

PROPOSED CLADDING MATERIALS

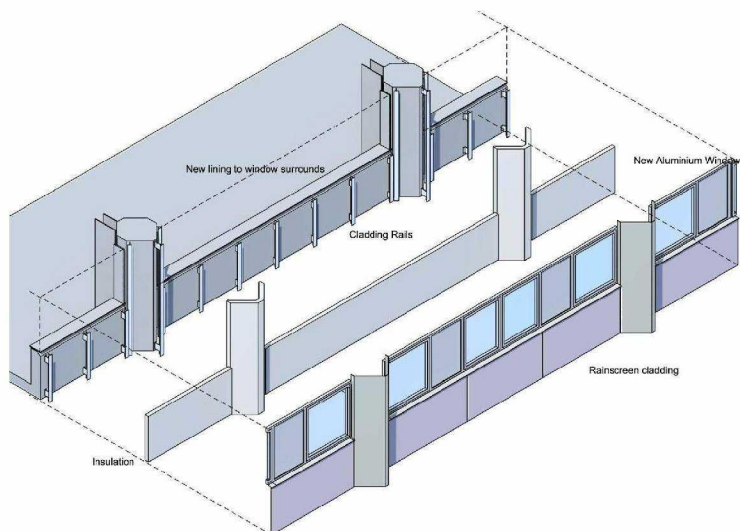
Project: Grenfell Tower Refurbishment Project

File ref.: 1281-M1-020

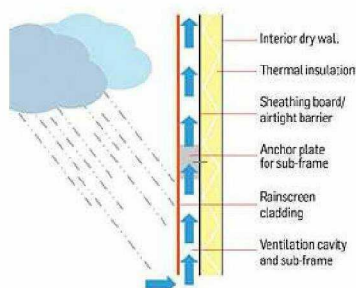
The need to insulate and replace the windows on Grenfell tower recommends the use of a ventilated rainscreen cladding which is both lightweight and an effective means of transforming the appearance of the existing tower while adding 100mm+ of insulation underneath. Rainscreens can be made with many materials, including cement boards, high pressure laminate boards, folded metal, timber, terracotta tiles, porcelain tiles etc...

Zinc was proposed early on for Grenfell Tower because of its long life span (50+ years) and as a “natural material” it oxidises gracefully and is recyclable.

Several pre-weathered or “pre-patinated” finishes are available but it is felt that the overall effect needs to lighten what is currently a dull grey tower. The horizontal window panels will have contrasting ppc aluminium frames and the infill panels to the upper stories will be in white – a similar language of contrasts to the existing concrete frame and aluminium infill.



Exploded isometric of proposed overcladding



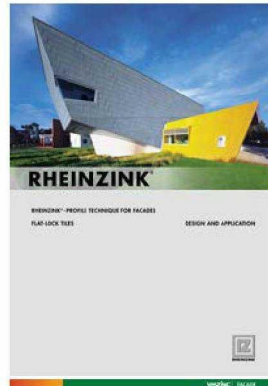
Rainscreen principle



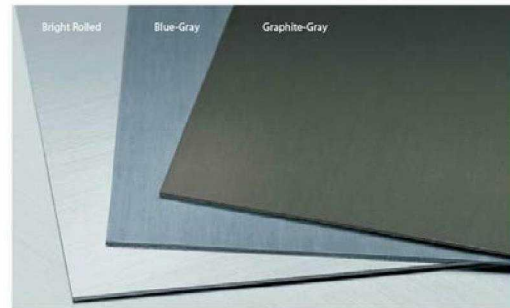
ZINC

There are two main suppliers of zinc sheet material to the UK market: There are numerous project images on each website – see links below.

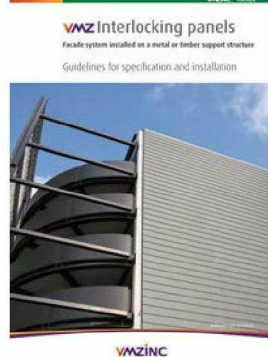
[Rheinzink](#)



Rheinzink pre-patinated colours:



[VM Zinc](#)



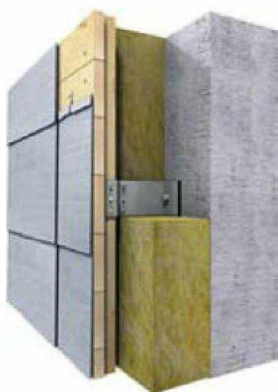
The lightest option from VM Zinc, their QUARTZ-ZINC is much darker than the Blue Grey offered by Rheinzink.

Surface
aspects
VMZINC



Very generally there are two approaches to installing a zinc rainscreen:

1. Fully supported strips or tiles
0.7mm – 1mm sheet thickness



2. Folded cassettes or panels rails. These can be horizontal or vertical
1mm sheet achieves a maximum panel width of approx 300mm.



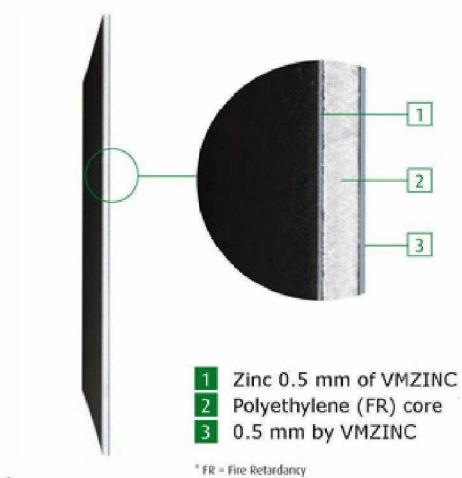
These principles are similar for aluminium although larger cassette sizes are more viable with aluminium than zinc.



Rheinzinc Blue Grey in diamond shingle: Bishop Challoner School, Stepney

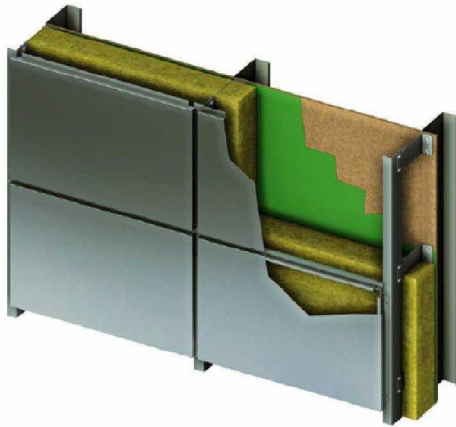
Composite Panel

A third zinc option is a composite panel, similar to the ACM discussed below, currently only offered by VMZinc in their Quartz colour. This sandwich panel achieves smooth regular panels of up to 1m x 4m with a true zinc finish, although without the character of the folded appearance of other approaches.

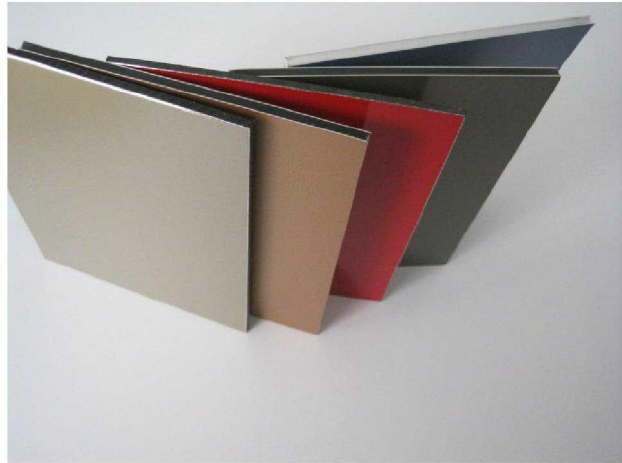


ALUMINIUM

Aluminium is lightweight and like zinc does not easily corrode. Finishes are typically Polyester Powdercoated (coated post fabrication – 20-25yr warranty) or coil coated, usually PVDF.



*LINEAR3 rainscreen cassette panel system
by Euroclad*

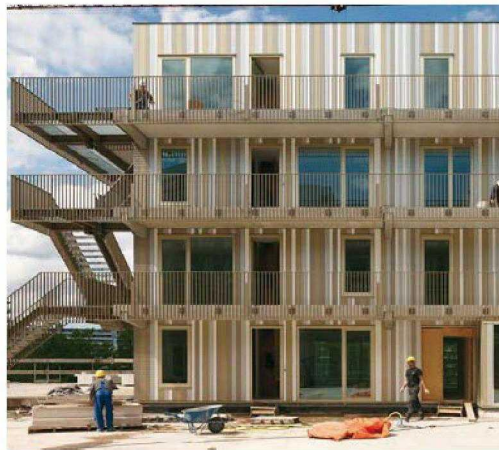


An ACM a polyethelene core with two outer skins of aluminium. It is both light and strong.

Coil coated aluminium offers numerous finishing options. A big supplier is [Euramax](#),



Euramax anodised Zinc



Euramax anodised aluminium

Aluminium composite material (ACM) (eg [Alucobond](#) or [Reynobond](#))



Alucobond Spectra



City South Manchester. Alucobond Metallic Colours

COSTS


We have received budget rates from several suppliers and manufacturers. These are difficult to benchmark as this project is quite bespoke in terms of access and detailing.

The original cost plan prepared by Appleyards allowed for £260/m²







| Indicative Rates provided by CGL Systems UK (April 2013) | Rate (supply only) |
|---|---------------------------|
| Polyester Powercoated Shingle rainscreen | £67/m ² |
| Coil coated aluminium rainscreen panels (ref Euramax) | £65/m ² |
| Aluminium composite material (ACM) ref Alucobond/Reynobond standard colour | £85/m ² |
| Folded Zinc, mill finish (ref Rheinzink or VMZinc) | £90/m ² |
| Aluminium composite material (ACM) ref Alucobond "Spectra" finish | £90/m ² |

See a more comprehensive set of budget rates for metal cladding from CGL over

CGL Systems Facade options - Contact [REDACTED] or www.cglsystems.co.uk

| PPC/pre-coat aluminum Interlocking Wallplank | PPC/pre-coat aluminum Traypanel | Corten Traypanel | ACM (Alucobond) Traypanel | Zinc Interlocking Wallplank | Copper/Brass Shingles |
|---|---|--|---|---|---|
|  |  |  |  |  |  |
| Cost: £165/m ² | Cost: £200/m ² | Cost: £205/m ² | Cost: £205/m ² | Cost: £215/m ² | Cost: £250/m ² |

CGL SYSTEMS LTD - COST RANGE FROM £150 > 250/M²

| PPC/pre-coat Aluminum Hook on Rainscreen | Anodised Aluminium Interlocking Wallplank | ACM (Alucobond) Hook on Rainscreen | Zinc Traypanel | Anodised Traypanel | Stainless Steel Hook on Rainscreen |
|---|---|--|---|---|---|
|  |  |  |  |  |  |
| Cost: £270/m ² | Cost: £275/m ² | Cost: £275/m ² | Cost: £275/m ² | Cost: £320/m ² | Cost: £340/m ² |

CGL SYSTEMS LTD - COST RANGE FROM £251 > 349/M²

| Zinc Hook on Rainscreen | Copper/Brass Interlocking Wallplank | Anodised Aluminium Hook on Rainscreen | Copper/Brass Traypanel | Copper/Brass Hook on Rainscreen | Post Patinated Copper Hook on Rainscreen |
|--|--|---|--|--|--|
|  |  |  |  |  |  |
| Cost: £350/m ² | Cost: £380/m ² | Cost: £395/m ² | Cost: £550/m ² | Cost: £600/m ² | Cost: £650/m ² |

CGL SYSTEMS LTD - COST RANGE FROM £350 > /M²