

Road to Net Zero

September 2021

The image shows the letters 'CO2' in a large, bold, sans-serif font. The letters are filled with a photograph of a cloudy sky, with the clouds appearing as white and grey shapes against a blue background. The 'C' is on the left, the 'O' is in the middle, and the '2' is on the right. The overall effect is a visual representation of carbon dioxide emissions.

1. Commitment to Achieving Net Zero

Borras Construction Limited are committed to achieving Net Zero emissions by 2040:

Climate change is one of the most pressing problems facing our world today. It affects everyone - from families worrying about their children's futures, to pension funds deciding where to invest. So, it is in the interests of everyone that we see systemic change that averts climate catastrophe and unlocks the potential of green growth.

At Borras, we believe the business community has a key role to play in making that happen. And we're determined to play our part. That's why we're making a science-based commitment to reach net zero greenhouse gas emissions by 2040.

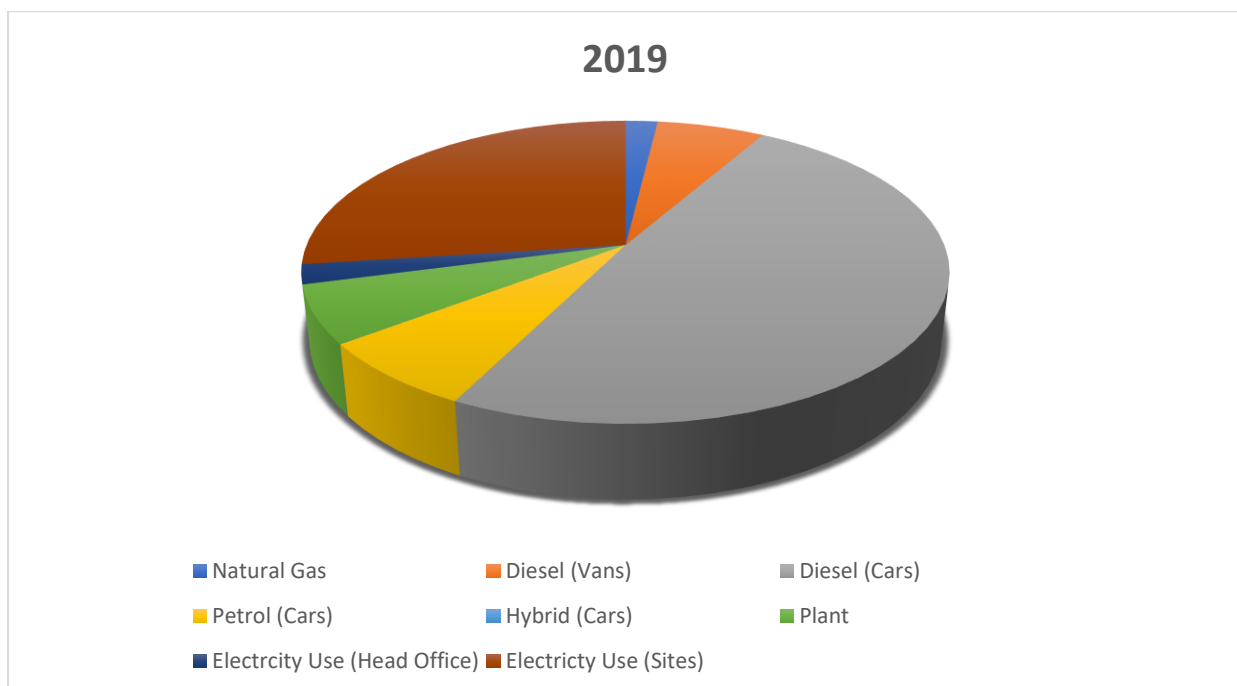
2. Baseline Emissions Footprint:

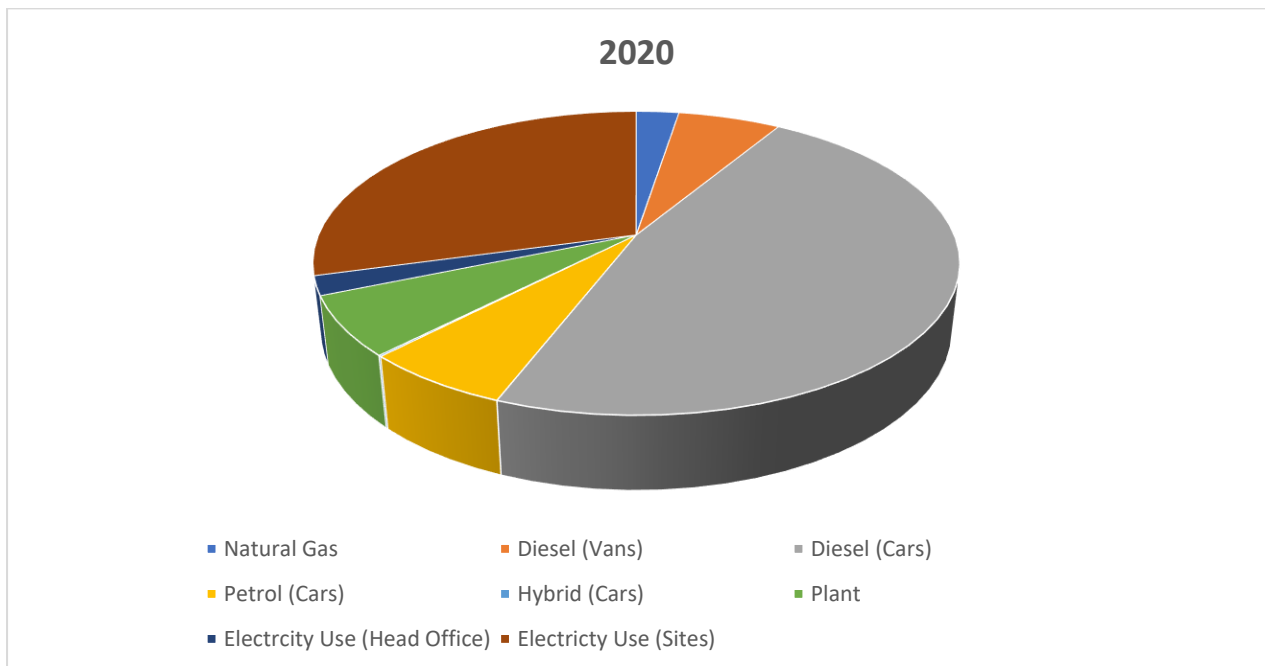
This carbon footprint report refers to emissions from Scope 1 and 2 sources and Scope 3 emissions within the following categories:

Scope 3 Category	Category description	Minimum boundary
Upstream transportation and distribution	Transportation and distribution of products purchased from tier 1 suppliers including inbound logistics, outbound logistics and transportation and distribution between own facilities (in vehicles and facilities not owned or controlled by Borras)	The scope 1 and scope 2 emissions of transportation and distribution providers that occur during use of vehicles and facilities (e.g., from energy use).
Waste generated in operations	Disposal and treatment of waste generated in the reporting company's operations in the reporting year (in facilities not owned or controlled by the reporting company)	The scope 1 and scope 2 emissions of waste management suppliers that occur during disposal or treatment
Business travel	Transportation of employees for business-related activities during the reporting year (in vehicles not owned or operated by Borras Construction)	The scope 1 and scope 2 emissions of transportation carriers that occur during use of vehicles (e.g., from energy use)
Employee commuting	Transportation of employees between their homes and their worksites during the reporting year (in vehicles not owned or operated by the reporting company)	The scope 1 and scope 2 emissions of employees and transportation providers that occur during use of vehicles (e.g., from energy use)
Downstream transportation and distribution	N/A	N/A

3. GHG Emissions Summary:

GHG Emissions Summary (tCO ₂ e)		Year					
Scope	Activity Type	2019	2020	0	0	0	0
Scope 1	Stationary combustion (Gas Use Office)	12.84	11.83	0.00	0.00	0.00	0.00
	Mobile combustion (Cars/Vans)	467.69	307.40	0.00	0.00	0.00	0.00
	Fugitive emissions from air-conditioning	0.00	0.00	0.00	0.00	0.00	0.00
	Scope 1 - Total	480.52	319.23	0.00	0.00	0.00	0.00
Scope 2	Purchased electricity - market based	197.67	145.38	0.00	0.00	0.00	0.00
	Scope 2 Total	678.19	464.61	0.00	0.00	0.00	0.00
Scope 3	Upstream Transport & Distribution			0.00	0.00	0.00	0.00
	Waste Generated in Operations			0.00	0.00	0.00	0.00
	Business Travel			0.00	0.00	0.00	0.00
	Employee Commuting	144.906	23.413	0.00	0.00	0.00	0.00
	Scope 3 Total			0.00	0.00	0.00	0.00
KPI	tCO₂e /£Million Turnover	12.02	11.11				





The above Emissions Summary shows that the most significant GHG emissions are associated with mobile combustion from our predominantly diesel cars & vans making up 68.98% and 66.16% our total emissions in 2019 and 2020 respectively.

The other most significant contribution to GHG emissions is from electricity use – particularly across our sites which accounts for approximately 92% and 93% of electricity use in 2019/2020 respectively.

It can also be seen that there was a marked reduction in the emissions in 2020 compared to 2019 levels (a 31.5% reduction). This large GHG reduction in 2020 should be viewed in light of a significant reduction in turnover of the business as a result of the global pandemic in 2020.

It is also true to say that the many of the measures that were implemented as a result of the pandemic – in particular the enforced working from home and use of remote meetings – are also likely to have been the significant contributors to this reduction. Therefore, when the effect of the reduction in turnover is stripped out, those measures contributed to a real-terms reduction in GHG emissions of around 9.2% in 2020 compared to 2019 levels.

Whilst the pandemic has significantly reduced emissions, the emission sources and their percentage contribution can be seen to be broadly stable when compared to the 2019 baseline levels.

Although there has been some reduction in the scope 1 & 2 emissions at head office, it is likely that these emissions were not reduced but merely transferred outside of scope 1 & 2 emissions monitoring with employees needing to heat and power their homes. This effect would in turn be offset by the reduction in commuting as a result (both Scope 3 emissions and not accounted for in these calculations).

Whilst many of the reductions can be seen to be as a direct effect of the pandemic response, we anticipate that practices – learned as a result of the pandemic – will continue to positively impact our carbon foot print as we return to pre-pandemic activity levels. We expect, therefore to maintain a significant reduction (compared to turnover) in 2021 compare to the 2019 baseline.

4. GHG Emissions (with Emissions Factors)

2019 Emissions (Baseline):

Scope 1: Includes fuel consumption by vehicles that are owned or leased by the company. Combustion of fossil fuels in vehicles (including cars, trucks, planes, and boats) emits carbon dioxide, methane, and nitrous oxide into the atmosphere.

Natural Gas			GHG Emissions (tonnes CO ₂ e)					Emission Factor	
Year	Total	Units	CO ₂ (tonnes)	CH ₄ (tonnes)	N ₂ O (tonnes)	CO ₂ e (tonnes)	Biofuel CO ₂ (tonnes)	EF (kgCO ₂ e/unit)	Source
2019	70835	kWh	12.825	0.0002417	0.0000242	12.838	0.000	53.1145	EPA, "Emission Factors for Greenhouse Gas Inventories," Table 1 Stationary Combustion Emission Factors, March 9, 2018 (https://www.epa.gov/climateleadership/center-corporate-climate-leadership-ghg-emission-factors-hub).

Fuel (Cars, Vans & Plant)			GHG Emissions (tonnes CO ₂ e)					Emission Factor	
Year	Total	Units	CO ₂ (tonnes)	CH ₄ (tonnes)	N ₂ O (tonnes)	CO ₂ e (tonnes)	Biofuel CO ₂ (tonnes)	EF (kgCO ₂ e/unit)	Source
2019	16054 (Diesel vans)	Litre	43.301	0.000069	0.000103	43.330	0.000	10.217	EPA, "Emission Factors for Greenhouse Gas Inventories", March 9, 2018 (https://www.epa.gov/climateleadership/center-corporate-climate-leadership-ghg-emission-factors-hub); WRI, GHG Protocol - Emission Factors from Cross-Sector Tools, April 2014
	14866 (Diesel car)	Litre	40.097	0.000044	0.000088	40.121	0.000	10.216	EPA, "Emission Factors for Greenhouse Gas Inventories", March 9, 2018 (https://www.epa.gov/climateleadership/center-corporate-climate-leadership-ghg-emission-factors-hub); WRI, GHG Protocol - Emission Factors from Cross-Sector Tools, April 2014
	645362 (Diesel Car)	Miles	292.851	0.000323	0.000645	293.031	0.000	10.216	EPA, "Emission Factors for Greenhouse Gas Inventories", March 9, 2018 (https://www.epa.gov/climateleadership/center-corporate-climate-leadership-ghg-emission-factors-hub); WRI,

									GHG Protocol - Emission Factors from Cross-Sector Tools, April 2014
	125888 (Petrol Car)	Miles	49.124	0.002178	0.000453	49.305	0.00	8.812	EPA, "Emission Factors for Greenhouse Gas Inventories", March 9, 2018 (https://www.epa.gov/climateleadership/center-corporate-climate-leadership-ghg-emission-factors-hub); WRI, GHG Protocol - Emission Factors from Cross-Sector Tools, April 2014
	613 (Hybrid)	Miles	0.173	0.000011	0.000002	0.174	0.00	8.825	EPA, "Emission Factors for Greenhouse Gas Inventories", March 9, 2018 (https://www.epa.gov/climateleadership/center-corporate-climate-leadership-ghg-emission-factors-hub); WRI, GHG Protocol - Emission Factors from Cross-Sector Tools, April 2014
	10820 (Plant)	Litres	41.380	0.002310	0.001054	41.724	0.00	10.295	EPA, "Emission Factors for Greenhouse Gas Inventories", March 9, 2018 (https://www.epa.gov/climateleadership/center-corporate-climate-leadership-ghg-emission-factors-hub); WRI, GHG Protocol - Emission Factors from Cross-Sector Tools, April 2014
	Totals:		466.926	0.005556	0.002345	467.685	0.00	-	

Scope 2: Electricity and other sources of energy purchased from your local utility (that is not combusted on-site)

Electricity Use (Head Office)			GHG Emissions (tonnes CO ₂ e)				Emission Factor	
Year	Total	Units	CO ₂ (tonnes)	CH ₄ (tonnes)	N ₂ O (tonnes)	CO ₂ e (tonnes)	EF (kgCO ₂ e/unit)	Source
2019	37248.4	kWh	14.19015	0	0	14.19015046	0.38096	European Residual Mixes 2018 v1.2 (published July 2019) - Table 2, Direct GWP (gCO ₂ /kWh)

Electricity Use (Sites)			GHG Emissions (tonnes CO ₂ e)				Emission Factor	
Year	Total	Units	CO ₂ (tonnes)	CH ₄ (tonnes)	N ₂ O (tonnes)	CO ₂ e (tonnes)	EF (kgCO ₂ e/unit)	Source

2019	481621	kWh	183.47834	0	0	183.4783362	0.38096	European Residual Mixes 2018 v1.2 (published July 2019) - Table 2, Direct GWP (gCO2/kWh)
------	--------	-----	-----------	---	---	-------------	---------	--

Scope3: Employee Commuting

2019										
Activity Type	Vehicle Type	Amount of Activity Type	Units of Measurement	GHG Emissions					Emission Factor	
				CO ₂ (tonnes)	CH ₄ (tonnes)	N ₂ O (tonnes)	CO ₂ e (tonnes)	Biofuel CO ₂ (tonnes)	EF (kgCO ₂ e/unit)	Source
Vehicle Distance	Average Car - Diesel	336444	vehicle-mile	92.868637	3.364E-06	9.992E-04	93.134	0	0.27681733	UK DEFRA, Passenger vehicles, 2019 (https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/891105/Conversion_Factors_2020_-_Condensed_set_for_most_users.xlsx)
Vehicle Distance	Average Car - Petrol	175858	vehicle-mile	50.982993	8.969E-05	1.073E-04	51.014	0	0.29008593	UK DEFRA, Passenger vehicles, 2019 (https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/891105/Conversion_Factors_2020_-_Condensed_set_for_most_users.xlsx)
Vehicle Distance	Average Car - Hybrid	4140	vehicle-mile	0.755923	1.076E-06	7.411E-06	0.758	0	0.18307163	UK DEFRA, Passenger vehicles, 2019 (https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/891105/Conversion_Factors_2020_-_Condensed_set_for_most_users.xlsx)

2020 Emissions:

Scope 1: Includes fuel consumption by vehicles that are owned or leased by the company. Combustion of fossil fuels in vehicles (including cars, trucks, planes, and boats) emits carbon dioxide, methane, and nitrous oxide into the atmosphere.

Natural Gas	GHG Emissions (tonnes CO ₂ e)	Emission Factor
-------------	--	-----------------

Year	Amount of fuel	Units	CO ₂ (tonnes)	CH ₄ (tonnes)	N ₂ O (tonnes)	CO ₂ e (tonnes)	Biofuel CO ₂ (tonnes)	EF (kgCO ₂ e/unit)	Source
2020	65251	kWh	11.814	0.0002226	0.0000223	11.826	0.000	53.1145	EPA, "Emission Factors for Greenhouse Gas Inventories," Table 1 Stationary Combustion Emission Factors, March 9, 2018 (https://www.epa.gov/climateleadership/center-corporate-climate-leadership-ghg-emission-factors-hub).

Fuel (Cars, Vans & Plant)			GHG Emissions (tonnes CO ₂ e)					Emission Factor	
Year	Total	Units	CO ₂ (tonnes)	CH ₄ (tonnes)	N ₂ O (tonnes)	CO ₂ e (tonnes)	Biofuel CO ₂ (tonnes)	EF (kgCO ₂ e/unit)	Source
2020	10542 (Diesel vans)	Litre	28.434	0.000045	0.000068	28.453	0.000	10.217	EPA, "Emission Factors for Greenhouse Gas Inventories", March 9, 2018 (https://www.epa.gov/climateleadership/center-corporate-climate-leadership-ghg-emission-factors-hub); WRI, GHG Protocol - Emission Factors from Cross-Sector Tools, April 2014
	8524.63 (Diesel car)	Litre	22.993	0.000025	0.000051	23.007	0.000	10.216	EPA, "Emission Factors for Greenhouse Gas Inventories", March 9, 2018 (https://www.epa.gov/climateleadership/center-corporate-climate-leadership-ghg-emission-factors-hub); WRI, GHG Protocol - Emission Factors from Cross-Sector Tools, April 2014
	432575 (Diesel Car)	Miles	196.293	0.000216	0.000433	196.414	0.000	10.216	EPA, "Emission Factors for Greenhouse Gas Inventories", March 9, 2018 (https://www.epa.gov/climateleadership/center-corporate-climate-leadership-ghg-emission-factors-hub); WRI, GHG Protocol - Emission Factors from Cross-Sector Tools, April 2014
	75441 (Petrol Car)	Miles	29.439	0.001305	0.000272	29.547	0.00	8.812	EPA, "Emission Factors for Greenhouse Gas Inventories", March 9, 2018 (https://www.epa.gov/climateleadership/center-corporate-climate-leadership-ghg-emission-factors-hub); WRI, GHG Protocol - Emission Factors from Cross-Sector Tools, April 2014
	1962 (Hybrid)	Miles	0.553	0.000034	0.000007	0.556	0.00	8.825	EPA, "Emission Factors for Greenhouse Gas Inventories", March 9, 2018 (https://www.epa.gov/climateleadership/center-corporate-climate-leadership-ghg-emission-factors-hub); WRI,

									GHG Protocol - Emission Factors from Cross-Sector Tools, April 2014
	10820 (Plant)	Litres	29.184	0.001629	0.000743	29.426	0.00	10.295	EPA, "Emission Factors for Greenhouse Gas Inventories", March 9, 2018 (https://www.epa.gov/climateleadership/center-corporate-climate-leadership-ghg-emission-factors-hub); WRI, GHG Protocol - Emission Factors from Cross-Sector Tools, April 2014
	Totals:		306896	0.003245	0.001574	307.403	0.00	-	

Scope 2: Electricity and other sources of energy purchased from your local utility (that is not combusted on-site)

Electricity Use (Head Office)			GHG Emissions (tonnes CO ₂ e)				Emission Factor	
Year	Total	Units	CO ₂ (tonnes)	CH ₄ (tonnes)	N ₂ O (tonnes)	CO ₂ e (tonnes)	EF (kgCO ₂ e/unit)	Source
2020	24759.8	kWh	9.43249	0	0	9.432493408	0.38096	European Residual Mixes 2018 v1.2 (published July 2019) - Table 2, Direct GWP (gCO ₂ /kWh)

Electricity Use (Sites)			GHG Emissions (tonnes CO ₂ e)				Emission Factor	
Year	Total	Units	CO ₂ (tonnes)	CH ₄ (tonnes)	N ₂ O (tonnes)	CO ₂ e (tonnes)	EF (kgCO ₂ e/unit)	Source
2020	356848	kWh	135.94481	0	0	135.9448141	0.38096	European Residual Mixes 2018 v1.2 (published July 2019) - Table 2, Direct GWP (gCO ₂ /kWh)

2020

Activity Type	Vehicle Type			GHG Emissions					Emission Factor	
		Amount of Activity Type	Units of Measurement	CO ₂ (tonnes)	CH ₄ (tonnes)	N ₂ O (tonnes)	CO ₂ e (tonnes)	Biofuel CO ₂ (tonnes)	EF (kgCO ₂ e/unit)	Source
Vehicle Distance	Average Car - Diesel	60570.75	vehicle-mile	16.719344	6.057E-07	1.799E-04	16.767	0	0.27681733	UK DEFRA, Passenger vehicles, 2019 (https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/891105/Conversion_Factors_2020_-_Condensed_set_for_most_users.xlsx)
Vehicle Distance	Average Car - Petrol	22258.5	vehicle-mile	6.452962	1.135E-05	1.358E-05	6.457	0	0.29008593	UK DEFRA, Passenger vehicles, 2019 (https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/891105/Conversion_Factors_2020_-_Condensed_set_for_most_users.xlsx)
Vehicle Distance	Average Car - Hybrid	1035	vehicle-mile	0.188981	2.691E07	1.853E-06	0.189	0	0.18307163	UK DEFRA, Passenger vehicles, 2019 (https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/891105/Conversion_Factors_2020_-_Condensed_set_for_most_users.xlsx)

5. Existing Carbon Reduction Projects

Borras Construction Limited have already implemented the following measures:

- We are BS EN ISO 14001:2015 registered with British Standards Institute demonstrating our commitment to compliance with environmental regulations and having a positive environmental impact (including reducing our GHG emissions).
- We installed PIR/energy efficient lighting to our offices resulting in an estimated 86% reduction in CO2 emissions from our lighting in the head office.
- We have worked on a number of exemplar projects delivering positive outcomes – most recently delivering net zero homes for London Borough of Hounslow.
- We have also successfully delivered projects to defined environmental standards for example at Broughton Pavilions which achieved an “Excellent” rating under the BREEAM scheme.
- We have continued to incentivise our staff to choose lower emissions vehicles through a carbon car-bonus scheme.
- We also continually review our company car choices to reduce fleet emissions and now offer staff both mild/plug in hybrid and in 2020 the first full electric car choice.
- We continue to offer our staff with tax free bike to work scheme and worked with Fresh Ways to Work to develop a Green Travel Plan for the office.
- We have developed Biodiversity Workshops provided to schools as an educational resource.

6. Future Emissions reduction targets

In order to continue our progress to achieving Net Zero emissions by 2040 Borras Construction Limited will need to target address the significant carbon emitting processes – namely company car & van use (accounting for 59% of GHG emissions in 2020) and electricity use on site (29% in 2020) and in the office.

The move towards renewable generation will continue to lower our scope 2 emissions over time, however if Borras Construction Limited are to reach Net Zero by 2040 short and longer-term investment and policy decisions will be required. Therefore, we have developed short medium and long-term actions that progressively move us towards our Net Zero goals.

Short (1-2 Yrs)

- Constitute a Sustainability Working Group headed up by a Construction Director with responsibility to drive environmental improvement within the business
- Launch "Road to Net Zero" commitment at next AGM
- Implement Deltek Project Information Management Systems
- Record and monitor waste, water and electricity on a monthly basis across all sites via Deltek
- Set KPI's for waste, water & electricity use based on monitoring data
- Continue to encourage home-working & use of remote meeting technology via dynamic working policy
- Undertake Fleet Audit* to determine options for company vehicles
- Adopt CLOCS/FORS as standard for all projects
- Undertake Carbon Training for all staff to raise awareness of issues***
- Carry out the CITB Site Environmental Awareness Training (SEATS) for Site Managers
- Require all hired Non-Road Mobile Machinery (NRMM) to be minimum stage IV compliant with NRMM within Central London ULEZ and CAZ to be minimum Stage V (over 37kw)
- Carry out Environmental Information campaign(s) on single use plastics, plant-based diets etc
- Require suppliers and sub-contractors to commit to Net Zero by 2050 (to be approved as part of our supply chain)

Medium (2-5 Yrs)

- Provide Charge Points at company offices (including considering where these can be introduced as part of the scheme being undertaken).
- Work with suppliers to encourage the use of electric plant and tools by providing discount codes
- Determine mechanisms to measure additional scope 3 emissions (e.g. from products used) and develop a future plan as to how these emissions can be reduced/mitigated
- Implement routine post occupancy monitoring (where we have design responsibility) and review data to improve energy performance of projects in use.

Long (5 Years +)

- Increase the use of renewable energy on our sites
- All vehicles (company owned to be powered from renewable sources)
- Review the head office facility to determine energy efficiency/renewable energy investment options**
- Invest in carbon offsetting for those emissions that cannot be eliminated

* Fleet audit available via Energy Saving Trust <https://energysavingtrust.org.uk/>

** Note that there is @25% funding available in Hertfordshire via Eastern New Energy <https://www.uel.ac.uk/sri/eastern-new-energy> - budget @40k to exceed energy demand at HO via solar PV

*** Free on-line training currently available via the Supply Chain Sustainability School <https://www.supplychainschool.co.uk/>

It should be noted that this report only considers Scope 1 & 2 emissions – other significant emissions will likely to be found within the Scope 3 categories including those categories highlighted in section 2 of this report. Additional policy decisions will be required for these aspects such as:

- Moving to a paperless management system (via implementation of a cloud-based Project Information Management System).

7. Carbon Offsetting:

Whilst we will continually strive to reduce our GHG emissions we recognise that – particularly in the short term, some emissions will be unavoidable. It is also probable that, even after all reasonable actions have been taken, our processes will still have residual GHG emissions.

Where this is the case Borrás can offset those carbon Scope 1 & 2 Emissions by investing in [Verified Gold Standard](#) or [Verified Carbon Standard](#) carbon offsetting schemes. Examples include £4,500 per annum for a Global Portfolio of carbon offsetting schemes or £9,500 of a UK Tree Planting Scheme (based on 2019 GHG Emissions totals). It is expected that the cost of many carbon offsetting schemes will rise as the “low hanging fruit” carbon offsetting measures are replaced with more complex and costly schemes.

Declaration and Sign Off

This Carbon Reduction Plan has been completed in accordance with PPN 06/21 and associated guidance and reporting standard for Carbon Reduction Plans.

Emissions have been reported and recorded in accordance with the published reporting standard for Carbon Reduction Plans and the GHG Reporting Protocol corporate standard¹ and uses the appropriate Government emission conversion factors for greenhouse gas company reporting².

Scope 1 and Scope 2 emissions have been reported in accordance with SECR requirements, and the required subset of Scope 3 emissions have been reported in accordance with the published reporting standard for Carbon Reduction Plans and the Corporate Value Chain (Scope 3) Standard³.


This Carbon Reduction Plan has been reviewed and approved by the board of directors.

¹ <https://ghgprotocol.org/corporate-standard>

² <https://www.gov.uk/government/collections/government-conversion-factors-for-company-reporting>

³ <https://ghgprotocol.org/standards/scope-3-standard>

1 Salar House,
Campfield Road,
St Albans,
Hertfordshire,
AL1 5HT

 01727 850633

www.borrasconstruction.co.uk