

Meeting the vision of Ireland 2040

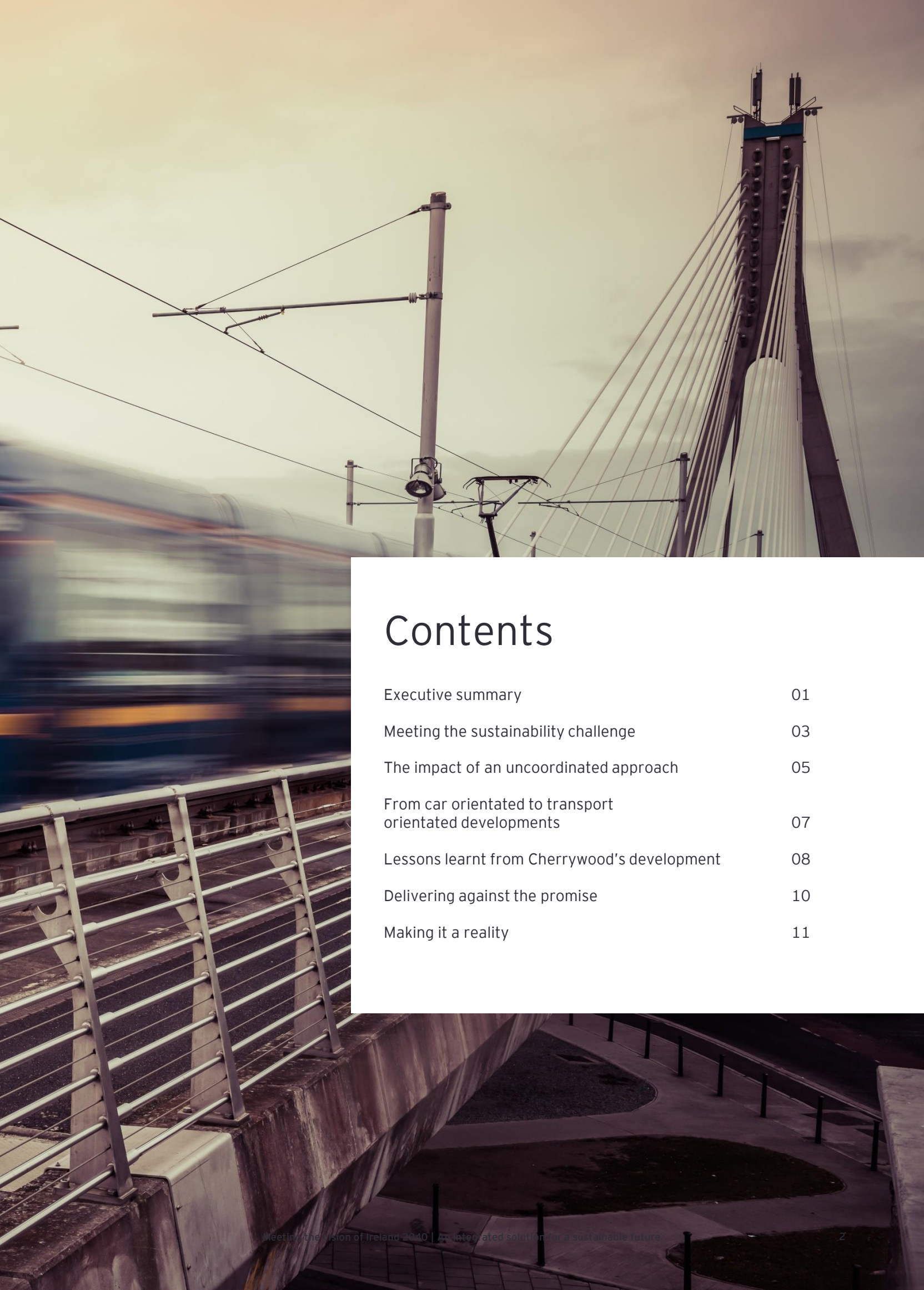
An integrated solution for a
sustainable future

June 2021



Building a better
working world





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Executive summary

Project Ireland 2040 sets out to tackle the challenges facing Ireland's infrastructure. It identifies a set of strategic outcomes including sustainable mobility, compact growth and the transition to a low carbon economy, among others. In this report we argue that many of these outcomes can be pursued through the integration of planning and delivery of public transport and housing, rather than seeing them as two separate challenges requiring separate solutions.

With the introduction of Project Ireland 2040, the Irish Government has significantly increased investment in infrastructure in a bid to reach the National Strategic Outcomes, including compact growth, sustainable mobility and transition to a low-carbon economy. Pre COVID-19 it was anticipated that by 2020 investment in infrastructure would have reached 4% of national income (ahead of the EU average of 2.9%). This investment includes 13 housing projects and five sustainable mobility projects¹.

Investment in both housing and public transport is much needed. House prices are now 32% higher than they were 10 years ago and, as we have previously reported, they are out of reach for most first-time buyers². However, investment to date has tended to focus on delivering housing units and has overlooked the associated transport needs. This has led to urban sprawl and increased emissions as commuters find themselves living further and further away from the workplace without opportunities to use public transport. For example, in Dublin only 14% of houses are constructed within walking distance of a train station³.

The missed opportunity of this is significant. People who live within one mile of a station are 1.7 times more likely to use sustainable transport to get to work and 2.2 times more likely to not own a car⁴. If Ireland is to be weaned off its dependence on cars, sustainable transport needs to be at the heart of all new major developments. When people are confident that they can reach jobs, schools, amenities and shops by walking, cycling or public transport then cars will become a luxury rather than a necessity. This not only saves the planet but also money, as car ownership is generally much more expensive than the alternatives.

¹ Source: Project Ireland 2040: Prospects Ireland's Pipeline of Major Infrastructure Projects

² Source: https://www.ey.com/en_ie/strategy-transactions/just-how-affordable-is-housing-for-ireland-s-first-time-buyers--

³ Source: Property Price Register, EY analysis

⁴ Source: National Census 2016

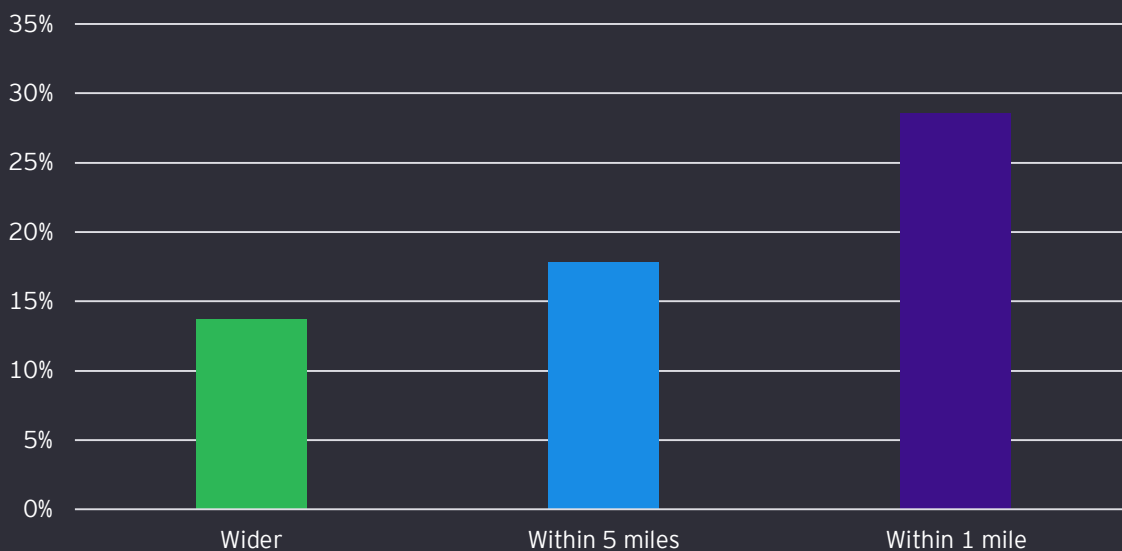


Figure 1: Share of households who do not own a car by proximity to station

Project Ireland 2040 sets out clear objectives including the delivery of compact urban growth and the transition to a low carbon economy. To successfully deliver against these objectives we argue that a collaborative approach is needed. Transport planners, urban planners and private developers all need to work together from the very start to ensure that the value of the public investment is maximised, and the right housing developments are completed and in the right locations. This will require a new way of thinking and a more collaborative approach than has been taken to date. As Ireland begins to take on some of the most ambitious investment projects in its history, it has a once-in-a-lifetime opportunity to develop a more sustainable future. This is an opportunity too good and too important to be missed.

Meeting the sustainability challenge



*Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.*⁵

This principle was first set out in 1987 and remains as valid today as it was then. The UN has established a total of 17 Sustainable Development Goals that challenge all countries to transform their economies and deliver this vision for their populations. The desire in Ireland to meet this challenge is reflected in Project Ireland 2040 whereby the Government has committed to infrastructure development, prioritising investment projects in areas such as housing and public transport.

The UN vision for a sustainable future shows the importance of seeing sustainability as much more than just about reducing greenhouse gases. It makes it clear that a much more all-encompassing view needs to be taken if we are to ensure that the environments we live in are suitable not just for our needs, but for our children's and their children's needs.

One of the UN sustainability goals is 'Develop sustainable cities and communities'⁶ and includes the target of by 2030 ensuring access for all to 'adequate, safe and affordable housing' as well as to 'safe, affordable and accessible transport systems'⁷. If more sustainable cities are to be developed in Ireland then a holistic approach is required which considers these as a single set of challenges and opportunities.

The increased focus on investment in public transport is welcomed and is a key component in delivering the future Ireland requires. Nevertheless, more still needs to be done. As reflected in figure 2, house prices have risen continuously from 2012 to 2020 and are now 63% higher, despite the pandemic. Greenhouse gases emissions have reduced by 4.5% between 2018 and 2019, however still remain above target and Ireland has the third-highest levels per person in the European Union⁸. Finally, the car remains the preferred mode of commuting for 66% of Irish households.

With more than €500m of government investment planned for sustainable urban developments alongside significantly over €1b of public transport investment, delivering value for money will be critical. Currently transport and housing are seen as different challenges, requiring different solutions. Each is led by a separate Department and Minister. If progress is to continue to be made, and indeed improved upon, then a new way of thinking is needed.

⁵ Source: Report on the World Commission on Environment and Development: Our common future

⁶ Source: <https://sdgs.un.org/goals>

⁷ Source: https://unstats.un.org/sdgs/indicators/Global%20Indicator%20Framework%20after%202020%20review_Eng.pdf

⁸ Source: [https://www.epa.ie/ghg/currentsituation/#:~:text=In%202019%2C%20Ireland's%20provisional%20GHG,data%20\(2009%2D2019\)](https://www.epa.ie/ghg/currentsituation/#:~:text=In%202019%2C%20Ireland's%20provisional%20GHG,data%20(2009%2D2019))

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A 63% rise in house prices since 2012 is unsustainable. New approaches will be needed to deliver affordable houses to all those struggling to get onto the property ladder

Annette Hughes, Director EY-DKM

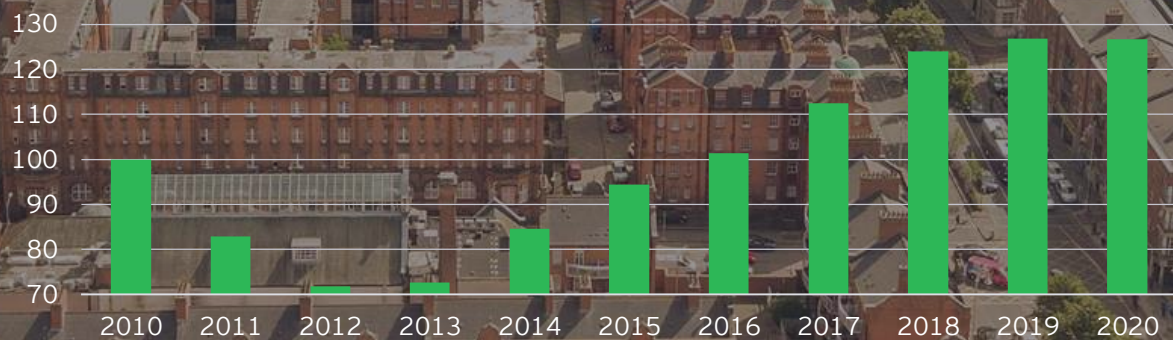


Figure 2: Residential Property Price Index (Base 2010=100), Source: CSO.ie

The impact of an uncoordinated approach

The focus over the last number of years has been to tackle the housing crisis and build new houses, regardless of the wider cost involved. This has led to an increase in the number of new houses completed, which is up 17% since 2010. However, transport and sustainability have been considered as an afterthought, if considered at all. Only 14.1% of new houses have been built within an easy walk of a railway station. The result has been unsustainable urban sprawl.

In 2019 21,107 new houses were built. This was up from 14,602 in 2010. In order to achieve this ever more land has been needed to be turned into housing developments, especially around Dublin. With little space in the centre of Dublin available, developments have increasingly sprung up in the wider Mid-Eastern Region. More than 20,000 new houses have been built in the Mid-East since 2012, 21% of the national total; however, the rise in house prices often means these houses can only be afforded by those on higher paid jobs in Dublin. These means that the price of an affordable house is a long commute.

Commutes in the greater Dublin area are the longest in Ireland, with an average commute of 34 minutes. In Wicklow, for instance, 17% of all commutes are more than one hour each way (compared to a national average of only 9%). These counties are not well connected by public transport to Dublin city centre and as a result the majority of these commutes (69%) are undertaken in private vehicles. This means people are having to trade off affordable housing for sustainable journeys. It also results in large sprawling housing developments with green spaces turned into car parking spaces, rather than compact urban developments focused around community spaces. This doesn't just hurt the environment; it hurts the most vulnerable in society. Many are forced into owning cars, despite not being able to really afford them, as they have no choice if they wish reach jobs, schools and shops.

Even when transport infrastructure is designed to facilitate new housing, this tends to happen in a disjointed fashion. Stations are built on the assumption that "if you build it, they will come". However, such an approach means that developments can take years to arrive, if they even arrive at all, as planning only begins once the infrastructure is in place. This leads to a wasted opportunity, as is the case of the Cherrywood development (see overleaf) which is still not finalised 10 years following the opening of the Luas Green line extension.

An aerial photograph of a dense urban area, likely Dublin, Ireland. The image shows a mix of traditional brick buildings and modern structures. A prominent church spire is visible in the center. The background features rolling hills under a cloudy sky. The text is overlaid on the left side of the image.

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Although housing developments have been increasing in the Mid-East region, the jobs have remained in Dublin. This means more commuters on the roads and more emissions in the air. Compact urban designs are needed to move commuters out of their cars and onto public transport.

Ben Warner, Assistant Director EY-DKM

From car orientated to transport orientated developments

It is possible to meet both the sustainability and housing challenges at the same time. To do that public transport needs to be at the very heart of new developments. These transport solutions need to be of the right scale and in the right place and delivered at the right time. The developments need to be aligned to public transport solutions and be ready to go when the transport is ready. In short, they need to work together.

Currently new housing developments are built around the car. That needs to change. This can be achieved by Transport-Orientated Developments (TOD). TOD is a form of high-density, sustainable urban development, which seeks to maximise land-use in the provision of housing, employment, public services and public spaces within close proximity to efficient and reliable public transport. These mixed-use developments are generally within a radius of 400 to 800 meters from a transport hub, which is considered to be an appropriate distance to reach on foot or bike.

When effectively developed, such developments are characterised by an integrated approach to land-use and transport planning, resulting in compact regeneration and the reduction in urban sprawl. By putting transport hubs at the heart of the community, car trips are converted into active trips such as walking or cycling. This results in better mobility and health, better social integration, reduced traffic congestion, more affordable housing and less climate-destroying emissions. Families also spend less time travelling meaning they have more time to do more productive things.

The removal of the car also means the removal of car parking spaces. The need for car parking spaces increases the overall environmental footprint of each car due to the need for both construction and maintenance. This is not just at the house, but also at the place of work where the car sits idle for most of the day. It is estimated that a single car parking spot produces emissions equivalent to around 95kgs of CO₂⁹. With the average family owning 1.4 cars, this can add up to a significant improvement in sustainability.

⁹ Source: <https://iopscience.iop.org/article/10.1088/1748-9326/5/3/034001/pdf>

Lessons learnt from Cherrywood's development

Cherrywood Planning Scheme is a prime example of a development that was planned around a key transport node. The Scheme, however, was unable to maximise the opportunities presented, and 10 years following the opening of the Luas Green Line extension, the development is still not finalised.

Following the opening of the Luas Green Line Extension in 2010, Cherrywood was designated as a SDZ, due to the area's strategic importance. The area is ideally located around four Luas stops as well as between the M50 and N11 transport corridors, with Dublin Airport just 35 minutes away by motorway and the city centre 40 minutes by tram. The primary land use of Cherrywood is to provide high-density employment, commercial uses, residential units and education. Upon completion, the Cherrywood scheme should comprise more than 7,700 new homes, six schools, three public parks and leisure facilities. It should deliver the perfect combination of work, rest and play.

However, the Cherrywood Planning Scheme wasn't even approved until 2014, four years after the Luas line opened. Construction of the first 1,269 apartments only began in 2018 with construction expected to take three years. Final completion of the project is now anticipated in 2025, a total of 15 years following the opening of the Green Line extension.

This delay represents a lost opportunity, which could have been avoided if the housing development had been planned alongside the Luas extension. Whilst housing developments take a long time to build, work could have begun before the Luas extension was completed. In particular, planning permission could have been sought whilst the work on the Luas was ongoing, meaning construction work could have begun as quickly as possible. 7,700 additional houses arriving 10 years sooner would have made a considerable impact on the Dublin housing crisis.



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Sustainable transport and housing have been seen as separate challenges for too long. They are not separate challenges, rather they are two sides of the same coin. An integrated approach is required if a sustainable future is to be achieved.

Stephen Prendiville, EY Ireland Head of Sustainability

Delivering against the promise

Such developments will not happen on their own, they need careful planning. They require transport and urban planners to work together all the way through the process, with both sides being willing to make compromises. This will require new ways of thinking and new types of developments. It will also require both sides to acknowledge that their success depends on the other party.

If we continue to develop housing sites which are only connected by roads, we will continue to need more roads and more cars. This leads to a wide range of negative impacts. Traffic congestion gets worse (TomTom now rates Dublin as the 17th most congested city in the world¹⁰); We lose biodiversity and the positive impacts of our green assets and we incur a significant carbon footprint from the construction and related materials. Whilst the move towards low emission vehicles will help reduce some of this impact, it does not reduce the need for tarmac for roads or parking spots.

We need to move away from the assumption that every house has a car and that every house needs a parking spot. Transport Orientated Designs offer the chance to do this. If we can achieve this, everyone gains from more attractive, affordable and accessible developments.

If we are to have any chance of unlocking the benefits of such designs, the planning and provision of public transport must coincide and support housing. Building housing and then hoping public transport can be installed afterwards is inefficient and risky. Building public transport in the absence of a cohesive alignment with land development goals is foolhardy.

Alignment between the stakeholders to these intertwined issues is critical. The current system of development levies needs to be considered if it is fit for purpose to deliver on the National Strategic Outcomes.

With the country about to take on some of the most ambitious transport projects in its history under the National Development Plan and Project Ireland 2040 it has a once-in-a-lifetime opportunity to deliver a new, more sustainable, integrated and efficient housing market for the people.

Ireland can simply not afford to miss this opportunity!

¹⁰ Source: https://www.tomtom.com/en_gb/traffic-index/ranking/

Making it a reality

While the concept of Transport Orientated Design has been around for a while now, history is littered with failed attempts to make this happen. If the ambition set out in Project Ireland 2040 is to be achieved, then housing developments need to change. They need to change not only how they are developed but the type of environment that they deliver.

In order to achieve this, we believe four key changes need to happen:

- 1. Work together:** As new transport plans are put in place, urban planners and commercial developers need to work together from an early point in the development cycle. This needs to be before route plans are finalised to ensure that the proposed routes are aligned to potential development sites as well as existing urban centres. They need to be considered as more than just a stakeholder to be considered, but rather as a joint partner on the journey.
- 2. Finance jointly:** Guaranteeing the delivery of the public transport solution will be key to success and efforts need to be made to help ensure it remains affordable. Developments close to high-quality public transport are likely to be more profitable than others (research on the 'Luas effect' suggesting that prices can be up to 8% higher when close to a Luas stop¹¹) and levies may play a role in aligning incentives and helping to ensure the project delivery. However, if levies are to be used, they need to be rethought. Current levies may have the impact of driving up house prices, making sites potentially unviable. This will need to change, with payment linked to actual financial gains and only charged when those gains are realised (i.e., the development is sold).
- 3. Bring work to where you live:** The focus has traditionally been to try and move people closer to work; however, in crowded city centres such as Dublin this is no longer practical. New developments need to combine opportunities to 'work, rest and play', with Cherrywood being an example of how this can be achieved. Linking such developments to transport hubs will prevent urban sprawl. If work, schools and amenities are within walking distance and public transport stands ready to transport into the City Centre, then a car should become an unnecessary expense.
- 4. Plan for the future:** To achieve the vision it is not sufficient to simply construct traditional developments along transport routes. The developments themselves need to be fundamentally different. They will need to be built around sustainable transport and attractive green spaces. This will allow for high density developments, with fewer car parking spaces, whilst still delivering attractive and vibrant communities.

¹¹ Source: https://ww1.daft.ie/blog/dublin-home-buyers-continue-to-pay-high-premium-for-convenience/?d_rd=1

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