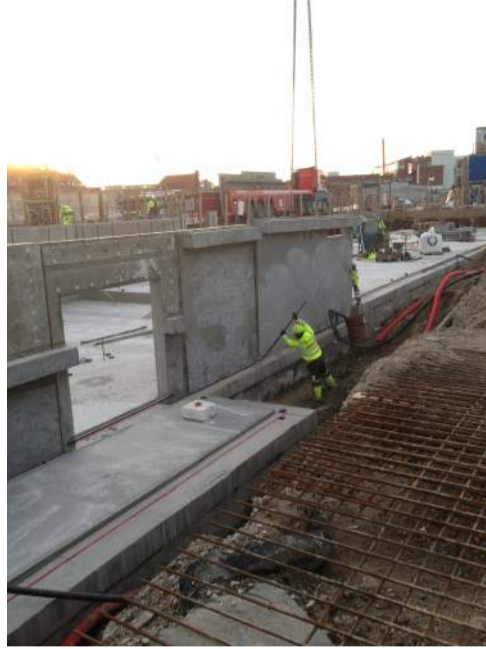
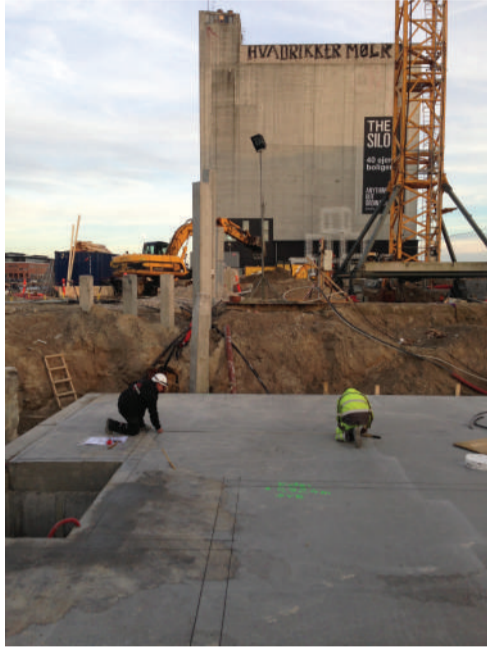


USE OF STEEL SHEET PILES IN A
CONSTRUCTION SITE OF COPENHAGEN



Project information

Fortkaj, 2100 København Ø, Denmark.
Large-scale construction site in North Harbour of
Copenhagen.

Crown Race house led by CASA:
86 flats (50 to 100 m²) + communal roof terraces
+ artificial island + underground parking

Construction started 6 months ago (digging, foun-
dations and basement are done) till august 2015

Material study

A sheet pile is a hot-rolled structural shape. Series
of individual, separate sheet piles can be connect-
ed by side interlocking to form a continuous wall.

Typically used in waterfront structures construc-
tions, this system is spread in dock constructions in
Copenhagen.

Here, because of the level of this particular site
and its proximity to the water; series of interlocked
steel sheet piles are used to form a retaining wall:
the individual modules are water tight and the
interlocks are strong enough to avoid leakage
through. There is a water pumping station in site
but in the case of the making of sheet piles retain-
ing wall a complete dewatering of the site is not
essential.

As they are embedded in the ground to avoid later-
al movement, the steel sheet piles are designed to
resist the penetration into the soil strata below the
depth of the excavation. According to the chosen
depth of introduction into the soil, a particular
grade of sheet piles (specific thickness, width,
length and shape) is appropriate to avoid overturn-
ing.

They are to resist bending moment and distribute
lateral loads applied on the structure through each
module (convex/concave profiles) and through
the strong interlocks.

The steel sheet piles are pre-fabricated and trans-
portable. Along with being water/earth tight, they
constitue a fast, economical, durable and recyclable
material solution.

