Investments, Royal London Asset Management and Turnstone Estates.

To govern the development of the site, a Supplementary Planning Document (SPD) was adopted by South Cambridgeshire District Council in 2019[35]. To quote Greater Cambridge Shared Planning (the joint planning office of Cambridge City Council and South Cambridgeshire District Council),"this provides guidance on how the new town should be designed, developed, and delivered in accordance with the Local Plan.

Eddington centre (Stephen Joseph)

33 https://www.transportxtra.com/publications/local-transport-today/news/81179/eddington-cambridge-delivering-active-travel-from-vision-to-reality
34 https://www.greatercambridgeplanning.org/new-towns-and-major-developments/north-west-and-west-cambridge
35 https://www.scambs.gov.uk/media/5jkamxgw/waterbeach-new-town-spd-low-res-feb-2019-1.pdf

It promotes a co-ordinated and comprehensive approach to development, ensuring that homes and infrastructure come forward together across the site"[36]. Detailed design codes have been developed and agreed for the site. The density varies from 40-45 dwellings per hectare around the transport hubs and town centre to 25 dph in areas bordering the existing Waterbeach village and the rural/fen landscape.

In transport terms, the design of Waterbeach gives priority to walking and cycling. Car access is to the rear of the development, and car parking is kept there, while the main road through the development and past the school is an active travel route. There are subsidised hire bikes available too. However, the active travel route into Cambridge, the Waterbeach Greenway, has not yet been fully delivered. The local cycling campaign, which has been very involved in the development of this site, has said that this and other high quality active travel connections need to be delivered.

Bus connections to Waterbeach are already in place. A new developer funded service started in July 2025, linking the site to Waterbeach station and the city centre. A busway is planned linking Waterbeach to the city. However, the most important transport plan is for a new Waterbeach station, relocated from its existing site to serve the eastern side of the New Town. This was originally going to be delivered by the private sector, but this has not proved possible. It is now being taken forward and funded by the Greater Cambridge Partnership and Homes England, with support from the Cambridge Growth Board, and a planning application is expected during 2026.

The development of the eastern part of the site is tied to this railway station; the planning approval for this part of the site includes a requirement for the station to be relocated before any of the new homes are occupied.

Waterbeach is an exemplar development and its approach on transport is to prioritise active travel and public transport and reduce the need for owning and using a car. A "sustainable travel hub" has been created, bringing together the bus service, hire bikes, car sharing services and bike repairs. However, the SPD/masterplan and design codes have been important and act as frameworks for all developers on site; it is different from practice elsewhere and developers sometimes have found it difficult to adjust to this.

Northstowe

Like Waterbeach, Northstowe is a former RAF site. It is a residential development 8 miles NW of Cambridge and it is intended when finished to have 10,000 new homes and 25,000 residents, with a new town centre, community facilities, cycle and walkways, recreational sites and green spaces. Overseen by the government agency Homes England (formerly English Partnerships), the 20-year development started in 2015 with completion over 3 main phases. In 2017 the first residents moved in.

Some development phases were held up awaiting expansion of the A14 and Guided Busway and in 2023 there was public criticism of the failure to provide local amenities such as a shop, café or GP surgery, as had been promised[37]. Following this criticism, temporary buildings were constructed and the secondary school was used for the "Northstowe Tap & Social" - a bar, café, bakery and events space[38]. A new Community Centre was opened in March 2026. However, there is continued criticism of Northstowe's lack of facilities[39]. The density in Northstowe averages at about 45 dwellings per hectare, with higher density (61 dph) near the town centre, 40-60 dph around the guided busway and neighbourhood centres, and 35-40 dph at the edges and in environmentally sensitive areas.

In September 2024 Homes England appointed TOWN, the developer responsible for the successful co-housing development of Marmalade Lane in Cambridge, to create 145 homes in Northstowe. These will include two co-housing communities along with private sale, rental and 40% affordable housing. The project is due for completion in 2027.

Northstowe has a stop on the guided busway, but it is at the edge of the town; it takes 25 minutes to walk from the stop to the new leisure centre.

Other developments around Cambridge include Bourn Airfield near Cambourne, where 3,500 homes are planned (linked to the guided busway extension to Cambourne) and a set of developments in the east side of Cambridge including Marleigh Park (1391 homes) and Springstead Village (1200 homes)[40].

Conclusions from Cambridge

The authorities in Cambridge have managed to create a number of high-quality new housing developments, in some cases with good public transport and good active travel links. They have used various tools to do this, including Supplementary Planning documents and design

36 https://www.greatercambridgeplanning.org/new-towns-and-major-developments/waterbeach-new-town
37 https://www.bbc.co.uk/news/uk-england-cambridgeshire-66156561
38 https://www.bbc.co.uk/news/articles/c74d412l871o
39 https://www.newstatesman.com/politics/2026/07/the-road-to-nowhereville
40 https://www.greatercambridgeplanning.org/new-towns-and-major-developments

codes. A guided busway, one of the longest anywhere, has provided links to new housing and there has also been investment in new railway stations, with more to come.

The planning and transport authorities have the advantage of starting in Cambridge with very high levels of active travel, especially cycling, and have tried to include provision for this in the developments.

However, this has not been easy. As we have noted, governance in the Cambridge area is complex, especially by comparison with Freiburg, and although there is a lot of joint working, especially through the Greater Cambridge Partnership, this makes it much more difficult to ensure high quality development.

In particular, the co-ordination between land use planning and transport has been difficult. We noted that although the guided bus serves Northstowe, it is on the edge of the development and the delay in providing local facilities is also said to have added to car dependence there. New rail stations have been developed, but these have not been easy to get approved, funded and delivered and the public sector has had to take a strong leadership role to do this. The move towards the franchising of bus services, which the Cambridgeshire mayor has been developing, may help with better provision.

Provision of and priority for active travel has also required strong direction from planning and transport authorities, including in the design of new developments to make cycling and walking easy, safe and convenient choices rather than afterthoughts.

Harlow

We also looked at new developments in Harlow in Essex, in particular Newhall. We also heard about plans for the Gilston garden town.

Harlow was designated as a New Town In 1947 following the 1946 New Towns Act. It was the 4th such designation after Stevenage, Crawley and Hemel Hempstead and similar in terms of layout and built form. It was developed into the mid 1950's with additional areas added in the 1970's. The current population is around 93,000. It was built on a masterplan by Sir Frederick Gibberd with higher density development and "green wedges" giving people access to green space.

As with other New Towns, it was developed by a Development Corporation, which was wound up in 1980. Harlow District Council is the main administrative and planning authority and Essex County Council is the transport and highway authority. However, Harlow is on the county boundary next to Hertfordshire. This has made expansion and development complex.

Currently, the town centre of Harlow is being redeveloped in stages with a new "sustainable travel hub" as a gateway to the town[41].

Transport in Harlow

Harlow has an extensive road network and is relatively car dependent – for travel within the town car travel accounts for 59% of trips and overall 75% of journeys to work are by car or van. It has two railway stations with services to London, Cambridge and Stansted Airport (a major local employer), though these stations are on the northern edge of the town. It has a network of bus services and a bus station (currently being redeveloped to become part of the sustainable travel hub). As in Cambridge, buses are deregulated, meaning that bus companies manage route networks and fares. It also has an extensive network of cycle routes, built as part of the new town development; some 16% of journeys to work are on foot or bicycle.

There are plans to increase public transport use and active travel. A series of "Sustainable Transport Corridors" are being developed across the town; the first of these was under construction on our visit and has now been completed. These corridors, which are linked to the Gilston development (see below), include bus priority lanes, high quality bus stops and waiting areas, cycling and walking routes, improved road crossings and landscaping[42]. In addition, a bike hire scheme has been approved and is due to be launched in 2026.

Newhall

The Newhall development was created on private land (Soper Farm) by the landowner there. It is adjacent to the New Town and covers just over 100 hectares. It used design codes to reflect the original Sir Fredrick Gibberd/ Harlow masterplan but updated with more contemporary architecture. Built for around 6,000 residents/2,000 homes it has a neighbourhood centre with school, GP surgery, play areas, cycle routes and a street pattern to encourage walking/cycling rather than car use. 40% of the land is set aside to retain the green space[43].

As a landowner-led development and in order to maintain the overall coherence of the scheme, the landowners (who still own the site) and planners retained the right to sign off the design of individual schemes. This allowed individuality and variety within the different schemes to create a scheme with a diverse mix of developments over different build phases. The first development

41 https://discover-harlow-hub.yolasite.com/town-centre-regeneration/
42 https://www.essexhighways.org/harlow-sustainable-transport-corridors
43 https://newhallofficial.co.uk/

of 560 homes was completed in 2009 followed by further phases continuing to 2025. Much of the recent development has been named as “Base” and is being developed in phases by Countryside Properties[44]. Newhall has been applauded for its commitment to high architectural standards[45]. Newhall density is around 36-52 dwellings per hectare.

However, in transport terms, Newhall has not so far had good links. There is a spine road through the site but it is not yet a through road, though it is due to be completed as part of an Enterprise Zone next door. Once the spine road is completed, it is proposed that a new bus service will run through the heart of Newhall, connecting the residential area, Harlow Science Park, and the railway stations. This means that Newhall is very car dependent and the availability of car parking is a selling point.

Gilston

A major expansion of Harlow is planned at Gilston, north of the town and across the river. Gilston will have 10,000 homes in seven villages, of which six (8,500 homes) are being developed by “Places for People”, a social enterprise. The villages will have 660 hectares of public open space and will have at least 1,950 affordable homes. Its net density will be around 33 dwellings per hectare, excluding the large open space areas.

Gilston is part of a wider “garden town” plan for Harlow, with new development areas also designated in the west (Water Lane), the south (Latton Priory) and east of Harlow, totalling 16,000 homes in all[46].

A transport strategy for Gilston and the other extensions has been developed by Hertfordshire and Essex County Councils and the three district councils involved, Harlow, East Hertfordshire and Epping Forest. This has an ambitious target of 60% of all journeys within the new Garden Town Communities, and 50% of all journeys across Harlow, to be undertaken by sustainable modes[47]. The new developments including Gilston will be linked to Harlow through the sustainable transport corridors mentioned above. A new road crossing of the River Stort is being built during 2026 as part of this strategy.

Much of this is being funded by Homes England, which has committed £172m Housing Infrastructure Fund towards the corridors and other infrastructure. The new river crossing is being delivered by the Gilston developers and administered by Hertfordshire County Council on behalf of the local authorities[48].

In the longer term, an east-west rapid transit scheme, HERT, is being developed by Hertfordshire County Council to link Harlow and Gilston to other major settlements – Hertford, Hatfield, St Albans, Hemel Hempstead and Watford – and is intended to act as a spine for new housing developments[49].

Conclusions from Harlow

Harlow as a first-generation new town has faced challenges in development and expansion. It is now focused on a large expansion, especially the Gilston development to the north; the transport strategy for this expansion has ambitious mode share targets. Sustainable Transport Corridors, giving priority to buses and to active travel, are seen as a main route to achieving these targets.

A major challenge for Gilston and this strategy has been the need to work across local authority boundaries. However, the partnership between the five local authorities involved and with developers and other interests appears to have created a clear framework for developing the town, with funding from Homes England supporting the transport and other work.

Newhall as a development area has preceded the latest plans. It is an example of landowner-led development with long term commitment from the landowner to high quality design, architecture and community services, though it has not yet been linked to high quality public transport services.

44 https://www.countrysidehomes.com/developments/essex/base-newhall-harlow
45 https://www.tibbalds.co.uk/news/new-communities-how-is-harlows-newhall-holding-up
46 https://hggt.co.uk/about-us/
47 https://www.eppingforestdc.gov.uk/app/uploads/2024/02/EB1408-Harlow-and-Gilston-Garden-Town-Draft-Transport-Strategy.pdf
48 https://hggt.co.uk/2026/05/14/central-stort-crossing-works-to-begin/
49 https://www.hertfordshire.gov.uk/services/highways-roads-and-pavements/roadworks-and-road-closures/major-roadwork-projects/hert.aspx

Summary, comparisons and conclusions

Faced with a need to build more homes, it is tempting for any Government to support new housing of any sort, in any location. However, as noted already, this has led in many areas to a pattern of low-density development with limited or no shops and community services, limited or no public transport, and sometimes with no pavements. This leads to car dependence, where most journeys have to be made by car; those without access to cars suffer significant social exclusion and those with cars face increasing levels of congestion on road networks around these new developments. There are also wider impacts, including on people's health from reduced physical activity.

There is therefore an emerging consensus that urban extensions and New Towns should be based around high quality public transport and prioritise active travel. The New Towns Task Force report says: "The Taskforce's placemaking principles recommend new towns come with high quality public transport networks and connection to wider transport networks" (para 232).

Our visits found that there are barriers and challenges to this approach. One issue is **complexity in governance.** As already noted, the governance in Cambridge and Harlow is complex, with many different authorities with overlapping functions on planning and transport, compared with simpler governance arrangements in German and French cities and towns. Cambridge and Harlow have both developed partnerships and joint arrangements to address this issue, but the underlying issue remains. To address this, the New Towns Task Force proposes development corporations to "co-ordinate investment, develop expertise, assemble land and facilitate faster delivery" (para 17) – this model was used to develop earlier New Towns and also areas such as London Docklands and a development corporation has now been approved for Cambridge.

Future cycle lane at Northstowe (Danny Williams)

By contrast, in Freiburg the city council has a clear leadership role in site selection, masterplanning and having a special unit to own delivery of the masterplans as the developments are built. This has enabled Freiburg to have a simple and well-conceived central idea and sticking to it, with a tram running down a boulevard forming the spine of each development.

Financing and land value capture

This emerged as a key difference. Germany's 'urban development measure'; combined with its strict local plans system, provides a streamlined and codified route to establishing comparatively low existing use values for land bought in this way. German development corporation-style bodies can borrow without caps, and local authorities have a wide range of local taxes which can capture further development value.

How Germany achieves high land value capture in its 'Urban Development Measure' system

The German system succeeds because it distinguishes between two types of CPO. The first is a case-by-case process similar to the UK. The second is to designate special areas, such as the 'urban development measures' within which the case for CPO is pre-approved (like a Development Consent Order) and where different rules apply. This has several advantages:

First; landowners are disincentivised from dragging out CPO proceedings by 'freezing' its planning status in the valuation at the date when the public scheme becomes known. In the UK the planning potential valuation date is the date the land is actually entered, years in the future; the landowner doesn't know what the planning situation then might be so, fearing a bad deal, fights the CPO; and continues to try to add planning value to the land with applications.

Second, the 'urban development measure' in Germany allows the CPO price to specifically disregard the value added to the land by appearing in the local plan allocation. In the UK, judges have sometimes included the local plan allocation in the compensation value even where intended to enable the scheme; disregarding it requires forensic case by case evidence that the plan allocation wouldn't have 'happened anyway'.

Third, there is fairness between those whose land is acquired within the 'urban development measure' area and those whose land is not – they can be required to pay a development levy for the amount of value created by the plan allocation. In the UK, land that stays in private hands may have to pay S106 or CIL contributions; but is likely to leave its owner much better off than if they were compulsorily purchased.

Fourth, and importantly for human rights justification; land value uplift can only be used for scheme costs – profits outside this must be returned to the original landowners.

Fifth, transactions in the development area are subject to pre-emption rights; where the value of land is exceeded the sale can be blocked (or pre-empted), to prevent speculation increasing costs.

Sixth, even outside of special CPO areas, in Germany land can only become developable if allocated in the local development plan. In the UK, land can sometimes get planning permission outside it - where there hasn't been enough building; or, in the most recent NPPF; around rail stations. This creates more routes for landowners to claim they might have got planning permission otherwise.

While specific get-outs have been created in the UK, these are typically too limited to work: For example, if a new transport project unlocks land, the value it adds can be disregarded from the CPO price – but only if the purchase is within 5 years of the transport scheme opening; whereas such developments can take 30 or more years.

Density is also an underlying issue. We have noted that the Freiburg urban extensions are at high density (though low rise), whereas standard UK housing developments are much lower[50]. The Cambridge developments are higher than this standard but still in many cases lower than Freiburg's. Density matters because with lower density journey lengths tend to increase, leading to increased car use and less walking and cycling. It can also be more costly or difficult to provide public transport in lower density developments. One of the "placemaking principles" in the New Towns Task Force report is **"ambitious density"**:

"New towns should aim to be built at a density sufficient to enable residents to walk to local amenities, support public transport, unlock better social infrastructure, and create active and liveable neighbourhoods, with the government establishing clear minimum density thresholds…. Well-planned urban density allows more homes to be delivered within a compact footprint, creating more space for parks, shared gardens, and community facilities. It also enables more people to live closer to employment, services, and public transport, reducing reliance on private vehicles and associated household costs" (p71).

50 Greenfield developments in the UK average 28 dwellings per hectare – cited in https://www.theplanner.co.uk/2018/06/04/ loss-green-areas-increases-58-cpre-says

It has been shown that urban extensions in the UK can if built at higher density provide housing numbers with less land take and less car use. A study by Create Steets and Sustrans in Chippenham, Wiltshire, showed that 7500 homes could be built with reduced land take, increased public transport and active travel, and no extra public funding[51].

A main barrier to urban-edge density is lack of transport being in place ahead of time. Germany solves this by accepting a need for temporary transport subsidy for mass transit routes. The funding streams to do this do not exist in the UK, so neither dense development nor mass transit can rely on the other to justify the financial case for either.

Public transport

As we noted above, Freiburg's urban extensions are characterised by high density (but low rise) development served by high quality public transport in the form of trams. Critically, these have been installed at the start of development so are available as the first residents move in. The trams are at the centre of the extensions, forming a spine around which high density development is placed.

The provision of the tram lines in Freiburg is enabled by a number of factors:

- Funding: capital and funding is available from Federal and state governments for rail-based public transport investments. The process for tapping into this funding is fairly straightforward. The city's share comes from the uplift in land values from the Urban Development Measure designating the land for development. This reflects proposals in the New Towns Task Force for the use of new financing mechanisms so that "future rising land values, created by transport investment, could be better relied on to pay back costs" (para 244). Revenue funding is available both from higher government tiers and from local tax levers
- Planning approval: the process for approving new tram lines is also reasonably clear. As noted above, a single planning approval process by the relevant district council or regional government gives planning permission, and although there may be other requirements many of these are rolled into this approval process. Consultation with other authorities and with the public and environmental protection agencies also seems to be part of this process.

This means that in Freiburg the provision of public transport is fully integrated with the development of the urban extensions.

This is not unique to Freiburg, or to Germany. Other German cities have created urban extensions around public transport – two often cited are HafenCity in Hamburg and Kronsberg in Hanover[52].

France has also seen urban extensions around trams. A study tour undertaken at the same time as our visit to Freiburg looked at three areas in France, two in Greater Paris and the other in the city of Angers. All have seen major housing development enabled by tram lines. Local funding through an employers' payroll tax (the "Versement Mobilites") is used to finance such projects[53].

One major barrier to replicating this approach in the UK is cost. As the New Towns Task Force report observes, the UK has unusually high costs for urban rail mass transit schemes. One study found that tram routes in Britain cost more than twice as much as elsewhere, at £87m/mile average compared with £42m per mile average in Europe[54]. Utilities regulations (and the share of utility diversions paid by tram promoters) and other planning and technical requirements are said to drive unnecessary cost. The New Towns Task Force recommended that the government should review these cost drivers and "provide guidance on reducing costs for future schemes and new settlements" (para 230). The Government has now responded to this by setting up a "Mass Transit Task Force"[55] to review and tackle barriers to the delivery of mass transit schemes in the UK.

Whereas "mass transit" in Freiburg and other European cities has generally meant trams and light rail, in the UK it has also meant busways (sometimes known as Bus Rapid Transit or BRT). These are sometimes, as in Cambridge, guided busways, with concrete guideways; the Cambridge busway, as noted, is the longest in the world, but there are others in the UK – Luton-Dunstable, Leigh in Greater Manchester and shorter sections as part of larger bus projects. Other BRT systems do not have guided sections but have high quality vehicles and priority over other road traffic; the Glider in Belfast is sometimes cited as a successful example of such bus provision offering high quality public transport[56]. The task force will include bus schemes in its remit.

There is a UK debate about trams and busways. The trams offer certainty and reliability, and are a visible commitment for the future; they also have higher capacity than buses, which matters on main routes and

51 https://www.createstreets.com/steppingofftheroadtonowhere/ 2024
52 https://urbed.coop/sites/default/files/Case%20studies_1.pdf
53 https://www.createstreets.com/projects/towns-and-trams-what-britain-can-learn-from-frances-tram-led-housing-model/
54 https://www.britainremade.co.uk/backontrack
55 https://www.gov.uk/government/news/new-mass-transit-taskforce-to-reshape-the-future-of-transport-in-towns-and-cities
56 https://en.wikipedia.org/wiki/Glider_(Belfast)

at peak times. Busways offer flexibility – buses can use guideways or bus lanes for core routes but can then serve areas away from these routes without the need for interchange. They can also be cheaper in initial capital cost than trams– the final cost of the Cambridge scheme was £11m/mile in 2010, though the new busway to Cambourne is estimated to cost £17.6m - £23.5m/mile. New engineering approaches to trams being pioneered in Coventry ("Very Light Rail") are also predicted to bring the costs of trams down by 40-90% and speed up construction[57].

However, as the Treasury in the UK typically only funds capital costs of projects, this can result in neglect of whole life cost and cost-shifting to local authorities. The higher revenue cost in a bus project from employing more drivers and maintaining the road surface falls to the operator; whereas higher initial capital investment in higher-capacity trams and longer-lasting tram track moves this cost into the capital spend.

All types of mass transit projects in the UK face a much more complex approval process than in Germany or France. Approval is given via a "Transport and Works Act Order", for which promoters have to apply to the Government, which makes the decisions on them. The Government is now consulting on devolving TWAO approval powers for mass transit schemes to mayors. However, other approvals are also needed, and the Government also has to approve the detailed business case for each mass transit scheme, which is not the case in Germany or France.

Cambridge – unlike Freiburg - is also making use of the heavy rail network to serve its developments, with new stations and the East-West Rail line. The East-West Rail project is also being used as a development spine for new developments, including a new town at Tempsford and the expansion of Milton Keynes.

However, Cambridge's experience has shown that good public transport links from the surrounding areas to rail stations are also required. Another feature of Freiburg public transport is that bus services to surrounding areas are integrated with the trams. As noted, the UK bus network is deregulated, but several areas including Cambridgeshire are looking at using new legislation to move towards a franchised system; one argument advanced for this is that it would allow better planning and co-ordination of bus services to serve new developments.

In summary, Freiburg and Cambridge both show that it is possible to give new developments high quality public transport. However, the process for developing and getting approval and funding for high quality mass transit schemes to serve new housing developments is more complex in the UK than in Germany or France; regulatory and other factors add significantly to costs and implementation time compared with European provision. The New Towns Task Force has recognised this and made some proposals for change, some of which the Government is already acting on.

As the task force suggests, new funding mechanisms for public transport in new towns, using the uplift in land values from development, might also help the upfront funding of transport infrastructure. This "land value capture" has been used in the UK – for example business rate supplements to finance the Elizabeth Line in London – and an innovative approach was used to part-finance stations on the reopened Northumberland line, with landowners contributing a portion of the uplift in the value of their land[58].

In terms of public transport funding, especially for revenue funding, the UK has modal-specific national funds (examples are funding for Bus Service Improvement Plans and rail franchise subsidies or cross-subsidy within franchises, and there are other specific funds). These have different criteria for what services are worth subsidising, naturally leading local authorities to prioritise the mode with more money available (e.g. rail over bus).

Active travel, roads and parking

Another key aspect of our visits has been high levels of active travel – walking, wheeling and cycling. Both Freiburg and Cambridge have high levels of cycling and the urban extensions in both have built on this. Local services and facilities – for example retail and the community centre in Eddington – enable walking as well as cycling for more journeys. This has required high quality infrastructure and priority for active travel compared with other road traffic The designs for streets in the developments give priority to pedestrians and cyclists, with low speed limits (20 mph/30 kph) and on-street priority where appropriate (for example, the street by the school in Waterbeach is an active travel route, with car access at the rear).

However, our visits showed that promised active travel infrastructure in Cambridge has not always been delivered; for example part of a supposed active travel route in Northstowe has cars parked on it and some of the links between developments such as Waterbeach and the existing networks have been delayed. Audits of some developments have shown that in some cases active travel networks and plans that are overall of high quality are let down by details – poor quality or missing links,

57 https://www.coventry.gov.uk/coventry-light-rail/light-rail
58 https://www.e-rail.co.uk/; https://www.e-rail.co.uk/first-of-a-kind-groundbreaking-model-helps-to-fund-the-re-opening-of-uk-rail-line/

poor or no signing, poor design at key points etc[59]. By contrast, Freiburg demonstrated good attention to detail in making high quality active travel networks that function well. Clear design standards, properly implemented, seem to be the key here.

Another key element in the places visited was the level and design of parking. In Freiburg and in many of the UK developments visited, residents still have access to car parking, but it is not provided on the roads immediately outside houses. In some parts of the Freiburg developments parking is provided underground; in other parts, and in some of the Cambridge developments, it is provided nearby, but not next to the houses on the streets. As noted, in Vauban householders pay an additional fee for a parking space in a nearby multi-storey car park, and Dietenbach is adopting a similar approach.

This is unlike much new UK housing, which provides for a lot of on- and off-street parking – often augmented by a garage – for each house This contributes to the low density in many developments. In Germany too we noted the existence of federal minimum parking standards, which the mobility plans for the Freiburg developments had to address. However, the approaches in Freiburg and Cambridge offer an alternative to plentiful car parking and the land take from it. It should be noted that another response to the minimum parking standards, seen in Riesenfeld and in other German cities has been the building of underground car parking – a feature also found in the French study tour previously referenced.

We noted that in Freiburg car ownership and use in the new developments is comparatively low and active travel and public transport use is high. In the UK particularly, there is sometimes concern that even if public transport and active travel are provided, people won't use them and will carry on driving. This translates into high levels on on-site car parking and priority on roads and in developments for cars. Freiburg also has a large car club operation, franchised by the council, and this offers another alternative to household car ownership. By contrast, in the UK car clubs have had limited local or central government funding and in fact one of the largest providers, Zipcar, recently closed its UK operations[60].

In fact, the evidence is that where alternatives to car use are provided in new developments, people will use them. A 2019 survey found that in Trumpington Meadows 35% of residents cycle to work or study and 15% take the bus[61]. Examples from elsewhere include Kesgrave near Ipswich, where nearly 90% of students walk or cycle to school.

Conclusion

Our visits – both to Freiburg and to Cambridge and Harlow in the UK – show that it is possible to deliver new housing without relying on and providing for high levels of car use. As the New Towns Task Force has said, the new generation of new towns planned by the Government offer an opportunity to "create thriving communities which will have the supporting social and economic infrastructure and public services and amenities they require established from the outset. This includes access to green spaces and reliable transport links, built in line with leading placemaking standards"[62].

As the task force report says, the previous generation of UK New Towns did offer such opportunities. Our visits were designed to help inform the transport aspects of future New Towns and the Government's response to the transport recommendations in the Task Force report (see appendix).

Characteristics of the developments visited included:

- High quality public transport – trams in Freiburg (with bus links), and guided buses and new rail stations in Cambridge; critically in Freiburg the public transport was delivered at the start of the development
- A strong emphasis on active travel, with high quality route networks for cycling and for walking, and also plentiful cycle parking
- Shared transport services –bike share schemes, and car clubs in Freiburg.

Our visits showed that developments with these characteristics have required strong planning and determination – Freiburg had to come up with mobility plans to show their plans did not need to meet national minimum parking standards, and Cambridge has had challenges in funding, governance and national norms to face down in creating high quality developments.

Wider factors have also influenced what has been delivered, land ownership being key. Most of the housing we saw in Cambridge and Harlow has been delivered primarily by private developers, but in some cases with enlightened landlords with a long-term commitment (Cambridge University at Eddington, Soper Estates at Newhall).

An underlying element in the developments visited was their density. We have noted where available the density of the developments visited, in terms of dwellings per hectare. Density matters because if houses and services

59 For example, a site visit to part of Trumpington by Transport for New Homes highlighted blocked paths and requirement to cross car parks - see https://www.transportfornewhomes.org.uk/reports/building-car-dependency/

60 https://www.bbc.co.uk/news/articles/cp8zv1gr0z9o

61 https://cambridgeshireinsight.org.uk/wp-content/uploads/2019/07/Southern-Fringe-Survey-Report-FINAL.pdf

62 New Towns Task Force report, executive summary para 14

are spread out (as has been a feature of much new UK housing), journeys become longer and are less likely to be made on foot or bike.

The financial powers available to the masterplanner in Freiburg (in this case the council) were central to unlocking integrated transport and density. Through control of the financial design, the value uplift, and transport funding streams, Freiburg council was able to take integrated decisions about scale, capacity and timing. As UK authorities lack these powers, both they and developers are constrained by what is financially viable for them separately, which inevitably produces a less integrated result.

Community led funding and design, especially in Vauban, also helped to create high quality housing with residents in the lead. Greater use of bonds can capture social value and could be applied in new UK housing developments.

We have tried to highlight these and other issues in this report, to show the changes that may be needed to deliver high quality transport services and networks in New Towns and other large new housing developments. Simpler governance, clear planning systems, new funding and financing regimes (including devolved funding for public transport so that it can be provided in the early years), stronger master plans and design codes and opportunities for community and resident involvement along the way will all help deliver the vision in the New Towns Task Force report.

Appendix: transport recommendations in the New Towns Task Force report

Chapter 3: placemaking principles for New Towns:

7. Transport connectivity

Recommendation 10: New towns should connect people to skills, jobs, services and amenities. This should include high quality public transport, walking and cycling networks within each town and convenient connections into wider transport networks.

Effective transport within and beyond new towns is fundamental to unlocking their economic potential and enhancing the health and wellbeing of residents.[footnote 142] A bold transport vision that promotes a range of transport options and reduces car dependency is critical to ensuring the success of new towns. This should be aligned more broadly with national goals on sustainable travel, health and access to employment.

New towns also present an opportunity to secure wider investment in transport infrastructure across their wider region. Early delivery of high-quality public transport and safe walking and cycling networks can shape long-term travel behaviours, positively influencing transport choices from the outset, and improve the viability of ongoing investment. This approach not only reduces environmental impacts but also reinforces the role of new towns as drivers of inclusive economic and social growth.

To achieve the travel ambition, a long-term transport strategy should be integrated into the early stages of masterplanning, maximising existing infrastructure, and setting clear design standards for streets, parking, and freight logistics. This is consistent with the vision-and-validate approach introduced in the December 2024 update to the NPPF, and should be supported by robust Travel Plans to monitor and achieve travel objectives, as well as dedicated funding to maintain the town's transport vision.

Chapter 4: How to deliver new towns – Transport and utilities

232. Infrastructure delivery could prove a binding constraint on new town delivery. As set out in **Chapter 3**, essential infrastructure, including transport, utilities and social infrastructure is crucial for success. The Taskforce's placemaking principles recommend new towns come with high quality public transport networks and connection to wider transport networks. New town delivery bodies should therefore develop plans and strategies to future proof progressive upgrades of transport routes over time as demand develops.

233. Reforms currently underway by the government should provide an improved transport planning context for new towns delivery than has been available in recent years. This includes the ability for Mayoral Strategic Authorities to develop Spatial Development Strategies that can align housing locations with transport connections, including bus franchising, to ensure networks are strategically planned. However, the Taskforce encountered a range of particular issues related to transport and utilities through its engagement which are highlighted in this section.

Right-sizing infrastructure for new towns

234. A key constraint on housing delivery is the impact of developments on the road network. We have seen evidence that high-density, sustainable transport-focussed development is being held back by concerns that it will unacceptably impact the national strategic road network. Similar issues arise for highways

authorities across the country in terms of impact on junction demand.

Example: Brabazon, Bristol

YTL (UK) Developments Ltd has secured permission for 6,500 homes in a dense, mixed use development at the former Filton Airfield which prioritises public transport and active travel. As a strategic scale development within the urban area, transport impacts were a key consideration through the determination process. YTL has agreed a monitor and manage approach with SGC and National Highways that includes an agreed package of mitigation for the SRN junctions that will be required only in the event that modal shift does not transpire in manner envisaged. Further densification is therefore reliant on continued investment in public transport.

235. The revised NPPF sets out that new developments should be planned for under a 'vision-led' approach. This means taking action over time to provide the conditions for people in new developments to use public and active travel, rather than pre-emptively adding road networks. A key barrier to implementing this is assuring National Highways, in its role as steward of the strategic road network, that such plans are credible and having a mutually-agreed methodology for assuring against this as agreeing such assurance can take a significant amount of time.

236. Recommendation 36: The government should move to a standardised and updated route to assessing the impact of development on strategic roads to allow for progressive monitoring of the impact from new development over time. This would ensure the vision-led ambition can be met in practice. It would need to have the joint involvement of key partners such as the Department of Transport and Highways England. New town delivery bodies could also support this by future-proofing main corridors for progressive upgrades of transport routes over time as demand develops.

Regulatory cost barriers to urban mass transit

237. New towns will need to connect effectively to existing regional transport networks to access jobs. Various technologies could be relevant, including integrating existing rail lines within regional transport networks, and at the urban scale 'mass transit' such as tram / light rail and Bus Rapid Transit.

238. However, a range of reports and commentators[footnote 156] such as the National Infrastructure Commission[footnote 157] have observed that for urban rail mass transit schemes, the UK has unusually high costs. Britain Remade found British tram routes cost more than twice as much those in the rest of the world, at £87m per mile against a Europe average of £42m per mile.[footnote 158] Anecdotally, we have heard from Mayoral Strategic Authorities that delivery of such schemes has often been frustrated by specific utilities regulations and planning conditions which drive unnecessary cost. Emerging technologies such as the Coventry Very Light Rail now offer a fresh opportunity to revisit these constraints.

Example: Coventry Very Light Rail

Coventry City Council has co-developed an innovative tram system with the potential to reduce costs by 40-90% compared to existing technology. The new track system requires removing only the top 30cm of the existing road, compared to up to 1 meter for typical tram tracks, by using shallow ultra-high performance concrete. This avoids the need for replacement of all utilities under the road, many of which are often un-mapped, resulting in costly surprises; and avoids the need to reconstruct the whole road. The system also avoids the need for long closures – a short trial track in Coventry city centre was installed in just 8 weeks, compared to up to multiple years for traditional track (albeit on much longer distances).

239. Recommendation 37: The government should review the regulatory and legislative cost drivers for urban rail mass transit schemes and provide guidance on reducing costs for future schemes and new settlements. Identifying the right way forward will require detailed consideration with practitioners, Mayoral Strategic Authorities, and contractors who should be a central part of any review. The Competition and Market Authority's upcoming investigation into civil engineering costs in rail and road should also consider this issue.

240. The Taskforce would highlight that Network Rail has already identified savings of £156m over 5 years for heavy rail by streamlining standards and regulations.[footnote 159] A similar exercise for light rail and mass transit schemes should be undertaken to identify opportunities for cost reduction. This could include assessment of issues such as:

a The **lack of standardised national urban rail mass transit construction standards**, and resultant 'gold-plating' of schemes due to perceived project or legal risk, or use of excessive heavy rail standards.

b The **very high levels of utility replacement currently specified by guidance for light rail schemes**, and whether this could be changed in general, or to reflect technology advancements such as the Very Light Rail shallow tram track, which avoids the need to replace underlying utilities.

c The **need for multiple further planning permissions** even where a project has been approved with a Transport and Works Act Order.

d A **lack of 'intelligent investors' who can provide technical expertise alongside finance**, and whether the National Wealth Fund, in its role as project financer, could work with transport authorities to advise on scheme optimisation, as for example the Caisse des Depots does in France for tram schemes.

Region-wide funding mechanisms for public transport

241. Recommendation 38: The government should consider how new towns could support delivery of the commitment in the 10 Year Infrastructure Strategy to diversify revenue funding for local transport.

242. Having a wider regional public transport network to plug in to is vital to delivering sustainable new towns with access to jobs. New towns themselves would be unlikely to able to fund region-wide transport upgrades. Therefore, **the wider capability of Local Transport Authorities to serve a new town is vital**, at both local and mayoral strategic authority level. However, at present many UK city-regions have much less public transport reach than similar European cities, with only 40% of people able to reach city centres in 30 minutes compared to 67% in Europe;[footnote 160] while UK cities are also less accessible by road than their US counterparts.[footnote 161]

Example: Milton Keynes

Milton Keynes has ambitious growth aspirations, with large amounts of land allocated in the local plan. New mass transit services could unlock access to more employment for these new residents. However, the council has limited financial tools to capture the longer term land value increases and additional economic growth these services would generate, which would allow them to borrow against these. Tools such as parking fees and congestion charging, aren't strongly linked to the growth and land value transport schemes create.

Developer contributions through the planning system can capture some of the value of the planning permission for community benefit, but this is only for a single point in time – whereas the benefit of a transport project is felt over many years.

Other local rates and taxes do not allow for increased revenue from a project to be kept locally in the predictable way needed to borrow against them.

With existing tools limited, the mass transit project could currently require national funding.

243. Commentators have observed that the higher proportion of city regions with mass transit in European cities may be linked to the abilities of these places to fund schemes by capturing the increased economic growth they unlock,[footnote 162] without competing for national funds against priorities like defence or health. For example, Greater London was able to part-fund the 16 miles of the Elizabeth Line within its borders through levying a supplement on business rates for high-value premises, without a ballot, an option not available to other cities like Milton Keynes (see case below). Similarly, French local councils are able to charge a 'transport levy' on major employers, helping pay for services and new infrastructure while increasing the workforce available to those same companies.[footnote 163]

244. Having the **appropriate levers in place to profit from the wider economic benefits new transport creates** would mean future rising land values, created by transport investment, could be better relied upon to pay back costs, delivering a predictable means of long-term funding and also reducing the burden on the public purse.