



LEVIN SOURCES

Environmental Reporting – April 2019 / March 2020



August 2020

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Company information: Levin Sources Limited is a company registered in England and Wales with company number 07162292 and registered office at Quern House, Mill Court, Hinton Way, Great Shelford, CB22 5LD

Reporting period: 1st April 2019 – 31st March 2020

1. Introduction

RATIONALE FOR THE STUDY

At Levin Sources, we are deeply concerned by the intra- and inter-generational injustices of climate change, as well as the decline in ecological health and environmental resilience felt across ecosystems and across the planet. Climate change destroys cultures, environments and homes, especially in the world’s most vulnerable places. We understand our privileged position as part of the global north, and our responsibility to take real action. For these reasons, Levin Sources has been monitoring its carbon footprint since 2017 in order to:

- Reduce our energy and resource costs
- Better understand our impact and the exposure to the risks of climate change
- Set meaningful annual emission reduction targets
- Continuously improve our environmental policy
- Demonstrate leadership in the sector to help strengthen our “green” credentials and inspire and enable others to act

What do we mean by ‘carbon footprint’?

The ‘carbon footprint’ is a measure of greenhouse gas (GHG) emissions, which include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF₆). Water vapour is not considered a greenhouse gas because its persistence in the atmosphere is very low (only a few days).

Carbon footprints are measured in tonnes of carbon dioxide equivalent (tCO₂e) so that all GHG emissions can be compared. Each GHG has a different global warming potential (GWP), which is a measure of the amount of heat a GHG traps in the atmosphere. A GWP is calculated over a specific time interval, commonly 20, 100 or 500 years, to allow for the fact that GHGs have different persistence times in the atmosphere. In this report, the 100-year GWP will be used, as it is the most widely utilized. Table 1 shows how much each GHG would warm the earth over a period of 100 years compared to CO₂.

100-year Global Warming Potential values

GHG	100-year GWP
Carbon dioxide	1
Methane	25
Nitrous oxide	298
Sulphur hexafluoride	22800
Hydrofluorocarbon-23	14800
Hydrofluorocarbon-32	675
Perfluoromethane	7390
Perfluoroethane	12200
Perfluoropropane	8830
Perfluorobutane	8860
Perfluorocyclobutane	10300
Perfluoropentane	13300
Perfluorohexane	9300

In 2012 (no more recent data found), the average British carbon footprint was around 9 tCO₂e per person¹, which had fortunately decreased since 2006 (around 10 tCO₂e per person)¹. However, if we want to keep the increase in average temperature to below 2 degrees, we need to achieve zero net emissions by 2050. And if we take into account our historical emissions, we most likely do not have the rights to emit anymore. Therefore, Levin Sources as a business should aim to have a **carbon neutral** footprint.

2. Reasons for change in emissions

Blanca Racionero Gomez has re-calculated base year emissions (2017) with the conversion factors recommended by internationally recognised agencies and used them in this report to be able to calculate real change and improvement. Base year emissions were recalculated as stated in our policy because there have been significant changes in the calculation methodology due to improved emissions factors and activity data, and changes in emissions were greater than 5%.

¹ * The average British carbon footprint is the total emissions generated in the UK divided by the country’s population therefore it includes emissions at work.

3. Quantification and Reporting Methodology

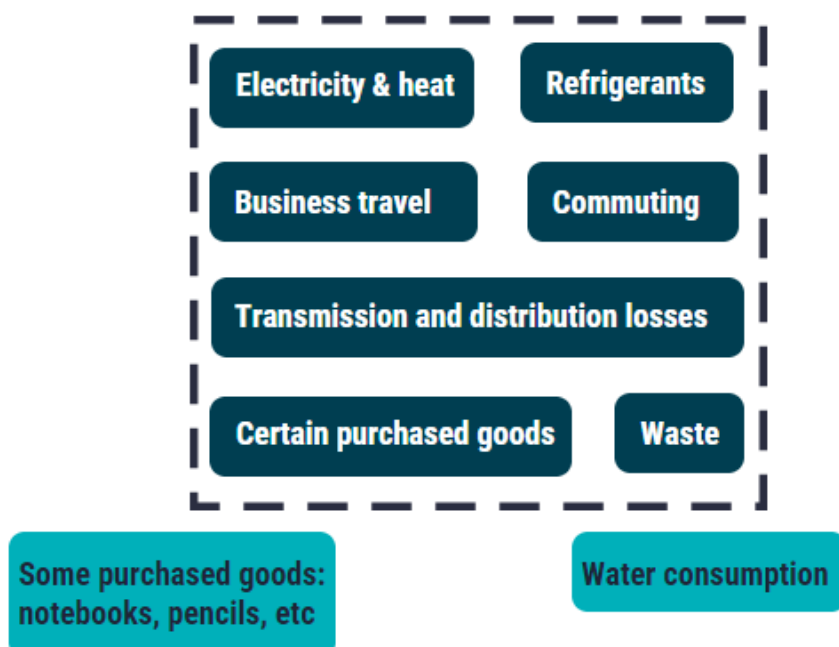
In order to align with our CEO Carbon Neutral Challenge commitment, we have followed the 2019 UK Government environmental reporting guidance and also used the GHG Corporate Standard, but we are not as yet able to report on all categories. We have used 2019 UK Government Conversion Factors for Company Reporting and have calculated emissions from the GHGs covered by the Kyoto Protocol.

We have taken into account all scopes 1, 2 and 3 emissions:

- **Scope 1** emissions relate to direct emissions: activities owned or controlled by Levin Sources that release emissions straight into the atmosphere. These include emissions from controlled boilers, furnaces, company vehicles, emissions from controlled process equipment.
- **Scope 2** emissions relate to energy indirect emissions being released into the atmosphere associated to Levin Sources consumption of purchased electricity, heat, steam and cooling.
- **Scope 3** emissions relate to other indirect emissions that are consequence of Levin Sources actions. Examples of these emissions are business travel, waste disposal or purchased materials.

BOUNDARIES

Levin Sources has tried to include as much items as data available (e.g. emissions from certain purchased items/stationary). The main Levin Sources emissions are related to employee business travel. The figure below shows the boundaries of this reporting (dark blue are elements included in the analysis). Elements in light blue have not been included because of the lack of data and the relatively smaller impact compared to the other included elements. Meals emissions have been excluded for this reporting year because it is not a requirement of the GHG Corporate standard or cited in Defra's guidance.



DATA COLLECTION AND DATA ANALYSIS

Levin Sources collected business travel data from our travel agency Key Travel (travels made by departure date from 1st April 2019 to 31st March 2020), electricity consumption comes from electric meter readings, waste generated was weighted, stationary bought was tracked via receipts and refrigerants emissions were estimated using the Screening Method laid out on page 98 of the 2019 UK Government environmental reporting guidance.

Levin Sources has used the operational control consolidation approach to report emissions. Scope 2 emissions were calculated using the location-based approach.

Targets have been set following the Science Based Targets setting Initiative (SBTi) tool using the absolute contraction approach. Base year is 2017, and target year is 2030.

4. 2019 Carbon Emissions

Scope 1, 2 and 3 emissions are outlined in the table below.

Activity	2019	Specific exclusions % this represents for relevant scope	% of activity data that is estimated
Scope 1 (tCO₂e)			
Fugitive emissions (refrigerants)	1.76	None	Estimated 4 months usage of AC during winter and 4 months of AC usage during summer (both on for 4 h/day)
TOTAL Scope 1	1.76		

Scope 2 (tCO₂e) (location-based approach)			
Electricity and heat	3.24	None	None, electric readings
TOTAL Scope 2	3.24		

Scope 3 (tCO₂e)			
Air travel	88.6	None	None
Rail travel	0.57	None	30%
Staff commuting	4.62	None	20%
Purchased goods	0.10	All stationery and cleaning products, except for the paper	None
Purchased services	NA	100% because we do not purchase many services and it would be very costly to calculate	
Transmission & distribution	0.28	None	None
Waste disposal	0.003	None	None
Water	NA	100% because of lack of data on water consumption	
TOTAL Scope 3	94.19		

TOTAL Emissions	99.29 tCO₂eq
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COMPARISON WITH BASE YEAR

Activity	Base year (2017/18)	Current (2019/20)	Change (%)	Base year normalised against staff (tonne/staff)	Current year normalised against staff (tonne/staff)	Change (%)	Base year normalised against financial turn over 2017/18 (tonne/1M £)	Current year normalised against financial turn over 2019/20 (tonne/1M £)	Change (%)
Scope 1 (tCO2e)									
Fugitive emissions	1.76	1.76	0	0.1	0.1	-7	1.4	1.2	-16
TOTAL Scope 1	1.76	1.76	0	0.1	0.1	-7	1.4	1.2	-16
Scope 2 (tCO2e) (location-based approach)									
Electricity & heat	6.33	3.24	-49	0.5	0.2	-52	5.0	2.1	-57
TOTAL Scope 2	6.33	3.24	-49	0.5	0.2	-52	5.0	2.1	-57
Scope 3 (tCO2e)									
Air travel	75.59	88.62	17	5.4	5.9	9	59.5	58.7	-1
Rail travel	0.21	0.57	171	0.0	0.0	153	0.2	0.4	128
Staff commuting	4.96	4.62	-7	0.4	0.3	-13	3.9	3.1	-22
Purchased goods	not calculated	0.10	NA	NA	0.0	NA	NA	0.1	NA
Transmission & distribution	0.59	0.28	-53	0.0	0.0	-56	0.5	0.2	-60
Waste disposal	not calculated	0.003	NA	NA	0.0	NA	NA	0.0	NA
TOTAL Scope 3	81.4	94.19	15	5.8	8.0	8	64.1	62.4	-3
TOTAL emissions	89.4	99.19	11	6.4	4.0	4	70.4	65.7	-7

Normalisations have been done against staff and against financial turn over, in the period of April 2017 – March 2018 Levin Sources had 14 staff, in April 2019 – March 2020 Levin Sources had 15 staff. Financial turn-over is of 2017-2018 was £ 1,269,948, whereas in 2019-2020 was £ 1,508,840. The table above shows the normalised values and percentages of emissions increases or decreases.

In absolute terms Levin Sources emissions have increased, although when normalised against financial turnover, emissions have decreased slightly. Although this decrease is likely to be lower if we were to take inflation into account. Scope 2 emissions have been greatly reduced in absolute terms, due to the decision of stop using the central heating system and instead use the AC system during the winter months.

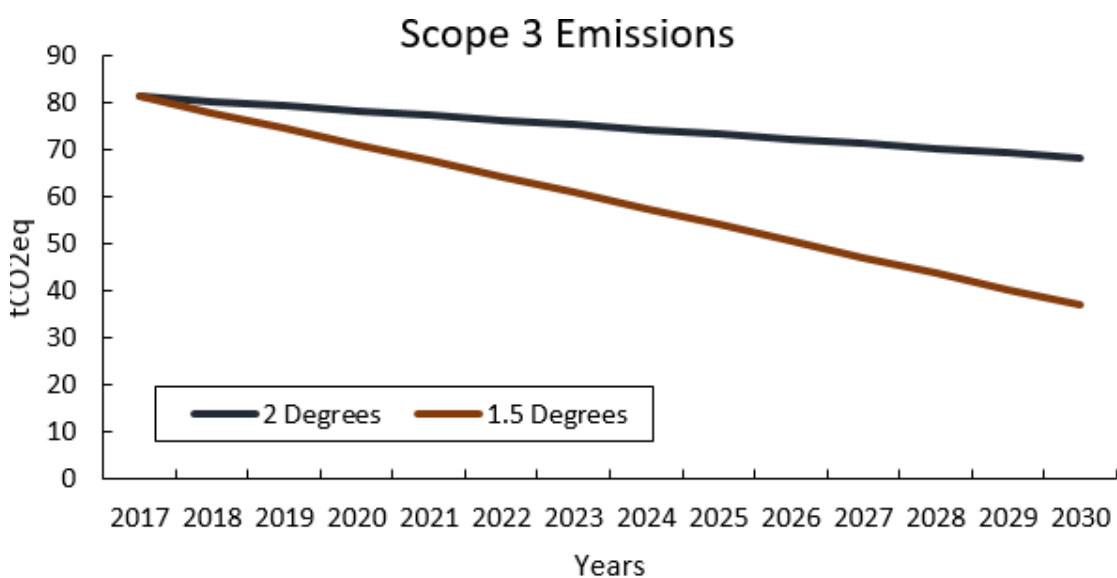
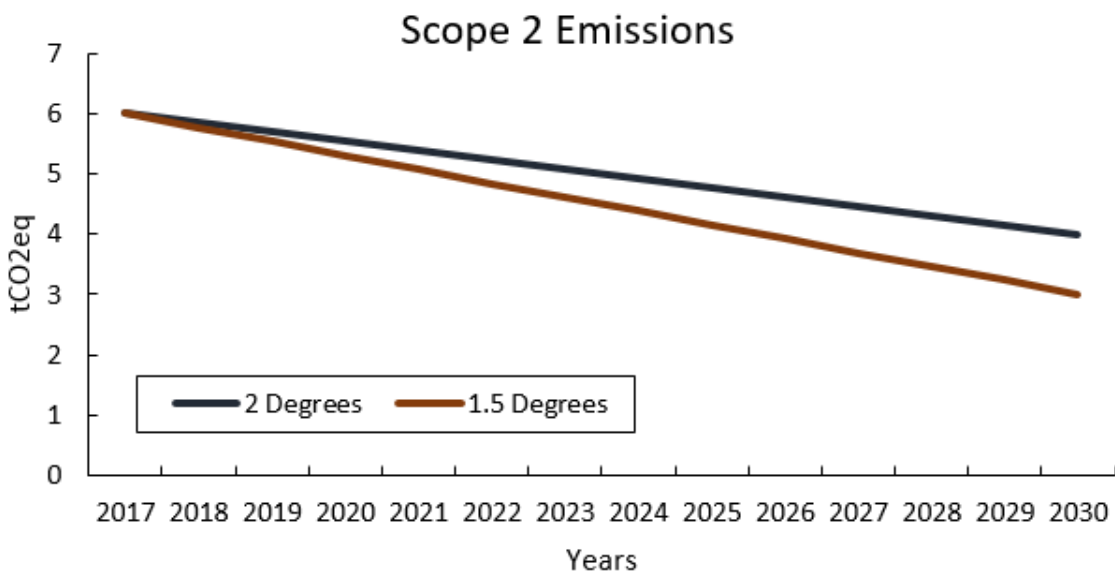
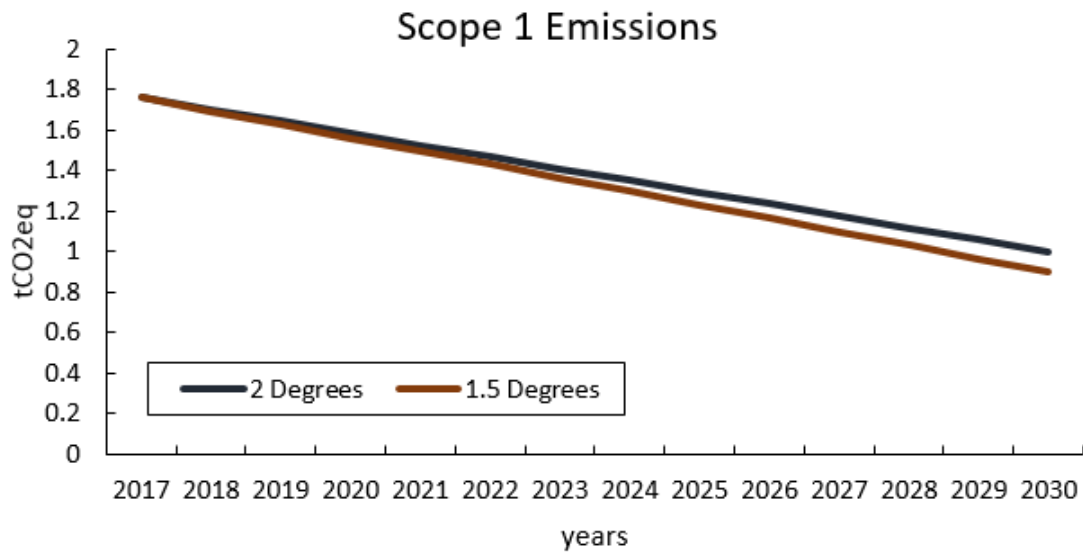
5. Emission reduction targets

TARGETS

Based on the SBTi tool, in order to contribute to keeping planetary waring below 2 degrees scope 1 and 2 emissions should be reduced by 32.5% by 2030. To stay below 1.5 degrees, a 54.6% reduction is necessary. For scope 3 emissions, based on SBTi tool the reduction should be 16% in order to stay below 2 degrees, and 54.4% to stay below 1.5 degrees.

Levin Sources has already managed to achieve the end target for scope 2 emissions, but not for scopes 1 and 3. Emissions have increased for scope 3. It is important to understand that the SBTi tool's absolute contraction approach does not take into account the amount of emissions generated in the base year, it always asks for the same reduction percentages independently of the actual carbon intensity.

	Base year (2017)	Target year (2030)	% Reduction <i>Necessary</i>	Aim 2019	Achieved in 2019?
Scope 1 (tCO2e)					
Below 2 degrees	1.8	1.0	32.5	1.6	No – emissions of 1.76
Below 1.5 degrees	1.8	1.0	54.6	1.6	No – emissions of 1.76
Scope 2 (tCO2e)					
Below 2 degrees	6.0	4.0	32.5	5.7	Yes – emissions of 3.3
Below 1.5 degrees	6.0	3.0	54.6	5.5	Yes – emissions of 3.3
Scope 3 (tCO2e)					
Below 2 degrees	81.4	68.4	16.0	79.4	No – emissions of 99
Below 1.5 degrees	81.4	37	54.6	74.6	No – emissions of 99



6. Towards Zero Carbon and Offsets

REDUCTION OF EMISSIONS

In order to reduce scope 1 emissions Levin Sources would need to consider building on the existing downward trajectory and further reduce the number of days during which the AC / heater is on. Levin Sources could influence the power source in our rented office space if we were to invest: 1) significant time organising other renters and the landlord/agency, and 2) money to collectively pay for the changes. Levin Sources has been working with the landlord to install some bird boxes and additional flowers and plants in the shared garden area. And we are involved in Wildlife Trust activities, Levin Sources won the gardening at work awards in 2020. For scope 3 emissions, the only way to achieve the end target is by drastically reducing business air travel by half by 2030.

CARBON OFFSETS

Levin Sources has been contributing £1000 per annum to the Wildlife Trust for more than 2 years as a corporate member, but we have not yet contributed to a specific carbon offset scheme. The Wildlife Trust is currently building an offset scheme that should be ready by 2021. We will offset our 2020 emissions using their scheme as soon as it is available.

Offsetting with the Wildlife Trust costs 15 £/tCO_{2e}, offsetting costs for this reporting year (2019/20) are therefore £ 1,480. With £1000 paid to the Wildlife Trust as interim coverage, we have underspent £480 for 2019/20.

Offsetting costs for historical emissions of Levin Sources is difficult because we do not have accurate data on historical emissions, but given that air travel is the highest contributor to Levin Sources emissions we can assume the following:

- Estimation of Flights 2015 until 2017 (2 years) = base year emissions (75.6 tCO _{2eq}) x 2 = 151 tCO _{2eq}
- Estimation of Flights from 2014 until 2015 (1 year) = base year emissions (75.6 tCO _{2eq}) / 14 staff x 5 staff = 27 tCO _{2eq}
- Estimation of Flights from 2011 until 2013 (2 years) = 75.6 tCO _{2eq} / (15 staff x 1 staff) x 2 y → 10 tCO _{2eq}
- Estimation of Flights from 2010 until 2011 (1 year) = barely travelled due to ELN having young children, if we assume 1 long-haul flights per year and 1 short-haul flight x 1 years = approx. 5 tCO _{2eq}
- Base year (2017/18) = 75.6 tCO _{2eq}
- Estimation (2018/19) = base year emissions (75.6 tCO _{2eq}) x 1 year = 75.6 tCO _{2eq}
Total estimation of emissions from flights:
151 tCO_{2eq} + 27 tCO_{2eq} + 10 tCO_{2eq} + 5 tCO_{2eq} + 75.6 tCO_{2eq} + 75.6 tCO_{2eq} = 345 tCO_{2eq}
Total estimation of historic emissions (given that flights contribute to 90% of total emissions)
345 tCO_{2eq} x 100 / 90 = 383 tCO_{2eq}

¹ years are calendar years

Therefore, Levin Sources' carbon debt is estimated to be 383 tCO_{2e}, offsetting costs of historical emissions up to and including 2017 and 2018 using the Wildlife Trust scheme would be £ 5,750.

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