



Evolution in the building industry



Innovation

Sustainable development

PRESS KIT BATIMAT 2003

CONTENTS

EVOLUTION IN THE BUILDING INDUSTRY

LAFARGE – DRIVING CHANGE IN THE BUILDING INDUSTRY	p.	4
I. IMPROVING WORKING CONDITIONS ON CONSTRUCTION SITES	p.	5
II. SUPPORTING PROFESSIONAL PERFORMANCE	p.	7
III. CONTRIBUTING TO TRAINING PROFESSIONALS	p.	10

SUSTAINABLE DEVELOPMENT

LAFARGE AT THE HEART OF SUSTAINABLE DEVELOPMENT	p.	13
I. COMMITMENTS FOR SUSTAINABLE GROWTH	p.	14
II. PUBLICATIONS : REPORTING PROGRESS ACHIEVED AND GOOD PRACTICES	p.	17
III. PRODUCTS FOR SUSTAINABLE CONSTRUCTION	p.	18

INNOVATION

LAFARGE, INNOVATING TO CREATE VALUE	p.	22
I. PRODUCTS AND SYSTEMS	p.	23
II. TOOLS AND SERVICES	p.	27

APPENDICES

LAFARGE GROUP PROFILE	p.	30
LIST OF PRESS CONTACTS	p.	31
PRESS RELEASE SEPTEMBER 4,2003 : THE LAFARGE GROUP HAS SELECTED ARCHITECTS BECKMANN AND N'THÉPÉ TO DESIGN ITS STAND FOR BATIMAT	p.	32
ILLUSTRATIONS	p.	34



EVOLUTION IN THE BUILDING INDUSTRY

LAFARGE – DRIVING CHANGE IN THE BUILDING INDUSTRY

As a benchmark supplier and a partner of construction industry players (specifiers, craftsmen, contractors, dealers, etc.), Lafarge, world leader in building materials, plays an active part in bringing about change in the building industry. The Group's commitment to help its customers generate value in their own businesses is notably expressed through its detailed understanding of their activities and their specific needs, enabling it to design and offer them the best products, systems, services and solutions, drawing on all the benefits of the Group's worldwide experience.

By developing innovative products and offering pertinent services from the array of technological possibilities available, Lafarge actively promotes the transformation of building trades by helping professionals improve the quality of their work, their comfort, their health and their safety.

This approach is based on several factors :

- **Improvement of working conditions**, seen through many examples :
 - the commitment of Lafarge Ciments (French cement business unit) to masons in the form of a health and safety charter signed with all the professional organizations leading to a reduction in the weight of cement bags and the wearing of gloves,
 - the creation of services facilitating the organization of public works contractors, thanks to a quarry geolocation tool (Lafarge Granulats, French aggregates business unit),
 - development of high-performance and easily applied products, such as the Agilia[®] range (Lafarge Bétons, French concrete business unit) or the roofing membrane unwinder (Lafarge Couverture, French roofing business unit), which make site work less arduous, optimize site organization and provide greater safety for professionals.
- **Supporting performance** by providing professionals with such innovative tools as :
 - two websites, batissor.com, intended for craftsmen and contractors, and creargos.com, which targets specifiers
 - the Lafarge Materials Information Center, a call center available for all building industry players,
 - a roof configuration software tool (Lafarge Couverture), a companion for the roofer at every step of the process of building a roof.
- **Contributing to the training of building trade professionals** : organization of "Demo Days" (Lafarge Group), sponsorship of the National Skills Competition (Lafarge Ciments), creation of "Toituriers de France", a network of roofing contractors (Lafarge Couverture), the "Launch your career" operation (Lafarge Granulats), collaboration with apprentice training centers, etc.

Through all these initiatives – informing, training, supporting and forging links – the Lafarge Group endeavors to help everyone be more efficient in their own businesses.

I. IMPROVING WORKING CONDITIONS ON CONSTRUCTION SITES

Lafarge Ciments

Partnering building professionals to reduce the weight of cement bags from 50 kg to 35 kg

Resulting from a charter signed by a number of professional organizations (FFB - Union Maçonnerie Gros Œuvre, CAPEB UNA Maçonnerie-Carrelage, FFNMC and SFIC), the move to lighten the weight of bags of cement is part of a drive which aims to improve the occupational health and safety conditions of building trade professionals. This change not only constituted significant progress for the entire profession, it also represented a big shift in working habits. To cope with the challenge, Lafarge Ciments, which supplies all its distributors with 35 kg bags, set up an entire communications campaign to support its partners : publication of an information leaflet providing answers to the main questions about 35 kg bags and giving examples of proportioning, introduction of an easily recognizable mascot figure to embody the 35 kg Lafarge Ciments bag, development of sales aids for distributors (information posters, proportioning table, etc.), and design of application aids for craftsmen (two leaflets “A range for masons” and “New 35 kg proportioning”).

“Masonry builds its future” – a commitment to masons

As a partner of the “masonry builds its future” information campaign run by the FFB - Union Maçonnerie Gros Œuvre, CAPEB UNA Maçonnerie-Carrelage, FFNMC and SFIC, Lafarge Ciments is working alongside building trades professionals to help protect their health and improve working conditions on construction sites. The aim is to encourage site workers to wear protective gloves systematically during all handling of cement, and to warn them of the risks presented by cement when it is mixed with water and comes into contact with the skin.

Lafarge Granulats

Two clicks to locate a quarry

Lafarge Granulats has supplemented its offer by providing a new tool for building industry professionals and private individuals. Available on the lafarge-granulats.fr website, an original and practical geolocation tool enables visitors to the website to instantly visualize access roads to Lafarge Granulats quarries. This is intended to help customers locate the quarry situated closest to their building sites.

Lafarge Bétons

Agilia[®] self-placing concrete range : facilitating building sites

Bringing about a significant reduction in the impact of building sites on workers and on the environment, the Agilia[®] range is playing a part in transforming the building trades. The 11 self-placing and self-leveling products in the Agilia[®] range bring numerous benefits for craftsmen :

- reduced duration of building thanks to the easy application of the products and the reduction of the smoothing phase,
- less arduous work : these forms of concrete place themselves and deliver optimal filling, doing away with the need for vibration or troweling operations (certain products in the range contain metal fibers, removing the need for a wire grille, a process approved by a CSTB Technical Evaluation),
- reduction of noise and greater safety thanks to the elimination of vibrations and use of the power trowel as well as the reduced number of pouring points.

Agilia[®] thus seeks to reduce the impact of a construction site on its environment, as much for the benefit of the site workers as for local residents.

Lafarge Couverture

Roofing membrane unwinder for rapid and safe laying

Lafarge Couverture is launching a roofing membrane unwinder, an original tool designed for carpenters and roofers. This patented appliance provides professionals with a practical and economical new solution for saving time onsite. It simplifies membrane laying, and presents a number of benefits for the roofer, so contributing to the transformation of building trades :

- it is lightweight (5 kg) and easy to handle (it can be installed by one person working alone), and makes it possible to unwind the membrane directly onto the roof frame without the need to pre-cut it in strips,
- the ingenious device reduces the time taken to lay the roofing membrane : it only takes 15 minutes to cover an 80 m² surface (on a 60% pitch),
- it is economical, delivering savings of 10% to 15% of material consumed thanks to a movable built-in blade allowing very accurate cutting.

The unwinder is equipped with a clever fixing system for rafters, enabling it to be moved rapidly, avoiding the need to walk backwards and making it easier for the carpenter to move about on the roof.

Lafarge Plâtres

New PLAtec system : cut-to-size plasterboard elements

Lafarge Plâtres has launched the PLAtec system in France, consisting of plasterboard elements that can be used for all types of decorative and finishing work.

With the new system, Lafarge Plâtres offers plasterboard installers the services of its design office coupled with a workshop specializing in manufacturing and cutting plasterboard elements to measure.

Offering new outlets to contractors, the PLAtec system allows simple and rapid construction of assemblies that usually take considerable time and require the on-site presence of highly-skilled personnel (cornices for concealed lighting, recessed joints, decorative finish or joinery for insertion in partitions, overhangs and more complex forms, such as ellipses, domes, cones, etc.).

The PLAtec system brings real added value to plasterboard installers :

- high-quality decorative works can be produced simply (the finish of angles produced with milled board is perfectly clean and computerized numeric milling machines deliver precision to within 1/10 mm),
- productivity is improved thanks to the time-saving in design and installation made possible by the use of prefabricated elements and the fact that PLAtec plasterboard elements are ideal for subsequent decoration and painting,
- economies of scale for multiple features, with identical reproduction of elements,
- a solution to the problem of lack of personnel, in particular qualified personnel,
- less loss and wastage of materials.

The PLAtec system is an advantageous replacement for wood- and metal-based solutions.

II. SUPPORTING PROFESSIONAL PERFORMANCE

Lafarge Group

Batissor.com – boosting craftsmen’s performance

Intended for craftsmen and contractors, Lafarge’s non-transactional Batissor.com website offers a wide array of information and services to help professionals perform better – comprehensive technical information not only on Lafarge products and solutions, but also on the management of their businesses. An ergonomic, user-friendly site, visitors can find the information they require with just a few clicks of the mouse. They only need to select the type of work to be performed (masonry, screeds, roofing, facades, plastering, finishing, etc.) and to make a choice from several headings :

- “My sites” regroups all the technical information (information on materials, calculation and simulation tools, standards and regulations, expert advice, etc.),
- topics relating to sales and managing the company and personnel are collected under “My company”,
- “Subject of the Day” covers important subjects for craftsmen and contractors, such as “New VAT rules for billing,” “Telephone answering,” “The temporary employees’ bonus,” etc.,
- “New product” highlights a recent and innovative Lafarge product.

Creargos.com – features for specifiers and consulting engineers

A tool to aid design for all building industry specifiers, whether architects or consulting engineers, the new version of the creargos.com website has been simplified ergonomically, allowing more user-friendly net surfing. Developed in conjunction with a research institute for consulting engineers and owners, it now provides exclusive features :

- free e-mail alerts of the latest competitions and invitations to tender for government contracts,
- new guide to public works solutions.

With 30,000 visitors and 200,000 pages consulted every month, creargos.com guides and supports specifiers, seeking to make their everyday work easier.

Lafarge call center – a dedicated service for craftsmen and specifiers

Launched in 2001, the Lafarge Materials Information Center is an assistance service available for all building industry players. Seeking to make things still easier for its customers, Lafarge has simplified access to its call center with two telephone numbers, 082-LAFARGE or 0820 385 385.

A team of Lafarge technical advisors man the phone lines between 8 a.m. and 7 p.m., Monday to Friday, providing rapid and accurate answers to technical questions relating to all the sectors in which Lafarge operates – Concrete, Roofing, Gypsum, Cement and Aggregates. A source of essential technical information for craftsmen and specifiers alike, the service :

- provides advice on the choice of a product or a material,
- gives information on application and conditions of use,
- makes it possible to check regulatory constraints and to obtain information on technical evaluations, directives, standards, etc.,
- can be used for ordering technical literature.

The reliability of the answers provided is guaranteed by the advisors' excellent level of technical knowledge. They follow an intensive training program and are subject to regular tests of their knowledge on all Lafarge sectors and products. The call center also refers callers to the appropriate technical expert of a Group subsidiary if the question so requires, and checks that the craftsman or specifier's request for help has received an appropriate answer.

With several tens of thousands of contacts recorded since the introduction of the service and a 40% rise in the number of calls during the first half of 2003, the Lafarge call center is fulfilling its ambition of providing a genuine service for construction industry craftsmen and specifiers.

Lafarge Couverture

Roof configuration software tool – the roofer's companion

Lafarge Couverture has upgraded its roof configuration software, launching a more complete version. Unique on the market, the tool recommends all the elements required for a roof (tiles and roof system components). A decision-making tool reserved for use by professionals, it can be used to select products by way of an interactive catalogue adapted to the geometry of the roof and its geographical location.

The roofer can rely on the software tool like a trusty companion. It provides him with a complete and coherent solution in the form of a detailed and quantified list of all the elements needed to produce a roof. Forming part of the comprehensive approach to roofing developed by Lafarge Couverture, the Complete Roofing System enables roofers to design solutions incorporating all the functions of the roof : durability, comfort and beauty.

This software tool is available on the lafarge-couverture.fr website, and can also be downloaded on the Lafarge Group's batissor.com and creargos.com sites.

“Toituriers de France” – a unique network of French roofers

Lafarge Couverture is now offering roofers new means to develop on the renovation market with the creation of “Toituriers de France”, France’s first such network of roofing contractors.

“Toituriers de France” offers its members a number of benefits, including :

- endorsement by a leading player in the roofing sector,
- two annual training sessions organized by Lafarge Couverture (one session of sales training and one on the use of the company’s products and systems),
- availability of sales development aids,
- promotion of the network,
- optimization of supplies,
- support in organizing promotional events (trade fairs, open days,...).

The roofing professionals of “Toituriers de France”, selected by Lafarge Couverture, commit themselves to guaranteeing a high level of service by signing a Quality Engagement Charter. The national “Toituriers de France” network, which currently consists of more than 150 roofing contractors and individual roofers, with two or three members per *département*, covers 90% of the country.

Lafarge Plâtres

The Prégyprou network – the Lafarge Plâtres plasterboard specialists

The Lafarge Plâtres Prégyprou network consists of a large number of contractors spread over the whole of France, selected each year for their technical skills and their development potential.

Lafarge Plâtres offers these contractors exclusive services to increase their professional experience, with updates of technical knowledge keeping pace with product developments, enabling them to respond better to the demands of site owners, specifiers and regulatory requirements.

The Prégyprou network is responsive, available, and offers its members a broad array of services and information on :

- products, with previews of new products, range developments, etc.,
- preferential technical assistance in the field, with preliminary studies and site follow-up,
- regular updating of technical knowledge, thanks to regional information days, specific technical sheets, personalized and exclusive training courses, etc.,
- concerns of company managers on management, responsibility, subcontracting, site management, etc., with information sessions given by specialists and meetings to discuss concrete cases.

Lafarge Plâtres provides its Prégypso plasterboard specialists with support and true professional added value. Within their zone of activity, each of these contractors, is acknowledged for his competence and the excellence of his application of Lafarge Plâtres systems.

III. CONTRIBUTING TO TRAINING PROFESSIONALS

Lafarge Group

“Demo Days” strengthen links with craftsmen

Lafarge organizes “Demo Days”, with the aim of strengthening its links with craftsmen and building contractors. Held at Lafarge Group Business Unit production facilities, these days enable professionals to see work performed for themselves and to appreciate the performance of products or the rapidity of application.

They also give building trades professionals an opportunity to become familiar with the services available on the batissor.com website, which is dedicated to them, and with the technical assistance call center. During these sessions, the craftsmen can also ask Lafarge demonstrators and advisors questions and benefit from training in a welcoming and relaxed atmosphere. Upcoming dates for Demo Days and details of the sites hosting them in 2004 will be made available via the 082-LAFARGE call center number, batissor.com and the *Entrevous* magazine.

Lafarge Ciments

Exclusive sponsor of the National Skills Competition for masonry

Since 1988, Lafarge Ciments has been the exclusive sponsor of the French National Skills Competition for masonry.

Through its support for this project, Lafarge Ciments confirms :

- the importance that it attaches to skilled labor and high-level training,
- its desire for contact and dialogue with young people, building contractors and masons,
- its wish to make the masonry profession more attractive to young people, helping to raise the image of the building trades.

Organized by the French National Skills Competition Committee, the championships are held every two years. The next competition will consist of three phases :

- regional competitions, to held between January and April 2004,
- national finals, organized by the Pays de Loire Region in Nantes from January 20 to 22, 2005,
- the international competition, the last phase of the World Skills Competition, which will be held in May 2005 in Helsinki and will see young people from 37 countries competing for the title of World Champion in their particular skill.

As a sponsor, Lafarge Ciments is committed not only to providing competing masons with Multibat[®], the premier cement for bricklaying, coating, tiling and roofing, but also to giving them access to specialists who can offer them the technical support needed for high-level preparation.

Lafarge Granulats

“Launch your career” – attracting young people to the quarry industry

With the aim of attracting young recruits to jobs such as quarry operative, site machine driver and quarry manager, Lafarge Granulats launched a nationwide recruitment and training campaign targeting young people up to the age of 26, from early school-leavers to people with two years' further education.

The plan, which aims to deal with the problem of departures programmed over the next five years, involves a number of operations designed to attract both young men and young women to often undervalued professions in the aggregates industry; including an advertising campaign in the daily press, a mini website, a toll-free telephone number, a poster and a careers brochure. In association with the ANPE, the national employment agency, and the AFPA, an adult professional education and training organization, 46 young people have been recruited from a shortlist of 80. They have been given training contracts and assigned tutors, and will spend alternating periods in the company and in training. They will qualify with professional certificates, accompanied by a promise of employment on a permanent contract.

Lafarge Plâtres

Close collaboration with apprentice training centers

Seeking to develop relations with industry and promote skill transfers with contractors in order to enrich the training programs they offer to young people, Aforbat and AFBTP, two provincial building trades apprentice training centers, have signed agreements with Lafarge Plâtres.

These partnerships involve the following benefits for the training centers :

- supply of gypsum products (plasterboard and gypsum blocks, insulation foams, frames, etc.),
- technical days, during which apprentices see demonstrations of gypsum solutions and are shown how to apply them in compliance with the requirements of regulations and the preferences of site owners and specifiers,
- provision of complete technical literature both in printed form and through Internet data banks accessible via batissor.com,
- organization of tours of plants and building sites.

Lafarge Plâtres is using these operations, not only to encourage apprentices to acquire autonomous skills, but also to help promote professions in the building trades.



SUSTAINABLE DEVELOPMENT

LAFARGE AT THE HEART OF SUSTAINABLE DEVELOPMENT

For Lafarge, as world number one for building materials, durable growth means establishing the Group's strategy in a perspective of global economic, social and environmental performance. Practical initiatives and precise targets are applied at every level of the company.

At Group level, recent commitments to NGOs (WWF for biodiversity and climate change and CARE in the area of health and development) and the United Nations (respecting human rights and labor standards) as well as commitments made alongside other industry players (WBCSD) exemplify Lafarge's desire to contribute to protecting the environment and promoting the well-being of the community in the 75 countries where it operates. The publication of the Group's second sustainability report disclosing its targets and the progress it has achieved reflects its desire for dialogue and transparency with its various stakeholders.

In the Business Units, producing while conserving natural resources, supplying while using less energy, and taking account of the entire lifecycle of its products and their consequences, Lafarge has made commitments at the level of :

- **its production processes** : a voluntary pledge to cut CO₂ emissions by 30% in French cement plants (Lafarge Ciments) over the period 1990-2010, river transportation of products (Lafarge Granulats), integration of production facilities in an urban environment (Lafarge Bétons), partnership for the use of recycled raw materials (Lafarge Plâtres),
- **the application of its products** : accessibility of resources near urban areas (Lafarge Granulats and Lafarge Bétons), limitation of nuisance factors linked to construction sites with its Agilia® range of self-placing concrete (Lafarge Bétons),
- **its products and services themselves** : Ductal®, an ultra high-strength concrete, and Durabat®, a cement that is suitable for works in naturally aggressive environments (Lafarge Ciments), special filtration sand for individual drainage systems (Lafarge Granulats), a range of decorative concrete (Lafarge Bétons), Pack 140 and Pack 190 anti-storm roofing systems with a 10-year guarantee against 140 kph and 190 kph winds (Lafarge Couverture),
- **recyclability of its materials** : 100% natural range of lime (Lafarge Ciments), removal of site rubble by river transport (Lafarge Granulats), 100% recyclable Prégymax 32TM plasterboard (Lafarge Plâtres).

Finally, Lafarge considers that the HEQ (High Environmental Quality) procedure and the issues of sustainable construction are subjects of vital importance for the future of the entire construction sector. Through all these initiatives, Lafarge confirms its environmental, social and economic responsibility on a daily basis.

I. COMMITMENTS FOR SUSTAINABLE GROWTH

Lafarge Group

Lafarge and WWF, partners in the conservation of biodiversity

Since March 2000, WWF, the international environmental protection and nature conservation organization, and Lafarge, an industrial group which considers the environment a key strategic issue, have been partners in the framework of WWF's "Conservation Partner" program. The objectives of the partnership are as follows :

- strengthening Lafarge's environmental policy, through the implementation of performance indicators (environmental audits, reduction in the consumption of non-renewable energy, waste recycling, limitation of emissions, etc.),
- raising industry standards,
- improving Lafarge's environmental performance as well as its competitive edge,
- contributing to the ecological restoration of forest ecosystems in the context of WWF's "Forests Reborn" program,
- encouraging local initiatives.

Lafarge's annual financial contribution stands at 1.3 million euros, and the partnership is for an initial period of 5 years. Both partners hope to see the agreement become established on a long-term basis.

Lafarge and the WBCSD – 10 cement producers commit themselves to an agenda for action for the promotion of sustainable development

In July 2002, ten of the world's leading cement producers announced an initiative encouraging actions that will speed up progress to sustainable development. Established in conjunction with the World Business Council for Sustainable Development (WBCSD), the following companies are involved : Cemex (Mexico), Cimpor (Portugal), Heidelberg Cement (Germany), Holcim (Switzerland), Italcementi (Italy), Lafarge (France), RMC (United Kingdom), Siam Cement (Thailand), Taiheiyo (Japan) and Votorantim (Brazil). The signatories are committed to six priority areas : climate protection, consumption of fuels and raw materials, employee health and safety, emissions reductions, local impact and internal business processes. The ten cement producers have also pledged to report on the progress of the program in 2005 and 2007.

United Nations "Global Compact" program – promoting corporate citizenship and social responsibility

Launched in 1999, the Global Compact aims to promote the corporate citizenship and social responsibility of companies. Lafarge is today committed to it, alongside 635 other signatories. Global Compact benefits from the UN's power of action and organization with regard to governments, the business world and civil society, and requires member companies to incorporate nine principles in their day-to-day operations.

These principles are inspired by the Universal Declaration of Human Rights, the Declaration of the International Labor Organization, and the Rio Declaration on Environment and Development. Each year, Lafarge must publish information on the concrete measures it has taken to comply with these principles and the lessons it has learned. For more information, visit : www.unglobalcompact.org

Battle against HIV/AIDS

In 2002, Bertrand Collomb signed Lafarge up to the Global Business Coalition against HIV/AIDS. With the collaboration of the NGO Care, an action plan and a policy were devised for the African subsidiaries of the Group. Measures include a commitment from senior managers, awareness and prevention campaigns, voluntary and anonymous HIV screening, help and advice for people who are infected, and the supply of anti-retroviral drugs. The Group's multi-partner approach involves relations with the public sector, local NGOs and local medical personnel.

Lafarge Ciments

AERES agreement : a pledge to reduce CO₂ emissions in France

Lafarge Ciments, the leading French cement producer, has voluntarily pledged to reduce its net carbon dioxide (CO₂) emissions by 30.8% in France by 2010 in comparison to 1990 levels.

This pledge, which was approved by AERES (the French Association of Companies for the Reduction of the Greenhouse Effect) in February 2003, will result in Lafarge Ciments cutting its CO₂ emissions by 2,000 Kt/year by 2010. Contributing to the fight against climate change (under the terms of the Kyoto Protocol), the target that has been set will require a supplementary investment from Lafarge Ciments of almost 80 million euros.

Lafarge Granulats

Removal of site rubble by river : a clean solution for tomorrow

As part of its business, Lafarge Granulats is required to recycle site rubble, which can be incorporated into its production or used as banking for the rehabilitation of quarries. Lafarge Granulats subsidiary Compagnie des Sablières de la Seine has won the contract for the site clearance necessary for the construction of the Primitive Arts Museum in Paris, which will house collections of native arts from Africa, the Americas, Oceania and Asia, set to open to the public late in 2005. It will take an entire year to remove the 200,000 tonnes of rubble produced by excavating to a depth of almost 30 meters for the construction of the foundations and a car park. The rubble will be transported by river in convoys from the Pont de l'Alma in Paris to Normandy. River transport, a favored means of transport for Lafarge Granulats, is not only economically viable, it also constitutes an environmental advantage. It is environmentally friendly, safe and economical, runs on time and causes neither noise pollution nor traffic jams.

The site rubble from the Primitive Arts Museum site will be recycled for the restoration of the Gaillon quarry in Normandy. The rehabilitation of this facility, which has been in operation since 1985, involves the replanting of the site through the creation of meadows and planting of trees.

Lafarge Bétons

La Capelette – integrating a production facility in an urban environment

Forced to move one of its ready-mix concrete plants as it was located on land belonging to the city of Marseilles, Lafarge Bétons was looking for a new site in the same geographical zone (the heart of Marseilles, to maintain proximity with its customers) and capable of housing both the concrete plant and the head office of its regional subsidiary, Bétons Chantiers Provence. Lafarge Bétons took the decision of setting up inside a disused date and wine warehouse thus creating an ultra-modern concrete plant, installed on the inside of the building, in such a way as to be invisible to local residents and to reduce the nuisance of noise and dust emissions. For an investment 25% higher than that of a traditional ready-mix facility, Lafarge Bétons has successfully integrated the plant in the city with no inconvenience to the surrounding population. Excluding land, the cost of the integration operation stands at 1.33 million euros.

The Vaise ready-mix plant – integration and environmental protection

A new ready-mix concrete plant at Lyon-Vaise boosts the production network of Béton Chantiers Rhône-Auvergne, a subsidiary of Lafarge Bétons. With a clientele consisting of craftsmen, building and civil engineering contractors and the general public, the new plant has a production capacity of more than 80 m³/h. The facility, which is located in the very heart of Lyons, has been entirely clad with siding panels in order to contain noise and dust emissions generated by the production of concrete.

Located on the land of a freight station run by the French national railway, SNCF, it is exclusively supplied with aggregates by rail from the Lafarge Granulats quarry at Sainte Julie. The trains have the effect of keeping the equivalent of 25 to 30 semi-trailers per day off the road. 1 million euros was invested in the construction and integration of the plant.

Lafarge Plâtres

Lafarge Plâtres and the Symiris sign an agreement for recycling domestic gypsum waste

Having cooperated on an occasional basis since 2001, the Symiris, a regional authority based to the west of Paris responsible for processing domestic garbage, and Lafarge Plâtres, have signed an agreement for the processing of 200 tonnes of gypsum block wastage per year, avoiding the need to consign it to landfill.

The Symiris will be responsible for collecting and delivering the material, and the Lafarge Plâtres Auneuil plant for recycling it. Since 1996, the plant has been equipped for recycling production waste and pre-sorted site waste.

The process developed at Auneuil for recycling the waste delivered by the Symiris includes the following stages :

- reception and monitoring of the waste,
- introduction of waste into the mix along with plasterboard scrap in the hopper of the waste grinder,
- onsite storage of natural gypsum,
- waste mixed in with natural gypsum for calcination and production of plaster. From this stage onwards, the waste is completely integrated into the flow of materials in the plant.

Recycling by conversion of material, introduced by the Symiris, depends on garbage collection centers assuming responsibility for carrying out a very strict sorting procedure at the moment of clearance to separate gypsum block wastage physically from all other materials. The Symiris has therefore organized an upstream process of recovery, storage, mechanical and manual sorting and delivery. The Symiris expects to deliver 15 tonnes of gypsum block waste per month.

II. PUBLICATIONS : REPORTING PROGRESS ACHIEVED AND GOOD PRACTICES

Lafarge Group

Second sustainability report : “Building value in the long run”

For Lafarge, sustainable development constitutes a responsible, long-term commitment, the aim of which is the creation of value in the long run. This approach increasingly guides all its operations and motivates a growing number of employees.

The second report on sustainable development published by the Lafarge Group emphasizes the follow-up of the sustainability objectives that were set and announced when the first report was published, as well as the emergence of new targets.

Efforts are concentrated in four strategic areas :

- Transparency, dialogue and partnership – collaboration with stakeholders is gradually becoming more structured at all levels of the organization and is now starting to be incorporated into the performance management programs of the Divisions and Business Units.
- Creation of economic value : the ultimate goal consists in generating value for the company’s customers, employees and shareholders. One of the tools used, EVA, which was introduced to give employees an interest in the creation of value, is progressively being extended to a growing number of employees.
- Social progress : this takes the form of the assumption of increasingly greater responsibility as much for employees as for people who live in proximity to Group businesses.
- Environmental protection : targets are built in at every phase of each business, and very significant progress has been achieved in relation to the targets set in 2001.

The new targets are to :

- Repeat employee shareholder programs at regular intervals (2004) with a medium-term target of employee ownership of 3% of equity.
- Define a Health-AIDS action plan in 100% of African countries.
- Set up a Health and Safety management system in all Business Units by 2005 (the Cement Division, where this is a particular issue, was the first to implement this system towards the end of 2002 and to define tools to achieve four objectives in 2003 : zero fatalities in silos caused by a fall or working at height; regular safety inspections; preventive analysis of risks on each site).
- Greatly increase the rate of in-house training, doubling it from one employee in six receiving training during the year to two in six by 2005.

Lafarge and the Environment : 80 case studies to demonstrate its determination

The 2003 edition of the brochure *Lafarge and the Environment* demonstrates the efforts made by Lafarge in each of its businesses and across all the countries where it operates. It provides a very clear presentation (objective, context, solution, results) of 80 concrete examples spread over seven chapters : quarry rehabilitation, conserving natural resources, protecting air quality and mitigating disturbances, water protection, transport, heritage and architecture, and products.

III. PRODUCTS FOR SUSTAINABLE CONSTRUCTION

Lafarge Ciments

Durabat[®] : a cement for works in naturally aggressive environments

Building materials are sometimes employed in particularly difficult environments (aggressive, unstable or damp soils, sewage, extreme climatic conditions, etc.). Durabat[®] cement from Lafarge Ciments is designed to take all such difficulties into account and contributes to sustainable construction.

- Durabat[®], which contains a high proportion of slag, is suitable for use in most aggressive conditions– seawater, sulfated water, pure water with low mineral content, acid water (pH>4), industrial water, sewage water, etc.
- Thanks to its excellent resistance to certain forms of chemical aggression, Durabat[®] is recommended for works in an agricultural environment (stables, manure pits, etc.).
- Durabat[®]'s low heat of hydration means that it can be used for mass concreting – e.g. foundations, concrete paving, bases, supporting walls, etc.

Ductal[®] : the first Ultra High-Strength concrete

Deriving from a revolutionary concrete technology, Ductal[®], marketed in France by Lafarge Ciments, is an Ultra High-Strength ductile concrete. Ductal[®] is a product with a fiber-reinforced cement matrix which has great compressive strength and is ductile, durable and attractive.

Its ductile, highly deformable behavior is close to that of elastic-plastic materials. This unique quality results from an improvement in the micro-structural properties of the mineral matrix and an improvement of the link between matrix and organic or metal fibers with specific geometric design. A high-technology product, Ductal[®] has a very high level of mechanical strength. The ultra fineness with which Ductal[®] is manufactured (maximum diameter 500 µm) make self-placing application possible, as well as the reproduction of textured finishes from the form of the mold.

The structural qualities of Ductal[®] mean that neither passive nor active reinforcements are needed, making it possible to produce extremely thin elements. Ductal[®] allows a combination of solidity and lightness in structures, ideal qualities required in modern architecture. Moreover, to greatly broaden the range of esthetic choices, Ductal[®] can be mass-colored.

This material constitutes a new lever for architects and engineers, enabling them to design and construct innovative and enduring graceful, slender structures that optimally comply with their intended appearance.

Performance in terms of the ductility, mechanical strength and permeability of Ductal[®] along with its ease and rapidity of application place it at the center of major market trends that give top priority to reducing overall construction costs.

A complete range of hydraulic, natural and non-hydraulic limes

For 170 years, Lafarge Ciments has been developing local and adapted ranges of binders for building and civil engineering contractors.

Compatible with old walls and environmentally friendly, its complete range of limes include :

- 3 natural hydraulic limes : Tradifarge[®], Chaux Blanche and Crualys[®],
- 1 non-hydraulic lime : Frescalys[®].

As it is the only binder that is compatible with old walls, lime is an ideal material for heritage restoration. With low strength in compression, it is flexible enough to move with the building with no risk of cracking. Its steam permeability is also vital for the durability of this type of construction.

Developed according to precise criteria, Tradifarge[®], Chaux Blanche, Crualys[®] and Frescalys[®] limes correspond to all the prescriptive requirements of the EN 459-1-2-3 standard.

Manufactured from limestone, lime is a mineral binder for exterior and interior coatings, pointing and grouting, bricklaying, and, in the case of certain products, whitewashes and lime washes.

Lafarge Granulats

Special Filtration Sand : an ecological solution for drainage installations

Since 1992, French water legislation has obliged all homeowners whose properties are not linked up to main drainage systems to install a domestic wastewater treatment system on the same plot of land, and keep it maintained in good operating order. Today, more than 13 million homes in French rural and suburban zones are affected.

Previously, these independent drainage systems used to require only a drain consisting of gravel of different grades. Current legislation, however, calls for mound systems to be created, adapted to the particularities of the terrain (topography, composition of the subsoil). The purpose is to provide traditional cesspit systems with a layer of sand intended to retain the largest particles. The sand has the same properties as a fine-mesh sieve.

The installation of this type of system is therefore compulsory on all sites where wastewater is released, including detached houses and housing developments not on the main drains.

In response to these requirements, Lafarge Granulats offers a wide range of “Special Filtration” non-limestone gravel and sands compliant with the DTU 64.1 norm (stipulating the use of washed gravel to eliminate fines), allowing homeowners to install drainage systems meeting standards. This range of aggregates, derived from natural products, also helps protect the water table.

Lafarge Bétons

Decorative concrete range – for ideal integration in the environment

Lafarge Bétons has an entire decorative concrete range with many different aesthetic qualities. Intended to enhance the appearance of buildings and outdoor structures, these products allow greater design freedom while beautifying structures and making them more durable :

- The “Bétons de Parement” cladding concrete range allows a choice of colors and can be finished in many ways – stain, bush hammered or board finish, etc. This material is suitable for all types of work, buildings and engineering structures.
- The Bétons d’Aménagement et de Décoration (features and decoration) range, including BC Désactivé, BC Imprimé, BC Coloré and BC Balayé, combines the strength of concrete with solutions that are both pleasing to the eye and economical for all types of work. Village squares, pedestrian precincts, drives and garden walks can all be improved thanks to the unlimited type of finish possibilities of this material.
- Intended for interior floors, polished and waxed concrete can be used to personalize floors, offering a wide and varied palette of colors and finishes, including an imitation of the polished appearance of marble in the case of BC Poli.



INNOVATION

LAFARGE, INNOVATING TO CREATE VALUE

Lafarge, world leader in building materials, endeavors to develop innovative products and new solutions for all players in the construction industry.

The Lafarge Group's Research & Development organization is built around the Central Research Laboratory (LCR) and a network of technical centers and specialized laboratories per Divisions and geographical regions. In all, R&D activities occupy almost 500 of the Group's employees, and account for an annual budget of approximately 100 million euros. To ensure the successful outcome of its projects, Lafarge bases its R&D on fundamental research into the physics and chemistry of building materials. This has been reflected by the marketing of such innovative products as new cements and hydraulic binders, self-placing concrete (Agilia®) and ultra high-strength concrete (Ductal®), multi-functional plasterboard (Prégydéco®, Prégydro®), etc.

Research programs meeting needs

The principal research programs currently under way include :

- **future ranges of concrete**, which focus on key problem areas for customers : cracking, control of setting and the onset of hardening, site productivity, strength, durability, appearance;
- **better controlled and more specific cements**, by improving their properties (regularity, workability, setting time, strength during the first hours, etc.) and differentiating them more so they can perform a wider range of applications;
- **new generation roof tiles**, with a guarantee of lasting appearance and higher performance, for which LCR is carrying out upstream research;
- **plasterboard with improved mechanical and acoustic performance** thanks to better microstructure control.

Innovation that creates value for both the Group and its customers

Product development involves the entire range of Group products, from constituent ingredients (cement, gypsum, lime, aggregates, additives) to finished products (concrete, plasterboard, roof tiles, screeds, mortars, etc.), and extends to services. The organization of R&D teams strengthens the Group's capacity to spread best practices and progress achieved to all Business Units. A global player established on a local basis, Lafarge is able to bring its local customers the best technology available anywhere in the world.

This overall vision, which has no equivalent in the world in the building materials sector, gives Lafarge a major competitive edge.

I. PRODUCTS AND SYSTEMS

Lafarge Group

Opening of the Western European Technical Center to improve the performance of cements

In October 2003, with the opening of the new Western European Technical Center (CTEO), dedicated to cement products, Lafarge has strengthened both its R&D network and its competitiveness in the Western Europe region.

Located at the Lafarge Technology Center in L'Isle d'Abeau (near Lyons), one of the world's largest such facilities in the building materials sector, the CTEO is home to cement R&D teams for France, Spain, Italy, the United Kingdom and Morocco. This geographic centralization strengthens the organization of the regional network of cement technical centers. The center, established in new premises of 5,000 m², employs a 90-strong team composed of people of six nationalities. Its aims are to improve the performance of cement plants and to provide assistance for, and work on the development of, existing products in terms of applications specific to the region. Its zone of activity includes 27 cement plants and six grinding plants, with a total annual capacity of 27 million tonnes of cement.

Lafarge hopes to strengthen its technological capabilities and its capacity for R&D in cement, while boosting its involvement in one of the geographic regions where the stakes for the development of building materials are the highest.

Cement is a complex material, used in many different ways, requiring constant investment to improve understanding of its behavior. The Western European Technical Center has several tasks :

- enable the transfer of knowledge and technical know-how between the countries and sites in the region, drawing up an inventory of best practices and ensuring that they are spread,
- providing assistance for assessing and improving the performance of plants in all areas – costs, process, quality, environment and choice of investments – with concern for the safety of people and of facilities,
- furnishing a high level of assistance and expertise to all sites in the region in all the fundamental technical fields of the cement industry,
- giving plants assistance and guidance for planning and carrying out their internal investments with the aim of guaranteeing the technical validity and economic efficiency of solutions.

To carry out these missions, the CTEO calls upon high-level experts with competence in the fundamental technical aspects of the cement industry – process, maintenance, mechanics, electricity, civil engineering and the environment.

In the context of the launch of the Cement Division's performance program, the CTEO is highly involved in all improvement actions in the plants, whether they concern production, marketing or sustainable development.

The CTEO puts its own laboratory at the disposal of the region's Business Units. It works in particular on mastering the quality and regularity of cements and on their differentiation according to the usage qualities expected by the customer. Particularly noteworthy examples are the cements used for the Millau viaduct, the differentiation of the cements employed for the Agilia® ranges of self-placing concrete and the support given to the commercial development of Ductal®.

In addition, because it is located within the Lafarge Technology Center, the CTEO laboratory can draw on assistance from the engineers and scientists of the Central Research Laboratory.

The Lafarge Group's Research & Development organization is built around the Central Research Laboratory (LCR) and a network of technical centers for individual Divisions. The CTEO is one of five technical centers operated by the Cement Division around the world.

Lafarge Ciments

The Millau Viaduct – exceptional cement for an exceptional project

At its Le Teil plant (the historical birthplace of Lafarge), Lafarge Ciments produced the 35,000 tonnes of cement needed to construct the 7 piers of the Millau viaduct. The cement in question – CEM I 52.5N CE PM-ES-CP2 NF – corresponded to specific technical and esthetic characteristics.

The quality of the cement was monitored at every step, from the plant to the site of the project, to guarantee perfect consistency from the first casting of concrete to the last. Samples of cement were taken every day at Le Teil and analyzed in the company's laboratories.

In addition, a first-rate logistics system was deployed to deliver the cement. To guarantee the reliability and traceability of cement throughout the duration of the project, Lafarge Ciments devoted a silo at Le Teil to the storage of cement intended for the Millau Viaduct. To cope with supplying the volumes of cement that were needed, Lafarge Ciments laid on substantial fleets of trucks. Particularly imposing were the foundation slabs for the piers which required an exceptional rate of casting, with the continuous pouring of up to 2,200 m³ in a 24-hour period. This called for some twenty trucks to be used to deliver the requisite quantity of cement according to schedule.

Special sand for synthetic grass – optimizing ground conditions

Synthetic grass is gradually coming into more frequent use for the construction of sports fields. The principle consists of laying an artificial carpet on a flat surface upon which sand has been poured as ballast. Surfaces remain clean, white lines are visible and permanent, and drainage is very rapid, avoiding the formation of patches of mud on which players can slide. With highly resistant fibers, artificial grass is available in different colors and heights to suit the various sports that can be played on it (e.g. soccer, rugby, tennis and hockey).

Lafarge Granulats supplies sand on this market for two types of sports field : partially sanded (the sand is covered with a layer of rubber granules) and sanded to almost the complete height of the carpet. In both cases, the quality of the Lafarge Granulats sands complies with standard P 90 112. It is round-grained, clean and resistant (friability < 30%), with permeability greater than 10^{-4} m/s. The grading curve is designed to prevent compacting and its dull, neutral beige color avoids any reflection or dazzle under floodlights. Because it is delivered in sealed Big Bag-type containers, the product can be kept clean, dry and ready for use, even after prolonged storage.

“Green” sand for golf courses

With almost 292,000 club members in France, golf has become a much more accessible sport over the past ten years, and the number of golf courses has grown proportionately.

To meet this growing demand, Lafarge Granulats has developed a special range for golf courses, designed to improve the permeability of the grass and protect it from the wear and tear of play. Three types of sand are available in the range according to specific requirements :

- when the putting greens are laid, sand is added as an enriching agent to lighten and aerate the topsoil,
- during ongoing maintenance, particularly the boring of the grass (sinking 1 cm deep cavities to a depth of 10 cm to 15 cm), it guarantees permeability by acting as a micro-drain,
- for creating and maintaining bunkers.

Therefore ground deformation is limited and playing time is increased, even in rainy conditions. The premature wear of mower blades is avoided and the filling of drains is optimized. Furthermore, the sand of the ‘Spécial golf’ range encourages the growth of grass, offering protection for roots and stalks.

Lafarge Bétons

Agilia Sols C[®] and Agilia Sols C Métal[®] – a new generation of self-leveling cement screeds

Agilia Sols C[®] and Agilia Sols C Métal[®] are Portland cement-based ready-to-use fluid screeds. Mixed industrially at a ready-mix concrete plant, they are easily and rapidly pumped into place (1,500 m²/day with a team of 3 or 4 people). Agilia Sols C[®] and Agilia Sols C Métal[®] are incombustible.

Ideal for producing traditional floors rapidly, without effort and with perfect levelness, Agilia Sols C[®] offers numerous benefits :

- can be poured thinly (4 cm minimum) or thickly (10 cm maximum), with expansion joints only required every 75 m² or 40 m² for heated floors,
- insensitive to damp,
- no additional drying time by comparison with a traditional screed.

To install heated floors, the product’s unique characteristics enable a perfect coating of the pipes and resistance to heating (optimal fluidity), better efficiency of heated floors and a shorter time period to heat the system for the first time (5 days).

With equivalent usage qualities, ideal for works on insulating materials and heated floors without a grille, Agilia Sols C Métal[®] is the first self-leveling cement screed reinforced with metal fibers.

The quantity of metal fibers has been specially calculated to give the screed an identical level of performance to that achieved with a traditional tiler's grille (performances validated by the CSTB).

Agilia Sols C Métal[®] offers excellent ease of application, thanks to the self-leveling qualities of the products and the elimination of the grille which is long and troublesome to deploy and is frequently a source of problems down the line, because of the difficulty of positioning it (beneath the cement layer, floating on it, poorly positioned at the level of the expansion joints, etc.).

Agilia Force[®] – robust, self-placing concrete

Agilia Force[®] is a self-placing concrete intended for high-quality poured application, requiring no vibration, for structural or civil engineering works and, more generally, any type of structure subjected to heavy stress. Agilia Force[®] makes it possible to obtain evenly poured concrete on sites which have the following constraints :

- structures or partial structures for which traditional methods of concrete vibration are difficult to deploy correctly, particularly for very high walls and columns and walls with very wide and/or numerous openings,
- structures containing a large quantity of metal reinforcements,
- elements to cast with complex shapes.

In addition, Agilia Force[®] delivers all the benefits of the Lafarge Bétons Agilia[®] range : rapid application (self-placing product with no vibration required), less noise and more flexible on site.

Lafarge Couverture

Profilo – the first self-supporting valley rafter on the market

Intended for waterproofing roofs, the Lafarge Couverture Profilo valley rafter has been designed to offer roofing contractors ease of installation and high performance. The first self-supporting valley rafter on the market, Profilo has a unique design and method of installation.

- Easy to install : pre-formed, Profilo is placed directly on the slate battens with no gauge needed. It requires neither soldering nor bending, and is simply nailed or screwed in place.
- High durability : able to withstand a pressure of 5,806 newtons, the Profilo valley rafter is made of Z 275 hot-dipped steel and a double polyurethane covering that offers high resistance to climate aggression.
- Excellent waterproofing : the sides of the Profilo valley rafter constitute five successive barriers to water penetration, delivering optimized protection.

Adaptable to all roof tile profiles, the Profilo valley rafter can be laid on any roof with a pitch of between 15° and 60° (26 and 175%), for both newly built and renovation projects. It can also be used when two roofs are of different pitch, so long as the angles do not differ by more than 15°.

Pack 140 and Pack 190, exclusive to Lafarge Couverture

Further to its Complete Roofing System, Lafarge Couverture is now launching two packs of storm-proofing equipment designed to meet the needs of both contractors and homeowners : Pack 140 and Pack 190.

- Pack 140 is guaranteed ten years against storms with winds of up to 140 kph. To achieve this, one roof tile out of three is fixed with Europanneton roof hooks and the kit includes a flexible roofing membrane, a Metalroll or Figaroll flexible closure, ridge tiles and edges that can be fastened or screwed.
- Pack 190 is guaranteed ten years against storms with winds of up to 190 kph. Each tile is fixed with Europanneton roof hooks and the kit includes a flexible roofing membrane, a Metalroll or Figaroll flexible closure, ridge tiles and edges that can be fastened or screwed.

With this ten-year “high wind resistance” guarantee for private houses, Lafarge Couverture agrees to pay the full amount of the insurance allowance of the householder’s policy should a claim be made in the event of storm damage. On request, Lafarge Couverture will also add 30-year guarantees against damage from freezing and erosion for the majority of roof tiles.

II. TOOLS AND SERVICES

Lafarge Granulats

55 wharves and depots provide greater proximity to customers

Cities are growing larger and quarries are further and further away from them, posing the problem of the availability of materials in proximity to the locations where they are needed. With 130 quarries and 55 wharves and depots, the regional subsidiaries of Lafarge Granulats provide a true local service for their customers.

The objectives of these platforms are :

- maintaining stocks of products close to customers in order to fulfill their needs rapidly,
- receiving inert building site rubble. It is removed by the same barges used to supply the platforms in order to minimize nuisance.

A list of the company’s wharves and depots as well as the sites that handle site rubble can be accessed on the lafarge-granulats.fr and batissor.com websites.

Lafarge Plâtres

Lafarge Plâtres provides comprehensive documentation for wet rooms

New building regulations concerning the partitioning of wet rooms in both private and public buildings require the use of water-repellent plasterboard. Lafarge Plâtres has published documentation that covers all partition and lining solutions using Prégydro plasterboard products.

The entire range of these systems is set out clearly in tables with suggestions that are adapted to the specific difficulties of different types of wet room. The documents come with detailed installation instructions and are fully illustrated with explanatory diagrams.

The Memento – the plasterboard installer’s bible

Lafarge Plâtres Memento is a veritable plasterboard installer’s bible. Within its 279 pages, it sets out all of the elements and systems available in Prégys plasterboard, discusses regulations and, with these in mind, the right choice of Prégys systems and is packed with advice for correct installation. Written with the aim of making work easier both in the consulting engineer’s office and for the site contractor, the Memento is a valuable tool when specifying. It also helps to broaden the advisory role of the dealer. The Memento is available in printed form or on a CD-ROM from which the various drawings, tables and system definitions can be exported for insertion in descriptive documents. The CD-ROM version also contains videos showing installation of basic plasterboard structures.

APPENDICES

LAFARGE GROUP PROFILE

Lafarge is world leader in building materials. It employs 77,000 people and recorded sales of 14.6 billion euros in 2002.

The Group does business in 75 countries, and holds top-ranking positions in all four of its Divisions :

➤ **Cement : world no. 1**

The Cement Division generates sales of 7 billion euros and has 37,500 employees. It operates in 42 countries and boasts 142 plants. With ranges of cements, hydraulic binders and limes designed to meet the needs of construction industry and civil engineering players, the Division has an annual production capacity of 150 million tonnes.

➤ **Aggregates & Concrete : world no. 2**

With annual sales of 4.7 billion euros, the Aggregates & Concrete Division employs 21,000 people and is active in 23 countries. With product ranges including aggregates, ready-mix concrete and prefabricated concrete units for builders of engineering structures, roads, builders, etc., the Division possesses 674 quarries and 1,078 concrete plants.

➤ **Roofing : world no. 1**

The Roofing Division has 12,000 employees and records sales of 1.5 billion euros. It operates in 32 countries and possesses 159 production facilities. The Roofing Division manufactures ranges of roof tiles in concrete and in clay, roof system components and chimney systems.

➤ **Gypsum : world no. 3**

Generating annual sales of 1.146 billion euros, the Gypsum Division employs 5,300 people. It is active in 22 countries, and possesses 67 plants. The Gypsum Division's businesses include plasterboard systems, gypsum blocks and building plaster intended for construction finishings, new building and renovation.

Lafarge's growth policy is defined in the context of a strategy of sustainable development. The Group's expertise in efficient industrial processes generates value, protects the environment, shows respect for societies and cultures and is sparing in its use of natural resources and energy.

By focusing on the development and advancement of building materials, Lafarge places the customer at the core of its strategy and offers the construction industry and the general public innovative solutions that will bring more safety, comfort and beauty to our everyday lives.

LAFARGE GROUP
LIST OF PRESS CONTACTS IN DIVISIONS AND BUSINESSES

	PRESS CONTACTS
<p>Lafarge Group 61, Rue des Belles Feuilles 75782 Paris Cedex 16, France Tel. : (+33) 1 4434 1111 Tel. : (+33) 1 4434 1947 (Véronique Doux) Fax : (+33) 1 4434 1223</p>	<p>Philippe Hardouin Senior VP, Communications Véronique Doux Press Relations manager</p>
<p>Lafarge Ciments 5, Boulevard Louis Loucheur 92214 Saint-Cloud, France Tel. : (+33) 1 4911 4040 Fax : (+33) 1 4911 4200</p>	<p>Françoise Muteaud</p>
<p>Lafarge Granulats 5, Boulevard Louis Loucheur – BP 302 92214 Saint-Cloud Cedex, France Tel. : (+33) 1 4911 4442 Fax : (+33) 1 4911 4396</p>	<p>Corinne Collomp</p>
<p>Lafarge Bétons 5, Boulevard Louis Loucheur – BP 302 92214 Saint-Cloud Cedex, France Tel. : (+33) 1 4911 4441 Fax : (+33) 1 4911 4296</p>	<p>Estelle Bekaert</p>
<p>Lafarge Couverture 12, Avenue d'Italie 75013 Paris, France Tel. : (+33) 1 5380 6953 Fax : (+33) 1 5380 6951</p>	<p>Régis Bourdot</p>
<p>Lafarge Plâtres 500, Rue Marcel Demonque Zone du Pôle Technologique Agro Parc 84915 Avignon, France Tel. : (+33) 4 3244 4444 Fax : (+33) 4 3244 4040</p>	<p>Nathalie Cayrol</p>



PRESS RELEASE

September 4, 2003

THE LAFARGE GROUP HAS SELECTED ARCHITECTS BECKMANN AND N'THÉPÉ TO DESIGN ITS STAND FOR BATIMAT

For the first time, the Lafarge Group, world leader in building materials, has invited architects to design and produce its stand for Batimat, the international building exhibition, which runs from November 3 to 8, 2003 in Paris. It has selected Beckmann and N'Thépé, winners of an *Albums de la Jeune Architecture* award.

Lafarge has opted for an original approach and an innovative use of its products to present its role as a driving force in the evolution of the construction industry and its commitment to sustainable development.

Lafarge was captivated by the project dreamed up by this pair of young architects, who have designed "a stand portraying Lafarge, combining clarity, simplicity, efficiency and warmth."

An innovative project to convey Group values

For Lafarge, as world leader in building materials, innovation is a fundamental value. Innovation characterizes the highly modern and original stand conceived by young architects Françoise N'thépé and Aldric Beckmann. "Designing a stand with an industrial operator such as Lafarge is a moment of intensely focused creation which culminates in a single temporary space which will strike the visitor and vehicle the image and strong values of the company," said the architects. "The project also gives us the opportunity to work with different materials and to create architecture in which sound, images and light play a part." The space which they have created for the Lafarge Group at Batimat will be "ample and generous," "a space to breathe and an instant of poetry in the midst of a bustling trade show."

Lights, space and Lafarge materials welcome visitors

The Lafarge stand, conceived to be easily understood by the visitor, takes the form of a white parallelepiped with graceful contours. Covering a floor area of 525 m² and 5 meters tall, it displays full, ample forms, like a sculpture. It is entirely clad with PLAtec plasterboard, which has been randomly perforated to create patterns of light. As the visitor approaches, screens display Lafarge's key messages for Batimat : its commitment to sustainable development and its role as a driving force in the evolution of the construction industry.

Inside, Françoise N'Thépe and Aldric Beckmann have dreamed up a décor combining warmth and human contact. Peripheral zones are reserved for four of the Group's Business Units (Cement, Concrete, Aggregates and Roofing). Their materials are applied over surfaces 5 meters tall.

The central zone is dedicated to welcoming visitors. There is also a mezzanine floor, which houses a restaurant area and individual reception areas for customers.

Architects as key players in the evolution of the construction industry

Working in this way with a team of architects again demonstrates the natural link existing between the leader in building materials and construction industry specifiers. The choice of this design by Françoise N'Thépe and Aldric Beckmann has also given Lafarge an opportunity to encourage young professionals. The Group has for many years partnered and supported architects in numerous initiatives, including collaboration with the Institut Français d'Architecture, the Direction de l'Architecture, the AFAA and the International Union of Architects (UIA). Lafarge also set up Creargos.com in 2001, a website dedicated to architects.

A detailed Lafarge press kit for Batimat will be available at the exhibition. Focusing on the central themes of industry changes and sustainable development, the kit will present the products and services of the Group's French Business Units.

World leader in building materials, Lafarge employs 77,000 people in 75 countries. The Group holds top-ranking positions in all four of its Divisions : Cement, Aggregates & Concrete, Roofing and Gypsum. In 2002, Lafarge recorded sales of €14.6 billion. You will find more complete information by visiting www.lafarge.com

PRESS CONTACTS

LAFARGE

Véronique Doux : (+33) 1 4434 1947
veronique.doux@lafarge.com

CLC COMMUNICATIONS : (+33) 1 4293 0404

Jérôme Saczewski : j.saczewski@clccom.com
Virginie Adam : v.adam@clccom.com

