16022 REP 079 Rev01

101 Camley Street , Camden

Brick Material Study

April 2018

HUTCHINSON & PARTNERS

Document Control:

Revision	Date	Notes	Initial
-	05.04.2018	First Issue	TW
01	20.04.2018	Approved sample panel pages added	TW

Content

01.00

Introduction

01.01 Material Study Introduction

Exterior CGI of the Proposed Eastern Facade Facing the Canal

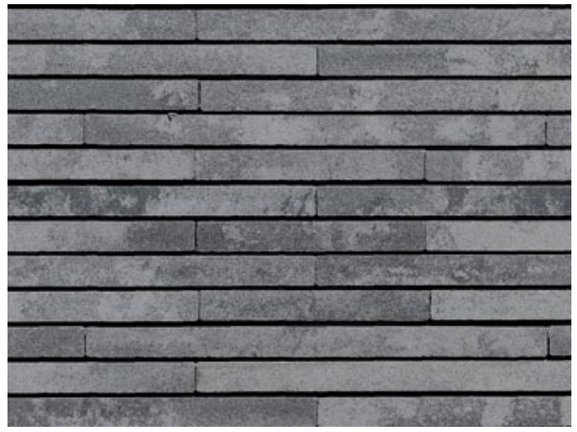
Exterior CGI of the Proposed Entrance to the Buildings From Camley Street

This material study outlines the strategy and approach that the design team carried out during the Stages 3 & 4 in order to select the external brick for 101 Camley Street. The above images indicate the intended external envelope, based on planning consent granted on the of 18th March 2015(2014/4385/P). The following pages illustrate the comprehensive research to the many different products that the design team has carried out in the last year.

02.00

Brick Selection Process

02.01 Desktop Study



Geo-Brick Shaded Grey - Dark tones with dark mortar.

Janinhoff STP-LT FS Bricks.

York Handmade - Piece Hall Blend

Sant Anselmo - CORSO Longformat CT 001 VTB

Ibstock Linear Brick

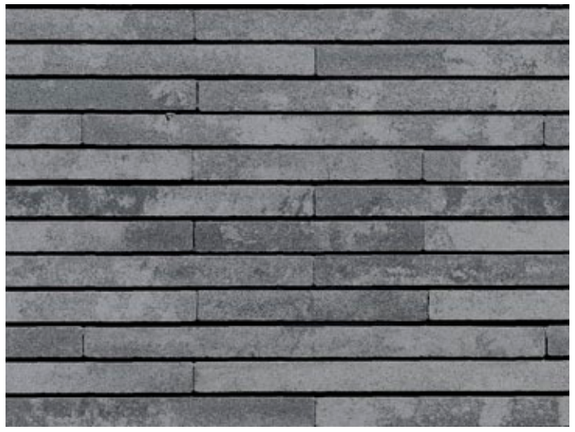
Wienerberger Waterstruck Special Quartz Grey

Petersen Tegl - Kolumba K92 with Dark Mortar

Randers Tegl - Ultima RT160 with Anthrazit mortar

A specific brick product was not identified within the original planning application, only a mention of a grey long format brick. Our initial research focused on products available that fulfilled this criteria, and also provided the texture and colour contrast that would match the original design intent. Long format bricks are still rare within the UK so most of the products that satisfy these requirements are based in other European countries, with Denmark and the Netherlands having the widest ranges. Brick suppliers such as EHSmith and UKBrick were a great help in this process, providing valuable assistance in order to understand this format of brick. Most of the long format bricks available are still handmade so the texture and colour variance cannot be fully controlled. We believed that in order to keep closely to the original design intent, we required more control over these characteristics, leading us to focus on the Water-stuck process. Bricks manufactured using this process are described as a smooth, hand-made brick. When moulding a waterstruck brick, the ball of clay is introduced into a mould that has been sprayed with water. This procedure creates a special, lightly structured texture. The visible surface is not smooth, but very lightly textured. In keeping with the planning design intent only those bricks with a 50mm vertical module would be eligible to make the shortlist, likewise H&P were conscious of retaining the overall grey mottled appearance.

02.02 Shortlist



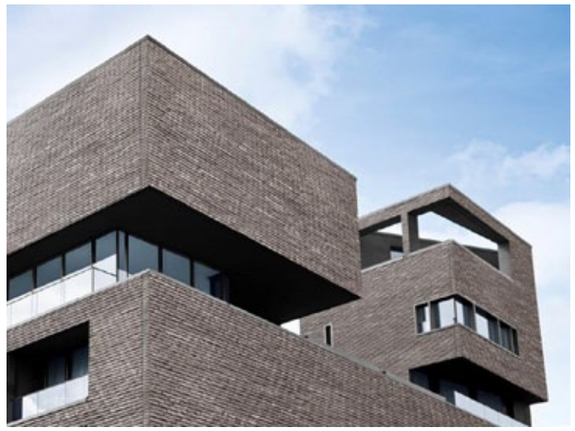
Geo-Brick Shaded Grey - Dark tones with dark mortar.

Sant Anselmo - CORSO Longformat CT 001 VTB

Petersen Tegl - Kolumba K92 with Dark Mortar

Randers Tegl - Ultima RT160 with Anthrazit mortar

Case Study - Community Centre, Arkel, Netherlands.



Sant Anselmo CORSO Visualisation

Private house by Caroline Cust, South West London

Randers Tegl - Ultima RT160 Visualization

Geo-Brick
A manufacturer of veneer bricks and visible interior stone bricks. The GeoStylistiX range is a clinker brick in a long format that enables extremely fine mortar joints due to the uniformity of the manufactured brick. The minimal mortar joints that can be achieved produce a very monolithic finished appearance.

Sant Anslemo
Brick manufacturer who are based in Loreggia, Italy. The Corso range is the manufacturer's long format brick and it is available in four textures. The terra uses an architectural ceramic technique that achieves a broader range of colours and most closely matches the desired appearance.

Petersen Tegl
Danish brickworks which manufactures bricks with an emphasis on excellent craftsmanship. Petersen Tegl fire bricks using coal as fuel adding vibrant light and dark shades to the waterstruck bricks. The Kolumba™ range closely matches the imagery within the approved documentation.

Randers Tegl
Manufacturer of waterstruck bricks based in Denmark. Randers Tegl use a mechanical process, which means that the cost of the linear waterstruck bricks is less than the handmade Petersen Tegl. The varied shades of bricks produce a similar appearance to the planning design intent.

02.03 Sample Panels

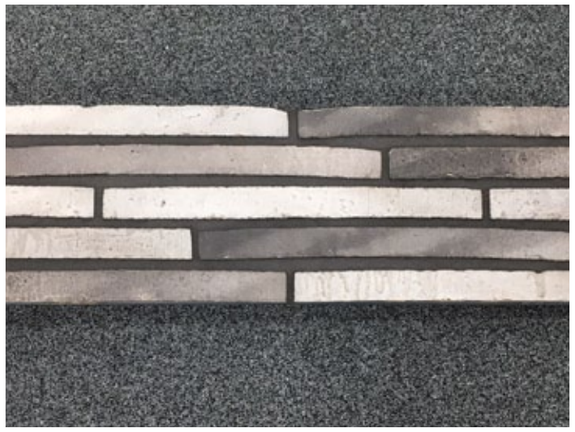
Geo-Brick Shaded Grey

St. Anselmo - CORSO Longformat

Petersen Tegl - Kolumba

Geo-Brick Shaded Cream

St. Anselmo - CORSO Terra Longformat



Randers Tegl - Ultima RT160

Randers Tegl - Ultima RT160

Sample bricks and panel boards were obtained for each of the shortlisted bricks in order to compare their appearance, texture, and quality. This process led to the dismissal of the Geo-Brick in the first instance. This ‘brick’ is in fact a reconstituted stone finish on a concrete brick, giving a very granular almost crystalline finish which is not representative of a traditional brick. For these reasons the brick was discounted. The Sant Anselmo grey bricks, in comparison to their product images, were less grey and would not have been true to the planning intent. For this reason the brick was discounted. This left the Petersen Tegl and the Randers Tegl, both Danish brick manufacturers, as the leading bricks in terms of appearance, texture, and quality.

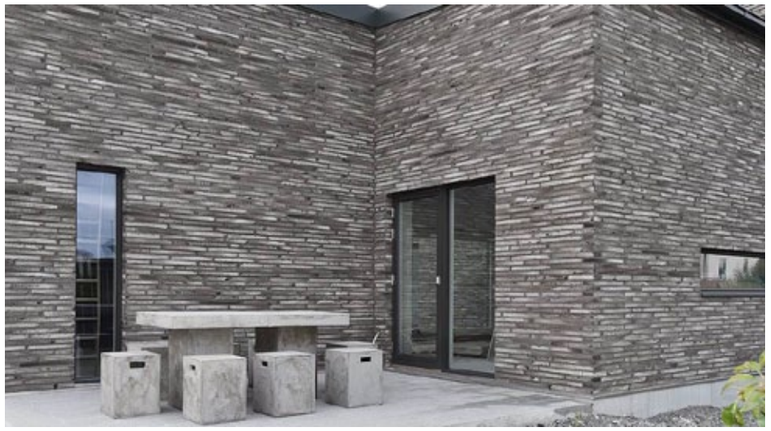
02.04 Preferred Bricks

Randers Tegl - Ultima RT154

Randers Tegl - Ultima RT160

Randers Tegl - Ultima RT156

UK-Brick - Pattingham Blend linear



UK-Brick - Pattingham Blend linear

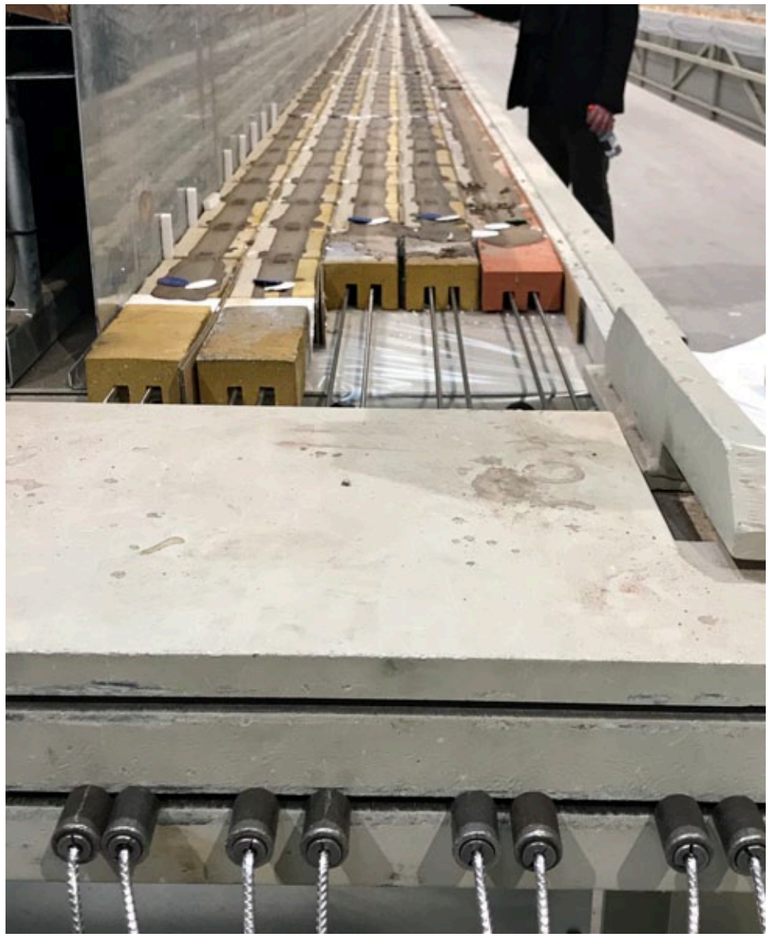
Private house in Netherlands

After careful consideration of the appearance, texture, quality and cost of the shortlisted bricks it was clear that the Randers Tegl range was the only brick that met all the criteria. These bricks are made through a mechanical manufacturing process, which means that the cost of the linear waterstruck bricks is less than the handmade Petersen Tegl alternative. The grey colouration and overall mottled appearance matches the planning intent and the quality of the brick itself is high.

03.00

Randers Tegl Bricks

03.01 Visit to Renders Tegl Factory in Denmark

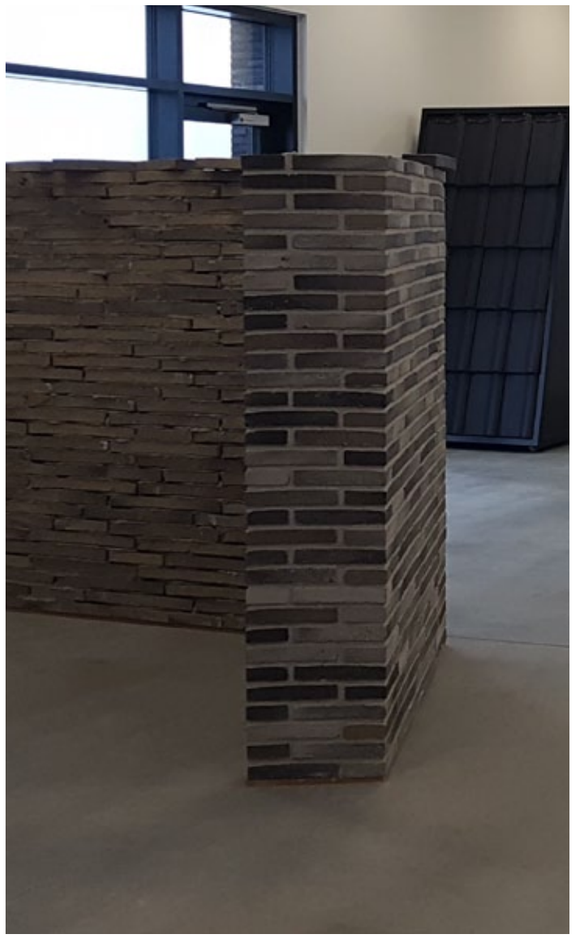


Renders Tegl factory in Aalborg, Denmark.

The Client and Design Team visited the Randers Tegl production facility and showroom in Denmark to learn about the manufacturing process of the preferred bricks, and to see the sample wall that had been produced in order to display the bricks on a larger scale. Randers Tegl have recently completed a new showroom facility which incorporates their own brick products on all exposed surfaces giving an in-situ experience for the majority of their products. Their novel pre-tensioned pre-cast process was also explained, allowing the team to appreciate how this could potentially be incorporated into design work.

03.02 Large Sample Wall

Large Brick Panel RT160 with Grey White mortar at Tegl factory in Aalborg, Denmark.



Large Brick Panel RT160, wall return.

Randers Tegl - Ultima RT60 & RT154

The large sample wall had been constructed to showcase the chosen brick on a much larger scale than the sample boards previously seen by the team. The wall, measuring approximately 4m long by 1.6m high was kinked in the middle, incorporating an angled brickwork corner, picking up on the angled corners within the Camley Street design, in order to discuss the manufacturing process and quality of these special bricks. The construction of this wall enabled the team to appreciate the appearance of the brickwork on a macro scale, from a distance, viewing the wall as an object itself and appreciating the changes in shades across its surface, as well as on a micro scale of the individual bricks and mortar joints. The opportunity of seeing the large sample wall in Denmark confirmed Randers Tegl as the preferred brickwork manufacturer, but also raised questions over alternative brick ranges and mortar colours. Further large sample panels were required to provide the team with the opportunity to compare alternative options.

03.03 Randers Tegl Ultima Range RT 160: Mortar Options

Randers Tegl - Ultima RT160 with Anthrazit mortar

Randers Tegl - Ultima RT160 with Black mortar

Randers Tegl - Ultima RT160 with Grey mortar

Ultima RT160 with Anthrazit mortar. Visualization

Randers Tegl - Ultima RT160 with Standard mortar

Randers Tegl - Ultima RT160 with Grey White mortar

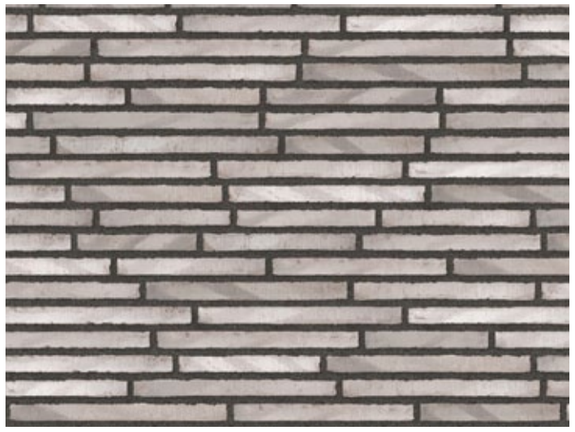
Randers Tegl - Ultima RT160 with Natural White mortar

Ultima RT160 with Anthrazit mortar. Visualization

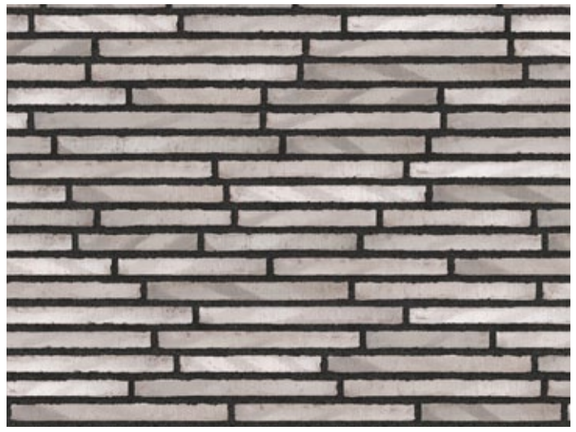
The choice of mortar colour can dramatically change the appearance of the bricks and the overall feel of the constructed wall. The above examples show the RT160 brick with a selection of mortar shades available to choose from which were reviewed when at the Randers Tegl showroom in Denmark.

The Anthrazit and Grey mortar colours were selected for the panels to be constructed on site.

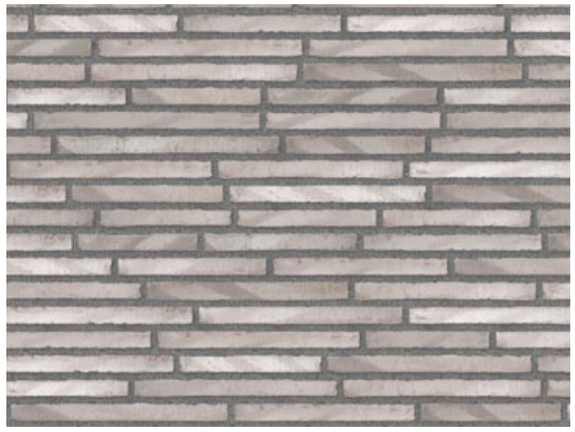
03.04 Randers Tegl Ultima Range RT 156: Mortar Options



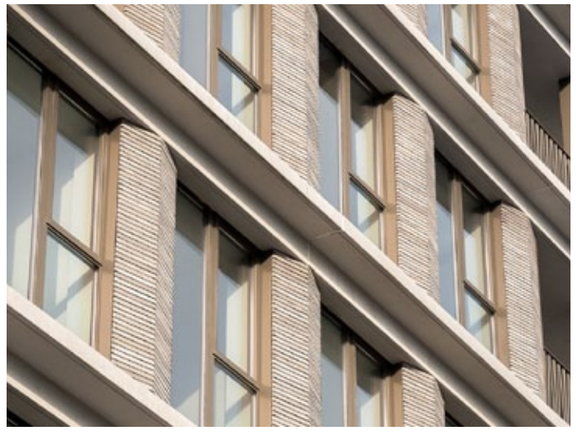
Randers Tegl - Ultima RT156 with Anthrazit mortar



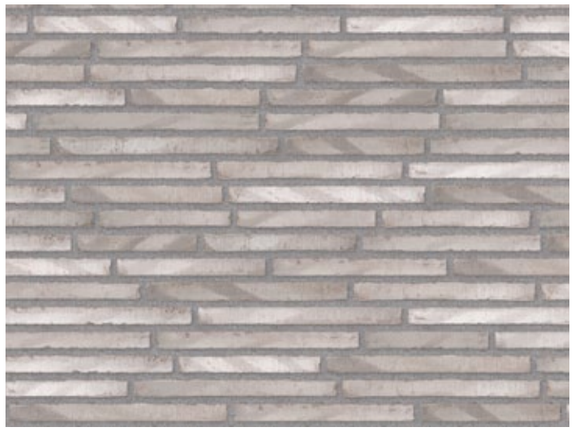
Randers Tegl - Ultima RT156 with Black mortar



Randers Tegl - Ultima RT156 with Grey mortar



Randers Tegl - Ultima RT156 with Anthrazit mortar



Randers Tegl - Ultima RT156 with Standard mortar

Randers Tegl - Ultima RT156 with Grey White mortar

Randers Tegl - Ultima RT156 with Natural White mortar

Randers Tegl - Ultima RT156 with Grey White mortar

The above examples show the alternative brick choice, the RT156 brick, with the same selection of mortar shades available to choose from which were reviewed when at the Randers Tegl showroom in Denmark. The Anthrazit and Grey White mortar colours were selected for this brick for the panels to be constructed on site.

03.05 Next Steps: Sample Panels on Site

Top - Ultima RT160 with Grey recessed mortar joint.
Base - Ultima RT160 with Anthrazit recessed mortar joint.

Top - Ultima RT156 with Grey White recessed mortar joint.
Base - Ultima RT156 with Anthrazit recessed mortar joint.

The above sample panels are to be constructed on site to make the final selection of brick and mortar colours. This will allow the design team to see the products in their final environment. As the location will be external it will also allow water to be sprayed onto the panels to simulate rain, giving the design team a much fuller understanding of the appearance of the building under the varying conditions of the British climate, and allowing the finals decision to be made. This also provides the opportunity for the London Borough of Camden to attend site to view the panels as well.

04.00

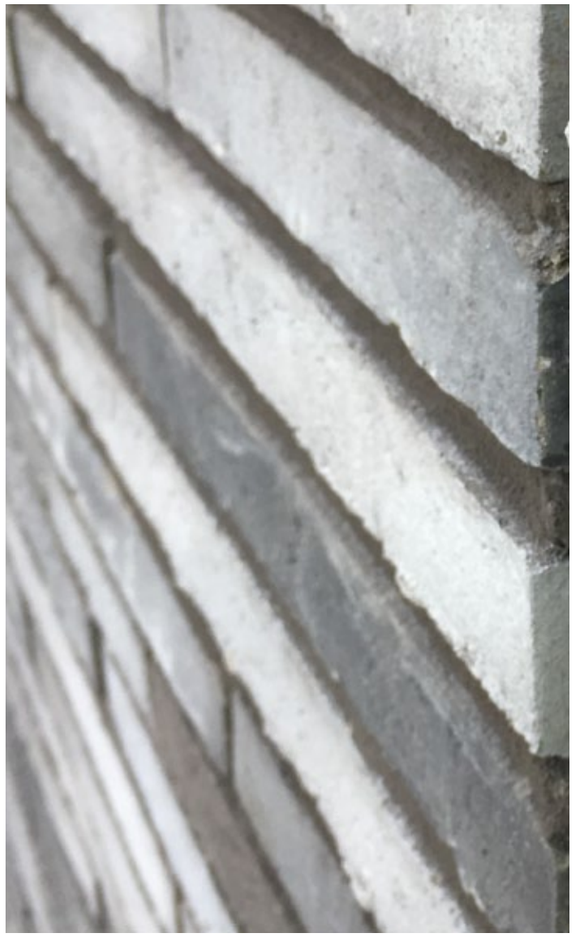
On Site Sample Panel Review with LBC

04.01 Review of Sample Panels with LBC 17/04/18

Completed Brick Sample

The Client team met with Jonathan McClue and Kevin Fisher of the London Borough of Camden on site on the 17th April 2018, to view and discuss the brickwork sample panels that had been constructed to finalise the brick and mortar selection. Hutchinson & Partners reiterated the process of selection contained within this report and invited comments and views from those attending the viewing. It was quickly established that the left hand panels in the photo above, the Randers RT 160 brick were the truest representation of the planning intent. Discussion turned to the mortar colour and the perceived effect on the bricks the different shades of grey had. The conclusion reached by all attending was that the Anthracite mortar, bottom left panel, caused the whiter shades of brick to stand out too much. It was also agreed that the wild bond, as used in the top two panels, was preferred over the 1/4 overlap as this would hide the 8mm variance in the brickwork length and avoid any diagonal patterning over the larger surfaces of the proposed building. To conclude, it was agreed that the RT 160 bricks with a recessed Grey mortar joint in a wild bond are to be used, as indicated by the highlighted panel in the photo above.

04.02 Mortar Specification



TECHNICAL DATA SHEET **TRUSPREAD DRY SILO MORTARS**
Ver May 2017

TARMAC
A CRH COMPANY

TECHNICAL INFORMATION

TRUSPREAD DRY SILO MORTARS

Product Data Sheet No. 100/02

INTRODUCTION

Tarmac Truspread Dry Silo Mortars are a range of factory produced mortars, manufactured under computer controlled conditions. The constituents are dried fine aggregate (sand), cementitious materials and admixtures, together with pigments, if required. Tarmac Truspread Dry Silo Mortar is delivered direct to site in state- of-the art silos, each complete with an integral mixing unit. Once power and water have been connected, mortar can be produced at a touch of a button. The mix consistency can easily be adjusted by the site operative in order to cater for the many varied types of masonry units, from dense concrete blocks to high suction bricks (in summer/ extreme conditions, consider the use of Hydrocure & Hyrdocure+ refer to Product Data Sheet No.100/03), as well as to suit prevailing weather conditions.

PRODUCT CONFORMITY

Tarmac Truspread Dry Silo Mortars are manufactured from constituent materials conforming to the following British/European Standard specifications:

Cementitious Materials	BS EN 197-1, BS 7979
Fine aggregates	BS EN 13139
Hydrated Lime	BS EN 459-1
Admixtures	BS EN 934
Pigments	BS EN 12878

PHYSICAL PROPERTIES

COMPOSITION AND STRENGTH

The mix proportions of Tarmac Truspread dry silo mortar conform with the values specified in the following table when tested by the methods prescribed in BS EN 1015 and BS 4551.

PERFORMANCE

Tarmac Truspread Dry Silo Mortars are based on performance. We would recommend you consider the following strength designations when specifying mortar mixes. Results are based on prisms made from typical production material cured and tested in accordance with the requirements of BS EN 1015 part 11.

STRENGTH

BS EN 998-2 Mortar Class	(iii) M4	(ii) M6	(i) M12
Compressive Strength N/mm^2	4	6	12

Table 1 – BS EN 998-2 compressive strengths made using prisms.

FIRE PROTECTION

Tarmac Truspread Dry Silo Mortar contains less than 1.0% organic material and is classified in accordance with BS EN 13501-1 as Class A1 without testing (Commission Directive 96/603/EC).

For more details contact:
03701 116 116 mortar@tarmacbp.co.uk

TARMAC.COM

Ultima RT160 with Grey recessed mortar joint.

The chosen mortar is the Black grey Y2 Medium from Tarmac,