

Q4, 2022

Resibuild

# INSIGHT

M A G A Z I N E

## FUTURE PROOFING:

Making ethically conscious decisions in the residential sector, page 8

GLOBAL INSIGHT FOR THE HIGH-RISE RESIDENTIAL SECTOR



**Editor**

Hi, I'm Sam. I'd love to hear your ideas for future content, feedback on our current work or questions you'd like our experts to answer in future issues. You can reach me at [sam.estall@resi.build](mailto:sam.estall@resi.build)

# EDITOR'S OVERVIEW

Welcome to Insight Magazine. We all know the adage – "it's a small world". Thinking about residential construction from a global perspective is hugely important and so we've dedicated this quarter's issue to trying to make our industry just that little bit more close-knit.

This month's Q&A comes from Nick Haughton, Head of Marketing at Sapphire Balconies, who shares his insight on the life cycle of a building and ways to aim for net zero carbon emissions that could work on an international scale. We're also shedding a spotlight on some interesting housing projects in the Netherlands, New Zealand and Ireland,

we're speaking with Murray Hone about Sapphire's 'Showroom in a box' and seeing how the continuing worldwide rise of material costs could affect your projects.

We're looking further and wider than ever before this quarter and I'm excited to share how the world of residential construction is constantly changing. I hope you enjoy reading through this quarter's issue.

Sam Estall

## UPCOMING RESIBUILD EVENTS



**Event Coordinator**

Hello, I'm Tanya; we run regular CPDs, industry roundtable events and more at Resibuild. To join an event or book a fire safety, design or balcony drainage CPD, you can email me at [tanya.brass@resi.build](mailto:tanya.brass@resi.build)

Tanya Brass



**Hindsight**

Sapphire Balconies' 30th Anniversary Event  
30 Years of Innovation  
8/9/2022



**Foresight**

ICM – Vision of Construction  
9-11 May 2023



**Resibuild | Flagship Event**

Navigating the Fast-Changing Landscape  
The Shard | London | 9/11/2022



# 6500

Sapphire Balconies is on target to manufacture 6500 Glide On balconies this year

# £114<sup>m</sup>

Monthly construction output in UK decreased 0.8% (£114m) in July 2022

# \$959<sup>m</sup>

The top 10 construction project starts in Canada in August 2022 value around \$959 million<sup>1</sup>

# 2.5%

The Dutch construction industry is expected to grow by 2.5% in 2022<sup>2</sup>

# 96%

of Irish construction companies report increase in cost of materials<sup>3</sup>



# Super 'stats'

## References:

1. <https://canada.constructconnect.com/canadata/forecaster/economic/2022/09/top-10-largest-construction-project-starts-in-canada-and-trend-graph-august-2022>
2. <https://www.businesswire.com/news/home/20220809005568/en/Netherlands-Construction-Industry-Report-2022-Industry-is-Expected-to-Continue-to-Expand-in-2022-Boosted-by-the-Governments-Focus-to-Invest-Heavily-on-Renewable-Projects-Housing-and-Transport---ResearchAndMarkets.com>
3. <https://irishbuildingmagazine.ie/2022/10/05/96-of-construction-companies-report-increase-in-cost-of-materials/>

# SPOTLIGHT

 on our charities



## RRT

The Rapid Relief Team offers quality assistance to charitable and government organisations confronting some of humanity's greatest challenges through the form of catering. The RRT has supported those affected by natural disasters, heart disease, cancer and homelessness and is ready to rapidly respond when they are needed most. We have been a long, steadfast supporter of the RRT and will continue to support them as the UK heads into financially difficult times.

## MIND

Our friends at TP Bennett were recently fundraising in support of Mind UK and we are proud to have been supporters of this fundraiser.

Mind provides advice and support to empower anyone experiencing a mental health problem. As one in four adults experience some form of mental health issue in their lifetime, it's an incredibly important charity to support and we are proud to have helped TP Bennett in their mission to do so.

## The Lighthouse Charity

The Lighthouse Charity is a construction industry charity, focusing on providing support to those who need it most in the construction community. This can mean providing access to mental health support, physical therapy, or financial support.

We have supported The Lighthouse Charity in the past through fundraising quizzes during the pandemic lockdown and have donated an extra amount for every person in attendance.

## Get involved

It's important to reach out to those in need and we'd love to help you to do the same. Tweet in a photo of yourself holding this month's Insight Magazine with the hashtag #InsightCharity and we'll donate £10 to a charity of your choice!



UNITED KINGDOM

## UK Gets New Secretary of State for Levelling Up, Housing and Communities

Rishi Sunak has appointed The Rt Hon Michael Gove as Secretary of State for Levelling Up, Housing and Communities and Minister for Intergovernmental Relations. Whilst, Lee Rowley retains

his position as Parliamentary Under Secretary of State in the Department for Levelling Up, Housing and Communities having been appointed by Liz Truss on 7 September.

CHINA

## Skyscraper fire in China

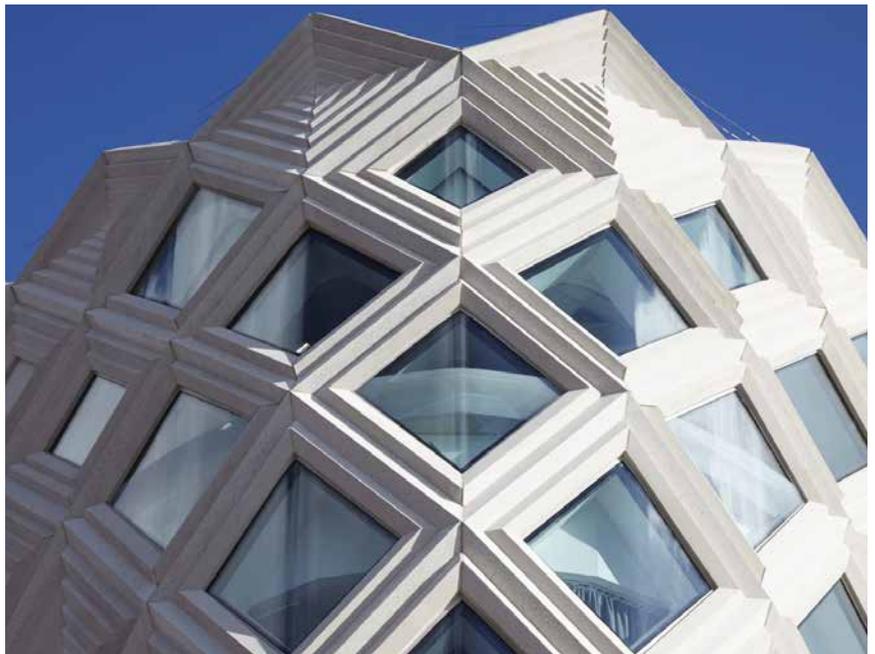
A major fire engulfed a 42-story skyscraper in the central Chinese city of Changsha in Hunan province on 16 September.

The 218m-tall building with 42 stories is owned by state-owned China Telecom, reported the Associated Press. The building was completed in 2000, when it was the first building in Changsha to exceed 200 meters tall with a height of 218 meters, and was also known as the tallest building in Hunan at the time. It is still one of the landmark buildings in Changsha. The building has 42 floors above ground and 2 floors below ground, and is a super high-rise building.



LOCATION

## Sapphire partners with leading precast manufacturers



Sapphire Balconies has announced a partnership with leading precast concrete manufacturer Techrete. This is the latest in a series of similar partnerships the company has announced. Founded in 1985, Techrete is the leading company in the design, manufacture, and installation of architectural precast cladding, serving the UK and Irish construction markets.

As the adoption of modern methods of construction continues to grow, precast and unitised façades have fast become a common method across various European and North American markets

Sapphire has forged close relationships with best in-field specialists, to create better results for customers. Nick Haughton at Sapphire commented "The synergy of working closely with these companies has made a significant difference for our customers as we have been able to create, test and refine new connection methods and easier interfaces which make the connection of balconies to these buildings simpler and more effective whilst ensuring thermal and rigidity are not an afterthought".

# Canada – Becoming thermally efficient

**With how bitterly cold the winter months can be, it's important to keep your home energy efficient, retaining as much heat as possible whilst still providing an essential escape to the outside environment where needed.**

Solutions to thermal efficiency in Canada come in the form of intelligent thermal break design, using anchors cast into the building incorporating a thermal break can keep high-rise buildings capable, economical, and warm throughout the stoniest weather.

Thermal efficiency is the measure by which we understand the rate of heat loss. There is a common misconception that the external envelope will do little to impact the energy efficiency of a building, but this is far from the case. A glazed balcony, for example, can be beneficial for colder climates by creating retention of heat, which can be particularly useful for buildings in the centre of built-up areas with less clean air. By sustaining thermal efficiency, the apartment's resident can keep their home as warm as needed and spend less on their energy bills.

Heat will always travel by the path of least resistance – if there's a way to find new fuel and spread as far and wide as possible, you can be sure that fire will find a way to do so. This is how thermal bridging can occur. If the materials surrounding an object are more conductive than the object itself, the heat can jump through, creating the risk of a thermal bridge.

Homes in North America have traditionally been built with two-by-four wooden studs surrounding fibreglass batt insulation in the cavity. Whilst the fibreglass may have an R-value of R-15 or higher and reduces energy loss, it can only be placed between the wooden studs. Wood is an incredibly conductive material and so can act as a path of least resistance – a thermal bridge over the insulation. Whilst the insulation might reduce energy loss, the thermal bridge means there may not be a break in energy conductivity.

Maximising thermal efficiency whilst maintaining a rigid structure in a condo's design is key. These efficient design choices can include incorporating thermal breaks in tactical locations

throughout your builds to reduce total heat loss – these can be located between the floors and ceilings of the apartments in question, acting as an extra layer of insulation around any penetrations on the building's façade. The insulation materials used to form the thermal break often will help to insulate the small area in question, though architects should also consider good ceiling and flooring insulation around these junctions.

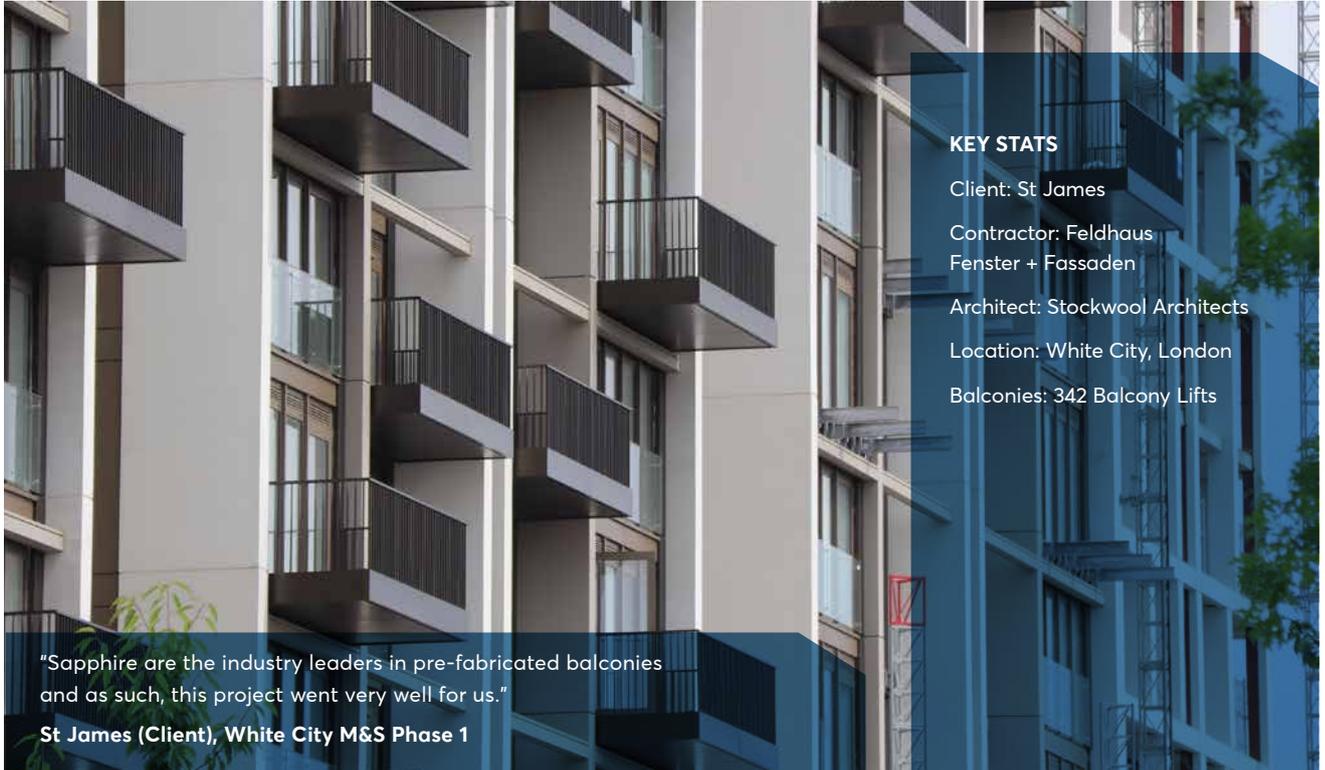
Maintaining a focus on energy and thermal efficiency in Canadian builds will contribute positively to Canada's Carbon NETZERO 2032 policy by keeping apartments warm in the cold months and cool in the hotter months – keeping a comfortable temperature in a resident's apartment can be the difference between an extra tonne of carbon emissions and an extra few dollars per month in your pocket.

Increasing thermal efficiency in every aspect of a person's home can contribute to their well-being both financially & physically and with globally rising energy bills, consumers should take every action they can to reduce costs and keep their homes warm.



Marcos Paulo Prado on Unsplash

# White City M&S Phase 1, W12



## KEY STATS

Client: St James

Contractor: Feldhaus  
Fenster + Fassaden

Architect: Stockwool Architects

Location: White City, London

Balconies: 342 Balcony Lifts

"Sapphire are the industry leaders in pre-fabricated balconies and as such, this project went very well for us."

St James (Client), White City M&S Phase 1

## HISTORY

Situated in the northern part of Shepherd's Bush, Hammersmith, White City is home to many cherished London institutions. Television Centre (formerly the headquarters of the BBC), Queens Park Rangers football ground and the grounds of the 1908 London Summer Olympics all have their roots in White City. In the years since, Imperial College London has opened an innovation hub in the area and White City maintains its status as one of London's most notable suburbs.

## CHALLENGE

The White City M&S Phase 1 project was not without its challenges. The project was the first phase on an enormous scheme with a new team coming together to accomplish the build. Some interesting detailing on the roof made for an extra challenge, as this needed to be considered when installing the 342 balcony lifts.

## SOLUTION

Whilst a huge new project and intricate façade detailing may have been challenging, they were not impossible challenges to overcome. Feedback from the supply chain mentioned that not only did we deliver most of our balconies rigid, ready and right the first time, but we also communicated well and frequently. Once the supply chain became familiar with our Passport system, the process of the installation became much simpler for them. We had reports that the anchors were on par with the best in the industry and that offsite manufacture and storage helped a great deal – with delays on the project, keeping the balconies in storage for an extra 6 months was a huge positive.





Credit: Karsten Würth

# future PROOFING

**Environmental, Social and Governance (ESG) standards are a set of guidelines used by a company to consider behaviours from a socially conscious perspective. Acting from a socially conscious perspective is incredibly important for a company that wants to demonstrate its values and consciously avoid preventable disasters.**

Acting from an environmental perspective can help to stay sustainable. Being socially considerate can help to levy communities in need of support. Dealing closely with governance can help internal controls. Working from an ESG perspective can help to bolster conscious business and so it's worth asking how to become a resolute supporter of ESG standards.

## **Environmental Impact**

Considering your impact on the environment has never been more important than in today's climate. Being aware of your processes and how they can have an impact on, either through harming or safeguarding, the environment should always be a major concern in whatever actions your company takes. Taking a sustainable approach to residential construction is key. Ask yourself questions at every opportunity – how can I reduce my project's embodied carbon? How can I avoid the use of unnecessary materials? How can I make the build of my a project efficient without having to introduce a bulk number of on-site staff? All these questions could raise and address issues with your process and allow you to make early adjustments.

## **Social Impact**

A modern company should take a social approach to their business. How does the company manage a relationship with their suppliers, their customers, or the communities in which it operates? Managing these relationships should be a priority in conducting yourself. Forging relationships with trusted suppliers and accrediting those you have worked well with could lead to a series of projects worth being proud of. Having a series of quality products can have an impact on your consumers too. Innovating in the residential space can keep residents happy and in possession of the quality projects they have invested in.

## **Governance**

ESG can also oversee how a company governs itself. Looking at leadership roles, executive pay, audits, and internal controls is an incredibly important way to make sure a company is operating both morally, efficiently, and correctly.

Implementing tight controls on how your company operates means always being held to a set of standards. Keep your staff knowledgeable on the work they are doing, audit the work you are putting out regularly and make sure there are internal controls on your construction. Missing even one of these could lead to disaster, so keeping a close eye on governance controls from the outset can avoid preventable drawbacks to your work.

Following a code of environmental, social, and strict governance means that you can operate in a conscious, moral, and efficient way without ever compromising on quality. By considering your impact on the environment, community support, and keeping yourself in check at every stage, you can ensure that your company is operating at the ethical standards you have set.





# Variations of balcony installation

**The options for balcony installation on the market are numerous. Some offer incredible speed, others offer sustainability benefits or perhaps offer advantages to cost or health and safety. Various answers to the installation question are on offer, it just comes down to you to decide what option works best for your project's needs.**

## Ultra-low-carbon alternative

New, intelligent systems are on offer and the industry is constantly evolving. Current developments in anchor management mean that balconies can be attached to a building's façade using fewer, smarter connections. This not only reduces the load on the wall but reduces potential thermal bridging, putting the apartment at a lower risk of heat loss.

The sustainability benefits of this upcoming system are enormous. By reducing the penetrations in the façade of a building, not only will less operational carbon be emitted after the building is in use, but less carbon will be emitted when first constructing the building. Saving on both embodied and operational carbon is a great benefit and will keep the balcony sustainable for long-term use.

Finally, by reducing the penetrations in the building's façade and guaranteeing fewer carbon emissions, the overall cost of the building can be reduced. These savings include but are not limited to reduced crane costs, simpler fire and waterproofing detail, and increased ROI on the finished apartments.

## Remote locker installation

Safety during installation is key, so using a modern, innovative installation solution may be beneficial. The Remote Locker is a smart device, no bigger than a toolbox, which allows for the installation of a balcony in an advanced, safe, and cost-effective manner.

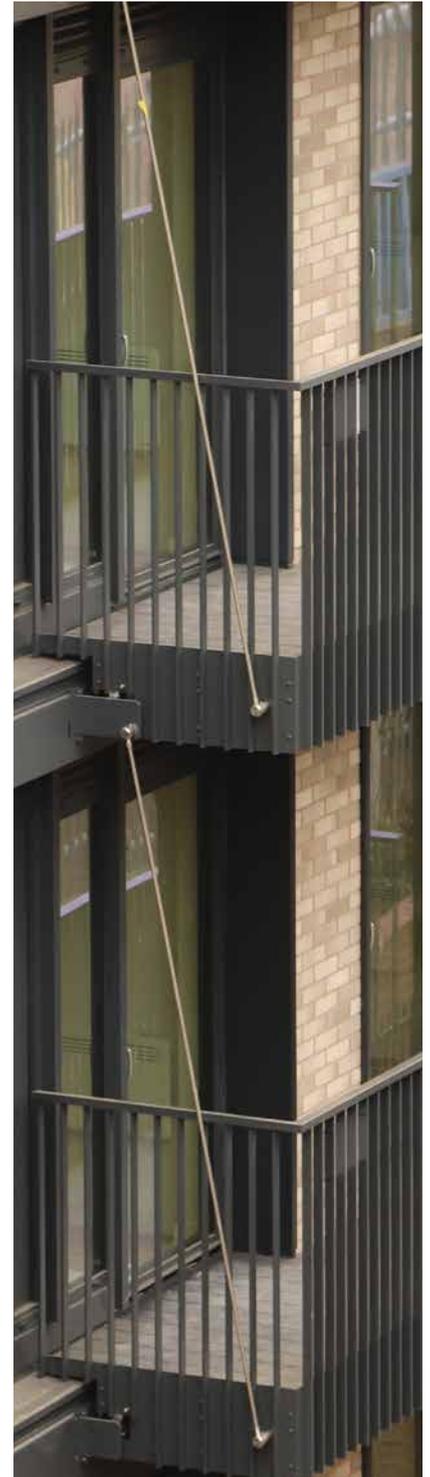
The Remote Locker design allows balcony arm connections to be installed inside the balcony at the factory. This comes with cost benefits at two major junctions. Firstly, time spent at the arm casting stage is reduced as only the stub arms will need to be fixed to the building's façade. Secondly, labour costs can be reduced as the arms are already fitted inside the balcony, so less time will be needed to fit a two-piece arm onto the stub bracket.

Cost improvements often marry well with sustainability goals – by using an innovative installation technique, the time spent on site can be reduced and so too will the carbon emissions present in longer installations.

## Tie-rod installation

Sometimes, simplicity can be the difference between being stuck in thought and inspiration. Using a simple design like a tie-rod can bring great benefits to your balcony project. The connections, beyond just reducing force on the balcony anchor, are incredibly versatile and can be attached to almost any type of balcony façade.

A tie-rod anchor is massively beneficial from an environmental perspective. Due to the smaller anchors needed, less penetration is needed into the building's façade during the casting stage. With less penetration comes far less risk of thermal bridging and heat loss during the building's lifespan. Furthermore, with less metal used in the anchor itself, a tie-rod anchor can make for an inexpensive and sustainable balcony connection solution. This inexpensive and sustainable solution would be perfect for areas with colder climates such as Northern Europe or Canada and as such, is a recommended installation variation for those regions.



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# TORONTO'S showroom in-a-box

With the Greater Toronto Area set to overtake Manhattan as the high-rise capital of North America, the home of Canada's largest architectural firms and builders made Ontario a natural location to place our showroom. Considering the Greater Toronto Area is consistently one of the best performing real estate markets, supply is never able to keep up with demand.

The showroom in a box is our modular solution to showcase Sapphire's innovative 30-year history in an up-close and personal format. Multiple balcony, flooring and railing configurations are on display and able to be interacted with.

Balcony and condo design differs in Canada partly due to the thermal inefficiencies of concrete balconies, combined with the dangers of working at height, maintenance costs and lack of accessibility. This has made Sapphire's entrance into the Canadian market a welcomed one.

Interacting with potential customers in the showroom is a great source of joy - people are here to find new and innovative solutions to build better. I get to dream with designers about achieving their architectural vision, occasionally

get peppered with the details from blunt old school builders, or sometimes have customers ask when we'd be returning as they wanted to bring others along.

With all this excitement, it's important to note the Canadian residential market is quickly heading towards new energy standards (such as the Toronto Green Standard or Energy Step Codes) that will force changes in how buildings are constructed. There has been an emphasis on aesthetics and cost rather than performance.

Our top priorities in Ontario are to let everyone in the building industry know that Sapphire Balconies is now manufacturing and providing innovative solutions in Canada. We'll be educating the construction community and industry leaders about inferior conventional methods whilst demonstrating time and energy saving modular balcony solutions. The Canadian market is incredibly exciting - getting to know our potential customers has been a great benefit and whilst 2022 has been a fantastic year for us, we can't wait for what 2023 will bring.

**Murray Hone**  
Business Development Manager,  
North America - Sapphire Balconies.



# ASK THE EXPERT



## NICK HAUGHTON

It is now mandatory in many countries to build properties as 'net zero ready' by 2030. With this date now rapidly approaching and with a global focus on achieving net zero carbon emissions by 2050, Nick Haughton, head of UK and global marketing at Sapphire Balconies looks at some of the key issues surrounding reducing carbon and how best to achieve it.



### How green is my balcony?



With less than a decade until the zero carbon emissions goal for the building sector across most of the world's developed markets, manufacturers of materials and components – such as balconies – are keen to show the green credentials of their products. But there are pitfalls for the unwary. For example, the shade of green can vary considerably – and in some cases the notion of compliance may even be an illusion. This has huge implications for residential development because if Net Zero – or at least a substantial step towards it – is not achieved before the first residents move in, it may never be achieved.



### What's changing with regard to carbon?



In most markets, 2030 is the target date for Net Zero, and governments are working on regulatory changes to ensure the goal is achieved. The United Kingdom, for example, has already modified parts 'F' (ventilation), 'L' (conservation of fuel and power), 'O' (overheating) and 'S' (infrastructure for charging electric vehicles) of its existing building regulations. It is currently developing an additional 'Part Z', specifically to reinforce the drive towards Net Zero.

Similar upgrades to building codes are in progress in Canada and the United States through the International Code Council and the American Society of Heating, Refrigeration and Air-conditioning Engineers (ASHRAE).

It is not inconceivable that the screws will tighten further if the move towards Net Zero fails to maintain the necessary pace.



### What are the essential areas for reducing emissions?



At Sapphire, our interest in the move to Net Zero arises because balconies – along with windows – are regarded as vital ingredients for a quality lifestyle in the medium and high-rise apartment buildings typical of today's urban residential developments. Both penetrate the building envelope, potentially draining heat from the interior, increasing demand for energy to sustain comfort levels.

This is 'operational carbon' – and if unchecked it could be an immensely burdensome cost in terms of emissions over the 60-plus years of a building's life.

But also important is the concept of 'embodied carbon' – typically the energy that goes into the production of component materials and the installation process itself.

Q

## Should the focus be on embodied or operational carbon?

A

Sapphire recognises the importance of both the operational and embodied carbon in the Net Zero process. As a manufacturer, our focus is on minimising the embodied carbon in our balconies – through stronger, lighter constructions. These bring an automatic ongoing reduction in operational carbon without compromising the strength or stability of the balconies. This becomes reality through the use of fewer, smaller penetrations of the building envelope and efficient thermal breaks on the steel arms that support the balconies.

Q

## What's the role of EPDs?

A

Other manufacturers may take a different course to demonstrate the green aspects of their systems. For example, some rely on an Environmental Product Declaration (EPD), which normally provides a verified method of product comparison. However, there are various naming conventions, which may be misleading to customers and make comparisons difficult.

We believe some companies actually use EPDs with intent to mislead. We also believe that terms such as 'carbon neutral' and 'zero impact' are often used to 'greenwash' products and projects.

Q

## How should suppliers be qualified?

A

Equally misleading are the decorative – but mostly worthless – website badges that pretend to prove compliance or other standards. The only real standard is ISO14001, which specifies requirements for an effective environmental management system. Sapphire is proud to have maintained this international standard since 2009.

In our view, as ISO standards are difficult to achieve, companies that enjoy ISO accreditation are likely to be reliably compliant.

## OTHER PITFALLS TO NOTE

**We know that some companies focus on specific minor aspects of their performance in order to disguise weaknesses elsewhere. What really matters is that steps are taken to minimise emissions – for example, through recycling wherever possible.**

**The industry is often accused of excessive emissions resulting from transport of materials and equipment to building sites. But the fact is that transport represents only around 1% of total emissions on a given project. So even if transport emissions could be cut by 70%, project-wide that would be just 0.7%.**



### The Grange, Dublin, Ireland

The Grange is an impressive residential site in South Dublin complete with stylish balconies and easy access to Dublin Airport.

### Ontario Condos

Casting a striking appearance above this Ontario town, these condos are illustrative of the bold geometric architectural style Canadian apartments are known for.



### Residential street (The Netherlands)

This street of apartments and houses uses smart façade design to marry balconies and brickwork in a truly European way.



### Kenepuru, New Zealand

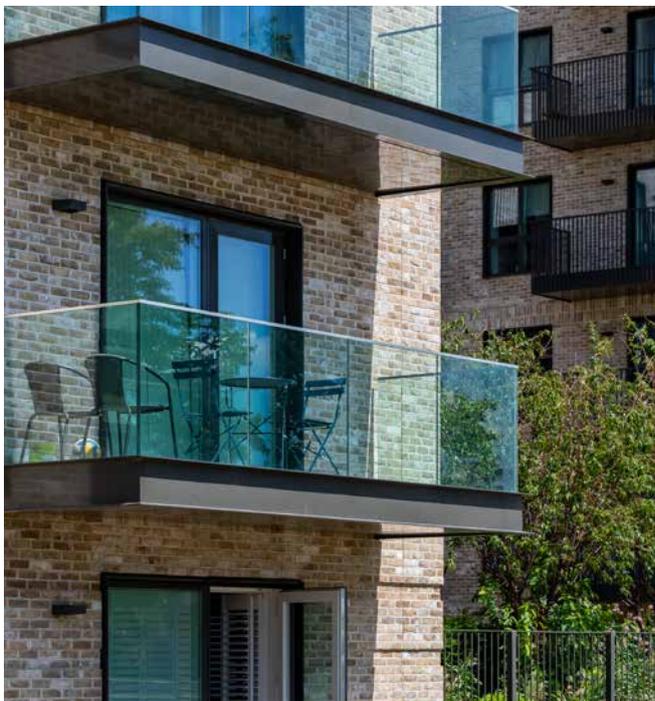
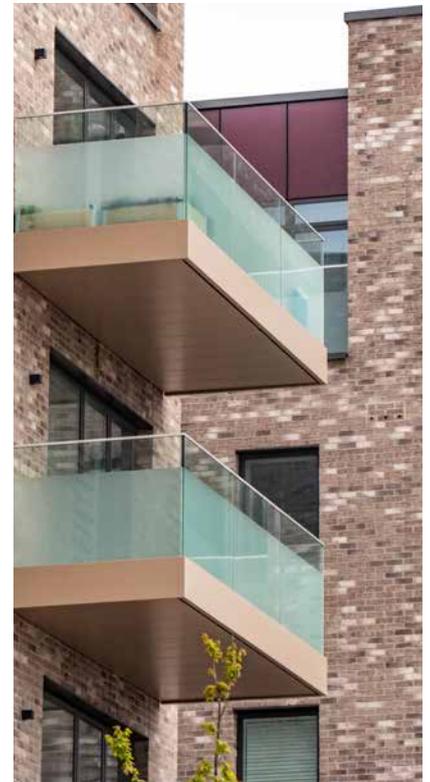
Kenepuru is a site in Wellington, New Zealand that has been in construction since February 2020. Whilst the global pandemic halted progress a little, the site is still looking fantastic.



**London Dock Blocks A & B**

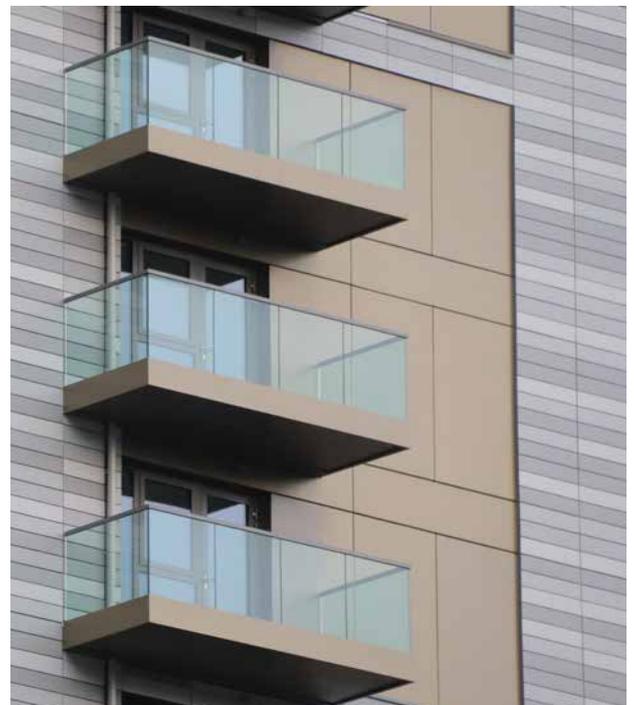
Set against the home of Tobacco Dock and the King Edward Memorial Park, this beautiful combination of vertical bar balustrades and frameless structural glass balconies give this building in Wapping a modern aesthetic.

**Greenwich Millennium Village Phase 6**  
Sustainability and inclusivity are at the heart of this project, creating eco-friendly homes for the existing and growing communities in Greenwich



**The Green Quarter, Phase A (Southall Waterside)**

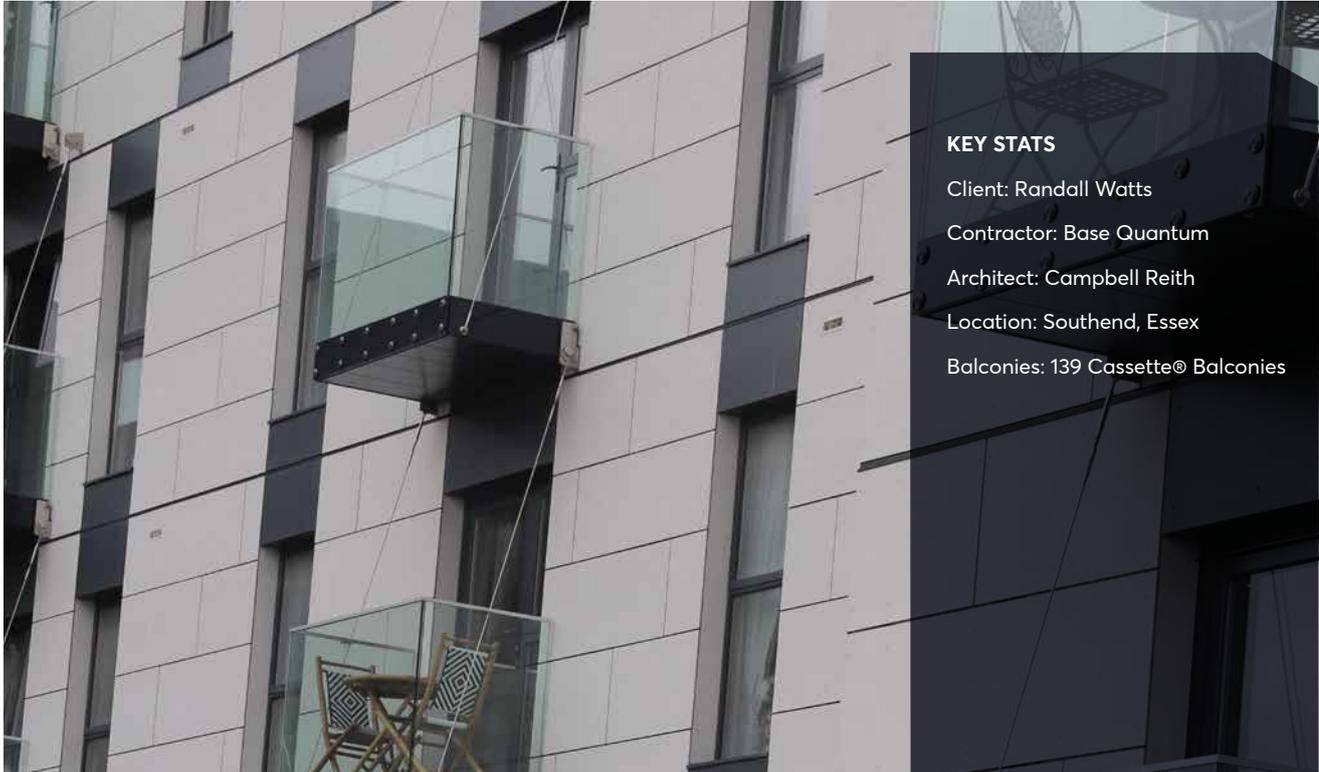
This multi-phase scheme is one of London's largest regeneration projects and will deliver over 3,500 homes to the borough.



**Dudley House**

The flagship development of the City for All scheme is a mixture of studio, one-bedroom and two-bedroom units that overlook the historic City of Westminster.

# Beaumont Court & Richmond House



## KEY STATS

Client: Randall Watts

Contractor: Base Quantum

Architect: Campbell Reith

Location: Southend, Essex

Balconies: 139 Cassette® Balconies

## HISTORY

Southend-on-Sea is a city in the southeast of Essex. Growing over time from a small seaside resort to one of the UK's premier technology hubs in the late 1960s, the city was largely redeveloped for commerce and retail and was famous for its annual air shows until 2012. The Beaumont Court & Richmond House project was an ambitious design, re-purposing two vacant office blocks as 280 apartments, complete with two modern roof terraces.

## CHALLENGE

The main challenge with this project was that it was the renovation of an existing building, meaning anchors couldn't be cast into the slab. The team had to find a way to secure the balconies to the building and achieve a high level of rigidity while not knowing the exact strength of the existing floor substrate of a long-term derelict building.

## SOLUTION

To overcome the challenges posed by the existing slab we worked with the site and engineers to design a unique anchor and tie wire system to suit the needs of the project. Considering the existing structure, the size and weight of the balconies a bottom bracket was fixed to hold the balconies with tie wires for the below balconies restraining from the same brackets.

Tie wires securely cantilever the balcony off the building while giving a unique aesthetic finish. This meant the balconies were safely secured to the building slab for taking momentum forces like a traditional bolt-on/Glide-On™ approach.



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*Job: Wates NW06*  
*Steve Harris*  
*OCL Facades*



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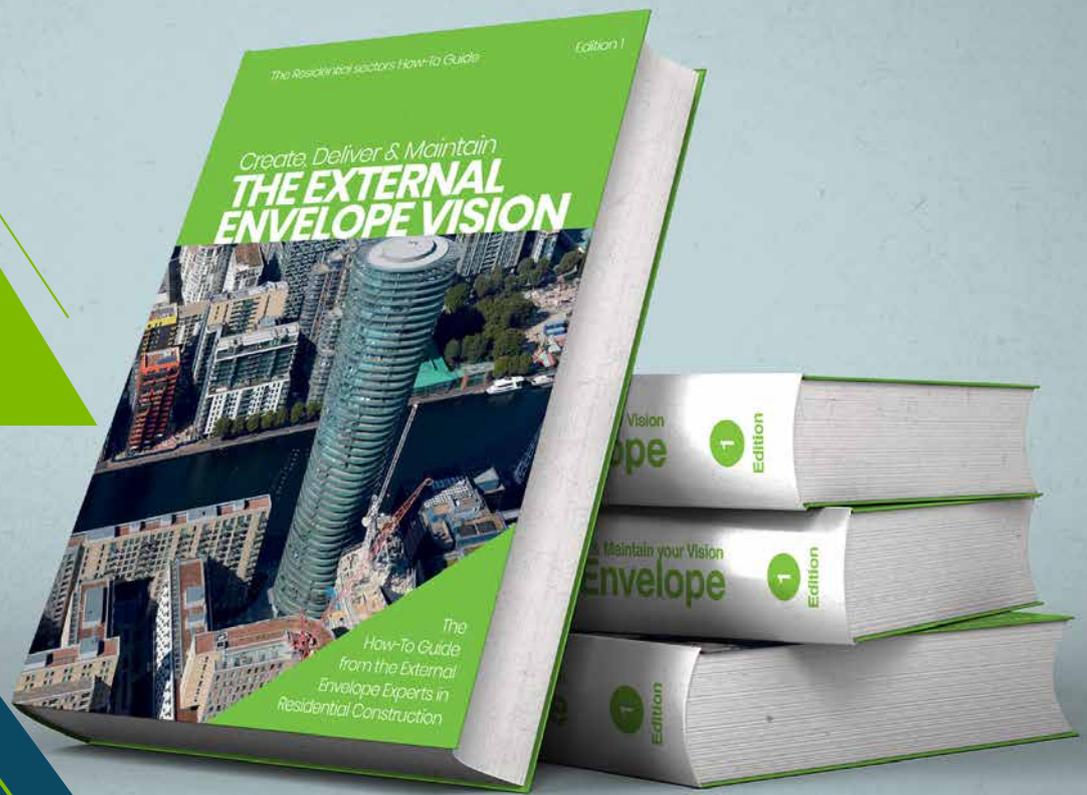
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# Non-structural

# VERTICAL COLUMNS



Vertical Columns have played a vital role in the architectural world throughout history, starting as a support structure for the building but quickly becoming an aesthetic feature. Architects often look to create a distinct architectural language using balconies and columns are certainly an enabler to do just that, adding a sense of grandeur to the building. Vertical columns are particularly common on low-rise buildings, and it has moved from a purely functional role to an increasing trend of being creative with the façade and appeal of the building.

The 'stick-built' approach is the standard approach to implementing vertical columns in balconies. Vertical columns are stick-built onsite by general fabricators and will often require a small padstone or foundation because they are a structural requirement.

However, this approach does not appeal to most offsite balcony manufacturers. They believe in high-quality factory finish, which means installing balconies, should be the last activity on the façade, even after removing the scaffolding. Installing columns for high-rise buildings becomes a massive challenge with no proper access.

Non-structural aluminium extruded columns have been created to address the current challenges with installing feature columns onto building façades using clinically high-quality aluminium extruded columns. This method both produces a neat and lightweight balcony column and additionally, the non-structural function allows lightweight materials instead of heavy steel sections with no need to fix back to the ground.

Further to their physicality, non-structural columns are designed to be lifted with the balcony to overcome site installation needs for scaffolds or other external access, which is the perfect solution for high-rise buildings. What's more - non-structural columns are highly customisable, with a huge mix of colours available, making them attractive for architects. Architects will have the ability to pick colours that match the balconies or let their creative flair shine by choosing contrasting colours.

Whilst vertical columns have played a vital role as a support structure throughout history, the introduction of a highly customisable, lightweight column could mean a new dialect of architectural language coming into the foray in the years to come.

# Smart solutions slow price spiral and avoid lifestyle feature cutbacks



Credit: Michael Bader

Statistical forecasts for the construction sector are often tainted by gloomy evidence of fast-rising costs, but smart solutions could help to slow the residential price spiral to avoid major cutbacks on the features that customers want.

Close collaboration with the supply chain is undoubtedly one of the smartest solutions in construction, giving businesses at all levels at least some leeway to accommodate fluctuations in price and supply.

On paper, the statistics are grim. General building costs are set to rise by 17% over the coming five years, giving good reason for concern over the whole development sector's ability to meet demand – especially for residential accommodation – without pushing selling prices to impossible highs.

The cost surge was predicted earlier this year by the UK's influential Building Cost Information Service (BCIS). Its five-year forecast includes a 24% increase in tender prices and a 15% hike in materials prices – having already hit a 40-year high back in 2021.

By way of example, some of the key costs Sapphire faces in the offsite manufacture of balconies have risen sharply over the past three years. For example, global spot rates for aluminium were 1,502 USD/ton in the first quarter of 2020 and \$2,821 in the second quarter of this year – after hitting £3,363 in the first quarter. In the same timeframe, steel prices, in Chinese yuan per ton, rose from 3,430 to 5,017 with a peak 5,543 in the fourth quarter of last year.

Like many other suppliers in the construction sector, Sapphire is also closely watching the impact of currency fluctuations on imported materials as well as factory and office labour costs. For example, in the wake of Brexit-related labour shortages, contractors and others in the building supply chain are facing ongoing difficulty attracting sufficient numbers of appropriately skilled workers.

Many extraneous factors have contributed to financial uncertainties in the construction sector: Brexit and the Covid-19 pandemic took much of the blame in previous years. Now, the Russian campaign against Ukraine is undoubtedly fuelling concerns – as is the UK government's recent instability and its handling of economic issues in general.

We recognise that property development team face the dilemma of balancing market demand for fair-priced, conveniently located, quality homes – of course complying with official standards of performance, aesthetics and safety – against pressure from suppliers striving for the proverbial 'honest day's pay'.

At Sapphire, we see considerable merit in ongoing close monitoring of costs, active steps towards smarter working, and open communication with customers.

We are aiming to supply 6,500 balconies this year and have healthy forward orders. Our capacity in design resource and factories puts us in a good position to meet the demands of a growing order book.

We can't be sure about all building materials and components, but our approach to market-monitoring and our experience in offsite manufacturing may well apply to other systems and materials for residential developments.

In our view, an offsite-built balcony is a great example of a smart, economical solution that is easy to design, build and install while ensuring long-term lifestyle benefits for apartment-dwellers.

Economy comes from efficient production-line manufacturing and fundamental good design, based on a wide range of materials for the visible parts – such as balustrade and soffits – and the mostly unseen elements, such as the support arms and drainage systems.

Further economy comes from efficient, timely deliveries to site plus techniques for fast, safe installation at any height. In fact, by removing complexity in balconies we are helping customers to save many hundreds of thousands of pounds, while rapid installation is a great productivity booster.

Maximum rigidity with cast-in anchors and strong support arms avoids fears about user-safety, while thermal breaks in the support system ensure the balcony does not drain heat from the building envelope – presenting a lifelong 'green' opportunity.

In short, it's finding wide-ranging solutions like this that will help everyone in the delivery chain to meet regulatory and aesthetic standards within acceptable cost parameters – without, ultimately, leaving residents uncomfortable and facing unnecessary bills.



Credit: Johnny Sanchez





Learn more  
about ESG/  
sustainability

[www.balconies.global](http://www.balconies.global)

# ESG/Sustainability

## Your challenge

Maintaining a sustainable project, compliant with environmental, social and governance guidance, that isn't undermined by the series of balconies installed.

## Our solution

Sapphire are committed to lowering carbon emissions in every stage of the balcony project. By using their innovative Glide-On Cassette technology, time spent on site can be reduced and fewer carbon-rich materials need to be fabricated. Contact us to find out more.

Call 0344 88 00 553 | [www.balconies.global](http://www.balconies.global)