

# OCE BALCONIES

## OFFSITE SOLUTIONS FOR APARTMENT BUILDS



Offsite fabricated, fully finished balcony product solutions.  
From design through to efficient installation.



## O'CARROLL ENGINEERING (OCE) & BALCONIES

O'Carroll Engineering (OCE) was established in 1990 and over those 30 years we have worked on numerous styles and shapes of balconies with varying finishes and installation methods. These included single domestic projects to multiple balconies in commercial developments. From cantilevered to self-supporting structures to traditional bolt-on solutions.

### OCE BALCONY PRODUCT SOLUTIONS – OFFSITE FABRICATED FOR VOLUMETRIC RESIDENTIAL BUILDS

OCE have combined experience and advanced fabrication resources to design offsite manufactured cantilever balcony products tailored to 'fast-track' build needs of clients. Specifically for clients' working on large residential builds utilising modern methods of construction (MMC).

Solid structures, beautifully finished, these balcony products embody the advantages of offsite fabrication and represent an opportunity for clients to save significant time onsite. Less trades required and considerably less demand on key resources.

*"Offsite fabricated balconies, delivered to site ready for safe and quick installation, saving significant site time with considerable less demand on key site resources."*



## OCE BALCONY BASE MODELS

- Mild steel galvanised base frames are finished with soffit & fascia, mild steel galvanised or glazed railings and a choice of aluminium or composite non-slip fire rated decking, drained or free-draining.
- Designed to integrate with volumetric build methods - BIM compatible, certified products.
- Certified and regulation compliant
- Designed to integrate with volumetric build methods  
If required, standard models can be tailored to specific client build methods, structural needs, size and aesthetic brief.
- Optimised to meet 'outdoor space' requirements, to ensure a solid feel underfoot and enable fabrication and fitting efficiencies.

*"Keeping balconies uniform sizes as much as possible and reducing the number of different sizes of balconies on a building enables clients maximise the time and cost savings to be gained from offsite volumetric build methods"*

## FINISHING OPTIONS

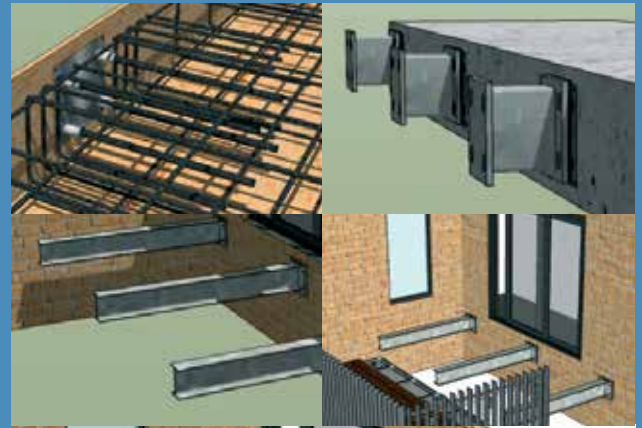
- Mild steel railings: - galvanised, powder coated or wet sprayed to RAL of choice
- Frameless glass and stainless steel & glass options
- Decking: - fire rated, non-slip composite or aluminium options (incl. class A2 non-combustible aluminium option).
- Drainage and soffit options.
- Options can be tailored to client specific build method and encompass support methods, stubs, anchoring systems and thermal breaks (can work with standard industry options or supply in-house solutions).
- Shape options include - projecting, recessed, semi-recessed, corner, or terrace.

## FIXING

- We can offer fixing methods to steel structures, precast exterior cladding and traditional concrete builds.
- Each project is assessed individually and tailored specifically.
- OCE balconies available in Supply Only or Supply & Fitted by OCE fitting crews.

## FULL DESIGN CERTIFICATION

- All balconies can be tailored to project performance specification requirements – in particular in relation to frequency, deflection and thermal bridging.
- Balcony elements designed and independently tested to relevant Eurocode standards in all aspects including deflection and vibration limits.
- Balconies are designed to have a natural frequency >6 Hz and deflection limited to Span/180.



# Benefits of the OCE balcony system in volumetric builds

## SEQUENCE AND SPEED OF WORKS

As the balconies are delivered ready-to-install at the end of the project then the ongoing co-ordination of multiple trades and build elements can be streamlined or eliminated.

Significant site hours may be saved. Taking an example of a traditional concrete built deck, many activities may be removed and there is considerably less demands but on key resources.

- Structure (concrete balcony)
- Carcassing (of steel works)
- Completion of soffits & fascia's
- Balustrading installation
- Protection of each of the above as they occur
- Reduction in attendances to balcony works, in particular – craneage

## SCAFFOLDING

The system permits the easier progression of the scaffolding. The scaffold follows the building perimeter and does not need to step out to accommodate balcony structures especially where some developments have staggered balconies over each other (standards do have to avoid cantilevered beams if such beams are to be installed before scaffold removal).

It may also be stripped earlier and allow for more efficient finishing of envelope elements.

## DRAINAGE & WATERPROOFING

Particularly with concrete decks, waterproofing and drainage can be tricky as well as requiring multiple trades. This element may be eliminated as drainage system can be designed into and accommodated within the steel balcony structure. Accommodating these services as well as electrical can be an issue with concrete built but not within the steel structure.

## THERMAL BREAKS

Concrete built balconies will generally require continuous thermal breaks whereas the OCE balcony design requires intermittent breaks at the locations of the stubs / supports. Non-continuous breaks will offer a saving and we can offer a number of options - from Schoeck thermal systems to in-house manufactured solutions.

## WEIGHT OF THE STRUCTURE VERSUS CONCRETE

The physical depth of the concrete or perimeter down stand may be decreased with the use of the steel balcony and agreed structural fixing details.

## INTERFACING WITH BUILDING

Interface details are agreed early to allow for the required tolerances and easily accommodated during fitting.

## GENERAL ADVANTAGES OF OFF-SITE FABRICATION, FACTORY CONTROL FABRICATION ENVIRONMENT FACILITATES.

- Improvements in quality of finish.
- Health & safety is controlled.
- More environmentally friendly – less trips to site by multiple trades.
- Protection of works reduced or eliminated as installation is at the final stages of build.

## OTHER ADVANTAGES OF THE PROCESS

In today's covid-19 driven site safety, considerably less people on site for shorter periods of time with easy traceability. Less exposure to accidents and less management required of Healthy & Safety activities. Less burden on site welfare facilities, parking, WC, canteen, storage etc.



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