

Project study of the installation work at the Harbour Walk Haugesund

Betomur deliverables:
Flowpoint grout in black, charcoal grey and red

PROJEKT STUDY



This is a project study and reference document for projects in which Betomur AS is involved as a supplier of know-how and materials, if necessary participating in an introductory demonstration. The first few pages give an introduction to the project as seen from Betomur AS's position. Following that, we have included unedited feedback from parties which took part in the project.

HAUGESUND

Haugesund Municipality had 32,250 inhabitants as at 1 January 2007.
The municipality's population has been growing steadily for the last ten years.
Total area, including marine waters: 366 km₂
Total area of freshwater: 4 km₂
Total area of dry land, including islands: 73 km₂
Total length of coastline: 140 km

Haugesund – the “little big city” on the sound, is a natural centre of energy in the midst of a region of 160,000 inhabitants. Haugesund is a cultural town, rich in activities and experiences for all tastes, the most well-known being the international jazz festival “Sildajazzen” and the Norwegian International Film Festival.

Although Haugesund is a young city, as a community it has been known since Viking times. In 2004 the city celebrated its 150th anniversary.

Haugesund city centre offers a rich and diverse range of attractions to its visitors. More than 300 commercial businesses and just over 350 service providers are located in the centre of Haugesund. The city also has a wide range of cultural arenas and eating places and hosts many exciting festivals and activities year-round.

The first city-centre plan was drawn up in 1990 and a fire in the city centre resulted in the production of a rotating action plan which is about to enter its second phase.



PROJECT:

The Harbour Walk in Haugesund
Pointing of cobblestones in pedestrian streets,
harbour areas and traffic areas in the vicinity
of the inner harbour in Haugesund.

OWNER: Haugesund Municipality
CONTRACTOR: Jostein Myge AS
BUILDER: Jostein Myge AS
SITE MANAGER: Torgeir Myge, Jostein Myge AS

PROJECT
DESCRIPTION: Pointing of cobblestones
and granite flagstones using
charcoal grey, black and red grout

SITUATION: Large parts of the underlying material
have been replaced.

Several alternative grouting methods
were considered. For example, an area
was treated using an epoxy-based grout
and grouting with bitumen was also tested.

Both alternatives were rejected owing to
very unsatisfactory results before
UltraCrete Flowpoint grout was selected.



Because Haugesund has always been characterised by maritime activity, it is probably natural that the city's façade towards the sea should now be upgraded, in the form of a new, attractive Harbour Walk. (3 photos at lower right: www.westfoto.no)



*In Haugesund
they understand
the importance of
aesthetics!*



Betomur UltraCrete Flowpoint grout was supplied in red, black and charcoal grey, according to the client's wishes. Photos on Page 4 are from November 2007.

Photos on Page 5 were taken during the construction period and show the grouting process. When dry, the red grout is bleached to provide a warm tone to the natural stone.



The result is very strong, durable paving without dangerous joints in which stiletto heels, prams or bicycle wheels might get stuck!

Flowpoint has clearly also provided strength, preventing damage to the paving by heavy road vehicles on the quayside.

According to Odd Engen of Haugesund Municipality, fill has been replaced in places to a depth of 10 metres and it was feared that settling of the underlying material would have a serious effect on the stone paving.

In the first area where installation was commenced, there are a few small flaws caused by settling and unsatisfactory ground work.

Although the paving here has sunk when subjected to heavy loads, the Flowpoint maintains its adhesion to the paving stones. This is evident in that large sheets have subsided, rather than individual stones.



Only two or three small areas in the entire Harbour Walk display such damage. Based on this, the installation must be said to be very successful, and Flowpoint has once again demonstrated its quality.

The Harbour Walk displays a very attractive colour tone, which is a delight to the eye! – Which was of course exactly what one wanted to achieve, without loose paving stones which rock underfoot and cause annoyance instead of enhancing the experience.

When the undersigned carried out an inspection of the quayside with Odd Engen, several of the townspeople came over to say hello and thank him for the attractive result! It was well deserved!

The photo at the bottom right shows a group including some Danish visitors on an inspection to learn how it's done. Congratulations, Haugesund Municipality!





The grouted joints are just as sound after about two years, with no “traps” for stiletto heels, bicycles or prams Street cleaning machines and high-pressure hoses – just bring them on!



Feedback from Odd Engen
HAUGESUND MUNICIPALITY

THE BACKGROUND FOR THE CHOICE OF GROUT:

In connection with the work at the inner harbour in Haugesund, solid grouts were assessed in three stages. Flexible, elastic bitumen grouts were unsuccessful in 2005.

Choice of grout to withstand street cleaning machines.

Grout for cobblestones and granite flagstones.

PRODUCTS USED (supplied by Betomur AS):

Betomur UltraCrete Flowpoint, black

Betomur UltraCrete Flowpoint, charcoal grey

Betomur UltraCrete Flowpoint, red

HOW DID BETOMUR PERFORM IN THE PROJECT? (Graded from 1-10, where 10 is best)

Was Betomur familiar with the project at the start?	No		
Was preliminary information received from Betomur AS?	Yes	(10)	
Were products demonstrated on site by Betomur?	Yes	{10}	
Follow-up by Betomur during the process?	Yes	(10)	
Completion of delivery:	Yes	(10)	
Our experience with this product as at today.		{10}	Two years' experience
What was the product like to use?		(10)	Easy to work with
Used again for the same purpose?		(10)	Stage 4, inner harbour
Recommended? {		(10)	Can be laid in the rain



OVERALL COMMENTS ON BETOMUR AS A SUPPLIER:

Visits before, during and after paving work. Positive with regard to obtaining the product in new colours, although the British manufacturer originally said no. Result-oriented, good communication. (10)

Queries about the installations can be addressed directly to Odd Engen, senior Engineer in Haugesund Municipality at:

Telephone: +47 52 79 33 07
Mobile telephone: +47 915 62 902
or odd.engen@haugesund.kommune.no



Feedback from Torgeir Myge
JOSTEIN MYGE AS

Project start-up: February 2006
Project completion: August 2006

WORK CARRIED OUT:

Approx. 1500 sq. metres of street paving laid in moulding sand and pointed with Flowpoint grout.
Approx. 300 sq. metres of granite flagstones laid in moulding sand and pointed with Flowpoint grout. (Stage 2).
In Stage 3, Flowpoint was chosen because of the good results in Stage 2.

OUR ASSESSMENT OF HOW BETOMUR PERFORMED IN THE PROJECT (Graded from 1-10, where 10 is best)

Was Betomur familiar with the project at the start?	No	
Was preliminary information received from Betomur AS?	Yes	(08)
Were products demonstrated on site by Betomur?	No	(00)
Follow-up by Betomur during the process?	Yes	(09)
Completion of delivery:	Yes	(09)
Our experience with this product as at today.	(09)	All cracks were caused by our joints being too shallow or the granite flagstones having sawn edges.
What was the product like to use?	(08)	Perfect for west-coast weather. A little rain is a great advantage during installation.
Used again for the same purpose?	(10)	Has been used in Stage 2 and 3 at the inner harbour and on outdoor areas around the Rica Maritim Hotel.
Recommended?	(10)	The main challenge is collecting and flushing away surplus material, but in all other respects, Flowpoint is 100% satisfactory. Problems may arise if the joints are too shallow or if surplus is flushed over areas which have not been pointed. Granite flagstones should not have sawn edges as these cause poor adhesion.



OVERALL COMMENTS ON BETOMUR AS A SUPPLIER:

We were thoroughly informed about the installation work by telephone and Betomur's follow-up was impeccable.
On principle, I never award top marks to anything.
We were given an on-site demonstration later in the process. (09)

Queries about the installations can be addressed directly to Torgeir Myge of Jostein Myge AS at:
Mobile telephone: +47 415 09 834 or post@myge.no

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