



## Climate Change 2016 Information Request M50 Concession Ltd.

### Module: Introduction

#### Page: Introduction

#### CC0.1

##### Introduction

Please give a general description and introduction to your organization.

M50 Concession Ltd ([www.m50concession.com](http://www.m50concession.com)) is the company in charge of the operation and maintenance of the M50 motorway in Dublin, Ireland. The M50 is a 31 Km C-shaped ring around Dublin that connects all the National Primary Routes leaving the capital and carries more than 130,000 vehicles per day. In 2007, the Irish Government awarded M50 Concession Ltd the 35-year concession contract to construct, finance and operate the M50. M50 Concession Ltd shareholders are Globalvia Inversiones, a major worldwide infrastructure developer and operator ([www.globalvia.com](http://www.globalvia.com)), and DIF, an independent fund management company ([www.dif.eu](http://www.dif.eu)).

#### CC0.2

##### Reporting Year

Please state the start and end date of the year for which you are reporting data.

The current reporting year is the latest/most recent 12-month period for which data is reported. Enter the dates of this year first.

We request data for more than one reporting period for some emission accounting questions. Please provide data for the three years prior to the current reporting year if you have not provided this information before, or if this is the first time you have answered a CDP information request. (This does not apply if you have been offered and selected the option of answering the shorter questionnaire). If you are going to provide additional years of data, please give the dates of those reporting periods here. Work backwards from the most recent reporting year.

Please enter dates in following format: day(DD)/month(MM)/year(YYYY) (i.e. 31/01/2001).

Enter Periods that will be disclosed  
Thu 01 Jan 2015 - Thu 31 Dec 2015

#### CC0.3

##### Country list configuration

Please select the countries for which you will be supplying data. If you are responding to the Electric Utilities module, this selection will be carried forward to assist you in completing your response.

Select country  
Ireland

#### CC0.4

##### Currency selection

Please select the currency in which you would like to submit your response. All financial information contained in the response should be in this currency.

EUR(€)

#### CC0.6

##### Modules

As part of the request for information on behalf of investors, electric utilities, companies with electric utility activities or assets, companies in the automobile or auto component manufacture sub-industries, companies in the oil and gas sub-industries, companies in the information technology and telecommunications sectors and companies in the food, beverage and tobacco industry group should complete supplementary questions in addition to the main questionnaire.

If you are in these sector groupings (according to the Global Industry Classification Standard (GICS)), the corresponding sector modules will not appear below but will automatically appear in the navigation bar when you save this page. If you want to query your classification, please email [respond@cdp.net](mailto:respond@cdp.net).

If you have not been presented with a sector module that you consider would be appropriate for your company to answer, please select the module below. If you wish to view the questions first, please see <https://www.cdp.net/en-US/Programmes/Pages/More-questionnaires.aspx>.

#### Further Information

M50 Concession Ltd aims to become the reference of the motorway operators in Ireland by conducting its business in a responsible and sustainable manner, respectful with the environment and committed to the society and its stakeholders. For this reason, M50 Concession Ltd operates under a Quality and Environmental Management System certified under ISO 14001, ISO 9001 and OHSAS 18001. As part of Environmental Policy (attached) we are committed to improve our environmental performance and minimise our adverse environmental impacts. In this sense, CDP represents a key element of our environmental strategy. We started to complete assessments on our carbon footprint in 2014 and set up a specific company objective to reduce our carbon emissions in the next years. In 2014, we joined the CDP and submitted a public response covering 2012 and 2013 reporting years. In 2015 we submitted a public response for 2014 reporting year.

#### Attachments

[https://www.cdp.net/sites/2016/60/53060/Climate Change 2016/Shared Documents/Attachments/ClimateChange2016/CC0.Introduction/M50 Concession Ltd's Environmental Policy Statement 2016.pdf](https://www.cdp.net/sites/2016/60/53060/Climate%20Change%202016/Shared%20Documents/Attachments/ClimateChange2016/CC0.Introduction/M50%20Concession%20Ltd's%20Environmental%20Policy%20Statement%202016.pdf)

### Module: Management

#### Page: CC1. Governance

#### CC1.1

Where is the highest level of direct responsibility for climate change within your organization?

Senior Manager/Officer

#### CC1.1a

Please identify the position of the individual or name of the committee with this responsibility

The Board of Directors, chaired by Brendan McGinn, has overall responsibility for ensuring that the strategy for managing climate change aspects meets the needs of M50 Concession Ltd. and its stakeholders. The General Manager, Borja Santamaria, has the direct responsibility for implementing the climate change strategy and for the day-to-day management of climate change matters.

CC1.2

**Do you provide incentives for the management of climate change issues, including the attainment of targets?**

No

**Further Information**

2015 was the first year that the Company set up absolute targets regarding climate change issues but it was decided not to implement economic incentives to the management because of the lack of previous experience and the difficulty to assess the fairness of the targets. However, the Board of Directors is currently evaluating the future introduction of economic incentives for the management related to the attainment of the Company's carbon emissions target through its existing annual appraisal procedure.

Page: CC2. Strategy

CC2.1

**Please select the option that best describes your risk management procedures with regard to climate change risks and opportunities**

There are no documented processes for assessing and managing risks and opportunities from climate change

CC2.1d

**Please explain why you do not have a process in place for assessing and managing risks and opportunities from climate change, and whether you plan to introduce such a process in future**

Main reason for not having a process	Do you plan to introduce a process?	Comment
Insufficient knowledge of climate change impacts	Yes	

CC2.2

**Is climate change integrated into your business strategy?**

Yes

CC2.2a

**Please describe the process of how climate change is integrated into your business strategy and any outcomes of this process**

i) How the business strategy has been influenced -

The business strategy is agreed by the Board of Directors on an annual basis. To define the business strategy, the Board of Directors takes into consideration any relevant risks and opportunities in the short and long term. In 2014, the Board of Directors decided to include among its considerations to define the business strategy all those relating to climate change and the General Manager was made responsible for their collection and reporting. Since then, the risks and opportunities related to climate change have been collected on an on-going basis through the QEMS Management Review Committee, which is chaired by the General Manager and comprises of the rest of the operating managers of the Company. Once the business strategy is agreed, then it is captured into the annual business plan which is reflected into the annual budget. The annual budget facilitates the appropriate planning, resourcing and implementation of any climate change related activities identified.

ii) What aspects of climate change have influenced the strategy -

The business strategy has been mainly influenced by the aim of the Company to improve our environmental performance and minimise our adverse impacts on climate change. For that reason, and although the Company has no legal or regulatory obligations in relation to climate change reporting or performance, the Board of Directors decided in 2014 that the Company should start identifying and implementing green business initiatives including reporting to CDP. This strategy has not changed in the past two years and it is expected to continue in the near future.

iii) The most important components of the short term strategy that have been influenced by climate change -

Our short-term business strategy responds to climate change in two main ways:

- Assessing the impact that our business has on climate change: This has translated into changes on our operational procedures to ensure an appropriate tracking of our GHGs emissions.
- Delivering specific initiatives to reduce our impact on climate change: Our initiatives are orientated on reducing our current level of GHG emissions and focused specially on our electricity consumption, which represents more than 80% of our current emissions.

iv) The most important components of the long term strategy that have been influenced by climate change -

The Company considers that material climate change risks are unlikely to materialise in the next twenty years. However, in terms of opportunities, the Company recognises that any climate change initiative must be evaluated on a long term perspective, taking into account the whole length of our Contract. As an example, our long term streetlighting strategy has been evaluated on the basis of a cost-benefit analysis where climate change has been taken into account. As a result, it has been decided to pursue the introduction of a new dimming technology which will represent a major investment for the Company in the short term but long term benefits in terms of GHG emissions reduction.

v) How this is gaining us strategic advantage over our competitors -

The integration of climate change into our business strategy is helping us to conduct our activity in a responsible and sustainable manner. This proves our commitment with society and enhances our relationships with our Authority and stakeholders, helping us to achieve our goal to be generally recognised as the lead reference of the motorway operators in Ireland. We considered this recognition to be a key competitive advantage. In addition to this, the integration of climate change into our business strategy is encouraging us to set up targets and implement initiatives to reduce our emissions. We have found that most of the initiatives proposed represent also cost efficiencies that are improving the economic performance of the Company both in the short and in the long term.

vi) What have been the most substantial business decisions made during the reporting year that have been influenced by the climate change driven aspects of the strategy -

- The decision to carry out again this year an assessment on the Company's carbon footprint as well as to join the CDP.
- The use and maintenance of tools to ensure the on-going tracking of our GHGs emissions, like energy, waste and fuel trackers.
- The definition of absolute environmental objectives related to the reduction of our GHGs emissions. Specifically, the objective to reduce energy use by a 14% in 2015 when compared to 2014.
- In relation to its long term streetlighting strategy, the decision to keep on pursuing for the installation of power regulators and implementation of a dimming strategy in the motorway.

CC2.2c

**Does your company use an internal price of carbon?**

No, and we currently don't anticipate doing so in the next 2 years

CC2.3

**Do you engage in activities that could either directly or indirectly influence public policy on climate change through any of the following? (tick all that apply)**

No

CC2.3g

**Please explain why you do not engage with policy makers**

Currently there is no mandatory reporting policy on climate change in Ireland but it is expected that the Irish Government will implement such a scheme in the near future. M50 Concession Ltd aims to take part on the incoming discussions regarding the new government policy on climate change through our membership in IBEC (Irish Business and Employers Confederation). IBEC is the most relevant association representing Irish business and it works with government and policy makers, nationally and internationally, to shape business conditions and drive economic growth

#### Further Information

#### Page: CC3. Targets and Initiatives

##### CC3.1

**Did you have an emissions reduction or renewable energy consumption or production target that was active (ongoing or reached completion) in the reporting year?**

Absolute target

##### CC3.1a

**Please provide details of your absolute target**

ID	Scope	% of emissions in scope	% reduction from base year	Base year	Base year emissions covered by target (metric tonnes CO2e)	Target year	Is this a science-based target?	Comment
Abs1	Scope 1+2 (location-based)+3 (upstream)	100%	14%	2014	2045	2015	No, and we do not anticipate setting one in the next 2 years	This will be achieved mainly through reductions in electricity consumption

##### CC3.1e

**For all of your targets, please provide details on the progress made in the reporting year**

ID	% complete (time)	% complete (emissions or renewable energy)	Comment
Abs1	100%	100%	The actual reduction achieved was 29%, that is, 15% above the target

##### CC3.2

**Do you classify any of your existing goods and/or services as low carbon products or do they enable a third party to avoid GHG emissions?**

Yes

##### CC3.2a

**Please provide details of your products and/or services that you classify as low carbon products or that enable a third party to avoid GHG emissions**

Level of aggregation	Description of product/Group of products	Are you reporting low carbon product/s or avoided emissions?	Taxonomy, project or methodology used to classify product/s as low carbon or to calculate avoided emissions	% revenue from low carbon product/s in the reporting year	% R&D in low carbon product/s in the reporting year	Comment
Company-wide	Transport is a significant contributor to GHG emissions. However motorways reduce the Scope 1 emissions associated with a specific trip. This is because free-flow travel produces lower emissions than a comparable trip in the stop-start conditions of major arterial roads. In our particular case, M50 Concession Ltd carried out between 2007 and 2010 major improvements on the M50 motorway as part of the M50 Upgrade Scheme works. These works included the construction of a third lane in each direction in a total distance of approximately 32km and the provision of auxiliary lanes in nearly 16km. Traffic circulation was further improved by upgrading all the interchanges to provide full or partial free flow lanes. Finally, the old toll barrier plaza was substituted with a fully electronic barrier-free tolling system. As a result of these upgrading works, travel times and congestion problems were improved in a very significant way in all the Dublin Metropolitan Area. It is estimated that journey times on M50 were reduced roughly by a 50% during the day, thus benefiting an average of 130,000 customers who use the M50 motorway every day.	Avoided emissions	Other: M50 Concession Ltd has not available an accurate estimation of the avoided emissions by third parties.		Less than or equal to 10%	

##### CC3.3

**Did you have emissions reduction initiatives that were active within the reporting year (this can include those in the planning and/or implementation phases)**

Yes

##### CC3.3a

**Please identify the total number of projects at each stage of development, and for those in the implementation stages, the estimated CO2e savings**

Stage of development	Number of projects	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
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Stage of development	Number of projects	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	1	105
To be implemented*	1	1190
Implementation commenced*	0	0
Implemented*	2	55
Not to be implemented	1	2

## CC3.3b

For those initiatives implemented in the reporting year, please provide details in the table below

Activity type	Description of activity	Estimated annual CO2e savings (metric tonnes CO2e)	Scope	Voluntary/Mandatory	Annual monetary savings (unit currency - as specified in CC0.4)	Investment required (unit currency - as specified in CC0.4)	Payback period	Estimated lifetime of the initiative	Comment
Energy efficiency: Processes	Reduction of the streetlighting consumption in the motorway: This initiative consists of the implementation of a policy of varying lighting levels on the M50 motorway to match the traffic volume, in compliance of the minimum standards defined by CEN/TR 13201-1:2014 and BS 5489-1. In order to implement a varying lighting system on the motorway, centralised power controllers are installed on the meters. In order to test and verify the solution proposed, M50CL installed the system on one section of the motorway between Junction 4 Ballymun and Junction 5 N2 in November 2014. The section chosen has a total of 5 meters that feeds 149 lamps, 29 of them are 600W, 70 are 400 W, 30 are 250W and 20 are 100W. The trial went on all along 2015. The results showed that the power control units are effective in reducing energy consumption by a 35% with no negative impact on road safety and attracting no complaints from the road users. The trial represented savings of 98,102 KWh in 2015. The Company intends to extend this initiative to the entire M50 motorway during 2016, an action that we estimate will represent total savings of 1,190 tons (CO2e) per year in terms of Carbon Emissions	36	Scope 2 (location-based)	Voluntary	13000	21660	1-3 years	6-10 years	
Energy efficiency: Processes	Replace several of the oldest vehicles of the fleet with more fuel efficient ones.	19	Scope 1	Voluntary	6300	55737	4-10 years	3-5 years	

## CC3.3c

What methods do you use to drive investment in emissions reduction activities?

Method	Comment
Financial optimization calculations	Net Present Value (NPV) / pay back periods: Investment in emission reduction activities are driven by the long term cost-benefit analysis and pay-back periods.
Employee engagement	Staff engagement around emission reduction activities is promoted through our QEMS System and driven through the QEMS Management Review Committee meetings.

## Further Information

Page: CC4. Communication

## CC4.1

Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s)

Publication	Status	Page/Section reference	Attach the document	Comment
No				

#### Further Information

As a private Irish company, we don't have any legal or regulatory obligations in relation to publish our climate change performance. However, since 2014 the Company is measuring and voluntarily disclosing our emissions to CDP as part of our climate change initiatives.

#### Module: Risks and Opportunities

#### Page: CC5. Climate Change Risks

#### CC5.1

**Have you identified any inherent climate change risks that have the potential to generate a substantive change in your business operations, revenue or expenditure? Tick all that apply**

Risks driven by changes in regulation  
Risks driven by changes in physical climate parameters  
Risks driven by changes in other climate-related developments

#### CC5.1a

**Please describe your inherent risks that are driven by changes in regulation**

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Carbon taxes	Increase in the current carbon tax in Ireland aimed at reducing GHG emissions, including transport.	Increased operational cost	Unknown	Indirect (Supply chain)	Likely	Low	We anticipate low negative financial implications from the increase in Carbon taxes related to the fact that operating costs will increase as a result of the carbon tax, the expansion of the renewable energy requirements and the consequential increases in CPI.	Setting up of targets and implementation of measures to reduce our GHG emissions in the short and long term, using the CDP reporting initiative as the main driver of this process.	These actions don't represent additional material management costs to the business.
Uncertainty surrounding new regulation	The current uncertainty surrounding the future of Emission's Policy in Ireland	Increased operational cost	Unknown	Indirect (Supply chain)	Unknown	Unknown	Unknown	M50 Concession Ltd. carries out annual reviews and updates on legislation as part of our QEMS, including climate change legislative developments	These actions don't represent additional material costs to the business.
Emission reporting obligations	Introduction by the Irish Government of new regulations that demand the disclosure of data to private entities regarding energy reporting obligations as well as emissions reporting	Increased operational cost	Unknown	Direct	More likely than not	Low	Additional costs in order to put in place the necessary reporting processes and procedures	Anticipation of the potential requirements by joining the CDP in advance.	These actions don't represent additional material costs to the business.

#### CC5.1b

**Please describe your inherent risks that are driven by changes in physical climate parameters**

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Change in precipitation extremes and droughts	An increase in extreme rainfall events has the potential to increase the number of road incidents, landslips, flooding and deterioration of some infrastructure.	Increased operational cost	Unknown	Direct	Likely	Low	We anticipate a low increase in operating and maintenance costs	Implementation of climate change initiatives, like the CDP reporting initiative.	These actions don't represent additional material costs to the business.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Snow and ice	An increase in the severity and number of extreme ice and snow events will increase the winter maintenance requirements and could multiply the number of road incidents in the road, as well as accelerate the deterioration of the asphalt and some other infrastructure assets.	Increased operational cost	Unknown	Direct	Likely	Low	We anticipate low negative financial implications related to the increase in winter maintenance costs (salt consumption, gritting operations, etc)	Implementation of climate change initiatives, like the CDP reporting initiative.	These actions don't represent additional material costs to the business.
Change in temperature extremes	A significant increase in temperature may accelerate the deterioration rate of the asphalt. This may lead to traffic disruption and vehicle damage. Extreme temperatures may also lead to an increase in the number of vehicles breaking down, which may lead to traffic flow disruption and road congestion.	Increased operational cost	Unknown	Direct	Likely	Low	We anticipate low increases in pavement maintenance and replacement costs.	Implementation of climate change initiatives, like the CDP reporting initiative.	These actions don't represent additional material costs to the business.

**CC5.1c**

**Please describe your inherent risks that are driven by changes in other climate-related developments**

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Other drivers	There may be fewer additional public funds available to improve our motorway as they would be used in favour of public transport and alternative land transport such as rail.	Reduced demand for goods/services	Unknown	Direct	Very unlikely	Low	We anticipate a reduction of additional revenues from operational variations to our contract.	Implementation of climate change initiatives, like the CDP reporting initiative.	These actions don't represent additional material costs to the business.

**Further Information**

**Page: CC6. Climate Change Opportunities**

**CC6.1**

**Have you identified any inherent climate change opportunities that have the potential to generate a substantive change in your business operations, revenue or expenditure? Tick all that apply**

- Opportunities driven by changes in regulation  
Opportunities driven by changes in other climate-related developments

**CC6.1a**

**Please describe your inherent opportunities that are driven by changes in regulation**

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Fuel/energy taxes and regulations	Regulations aimed mainly at the consumption of fuel may lead to less travel on our motorway. As	Reduced operational costs	Unknown	Indirect (Client)	Unknown	Low	We anticipate small reduction of operating and maintenance costs related to the fact that there will be	Implementation of climate change initiatives, like the CDP reporting initiative.	These actions don't represent additional material costs to the business.

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	our revenues consist mainly of availability payments, they won't be affected by a reduction on traffic volumes. However, we will benefit from a positive impact in our operating and maintenance costs.						less vehicles and heavy trucks using the motorway		

## CC6.1c

Please describe the inherent opportunities that are driven by changes in other climate-related developments

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Changing consumer behaviour	Government and community action to reduce GHG emissions from transport may lead to less travel on our motorway. As our revenues consist mainly of availability payments, they won't be affected by a reduction on traffic volumes. However, we will benefit from a positive impact in our operating and maintenance costs.	Reduced operational costs	Unknown	Indirect (Client)	Exceptionally unlikely	Low	We anticipate small reduction of operating and maintenance costs related to the fact that there will be less vehicles and heavy trucks using the motorway	Implementation of climate change initiatives, like the CDP reporting initiative.	These actions don't represent additional material costs to the business.

## CC6.1e

Please explain why you do not consider your company to be exposed to inherent opportunities driven by physical climate parameters that have the potential to generate a substantive change in your business operations, revenue or expenditure

We have assessed the physical impacts from climate change and we don't consider that these will result in any significant opportunities for M50 Concession Ltd. In fact, we consider the potential physical impacts of climate change on our business as risks to be managed rather than opportunities to the business and these are addressed in the risk section of our submission

## Further Information

## Module: GHG Emissions Accounting, Energy and Fuel Use, and Trading

## Page: CC7. Emissions Methodology

## CC7.1

Please provide your base year and base year emissions (Scopes 1 and 2)

Scope	Base year	Base year emissions (metric tonnes CO2e)
Scope 1	Sun 01 Jan 2012 - Mon 31 Dec 2012	258
Scope 2 (location-based)	Sun 01 Jan 2012 - Mon 31 Dec 2012	1826
Scope 2 (market-based)		

## CC7.2

Please give the name of the standard, protocol or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions

Please select the published methodologies that you use
ISO 14064-1
The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

## CC7.2a

**If you have selected "Other" in CC7.2 please provide details of the standard, protocol or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions**

## CC7.3

**Please give the source for the global warming potentials you have used**

Gas	Reference
CO2	IPCC Fourth Assessment Report (AR4 - 100 year)
CH4	IPCC Fourth Assessment Report (AR4 - 100 year)
N2O	IPCC Fourth Assessment Report (AR4 - 100 year)

## CC7.4

**Please give the emissions factors you have applied and their origin; alternatively, please attach an Excel spreadsheet with this data at the bottom of this page**

Fuel/Material/Energy	Emission Factor	Unit	Reference
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## Further Information

## Attachments

[https://www.cdp.net/sites/2016/60/53060/Climate Change 2016/Shared Documents/Attachments/ClimateChange2016/CC7.EmissionsMethodology/CDP\\_2016 Emissions Factors.xlsx](https://www.cdp.net/sites/2016/60/53060/Climate%20Change%202016/Shared%20Documents/Attachments/ClimateChange2016/CC7.EmissionsMethodology/CDP_2016_Emissions_Factors.xlsx)

**Page: CC8. Emissions Data - (1 Jan 2015 - 31 Dec 2015)**

## CC8.1

**Please select the boundary you are using for your Scope 1 and 2 greenhouse gas inventory**

Financial control

## CC8.2

**Please provide your gross global Scope 1 emissions figures in metric tonnes CO2e**

243

## CC8.3

**Does your company have any operations in markets providing product or supplier specific data in the form of contractual instruments?**

No

## CC8.3a

**Please provide your gross global Scope 2 emissions figures in metric tonnes CO2e**

Scope 2, location-based	Scope 2, market-based (if applicable)	Comment
1179		

## CC8.4

**Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?**

No

## CC8.5

**Please estimate the level of uncertainty of the total gross global Scope 1 and 2 emissions figures that you have supplied and specify the sources of uncertainty in your data gathering, handling and calculations**

Scope	Uncertainty range	Main sources of uncertainty	Please expand on the uncertainty in your data
Scope 1	More than 2% but less than or equal to 5%	Metering/ Measurement Constraints	The Company has electronically controlled tanks for all their fuel but a minimum uncertainty is considered to allow for potential system errors
Scope 2 (location-based)	More than 2% but less than or equal to 5%	Metering/ Measurement Constraints	Reliant on 3rd party supplier for data. Monthly energy consumptions are provided by the energy supplier and actual official meter readings carried out by ESB, the licensed operator of the electricity distribution system in Ireland, are only completed whenever there is a change in the energy supplier.
Scope 2 (market-based)			

## CC8.6

**Please indicate the verification/assurance status that applies to your reported Scope 1 emissions**

Third party verification or assurance process in place

## CC8.6a

**Please provide further details of the verification/assurance undertaken for your Scope 1 emissions, and attach the relevant statements**

Verification or assurance cycle in place	Status in the current reporting year	Type of verification or assurance	Attach the statement	Page/section reference	Relevant standard	Proportion of reported Scope 1 emissions verified (%)
Annual process	Complete				ISO14064-3	100

Verification or assurance cycle in place	Status in the current reporting year	Type of verification or assurance	Attach the statement	Page/section reference	Relevant standard	Proportion of reported Scope 1 emissions verified (%)
		Reasonable assurance	<a href="https://www.cdp.net/sites/2016/60/53060/Climate%20Change%202016/Shared%20Documents/Attachments/CC8.6a/M50%20Concession%20Verification%20CDP%202016.pdf">https://www.cdp.net/sites/2016/60/53060/Climate Change 2016/Shared Documents/Attachments/CC8.6a/M50 Concession Verification CDP 2016.pdf</a>	Page 1 / Section 1		

## CC8.7

Please indicate the verification/assurance status that applies to at least one of your reported Scope 2 emissions figures

Third party verification or assurance process in place

## CC8.7a

Please provide further details of the verification/assurance undertaken for your location-based and/or market-based Scope 2 emissions, and attach the relevant statements

Location-based or market-based figure?	Verification or assurance cycle in place	Status in the current reporting year	Type of verification or assurance	Attach the statement	Page/Section reference	Relevant standard	Proportion of reported Scope 2 emissions verified (%)
Location-based	Annual process	Complete	Reasonable assurance	<a href="https://www.cdp.net/sites/2016/60/53060/Climate%20Change%202016/Shared%20Documents/Attachments/CC8.7a/M50%20Concession%20Verification%20CDP%202016.pdf">https://www.cdp.net/sites/2016/60/53060/Climate Change 2016/Shared Documents/Attachments/CC8.7a/M50 Concession Verification CDP 2016.pdf</a>	Page 1 / Section 1	ISO14064-3	100

## CC8.8

Please identify if any data points have been verified as part of the third party verification work undertaken, other than the verification of emissions figures reported in CC8.6, CC8.7 and CC14.2

Additional data points verified	Comment
No additional data verified	

## CC8.9

Are carbon dioxide emissions from biologically sequestered carbon relevant to your organization?

No

Further Information

Page: [CC9. Scope 1 Emissions Breakdown - \(1 Jan 2015 - 31 Dec 2015\)](#)

## CC9.1

Do you have Scope 1 emissions sources in more than one country?

No

## CC9.2

Please indicate which other Scope 1 emissions breakdowns you are able to provide (tick all that apply)

By activity

## CC9.2d

Please break down your total gross global Scope 1 emissions by activity

Activity	Scope 1 emissions (metric tonnes CO2e)
Transport	211
Heating	32

Further Information

Page: [CC10. Scope 2 Emissions Breakdown - \(1 Jan 2015 - 31 Dec 2015\)](#)

## CC10.1

Do you have Scope 2 emissions sources in more than one country?

No

## CC10.2

Please indicate which other Scope 2 emissions breakdowns you are able to provide (tick all that apply)

By activity

## CC10.2c

Please break down your total gross global Scope 2 emissions by activity

Activity	Scope 2 emissions, location based (metric tonnes CO2e)	Scope 2 emissions, market-based (metric tonnes CO2e)
Streetlighting	1144	0
Office Lighting	36	0

## Further Information

## Page: CC11. Energy

## CC11.1

**What percentage of your total operational spend in the reporting year was on energy?**

More than 10% but less than or equal to 15%

## CC11.2

**Please state how much heat, steam, and cooling in MWh your organization has purchased and consumed during the reporting year**

Energy type	Energy purchased and consumed (MWh)
Heat	0
Steam	0
Cooling	0

## CC11.3

**Please state how much fuel in MWh your organization has consumed (for energy purposes) during the reporting year**

945

## CC11.3a

**Please complete the table by breaking down the total "Fuel" figure entered above by fuel type**

Fuels	MWh
Kerosene	122
Diesel/Gas oil	780
Motor gasoline	43

## CC11.4

**Please provide details of the electricity, heat, steam or cooling amounts that were accounted at a low carbon emission factor in the market-based Scope 2 figure reported in CC8.3a**

Basis for applying a low carbon emission factor	MWh consumed associated with low carbon electricity, heat, steam or cooling	Comment
No purchases or generation of low carbon electricity, heat, steam or cooling accounted with a low carbon emissions factor		

## CC11.5

**Please report how much electricity you produce in MWh, and how much electricity you consume in MWh**

Total electricity consumed (MWh)	Consumed electricity that is purchased (MWh)	Total electricity produced (MWh)	Total renewable electricity produced (MWh)	Consumed renewable electricity that is produced by company (MWh)	Comment
3187	3187	0	0	0	

## Further Information

## Page: CC12. Emissions Performance

## CC12.1

**How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to the previous year?**

Decreased

## CC12.1a

**Please identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined) and for each of them specify how your emissions compare to the previous year**

Reason	Emissions value (percentage)	Direction of change	Please explain and include calculation
Emissions reduction activities	2.8	Decrease	Gross Scope 1+2 emissions decreased by a total of 28.7% when compared to the previous year. These reductions were partially driven by energy efficiency activities undertaken during the year, mainly for our streetlighting consumption. They implied the installation of a dimming system in one stretch of the motorway since 26th November 2014 and the replacement of some old vehicles in the company. As a result 55 tones were saved. As total S1 and S2 emissions in the previous year were 1,995, therefore we arrived at 2.8% through $(55/1,995)*100$
Divestment Acquisitions Mergers			
Change in output	12.7	Decrease	Gross Scope 1+2 emissions decreased by a total of 28.7% when compared to the previous year. This is mainly due to decrease in electricity consumption that represented 255 tco2e. As total S1 and S2 emissions in the previous year were 1,995, therefore we arrived at 12.7% through $(255/1,995)*100$
Change in methodology	13.2	Decrease	Gross Scope 1+2 emissions decreased by a total of 28.7% when compared to the previous year. These reductions were partially driven by an decrease in the www.cer.ie location based rate for electricity accounting for an estimated 263 tco2e. As total S1 and S2 emissions in the previous year were 1,995, therefore we arrived at 13.2% through $(263/1,995)*100$

Reason	Emissions value (percentage)	Direction of change	Please explain and include calculation
Change in boundary		Decrease	
Change in physical operating conditions			
Unidentified			
Other			

## CC12.1b

**Is your emissions performance calculations in CC12.1 and CC12.1a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?**

Location-based

## CC12.2

**Please describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tonnes CO2e per unit currency total revenue**

Intensity figure =	Metric numerator (Gross global combined Scope 1 and 2 emissions)	Metric denominator: Unit total revenue	Scope 2 figure used	% change from previous year	Direction of change from previous year	Reason for change
.00025	metric tonnes CO2e	5564173	Location-based	18.1	Decrease	The decrease gross global Scope 1 & 2 emissions by 28.7% combined with a decrease in revenue from 6.4 million in the previous year has resulted in a reduction in the intensity figure for revenue. $(1-0.000025/.00031)*100=18.1$

## CC12.3

**Please provide any additional intensity (normalized) metrics that are appropriate to your business operations**

Intensity figure =	Metric numerator (Gross global combined Scope 1 and 2 emissions)	Metric denominator	Metric denominator: Unit total	Scope 2 figure used	% change from previous year	Direction of change from previous year	Reason for change
64.64	metric tonnes CO2e	full time equivalent (FTE) employee	22	Location-based	28.7	Decrease	Gross Scope 1+2 emissions decreased by 28.7% as described in section CC12.1 while the number of FTE has remained the same as the previous year at 22. This has resulted in a corresponding 28.7% decrease the FTE intensity figure $(1-64.64/90.66)*100 = 28.7$
1.09	metric tonnes CO2e	Other: Million Vehicle km Travelled	1307	Location-based	24.8	Decrease	Gross Scope 1+2 emissions decreased by 28.7% as described in section CC12.1. The number of Vehicle Km Travelled also decreased from 1380 in the previous year representing a decrease of 5%. This has resulted in a decrease in the intensity figure of 24.8%. $(1-1.09/1.45)*100 = 24.8$

## Further Information

[Page: CC13. Emissions Trading](#)

## CC13.1

**Do you participate in any emissions trading schemes?**

No, and we do not currently anticipate doing so in the next 2 years

## CC13.2

**Has your organization originated any project-based carbon credits or purchased any within the reporting period?**

No

## Further Information

[Page: CC14. Scope 3 Emissions](#)

## CC14.1

**Please account for your organization's Scope 3 emissions, disclosing and explaining any exclusions**

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
Purchased goods and services	Relevant, calculated	15	Ecoinvent 2014 data used to footprint salt and Defra 2015 factors used for Water footprint	100.00%	Use of Salt on Road for winter maintenance treatments and water for cleaning and sanitation
Capital goods	Not relevant, explanation provided				There have been no significant acquisitions of capital goods during 2015 that may generate a relevant amount of carbon emissions
Fuel-and-energy-related activities (not included in Scope 1 or 2)	Not relevant, explanation provided				There is no significant fuel and energy related activities not included in scope 1 or 2
Upstream transportation and distribution	Relevant, not yet calculated		3rd party contractors generate emissions in support of M50 motorway activities		We will review the opportunity to engage with our contractors on emissions reduction initiatives going forward.
Waste generated in operations	Relevant, calculated	16	Defra 2015 factors applied to volumes provided by waste contractor	100.00%	Waste disposal and recycling
Business travel	Not relevant, explanation provided				There is a very small amount of business travel associated with the business.
Employee commuting	Not relevant, explanation provided				Small number of employees, minimal impact on footprint
Upstream leased assets	Not evaluated				Minimum impact, only 2 vehicles of the entire fleet are leased.
Downstream transportation and distribution	Relevant, not yet calculated		The M50 motorway contributes to the avoidance of Scope 1 emissions by significantly reducing the travel times of its users. However M50 Concession Ltd has not available an accurate estimation of the avoided emissions by third parties.		We will review the opportunity to carry out an accurate estimation of the avoided emissions by third parties in the future
Processing of sold products	Not relevant, explanation provided				No products sold, as the object of the company is the maintenance of a motorway
Use of sold products	Not relevant, explanation provided				No products sold, as the object of the company is the maintenance of a motorway
End of life treatment of sold products	Not relevant, explanation provided				No products sold, as the object of the company is the maintenance of a motorway
Downstream leased assets	Not relevant, explanation provided				No downstream leased assets, as the object of the company is the maintenance of a motorway
Franchises	Not relevant, explanation provided				No franchises
Investments	Not relevant, explanation provided				There has been no significant investments (e.g. repaving works) in the motorway generating emissions during 2015
Other (upstream)					
Other (downstream)					

## CC14.2

**Please indicate the verification/assurance status that applies to your reported Scope 3 emissions**

Third party verification or assurance process in place

## CC14.2a

**Please provide further details of the verification/assurance undertaken, and attach the relevant statements**

Verification or assurance cycle in place	Status in the current reporting year	Type of verification or assurance	Attach the statement	Page/Section reference	Relevant standard	Proportion of reported Scope 3 emissions verified (%)
Annual process	Complete	Reasonable assurance	<a href="https://www.cdp.net/sites/2016/60/53060/Climate%20Change%202016/Shared%20Documents/Attachments/CC14.2a/M50%20Concession%20Verification%20CDP%202016.pdf">https://www.cdp.net/sites/2016/60/53060/Climate Change 2016/Shared Documents/Attachments/CC14.2a/M50 Concession Verification CDP 2016.pdf</a>	page 1 / Section 1	ISO14064-3	100

## CC14.3

**Are you able to compare your Scope 3 emissions for the reporting year with those for the previous year for any sources?**

Yes

## CC14.3a

**Please identify the reasons for any change in your Scope 3 emissions and for each of them specify how your emissions compare to the previous year**

Sources of Scope 3 emissions	Reason for change	Emissions value (percentage)	Direction of change	Comment
Purchased goods & services	Change in physical operating conditions	27.3	Increase	Salt consumption increased by 85 tonnes or 21% when compared to the previous year due to the fact that the winter season was milder in 2014 than in 2015. This combined with an increase in water consumption has resulted in an increase purchased goods and services emissions when compared to the previous year of 27.3%. $(15/12-1)*100 = 27.3\%$ .
Waste generated in operations	Change in output	46.9	Decrease	There has been a significant reduction in the emissions associated with waste. These mainly due to a reduction of waste to landfill. Landfill waste has a higher emission factor than other forms of waste processing. $(1-15/29)*100 = 46.9$

**CC14.4****Do you engage with any of the elements of your value chain on GHG emissions and climate change strategies? (Tick all that apply)**

Yes, our customers

**CC14.4a****Please give details of methods of engagement, your strategy for prioritizing engagement and measures of success**

M50CL works very closely with our client, Transport Infrastructure Ireland (TII), formerly the National Roads Authority (NRA), to develop strategies to reduce the carbon emissions of the M50 motorway. We meet on a monthly basis and as part of the agenda we review our environmental performance and discuss ways to improve our emissions performance. As a result of these meetings, specific collaborative projects may be identified and, in that case, a project team with specialists from both parties would be set up to coordinate the analysis and implementation of the project. An example of this approach is the project that was launched in 2014 to implement a policy of varying lighting levels in the M50 to match the hourly traffic volume. The project is a result of a joint effort to reduce the streetlighting consumption in the entire motorway. For that reason, the scope of the project not only includes those sections of the motorway which are part of the M50 Concession Ltd's contract, but also other stretches that are being operated by TII through separate contracts. Other examples of this approach are the changing of the M50 motorway winter maintenance strategy from a dry salt gritting process to a pre-wet system that took place in 2014 and the analysis of a tool developed by the CEREAL project to incorporate carbon emissions analysis into the M50 long term pavement strategy.

M50 Concession Ltd. operates the M50 motorway through a 35-year term PPP (Public Private Partnership) Contract. As such, the Company understands that the success of the project essentially depends on establishing a long term, collaborative and transparent relationship with our Grantor, the TII. The structure of the PPP Contract requires the agreement and support of both parties, the concessionaire and the Grantor, to implement any significant initiative in relation to carbon emissions and climate change, as they would usually represent operation variations to the original Contract. For that reason, M50 Concession Ltd. prioritizes the engagement with TII over any other stakeholder. However, the Company recognizes the relevance of other members of our value chain in relation to GHG emissions and climate change strategies, specially our suppliers and contractors. For that reason, we will review the opportunity to engage with them in the future.

The grade of success of our engagement is measured through the actual improvement of our carbon footprint as a result of specific reduction initiatives carried out in conjunction with TII and the rest of our partners. As part of our internal process to define the emissions reduction target for the year we would take into consideration the implementation of a number of collaborative projects with our partners. A target has been already set up for 2016, consisting of reducing carbon emissions by 15% measured in absolute terms in relation to 2015. To set up this target, it was considered that part of the savings will depend on the successful implementation of one collaborative project with TII. Specifically, the target considered emissions savings equivalent to 15% of the streetlighting consumption as a result of the dimming initiative. At the end of the year, we will compare the actual savings versus the expected ones for each collaborative project and the grade of success of our engagement will be calculated as the aggregate percentage of completion for all the projects.

**Further Information****Module: Sign Off****Page: CC15. Sign Off****CC15.1****Please provide the following information for the person that has signed off (approved) your CDP climate change response**

Name	Job title	Corresponding job category
Borja Santamaria Mariscal	General Manager	Chief Executive Officer (CEO)

**Further Information**

CDP: [D][.][D2]