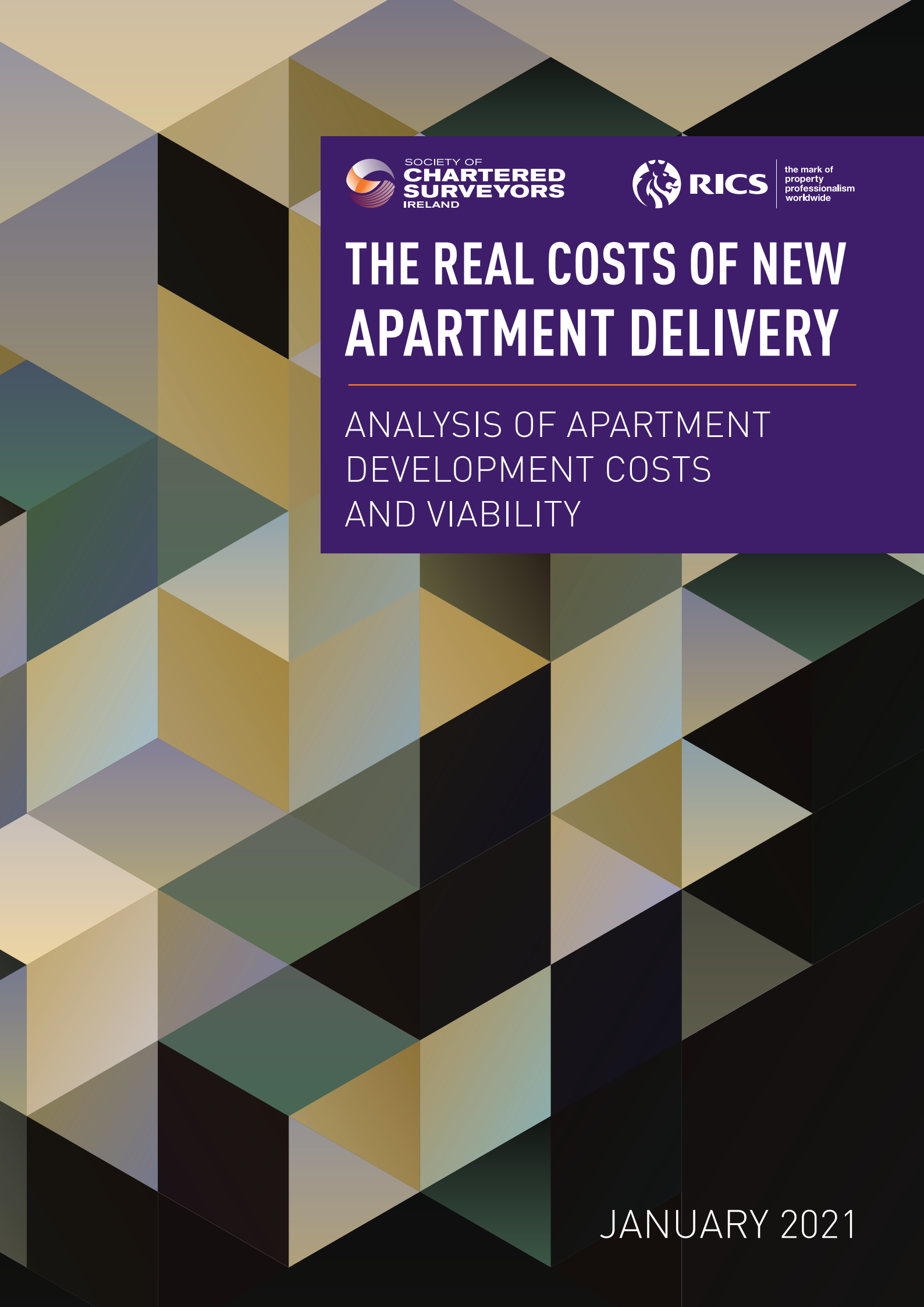
SOCIETY OF
CHARTERED
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IRELAND
RICS
the mark of
property
professionalism
worldwide
THE REAL COSTS OF NEW APARTMENT DELIVERY
ANALYSIS OF APARTMENT DEVELOPMENT COSTS AND VIABILITY
JANUARY 2021

ABOUT US

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ABOUT US

The Society of Chartered Surveyors Ireland (SCSI) is the independent professional body for Chartered Surveyors working and practising in Ireland. One of our key objectives is to provide impartial, independent and authoritative advice on key issues for consumers, business and policy makers, as well as advancing and maintaining standards for Chartered Surveyors working in the property, construction and land sectors. All aspects of the profession, from education through to qualification and the continuing maintenance of the highest professional standards are regulated and overseen through the partnership of the Society of Chartered Surveyors Ireland and Royal Institution of Chartered Surveyors, in the public interest.

ABOUT THE SCSI RESIDENTIAL CONSTRUCTION WORKING GROUP

The Society of Chartered Surveyors Ireland (SCSI) would like to acknowledge the commitment and efforts of the Working Group members who have prepared this Report.
This Working Group was originally established in 2017 to publish our first 'Real Cost of New Apartment Delivery' report. The Group involved in the preparation of our updated Report is comprised of industry experts from the following disciplines:

- Chartered Quantity Surveyors in private practice;
- Chartered Quantity Surveyors (contractors, private contractors and surveyors in the public sector);
- Chartered Planning and Development Surveyors;
- Chartered Residential and Valuation Surveyors; and,
- the SCSI Executive.

The SCSI would like to thank all those members who contributed construction cost data to inform our report.

CONTENTS

EXECUTIVE SUMMARY

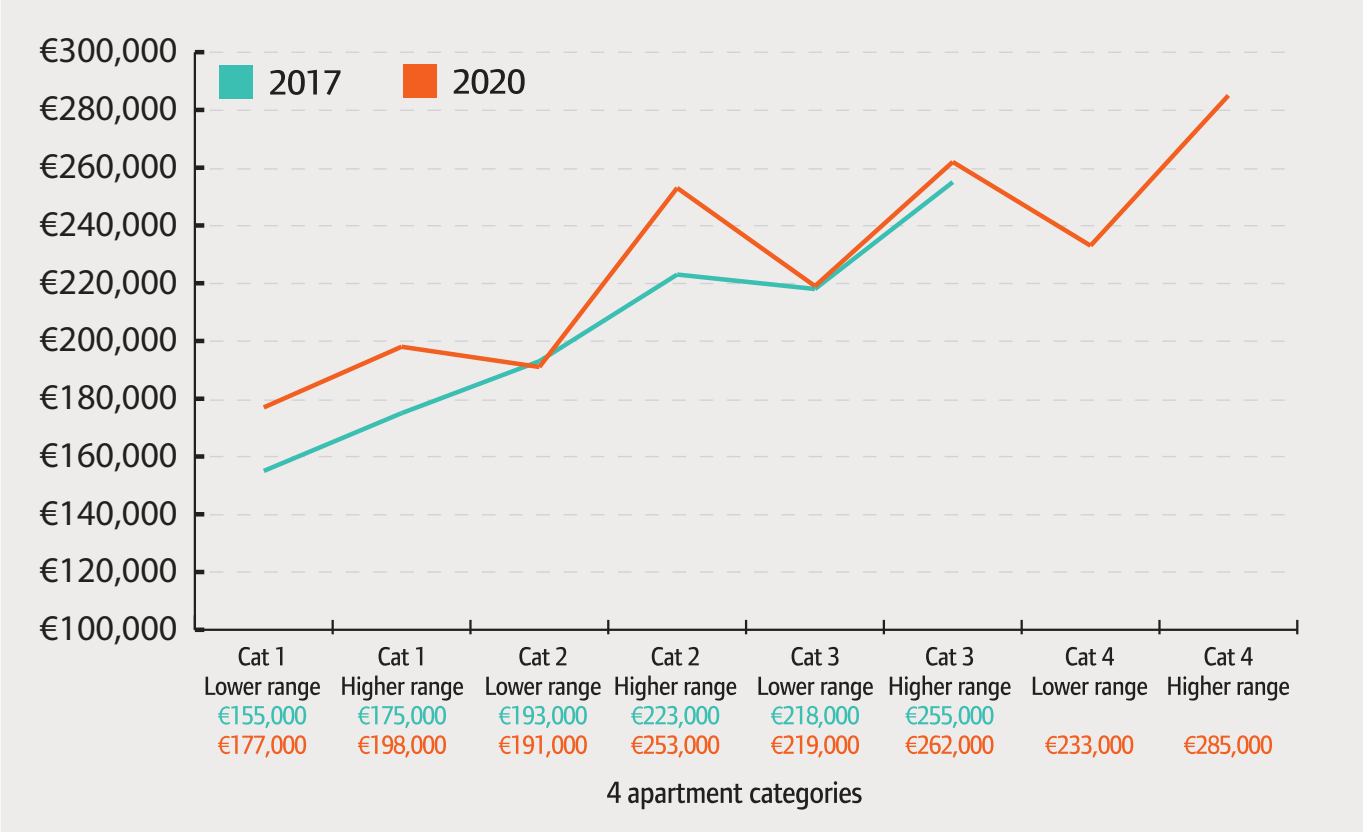
This report provides a cost breakdown of all input costs involved in the delivery of new, privately developed apartments to the market. It is an independent assessment of development costs and viability based on the current market for apartments in Dublin. This report is informed by costs data relating to 9,454 apartment units within Dublin (up from 2,146 units in our 2017 report). This equates to an average of 193 apartments per scheme, which ranged from the smallest scheme of 14 units to the largest of 628 units. The issues presented, and the recommendations highlighted, are very much relevant to other urban locations across Ireland. We examine the build-to-sell model and assess the viability of such schemes in the context of the average income earning couple looking to secure an apartment to purchase. We also examine the build-to-rent model, highlight the viability challenges within some complex types, and make recommendations to assist policy-makers, to ensure a more vibrant and affordable delivery of apartment units to the market. This report covers apartments delivered within Dublin. It is forecast that our population will grow by up to 600,000[1] in the next 10 years, which will place additional pressures on the market to produce a greater selection of unit types and sizes, not just for growing families, but also for those who wish to downsize to two- and one-bedroom apartments. A proportionate amount of private and publicly developed units is therefore required to ensure that our urban and suburban centres are developed in a way that caters for all demographics and family sizes, with varying income levels, in a co-ordinated and inclusive manner.

For our economy to remain in a healthy position, the housing delivery market must be in a sustainable and well-functioning state to ensure that we have sufficient accommodation for future needs.

The delivery of new units to the market has been playing catch-up since as far back as 2014/15, when the Society of Chartered Surveyors Ireland (SCSI) flagged to policymakers that the supply of housing to cater for current demand was well below what was needed.

1. CSO population projections.

Construction cost only (two-bedroom apartment, ex. VAT, including parking and external works).



The construction and associated delivery costs presented in our report are based on the delivery of two-bedroom apartments (91 sq. m. gross). In our analysis, the apartment units were categorised into four different apartment complex types, with a new addition since our 2017 report to now include an urban location medium-rise (nine to fifteen stories) development category. The costs data from 2020 also includes the build-to-rent model, which was not a feature of the 2017 'Real Cost of New Apartment Delivery' report due to the relatively new addition of this type of delivery model at the time.

The total construction costs (i.e., bricks and mortar) and the total development costs (i.e., bricks and mortar including site, levies, finance, infrastructure costs, VAT, etc.) are generally similar for a build-to-sell or a build-to-rent apartment scheme, except for the addition of private amenity space.

The construction costs (hard costs, i.e., bricks and mortar) of apartment schemes have increased generally within the past three years. There is a range of reasons as to why this has occurred, which includes general wage and tender price inflation (increased demand on construction services by clients). Further changes to nearly zero energy building (NZEB) regulations to increase the thermal performance of buildings is another factor in the increase in construction costs. However, the policy changes implemented in 2018 in relation to less onerous design regulations, which increased the maximum number of apartments per core, reduced the number of car parking spaces needed in certain locations (therefore reducing basement parking ratios), and also changed dual-aspect ratios, have helped to reduce the overall construction cost.

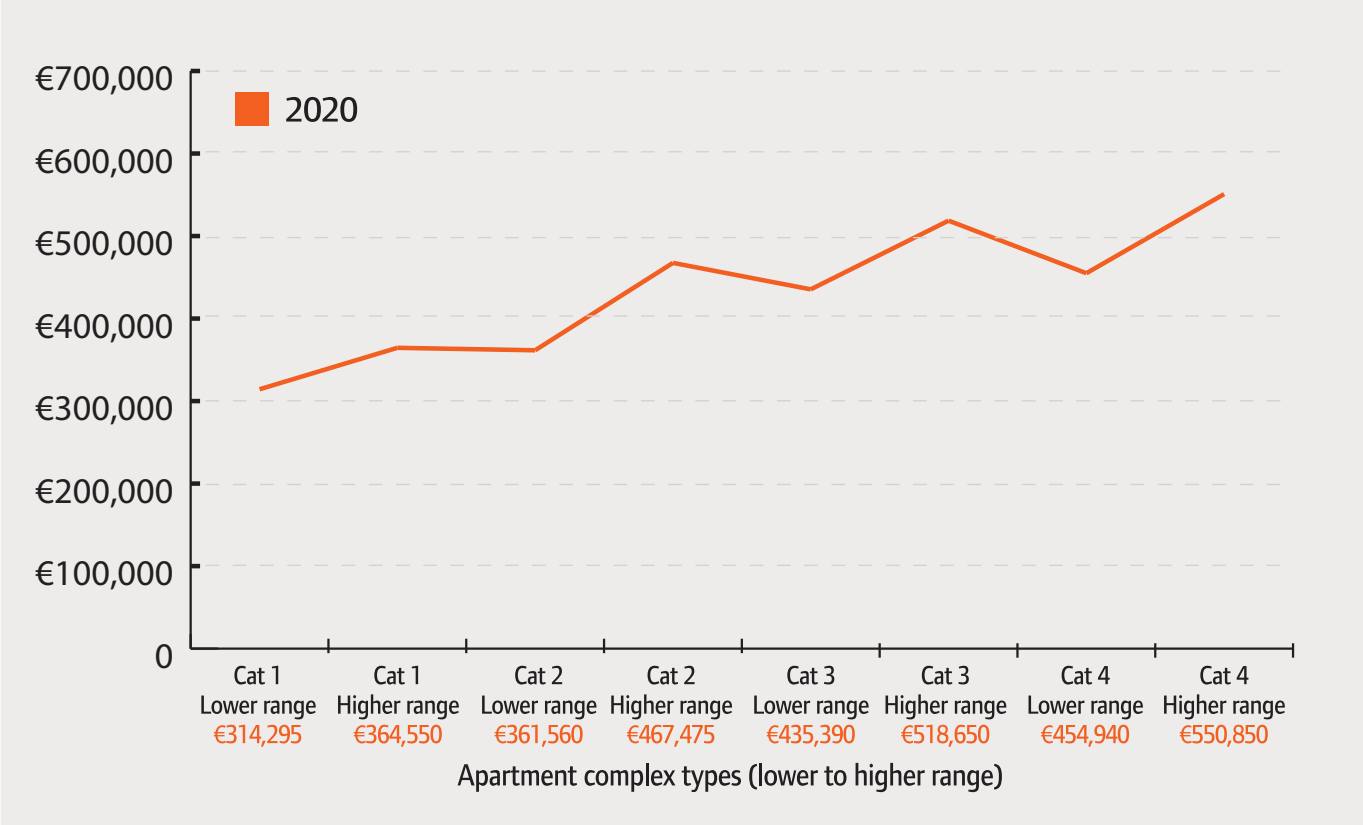
Our analysis shows that the costs in each element of each category have changed for different reasons since the 2017 report. It shows that the hard construction costs have generally increased in line with inflation, but the reduction in parking requirements compensates for that increase in affected categories. In Category 1, where there is no basement parking the hard costs show a 13-15% increase,

REAL COST OF NEW APARTMENT DELIVERY

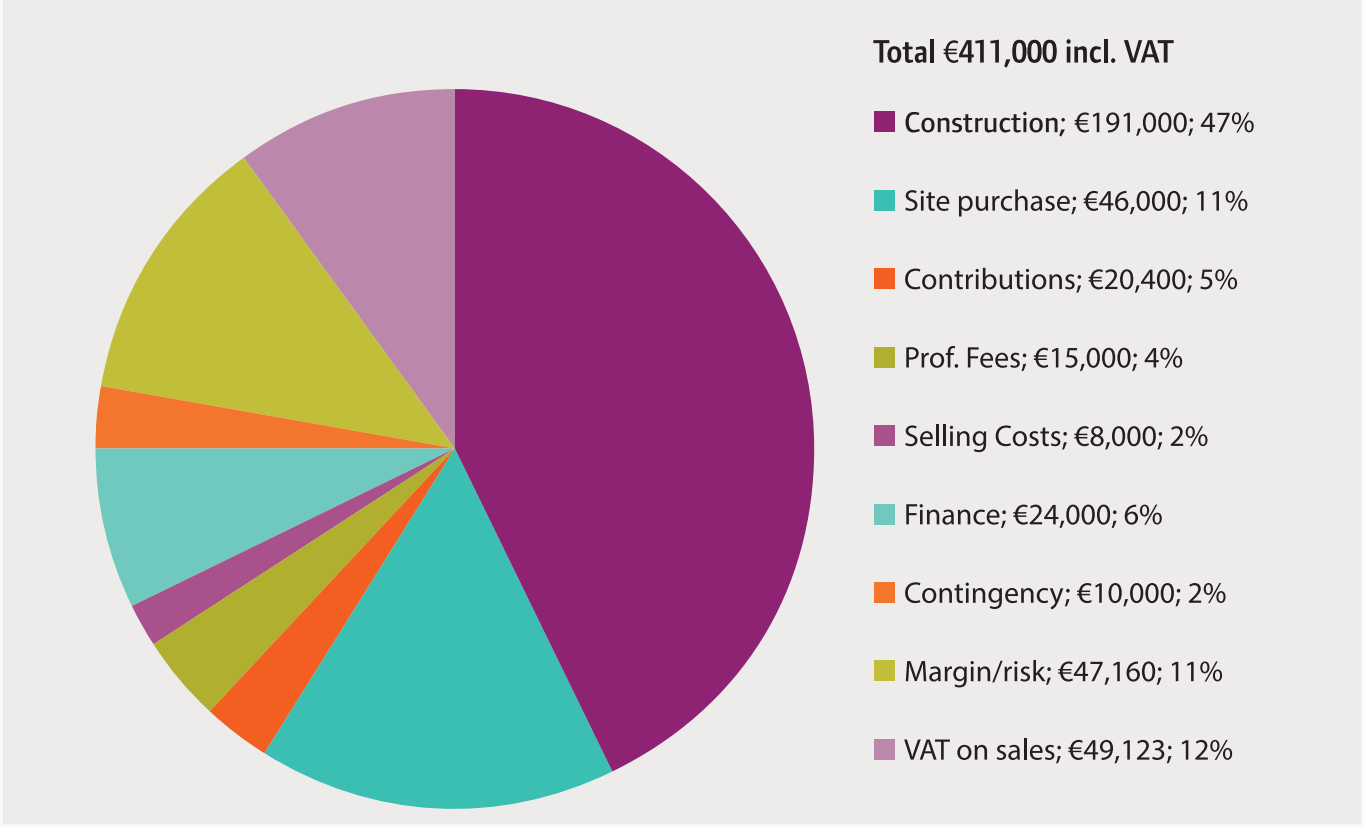
Apartment categories analysed for build to sell and build to rent.

Category 1 Suburban (Low rise)	Category 2 Suburban (Medium rise)	Category 3 Urban (Medium rise 5-8st.)	Category 4 Urban (Medium rise 9-15st.)
			
This type of apartment scheme is generally incorporated into new housing schemes to provide the required planning density. Blocks are typically three storeys high. They are similar in appearance to housing and are built using simple, traditional methods. Surface car parking is generally provided as opposed to basement parking.	This type of apartment scheme is generally three to six storeys high and forms a separate scheme of apartments. Such blocks have complex structures due to their height, and have more expensive facades. Parking is generally a mix of partial basement (undercroft) with some surface spaces.	This type of apartment scheme is generally five to eight storeys high and forms a separate scheme of apartments. These blocks are located in urban locations and have higher-specification facades, and more complicated mechanical and electrical systems. Parking is normally a full basement solution.	This type of apartment scheme is generally nine to fifteen storeys high and has similar features to Category 3. The construction is typically a precast or in situ concrete-framed structure with concrete stair/lift cores. The layouts and finishes internally are similar to Category 3. The external walls tend to be more expensive as they involve unitised facades, e.g., panelised brick, glazing, precast panels, etc., as traditional brick and hand-laid elements are not as efficient/practical in these taller buildings.
Location	**Location**	**Location**	**Location**
Areas similar to Ballyogan Road, Leopardstown	Areas similar to Sandyford Industrial Estate	Areas similar to north Dublin Docklands (non-waterfront) type locations	Areas similar to north Dublin Docklands (non-waterfront) type locations

Total development costs (hard and soft costs, i.e., bricks and mortar, including land, finance, levies, etc.), ex. VAT.



Percentage breakdown of the total development costs for a two-bedroom apartment (Category 2 – lower-range, 5-8 st.), incl. VAT.



REAL COST OF NEW APARTMENT DELIVERY

Viability of a two-bedroom apartment (build to sell), ex. VAT, including siteworks and parking.

Category 1
Suburban
(Low rise)

€1,950 - €2,175/m²
€181 - €202/ft²

Cost range per unit
lower - higher

Category 2
Suburban
(Medium rise)

€2,098 - €2,785/m²
€195 - €259/ft²

Cost range per unit
lower - higher

Category 3
Urban
(Medium rise 5-8st.)

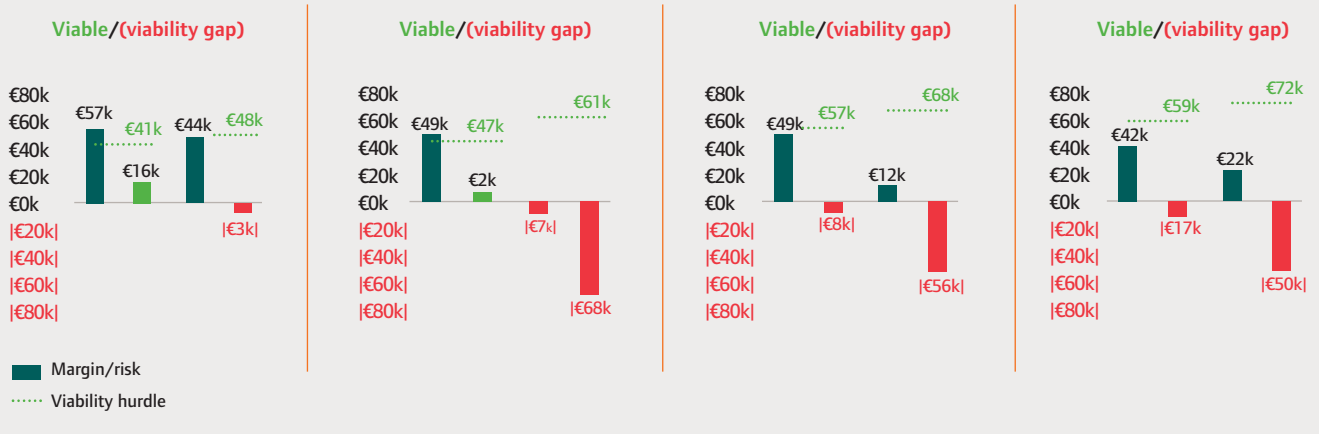
€2,408 - €2,884/m²
€224 - €268/ft²

Cost range per unit
lower - higher

Category 4
Urban
(Medium rise 9-15st.)

€2,558 - €3,137+/m²
€238 - €291/ft²

Cost range per unit
lower - higher



whereas in Categories 2 and 3, the hard costs are static (0-1%) in the lower range, but up (3-14%) in the higher range. The reduction in parking ratios is clear and the calculation is straightforward.

The increase at the higher end of the range is based on the data received and is therefore a combination of specification and different schemes being constructed compared to 2017.

The site locations have been updated in this report to reflect the general location of the project data received, and are therefore not a like-for-like comparison with the 'Real Cost of New Apartment Delivery' report from 2017:

- there is more commentary on land values within this report;
- development contributions have all shown a significant increase (18% to 42%) – the four local authorities in Dublin all generally increase their contribution rates in line with tender price inflation;
- other fees for utility companies would be included within this and they have also increased; and,
- professional fees are based on a percentage of the construction costs and therefore track those. Our updated report uses a static 8% across each category, whereas the 2017 report used a range of 8-10% across the three categories. This was reduced in this report as the average scheme size is now much larger (193 units on average per scheme) and the schemes in Categories 2-4 are much larger schemes.

Finance has once again been included on a blended rate of 9%, similar to 2017, albeit that schemes vary a lot depending on the make-up of the funding solution. The figures show a reduction as the base costs are lower.

Viability of a two-bedroom apartment – build to sell vs build to rent.

Category 2 Suburban (Medium rise)

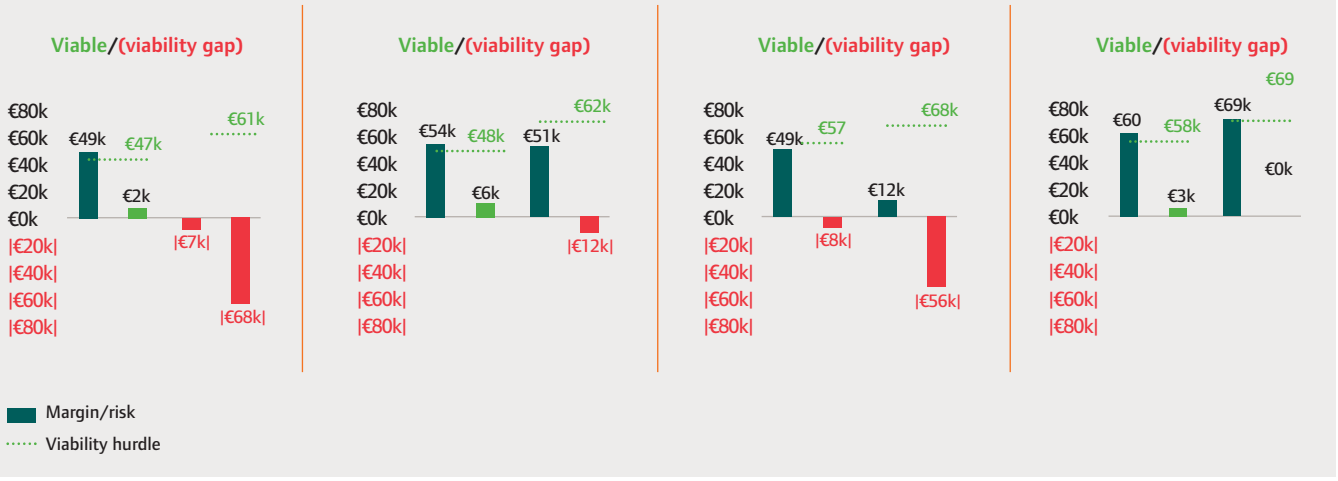
Build to sell Example

Build to rent Example

Category 3 Urban (Medium rise 5-8st.)

Build to sell Example

Build to rent Example



Build to sell

In relation to the viability of build-to-sell apartments, Categories 1 and 2 (lower range) are viable (i.e., sales prices of apartment units exceed development costs). However, in our analysis, Category 2 suburban (higher range) apartments and Category 3 and 4 urban (lower and higher range) apartments do not meet the viability criteria based on the average income earned by a couple working in Dublin.

Therefore, to ensure the provision of such apartments, one of two things must change: the current price of the unit must increase; or, the total delivery cost must decrease.

Similar to our 'Real Cost of New Apartment Delivery' report in 2017, we analysed the affordability matrix for those buying an apartment.

In 2020, the least expensive type of apartment to deliver (suburban low rise at the lower range) requires a (combined) gross salary of at least €97,500 per annum, provided that the purchaser (when taking first-time buyers as an example) has a 10% deposit.

Some 20% of all households have earnings over €80,000, with just 14% earning more than €100,000;[2] therefore, coupled with the macroprudential rules policy, the scope for sale price increases, to match or exceed this imbalance is challenged.

New apartment delivery models are therefore required to ensure that new apartment construction continues in a sustainable manner and, where opportunities present, that overall delivery costs remain in focus to improve affordability and viability.

From our analysis of the average income earning couple (€44,000 annual salary each), the suburban (Category 1, lower range) apartment is viable for this home purchaser.

2. Central Statistics Office.

Build to rent

The construction cost (i.e., bricks and mortar) for the apartment itself under the build-to-sell and build-to-rent models is similar. The build-to-rent model is valued as an investment, similar to an office block, where the rent, less operating costs, is divided by the investment yield to a gross valuation before purchaser's costs are deducted to provide a comparable net development value.

For the build-to-rent analysis, monthly rents of between €1,850 and €2,300 (Category 2), and €2,200 and €2,600 (Category 3) were used. Using a yield of 4%, this shows the net development value at between €374,000 and €466,000 (Category 2), and €445,000 and €526,000 (Category 3) (figures rounded). The build-to-rent model achieves successful viability in Category 2 and Category 3 where a direct comparison was carried out.

Solutions for the apartment delivery market

Due to the complex nature, prolonged delivery times and more complex structure in building apartments, it can be significantly more expensive when compared with delivering houses. Our report looks at a number of options to ensure that the delivery of apartments continues in our urban and suburban centres to cater for current and future demand.

Cost rental

A wider roll-out of cost rental is a recent positive announcement by the Department of Housing, Local Government and Heritage. Cost rental can play a role in delivering apartments to the market for occupiers who do not meet either social housing criteria, or mortgage lending criteria to purchase.

While cost rental can be subsidised by the State in relation to site costs, longer term and cheaper financing, early indications are that the model can serve a proportion of overall housing needs. Cost rental provides rental units to qualifying tenants at the cost of delivering the units to the market. The rent is generally reviewed every three to four years and linked to an acceptable inflationary index. The rent can be up to 50-60% cheaper than market rent in some cases, depending on the location and densities of the development.

Cost rental is not a single solution to the delivery of new units to the average income earning family, but it is, rather, another development model to assist with the delivery of more units to the market.

Land Development Agency

Land values are heavily influenced by location and the prices paid for land can impact the overall delivery costs of apartments to the market. The latest data from our annual commercial property surveys suggest that development land value growth in Dublin is relatively static.

The utilisation of compulsory purchase order (CPO) by the Land Development Agency will be an important tool to manage State land effectively.

The roll-out of a comprehensive and co-ordinated land utilisation plan is essential to ensure that housing is delivered to areas of most need at a price that meets the needs of the general hinterland.

Partnerships between private and public-led development are most desirable, to ensure that the expertise available within the private sector can deliver units on State lands at affordable rates.

Shared equity scheme

For some in society, the cost of purchasing a home is well within reach; for others, it is very difficult to meet the requirements of the mortgage lending criteria. A recent announcement by the Government of the introduction of a shared equity scheme is a positive move to assist prospective homeowners who otherwise might find it difficult to obtain a mortgage and get onto the property ladder.

The existence of a shared equity scheme is not a remedy for the housing market. Initiatives to reduce the overall cost of delivering new units to the market should continue to ensure a sustainable housing delivery model.

The development of such a scheme should be considered in detail, ensuring that it serves as a viable solution for buyers, while avoiding house price inflation. It is imperative, therefore, that the prospects of such a scheme are well considered and appropriate thresholds applied so that it is targeted to areas of greater need.

The availability of a shared equity scheme could assist home buyers with purchasing property and owner occupation.

For the apartment sector, a more generous shared equity scheme would support the need for more apartment construction and more compact growth. Given the expensive nature of building apartments, consideration could be given to a longer-term payback of the equity loan for apartment owner-occupier buyers.

Innovation in construction

Innovation in construction has the potential to reduce the expensive nature of apartment building. Construction costs account for 47%[3] of the overall delivery costs of apartments. Driving efficiencies within the construction process could deliver cost savings.

There have been many reports on the construction industry and its need to innovate.

However, there are many reasons why it has not kept pace with its industrial colleagues. See the World Economic Forum's report, 'Shaping the Future of Construction' (May 2016), or the UK Government's 'Modernise or Die' report (Farmer, 2018), which highlight various reasons, including a fragmented market, lack of continuous projects where learnings are utilised, an adversarial commercial model, and the lack of research and development resources available.

The cost of construction is driven primarily by labour and materials, with additional costs from increased building or energy standards. Innovation is key but there are other pressures continually pushing up the cost. One such, which is a pressing matter in Ireland, is our lack of resources, particularly on large projects.

The construction sector in general has embraced mechanisation and off-site fabrication to a degree. The sector recognises that more can be done to intensify the use of more 'smart' technology to help speed up the construction process.

Plans are underway through the Department of Public Expenditure and Reform and the Construction Sector Group to foster an environment where technology is facilitated to grow the construction sector and help to increase the delivery of new units.

Satisfactory Government funding may be required, however, to help establish such an initiative so that a tech sector can germinate and ultimately become an export sector once firmly established.

Help to Buy Scheme

Continued support of the Help to Buy (HTB) Scheme to assist first-time buyers is important, and should remain in place. However, the SCSI calls for a longer-term strategy to be published with actual HTB targets so that more comfort and commitment regarding the lifetime of the Scheme is clear to both consumers and to developers when planning for new housing schemes.

Supply and transactional data for development land

Supply – The issue of perceived land hoarding forms part of regular debate in the sector generally, and by other commentators on the market. Any legislation or regulations to implement a time limit bar on development land that has received planning consent, and to ensure that the land must be built upon within a certain period, should be approached with caution and well considered to ensure that realistic market influences and delays are captured. Delays to the construction of new units can be for a multitude of reasons, such as redesign, delayed infrastructural delivery, regulatory amendments, market shocks, etc., and these must be factored in any policy intervention to avoid any unintended consequences of delaying or postponing construction projects further.

Transactional data – Land prices are a significant variant due to many factors such as location, land type, contamination within sites, and so on. However, at times, bidders can pay in excess of the residual value of land in the hope and expectation that the land value may rise. Having access to detailed transactional data, similar to the Property Price Register, will ultimately assist policymakers when it comes to making important decisions impacting housing supply.

Finance

For the delivery of apartments to be a success, sufficient levels of funding are required by lenders to meet the financial capacity of developers; otherwise, plans to develop a site may be delayed or postponed. The construction of apartments is expensive due to the larger structural elements required, and it is also important to note that apartments can only be sold or rented when the entire complex is completed, thereby limiting the option to sell or rent units to fund the completion of others. This has a compounding impact on the overall cost of finance.

3. Category 2: lower-range apartment type.

INTRODUCTION

New housing delivery has overcome many challenges in the recent past, yet many challenges still lie ahead, which require further thought and consideration as we enter a new decade. Ten years on from the height of Ireland's economic woes, apartment planning permissions are on the rise, and for the first time more apartments are receiving permissions compared with housing schemes. The progress made in relation to new apartment delivery has been because of the build-to-rent sector and a longer-term strategy is required to ensure that the future pipeline of apartment delivery meets the needs of all tenure types.

The availability of reliable data is important for any economy to ensure that the right policy decisions are being made. The Society of Chartered Surveyors Ireland (SCSI) is concerned that real-time, reliable data is proving difficult to obtain within the construction and home delivery sector.

The continued debate and confusion over the costs of new home delivery from public sector-led construction compared with private-led construction is a concerning discussion and one that needs particular focus to ensure that any significant delivery of social and affordable housing is well equipped for success.

Over recent years improvements have been made, with the development of the price registers by the Central Statistics Office as one example, but transactional evidence, particularly in relation to development land, is an area which, if developed, could greatly assist policymakers. The SCSI continues to play its part in relation to bringing new, evidence-based data to the market by publishing its updated 'Real Cost of New House Delivery' report in 2020, which updates a previous 2016 report. Similarly, this report highlights the increasing need for more data to be provided on new home delivery, both public housing costs and private sector costs.

The National Development Plan and associated regional plans call for more compact growth and therefore there will be a greater focus on new apartment delivery to ensure that it meets the needs of a growing population, and also meets the needs of growing and expanding families.

Apartment living rates in Ireland are low in comparison to other EU countries. However, there are signs that this will improve into the future. A report from the Office of the Planning Regulator published in 2020 reported that apartments now account for over 50% of total planning permissions sought countrywide. This is evidenced by the latest Central Statistics Office figures, which report that approximately 20,000[4] apartment units were granted planning permission up to Q3 2020. This compares with circa 10,000[5] new, speculatively built housing receiving planning permission in 2020. Given the move within Government policy for the delivery of more compact growth, it is now more important than ever to ensure that there is a sustainable apartment delivery market.

4. Excluding Q4 2020, as unavailable at the time.
5. Excluding Q4 2020, as unavailable at the time.

APPROACH AND METHODOLOGY

The SCSI established an expert group of various surveyor types to collate and analyse data to inform this report. These surveyors have expert knowledge in delivery costs, and site and apartment values.

Detailed construction cost information was collected from Chartered Surveyors on a strictly confidential basis during 2020. Construction cost data was received, reviewed and analysed for 9,454 apartments, all in Dublin. While the financial and narrative information was provided, no project names or other identifying information is reported.

In relation to the prices currently being paid for development land and apartments, our Chartered Valuation Surveyors and Residential Agents provided their expertise, and the information they provided is included within our reported figures.

This report covers construction costs for a 78.5 square metre (sq. m.) net internal floor area (i.e., useable area), which equals 91 sq. m. gross floor area (i.e., area including common areas), two-bedroom apartment in each of the four categories (as defined on page 14).

The minimum size for a two-bedroom apartment is 73 sq. m. (see 'Sustainable Urban Housing: Design Standards for New Apartments', published in December 2015). On build-to-sell apartment schemes over 100 units, the majority of apartments have to be 10% larger to comply with the Design Guidelines from the Department of Housing, Local Government and Heritage.

Unless the apartment is open plan, designers find it very difficult to fit the various rooms and ancillary spaces into the minimum 73 sq. m.

This is mainly due to other minimum standards (e.g., bedroom dimensions), dual aspect (two different views) and other adjacency requirements. The 78.5 sq. m. used is based on our members' experience of schemes being designed to the current design regulations.

Categories of apartments covered in this report

Apartments are more complicated in their design and construction than housing and there is a large variance in the type and size of apartment schemes being developed. For this reason, the apartment data was categorised into four main categories that exist in the marketplace. To address the variance of costs provided, the four categories were analysed for a lower-range cost specification and a higher-range cost specification apartment.

Category 1: Suburban (low rise)

The suburban low-rise type of apartment scheme is generally incorporated into new housing schemes to provide the required planning density. The apartment blocks are typically three storeys in height. The physical structure and specification for this apartment type is very similar to housing. For example, they are traditionally load-bearing construction with standard internal finishes. The external walls will be traditional cavity blockwork with largely plastered walls and elements of brickwork, with steel balconies fixed externally. The windows are generally PVC. Allowances for internal fittings and equipment will be at the lower end of the cost scale, compared to the other three categories. The mechanical system will be domestic grade and self contained (e.g., individual gas boiler), rather than centralised. Car parking is generally provided at surface level as opposed to basement parking. The external works are largely green open areas with limited landscaping and tarmac finish to car spaces.

Category 2: Suburban (medium rise)

The suburban medium-rise type of apartment scheme is generally three to six storeys in height and comprised within specific scheme apartments. The construction method comprises a concrete framed structure with concrete lift/stair cores and elements of blockwork. The layouts and finishes internally are similar to Category 1 but may have a higher specification depending on the location, target market and potential sales price. The external walls will be more expensive to construct and normally include a high percentage of brick or precast finishes with render to rear facing or internal facades. The balconies may be recessed or larger steel types. The glazing specification may be higher (e.g., Aluclad) and may incorporate larger elements of glazing to the lift/stair cores or set-back floors. The mechanical installation (i.e., heating and plumbing) may be centralised and can incorporate more sustainable features. Parking is generally a mix of partial basement/ undercroft with some surface spaces. The external works feature hard landscaping (e.g., paving, stone) and higher specification courtyards.

Category 3: Urban (medium rise, 5-8 storey)

The urban medium-rise type of apartment scheme is generally five to eight storeys and comprised within a specific scheme of apartments.

The construction is generally a concrete framed structure with concrete stair/lift cores with elements of blockwork.

The layouts and finishes internally are similar to Category 2, but it may have a higher specification depending on the location, target market and potential sales price.

The external walls will be more expensive to construct and more akin to a commercial-type façade, with elements of stone, precast panels or rainscreen, with larger expanses of curtain walling and screens to recessed balconies with glazed balustrades.

The mechanical installation will most likely be centralised and may incorporate more sustainable features. If the building is open plan or higher than 30 metres, it may also have a fire sprinkler system installed. Parking is generally a full basement under the building footprint. The external works will feature more hard landscaping (e.g., paving, stone, etc.) throughout, with more public thoroughfares.

Category 4: Urban (medium rise, 9-15 storey)

This type of apartment scheme is generally nine to fifteen storeys and has similar features to Category 3. The construction is typically a precast or in situ concrete-framed structure with concrete stair/lift cores. The layouts and finishes internally are similar to Category 3. The external walls tend to be more expensive as they involve unitised facades, e.g., panelised brick, glazing, precast panels, as traditional brick and hand-laid elements are not as efficient/practical in these taller buildings.

CONSTRUCTION COSTS

The data collected from members was collated using a similar approach as used for the 'Real Cost of New Apartment Delivery' report in 2017. Therefore, the overall construction costs, which include site works and parking costs from all of the categories, were applied to the gross floor area of the apartment, which, for this report, is 91 sq. m.

Apartment costs assessment

Once all costs were identified, they were allocated to cost headings as shown in **Figure 1** (page 17).

Construction costs

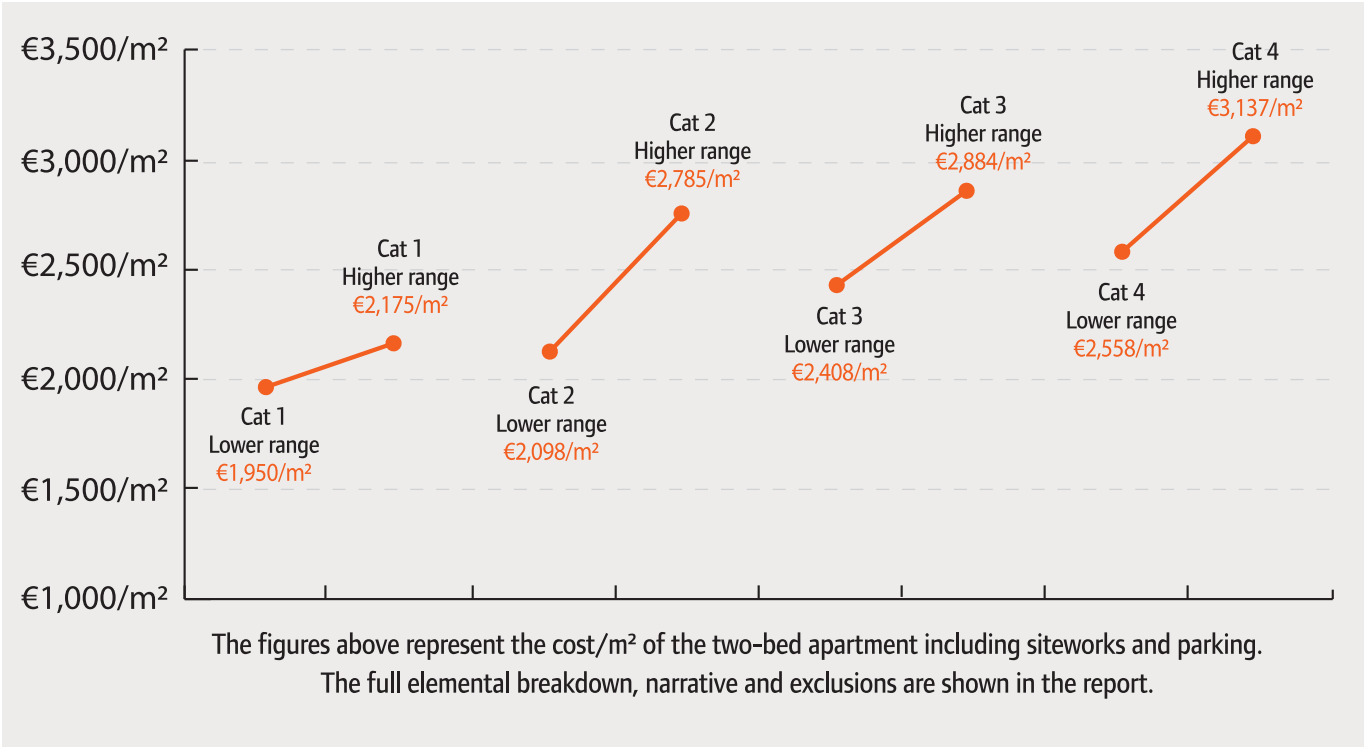
The construction costs provided are based on a traditional procurement model where the developer and contractor are separate entities. However, the report includes costs provided by developers where they are undertaking the work directly (e.g., 'builder/developer'); these often represent the lower range of the cost scale due to accounting treatment. This balances out in aggregate as the construction profit (i.e., profit normally charged by main contractors) would be included in the overall development margin as opposed to the component construction rates and overheads, which are usually included in preliminaries. Preliminaries may also be included in companies' group accounts and therefore may not feature at all in the project development budget. The construction costs used are based on a mix of planning schemes and projects on site.

The soft costs (e.g., fees, contributions, financing) are based on industry norms, rather than from the specific projects.

The reported delivery costs information contains both hard costs, i.e., the bricks and mortar element, and soft costs, i.e., VAT, levies, finance, land costs, profit.

The analysis shows the overall make-up of the total delivery costs of a two-bedroom apartment. Note that the construction costs make up 47% (up from 43% in 2017) of the overall delivery cost, which includes VAT at 13.5% on sales.

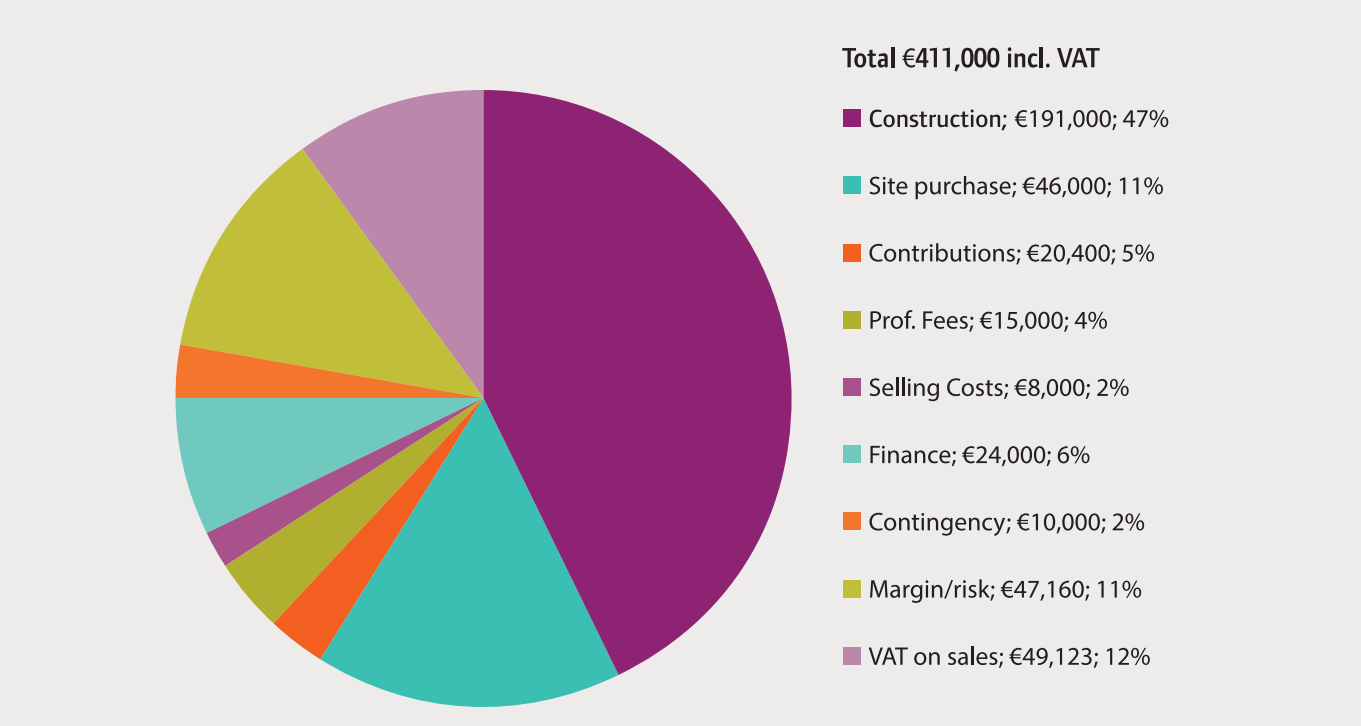
Chart 1: Construction costs (€/sq. m.) of a two-bedroom apartment (ex. VAT), including siteworks and parking.



The figures above represent the cost/m² of the two-bed apartment including siteworks and parking.
The full elemental breakdown, narrative and exclusions are shown in the report.

Chart 2: Total delivery costs (ex. VAT).

Chart 3: Percentage breakdown of the total development costs for a two-bedroom apartment (Category 2 – lower-range, 5-8 st.), incl. VAT on sales.



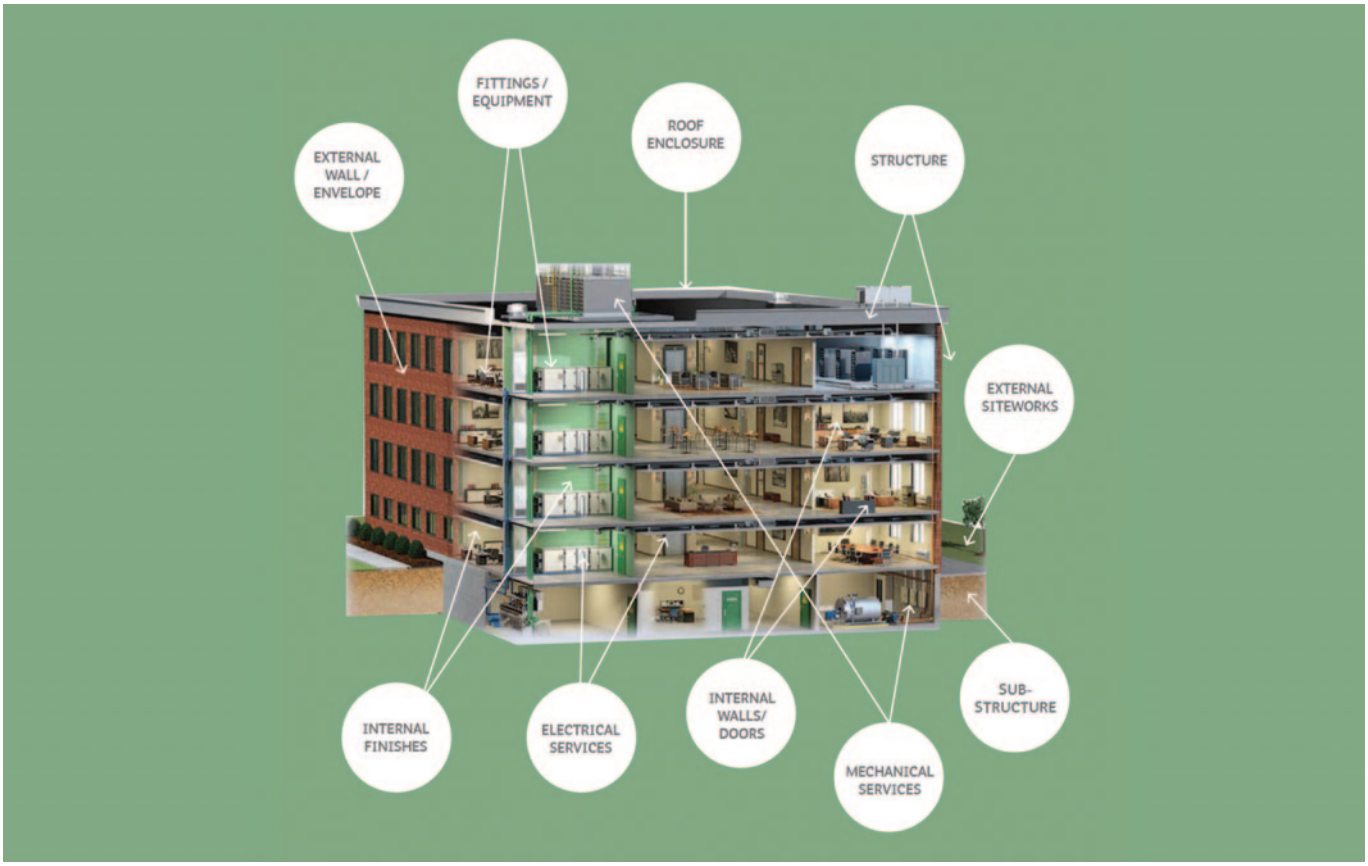


Figure 1: Categorisation of cost headings.

VIABILITY AND AFFORDABILITY – BUILD TO SELL AND BUILD TO RENT

In our report, we have assessed affordability and viability for the build-to-sell model and the build-to-rent model. For the sales market, we provided for multiple buyer income scenarios based on a first-time buyer.

Build to sell

Our report assesses the current market price of a two-bedroom apartment. If, as the analysis will show, this price is below the cost, then prices would need to rise to that rate or costs will need to reduce. When sales price equals this amount, the firms involved will determine if it makes commercial sense to develop. In the build-to-sell model, currently only Categories 1 and 2 (lower range) are viable, which is an improvement when compared with our 2017 report, where Category 1 (lower range) was the only category that was viable.

It is worth noting that the viability of any scheme is dependent on its inputs, e.g., sales, site, construction cost and other costs. This report provides a range in each category to capture the majority of the situations encountered, but each scheme is specific and, as such, may present a different outcome.

Our analysis of current sales prices (ex. VAT) compared with total delivery costs highlights that Category 1 and 2 apartments (lower range) are viable. It is clear to see from the

Chart 4: Viability/unviability of two-bedroom apartment schemes across the four categories of apartment.

Category 1: Suburban (Low Rise)

	RANGE Lower	-	Higher
Sales price (excl. VAT)	€330k	-	€361k
Total cost (excl. VAT)	€273k	-	€317k
Development margin/risk	€57k	-	€44k
	21%	-	14%

Category 2: Suburban (Medium Rise)

	RANGE Lower	-	Higher
Sales price (excl. VAT)	€364k	-	€399k
Total cost (excl. VAT)	€314k	-	€407k
Development margin/risk	€49k	-	-€7k
	16%	-	-2%

Category 3: Urban (Medium Rise; 5-8 St.)

	RANGE Lower	-	Higher
Sales price (excl. VAT)	€427k	-	€463k
Total cost (excl. VAT)	€379k	-	€451k
Development margin/risk	€49k	-	€12k
	13%	-	3%

Category 4: Urban (Medium Rise; 9-15 St.)

	RANGE Lower	-	Higher
Sales price (excl. VAT)	€438k	-	€501k
Total cost (excl. VAT)	€396k	-	€479k
Development margin/risk	€42k	-	€22k
	11%	-	5%

Figures rounded to nearest €1,000.

chart that the net value is either positive (i.e., viable for development once over 15%) or negative (not viable for development). This does not necessarily mean that apartments are generally unviable. Developments targeting more affluent purchasers can secure sales prices above this general average, bringing some apartment developments to a positive net value.

Only one category is commercially viable based on the data received. Finance, VAT, disposal costs and contingency are mostly percentage based and, therefore, increase in line with those costs.

The comparative analysis between the four categories provides a useful insight into how a scheme can be viable in one scenario and not in another. This is further analysed in subsequent sections of this report.

Affordability scenarios

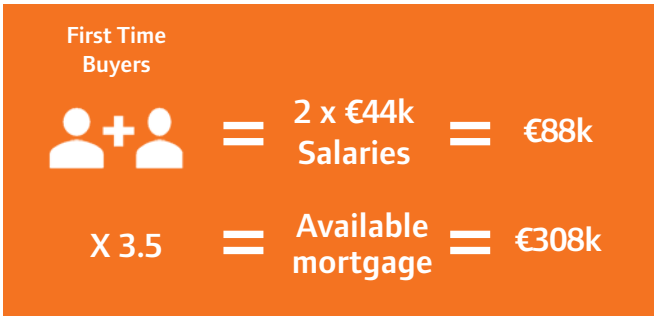
We will now examine the availability of mortgages under the current lending rules for first-time buyers. It is not intended to be an exhaustive financial analysis, but rather a high-level view based on different salary ranges. We note the following in relation to the apartments examined in this report and the current lending constraints:

- the sales price of the two-bedroom apartment reviewed ranges from €375k to €569k (incl. VAT) (Categories 1, 2, 3 and 4);
- a first-time buyer couple requires a 10% deposit of €38-€57k and a combined salary range of €96-€146k to afford these;
- this assumes a couple each earning a salary of €44,000[6] per annum, giving a combined total salary of €88,000; and,
- the current Central Bank lending rules currently have a loan-to-value (LTV) restriction on mortgages to first-time buyers of 90% and a loan-to-income (LTI) cap of 3.5 times the salary of the applicant(s).

The table in **Example 1** shows that a couple each earning €44,000, who are both first-time buyers, would not meet the financial threshold to purchase.

They would also need the required 10% deposit and other funds for furnishing, moving costs, legal costs, etc. So, unless the couple had additional savings on top of the 10% deposit and related costs, these apartment categories would not be affordable to them. A couple may also be eligible for the Help to Buy scheme.

Our report examines multiple affordability scenarios to take account of the wide variety of household incomes and assess their capability of purchasing an apartment in Dublin. **Table 1** sets out a number of scenarios, showing a couple with different salary levels, the 10% deposit requirement and the mortgage available. The addition of the mortgage and the



EXAMPLE 1: Couple earning combined salary of €88,000.

	Cat. 1	Cat. 2	Cat. 3	Cat. 4
Sales price of two-bedroom apartment (lower range)	€375,000	€413,000	€485,000	€497,000
Deposit required (10%) (First-time buyer)	€37,500	€41,300	€48,500	€49,700
Mortgage required	€337,500	€371,700	€436,500	€447,300
Mortgage available (based on LTI of 3.5)	€308,000	€308,000	€308,000	€308,000
	-€29,500 X	**-€63,700** X	**-€128,500** X	**-€139,300** X

6. Central Statistics Office. Earnings and Labour Costs Q3 2020 (provisional) – weekly earnings annualised.

Table 1: Affordability scenarios.

AFFORDABILITY SCENARIOS									
Scenarios	Salary Nr.1 (a)	Salary Nr.2 (b)	Combined salary (c)	Mortgage available (e)	10% deposit €	Couple's budget (f)	Apartment categories (g)	Apartment sales price (incl. VAT) (h)	Total apartment development cost (incl. 15% margin and VAT) (i)
			(a)+(b)	(c) x 3.5		(d) + (e)			
Scen. 1	€45,000	€22,500	€67,500	€236,250	€26,250	€262,500			
Scen. 2	€50,000	€25,000	€75,000	€262,500	€29,167	€291,667			
Scen. 3	€55,000	€27,500	€82,500	€288,750	€32,083	€320,833			
Scen. 4	€60,000	€30,000	€90,000	€315,000	€35,000	€350,000			
Scen. 5	€65,000	€32,500	€97,500	€341,250	€37,917	€379,167	Cat 1 (Lwr range)	€375,000	€358,899
Scen. 6	€70,000	€35,000	€105,000	€367,500	€40,833	€408,333	Cat 1 (Upr range)	€410,000	€413,317
Scen. 6	€70,000	€35,000	€105,000	€367,500	€40,833	€408,333			
Scen. 7	€75,000	€37,500	€112,500	€393,750	€43,750	€437,500	Cat 2 (Lwr range)	€413,000	€410,683
Scen. 8	€80,000	€40,000	€120,000	€420,000	€46,667	€466,667	Cat 2 (Upr range)	€453,000	€521,356
Scen. 9	€85,000	€42,500	€127,500	€446,250	€49,583	€495,833	Cat 3 (Lwr range)	€485,000	€493,077
Scen. 9	€85,000	€42,500	€127,500	€446,250	€49,583	€495,833	Cat 4 (Lwr range)	€497,000	€514,055
Scen. 10	€90,000	€45,000	€135,000	€472,500	€52,500	€525,000	Cat 3 (Upr range)	€525,000	€581,095
Scen. 11	€100,000	€50,000	€150,000	€525,000	€58,333	€583,333	Cat 4 (Upr range)	€569,000	€618,528

Chart 5: Affordability scenario.

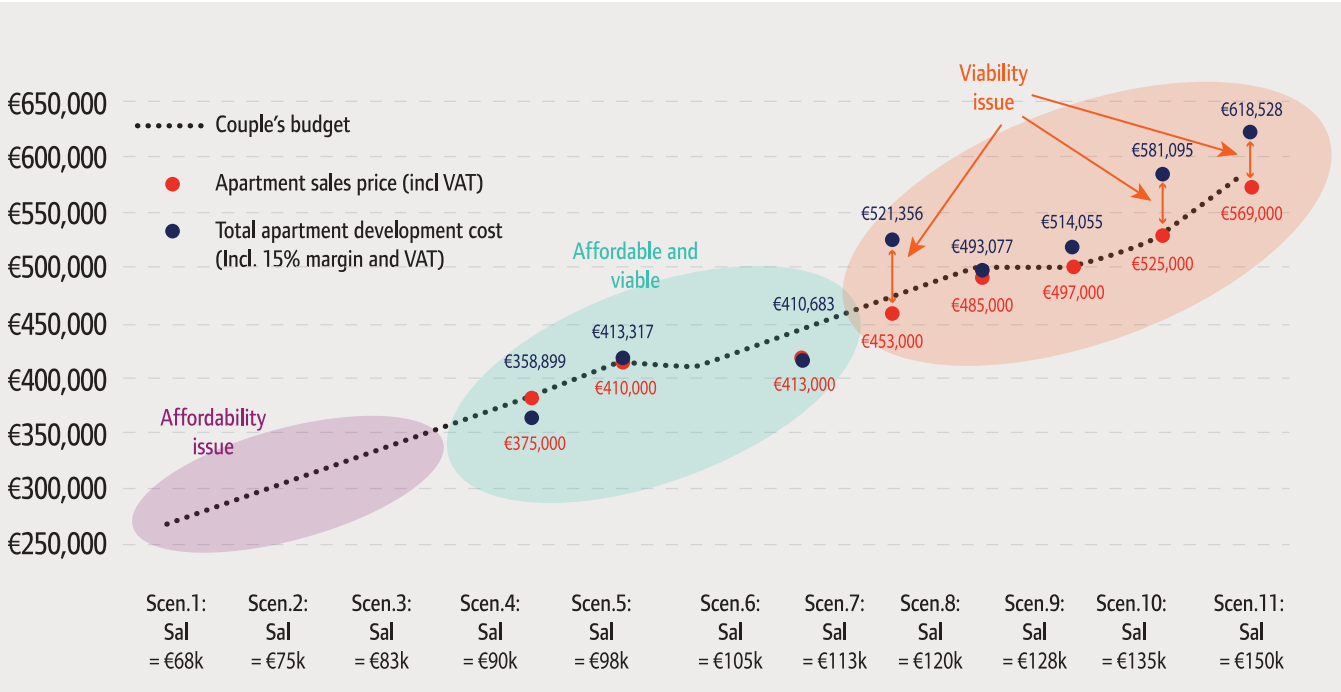


Table 2: Site costs as a percentage of overall sales.

Category 1			Category 2			Category 3			Category 4		
	Lower range	Higher range		Lower range	Higher range		Lower range	Higher range		Lower range	Higher range
Site cost:	€28,500	€42,000	**Site cost:**	€46,000	€59,000	**Site cost:**	€65,000	€80,000	**Site cost:**	€65,000	€80,000
Sales price:	€375,000	€410,000	**Sales price:**	€413,000	€453,000	**Sales price:**	€485,000	€525,000	**Sales price:**	€497,000	€569,000
% of sales price relating to site cost:	**8%**	**10%**	**% of sales:**	**11%**	**13%**	**% of sales:**	**13%**	**15%**	**% of sales:**	**13%**	**14%**
Locations used for site and sales information:	Areas similar to Ballyogan Road, Leopardstown		**Locations used for site and sales information:**	Sandyford Industrial Estate		**Locations used for site and sales information:**	North Dublin Docklands (non-waterfront) type locations		**Locations used for site and sales information:**	North Dublin Docklands (non-waterfront) type locations	

deposit equates to the couple's purchasing budget. In addition to the affordability element, the four categories of apartments examined earlier in the report are overlaid for comparison purposes **(Table 1)**. Affordability of apartments to purchase in Dublin remains challenging, particularly for the average income couple. A joint income of more than €110,000 is required for a lower-range Category 2 apartment.

Cost containment to achieve affordability

Site purchase cost

The valuation and price paid for development land varies considerably and is very much dependant on a number of factors such as location, quality of land (i.e., topography, contamination on site), location of services, and how much advanced adjacent infrastructure is in place. According to our most recent data from our commercial property survey, average development land inflation is relatively static in Dublin. Many investors and developers would conduct a residual valuation to examine the true value of development land. This is achieved by computing all the various input costs within a development appraisal, with the residual figure remaining from the net sales value to produce a site value.
We have included an average range, for each category, based the expert views received from SCSI Chartered Residential Valuers based on specific locations. These locations are more specific than the 2017 report in a bid to narrow the range and link as closely as possible to the sales prices in those areas.
We have received construction cost data for almost 10,000 apartment units that form the basis of this report, compared to c. 2,000 units in 2017. This cost data reflects where apartments are being planned/built. The choice of site locations has been updated to correlate to the construction costs.
The lack of statistical data relating to land values and prices paid for development land is a significant issue for many involved in making key policy decisions relating to housing and development in general. The Property Price Register is well established and operated by the Property Services Regulatory Authority, and provides sales data on residential transactions. This is a helpful source of data to track house price inflation generally, and is also a significantly beneficial resource for house purchasers to establish the true levels of house values in certain areas. This model could be adopted for roll-out for development land sales to increase transparency in this area and ultimately assist policymakers.

Site prices within our report

Overall, site prices broken down by each apartment range from €28,500 (Category 1, lower range) to €80,000 (Categories 3 and 4, higher range).
Supply and demand dynamics can have a significant bearing on the value attached to a particular plot of land and, in some cases, the value of a plot of land can be significant compared with another within the same area but on a different street. For example, Dublin's docklands, especially along the waterfront, have undergone vast change in recent years,

Table 3: Comparative analysis of development costs of a two-bedroom apartment.

	Category 1		Category 2			Category 3			Category 4		
Item	Lower	Higher	Lower	Higher	% change (Cat.1 v 2) (d)-(c)/(c)	Lower	Higher	% change (Cat.2 v 3) '(f)-(c)/(c)	Lower	Higher	% change (Cat.3 v 4) '(i)-(f)/(f)
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	
Construction	€177,000	€198,000	€191,000	€253,000	+8%	€219,000	€262,000	+15%	€233,000	€285,000	+6%
Site purchase	€28,500	€42,000	€46,000	€59,000	+61%	€65,000	€80,000	+41%	€65,000	€80,000	
Contributions	€18,800	€20,000	€20,400	€21,500	+9%	€25,600	€27,000	+25%	€25,600	€27,000	
Prof. fees	€14,000	€16,000	€15,000	€20,000	+7%	€18,000	€21,000	+20%	€19,000	€23,000	+6%
Selling costs	€7,000	€7,000	€8,000	€9,000	+14%	€9,000	€10,000	+13%	€9,000	€11,000	
Finance	€19,000	€24,000	€24,000	€31,000	+26%	€31,000	€38,000	+29%	€32,000	€39,000	+3%
Contingency	€9,000	€10,000	€10,000	€13,000	+11%	€11,000	€13,000	+10%	€12,000	€14,000	+9%
Margin/risk	€40,995	€47,550	€47,160	€60,975	+15%	€56,790	€67,650	+20%	€59,340	€71,850	+4%
sub-total	€314,295	€364,550	€361,560	€467,475	+15%	€435,390	€518,650	+20%	€454,940	€550,850	+4%
VAT on sales	€44,604	€48,767	€49,123	€53,881	+10%	€57,687	€62,445	+17%	€59,115	€67,678	+2%
	€358,899	**€413,317**	**€410,683**	**€521,356**	**+14%**	**€493,077**	**€581,095**	**+20%**	**€514,055**	**€618,528**	**+4%**

Chart 6: Comparison of total development costs across the four categories.

which makes non-waterfront property available for development. Non-waterfront property does not come with the same premium as waterfront property, and this is therefore reflected within this year's report.

Table 2 shows the relationship between the site purchase cost and the sales price in each of the four categories. As shown, site purchase cost ranges from 8% to 15% of the sales price. The viability issue is further exacerbated when locations with lower sales values are considered. While the site cost might reduce somewhat in line with the sales value, the development costs do not. This is because the development costs might be influenced by, but are not a function of, design. For example, the foundations, structure, services, internal walls and finishes all have to be constructed regardless of location. The only items that might be adjusted based on the sales price would be the standard of external and internal finishes, fittings and equipment.

Table 3 shows a comparative analysis of the development costs of a two-bedroom apartment. In relation to statutory fees and development contributions, these include planning application costs, development contributions (Fingal and Dublin City Council (DCC) in this example), Irish Water charges, Disabled Access Certificates, Part V costs, Fire Certificate fees, and utility connections. These are all largely known costs and are based on the actual size of the scheme. If the scheme is in an area where special conditions (Section 49) apply (usually where there are large public infrastructure projects to be carried out, e.g., LUAS), then these can add additional costs.

We have included an industry-standard range percentage for professional design team fees. These will depend on the composition of the team, expertise, timeframe and the complexity of the project. For the purposes of this exercise, we have included 8% of the construction costs for all categories, as indicated in the table. The budget for sales, marketing and legals includes the costs incurred in selling and conveying the units. We have included an average percentage based on the sales price. While these figures may vary, they do not impact on viability in any significant way.

Development finance has become somewhat more complex in recent years with the advancement of different funding streams and models. This varies significantly from one project to another. Private equity, mezzanine finance and senior bank debt all feature in the current development funding model.

The cost of finance depends on the actual project, the promoter and the overall risk involved. Private equity, depending on its source, can cost between 10% and 20% per annum, and make up 5-15% of the overall funding requirement. Mezzanine finance can cost between 10% and 15% per annum and make up 10-30% of the overall funding requirement. Senior debt, provided by banks, can cost between 5% and 8% per annum and make up 60-70% of the overall funding requirement. These ranges are very broad and change on a scheme-by-scheme basis. For the purposes of this exercise, we have included a blended rate of 9% across the development and have assumed a holding period of two years for the site and an 18-month construction delivery programme. A percentage has been included for arrangement fees and funder advisors.

Return on risk

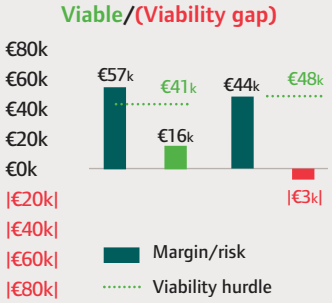
The internal rate of return is the profitability measure used by a company to ensure that allocation of capital investment provides an expected return. The rate reflects risk in the sector the company is operating in and expectations of owners. This will vary from site to site, depending on the risks involved in the development. While a developer may wish to proceed with a lower margin level, this is often not possible due to the funder's minimum underwriting requirements. This is traditionally presented as an annualised rate, but for simplicity of comparison it has been included at 15% gross profit of the total development costs. It is expected that apartments, unlike housing, will have a higher overall return as more cash is locked into the construction for longer. The technique of phasing in a housing development, where homes are sold as they become available, allows the firm developing the site to use the cash flow from sales to finance the next phase. In an apartment block, no sales can be completed until it is fully constructed and commissioned.

The analysis shows that only the Category 1 and Category 2 apartments (lower range) are viable. The other categories show three categories close to the 15% hurdle (+11% to +14%), with three other sub-categories close to or making a loss (-2% to +5%). It is interesting to analyse why the lower end of the Category 1 and 2 apartments are viable when some of the other examples make a significant loss. It is clear from the analysis that certain costs increase more rapidly than others when compared across the categories. The increase in construction costs between the categories may be analysed more closely in the construction costs section but, at a high level, the increases are largely due to more complex structure

Chart 7: Viability of build-to-sell apartments.

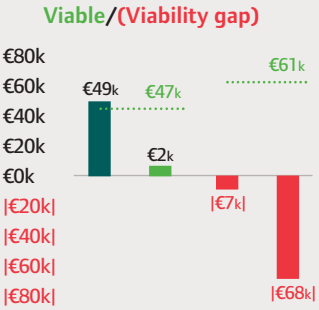
Category 1: Suburban (Low Rise)

	RANGE Lower	-	Higher
Sales Price (excl. VAT)	€330k	-	€361k
Total Cost (excl. VAT)	€273k	-	€317k
Development	€57k	-	€44k
margin/risk	21%	-	14%



Category 2: Suburban (Medium Rise)

	RANGE Lower	-	Higher
Sales Price (excl. VAT)	€364k	-	€399k
Total Cost (excl. VAT)	€314k	-	€407k
Development	€49k	-	-€7k
margin/risk	16%	-	-2%



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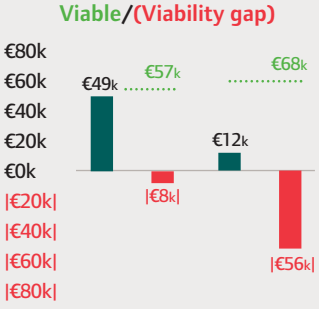

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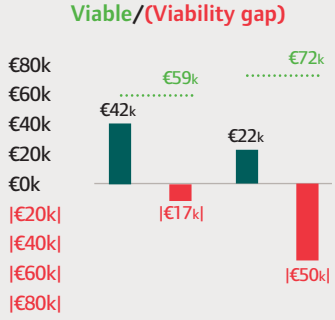
Sales Price (excl. VAT)	€438k	-	€501k
Total Cost (excl. VAT)	€396k	-	€479k
Development	€42k	-	€22k
margin/risk	11%	-	5%



Figures rounded to nearest €1,000.

Viability of build-to-sell apartments

Chart 7 summarises the viability results for the four categories. A 15% gross profit financing hurdle (shown by the green dotted line in the graphs) has been adopted. Even though a project may produce a margin, it may not obtain funding if it does not include a sufficient level to satisfy development risk assessment.

Category 1 (lower range) achieves the required level of viability with the upper range just falling short of the gross margin hurdle level of 15%.

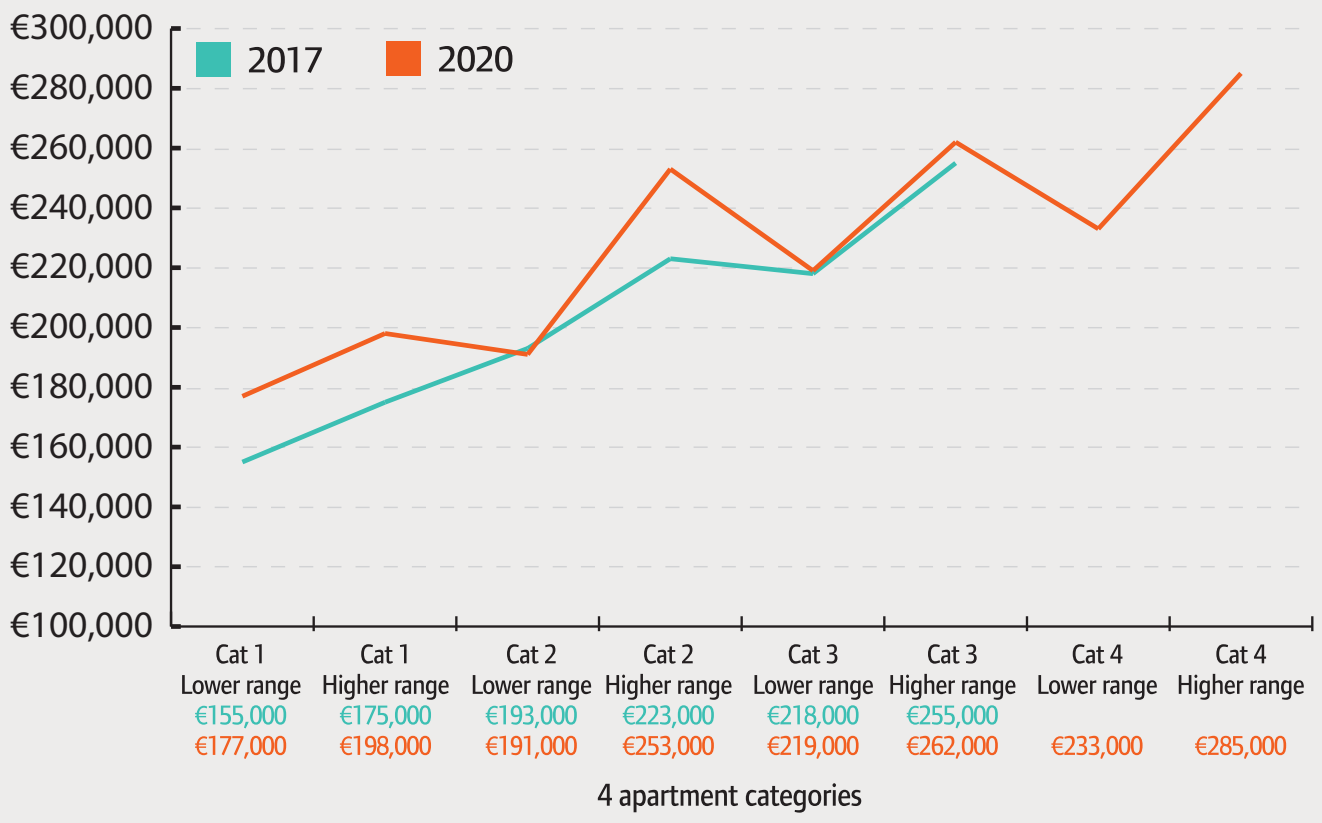
Category 2 (lower range) is similar in achieving the viability hurdle but the upper range makes a loss, based on the costs and revenue inputs used. Note the large increase in costs at the higher range.

Category 3 (lower range) almost meets the viability hurdle (13% gross margin) but the upper range only shows a 3% margin, which does not meet the finance hurdle. The increase in development costs in the range is not met by the higher sales figure.

Category 4 (lower range) similarly almost meets the viability hurdle (11% gross margin) but again this category fails to come close on the upper range.

The comparative analysis of the four categories provides a useful insight into how a scheme can be viable in one scenario and not in another.

Construction cost only (two-bedroom apartment, ex. VAT) and including siteworks and parking.



(load-bearing walls versus concrete frame), more sophisticated facades (plaster/brick versus stone/precast/curtain walling), higher spec. finishes, more en suites, more complex mechanical and electrical services, and the use to a greater or lesser extent of basement parking.
The site purchase cost differences are largely due to the area and the sales price achievable in that area. The statutory fees and development contributions are made up of a number of items as shown in the viability analysis.The contributions are driven by the size of the apartment only and if Section 49 contributions (e.g., LUAS, etc.) apply. Part V is another component and is influenced by the site cost and sales price.
The professional fees are a function of the complexity of the design and the need for additional consultants. For example, a Category 1 type apartment involves traditional construction methods with little specialist consultant input. Category 3 apartments are more complex and can involve additional costs, such as specialist facade consultants, wind experts, specialist structural engineer input, project management, external lighting design, and traffic analysis, among others.
Selling costs are based on the sales price of the unit and increase proportionately. Finance costs, contingency and margin/risk are all percentage based and relate to the input costs, and therefore increase/decrease accordingly. VAT on sales is included in the sales price at 13.5% and therefore changes in accordance with this.
The comparative analysis between the four categories provides a useful insight into how a scheme can be viable in one scenario and not in another.

Build to rent

Build to rent, as we know it today, was introduced by the Department of Housing, Planning and Local Government in the publication 'Sustainable Urban Housing: Design Standards for New Apartments' in March 2018. Previous build-to-rent guidelines were issued by the Department in 2016, but these are superseded by the latest version.
The March 2018 guidelines introduced changes to the prevailing design guidelines for build-to-sell apartments, and also introduced a new category of shared accommodation, now commonly referred to as 'co-living'.
The main changes may be summarised as follows:

- introduction of less stringent dual aspect requirements for all apartment types (33% in urban areas and 50% in suburban areas);
- an increase in the maximum number of apartments per core to 12 in build to sell, with no restriction on build to rent or co-living;
- a reduction in the amount of car spaces for build to sell with 'minimal' requirements for build to rent and co-living;
- an increase in the provision for bike storage;
- a reduction and firm direction on minimum floor to ceiling heights, with the same levels across all three categories;
- a minimum set of floor areas for studios, one-, two- and three-bedroom apartments, with the introduction of a new 63m^2 two-bedroom (three-person) apartment, restricted to 10% in build- to-sell;
- the mix of units is set down in the build-to-sell category with no restriction for the build-to-rent;
- the build-to-sell category requires the majority of the apartments to be 10% bigger than the minimum, so in effect the overall scheme must be 5% greater in net floor area – there is no such requirement for the build-to-rent category;
- build-to-rent schemes are also required to include amenity areas within the schemes for occupiers; and,
- a new requirement under the build-to-rent model is the requirement to keep the apartment scheme as a rental scheme for a minimum of 15 years.

The changes were largely welcomed and seen to address some of the viability issues being experienced on apartment schemes. The reduction in parking had a real impact on appraisals.
The new accommodation types introduced served to accommodate different parts of the market. Initially, the 15-year covenant appeared to put developers off taking up the build-to-rent route, even on projects where they planned to rent the full scheme long term. However, developers made build-to-sell planning applications with amenity space included, fulfilling all the requirements of a build-to-rent scheme but without the 15-year perceived restriction.
So, why are apartments being developed for rent but not for sale? There are two main reasons: viability; and, affordability. As we have seen in this report, apartments are expensive to develop and viability depends on the sales value exceeding the total development cost. In schemes that are viable, purchasers may not be able to get a mortgage based on their income.

So, someone who may not be able to secure a mortgage may be able to pay the market rent, even if this rent is higher than a monthly mortgage payment would be. However, one would expect viability to be largely similar? You have to build a very similar apartment block, pay for the same site and secure funding to build out the scheme. The worked examples that follow compare two of the buy to sell categories from the last section with the same apartments but developed under a build-to-rent model.

As shown in the examples, the construction cost for the apartment itself under the two models is identical, bar the amenity cost. One could make an allowance for the lesser size under the build-to-rent option, but we have not seen much evidence of that in the data received as part of this study.

An allocation (3.5%) for amenity space is added to the build-to-rent model, which ranges from €6,000-€8,000 per apartment. Loose furniture is excluded from both and deemed to be installed by the purchaser.

The site cost used is the same in both models, with a slight difference on the statutory fees and contributions as it takes the additional area of the amenity space into account.

Professional fees are the same percentage in both cases. Sales and marketing are slightly lower given the lesser effort in selling one apartment scheme of 100-300 units in one block as opposed to individually. The same assumptions have been used for finance, albeit the make-up is likely to be very different, with a similar resultant cost.

So overall, there is a difference of c. €6-8,000, which is largely the amenity space with add-on costs as outlined above.

The difference occurs in how the apartments are valued. In the build-to-sell model, it is simply the sales price minus the VAT to give a net sales price. In the build-to-rent model, it is valued as an investment, similar to an office block, where the rent, less operating costs, is divided by the investment yield to a gross valuation before purchaser's costs are deducted to provide a comparable net development value.

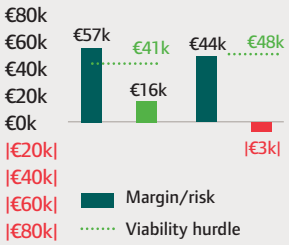
Similar to any investment model, it is highly sensitive to the rent and yield. Minor changes can move a scheme from viable to unviable. The featured table shows that where the build-to-sell model is not viable using a 15% development margin, the build-to-rent model achieves successful viability in all categories except for Category 3 (higher range), where it records a 12% margin, 3% below the chosen financing hurdle.In the current global financial environment, large residential investments such as these are attractive places for pension funds or other types of structured funds to invest. Local tax treatment, global events and changes in local regulations are all threats to the build-to-rent model. As can be seen, the build-to-rent model is sensitive and is largely only viable in urban centres where there is a high rental demand.

REAL COST OF NEW APARTMENT DELIVERY

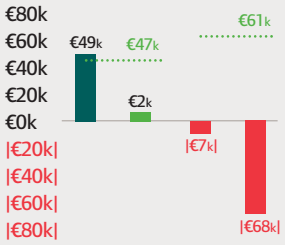
Development costs and viability of a two-bedroom apartment (ex. VAT) – BUILD-TO-SELL OPTION.

Residential apartment categories	Category 1: Suburban (Low rise)	Category 2: Suburban (Medium rise)
		
Total construction costs incl. siteworks and parking (ex. VAT)	€1,950 - €2,175/m² €181 - €202/ft² **Cost range per unit lower - higher**	€2,098 - €2,785/m² €195 - €259/ft² **Cost range per unit lower - higher**
Construction costs range	Construction cost range for 2 bed apartment (91m² gross floor area) **177,000 - 198,000**	Construction cost range for 2 bed apartment (91m² gross floor area) **191,000 - 253,000**
Non-construction costs		
Site cost	The site cost is a large variable from site to site. A notional range has been included based on advice from SCSI Sales Agents. **28,500 - 42,000**	The site cost is a large variable from site to site. A notional range has been included based on advice from SCSI Sales Agents. **46,000 - 59,000**
Statutory fees and contributions	This includes planning application costs, development contributions (Fingal used), Irish Water, DAC, Part V, Fire Cert, Utility connections. Note special S.49 levies apply in certain areas e.g. LUAS excluded **18,800 - 20,000**	Same as Category 1. Note special S.49 levies can exceed this figure and are excluded from this example. **20,400 - 21,500**
Professional fees	Assume 8% **14,000 - 16,000**	Assume 8% **15,000 - 20,000**
Sales, marketing and legals	Assume standard market percentage fees for these items **7,000 - 7,000**	Assume standard market percentage fees for these items **8,000 - 9,000**
Development finance	Assume blended finance rate for funders of 9% plus Funder Advisors. **19,000 - 24,000**	Assume blended finance rate for funders of 9% plus Funder Advisors. **24,000 - 31,000**
Contingency	Allow 5% on construction costs. **9,000 - 10,000**	Allow 5% on construction costs. **10,000 - 13,000**
VAT	VAT is deducted off the sales price below.	VAT is deducted off the sales price below.
Total development costs	**(a) 273,300 - 317,000**	**(a) 314,400 - 406,500**
Sales price for two-bed	375,000 - 410,000	413,000 - 453,000
Deduct VAT (13.5% incl.)	(44,604) - (48,767)	(49,123) - (53,881)
Net sales price	(b) 330,396 - 361,233	(b) 363,877 - 399,119
Development margin/risk	(b) - (a) 57,096 - 44,233 21% - 14%	(b) - (a) 49,477 - (7,381) 18% - (2%)

Viable/(Viability gap)



Viable/(Viability gap)



Note: Note average cost and sales ranges used for examples above; Margin/loss will vary upon inputs used

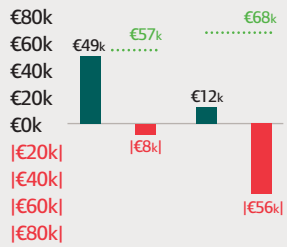
Category 3: Urban
(Medium rise 5-8st.)

€2,408 - €2,884/m²
€224 - €268/ft²

Cost range per unit
lower - higher

Construction cost range for 2 bed apartment (91m² gross floor area)	**219,000 - 262,000**
The site cost is a large variable from site to site. A notional range has been included based on advice from SCSI Sales Agents.	**65,000 - 80,000**
Same as Category 1 except DCC used. Assume LUAS contribution included (€2,000)	**25,600 - 27,000**
Assume 8%	**18,000 - 21,000**
Assume standard market percentage fees for these items	**9,000 - 10,000**
Assume blended finance rate for funders of 9% plus Funder Advisors.	**31,000 - 38,000**
Allow 5% on construction costs.	**11,000 - 13,000**
VAT is deducted off the sales price below.	
	(a) 378,600 - 451,000
	485,000 - 525,000
	(57,687) - (62,445)
	(b) 427,313 - 462,555
	(b) - (a) 48,713 - 11,555
	13% - 3%

Viable/(Viability gap)



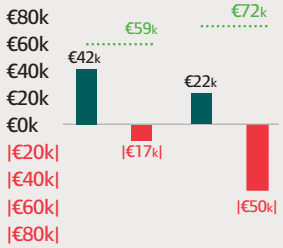
Category 4: Urban
(Medium rise 9-15st.)

€2,558 - €3,137/m²
€238 - €291/ft²

Cost range per unit
lower - higher

Construction cost range for 2 bed apartment (91m² gross floor area)	**233,000 - 285,000**
The site cost is a large variable from site to site. A notional range has been included based on advice from SCSI Sales Agents.	**65,000 - 80,000**
Same as Category 1 except DCC used. Assume LUAS contribution included (€2,000)	**25,600 - 27,000**
Assume 8%	**19,000 - 23,000**
Assume standard market percentage fees for these items	**9,000 - 11,000**
Assume blended finance rate for funders of 9% plus Funder Advisors.	**32,000 - 39,000**
Allow 5% on construction costs.	**12,000 - 14,000**
VAT is deducted off the sales price below.	
	(a) 395,600 - 479,000
	497,000 - 569,000
	(59,115) - (67,678)
	(b) 437,885 - 501,322
	(b) - (a) 42,285 - 22,322
	11% - 5%

Viable/(Viability gap)



Residential apartment categories

- Total construction costs incl. siteworks and parking (ex. VAT)
- Construction costs range
- Non-construction costs
- Site cost
- Statutory fees and contributions
- Professional fees
- Sales, marketing and legals
- Development finance
- Contingency
- VAT
- Total development costs
- Sales price for two-bed
- Deduct VAT (13.5% incl.)
- Net sales price
- Development margin/risk

REAL COST OF NEW APARTMENT DELIVERY

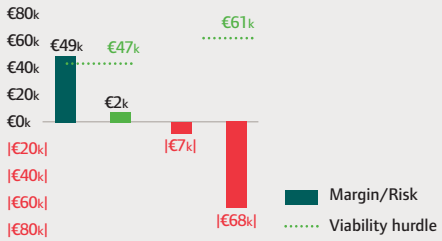
COMPARISON OF BUILD-TO-SELL MODEL VERSUS BUILD-TO-RENT MODEL.

Residential apartment categories

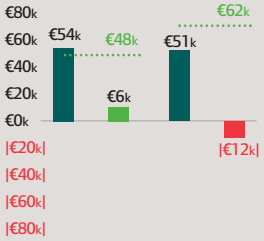
Category 2: Suburban
(Medium rise)

	Build to sell example	Build to rent example
		
Total construction costs incl. siteworks and parking (ex. VAT)	€2,098 - €2,785/m² €195 - €259/ft²	€2,098 - €2,785/m² €195 - €259/ft²
	Cost range per unit lower - higher	**Cost range per unit** lower - higher
Construction costs range	Construction cost range for 2 bed apartment (91m² gross floor area) **191,000 - 253,000**	Construction cost range for 2 bed apartment (91m² gross floor area) **191,000 - 253,000**
Add amenity space allocation to BTR (loose furniture to units by purchaser)		**6,000 - 8,000**
Non-construction		
Site cost	The site cost is a large variable from site to site. A notional range has been included based on advice from SCSI Sales Agents. **46,000 - 59,000**	The site cost is a large variable from site to site. A notional range has been included based on advice from SCSI Sales Agents. **46,000 - 59,000**
Statutory fees and contributions	Same as Category 1. Note special S.49 levies can exceed this figure and are excluded from this example. **20,400 - 21,500**	Same as Category 1. Note special S.49 levies can exceed this figure and are excluded from this example. **20,700 - 21,900**
Professional fees	Assume 8% **15,000 - 20,000**	Assume 8% **15,000 - 20,000**
Sales, marketing and legals	Assume standard market percentage fees for these items **8,000 - 9,000**	Assume standard market percentage fees for these items **7,000 - 8,000**
Development finance	Assume blended finance rate for funders of 9% plus Funder Advisors. **24,000 - 31,000**	Assume blended finance rate for funders of 9% plus Funder Advisors. **25,000 - 32,000**
Contingency	Allow 5% on construction costs. **10,000 - 13,000**	Allow 5% on construction costs. **10,000 - 13,000**
VAT	VAT is deducted off the sales price below.	VAT is deducted off the sales price below.
Total development costs	**(a) 314,400 - 406,500**	**(a) 320,700 - 414,900**
Revenue (rental) rent		Rent for 2 bed 1,850 - 2,300 Operating costs, voids etc (370) - (460) Annual 17,760 - 22,080 Assumed yield @ 4% 444,000 - 552,000 Purchaser's Costs @4.46% (18,957) - (23,568)
Sales/net dev. value Deduct VAT (13.5% Incl.)	413,000 - 453,000 (49,123) - (53,881)	425,043 - 528,432 (50,556) - (62,853)
Net development value	(b) 363,877 - 399,119	(b) 374,487 - 465,579
Viable/(viability gap)	(b) - (a) 49,477 - (7,381) 16% - (2%)	(b) - (a) 53,787 - 50,679 17% - 12%

Viable/(Viability gap)



Viable/(Viability gap)



Note: Note average cost and sales ranges used for examples above; Margin/loss will vary upon inputs used

Category 3: Urban
(Medium rise 5-8st.)

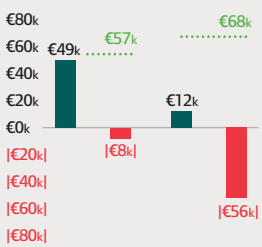
Build to sell example

€2,408 - €2,884/m²
€224 - €268/ft²

Cost range per unit
lower - higher

Construction cost range for 2 bed apartment (91m² gross floor area)	219,000 - 262,000
The site cost is a large variable from site to site. A notional range has been included based on advice from SCSI Sales Agents.	65,000 - 80,000
Same as Category 1 except DCC used. Assume LUAS contribution included (€2,000)	25,600 - 27,000
Assume 8%	18,000 - 21,000
Assume standard market percentage fees for these items	9,000 - 10,000
Assume blended finance rate for funders of 9% plus Funder Advisors.	31,000 - 38,000
Allow 5% on construction costs.	11,000 - 13,000
VAT is deducted off the sales price below.	
	(a) 378,600 - 451,000
	485,000 - 525,000
	(57,687) - (62,445)
	(b) 427,313 - 462,555
	(b) - (a) 48,713 - 11,555
	13% - (3%)

Viable/(Viability gap)



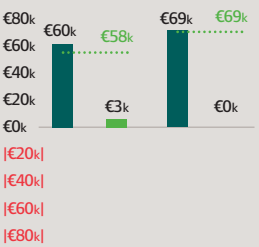
Build to rent example

€2,408 - €2,884/m²
€224 - €268/ft²

Cost range per unit
lower - higher

Construction cost range for 2 bed apartment (91m² gross floor area)	219,000 - 262,000
	7,000 - 8,000
The site cost is a large variable from site to site. A notional range has been included based on advice from SCSI Sales Agents.	65,000 - 80,000
Same as Category 1 except DCC used. Assume LUAS contribution included (€2,000)	26,000 - 27,300
Assume 8%	18,000 - 21,000
Assume standard market percentage fees for these items	7,000 - 8,000
Assume blended finance rate for funders of 9% plus Funder Advisors.	32,000 - 38,000
Allow 5% on construction costs.	11,000 - 13,000
VAT is deducted off the sales price below.	
	(a) 385,000 - 457,300
Rent for 2 bed	2,200 - 2,600
Operating costs, voids etc	(440) - (520)
Annual	21,120 - 24,960
Assumed yield @ 4%	528,000 - 624,00
Purchaser's Costs @4.46%	(22,543) - (26,642)
	505,457 - 597,358
	(60,120) - (71,051)
	(b) 445,336 - 526,306
	(b) - (a) 60,336 - 69,006
	16% - 15%

Viable/(Viability gap)



Residential apartment categories

- Total construction costs incl. siteworkds and parking (ex. VAT)
- Construction costs range
- Add amenity space allocation to BTR (loose furniture to units by purchaser)
- Non-construction costs
- Site cost
- Statutory fees and contributions
- Professional fees
- Sales, marketing and legals
- Development finance
- Contingency
- VAT
- Total development costs
- Revenue (rental) rent
- Sales/Net dev. value Deduct VAT (13.5% Incl.)
- Net development value
- Viable/(viability gap)

CONCLUSIONS AND RECOMENDATIONS

Conclusions

Apartment development is showing positive signs of growth in many urban centres across the country and this is to be welcomed. Planning permissions for apartments are increasing and for the first time are higher compared with the number of planning permissions for houses. Much of this positive change is attributed to the good work of the Department of Housing, Local Government and Heritage. Apartment development is primarily driven by the build-to-rent sector, with less supply of available units for those wishing to purchase new apartments. Because of the expensive nature of apartment development, it is often difficult to ensure the viability of new units for the sales market; instead, investors and developers seek a long-term yield from the development to make the investment viable. Apartment total development cost across the four categories examined in this report varies from €315,000 to €551,000 (ex. VAT) depending on design and car parking strategy. The site cost is another large variable with lots of underlying, interconnected cost drivers. The site cost included in this report ranges from €28,500 to €80,000 per apartment. Therefore, there is still an issue with apartment affordability whereby a couple need to have a combined salary of €97,500 to afford a suburban apartment at the lower end of the scale. While the Help to Buy Scheme is available to qualifying first-time buyer applicants, this initiative is a short-term measure, updated and renewed from time to time. But what is the long-term strategy to tackle housing affordability concerns? The Central Bank macroprudential rules require that first-time buyers provide a 10% deposit, yet second and subsequent buyers are required to have a 20% deposit. Taking a wider look at the various regulations and initiatives shared between Government and the Central Bank of Ireland, perhaps there is a better way of incentivising and supporting home buyers to purchase in urban and suburban centres in the interest of compact growth and sustainability for the environment.

For renters, and chiefly those renters who find themselves unable to apply for social housing and also unable to apply for a mortgage due to insufficient income, a cost rental model is a very positive and achievable solution. The development of a Government policy and scheme for the roll-out of a more active cost rental model is one to be supported to assist families and ultimately reduce the high burden on the private rented sector to cater for all renter types, both private tenants, and public and publicly supported tenancies.

RECOMMENDATIONS

Review Caution Start

Affordability

1. **Cost rental –** begin with the design and procurement process across multiple State sites to enable a speedy take-up of the scheme at its introduction.
2. **Shared equity –** start a high-level awareness-building programme of the scheme with the public and prospective purchasers, and seek to introduce a register of interest. When the shared equity scheme is approved, this will ensure a faster roll-out.
3. **Build to rent –** keep current design and finance regulatory framework – sudden changes would have negative impact on affordability.
4. **Public building cost review –** introduce a standardised construction cost reporting process, so that clear and transparent delivery cost data is made available to the sector.
5. **Help to Buy –** extend and provide certainty regarding the duration of the scheme. Many developers and builders will need certainty regarding the scheme when planning developments.

Costs

6. **Modern methods of construction –** progress the journey with the leadership of the Construction Sector Group towards a more digitalised and productive construction industry.
7. **Building Regulations –** carry out an independent cost–benefit analysis ahead of implementing new regulations to assess the impact these potentially may have on housing delivery.
8. **Planning resources –** it takes c.14-18 months to get a 100-unit scheme to planning (assuming no judicial review), which adds significant holding costs. Planning reform is required.
9. **Irish Water –** delays by the utility company are causing significant delay and cost to projects.
10. **Construction labour resource –** advance apprenticeship scheme and other incentives to attract European workers.
11. **Living City Initiative/Bringing back homes –** promote and provide financial incentive to deal with additional costs.

Supply

12. **Land Development Agency –** continue to support and resource LDA work to progress its objectives. Strategic use of CPO powers for the LDA may prove a useful tool to enable land for the delivery of affordable units
13. **SHD planning –** carry out another review to ensure correct decision in ceasing use.
14. **Public sector housing –** continue roll-out of public sector housing delivery.
15. **Infrastructure –** pre-fund site infrastructure to enable residential development. Similar to Local Infrastructure Housing Activation Fund (LIHAF), pre-funded, etc.
16. **Judicial reviews –** examine legal threshold to allow reviews. Significant delay to supply due to minor administrative errors.
17. **Local Area Plans -** carry out Financial Viability test prior to implementation to ensure units can be delivered especially where increased density is envisaged.
18. **Accommodation –** utilise all accommodation types to achieve target of c.35,000 units. BTS and social housing alone will not meet target.

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