



BROGÅRDSAND AB

Brogårdsand AB process and sell specialised sand that is used primarily for water filtration, power stations, the construction industry, foundries, sport and recreation facilities, in blasting and for parks and gardens. We have long experience of working with sand, whose natural qualities of shape and mineralogical properties mean our raw material is unique and suitable for a range of different purposes.

Our advanced production facility in Habo provides for controlled and efficient processing of the sand, whatever its final use. Both ordering and delivery are tailored to customers wishes and requirements. For example, the products can be transported by bulk or on flat-beds, loose or in large bags, or discharged directly into a silo. We have 20 employees and aim to reach sales of 100 million Swedish crowns.



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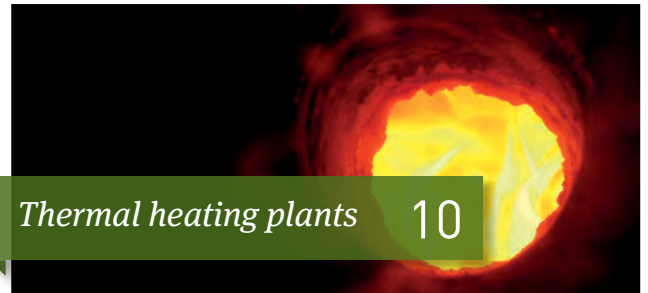
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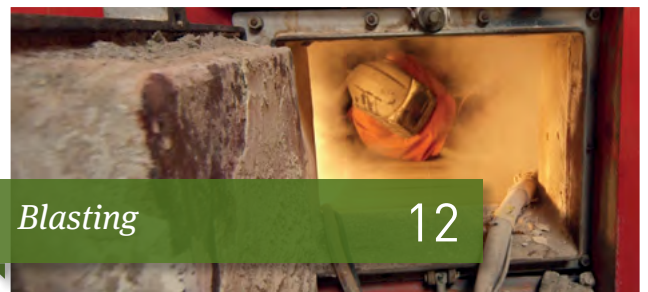
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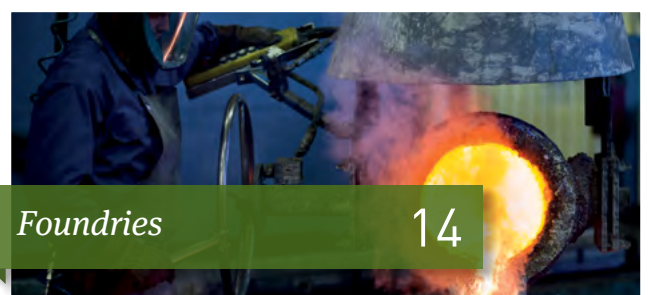
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Build sustain



nable with us

Natural special sand

#älskasand

THE PROCESS

From sand to the final product

The raw material is extensively processed to become the specially customized sand that we offer to our customers. Our production facility is automated with a high level of technical capabilities, which means the sand is processed in a controlled and efficient way. The various stages of the process are tailored to the type of sand being produced and to how it will be used.

The unique qualities of our sand and our long experience guarantee a high, even quality and we meet the quality standards of ISO 9001. We also consider it important to look after the environment surrounding our quarries. Brogårdssand therefore works actively on environmental issues and is environmentally certified in line with ISO 14001.



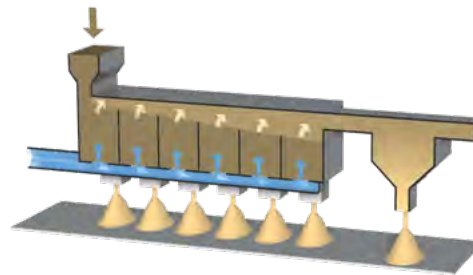
1 EXTRACTION AND COARSE SORTING

The sand is extracted in the quarry, where it is sorted so coarse material is taken out. The sand is then transported from the quarry to the washing plant.



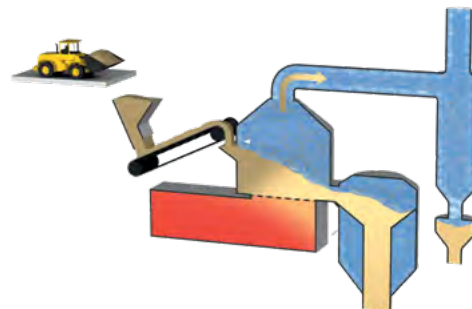
2 WASHING AND WET PROCESSING

The sand is washed and sorted in the washing plant in high-precision machines. The end product is already a determining factor at this stage. About 80% of the raw material sand has a particle size of between 0.1 mm and 1 mm. The larger particles are then sorted further into average sizes of 0.16 to 3.0 mm. Sizes over these are divided into additional fractions of between 3.0 mm and 32 mm. Our standard products are ready for delivery after this process has been completed.



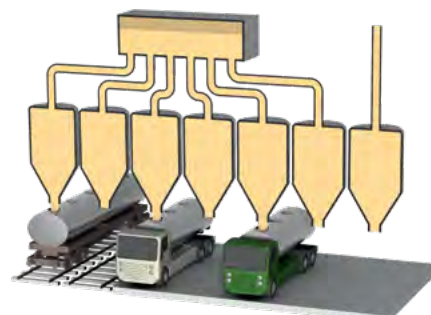
3 DRYING AND COOLING

For specialised sand, for example for foundries, power stations and mortar, an advanced process is used to make the sorted sand completely dry. It is also sorted further into special fractions at this stage and then cooled to the right temperature. The sand is now clean, dry and completely free of dust.



4 STORAGE AND DELIVERY

The cleaned and sorted sand is kept in silos and is loaded under cover in a closed system, either loose in tank trucks or in bags of various sizes, from 25 up to 1,000 kg. The closed system allows for a high, consistent quality. We are also well placed geographically for transport. Brogårdssand's location next to the southern end of Lake Vättern is ideal for rapid delivery throughout the country.



A PRODUCT FOR EVERY JOB

There are virtually no limits to the uses of our sand

Apart from all the other areas mentioned in this catalogue, there are many other ways to use sand.

You can see below what our pure, natural sand can also be used for.

Locomotive sand

Railways are important for environmentally friendly transport, but both snow and leaves can make the tracks slippery and dangerous. So we have developed a special locomotive sand which helps with braking and makes tracks less slippery. You might say we help trains arrive on time and bring them to a standstill.

Punch bags

You can take a swing at punch bags filled with our sand. The round particles mean you get the right resistance when you throw a good punch.

Gravel for car test-drive tracks

Car test-drive tracks have so-called runoff zones which slow cars down if they veer off course. We also have a specially developed gravel for that.

Flue gas cleaning

The distribution of particle sizes means our sand is suitable for industrial flue gas cleaning filters.

Ash stands

There is nothing worse than cigarette ends being strewn on the ground. That can be avoided with our ash stands, which are perfect for stubbing out cigarettes. The roundness of the sand particles mean they do not compact together, allowing cigarette ends to slide easily into the sand and be extinguished without giving off annoying clouds of smoke.

Forestry plant protection

We take a special fraction of our sand. It is then mixed with a binding material and spread around saplings to protect the roots from nasty pine weevils.

Art installations

Make a work of art with the help of our sand. It is used for the blasting of glass and casting sculptures and has even appeared in advertisements. For example, one large hamburger chain made a publicity clip where our sand played a desert with great conviction.

Horticultural sand

Soil is not the only thing you can use to grow things. Sand can often be used as well. Sand makes it easy for roots to develop and root vegetables grow particularly well in it. There are also fewer weeds. Sand can also be used to improve soil.

Flood protection

Rising water levels can sometimes threaten disaster. That is when our sandbags can hold the waters back and protect property.

Football pitches

Football pitches with natural turf are laid in a similar way to golf courses. Our sand works by draining and oxygenating so that the grass grows well and is hard-wearing.

Zoos

Many animals' well-being depends on sand. We supply specialised sand for aquariums and terrariums. The purity of our sand means it can be used for everything from chinchillas and lizards to hens.

Fish ladders for salmon

Fish ladders need large stones which the salmon can swim up. We have large cobble stones which are just the right thing.



Sand filling / Kärreberg Waterworks · VIVAB, Water & Environment in the West AB in the municipality of Falkenberg

WATER FILTRATION

Sand for cleanliness, life and health

Clean water is vital for life

However, fresh, pure water does not always occur naturally. Sweden also needs to have its water cleaned so it can be drunk and used in everyday life. Brogårdsand has developed an absolutely pure sand that is used in cleaning both untreated water and sewage in municipalities, water treatment plants and industry. We have delivered sand to most of the large water treatment companies in south and central Sweden as well to several water treatment plants in Norway, Russia and the Baltic states. We also supply filtering sand to clean pools. Our sand helps to create a clean environment, which is an absolute must for every living being's life and our health.

Round, clean and adsorbent

Only the best sand is good enough for water purification. The particle structure and fraction size have to be exactly right for the requirements of the different types of water and treatment that are used in water filtration and the sand must be completely free of organic matter. The sand

particles in our water filtration sand are clean, round, made of hard mineral and have a high adsorption capacity, which contributes to a natural and well-performing filtration process. We supply two types of filtering sand.

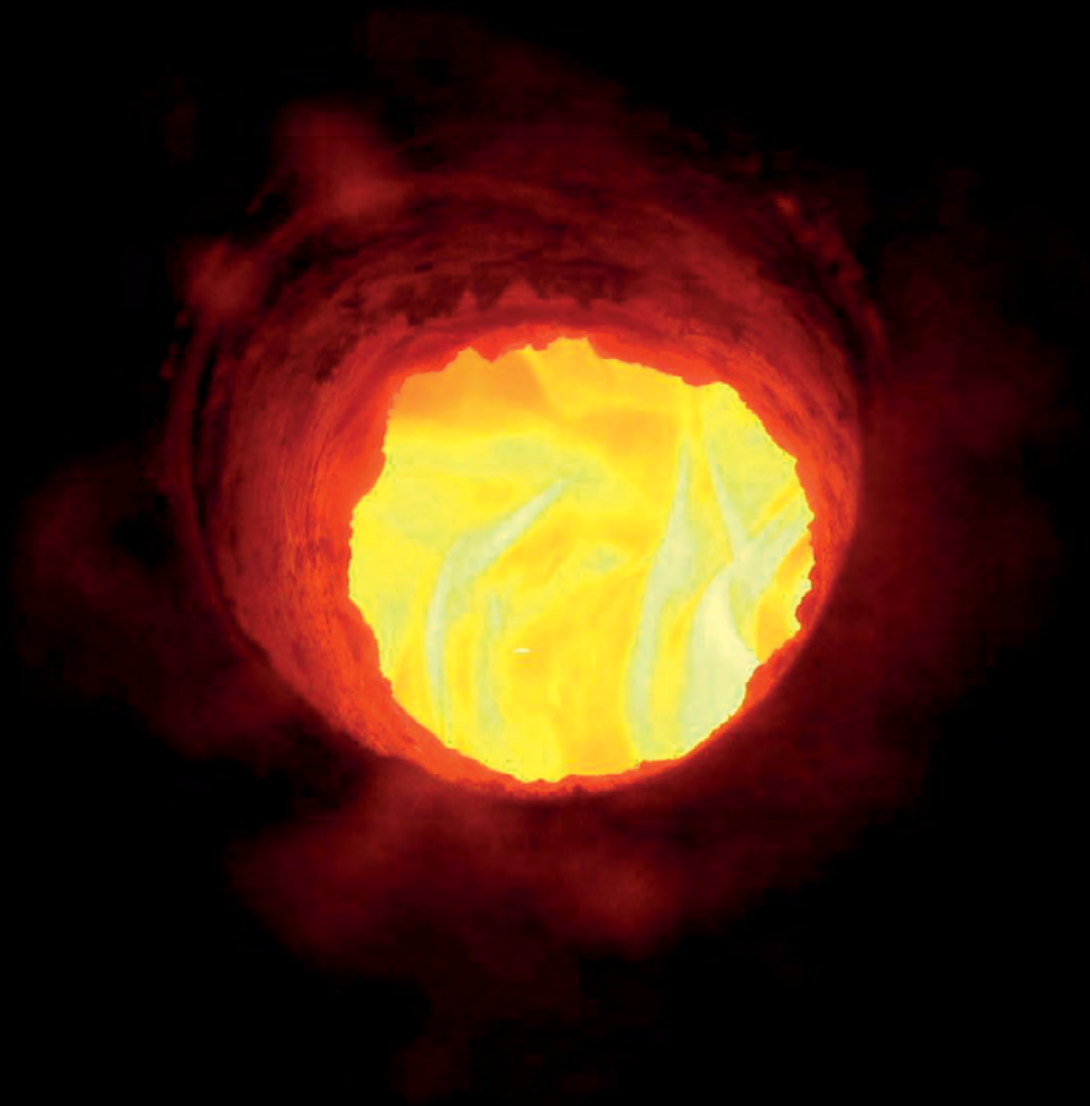
Quick filter sand - quick and clever cleaning

Brogårdsand's quick filter sand is suitable for many different types of filtration plants. From large municipal water treatment plants to sand filters for swimming pools and spas. The sand is also suitable for water filtration plants at deep wells.

Slow filter sand - for fresh drinking water

Brogårdsand's slow filter sand is used by municipalities for infiltration basins where drinking water is produced. It is also suitable for single or multi-family houses that have their own earth-bed infiltration facilities. The slow filter sand is just right when there are high requirements for the sand's purity, its particle distribution and adsorption, its ability to isolate organic matter and biodegradability.





A power plant furnace / TIMRÅ SCA

THERMAL HEATING PLANTS

Sand that can take the heat

We give you a warm feeling

Living in a cold land means we need warmth supplied to our homes and workplaces. That is why all around in Sweden there are thermal heating plants and industries producing power and steam. However, they need one very important ingredient to produce this much sought-after warmth - namely sand. Here at Brogårdsand we have developed a unique, heat-resistant sand that can handle the veritable inferno that prevails in the bubbling furnaces of the thermal power plants so we can all be warm and cosy.

Sand that can stand tough conditions

We offer a number of special fractions, both for heating plants and for the production of electricity, district heating and steam. Sand for thermal heating plants has to cope with tough conditions. Our sand's unique mix of about 80% quartz and 20% feldspar has big advantages in the hot fluidized beds (bubbling beds), which are used in biofuel heating plants. This is because quartz has a high sintering temperature (melting point) and does not melt when it comes into contact with the high temperatures in the beds.



Thermal power plant, Torsvik



Sand blasting / Växjö Veab

BLASTING SAND

Sand for clean, smooth surfaces

Tough on hard surfaces

Blasting requires sand which is tough and hard. Our natural blasting sand is made of hard mineral quartz and is therefore ideal for both wet blasting and sandblast cabinets. We offer various types of blasting sand. It is

always carefully sorted into exact fractions to exclude dust and large particles. This process of exact and careful separation of fractions means blasting equipment nozzles do not get blocked. You also get exactly the right fraction for your equipment.



Floor levelling/Finja Betong AB

CONSTRUCTION INDUSTRY

Sand for all kinds of building work

The right sand for the right building job

Every builder knows that you need lots of different types of specially customized sand when building and renovating. Brogårdsand has a wide range of sand for mortars for brick-laying and plastering, insulation, laying epoxy floors, for drainage, cable sand, and for various different types of putty and special concrete products.

You build. We have the sand

Whatever your building needs, we have the sand. Whether it's self-levelling floor compounds, where the roundness of the sand particles is a particularly important factor for flow properties, or sand for masonry and plastering where the structure is important. Our unique raw material is suitable for all building work, both in terms of its mineralogical structure as well as its shape and fraction size.



Copper sand casting / Traryds Metall AB

FOUNDRIES

Sand that copes when things heat up

Sand for shape and structure

Brogårdsand develops and processes a natural sand to serve as foundry sand for foundry casts and cores for many iron and metal foundries in Sweden and Norway.

Sand which keeps its shape and can take the heat

The mineral composition of our sand, with its unique mix of about 80% quartz and 20% feldspar, creates the best conditions for casting with complex sand-cast structures. The reason is that quartz has a high sintering temperature (melting point), while feldspar has a low expansion factor. Because it is important that the sand in the sand cores expands as little as possible and does not melt

when it comes into contact with the hot, molten iron, this mineralogical combination provides great advantages over pure quartz sand. This minimizes the risk of cracking when casting and leads to less cleaning up work and spillage in the foundry. The natural round shape of the sand particles means that the casting shape holds together with fewer binding agents. The sand's purity, its low moisture content and delivery temperature of 30–40 degrees Celsius also cause lower reprocessing costs. Brogårdsand's foundry sand is available in a number of standard fractions and special grades and is marketed by G & L Beijer Industri AB, which sells machinery and supplies to heavy industry.





SM Beach volleyball / Malmö

BEACH VOLLEYBALL

Sand for feeling good and for fun

The right feel

Beach volleyball is becoming more and more popular, whether on the beach, in the centre of big cities or even indoors. The feel of the playing surface is an important part of the fun of beach volleyball. The sand must be soft and pleasant to play on. We have therefore developed a sand with both the right function and feel, and in the past few years we have delivered sand to a large number of beach volleyball courts, both outdoors and indoors, all around Sweden. Both top players and those who do it just for fun appreciate the quality and feel of our sand.

Beach volleyball is not the only sport that is gaining in popularity. Beach handball and beach soccer are also on the way up. And what makes our sand perfect for beach volleyball is also what makes it perfect for beach handball and beach soccer.

Softness, durability and pure fun

It is important to choose the right quality of sand when building a beach volleyball court. That is because it must

be long-lasting and provide the right, fun feeling of beach volleyball. Our sand is ideal for beach volleyball because it is dust-free and self-draining. The round form of the grains and its purity mean that it does not clump, even after rain. It always has the same softness and feels good to play on. At the same time you feel clean because there are no dust or clay particles that stick to your body.

How much sand do you need?

You should calculate on an area of 14x22 m for a beach volleyball court of 8x16 m. The depth should be 0.4 m, which means a volume of 123 m³ or approximately 190 tons of sand. Permanent courts must be drained.

Sand for pretty paths and parking places

A beach volleyball court also sometimes needs attractive paths and practical parking spaces nearby for players and visitors. For more information, please see *Parks and Gardens*, where you can read more about our washed natural gravel for such purposes.





Bunker sand

GOLF

Long shots and sure-fire putts

Golfers want the best, and rightly so, because the way the course is built and how it looks is extremely important for the game. The right sand in the right place makes all the difference when you are aiming for birdies, eagles and par. Brogårdsand has therefore developed a complete range of sand that makes your golf course both beautiful, long-lasting and fully functional. We have supplied sand to several of Sweden's biggest golf courses.

The sand also meets USGA standards

We know that it is extremely important that the sand is the right fit for the various demands placed on a golf course. When constructing new golf courses or improving old ones the Swedish Golf Association recommends using as much USGA-approved material as possible. Brogårdsand can offer customers all USGA-approved grades, whether standard grades or special mixtures for drainage, bunker construction and seedbeds. An additional plus is that our sand lasts a long time, which is good from the financial point of view.

Drainage and seeding sand - for increased plant power

The rounded form of our sand's grains leads to increased oxygenation of planting beds, which is good for the growth of turf. The round shape and the addition of peat also increases the soil's ability to retain water so that it neither becomes too wet nor too dry on the fairway.

Bunker sand - a necessary evil of the highest quality

You probably don't want to end up in the bunker, but

if you do it is important that the sand does what it is supposed to do. It has to stop the ball from rolling out to the edge. Our bunker sand has been tried and tested by both players and greenkeepers to make sure it holds the ball in place and stops it rolling further. In addition, thanks to the specially formulated grain distribution and the natural round grain shape, the sand is self-draining and easy to put back in place. We can also produce special grades according to your wishes.

Top dressing - made for its looks

We also offer top dressing. It is delivered according to your wishes, either with or without peat mix. This top-dressing material is suitable for dressing fairways, tees and greens. The rounded shape makes the sand easy to brush into the grass during dressing, resulting in minimal wear on lawn mowers. We can also offer our green top-dressing sand for the improvement of greens and tees, camouflaging damaged areas until new grass grows. Even problem greens can be gradually improved by consistent and correct top dressing.

Sand for pretty paths and parking places

Green spaces are not the only things on a golf course. It also needs attractive paths and practical parking spaces nearby for players and visitors. For more information, please see *Parks and Gardens*, where you can read more about our washed natural gravel for such purposes.





EQUESTRIAN SPORTS

A firm foundation for success

When looking after horses, you want to avoid injury at all cost, both to yourself and the horse. That means you need the right sand to surface the riding areas and paddocks. The sand must act as a shock absorber and be soft but not be slippery or cause injuries from sliding or strains. Borgårdsand has developed various different fractions of our unique round sand so your surface is as safe and fun to ride on as possible. Borgårdsand has supplied sand to several of Sweden's biggest stables.

Soft and round

Our sand is round and pure. Thanks to those properties it does not compact and get hard after rain, but stays soft and retains its shock-absorbing properties regardless of

the weather. The advantageous distribution of the sand particles provides spring for the horse's legs and good drainage, which means that the track does not become wet and difficult to ride on. The sand is also free from sharp edges, which is good for hooves.

Sand for pretty paths and parking places

A stables does not only involve the riding tracks themselves. It also needs attractive paths and practical parking spaces nearby for players and visitors. For more information, please see *Parks and Gardens*, where you can read more about our washed natural gravel which is perfect for such purposes.





Artificial turf / Jönköping

ARTIFICIAL TURF

Forever green, thanks to sand

We can supply you greenery that lasts forever

Artificial turf, instead of ordinary grass is becoming more and more common at sports grounds, football pitches, golf courses, parks and playgrounds. Artificial turf is hard-wearing, stays green and requires less maintenance than normal, which provides financial benefits over the long-term. Brogårdssand offers a natural, round sand which is excellent for laying artificial turf. We have supplied sand for the laying of artificial turf in many parts of Sweden and Norway.

Stable and easy to work with

When laying artificial turf, the sand must be able to hold it down so it does not move when loads are applied to it. We offer a sand that is specially designed to deal with such challenges. Our sand's particle distribution and natural roundness make it easy to brush out and form a stable foundation. As the sand is completely clay-free, the soil gets the best possible drainage and weeds find it difficult to take root.

LONG JUMP

Record-setting sand

Take the leap with us

You want to do your best when doing the long jump. You need a good surface that is soft and gentle to land in but it also needs to be easy get back into shape for the next jumper. Nobody wants to land in a puddle either, so Brogårdssand has developed long jump sand that stays loose and soft even after rain. We have supplied sand for long jump tracks in many parts of Sweden.

Soft, clean and easy to lay

Our long jump sand is washed and completely free from clay. Combined with the specially developed distribution of particles and the natural round shape of the grains,

the sand is a good shock absorber, easy to lay and is self-draining. The round shape prevents the sand from compacting and becoming hard, even after rain. It also avoids injuries such as grazes.

Sand for pretty paths and parking places

A sports ground does not only involve the stadium itself. It might also need attractive paths and practical parking spaces nearby for athletes and visitors. For more information, please see *Parks and Gardens*, where you can read more about our washed natural gravel, which is perfect for such purposes.



Habo sports club / Habo



Town gardens / Jönköping

PARKS AND GARDENS

Sand for pleasure and prettiness

Greenery is good for the soul. That is why parks, cemeteries and gardens are so important in times of stress. An important ingredient in creating these green oases is sand, whether for grassy areas or beautiful footpaths. We have therefore developed a range of sands which are suitable for a wide variety of uses in parks and gardens. The right grains of sand in the right place mean that your lawns, paths, decorative areas and car parks will be beautiful, long-lasting and calming.

Lawns - for better growth

When laying lawns using both ready-made turf or by sowing the round shape of our sand grains increases the oxygen content in the plant beds, which enhances growth of the grass. The round shape and the addition of peat also optimizes the soil's ability to retain water.

Top dressing - function and form

We also offer top dressing. It is delivered according to the client's wishes, either with or without peat mix. The rounded shape makes the sand easy to brush into the grass during dressing, resulting in minimal wear on lawn mowers. The addition of peat enhances the soil's ability to retain water.

Decorative surfaces - a study in grey

Sometimes you want gardens and parks that are easy to maintain but which are still aesthetically pleasing. It has therefore become increasingly popular to have decorative areas of coarse gravel and stone instead of grass. Our decorative stone is of a beautiful rounded shape and is naturally dappled in grey. It is available in different fractions, according to your wishes. It is clean and free from stone dust, which makes it difficult for weeds to take root and means you do not have to spend time clearing it.

Sand for pretty paths and parking places

Parks, cemeteries and gardens do not only contain green spaces. It also needs attractive paths and practical parking spaces nearby for players and visitors. We therefore also supply washed natural gravel for such areas. Our natural gravel is an attractive grey colour, naturally round and perfectly clean. That means no stone dust for weeds to take a hold in. Additionally, an earth cover under the gravel makes it even harder for weeds to take root, giving you areas that are easy to maintain and sustainable.



Cemetery / Habo



Playground in the town gardens / Jönköping

SANDPITS AND PLAYGROUNDS

Sand for the best we have

Play save, have fun

Is there anything more important than our children? We want them to be care-free and happy and to have fun, be it at home, at school or at leisure. But we also want to make sure they do not get hurt during their games and rough and tumble. Brogårdsand has even thought of that. So we have developed sand for sand pits that has just the right structure and grain so that even small builders can manage to make sand pies and sandcastles, but which is as porous and soft as possible to soften the landing from any falls from swings and other playground equipment.

Shock-absorbing playground sand Sand which meets EU requirements

When you have swings and other playground equipment, you want a sand that can absorb the shock of any falls. Our sand meets EU requirements for playground sand and has been tested by the Swedish Testing and Research Institute in Borås as well as SS-EN 1177 for playground shock-absorbing surfaces. These standards mean you can measure how thick the sand layer needs to be to minimize damage, depending on the highest fall height of the play area in question.

Our playground sand is also dust-free and self-draining. This means that children do not get dirty or wet when they play. Thanks to the grain distribution, purity and the natural

round shape of the sand, it does not clump or get hard, even after rain. So it remains safe, whatever the weather. The rounded shape also lessens the risk of grazes.

The right thickness is important

For maximum safety and the greatest level of shock absorption, it is important that whoever buys the sand informs us about the highest fall height and the size of the playground. That means we can calculate the thickness of the sand needed, and the children can get on with their fun in a safe and sound way.

Sandpit sand - for small builders and pie makers

One important thing for sandpit sand is that it should be easy to shape things. Our sandpit sand is designed to be as easy to shape and bake as possible. It is also free from clay particles, which means it drains naturally and does not pack together when it rains. So children stay clean and dry, which is good for every parent and teacher.

Sand for pretty paths and parking places

A playground might also need attractive paths and practical parking spaces nearby for staff and visitors. For more information, please see *Parks and Gardens*, where you can read more about our washed natural gravel for such purposes.



Playground / Habo

Watch our videos on



Paving the way to
greener concrete

Naturally, we are involved in sustainability issues and the importance of focussing on the environment and the future is clear to us. Since 2015, we have been self-sufficient in green electricity and our two wind turbines, located on Rödshöjden just outside of Sollefteå, collectively generate almost 20 GWh of renewable energy. This is twice as much as our companies currently consumes, which allows us to continue to grow while contributing to a sustainable society.



Feel free to get in touch

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For up-to-date information always refer to www.brogardsand.se.

