

Appendix 1. - Calculations**Paper:**

Each roll of paper = 38 m or 0.038 km per roll as sourced from Alliance Examination Table Paper

Our clinic used 216 rolls of paper x 0.038 km per roll

= 8.2 km of paper

Trees:

(Number of trees required to offset the emissions from the clinic - “trees saved” or “trees to absorb additional emissions”)

A tree absorbs approximately 25kg of CO₂ per year ([Ecotree, 2023](#)).

=261.10 kg CO₂eq exam paper used/25 kg CO₂e tree absorption per year

=10.44 trees per year needed to offset the clinic’s annual exam table paper use

Laundry:

3 kg CO₂/ load* x 37.5 loads/ year = 113 kg CO₂ = 0.113 T CO₂ per year

<https://www.theguardian.com/environment/green-living-blog/2010/nov/25/carbon-footprint-load-laundry>

Emissions:

Our clinic previously used crepe exam table paper, made from pulp. When determining the carbon footprint of this type of paper, a greenhouse gas intensity of 1511 kg CO₂eq/metric ton of product was assumed ([Table 7 – GHGI for all US Pulp and Paper Product Categories](#)). This greenhouse gas intensity accounts for the total fuel, electricity, wood (upstream), chemicals (upstream) and transportation emissions associated with producing a metric tonne of product.

It was assumed that the crepe exam table product was made from ‘Coated Ground Wood’ Category of Paper as outlined in Table 1 - Paper Product Categories with Abbreviations and Definitions as sourced

from the [Life Cycle Carbon Footprint Analysis of Pulp and Paper Grades in the United States Using Production-line-based Data and Integration](#).

Our clinic used 172.8 kg paper = 0.1728 metric tonnes

=0.1728 metric tonnes x 1511 kg CO₂eq/metric tonnes (emission factor)

=261.10 kg CO₂eq per year.

Equivalent driving distance:

The clinic saved 261.1 – 113kg CO₂ per year = 148 kg CO₂ per year

The average new car emits **120.1g/km** of CO₂ <https://www.lightfoot.co.uk/news/2017/10/04/how-much-co2-does-a-car-emit-per-year/#:~:text=The%20average%20new%20car%20emits%20120.1g%2Fkm%20of%20CO>

0.12 kg Co₂/ km x X km = 148kg CO₂

148 kg Co₂ saved / 0.12 kg Co₂ per km

= equivalent of 1233 km driven

Approximate savings if changes implemented Canada-wide: See Table 3.

Table 3. - Approximate savings if change implemented Canada-wide		
	Single clinic	Canada-wide (x 11,700)
Paper saved	8.2 km	95,940
Trees saved	10.44	121,680
\$ Saved		
Paper	\$564	\$6,598,800
Staff time	\$154	\$1,801,800
Total	\$718	\$8,400,600
Emissions		
Laundry	+113	+1,322,100
Paper	-261	-3,053,700
Total	-148	1,731,600 kg co ₂
Equivalent km driven	1233 km	14,426,100 km (= 360. 65 times around the world)

46,800 FPs in Canada / 4 FTEs in our clinic = 11,700

(<https://www.statista.com/statistics/831118/canada-family-general-practitioners-by-province/>)