



GREENE Works Ltd

Committed to deliver above and beyond client's expectations

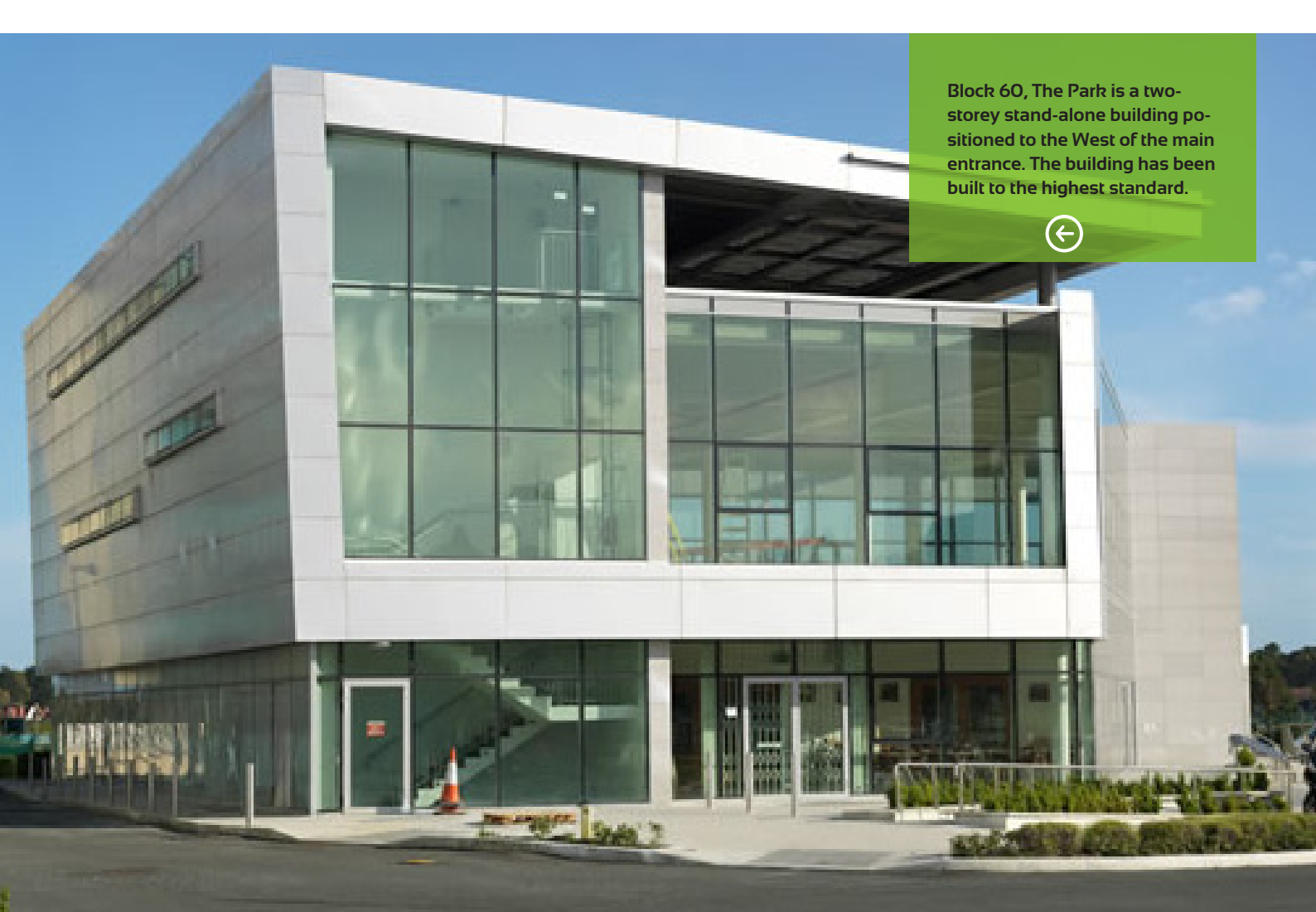


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**Greene Works Ltd, Road 44, House 103,
Victoria Garden City, Ajah, Lagos, Nigeria**



Block 60, The Park is a two-storey stand-alone building positioned to the West of the main entrance. The building has been built to the highest standard.



About Us

Greene Works Ltd and its associated companies has a proven track record in Civil engineering, General Construction, Commercial and residential projects.

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Greene Works Ltd is an Irish owned company,

Our goals are to expand into the international market. Our vision for the future is to be identified by Clients, Design Teams and our competitors, as the industry's first choice management team.

"Greene Works Ltd has a proven track record"

Greene Works Ltd has a proven track record in providing the right team with the skills, knowledge and experience to consistently deliver challenging projects from inception to completion on time and within budget.

Greene Works is committed to working alongside the client to deliver above and beyond their expectations, we believe in great attention to detail as can be seen in the quality of our finish projects.

With offices in Dublin and Lagos Nigeria we have completed major projects for a wide range of clients from every construction sector.

As Greene Works expands, so also does our experience and expertise.

Greene Works prides itself on delivering quality projects safely, on time and within budget. We believe a safe site is the key to delivering projects on time, we believe in finding safer methods of construction to ensure a safe work place of our employees.

Greene Works only employs high calibre individuals from a broad skills base and we select the precise mix of skills and experience demanded by each project.

↓ Civil Engineering

Experience in large scale Civil Engineering projects around the world

↓ Commercial

We have a proven track record of delivering high quality commercial buildings

↓ Quarries + Mining

Aggregates,
Contract Crushing
Load + Haul

↓ Residential

Designed and built to the highest standards

Key Points

- **Primary areas of expertise: residential & commercial construction, quarry & mining, civil engineering**
- **Projects including roads & marine, water & wastewater sectors.**
- **Provide services, design & execute projects for both the public and private sector.**
- **We have the necessary resources to carry out contracts in excess of Euro 100 million.**
- **Recently expanded into Nigeria**

Board of Directors

John Greene
Managing Director

Ellie McQuaid
Engineer + Information Co-Ordination

Jason Donohoe
Contracts Manager

Olayinka Ricketts
Nigeria advisor and public relations

Michael Condon
Civil & Mechanical Engineer



Greeneform Ltd was formed in 1999 by John Greene.

Greeneform Ltd specializes in

- Concreting
- Waterproofing,
- Steel fixing
- Formwork,

Greeneform constructs mainly large type reinforced in-situ framed buildings.

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construction to ensure a safe work place of our employees.

Over the past 12 years Greeneform has completed many projects from small to large.

Our vision for the future is to be identified by Clients, Design Teams and our competitors, as the industry's first choice Formwork contractor who always:

- Are prepared to go the extra mile to deliver projects to the highest standards,
- Continually differentiate ourselves from our competitors through superior management skills,

We believe in Quality and operate a control plan which is implemented on every project to ensure Greeneform maintains performance and quality of the highest standard. Health and Safety is a top priority at Greeneform Ltd. We make every effort to achieve an accident free workplace by eliminating workplace hazards where possible.

It is the policy of Greeneform

- To comply with all current health and safety legislation,
- To promote a strong health and safety culture throughout our company
- To provide sufficient resources to implement this policy

"We believe in great attention to detail as can be seen in the quality of our finish projects."



Trackcare Engineering Ltd

Trackcare Engineering Ltd was formed in 1992 by Michael Condon

Over the years, Trackcare has gained an in dept knowledge and expertise in many different areas including steelworks design and manufacturing. Trackcare prides itself on delivering projects safely, on time and within budget. Keeping to the highest safety and quality standards. We have carried Engineering contracts for private and semi state companies. Trackcare moved into Road Recycling in 2003.

We have being working with county council through out Ireland and the National Road Authority (NRA) on Road Recycling and Cost Saving. We have worked on over 800 kilometres of Irish Roads since 2004. At a massive cost saving to the local and national autorites. A cost reduction of up to 60% over traditional methods.

We use the lareset stabilisers/ recyclers for the creation of foundation layers for road highways, airports, side walks, industrial sites, railways etc. Then we add water based environmentally safe polymer that binds all soils, including sand, into structurally sound roads. The road is sealed and water resistant. Typically the road can be used within two hours of completion.



**"A cost reduction
of up to 60%
over traditional
methods."**



Residential: Wyckham Point

Construction is continuing on this stunning development of 514 apartments on a 12 acre site which includes 3 acres of park and lake. The specification of this development is exceptional with a fully fitted out on-site gym and leisure suite and a 24 hour concierge service situated on site.

Address: Wyckham Point,
Dundrum,
Dublin 14
Ireland

Client: Dorville Homes &
O'Malley's (JV)

Value: € 8,000,000





Commercial: Rathborne Village

The construction of a mixed use scheme in the form of 3 blocks ranging in height from one to eight stories. The development includes a 2 storey public house and restaurant. It also includes 3,000m² of retail space, 257 apartments and 14,000m² of double storey underground car parking.

Address: Rathborne Village,
Ashtown,
Dublin 15
Ireland

Client: John Paul Construction
Ltd

Value: € 3,800,000





Multistory Car Park:

Rathmines Mixed Used Development

Rathmines Square is a 12,600 sq.m2 mixed use development consisting of new civic space, leisure centre with a brand new 25m pool incorporating a moveable floor, gymnasium, aerobics room, multi-purpose sports hall, treatment rooms, all above a secure two level underground car park.

Address: Swan Leisure,
Rathmines Square,
Lower Rathmines Rd,
Dublin 6
Ireland

Client: John Paul Construction
Ltd

Value: € 2,100,000



Product services

Greeneform prides itself on offering the best service to our clients:

Water Proofing	Tanking Hydromat	Radon Barrier	Waterbar, Angles & Intersection
Reinforcement	Lift Pits, Pile Caps & Ground Beams	Ground Slab & Suspended Slabs	Walls, Columns & Beams
Concrete	Blinding	Placing	Fair Face Work
Formwork	Walls Columns Beams, Jump-form & Slip-form	Decking	Fair Face Work V-Beams Waffle Slab Transfer Channel

Greeneform are also available to supply the following services;

- Concrete Repair & Remedial Systems (Resin Injection)
- Tower Cranes / Mobile Cranes
- Concrete Pumping / Concrete Testing
- Scaffolding
- Post tensioning
- Reinforcement
- Concrete
- Accessories



Radon Barrier



**Tanking
Hydromat**



Blinding





Placing
concrete



Some recent Civil work



Road Recycling & Soil Stabilisation

A cost reduction of up to 60% over traditional methods.



Preparing

The surface of the road is ripped to depth of 150mm with our stabilizers/recyclers for the creation of the foundation layer. Our machines allow the ground uniformly and to reach an unprecedented depth.



Adding polymer

Then an water based environmentally safe polymer is applied on the surface of the ripped soil road. Then immediately the solution is mixed with the ripped soil thoroughly.



Finishing

The road is then compacted using a vibrator. The surface of the road is then sealed with a top-seal spraying of polymer; The road is rolled again without vibration.

The road is now completed. It is sealed and water resistant. Typically the road can be used within two hours of completion.





Specifications

Specifications of AggreBind soil stabilizing cross-linked styrene acrylic polymer.

1. The stabilizer being applied properly will comply with the requirements of AASHTO standards for soil stabilization.
2. The stabilizer, while in its undiluted liquid state, will withstand at least five (5) freeze- thaw tests and retain its chemical properties.
3. The stabilizer, when cured, has a temperature tolerance range from -57°C to +163°C. (= -70°F to + 325°F).
4. The stabilizer has unconfined compressive strengths approaching low grade concrete of 1750 psi (123.07 kg/p/cm²) in common silty sandy soil as well as low percentage (<15%) clay based soil.
5. The stabilizer performs in high Ph and low Ph soils; it is 'environmentally friendly'.
6. The stabilizer increases the load bearing capability of on-site sub-soils.
7. The stabilized base material can be open to traffic within 2 hours of installation and withstand full wheel loads of aircraft, helicopter and heavy equipment depending on depth. (Recommended at last 12 inches (30 cm) for heavy load bearing requirements.)
8. The stabilizer repels water during, and after the curing process, and will resist water runoff during construction in the event of rainfall.
9. The stabilizer can be used on all soils. If desired, you can add aggregate and or fines to optimise the strengthening abilities and reduce polymer concentration.
10. The stabilizer in unopened drums has a shelf life of 24 months; agitation is required prior to use.
11. The stabilizer can be installed with common road building/agricultural machinery (as project applicable).
12. The stabilizer has good resistance to Ultra Violet damage and has the ability to be blended to contain additional Ultra Violet protection, if required, to increase its unpaved life. (Unpaved means no wearing surface.)
13. The stabilizer can be blended with either fresh or salt water. The use of salt water for dilution will reduce the strength by approximately 10% but should not exceed 4% salts (combined total of the salt content in sea water.)
14. The stabilizer contains the unique ability to "bond back to itself"; providing a permanent bond, free from any delaminating or separation risk.
15. The stabilizer has the properties and strength to retain polymer impregnated stone chippings (2-4mm) into the surface prior to final rolling and thus provide acceptable slip/grip (PSV) resistance. (PSV is Polished Stone Value and is a standard test for grip on a road surface.)
16. The stabilizer has the ability to both seal and bind non-regular aggregate materials and bind/seal it with the soil. Such materials include (but are not limited to) crushed glass, rubber crumb, construction waste, non-organic municipal waste (after extraction of green waste, metals, and other recyclable materials).
17. The stabilizer to have penetration capabilities from surface spray application; binding and sealing the surface to contain dust and preventing the ingress of surface water.
18. The stabilizer to have a viscosity, penetration, sealing and encapsulating capability to contain low level radiation and heavy metals being emitting into the air and can seal the surface to reduce /

eliminate surface water penetration from percolation into the subsoil.

19. The stabilizers are capable of sealing, making inert, re-aligning particles of clay (such that they become inert) and can be utilized within soils where high clay content exists and be compatible with the polymers in binding and sealing into a stabilized soil layer.

20. The stabilizers have the properties of, once cured, being irreversible and thus the integrity of the product is retained indefinitely.

21. In the event of rainfall during installation of the stabilizers, the stabilizers are capable of retaining their properties, and are able to be reworked to bond and seal the soil without any significant loss of strength or water resistant properties.

22. The stabilizer has soil lubrication properties that, when used with a well graded soil mixture, will produce compaction results of 95-97 Proctor. (Proctor is a standard compression test in the construction industry.)

23. The stabilizer products shall meet or exceed all the standards set forth in this SPECIFICATION sheet.



African Soil Sample Tests



AggreBind is diluted with H₂O on 1 part AGB to 3.5 parts H₂O.

The diluted AGB is mixed into the different African soils to OMC, optimum moisture content and manually compacted to make hand-samples.

Laterite and desert sand

50/50 %

Clay and desert sand

50/50 %

Laterite

100 %

Sand

100 %

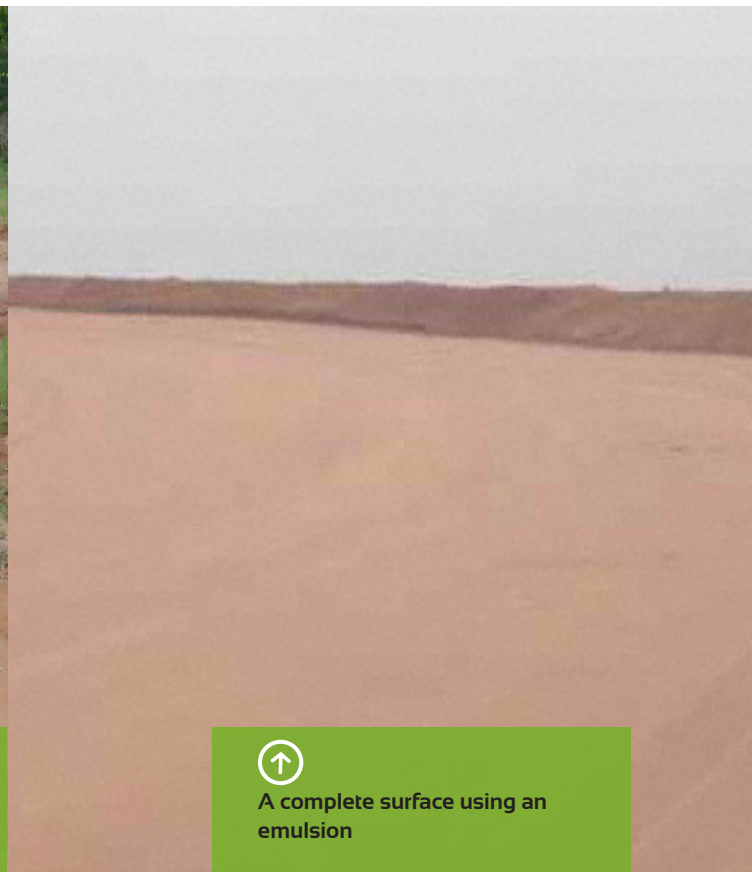
Clay

100 %





A road before the process



A complete surface using an emulsion

Method Statement



Road Rehabilitation/Recycling using Asca Bitumen Emulsion

Site Investigation:

a. The road shall be inspected and sampled to determine if the material is suitable for recycling, and to determine the work required to offer an optimal solution. The samples shall be tested as follows:

- i. Optimum Moisture Content, to ensure compaction.
- ii. Compatibility of the Emulsion with the material to be treated.
- iii. Coat-ability of the material with the Emulsion, to demonstrate coating without breaking.
- iv. The strength of the treated sample will be determined to ensure proper performance.

b. The scope of works shall be defined to determine if more Laterite is required for the adjustment of levels.

c. Drainage shall be examined to determine if drains need to be cleared or to be cut with the motor-grader after the surface has been treated.

Procedure:

a. The motor grader loosens the material to a sufficient depth by using it's rippers attached to the rear of it's frame

b. The motor grader then grades the material to produce an even riding surface with the relevant longitudinal and transverse falls to allow water to run off the pavement.

c. The heavy duty sheepsfoot roller compacts the material.

d. The recycling train then starts it's process, the train is composed as follows:

i. Water tanker to add water to the pavement to optimise the moisture content to achieve optimum compaction after treatment.

ii. Bitumen Emulsion tanker/sprayer to feed the spraybar in the mixing head attached to the tractor.

iii. The tractor with the rotovator mounted on the back to mix the material and add the bitumen emulsion to achieve a homogeneous mix of the material.

e. The motor grader then re-grades the material to the correct levels. The heavy duty sheepsfoot roller re-compacts the material. This is to achieve compaction at the lower pavement levels and to cause the emulsion to break and start the curing process.

g. The motor grader then re-grades the material to the correct levels.

h. The smooth drum vibratory roller re-compacts the material. This is to achieve compaction throughout the material and seal the surface.

i. The bitumen emulsion sprayer fog seals the surface with the application of a bitumen emulsion tack coat at a rate of 0.4 l/m².

j. The surface is blinded with sharp sand to stop pick-up on vehicle wheels with the initial opening to traffic. The rate applied is the minimum to stop pick up, but is normally in the range of 4.0 to 8.0 kg/m².

Application Rates:

a. The Water must be applied at a variable rate dependant upon:

- i. The existing moisture content of the road material
- ii. The OMC (Optimum Moisture Content) of the road material
- iii. The application rate of the emulsion, allowance is made for the fact that the emulsion contains 40% water.
- iv. The total water applied through direct application, the additional water in the emulsion and the exist-

ing water in the road pavement material should achieve a total moisture content of OMC to OMC-2.0%.

b. The application of the Asca Bitumen Emulsion should be to achieve a residual bitumen content of 2.5%, this would mean an application rate of 4.2% of the emulsion by mass. This would equate to an application rate of 9 l/ m² per 100mm of pavement depth treated. i.e. if 200mm of pavement is recycled the application rate would be 18 l/ m².

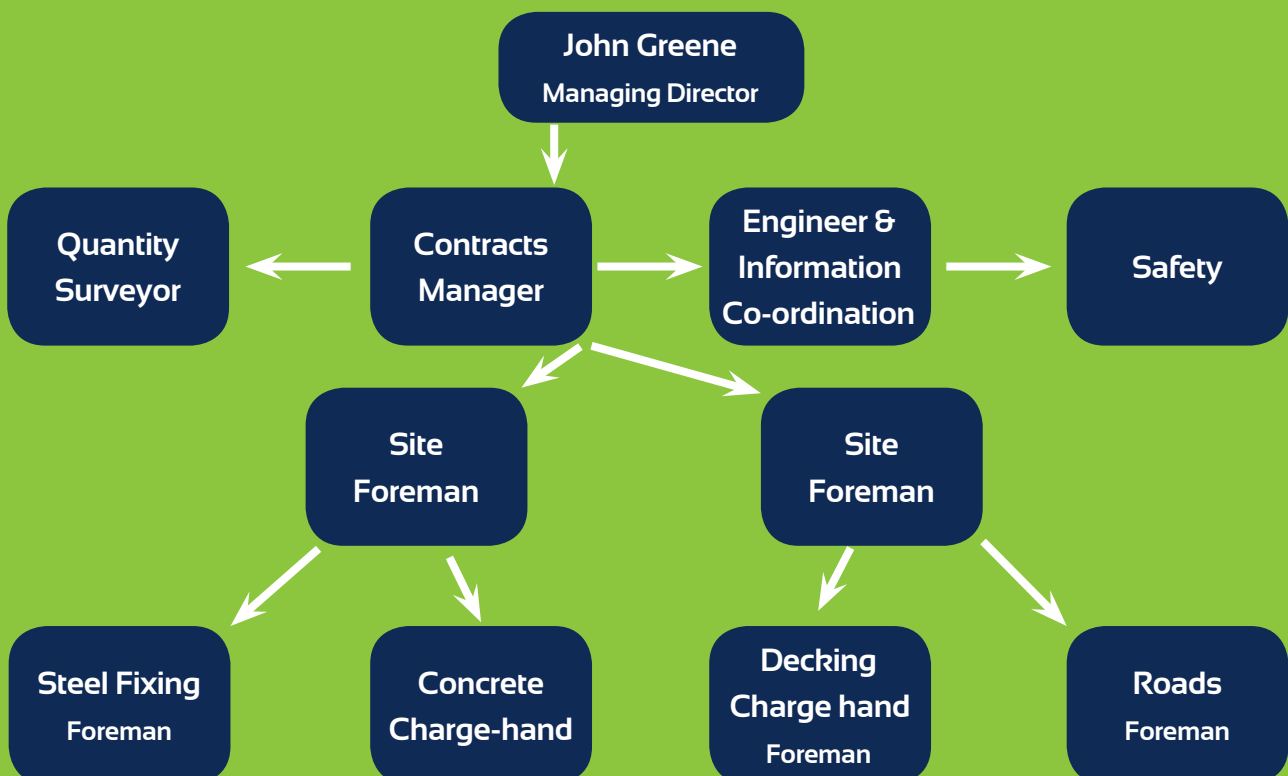
c. The application of the tack coat emulsion for final pavement sealing will be undertaken at a rate of 0.4 to 1.0 l/ m², this is dependent on the porosity of the surface to be sealed and would be determined on a site by site basis.



The method is used on a wide range of surfaces.

Management Chart

The completion of each project by the Greene Works Ltd and its associated companies is insured by the correct management chart,





Get in touch

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