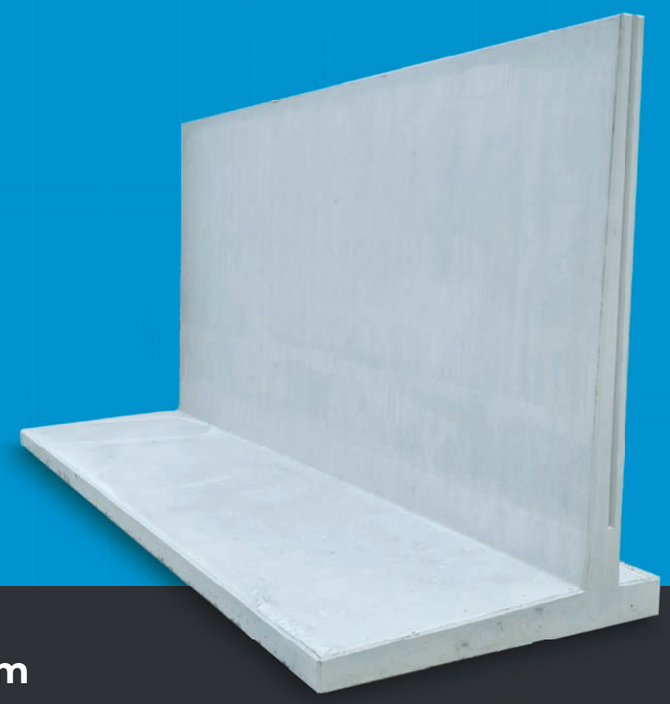
BOSCH BETON

CIVIL ENGINEERING

Road & Transport | Soil & Garden | Storage |
Water | Terrain fencing | Railway | Specials



www.boschbeton.com

BUILDING A
SOLID FUTURE

CORPORATE STORY

Bosch Beton is an ambitious family firm that produces concrete retaining walls from its state-of-the-art factory in Barneveld and sells them to the civil engineering and agricultural industries. We do this in the Netherlands and in our neighbouring countries. Whatever your requirements, we have a retaining wall solution for you. We deliver a high-quality and sustainable product for now and for the next generations. Sustainability and innovation are high priorities so that we can minimise our own footprint and that of our customers. We are working towards 100% circular production of our retaining walls in the future. ‘Building a solid future’ is our promise to our customers. Supporting customers, personal contact, full service, fast delivery and quality make Bosch Beton a solid partner. Sustainability, a pioneering approach, decisiveness, sincerity and loyalty are our core values.

RETAINING WALL SOLUTIONS

Our retaining walls can be used for so many different applications in the agricultural sector; as silage clamp for grass or maize, as concrete manure storage, as silo for storing raw materials for biogas or retaining walls for a dairy farmer’s barn. Whatever the issue and however complex we work with you to find the best customised solution for your situation.

Sustainability

With our products, we provide customers with the most sustainable solution for all their requirements.

A pioneering approach

We aim for innovative products and work continuously on product development.

Decisiveness

And we don’t only think about innovation, improvement, connection and sustainability; we do it too.

Sincerity

Providing honest and expert advice with the right price/quality ratio always comes first for us.

Loyalty

We are committed to our customers and always honour our agreements and obligations.

We processed 20,000 tonnes of rubble from our former factory into granulate for use as raw material for new retaining walls.

SUSTAINABLE PRODUCTION

Sustainable raw materials

100% recyclable

Long service life

Solar power

Guarantee

Rainwater

BUILDING A SOLID FUTURE

'Building a solid future' is our promise to our customers and we aim to realise this in the broadest sense. What we build today must contribute to tomorrow's world. If customers choose Bosch Beton retaining walls, they must have assurance that they're making a sustainable choice. That's why we keep on innovating, developing and improving our sustainability to continue to make and deliver a high-quality and sustainable product. Our prefab retaining walls are certified in line with the strictest requirements, including KIWA/KOMO and Güteschutz. Bosch Beton is one of the first retaining wall producers worldwide to obtain a CSC Gold certificate (Concrete Sustainability Council), which means that we produce sustainable and responsible concrete products. Our state-of-the-art factory exudes sustainability throughout. We use sustainable materials, installations and recycled products for our production, reuse rainwater in the production process and have over 18,000 solar panels to generate our energy.

CONCRETE SUSTAINABILITY COUNCIL · GOLD · 141-CSC16-2017

CE 0620-CPR-56074 10 NEN-EN 15258:2008 DoP nr. 01201905 Keerwanden voor agrarische toepassing of GWW

STATE-OF-THE-ART FACTORY

Building a solid future

Production in the state-of-the-art Bosch Beton factory in Barneveld is all about sustainability. The first sustainable concrete factory in the Netherlands was built in accordance with **BREEAM-NL** Outstanding (Building Research Establishment Environmental Assessment Method). As the building is designed around the production process, we can work in the most technically efficient and sustainable way. A possible second life for the factory was also incorporated in the design. For instance, the building can be fully dismantled and recycled at the end of its service life.

Weighbridge
Check on all incoming raw materials

Rainwater
Captured in reservoir (2,100 m³). Filtered for reuse as process water

Planning and logistics
Efficient coordination for transport

18,500 solar panels
Supply green energy for entire site

Raw materials
Acclimatised storage

Own laboratory
Quality control and innovation

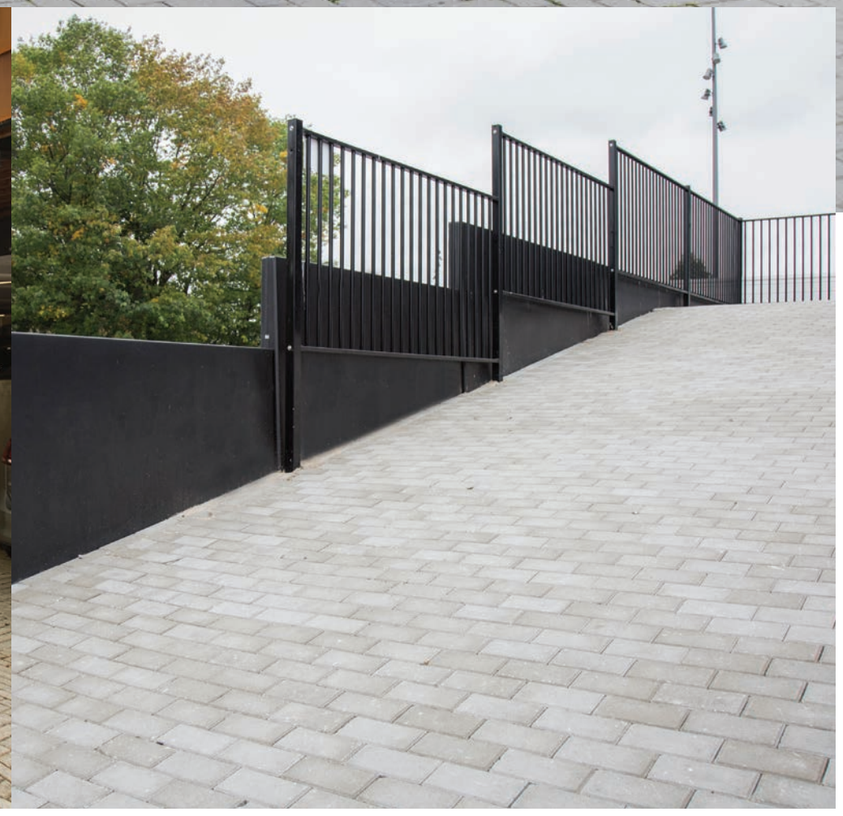
Central mixing plant in the factory
Maximum quality assurance

Specials and adjusting department in the factory
For customisation

Stock of retaining walls
Produced using sustainable raw materials

ROAD & TRANSPORT

Sometimes making a slightly stronger thoroughfare is needed for passing traffic. Or an entrance has to be constructed at a point where there is a ditch. Parking bays have to be constructed in a lower lying section. An embankment at an ecoduct is to be given additional reinforcement. For an efficient design of the recycling depot, a municipality requires retaining walls that are suitable for heavy loads on which fencing can be installed. These are just a few situations where our retaining walls can offer a solution.



SOIL & GARDEN

A solid solution is required to bridge great height differences between a garden and the pavement. Retaining walls can be used to create a natural pond or a bathing pond, or shoring if the garden borders the water. A wall also works well as partition or yard fencing on farmyards. And if you're not keen on the concrete look, you can have the walls finished with woodwork, brickwork or with a coating. An alternative is the bio-retaining wall that is proven to make a positive contribution to biodiversity. You can insert plants into the cut out gaps and insect hotels attract a range of insects.

STORAGE

Municipalities are increasingly working towards sustainable and separate waste collection and recycling. Separate collection also means separate storage on the municipal collection yard or recycling depot. Older recycling depots are not (yet) fully equipped for these developments, or require expansion in the near future to be more efficient and sustainable. Strong partition walls are important for separating different types of raw materials effectively. For example, for separating waste flows at the recycling depot or for keeping sand, gravel, sand for mortar, or mixed granulate etc. separate at extraction companies.

“The 7-metre-high retaining walls from Bosch Beton are perfect for sawdust storage.”

Gert Boeve,
Rondhoutzagerij
Midden Nederland

WATER

A water barrier made of retaining walls to keep out (excess) water and prevent flooding. Depending on its location, a water barrier provides protection against maximum water levels. For example, a quay wall, dam, dike, wide ditch, bathing pond, shoring or water channels in new or existing residential areas. Because water generates huge pressures and forces, it is important that the retaining wall is strong enough to withstand these. Our range includes retaining walls that are especially made for the extremely large loads caused by water (or soil) pressure.

“Stadsbeek was a project with challenges. Bosch Beton thought along with us, resulting in a very nice end result.”

Brian Grefte,
Dura Vermeer regio Oost

TERRAIN FENCING

Terrain fencing is not only required at companies, but also on private property and at schools and sports clubs. Retaining walls without load may serve as yard fencing between two plots, or as a subtle boundary between two driveways. It can also be used to screen off less attractive views onto sports fields from residential areas, while also simultaneously serving as a sound barrier. In addition, retaining walls often form the basis for a solid wall around the grounds of a school, with the concrete wall subsequently being given a finish with woodwork or metalwork. Another option is to mark the boundary of a site.

RAILWAY

Many railway lines and stations will undergo alterations and expansion as a result of the growth in the number of passengers, goods and trains. Our retaining walls are frequently used as part of these often far-reaching changes. One example is making the entrances of stations more accessible and safer, where retaining wall structures are installed for soil (or water) barriers, widening platforms, constructing a sound barrier along the railway or a cycle park. We supply retaining walls to ProRail for the ‘Standardised Platforms’ project. We also sometimes finish retaining walls with a structure, a RAL colour, anti-graffiti coating, fencing or greenery.

“Bosch Beton contributed to optimise the construction, design and calculations for this train station renovation project.”

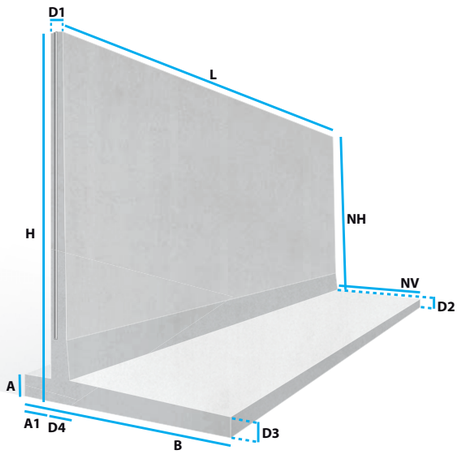
Koen de Koning,
K_Dekker bouw & infra

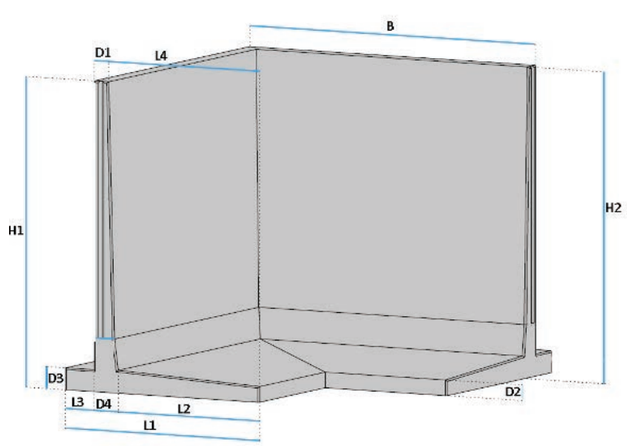
SPECIALS

As well as the standard retaining walls, we also produce special walls: our specials. These include rounded, bevelled, mitred, coloured, thickened or radius walls. Or walls with a certain structure and fitted with swallow holes. The bio-retaining wall has insect hotels and gaps for planting greenery, which makes a positive contribution to biodiversity. Our retaining wall specials have also formed the basis for holiday homes or the foundation for art, where a different design with respect to form, colour or structure turns the concrete retaining wall into something really ‘special’.

L RETAINING WALLS
(WITH HEEL)

The L-shaped retaining wall with heel was developed especially for medium load applications in civil engineering and is available in various lengths. Fixed L-wall corner elements with heel are also available for corner solutions.





- These have a heel which offers more stability and therefore a higher load capacity
- Total net height
- The foot side is also the load side
- Vertical rear side
- Exposure classes XA3, XC4, XS3, XF3, WF
- Design service life 50 years

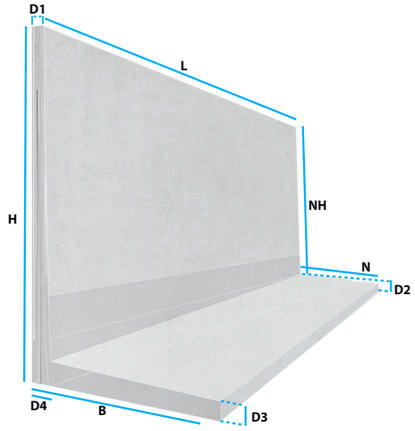
Type	H	L	B	NV	NH	D1	D2	D3	D4	A	A1	kg
L050hak	500	3995	600	285	410	85	90	83	115	90	200	890
L075hak	750	3995	800	488	659	85	91	83	112	90	200	1220
L100hak	1000	3995	800	489	909	85	91	83	111	90	200	1425
L125hak	1250	3995	900	577	1148	85	102	92	123	100	200	1860
L150hak	1500	3995	1050	716	1387	85	113	94	134	110	200	2395
L175hak	1750	3995	1200	850	1620	90	130	98	150	125	200	3060
L200hak	2000	3995	1350	985	1855	100	146	101	165	140	200	3835
L225hak	2250	3995	1500	1113	2085	100	165	120	187	165	200	4820
L250hak	2500	3995	1600	1200	2322	100	178	136	200	170	200	5655
L300hak	3000	3995	1900	1467	2775	100	225	144	233	200	200	7850
L350hak	3500	2495	2050	1590	3245	100	255	149	260	220	200	5930
L400hak	4000	2495	2450	1810	3731	100	269	150	290	229	350	7375

Type (Corner)	H1	H2	B	L1	L2	L3	L4	D1	D2	D3	D4	kg
HoekL050hak	500	410	1995	600	285	200	315	85	83	90	115	840
HoekL075hak	750	659	1995	800	488	200	515	85	83	90	112	1140
HoekL100hak	1000	909	1995	800	489	200	515	85	83	90	111	1350
HoekL125hak	1250	1148	1995	900	577	200	615	85	92	100	123	1725
HoekL150hak	1500	1387	1995	1050	716	200	765	85	94	110	134	2180
HoekL175hak	1750	1620	1995	1200	850	200	910	90	98	125	150	2765
HoekL200hak	2000	1855	1995	1350	985	200	1050	100	101	140	165	3435
HoekL250hak	2500	2322	1995	1600	1200	200	1300	100	136	170	200	4795
HoekL050100hak	500	410	995	600	285	200	315	85	83	90	115	400
HoekL075100hak	750	659	995	800	488	200	515	85	83	90	112	540
HoekL100100hak	1000	909	995	800	489	200	515	85	83	90	111	640
HoekL125100hak	1250	1148	995	900	577	200	615	85	92	100	123	810
HoekL150100hak	1500	1387	995	1050	716	200	765	85	94	110	134	990

Other sizes available on request.

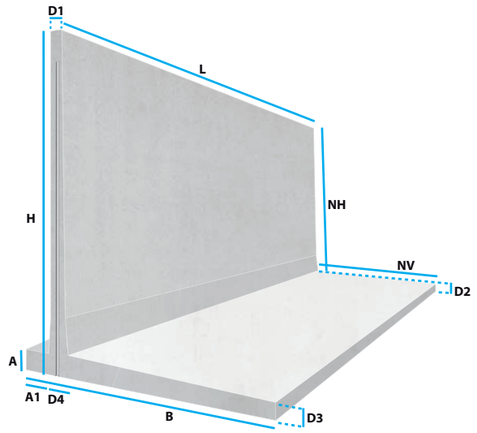
LR RETAINING WALL
(WITH AND WITHOUT HEEL)

The LR retaining wall with heel was developed especially for heavy load applications (R=retaining) in civil engineering and is available in various lengths. The uniform top thickness and the special tie bar recess, enables easy placement of this retaining wall at different heights. Mitred corners are available for corner solutions.



- No heel, making it perfect for a yard boundary
- Total net height and level
- Top thickness 150 mm
- The foot side is also the load side
- Inner wall is sloping
- Exposure classes XA3, XC4, XD3, XS3, XF4, WF
- Design service life 100 years

Type	H1	H2	B	L1	L2	D1	D2	D4	D5	kg
LR050S	500	360	3995	450	300	150	140	150	140	1109
LR075S	750	610	3995	600	450	150	140	150	140	1664
LR100S	1000	860	3995	650	500	150	140	150	140	2142
LR125S	1250	1110	3995	750	600	150	140	150	140	2643
LR150S	1500	1360	3995	850	700	150	140	150	140	3143
LR175S	1750	1600	3995	1000	850	150	140	150	150	3714
LR200S	2000	1810	3995	1100	915	150	156	185	185	4639
LR225S	2250	2050	3995	1250	1040	150	160	210	200	5243
LR250S	2500	2280	3995	1400	1170	150	166	230	220	6336



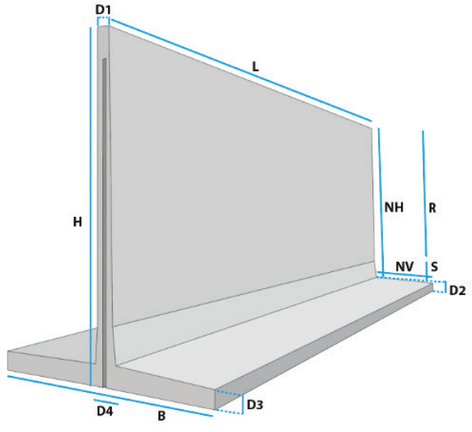
- The heel offers more stability and greater load possibilities
- Total net height and the same top thickness 150 mm
- The foot side is also the load side
- The inner wall is sloping
- Exposure classes XA3, XC4, XD3, XS3, XF4, WF
- Design service life 100 years

Type	H1	H2	B	L1	L2	L3	D1	D2	D3	D4	D5	kg
LR050H	500	360	3995	650	300	200	150	140	140	150	140	1374
LR075H	750	610	3995	800	450	200	150	140	140	150	140	1929
LR100H	1000	860	3995	1000	650	200	150	140	140	150	140	2619
LR125H	1250	1110	3995	1100	750	200	150	140	140	150	140	3120
LR150H	1500	1360	3995	1500	1150	200	150	140	140	150	140	4033
LR175H	1750	1600	3995	1600	1250	200	150	140	150	150	150	4535
LR200H	2000	1810	3995	1800	1415	200	150	140	190	185	185	5646
LR225H	2250	2050	3995	2000	1565	225	150	140	210	210	200	6438
LR250H	2500	2280	3995	2200	1750	250	150	140	230	230	220	7720
LR300200H	3000	2735	1995	2550	1965	300	150	140	285	285	265	5101
LR350200H	3500	3195	1995	2850	2185	350	150	140	330	315	305	6423
LR400200H	4000	3635	1995	3100	2335	400	150	140	395	365	365	8076

* Walls of over 4 m can be produced by agreement
* Walls up to 300 cm are also available without heel
* Walls up to 300 cm are also available in lengths of 1990 mm

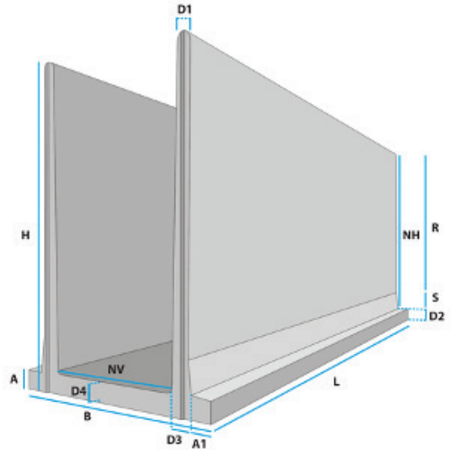
PARTITIONING WALLS

Partitioning walls are especially developed to separate covered or uncovered storage systems, such as salt storage and recycling storage. They serve as space-saving partitioning walls when implementing several silo or storage rooms. As personnel access is created here, the U-support walls are particularly suitable for large external storage systems. Mitred corners are available for corner solutions.



- Space saving
- The inner side of the wall has a total net height
- Both foot sides are loading sides
- Fitted with an additional rubbing strake for filling/liner
- Exposure classes XA3, XC4, XS3, XF3, WF
- Design service life 50 years

Type	H	L	B	NV	NH	D1	D2	D3	D4	kg
TWA100	1150	3995	1280	550	1000	125	150	145	180	3100
TWA125	1400	3995	1480	650	1250	125	150	145	180	3685
TWA150	1650	3995	1680	750	1500	125	150	144	180	4325
TWA175	1910	3995	1900	850	1750	125	160	149	200	5260
TWA200	2160	3995	2020	900	2000	125	160	140	220	5920
TWA250	2710	3995	2260	1000	2500	125	210	188	260	8410
TWA300	3245	2495	2600	1150	3000	125	245	180	300	6850
TWA400	4350	2495	3100	1370	4000	125	350	190	360	10775



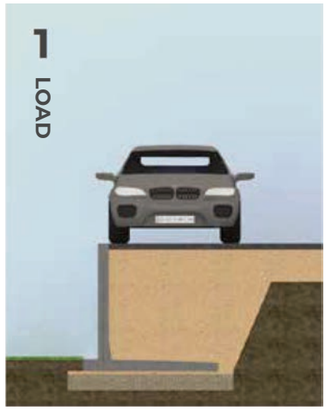
- More stability with heel and therefore higher load capacities
- The inner side of the wall has a total net height
- Both foot sides are loading sides
- Fitted with an additional rubbing strake for filling/liner
- Exposure classes XA3, XC4, XS3, XF3, WF
- Design service life 50 years

Type	H	L	B	NV	NH	D1	D2	D3	D4	A	A1	kg
U100	1165	3995	1250	1006	1165	100	-	122	-	-	-	3780
U125	1415	3995	1250	994	1415	100	-	128	-	-	-	4360
U150hak	1680	3995	1450	982	1540	100	140	154	140	140	80	5435
U175hak	1930	3995	1450	972	1790	100	140	159	140	140	80	6085
U200hak	2190	3995	1550	970	2050	100	140	160	140	140	130	6795
U250hak	2690	3995	1900	1188	2540	100	150	176	150	150	180	8890
U300hak	3190	3995	2150	1418	3020	100	170	186	170	160	180	11420

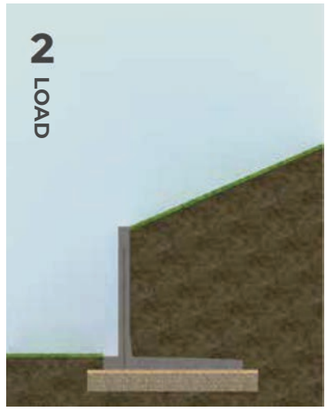
Other sizes available on request.

TECHNICAL DETAILS AND ADVANTAGES

Your requirements determine which type of retaining wall you need for your project. Exclusive on the market: Construction of this load with fine planum, also possible without mortar bed. If your required application is not listed, please contact us. Our engineers will help you find the right solution.

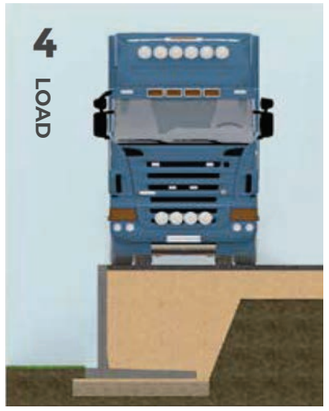


Suitable for light traffic load
(max. 5.00 kN/m²). No safety distance.

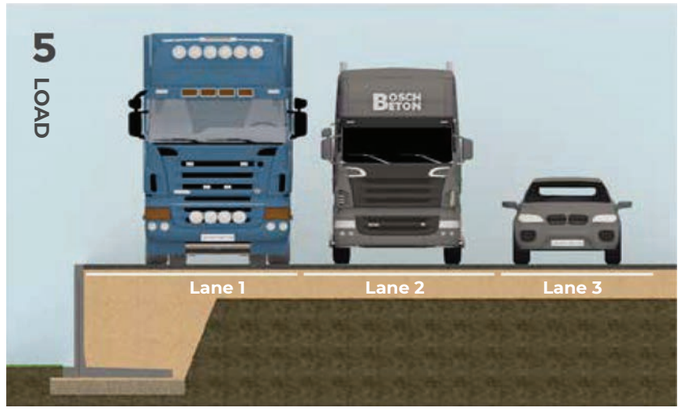


Suitable for terrain stabilisation
with a maximum slope of 25°.

Suitable for traffic load up to 16.67 kN/m².
No safety distance.



Suitable for heavy traffic up to 33.33 kN/m².
No safety distance.



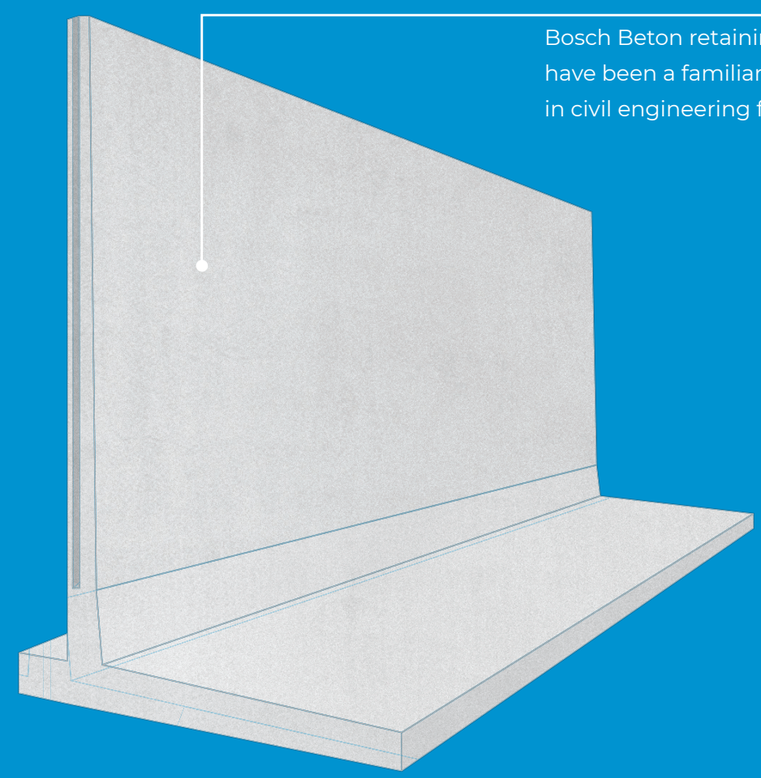
Safety distance ≥ 1.00 m. Lane 1: TS = 300 kN axle load (40.00 kN/m2); UDL (12 kN/m²).
Lane 2: TS = 200 kN axle load (26.67 kN/m2); UDL (6 kN/m²)
Lane 3: TS = 100 kN axle load (13.33 kN/m2); UDL (3 kN/m²)

- **Substructure without mortar bed** only installed on ballast foundation with gravel substrate!
- **Can be used immediately.** No anchoring or connection reinforcement required
- **Heavy traffic up to SLW60 without safety distance**
- **Quick to move** because of the 2 or 4 metre construction length

OVER 50 YEARS OF EXPERIENCE AND KNOWLEDGE POURED INTO 7 METRE-HIGH CONCRETE RETAINING WALLS

BEST SELLERS

Bosch Beton retaining walls
have been a familiar feature
in civil engineering for 20 years.



FEATURES OF OUR RETAINING WALLS

- Concrete quality C60/75
  (self-compacting high performance concrete)
- Reinforced steel B500
- All visible sides SB2
- Service life 50 to 100 years
- Guarantee 10 to 20 years
- No hoisting device in the elements as standard,
  to be placed with grab.

designed according to DIN-EN 1990 Eurocode 0

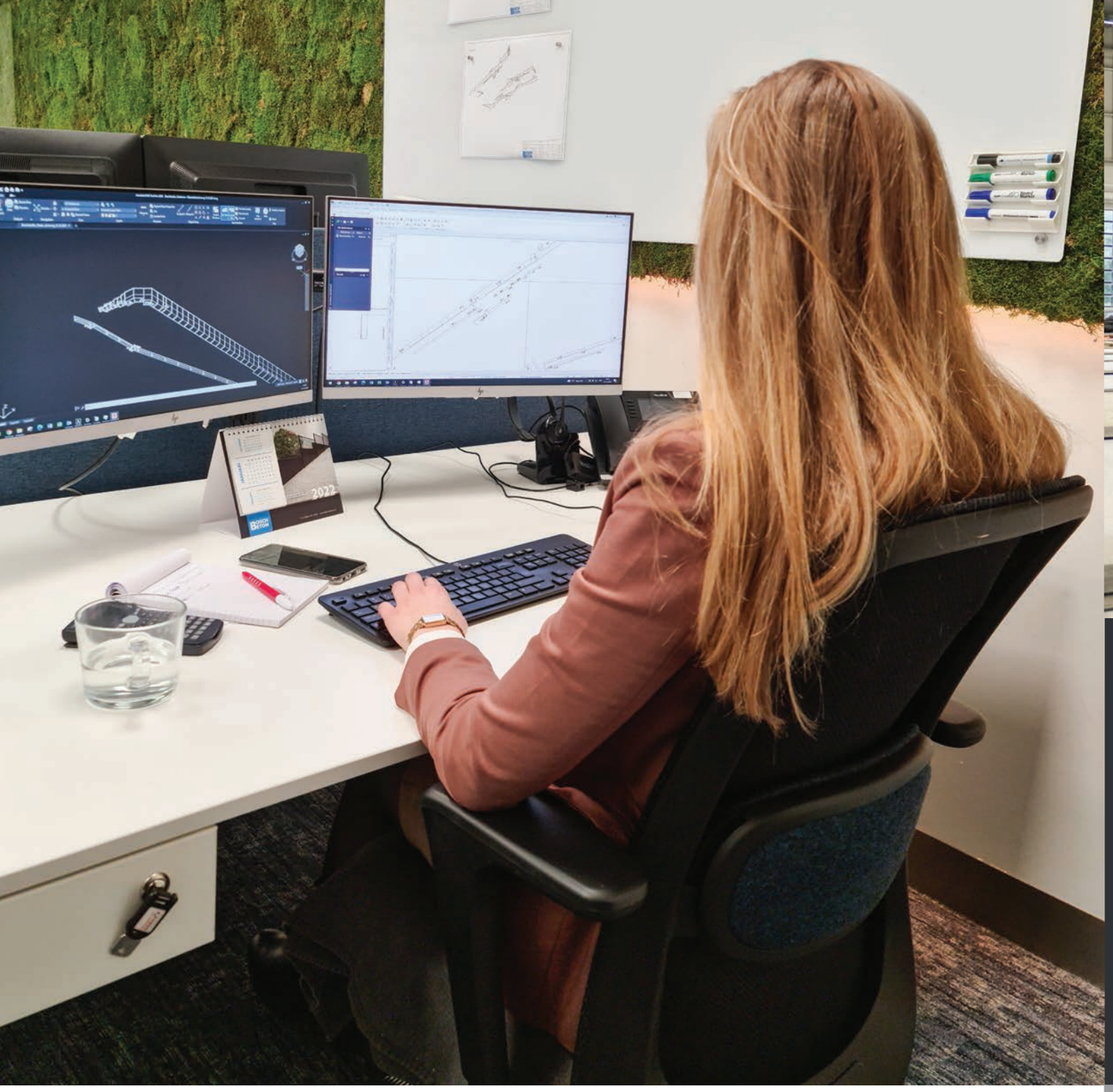
DIN-EN 1991 Eurocode 1
DIN-EN 1991 Eurocode 2
DIN-EN 1997 Eurocode 7
DIN-EN 206-1

ECI

In the future, projects must be implemented in a climate-neutral and circular way so that they contribute to a sustainable living environment. The ECI (Environmental Cost Indicator) was initiated for this. External certification bodies use a fixed method to formulate the LCA (Life Cycle Assessment), which produces the ECI value. The ECI is a fictive price that reflects the costs you would need to make to compensate for the negative environmental impact of producing a product. This helps clarify for government agencies and consumers how polluting a product really is and enables people to reach better comparisons. The retaining walls from Bosch Beton were integrated into DuBoCalc, a tool of the supreme road and water authority Rijkswaterstaat.

SUSTAINABLE INNOVATION

We need cooperation within the chain and the sector, and with the government to be able to innovate and realise new products, raw materials and norms and standards. Our customers then also benefit from that network and from the expertise gained, which is why we are affiliated with various networks and work together with different organisations and initiators.



ENGINEERING

Our Engineering team details large requests into clear quotations, makes structural calculations and working drawings and devises solutions to ensure that projects are feasible in practice. The team uses advanced design and software programs including Scia, Allplan and Tekla. Handling materials in a smart way so we can develop alternative solutions ensures that we make an important contribution to structurally-improved products with a longer service life and a lower carbon footprint.

PRODUCTION

Bosch Beton stands for quality and we invest in that. We use high-quality moulds so we can guarantee dimensions. Handling materials in a smart way so we can develop alternative solutions ensures that we make an important contribution to structurally-improved products with a longer service life and a lower carbon footprint. We conduct daily tests and measurements on concrete quality in our own laboratory, including extensive retaining wall strength tests in our own pressure chamber. The test simulates the lateral and downward pressure in practice, so we can examine the wall's behaviour and see where potential cracks can occur.

PROJECT PREPARATION & PLACEMENT

We discuss the preparation with our customer to ensure smooth and satisfactory wall placement on site. For example, the unloading point must be accessible and easy for transport to drive on. Sound preparation of the substrate is also important for correct wall placement and it's vital that a qualified employee is present. The walls can be placed in different ways. We usually place the walls ourselves from the truck. Other options are placement using a clamp or that the customer does this themselves.

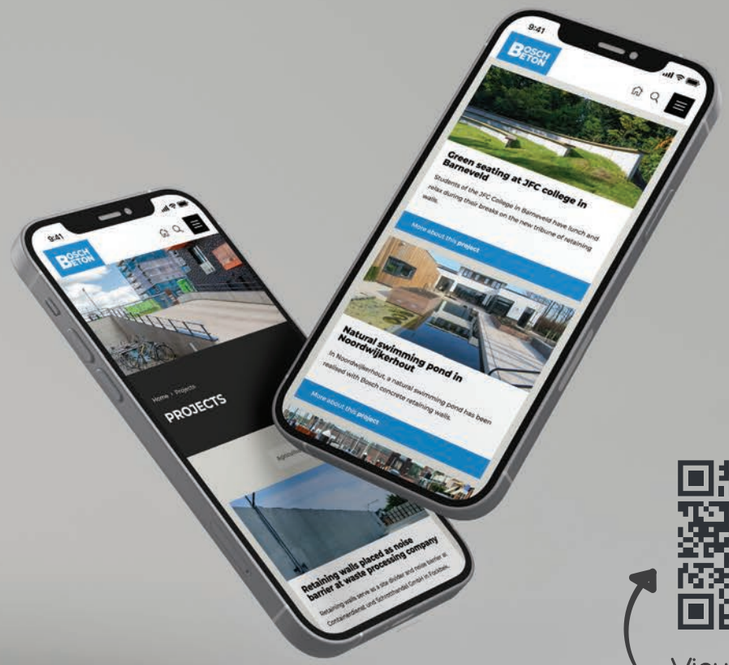
Watch the installation of retaining walls

SERVICETEAM

Quality and service come first for us. We think it's important that our customers are satisfied and stay that way. From quotation request to delivery. And we stay in touch with our customers after that too. If necessary, our service team is available outside standard working hours. Our employees are knowledgeable. Feel free to contact us with questions about the strength of the walls, structures, services or other questions.

Customers give Bosch Beton an average 8.8

Would you like to give us a rating?



View more of our projects

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