

# NES Architectural Ltd



NES | ARCHITECTURAL

[W/nes-solutions.co.uk](http://www.nes-solutions.co.uk) T/01206 843200

<http://www.nes-solutions.co.uk/architectural>

## Who Are we?

NES Architectural is a family owned business, based in Colchester. The manufacturing facility is 70,000 sq. ft with a staff of over 50.

## What do we do?

### N E S | A R C H I T E C T U R A L

NES Architectural specialises in 3D design, architectural cladding and feature metalwork.

In the wider NES group, the architectural offering is complimented by the other two divisions:

### N E S | S I G N S & P R I N T

Our signs division has over 30 years' experience producing retail displays, corporate signage, wayfinding, wide format digital print and event branding. Over the years the diverse skills and expertise of our team have attracted a who's who of the high street and blue chip commercial brands.

### N E S | L I G H T L I N E

Our LED Lighting division "NES Lightline" specialises in high quality illuminated displays and LED Light Boxes. This include major LED projects for corporate receptions, shopping malls and facade lighting.



# NES Architectural - Capability

4m x 2m water jet cutter



T1600 Trumpf Punch



Challenger Punch



8 meter guillotine



8 meter brake press



4 meter brake press



8m double head saw.



Double head mitre saw.



8m CNC 6-headed machine centre



# NES Architectural - Capability

## Coded MIG and TIG Welding



## CD Studd Welding



## CD Studd



## 3m x 2m Flat bed routing



## 3m x 1.5m Flat bed routing



## Grinding and fettling



## 4.1m Roller



## 3.2m CNC Roller



## Extrusion Roller



## Eckold forming



# Manufacturer of Cladding and Façade Products



# PROJECT PORTFOLIO



257 City Road - The Canaletto Building



Borough High Street



Royal Court Theatre, Liverpool



Broomfield Hospital



Coca Cola



Fetter Lane



London Bridge Station



Grosvenor Waterside



Highline 23



Castle Mall



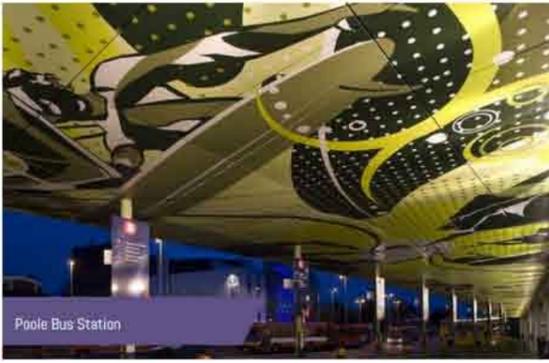
Liverpool University



Playboy Smoking Terrace



PWC HQ



Poole Bus Station



Global Switch



Aquis House - Kinetic Façade



St Elizabeth House



LOCOG - Anodised Public Art



28 Savile Row



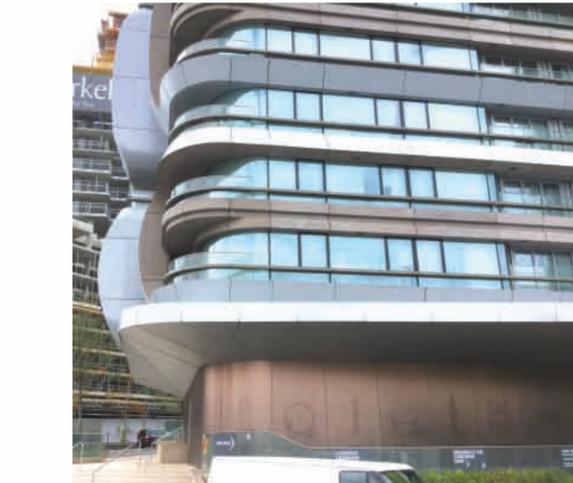
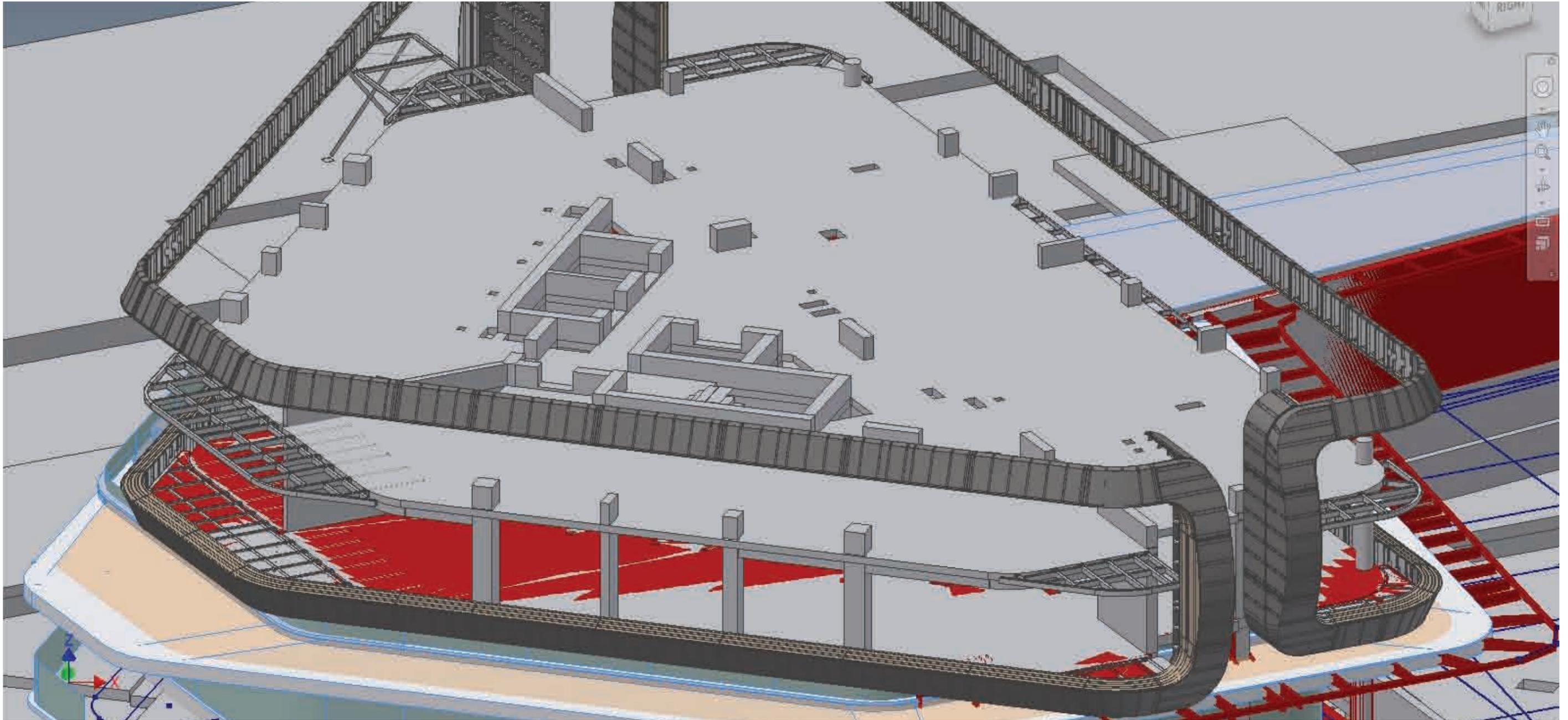
Old Church Street



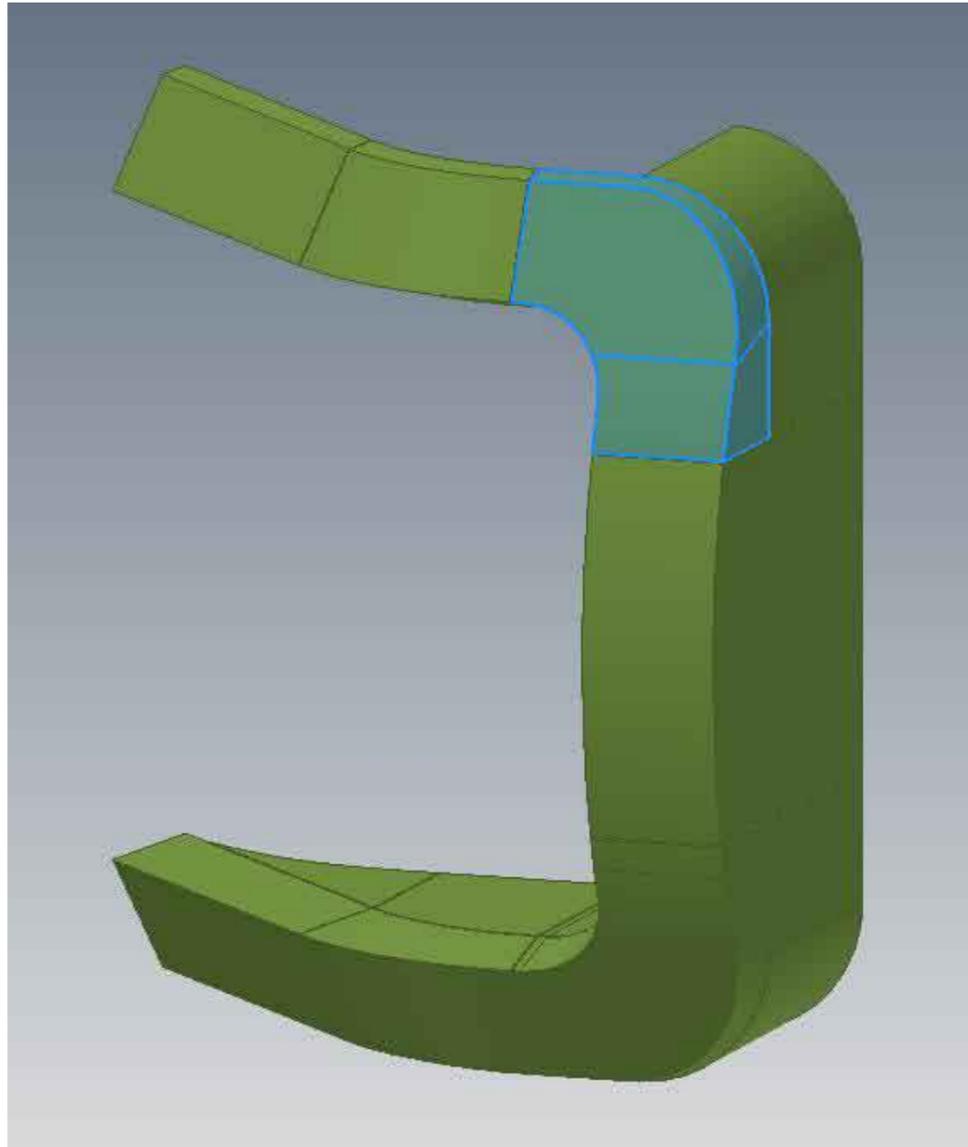
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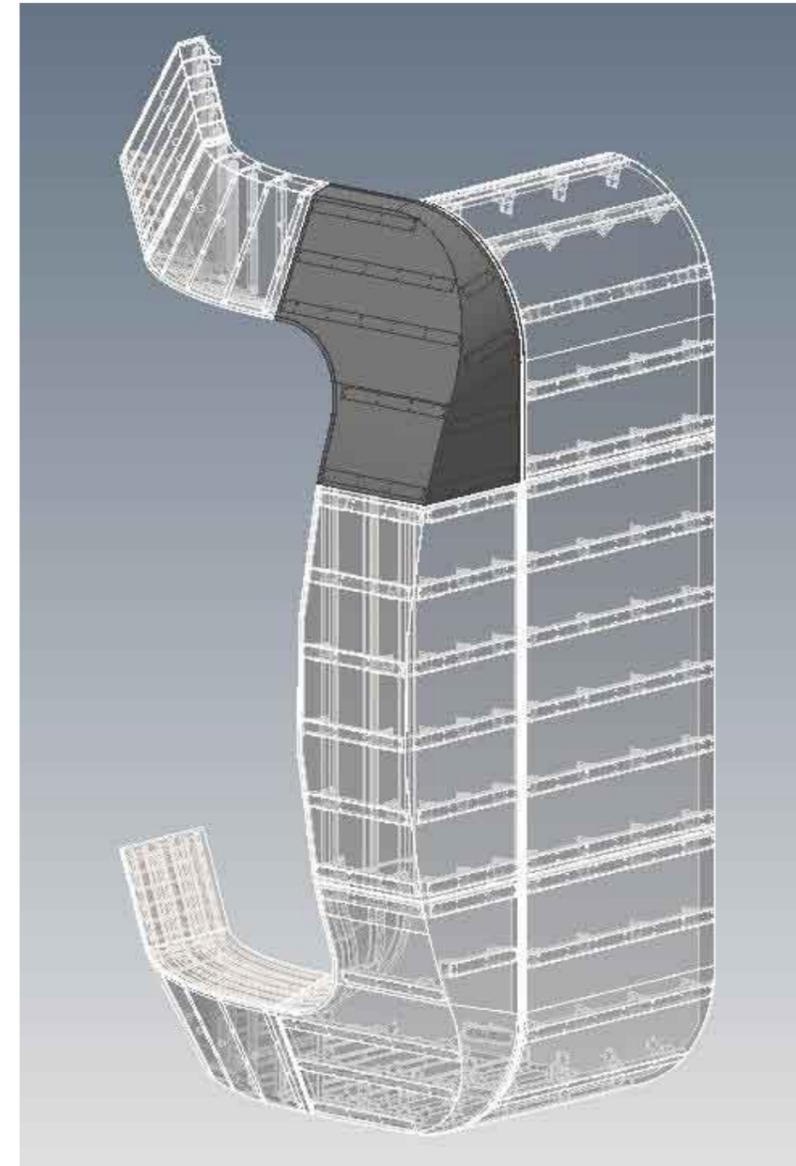
# 257 City Road - 257 City Road - Canaletto Tower - aluminium megaframe feature cladding



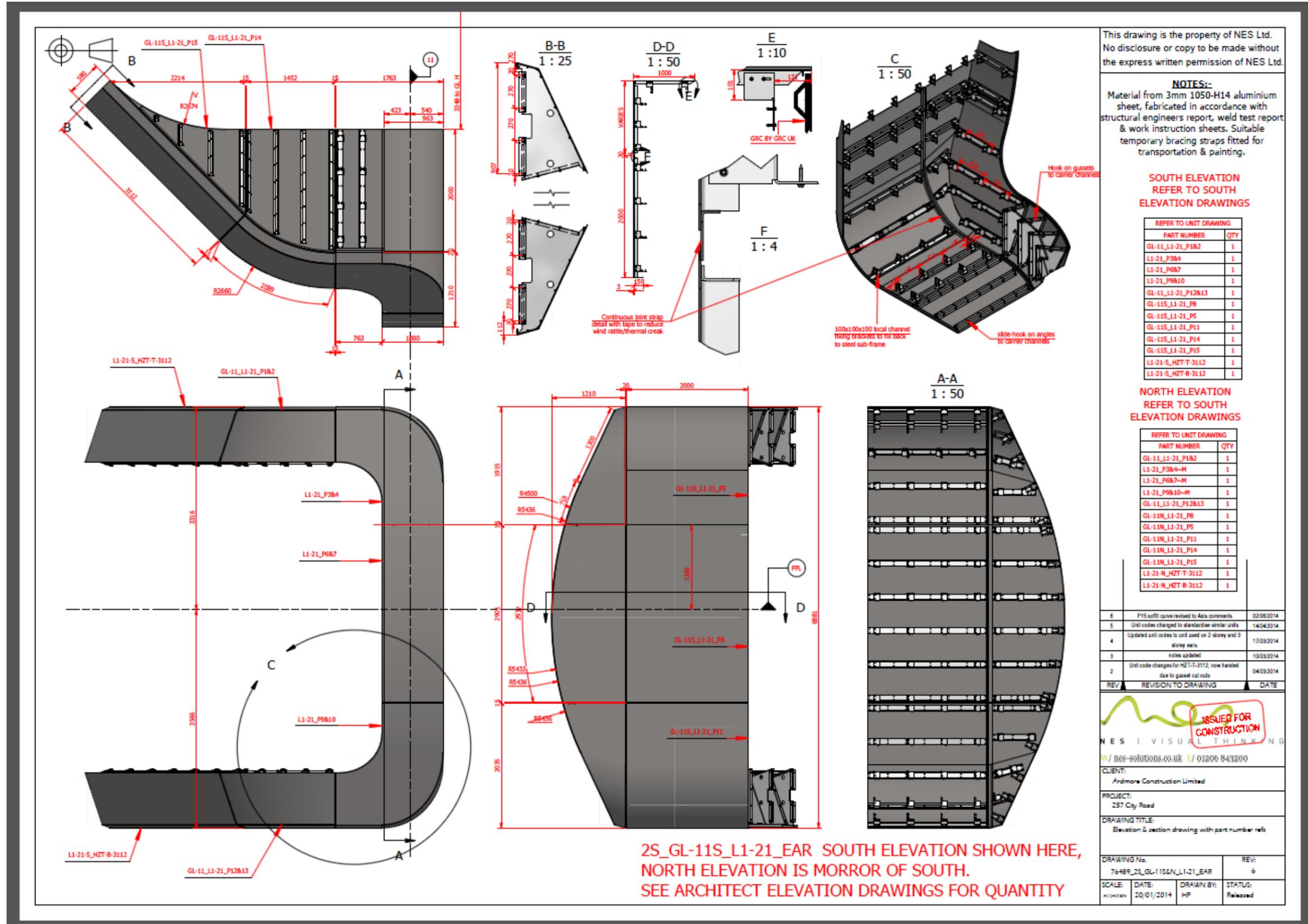
## Initial Solid Block 3D Modelling



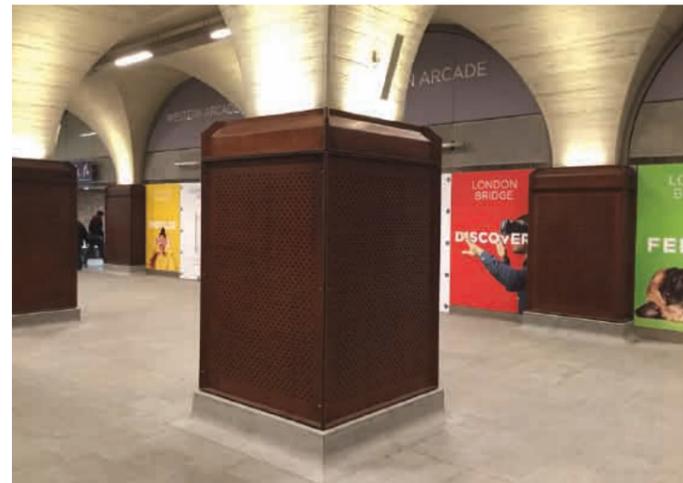
## Model Assembly



# Design Drawing



**London Bridge Station- Costain - 10mm Chemically rusted Corten. Acoustic Panels. Design, Manufacture and Installation.**



# London Bridge Station- Costain - 10mm Chemically rusted Corten. Acoustic Panels. Design, Manufacture and Installation.

NES has recently completed the **Corten Column Cladding at London Bridge Station**. This is the link between the underground and the network rail station. The original quadripartite vaulted ceiling was also exposed during these works. The initial design was for perforated stone column cladding. The cost and risk of damage involved with this moved the concept on to steel cladding. Different surface finishes were explored in bronze, blackened steel and Corten.

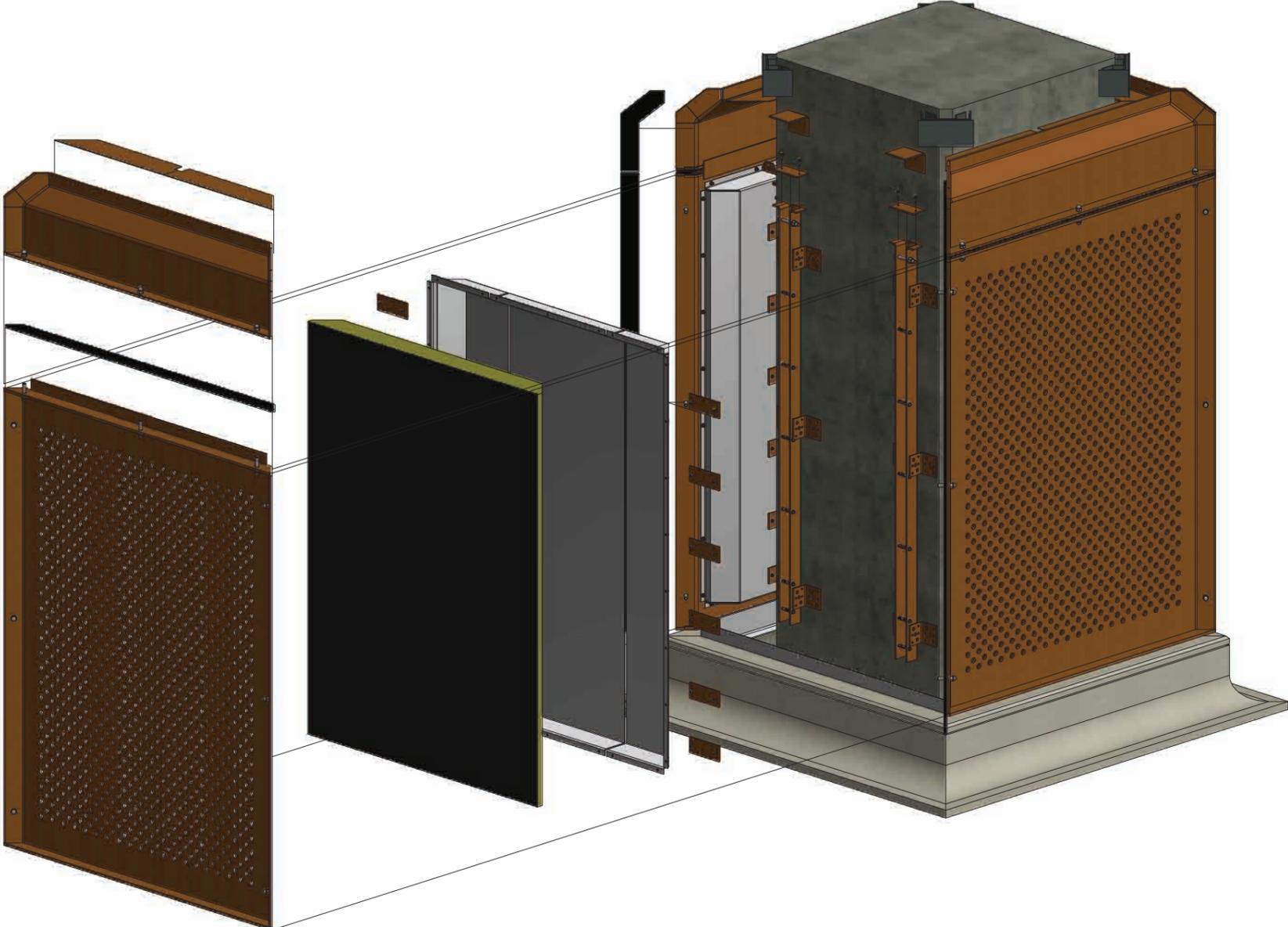
- There was a number of features the finish needed to achieve:
- It needed to contrast with the colour pallet of the floor and ceiling finishes.
  - It needed to have an inconsistent organic texture and colour patina. This is to reference the caustic, neo-industrial style of the stations Victorian manufacturing heritage.
  - Finally, it had to be robust enough for the environment. This includes minimising the rust brush off, Class 0 fire safety, bomb blast requirements and in situ maintenance.

**The chosen finish was the chemically rusted Corten Steel from NES Architectural.** This has a number of layers of rusting to build up the texture of the rust layer in a controlled environment. On top of the Corten's rust patina, a clear matt lacquer is wet sprayed to the face. This is built up in four to six layers to get the lacquer thick enough to accommodate the high texture of the face and rigours of the station environment.

The Corten Cladding was specified as 10mm. Initially thinner steel was discussed however, the thick metal and the sold M20 bolts reinforce the industrial Victorian feel of the column cladding. This can be seen in some of the other classic architecture in the London Rail and Underground Station columns. Practically the columns are backed with 100mm acoustic mineral wool to absorb and refract the sound in this area. NES has 15 sq. meters of the cladding panels achieved an absorption coefficient as high as 0.9 at 500 hertz Frequency.

The site installation has some challenges installing the half columns in close proximity to the retail shop front glazing to both sides of the columns. The flooring had already been pre laid and featured a slant. This means each line of 2 full and 2 half columns is a different height. The cladding panels had to be fitted on an invisible fix hook on system with the ability to be moved for site tolerances and in relation to the other sheets as they are bolted together for aesthetic reasons. The top cap of the columns features a removable section allowing for both the LED wall washer uplighters and the M&E services behind the cladding to be accessible.

**Project details:**  
**Scope:** Design, manufacture and installation  
**Quantity:** 18 full columns and 18 half columns  
**Client:** Network Rail  
**Lead Contractor:** Costain Group  
**Lead Architect:** London Bridge Station  
**Consultant Architect:** Grimshaw Architects  
**Completion date:** Dec 2017



**Finish**



**Installation**



# London Bridge Station - Costain Group - Copper Anodised Aluminium Cladding - Design, Manufacture and Installation.

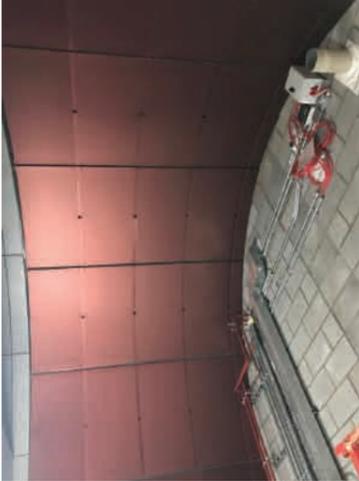
These works represent an innovative response from the NES design team to an ambitious and urgent brief.

The retail units in the Western Arcade Mall urgently required ceiling cladding. These units are tight but extremely highly prized commercial spaces due to the extremely high footfall and the prestige of the new station. Bronze and copper were initially discussed and sampled.

NES' offering of copper anodised aluminium was chosen due to the  
Long lifetime,  
Deep anodised colours from the 'live' surface  
Fire rating,  
Anti-graffiti properties,  
Value for money  
Providing a stable surface that would be unaffected by finger greases or water.

The **exceptional speed** at which the complex architecture was taken from survey to completed works was important here.

## Completed Copper Anodised Cladding



## With polyfilm on



## Project details

**Date 2018** - to complete end 2018

**Lead contractor:** Costain Group

**Architect:** London Bridge Station

**Facade Contractor:** NES Solutions

**Scope:** 1,000 sq. m

## Additional Screens to Western Arcade



**Warrington Time Square- Vinci- Anodised aluminium cladding. Design, Manufacture and Installation.**

This is a showcase for anodised aluminium. 3D pyramids have been formed from 2mm J57S aluminium. These have been anodised to 3 different bronze anodised colours and 2 dye colours. Each of the pyramids refracts light at a different angle. Due to the fact anodising is a 'live' surface the colour is dependant on the angle of incidence it is viewed from. This mean the pyramids produce 4 different colours per pyramid. This makes 20 different shades at a minium at any one time. The client was inspired by Liverpool university bronze anodised facade. The pyramids are CD studd welded from the reverse leaving no visible deflection or discolouration of the anodised layer.

The cladding provides the new facade for the Cineworld cinema re-shaping the heart of Warrington town centre.

**Project details**

- Date:** 2018 - to complete end 2018
- Lead contractor:** Vinci Construction
- Architect:** Leach Rhodes Walker
- Facade Contractor:** NES Solutions
- Scope:** 1,300 sq. m

**CD Studd Welded Joint Strap**



**Mock Up**



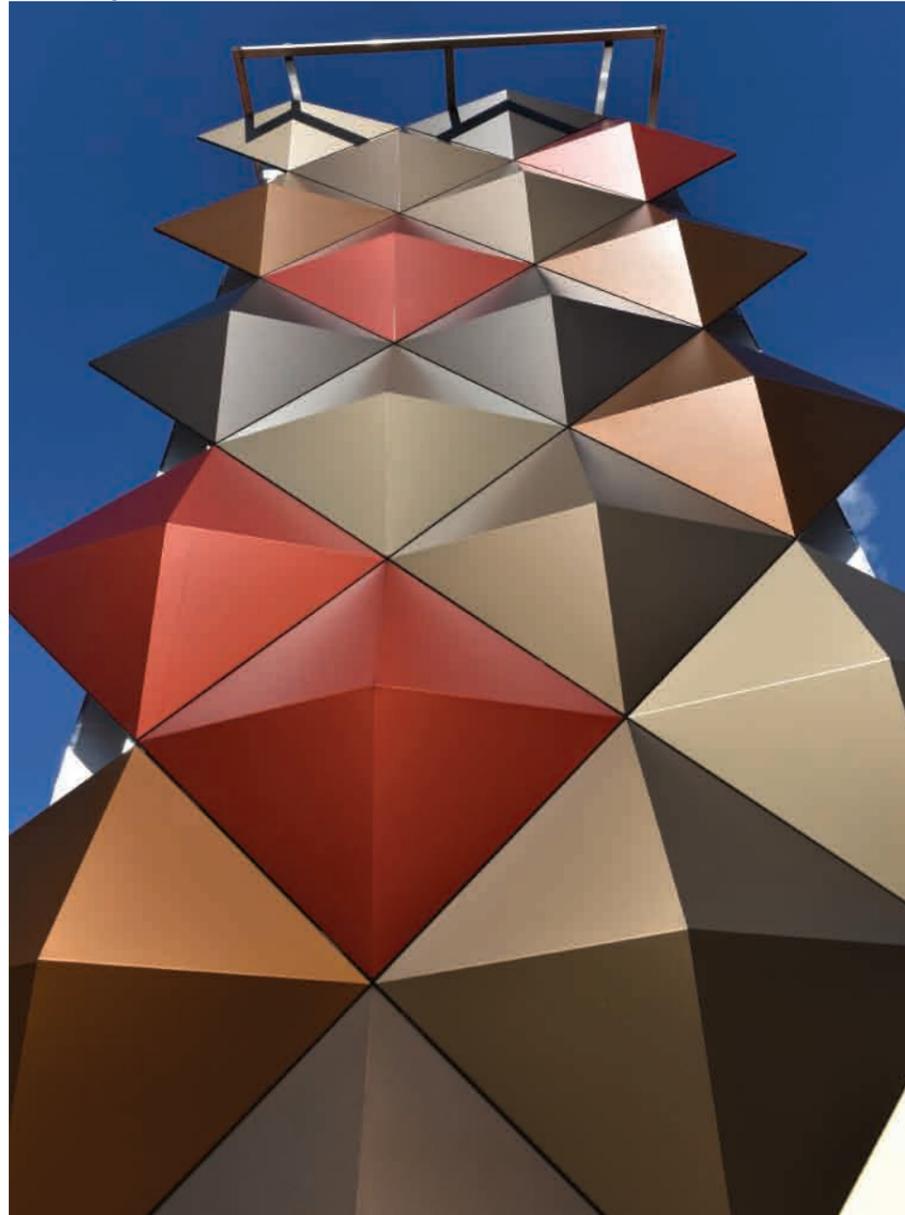
**Secondary Steel Sub Frame Welding**



**Mock Up**



**Mock Up**



**CGI**



**CGI**



# Bunhill 2 Energy Centre- Colloide - 3mm Copper Anodised Brushed Aluminium Cladding. Design and Manufacture.

NES Architectural are excited to be part of this innovative new scheme. The energy centre recovers heat created by the London underground network and uses it to heat over 500 local authority homes in the local area.

The development is in a central position with 5 road elevations. It was essential that the development enhanced the local environment and did not represent an eye sore. In order to provide this patina copper was initially mooted as a material. Through the development process it became apparent the heat extraction machinery and flues would be emitting steam. The moisture from this would attach to the copper making discolouration in the form of **verdigris a significant concern**. The expense of copper made wider panels, especially with the perforations prohibitively expensive.

The perforations have been punched with a cluster tool allowing for **10,000 holes / sq. m.**

The Pattern is **v-cut routed** allowing for a subtle block out zone on the lower facade.

The solution finally developed with Islington Council Planning Department was to go for the Anodised Aluminium AnoCopper04. The anodic coating offers a **25 year guaranty on the finish** and a 50 year expected lifetime. This thickness of the anodising layer is 25 micron, full BS standard. In addition to this the brushed effect was chosen. The brushing is a form of polishing. It increases the light refraction and the visual interest of the facade. There is the concern that with the darker 'Copper Effect' colours some of the contrast would be lost in the dark shades. The brushed makes the whole facade that bit more vibrant.

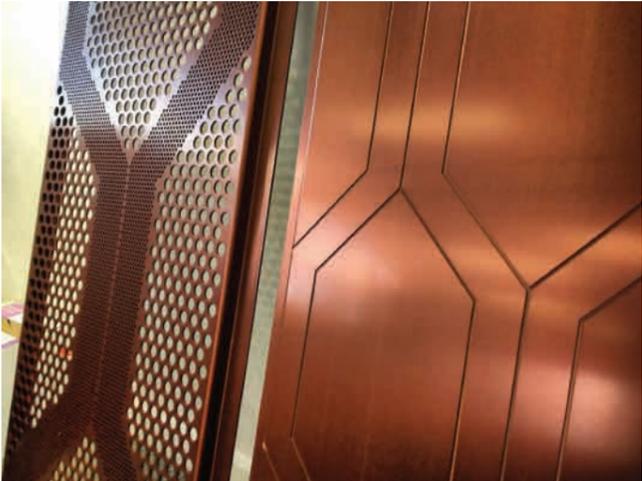
Expanded mesh was also used on some elements of the face. Normal anodising grade aluminium is not ductile (flexible) enough to be slitted and expanded. A special anodising grade of 1050 aluminium was used. Because of the angles of the expanded mesh it did not cause an aesthetic problem to have this different metal adjacent to the brushed copper anodised aluminium.



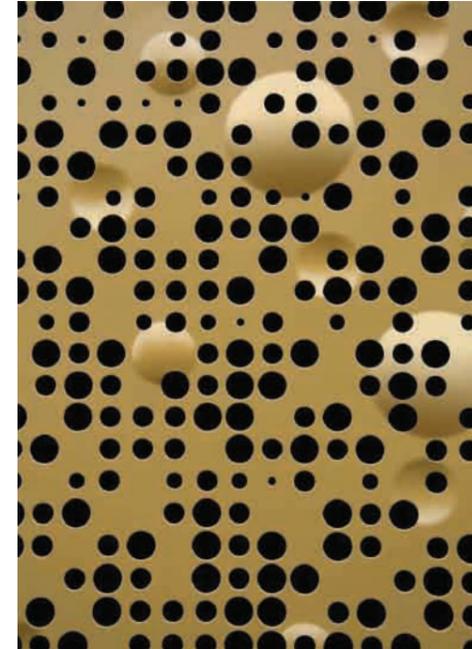
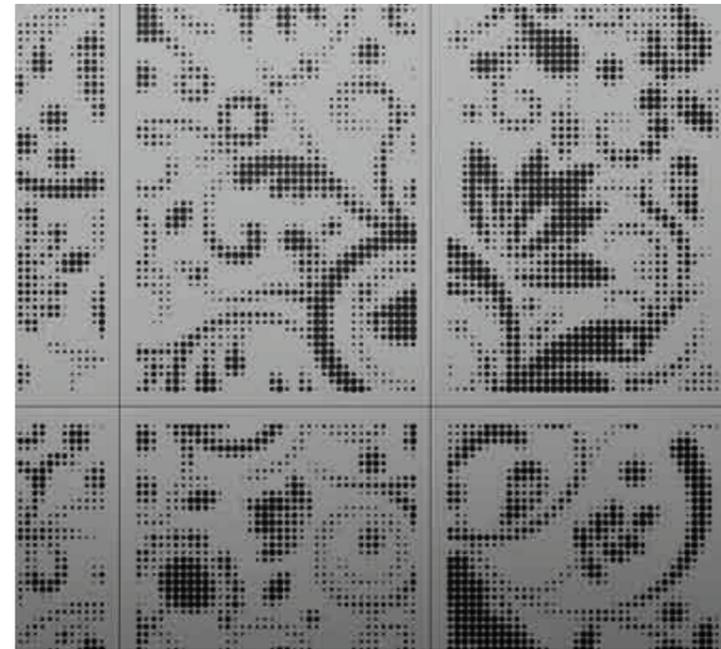
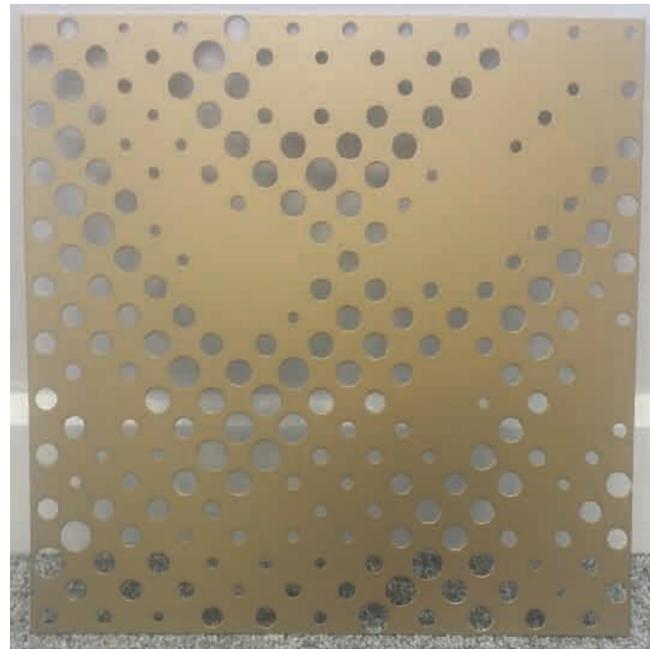
**Perforated and V-Cut Routed Aluminium**

**CGI**

- Project details**
- Date:** 2018 - to complete end 2018
- Client:** Islington County Council
- Lead contractor:** Colloide Engineering
- Conceptual Architects:** Cullinan Studio
- Detailed Design:** McGurk Chartered Architects Ltd
- Facade Contractor:** NES Architectural
- Consulting Engineering:** Ramboll UK Ltd
- Landscape Architecture:** J&L Gibbons
- Artist:** Toby Paterson
- Quantity Surveyors:** Gleeds
- Consulting Surveyors:** Right of Light
- Scope:** 625 sq. m



# Perforated aluminium - Water jet, Laser, Punch, CNC Routing



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## Perforated screen



## FORM

### Bespoke textured patterns

Most perforated or solid screens are one dimensional. Form now offers designers the ability to conceive a second dimension by forming shapes into the surface offering designers the ability to generate texture and movement in the screen.

### KEY:

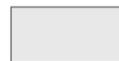
Other perforation shapes are available upon request.



Circle



Square



Rectangle



Rhombus



Hexagon



Triangle



Ellipse

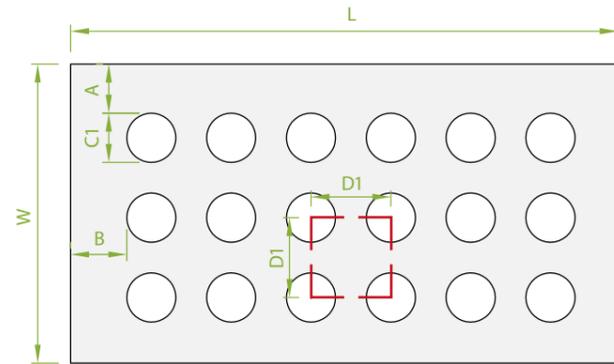


Obround

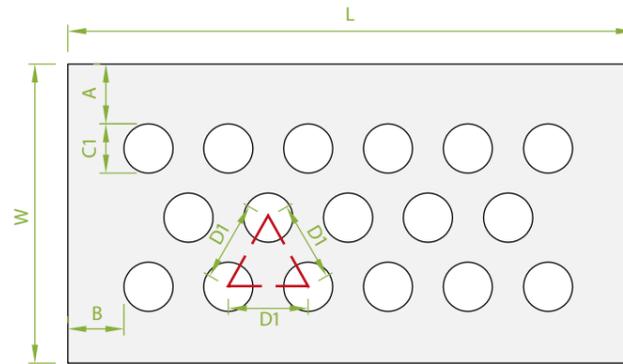
<b>A</b>	Perimeter border 1
<b>B</b>	Perimeter border 2
<b>C1</b>	Perforation size 1
<b>C2</b>	Perforation size 2
<b>D1</b>	Perforation spacing 1
<b>D2</b>	Perforation spacing 2
<b>L</b>	Length of panel
<b>W</b>	Width of panel

Pattern orientation can be modified to suit requirement.

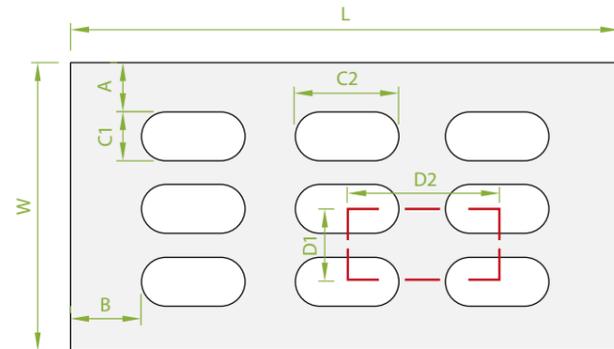
### Square pattern



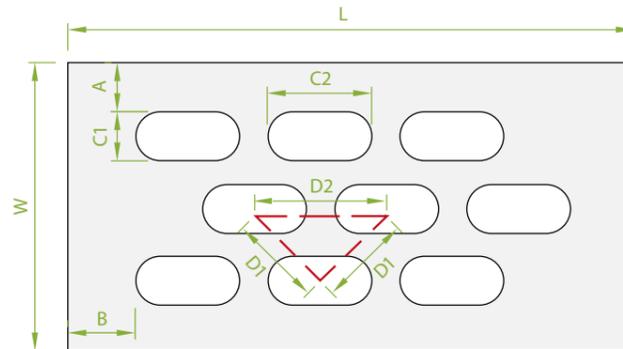
### Triangular pattern



### Square pattern



### Triangular pattern



## CREATE

### Bespoke perforated panels

Utilising the latest computer software to pixelate images, logos, letters and numbers to create a bespoke perforation pattern that can be applied to one panel or a number of panels to create a "jigsaw" that can be applied to a whole building façade. Create offers a designer and building owner the ability to set their individual mark on a building façade.

