

Shred Station Limited

2019 Greenhouse Gas Assessment

On behalf of Natural Capital Partners

713279R(01)

29TH JULY 2020






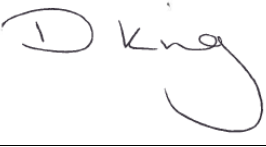
RSK GENERAL NOTES

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Client: Natural Capital Partners

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1 CARBON NEUTRAL CERTIFICATION SUMMARY

1.1 CarbonNeutral® Company

Table 1 displays the CarbonNeutral® certification scope and emissions to be offset:

Table 1. CarbonNeutral® Company Certification Summary

Organisation:		Shred Station Limited			
CarbonNeutral® certification:		CarbonNeutral® Company			
Reporting Period:		1st January 2019 to 31st December 2019			
Consolidation approach:		Operational control			
Scope	Emissions Source Category	Required or Recommended	Included ?	tCO ₂ e	
1	Direct emissions from owned, leased or directly controlled stationary sources that use fossil fuels or emit fugitive emissions	Required	N/A	--	
	Direct emissions from owned, leased or directly controlled mobile sources	Required	✓	1,572.0	
2	Emissions from the generation of purchased electricity, heat, steam or cooling	Location-based	✓	110.4	
		Market-based		110.4	
3	Purchased goods & services	Water supplied to subject	Recommended	✓	0.3
	Fuel and energy related activities	Upstream emissions of purchased electricity and fuels	Recommended	X	--
		Transmission and distribution (T&D) losses	Required	✓	9.4
	Upstream transportation and distribution	Outbound courier deliveries of packages	Recommended	X	--
		Third-party transportation and storage of inbound production-related goods	Recommended	N/A	--
		Third party transportation of outbound final products	Required	N/A	--
	Waste generated in operations	Wastewater	Recommended	✓	0.6
		Other waste	Required	✓	<0.1
	Business travel	Transport by air, public transport & leased vehicles	Required	✓	20.5
		Emissions from hotel accommodation	Recommended	X	--
Employee commuting		Recommended	N/A	--	
Location-based total			✓	1,713.3	
Market-based total			✓	1,713.3	
Total minus fleet emissions (1,572.0 tCO₂e)			✓	141.3	
Total for offset (tCO₂e)				142	

1.2 CarbonNeutral® Fleet

Table 2 displays the CarbonNeutral® certification scope and emissions to be offset:

Table 2. CarbonNeutral® Fleet Certification Summary

Organisation:	Shred Station Limited		
CarbonNeutral® certification:	CarbonNeutral® Fleet		
Reporting period:	1st January 2019 to 31 st December 2019		
Consolidation approach:	Operational control		
Emissions Source Category	Required or Recommended	Included?	tCO _{2e}
All direct emissions from mobile sources used to deliver the activity	Required	✓	1,572.0
Emissions from consumption of purchased electricity (including transmission losses) and/or steam used to deliver the activity	Required	N/A	--
Overall compliance		✓	1,572.0
Total for offset (tCO_{2e})			1,573

2 CONTEXT

2.1 Why Measure GHG Emissions?

Greenhouse gas (GHG) emissions assessments quantify the total GHGs produced directly and indirectly from a business or organisation's activities. GHG assessments may also be conducted for products or services. Also known as a “carbon footprint”, a GHG assessment is an essential tool in the process of monitoring and reducing an organisation's climate change impact as it allows reduction targets to be set and action plans formulated.

GHG assessment results can also allow organisations to be transparent about their climate change impacts through reporting of GHG emissions to customers, shareholders, employees and other stakeholders. Regular assessments allow clients to track their progress in achieving reductions over time and provide evidence to support green claims in external marketing initiatives such as product labelling or Corporate Social Responsibility (CSR) reporting.

2.2 The Kyoto Protocol Greenhouse Gases (GHGs)

GHG assessments quantify all six Kyoto Protocol GHGs, where applicable, and are measured in terms of tonnes carbon dioxide (CO₂) equivalence, or tCO₂e, where equivalence means having the same warming effect as CO₂ over a period of 100 years. The six Kyoto Protocol gases are CO₂, methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), sulphur hexafluoride (SF₆) and perfluorocarbons (PFCs). The global warming potential (GWP) of each GHG is presented in Table 2.

Table 3. Kyoto Protocol GHGs and their Global Warming Potential (GWP)

Greenhouse Gas	Chemical Formula	GWP (CO ₂ e)
Carbon dioxide	CO ₂	1
Methane	CH ₄	25
Nitrous oxide	N ₂ O	298
Hydro fluorocarbons	HFCs	Depends on specific gas
Sulphur hexafluoride	SF ₆	22,800
Perfluorinated compounds	PFCs	Depends on specific gas

2.3 Calculating Emissions

GHG assessments use client-supplied activity data (i.e. kWh's of electricity consumed, or litres of fuel burned), from which GHG emissions estimates are quantified by applying the most relevant emission factor(s) from published reputable sources (e.g. DEFRA).

An 'emission factor' is a representative value that attempts to relate the quantity of a pollutant released to the atmosphere with an activity associated with the release of that pollutant. Emission factors are typically available from government publications, independent agencies, and scientific research journals; however, the quality and accuracy of such factors can vary significantly. Factors can differ depending on the research body and/or underlying methodologies applied. It is therefore best practice to apply emission factors only from reputable sources, such as DEFRA.

2.4 Reporting Standards

GHG assessments are generally carried out in accordance with one of two recognised standards for accounting and reporting corporate GHG emissions. The most well-known is the "*Greenhouse Gas Protocol - Corporate Accounting and Reporting Standard*" (GHG Protocol, 2011) developed in a partnership of the World Business Council for Sustainable Development (WBCSD) and the World Resource Institute (WRI). The International Organization for Standardization (ISO) also produced the *ISO 14064*¹ specification series, detailing specification and guidance for the organisation and project levels, as well as for the validation and verification of emissions.

The CarbonNeutral® Protocol developed by Natural Capital Partners (NCP) is an additional quality layer on top of the GHG Protocol and describes the requirements for achieving specific CarbonNeutral® compliant certifications (i.e. 'Company', 'Product', 'Event').

2.5 Emissions Scopes

The aforementioned standards break down emission sources into three distinct categories or 'Scopes'.

2.5.1 Scope 1

'Scope 1' accounts for direct emissions released from sources that are owned or controlled by the reporting company (e.g. corporate car fleets, power generation facilities, fuel combustion for heating and power, and refrigerant gas losses).

¹ 'ISO 14066 - Greenhouse gases — Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals'

2.5.2 Scope 2

'Scope 2' accounts for the indirect emissions associated with the generation of purchased electricity, heat and steam generated off-site.

An increasing number of countries have adopted policies to allow and encourage electricity suppliers to offer zero carbon renewable electricity to their customers, typically through tariffs or Power Purchase Agreements (PPA's). In January 2015, the GHG Protocol published a revision of the Scope 2 GHG reporting guidelines. These guidelines state that any operations in markets providing product or supplier-specific data in the form of contractual instruments shall report Scope 2 emissions in two ways: one based on the location-based method, and one based on the market-based method, with each result labelled according to the respective method. This is also termed 'dual reporting'. A location-based method reflects the average emissions intensity of grids on which energy consumption occurs, while a market-based method reflects emissions from electricity that companies have purposefully chosen (i.e. Renewable Obligation Certificates).

As per The CarbonNeutral® Protocol, zero emissions may only be awarded when double-counting is avoided. Any businesses seeking to make a Scope 2 reporting declaration in support of CarbonNeutral® certification must complete and sign a disclosure form provided by NCP, which outlines the contractual instrument(s) purchased, the total consumption covered (MWh), and the reporting period it applies to.

2.5.3 Scope 3

'Scope 3' includes all other indirect emissions sources not accounted for within Scope 1 and 2 (e.g. business travel, staff commuting, water consumption, waste disposal and outsourced activities such as deliveries).

The GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard (WRI and WBCSD, 2011) groups Scope 3 emissions into 15 distinct categories, which are intended to provide companies with a framework to organise, understand and report their emissions from wider upstream and downstream impacts. The CarbonNeutral® Protocol requires inclusion of certain Scope 3 emissions depending on the certification targeted (typically waste and business travel), however other non-'required'/'recommended' sources may be included at the discretion of the client, should they be deemed as relevant to the activities of the company.

The GHG Protocol describes the quantification of Scope 1 and 2 as mandatory, whereas Scope 3 emissions are considered optional. Depending on the nature/remit of an organisation, Scope 3 activities can contribute a significant proportion of overall emissions, and therefore to gain a proper understanding of an organisation's GHG emissions it is advisable to include all relevant sources.

2.6 Measuring Climate Impacts from Aviation

From 2014, it is a requirement of The CarbonNeutral® Protocol that clients consider the evidence regarding the overall effect of aviation on climate, aside from simply GHG emissions released during combustion of jet fuel; including, but not limited to, soot particles and aviation induced clouds. Having considered the evidence, clients may elect

to calculate their aviation carbon impact by considering only GHG emissions (an Aviation Impact Factor (AIF) of 1), or alternatively may elect to address the wider effects of aviation by applying an Aviation Impact Factor (AIF) of 2.

2.7 GHG Accounting Principles

RSK's approach to carbon accounting is to follow the GHG Protocol's core principles where possible:

- Relevance: selecting an appropriate inventory boundary that reflects the GHG activities of the company and serves the decision-making needs of users;
- Completeness: accounting for all emission sources within the chosen inventory boundary, with any specific exclusions disclosed and justified;
- Consistency: aiming to collect meaningful and consistent data over time whilst transparently documenting any significant changes to data quality and/or format;
- Transparency: addressing all relevant issues in a coherent and clear manner; and
- Accuracy: minimising uncertainty and avoiding systematic over- or under-quantification of emissions, and ensuring any necessary estimates or assumptions required are conservative and guided by best practice.

2.8 Data Quality and Accuracy

The accuracy of a GHG assessment is directly related to the quality of the activity data provided. 'Primary' data should always be used where available, which denotes actual activities which occurred during the reporting period (i.e. kWh's of electricity consumed via invoice). It is accepted that 'secondary' data in the form of estimates, extrapolations and/or industry averages may be used when primary data is not available. Assessments based largely on secondary data should only be viewed as an estimate of GHG emissions impact, and actual emissions may vary significantly. All clients should aim to improve the proportion of primary data over time.

3 METHODOLOGY

3.1 Introduction

This GHG assessment has been prepared by RSK, on behalf of NCP, to estimate GHG emissions associated with the operations of Shred Station Limited ('Shred Station') during the 2019 calendar year reporting period 1st January 2019 to 31st December 2019. Shred Station is the UK's largest independent provider of secure confidential waste destruction and disposal services, and employed 115 full-time equivalent (FTE) staff across three sites (Norwich, Harlow and Denton), including a number of home workers and fleet drivers.

Table 4 displays a breakdown of the office location assessed within this report:

Table 4. Office Locations

Office Name, Location	Floor Area (m ²)	Staff
Norwich	4,267	30
Harlow	3,048	7
Denton	4,145	3
Home workers	--	6
Drivers and drivers' mates	--	69
Total	11,460	115

3.2 Approach

Upon project commencement, a Quality Assurance form was completed by RSK to review all activity data provided by the client, with conservative assumptions proposed where necessary to ensure a best practice approach is adhered to.

GHG emissions were then quantified by applying the most relevant emission factor(s). GHG emission factors relating to the 2019 reporting year are sourced from DEFRA's 2019 UK GHG Conversion Factors for Company Reporting (July 2019). See **Appendix A** for details of all GHG emission factors used in this assessment.

For air travel, Shred Station recorded zero data for the 2019 calendar year and therefore are not required to apply an Aviation Impact Factor (AIF) for this GHG assessment (see Section 2.6 for additional detail).

3.3 Operational Boundary and Data Quality

Table 5 displays the operational boundary applied for this assessment, along with an overview of the quality of data provided by the client.

Table 5. Operational Boundary and Data Quality

Scope	Emissions Source	Requirement	Data Provided and Quality
1	Refrigerant gas losses	Required	< No refrigerant gases replaced/lost for 2019 calendar year; however, air conditioning is used on-site
	Stationary sources	Required	< Not applicable (electric heating used on site)
	Mobile sources	Required	< Primary data provided in total litres of fuels used
2	Electricity consumption	Required	< Primary data provided in total kWh used
3	Water	Recommended	< Primary data provided in m ³ , however does not cover the full 12-month period
	T&D losses ²	Required	< See electricity consumption
	Upstream electricity (WTT ³)	Recommended	< Not reported
	Wastewater	Recommended	< Primary data provided in m ³
	Waste	Required	< Secondary data provided in terms of number of bin bags
	Business travel	Required	< Primary data provided in miles travelled
	Hotel stays	Recommended	< Not applicable
	Staff commuting	Recommended	< Primary data provided which displays annual distance by vehicle type; however, data is reported within 'business travel' and therefore disaggregation has not been possible
	Outbound courier deliveries of packages	Recommended	< Excluded from the assessment due to a lack of granular and transparent data, however likely de-minimis in any case
	Third party distribution and storage of inbound production-related goods	Recommended	< Not applicable
	Third party transportation of outbound final products	Required	< Not applicable

² Transmission and Distribution (T&D) losses refer to the Scope 3 emissions associated with grid losses (the energy loss that occurs in getting the electricity from the power plant to the organisations that purchase it).

³ Well-to-Tank (WTT) emissions refer to the impact of the extraction, refining and transportation of primary fuels before their use in the generation of electricity.

3.4 Key Assumptions

Upon completion of the Quality Assurance phase, the following assumptions were agreed with the client:

- Due to missing water data for 9 months of the year at Harlow, the data provided for the first 3 months has been extrapolated for the remainder of the year;
- Due to missing water data for Denton, the data provided for Norwich and Harlow has been extrapolated based on FTE numbers for Denton (it should be noted that only 9 months of data was extrapolated to account for just 9 months of occupancy at the Denton site);
- Due to a lack of data for the weight of waste generated at all sites, waste was estimated based on an average of 5kg per bin bag; and
- Due to the format of the data, it has not been possible to disaggregate business travel and staff commuting mileage, therefore staff commuting emissions have been reported within the total displayed for business travel.

4 RESULTS

4.1 GHG Emissions Summary

Table 6 shows total GHG emissions estimated during the reporting year, together with emissions normalised by metrics related to company activities. Absolute GHG emissions can vary over time and often correspond to the expansion or contraction of an organisation. It is therefore useful to use reporting metrics that take these effects into account to establish emissions intensity. Common emissions intensity metrics are tCO₂e per FTE staff or per square metre floor area (m²).

Table 6. 2019 GHG Emissions Summary

Metric	GHG Emissions
Total GHG emissions	1,713.3
GHG emissions per FTE (115)	14.9
GHG emissions per sqm floor area (11,460m ²)	0.1

4.2 GHG Emissions by Scope

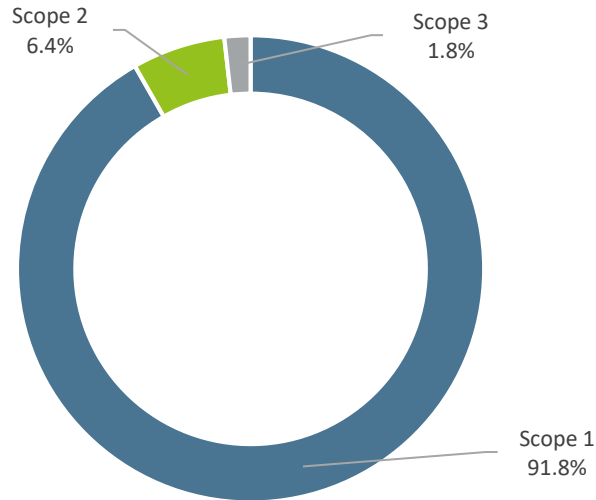
Table 7 and Figure 1 present GHG emissions by Scope estimated for company activities.

Table 7. 2019 GHG Emissions by Scope

Emissions Scope	GHG Emissions (tCO ₂ e)
Scope 1 – Direct emissions	1,572.0
Scope 2 – Indirect electricity emissions	110.4
Scope 3 – Other indirect emissions	30.9
Total	1,713.3

Scope 1 (direct) emissions from mobile sources (fleet vehicles) represent the largest emissions Scope (approximately 92%), followed by Scope 2 emissions (approximately 6%) from main electricity consumption. Scope 3 (other indirect emissions) account for the remaining 2% of the carbon footprint.

Figure 1. CN® Company GHG Emissions by Scope (%)



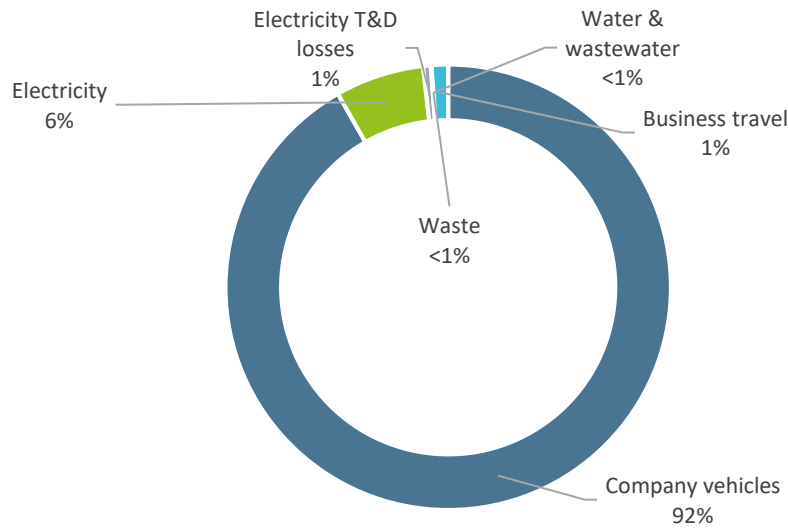
4.3 GHG Emissions by Source Category

Table 8 and Figure 2 present GHG emissions by source relating to company activities.

Table 8. 2019 GHG Emissions by Source Category

Activity	GHG Emissions (tCO ₂ e)	Sub-Total (tCO ₂ e)
Premises		
Refrigerant gas losses	0.0	120.7
Electricity including T&D losses	119.8	
Water and wastewater	0.9	
Waste	<0.1	
Business Travel		
Cars – small diesel	9.7	20.5
Cars – medium diesel	4.4	
Cars – large diesel	6.4	
Company Vehicles (fleet)		
Car – diesel fuel	1,572.0	1,572.0
Total		1,713.3

Figure 2. CN® Company GHG Emissions by Source (tCO₂e)



Regarding emissions sources, company vehicles are Shred Station’s largest source (approximately 91.8%), followed by electricity (6.4%), business travel (1.2%). Water supply and treatment of wastewater together account for 1%, while electricity losses and waste each represent less than 1% of the overall footprint.

4.4 Comparison of 2018 & 2019 GHG Emissions

A comparison of GHG emissions from their current (2019) and previous (2018) GHG assessments is provided in Table 9.

Table 9. Comparison of 2018 & 2019 GHG Emissions

Emissions Source Category	GHG Emissions (tCO ₂ e)		
	2018	2019	Change
Company vehicles (fleet)	1,146.4	1,572.0	+ 425.6
Electricity incl. losses	92.4	119.8	+ 27.4
Water & wastewater	0.7	0.7	--
Waste	<0.1	<0.1	--
Business travel	13.5	20.5	+ 7.0
Total	1,253.1	1,713.3	+ 460.2
Emissions per FTE (office-based staff only)	37.97	42.83	+ 4.86



Overall, there has been an increase in total emissions between 2018 and 2019, predominantly due to an increase in the total diesel fuel used in company owned vehicles. An increase in electricity use and business travel also contributed to this increase. It should be noted that the increase in electricity use is likely to be attributed to the addition of the Denton office, not previously a Shred Station site in 2018.

REFERENCES

- BSRIA, Rules of Thumb 5th Edition, Energy Benchmarks (2011);
- CIBSE, Guide F – Energy Efficiency in Buildings (2012);
- Cundall, CO₂e Emissions Due to Office Waste, Information Paper – 6 (2013);
- Cundall, Comparison of Building Energy Benchmark to Total energy (2013);
- DEFRA's Environmental Reporting Guidelines, including streamlined energy and carbon reporting guidance (2019);
- DEFRA's UK 2019 GHG Conversion Factors for Company Reporting (June 2019);
- International Organization for Standardization (ISO), ISO 14064:18, Greenhouse gases — Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals (2018);
- The CarbonNeutral® Protocol by Natural Capital Partners (2020);
- The Greenhouse Gas Protocol - Corporate Accounting and Reporting Standard (WBCSD & WRI, 2004);
- The Greenhouse Gas Protocol - Corporate Value Chain (Scope 3) Accounting and Reporting Standard (WBCSD & WRI, 2011);
- The Greenhouse Gas Protocol - Scope 2 guidance, An amendment to the GHG Protocol Corporate Standard (WBCSD & WRI, 2015).

APPENDIX A: APPLIED EMISSION FACTORS

Table 10. Applied Emission Factors

Emissions Source	Notes	Factor	Unit	Reference
Diesel fuel	Average biofuel blend	2.59411	kgCO ₂ e/kWh	DEFRA 2019
Electricity	UK, consumed	0.2556	kgCO ₂ e/kWh	DEFRA 2019
	UK T&D losses	0.0217	kgCO ₂ e/kWh	DEFRA 2019
Water consumption	Water supply	0.344	kgCO ₂ e/m ³	DEFRA 2019
Wastewater	Water treatment	0.708	kgCO ₂ e/m ³	DEFRA 2019
Waste incinerated	Municipal waste	21.3538	kgCO ₂ e/tonne	DEFRA 2019
Small car	Diesel	0.22868	kgCO ₂ e/mile	DEFRA 2019
Medium car	Diesel	0.27459	kgCO ₂ e/mile	DEFRA 2019
Large car	Diesel	0.33713	kgCO ₂ e/mile	DEFRA 2019
Notes DEFRA 2019 - Guidelines to DEFRA / DECC GHG Conversion Factors for Company Reporting (July 2019)				