Hanson UK

VISUAL AND SUSTAINABLE CONCRETE

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Hanson UK

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OVERVIEW

- Colourcrete – the core colours
- Examples of colourcrete and non-coloured concretes
- Concretes used for sustainable applications
- Example of visual concretes using Regen (GGBS)
- Varying shade by use of microsilica
- Impact of Regen (GGBS) on CO_2 content

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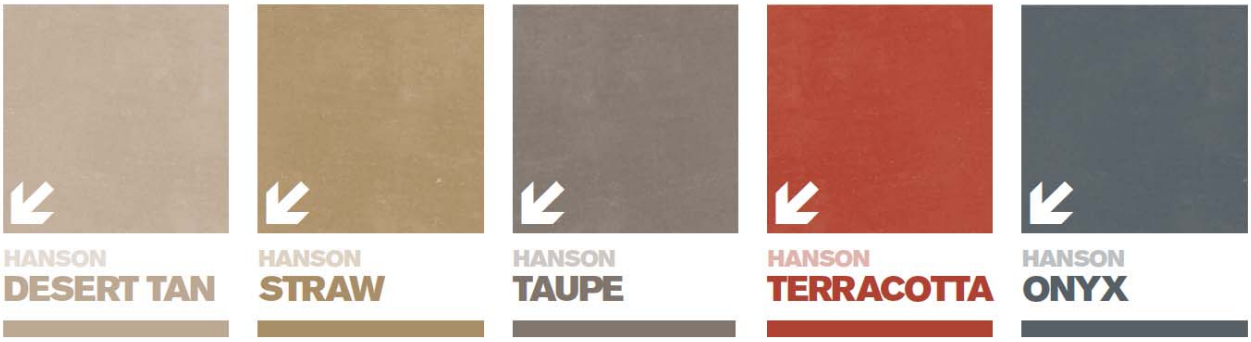
Our core colour range



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Colourcrete examples - 168 Upper Street, Islington

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168 Upper Street

Concrete pour

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168 Upper Street

Concrete pour

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Colourcrete examples – The Zig Zag building

- Both Colourcrete and Regen used to create the required finishes
- Abraded/exposed finish external concrete columns
- Internal concrete columns left exposed, high quality finish
- High strength aesthetic white concrete column, focal point of the reception area

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The Zig Zag building – external columns

- Consistent unifying element to the two buildings
- Construction options
- Sample columns
- Precast concrete fascia panels above

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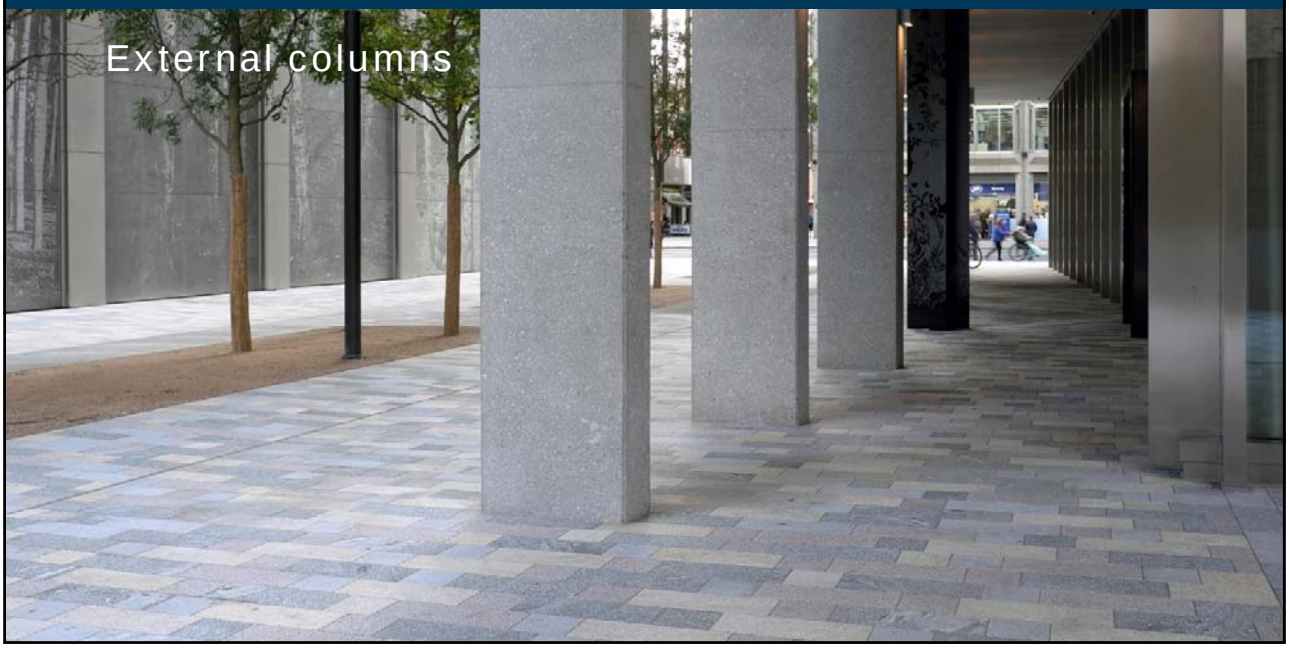

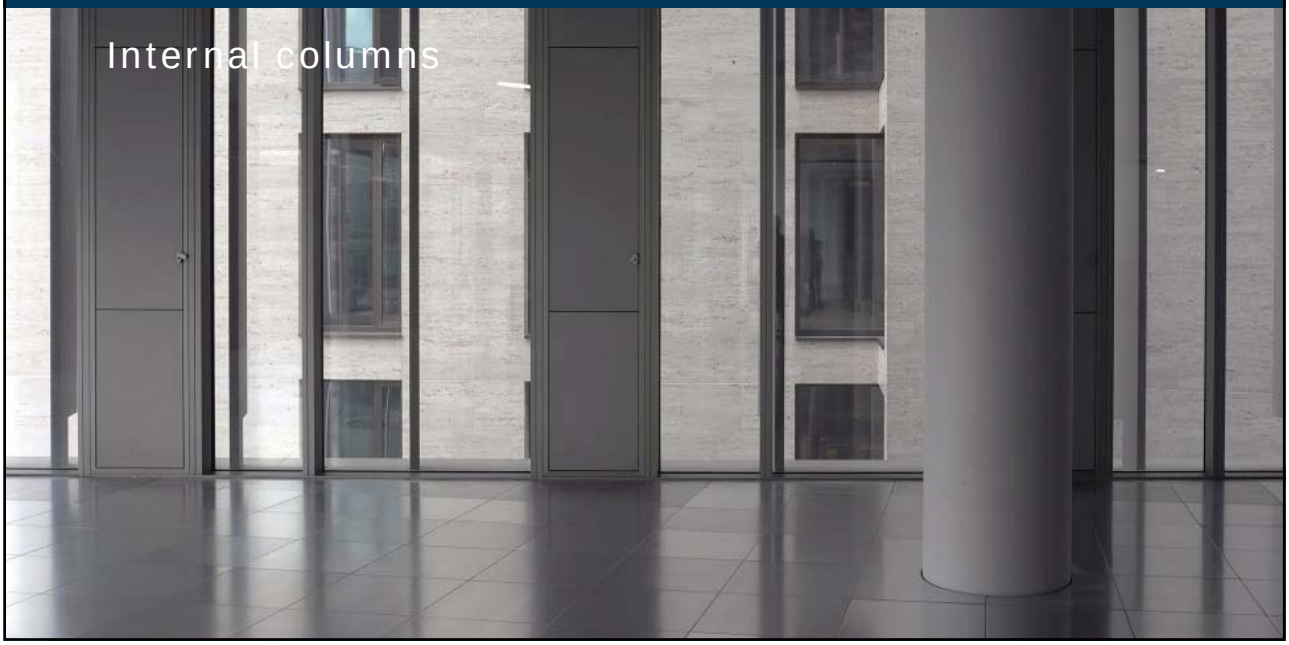

Challenges to overcome

- The double height slender feature column in the reception area posed very specific challenges
- The was section less than half the size of neighbouring columns and the cross section changing from circular at the bottom to square at the top ending in a metal bearing plate
- The architectural vision was for a white visual grade concrete with some “sparkle”
- Structural requirements called for:
  - C80/90 concrete with the ability to flow around a dense reinforcement cadge
  - Not to segregate during a single cast operation of a 9m tall visual column
  - Achieve early strength to deal with temporary construction loads

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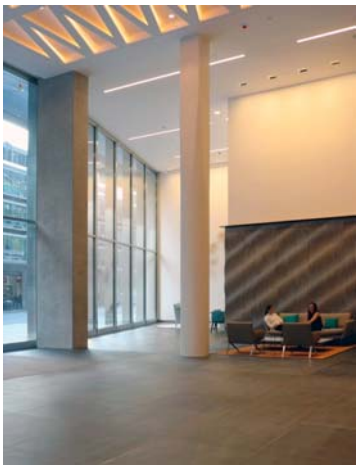
Feature column



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- Self compacting Onyx concrete

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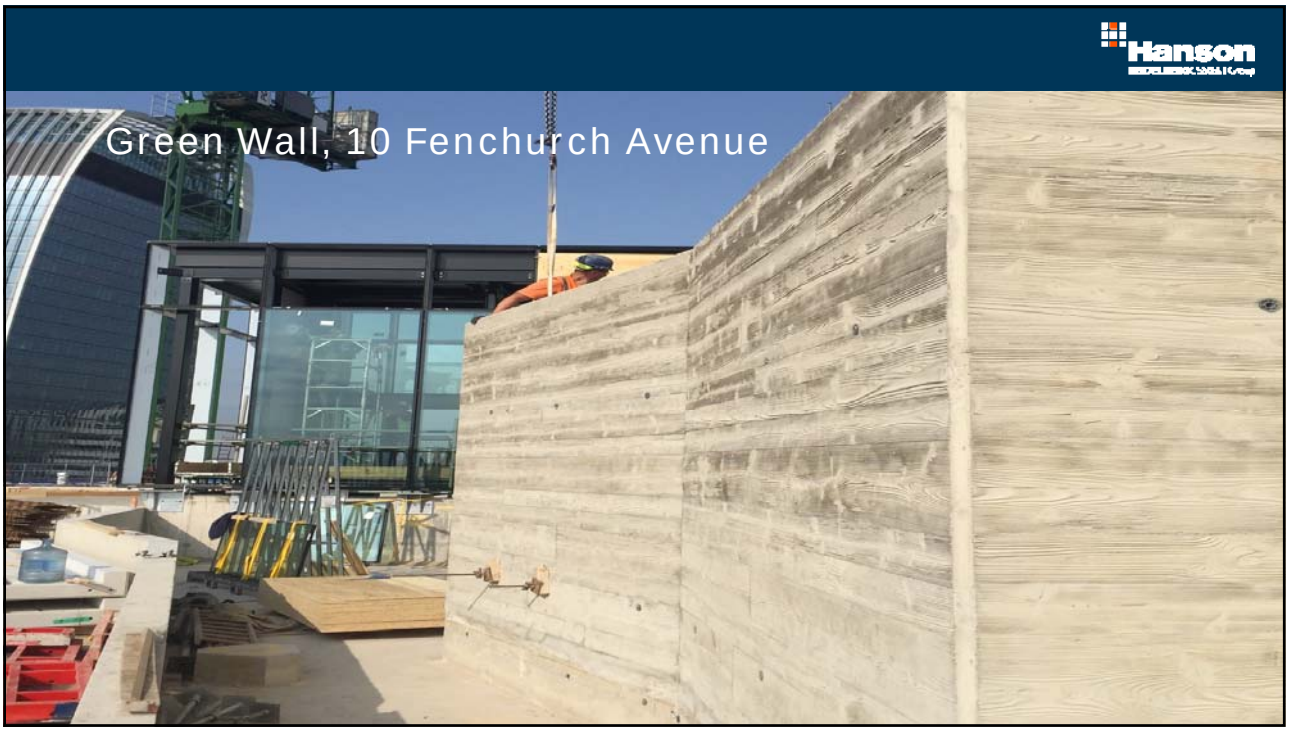
Green Wall, 10 Fenchurch Avenue


Hanson
Green Wall, 10 Fenchurch Avenue

- Regen (GGBS) in SCC used in RAA redevelopment

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- Concrete shade variation achieved by microsilica addition

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North wharf road

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CO_2 declarations

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Carbon Data Sheet

In accordance with PAS2050:2008

Hanson Concrete

Product

This data sheet is valid for 1m^3 of ready mix concrete supplied by Hanson derived from the mix supplied. Where the base materials are supplied by Hanson, site specific data is used, if the base materials are sourced from a third party then either industry reported data or data from the ICE database is used.

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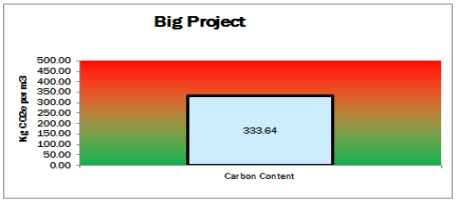
C32/40 CEMI 20mm S3

Client	AN Contractor	
Site Name	Big Project	
SE/JB Number	0	
Supplying Plant	Kings Cross 3 - Concrete	
Contact	James Branch	
Job Title	Technical Services Manager	
Mix Designation	C32/40	
Cement Type	CEMI	
Minimum Cement Content	0	
Carbon Content per m3 (inc delivery)	333.64 Kg $C0_2e$	
Project Carbon Content	0.334 Tonnes CO_2e	
Delivery (per trip)	2 miles (round trip)	1.473 KgCO2e
Regen Inside	No	0%



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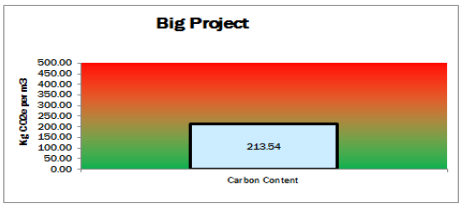
C32/40 CIIIA 20mm S3

Client	AN Contractor	
Site Name	Big Project	
SE/JB Number	0	
Supplying Plant	Kings Cross 3 - Concrete	
Contact	James Branch	
Job Title	Technical Services Manager	
Mix Designation	C32/40	
Cement Type	CIIIA	
Minimum Cement Content	0	
Carbon Content per m3 (inc delivery)	213.54 Kg $C0_2e$	
Project Carbon Content	0.214 Tonnes CO_2e	
Delivery (per trip)	2 miles (round trip)	1.475 KgCO2e
Regen Inside	Yes	50%



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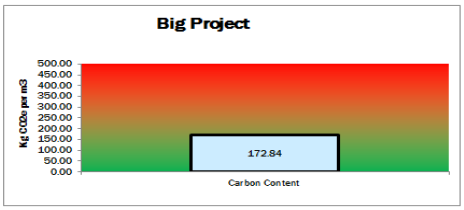
C32/40 CIIIB 20mm S3

Client	AN Contractor	
Site Name	Big Project	
SE/JB Number	0	
Supplying Plant	Kings Cross 3 - Concrete	
Contact	James Branch	
Job Title	Technical Services Manager	
Mix Designation	C32/40	
Cement Type	CIIIB	
Minimum Cement Content	0	
Carbon Content per m3 (inc delivery)	172.84 Kg $C0_2e$	
Project Carbon Content	0.173 Tonnes CO_2e	
Delivery (per trip)	2 miles (round trip)	1.532 KgCO2e
Regen Inside	Yes	70%



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QUESTION AND ANSWER SESSION

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THANK YOU

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