



BUILD COST
CHARTERED QUANTITY SURVEYORS



Making Apartment
Construction Costs Viable **2020**

www.buildcost.ie

Welcome

We are living in unprecedented times. The focus now is ensuring the health and wellbeing of our family, friends, and work colleagues during this Covid-19 pandemic and beyond. It is still too early to understand its full implications, but it has already permanently changed the Irish Economy.

Looking forward, people’s requirements are likely to change. Different development models / asset classes may be required in the future. Companies will need to be agile and quick to adapt to the changing requirements. In relation to Apartment developments, ‘Will there be a demand for more or better-quality homes which can cope with remote working in terms of facilities and connectivity?’

Pre Covid-19 there was a huge demand for good quality housing for all. This is unlikely to change post Covid-19. The pandemic has delayed the completion of schemes under construction. Schemes in the feasibility stage of marginal viability may never make it to site. Both issues will affect supply in the short to medium term.

Apartment Developments and Transactions

Apartment transactions for the Private Rental Sector were marginally up in the first quarter of 2020 compared to the same period in 2019. Over the past 4 years more than half of the PRS transactions were for older stock. New apartment completions are still at a relatively low level. In a market where there is a shortage of accommodation, one of the main stumbling blocks

is viable demand. This is contributing to the supply shortage of new apartments.

Apartment cost and its viability

Delivering affordable and viable apartments are huge challenges facing the industry. While we are delivering high-quality accommodation, the improvements in planning and building standards have been a driver in increasing construction costs. Delivering value for money schemes against the backdrop of inflation, Brexit, Sectoral Employment Order (SEO), NZEB and pressure of increasing wages has been a huge challenge for all in the industry over the past number of years.

The revised Part B of the fire regulations will pose a further challenge.

Construction costs make up just over half the cost of delivering apartments. Non-construction costs such as site costs, VAT, contributions, professional fees, legal, utilities and finance make up the balance of the cost.

Delivering schemes on the backdrop of Covid-19 will probably be the most difficult challenge the industry has ever faced. This will require critical input and knowledge from the entire construction team. We at Buildcost, are completely cost-focused and look forward to embracing this new challenge with our clients. We will continue to take the lead in looking at cost effective solutions.

Value Engineering will play a huge part in this regard.

Buildcost Directors

Jason Tully Liam Langan



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Background

Buildcost have provided Quantity Surveying services on circa 7,500 apartment units in the past few years. Through this we have become experts in the construction cost of residential units. We have a deep understanding of what makes a residential scheme commercially viable and how building economics can assist with this.

Given the issues surrounding viability and affordability, the build to rent (private rental scheme) has become the most popular asset class in delivering apartments. Most institutional investors take a long-term view on their assets. The rental yield on apartments is strong. Forward sales of large apartment developments to institutional investors is the main stimulus in apartment development currently.

This document will focus on overcoming the challenges of apartment construction and delivering cost effective schemes in private, public private partnership and housing land initiative developments.

Some of our experiences that we will share include:

- Changes in Planning Guidelines 2018
- Key Cost Drivers to deliver Economical Building Design
- Tendering and Procurement
- Costs Ranges
- Benchmarking



Planning Guidelines for design standards of new apartments

The updated 2018 Planning Guidelines for design standards of new apartments are assisting with reinvigorating much need apartment and shared accommodation construction.

Apartment developments fall into 3 categories:

1 | Build to Sell

2 | Build to Rent

3 | Shared Accommodation

Some of the key components of each category are:

Build to Sell

- No minimum requirement for 3-bed or more bedroom units
- Studio units allowed with minimum areas of 37m²
- 3-person 2 bed units allowed with a minimum area of 63 m² (no more than 10%)
- Dual aspect reduced from 50% to 33% on sites near cities, quality public transport or in SDZ areas.
- Less than 50% dual aspect - provide minimum ceiling height of 2.7m generally (3.0m on ground floor)
- 12 units per stair / lift
- Car space requirement eliminated / reduced in large scale developments in central locations
- Visitor cycle parking of 1 space / 2 units – in addition to the 1 cycle space per unit

Build to Rent Schemes

- No restriction on dwelling mix
- Flexibility on the minimum storage and private amenity requirements subject to the provision of compensatory communal support facilities
- Minimal or significantly reduced car parking provision based on schemes centrally located
- Requirement that majority of apartments exceed the minimum floor area by 10% shall not apply
- The requirement for a maximum of 12 apartments per floor per core shall not apply to BTR schemes
- Greater flexibility in how the requirements of Part V are met

Shared Accommodation Schemes

- Only appropriate in locations where responding to an identified urban housing need
- Units comprising of 2-6 Bedrooms of single or double occupancy (up to 8 persons per unit)
- Minimum room sizes including en-suites now defined (single room 12m²; double room 18m²)
- Shared accommodation will not normally be subject to Part V requirements
- Shared accommodation may be a sub-component of a BTR scheme

Key Cost Drivers

to deliver economical apartment building design

The apartment guidelines are having a positive impact on the building efficiencies. However, there is still a lot of work to be carried out by developer and design team to make these schemes commercially viable. The fast-tracked Strategic Housing Development (SHD) planning process has helped with gaining planning permission for many apartment schemes. However, many of these schemes have not proceeded to construction yet. This may be due to a number of complex issues including project viability and lack of forward sales. When proceeding with an apartment development, the following areas should be carefully considered to achieve an economical building design and a commercially viable development:

Building Economics

Starting with an economic design for the building will have the biggest impact in terms of the cost. It is important to vigorously interrogate and challenge the design proposal in terms of building shape and form. Key cost drivers are as follows:

Asset Class build to sell, build to rent & shared accommodation have very different design principals, requirements, and guidelines.	Design initial design should suit the construction method in mind i.e. pods, off site, modular, precast etc. Standardisation and repetition are key.	Carparking the strategy selected for carparking will impact the costs significantly i.e. none, surface, under croft, podium, basement parking etc.
Basements now subject to a 'Basement Impact Assessment' with Dublin City Council. It is unclear how this requirement will affect future basement design and cost.	Mix studios, 1-bed, 2-bed, 3-bed. Carry out a cost benefit analysis on the costs versus value early in the design process. The mix will also impact the cost/m2 of the units.	Densities increasing density on the site will result in a lower cost per unit on items such as land, site works and infrastructure etc.
Repetition ensure repetition in apartment types throughout for cost and buildability purpose. Stack the building by reducing setbacks, terraces, number of roofs etc.	Minimum Sizes target the minimum / average unit sizes as set out in guidelines	Nett to Gross analyse the net to gross areas and reduce circulation to minimum requirements
Cores minimise the number of cores in the building and maximise the number of apartments per cores	Floor to Wall Ratios maximise the floor to wall ratios i.e. more floor area than external wall area	Storey-Heights analyse building height and each storey height – every additional 100mm is costly. High rise units will attract higher structure, fire and preliminaries cost

Building Design

Once the apartment building form is agreed, the design and buildability will need to be reviewed to ensure the most economical design is chosen:

Substructure pads, rafts, piles etc	Structure precast, concrete, blockwork, Metsec etc	Façade % of solid to glass, palette of materials, interface details
Fire Strategy examine whether sprinklers are required. This should reduce the gross internal floor area of the building	Apartment Design review open plan apartments vs traditional fire rated hallways	Balcony Design review the number of balconies, the size of each and the design options
Sustainability review the implications of NZEB on the design of plant and roof space, facades, lighting. Evaluate in terms of their payback and maintenance.	Attenuation Strategy review requirement of tanks, green roofs, rainwater harvesting etc	Siteworks interrogate the requirement for open space and the extent of hard landscaping vs soft landscaping

Review options for the **management suite / amenity space**. This could be a fit-out on ground floor or a standalone building. There are significant differences in cost.

Building Materials

Ideally this process should happen after the building economics and the building design reviews have been carried out. Some options to consider are as follows:

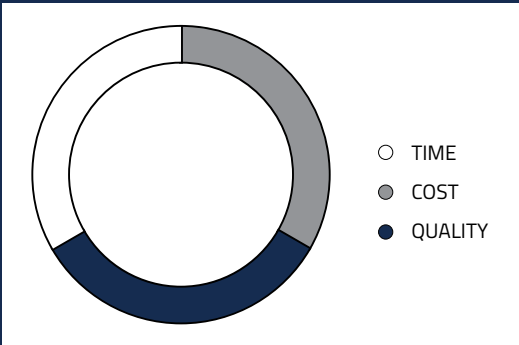
Facades	Specification of façades and % allowances. Solid: brick, stone, render, metal, timber. Glazing: windows, curtain walling, double or triple glazing
Asset Class	Build to sell vs build to rent may impact on choice of materials and level of fitting out
Quality of Finishes	Review apartment specification in line with target market to ensure they are aligned
Siteworks	Review specification options for hard and soft landscaping including site boundary treatments

Set budget targets for the various finishes and elemental cost centres that the designers are to work to. There will be certain elements that will be more important visually. It is important that costs are spent in the right areas in line with the client's requirements to maximise values.

We work in close collaboration with the client and the design team to challenge all the above cost centres. This ensures that the apartment development is economical in terms of its economics, design, and material choices. This enables a viable project to be developed.

Tendering & Procurement

Finding innovative ways to tender and procure projects will be crucial to ensuring commercial viability. There are typically 3 main factors which need to be considered when evaluating which procurement option is the most appropriate for the project. They are as follows:



The level of design information is key to ensuring robust tender documents. The procurement choice i.e. traditional (single stage, 2-stage), negotiation, design and build, management contract by needs to be considered. The last critical phase is to ensure that we select the most appropriate contractor/sub-contractors relative to the nature and size of the project and its location. Some key interventions to ensuring that this process is delivered include:

- 1

Separate enabling works package which:

 - De-risks the main construction works
 - Overlaps with the main tender preparation
 - Provides greater cost certainty
- 2

Specific expressions of Interest from contractors / sub-contractors which Obtains a suitable list of relevant contractors for the project which considers:

 - Experience of contractor’s team relevant to the project
 - Capacity of contractor
 - Capability of contractor to deliver in line with programme
 - Review innovative construction methods proposed by contractors

The above can lead into an early contractor engagement appointment if desired. This could provide a non-obligation agreement where the contractor provide early stage construction advice and be reimbursed for their time or be afforded the first opportunity at tendering for the project.
- 3

Procure the project as one contract, but break into 3 parts as follows:
(i) grey box (ii) landlord shell and core (iii) apartment fit-out.

This allows for the appointment in phases with agreed dates for potential suspension of the future phases. It also allows decisions to be made on the fit-out much later in the programme, thus providing flexibility to change in response to the market at that time. The traditional procurement method means that the client can be bound by decisions made 18 months prior to when they are required. The fit-out may also form part of a separate contract.
- 4

Carrying out a separate gap analysis on the design and tender information prior to tender, ensures that the tender documentation is robust. Any issues can be rectified to ensure cost certainty.

Cost Ranges

Our construction cost guide sets out typical building costs prepared from our experience and cost database. The cost ranges are representative of standard specifications and should be used as a guidance only.

These costs **exclude** abnormalities, siteworks, VAT, professional fees, inflation and other developer costs etc.

Apartments	Specification	Cost Range €
Apartments (build to sell)	Excludes: Floor finishes to bedroom & living room Appliances Wardrobes Furniture, fittings & equipment	2,000 - 2,500 per m2
Apartments (build to rent)	Includes: Floor finishes to bedroom & living room Appliances Wardrobes Furniture, fittings & equipment	2,200 - 2,700 per m2
Shared accommodation	Includes: Floor finishes to bedroom & living room Appliances Wardrobes Furniture, fittings & equipment	70,000 - 90,000 per room
Crèche ground floor unit	Includes: Grey box Power to a point	900 - 1,200 per m2

Carparks	Cost Range €
Surface Car Parks	3,000 - 4,000 per space
Multi-Storey Car Parks	14,000 - 18,000 per space
Under croft Car Space	20,000 – 25,000 per space
Single Basement Car Park	45,000 - 65,000 per space
Double Basement Car Park	65,000 - 75,000 per space

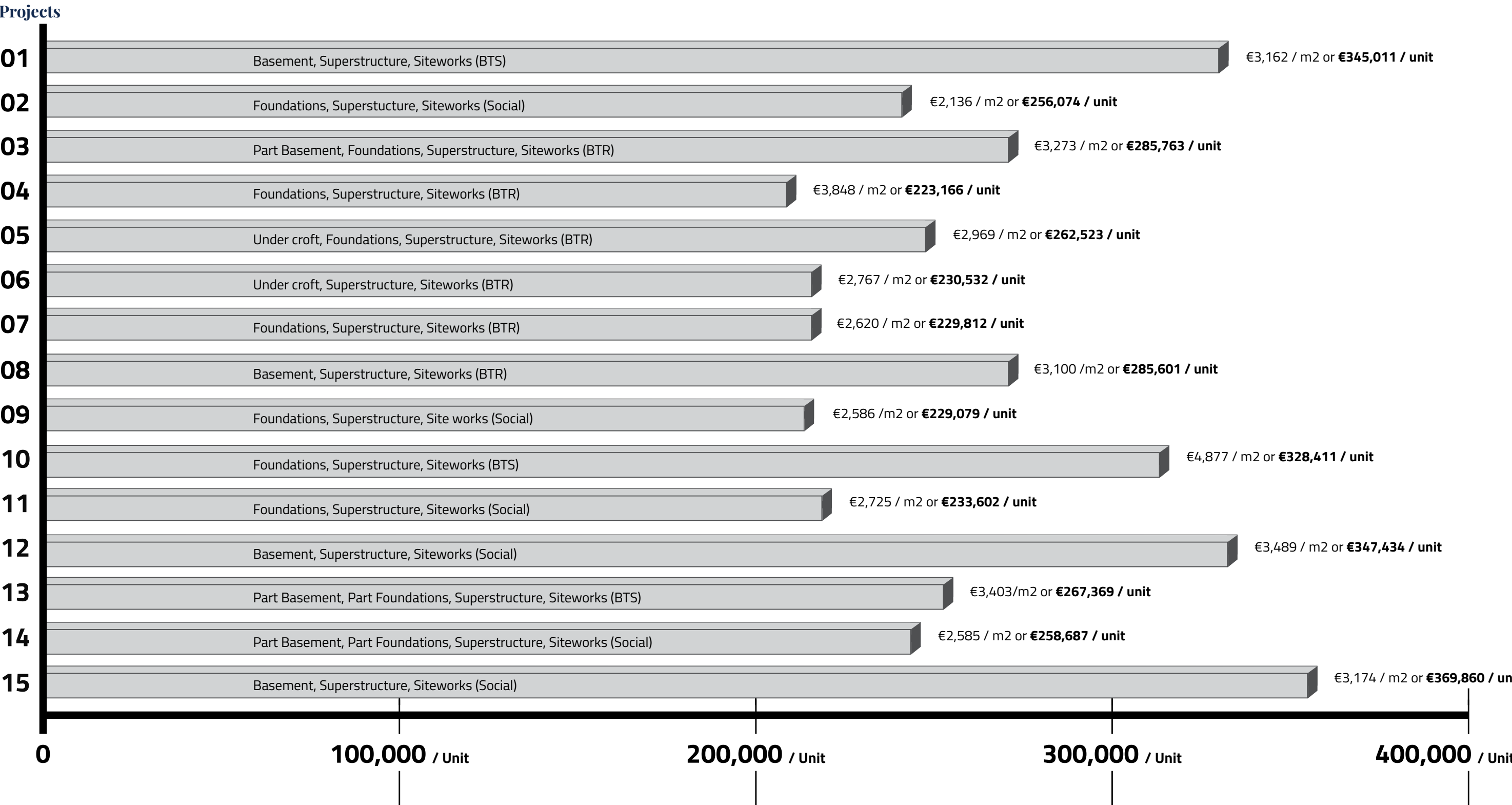
Site Development Works	Cost Range €
Estate Roads	2,000 - 2,500 per m
Roads, Footpaths, Enclosed and Services	120 - 200 per m2
Civic / Public Realm Areas	500 - 800 per m2

Benchmarking

BTS - Build to Sell

BTR - Build to Rent

The following benchmarking is a sample based on 7,500 units at various stages of the project cycle. We have included 15 examples of projects and their associated costs. The figures below are construction costs only and exclude all development costs such as VAT, professional fees, land cost, finance cost etc.,



About Buildcost

Buildcost are a Chartered Quantity Surveying practice based in Dublin, Ireland.

Buildcost was established by founding directors **Liam Langan** and **Jason Tully**.



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We are experts in providing cost consulting on construction and refurbishment projects. We have a strong team of highly motivated and professional quantity surveyors and support staff in our Dublin head office.

We successfully provide our cost management services to a broad range of clients including developers, REITs, public bodies, financial institutions, tech companies, agents, and large contractors etc. We provide a professional service and adopt a partnership approach that ties our own success to that of our clients.

What Sets Us Apart

We have a proven track record for delivering considerable cost savings on large scale projects through our in depth analysis of the key cost drivers and in particular our expertise in value engineering and building efficiencies. The cost savings achieved on previous projects far outweigh our fees.

Buildcost Culture

There are three pillars that make Buildcost stand out...





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