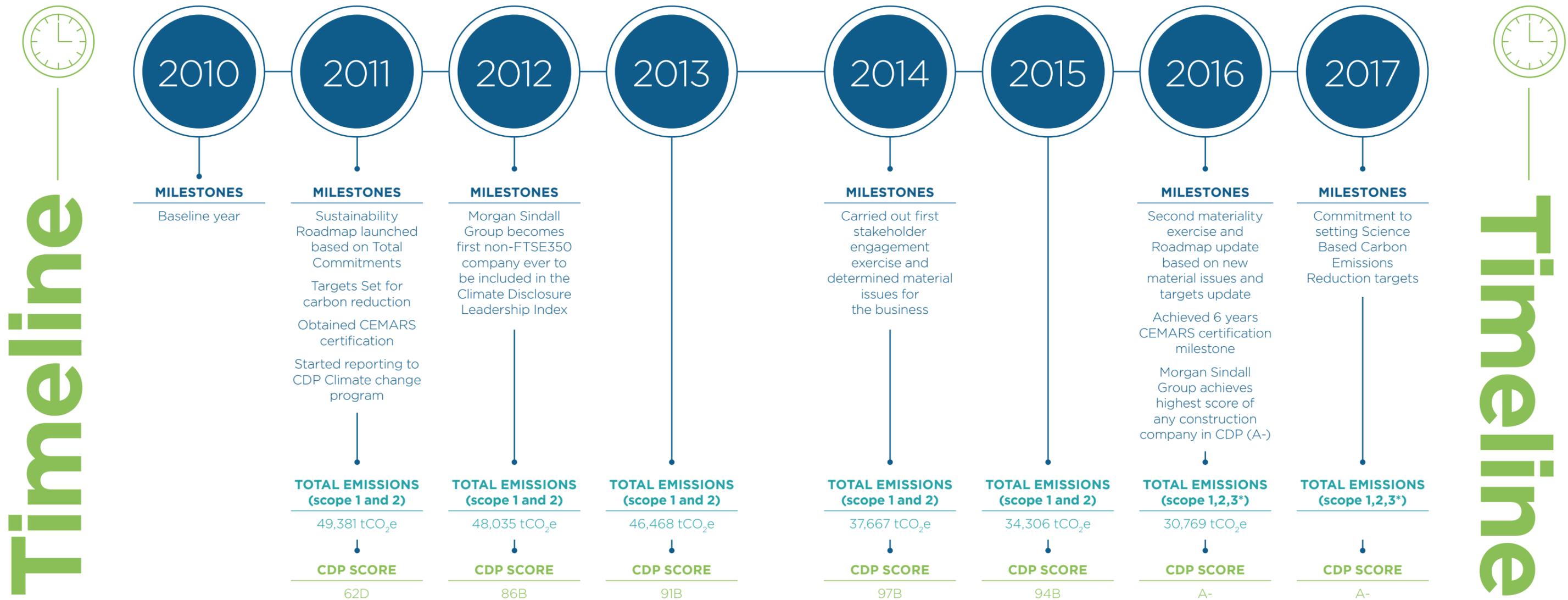




Carbon Performance Review

Morgan Sindall Group
November 2017
Prepared by: IMS Consulting



* Scope 3 emissions are being assessed separately from 2016. Prior years' figures include scope 3 emissions where measured (i.e. waste and business travel)



Carbon Emissions Reduction Performance

Direct emissions from our operations

Thanks to carbon saving initiatives our emissions in 2016 were lower than in 2015.

Specifically, in 2016, scope 1 and 2 emissions (see Glossary for definitions of the different scopes) were reduced by around 20% compared to the previous year.

Scope	2016 emissions (t CO ₂ e)	Baseline emissions (t CO ₂ e)
Scope 1	17200	33356
Scope 2	6935	25288

This means that compared to our baseline year (2010) we have achieved a reduction in carbon emissions in scope 1 emissions of over 50% and a reduction in scope 2 emissions of 27%.

Scope 3 emissions

As part of the requirements to set science based targets, the Group is conducting a screening of its scope 3 or indirect emissions (e.g. those derived from subcontractors and materials supplied) to understand which are relevant and estimate them. A focus for 2016 and 2017 has been getting a better understanding of our scope 3 emissions.

In 2016 we were able to estimate emissions for the following categories:

Category	Emissions (tCO ₂ e)
Purchased goods and services	55.98
Fuel-and-energy-related activities (not included in Scope 1 or 2)	627.25
Waste generated in operations	232.41
Business travel	5704.49

Reporting and assurance

Morgan Sindall Group has been reporting to CDP for the past 5 years and has significantly improved its score over time. Last year, 2016, the Group scored A- one of the highest scores for companies in its sector. Maintaining a high score is a significant achievement as CDP regularly raises the bar for reporting companies and encourages them to keep improving their performance.

The Group has been reporting to CEMARS and had its carbon emissions verified by a third party as part of the process for the past 7 years.



Strategy and targets updates

Group Targets

The group is currently reporting against the following targets:

Scope	Target	Progress
Scope 1	Reduce direct fuel consumption by 26% by 2020 against a 2010 baseline through fuel efficient choice and driving behaviour.	Achieved: absolute emissions in 2016 were 8,535.36 tCO ₂ e compared to 2010 baseline, 23,480tCO ₂ . This represents a 63% reduction achieved compared to 26% target.
Scope 1	Reduce bulk fuel purchase and use by 26% by 2020 against a 2010 baseline, through eco-site establishment, equipment selection and behaviour.	Achieved: absolute emissions of 8,665.40 tCO ₂ e in 2016 compared with 10,581tCO ₂ e in 2010, our baseline year. This represents a 18% reduction achieved compared to 26% target.
Scope 2	Reduce direct electricity consumption by 26% by 2020 against a 2010 baseline, through installation of energy efficient devices and behavioural change.	Achieved: absolute emissions of 6,934.73 tCO ₂ e in 2016 compared with 25288 tCO ₂ e in 2010, our baseline year. This represents a 27% reduction achieved compared to 26% target.

Science based targets

The Group has already exceeded or achieved targets set for 2020 for scope 1 and 2 absolute carbon emissions. As part of our renewed commitment to carbon emissions reduction and management we're setting ambitious, science based carbon reduction targets. Science Based Targets (SBTs) are quickly becoming a requirement for businesses wanting to demonstrate leadership in environmental and carbon management. This is a unique opportunity for the Group to be one of the first construction companies globally to set SBTs thus gaining credibility and a reputation as a leader in carbon management, which helps work winning and performance in global sustainability business ratings (see Next Steps below).

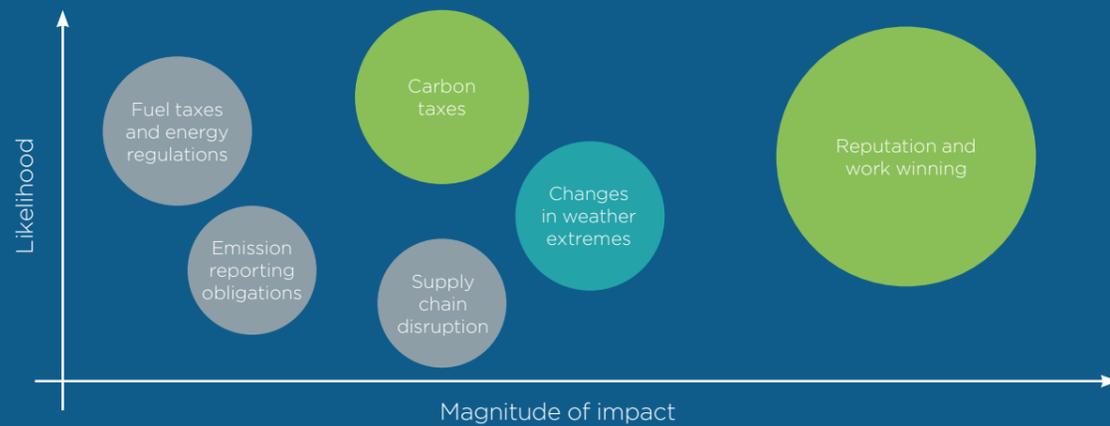


Strategy and targets updates

Risks and Opportunities

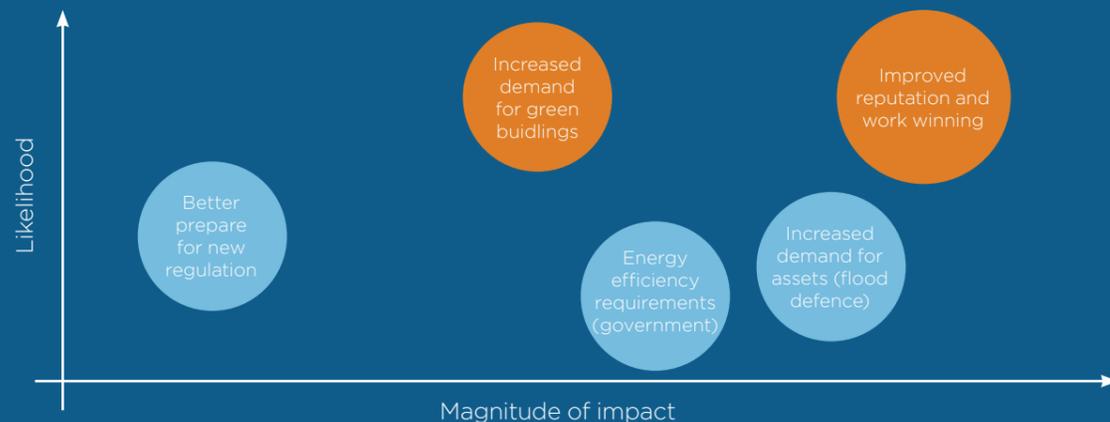
Identifying and evaluating the risks and opportunities deriving from the direct and indirect impacts of climate change is an essential process to help guide our strategy. As part of the CDP reporting process we review risks and opportunities and how we are managing them.

In the Group's 2016 CDP response we identified the following risks:



While it is essential to be aware of the risks climate change and regulations associated with it can have on our business, we need to keep in mind that adapting to the changes to our regulatory and physical environment can be a source of significant opportunities for Morgan Sindall.

To best position ourselves to make the most of these changes we have identified the following opportunities:



Initiative updates

Emissions reduction activities

Significant carbon reduction activities that were active in 2016 included:

Activity	Description	Carbon saved (t CO ₂ e)	Cost saved (£)
Filton Airfield Welfare Hub	The site replaced a 150kVA generator with 204 kW of clean energy lithium ion battery capacity with inbuilt management systems supported by 4 x 40 kVA generators with auto start and renewables consisting of 30 kW solar PV and 10 kW wind power.	168	24,023
Nottingham University	Morgan Sindall has constructed the UK's first carbon neutral laboratory. The facility houses The University of Nottingham's Centre for Sustainable Chemistry, which serves as a hub to catalyse new collaborations with industry. The centre is unique in the UK, not only in its design but also in its focus on world-leading research activity in sustainable chemistry. The building achieved a BREEAM rating of Outstanding and LEED (Leadership in Energy and Environmental Design) Platinum rating. It is set to reach carbon neutral status after 25 years. The laboratory was built from natural materials and energy required to run it will be met by renewable sources such as solar power and sustainable biomass. Excess energy created by the building will provide enough carbon credits over 25 years to pay back the carbon used in its construction.	784	
A1L2B	On a Construction & Infrastructure major highways project, A1L2B, 5,500t carbon was saved through logistics, through large-scale waste minimisation, where 600,000 tonnes spoil was reused on site, rather than disposal at landfill. (Fully implemented).	5,500	5,000,000
Fleet re-fitting	As a phased process, our fleet of vehicles is being fitted with tracker devices that generate detailed information on the use, movement and emissions from our vehicle fleet. This is a phased process as vehicle leases expire and new vehicles are brought on stream. Management can take appropriate action, based on developing intelligence, to influence driver behaviours providing for efficient vehicle use as well as improved and reduced emissions performance	1,000	100,000
Behavioural change - travel to work	Employee travel to work; As part of the management system, Morgan Sindall projects are required to have a Green Travel Plan in place aimed at the employees from each site or office location. This plan is put in place to provide employees with a variety of energy efficient travel options and is reinforced on site through the provision of bicycle racks, showers and other facilities. Car sharing is actively promoted and 'sharemiles' are captured as part of the monthly SHEQ reporting.		
Asphalt savings	The baseline for asphalt on our major highways project A1L2B was 625,258 tonnes; through value engineering, the project has been able to significantly reduce asphalt requirement to complete the scheme by 84,924 tonnes.	6,025	6,500,000

Next Steps



The CDP reporting process is an opportunity for companies to disclose achievements and progress in carbon emissions reduction and management, but also highlights key issues we should focus on next to keep improving our approach.

The main ones are:

Setting Science Based Targets -

in 2017 we have started working on setting scope 1 and 2 targets set in accordance with the Sectoral Decarbonization Approach method and measurable and ambitious scope 3 targets, and aim to get approval by the Science Based Targets initiative by 2018.

Improving our understanding of, and estimating, our scope 3 (or value chain) emissions -

the next important area of focus for our carbon management is working on the indirect emissions deriving from our work, including the embodied carbon in the materials we use and the carbon produced by the assets we build.

To do this we are taking action to:

- Evaluate our downstream and upstream value chain emissions to identify relevant categories (see Glossary below for an overview of scope 3 categories);
- Calculate or estimate emissions for relevant categories (i.e. either categories that are significant in terms of the 'size' of the emissions and/or in terms of the impact we can have in helping to reduce them).

Glossary



Scope 1	All direct GHG emissions. Direct GHG emissions are emissions from sources that are owned or controlled by the reporting entity (as defined by the GHG protocol).
Scope 2	Indirect emissions deriving from the consumption of purchased electricity, heat or steam.
Scope 3	Other indirect emissions, such as the extraction and production of purchased materials and fuels, transport-related activities in vehicles not owned or controlled by the reporting entity, electricity-related activities (e.g. T&D losses) not covered in Scope 2, outsourced activities, waste disposal.
Scope 3 category	<p>The GHG protocol identifies 15 'sources' of scope 3 emissions called 'categories'. These are:</p> <ol style="list-style-type: none"> 1 Purchased goods and services 2 Capital goods 3 Fuel- and energy-related activities (not included in scope 1 or scope 2) 4 Upstream transportation and distribution 5 Waste generated in operations 6 Business travel 7 Employee commuting 8 Upstream leased assets 9 Downstream transportation and distribution 10 Processing of sold products 11 Use of sold products 12 End-of-life treatment of sold products 13 Downstream leased assets 14 Franchises 15 Investments
Science Based Targets	A science-based greenhouse gas reduction target is a commitment to reduce carbon emissions to the level needed for the company to make its full contribution towards achieving this limit. There are several methodologies available to set targets that 'allocate' a share of emissions to the company using different criteria (such as sector and contribution to GDP).