

## Executive Summary

As a socially responsible organisation, I&H Brown is committed to reducing its environmental impact. To further enhance its environmental leadership, I&H Brown has pledged to limit its contribution to climate change by managing and counteracting its greenhouse gas emissions.

I&H Brown measure their carbon footprint with the following objectives;

- Understand its emission footprint and establish a carbon baseline,
- Demonstrate a commitment to environmental stewardship and carbon management,
- Understand how its emissions have changed since previous year.

The reporting period is 1st September 2022 to 31st August 2023.

To further enhance its environmental leadership, I&H Brown are committed to limiting its contribution to climate change by managing and counteracting its greenhouse gas emissions. This report is the outcome of I & H Brown's 15th carbon footprint exercise.

The results of the exercise show that the company's carbon emissions for the period were 7,335 tCO<sub>2</sub>e with an available offset from its' own managed woodlands of 6,827 tCO<sub>2</sub>e. Understandably, given the nature of its business, the largest sources of emissions are due to diesel use, 95% for construction plant and road vehicles.

Item	2019-2020	2020-2021	2021-2022	2022-2023
Gas	16.83	8.40	28.39	25.01
Diesel	13,511	14,193.00	10,703	6,973.10
Petrol	3.88	41.16	40.51	45.01
Oils/LPG/Kerosene/Paraffin	97.23	54.40	34.80	83.46
Electricity	132.32	136.76	138.55	48.11
Hotel/Accommodation/Travel	91.31	110.41	33.92	35.21
Others	81.08	137.32	467.66	125.71
<b>Total Carbon Emissions (tCO<sub>2</sub>e)</b>	<b>13,942.9</b>	<b>15,229.14</b>	<b>11,498.44</b>	<b>7,335.61</b>
Woodland Management Offset	-6,944	-6,944	-6,827	-6,827
<b>Carbon Emissions, With Offset (tCO<sub>2</sub>e)</b>	<b>6,998.9</b>	<b>8,285.41</b>	<b>4,671.44</b>	<b>508.61</b>

### **Carbon Footprinting Process**

In this report the term 'carbon emissions' includes carbon dioxide and other greenhouse gases such as methane, nitrate oxide, hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride.

Carbon emissions are calculated and reported in tonnes of CO<sub>2</sub> equivalent (tCO<sub>2</sub>e) following recommended best practice. The carbon footprint calculations use UK Government published emission factors.

In accordance with ISO14064 the approach used in this footprint is based on the principal of operational control. Under the control approach we accounted for 100% of GHG emissions from operations over which I&H Brown has control.

I&H Brown operate from it's head office in Perth and an office in Warrington. The total floor area of both locations is 1,457m<sup>2</sup>. During the reporting period the business employed on average 220 people and had a turnover of circa £69,041,672 million.

Other sites owned by the company include farms, managed woodland, a hunting estate and a wind farm.

Activities included in the scope for the footprint are as follows:

#### Scope 1 (Direct Emissions)

- Gas
- Oils
- Diesel
- Petrol

#### Scope 2 (Indirect Energy Emissions)

- Electricity

#### Scope 3 (Indirect Other Emissions)

- Business Travel
- Others

### **Carbon Reductions**

The company has for a number of years owned a managed woodland (609.6 hectares) at the Kingie Estate, which is a combination of well established and recently planted woodlands. Woodlands can be seen as a greenhouse gas sink for carbon sequestration.

A realistic average carbon reduction over a long term full forestry rotation (from planting to harvesting) is estimated to be about three tonnes of carbon per hectare per year, which is calculated to be 11.2 tonnes of carbon dioxide per hectare per year. In 2022-2023, the company's woodlands are equivalent to a net reduction of 6,827t CO<sub>2</sub>e.



**Emissions Data Sheet**

Scope 1 (Direct) Emissions				
Resource	Quantity	Unit	tCO <sub>2</sub> e	% of Total
Diesel	2,526,485	litres	6,973.10	95.06
Oils / Kerosene / Paraffin	32,859	litres	83.46	1.14
Petrol	21,431	litres	45.01	0.61
Gas (Mains)	116,888	kwh	25.01	0.34
LPG / Gas / Oxygen	1,316	litres	2.05	0.03
Propane	73	kgs	0.01	0.00
<b>Scope 1 Total</b>			<b>7,128.65</b>	<b>97.18</b>
Scope 2 (Indirect Energy) Emissions				
Resource	Quantity	Unit	tCO <sub>2</sub> e	% of Total
Electricity (Purchased)	232,429	kwh	48.11	0.66
<b>Scope 2 Total</b>			<b>48.11</b>	<b>0.66</b>
Scope 3 (Indirect Others) Emissions				
Resource	Quantity	Unit	tCO <sub>2</sub> e	% of Total
<b>Business Travel</b>				
Air	20,648	km	3.78	0.0515
Rail	37,025	km	1.30	0.0177
Taxi	130	km		#VALUE!
Ferry	0	km	0.00	-
<b>Others</b>				
Waste	774	tonnes	111.38	1.5183
Hotel Stays	3,386	nights	35.21	0.4800
Deliveries	14,588	tonnes-miles	5.43	0.0740
Paper	395	(A4 reams)	0.82	0.0112
Water (Supply)	3,445	m <sup>3</sup>	0.61	0.0083
Water (Disposal)	1,520	m <sup>3</sup>	0.31	0.0042
<b>Scope 3 Total</b>			<b>158.83</b>	<b>2.17</b>
<b>Total Emissions (tCO<sub>2</sub>e)</b>			<b>7,335.59</b>	

Carbon Sequestration				
Resource	Quantity	Unit	tCO <sub>2</sub> e	% of Total
Woodland Ownership & Management	609.6	hectares	6,827	93.07

<b>Total Emissions After Offset (tCO<sub>2</sub>e)</b>	<b>508.59</b>
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When I&H Brown first developed its carbon management strategy in 2008 it recognised that its emissions were dependent upon operational activities, such as plant use on site, so that any progress would need to be explained in context of business operations and growth.

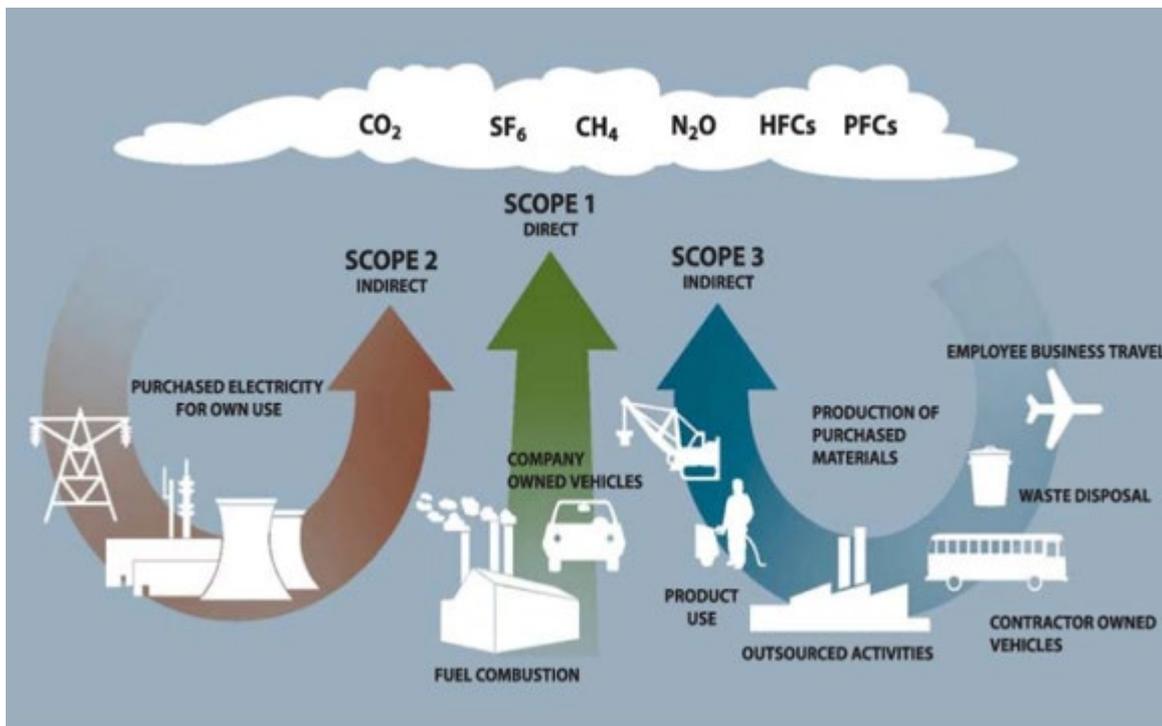
Rather than absolute emissions, I&H Brown's ambition is to achieve relative reductions against identified business metrics in conjunction with a policy of replacing site plant & road vehicles with new fuel efficient vehicles.

In summary I&H Brown's carbon footprint, after carbon offset, is 508.61 tCO<sub>2</sub>e.

## Carbon Glossary

### Scopes

As discussed earlier, the standard categorises GHG emissions in three different scopes, the figure below illustrates this concept.



### Greenhouse Gas Emissions (GHG)

Any of the atmospheric gases that contribute to the greenhouse effect by absorbing infrared radiation produced by solar warming of the Earth's surface. This study has focussed on carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>) and nitrous oxide (NO<sub>2</sub>). Each GHG has a different Global Warming Potential.

### Carbon Dioxide Equivalent (CO<sub>2</sub>e)

A metric used to compare the relative global warming potential of different greenhouse gases, for example, methane is 21 times more potent than CO<sub>2</sub>, meaning 1 tonne of methane equates to 21 tCO<sub>2</sub>e.

### Emission Factor / Conversion Factor

The number used to convert units of an activity or product into units of CO<sub>2</sub>e that result from the activity or from the manufacture and/or use of the product. Emission coefficients are usually expressed as tCO<sub>2</sub>e [unit of activity].

### Carbon Footprint

The total greenhouse gas emissions from an organisation or activity, expressed in CO<sub>2</sub>e.



**Carbon Neutral**

The state in which the emissions from one activity are balanced by emission reductions achieved elsewhere, e.g. if I&H Brown emits 100 tCO<sub>2</sub>e this could become carbon neutral if the company purchases 100 tCO<sub>2</sub>e of carbon credits from outside I&H Brown.

**Carbon Offsetting**

The process by which emissions from one source are matched against carbon credits derived elsewhere.

**Emission Reduction**

The removal, limitation, reduction, avoidance, sequestration or mitigation of GHG emissions.

**J SCOTT BROWN**  
**MANAGING DIRECTOR**

**Date: August 2023**