



Cover picture

The Esther Koplowitz  
Biomedical Research Centre

Leading News



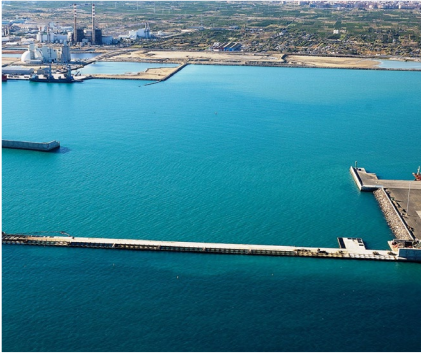
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## FCC wins the contract for Olsztyn Tram in Poland

The Polish city of Olsztyn has just chosen FCC to design and build its tram system.



Generic tram

Backed by a contract budget of 62.5 million euro, the tram system will form part of the Integrated Public Transit System Modernisation and Development Programme conducted by the authorities of the Polish city of Olsztyn to equip the city with more-modern infrastructure. The contract was awarded in an open call for tenders in which several groups

competed, including some Spanish firms. FCC was declared the winner.

## FCC to improve the seaward face of island city Santa Cruz de la Palma



Seaward face of Santa Cruz de la Palma

The Directorate-General of Coast and Sea Sustainability, an agency of the Ministry of the Environment, has awarded FCC the contract to improve the seaward face of Santa Cruz

de La Palma. The contract is worth a total of around 24 million euro. The work consists in the construction of a beach using approximately 740,000 m<sup>3</sup> of sand dredged up

from between two groynes. To keep the sand from washing away, plans are to build a submerged structure across the front of the new beach, forming a line between the noses of the two groynes. The complex will be rounded off with the construction of two cobble beaches, one at the northern end of the project, and the other at the southern end. In addition, this area will be outfitted with the necessary site furniture and services.

This project, which affects approximately 900 metres of coastline, will be an essential improvement for local inhabitants, who in future will be able to enjoy the beaches they never had before.

## Residential building in Santa Coloma de Gramenet, Barcelona



Viviendas Santa Coloma

FCC has finished constructing a residential building containing 130 units of publicly sponsored low-income housing. The project included development of the land surrounding the site and the construction of a 330-vehicle car park in the area of the Besós River.

The job had a two-and-a-half-year completion period and a budget of nearly 20 million euro. It forms part of the Front Fluvial del Raval de Santa Coloma de Gramenet refurbishment plan, which has wrought an urban and eco-

nommic transformation of the city's riverside neighbourhoods. The project has consisted in the construction of 14,815 m<sup>2</sup> of homes and common areas and 17,235 m<sup>2</sup> of land development work, car parks and retail space, which will give the banks of the Besós River an economic boost.

The residential building is a 62-metre-tall block with four staircases and four units per storey, each having 80 m<sup>2</sup> of net floor area.

### + Team

**Department head:** Jaume Vilà Casals  
**Construction manager:** Jerónimo Ojuel Solsona  
**Production chief:** Ricard Targarona Vera  
**Surveyor:** Sergio Gutiérrez Requejo  
**Systems technicians:** Ignasi Graell Alabern  
**Office staff:** Lourdes Fernández Mauriz  
**General foremen:** Joan Guirao Casanova, Manuel Molina Moreno.

## Conclusion of phase two of the water supply project for Villaviciosa, Asturias

Since February last the town of Villaviciosa has been enjoying a new water supply system thanks to work done by FCC under a cooperation protocol allying the North Sea Hydrological Confederation, the town of Villaviciosa and CADASA (the Consortium for Water Supply and Sanitation in the Principality of Asturias). Work on the town's water supply network began in September 2007.

The construction budget was something over seven million euro, and the completion period, more than 36 months.

The Ministry of the Natural, Rural and Marine Environment provided the necessary investments to address the area's problems through the North Sea Hydrographic Confederation.

### + Equipo técnico

**Department head:** Álvaro Barrio Pérez  
**Construction manager:** José Manuel Pelayo Prieto  
**Production chief:** Rafael Valentín Ochoa  
**Head surveyors:** Antonio Matachana Rodríguez y José Angel Díaz Guitiérrez  
**Jefe Administración:** Verónica Blanco



## ALPINE wins a motorway construction contract in Romania

The contract is worth 300 million euro



FCC's Austrian subsidiary has been chosen to build a section of motorway in western Romania. The job consists in the construction of a 16.6-kilometre-long section of two-lane motorway in the central western area of this European country.

With a budget of close to 91 million euro, the job will have a completion period of approximately 22 months.

The section is part of the motorway between Arad and Ndlac, situated in the western area of the country. This 16.6-kilometre-long section begins in Pecica and is the second of three sections that together measure a total of 220 kilometres.

All three sections will be built simultaneously. The project includes several

bridges and flyovers, as well as the preparation of a site for a car park and motorway maintenance facilities.

## ALPINE to build a gas pipeline ensuring the supply of natural gas to central European countries

The project is appraised at 76.7 million euro

The energy division of ALPINE Bau GmbH will be tackling two sections of the extension of the Gazelle gas pipeline to the Czech Republic, in a joint venture with the Belgian firm DENYS. This time around the client is Net4Gas, the Czech Republic's state natural gas supply operator and a member of GTE (Gas Transmission Europe). With this

project, FCC's Austrian subsidiary has secured for itself an important role in European energy projects.

The project is appraised at 76.7 million euro, and it will serve to ensure the supply of natural gas for the countries of central Europe, such as the Czech Republic, and so forestall the recurrence of energy crises like the one that hit two

years ago. The Gazelle gas pipeline will be over 105 kilometres long and will consist of two sections, one 52.4 kilometres long and one 53.4 kilometres long.

## Enlargement and alteration work at Gijón's Hospital de Cabueñes concluded



Inauguration ceremony at Hospital de Cabueñes

On 24 March last a ceremony was held in Gijón, Asturias to inaugurate the new areas of Hospital de Cabueñes, which was recently enlarged and altered.

The ceremony was attended by Ramón Quirós García, head of the Health Department, and Elena Arias Menéndez, manager of SESPA (the Principality of Asturias Health Service).

The local authorities there included Mayor Paz Fernández of Gijón and President Vicente Álvarez Areces of the Principality of Asturias, who highlighted the fact that Cabueñes has become Spain's first hospital to boast a high-tech hybrid operating room. With the rest of the

people attending were Javier Hidalgo González, manager of FCC Construcción Zone VIII, and Guillermo Castanedo Elizalde, manager of the North Bureau.

The enlargement and alteration work at Hospital de Cabueñes, done entirely by FCC, required the construction of 6,000 m<sup>2</sup> of new building for use as, amongst other things, a cardiology ward, and the alteration of 3,000 m<sup>2</sup> to house two operating rooms and two haemodynamics rooms adjoining the new cardiology ward. In addition, the digestive medicine and urology areas were altered to enable the hospital to conduct special tests that used to have to be referred to other facilities.

The project had a budget of over 10 million euro, mostly devoted to improving surgery and cardiology areas.

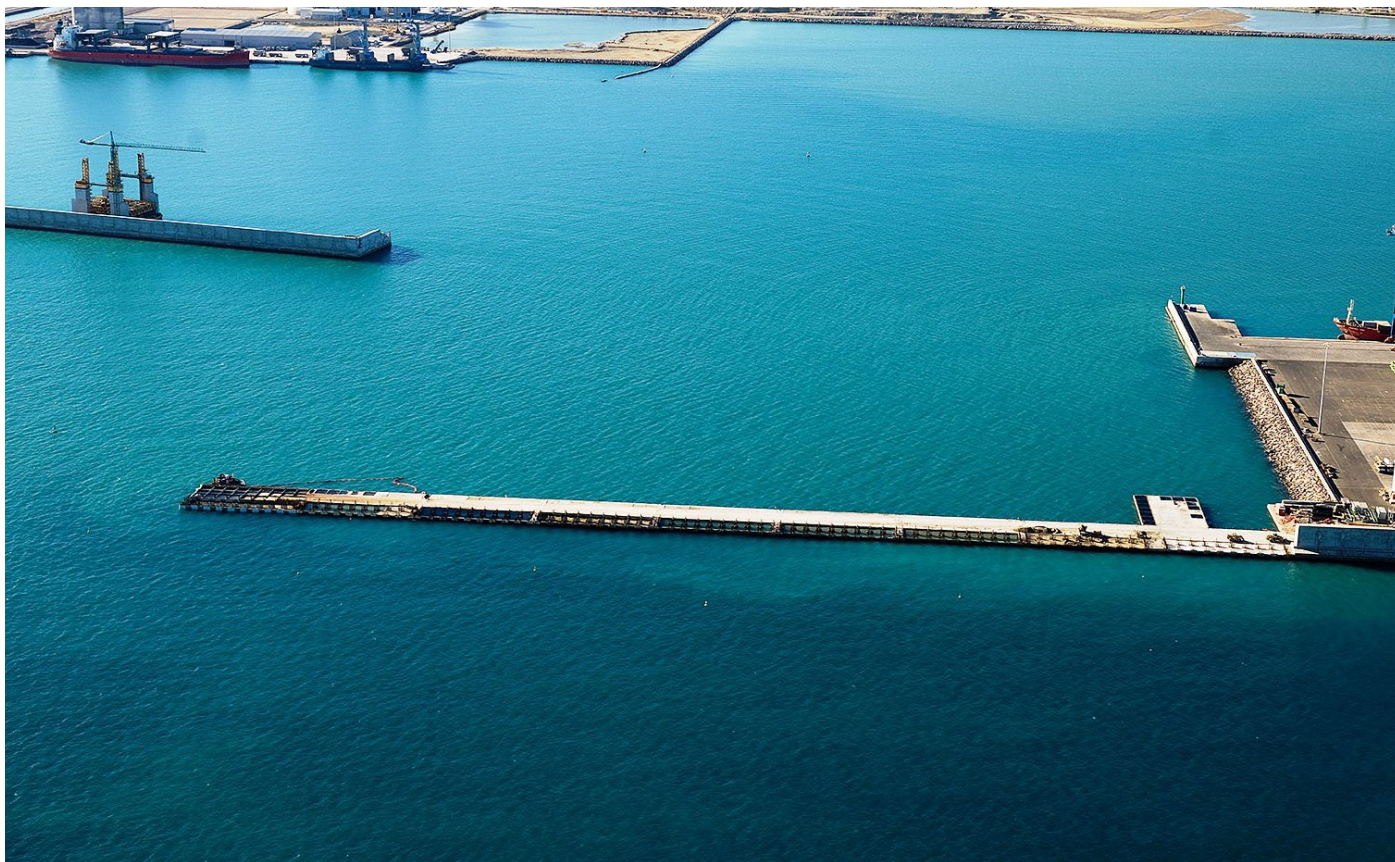
### + Equipo técnico

**Department head:** Aurelio Vega Fernández  
**Construction manager:** Manuel Cuesta García  
**Production chief:** Gabriel Ayesta Gallego  
**Technical office:** Juan Miguel Martín  
**Administration:** Juan Carlos Menéndez  
**Foreman:** Enrique Iglesias García



## Inauguration of the extension of Castellón harbour's east breakwater

The project is supplemented with dredging work in the harbour's incoming channel



East breakwater

On 3 March last the Castellón harbour breakwater and newly dredged incoming channel were inaugurated. The project, contracted to FCC Construcción, was worth a total of 40.3 million euro.

The ceremony was presided over by President Francisco Camps of Valencia. Also present were President Carlos Fabra of the Castellón Council, Ana Botella, government deputy in Valencia, and Mayor Alberto Fabra of Castellón, amongst other regional and local dignitaries. The breakwater is 450 metres long and is occupied for 350 metres by mooring space. At the structure's core

there lie 13 reinforced-concrete caissons. These caissons were cast by a floating dock moored at a sheltered spot in the harbour. Once the caissons were finished, they were towed by tugboat to their place in the structure, where they were anchored.

The cells were ballasted with water first, followed by granular ballast. Next, the caisson layer was protected by an edge slab, and lastly, the breakwater was topped with a spur.

The project as a whole was supplemented by the dredging and enlargement of

the harbour's incoming channel, which was deepened to 16 metres. This improvement and two RORO ramps will enable high-tonnage ships and transatlantic vessels to pass through and moor under proper safety and manoeuvrability conditions.



## ALPINE goes the extra mile to promote training programmes in Upper Austria

FCC encourages talent retention at all its subsidiaries



Alpine People

FCC's Austrian subsidiary ALPINE has taken advantage of education programmes promoted by the Ministry of Economic Affairs to allow seven foremen to participate in a winter education session and thus continue drawing their salary even in times of economic hardship. Thanks to the "Bildungskarenz" programme, which was implemented with the support of the Austrian government, FCC's Austrian subsidiary has been able to retain highly qualified personnel that it would otherwise have had to lay off until after the crisis.

During a visit to the offices of the Austrian building firm ALPINE, Viktor Sigl, head of Austria's Ministry of Economic Affairs, declared, "With more than 1,000 employees in Austria, the ALPINE construction firm has acted in an exemplary way to protect its workers in hard times. We're satisfied to be able to support companies like ALPINE by offering them such a valuable programme". The "Bildungskarenz Plus" programme gives

Austrian companies a way to retain their staff while providing them with additional training, so they are better prepared to meet the future.

The "Bildungskarenz" training period, promoted by the Austrian government, is part of the Austrian job protection law. It consists in an employee education period that may range in length from two months to a maximum of one year, during which time employees must spend a maximum of 20 hours a week on educational pursuits, or 16 hours if they have family responsibilities.

According to Karl Gruber of ALPINE's Board of Directors, the advantages of participating in the government education programme are obvious. "The programme provides a valuable education, and it enables employees to earn additional qualifications. It's structured into courses at different levels, so that, when they finish, employees return to their jobs and are ready for promotion."

The courses the seven ALPINE foremen participated in were quite varied and included labour law, EDP (electronic data processing) for foremen and quality leadership in core process management. This further education programme began on 10 January last and finished on 31 March 2011.

FCC encourages employees in all divisions, subsidiaries and offices to seek personal and career development as part of the corporate strategy to create a more-competitive company. In 2010 more than 143,000 hours of training were provided to 13,609 employees.



## 2011 Annual Executives' Convention



Executives' Convention

On 12 April the Annual Executives' Convention was held, faithful to its yearly tradition. More than 350 FCC Group executives attended. This year participants heard several presentations delivered by the group's leading zone and area managers.

The purpose of the encounter was to familiarise the executives from the different business areas with the figures from last fiscal year, FCC's short- and medium-term objectives and the main challenges the organisation will be facing in the upcoming months. Baldomero Falcones, chairman and ma-

naging director of the group, was in charge of opening the round of presentations with an address in which he gave a quick analysis of the economic situation in 2010, underlining the strength of the group's shareholder structure.

He then went on to review the strategic paths of strategy for group growth: internationalisation, cost optimisation and financing. The prevailing note and underlying core of the encounter was the drive to create a corporate culture in which efficiency and integrity will be the guiding lights of the company's at-

titude. This idea was embodied in the convention motto, "We're Doing It Together". Next the executives from the different business areas took the floor.

FCC Construcción held the podium for one of the convention's big presentations through its chairman, José Mayor Oreja, who introduced the executive members of his team and a total of eight presentations analysing the construction sector's different areas and subsectors. Greater internationalisation and diversification were the points most steadily underscored by the speakers.

## 2010 Prever Awards

FCC Construcción received an honourable mention in the 12th Prever Awards given out by the National Council on Industrial Relations and Labour Sciences. The awards were scheduled, as they are each year, to fall during the Technical Workshop on Occupational Risk Prevention, which was held on 1 and 2 April. The head of FCC's Zone V Levante Occupational Risk Prevention and Safety Services, Juan Carlos

Velázquez Palacios, received the honourable mention for his merit in introducing and disseminating occupational risk prevention strategies.

The prize was conferred by a committee made up of the mayor of Granada (the city hosting the workshop), the director-general of Labour and Employment for the Generalitat (regional government) of Valencia,

the chairman of the National Council on Industrial Relations and Labour Sciences and the secretary of the Prever Committee. The Prever awards have been given out since 1998 to individuals, entities, undertakings and institutions that stand out for their functions and career in the introduction and dissemination of guidelines for occupational risk prevention and on-the-job safety.

## The FCC team lends Lorca a hand



Buildings in Lorca

A team from FCC captained by the head of the Building III department, Manuel Martínez Nebreda, participated in the work to assess the earthquake damage to buildings in the city of Lorca.

After the Lorca earthquake, the City of

Madrid placed a team of architects and construction technicians from the companies that work regularly with the Madrid Upkeep and Building Service (such as FCC) at Lorca's disposal

## The Spanish Network of the United Nations Global Compact wins two prizes



Spanish section at Global Compact headquarter

The Spanish Network of the Global Compact received two of the three existing awards for local networks, both given at the Global Compact Annual Meeting held recently in Copenhagen.

The Spanish Network won the award for the network whose operation is most exemplary and most committed to progress reports and the award for the most-innovative network in the development of tools for its signatories. Based on these

achievements, the Spanish Network was recognised as the best of the more than 100 local networks set up the world over.

The winners of the prizes for the best local networks were chosen by the rest of the hundred networks supporting the Global Compact. The third of the prizes was given to the Belgian Network, as the network that has done the most to foster cooperation with other local networks. The awards were handed out by

Georg Kell, executive director of the Global Compact, and Soren Petersen, head of networks, during the Global Compact Week, which is the place where, from 16 May to 20 May, enterprises and experts from more than a hundred countries are gathering to discuss and share what they have done to make entrepreneurial social responsibility a regular part of the business world.



## Citroën, FCC and Bluemobility sign a contract at the Genera Energy and Environment Fair



FCC Industrial and Citroën

The fourteenth Genera International Energy and Environment Fair, promoted by IDEA (the Institute for Diversification and Saving of Energy), was held in Madrid on 11 May last. Various firms from the energy sector participated.

Genera was the site chosen for the signing of an agreement between Citroën, the Bluemobility company of Vigo and FCC to foster electrical vehicle use. Participating in the ceremony were several representatives of all three firms, led by General Manager Antonio Alfonso Avello

of FCC Industrial, Project Manager José Manuel Orejón, the director of automobile management at Citroën España and Bluemobility Chairman Alberto Casal.

## The first convoy arrives at the Málaga Metro car barns and shops



Arrival at the Málaga car barns

On 28 April the first convoy arrived at the Málaga Metro car barns and shops, bringing the fourteen trains that will form part of Málaga's underground system, which is currently under construction.

This event was yet another step toward

the final straight for the Málaga Metro system, said Josefina Cruz Villalón, head of the region's Public Works and Housing Department. The trains are Urbos 3s built by CAF at its Linares factory and shipped by road to the shop facilities and car

barns where maintenance on the Málaga underground's trains will be performed.

Since 2004 FCC has been leading Metro de Málaga, the consortium that is building and will operate the metro system. While the first trains were arriving, the finishing touches were being put on the civil engineering work, which includes infrastructure, tunnel and station construction and assembly of the double tracks on Line 2, which will run from La Malagueta to Palacio de los Deportes.

# The CEK's living building devoted to biomedical research

By Antoni Ubach and Javier Ainchil



The Esther Koplowitz Centre, known by its Spanish initials as the “CEK”, might well be thought to embody the soul of the Esther Koplowitz Foundation. It resides in a building designed by Catalan architect Antoni Ubach, blending perfectly into the urban fabric of the Ensanche Cerdà in Barcelona. It has an area of 14,400 m<sup>2</sup> housing a team of close to 500 researchers. It is like an extension of the Hospital Clínic and the University of Barcelona School of Medicine, a facility in the vanguard of world medical research.

The building benefits from the strong magnetism the Hospital Clínic enjoys in this part of the city, bringing the public closer to the ever-distant world of research. The CEK uses transparencies on a broad backlit board that can be seen through the windows at street level to tell citizens about the achievements research has made.

The space at the centre of the block has been equipped as a children’s play-

ground and given to the city in yet another effort to bring the world of research closer to the general public. A broad passageway gives access to this haven



of stillness and silence, a place of repose and communication for researchers.

The ground floor and the attic house the common social areas, the back office, conference rooms and Dr. Esteve Auditorium. These spaces have been carefully handled, in consonance with the importance a cutting-edge research centre like the CEK naturally assigns to the idea of making it easier for researchers to mingle for crossover ideas. The building has five storeys of

laboratories and a basement. The basement occupies the building’s entire horizontal area plus the space beneath the square, for a total of 2,500 m<sup>2</sup>. In it are the basic laboratories shared by all the actual research laboratories located on the storeys above, such as the human tissue bank, whose perfectly identified samples are essential for research and require extremely high security. The CEK has rooms with machines capable of reaching minus 85 and 150 degrees Celsius.

The laboratories above are arranged crosswise to the building’s façade in a linear series. The laboratories are supplied with the gases and liquids they need, plus electricity, fibre optics, connections to the building’s data-processing centre, and so forth through the façade. At the CEK’s express wishes, these cubicles are not physically separated from each other. The idea is to prevent the formation of separate cells; research inside the centre must be completely transparent. The façade is quite



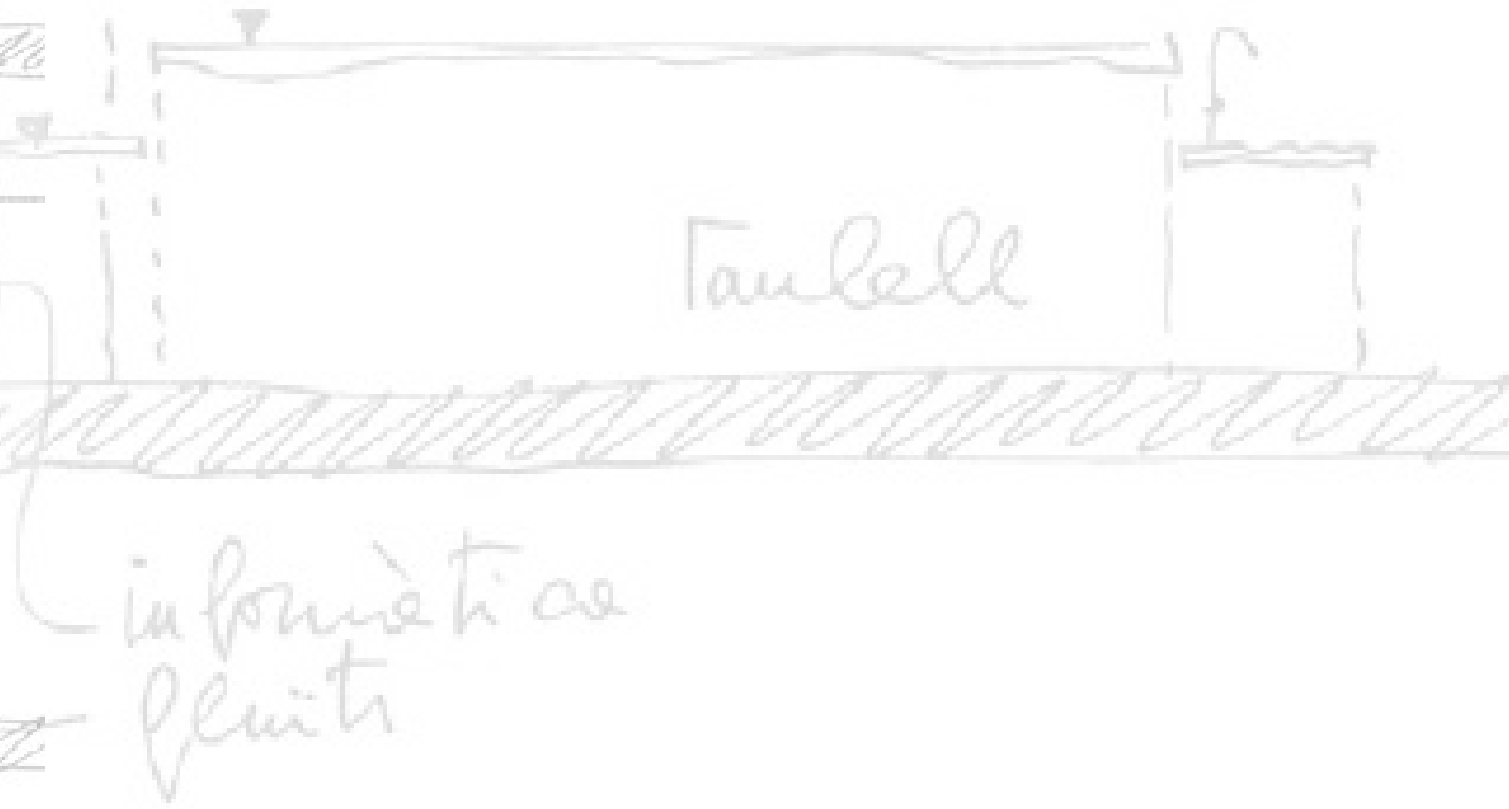
singular in architectonic terms, because in addition to its normal function as a wall, it plays a very active role as the structure carrying researchers the resources they require.

Daylight shines into the building, but never directly; here the façade has yet another role to play, this time filtering the sun's rays through screens. The presence of the outside world can be sensed from most parts of the building, thanks to the way glass is used to prevent any feeling of isolation. The idea has always been to make the building's own internal views spacious and to allow the outer world's presence to impregnate the working atmosphere at the CEK.

The support laboratories and the senior researchers' offices are located on the upper storeys, for technical reasons as well as in a token of the priority given to researchers.

The CEK is an energy machine, and its roof is the most obvious expression of that fact. On the roof sit the transformer station and two generator units for redundancy; they reflect both the great complexity of the CEK and the desire to devote all available floor space to research. Design containment has enabled the building to earn an energy efficiency rating of B. In achieving this very low score of energy use, the CEK was definitely helped by its exclusive

use of light fixtures using LEDs (light-emitting diodes), most of which are a model designed by the architect expressly for this project, one of Spain's first buildings equipped with LED fixtures



# Environmental measures at the new Despeñaperros roadway site

By Pedro Córdoba, Quality Chief



Despeñaperros

FCC is aware that our building activity has effects on our environment. Accordingly, FCC has an environmental management and planning system certified as compliant with UNE-EN ISO 14001, thanks to which we can apply preventive, corrective and compensatory measures to reduce the footprint we leave behind us.

One outstanding case of how such measures are applied is to be found at the site where the new Despeñaperros roadways are being built by FCC, on dual carriageway A-4 (the “Autovía del Sur”). Because of the special contours of the terrain and the valuable local ecosystem, the best practices are required.

Preventive measures have been applied gradually during the design and construction phases of the project. In this article, we would like to focus on the corrective and compensatory measures being taken in Despeñaperros Natural Park, in Jaén, as an example of FCC’s effective planning to combat harm to the ecosystem.

When faced with the need for action of this type, we methodically review a number of elements of the terrain: vegetation, animal life, traditional livestock

tracks, rivers and creeks, and so on.

On this occasion, in our corrective measures to right the effects of construction activity, we paid special attention to returning the landscape and vegetation to their original state. One of the leading measures we applied was to restore the areas used for landfills and vehicle tracks by planting a number of species of shrubs and trees. Shrubs and other species of vegetation were also planted beneath areas disturbed by viaducts and wild animal crossings. Lastly, because the terrain was so steep, a special hydro-seeding treatment was applied to slopes and embankments, a procedure used in places where conventional planting is not sufficient to cover hillsides with the necessary growth.

The measures designed to offset the project’s impact on the ecosystem were classified into two groups: measures targeting vegetation and compensatory measures concerning local fauna. The foremost of the latter measures, in terms of ecological interest, are aimed at reducing the lynx population’s mortality rate due to non-natural causes: Wells will be fixed, feeding and watering places will be fitted out and signage on roads where there is a danger of lynxes being hit

by vehicles will be improved. In addition, the Iberian lynx’s habitat will be improved by selective brush cutting, fencing, the creation of refuges and predator control. In short, protection will be fostered for exclusive lynx areas. Pastures will be sown to create corridors between lynx populations. Also, more artificial rabbit warrens and majanos (cairns built of stone cleared from cultivated fields) will be built, to boost the European rabbit population.

Some of our leading compensatory measures concerning vegetation call for the morphological restoration and re-vegetation of the Las Monjas curve, which is now decommissioned. In addition, efforts are being made to increase the population of *Centaurea citicolor*, a flowering plant of great botanical interest, because it is a typical species of the Sierra Morena and Despeñaperros area and is categorised by the Ministry of the Environment as endangered.

There are other measures aimed at improving local vegetation as well. Each year we collect seeds, store them and sow them in the neighbourhood of the Natural Park. Also, we have improved the vegetation along the banks of the Despeñaperros River by respecting and increasing the number of specimens already existing and cleaning and removing waste from Cuchareros Creek and the river where it intersects with the new dual carriageway.

These actions will be followed up yearly for five years after works conclusion, which is scheduled for the end of the year.