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Norwegian Architectural Policy



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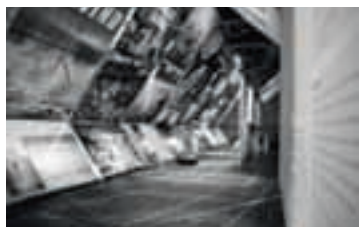


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Introduction

THE GOVERNMENT WANTS TO PROMOTE ARCHITECTURE

There is a need for a new, comprehensive architectural policy. Buildings, cities and population centres are facing new challenges from climate change, growth and transformation. This has brought a need for new knowledge and competence, locally, nationally and internationally. The field of architecture is complex and spans many sectors.

The Government's Architectural Policy lays down a broad definition of the concept of architecture.

In its broadest sense, architecture comprises all our man-made surroundings. It embraces buildings and infrastructure, outdoor spaces and landscape. It is about individual buildings and buildings in interaction, about the totality of towns, population centres and landscapes.

This broad definition means that a substantial number of public sector authorities will be important players in the task of promoting good architecture.

This document describes three main challenges facing architecture:

- Sustainability and climate
- Change and transformation
- Knowledge and innovation

From these have been drawn the following six focus areas for the Government's architectural policy:

- 1) Architecture should be distinguished by eco and energy friendly solutions
- 2) Cities and population centres should be developed with architecture of good quality
- 3) The government should safeguard cultural environment and building heritage
- 4) Architecture should be promoted by knowledge, competence and dissemination
- 5) The government should be a role model
- 6) Norwegian architecture should be visible internationally

These focus areas and various measures and initiatives are described in the chapters that follow.

With this as a background, the Government presents a complete overview of existing and planned measures and initiatives being implemented nationally to promote good architecture. A wide range of measures and initiatives are included, reflecting the government's many roles and tasks. The document describes visions, goals and challenges and states important focus areas. As many as 13 ministries have collaborated on it and a range of technical and professional specialists have made important contributions. This is the first time

an architectural policy document of such breadth has been presented in Norway.

This document is based on what the government is doing in the field of architecture, and the government is also the executing party in many of the measures discussed. This is seen most clearly in the case of public building projects. In many of the other measures, government influence is more indirect. Here it is about the regulatory framework - regulations, guidelines, finance schemes and other funding and resources. The regulatory framework is of vital significance for the opportunities regional and local authorities, industry, organisations and inhabitants have for realising the goal of improving the quality of our surroundings.

The work has involved the following 13 ministries:

Ministry of Children and Equality, Ministry of Renewal and Administration, Ministry of Defence, Ministry of Health and Care Services, Ministry of Local Government and Regional Development, Ministry of Culture and Church Affairs, Ministry of Education and Research, Ministry of Agriculture and Food, Ministry of the Environment, Ministry of Trade and Industry, Ministry of Petroleum and Energy, Ministry of Transport and Communications and Ministry of Foreign Affairs.

The work has been led and coordinated by the Ministry of Culture and Church Affairs. Central underlying institutions and public services, specialist centres and resource persons have also been involved.

FURTHER WORK

This architectural policy document is intended to help and encourage coordination and collaboration across administrative boundaries, so as to strengthen the overall effort and make it more efficient.

The document is intended as a tool to strengthen the quality - and awareness - of architecture and our physical surroundings and to make evident the combined and total national field of architecture. The public sector should lead the way, as example and role model.

This is the beginning of a job that will be followed up and further developed. Public authorities should regularly discuss its follow up in dialogue with the professional community. Conferences on the subject will be organised. The goal will be to assess status, discuss further strategies and inspire further work within the architectural field.

VISION

Good architecture should contribute towards a high quality of life and provide attractive, functional and universally designed buildings and surroundings. Good architecture should express a common culture and identity. Architecture should contribute to welfare, sustainability and value creation and inspire to conserve and enrich. Architectural policy should be targeted on totality and continuity in our physical surroundings.

WHAT IS ARCHITECTURE?

The term architecture can be applied in many ways. Architecture can mean an art form and a work of art. Architecture can be used as a general term for our surroundings seen as physical form, as a professional discipline and an academic discipline and as part of the building industry. More precisely, the term architecture is used like this:

1) When architecture is understood to mean architectural work and architectural practice as production, the term is a designation of quality. What is built may achieve the status of architecture by virtue of

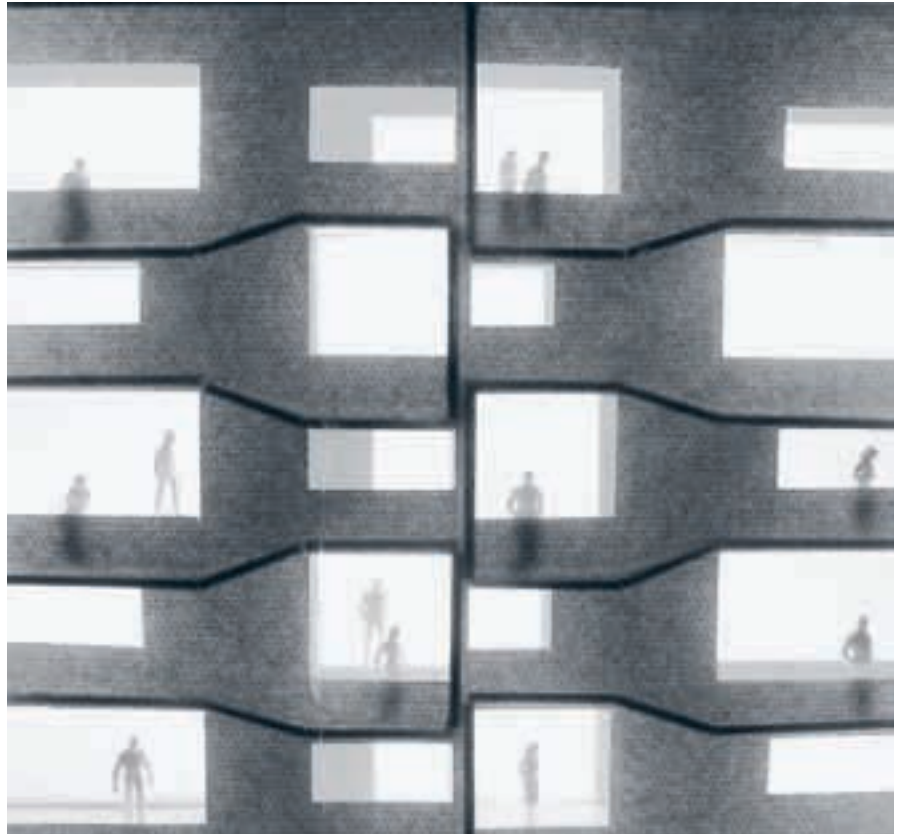
its architectural qualities, and thus not all buildings qualify as architecture. In 1942 Nikolaus Pevsner began his history of architecture by asserting that “a bicycle shed is a building; Lincoln Cathedral is a piece of architecture”. Architecture is built in order to satisfy the needs of society. It has the characteristics of an implement; Thus usefulness and functionality are important aspects of the architectural work. Architecture has a public character, is part of the context of the place, is perceived by all and is not the subject of personal choice, like other forms of art. During the second half of the 20th century, the concept of architecture was widened to embrace entire built-up areas, cultural landscape and technical infrastructure displaying the qualities of creative works.

2) Architecture can also indicate a field of industry that includes the results of the work of the architects and the building industry. This use of the term stems from the fact that architecture is a profession and stresses its professional, vocational and even craft aspects. Such an understanding allows for a division between, on the one hand, building practice which describes the broad building tradition and, on the other hand, architectural history which describes the buildings and areas that have been shaped by architects.

3) The dictionary gives us a third definition of the term architecture: “The branch of knowledge which concerns the planning and artistic design of buildings, civil engineering projects and useful items.” Architecture is the term for a professional discipline, administered by architects and architectural historians, and an academic discipline which has been a university subject in Norway for a hundred years. The subject was first taught at the art colleges and later adapted to societal changes in the polytechnic colleges that were established from the beginning of the 19th century. Its close relationship with engineering laid the basis for the tension between art, science and craft which still characterises the discipline.

4) The term architecture also serves as a description of our surroundings seen as physical form. In this context, architecture is not a normative term reserved for buildings and civil engineering projects of high artistic and architectural quality, but a description of our surroundings, when these are understood as physical structure, visually perceived as physical form and interpreted as physical expression. A community or a city can be analysed on the basis of different professional traditions: as an economic system, a social system, a system for exchanging information or a pattern that creates, orders and distributes traffic. One of architecture’s specific contributions is to read the city as physical form.

This document’s broad definition of the concept of architecture means that architecture thereby forms part of very many of the government’s areas of operation and tasks. Thus the document will be significant for public activity in its broadest sense.



[0.2] Hinna park (illustration). Stavanger (Atelier Oslo)

ARCHITECTURAL QUALITY

As a concept, architectural quality covers functional, technical and formal aspects. Appraisal of architectural quality must therefore include several elements. Objective value theories assert that certain things are “beautiful” or “ugly” in the same manner as small or large. Subjective value theories assert that all people consider that certain things are more beautiful than others. Cultural relativistic theory asserts that a particular society will develop its own perceptions, common to the whole of that society, about what is good - or beautiful - architecture.

Architectural quality will to a great extent be a matter of opinion, but must be defined in a way that allows the concept of quality to be used in discussions. We must be able to explain how we discuss quality. Some elements in such a discussion will be more easily measured



[0.3] 3 architects from 3 periods, Diploma Master of Architecture, autumn 2007 (Ola Hagen)

than others. Judgement of architectural quality thus embraces both the qualitative and the quantitative properties of the subject.

The purpose of quantitative assessment is to assess the architecture in relation to controllable data, measureable criteria, standard specifications and regulations. An architectural project can be discussed operationally in relation to the building and landscape contexts of which it will be a part. In the same way as other art forms can be assessed on the basis of their own traditions, architecture can be assessed within the profession in its own tradition. One can assess and discuss the degree of originality, the degree of creativity and positioning in the professional tradition of which the project is a part. To make architecture as a culturally active product is about driving forward and interpreting the tradition afresh.

Qualitative assessment is directed towards the properties of a building that cannot be measured, such as perceptions, feelings, meanings and symbols. Such quality assessments are based on the, often immediate, sensory aesthetic perception of an architectural project or a group of buildings - the “taste” of the project, what the observer likes and doesn’t like. This discussion is about the parts of the project that concern opinion. The meaning content conveyed by architecture is transitory, because this meaning will change over time to some extent. Also the author (architect) does not control opinion. Different



[0.4] Nansen Park Fornebu, Oslo (*Bjørbeek and Lindheim Landscape Architects*)

people interpret in different ways and, when the work is complete, it is often interpreted quite independently of the intentions that lay behind it. The knowledge base for such assessments consists of rules of the trade, practice, examples, ideals and typologies.

An architecturally successful building is seldom the result of a purely democratic process of participation, but user participation in building projects and involvement in planning processes represents a valuable supplement and corrective to the work of the professionals. To promote debate and competence in professional circles, among those who commission buildings, decision-makers and the general public, it is important to develop criteria and methods for assessing and criticising architecture, which can bridge gaps between the professionals and the general public.

The Planning and Building Act lays down guidelines for architectural quality and uses the terms: aesthetic design of the surroundings, visual qualities and architectural design and building practice.

1) The formulation aesthetic design of surroundings involves good design of built surroundings, good residential environments and safeguarding the qualities of the landscape.

2) Good visual quality means that the building, through its form, expresses its function and that other visual qualities, such as the interplay between volume and height, the expression of facades and so on, should be safeguarded in planning and execution.

3) The term good architectural design as used as a collective term for the integration of visual qualities, usability, functionality and universal design of the individual work.

4) Good building practice is used about architecture understood as good built surroundings. Building practice is used for example in connection with the Housing Bank's efforts to promote good architecture. The term is also used in the *National Building Practice Award* (*Statens byggeskikkpris*), which is presented annually by the Ministry of Local Government and Regional Development to buildings and built environments which, through their execution, use of materials, design and interplay with place and environment, can help to elevate, renew and develop general building practice. The projects should have good architectural design and fulfil key requirements for the environment, adaptation and universal design.

ARCHITECTS AND OTHER PROFESSIONAL GROUPS

A number of professional groups work within the field of architecture. In addition to the professions of architect, landscape architect and interior architect, this includes various types of planners, as well as a number of trades and professions in the building and construction industry and the public and private sectors. The planning of public buildings, roads, power plants etc. is increasingly done in interdisciplinary groups which seek to find good, comprehensive solutions. In such processes the architect can have a coordinating role.

The role of architecture

PUBLIC ARCHITECTURE

It is a government tradition to employ outstanding architects for important building projects. This applied for example to NSB's railway buildings as early as the late 19th century and in the reconstruction after the Second World War, when architects and other professional groups helped to materialise the dream of a modern welfare state, with better housing, schools, roads and day-to-day service functions.

A more specific policy for architectural quality in our built environments was introduced in connection with Architectural Heritage Year in 1975 and the Urban Environment Campaign in 1981/82. At the same time, the National Building Practice Committee (Statens Byggeskikuttvalg) was created to enhance awareness of good

architectural quality in everyday building. When the committee was disbanded around the year 2000, the Housing Bank was given responsibility for following up on efforts for good architecture and building practice, based on the entire built environment, not limited to everyday buildings or to housing. Since the 1960s there has been a greater awareness and understanding of the design and repair of the major impacts on the landscape caused by hydropower stations. The *Beautiful Roads Award* was created in 1988 as a result of increased prioritising of good road architecture. Further-



[0.5] From the National Tourist Routes project. Tungeneset, Senja, Troms
(Code Architecture – Marte Danbolt)

more the government took a strong interest in the planning of the 1994 Winter Olympics in Lillehammer, and this led to a broader discussion of architecture in public administration and external professional circles. In Report no. 61 to the Storting (1991-92) *Culture in Time*, architecture, design and the aesthetics of our surroundings were introduced for the first time in a comprehensive manner, as an important part of Norwegian cultural policy. In the wake of this, Norsk Form was created in 1993 and the Museum of Architecture was strengthened after its creation in 1975. Report no. 48 to the Storting (2002-2003) *Cultural Policy to 2014* briefly discussed the field of architecture and formulated some main issues for consideration. Political awareness of architectural issues increased considerably in the 1990s and was discussed at all levels of administration.

In the last decade, national ambitions for outstanding and creative architecture have resulted in, for example, the new Opera House in Bjørvika. Another example is the *National Tourist Route* project.

ABOUT NORWEGIAN PLANNING AND BUILDING

In terms of volume, building and construction is one of our biggest industries. It affects us all in a very direct manner, and is therefore subject to comprehensive control by society.

The volume of Norwegian building and construction activity, measured in terms of gross production value, is about 150-200 billion kroner a year. 15-20 per cent of this is publicly financed, about two-thirds of this with government funding. An estimated 35 billion kroner a year is used on refurbishing and modernising existing residential buildings (SINTEF's building research division - Housing Bank). The public share of the total investment in building is relatively high in Norway compared with other European countries. The reasons for this have not been systematically researched, but there is reason to believe that long-standing economic prosperity, strong regionalisation and the high cost of transport infrastructure may be possible causes.

Older buildings and built environments represent important historical values and environmental resources. It is estimated that 80 per cent of today's buildings will still be in use in 2050. Very many of these



[0.6] The Lantern. Sandnes, Rogaland (Atelier Oslo / AWP Paris)

will undergo a change of use and/or comprehensive rebuilding. One characteristic of the building activities of the future is that existing buildings and infrastructure are reshaped and refined to become part of new buildings, urban areas and population centres.

The first decades after the Second World War were marked by a great need for new buildings and roads. In recent decades, an increasing amount of our building and construction has been marked by maintenance work, rebuilding and extending. This shows the potential for adapting existing buildings and that this represents a resource in the development of society.

Norway has a high level of competence in many areas. This includes both traditional and modern use of wood, as shown for example in the Norwegian Wood projects in Stavanger. From an environmental perspective, wood is an extremely sustainable and eco-friendly building material. Norway is one of very few countries in which the use of wood has been a continuous tradition that, even throughout the 20th century, has been the subject of considerable architectural innovation.

Norway also has a strong engineering base and architectural



[0.7] Building site. Bjørvika, Oslo

tradition in infrastructure projects - especially in hydropower development, transport development and the petroleum industry. The quality of such projects is displayed in the extent to which they fulfil functional requirements. Technically and as engineering art they are on a par with the best in the world in their field, they are wonderfully executed as craft and they are characterised by professional and technical knowledge and a striving for good results. In recent years, hydropower and transport projects have often been cultivated to a very high architectural level, well adapted to both landscape and residential patterns.

The comprehensive development of hydropower and the geographically demanding nature of creating transport infrastructure have led to the development of high levels of competence and expertise. The petroleum industry in the North Sea has provided the opportunity to develop special competence in complicated project management, concrete construction and maritime steel structures. Concessions for hydroelectric and wind power stations and power lines are conditioned on demands regarding the environment and the landscape. Both the imposition of such stipulations and the consequent competence in this field have developed strongly in recent decades.

It is thought that professional architects are involved in only a minority of the country's total construction, whereas the greater part is done by others. Most large and/or significant building projects are planned and designed by architects and in recent years Norwegian architecture has gained international awareness.

As planning and building authorities, local authorities have a great opportunity to influence architecture locally. Zoning and land use planning represent an important instrument for controlling development and the local authorities have a great deal of freedom to define local building practice and the physical design of our surroundings. The trends of recent decades, which have led to car-based urban regions with inefficient land use and surroundings that often resemble wastelands, show the need for greater control of sustainable development. The new Planning and Building Act improves these opportunities as well as bases for options and guidelines.

The active and strategic purchase of land for development and the conscious use of formalised development agreements also give the local authorities opportunities for control beyond the framework of planning and technical regulations. Regional authorities, beyond their own building and transport infrastructure, have a more indirect influence on architecture, but have an important role through regional planning and guidance to the local authorities, as well as having the authority to make an objection.

TRENDS

Some decades ago, a greater proportion of the total building and construction activities were publicly financed. Today, for various reasons, the private sector plays a more significant role. The initiative for implementing regulatory planning has to a great extent shifted from the public to the private sector. Major government or public projects are more often executed by specially created companies, such as public sector corporations and statutory companies, with less public control.

Property development in which contractors or investors undertake building developments primarily to achieve return on capital has become more common. Local authorities in Norway find themselves increasingly in situations where solutions are found or supplemented through negotiation and agreements. These trends follow international currents and there are many causes. The transition from a situation where the local authority itself undertook a major planning

and implementational role (governing) to a situation where the local authority gives a framework and guidelines, but transfers more of the planning and implementation to private players in the market (governance), has greatly contributed to moving the initiative for clarification of land use from the public to the private.

In recent decades we have seen an increasing tendency for the building trade to be confronted with stringent demands for efficiency because of market pressures and strict earnings requirements. The



[0.8] The Pulpit Cabin, Rogaland (Helen and Hard Architects AS)

introduction of digital tools has also made it possible to reduce planning time for the individual project. At the same time, the development of technology gives unique opportunities for quality assurance, communication and collaboration throughout the entire process from planning to completion. This effect should be developed further through the implementation of new tools and standards.

In addition to the requirements for good quality and fewer building faults, recent years have seen a focus on two important considerations which good architecture must emphasise: the environment and universal design. Environmental considerations are linked to planning, to the building's use of resources, choice of materials, energy requirements and adaptation to natural and cultural environments, during construction, in use and on dismantlement. Also important are environmental assessments in the choice between conservation, reuse or new building. The intention of universal design is that new buildings, open spaces and infrastructure for the general public should be designed in such a way that their primary solution may be used by everyone, which is a vital element in social sustainability. The perspective of equality is central to universal design.

THE NEED FOR A NATIONAL ARCHITECTURAL POLICY THAT SPANS PUBLIC SECTOR DIVIDES

This document uses a broad definition of the concept of architecture. Seen in this way, “architecture” is a vital component of important government programme areas such as housing and building policy, urban policy, environmental policy, transport policy etc.

Architecture is increasingly perceived as an important expression of culture, which represents and documents earlier and current forms of life and common values. Places and buildings fill the role of being identity bearers, something that contributes to the profiling of the place and those involved. It is important to arrive at strategies and measures that can contribute to higher architectural quality in buildings and built surroundings. The goal must be to achieve satisfactory interaction between old and new and the proper preservation of values in the landscape. Planning instruments must be consciously used for good societal development and a land use that facilitates sustainable architecture and attractive communities. In recent decades, public commissioners of building and construction have been greatly committed to goals of architectural quality. The present debate calls for even wider-ranging work, in which increased architectural quality will be an overall goal for buildings, public spaces, outdoor environments, commercial buildings, transport infrastructure and landscaping. This wide-ranging goal means that effective cooperation spanning division lines between different administrative and professional centres will be essential. At the same time, Norwegian Architectural Policy must be based on a common understanding of the main challenges that the policy faces.

The main challenges

SUSTAINABILITY AND CLIMATE

The sustainability and climate issues are central to a comprehensive Norwegian Architectural Policy.

The planet is in the process of warming and it is the man-made emissions of greenhouse gases that have been the main cause of the climate change in the last 50 years. This is one of the main conclusions of the UN Climate Panel's fourth main report. Climate change leads to new challenges in a number of areas: energy needs and environmental technology, global eco-management and sustainable development. The International Energy Agency (IEA) estimates the world's energy needs will increase by 45 per cent by 2030. Climate change, increased energy needs and the processes of globalisation present both opportunities and challenges that must be met with increased efforts from administration, business and professional circles.

The Climate Panel's fourth report estimates that a temperature increase of 2.0-2.4°C will mean that CO₂ emissions in 2050 will need to be 50 to 85 per cent below the 2000 level. If we are to achieve such a cut globally, greenhouse gas emissions will have to be radically cut in both developed and developing countries. The Government intends to ensure that Norway makes a significant contribution to this.

Homes and commercial buildings account for 40 per cent and 60 per cent respectively of electricity consumption in Norway. The task will be to facilitate a coordinated and comprehensive energy policy that includes security of supply, energy efficiency and the increased use



[0.9] Tana District Court, Finnmark (Stein Halvorsen Architects AS)

of new, renewable energy sources. Existing buildings are important in the work of energy efficiency and conversion. Opportunities to implement measures in existing buildings are in essence more limited than in new buildings. The task of implementing energy efficiency measures in existing buildings without loss of cultural heritage value involves some major challenges - but opportunities too.

Energy considerations must be addressed at an early stage of the decision-making process in the planning, location and design of new building and construction. Lifecycle-based environmental assessments at building and area level should be carried out as a basis for consideration of demolition or reuse. It is important that architects and others involved in the work of planning should have relevant knowledge of energy consumption, in the production, use and dismantlement phases. Insulation, ventilation, choice of energy source for heating, use of materials, lighting, orientation of the building in the landscape and choice of windows are all important examples of elements that architects can influence. A good result is best assured through inter-disciplinary collaboration between architects and other professional groups. New building areas must be located and designed with consideration for increased rainfall and the increased risk of landslides and flooding. Similarly, new and existing buildings and areas must be planned to be able to handle large quantities of surface water and adapted to other forms of climate effects by means of new design or preventive measures.

Even if a comprehensive programme of measures is implemented over the next few years, climate change will take a long time to stop or reverse. Since the industrial revolution, the temperature of the planet has increased by almost 0.8°C and sea level has increased by 17cm. The UN's Climate Panel warn of further rises in both temperature and sea level and more extreme weather. It is essential to take such conditions into account when planning our surroundings.

CHANGE AND TRANSFORMATION

Over recent decades, Norway has undergone great processes of social change, which show themselves in the physical surroundings. This transformation, that is to say the reshaping and development of the land use and urban structure of former times, has characterised urban development in general, property development and the building market and also our urban understanding. Many of these change processes will continue and will create new prerequisites for architecture and planning. Urban growth in Norway has been very great in a European context. Handling this growth is a major challenge.

With increased mobility, cities and population centres today function as parts of larger functional urban regions, with a common labour and housing market. This is seen most clearly in the Oslo region. The challenge lies in ensuring functionality, quality of life, new forms of housing, high environmental quality and reduced greenhouse gas emissions within such urban structures.

Gentrification - the social, cultural and architectural reshaping of old urban, logistic and industrial areas - has, together with immigration, led to changes in forms of life and urban culture, and to some extent also to changes in demand for housing. The Norwegian Urban Research Programme (Research Council of Norway 2001-2005) had as its main heading *Urban Development - driving forces and planning challenges* and was an empirically oriented research programme intended to gather information about change processes in Norwegian urban regions. The challenge is to develop a policy based on knowledge, which assures commercial development, urban diversity, opportunities for the young to establish themselves in the housing market and a safe place for children to grow up.

Demographic changes are of great significance. The percentage of elderly will increase, while the ratio of people of working age will decrease. One of the challenges is to give more people the opportunity to stay at work longer and to include persons with reduced functional abilities in working life. Universal design is an important tool for helping to achieve this. At the same time it provides access to other aspects of social life. Norway has now introduced requirements for universal design in newly built areas intended for the general public, based on the fundamental requirement of equality for persons with reduced functional abilities. This is in line with international conventions.

Welfare and health are affected by the built environment, in that architecture creates frameworks, opportunities and limitations for personal and social life. Architecture's forms, colours and symbols provoke thoughts and feelings that are of significance for welfare and for physical and mental health. Functionally, architecture can facilitate social intercourse and create places for people to gather and mingle. Places with good architectural quality stimulate contact and fellowship and can help to strengthen people's feelings of belonging and security, control and identity of place. Residential areas can facilitate recreation,



[0.10] Park by Lørenskog Town Hall. Lørenskog, Akershus (*Bjørbekk and Lindheim Landscape Architects*)

play and relaxation and in particular create good conditions for children and young people to grow up in. Directly and indirectly, this has a positive influence on mental and physical health. The same applies to kindergartens and schools, where different architectural solutions can stimulate different degrees of interaction and social contact.

Urban growth and changes in trade and industry lead to changes in existing built-up areas. From being in a situation where most urban growth occurred in the form of urban expansion and green-field development, cities are now being changed through transformation and increased population density. The greatest building activity in urban areas in recent years has occurred in already-developed areas, and areas are now being redeveloped for the second or third time.



The challenge is to develop new urban areas with higher quality, in which cultural history values and qualities of the existing places are included as prerequisites for development.

Norwegian cultural landscape is under pressure. Modern agriculture makes new operational and building demands. A great number of farm buildings in rural areas of Norway are no longer used for their original purposes. At the same time, the cultural landscape is being changed as a result of new forms of life and recreational needs. In mountain and coastal areas, this has led to new forms of “recreational landscapes” which, given the scope and density of holiday home building, create urban problems. The pressure on the cultural landscape and the transformation of urban areas pose challenges for the administration of valuable cultural heritage sites, cultural environments and urban landscapes.

Urban growth also raises issues in relation to the public - especially local authority - role in managing development. Development largely occurs through processes in which the public role is limited to setting a framework and assuring quality on the basis of planning and regulations. Creating good processes for collaboration and interaction is a challenge.

KNOWLEDGE AND INNOVATION

The pace of change in today's society is very high and there is a great need for evaluating the consequences of these changes through research. In its widest sense, this is an issue of our quality of life and must be related to both growth and conservation.

The organisation of land use, production of buildings and infrastructure and urban design are intimately linked to, and influence, climate change. The climate challenges lead to research challenges that demand a multi-disciplinary approach. There is a need for increased knowledge about how existing buildings, historic buildings and urban environments can be upgraded to present-day environmental, climate and energy requirements without deteriorating their values. Adaptation of existing buildings may be necessary if national environmental and climate obligations are to be fulfilled. Environmental upgrading of existing, architecturally valuable, buildings is a field that will demand considerable knowledge building, in terms of craftsmanship, architecturally and technically.

The role of the public sector in the planning and production of buildings, infrastructure and our surroundings generally has changed considerably over recent decades. The question of how society's interests should be managed by setting frameworks, establishing democratic processes and exercising quality control is an essential one. Both new planning and building legislation, with the requirements it makes of local authorities, and the need to develop an architectural policy at national and local levels underline the need for new knowledge, competence and capacity. It is important that the public sector should possess sufficient competence and should be able to safeguard society's needs in meeting with an active private market which often has other goals to safeguard.

The building and construction industry is a substantial one throughout the country with a great significance for many places in rural Norway. The industry has great potential for greater value creation, efficiency and quality in the products it delivers. If the industry increases its efforts in research and development, this will contribute to increasing knowledge in the industry and in triggering creativity, to the development of innovative solutions and faster implementation of innovations.

Systemising and prefabrication are ongoing processes in the building industry. Digital tools pave the way for completely new forms of

design and production. These areas can be brought forward through research and development processes that integrate technical knowledge with artistic treatment.

Norwegian architecture currently enjoys great international recognition and is deliberately used in international profiling. It is important to establish international collaboration and exchange projects between institutions and professional centres and between educational institutions. At the same time, interest in architecture in Norway is greater than ever.

This increases the relevance of research and development work within architectural criticism, architectural theory and architectural history, also as a basis for understanding architecture as a cultural expression and for reflection upon and criticism of contemporary Norwegian architecture.

Education must address the new, multi-disciplinary challenge of developing competent architects and other professionals within the field. There is a need for research and development of topics that link architecture and environment, the quality of our surroundings, planning processes, architectural criticism, architectural theory and architectural history. So that a wide audience should be able to take part in the discourse, it is also important to establish good arenas for dissemination, communication and debate, both centrally and locally.





1. ARCHITECTURE SHOULD CHOOSE ECO AND ENERGY FRIENDLY SOLUTIONS

.....

SUSTAINABILITY AND CLIMATE

Architecture must be founded on principles and solutions that take climate issues into account. To a considerably larger extent than presently, we must focus on eco-friendly materials, effective energy solutions, responsible waste management and adaptation to climate change. The effort must, to a far higher degree, be directed towards good management of existing buildings, in which resource accounting and assessments of sustainability are given due weight in the choice between conservation, reuse or new building. Such a development must be facilitated through deliberate land use planning. The design of urban areas must safeguard environmental values and facilitate health-promoting and eco-friendly transport solutions.

ECO-FRIENDLY BUILDINGS

Our goal is that buildings should create the least possible adverse impact on their surroundings. It is now both technically and financially possible to construct buildings with considerably lower energy consumption than at present. Some projects have now been completed in Norway to passive house standard, with energy requirements only a quarter of average, and more are in the pipeline. By supplementing with new, renewable energy

- such as solar collectors, solar cells, heat pumps or biofuels - we can develop buildings that are self-sufficient in energy (zero energy buildings) or even produce more energy than they use (active buildings).

Together with a deliberate choice of components and materials, in combination with good location in relation to workplaces and transport systems, it is possible to develop an almost climate-neutral architecture.

REGULATORY FRAMEWORK FOR ECO-FRIENDLY ARCHITECTURE

Changing the building and construction industry to make it primarily eco-friendly demands determined and committed effort. The government must ensure a regulatory framework that supports and inspires such change. Such a regulatory framework may consist of legislation and regulation, devising specific environmental requirements for specific product groups, and various kinds of support schemes, for example for pilot projects for creative, climate-neutral architecture. The regulatory framework must allow for the needs of both new and existing buildings, while at the same time developing solutions which safeguard both aesthetic and environmental requirements.

Sustainable development

The concept of sustainable development was launched with the Brundtland Commission and the document *Our Common Future* in 1987. Sustainable development is defined as a social development that meets the needs of the present without compromising the ability of future generations to meet their own needs. *

The long-term perspective is central to the concept of sustainable development. The so-called pillars of sustainability must be in equal interaction. These comprise economy - which applies to long term operation, management and finance - and ecology - which applies to the environment and resources. The third pillar is the societal conditions - human, cultural and social conditions. It cannot therefore be taken for granted that sustainable goals lead to tenable results. Evaluation of a project's sustainability can be first assessed on the basis of how the desired goals function in use and over time. Sustainability is a dynamic concept that is continually revised in the light of societal change, new technical solutions and people's needs.**

* Brundtland, G. H. (1987). *Our Common Future*. World Commission on Environment and Development. Oslo

** Tiden norsk forlag. 257 s.; Butters, C. (2004). *Et helhetlig verktøy for evaluering av bærekraft*. (A total tool for evaluating sustainability) Plan 1:2004: 4-11.

Measures and initiatives

Energy consumption should go down

NEW ENVIRONMENTAL ACTION PLAN FOR THE HOUSING AND BUILDING SECTOR 2009

It is important to integrate the choice of renewable energy solutions for new buildings right from the planning phase. In 2009 the Government is putting forward a new interdepartmental environmental action plan for the housing and building sector for the period 2009 to 2012. The plan addresses the most important environmental issues in the housing and building sector, focusing mainly on greenhouse gas emissions, energy consumption, substances that are hazardous to health or the environment, a healthy indoor environment and waste. National instruments and measures that can help to address the challenges are part of the plan. The Ministry of Local Government and Regional Development (KRD) will provide regularly updated information on its website about the plan's key features and its implementation. At the same time an overview will be given of any new measures in KRD's area or that of other ministries that are of significance for the implementation of the plan.

SHARPENING UP ENERGY REQUIREMENTS IN THE BUILDING REGULATIONS

New and more stringent environmental and energy requirements will influence the architectural design of new and existing buildings. In 2007 the energy requirements in the building regulations were made about 25 per cent stricter. These requirements were voluntary until 1 August 2009. In the meantime a new Planning and Building Act has been adopted. This legislates the responsible use of energy, and new technical regulations will appear in 2010 specifying exactly what these involve. As a result of Parliament's (Stortinget's) climate agreement, energy requirements will now be revised at least every five years.

LIFECYCLE-BASED ENVIRONMENTAL ASSESSMENTS

The Government will attend to the need for increased knowledge about lifecycle-based environmental assessments of existing buildings and urban environments. Furthermore it will assess how best to improve energy consumption in existing buildings, in such a way that both aesthetic and environmental

conditions are safeguarded. The environment and resource audit model for brick buildings is a tool for comparing the green audit for refurbishing brick buildings versus demolition and new building.

The Directorate for Cultural Heritage will continue work on the research and development project Sustainable Urban Futures (SURF) which will be linked with information development in the project Towns of the Future. One of the aims is to increase knowledge about lifecycle-based environmental assessments and how historic buildings and built environments can be upgraded to today's environmental, climate and energy requirements with the aid of new technical solutions.

PASSIVE HOUSES

The energy required to heat a passive house is only about 25 per cent of the energy requirement for a conventional present-day home. Energy requirements are reduced through passive measures, such as extra insulation and extra sealing in the outer construction, the use of windows and doors with a very low heat loss and utilisation of solar energy and heat recycling. In the passive house concept, the emphasis is on solutions intended to give users and residents good thermal comfort and good air quality. Passive houses have become especially widespread in Germany and Austria. In Norway, interest in passive houses is increasing and several new building projects are planned. A Norwegian standard for passive houses is under development so that the term will have a clear meaning in Norwegian.

THE LOW ENERGY PROGRAMME

The Low Energy Programme is a collaboration between the Building Industry Association, the architects' association Arkitektbedriftene, the Housing Bank, Enova, the National Office of Building Technology Administration, the Norwegian Water Resources and Energy Directorate and Statsbygg - The Directorate of Public Construction and Property. The purpose of the programme is to make energy use in buildings and infrastructure more efficient and to ensure a change towards eco-friendly solutions. The programme's objective is to help ensure that there will be a large proportion of passive houses in Norway between 2014 and 2017. The programme will focus on raising competence in relation to new regulatory requirements and to prepare the industry for a development to a passive house level in 2020, as well as stimulating the commencement of prototype projects.



[1.2] I-BOX, Norway's first passive house, Tromsø (Steinsvik Architects Office AS)

Løvåshagen, Bergen

Løvåshagen is a low-energy homes collaboration between ByBo, Sintef Byggforsk and the Housing Bank, supported as a role model project by Enova. Løvåshagen consists of four buildings containing altogether 80 apartments, 52 of which are low-energy homes and 28 have been built as passive houses.

All the buildings face west or southwest, which gives more light, little nuisance from neighbouring properties and good contact with nature. The extra sunlight takes care of part of the heating. The average apartment size is 80 sq metres. Great emphasis has been placed on universal design and all the apartments have lifecycle standard, lift to residential floors and covered parking. The requirement for passive houses is a maximum heating need of 15kWh per square metre per year, while for low-energy homes the aim is 25kWh per square metre per year. The architects for the housing project were ABO Plan and Architecture AS.



[1.3] Løvåshagen, Bergen (ABO Plan and Architecture AS)

BIOENERGY PROGRAMME

Innovation Norway has been commissioned by the Ministry of Agriculture and Food to administer a bioenergy programme that is intended to stimulate increased use of renewable energy sources. The programme has two focus areas: bioenergy in agriculture and wood chipping production. The production of wood chippings is a new focus area from 2009. The programme provides investment support to small-scale biofuel plants tailored to the building structure of smaller communities. The most common methods of using bioenergy are point heating with firewood or pellets or circulating water heating based on, for example, wood chippings, straw or biological waste in larger district heating systems. Overall the estimated availability of resources indicates that there is potential to increase bioenergy production considerably, within present standards for environmental forestry. Read more at www.innovasjon Norge.no/Satsinger/Landbruk/Bioenergiprogrammet.

ENOVA

The state-owned enterprise Enova has estimated that the potential for increasing efficiency in existing buildings is close to 10 TWh. Enova has a number of programmes for homes, buildings and infrastructure, with the objective of reducing energy needs and promoting the use of renewable energy in new homes and commercial buildings (both private and public sector). As part of the Government's package of measures for 2009,

Enova has also created a dedicated support programme aimed at public-sector buildings. About 650 public buildings will now become more energy efficient with the aid of funding from Enova.

Enova has financial instruments for renewable heating in buildings with a goal of 4 TWh of circulating water heating based on renewable energy sources, waste heat and heat pumps during the period 2002 to 2010. A programme has been set up to support the new establishment of, or conversion to, renewable energy in local heating systems, and the establishment of district heating systems, as well as supporting the conversion of heating systems in buildings from oil-fired or electric heating to bioenergy and circulating water systems. Enova also has a support programme for innovative energy solutions and for the introduction of new technology, with the aim of introducing new energy and technology solutions to the market.

Local authorities are also central to Enova's work and there is a dedicated programme for these. Courses, guidance and support for the development of energy and climate plans are intended to help increase competence in energy and climate in the local authorities. Find out more at www.enova.no.

Enova supports a professorship at NTNU (The Norwegian University of Science and Technology) to help ensure that energy use in buildings forms part of architectural studies.

TOWNS OF THE FUTURE

Towns of the Future is a programme running from 2008 to 2014, the main aim of which is to reduce greenhouse gas emissions - and thereby make towns and cities better places to live. The programme covers the 13 largest urban areas: Oslo, Bærum, Drammen, Sarpsborg, Fredrikstad, Porsgrunn, Skien, Kristiansand, Sandnes, Stavanger, Bergen, Trondheim and Tromsø. The programme is headed by the Ministry of the Environment and organised into four focus areas:

- 1) Land use and transport (headed by the Ministry of Transport)
- 2) Stationary energy in buildings (headed by the Ministry of Petroleum and Energy, assisted by the Ministry of Local Government and Regional Development)
- 3) Consumption patterns and waste (headed by the Ministry of the Environment)
- 4) Adapting to climate change (headed by the Ministry of the Environment)



Green energy local authorities

Green energy local authorities focus on energy efficiency, renewable energy and a reduction of greenhouse gas emissions, through collaboration between the Norwegian Association of Local and Regional Authorities and the Government. 21 local authorities and one regional authority are taking part and the project period is from 2007 to 2010.

[1.4] Kjøllefjord Wind Farm in Lebesby, Finnmark

The goals are meant to be achieved partly through pilot projects. Experience from these will form the basis for devising principles for area development, new building and management of existing buildings. Part of the programme will be to specify the various architectural challenges involved in reducing greenhouse gas emissions. Towns of the Future will also include the implementation of measures in existing and new buildings, partly based on binding agreements between the Government and the towns and cities and partly on areas of collaboration and competence networks. Industry will also be committed, by a specific letter of intent, to work towards the same goals as the public sector. This will mainly occur through collaboration over various measures locally in the individual towns and cities. Information about the projects and experiences gained in Towns of the Future will be published on www.framtidensbyer.no.

OSLO-DRAMMEN TOWN AND HOMES EXHIBITION

The Oslo-Drammen Town and Homes Exhibition is intended as a driving force for the development of climate-neutral urban areas and architecture. The Municipality of Drammen has decided to focus on development in connection with this exhibition and the City of Oslo will do the same. The Government will support these local authorities' development work through the Town and Homes Exhibition. Collaboration has been established between the exhibition and Towns of the Future to cover coordination and development of model and pilot projects.

PUBLIC SECTOR ENERGY USE

When Government agencies plan building projects, they must take into account the environmental consequences, including by documenting the environmental properties of the products used.

Public-sector building commissioners should set more stringent requirements for their own buildings and infrastructure than are laid down in the energy requirements in the technical regulations to the legislation on planning and building. To reduce energy costs and carbon emissions, the use of fossil fuels should be reduced. Instead, heating should be based on renewable and eco-friendly energy. Public-sector building commissioners are currently in the process of converting existing heating systems, which are today based on fossil fuels, to use renewable and more eco-friendly energy.

Public sector building managers can help

to reduce greenhouse gas emissions by defining goals for energy efficiency in existing buildings and infrastructure. Tools are now available which can review the total energy consumption of a given building. This kind of energy accounting provides information that can form the basis for new guidelines for conversion and refurbishment, so that the building can save more energy while retaining its architectural design.

WOOD AS AN ECO-FRIENDLY AND RENEWABLE MATERIAL

Wood can increasingly be used as an eco-friendly and renewable material, as an alternative to other materials that require more energy. This also provides an opportunity to combine good environmental solutions with good aesthetic expression. There is great potential, within the limitations laid down by environmental standards and forestry legislation, to substantially increase the felling of timber and thereby improve access to eco-friendly timber for building and energy purposes. The increased use of wood would also help to reduce the building industry's adverse impacts on the climate and help towards more sustainable development, ref. Statsbygg - The Directorate of Public Construction and Property and www.klimagassregnskap.no.

Innovation Norway's Wood-based Innovation Programme (TIP) offers financial support to companies in the mechanised

wood value chain, that is to say production companies from sawmill to end consumer. The programme is directed towards architects, contractors, developers etc.

Norway's depth of experience and expertise in wooden structures (present and past) should be more strongly utilised internationally. The Directorate for Cultural Heritage is in contact with various professional circles in Norway with a view to organising and developing a network of Norwegian timber competence for use in international collaboration. The aim is also to establish a website for the exchange of expertise and information about wood.

GREENHOUSE GAS ACCOUNTING

Building projects where the government will be owner or tenant should document the building's greenhouse gas emissions so as to ensure eco-friendly solutions. Statsbygg - The Directorate of Public Construction and Property - is in the process of developing a web-based calculation tool which will make it possible to calculate greenhouse gas emissions linked to the planning, construction and operation of buildings. The preliminary results of using this tool show that the choice of energy-efficient design, renewable energy sources and energy carriers can reduce emissions by more than 50 per cent. Central location and/or location close to a good public transport system can reduce the emissions



[1.5] Homes at Strandveien 37-39, Trondheim (Brendeland and Kristoffersen Architects AS)



[1.6] Rena Camp (LPO Architecture)

Rena Camp – high environmental profile

Rena Camp was officially opened in October 1997 and is the headquarters of the Norwegian Army. Rena Camp is laid out as a “town”, in which the largest facilities are adapted to the landscape, the forest areas between them have been preserved and a building structure has been created that allows for identity, protection, ceremonial and social life.

The architectural design takes into account the location’s characteristics, allows for change and expansion and unites the needs of the user with the aesthetic and the environmental. The project has a high environmental profile and was inspired by local building and environmental design. Heating is based on circulating water, district heating and passive solar heating. There is extensive use of untreated timber on the facades using various types of panel. Two of the buildings have been constructed from solid timber. The project was designed by LPO Architecture AS



Viken Skog – commercial building with the focus on the environment and natural materials

Viken Skog’s new office building at Hønefoss makes evident use of wood in structures and interiors. Heating is based on circulating hot water from a local district heating system based on bioenergy. Energy consumption for heating is 123kWh per sq metre per year and for cooling 43kWh per sq metre per year. The project was designed by Stein Halvorsen Architects AS.

[1.7] Viken Skog, Hønefoss (Stein Halvorsen Architects AS)

from transport in connection with the use of the building and thereby reduce emissions by more than 50 per cent. Refurbishing and reusing buildings can reduce emissions from use of materials by 60 to 70 per cent, compared with new building.

The first project for which accounting has been done is Fornebu (Oslo's former airport), which shows a development with a strong environmental profile. The use of Statsbygg's greenhouse gas accounting tool will also be one of the criteria for pilot projects in Towns of the Future. See www.klimagassregnskapet.no

ENERGY LABELLING OF BUILDINGS

Energy labelling of buildings will contribute to increased knowledge and awareness of energy use and to a more correct valuation of homes and commercial buildings when these are sold or leased. The energy labelling scheme will give owners, tenants and buyers information about energy use in their building. The scheme will be compulsory for all commercial buildings over 1,000 sq.m, as well as smaller buildings or homes that are being sold or leased. All commercial buildings should have an energy label in a place where it can easily be seen by users of the building. The energy label is based on the well-known symbol that is used for energy labelling of white goods.

Energy labelling will be carried out via a web-based solution developed by the Norwegian Water Resources and Energy Directorate. The building will receive an energy certificate showing its need for energy based on heating solutions, the properties of the building and the ventilation system. The energy certificate also includes suggestions for actual measures the owner of the building can carry out to make energy use more efficient, as well as information about where



[1.8] Marilunden. Stavanger, Rogaland (Eder Biesel Architects AS / Noncon:form, Austria / Schönherr Landscape KS)

Marilunden – industrialised residential building with the focus on the environment and energy

As part of the Norwegian Wood project, this residential building had high ambitions for environmentally correct materials and low energy consumption. The buildings consist of 10 detached homes totalling 2,000 sq metres in a row, based on industrialised elements, using a timber framework with wood fibre based insulation blown inside the sections. All windows are highly insulated and satisfy passive house standards. The houses have been built with the focus on efficient sealing and balanced ventilation, heat recycling and geothermal heating. The energy goal is class A and energy supplied is estimated at 83kWh per sq metre per year. The project was designed by Sivilarkitekt Wilhelm Eder, Norway / Noncon:form, Austria



[1.9] Nardo School. Trondheim (Eggen Architects AS)

Nardo School – school expansion with the focus on the environment, working environment and energy

The project was for the expansion of a primary school for 385 pupils, covering about 7,000 sq metres in total. Timber has been used extensively to achieve an environmentally efficient building with a good working environment. The main structure is based on solid and laminated timber, with walls of solid wood or traditional panelling. The entire exterior of the building is covered with various types of wood cladding. The energy goal was 105kWh per sq metre per year and calculations indicate an energy consumption of 107kWh per sq metre per year, 75kWh of which is bought energy. Heating is by circulating water from a local district heating system and geothermal heat pump. The project was designed by Eggen Architects AS.

to find out more about these measures. In addition to energy labelling, the scheme introduces an obligation to carry out regular energy assessments of air conditioning and ventilation systems and boilers so as to ensure as efficient operation as possible.

The scheme is part of the implementation of the EU's building energy directive. It is the Government's intention that the scheme will come into force on 1 January 2010. Find out more about energy labelling at www.energimerkeordning.no.

Environmentally correct building should be worthwhile

One of Statsbygg's environmental measures has been the introduction of an environmental management system, based on international standards, to ensure that follow-up of environmental goals and routines should be systematically included in project management. Statsbygg's research and development input, as well as assessment of alternative possibilities with regard to costs, environmental benefits and available technology, also contribute to environmentally correct building. New solutions are developed, often with socio-economic benefits and financial gains for the project. New strategies are adopted, such as new types of environmental contracts or new forms of collaboration over environmental conditions in the building process. The Norwegian Public Roads Administration develops carbon accounting systems that can be used to assess the climatic effects of various development solutions and their operation and maintenance.

ECO-FRIENDLY TRANSPORT

Knowledge about anticipated climate change and greenhouse gas emissions will be used in planning, designing and choosing materials for new transport systems. There will be a focus on facilitating more pedestrian, cycle and public transport and developing patterns for land use that support these aims.

Knowledge and experience will be developed and communicated

Knowledge about lifecycle-based environmental assessment of existing buildings and urban environments must be developed and communicated. The same applies to knowledge about how to improve energy use in existing buildings while at the same time safeguarding historical, aesthetic and environmental requirements. The Directorate for Cultural Heritage provides information about how better climate control will reduce energy consumption and improve conservation conditions in churches, and recommends additional insulation where this is appropriate in terms of cultural heritage values.

VISUALISING CLIMATE CHANGE

The need for knowledge about the effects of climate change is great. Actual measures to address the consequences are also in demand. Adapting to climate change must be an integrated part of societal planning, both in the public sector and in commerce. Determined efforts in this area could save society enormous future costs. The Towns of the Future project will include collaboration with the Directorate for Civil Protection and Emergency Planning (DSB) to visualise climate change, map vulnerability and assess government guidelines in respect of rising sea level and handling surface water. Information about this topic in general is published on www.klimatilpasning.no.

Environmental certification of buildings

The environmental certification of buildings helps ensure that building commissioners, property owners, financial institutions and users increase their attention on energy efficiency and environmentally correct building. Currently there is no common system for environmental certification of buildings and infrastructure in Norway. Certification is a good tool for distinguishing good products from bad ones, such as with a kind of Swan eco-labelling that could include proof of environmental effects and energy consumption for new buildings. Technical quality could be measured, in terms of energy sources and consumption, materials used and building methods, total environmental effect in construction and use, lifecycle accounting, durability, flexibility, reuse values and general usability. Several Norwegian companies have now taken the initiative to develop a common classification tool.





2. CITIES AND POPULATION CENTRES SHOULD BE DEVELOPED WITH ARCHITECTURE OF GOOD QUALITY

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QUALITY IN OUR SURROUNDINGS

The planning of houses, public areas and infrastructure should be governed by high ambitions for good architectural quality. The processes should emphasise knowledge, cooperation, dissemination and good implementation. The government should develop a good regulatory framework for such processes, in accordance with present and future issues and conditions.

SUSTAINABLE CITIES AND POPULATION CENTRES

Cities and population centres are undergoing processes of great change. To meet these challenges, a better regulatory framework must be provided in a number of fields. government, regional council and local authority planning and guidance tasks must be given greater priority and the government must also help ensure that the building and construction industry is given incentives to renew its knowledge and improve its practices. Good design and location of residential and commercial areas should be facilitated, with public areas for social gathering and recreation and eco-friendly transport solutions. Cultural heritage qualities should be brought forward through increased knowledge and deliberate planning and land use policy. Mobility must be safeguarded from both a sustainability and a health perspective. For places with population and trade decline,

strategies should be developed to safeguard important common social functions.

URBAN CULTURE AND DIVERSITY

Urban drift, gentrification and immigration have been the cause of transformation of urban areas, with increased population densities. Many central areas in towns and cities have become more attractive as residential areas, with a consequent increase in housing values. Through these processes, Norwegian urban culture has changed markedly. For example, central areas of towns and cities must be transformed into residential areas for families. Cultural diversity brings challenges that must be consciously addressed in public planning and in the design and layout of urban environments.

ACCESSIBILITY FOR ALL AND UNIVERSAL DESIGN

New planning and building legislation sets requirements for universal design in our surroundings. The Government's plan for universal design and increased accessibility 2009-2013 shows how we can counteract discrimination against persons with reduced functional abilities and also give better and more functional surroundings for the whole population. The Government's vision is that Norway should be universally designed by 2025. This is to be achieved through the most comprehensive effort ever on universal

design. The measures laid out in the plan affect the design of our surroundings, where architecture is an important factor.

CRIME PREVENTION

The Government's policy guidelines, the new Planning and Building Act and general visions and goals for architectural policy mean that considerations of crime prevention are also an important perspective for architectural policy. Crime prevention can involve many different measures, including those intended to facilitate a safe social environment and through the physical design of our surroundings.

GUIDANCE AND INVOLVEMENT

Government guidance given to regional and local authorities is of great significance. There will still be a considerable need for sufficient competence in respect of many major tasks connected with planning and development. To ensure that guidance really works, the government must find measures to increase competence both in administration and among politicians in the local authorities. The government also has a specific responsibility for stimulating critical and knowledgeable debate in all circles, both central and local. The advisory centres of knowledge must contribute, including to private building

Measures and initiatives

*The local authorities should be
stimulated into good planning*

**NEW PLANNING AND BUILDING ACT
- AN IMPORTANT CONDITION FOR
COMPREHENSIVE PLANNING**

The planning section of the new Planning and Building Act emphasises social planning and action plans as the basis for societal development. Active use of the planning system is necessary to get a complete grasp and to be able to see the connection between the general and the details, between landscape, green structures and building, between past, present and future. The planning section of the Act emphasises quality in our surroundings and sets important prerequisites for comprehensive planning and development of cities and population centres. When the Act came into force on 1 July 2009, the Ministry of the Environment initiated comprehensive work on developing guidance material and training programmes. The guidance material is available at: www.planlegging.no

New planning application legislation was passed in the Storting in the winter of 2009 and comes into force in 2010.

COMPETENCE AND CAPACITY

The Government is working on several measures to follow up the survey of competence and capacity at local authority and regional levels. This is partly in connection with the introduction of the new Planning and Building Act. In addition to giving guidelines, the measures embrace inter-authority solutions and have developed and strengthened government advisory services for the local authorities. Research and educational institutions, through strengthening of existing measures and the development of systematic post qualifying educational measures and programmes, should have a central role in increasing professional capacity and the development of competence.

**LOCAL COMMUNITY
DEVELOPMENT PROJECTS**

The Government will continue to focus on attractive places and well-functioning, secure and identity-forming local communities throughout the country. New local development projects will be initiated and implemented with a primary focus on physical quality, as well as projects for physical improvements in socially vulnerable areas in

the cities. The Housing Bank will stimulate more architectural competitions and research and pilot projects for new and existing buildings, residential environments and communities. Good building practice and aesthetic environmental design will also be important in the work of developing "National Park Villages", a project initiated by the Ministry of the Environment.

MORE ECO-FRIENDLY TRANSPORT

Coordinated land use and transport planning is an important instrument for achieving eco-friendly, comprehensive solutions. To a greater extent than previously, the Ministry of Transport will emphasise that the intentions of the provisions of the Planning and Building Act are followed up in the urban areas - in work with regional and district planning, in proposals for city packages and in awarding multi-year contracts through the scheme for rewarding more public transport and less use of cars in towns and cities. The reward scheme covers the 13 towns and cities that are taking part in the Towns of the Future programme.

In all the largest urban areas, the scope of transport is large and increasing. The Government will make reducing emissions a prerequisite for all land use and transport policy, so that the need for transport is reduced and the transportation itself is transferred to less environmentally damaging means of transport, thereby facilitating a long term structural change in the transport systems in urban areas. A public transport strategy and a strategy to encourage walking

Groruddalen

The Groruddalen project is a ten year collaboration between the City of Oslo and the government. The intention is to improve environmental and living conditions in Groruddalen, seeking sustainable urban development, visible environmental improvement, better quality of life and better living conditions generally. The Ministry of Local Government and Regional Development is involved in programme area 3 (Housing, urban and local community development) and has entered into an agreement on collaboration until 2010.



[2.2] Cyklist. Oslo.

and cycling will help in achieving these goals. Restrictive measures aimed at the private motorist and a more transport-efficient land use policy are also necessary for guiding the transport systems in a more climate and eco-friendly direction. Such a change will provide the outline for the physical design of the transport infrastructure.

ENVIRONMENTAL QUALITIES IN THE LANDSCAPE

Recreational and holiday buildings should be located and designed with a view to landscape, environmental values, use of resources and aesthetics. In accordance with the landscape convention, the architecture should contribute to accentuating qualities in the landscape, both urban and rural. Environmental qualities in the landscape should be preserved and strengthened by increasing our knowledge about values and by deliberately applied planning and land use policy. Architecture should be consciously used to identify qualities in the landscape, notably in the context of natural and cultural landscapes of national heritage significance.

The state-owned enterprise Statskog, which administers forest and other land, is the country's biggest landowner. Its property comprises one fifth of the area of mainland Norway and the enterprise has property in about 180 of the country's local authority areas. Statskog owns almost a thousand buildings. Altogether about 250 of Statskog's buildings have been identified as being of cultural heritage interest, and conservation status and a national conservation plan is being assessed for these buildings.

Many areas face substantial pressure from a number of user interests. The extent of intrusion and energy consumption caused by holiday cabin developments has shown a growing trend. Statskog wishes in the near future to establish new cabins for rental and simple lodging in the mountains for general use. These will be built using a modern architecture with low energy consumption and maintenance needs. The Government wishes by this means to help create a new architectural expression for what can and should be built in the mountains and open areas.

Dissemination and advice should contribute to knowledge and commitment

KNOWLEDGE ABOUT ARCHITECTURE AND BUILDING AND ENVIRONMENTAL DESIGN

The government should encourage and stimulate good surroundings and good building and environmental design, both by financial assistance and by helping to develop and promote knowledge.

The Housing Bank will develop its role as national competence centre for building and environmental design and contribute to spreading knowledge about and commitment to good design of our built environment. Stimulation of increased knowledge will occur both in local authorities and in the building industry, including local and regional building and environmental design courses, internet-based remote tuition and support for good projects.

GUIDANCE

Government circulars and guidelines are important sources of information and updating is carried out continuously. Guidelines are useful for the understanding and communication of architecture in its widest sense. This work is also important for helping to reduce building faults and damage. The ministries and subordinate bodies help to increase competence in, for example, good local development by means of comprehensive guidance material, courses and conferences. The Ministry of the Environment, the Ministry of Local Government and Regional Development, the Housing Bank, the Norwegian Public Roads Administration, Norsk Form and the Directorate for Cultural Heritage have together established a Forum for the Development of Local Communities. The forum is intended to contribute to the development of attractive and eco-friendly communities by strengthening the competence and quality of the work of community development both locally and regionally. An important part of the work consists of organising regional professional conferences for the local authorities and in operating and developing the joint internet portal www.stedsutvikling.no.

BYLAB

Norsk Form works on the design and use of public spaces, the outdoor parts of residential areas in densely populated urban areas, children's open-air arenas and the housing

Blest

BLEST is a programme aimed at small towns and communities of up to 15,000 people. The work is led by the Housing Bank and governed by the Ministry of Local Government and Regional Development. The intention is to achieve physical results, increase commitment and create social meeting places.

environment of the elderly. The process of change and increasing population density can have effects such as social segmentation and reduced quality in the living environment and open spaces. In these fields, Norsk Form has long been a central producer of knowledge and participant in the discourse. Norsk Form coordinates and develops this field of activity in the form of an urban laboratory - ByLab to give it its Norwegian name.

ByLab is intended to work towards an inclusive local environment by strengthening the local authorities' knowledge and awareness, especially when considering children, young people and the elderly in urban and local community development. ByLab uses knowledge based on experience of our surroundings as a basis for discussing and defining quality requirements for public and private planning and helps to increase competence among local authority planning bodies in particular. ByLab is intended to become a competence centre for urban and local community development with the emphasis on the relationship between physical form and social environment. A website with relevant information will be developed.

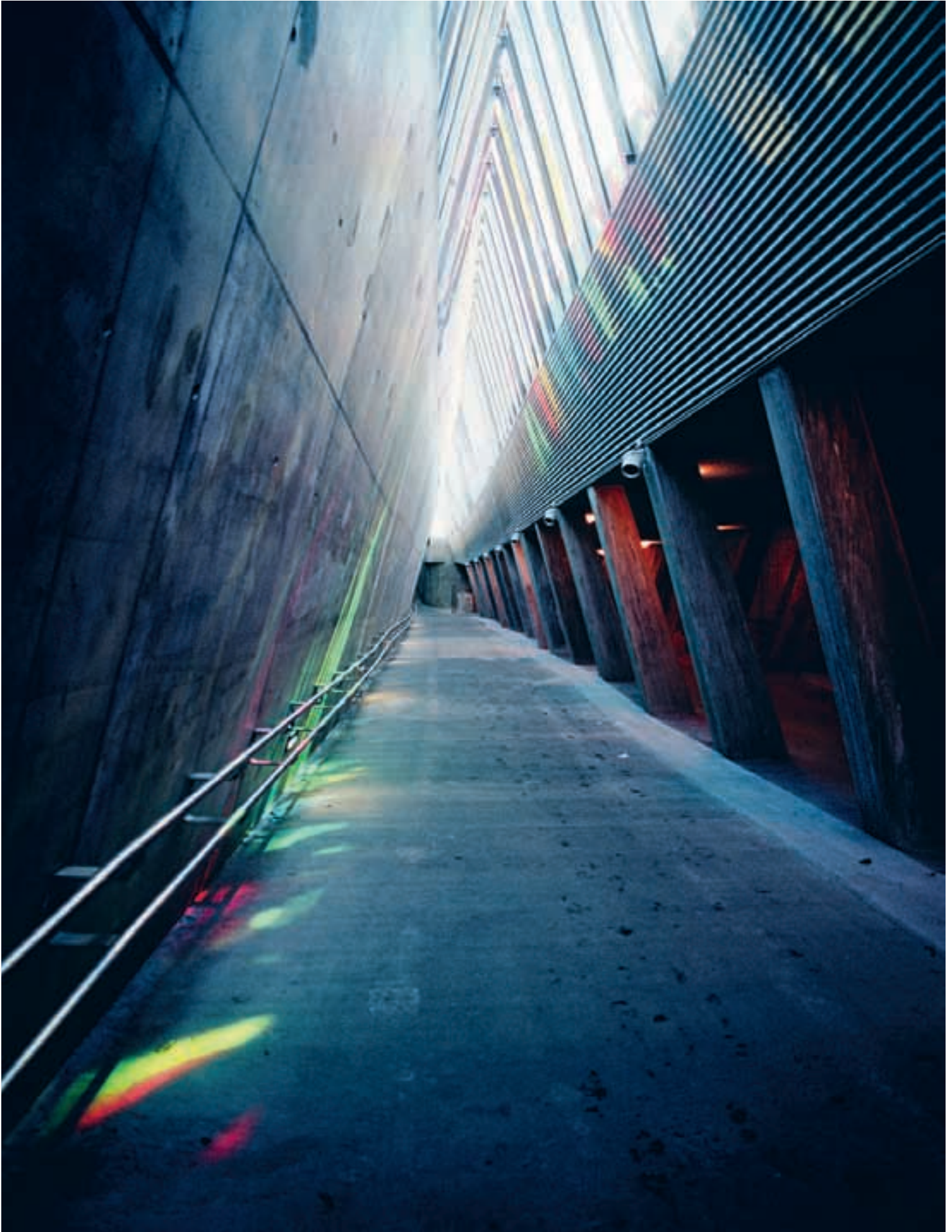
CHILDREN'S DIGITAL FOOTSTEPS

Norsk Form, in collaboration with the Norwegian Mapping Authority, has developed a digital mapping tool that allows children and young people themselves to record how they use their local area. In this way they have a voice in the planning process and in decisions that affect them. In addition to providing up-to-date information for better planning, this mapping of children's "footprints" increases our understanding of our physical surroundings and strengthens awareness of the planning challenges we face when we develop our cities and communities. In this way, this mapping tool fulfils national requirements for participation and assists local authorities in their work of securing good conditions for children to grow up in.

The tool can be used free of charge by local



[2.3] Cabins. Kvitfjell (Jarmund/Vigsnæs AS, Architects MNAL)



[2.4] Sinsen metro station, Oslo (Jensen & Skodvin Architects Office as)

authorities. What the children record builds up into a map that gives detailed information about routes to school, places for gathering and activities, which areas children avoid and what physical changes they would like to see. The maps showing children's footsteps can later be placed as a "layer" over other kinds of thematic maps. The map data is produced and maintained by the Norwegian Mapping Authority. Recordings have already been made in a number of local authority areas and many others are at the start up stage. See www.norskform.no

HEALTH AND SURROUNDINGS

The coming increase in the average age of the population should challenge Norwegian local authorities to rethink the planning of care for the elderly. Through collaboration with an interdisciplinary network for the nursing and care sector at local, regional and national level, it is Norsk Form's aim to contribute to the development of housing models for tomorrow's care for the elderly which can be adapted to local conditions and needs. The common denominator is centrally located



[2.5] Playing in Geo Park. Stavanger
(Helen and Hard Architects AS)

housing, designed in such a way as to invite the elderly to participate in an active lifestyle. Tomorrow's challenges cannot be resolved through the care sector alone - the collaboration of many public services will be required, as well as a total assessment of the local authority's resources. There is a need for experimental pilot projects in which architects will have the opportunity to develop new solutions. The interdisciplinary network has been created with support from the Ministry of Health and Care Services.



[2.6] Geo Park, Stavanger (Helen and Hard Architects AS)



[2.7] Tyssedal power station. Odda, Hordaland.

The Delta Centre

The Delta Centre is the government's competence centre for participation and accessibility. The central element of its work is universal design. The Delta Centre gives advice and guidance, carries out development work and collaborates with professional circles in projects and in networks. The centre comes under the Ministry of Children and Equality.
www.helsedirektoratet.no/deltasenteret



[2.8] Stairs at Oslo Central Station.

Cultural planning

Cultural planning is about making cities and population centres more attractive by mobilising cultural resources in urban and local community development. Cultural planning is a collective term that refers to a complex field of activities. It is partly about defining ambitions for culture and goals for the planning processes. It is also about using culture as a strategic tool in urban development and in geographical "branding". It also concerns itself with value creation through connecting culture and business.

Kryss.no is a website about cultural planning that includes news, reports and professional material from cultural planning circles in Norway and abroad. The website is a knowledge base with information and tools for cultural planning. Kryss.no facilitates collaboration between public bodies, cultural life and business.

Stimulation should be given to arriving at a good basis for decision

BETTER QUALITY AND COMMUNICATION WITH BYGGSØK

Byggsøk is a system for preparing, submitting and handling electronic planning proposals and planning applications. Byggsøk is operated by the National Office of Building Technology Administration (BE) and is open to all. The system can be found on www.byggsok.no.

Byggsøk has been in operation since summer 2003. 147 local authorities accept electronic planning applications (August 2009). The system is being continuously developed and work is currently going on to develop a new version of ByggSøk-build. The main changes are a result of the new Planning and Building Act and new regulations. Work is also going on for an alternative method of transferring planning applications to the local authority with the aid of direct import into the case/file system and transition to building SMART technology.

ByggSøk-plan is aimed at private planning applications and provides guidance throughout the planning process, with checklists and templates. The system can also be used even where planning proposals cannot be submitted or handled electronically. The use of ByggSøk-plan will give better communication and coordination between applicants and the planning authorities, because all parties will maintain common standards and routines. The system has been tested in a limited number of local authorities and is ready to be used on a larger scale, starting in autumn 2009, in an updated version in accordance with the new planning provisions of the Planning and Building Act.

CULTURAL HERITAGE SEARCH

A new website for cultural heritage searches - Kulturminnesøk - has been launched in 2009. The data presented in this has been obtained from Askeladden, the Directorate for Cultural Heritage's database of all known cultural heritage sites (including buildings and churches) that are protected under the Cultural Heritage Act. Another important source of information about buildings of cultural heritage importance is SEFRAK, a nationwide register that includes buildings dating from before 1900. With effect from 2009, this register has been included in Matrikkelen, the country's official

register of land ownership and buildings. Data from these sources is also available for use in digital mapping tools.

HISTORIC URBAN AREAS

New building in historic urban areas must be done with special care and respect. Through the Directorate for Cultural Heritage, the Government launched the database National Interests in Towns (NIB) in 2009. This gives an overview of national cultural heritage interests in about 75 cities and smaller population centres. The database will be a knowledge base and an instrument which cultural heritage authorities, centrally, regionally and locally, can use in the administration of the area, for land use planning and for handling planning applications. The area specifications will allow more predictable planning processes and provide important input when the local authorities wish to define planning zones in accordance with the new Planning and Building Act. The Directorate

for Cultural Heritage emphasises the communication of the possibilities available through the linking of professional tools such as cultural heritage local community analysis (DIVE) and the new NIB database and formal tools such as the new Planning and Building Act.

A network for Industry in Protected Urban Areas has been set up, with eight towns and cities participating: Fredrikstad, Røros, Hamar, Kongsberg, Tønsberg, Stavanger, Bergen and Ålesund. The aim of the network is to increase knowledge about practical, strategic and planning initiatives which can help to maintain and develop trade and industry in protected urban areas.

MINIMISING NEGATIVE INTRUSION IN THE LANDSCAPE

A specific aim is to minimise negative intrusion in the landscape and the loss of cultivated land. The renovation and restoration of areas that have already deteriorated



[2.9] Røros

The European Landscape Convention

The convention asserts that the landscape is an important factor for quality of life, in both urban and rural areas. A landscape is an area that is the result of the affects of and the interplay between natural and human factors. The convention builds bridges between nature and cultural heritage and discusses all kinds of landscapes, not just those that are seen as especially beautiful or valuable, but also our everyday surroundings and landscapes that are threatened with decay or deterioration in some form.



[2.10] Outbuildings at Eggum. Lofoten National Tourist Route.



[2.11] Pedestrianised street. Drøbak (Snøhetta)

is a priority. The pedestrianisation of streets is an example of such a measure. The Norwegian Public Roads Administration and the Norwegian National Rail Administration are applying their expertise in architecture and landscape architecture to inter-disciplinary work on developing plans and projects. The ambition is that new measures should be well designed and fit in well with the environment of which they are part. This practice is being continued.

Universal design - a prerequisite

SHARPENING UP THE RULES ON ACCESSIBILITY

The new planning and building legislation and the new legislation which forbids discrimination on the grounds of reduced functional abilities (the Anti-Discrimination and Accessibility Act) mean a sharpening up of the rules on accessibility.

Universal design has been included in the preamble to the Planning and Building Act and requirements for universal design will now be set for new buildings, infrastructure and outdoor areas intended for the general public, including buildings where people work or form part of an audience, through technical regulations.

For existing buildings, infrastructure and outdoor areas intended for the general public, legal authority has been given to introduce regulations that will require them to be upgraded to universal design by specified deadlines. A step-by-step, prioritised approach is proposed.

The law prohibiting discrimination on the grounds of reduced functional ability (the Anti-Discrimination and Accessibility Act) came into force in January 2009. The purpose of the act is to strengthen legal protection against discrimination on the grounds of reduced functional ability, including the prevention of discrimination by reduced accessibility. The act includes an obligation to universal design for organisations directed at the public. Public and private organisations directed at the public also have an obligation to work actively for universal design. Employers in both public and private sectors should also work actively to promote equality of opportunity and ensure equal opportunities and rights regardless of disability. The act also applies to existing buildings.

The local authorities are also enabled to decide on how the national goals should be

applied in the local authority planning apparatus. To ensure that more and more existing buildings will have universal design of a high architectural quality, it is desirable to honour the best projects, through a specific award for example.

ACCESSIBILITY IN TRAVEL

The Government is working towards all transport systems being of universal design in the longer term. The initial priorities will be improvements in the public transport system, stations, bus stops, airports and the conveyances themselves. Accessibility throughout the chain of travel is a priority. Development patterns for pedestrian and cycle networks must be planned in conjunction and contribute towards the network for pedestrians and cyclists being continuous and universally designed.

The Government is continuing the support scheme for universal design within the remits of the local and regional authorities. The Norwegian Public Roads Administration is developing guidelines and communicating information about the universal design of transport systems to the entire sector.

GUIDELINES AND REPORT ON UNIVERSAL DESIGN

Guidelines on universal planning and planning in accordance with the Planning and Building Act, which came into force on 1 July 2009, have been devised. The guidelines may be found on www.planlegging.no.

The report Universal Design as Local Government Strategy sums up experiences and results from the pilot local authority schemes of 2005 to 2008 (www.universell-utforming.miljo.no). In 2009 the Government has chosen eight counties as pilot counties for universal design for the next three-year period. The pilot counties will integrate universal design into their goals and strategies and weave this into their own areas of activity and their activities for the local authorities.

Bygg for alle.no

[Bygg for alle.no](http://byggforalle.no) is a website with information about accessibility in public buildings. Visitors can select buildings and look at the details of design and possible obstacles. The aim of Bygg for alle.no is to improve access in government buildings so that as many buildings as possible are universally designed.



[2.12] Guide line and clear marking of function.
Drammen (NUNO architecture AS)



[2.13] Bathing area with ramp. Kristiansand





[3.1] Early sunshine on a March morning. Reine, Lofoten National Tourist Route.

3. THE GOVERNMENT SHOULD SAFEGUARD CULTURAL ENVIRONMENT AND BUILDING HERITAGE

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DIVERSITY

Buildings and infrastructure are closely linked to life and work and they document various lifestyles and values. Our physical environment is the result of society's work over hundreds of years and is thus one of the most important sources for understanding our own culture. The diversity of cultural heritage sites and environments should be managed and safeguarded, assessed as a resource and provide a basis for knowledge, perception and value creation. Our existing surroundings with historically and architecturally valuable cultural heritage sites and environments should be sources of inspiration and provide premisses for developing new architecture.

EXISTING BUILDINGS

Existing buildings and built surroundings from various periods represent a great societal resource that must be used and managed well. Buildings and built surroundings that have no special historical or architectural value also give cities and communities a historic readability and character. Protected buildings and built environments worthy of conservation must be taken care of as important bearers of heritage and architecture. Strategies for various grades of protection or change of use must be further developed

and tested, including for transport systems, power stations and cultural landscapes that are typical of their periods. Cultural heritage analysis and the implementation of protection and development tasks relating to our environment and buildings are important in the education institutions.

NEW BUILDINGS IN HISTORIC SURROUNDINGS

New buildings must be introduced into historically significant surroundings with particular care, based on analysis of possibilities and the limits of what may be tolerated. This requires the development of new strategies and working methods, in line with increased knowledge and changing professional trends.

PROTECTION OF BUILDING HERITAGE: THE GOVERNMENT AS ROLE MODEL

The government lays down a regulatory framework for the protection of buildings, infrastructure and cultural landscape. As owner and administrator of important heritage properties, the government should appear as a role model for others who take on responsibility for conservation. The government should also be at the centre of the work of communicating the values which building heritage and heritage environments represent.

The government's cultural heritage policy

Report to the Storting No. 16 (2004–2005), Living with cultural heritage, records the ambitions that form the basis for conservation of the country's cultural heritage sites. The aim is that the diversity of cultural heritage sites and environments should be cared for as resources for use and the basis for knowledge, experience and value creation. It is a further goal that a representative selection of cultural heritage sites and environments that document geographical, social, aesthetic, commercial and chronological breadth should be given permanent protection. These ambitions are maintained in Report to the Storting No.26 (2006–2007), The government's environmental policy and the country's environmental condition.

Since 2005 there has been a considerable scaling up of efforts, including a doubling of funding to refurbish cultural heritage sites.

The Granada Convention

Norway has signed this convention, which aims to protect Europe's architectural heritage. The Granada Convention obliges member countries to set goals for the conservation of buildings and monuments of architectural value. These goals should be incorporated in planning of urban and rural areas and create the basis for the conservation and restoration of architectural values. The countries are also committed to inform the general public about the artistic or historic value of buildings and monuments that are worthy of conservation. The member countries should also increase collaboration on conserving architectural values

Measures and initiatives

The government's heritage properties

In recent years the government has been working to achieve sector-by-sector national conservation plans for publicly owned heritage properties. One important intention is to take care of buildings which demonstrate the scope of government activities and which can help towards an understanding of society's



[3.2] Fetsund Station 1890–1920.

history and development. This is a large and comprehensive initiative that will provide an overview and documentation of publicly owned properties and identify which of them are worthy of conservation. 16 ministries and their subordinate functions are involved in the work. 12 public sector enterprises are also taking part.

In 2009, 11 national conservation plans are in existence and a further 15 are under development. The work is being carried out by both the ministries and their subordinate functions. The national conservation plans are intended to create the basis for listing and conservation in accordance with the Cultural

Heritage Act. It is believed that the Directorate for Cultural Heritage will implement the protection of more than a thousand buildings as a result of this work. In collaboration with the Directorate for Cultural Heritage, the sector will also arrange for the conservation of a substantial number of buildings in other ways.

The responsibility for proper care and conservation of the buildings rests with their owners. Management plans will be devised as a follow up to the national conservation plans. One example is in the transport sector, where the nationwide conservation plans will be followed up through protection, development and management plans and the protection of

infrastructure in public ownership. Caring for and educating about the history of the transport and communications sector will be handled by the Norwegian Road Museum, the Norwegian Post Museum, the Norwegian Telecom Museum, the Norwegian Aviation Museum and the Norwegian Railway Museum.

Management and use of cultural heritage buildings

Cultural heritage sites and environments should be brought into use to a greater extent, so as to sustain and enhance local communities and to be a resource for value creation in trade and industry. The need for adapting listed and protection-worthy buildings to new uses will be reviewed based on experience from the conservation plans for publicly owned heritage property and the Value Creation Programme in the cultural heritage sector. Both opportunities and limitations will be taken into account.

THE FORTRESSES

The Norwegian Armed Forces are responsible for many cultural heritage properties, including 14 national fortresses. It is important that these fortresses should be protected through careful application of the premisses for cultural heritage sites and by conserving their military character. There is currently an extensive need for improvement and renovation of the fortresses. Critical maintenance work will be undertaken as quickly as possible, based on condition assessments that have already been undertaken. The aim is that the fortresses should have a satisfactory standard of maintenance by 2020.

Since the space requirements of the Norwegian Armed Forces within the fortresses have gradually changed, it is desirable to adapt the fortresses for new uses for the Armed Forces as well as for other users. The planning of a course, conference and accommodation facility at Kongsvinger Fortress is an example of adaptation for new uses. Experience from the implementation of the investment project for establishing accommodation at Kongsvinger Fortress will be well documented, so that it can be used when implementing similar projects.



[3.3] Kongsvinger Fortress. Hedmark.

THE HISTORY OF NORWEGIAN PETROLEUM, ENERGY AND WATER RESOURCES

The Norwegian Petroleum Museum displays the history of technological development from the start of the Norwegian oil story in the mid 1960s. The Norwegian Petroleum Museum is now creating a cultural heritage plan for the petroleum sector and documenting the most important oil and gas fields, so that coming generations can take part in this vital epoch in Norway's history.

In order to preserve, systemise and communicate the history of Norwegian energy and water resource management, a special museum scheme has been created under the auspices of the Norwegian Water Resources and Energy Directorate (NVE). The NVE's museum scheme is collaborating, among others, with the Norwegian Forest Museum at Elverum and the Norwegian Museum of Hydropower and Industry, which is located in the now protected Tysso I power station.

AGRICULTURAL BUILDINGS AND LANDSCAPE

The responsibility of the agricultural sector for buildings and landscape is endorsed by its role as producer of collective goods for society. A programme has been established which will cover the themes of new agricultural buildings and cultural landscapes, new use of vacant agricultural buildings and mapping agricultural buildings of cultural heritage significance.

Norwegian Cultural Heritage Fund

The Cultural Heritage Fund was created in 2002 and is the most important source of public funding for non-protected cultural heritage sites that are worthy of conservation. It is also an important source of funding for protected heritage sites. As at 2009 the fund's capital stands at NOK 1.4 billion. Interest on this capital is used to award project funding and for fund operation.

**Value creation programme based on
cultural heritage sites**

The Ministry of the Environment and the Directorate for Cultural Heritage have begun a value creation programme in which 11 pilot projects are intended to show how increasing use can be made of cultural heritage sites and environments to develop living local communities and use them as a resource for commercial value creation. The programme began in 2006 and phase 1 concludes in 2010.

The renovation, development and use of existing buildings and built environments is an important basis for the pilot projects. Experience so far has shown that a cultural heritage site can be a vital resource in both local community and commercial development and that this resource can be activated through determined effort.



[3.4] Cathedral Headland. Hamar (Lund + Slaatto Architects AS)



[3.5] Nesseby Church by Varangerfjord. National Tourist Route, Varanger.



The programme is intended to contribute to good adaptation of landscape and to good aesthetic qualities in the built elements of the agricultural landscape. The programme is also intended to help cover the need for renewal and development of buildings on farms, while at the same time safeguarding considerations of locally based building and environmental design, landscape, land protection and cultural heritage sites and environments.

Existing programmes for establishing high quality building and aesthetic standards for buildings in agriculture will be continued.

The Ministry of Agriculture and Food and the Ministry of the Environment have selected 20 cultural landscapes with a broad spectrum of cultural heritage aspects, which will be documented and given specific conservation. Several projects are planned under the auspices of the Nordic Council of Ministers that will be involved with the new use and change of agricultural buildings and access to cultural heritage environments.

Increasing knowledge about maintaining historic buildings

It is intended to devise ways of increasing our knowledge about the repair and maintenance of buildings from different historical periods and with different architectural idioms. There is a need for increasing our knowledge about how old buildings can be adapted to requirements for modern facilities in ways which safeguard their cultural heritage values. Not least, we need to find out more about how buildings of cultural heritage and architectural significance can be made more energy efficient without losing their essential values. There is also a need to increase our knowledge about the use of traditional materials, sustainability in the context of changing environmental requirements.

The Ministry of the Environment, in collaboration with the Building Industry Association (BNL), is preparing a national, internet-based knowledge network for cultural heritage properties. Among other things, this network is intended to provide an overview of available traditional craft competence. In 2009, the Directorate for Cultural Heritage launched a public version of Askeladden, its cultural heritage database. This gives an overview of all protected cultural heritage sites.

The Cultural Heritage Act provides statutory authority for requiring protected buildings to be brought into good condition. The new planning and building legislation gives local authorities the authority to require buildings worthy of conservation to be brought into good condition and maintained. Regulations for this will be prepared.

IMPORTANT BUILDINGS AND INFRASTRUCTURE WILL BE GIVEN PROTECTION AND BROUGHT INTO GOOD CONDITION

A representative selection of cultural heritage sites, which document the totality and breadth of our cultural history, will have permanent protection. Over the years to come, the Directorate for Cultural Heritage will provide protection to cultural heritage sites of kinds that are poorly represented at present. This includes buildings and infrastructure that represent trade and industry, crafts, the coastal culture, population migration, voluntary organisations and our more recent heritage. The national conservation plans will also help in this and provide a basis for safeguarding valuable architecture.

The aim is that protected buildings in private ownership will be brought up to a normal state of maintenance by 2020. Norway has at least 5,500 protected buildings. Almost half of these are privately owned. A considerable increase in budgets in recent years has provided the basis for increased efforts from the government's side. The Directorate for Cultural Heritage is now reviewing the status of the protected buildings. About 20 per cent of them will require major improvements.

OLD CHURCHES

When renovating old churches, important cultural heritage aspects must be safeguarded. At the same time the church must adapt to the needs of the congregation. Considerations of conservation and of active use of the church must be balanced in constructive dialogue with local interests and competent professional centres, such as the Directorate for Cultural Heritage and the church buildings consultant at the national Church Council. The requirements of the Planning and Building Act with respect to universal design also apply to churches.



[3.6] The Eidsvoll building of 1770, Eidsvoll.

Comprehensive refurbishment of the Eidsvoll building

The Eidsvoll building is to undergo substantial refurbishment, with the aim of returning the main building to its condition in 1814, when Norway's constitution was signed in it. Statsbygg will conserve and restore the main building and pavillions in accordance with antiquarian principles. The building's technical systems will also be upgraded. The areas of the main building that are open to the public will be universally designed as far as possible. The project has a provisional budget of NOK 220 million.

The refurbishment work should be completed by 2014.









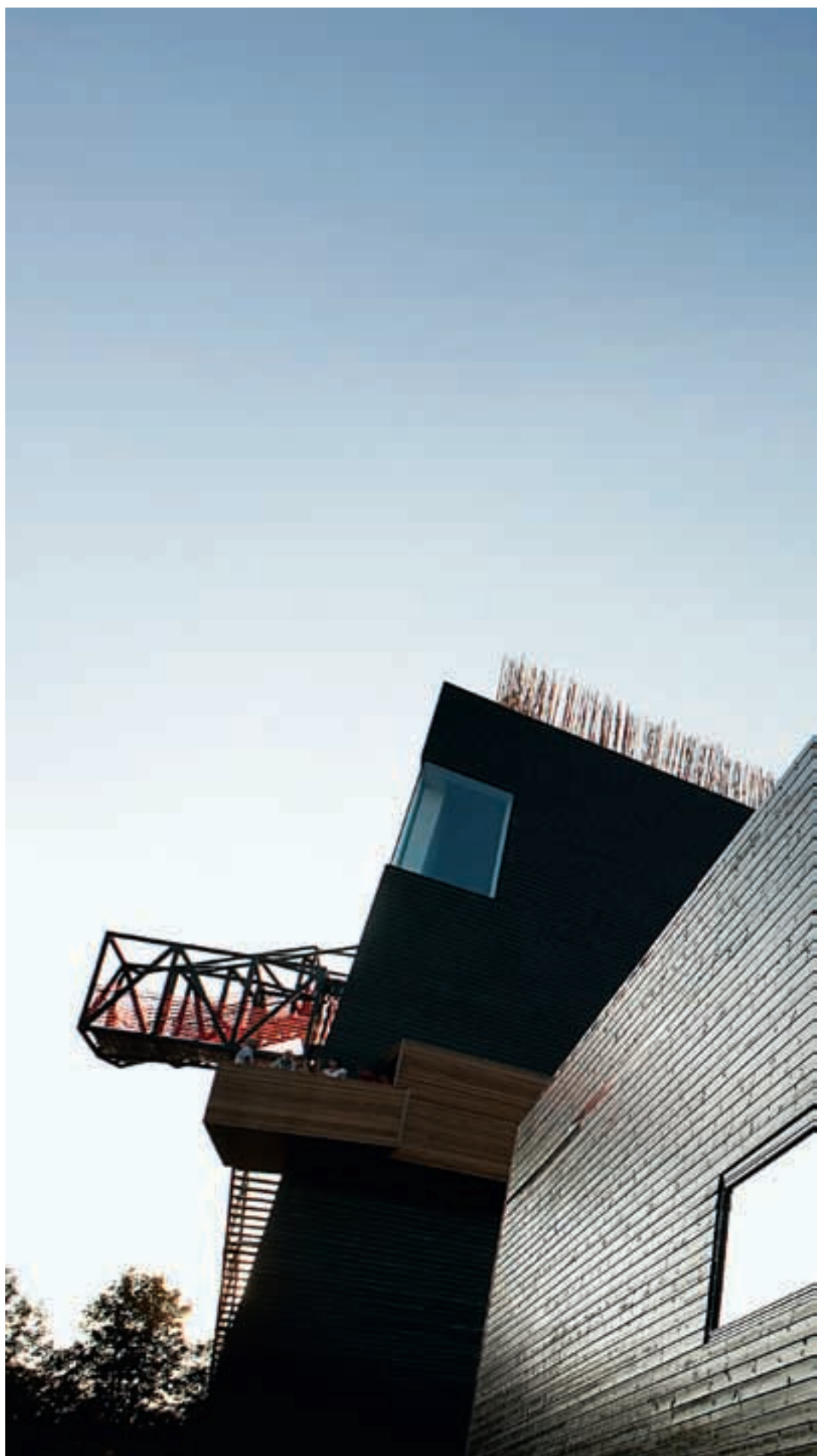


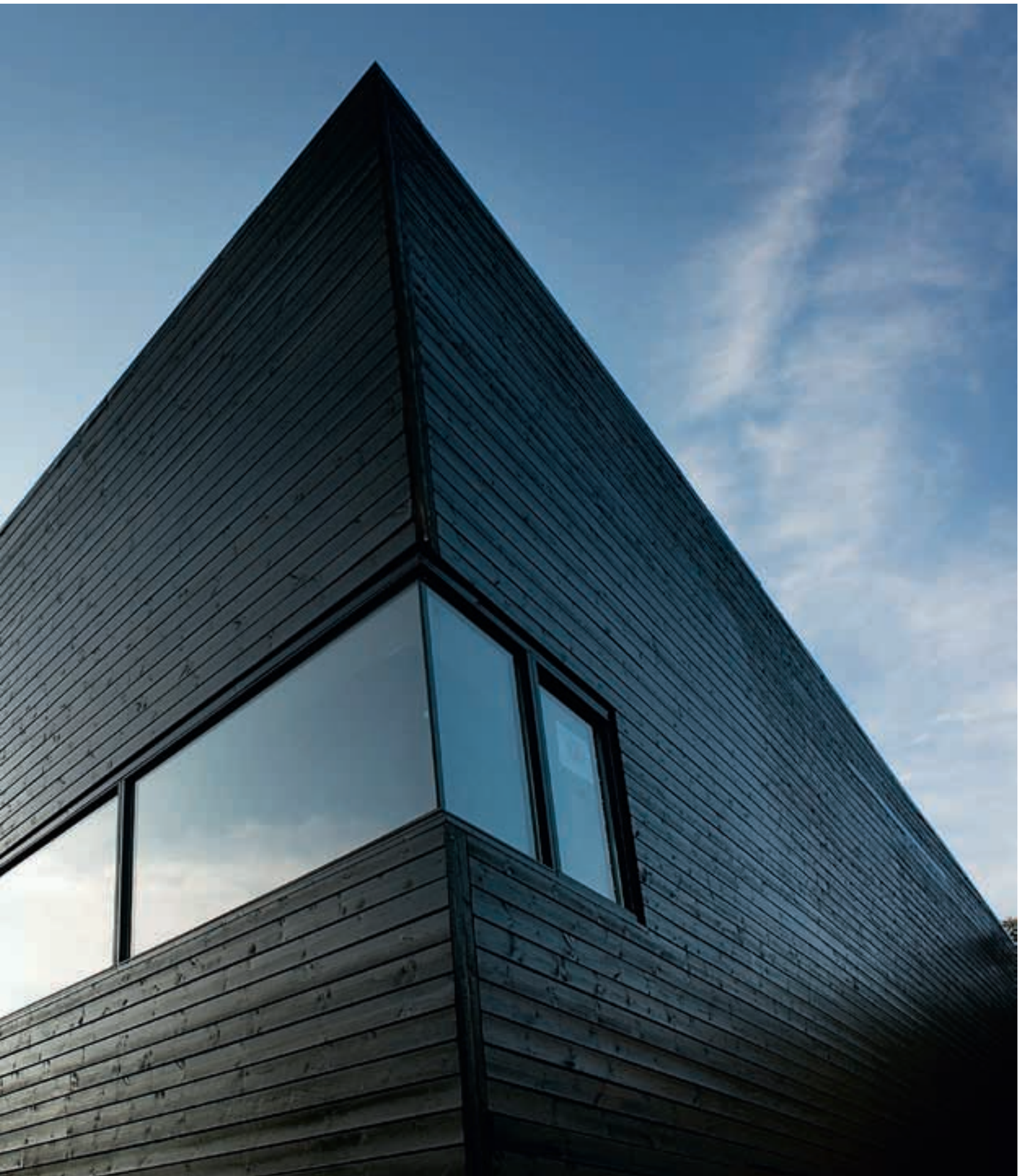
























[a.1] The Norwegian Opera and Ballet. Oslo
Snøhetta



[a.8] The Hamsun Centre. Hamarøy, Nordland
Steven Holl



[a.2] Solbergplassen. Rondane National Tourist Route
Carl-Viggo Hølmebakk



[a.9] Strandveien 37-39. Trondheim
Brendeland and Kristoffersen Architects as



[a.3] Tautra Mariakloster. Tautra
Jensen&Skodvin Architects Office as



[a.10] Mortensrud Church. Oslo
Jensen&Skodvin Architects Office as



[a.4] Oslo Airport Gardermoen.
Avioplan AS



[a.11] Svalbard Research Park. Svalbard
Jarmund/Vignæs AS, Architects MNAL



[a.5] Strandkanten, homes in Tromsø.
70°N Architecture



[a.12] National Library, annex. Oslo
Longva Architects



[a.6] Stegastein viewpoint. National Tourist Route,
Aurlandsfjellet, Sogn og Fjordane
Tommy Wilhelmsen



[a.7] Early February in Henningsvær, Lofoten
National Tourist Route.





[4.1] "Culture of risk", Oslo Triennale exhibition at DogA in 2007.

4. ARCHITECTURE SHOULD BE PROMOTED BY KNOWLEDGE, COMPETENCE AND DISSEMINATION

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STRENGTHENING THE DEVELOPMENT OF KNOWLEDGE

New insight, knowledge and experience will be needed in order to meet the major challenges presented by sustainability, the environment and transformation. Architects, planners and others who participate in the planning and building processes must be critical of established truths and help to develop new ones. Architecture will be further developed by means of education, research and practice.

BROAD ARENAS FOR PARTICIPATION

Planning and building our physical surroundings is one of society's most collective tasks, since most of us are involved in one way or another. Arenas must be developed for participation in and debate on architecture and to contribute to greater understanding of architecture's significance for society. Information and guidance, as well as individual participation and the opportunity for individuals to have an influence, must be strengthened.

BROADER AND DEEPER KNOWLEDGE

Globalisation presents challenges relating to interaction with those of other cultures, but also allows for a wider exchange of experience and knowledge. Sustainability and climate issues demand new knowledge and new priorities, which will change working practices and professional ideals. Changes in residential patterns and forms and the transformation of existing physical surroundings

also create a need for new insight. The needs of different population groups, such as children and young people, the elderly and so on, need to be specified and included in total solutions. The educational institutions must ensure that we have professionals with a broad knowledge base and that research and development work is carried out.

Norwegian architectural education and research is and should continue to be competitive and attractive in an international perspective. The educational institutions now have a great many strategic collaboration agreements with research institutions all over the world. International experience and knowledge is vital to ensure that the educational institutions have the best possible conditions for the further development of education and research. The exchange of researchers, professors and students must therefore continue to increase in years to come.

In order to develop knowledge, competence and dissemination in the field of architecture, and to raise these even further, a better regulatory framework must be provided in a number of areas. Governmental, regional and local guidelines must be given greater priority and the government must ensure that the building industry is given incentives to renew its knowledge and improve its practices. The government should help to promote young talent and enhance awareness of architecture's significance by supporting professional awards.

Measures and initiatives

The development of knowledge will be stimulated

KNOWLEDGE STATUS AND RESEARCH NEEDS IN THE FIELD OF ARCHITECTURE

The Oslo School of Architecture and Design (AHO) and the Norwegian University of Science and Technology (NTNU) have prepared a report on the status of knowledge for architectural research. The Research Council of Norway has supported the work on the report. The Institute for Landscape Planning at the Norwegian University of Life Sciences (UMB) has participated in the work.

The report presents an account of knowledge status and research needs in the field of “Architecture and Quality in Surroundings” and discusses characteristics of architectural research and societal issues that research could shed light upon.

The report points out that the typology of knowledge development in architecture is composed of academic research, architectural criticism and development work. “*Research by Design*” is the international term for systematic development work that makes use of creative design methodology in order to create innovation.

The report discusses the status of knowledge in relation to five different priority social issues and proposes increased R&D efforts in these areas:

- the pace of change in Norwegian surroundings
- the climate challenge
- Norwegian architecture as artwork and cultural expression
- the public role in the production of buildings and surroundings
- innovation in the building industry and in architecture

AHO and NTNU will work actively on knowledge development and wish to contribute to establishing a programme for architectural research that will safeguard the core, the totality and the breadth of architecture as a profession. The Government sees this report as an important review of status and a good starting point for further work.

CENTRES FOR ENVIRONMENT-FRIENDLY ENERGY RESEARCH (FME)

In 2009 the Government named the Research Centre On Zero Emission Buildings



[4.2] Egenes Park, Stavanger (HLM Architecture and Plan as / Onix)

(ZEB) as one of eight national Centres for Environment-friendly Energy research. The Faculty of Architecture and Fine Art at the Norwegian University of Science and Technology is responsible for the project. The vision is that the centre should become a national research centre that will put Norway in the front line of research, innovation and implementation relating to buildings with very low energy needs and no net climate impact. The primary aim is to develop products and solutions for existing and new buildings, homes and commercial buildings. The Research Council of Norway administers the FME scheme, which will support the chosen centres for the next eight years.

INVESTIGATING THE ESTABLISHMENT OF A "CENTRE FOR INTER-DISCIPLINARY RESEARCH INTO PRODUCING MORE ENVIRONMENT AND HEALTH PROMOTING SURROUNDINGS"

The Norwegian University of Life Sciences (UMB) wishes to investigate the establishment of a "Centre for inter-disciplinary research into producing more environment and health promoting surroundings". UMB has core competence in landscape architecture, urban and regional planning and property development, all of which are central to the production of our surroundings. The university also has scientific competence (water, earth, vegetation, environment/energy, climate, health) and mapping experience and provides engineering qualifications that are all relevant for the centre.

The centre's administration will rest with UMB, but its scope will be national. The centre will be tasked with establishing networks across professions and institutions, initiating and coordinating research and development and contributing to the dissemination of information.

The Government is positive towards a review being carried out into the potential establishment of such a centre.

DEVELOPING A CENTRE FOR ARCHITECTURAL THEORY AND HISTORY

The Oslo School of Architecture and Design (AHO) has a strong, multi-disciplinary, humanistic research environment with aesthetic, historiographic and hermeneutical architectural research as its particular focus. AHO has a long tradition in this field of research, has prominent researchers in this field and has gained national and international recognition as a dynamic research environment. By building on these strengths and gathering together many researchers

and research projects, AHO can strengthen an architectural research that is endorsed by the humanities and create a research environment unique in Norway. The Centre for Architectural Theory and History (CATH) is



[4.3] Education in architecture. Oslo School of Architecture and Design.

being built up in affiliation with international centres and institutions that have developed new architectural and cultural research strategies.

The development of this type of research element is based on the institution's own resources and with funding from the Research Council of Norway through announcements and competitions for research funding. These efforts are also significant for strengthening Norwegian architecture, for discourse on new Norwegian architecture, for the critical analysis of architecture as artwork and cultural expression and for the historic dimension in the discussion about our habitat.

ARCHITECTURAL RESEARCH AIMED AT INNOVATION AND BASED ON PRACTICE

Architecture is dynamic and is developed in close contact with changes in technology, trade and society. Both the profession and the building industry in general need to develop and implement new professional knowledge, new strategies and new solutions. The transfer of knowledge between traditional academic research, architectural practice and the building industry has been very limited and it is recognised internationally that research methods must be supplemented in order to obtain and disseminate the readiness to act that is latent within practice and that can lead to innovation and professional development.

Both AHO and NTNU have established programmes for strengthening development work through Research by Design. To ensure that such research is based on practice, it must be carried out in cooperation with the relevant professional circles.

KNOWLEDGE ABOUT ARCHITECTURE WILL BE STRENGTHENED

Knowledge is a resource and an instrument in itself. The Government intends to contribute to the work of strengthening knowledge about and competence in architecture and quality in building. Research and development activities will be supported so as to raise the level of knowledge about architecture and quality in the housing and building sector, with particular focus on the environment, energy and universal design.

Established arenas for collaboration, such as the Building Environment and the Building Costs Programme, are in their final year in 2009. The Govern-

ment will assess how experience from them can be furthered in continued collaboration with the building industry. Collaboration arenas of this kind will be actively used to spread knowledge about new legislation. The Government will also make an active contribution towards making good examples known, including through support of the Ecobox project database, which displays good examples of modern, eco-friendly architecture in Norway.

INCREASED COLLABORATION WITH UNIVERSITIES AND UNIVERSITY COLLEGES

An increased focus is necessary on research into architecture as cultural expression and identity bearer. Issues relating to quality in building, especially in the areas of the environment, energy, universal design, building practice and locality development, should be handled in close collaboration with and between universities and university colleges.

Ecobox

Ecobox is a self-financing department of the National Association of Norwegian Architects (NAL), which is intended to contribute to increased environmental competence and inter-disciplinary action among architects, planners and others in the building industry, such as building commissioners, contractors, consultants, research centres, students and public bodies. Ecobox is intended to help develop integration between architectural and local community development interests. Ecobox has a large network of professionals with specialist expertise in a number of areas, with whom it cooperates in projects as needed.

You can read about the most important Ecobox development projects at: www.arkitektur.no



[4.4] Marilunden. Stavanger (Eder Biesel Architects AS / Noncon:form, Austria / Schönherr Landscape KS)

Collaboration with universities and university colleges is also important to ensure recruitment and competence, further education and a wide range of study options in different subjects. A number of collaboration agreements have been entered into, including with the Oslo School of Architecture and Design, the Norwegian University of Life Sciences and the Norwegian University of Science and Technology.

Education must allow for new challenges

New challenges mean new requirements of the ability of the educational institutions to provide courses that are relevant to society at large. The educational institutions have a social duty and a special responsibility to develop post-qualifying studies that strengthen professional competence and establish systems for lifelong learning. This should occur in collaboration with trade and industry and with professional organisations.

CONTINUOUS DISSEMINATION OF INFORMATION

In order to ensure that professional architects are aware of the regulations and stay up to date as regards eco-friendly materials and energy efficiency in building projects, consideration is being given to increasing competence in training and through various integration measures in the building industry. The regulations have been updated in recent years and continuous assessment will be made of adaptations and improvements that should be well known within the educational institutions.

RAISING COMPETENCE IN UNIVERSAL DESIGN

The Norwegian University of Science and Technology will act as a driving force in initiating, following up and revising action plans for universal design at universities and university colleges. Plans for raising competence in universal design in the educational institutions will be followed up, so that this will be included in curricula and will increase competence among academic staff.

Arenas for dissemination and debate

The Government considers it essential to create arenas and meeting places for the exchange of information and will therefore contribute to this through various measures, including websites, conferences, workshops and themed events within the field of architecture.



[4.5] From exhibition opening at Space for Art and Architecture, Oslo.



[4.6] Environments with quality; "The Blue Stone" in Bergen. (Asjorn Andersen)

Building Environment

The purpose of the building industry's eco-secretariat Building Environment is to disseminate information about eco-friendly solutions, so as to strengthen insight and practice among the industry and the authorities. There is a mutually binding collaboration between public authorities and the building industry.

THE HOUSING BANK - NATIONAL COMPETENCE CENTRE AND ARENA FOR THE EXCHANGE OF INFORMATION

Experience shows that inter-disciplinary action and proper processes are necessary in order to achieve quality in its widest sense. The Housing Bank's inter-disciplinary position enables it to play an important role as bridge builder between local authorities, public bodies and the building industry. The basic values of the Housing Bank are linked to the general physical qualities of communities and specifically to universal design and eco-friendly building. In city and community development, the Housing Bank primarily provides financial and professional support for local authority planning processes and secondly disseminates knowledge about these activities.

The Housing Bank's operations in this field are twofold:

1) Building and environmental design: The Housing Bank is nationally responsible for promoting good building and environmental design, which it defines as buildings that are suitable for their purpose, are beautiful, long lasting and contribute something to the community in which they stand.

2) Community development: The Housing Bank supports and gives direct professional assistance to community development projects that can be later presented as role models on the internet and at conferences. The Housing Bank East also participates in the Groruddal strategic plan.

The Housing Bank acts as secretariat for the jury of the National Building and Environmental Design Award (Statens byggeskikkpris), for which the Ministry of Local Government and Regional Development is responsible. The Housing Bank collaborates with those involved in the housing and building sector, including through agreements of intent. There is a focus on further collaboration with universities and university colleges in various studies linked with housing and building policy and on making the educational institutions more aware of the policy aspects. The Housing Bank organises a number of conferences, workshops and themed events.

The Housing Bank will continue and develop its role as national competence centre for building and environmental design.

CONTINUED DEVELOPMENT OF DOGA NORWEGIAN DESIGN AND ARCHITECTURE CENTRE/NORSK FORM

Norsk Form is located together with the Norwegian Design Council at Doga



[4.7] Formlab, Norsk Form's architecture workshop at Doga, Oslo.

Norwegian Design and Architecture Centre in Oslo. DogA received the National Building and Environmental Design Award (Statens byggeskikkpris) in 2007 for the redevelopment of the former transformer station by the Akerselva river, carried out by the architects Jensen & Skodvin. Since opening in 2005, DogA has become an important meeting place and information arena for current issues in architecture and design. Professionals, the authorities, business, students and the public are its target groups for a number of different events ranging from main exhibitions in the large hall to gallery exhibitions, debates, conferences, workshops, Pecha Kucha Nights, baby walks, urban stunts and breakfast meetings.

Norsk Form is a project and information organisation whose aim is to increase understanding of architecture and design in a social perspective, while at the same time raising the quality of goods and surroundings being produced. The Government recognises the value of strengthening DogA as an information arena through increased focus on topical and issue-raising exhibitions about architecture and urban planning questions. Nationally, its dissemination activities will be strengthened via the internet. Tuition for children, young people and teachers in primary and secondary education will be maintained. Increased activity internationally and a greater volume of information in English on the website will support an ever

stronger international profiling of Norwegian architecture and design.

OSLO TRIENNALE

Oslo Architecture Triennale will be developed into the Nordic countries' most important arena for dissemination and debate about current architectural and urban planning issues. Every third autumn, exhibitions, conferences and other public events help to increase knowledge and awareness about architecture and urban development among professionals and the public. Oslo Triennale turns the capital into a major architectural arena, attracting professionals, the media and the public from home and abroad. Oslo Triennale has been organised three times so far. From 2010 it will be organised by the Oslo School of Architecture and Design (AHO), the Norwegian Architects Association (NAL), Oslo Architects Association (OAF), Oslo Teknopol and Norsk Form in partnership. The Government recognises the value of developing Oslo Triennale as a regular shop window for Norwegian architecture.

NATIONAL MUSEUM OF ART, ARCHITECTURE AND DESIGN

The National Museum of Art, Architecture and Design was established in 2003 and is an amalgamation of the former institutions the National Gallery, the Museum of Decorative Arts and Design, the Museum of Contemporary Art, the Norwegian Museum



[4.8] National Museum - Architecture. Oslo (Sverre Fehn)



of Architecture and the National Touring Exhibitions. The National Museum will be a major player for Norwegian architecture, safeguard the nation's historical consciousness and represent one of the most important information and dissemination arenas for architecture in Norway. The National Museum of Art, Architecture and Design will continue to be developed as a national arena for the documentation and dissemination of the field of architecture. In 2008 the National Museum opened a new exhibition arena for architecture at Bankplassen in Oslo. Sverre Fehn designed the new exhibition pavilion and the remodelling of the classicistic Norges Bank building of 1830, designed by C.H. Grosch.

The museum contains Norway's largest and most important collection of architectural drawings (more than 350,000) as well as models and other documentation of how the art of building has developed in Norway. For researchers who wish to understand the art of Norwegian building, this material is the most important source, in addition to the buildings themselves. The material is also useful when buildings are to be changed or restored to their original appearance.

Currently, description and documentation of Norwegian architecture is limited and there is no collected major work on how architecture in Norway has developed. The National Museum of Art, Architecture and Design and the Oslo School of Architecture and Design have begun work on a research-based history of Norwegian architecture. This will help to create a total understanding of the development of architecture in Norway.

By means of an open, international planning and design competition for a new museum facility for the National Museum at Vestbanen in Oslo, the National Museum will raise its profile as a significant museum internationally. The new building will have an architectural expression that marks the museum's position as an institution in society. It is planned that the new museum building will open during the course of 2016. Together with the new opera building, the new building for the National Museum will be among the greatest cultural building projects ever in Norway and will represent a considerable promotion for the field of architecture.

ROM Art and Architecture

ROM Art and Architecture is an independent centre in Oslo, created by Norwegian artist and architect associations and supported by public and private funding. ROM conveys impulses at the point of contact between art and architecture, with changing exhibitions, seminars, workshops and presentations. The centre combines the dissemination of information and experience within a great variety of topics and is a genuine project space for architecture in Norway. Architects and artists have the opportunity to work on their projects in three dimensions and on a one-to-one scale. ROM also gives space to research projects in art and architecture.

www.r-o-m.no

The National Museum's exhibition arena for architecture at Bankplassen in Oslo will continue to be used after the new building at Vestbanen has been realised.

INNOVATION NORWAY

For Innovation Norway (IN), architecture is one of five priority cultural industries within the culture and experience sector. The initiative is intended to introduce measures to professionalise and increase the profitability and sustainability of the cultural industries and culture-based trade and industry. Architectural practices may apply for IN's five services (finance, consultancy, networking, profiling and competence) and programmes according to the needs of the industry.

Young architects

In order to develop the profession of architecture it is important to stimulate the professional development of young architects. The Norwegian Public Roads Administration's National Tourist Routes project is an example of an initiative that has succeeded in a deliberate strategy to seek out architects, including young talent. In this way, the National Tourist Routes project functions as an incubator for new Norwegian architecture of high international quality. National Tourist Routes is a model for other projects - national, local authority or private.

EUROPAN

Europan is the world's biggest planning and architectural competition for young (under 40) architects, landscape architects and planners. It is organised every other year and over 60 cities in Europe take part. Since its foundation in 2002, European Norway has been a significant player in the development of architecture and planning in Norway and has helped to bring the Norwegian urban development discussion into the European arena. The European Norway foundation is the organiser of the European competition in Norway and Oslo School of Architecture, the Norwegian University of Science and Technology, Bergen School of Architecture, the National Association of Norwegian Architects, Norsk Form and the Housing Bank are all represented on its board. During the six years of the foundation's existence, a national and international professional network has been established that has contributed to innovation and the development of fresh ideas.

Europan helps to present new and innovative solutions for local authorities and developers. The challenges of urbanisation and climate change demand new concepts for how the city should be organised. It is important for this pioneering work to have the necessary conditions for growth. Europan seeks to create space for this. Europan is also an opportunity for young architects to develop and realise their ideas for the city of the future.

Europan's contact base and professional network extends from young, unestablished architects to planning bureaucrats, private property developers, consultants and politicians. Through its publications and exhibitions, Europan is also a shop window that helps to get new voices heard and new ideas seen. The intention is that this initiative will be continued and strengthened.

COLLABORATION BETWEEN YOUNG AND EXPERIENCED ARCHITECTS - THE WILD CARD SCHEME

Newly established architectural practices often find it difficult to break into the market, partly because invited architectural competitions require prequalification based on competence and experience.

It may be appropriate to create a scheme that makes it easier for young architectural offices to prequalify - modelled on the Wild Card scheme in Denmark for example. The Danish scheme is being evaluated in autumn 2009. The experience will be useful in evaluating a corresponding scheme in Norway. The City of Oslo's draft architectural policy document contains a proposal to allow Wild Card in Oslo.

The Wild Card scheme in Denmark

The Danish Architecture Centre (DAC) has devised the *Wild Card scheme* in collaboration with the Architects' Association of Denmark (AA) and the Danish Competition Authority.

The Danish Wild Card scheme puts the spotlight on young architects and makes it easier to invite newly established practices into architectural competitions. It is often difficult for a young, newly started architectural practice to get its first assignment. The reluctance of building commissioners to work with newly established architects often comes from fear of the financial consequences. There is also a need to get information to building commissioners, telling them where to find newly established architects. The Danish Wild Card scheme aims to improve this situation.

The Wild Card scheme is made up of four parts:

1. The Wild Card list gives a summary of young, newly established architectural practices.
2. 10 examples of successful planning processes headed by young architects.
3. The Architects' Association of Denmark (AA) offers guidance to building commissioners to make it easier for them to invite newly established architects to compete.
4. DAC and AA host match making events, where young architects, customers and potential partners can get to know each other.

It is planned to evaluate the scheme during 2009.
Read more at: www.dac.dk/wildcardordning





[4.9] Villa Nilsen/Borgen, Trondheim (*Brendeland and Kristoffersen Architects AS*)





5. THE GOVERNMENT SHOULD BE A ROLE MODEL

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THE GOVERNMENT AS BUILDING COMMISSIONER

In its role as building commissioner, the government is the biggest developer in the country. The government also commissions offices and official residences for the Norwegian Foreign Service abroad. The government's building programme has had, and has, a very important role in creating buildings of high architectural quality as important cultural expressions and identity bearers. Architectural policy measures must be designed in such a way that the government's building activities function well.

Important national bodies involved include the Norwegian Defence Estates Agency, the Norwegian National Rail Administration, Statsbygg - The Directorate of Public Construction and Property and the Norwegian Public Roads Administration. The government's own competence as building commissioner must be continually strengthened and developed.

Norwegian Architectural Policy should emphasise planning and design of both buildings and infrastructure, such as road and rail schemes with associated bridges and tunnels.

THE GOVERNMENT PROVIDES A REGULATORY FRAMEWORK

By means of its ongoing work on planning and building legislation and other legislation, the government determines the most important regulatory framework for changing the physical environment. In the energy sector, the processing of concessions is the tool that can provide such a regulatory framework. Increasing demands for careful use of resources and high functionality in state-financed building and construction have led to a number of norms and standards for the design and execution of buildings and infrastructure. Examples of such norms may be found with reference to institutions, schools, homes, church buildings, cultural buildings, sports facilities and transport facilities. Such standards will develop further towards common ambitions and professional goals for architectural quality.

THE GOVERNMENT AS INSPIRER

As planner, building commissioner and property manager, the government should set high targets for quality in planning, execution and management. In this way,

the government will be a role model and an inspirer for building commissioners at other management levels and for developers in the private sector. The national bodies which commission public building are professional and resourceful and should contribute to the implementation of good competitions and projects with innovative environmental and energy solutions, non-traditional processes and arenas for young and newly established planners. The government also has an important role in the market, both as a procurer and as a central player in the field of architecture.

It is the Government's intention that the work of this architectural policy document should also inspire regions and local authorities to devise their own architectural policy documents. In June 2009 the City of Oslo prepared a draft for a general architectural policy for the city and capital. The Government regards this as a very positive measure that shows that the capital city takes architecture seriously.

The City of Oslo's architectural policy

In summer 2009, the City of Oslo launched a draft version of a general architectural policy for the capital that underlines the city's role as national identity bearer and window to the world. The city's vision is that Oslo should be a role model at home and abroad for Norwegian democracy, quality of life and sustainability. Architecture has a special role in this, as identity bearer and attraction. The goal for a modern capital should be to allow space for the new in a growing city, while at the same time safeguarding and developing existing buildings and cultural heritage sites. Sustainability, cultural diversity and architectural quality should be assured.

The city aims to work on the following strategies in architectural policy: developing a framework for innovative building, developing important buildings and arenas for the nation and its capital, informing about the fjord city of Oslo and following in Munch's footsteps, identifying an east-west cultural line of the capital's most important identity building elements and increased integration of art into the city's public spaces. The City of Oslo wishes to collaborate with the government over relevant aspects of the capital's architectural policy.

See link to the document:
www.plan-og-bygningsetaten.oslo.kommune.no

Measures and initiatives

The role of the public sector as building commissioner

COMPETITION FOR GOVERNMENT PROCUREMENTS

The government has a responsibility to encourage good architecture in all projects, whether as building commissioner, property developer or administrator. Architecture competitions help to raise the quality of architecture, in that several architects analyse the same project and provide different solutions.

The general principle laid down in the Public Procurement Act, No. 69 of 16th July 1999 is that a competition should be held for all public procurements. Statsbygg - The Directorate of Public Construction and Property is the public body that organises the most architecture competitions, mainly in the form of planning and design competitions or invitations to tender.

The form of the competition is chosen dependent on the nature of the individual project, in accordance with general guidelines and total scope.

GUIDELINES ON ARCHITECTURAL QUALITY

There are several information websites and guidelines about the rules and regulations applying to the field of architecture. These have been devised to ensure high architectural quality in public building projects and to disseminate information to developers - both public and private.

There is a need to revise and develop the 1996 guideline on *aesthetics in public buildings*. The requirement for high architectural quality should cover aesthetic, functional and technical aspects. Sustainability and universal design should also be included in the requirements.

ECO-FRIENDLY PURCHASING

The public sector should take the lead in demanding eco-friendly goods and services. The aim is that consumption and production should be as sustainable as possible. The Government's action plan *The environment*

The Opera at Bjørnvika

After the Storting decided in 1999 that a new opera house was to be built in Oslo, an international architecture competition was announced in 2000 and won by Snøhetta. Snøhetta and Statsbygg were commissioned by the Ministry of Culture and Church Affairs to carry out the biggest cultural building project in Norway since Nidaros Cathedral. The Norwegian Opera and Ballet opened on 12 April 2008. By the time of its first birthday, 1.3 million people had been inside - at events, in the restaurants, on the roof and guided tours. Snøhetta and the Opera have won several international awards, including the EU Prize for Contemporary Architecture - Mies van der Rohe Award 2009, which is considered one of the world's most prestigious architectural prizes. This was the first time the award had gone to a Nordic building.

The Opera building had a budget of NOK 4,356 billion. The building has a floor area of 38,500 sq metres and 1,578 rooms. The opera building was decorated through an art programme organised by Public Art Norway (KORO). There are eight arts projects in the Opera and the area around it, ranging from fully integral to autonomous works. 17 Norwegian and international artists took part in the arts programme. Artworks in the Opera have a total value of almost NOK 53 million, 40 million of which is from government funding.



[5.2] Ørnesvingen viewpoint. National Tourist Route - Trollstigen, Geiranger (3RW / Sixten Rahlff)

Architectural competitions

The regulations to the Public Procurement Act, No. 69 of 16th July 1999 define what a planning and design competition is. This is the form of competition that is normally perceived as an architectural competition.

The main purpose of this form of competition is to arrive at one or more architects, based on actual proposed solutions, with whom the principal will negotiate in order to arrive at a planning assignment. It is only through negotiations with the winner(s) of the planning and design competition that the contract to design the building is awarded.

Planning and design competitions are often used when the site presents unusual challenges and/or alternative solutions are sought, or because the project is special or has major public interest and societal significance.

The assessment of the solutions presented in a planning and design competition is done by a jury. In the case of an architectural assignment, at least a third of the jury must be architects. The jury's assessment, recommendations and conclusions, including a ranking for the project entries, must be written down and signed by the members of the jury. The proposed solutions should be assessed in accordance with a set of criteria described by the principal in the competition programme.

A planning and design competition may be open or closed. An open competition is publicly announced, nationally or internationally, and there is no limit to the number of participants. In a closed competition, a certain number of qualified architects is invited to take part. Participants are chosen on the basis of stated qualification requirements. This form of competition gives the principal the opportunity to limit the scope of the competition.

In both forms of competition the participants are anonymous, although in the closed competition the identities of participants are known, but not who submitted which entry. In general terms an open competition will demand more resources for implementation, because the number of entries to be evaluated will usually be greater - in some cases much greater.

Procuring architectural assistance in projects can also be done with other forms of competition, most commonly by inviting tenders. Again, this process can be open or closed and may or may not have requirements for proposed solutions. Evaluation of the tenders is normally by committee, which might be compared with a jury.



[5.3] New Deichmanske central library, Oslo (Lund Hagem Architects / Atelier Oslo)

and social responsibility in public procurements (2007-2010) ensures that climate and energy measures are prioritised in public purchases.

A CONSCIOUS ARTS POLICY FOR PUBLIC SPACES AND BUILDINGS

Norway has a well-established arts policy for public spaces and public building. The policy is executed through the schemes administered by the institution Public Art Norway (KORO). KORO's arts projects chiefly explore the point of contact between art and architecture, art and infrastructure and art and place. Public art is part of our physical surroundings and is in this way perceived as part of architecture. It is important that the government, both in its own building activities and in the context of community and regional development, maintains common ambitions for public art. Government arts policy also has an inspirational effect on other players, both public and private. It should still be a government priority to establish conditions in which artistic contributions to public spaces and buildings can be prioritised.

THE ARMED FORCES' ARCHITECTURE COUNCIL

In recognition of the architectural responsibility in Norwegian Armed Forces' building projects, the Norwegian Defence Estates established an architectural council in 2001. The intention of the council is to maintain total quality assurance of all the armed forces' planning and building projects at the programming and planning stages. The architecture council consists of three architects with wide-ranging and extensive professional competence. The Norwegian Defence Estates intends to continue to use the architecture council and will evaluate the scheme to seek ways of using it more effectively.

NATIONAL TOURIST ROUTES

The Norwegian Public Roads Administration is currently responsible for developing National Tourist Routes as a tourist attraction. The essence of this initiative is the interplay between the road and the unique landscape it passes through. The variety and interest of the driving experience, together with creative architecture at viewpoints and rest areas, is intended to strengthen Norway as a holiday destination. Several of the projects have already achieved international architectural recognition and created great interest in the tourist attractions from visiting motorists. The aim is to strengthen local industries and communities, especially in rural areas. In line with government tourism



[5.4] Artwork by Laila Kongevold. *Jeg ser*, 2005-2006, University of Stavanger.

strategy, it is intended that up to 18 routes can be marketed as a joint tourism product from 2012. This depends on the efforts and initiatives of public bodies, regional and local authorities, travel companies and private participants.

The National Tourist Routes programme deliberately seeks unestablished and young architects who can bring something new, and has its own procedures for architectural quality assurance. The project has gained international recognition.

INFRASTRUCTURE

Several ministries work with projects that are significant for the form and use of our surroundings. This applies particularly to infrastructure projects, such as road and rail developments with their associated bridges and tunnels. These are measures that often involve a major impact on both natural areas and built environments and strongly conflicting interests. Questions regarding the design of such facilities are often central to the debate.

It is the ambition of the transport and communications sector to design new infrastructure of good architectural quality that is suited to the urban or rural landscape. The aim is to minimise negative impact on the landscape, employing both mitigative and reparative measures.

The transport and communications sector will further develop policy for good architectural quality. The Ministry of Transport and Communications will stimulate its underlying public services and companies to develop an internal policy for architectural quality, with the intention of evaluating the need for architecture/landscape architecture competence in projects when purchasing services, and also when architecture competitions should be held.

ENSURING LANDSCAPE CONSIDERATIONS THROUGH CONCESSIONS FOR ENERGY PROJECTS

The Government wishes to promote efficient energy production, while at the same time ensuring the sustainable management of nature. It is an important goal that increased development of energy production and power lines is done without loss of natural diversity, outdoor recreation or major landscape values.

When applications for concessions are considered in accordance with water resource and energy legislation, the benefits of the project are weighed up against the environmental or social disadvantages it may involve. Adaptation of the project and mitigative measures are essential to resolving conflicts. These include choice of route, camouflage, power line design adapted to landscape, measures to protect bird life and other considerations.

Processing concession applications for new production and grid facilities is coordinated in the regions where this strengthens the basis for arriving at the best overall utilisation of resources with the lowest possible level of conflict. National guidelines for the planning and location of wind farms and for small hydropower stations are used by the Norwegian Water Resources and Energy Directorate in the processing of concession applications. Landscape is discussed as a specific topic in both these guidelines. The Ministry of Petroleum and Energy has also devised a strategy to ensure greater consideration of environmental, aesthetic and local community issues when planning improvements to the power grid.

FUNDING FOR CULTURAL BUILDINGS AND SPORTS FACILITIES

The Government provides investment funding for the building or rebuilding of cultural buildings and sports facilities. There are requirements for architectural quality and functionality and projects should be characterised by sustainable and energy-efficient solutions.

The government will promote collaboration and try out new solutions

ARCHITECTURE AWARDS

To gain greater awareness of buildings that stand as role models, the government should prioritise its own architectural awards and ensure that they gain greater public recognition. In this context it may consider a review of the criteria for awarding national prizes for architecture.

SUPPLIER DEVELOPMENT AND INNOVATION

The Government wishes to use public procurements as a means of promoting innovation and creativity. This can be done through competitions for ordinary research and development contracts (goods and services), where the public principal covers the costs and retains the result (the product) for its own use. Such competitions follow the rules for public procurements. In the case of building work, the public building commissioner has a responsibility to facilitate systematic supplier development. Adding new requirements for planning and design competitions



[5.5] Toilet and services building at Hellåga rest area on the Coastal Realm Highway near Sjøna in Rana. National Tourist Route, Helgeland North (Nordplan AS - Arild Waage)

is another way of contributing to the development of both architects and the building industry. Public research and development contracts are a third method for contributing to innovation and creativity. Such contracts may be entered into between industry and the building sector, based on products or areas that the parties wish to develop.

PILOT PROJECTS

Public procurers carry out pilot projects to test out new solutions, methods, instruments or work processes. Experience from the pilot projects is documented and made available to the building industry, so that useful experience is transferred to new private and public projects. Pilot projects help to raise standards in the industry.

Fornebu

Oslo's former main airport at Fornebu has been developed into a new area for housing and commercial development. The work was carried out by Statsbygg - The Directorate of Public Construction and Property in collaboration with the City of Oslo and involved the clearing of contamination, ground movement, developing roads and landscaping, with parks, playgrounds and other infrastructure for the new use the area is being put to. Fornebu is to be an oasis for residents and visitors and an important role model for transforming a physical environment with environmental awareness and quality in planning and construction. The project is a source of inspiration for other infrastructures and has gained great recognition at home and abroad.

St. Olav's Hospital

Trondheim's new university hospital, St. Olav's, has been planned from the beginning to have a physical environment that would give the greatest benefit to patients and employees. The development plan was the result of an international ideas competition and featured an open pattern of areas. The idea is to develop the hospital area into a beautiful and publicly accessible "medical district", integrated with its surrounding landscape and city structure.

To safeguard the totality of the project and identify priorities, guidelines were devised at an early stage for the different design levels from general to interiors and decor. Guidelines were developed in dialogue with the researchers at the architecture faculty at the Norwegian University of Science and Technology. One of the priority areas was the quality of the physical environment, which has been shown to be able to combat stress and foster an impression of security and wellbeing during a stay in hospital.

The opportunity for privacy, control of one's own environment and easy access to staff were considered particularly important. The hospital has therefore been built with only single rooms and the ward areas have been grouped into open working areas for nursing staff with direct access to patients' rooms.

Contact with nature and positive signals, daylight, views, visibility, priority given to landscaping with ground and roof gardens use of natural materials - especially extensive use of wood and deliberate use of colour schemes. All patients have views of natural surroundings from their beds. Decor and artworks are integrated at every design level and actively used both indoors and out.

The planning of St. Olav's Hospital featured extensive user participation, with patients also taking part at all decision-making levels. A balance has been maintained between powerful architecture, a functional approach and a focus on health-promoting solutions.



[5.6] St. Olav's Hospital. Trondheim (Narud Stokke Wiig Architects and Planners AS)

MODEL PROJECTS

Model projects are those with high ambitions for the entire project. As with pilot projects, they are concerned with trying out new methods and tools, materials and work processes, but the aim is to create permanent change within a chosen area.

Defining and carrying out model projects is an important part of the work of the public building commissioners as role models for the building industry.

BIM - A PLANNING INSTRUMENT

BIM stands for Building Information Modelling. The model digitises information about products and processes. BIM helps to coordinate and provide an overview of all the professional and technical areas of a building process. BIM also helps to simplify work processes and communication between all those involved. National and international experience of using BIM points to efficiency and environmental benefits that make BIM an important tool both for new building and for work on existing buildings. Large public building commissioners such as Statsbygg and the Norwegian Defence Estates have been driving forces in the development and adoption of BIM in building processes and the management of buildings. In the development of a new national museum, Statsbygg has for the first time made the use of BIM a requirement of the architecture competition. The Government will facilitate open BIM standards, so that local authorities and other public principals in the building industry will be able to use BIM in building projects above a certain size

Government sponsored architectural awards

National Building and Environmental Design Award (Statens byggeskikkpris)

The National Building and Environmental Design Award is presented annually by the Minister of Local Government and Regional Development. The award is to honour buildings and associated infrastructure that, in their execution, use of materials and interaction with location and environment, help to raise, revitalise and develop building and environmental design generally. Candidates for the award should have good architectural design and fulfil key requirements for the environment and universal design. Among other things, this means low energy needs, eco-friendly materials and a design that makes it possible for everyone to use the building. The award is a means of identifying priorities and focus in Norwegian Architectural Policy. The Housing Bank acts as secretariat for the jury.

Preikestolen Fjellstue received the *National Building and Environmental Design Award* for 2009. The building was designed by the architects Helen & Hard (www.hha.no) and was commissioned by Stavanger Trekking Association. The award was presented for outstanding design, focusing on creative use of timber, the environment and an understanding of place, and in which the ethical, the aesthetic and the functional are united in a new language of form.

The Diploma of the Anton Christian Houen Foundation

is Norway's oldest architectural award and is considered to be one of the foremost distinctions that can be given to Norwegian architects. The presentation is made by the Minister of Culture every three or four years, with a tradition dating back to 1904. The foundation began as the bequest of one of Norway's greatest benefactors, Anton Christian Houen. He was born in Arendal in 1823, but was sent out into the world at an early age to learn business. He returned as a very rich man at the age of 50. Even though he was well travelled and internationally oriented, Houen wanted his fortune to benefit his homeland. Houen established a foundation to promote a "better and purer" architecture in Norway, and thanks to Houen's initiative we can look back on a hundred-year tradition of awarding diplomas for good architecture. The history of the awards during the period 1904 to 2000 may be found in the book *Priset arkitektur*.

The Norwegian Armed Forces Building and Environmental Design Award

This award was presented by the Norwegian Defence

Estates during the years 1992 to 2003 for building projects carried out for the Norwegian Armed Forces. It was an annual award for buildings that had been in use for at least one year. The Norwegian Defence Estates now intends to revitalise this award and has created new criteria for a first presentation in autumn 2009.

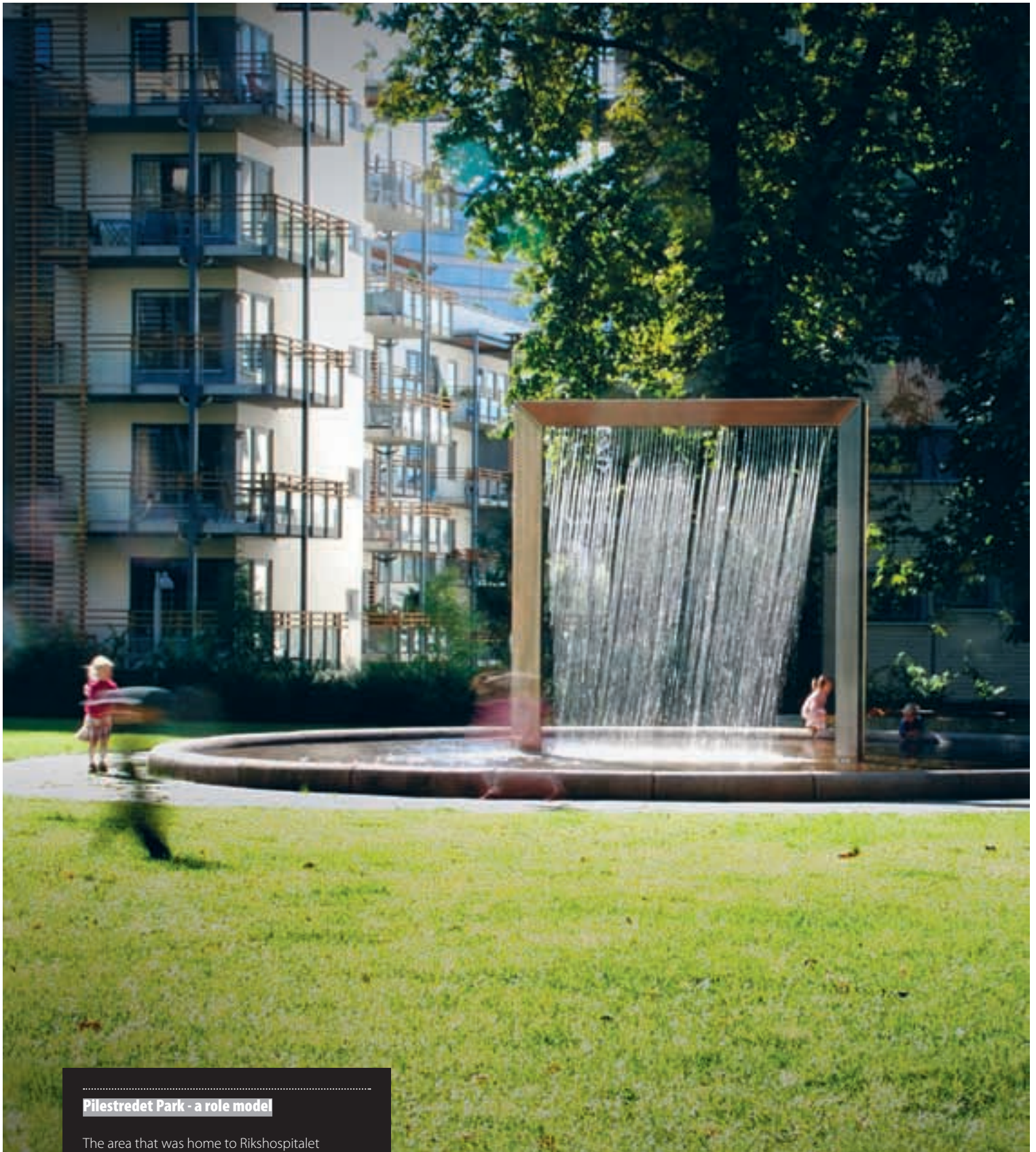
Beautiful Roads Award

The Norwegian Public Roads Administration will continue to present the Beautiful Roads Award every other year. The award is given for infrastructure of good aesthetic quality that is well suited to its surroundings. This may be roads, streets, bridges, tunnels or other associated infrastructure, which must be part of the public road network. The award inspires good adaptation to the landscape and architectural quality in the making of roads and streets. The Beautiful Roads Award was founded in 1988 after a long period during which aesthetics had had a low priority in Norwegian road building. The award is given by the Director of Roads and is intended to inspire those commissioning roads and streets. The award continues to have positive strategic effects by identifying good projects and is a stimulant to quality in both large and small projects. In 2008 an additional award was introduced for infrastructure that makes a positive contribution to operation and maintenance.

Urban Environment Award

The Urban Environment Award is intended to inspire more sustainable urban development and eco-friendly practice. The award was created in 2002 to reward and identify examples of collaboration and commitment to eco-friendly urban development. The award is presented annually to cities or urban areas that are making a long-term effort to create safe and living communities, within a set theme. In 2008 the theme was "Climate in urban environments" and the award went to the city of Trondheim for the implementation of a new environment and transport package. In cultural heritage year 2009 the theme was "Active use of cultural heritage in urban development" and the award went to Kongsvinger for the place of cultural heritage in strengthening the development of the town and region.

The book *Forbilder* gives a full presentation of the National Building and Environmental Design Award, the Beautiful Roads Award, the Norwegian Armed Forces Building and Environmental Design Award and the Urban Environment Award during the period 1983 to 2007.



Pilestredet Park - a role model

The area that was home to Rikshospitalet University Hospital for more than a hundred years became a car-free, green oasis with homes, offices, commerce and teaching. Pilestredet Park is a role model for sustainable urban development and an award-winning environmental project.

See www.pilestredetpark.no

[5.7] Pilestredet Park. Oslo (*Bjørbeek and Lindheim Landscape Architects*)





[6.1] "Bad Gleichenberg" spa. Austria (Jensen&Skodvin Architecture Office as)

6. NORWEGIAN ARCHITECTURE SHOULD BE VISIBLE INTERNATIONALLY

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NORWEGIAN ARCHITECTURE: A POSITIVE IMAGE

Norwegian architecture and Norwegian architects should help in creating a clear and positive image of Norway as a modern and innovative nation. Such images can be formed by displaying creative work of a high architectural quality.

MARKETING NORWEGIAN ARCHITECTURE

Profiling Norwegian architecture internationally will be given increased priority. Architecture is a globalised professional field that is based on long traditions, with access to common role models and ideologies and increasingly with access to globalised technology. Norway's contribution to this field must be grounded in those values and areas in which Norway is a pioneer, including social welfare, democratic processes, responsible administration of natural resources, sustainability and technology.

The high quality represented by Norwegian architecture must be made visible. International profiling of Norwegian architecture is done through exhibitions, presentations, trade fairs, festivals, programmes of visits, media work and internet-based information.

Profiling should reflect new trends in Norwegian society, where architecture helps in creating knock-on effects that promote Norwegian trade and industry, research, innovation, technology and culture and stimulates the export of Norwegian expertise. There is a large international market for architectural services, a market that has yet to be exploited to any great extent by Norwegians.

FACILITATION

The professional field can best be developed by facilitating the exchange of impulses in interaction with international professional circles. In its work of marketing Norwegian architecture, the foreign service is in close contact with professional circles both in Norway and abroad. The professional institutions indicate priorities among exhibitions and participation in important international arenas. The task of the foreign service is to create arenas and meeting places that facilitate dialogue, exchange and collaboration. The work is valuable for the profession in Norway in giving access to international impulses and by helping to strengthen Norway's reputation abroad.

Measures and initiatives

**Important international architecture
and urban development awards won by
Norwegians - a selection**

2009

Mies van der Rohe Award (EU award for contemporary architecture) Architect: Snøhetta AS / Building: The Norwegian Opera and Ballet, Oslo

World Architecture Festival Award (Category: Culture building) Architect: Snøhetta AS / Building: The Norwegian Opera and Ballet, Oslo

Detail – Ehrenpreis, Germany (awarded for first time) Architect: Sverre Fehn

Honorary membership of the German Architects' Association (BDA) Architect: Sverre Fehn

2008

Erich Schelling Architektur Preis (German architecture award) Architect: Jensen & Skodvin Architects Office as

Europe 40 under 40 Awards (award for promising young design talent) Architects: 3RW Arkitekter and a-lab (Arkitekturlaboratoriet AS)

European Concrete Award Architect: Sverre Fehn / Building: Gyldendalhuset, Oslo

European Steel Bridge Award Architect: Arne Eggen Architects AS / Building: Ypsilon pedestrian and cycle bridge, Drammen

European Urban and Regional Planning Award Winner: Drammen local authority

2007

European Steel Design Award Architect: LPO architecture and design as / Building: Kunnskapsparken, Papirbredden, Drammen

FIABCI Prix d'Excellence (Residential category) Architect: Kari Nissen Brodtkorb AS / Building: Lysaker Brygge, Bærum

MARMOMACC International Stone Award Architect: Jensen & Skodvin Arkitektkontor AS / Building: Tautra Mariakloster

***Profiling Norwegian
architecture internationally
is a priority***

Profiling Norwegian architecture internationally is one of the Government's priority areas in the dissemination of Norwegian art and culture abroad. The Ministry of Foreign Affairs has established a committee for design and architecture made up of representatives of relevant professions and chaired by Norsk Form. The committee considers applications and awards travel grants to professionals who are invited to important international events. Norsk Form and the National Museum of Art, Architecture and Design act as consultants for the work of the foreign service in presenting Norwegian architecture to target groups abroad.

In awarding grants for cultural, Norway-promoting and information purposes, the Government's aim is that the foreign service's marketing of Norwegian architecture to an international audience should continue to be extended and strengthened. The presentation of Norwegian architecture through exhibiting in important arenas, including participation in the most significant international biennials and triennials, will also be a priority. The presentations should focus on high architectural quality, energy efficiency, universal design, the use of eco-friendly materials and innovative building systems that are likely to create international awareness of Norwegian architecture.



[6.2] Winner of European Steel Bridge Award 2008: Ypsilon pedestrian and cycle bridge. Drammen
(Arne Eggen Arkitekter AS)

The profiling of Norwegian architecture should be positive for industry

Norway has architecture of high quality. It is part of Norwegian expression and of the image of Norway internationally and it is important in creating Norway's reputation. The attention given to Norwegian architecture in international media, from the new Opera building in Oslo to the Norwegian Trekking Association's new cabin at the Pulpit Rock near Stavanger and the new embassy building in Kathmandu in Nepal, says something important about Norwegian creativity and Norwegian society. Norway has become better known abroad for the artistic qualities of its buildings. No other building in modern times has made as great a contribution to profiling Norway internationally as the Opera building in Oslo. Global media coverage and a number of prestigious international awards are helping greatly in directing the attention of the profession and media internationally towards Norway.

Activities will be organised that focus on the opportunities to be gained from collaborating with Norwegian industry, which can also have a positive knock-on effect for the labour market and Norwegian competitiveness.

There will be an increased emphasis on measures aimed at professional circles whose attention is desired. In addition to architectural circles and commercial interests, it may also be possible to promote a wider range of Norwegian interests, such as Norwegian environment, energy and climate policy.

Venice Biennale of Architecture

The first Venice Biennale of Architecture took place in 1980 and has been from the very beginning the world's biggest and most important architectural event. The exhibition now attracts more than 100,000 visitors.

The Biennale Park houses 32 pavilions representing different countries. In 2008, 28 other countries took part in addition to these. The Biennale also has an enormous international exhibition.

The Nordic pavilion was designed by Sverre Fehn in 1962 and is owned by Finland, Sweden and Norway. The exhibits there are created in collaboration by the museums of architecture in Finland and Sweden and the National Museum in Norway. Norway's part of the exhibition is financed with funding from the national Museum and the Ministry of Foreign Affairs.

In 2008, the entire Nordic pavilion was at the disposal of the National Museum for the first time and showed the exhibition *Sverre Fehn, Intuition – Reflection – Construction*.



[6.3] The Nordic pavilion in Venice. Italy (Sverre Fehn)



[6.4] King Abdulaziz Center for Knowledge and Culture. Dhahran, Saudi Arabia (Snøhetta)

Norwegian architecture should be displayed in international arenas

It is important that Norwegian architecture should be displayed in international arenas, which could in turn lead to international awards, invitations to competitions and assignments abroad. Norwegian architectural practices must have the opportunity to export their competence in the same way as other companies. Respect for Norwegian architecture internationally is often based on the efforts of individuals, both as practising architects and in an educational context. At the same time, the eyes of the world are directed towards Scandinavia and Norway as pioneering countries in connections related to architectural production.

The promotional institutions in the field of architecture should increasingly produce exhibitions and information material that contributes to a positive international profiling of Norwegian architecture. In addition to displaying outstanding architecture, the exhibitions should also help to promote a wider spectrum of Norwegian commercial interests, including promoting Norway as an attractive travel destination. Arrangements should be made for more visits to Norway by the international trade press, resource persons and experts from leading foreign professional circles and media.

Competitions abroad won by Norwegian architects - a selection

2009

Winner: tripartite 1st prize: 70°N Arkitektur / Dahle & Uhre architects et al.
Competition: Nordhavnen district in Copenhagen, Denmark

2008

Winner: Space Group AS
Competition: Hotel, Lernacken, Sweden

Winner: Snøhetta AS
Competition: King Abdulaziz Center for Knowledge and Culture, Dhahran, Saudi Arabia

2007

Winner: a-lab AS, Migrant AS architecture+ urbanism, Zink interior, Multiconsult/13.3
Competition: City Hall, Ajman, United Arab Emirates

GOVERNMENT BUILDINGS ABROAD

The Ministry of Foreign Affairs occupies more than 200 offices and official residences abroad. The most representative Foreign Service buildings for marketing Norwegian architecture are naturally those where Norwegian architects have carried out the project. In the other buildings, which have not been designed by Norwegian architects, the internal fittings and interior architecture have an important function in the work of presenting Norway and Norwegian culture and products abroad. This is used actively to promote Norwegian design, art and architecture to an international environment and potential market.

The Ministry of Foreign Affairs and Statsbygg, The Directorate of Public Construction and Property, collaborate closely in the design of new buildings that will be used as offices and hospitality accommodation by the Foreign Service. They are currently working on planning a new official residence in Kathmandu and office buildings in Paris, Nairobi, Beijing, New Delhi, Kabul and Islamabad, among others. A new official residence in Sofia designed by Norwegian architects opened in autumn 2009.

As a general rule, the same requirements for architectural quality and accessibility apply to Norwegian Foreign Service buildings as to public buildings in Norway. The possibility of realising these may be affected by various considerations, including security, architectural values, conservation status and local laws and regulations. However the Government wishes, through the Ministry of Foreign Affairs and Statsbygg, to improve accessibility in our Foreign Service buildings through an action plan for universal design.



[6.5] Detour exhibition in Bologna.

Detour

Norsk Form, in collaboration with the National Tourist Route project of the Norwegian Public Roads Administration, has produced the exhibition presented abroad as *Detour: Architecture and Design Along 18 National Tourist Routes*. Experimental architecture and the magnificence of nature meet in this exhibition, which shows architectural projects along the Norwegian Tourist Routes. Visitors find viewpoint platforms, rest areas, service areas and stopping points of high quality. These have mainly been designed by young Norwegian architects, landscape architects and designers. The Tourist Route project and Detour have achieved international recognition and attracted a great deal of publicity.

The aim of the exhibition is to get more people to holiday in Norway and to strengthen Norwegian business and settlement, especially in rural areas. The travelling exhibition is the result of collaboration between the Ministry of Foreign Affairs and Innovation Norway.

For more information about the exhibition, see www.norskform.no



[6.6] Norwegian Embassy in Kathmandu, Nepal (Kristin Jarmund Architects as)

Exhibition of Contemporary Norwegian Architecture

Every five years the National Museum of Art, Architecture and Design creates an exhibition that is presented abroad under the title *Contemporary Norwegian Architecture*. The exhibition is produced in close collaboration with the Ministry of Foreign Affairs and shows highlights of contemporary Norwegian architecture through fifty of the best buildings to be built in Norway or designed by Norwegian architects and built abroad during the preceding five year period. These exhibitions represent the most comprehensive events we have for contemporary Norwegian architecture and the catalogues have become important source documents for those seeking an overview of Norwegian architecture from 1975 to the present day.

The National Museum also creates other architectural exhibitions that are shown internationally. The most important of these have been *Norwegian Wood*, *Sverre Fehn – Architect*, *The New Bibliotheca Alexandrina*, *Sverre Fehn, Intuition – Reflection – Construction* and *Snøhetta, Architecture – Landscapes – Interiors*.

For more information about the exhibition, see www.nasjonalmuseet.no



*Internet-based information
will be strengthened*

Norsk Form wishes internet-based information to be strengthened by developing a multilingual information channel on the internet and producing a monthly newsletter in English about Norwegian design and architecture for international media, professional circles and other interested parties. Norsk Form also aims to establish a database including information about awards in the fields of urban environment, architecture and building and environmental design. This will provide guidance for the Norwegian and international media and other professionally interested parties. The internet portal of the foreign service, Norgesportalen, is published in 19 languages and will be linked to the information channels and databases of the professional institutions. Norgesportalen will be expanded to 23 languages.

[6.7] Interior of the Hamsun Centre in Hamarøy, Nordland (Steven Holl)

The areas of responsibility of the ministries in architectural policy

MINISTRY OF CHILDREN AND EQUALITY

The Ministry of Children and Equality works for consumer rights, families, the circumstances of children and young people, persons with reduced functional ability, anti-discrimination and real equality of opportunity between women and men.

The Ministry of Children and Equality is responsible for coordinating policy for persons with reduced functional ability. This includes the coordination of *Norway Universally Designed 2025*, the Government's action plan for universal design and increased accessibility 2009-2013. The universal design of surroundings such as buildings, open spaces and transport is central to the plan.

MINISTRY OF RENEWAL AND ADMINISTRATION

The Ministry of Renewal and Administration is responsible for the government's building and property policy in the civil sector. The ministry directs Statsbygg, The Directorate of Public Construction and Property. Statsbygg is an adviser in building and property issues, a building commissioner, property manager and property developer. Statsbygg provides good, functional premises for public bodies and services and realises the government's social policy goals for architectural quality, universal design, conservation of cultural heritage and the environment. Statsbygg also safeguards government interests in planning processes. Statsbygg is involved in organising, planning and implementing around 140 projects at any one time, between 10 and 20 of them being completed each year.

MINISTRY OF DEFENCE

The Ministry of Defence is the country's largest public land administrator and invests large amounts each year in property, buildings and infrastructure. In 2009 almost NOK 1.6 billion is being invested in property, buildings and infrastructure in the defence sector. The Norwegian Armed Forces have a

property portfolio totalling about 4.7 million square metres, which also includes cultural heritage property and 14 national fortresses. As a major public sector building commissioner, the Norwegian Armed Forces also have a responsibility to safeguard considerations of quality in physical surroundings and good architecture. The Norwegian Armed Forces are also a major employer and good physical surroundings are important for people's daily life and wellbeing.

The Norwegian Defence Estates (FB) is the professional body of the Norwegian Armed Forces in the fields of property, building and infrastructure. FB is the government agency that, on behalf of the Ministry of Defence, invests in the armed forces' buildings and infrastructure and also safeguards architectural considerations in the armed forces' buildings.

MINISTRY OF HEALTH AND CARE SERVICES

The Ministry of Health and Care Services has overall responsibility for ensuring that the population receives good and equal health and care services, regardless of place of residence and personal finances, among other considerations. The ministry controls the health and care service through comprehensive legislation and annual funding and with the aid of government agencies, organisations and authorities. The ministry is a property administrator through the regional health authorities and underlying health authorities. However it is the local authorities that are increasingly building and owning nursing homes and serviced accommodation and other premises for the local health and social services.

Knowledge about the connections between architecture and health, wellbeing and quality of life is safeguarded in ordinary local authority planning in accordance with the Planning and Building Act. The planning section of the new Planning and Building Act requires regional and local authorities, as planning authorities, to safeguard both health and social considerations in planning.

MINISTRY OF LOCAL GOVERNMENT AND REGIONAL DEVELOPMENT

The Ministry of Local Government and Regional Development is responsible for housing and building policy and administers central resources and measures that affect the architectural design of the built environment. The ministry is responsible for building legislation, with requirements for architectural design, universal design, use of health and eco-friendly materials and energy use in buildings, among other things. The Ministry of Local Government and Regional Development also has a general responsibility for work on good building and environmental design, design of communities, area development and attractive localities.

THE MINISTRY OF CULTURE AND CHURCH AFFAIRS

The most important institutions within the area of responsibility of the Ministry of Culture and Church Affairs, with tasks relating to architectural policy, are Norsk Form and the National Museum of Art, Architecture and Design. The organisations

Public Art Norway (KORO) and the independent foundation ROM (Space) for art and architecture also operate in the intersection between architecture and art. The ministry is also the procurer of or provides support to cultural buildings and the building of sports facilities. The ministry is also the approving authority for the erection of new church buildings. It is also involved with grants to artists through Arts Council Norway, work on *The Cultural Schoolbag* and the profiling of architecture abroad (through Norsk Form and the National Museum of Art, Architecture and Design).

THE MINISTRY OF EDUCATION AND RESEARCH

The Ministry of Education and Research is responsible for architectural education through the Oslo School of Architecture and Design and the Norwegian University of Science and Technology in Trondheim. The Norwegian University of Life Sciences provides education in landscape architecture. In addition the ministry provides funding for education in architecture at the private institution Bergen School of Architecture.

The Ministry of Education and Research's underlying institutions of higher education occupy a total of about 3.2 million square metres. The ministry primarily uses Statsbygg, The Directorate of Public Construction and Property, as its building commissioner and adviser for the construction of new buildings and for the refurbishment of older buildings and cultural heritage property. The ministry emphasises that buildings should be functional and well suited to the requirements for quality in teaching and research. This also means that requirements are set for the buildings' aesthetic design, while technical building requirements must be emphasised with a view to operation and maintenance. In cases of leased property with private developers, the ministry sets requirements for good, functional leased premises that also meet the government's requirements for architectural quality.

MINISTRY OF AGRICULTURE AND FOOD

The Ministry of Agriculture and Food's responsibility for buildings and landscape is grounded in its role as producer of collective goods for society, something that was emphasised in the last white paper on agricultural policy. This is the basis for a programme that has been established that will cover the themes of new agricultural buildings and cultural landscapes, new use of vacant agricultural buildings and Mapping agricultural buildings of cultural heritage significance. The programme is intended to ensure good adaptation of landscape and good aesthetic qualities in the built elements of the agricultural landscape.

The Government, through the Ministry of Agriculture and Food and the Ministry of the Environment, has selected 20 cultural landscapes in agriculture that will be given special care and management. Each county in the country will take care of one of the selected landscapes in collaboration with local authorities and landowners. In total, these landscapes give a national cross section of cultural landscape in agriculture with great biological and heritage value.

The use of wood as an eco-friendly and renewable material, as a substitute for other materials that require more energy, will enable the combination of good environmental solutions with an exciting aesthetic expression.

On behalf of the general public, the state-owned enterprise Statskog, as the country's biggest landowner, manages and maintains a huge volume of rural buildings (forest shelters, mountain cabins, logging plants etc.) that altogether are of great cultural heritage significance.

MINISTRY OF THE ENVIRONMENT

The Ministry of the Environment has special responsibility for the Government's environmental policy. The ministry takes initiatives for, develops and implements measures through its own channels, but is also a driving force in respect of various sector authorities at national level. The ministry is responsible for coordinating the Government's environment policy goals and ensuring that results of environmental policies are followed up on. The Ministry of the Environment emphasises that environmental policy should be locally

endorsed and stimulate local environmental work. Collaboration and dialogue with trade and industry is also an important part of environmental policy. International collaboration on the environment is a prerequisite for being able to address regional and global environmental issues. Environmental management contributes in a number of arenas to ensuring that international collaboration on the environment at all levels is extended and strengthened.

The work of the Ministry of the Environment is divided into results areas. Each results area focuses on one of the most important environmental issues and identifies the Government's total environmental policy efforts. Directly relevant to the Government's architectural policy are the results areas "Planning for sustainable development" and "Conservation and use of cultural heritage sites". Other relevant results areas are "Clean sea and water and toxin free society", "A stable climate and clean air" and "Conserving nature's diversity and outdoor recreation".

MINISTRY OF TRADE AND INDUSTRY

The Ministry of Trade and Industry has no direct instruments of architectural policy, but architectural policy can have industry policy relevance and several areas of business and innovation policy affect architectural policy. The areas in which the ministry has instruments that may have particular relevance in this context are primarily directed at international profiling.

The ministry has business and profiling funds that support the implementation of actual, commercially related activities in the offices of the Foreign Service. The aim is to coordinate and strengthen the total and long-term national effort to increase Norwegian exports and promote Norwegian commercial interests. Among the priority areas are projects that contribute to profiling modern Norway and an innovative Norwegian trade and industry.

The Ministry of Trade and Industry is responsible for following up Norway's membership in the international exhibition bureau BIE, which regulates the frequency and quality of world exhibitions. One of the aims of Norway's participation in world exhibitions is to promote Norwegian trade and industry abroad and this provides very good opportunities for the international profiling of Norwegian architecture.

The Ministry of Trade and Industry is responsible for the Norwegian Design Council, which has contributed actively over the last ten years to profiling Norway internationally in a number of arenas. The events are often in collaboration with the Ministry of Foreign Affairs, Innovation Norway and Norsk Industri in connection with state visits or other official Norwegian events. Several of the profiling events have featured joint exposure of Norwegian design and architecture.

THE MINISTRY OF PETROLEUM AND ENERGY

The main task of the Ministry of Petroleum and Energy is to facilitate a coordinated and comprehensive energy policy.

The Ministry of Petroleum and Energy owns the state-owned enterprise Enova, which was created in 2001. Enova is the Government's instrument in the work of changing to eco-friendly energy, including energy efficiency measures and the transition to using

energy carriers other than electricity and oil for heating. This work is financed through the government's Energy Fund. The Energy Fund is partly financed through a supplement on the grid tariff for withdrawing power in the distribution network, as well as from returns on the fund for renewable energy and energy efficiency. NOK 10 billion was transferred into this fund in 2007 and a further NOK 10 billion in 2009. The Government intends to increase the fund by up to NOK 10 billion by 2012. In addition, NOK 1.19 billion was granted to Enova in the Government's package of measures (Bill no. 37 of 2008-2009 on changes to the national budget for 2009 with working measures).

MINISTRY OF TRANSPORT AND COMMUNICATIONS

The Ministry of Transport and Communications has overall responsibility for the regulatory framework for post and telecommunications, for the aviation, road and rail sectors and for the national car ferry network.

The ministry's working area covers long-term planning, review and analysis, as well as legislative and regulatory work and budget items within these sectors.

The ministry directs the Norwegian Public Roads Administration, the Norwegian National Rail Administration, the Civil Aviation Authority, the Norwegian Railway Inspectorate, the Post and Telecommunications Authority, the Cable Car Inspectorate and the Norwegian Accident Investigation Board. The ministry also administers the government's ownership interests in Avinor AS, Posten Norge AS, NSB AS and Baneservice AS.

Subordinate agencies and companies are responsible for investment, operation and maintenance of publicly owned transport infrastructure and safeguard considerations of good architecture in these.

MINISTRY OF FOREIGN AFFAIRS

The Ministry of Foreign Affairs is responsible for international cultural collaboration, including the internationalisation of Norwegian architecture as an expression of cultural design and innovation, with positive aspects for Norwegian trade and industry and tourism. Strengthening international cultural collaboration is part of the Government's promotion of culture and is intended to ensure the diversity of contacts that is essential for the growth of Norwegian culture.

The Foreign Service's offices abroad present and market Norwegian architecture globally through architectural exhibitions, presentations, seminars, press and inspection visits to Norway and an internet based presentation on Norgespportalen. The Foreign Service collaborates closely with professional circles in Norway and abroad, while the professional institutions carry out the necessary prioritising of exhibitions and participation in important international arenas. The responsibility of the Foreign Service is to cement contacts and create arenas and meeting places that facilitate dialogue, exchange and collaboration.

The Ministry of Foreign Affairs and Statsbygg, The Directorate of Public Construction and Property, collaborate closely on the design of new office and official residence buildings for our foreign service. The ministry is responsible for internal fittings and interior architecture in all the Foreign Service's premises. These premises are also actively used to promote Norwegian architecture abroad.

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- [a.11] Photo: **Nils Petter Dale**. Svalbard Research Park. Svalbard (*Jarmund/Vigsnæs AS, Architects MNAL*)
- [a.12] Photo: **Benjamin Hummitzsch**. National Library, annex. Oslo (*Longva Architects*)
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- [4.1] Photo: **Ghilardi + Hellsten Architects**. "Culture of risk", Oslo Triennale exhibition at DogA in 2007.
- [4.2] Photo: **Emile Ashley © NAL|ECOBX**. Egenes Park. Stavanger (*HLM Architecture and Plan as / Onix*)
- [4.3] Photo: **Thomas Hansen**. Education in architecture. Oslo School of Architecture and Design
- [4.4] Photo: **Norwegian Wood**. Marilunden. Stavanger (*Eder Biesel Architects AS / Noncon:form, Austria / Schønher Landscapes KS*)
- [4.5] Photo: **Galleri ROM**. From exhibition opening at Space for Art and Architecture, Oslo.
- [4.6] Photo: **Michael Fuller Gee/Housing Bank**. Environments with quality; "The Blue Stone" in Bergen. (*Asjorn Andersen*)
- [4.7] Photo: **Norsk Form**. Formlab, Norsk Form's architecture workshop at Doga. Oslo.
- [4.8] Photo: **Morten Thorkildsen / National Museum of Art, Architecture and Design**. National Museum - Architecture. Oslo (*Sverre Fehn*)
- [4.9] Photo: **Geir Brendeland**. Villa Nilsen/Borgen. Trondheim (*Brendeland and Kristoffersen Architects AS*)
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- [5.1] Photo: **Jiri Havran**. The Norwegian Opera and Ballet. Oslo Oslo (*Snøhetta*)
- [5.2] Photo: **Jarle Wæhler / Norwegian Public Roads Administration**. Ørnesvingen viewpoint. National Tourist Route - Trollstigen, Geiranger (*3RW / Sixten Rahlff*)
- [5.3] Photo: **Lund Hagem Architects / Atelier Oslo**. New Deichmanske central library. Oslo (*Lund Hagem Arkitekter / Atelier Oslo*)
- [5.4] Photo: **Geir Egil Bergjord / KORO archive**. Artwork by Laila Kongevold. Jeg ser, 2005-2006, University of Stavanger.
- [5.5] Photo: **Vegar Moen for Norwegian Public Roads Administration**. Toilet and services building at Hellåga area on the Coastal Realm Highway near Sjøna in Rana. National Tourist Route, Helgeland North (*Nordplan AS - Arild Waage*)
- [5.6] Photo: **Narud Stokke Wiig Architects and Planners AS**. St. Olav's Hospital. Trondheim (*Narud Stokke Wiig Architects and Planners AS*)
- [5.7] Photo: **Bjørbeek og Lindheim Landscape Architects**. Pilestredet park. Oslo (*Bjørbeek og Lindheim Landscape Architects*)
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- [6.1] Photo: **Jensen&Skodvin Arkitektkontor as**. Bad Gleichenberg" spa. Austria (*Jensen&Skodvin Architecture Office as*)
- [6.2] Photo: **Fredrik Bekken**. Winner of European Steel Bridge Award 2008: Ypsilon pedestrian and cycle bridge. Drammen (*Arne Eggen Arkitekter AS*)
- [6.3] Photo: **Eva Madshus**. The Nordic pavilion in Venice. Italia (*Sverre Fehn*)
- [6.4] Illustration: **MIR / www.mir.no** King Abdulaziz Center for Knowledge and Culture. Saudi Arabia (*Snøhetta*)
- [6.5] Photo: **Norsk Form**. Detour exhibition in Bologna.
- [6.6] Photo: **Guri Dahl**. Norwegian Embassy in Kathmandu. Nepal (*Kristin Jarmund Architects as*)
- [6.7] Photo: **Ernst Furuhatt / Salten Museum**. Interior of the Hamsun Centre in Hamarøy. Nordland (*Steven Holl*)

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