


# THE WHITE SITE



AALBORG WHITE®

September 2005/3



Copenhagen's Metro

Close co-operation with  
educational institutions

A concrete gateway

The visible concrete surface



AALBORG WHITE®

AALBORG WHITE® is white cement – made from nature's own raw materials, refined by supreme technology, and used for beautiful and functional solutions.

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# METRO



## ***Copenhagen's new Metro ring railway – an elegant signal to future Metro station design...***

Copenhagen's new above ground Metro ring railway, which is expected to carry up to 92,000 passengers per weekday, is a new cross city link for the greater Copenhagen S-bane railway network.

The new 11.5 km long Metro ring railway will link together S-bane railway lines, bus routes, regional trains and the mainly underground Metro. 5 of the stations on the ring railway is designed and constructed with extensive use of white concrete.

A close dialogue with AALBORG WHITE® Technical Team has resulted in the majority of the bridges, supporting walls, stairs and supporting columns being specified and executed in white concrete based on AALBORG WHITE® cement.

The architects wanted to design stations with light and friendly environments. The dominant materials are therefore glass and white concrete supplemented by high lux level lighting.

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# TR O





# METRO

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White concrete's ability to reflect light means the light sources used at stations have a much greater effect and therefore magnificently support the architects' intentions.

Glass was selected to create transparency and clearness, white concrete to create light, calm and direction and help to carry, orientate and direct the traffic at stations.

The new stations send an elegant signal that future Metro design in white concrete is the way forward and the antidote to the past's dark and dour stations.

*The architects wanted to design stations with light and friendly environments.*



# Panoramic side-walk



The flooring of the project in Hurghada is exclusively constructed from SWC's white cement.

Hurghada is one of the most attractive tourist cities in Egypt, with its sandy beaches, sun, sea, good weather and unspoilt beauty. The city has recently experienced a very active period of construction and development, to meet

the demands of the increasing numbers of tourists coming from all over the world. One major project in the downtown area of the city is the panoramic sidewalk, where there will be an open air exhibition of culture, arts, and music to

show the value of combining different types of civilizations in one place.

The project contractor is Arab Contractors Company, which is considered to be one of the biggest contractors not only in Egypt but in the Middle East and North Africa region.

The project's flooring is exclusively constructed from Sinai White Cement Co.'s white cement, which was selected so that brightly coloured floors could be created and for its high durability and wear resistance. The bright colours are created in a number of ways. Yellow is created by adding just sand (and no other additives) to white cement. Orange uses red oxide and light green uses blue oxide to create the colours. SWC concrete's strength (above 52.5 MPa) and high Blaine fineness (400 m<sup>2</sup>/kg) also more than satisfied the consultants' durability and fraction resistance requirements.

SWC is very proud to be a partner in a project that adds to the value of the city of Hurghada and supports the city's position on the tourist map of the region.



The panoramic side-walk, where an open air exhibition for cultures, arts, and music will take place to show the value of combining different types of civilizations at the same place.

# Grantley Adams International Airport Expansion Project



*The terrazzo floors at the Grantley Adams International Airport Expansion Project, Barbados, West Indies.*

AALBORG WHITE® has once again gained visibility and usage in the Caribbean. AALBORG WHITE® has over the last 2 years been used in the manufacture of terrazzo floors at the Grantley Adams International Airport Expansion Project, Barbados, West Indies.

The airport project is currently being undertaken by the Danish firm E. Pihl and Son, and the new airport will, after completion, have the capacity to simultaneously handle over 4,000 passengers. According to David Leacock, the local agent, AALBORG WHITE® is the premier choice for white cement consumers. It is primarily used for decorative and manufacturing purposes, including coral rendering which is a popular use for AALBORG WHITE® in Barbados and the rest of the Caribbean.





# BUSSTO





OP

# BUSSTOP

Everywhere we travel, we consciously or unconsciously navigate using the characteristics, shapes, colours and natural progression of the landscape that forms our route, for example to and from work. This is everything from direct directions such as signs in strong colours with lighting and reflections to steel crash barriers and bollards that separate soft road users from other road users. However, this highly visible way of giving directions unfortunately often disfigures road environment visual expression.

An alternative is to use the language of design and the landscape's natural progression to direct traffic.

The Municipality of Aalborg in Denmark has constructed a number of visible and characteristic bus stops, which are good examples of the use of this type of design in the road environment.

Using the language of design, colour, materiality and landscape adaption, beautiful nodes are created in daily navigation within the infrastructure.

The colours and materiality of supporting walls and pavings are in particular used to create bus stop character – all executed in white concrete based on AALBORG WHITE®.

The white concrete was selected through a dialogue with the AALBORG WHITE® Technical Team and is executed as white in-situ cast concrete for the supporting walls and white dry cast paving stones and kerbstones on horizontal surfaces.







## A concrete gateway

The versatile Danish artist Nils Sloth has for more than a year worked on the artistic decoration of the gateway into the inner courtyard of a new senior citizen housing project in Aalborg, Denmark. Nils Sloth was selected for the assignment because of his ability to create a bridge between the environment and art. The challenge in this project was to emphasize the atmosphere that exists as you go through a gateway, passing from a street into a courtyard. The beautiful result was unveiled at the inauguration of the building last year.

Nils Sloth's idea was to create a new and different type of decoration using reliefs cast in body coloured white concrete to which fragments of painted hard plastic and metal are added. Standing on the street, your eye is first caught by the small reliefs on the building's facade base. They draw the viewer to look more closely into the gateway, where the reliefs increase in extent and colour. The largest measures 1 x 1 meter and weighs 140 kg. The reliefs, which are based on the human body as a theme, are dynamic and vibrant in their expression.

The long creation process started with a preparation of the motifs in the computer's image processing program. The many small elements were then machined in a special polystyrene material. The artist then glued the elements together to form the final mould, in which additional figures were scored out. The 12 reliefs were then cast at Gandrup Elementfabrik (Gandrup Precast Factory) in Denmark in a spectrum of mainly light yellow, red, green and blue shades. After casting, brightly coloured stamped out plastic and metal fragments were inserted into the preformed recesses, giving a bright contrast to the pastel colours.



*The challenge was to emphasize the atmosphere you find when you pass through a gate from street to yard.*

*After the casting, brilliantly coloured punched plastic and metal fragments have been fitted in the holes which gives a happy contrast to the pastel shades.*







# Close co-operation with educational institutions

One of AALBORG WHITE®'s marketing strategies is to influence trends and attitudes towards concrete through co-operation with architecture and design students. Through this we can influence what the world will see, feel and experience executed in concrete in the future.

One of the many activities in the last 3 year has been a continuous cooperation between Aalborg Portland and Aarhus School of Architecture. 6 workshops of between 2 days and 3 weeks have been held, there has been a complete term with concrete as a theme and there have been individual competition assignments for students.

Most recently, the co-operation has resulted in wonderful graduation projects with concrete buildings and a large research project for 'Exploration of Concrete's Aesthetic Potential'.

The current research project is being run by Professor Karl Christiansen and lecturer Anders Gammelgaard from Aarhus School of Architecture in co-operation with Dalton Beton-elementer A/S and Aalborg Portland A/S and will continue to January 2006.

*Continues page 12*

*6 workshops have been held, there has been a complete term with concrete as a theme and there have been individual competition assignments for students.*







# Trendsetters of future design



*Continued from page 11*

The research is integrated into tuition and for a large part of the spring term, students have carried out a major part of the creative and pioneer work in finding concrete's potential for the future.

The results of student assignments are exhibited in the School of Architecture's courtyard in Aarhus and is now made

available as test objects for another research project, where accelerated patination is the goal (read more about this in the article 'The visible concrete surface' on page 18).

One example of this year's graduation projects is a wonderful new Visitor Centre for Aalborg Portland, executed in

organically shaped white concrete. The project can be viewed on the school of architecture's web site at [www.aarch.dk](http://www.aarch.dk) and will also be displayed at Aalborg Portland later in the year.



# The **visible** concrete surface

*- Improvement and renewal of the aesthetic qualities of concrete*

The aesthetic properties of concrete are fast becoming as important as its strength and durability. Concrete should not only support a load, it must look good while doing so.

As a continuation of four years of intensive research into concrete aesthetics at RDC, AALBORG WHITE® technical team and RDC are now taking part in a three year Danish research project titled 'The visible concrete surface – improvement and renewal of the aesthetic qualities of concrete'.

The project partners include major Danish architects, contractors, consultants and pre-cast concrete producers, partners who represent the entire building community. The overall aim of the project is to improve

concrete's image, through providing ways of ensuring that the expectations of building owners and users are met.

One tool used to achieve this is an internet portal. The portal will provide different examples of visual concrete expression. The designs will also be explained so that the portal can act as a source of inspiration and a discussion forum for players such as building owners and architects. Detailed information on how to produce the examples will also be available on the site.

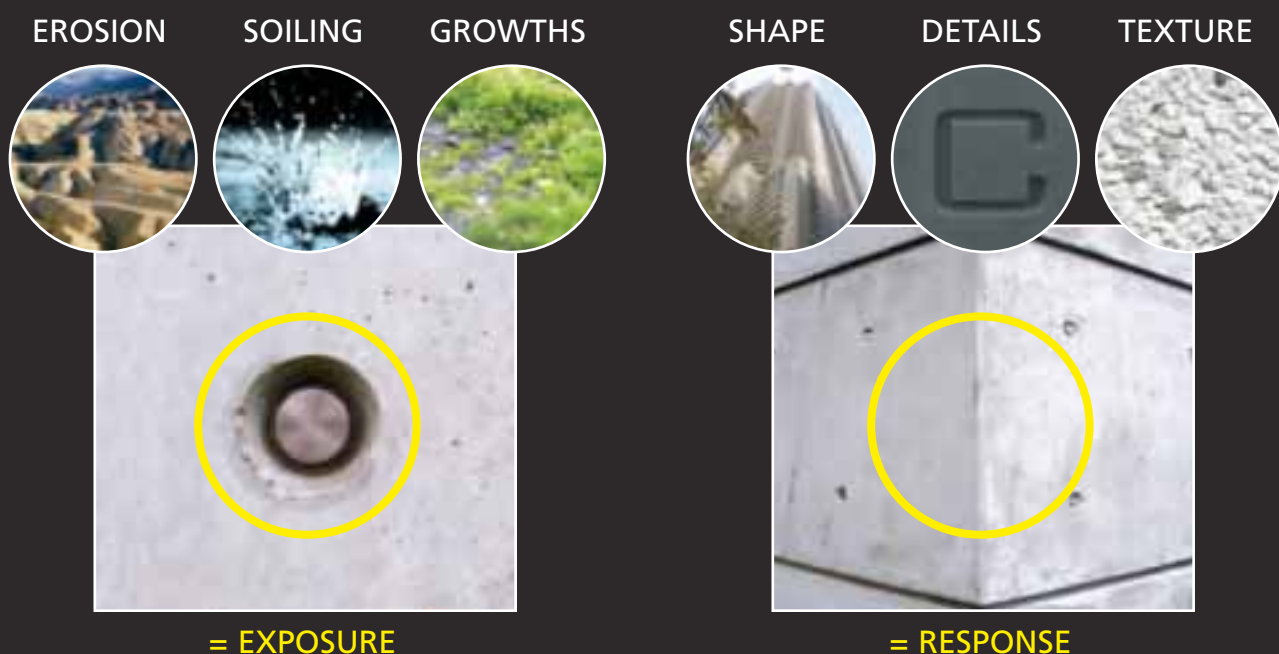
The forum can be used to, at an early stage, weigh up the expectations of the building owner against the interests of the architect, contractor and producer who are going to real-

ize the building. This will ensure that aesthetic aspects are taken into consideration in all phases of the building process.

The forum is based on research, drawing on experience from existing structures, exploring new ways of expressing concrete on concrete's own terms and focussing on areas such as nano and micro design of surfaces and macro design of buildings.

The research into new ways of expressing concrete on concrete's own terms is carried out in cooperation with the Aarhus School of Architecture.

The project runs until the end of 2007.



*All building material surfaces, including concrete, age aesthetically as a result of exposure to the environment...*

*... The response is governed by the combination of design, execution and maintenance, design being the most important.*

*As part of a project between the Aarhus School of Architecture and AALBORG WHITE® Technical Team, students have created 16 unique concrete shapes, rethinking the expression of concrete on concrete's own terms.*

*These shapes are exposed to accelerated ageing, to learn how different macro design elements influence the ageing and soiling of concrete surfaces.*



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## Growing with AALBORG WHITE®

The Australian company Darling Downs Brick Sales (DDBS) received a new lease of life when it was purchased by the Lundgaard Family in 1984. The Lundgaards, originally Danish farmers, accepted the challenge to build the company into what it is today.

It hasn't been easy. And it has taken time. The Toowoomba market is a hard market to break into, as the people here are conservative and prefer to go to the supplier they have always dealt with. It was a humble beginning, starting with one small 1961 truck, a small office and very few customers.

Business steadily grew and the Lundgaards employed more staff. However, despite updating and renovating the office building twice, they found they were running out of space to house them. Eventually the decision was taken to move from its premises at 13 Sowden Street to something bigger.

A further reason for moving was the need for more space to display bricks,



*Darling Downs Bricks Sales – the 860 square meters of displays is providing the biggest display west of Brisbane.*

blocks, pavers, gardens walls and the need for a warehouse to store cement, paving sand and concrete mix etc. – space they did not have at Sowden Street. At the new site, the 860 m<sup>2</sup> of displays gives the company the biggest display west of Brisbane.

The number of employees has grown from three to sixteen, which is just one factor illustrating the success of this company.

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## Dragon Gate on the road First stop Sinai White Cement Company in Egypt



*The 10 participants all came from the Sinai White Cement Company, from sales and market related positions.*

The first Dragon Gate Basic Diploma course held outside Aalborg was run on 28th and 29th of June at Sinai White Cement's office in Cairo. The 10 participants all came from the Sinai White Cement Company, from sales and market related positions.

The Basic Diploma is designed to create a common understanding of our mission, vision, core values, market roles and strategies, so that everyone has the same start point for working towards our joint goals. The Diploma focuses on making concrete communications tools available to our global organisation and on inspiring participants to take part in our organisation's development. The course also promotes and emphasises an understanding of the importance and significance of AALBORG WHITE® being a premium brand.

We had two very fruitful days with a lot of discussion and input.