

## ferrovial

Prepared by: Ana Belen Peña Laseca Head of Climate Change and Quality



## **SUMMARY**

Introduction p3

Management of the carbon footprint p5

Company description p11

Group GHG emissions p18

Sector-based analysis p30

Emissions avoided p38

Offset of emissions p43

Verification report p44

## Introduction

Ferrovial's commitment is to lessen the environmental impact of its activities, by maintaining a preventive focus which benefits the environment and reduces the company's global carbon footprint. This commitment is enshrined in principles which constitute the "ground rules" for all decision-makers in Ferrovial and its subsidiary companies on a global scale:

- Meeting client and user expectations.
- Universal participation.
- Mutual benefit in relations with suppliers and partners.
- Eco-efficiency and reduction of greenhouse gas emissions.
- The value of the commitment.
- Ongoing improvements.
- Smart stakeholder dialogue, in particular with governments and regulators.

## Regulatory environment

Although in 2013 there remained uncertainty as to the post-Kyoto era on a global scale, the European Union maintains its leadership vocation in the field of mitigating climate change and reducing emissions. There was a backdrop of scepticism to the last Conference of the Parties, which took place in Warsaw in November 2013, and which had as its main challenge making progress with an over-arching agreement – based on the Doha outcomes – to reduce greenhouse gas emissions. Agreements were nevertheless reached, particularly in

regard to deforestation, which could serve as a foundation for future advances.

Meanwhile, the last report of the Inter-governmental Panel (IPCC) confirmed the worst fears with regard to forecasts for impacts on a planetary scale, emphasising that time was running out for agreements to be signed on reduction of emissions.

Ferrovial maintains a firm stance in favour of a binding agreement on a global scale which would establish a roadmap for the coming years, insofar as it would ensure that targets were sufficiently ambitious and provide stability to facilitate long-term investment for the development of low-emission technologies, services and infrastructures.

On the positive side, Europe maintains an ambitious commitment to the economic and environmental agenda of the coming years. There is an assurance that the 2020 goals will be achieved, with ease even; and a preagreement has already been attained to further reduce greenhouse gas emissions with regard to 1990 by up to 40%. The feeling in Ferrovial is that this ambition will reinvigorate important markets for the company, such as that for energy efficiency, attracting long-term investment and promoting innovation in the industrial fabric and services throughout the European Union.

## Climate strategy

Ferrovial's business is closely linked with some of the main man-made sources of carbon emissions. Thus, mobility of people generates on a global scale around 25% of total emissions and is the source which has grown the most over the last two decades. If the current trend continues, it is estimated that transport in its different forms (land, air, maritime) will emit around 9.2 Gt of CO2 per annum by 2030. Cities and buildings are the cause of the consumption of almost 70% of energy, and generate over 30% of global emissions of greenhouse gases. Progressive "global urbanisation" is, moreover, unstoppable; it is calculated that in 2050 70% of the world's population will live in cities, and there can be no doubting that this will only serve to accentuate the problem of carbon emissions, pollution and scarcity of energy resources in the megapolis of the future.

In this context, as a developer, operator and manager of transport infrastructures and cities, Ferrovial is aware of its responsibility and of the importance of its public commitments in relation to climate change. But it is also clear that the big challenges society has to face in the coming decades, will need innovative and complex solutions. And these are solutions for which Ferrovial has the capacity, expertise and technologies which could open the door to new business opportunities.

In recent years, analysts have constantly pointed to Ferrovial as a leader in its business sectors, in the field of responsibility and environmental sustainability. In fact, these aspects have increasingly taken on a significant role which the company wishes to use a platform to generate new ideas and business models in a context of environmental crisis on a global scale.

In these terms, over the last few years, with the aim of creating long-term value, Ferrovial has strengthened its capacities for offering services and infrastructures which respond to challenges such as climate change, the energy crisis and diminishing biodiversity.

This approach to environmental sustainability was rolled out in a strategy adapted to the risks and related opportunities. It has two overriding objectives:

- Responsible management of environmental impacts occurring as a result of Ferrovial's activities, from an eminently preventive perspective. To include the development of actions to reduce GHG emissions.
- 2. To take advantage of de Ferrovial's capacities and expertise to develop infrastructures and services for a low-emission economy.

Efficiency in the use of energy and natural resources, as well as reducing emissions and landfills are of prime importance in production centres, but they are also a source of innovation and development of solutions that Ferrovial may subsequently offer to its clients and users. In particular, energy efficiency in buildings, holistic city management (Smart Cities), and low-emission mobility.

Conservation of biodiversity is also a top priority, and is supported by cutting-edge scientific and technical expertise.

# Management of the carbon footprint

As a potential supplier of low-emission infrastructures and services, Ferrovial's proposals would have no credibility if they failed to include ambitious commitments to reduce its own carbon footprint.

Since 2009 Ferrovial has measured 100% of greenhouse gas emissions caused by its activities worldwide, with the aim of reducing the carbon footprint - largely via using energy more efficiently.



It has a calculation procedure to compute said emissions, certified in 2009 according to the 14064-1 standard, in which the methodology for data retrieval and calculation methodology are established.

Emissions of greenhouse gases (GHGs) reported in the present report have been verified by PwC under limited assurance, in accordance with ISAE 3410 of the "Assurance Engagements on Greenhouse Gas Statements. The verification process also checked that the internal procedure "Calculating and Reporting the Carbon footprint", approved by Ferrovial's senior management, has been prepared in compliance with the international ISO 14064-1 standard.

Global scale targets have been set, working to a horizon of 2020, using a bottom-up approach which brings together the opportunities to reduce emissions from the base of production processes; in other words, commencing with the productive processes for each business area, and in which identification and economic appraisal of the "areas of opportunity" for reducing emissions were undertaken.

As a result of this process, Ferrovial set a reduction target of 21.3% of emissions vis a vis turnover (T CO2eq/million €) for 2020 in regard to the base year of 2009. In absolute terms the goal is to maintain emissions at base-year level. Reductions computed in 2013 were higher than initial estimates, reaching 31.6%, in relative terms, when compared to the 2009 base line.

## Action streams for reducing emissions

This aim covers 100% of activities, companies and subsidiaries on a global scale. To achieve this commitment, Ferrovial has developed and implemented emission-reducing actions, both specific to each business area and of a general nature:

- Incorporation of energy efficiency criteria in procurement and sub-contracting of services, electricity procurement from certified renewable sources, use of alternative fuels and increased use of alternative vehicles.
- o Ferrovial initiated its Sustainable Mobility Strategy for employees in 2008 and it has been steadily extended to the main corporate offices. It is a groundbreaking experience in the business world. These plans have also included actions to improve vehicle fleets and training programmes, and specific training to promote efficient driving (especially in the activities of Construction and Services).
- Development of technology and processes geared towards optimizing the avoidance of emissions.
- Inclusion of energy efficiency measures in buildings used as corporate headquarters. As an emblematic example of these actions, Ferrovial's central headquarters located at Calle Príncipe de Vergara (Madrid) achieved a 48.32 % reduction in electricity consumption compared to 2008, as a result of energy renewal works, and adjusting air

- conditioning temperatures and timing in the building.
- There has been progress in certification of activities providing holistic services for maintenance, energy efficiency for infrastructures and incorporating energy efficiency into waste management systems. This is the case of Ferrovial Services, whose system achieved certification in accordance with ISO 50001 requirements. These systems ensure energy management both in company-owned facilities and buildings and those owned by third parties, including energy production and supply, facility management and design, and processes associated with improved energy efficiency

In parallel with these measures others are carried out which are specific to each of the businesses.



### Ferrovial 2015-2020

Ferrovial developed its "Ferrovial 2015-20" project in order to analyse the impact that climate change is having on the company.

The project's main aim is to analyse how the group's activities fit into the new context produced by climate change policies and regulation, identifying risks for the different divisions on a global scale, as well as opportunities for commencing new businesses. Our aim is for this analysis to make a useful and significant contribution to the company's strategic planning in the coming years.

79 risks and opportunities were analysed and the following strategic areas were defined, based on "low carbon" infrastructures around which our business revolves:

Transport Infrastructures: airports and highways

- Construction
- Energy services
- Smart cities
- Smart forests
- Landfill
- Water

Lastly, the project is also closely linked to Ferrovial's carbon footprint reduction commitments on a global scale.

## Carbon footprint application

During this period the "Carbon footprint" application was developed and launched. It is used to calculate and monitor the carbon footprint, in addition to monitoring reduction objectives and decisions taken related to climate change. It enables optimization of calculations, and also provides greater reliability, traceability and transparency in regard to data on emissions and consumption rates for different fuels.

Ferrovial calculates 100% of the carbon footprint of all its activities in all countries, meaning that a considerable effort is made in terms of resources and people working on monitoring, integration and internal verification of emissions, even more so when one takes into account the enormous volume of geographically disaggregated data and the multiplicity of regulatory environments, as well as the relevant technical nuances.

Development of this IT platform has brought about the following operational improvements for management of the carbon footprint on a global scale:

- The application retrieves data from alreadyexisting applications, files downloaded from other tools or manually.
- Risk of loss is lessened and the verification process is facilitated since all forms of consumption and information from all business areas, companies and countries are centralized.
- It includes the main calculation methodologies, such as the GHG Protocol, DEFRA and DECC.
- Calculation and re-calculation of emissions is now automatized.

- It guarantees data traceability.
- A large number of reports and indicators facilitate analysis of decisions taken and monitoring of achievement of objectives.
- It is a bilingual (Spanish-English) application and is open to all users who have a relationship with climate change, and also to those to whom it may provide support in their daily work (procurement, tendering or bid drafting).



## **Q&E Steering Committee**

At Ferrovial, climate change-related strategy is a constituent part of corporate strategy. For this reason, issues related to the climate change strategy are dealt with by a committee with a company-wide remit. Throughout all Ferrovial companies the Q&ESC is the vehicle for implementation of climate change strategy.

In 2008, Ferrovial set up the Quality and Environment (Q&E) Committee, which has the role of discussing, decision-making, setting requirements and reviewing

project-related results, initiatives and practices, principally in regard to climate change; as well as implementation of the Quality and Environment Policy throughout the company.

The Q&E Committee is formed by the Quality and Environment departmental heads of all Ferrovial businesses, also members of their respective management committees in their business divisions.

Their participation is essential, given that they are familiar with the company environment and know the stakeholders in their areas of business. As appropriate, these members invite other participants whose expertise is key to decision—making.

The Committee meets quarterly, or more often, if required, and makes full use video-conferencing facilities, with the aim of reducing CO2 biomass emissions from participants' trips. Committee members manage all environmental aspects of their respective businesses, including climate change, on a daily basis.

The Q&ESC's decisions and actions stem from the application of the Corporate Responsibility policy, which is set by the Board of Directors. The decision-making process takes the following aspects into account: the needs of the countries in which Ferrovial operates, recommendations of governmental bodies and organizations, the commitment to reduce emissions, mitigation measures, the success of measures adopted etc.

#### Stakeholder relations

Ferrovial maintains a fluid relationship with its most significant stakeholders, understood as being those parties who may be involved in the main climate risks of company activities worldwide, those who have regulatory influence, or those who might have an influence on the development of new business opportunities in the field of environmental sustainability. For this set of players an analysis is performed such that relations with them can be prioritised, and the necessary resources and media allocated to maintain fluid, two-way communication within the framework of smart dialogue.

In this context, special attention is paid to the relationships maintained with analysts and investors specializing in Socially Responsible Investment (SRI), civil society spokespersons (primarily, NGOs and trades unions), governments and regulators, as well as local communities. The most appropriate channels of communication are established for each of these groups, ranging from the Ferrovial environment micro-site to personalized attention, and including the signing of mid and long-term partnership agreements. In the particular case of NGOs, and other civil society representatives, Ferrovial seeks projects of common interest with certain of the most important conservation organizations such as World Wildlife Found (WWF) and Forest Stewardship Council (FSC), the latter being supported by ecologist groups on a global scale. Ferrovial joined it as a partner in 2012. The company also works closely with institutions linked to public administration; this is the case of its long-term collaboration with Fundación Biodiversidad, in the

framework of the Convention for the Climate Change Monitoring Network ("Convenio para la Red de Seguimiento del Cambio Global"), which also features the participation of the Spanish Climate Change Office, the Meteorology Agency and the National Parks body.

Staying one step ahead of regulatory trends, by means of a close and mutually beneficial relationship with legislators and regulators, is considered to be an effective way of managing the impact of emerging regulation on Ferrovial's activities. The company is therefore very proactive in regulatory and legislative processes worldwide that might affect its activities, bringing to bear its experience and technical expertise on the matters subject to regulation. It is common practice for Ferrovial representatives to meet with those in charge of the development of a regulatory framework that could affect company activities worldwide, in a climate of collaboration and mutual trust. When legislative developments have a wide scope specific working groups are convened. These involve all areas of the business and subsidiaries potentially affected, and ongoing monitoring is executed with a view to anticipating the outcomes of new regulation. Structured lobbying activities are also carried out in the international arena, at all times in accordance with the legal framework in force in the relevant field. In these terms, agreements are sometimes reached with other companies or economic sectors with whom we may have common interests (this was the case for the European Energy Efficiency Directive, approved in 2012).

Ferrovial also has a growing influence on the development of policies and strategies of a wider scope. For instance, in 2013 a Ferrovial representative was appointed to the Green Growth Group, a body in which representatives from civil society, academia and the business world advise the European Commission on the future of the economic and environmental agenda for the 2030 and 2050 horizons.

Likewise, Ferrovial works to maintain a fluid and proactive relationship with analysts and investors, anticipating their expectations and responding to key issues on the global agenda for sustainable development. This relationship, consolidated over the last decade, has ensured that Ferrovial has become a reference in the leading sustainability ratings, as well as in the portfolio of the principal SRIs.

## Analysts' feedback

Ferrovial's climate change strategy has received recognition in the form of the company's inclusion in the CDP Climate Disclosure Leadership Index and Climate Performance Leadership Index, classifying the companies with the best practices in emissions reduction and the way they manage mitigation of the effects of climate change. In 2013, Ferrovial achieved 99 points out of 100 and maintained the maximum A category. The company has been present in these indices since 2009.

In addition, Ferrovial has achieved a position of leadership in the first edition of the Supplier Climate Performance Leadership Index (SCPLI) put together by CDP. This index accredits the excellence of corporations as companies supplying products and services which have low carbon emission business models.

CDP is the only global corporate environmental information system. It is an international not-for-profit organization providing a system for companies and cities to measure, disseminate, manage and share important environmental information. It works with market agents, including 722 institutional investors – with total assets valued at 87 billion dollars, so as to motivate companies to publish their impacts on the environment and natural resources and to take measures to reduce them.

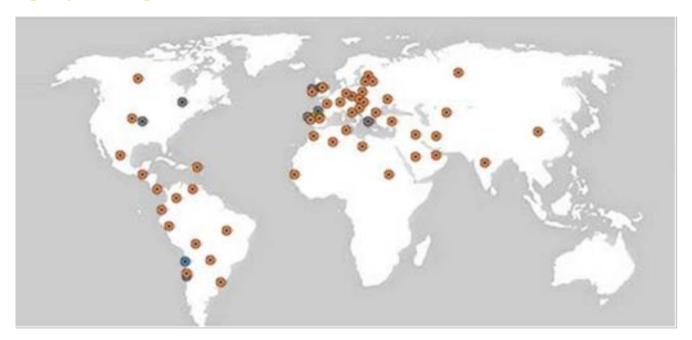
The established sustainability indices Dow Jones Sustainability Index and FTSE4Good have likewise highlighted Ferrovial's climate strategy and management of its carbon footprint.







## **Company description**



Founded in 1952, Ferrovial is one of the leading global infrastructure groups. Its businesses are structured into airports, highways, construction and services divisions and it operates in over 20 countries.

The hallmarks of Ferrovial's identity are innovation, the environment, and a commitment to society. The company harnesses these values to construct, create, and manage infrastructures, providing services to large communities. They are key in setting a pathway to improve quality of life and ensure progress for people.

Ferrovial's operations span four businesses:

- Services: Urban Services, Maintenance and conservation of infrastructures and Facility Management.
- o Highways: Concessions and management.
- o Construction: Civil works, Building and Industrial.
- Airports: holding of 25 %

### Services

Ferrovial Services is a company of reference internationally for efficient provision of urban and environmental services and maintenance of infrastructures and facilities.

The services division features the following Business Units:

- In the United Kingdom (UK): Amey, which is formed by AmeyFS and Enterprise. The incorporation of Enterprise in Amey creates a company with one of the most diversified offers in the UK, reinforcing its position in the environmental sector and facilitating utilities' entry into the services sector.
- In Spain: the Business Unit formed by merging the capacities and solutions of Ferroser and Cespa.
- On an International level: present in countries like Portugal, Chile and Poland, and aiming to explore entering new markets.

Together, they offer a wide-ranging catalogue of innovative solutions complying with the most demanding quality and commitment standards for all types of public and private customers. They work to improve infrastructures and cities, optimizing their efficiency, functionality, sustainability and contribution to society. The division executes its business via an integrated offering of value-added services:

- Maintenance of transport infrastructures, ensuring the most demanding quality and safety levels. The whole of the process is covered end-to-end, from needs-planning for vehicles and persons right up to the solution of all incidents.
- Environmental services to convert cities into sustainable environments: collection, recycling, treatment and transformation of waste into energy and new materials, management of green zones, street cleaning and conservation.
- Management of services and energy efficiency for buildings and facilities, optimizing costs and investments via the execution of bespoke, holistic solutions, from diagnostics to energy management itself.

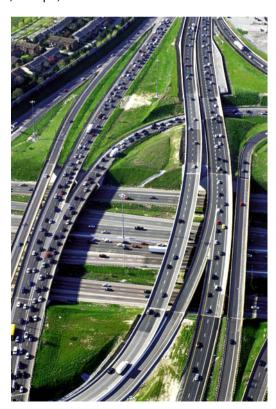


## Highways

Cintra is one of the world's biggest private toll-road developers, both in terms of project numbers and investment volume, and is a pioneer in electronic barrier-free tolls.

It directly and proactively manages projects, seeking operating efficiency, and optimizing quality of service. Cintra places enormous value on users and aims to ensure that users of its infrastructures have an insurmountable experience.

It operates a portfolio of 24 concessions totalling nearly 2,100 kilometres, and is present in Canada, the United States, Europe, Colombia and Australia.



#### Construction



Ferrovial Agromán is the flagship company of the construction division operative in all areas of civil works and building, both in Spain and abroad.

Ferrovial Agroman is a Ferrovial subsidiary engaged in the construction of civil works, building and industrial works. It is a reference internationally for its technical capacity in the execution of large transport infrastructures. Its international position continues to improve, and it is noteworthy that the international portfolio outweighs domestic work in the main operational aggregates.

In the field of civil works, it designs and builds all types of infrastructures: roads, railways, hydraulic works, maritime works, hydro-electric works and industrial and works. The division also has significant experience in home building and in non-residential building.

In Spain, Ferrovial Agromán also has the support of its auxiliary companies in executing part of its business:

- The structure pre-tensing business is operated via the company Tecpresa.
- Ditecpesa: is a company specializing in development, manufacture and sale of asphalt products.
- Edytesa: specializing in sliding formwork technology and lifting, movement and placement of large loads (heavy lifting).

Beyond Spain, business is carried out both by subsidiaries – like Budimex in Poland or Webber in the United States, and by stable delegations in countries deemed to be of strategic interest, such as the United Kingdom, Ireland, Italy, Portugal, Chile, Puerto Rico, Greece and the United States.

Cadagua operates within this division: specializing in the design, construction and running of all types of water treatment plants.



## **Airports**



Following the buyout of BAA Airports Limited in June 2006 (a company which changed its name to LHR Airports in October 2012), Ferrovial became one of the world's leading private infrastructure operators, with four airports in the United Kingdom including Heathrow Airport, the most international and one of the world's busiest for air traffic.

The airport infrastructures market is marked by a privatizing trend. Ferrovial Airports is ready to respond to this need. Its strategic position is consistent with the long-term investment required by these infrastructures and with a willingness to be involved in the management required by these projects. All of this points to a future with high growth potential.

LHR Airports, previously known as BAA, is Ferrovial Airports' main company. This strategy of this British company focuses on British airports, managing Heathrow, Southampton, Glasgow and Aberdeen.

## Business management

A key part of our environmental strategy focuses on the development of business models capable of contributing to society's drive towards an environmentally sustainable planet, optimizing Ferrovial's capacities and technologies in areas such as energy efficiency, reduction of greenhouse gas emissions, carbon sink forests and eco-efficiency.

Ferrovial believes that aspects such as energy efficiency in buildings, holistic city management, and the mobility of low emissions, as well as conservation of biodiversity, are sources of inspiration in developing new business models. This all contributes to the overall aim of creating long-term value, with Ferrovial becoming a strategic partner of governments in the countries where it operates, and contributing to the achievement of its global environmental objectives.

## Sustainable mobility

There is no doubt that the transformation towards low emissions transport infrastructures will involve their integration with ICTs, since this will ensure they have greater flexibility to achieve the aim of reducing energy consumption and greenhouse gas (GHG) emissions. Real smart infrastructures, capable of adapting to real-time demand, ensuring the smooth flow of transport or activating solutions for more sustainable mobility. Examples of this are the systems of traffic events predictability, advanced "SAVE" feeder systems for

highways, or the DAVAO+ system for the detection of highoccupancy vehicles; all of which are developed in the framework of the "Smart Infrastructure Innovation Centre (CI3)" built in 2010. The launch of these technologies has enabled Ferrovial to develop concepts like managed lanes, infrastructures capable of reducing the carbon footprint of people's mobility on the roads, as currently developed in countries such as the United States and Capada.

#### Smart Cities

Over three years ago the Services area began developing the "smart city" concept within the framework of municipal services and energy efficiency, proposing a very practical focus, based on cost reduction for local administrations, investment in technology, increasing energy efficiency and improving citizens' quality of life.

This new model has already been implemented in a range of cities, including Birmingham and Sheffield (both UK), where Ferrovial Services has long-term contracts, enabling it to invest in state-of-the-art technologies to reduce energy consumption and greenhouse gas emissions, whilst also reducing the economic cost of municipal services for taxpayers.

It has been a positive experience, well-received by local citizens, trades unions and employees. According to initial estimates, a realistic saving of 20% may be made in regard to the current cost of urban services.

## Sustainable forestry management (Smart Forest)

Since 2012 Ferrovial has sought to detect opportunities linked to conservation of biodiversity. In countries like Spain, the mountains are a source of natural resources, economic activities and job creation in the rural world; jobs which are vital to stop the local population uprooting, and to facilitate long-term conservation of habitats. However, the current policy of cuts in public expenditure has placed at risk public investment in conservation of forests, with attendant impacts and risks that this deficit might have for biodiversity and economic activity in rural areas.

In this context, Ferrovial maintains that private capital can play a significant role in making up for the lack of public investment, as long as sustainable and long-term forestry management is ensured, along with public usage of hills and mountains which form part of our heritage. With this aim, in partnership with ecologists' associations, the Forest Stewardship Council (FSC) and the scientific community, Ferrovial is currently working with different public administrations in Spain to develop a pilot project to manage public mountains.

In 2013, this model was launched in part in the autonomous community of Catalonia (Spain), via installation of the first biomass power stations using the sub-product of forestry management on a large area of mountainside.

### *Green construction. Bioclimatic buildings*

Over the last three years, Ferrovial companies have built over 98,000 m2 of buildings and more than 142,000 m2 of urbanisation in the framework of bioclimatic projects. Of the 11 buildings finished in accordance with these criteria, two have BREEAM certification, eight are undergoing the certification process according to the LEED (Leadership in Energy and Environmental Design, developed by the U.S. Green Building Council) tool, and one via the Spanish tool "Verde". These three certification systems feature a set of tools designed to measure, evaluate and weight the sustainability levels of a building, in the phases of design, execution and maintenance.

Since 2009, Ferrovial has been a patron and active partner of the regional chapter of the Green Building Council in Spain, collaborating with this institution and the international World GBC network on projects like the activation of the rehabilitation of buildings on an urban scale, according to energy efficiency criteria, or development of the "Verde" and LEED certification tools.



## Rehabilitation of buildings with energy efficiency criteria

In cities, experts hold that the urban rehabilitation of buildings using energy efficiency criteria, both in the residential and tertiary sectors, will be the future of building. In recent years – with an emphasis on Spain – Ferrovial has led an initiative which aims to reorient the industry's business model, until now based on building new stock, towards a new framework geared towards improving the habitability of the stock of already-existing buildings.

This alternative has the potential to bring great benefits to the building industry. In its key report, the Technical Rehabilitation group (TRG) - of which Ferrovial is a member - proposes an ambitious programme of urban renewal and energy rehabilitation, with works to be executed in ten million Spanish homes by 2050. Given its potential, it is a big opportunity to generate economic activity and above all jobs - estimated at more than 140,000 on an annual basis in Spain alone.

In 2013, Ferrovial moved forward considerably in the development of a pilot project in energy rehabilitation and urban renewal in Spain. A pre-agreement was also reached to train a development consortium for rehabilitation works in the cities of Madrid and Zaragoza which would affect more than 2,800 dwellings in both cities during the initial phase. The consortium is formed by Ferrovial, a leading energy industry company, the Municipal Housing Companies of the aforementioned municipalities, and the European Climate Foundation (ECF). ECF lists amongst its objectives the development of a large-scale energy rehabilitation pilot project in Spain,

which would serve as a successful example for the other European Union member states.



## **GROUP GHG EMISSIONS**

The carbon footprint calculation and reporting project is applicable to the whole of the Ferrovial Group, including all business departments and subsidiaries.

Calculation methodology is mainly based on GHG Protocol (WRI & WBCSD), since it has greatest international acceptance, whilst compliance with ISO14064-1 is also maintained. Nevertheless, other methodologies were used to take into account specific aspects of business, for example DEFRA and DECC methodology for operations in the United Kingdom, and EPER methodology to estimate diffuse biomass emissions from landfills.

For calculation purposes, operational control is taken to be the organizational limit. Using this focus, companies calculated emissions from sources over which they exercised full authority to introduce and implement their operational policies, regardless of their shareholding in the company.

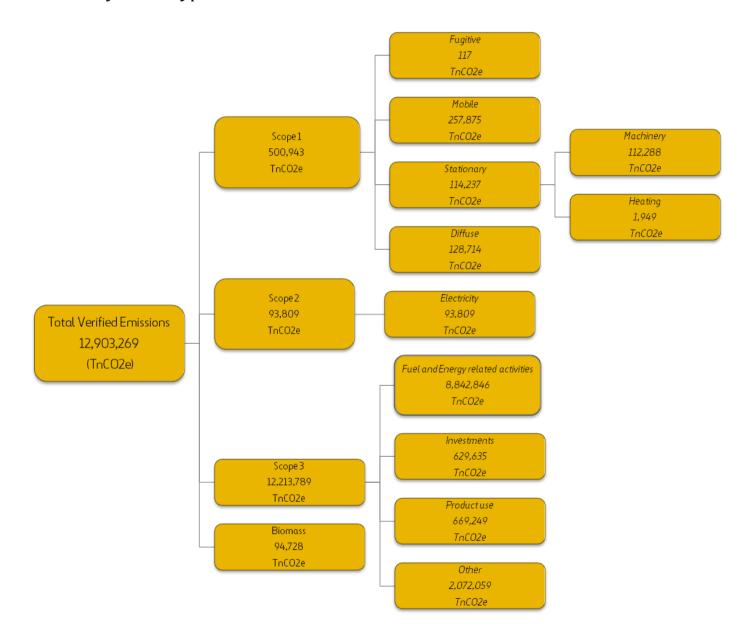
In its "Calculation and Reporting of the Carbon footprint" procedure, Ferrovial uses 2009 as its base year and undertakes the re-calculation of its inventory whenever there is a structural change, a change in calculation methodology (emission factors, focus...) or changes in annual consumption levels, with the aim of ensuring the comparability of information between years.

The most significant changes which occurred in 2013 were due to perimeter changes in the main business divisions, certain of which were particularly emission-intensive:

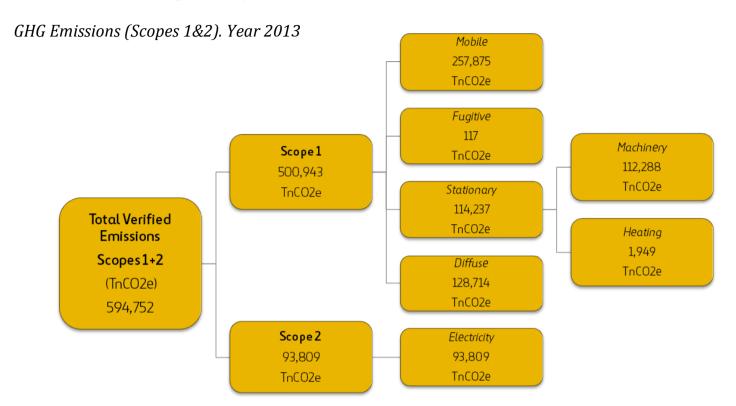
- Cadagua. Re-calculation of Cadagua's emissions since 2009 due to elimination of a thermal drying plant over which the company had not exercised operational control and which had not been consolidated in the annual financial statement. emissions for all years were therefore removed and were not included in the calculations for 2013.
- Steel Ingeniería. This company was bought and consolidated within Ferrovial Services during the financial year. To enable analysis of the evolution of emissions estimates were used for emissions for 2009, 2010, 2011 and 2012.
- Enterprise. Amey bought and consolidated this company within its perimeter this financial year. To enable analysis of the evolution of emissions estimates were used for emissions for 2009, 2010, 2011 and 2012.
- Ferroser and Cespa. In 2013, these two companies merged. Henceforward, they will trade under the Ferrovial Services brandname.

## GHG emissions (Scope1&2&3&Biomass)

GHG emissions by source type. Year 2013



## GHG Emissions (Scopes 1&2)



Under this scope, GHG emissions caused by Ferrovial activities are classified as follows:

- Direct emissions are those issuing from sources which are owned or controlled by the company.
   They mainly originate from:
  - Fuel combustion in stationary equipment (boilers, furnaces, turbines...) to produce electricity, heat or steam. Fuel combustion in vehicles owned or controlled by the company.

- Diffuse emissions. Emissions not associated with a given emitting source, as is the case with biogas emissions from a landfill.
- Channelled emissions. Emissions of greenhouse gases via a focus, excluding those accruing from fuel combustion.
- Fugitive emissions. Refrigerants.
- Indirect GHG emissions are emissions resulting from the consumption of electricity bought from other companies which produce or control it.

## GHG Emissions (Scopes 1&2)

## Evolution 2009-2013

	<b>Business Division</b>	Company	2009	2010	2011	2012	2013
	Construction	Budimex	27.744	27.744	37.261	44.895	37.678
		Cadagua	18.669	20.576	19.983	22.615	21.706
		FASA	61.287	61.287	70.423	44.284	44.901
		Webber	44.395	44.395	37.772	38.728	27.096
	Corporate	Ferrovial Corporación	375	341	234	274	236
Scope 1	Infraestructures	Cintra	3.145	3.105	3.237	3.343	3.836
	Services	Amey	40.813	44.430	51.073	42.600	37.380
		Amey-Cespa	33.739	33.739	33.739	8.331	29.382
		CESPA	371.011	346.384	279.738	225.542	219.473
		Enterprise	61.102	61.102	61.102	61.102	61.102
		Ferroser	18.791	18.691	15.187	19.207	18.152
	Total Scope 1		681.071	661.793	609.749	510.920	500.943
	Construction	Budimex	19.921	19.921	19.329	23.957	24.716
		Cadagua	44.552	30.992	24.820	25.448	26.401
		FASA	13.647	13.647	8.087	6.000	5.354
		Webber	7.800	7.800	6.795	7.076	3.167
	Corporate	Ferrovial Corporación	521	519	490	437	402
Scope 2	Infrastructures	Cintra	12.538	12.090	10.942	10.290	10.451
	Services	Amey	6.912	6.840	7.592	5.620	0
		Amey-Cespa	2.343	2.343	2.343	2.934	0
		CESPA	12.225	13.748	15.518	20.045	18.030
		Enterprise	2.698	2.698	2.698	2.698	2.698
		Ferroser	2.248	2.213	2.417	1.976	2.590
	Total Scope 2		125.406	112.811	101.031	106.482	93.809
	Construction	Budimex	47.665	47.665	56.590	68.853	62.394
		Cadagua	63.221	51.568	44.803	48.062	48.107
		FASA	74.934	74.934	78.509	50.283	50.255
		Webber	52.194	52.194	44.567	45.805	30.263
	Corporate	Ferrovial Corporación	896	860	724	711	638
Scopes 1&2	Infrastructures	Cintra	15.684	15.195	14.179	13.633	14.287
	Services	Amey	47.725	51.270	58.665	48.219	37.380
		Amey-Cespa	36.082	36.082	36.082	11.265	29.382
		CESPA	383.236	360.132	295.256	245.588	237.503
		Enterprise	63.801	63.801	63.801	63.801	63.801
		Ferroser	21.038	20.904	17.603	21.183	20.741
	Total Scopes 1&2		806.476	774.604	710.779	617.403	594.752

Evolution Scopes 1&2 in absolute terms (t CO2 eq)

In 2013, Ferrovial's emissions on a global scale fell by 26.2 % in absolute terms in comparison with the 2009 base year and by 3.7 % with regard to 2012 (22,651 TnCO2eq).

Generally speaking, companies continued the trend of reducing emissions in absolute terms, except for Amey-Cespa which increased emissions in this period due to a substantial increase (over 100%) in waste managed at landfill, with the resulting rise in biogas emissions. It is well-known that increases in this flow of emissions have a significant knock-on effect on the footprint as a whole. Amey-Cespa changed the origin of its electricity consumption to 100% renewable in order to offset a large proportion of this increase.

The reduction in emissions achieved is the result of implementing reduction measures in the business divisions, including:

- Establishing efficiency criteria for procurement, renting and leasing of vehicles and machinery.
- A rise in the number of alternative vehicles.
- Completion of efficient driving courses.
- Use of alternative fuels.
- o Company mobility plans.
- Optimization of company trips, via use of information technologies (videoconferencing...).
- Energy efficiency in buildings. Incorporation of proactive energy efficiency measures in buildings occupied as corporate headquarters.
- Use of electricity from renewable sources. This is the case of Amey and Amey-Cespa whose electricity consumption this financial year was totally from renewable sources.



The economic crisis in Spain has also directly affected diffuse emissions from waste treatment, as well as those originated by other activities.

## Ferrovial | Carbon Footprint Inventory 2013

Metric Tonnes	Reduction 10vs09	Reduction 11vs09	Reduction 12vs09	Reduction 13vs09	Reduction 13vs12
CO2eq/Million €	%	%	%	%	%
73,84	-5,83	-10,60	-25,36	-31,60	-8,35

Evolution of GHG emissions relative terms (t CO2 eq /INCN million €)

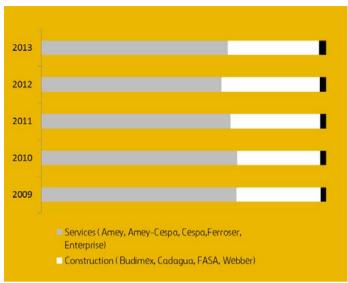
The indicator in the table measures evolution of absolute emissions compared to the company's volume of activity. Net turnover is used as the best indicator of this. In 2013 Ferrovial reduced the indicator of relative intensity by 31.6% compared to 2009. This ensured sufficient margin to achieve the reduction target of 21.3% as included in the roadmap for reduction of emissions, above and beyond circumstantial factors which may have had an influence on the indicator (e.g. the severe economic crisis in Spain since the end of 2008).

The figure obtained in 2013 reflects the result of efficiency measures implemented throughout these years, given that although turnover increased, GHG emissions in relative terms have not only been contained but reduced.

	CO2(Ton)	CH4 (Ton)	N2O (Ton)	Teq. CO2
2009	484.065	12.942,01	81,38	806.476
2010	500.205	12.391,87	659,42	774.604
2011	433.018	9.734,15	447,65	710.779
2012	503.375	5.394,38	252,70	617.403
2013	464.827	6.942,81	473,04	594.752

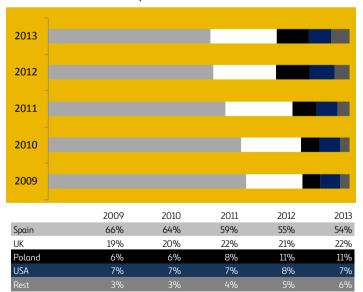
Evolution of emissions by GHG type (Scopes 1&2)





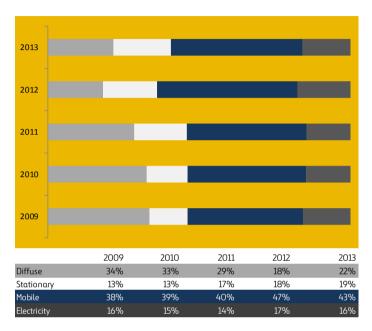
Distribution of emissions by sector and year (Scopes 1&2)

Services took on some extra weighting in the distribution of emissions by business areas in comparison with the previous year, two percentage points, as a result of the consolidation of Enterprise and Steel.



Country-based distribution of emissions (Scopes 1&2)

Growing internationalization entails a fall in emissions in Spain and an increase in emissions in other countries.



#### Distribution of emissions by sources (Scopes 1&2)

The weighting of diffuse emissions in respect of the rest of the sources fell by 12 percentage points when compared to 2009. This reduction was due to the energy efficiency measures implemented at landfills and consumption was also directly affected by the effect of the current crisis in Spain. Reduced consumption means less waste is generated at landfills and consequently there is also a fall in diffuse emissions. Therefore, a reduction in the weighting of diffuse emissions means that there is an increase in that of the rest of the sources in regard to the total. Nevertheless, it can be seen that the weighting of electricity is the same as it was in 2009, thanks to the acquisition of electricity from renewable sources.

### GHG Emissions 2013. Biomass

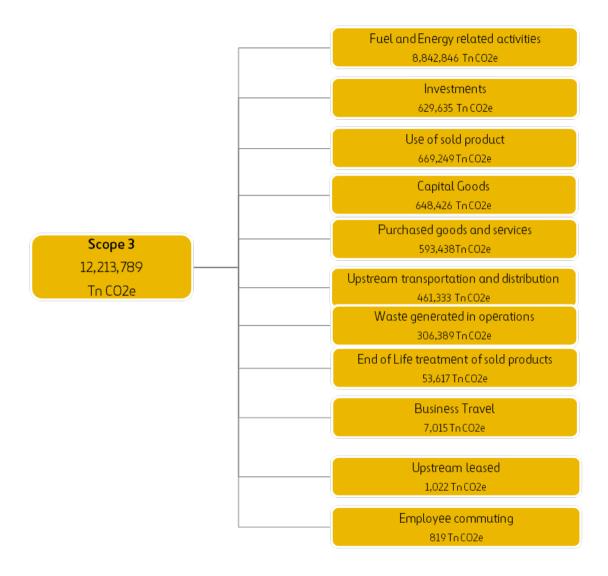
		Emissions (TnCO2eq)	Emissions (TnCO2eq)	Emissions (TnCO2eq)	Emissions (TnCO2eq)	Emissions (TnCO2eq)
Business division	Company	2009	2010	2011	2012	2013
Construction	Cadagua	1.191,08	1.407,00	14.698,80	16.671,60	50.159,56
Services	Amey-Cespa	7.436,18	7.436,18	7.436,18	6.972,46	6.563,66
	Cespa	25.671,98	28.156,22	28.533,10	34.921,12	38.005,00
	Ferroser				14,42	0,00
Total		34.299,24	36.999,40	50.668,08	58.579,60	94.728,22

These include emissions generated by the combustion of biogas recovered and channelled and from biodiesel in vehicles. The biogas is generally burnt in cogeneration processes, or flare-burnt. In Emissions due to combustion of biomass rose by 61.9% this financial year due to the opening of four waste-water treatment plants and the biogas generated was burnt.

Use in Cespa and Amey-Cespa landfills of the biogas generated, or its use as fuel at Cadagua's plants, helps to reduce GHG emissions. Biogas contains approximately 50% methane and 50% CO2. When methane is burnt it becomes CO2, reducing equivalent emissions 21-fold.



## GHG Emissions (Scope 3)



Emissions (Scope 3). 2013

Ferrovial calculated the total figure for emissions in line with the guidelines included in the Corporate Value Chain (Scope 3) Accounting and Reporting Standard published by the Greenhouse Gas Protocol Initiative, the WRI and the WBCSD. In parallel, a specific reporting and calculation methodology scope 3 emissions was developed and included in a technical instruction.

Ferrovial calculates 11 of the 15 categories which feature in the Corporate Value Chain (Scope 3) Accounting and Reporting Standard. The remaining categories are not applicable to Ferrovial's business:

- Downstream transportation and distribution.
   Ferrovial does not sell products which have to be transported or stored at other premises.
- Processing of sold products. Ferrovial does not have products which require transformation or inclusion in another product.
- Downstream leased assets. Ferrovial does not have assets which are rented out to other companies.
- Franchises. Ferrovial does not operate as a franchiser.

The following are the activities, products and services which have been used in calculating Scope 3:

### Purchased goods and services

This section includes emissions related to materials bought by Ferrovial and used in products or services supplied by the company. These, in turn, include emissions issuing from different phases of the life cycle: extraction, prior processing and manufacture. Phase of use and transport are excluded.

This category features the most significant materials in environmental and procurement volume terms, including paper, timber, water, concrete, asphalt and asphalt aggregates.

#### Capital goods

This category includes all upstream emissions (that is, from the cradle to the gate) of the production of capital goods bought or acquired by the company during the year.

## <u>Fuel and energy related activities (not included in Scope 1 or 2)</u>

This section covers the energy required to produce fuels and electricity consumed by the company and the loss of electricity in transportation.

## Upstream transportation and distribution

This section covers emissions from transport and distribution of products reported in the category for Purchased goods and services.

### Waste generated in operations

Emissions included under this section are related to the waste generated by the company's business which has been reported during the financial year. This section includes:

- Waste from construction and demolition.
- Non-dangerous waste materials: municipal solid waste, wood, plant waste.
- Dangerous waste materials.

- Re-used excavation earth.
- Excavation earth taken to landfills.

#### Business travel

Emissions associated with company trips are included: train, aeroplane and taxi.

#### **Employee commuting**

This category includes emissions accruing in employees' journeys from their homes their workplaces. Within each section, Ferrovial calculates emissions from employees in construction, services, infrastructures and Grupo Ferrovial who work at company headquarters.

#### Investments

Emissions related to investments in British airports are computed. Since Ferrovial has a 25 % holding in HAH (Heathrow Airport Holdings) the following emissions are computed within this category:

- 25 % of scopes 1&2.
- 25 % most significant scope 3 headings as follows: Air traffic movements, Employee Commuting and Passenger transport.

#### Use of sold products

Ferrovial calculates emissions accruing from use of transport infrastructures managed by Cintra.

#### End of life treatment of sold products

This category includes emissions issuing from elimination of waste generated at the end of the useful lifespan of products sold by Ferrovial in a reporting year.

#### Upstream leased assets

This heading covers emissions related to electricity consumption in customers' buildings maintained and cleaned by Amey



Scope 3 Evolution

			Years		
Category	2009	2010	2011	2012	2013
Investments	814.108	803.018	827.550	805.044	629.635
Fuel and energy related activities				9.434.307	8.842.846
Capital Goods				569.407	648.426
End of life treatment of sold products				52.703	53.617
Purchased goods and services				743.192	593.438
Upstream transportation and				461.487	461.333
distribution					
Waste generated in operations				212.976	306.389
Employee commuting				792	819
Business travel	403	4.911	4.918	6.606	7.015
Use of sold products			690.845	641.031	669.249
Upstream leased	1.728	1.710	1.898	1.405	1.022
Downstream transportation and	NA	NA	NA	NA	NA
distribution					
Processing of sold products	NA	NA	NA	NA	NA
Downstream leased assets	NA	NA	NA	NA	NA
Franchises	NA	NA	NA	NA	NA
	816.239	809.638	1.525.211	12.928.950	12.213.789

In 2013, scope 3 fell by 5.5% with regard to 2012.

The "Investments" and "Upstream leased" categories have been calculated since 2009. This facilitates monitoring of evolution and comparison of emissions from 2012 with 2009. Emissions under the "Investments" category fell by 21 % year-on-year. The main reason for the reduction was divestment in airports.

Energy efficiency measures implemented in our customers' buildings enabled a reduction in "Upstream leased" emissions of 22 % with regard to 2012.

#### **SECTOR-BASED ANALYSIS**

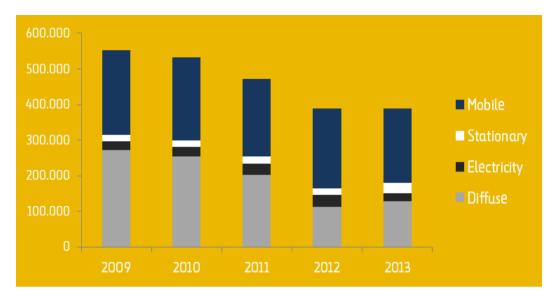
### Services

				Years			Evol	ution
		2009	2010	2011	2012	2013	2013Vs2009 %	2013vs2012 %
Amou	t CO2eq	47.725	51.270	58.665	48.219	37.380	-21,68	-22,48
Amey	t CO2eq/Millon €	46,36	46,93	46,37	32,82	28,50	-38,53	-13,17
Amou Cosoo	t CO2eq	36.082	36.082	36.082	11.265	29.382	-18,57	160,83
Amey-Cespa	t CO2eq/Millon €	979,16	979,16	979,16	261,85	328,40	-66,46	25,41
CESPA	t CO2eq	383.236	360.132	295.256	245.588	237.503	-38,03	-3,29
CESFA	t CO2eq/Millon €	406,28	383,53	317,48	277,08	272,62	-32,90	-1,61
Entococico	t CO2eq	63.801	63.801	63.801	63.801	63.801	0,00	0,00
Enterprise	t CO2eq/Millon €	83,74	83,74	83,74	83,74	83,74	0,00	0,00
Foreser	t CO2eq	21.038	20.904	17.603	21.183	20.741	-1,41	-2,08
Ferroser	t CO2eq/Millon €	34,19	34,37	28,66	36,56	34,30	0,32	-6,17
Total	t CO2eq	551.883	532.189	471.407	390.055	388.808	-29,55	-0,32
Services	t CO2eq/Millon €	213,45	201,78	167,93	132,73	106,85	-49,94	-19,50

Emissions (Scopes 1&2). 2013

The services division comprises the following Business Units:

Ferroser is a reference in holistic provision of urban, environmental and infrastructure management services in Spain. It stands out in fields such as energy efficiency, facility maintenance for the industrial, sanitary and airport sectors, road conservation, air traffic and ancillary services as wide and varied as sport centre management, healthcare transport, customer care centres and cleaning. In the field of treatment and industrial Cespa develops innovative solutions applicable to the different phases of the waste lifecycle: collection, processing, recycling and recovery.



Emissions by source-type and year (Scopes 1&2

We also bring our experience to bear in industrial services including waste transfer and cleaning of confined spaces and gardening. In landfills, Cespa has launched selective waste separation on entry. This also contributes to reduction of entry-level waste in spite of the fact that it requires higher electricity consumption. In 2013, Ferroser and Cespa merged their capacities and solutions in order to optimize services offered to cities and there is exploration of entering new markets like Portugal, Chile and Poland. This year, for its part, Ferroser acquired and consolidated Steel Ingeniería. To allow for evolution emissions since 2009 were re-calculated.

 Amey, Enterprise and Amey-Cespa operate in the UK. Their activities range from road and rail infrastructure maintenance to holistic waste management, asset lifecycle management, energy or water supply services, whilst also reinforcing our positioning in environmental services.

Thus, Amey is a pioneer in holistic management of cities, which includes lighting, sanitation, traffic management, waste collection and maintenance of infrastructures.

This optimizes processes, increasing efficiency and reducing the environmental impact. Re-design of processes and the use of new technologies entails improvements in the efficiency and productivity of services. There is investment in innovative solutions. One example is public lighting, which is incorporating LED technology to enable centralized control of lighting in accordance with the activity in urban spaces. This all has knock-on effects in reducing management costs, and in reduction of energy consumption. Software implemented in Amey's vehicles optimizes their use in routes, improves incident solving, minimizes traffic congestion, reduces fuel use and increases the effectiveness of winter maintenance.



The main aim of Amey Cespa is to pool Amey's experience in the British services sector with the wide-ranging expertise of Cespa in the field of waste. AmeyCespa has thus bet firmly on recycling and making use of waste as energy; by using cutting-edge technologies to generate energy types whilst minimizing the environmental impact. The company's work is thereby transformed into a commitment to the environment and to meeting the challenges and needs of the localities where it provides a service.

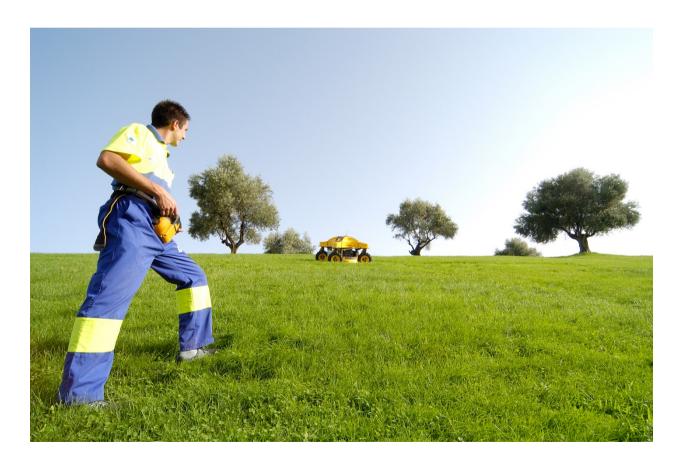
A reduction in the entry of waste into landfills has a significant influence on diffuse emissions released into the atmosphere. The reasons for a reduction in waste management are closely linked to the economic situation given that there has been a reduction in the production of waste due to the fall in consumption.

The acquisition of Enterprise adds extra services to those carried out by Amey. These include community work and waste collection, and increases company presence in infrastructure management. In order to allow for analysis and evolution of emissions an estimate was made for emissions corresponding to previous years.

As a whole, the Services division continued the trend of reducing emissions in absolute terms with regard to the base year. Amey-Cespa increased its emissions in this period due to a large increase (over 100%) of waste managed in landfill, with the attendant increase in biogas emissions. It is well-known that increases in this flow of emissions have a significant knock-on effect on the footprint per se. Amey-Cespa has largely offset this increase by changing the origin of its electricity consumption to 100% renewable.

The economic crisis has also led to a reduction in consumption, in waste deposited at landfills and, hence, in diffuse emissions since 2009.

Amey was also able to reduce its emissions by purchasing electricity from renewable sources.



## Highways

			Years		Evolution		
	2009 2010 2011 2012 2013				2013	2013Vs2009 %	2013vs2012 %
t CO2eq	15.684	15.195	14.179	13.633	14.287	-8,90	4,80
t CO2eq/Millon €	52,81	29,97	37,61	37,65	35,43	-32,91	-5,90

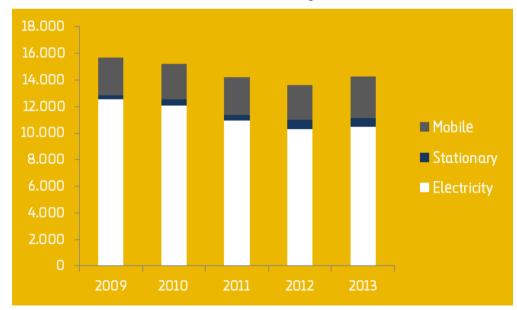
Emissions (Scopes 1&2). 2013

Cintra is one of the world's largest private highway developers, both in terms of project numbers and volume of investment, and a pioneer in innovative solutions in barrier-free electronic tolls.

As at the end of 2013, Cintra exercised operational control over 13 highways shared between Spain, Ireland, Portugal and the United States. In absolute terms emissions increased by 654 t CO2eq, 4.8 %, year-on-year, due to the fact that in 2013 a new highway (SH130) was inaugurated.

Emissions associated with the functioning of this highway are equal to 1,425 t CO2eq. If the SH130 had been left out of the equation, the figure for emissions would have been down by 5.6 %.

73 % of Cintra's emissions are located in electricity consumption for lighting of highways, tunnels, tolls and offices. Therefore, implementation of energy efficiency measures for lighting has a knock-on effect in lower consumption and a reduction in emissions and, hence, on the good reduction results achieved since the base year.



Emissions by source-type and year (Scopes 1&2)

Construction				Years			Evolu	ıtion
		2009	2010	2011	2012	2013	2013Vs2009 %	2013vs2012 %
Budimex	t CO2eq	47.665	47.665	56.590	68.853	62.394	30,90	-9,38
	t CO2eq/Million €	41,38	41,38	43,36	44,84	55,24	33,51	23,20
Cadagua	t CO2eq	63.221	51.568	44.803	48.062	48.107	-23,91	0,09
	t CO2eq/Million €	483	508	494	401,74	382,68	-20,84	-4,74
	t CO2eq	74.934	74.934	78.509	50.283	50.255	-32,93	-0,06
Ferrovial Agroman	t CO2eq/Million €	27,85	27,85	33,94	23,94	24,05	-13,65	0,44
	t CO2eq	52.194	52.194	44.567	45.805	30.263	-42,02	-33,93
Webber	t CO2eq/Million €	106,52	106,52	106,11	80,90	46	-57,28	-43,75
	t CO2eq	238.014	226.361	224.470	213.003	191.019	-19,74	-10,32
Construction Total	t CO2eq/Million €	53,32	51,04	54,36	49,29	48	-10,67	-3,37

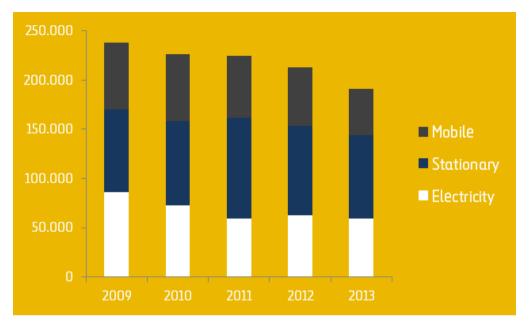
#### Emissions (Scopes 1&2). 2013

Via the company Ferrovial-Agromán, the construction division in Spain undertakes construction in all areas of civil works and building. In the field of civil works, it designs and builds all types of infrastructures: roads, railways, hydraulic works, maritime works, hydro-electric works and industrial and works. The division also has significant experience in both home building and non-residential building.

Outside Spain, the international construction division also undertakes business in all areas of civil and works and building. The division's business involves both a local presence, by means of subsidiaries such as Budimex in Poland or Webber in the state of Texas in the United States, and stable Ferrovial-Agromán delegations in countries felt to be of strategic interest.

There are currently offices in the United States, Canada, Poland, United Kingdom, Ireland, Portugal, Chile, Colombia, Peru, Puerto Rico, Brazil, Qatar, United Arab Emirates, Saudi Arabia, India and Australia.

Cadagua also forms part of the construction division. As witnessed by its references and prestige, it is a world leader in the engineering and construction of water treatment plants, mainly in seawater desalination plants, although also in purifying plants and drinking water treatment plants and waste treatment. There has been a considerable and ongoing commercial effort on the international markets, with company presence on the markets of the Middle East, India, Poland being strengthened by resources from activity in Spain, Latin America and in a range of western European countries, including United Kingdom, Portugal and Ireland.



Emissions by source-type and year (Scope 1&2)

Cadagua's emissions since 2009 have been re-calculated due to elimination of a thermal drying plant over which the company had not exercised operational control and which had not been consolidated in the annual financial statement. Emissions for all years were therefore removed and were not included in the calculations for 2013.

In general, the building industry is where the disparity is most noted in demand for energy certain years compared to other years, depending on the on-site activities which are executed. For example, the level of on-site manufacturing of aggregates, which is highly energy-intensive, depends directly on the amount of road-building, and the use of a tunnelling machine means significant increases in consumption of electricity vis a vis traditional tunnels etc.



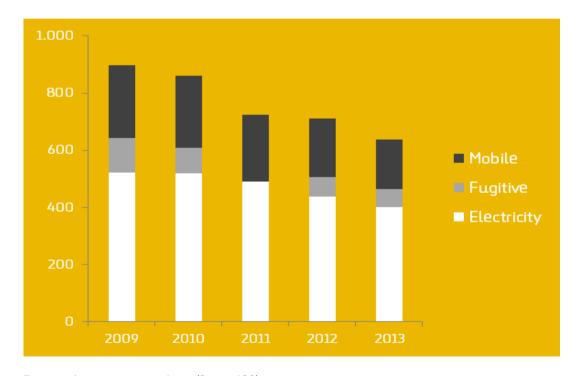
## Corporate

	Year					Evoluction		
	2009	2010	2011	2012	2013	2013Vs2009 %	2013vs2012 %	
t CO2eq	896	860	724	711	638	-28,79	-10,27	

Emissions (Scopes 1&2).2013

'Corporate' refers to Ferrovial's company headquarters, where all company information is consolidated and where the management committee is located.

Corporate provides support to all Business Units, including the Quality and Environment directorates.



Emissions by source-type and year (Scopes 1&2)

#### **EMISSIONS AVOIDED**

Emissions are avoided by Ferrovial as follows:

- Emissions avoided in triage activity and biogas recovery in landfills.
- o "Green" electricity generation in co-generation plants.
- o Extension of green procurement policies throughout the supply chain.
- Emissions avoided in the construction division.

1,233,117 tonnes CO2 equivalent avoided in 2013, thanks to triage activity and biogas recovery

## Emissions avoided via triage and biogas recovery

Emissions Avoided (Teq. CO2)										
		2009	2010	2011	2012	2013				
Cespa	GHG emissions avoided due to biogas recovery	519.603,83	628.874,23	688.157,00	547.151,00	843.025,00				
Сеѕри	GHG emissions avoided due to triage activity	189.981,00	212.186,00	457.014,00	282.405,00	302.295,10				
Amey-Cespa	GHG emissions avoided due to biogas recovery				53.099,71	49.986,46				
	GHG emissions avoided due to triage activity			9.844,00	53.797,00	35.797,83				

In waste management, via the activity of triage, recovery is prioritised as opposed to elimination, with the aim of reducing of the quantity of waste coming on site, thereby reducing the capacity for production of GHGs.

Following decomposition of waste materials, biogas is recovered in landfills via collection networks so as to avoid direct methane (CH4) emissions into the atmosphere and facilitate its use in energy production.

In recent years, ongoing investment in technology, both in the activity of triage and in biogas recovery has facilitated a reduction in GHG emissions and this trend is growing.

The greenhouse gas emissions avoided due to biogas management in landfills in 2013 increased by 1 % when compared to 2012.

## Emissions avoided due to generation of energy at landfills

Energy produced (GJ)	2009	2010	2011	2012	2013
Quantity of electricity produced by biogas recovery	308.959	310.291	383.588	448.434	520.751
Total thermal energy produced by biogas recovery	146.666	102.568	102.946	134.060	187.632
Total Quantity of Energy	455.625	412.859	486.534	582.494	708.383

Biogas recovered at landfills is employed at co-generation plants to produce electricity and thermal energy. In 2013, Cespa generated 708,383 GJ from biogas recovered at landfills. The recovery process not only avoids discharging GHGs into the atmosphere but also generates energy from renewable sources.

During the year there was a 21.6 % increase in energy production and consumption of this energy from renewable sources avoids 50,405 TnCO2eq. Fossil fuel dependency is thus reduced, with the avoidance of methane emissions, con which have a bigger effect on global warming than CO2.

In 2013, 50,405 t CO2eq avoided thanks to consumption of energy from renewable sourcees

## Emissions avoided by generation of energy at water treatment plants

Energy Generated (Kwh)									
	2009	2010	2011	2012	2013				
Electricity generated at WTPs	6.011.047	7.127.767	4.135.679	6.526.099	29.478.819				
Electricity generated by thermal drying	47.171.222	43.011.180	60.848.185	73.507.530	39.549.004				
Total	53.182.269	50.138.947	64.983.864	80.033.629	69.027.823				

In thermal sludge drying processes at Cadagua-managed water treatment plants, natural gas co-generation plants were implemented to produce thermal energy drying and electricity. Water treatment plants generate electricity through combustion of the biogas generated.

Via these processes, the company generated in 2013 a total of 69,029,836 Kwh - 29.8% more than in the base year - whilst it also avoided 20,625 t CO2eq of emissions.

In 2013, 20,625 t CO2eq avoided thanks to consumption of "green" electricity

## Emissions avoided due to renewable electricity procurement

	Consumption of electricity from renewable sources (kwh)				
	2009	2010	2011	2012	2013
Cadagua	166527,6	46.731.972,50	36.927.959,10	34.638.858,20	38.007.908,80
Amey					8.781.112,00
Amey-Cespa					4.202.564,70
Enterprise	4934215	4.934.215,00	4.934.215,00	4.934.215,00	4.934.215,00
Ferroser				1.449.268,69	606.410,00
TOTAL	5.100.743	51.666.188	41.862.174	41.022.342	56.532.211

Extending the green procurement policy throughout the organization has had a certain impact on the carbon footprint, in particular due to:

A significant increase in the number of electricity supply contracts from certified renewable sources and company use of energy generated avoided emission into the atmosphere of 22,072 TnCO2eq.

In total during this year 37.8% more electricity was consumed from renewable sources than last year.

In total during this year 37.8% more electricity was consumed from renewable sources than last year

## Emissions avoided due to procurement of vehicles running on alternative fuels

The initiative to purchase vehicles which run on alternative fuels consists of improving the energy efficiency of these assets, for instance via improvements to criteria for procurement, renting or leasing, efficient driving courses, use of alternative fuels, and alternatives with hybrid engines.



In 2013, 3,823 t CO2 eq avoided thanks to use of alternative vehicles

#### Emissions avoided in construction

 In 2013, Ferrovial Agromán worked on the reduction of scope 3 emissions, focussing on achieving Reduction of distances for on-site earth transport by lorry or dump truck.

In 2013, 5,341 t CO2 eq avoided thanks to reduction of transport distances

#### **OFFSET OF EMISSIONS**

In 2013, Ferrovial's Quality and Environment Directorate held its 3rd Global Quality&Environment Meeting at the headquarters of the Ferrovial University at El Escorial, Madrid.



51 Ferrovial Environment and Quality executives participated in this bi-annual meeting with the aim of gathering useful information for each business unit for short-term planning of tasks related to these fields, pooling knowledge and sharing best practice.



This was one of the first carbon neutral/O emission events to be organized by Ferrovial. All emissions generated during the day were offset by means of the standards offset project of the Voluntary Carbon Market. A total of 25.42 t CO2eq were offset via the "Conservation of Amazonia in Madre de Dios in Peru" Project, verified VCS, CCBS Gold and FSC.

An outdoors activity also took place so that attendees could get closer to nature in an area as enriched as El Escorial. As part of it, they planted a range of trees - yew, Montpellier maple, Pyrenean oak, rowan and cherry.



#### VERIFICATION REPORT



A free translation from the original in Spanish. In the event of a discrepancy, the Spanish language version prevails.

#### INDEPENDENT ASSURANCE REPORT ON THE 2013 GREENHOUSE GAS EMISSIONS INVENTORY

To the Management Committee of Ferrovial, S.A.:

#### Scope of the work

We have undertaken an assurance engagement of the Greenhouse Gas Emissions Inventory (hereon GHG Inventory) of Ferrovial, S.A. and its Group Companies Budimex, Cadagua, Ferrovial-Agromán Webber, Cintra, Amey, Amey-Cespa, Enterprise and Ferrovial Servicios (which involves Ferroser y Cespa), hereon Ferrovial, for the year ended 31st December 2013, included in the Annex.

#### Responsibility of Ferrovial for the GHG Inventory

The Management of Ferrovial is responsible for the preparation and update of the 2013 GHG Inventory, in accordance with its internal procedure "Calculation and Report of Carbon Footprint", described in pages 18 to 37 of the Report "2013 Carbon Footprint Inventory" of Ferrovial. This responsibility includes the design, implementation and maintenance of the management and internal control systems from which the information is obtained for the preparation of the GHG inventory, as well as the processes and basis for its preparation free from material misstatement, whether due to fraud or error.

GHG emissions quantification is subject to inherent uncertainty given their nature and the methods used to determine, calculate or estimate emissions.

#### Our responsibility

Our responsibility is to express a limited assurance conclusion on the GHG inventory based on the procedures we have performed and the evidence we have obtained.

We conducted our limited assurance engagement in accordance with the International Standard on Assurance Engagements ISAE 3410 "Assurance Engagements on Greenhouse Gas Statements" (here on ISAE 3410), issued by the International Auditing and Assurance Standard Board (IAASB) of the International Federation of Accountants (IFAC). That standard requires that we plan and perform this engagement to obtain limited assurance about whether the 2013 GHG Inventory of Ferrovial has been prepared in accordance with its internal procedure "Calculation and Report of Carbon Footprint" and is free from material misstatement. Therefore, the engagement has been undertaken by a team of sustainability and climate change specialists with substantial experience in these issues.

A limited assurance engagement undertaken in accordance with ISAE 3410 involves assessing the suitability of the "Calculation and Report of Carbon Footprint" of Ferrovial as the basis for the preparation of the GHG Inventory, assessing the risks of material misstatement of the GHG Inventory whether due to fraud or error, responding to the assessed risks as necessary in the circumstances, and evaluating the overall presentation of the GHG Inventory. A limited assurance engagement is substantially less in scope than a reasonable assurance engagement in relation to both the risk assessment procedures, including an understanding of internal control, and the procedures performed in response to the assessed risks. In any case, this report shall not be understood as an audit report. The procedures we performed were based on our professional judgment and included inquiries



to Management and various units of Ferrovial that participated in the preparation of the 2013 GHG Inventory and the application of certain analytical procedures and tests, which in general, are described below:

- Interviews with the personnel of Ferrovial in order to understand the content and implementation
  procedures related to the "Calculation and Report of Carbon Footprint" of Ferrovial.
- Analysis of the processes used in compiling and validating the figures presented in the 2013 GHG Inventory of Ferrovial.
- Evaluation of data gathering and internal control systems in relation to the preparation of the 2013 GHG Inventory of Ferrovial.
- Evaluation whether the methods for developing estimates are appropriate and had been
  consistently applied. Our procedures did not include testing the data on which the estimates and
  emission factors are based, or the examination of the reliability of the information provided by
  third parties.
- Verification, through analytical and substantive testing based on the selection of a sample, of the
  quantitative information (activity data, calculations and information generated) used for the
  preparation of the Ferrovial 2013 GHG Inventory and its appropriate compilation on the basis of
  Ferrovial's internal procedure "Calculation and Report of Carbon Footprint".
- Analysis of compliance of the internal procedure "Calculation and Report of carbon Footprint" with the provisions set down in ISO 14064-1 "Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals".

#### Independency

We have complied with the Code of Ethics issued by the International Federation of Accountants (IFAC).

PwC applies International Standard on Quality Control 1 (ISQC 1) and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

#### Conclusion

Based on the procedures we have performed and the evidence we have obtained, nothing has come to our attention that causes us to believe that the 2013 GHG Inventory of Ferrovial for the year ended December 31st contains any significant errors or has not been prepared, in all material aspects, in accordance with the Ferrovial's internal procedure "Calculation and Report of Carbon Footprint".

PricewaterhouseCoopers Auditores, S.L.

Mª Luz Castilla Partner

June 17th 2014



#### Appendix

### Ferrovial 2013 GHG Inventory

GHG Inventory	tCO2-eq	
Scope 1	500.943	
Scope 2	93.809	
Scope 3	12.213.789	
<ol> <li>Purchased goods and services</li> </ol>	593.438	
2. Capital goods	648.426	
<ol> <li>Fuel-and energy- related activities (not included in scope 1 or scope 2)</li> </ol>	8.842.846	
4. Upstream transportation and distribution	461.333	
5. Waste generated in operations	306.389	
6. Business travel	7.015	
7. Employee commuting	819	
8. Upstream leased assets	1,022	
<ol> <li>Downstream transportation and distribution</li> </ol>	NA	
10. Processing of sold products	NA	
11. Use of sold products	669.249	
12. End-of-life treatment of sold products	53.617	
13. Downstream leased assets	NA	
14. Franchises	NA	
15. Investments	629.635	
Biomass	94.728	

NA: It is considered that these categories proposed on the GHG Protocol "Corporate Value Chain (Scope 3) Accounting and Reporting Standard", do not apply to Ferrovial's activity.

Quality and Environment Directorate
Calle Quintanavides 21, Edificio 5
28050 MADRID