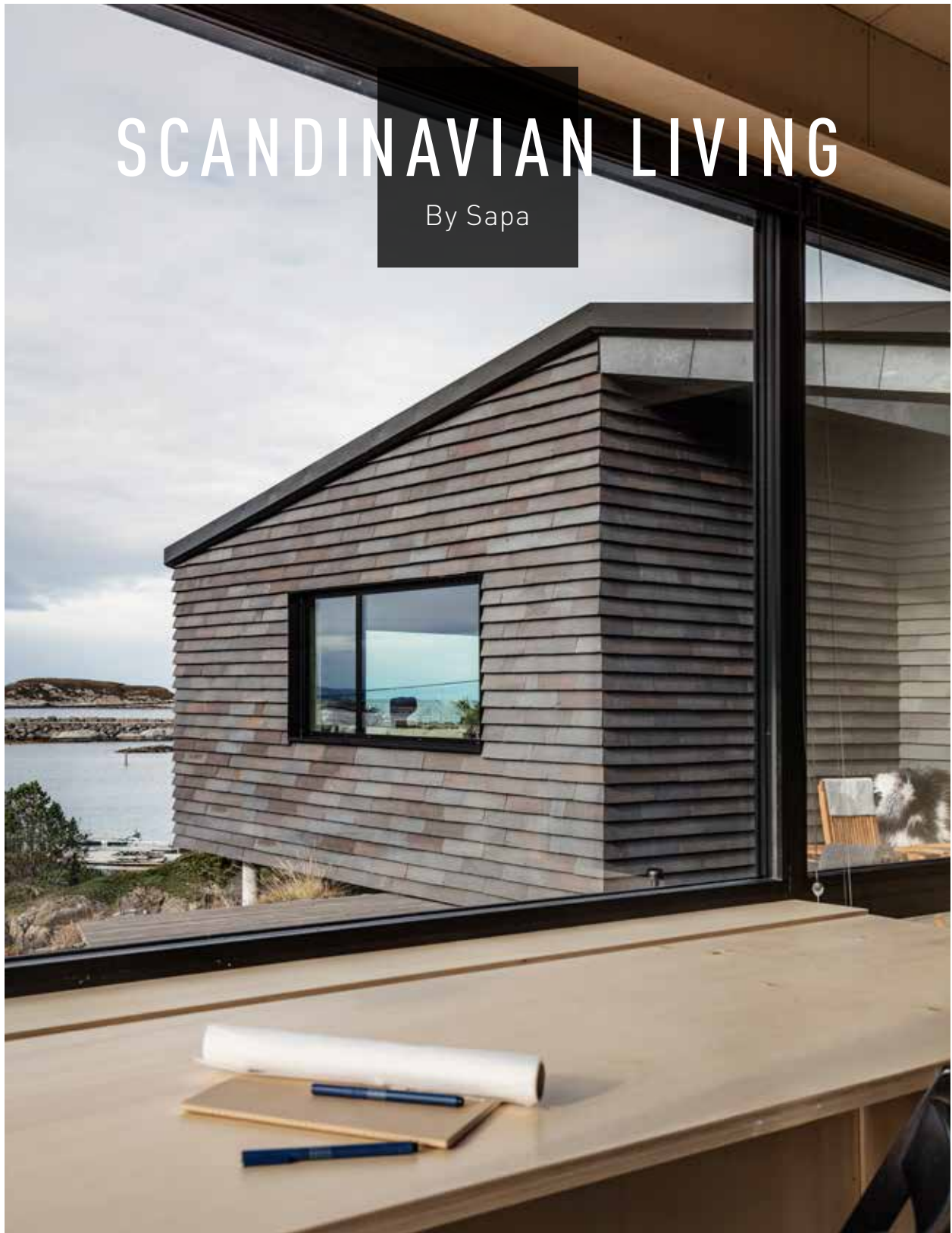


# SCANDINAVIAN LIVING

By Sapa



INSPIRATION AND GOOD TO KNOW FACTS ABOUT WINDOWS AND DOORS

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COVER: CABIN SANDØY – A HOLIDAY HOME AND  
GATHERING POINT FAR OUT ON THE ROMSDAL COAST ON THE  
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# WHAT CHARACTERISE SCANDINAVIAN LIVING?

**W**e Scandinavians love our beautiful nature. That's why we like to build houses that allow us to be a part of it, even when we are inside. Clean lines, natural materials, doors that open to nature and windows that let in the light are all elements of a Scandinavian style. A house created for Nordic conditions needs materials that are weather resistant. The building should provide comfort generations ahead, with materials that are gentle to the environment.

## **TAILOR-MADE FROM SAPA**

We know that building your own home is to a large extent about choices and priorities. It is not certain that absolutely all your wishes will be compatible, but you will be able to achieve many of those that are most important to you. There are no standard windows, doors and glass facades in our assortment. We want you to have things exactly as you like.

## **WHAT ARE YOUR DREAMS?**

With our Scandinavian heritage, we master the art of combining outstanding design and architecture with efficiency, performance and ease of use. Our building solutions are straightforward, simple and appropriate. With this magazine we hope to give you some inspiration, good insights and valuable knowledge that you can bring with you when you are planning for a dream home that will last for many years to come. ●





## EXTENDED FAMILY'S GATHERING POINT OUT AT THE MOUTH OF THE FJORD

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Far out on the Romsdal coast, right alongside the ocean, you will find the island of Sandøya. On a barren rock in Hamnevågen, looking down to the marina, the architect Tone Sandøy has created a modern and stylish holiday home, perfectly adapted to the surrounding terrain.







Tone and her father have worked closely to make the building as functional as possible, while also taking into account the surrounding nature.

**T**one's father was born and raised on the island, and both Tone and her sister have spent their holidays here since childhood. Now the new cabin on the sisters' childhood island has become the most important gathering point for all the generations of their extended family.

#### A FLEXIBLE FAMILY LOCATION

The fact that this place is so important for the family meant that there were some demanding guidelines for the project.

—It was a challenge to plan a home that would allow enough room for everyone when we wanted it, but that was also cosy when there are fewer of us, says Tone.

The result is a holiday home of just over 200 m<sup>2</sup>, with sections that can be closed off when they are not in use. The

solution was such a success that Tone's father, who is also a builder, comes to Sandøya as often as he can. He has recently moved from a house to an apartment in Molde, because Sandøya is where the family prefers to meet. Here they live at one with the elements.

The weather is the biggest topic of conversation out here. There is a lot of weather, and it can be tough. This has permeated through the whole solution with regard to space, volume and materials.

Tone talks of how the family has got to know each other better by working on the cabin. She has strived to achieve a fine balance between the different users' needs and wishes, while at the same time ensuring an architectural whole.

She has used large window surfaces to open up the space to nature, the outlook and good natural light, but not at the expense of cosiness. It was her wish to











The opportunity to install large formats supplied to order and materials guaranteed to withstand the tough weather conditions, with lots of wind, rain and salt water, helped to fulfil both the aesthetic and functional requirements.

bring nature close to the living space and to take in the fantastic view, but not open up so much that you were unable to feel sheltered.

—When you have to plan for a number of people, there are also different opinions about how open or closed you want it to be. I tried to accommodate everyone's needs and opinions. I think we managed it, says Tone.

### **COSINESS AND A SPECTACULAR VIEW**

Tone worked long and hard to find the right window solution. The challenge of creating good facades was to find the right balance between expression and composition in the exterior, and good natural light in the right places and framing the desired views on the inside. In order to be able to achieve large, open glass surfaces with minimal and slim profiles, she chose to use glass facades from Sapa.

The opportunity to install large formats supplied to order and materials guaranteed to withstand the tough weather conditions, with lots of wind, rain and salt water, helped to fulfil both the aesthetic and functional requirements.

The slim, dark aluminium windows provide a cool and effective contrast to both the internal and external cladding. The facades feature a mix of exposed concrete and Petersen Cover brick tiles – robust materials that were chosen to match the surrounding rocky landscape. The brick tiles have a small, rough and uneven surface, and the large windows in aluminium have a tensioning effect on the rough cladding. Internally, the walls are clad with a light and elegant poplar veneer, and the floors are tiled with large format tiles.

—It's about creating an effective whole. It was very important to use robust mate-

rials that can withstand a great deal, both with regard to the weather conditions and the family who would be using the building. We therefore chose to lay tiles on the floor that would cope with dirty boots running in and out, bricks that would last hundreds of years, and aluminium windows that we know will withstand the climate and not give us unnecessary worries. But these are all hard materials that alone can give quite a cold impression. We therefore chose to cover large areas of the interior of the house with wood, both on the walls and the ceiling. And after selecting all the furniture and other interior fittings, wood was a natural choice. I think we have succeeded in putting together a material palette that gives an overall impression of warmth, says Tone.

There has also probably been some discussion in the local area on the choice of positioning of such large windows. ➔





Large window surfaces open up the space to nature, the outlook and good natural light, but not at the expense of cosiness.









THE SLIM, DARK ALUMINIUM WINDOWS PROVIDE A COOL AND EFFECTIVE CONTRAST TO BOTH THE INTERNAL AND EXTERNAL CLADDING. THE FACADES FEATURE A MIX OF EXPOSED CONCRETE AND PETERSEN COVER BRICK TILES - ROBUST MATERIALS THAT WERE CHOSEN TO MATCH THE SURROUNDING ROCKY LANDSCAPE.



Tone says that in the olden days on Sandøya, people generally did not have windows on the south facing wall, because the weather was too harsh, and these “rules” may still be a bit ingrained with the local people.

—Fortunately this is no longer an issue today. “The products are so good that it is no problem at all to plan a house with large window surfaces, where you previously avoided it, says Tone.

#### **FUNCTIONALITY THAT FITS IN WITH NATURE**

Tone and her father have worked together closely to make the building as functional as possible while taking the surrounding nature into consideration. Tone has exploited the fantastic site with the aim of achieving the best angles of view to both the jetty and its surroundings and the mighty ocean beyond. It has been really

useful that both Tone and her father know the place so well.

—For example, I wanted to have a view of the sunset but still have the building low in the terrain. Working with my father, who knows the local weather and wind conditions, meant that we could also create cosy outdoor areas in the lee of the north wind. We worked very hard to find out which conditions we needed to take into consideration, so we have been able to secure areas that are good to use, says Tone.

She did a lot of work adapting the landscape to integrate the building nicely in the terrain, even though it is so large. To anyone who does not live on the property, it looks like the building has just one floor instead of two.

#### **AN EXPOSED HOLIDAY PARADISE IN SUSTAINABLE MATERIALS**

Consideration of the local nature and surroundings has been top of Tone’s agenda throughout the building process. It was important for her that the end result would have a distinctive and modern expression, without being too provocative.

—When you build in such a small place, you have to take account of the surroundings. The island has a varied architecture from its past and the task was not to conform to a local style. The most important thing then was to work in tandem with nature and find a design idiom that does not seem foreign and harsh in relation to the landscape. The volume has been broken up so that it provides depth and variation, and the roof has been given a wave shape that reflects the surrounding rocks. ●

"WHEN YOU BUILD  
IN SUCH A  
SMALL PLACE,  
YOU HAVE TO  
TAKE ACCOUNT  
OF THE  
SURROUNDINGS."









**Project:** Cabin Sandøy, Sandøya, Norway

**Architect:** Tone Sandøy

**Sapa producer:** H-Fasader AS

**Year of build:** 2017/2018

**Photographer:** Marius Beck Dahle

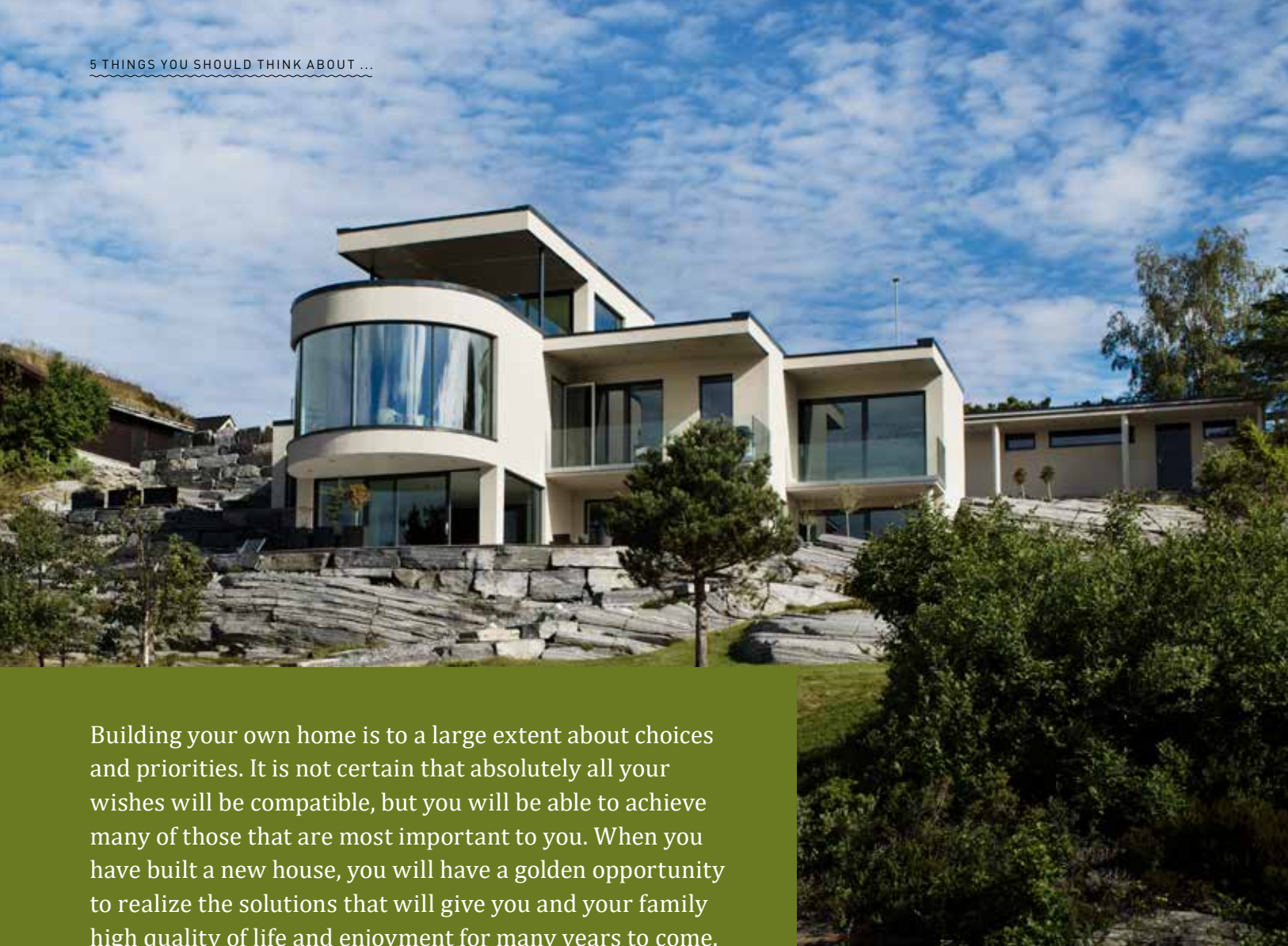






5 THINGS  
YOU SHOULD  
THINK ABOUT  
BEFORE BUILDING  
A NEW HOUSE

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Building your own home is to a large extent about choices and priorities. It is not certain that absolutely all your wishes will be compatible, but you will be able to achieve many of those that are most important to you. When you have built a new house, you will have a golden opportunity to realize the solutions that will give you and your family high quality of life and enjoyment for many years to come.

## 1. LOCATION ON THE SITE

The first thing you should consider when you are going to build a house is where the building will stand on the site. In most cases, the site will set the framework for the design of the home. It is important to take full advantage of the site.

Is the site in an urban environment or in the middle of the countryside? Is the terrain sloping or hilly? What about the use of space and size of the site? How does the light fall and how does the wind blow? What about neighbours, access, trees and traffic? All these conditions should be assessed before you decide where to build the house.

Consider the site carefully, and think through which qualities are important for you.

If the site has a view, this will often be crucial in deciding where the house should be built. Then you should think about the outlook, in other words, the experience of distance and contact with the outside. In order to get the most from the view and outlook, you can consider facades consisting mostly of windows and glass.





## 2. OUTLOOK AND NATURAL LIGHT

Outlook has a close relationship to the lighting conditions in your home. Both outlook and natural light will affect the aesthetic experience and enjoyment of being in a room. These factors also influence both your physical and mental health. There has been a lot of research documenting how sufficient access to light, air and space affects us both physically and mentally.

Glass surfaces will be extremely important in helping to maintain good lighting conditions and outlook. The options here are many and varied, and should be defined by the desired aesthetic expression and the geographical possibilities of your home. What is essential is to find solutions that take these elements into consideration in relation to the planned use of the rooms and the needs of the residents.

To maintain the outlook and natural light, there are a number of options available that can be chosen separately or combined. Light and a sense of space, for example, can be achieved if you install several windows along a wall. It is also possible to exploit the height of the room by choosing windows that reach from the floor to the ceiling. Otherwise, sliding doors with narrow profiles will provide greater dimensions that unite both the outdoor and indoor environments.











### 3. PARTITIONING AND USE OF ROOMS

How you plan for outlook and natural light should be linked to how the rooms in the home will be used. It is usual for living rooms to be positioned so they enjoy the best conditions.

Outdoor areas, such as verandas and terraces, should be positioned with both afternoon sun and access from the neighbours in mind. These are conditions that will be decisive for the utility value of the site. Sliding doors and folding doors can be used to blur the boundary between the indoor and outdoor areas.

A home that optimizes outlook and natural light will naturally consist of a lot of glass and windows. You should therefore also think about sun shades, heat and visibility. Glass is available with a sun filter that absorbs some of the dazzle. External screens deal with both dazzle and heat, while internal sun shades are a more reasonable alternative that absorbs dazzle but not heat. Decide what you need in different places around the house. A glazier can help you to make a good assessment.



#### 4. INSULATION AND HEAT LOSS

Buildings account for about 40 percent of energy emissions in Scandinavia which necessitates stringent requirements in terms of energy efficiency and sustainability for new buildings. In many cases, this was solved by reducing facade and window surfaces and choosing thicker walls that provide deep window recesses. These are measures that can go beyond natural light and outlook.

You should therefore prepare your home to be energy efficient and environmentally friendly, but not at the expense of the utility value. This is completely possible with a well thought-out plan and the right products. Windows with triple glazing and a low U-value, in other words, windows with a high thermal insulation capacity, both fulfil both the energy requirements and maintain living quality. If you want to open up to the outside, there are high insulation folding doors that meet the energy saving requirements for a passive house.

A well insulated house with a low heating demand will reduce electricity bills when your home is in use. A home with large glass surfaces will have a high level of daylight and require less electricity for lighting. Passive solar heat shortens the heating season and reduces the demand for heating in winter.



**BUILDING YOUR OWN HOME IS  
LIKE A DREAM COME TRUE.**  
IT IS A COMPLEX AND DEMANDING  
PROCESS THAT WILL PLAY  
WITH YOUR WHOLE RANGE OF  
EMOTIONS. YOU WILL EXPERIENCE  
EXPECTATION, FRUSTRATION,  
WORRY, CONFUSION, VIGOUR AND  
CREATIVE ENTHUSIASM.





ALUMINIUM IS A  
SUSTAINABLE AND  
MAINTENANCE-FREE  
ALTERNATIVE  
FOR THE  
DESIGN CONSCIOUS.

## 5. CHOICE OF MATERIALS

The materials you choose to build your windows and doors in will determine the appearance, living quality and maintenance requirements of your home. The most common materials to choose from are wood, aluminium, a combination of these or PVC. All these materials have a different aesthetics and properties.

Wooden materials have a long tradition in Scandinavia and are a relatively cost-effective alternative. The quality can vary, however, and wood requires regular maintenance. These are ongoing costs that must be included in the overall assessment. You can reduce the need for maintenance by choosing a wooden window with a sill and frame lined with an aluminium profile.

PVC is a maintenance-free and reasonable alternative with a long life. The disadvantage, however, is that the material's aesthetic qualities are not compatible with all building types.

Aluminium is a sustainable and maintenance-free alternative for the design conscious. The material is very stable, which makes it possible to construct large glass panels in a safe manner. Modern aluminium windows also have good airtightness and can be supplied with an energy efficiency that meets the requirements for a passive house. Since aluminium is not mass produced and supplied to specific dimensions, these types of windows allow flexible and distinctive solutions for all building types. ●

> *The next article will give you a deeper dive in the different materials.*





**Project:** Villa, Ålesund, Norway **Architect:** Haldor Lervåg, Siv ark MNAL **Sapa producer:** H-Fasader AS **Year of build:** 2015 **Photographer:** Felix Odell





# WINDOWS IN WOOD OR WINDOWS IN ALUMINIUM?

**C**hoosing new windows and patio doors is a decision that needs to be thought through carefully. Such a big investment will characterize the appearance and character of the building for a long time to come.

Most people choose based on price and energy efficiency. We know that conditions such as the aesthetics, maintenance and lifetime of windows and patio doors should also be taken into consideration. The most important thing is that you choose windows and patio doors that you will be happy with in the long term.

#### **MATERIAL CHOICE FOR WINDOWS AND PATIO DOORS**

The choice of windows will impact generations to come, so you should choose a material that will withstand the ravages of time. The choice of materials will also impact access to daylight, the need for sun shades, and maintenance and cleaning options.

When it comes to the difference between wood and aluminium, there are three types of windows to choose from:

- **Wooden windows**

Standard wooden windows consist completely of wood, painted on the inside and outside. Wooden windows are the traditional and cost-effective choice, suitable for homes being renovated and needing the real, classic and “old fashioned” look. Wooden windows generally require lots of maintenance, especially if they are in areas exposed to the weather on the coast or in the mountains.

- **Wooden windows with external aluminium cladding**

These are wooden windows with an external weather shield made of aluminium. The weather shield reduces maintenance, because aluminium is not decomposed by sunlight and water in the same way that painted wood is. The wooden frame inside the window must be maintained just like a regular wooden window.

- **Windows in aluminium**

Windows in pure aluminium require little maintenance except for cleaning with soap and water. These windows last almost twice as long as a corresponding wooden window: Wooden windows have an estimated lifetime of approx. 25 years, while windows in aluminium last for almost 40 years.







### **WINDOWS IN ALUMINIUM ARE SUSTAINABLE**

In principle, once a window in aluminium has reached the end of its useful life, the aluminium can be endlessly recycled. Aluminium is a material with a long life, high level of recycling and good thermal insulation properties, and to a large extent can be seen as a sustainable choice.

The investment costs for an aluminium window, however, will be much greater than for wood, but this must be weighed against energy efficiency and zero maintenance costs over time.

### **ANODIZED ALUMINIUM IS PERFECT FOR NORDIC CONDITIONS**

Aluminium is a good solution for the climate in Scandinavia. We need materials here that

can withstand water, wind, snow and cold. In line with accelerating climate change, we will also see a wetter climate, in which water and moisture will be a bigger threat to the materials used in our building stock.

Wood that is not maintained will attract water, which is not the case with aluminium. With Sapa Selection, we supply windows and patio doors with aluminium that has undergone an additional process to withstand both climate change and the harsh Nordic climate.

Anodizing is a surface treatment that improves a metal's resistance to corrosion. It is the strongest surface treatment available for aluminium profiles. It is an electrolytic process that builds up an oxide layer. This oxide layer strengthens the surface so it can better withstand















**Project:** Villa Hasseris, Aalborg, Denmark

**Architect:** Lars Gitz Architects

**Sapa producer:** ap facader a/s

**Year of build:** 2016

**Photographer:** Jacob Lerche

mechanical wear, UV light and the effects of demanding environments.

Windows and patio doors in anodized aluminium can last for generations, despite the different stresses and strains from the elements.

#### THE AESTHETIC BENEFITS OF ALUMINIUM PROFILES IN WINDOWS

For many people, one of the most decisive reasons for choosing aluminium will be how the material impacts the building's visual appearance. Slim frames or profiles in aluminium can be surface treated in different colours and anodized so that they are in harmony with the rest of the facade cladding.

Windows or patio doors in aluminium must be customised. This provides the

opportunity for flexible solutions, such as opening out to outside areas or creating large glass panels that let in lots of light. This is how living quality is improved. You can tailor your own solution at no extra cost.

Since you have the opportunity to make individual adjustments and design choices, windows and doors with aluminium profiles can become an important part of the home's aesthetic, both indoors and outdoors. This will give your home a tasteful overall impression that you will enjoy for many years to come. ●





# A SUSTAINABLE HOME

As a supplier, Sapa, must make choices at all stages of the supply chain – from design, materials, packaging and transport right through to the final product. But the most important part is to develop products that can be used for a long time.







## DEVELOPING NEW PRODUCTS STARTS WITH SUSTAINABILITY.

### **HONEST MATERIALS**

Building with vision means taking the future seriously and bearing in mind that our resources are finite. We are absolutely convinced that future urban development is inconceivable without sustainable reuse of materials. We only use aluminum from Hydro in our windows, doors and facades. Melting down aluminum for reuse uses just 5% of the energy required for primary aluminum production. So the higher the recycled content of scrap, the better it is for our cities and the environment. Through use of renewable power and modern technology, Hydro can produce cleaner aluminum than ever before.

### **PRODUCTS DEVELOPED FOR NORDIC CONDITIONS**

To make a product last, we must ensure that it can withstand the Nordic climate. Windows, doors and facades are part of the building skin and play an important role. Along with the other elements in the facade, windows and doors are elegant components that help to define the unique architectural aesthetics of the building. At the same time, they play a critical role in energy performance and the building's interior functions. The facade is the first line of defence against environmental and physical exposure based on its intrinsic design and location. Sapa products are developed for the Nordic climate. Our 40 years of experience in developing and manufacturing building systems in aluminium for this market is one of our main keys to success.





### LOCAL PRODUCTION AND QUALITY

Sustainability is all about building right the first time. This requires knowledge and skills in the executive part of the supply chain. A close relationship with and strong focus on quality in the engineering, production and installation stages. We work with authorised producers and retailers throughout the region, and focus together on delivering a long-lasting, sustainable product to your home.



## INFINITE ALUMINIUM By Hydro

### Hydro CIRCAL® 75R

Is a range of prime quality aluminium made with a minimum of 75% recycled, end-of-life aluminium (post-consumer scrap), such as facades and windows that have been dismantled from buildings and fully recycled.

It has a CO<sub>2</sub> footprint among the lowest in the world: 2.3 kg or less CO<sub>2</sub> per kilo of aluminium. This is 84% less than the worldwide average for primary extraction.

### Hydro REDUXA®

Is a series of low-carbon aluminium. Through the use of renewable energy from water, wind and solar, Hydro can produce cleaner aluminium than ever before. Hydro REDUXA® has a maximum carbon footprint of 4.0 kg CO<sub>2</sub> per kg aluminium produced. Less than a fourth of the global average. ●





# IMPROVE YOUR HEALTH BY INCREASING THE NATURAL LIGHT IN YOUR HOME

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Natural light affects health and quality of life, so it's very important to get enough. With people today spending an increasing amount of time indoors, we risk not getting enough natural light.

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... LIGHT IS A HEALTH FACTOR  
THAT IS AS IMPORTANT AS SLEEP,  
EXERCISE AND DIET ...







In the past, people spent a lot of time outdoors and automatically got enough of the natural light so crucial to health. This is more difficult to achieve with our modern lifestyle. According to the World Health Organization (WHO), people spend nearly 90 percent of their time indoors, which is worrying since we risk not being exposed to enough natural light.

With this in mind, natural light is an important factor to consider when planning a home. Whether you're building a new house or refurbishing an existing property, there are many things you can do to maximise the natural light.

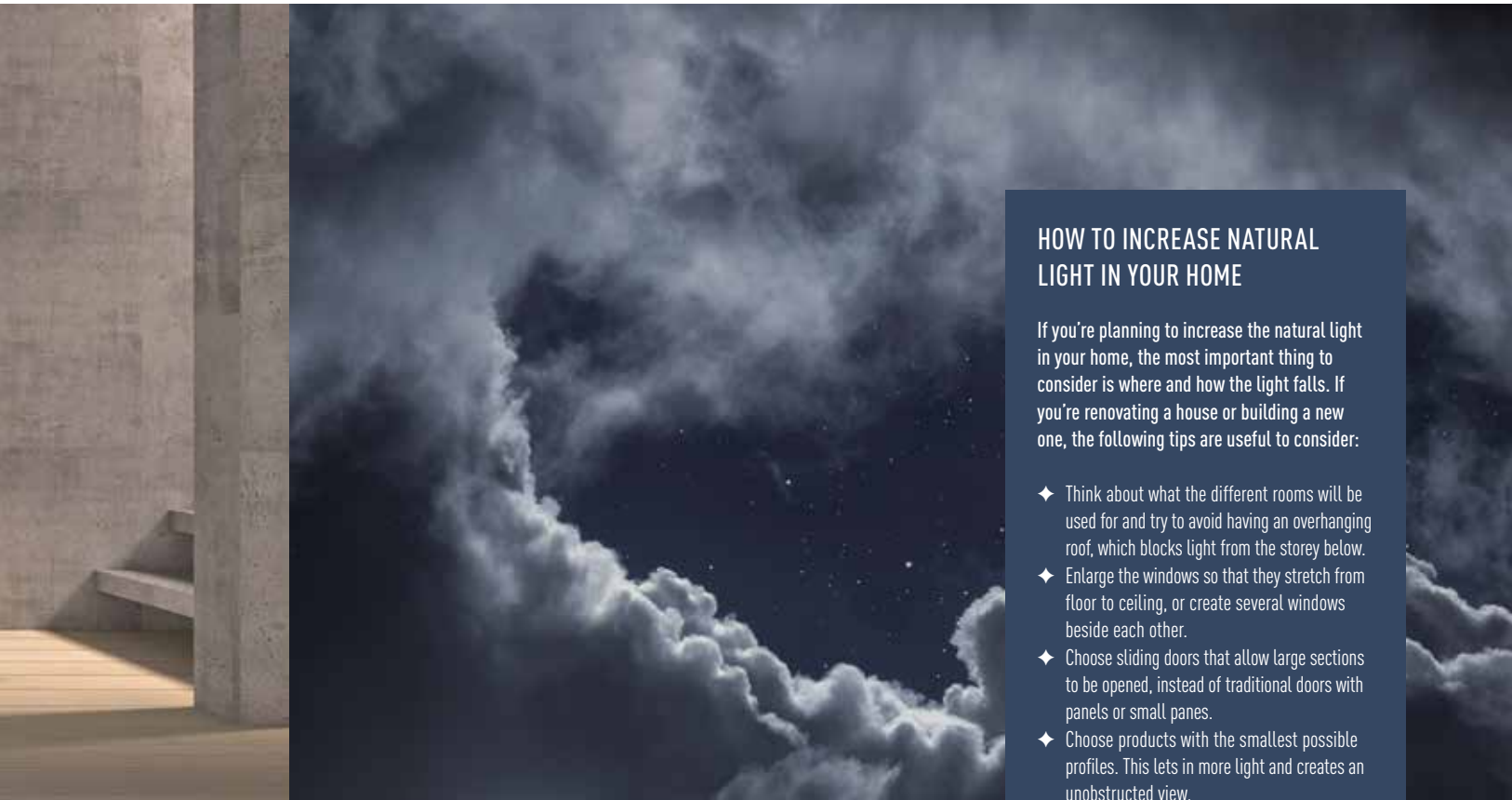
### THE HEALTH BENEFITS OF NATURAL LIGHT

People's sight is physiologically adapted to daylight, which has governed our internal body clocks for millions of years. We know that getting the right quantity of light signals during the day and enough darkness at night is crucial to good general health.

This is because natural light affects our circadian rhythm. Light tells the brain what time of day it is, which affects the body's hormone production. The hormone that makes us sleepy is called melatonin. When light reaches our eyes, our body gets a signal to block the release of melatonin. Instead, the hormone cortisol is produced, which in many ways has the opposite effect to melatonin. It wakes us up, or keeps us awake.

Hormone production affects a wide range of functions, from our internal organs to our mental state. For this reason, factors such as mental clarity, sleep, enjoyment, mood and performance are also stimulated by light conditions. A lack of natural light is associated with conditions including depression, obesity and diabetes.

In fact, light deficiency can trigger a condition known as Seasonal Affective Disorder (SAD). A slightly milder version of this condition, known as Sub-SAD, is characterised by a tendency to feel tired, depressed and socially withdrawn, and can also cause insomnia.



## OPTIMISING THE LIGHT CONDITIONS IN YOUR HOME IS AN INVESTMENT IN YOUR HEALTH, ENJOYMENT AND VITALITY.

### HOW TO INCREASE NATURAL LIGHT IN YOUR HOME

If you're planning to increase the natural light in your home, the most important thing to consider is where and how the light falls. If you're renovating a house or building a new one, the following tips are useful to consider:

- ◆ Think about what the different rooms will be used for and try to avoid having an overhanging roof, which blocks light from the storey below.
- ◆ Enlarge the windows so that they stretch from floor to ceiling, or create several windows beside each other.
- ◆ Choose sliding doors that allow large sections to be opened, instead of traditional doors with panels or small panes.
- ◆ Choose products with the smallest possible profiles. This lets in more light and creates an unobstructed view.
- ◆ Choose glass instead of panels where possible. If you want to maximise the amount of light, opt for large glass facades, windows or sliding doors. This lets more light in.

A wide range of energy-efficient, environmentally friendly and maintenance-free solutions are available today, offering you plenty of possibilities. It is precisely the products that come in light materials and flexible sizes that allow you to maximise the amount of natural light in your home.

Natural light, more specifically sunlight, also determines the body's vitamin D production. Vitamin D is important for our skeleton and calcium absorption, and can also help prevent certain types of cancer, cardiovascular disease, depression and obesity. In short, light is a health factor that is as important as sleep, exercise and diet.

#### **OPTIMAL NATURAL LIGHT CREATES A HEALTHIER INDOOR CLIMATE**

However, all light does not have the same effects. Depending on the light's intensity and wavelength, it can affect us in different ways. Today we know, for example, that blue light helps keep us awake and alert, while yellow light can make us sleepy.

Natural light contains a high quantity of blue wavelengths, as well as many other wavelengths that our body needs. Because the human eye registers more shades of colour in natural light than in artificial light, natural light will always be the best light source. It's not without reason that architects have started working with light as a health factor, instead of just an aesthetic factor. Although this is a new field of research, architects and engineers have started taking light compositions and circadian rhythms into account when designing buildings that people will spend a lot of time in. ●





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# HOW TO REDUCE HEAT LOSS IN HOUSES WITH LARGE GLASS SURFACES

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**A**lthough the windows in a regular house comprise only 5 to 10 percent of the total surface area, the windows can be responsible for up to 40 percent of the heat loss. The quality of the glass, size of the window area, airtightness and insulation around the window determine how great the heat loss is.

Installing better insulation and reducing heat loss from windows will reduce the energy demand considerably. You can also save both electricity and the environment by replacing old windows and doors.

#### GLASS PANELS AND HEAT LOSS

Today, many people like to give their homes new qualities by installing large windows and glass panels to let in more daylight and create visual openness. This does not need to be at the expense of heat preservation and energy efficiency.

If you live in an exposed country. You should choose products that have been adapted to the climate. You need doors and glass panels that have good thermal

insulation properties, and are equipped to withstand pressure from the elements.

When you choose glass panels and sliding doors in aluminium, you maintain both the aesthetic and thermal insulation properties. Sapa Selection can supply glass facade solutions with passive house certification. Without draughts from the windows, you can lower the temperature in the room, which contributes to a better indoor climate and lower energy costs.

#### CHOOSE GLASS PANELS WITH INSULATING PROPERTIES

To limit heat loss, you must install doors and windows that are well insulated. The U-value is a measure of how well a window or glass door provides insulation.

Technically speaking, the U-value is described as how much heat passes through a one square metre window or door at a temperature difference of one degree Celsius. The lower the U-value, the better the thermal insulation. The U-value refers not only to the properties of the glass, but also the total heat loss from the sill, frame and glass.

Choosing an aluminium frame with a broken thermal bridge and triple glazing





IF YOUR HOME IS LOSING HEAT, IT WILL HAVE  
NEGATIVE CONSEQUENCES FOR YOUR ELECTRICITY  
BILLS, STANDARD OF LIVING AND THE ENVIRONMENT.  
IF YOU WANT TO USE THE LEAST AMOUNT OF ENERGY  
POSSIBLE TO HEAT YOUR HOME, IT IS IMPORTANT THAT  
HEAT LOSS IN THE HOUSE IS KEPT TO A MINIMUM.



will give you a good starting point for a low U-value. If you also add a highly insulating sill, the airtightness will be even better. Sapa Selection insulators and seals limit heat loss in an optimal way and provide high air and water tightness. This means low energy consumption and excellent comfort.

#### **PROPER INSTALLATION OF GLASS PANELS AFFECTS HEAT LOSS**

Heat loss in glass doors and windows refers not only to the product's inherent properties, but also to how they are installed.

An outer wall has an external and an internal side. We find a zero point inside the wall, which shows the transition from a warm to a cold temperature. It is important that the windows are installed in the warm zone, where the temperature is above zero.

If the window is installed too far out in the facade, it can end up in the cold zone, so the thermal insulating properties are not fully exploited.

#### **ALUMINIUM IN GLASS PANELS IS A SUSTAINABLE CHOICE**

Aluminium is a strong, lightweight material with a long life. Aluminium is therefore often used in exposed environments and in places with harsh weather conditions, where it lasts for generations. Using aluminium contributes to sustainable buildings, thanks to constructions with high energy performance, safety and comfort. Aluminium can also be recycled and turned into new products in a endless cycle – with no deterioration in quality. ●











**Project:** VillAma, Åbo, Finland  
**Architect:** SAFA Pekka Mäki (Sigge Oy)  
**Sapa producer:** Alavus Alufront Oy  
**Year of build:** 2012  
**Photographer:** Vesa Loikas – Vesa Loikas Design





# SCANDINAVIAN DESIGN CLOSE TO NATURE

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Deep inside a small inlet by the sea in Ålesund is a minimalistic pearl of a villa. The constantly changing weather is reflected via the enormous glass fronts, creating a sense of dynamism in the facade. Indoors, the residents exploit the closeness to their surroundings in light, cosy rooms – thanks to a combination of smart home and low energy home technology.







**T**he family from Ålesund wanted a house that would provide space for all the family and at every stage of life. Different zones would be required and different needs would have to be met – both indoors and outdoors. Some of the most important functions were energy efficiency, smart home technology, minimal maintenance and an openness to nature and the garden areas.

#### ENERGY EFFICIENT SOLUTIONS

The builder Pritchard wanted a house with low energy consumption. They therefore built a low energy house that uses ground source heat as its most important source for heating. A low energy house is defined as a home with a lower demand for heating energy than a standard home.

—Two metres from the house wall, an energy well has been bored with a depth of almost 200 metres. This hole is connected to the house's internal heat pump, which provides domestic hot water and supplies almost 400 square metres with underfloor heating through water-borne heat, says Pritchard.

The family's outdoor pool is also connected to this ground source heat, and they have installed a setup for solar cell solutions on the roof.

#### SMART HOME SOLUTIONS

The energy efficient home should also have plenty of smart functions. The builder explains that the heating, lighting and entrance doors are controlled via a mobile app, in addition to night time temperature lowering and heat storage. They have also installed their own weather station on the plot, which constantly measures and transmits temperature information to an automated heating control solution.



1. The window surfaces were supplied partly as glass facades and partly as aluminium windows. A glass facade gives more architectural freedom than windows and provides larger formats.
2. The house has two stepped, fully glazed corners installed on both floors, a solution that creates an exclusive and attractive impression.

**Project:** Villa Klokbersundet, Ålesund, Norway

**Architect:** Ana Maria Hoyos

**Sapa producer:** H-Fasader AS

**Year of build:** 2015/2016

**Photographer:** Marius Beck Dahle













The great heights and the large surfaces required extreme precision from the window supplier. The largest windows were craned in.



### SCANDINAVIAN DESIGNED WINDOWS OFFER CLOSE CONTACT WITH THE ENVIRONMENT

Even as a low energy home, the house should have large openings to join together the indoor and outdoor spaces in a minimalistic and stylish design. The functional home consists of many large glass facades and windows in aluminium – in different shapes and sizes.

—We wanted to have large window surfaces to create good contact with the garden and pool areas. It was important to plan for lots of light, and I wanted to keep the view to the west. At the same time, we wanted to maintain a minimalistic and modern style with a low level of maintenance, says Pritchard.

The unique window formats placed specific requirements on the choice of materials. Only aluminium was good enough.

Aluminium is a strong, lightweight metal that is easy to shape and process. Aluminium therefore allows you to create stable structures that are attractive, minimalistic and sustainable, and perfectly suitable for exposed environments, such as the Atlantic coast.

The choice of supplier was also important, and it needed someone who knew the local conditions.

—We wanted to use a local supplier with a well known brand. In addition, there was great flexibility with the architectural windows, says Pritchard.

The great heights and the large surfaces required extreme precision from the window supplier. The largest windows were craned in. The large east facing window was especially demanding due to its size of 6 x 1 metres.







The windows were supplied in the colours RAL 7016 Anthracite grey on the outside and RAL 9010 Pure white (gloss level 80) on the inside.







### LARGE FORMAT WINDOWS

The window surfaces were supplied partly as glass facades and partly as aluminium windows. A glass facade gives more architectural freedom than windows and provides space for larger formats.

The windows in the house should be in large format and go from the floor to the roof and be supplied as a glass facade. Glass facades are not supplied as a finished product, but glazed from the outside on site. This requires more planning, but at the same time makes it easy to integrate opening elements in the glass facade, such as sliding doors, so that the entire facade becomes a glass wall with different functions.

The house has an integrated balcony door in the glass facades, on both the first and second floors. In addition, two stepped, fully glazed corners were installed on both floors, a solution that creates an exclusive and attractive impression in the facade – both from the inside and the outside.

Both the glass facades and the windows were supplied in the colours RAL 7016 Anthracite grey (gloss level 80) on the outside. For the inside they chose a white colour, RAL 9010 Pure white (gloss level 80).

### SLIDING DOORS

The lifting/sliding door has two leaves and opens out from the centre. This means that both door leaves can be opened in the centre and slid to each side to provide a maximum opening onto the terrace.

The lifting/sliding door has dimensions of almost 6 x 2 metres and a door leaf weight of over 300 kg. The door is therefore equipped with an extra wheel set and a lifting/slide mechanism that lifts the door up from the threshold when it is opened and lowers it when it is closed. This seals the door more tightly when it is closed and makes it easier to handle when it is opened. The door can also be lowered and placed in a set position when it is open. ●



The lifting/sliding door has dimensions of almost 6 x 2 meters and a door leaf weight of over 300 kg.

## SOME TIPS FOR BUILDING YOUR HOME

It took around 16 months to build the house. And the result was as intended, both airy and open. Pritchard has learned a thing or two himself about what you should think about when building a new house and would like to share some tips with you if you are planning on doing the same:

1. Think through your requirements carefully, both now and in the future. Children will go through different phases, so it's a good idea to predict and prepare for this before it is too late.
2. Smart home technology can cost quite a bit when it is first incorporated in the construction phase, but it offers large gains with regards to finance, environment and comfort. These gains are worth the investment over time.
3. Get involved in your choice of windows. Large windows create extra living quality in the form of daylight, views and good contact with the environment. The choices you make here and now are difficult to go back on later.







A DISTINCTIVE FEEL  
WITH SLIDING DOORS OR  
FOLDING DOORS >>

Here in Scandinavia, we really appreciate our nature, sunlight and being outdoors. As much as possible, we like to be at one with our beautiful natural environment, even when we are indoors. Sliding or folding doors make this possible. By opening up to your outdoor area, you can make your dream a reality.



## WHY CHOOSE SLIDING DOORS?

**SLIDING DOORS** in glass are also perfect for creating free and unhindered access to your terrace or garden. When you have the opportunity to open large sections of the wall, you can get close to the outside area without taking up floor space when the door is open.

Large, sliding glass panels allow you to create an ideal indoor climate. Our sliding doors in aluminium have a small number of slim profiles, which open up the room to its maximum size, so you get closer to the sunlight and nature outdoors. We particularly need to take full advantage of daylight here in Scandinavia.

Sapa sliding doors in aluminium slide open easily and have a slide field on the outside to ensure that they close with a tight seal, whatever the weather. This makes them perfectly suited to the Nordic climate. When the glass is pushed to the side, the boundary between the indoor and outdoor areas is quietly slid away.



- DO YOU NEED A TERRACE DOOR OR A SOLUTION FOR YOUR CONSERVATORY?
- WHAT DO YOU NEED TO CONSIDER WITH REGARD TO HANDLE OR FOLD DIRECTION, OBSTACLES AND SPACE?
- WHICH SOLUTION WILL BE BEST IN RELATION TO CLIMATE, WEATHER AND POSITION?

## WHY CHOOSE FOLDING DOORS?

**FOLDING DOORS** are ideal if you want to open a room onto your patio. If you are looking for a terrace door that opens up as much of the wall as possible, stylish folding doors in glass and aluminium can be the perfect solution for you.

These doors let you fold and slide the wall completely to the side so you can pass freely into the garden or onto the terrace. When you open a folding door in aluminium, the doors will fold together into a slim package on the inside or outside of the wall. This allows you to create a feeling of being outdoors, even when you are indoors.

When the door is closed, you will still feel close to the outdoor area thanks to the large glass panels with their slim aluminium profiles, which barely disturb your field of vision. Sapa folding doors can be supplied with high insulating glass and provide an effective seal with very good thermal insulation.

The folding doors are just as secure and stable as a wall, with locks on both the top and base profiles. Sapa folding doors in aluminium give your home flexibility and a distinctive character that will influence its use and appearance for years to come.



SLIDING- OR FOLDING DOORS?





## MANY POSSIBILITIES

Sapa Selection supplies a range of systems with different qualities and characteristics, when it comes to both folding doors and sliding doors in glass and aluminium. The most important thing is that you choose the right quality and function for your requirements.

For example, do you need a terrace door or a solution for your conservatory? What do you need to consider with regard to handle or fold direction, obstacles and space? Which solution will be best in relation to climate, weather and position?

Sapa Selection systems give you endless possibilities. Our folding- and sliding door solutions let you combine characteristics such as form, function, colour and technology as you wish. With its stylish design solutions, the company's distinctive feel and character really comes into its own. ●



# TIPS WHEN CHOOSING SLIDING DOORS

A sliding door is not just a sliding door. There are a number of combinations and possibilities you should consider when looking for the perfect sliding door solution for your own unique home. Things to consider include the dimensions, design and colour, but you should also assess conditions such as energy efficiency, maintenance requirements and protection against burglary.

The important thing is that you end up with a solution that meets your requirements, so the end result is a sliding door you can enjoy for a long time.

## 1. CHOOSE THE RIGHT MATERIALS

The materials you choose for your sliding doors will determine the appearance, living quality and maintenance requirements of your home. Aluminium is a sustainable and maintenance-free alternative adapted for the Nordic climate.

Aluminium is a material that can cope with almost anything. A sliding door in aluminium can be exposed, without deterioration from snow, wind, rain or damp.

If you choose a sliding door in aluminium, it will be completely maintenance-free, besides a quick clean with soap and water. In other words, you will avoid scraping, painting and staining, which wood frames require at regular intervals.





In addition, a sliding door in aluminium will last almost twice as long as the alternative in wood. While sliding doors in wood have an estimated life of about 25 years, sliding doors in aluminium can last for almost 40 years.

## 2. CHOOSE THE RIGHT LEVEL OF INSULATION

Make sure the sliding door you choose has the right thermal insulation properties. Your thermal insulation requirements will depend on where you position the sliding door.

In a conservatory, a simple construction with double glazing can be enough.

The level of insulation should be higher

if the sliding door will function as a terrace door. Triple glazing provides better thermal insulation properties and can withstand a great deal when it comes to water tightness and airtightness.

Sliding doors with triple glazing and a low U-value, in other words, glass with a high thermal insulation capacity, fulfil both the energy requirements and maintain living quality in your home. Install the sliding door in a warm zone in order to take full advantage of the thermal insulation properties.

## 3. OPTIMIZE THE VIEW AND LIGHT

To maintain the outlook and natural light, you need a sliding door with the largest

possible glass surface. For example, you can exploit the height of the room by choosing sliding doors that reach from the floor to the ceiling. If you choose solutions with integrated profiles, you will maximize the glass surface, because you avoid door frames that block the light and view.

Sliding doors are possible to get in very large dimensions that give your home the best possible view and natural light. They can be integrated into the floor, walls and ceiling. This means that the profiles are not visible, and the glass comes right out against the wall. The handle is integrated in the profiles. You can get hold of a grip that stretches along the entire height of the doors. ➔







DO YOU DREAM OF A BETTER OUTLOOK  
AND MAXIMUM NATURAL LIGHT?

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ARE YOU KEEN TO HAVE A GREATER  
SENSE OF SPACE AND BETTER LIVING  
QUALITY?

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OR MAYBE YOU WOULD LIKE FLUID  
TRANSITIONS BETWEEN THE INDOOR  
AND OUTDOOR SPACES?

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**SLIDING DOORS CAN CONTRIBUTE  
TO ALL OF THIS.**

Despite the heavy door leaves, the sliding door's wheel system makes it easy to slide. Motorized solutions that can be operated via an app or remote control are also possible.

#### 4. DIFFERENT OPENINGS

Think about how much of the wall you wish to open before you choose your sliding doors. Many people would like the possibility of blurring the boundary between the indoor and outdoor areas.

A standard sliding door solution opens half of the wall. This will be two door leaves, each on separate tracks, where one leaf is fixed and the other can slide. If you choose a solution with three doors and three tracks, you can open two thirds of the wall.

There is also a sliding door solution that allows you to create "floating corners", in other words, you can open two doors in one corner without the frame remaining. In this way you can create maximum proximity to the outdoor space and blur the boundary between indoors and outdoors. Whether you bring nature indoors or take your living room outdoors, it's two sides of the same coin.

#### 5. SUITABLE FOR VENTILATION

Good ventilation and fresh air are important for a good indoor environment. If you want to ventilate without letting in people, insects or animals, a tilt and slide door can be the solution for you. This is a compact and practical solution that is especially suitable for ventilation.

In addition to functioning as a sliding door, these types of doors also offer the option of allowing air to flow inside and can be tilted out like a window in the tilt position, and roll like a sliding door in the slide position. When the door is closed, it is sealed like a window.

#### 6. THE COLOUR OF YOUR DREAMS

A sliding door in aluminium is not just a practical device, it is a part of the design and interior of your home. Choose your colours carefully to make your sliding door an eye-catching feature.

Slim frames or profiles in aluminium can be surface treated in a variety of different colours and anodized. If you want to achieve the perfect shade, you can choose from the whole range of colours in both the NCS and RAL scale.

The colours can be matched to both the interior and exterior, since sliding doors can be supplied in different colours on the inside and outside. The sliding door can therefore complement your home's overall impression in a tasteful manner.

#### 7. FLEXIBLE GLASS SOLUTIONS

The glass in your sliding doors should have properties that fulfil all your requirements. This means, for example, that you can have glass with good thermal insulation and sun-shading properties at the same time.

With triple glazing, you can install energy saving glass and glass with solar protection in the same door frame. In this way you can keep in the heat during winter while avoiding annoying sunlight.

It is also possible to install anti-intrusion glass. Anti-intrusion glass has been tested with regard to how resistant it is against intrusion.

A common European standard, NS EN 1627, defines the safety classes ("resistance class") from RC1 to RC4. ●













## BRING NATURE INTO YOUR CABIN

Nature is a source of good health, friendly companionship and increased energy and well-being. For many people, spending time in nature is like a balm for the soul. The wish to be close to nature is deeply embedded in Norwegian culture, and no doubt partly explains Scandinavians' fondness for cabins. A cabin is our natural retreat.

BRING NATURE INTO YOUR CABIN





← The sliding door measures 8690 mm x 2570 mm and has six sliding panels (3+3). It has a powder-coated metallic finish: Axalta AE03217045120 GREY BG451. The glass consists of Pilkington Suncool 66/33 double-glazed units.



**A**ccording to Statistics Norway, there were nearly 450,000 second homes in Norway alone in 2019. A second home is to do with our leisure time, the activities we enjoy and how we relax and recharge our batteries. Being close to nature is an essential part of this picture.

#### **MAKE NATURE PART OF YOUR INTERIOR**

Draw inspiration from your surroundings when designing and furnishing your second home. Whether you're building a new house or renovating an existing property, large windows and sliding doors offer unique possibilities to make the most of spectacular surroundings.

By blurring the boundaries between indoors and outdoors, you incorporate nature into your cabin. Glazed panels and

sliding doors afford an optimal view of your beautiful surroundings. This allows nature to become the centrepiece both indoors and out, providing exciting visual interest throughout the changing seasons.

Heighten the effect of the natural materials by harmonising your interior colour scheme with the surrounding nature. Elements from nature contribute to an attractive and inviting interior. Draw inspiration from the colours of the mountains, forest and hills when designing your interior. By integrating the interior and exterior, you create a sense of wholeness and harmony.

#### **SLIDING DOORS BRING NATURE UP CLOSE**

Sliding doors don't only make nature part of your interior – they bring it inside. Sliding doors offer many exciting possibilities to create a seamless transition between outdoors and indoors.







BRING NATURE INTO YOUR HOME



SCANDINAVIAN LIVING

Depending on the terrain outside your house, you might not need a terrace. Simply slide the wall aside and step out onto the bare rock or grass.

With aluminium sliding doors, you can have the glass reaching all the way to the ground. This brings nature right up to your cabin wall. The grass swaying in the breeze becomes an extension of the floor inside the glass.

If you're planning to use several sliding door panels, you can open up completely and let the indoor and outdoor environments merge. The outside air, light and scents from nature will fill your room, making you feel at one with the elements even when you're indoors.

When the summer is over, you can admire the changing seasons from the warmth and comfort behind the glass. Sliding doors with high-insulated glass minimise heat loss and meet the highest energy saving requirements.

If you prefer a window that gives you a panoramic view and an airy interior feel, glass facades may be your optimal solution. Tailor-made glazed walls can stretch from floor to ceiling if you want, creating a unique interplay with the world outside the cabin.

### **ALUMINIUM SLIDING DOORS ARE VIRTUALLY MAINTENANCE-FREE**

Aluminium sliding doors require no maintenance, except washing with soap and water. Aluminium is a sustainable and almost maintenance-free material with a long lifespan, making it ideal for tough environments. Aluminium is, quite simply, a material that respects your precious free time – so you can spend more of it outside in nature. ●









BRING NATURE INTO YOUR CABIN





### TAILOR-MADE CABIN IN BAMBLE

The architectural firm Lund Hagem designed a cabin on a private island in Bamble, a small municipality in Vestfold and Telemark county in south-east Norway. A family had a new, tailor-made cabin built on a private island. The position of the cabin was specially chosen to harmonise with the surrounding nature and vegetation. The cabin was ready for occupation in 2018. It has a total area of 100 square meters and includes a main section, an annex and a lakeside hut. The cabin sleeps a total of 15 people. It has large windows and a triple track sliding door creating seamless transitions between outdoors and indoors. The door measures 8690 mm x 2570 mm and has six sliding panels (3+3). It has a powder-coated metallic finish: Axalta AE03217045120 GREY BG451. The glass consists of Pilkington Suncool 66/33 double-glazed units.

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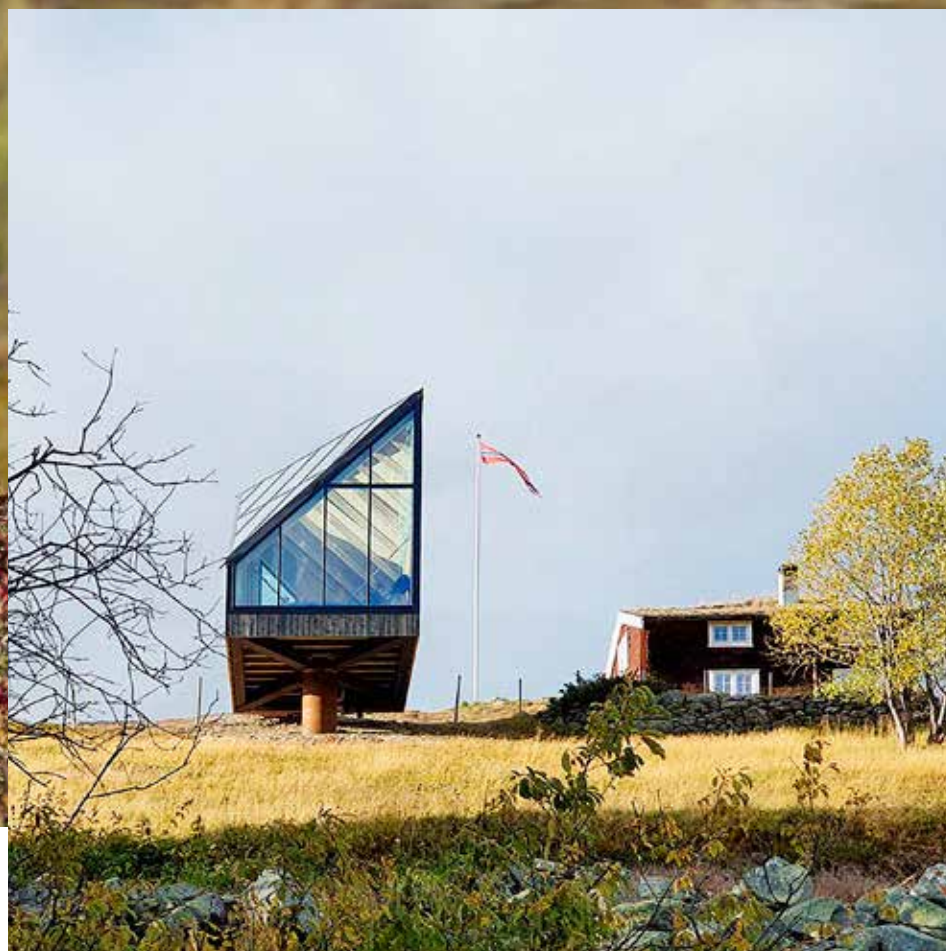
**Project:** Cabin, Bamble, Norway **Architect:** Lund Hagem Arkitekter **Sapa producer:** APS AS  
**Year of build:** 2018 **Photographer:** Inger Marie Grini



A MODERN  
EXPRESSION  
WITH A  
MINIMAL  
INTERFERENCE



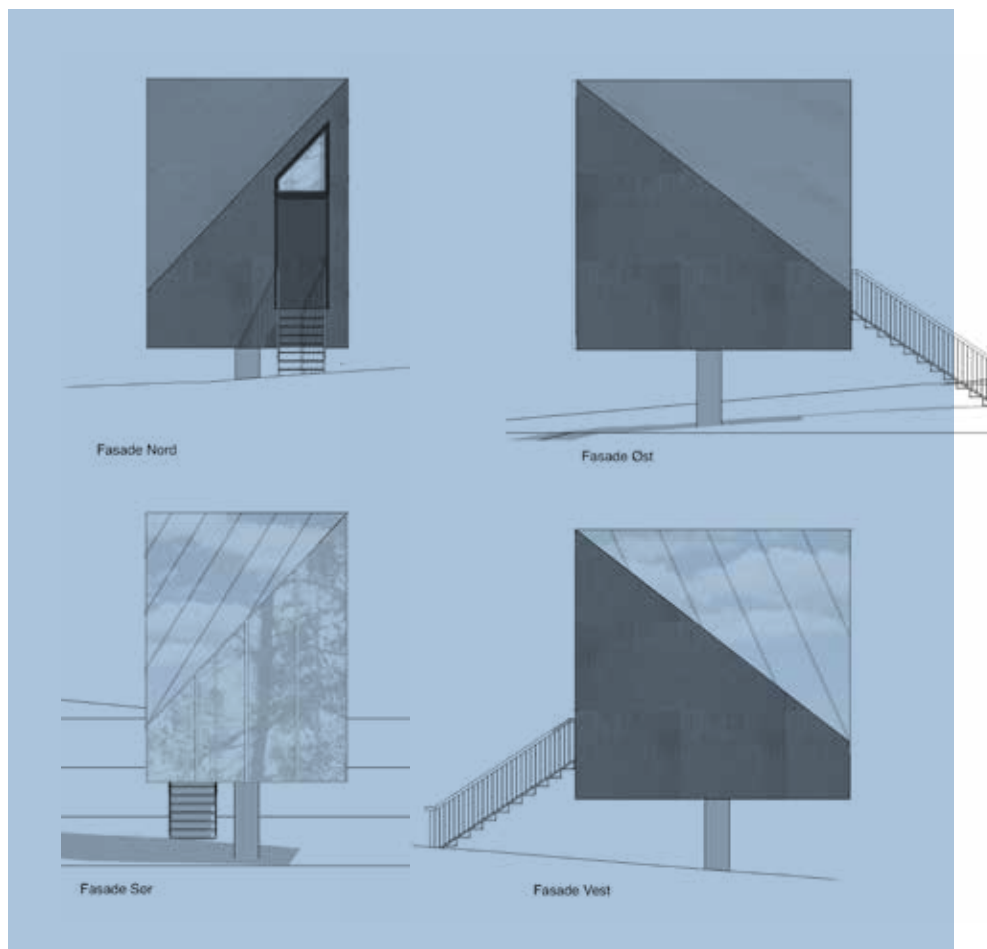




## THE ANNEX "THE DIAMOND"

**B**etween Dovrefjell and Trollheimen the architects from A38 Arkitekter created "The Diamond", an annex with the greatest panorama view over Oppdal. This was a collaboration with Tv3 and the program "Adventurous Home Improvement" or in Norwegian "Eventyrlig Oppussing". The brief was to create an annex with a modern expression that could contrast with the old courtyard. The result of a creative workshop in the architect office with many exciting ideas ended up as "The Diamond" in the middle of the mountains.

The concept is based on minimal interference with nature, which requires little ground work as it stands only on one pillar and the terrain is preserved almost untouched. Large windows are used for both the fantastic view of the site and the sky.





### THE LOCATION

Oppdal is a municipality in Trøndelag, a county in the central part of Norway. The administrative centre is at 545 metres above sea level. Most of Oppdal's area is mountainous, with large areas above the treeline. The mountains extend from Dovrefjell in the south to Trollheimen in the north. The climate is harsh, even by Norwegian standards. The municipality is an alpine community with a long winter.

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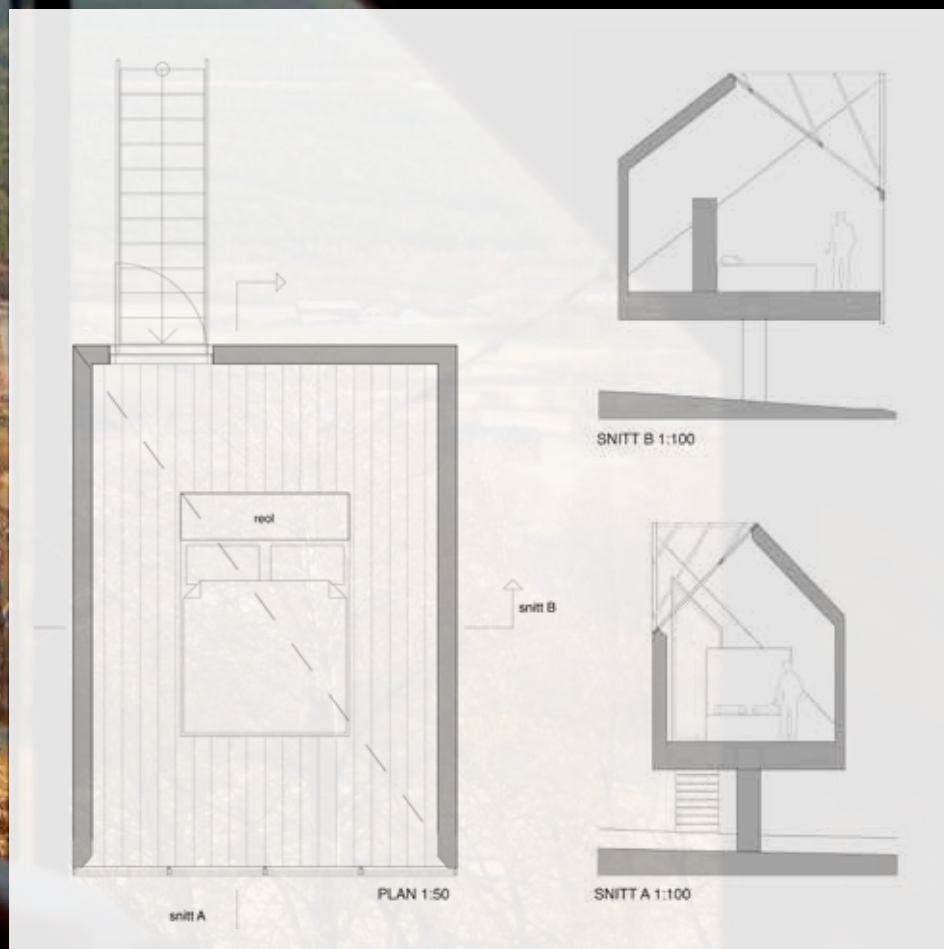
**Project:** "The Diamond", Oppdal, Norway **Area:** 20 m<sup>2</sup> **Architects:** Rune Ramfelt, Mari Heum, Georg Piantino, Tina Wessel, Jon Fleischer, Emil Årdal Aarseth **Sapa producer:** Riis Glass og Metall  
**Year of build:** 2019















P R O D U C T S  
D E V E L O P E D  
F O R N O R D I C  
C O N D I T I O N S

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**A** house built for Nordic conditions needs materials that can cope with the wind and weather. The building must offer comfort for future generations, with materials that are gentle on the environment.

Living well is important. Local production and local expertise provide the quality that is required to meet these Nordic conditions.

#### **LOCAL KNOWLEDGE FOR WINDOWS AND SLIDING DOORS**

Sapa Selection supplies custom products specially designed for the Nordic market. We are not only aware of the harsh climate here in Scandinavia, but also Nordic building traditions, regulations and standards.

For example, it is colder in the North of Scandinavia and it rains more in on the west coast of Norway. Our products have been tested for this.

In Scandinavia, we also have different lock and fitting systems than in England and Poland, for example. Our doors in glass and aluminium are manufactured to Scandinavian standards.

In Scandinavia, we have a number of quality requirements for windows, how they must be installed and where different types of windows can be positioned. Our local glaziers and fitters ensure that your windows and doors in glass and aluminium are installed according to the regulations that apply where you live.

This is exactly why we manufacture our products here in Scandinavia. The quality is guaranteed by people who know our unique requirements, at every stage of the process.









HYDRO USES GREEN  
HYDROELECTRIC POWER TO  
PROCESS THE ALUMINIUM,  
A SUSTAINABLE MATERIAL  
WITH A LONG LIFE AND  
HIGH LEVEL OF RECYCLING.

#### **SUSTAINABLE WINDOWS AND SLIDING DOORS**

A sliding door or window solution from Sapa Selection starts its journey in Norway. Hydro uses green hydroelectric power to process the aluminium, a sustainable material with a long life and high level of recycling.

The actual aluminium frames used in our building systems are produced mostly in Sweden. The profiles are then sent back to local producers around Scandinavia. Local glaziers or facade contractors fit the glass in the windows, sliding doors or folding doors that you order so they are finely tuned for your unique home.

Why do we do it in this way? Firstly, it is more environmentally friendly with regard to both the power used to process the aluminium and how it is transported. Secondly, we ensure a close relationship between the customer and supplier. Local expertise and service mean close contact between the person buying the product and those who make and fit the product.







### PROFESSIONAL PRIDE AND LOCAL SERVICE

If you wish to use glass and aluminium to raise the living standard in your home, being able to collaborate with a local expert provides a sense of security. A glazier or facade contractor will come to your property and be responsible for ensuring that the installation is carried out properly and thoroughly, so that the product functions as it should.

If, for example, you install a large glass panel in an unstable wall, you risk a poor result. A producer in another country will not necessarily see this. A local professional, on the other hand, will implement measures and improvements if the wall cannot withstand the load.

You get access to local expertise before, during and after the installation of your windows. The pride of our professionals is your assurance of quality throughout the process. ●

## YOUR SAPA:

Sapa was established in Småland in Sweden in 1967. The Norwegian corporation Orkla Group acquired Sapa in 2005. Today Sapa is a part of Norsk Hydro, a Norwegian aluminium and renewable energy company and one of the largest aluminium companies in the world.

### SAPA SELECTION

Sapa Selection is a range of specially selected products for home and residential use, designed for minimal maintenance and reliable operation. Now you can let in more daylight and give your home a contemporary style with glazed units and sliding doors that are easy to use and maintain and specially designed for the Nordic climate.

> **Windows** – Our windows combine all the benefits of aluminum with excellent thermal insulation. The combination of stability, precision, reliable operation and minimal maintenance gives you products that last for many, many years.

> **Glass facades** – A glazed facade creates a contemporary look and lets the light flood in. Transparency makes the landscape part of your home. The result is stylish design combined with a high level of comfort and minimal maintenance.

> **Sliding doors** – If you set up sliding doors between indoor and outdoor areas, you can use large glass surfaces. With this solution, you let plenty of beneficial daylight into the indoor space all year round, while letting the outdoor surroundings become part of the room.

> **Folding doors** – Do you dream of opening the whole wall and making your inside the outside? Folding doors allow you to do this. With a few easy steps, you can push the glass aside and let nature in. The folding door can be fully opened outwards offering you a panoramic view, flooding rooms with natural light and blurring the boundaries between indoors and outdoors.

> **Doors** – Our aluminum doors are high-insulated with a low U-value and good weather tightness, and are designed with a clear focus on energy and performance. The system is ideal for exterior doors in modern homes with high demands.

### BUY LOCAL

You can find our products with our authorised fabricators. They can assist you with your project and have long experience of building with glass and aluminum. You can find your local representative at [www.sapaselection.com](http://www.sapaselection.com). They will help you make the right choice and then build the entire system to your specifications. ●







BEING CLOSE TO WINDOWS  
AND GLASS WALLS MAKES US  
MORE AWAKE. WE SEE WHAT  
TIME OF DAY IT IS, THE  
CHANGING OF THE SEASONS,  
AND WHAT THE WEATHER  
IS LIKE. THIS REDUCES THE  
FEELING OF BEING TRAPPED.

**sapa:**  
SELECTION



## WE ARE:

PART OF A GLOBAL COMPANY, BUT OUR STRENGTH STILL LIES IN BEING LOCAL.  
WE HAVE SAPA PRODUCERS ALL OVER EUROPE WHO KNOW THE LOCAL REQUIREMENTS,  
NEEDS AND CLIMATE. THE LOCAL EXPERTS AT SAPA WORK CLOSELY WITH PRODUCERS  
AND RETAILERS TO BRING YOU QUALITY PRODUCTS MADE FOR NORDIC CONDITIONS.

**sapa:**  
SELECTION

[sapaselection.com](https://sapaselection.com)