

# DAVIES

The Veterinary Specialists



# Sustainability NEWS

April - June 2022

Welcome to the latest of our Sustainability Newsletters.

At Davies, our intent is more than to improve just our own sustainability; we want to help other practices navigate the steps to take to improve both environmental and social sustainability in their own veterinary practice. Our green group have put together this newsletter which includes a feature on carbon literacy, details of sustainability CPD events for vets, plus an update on recent green initiatives at Davies. We hope you enjoy reading and that this newsletter helps you on your journey.

## CARBON LITERACY

- Ellie West (Sustainability Lead)

Continuing our newest feature, Ellie West (Anaesthetist and Linnaeus Sustainability Lead) shares greenhouse gas facts for Veterinary Professionals.

### Greenhouse gas impacts of anaesthetic agents;

Carbon dioxide is one of many greenhouse gases (GHG); the global warming potential (GWP) of others is compared using carbon dioxide equivalent (CO<sub>2</sub>e), in kg or tonnes (t), where the global warming potential of CO<sub>2</sub> is 1.

250ml isoflurane releases 190kgCO<sub>2</sub>e. During anaesthesia, if fresh gas flow (FGF) is reduced by 25% on vaporiser settings of iso 2% with FGF starting at 3L/min for 4 hours per 251 working days, anaesthetic-related GHG emissions can be reduced 3.5tCO<sub>2</sub>e per year (from 14.1 to 10.6tCO<sub>2</sub>e).

The equivalent 25% FGF reduction using sevoflurane (49kgCO<sub>2</sub>e / 250 ml; vaporiser settings of sevo 3.5% with FGF starting at 3L/min for 4 hours per 251 working days) are 1.7 tCO<sub>2</sub>e per year (from 6.7 to 5 tCO<sub>2</sub>e).

Nitrous oxide releases around 0.56kgCO<sub>2</sub>e/litre (based on a density of 1.98g/L and 298kgCO<sub>2</sub>e/kg of N<sub>2</sub>O). Therefore, as an adjunct to anaesthesia for 4 hours/day (at 1.5 L/min each of oxygen and N<sub>2</sub>O for 251 working days), the N<sub>2</sub>O-related GHG emissions would be 50.6t of CO<sub>2</sub>e per year. Carbon equivalents from the volatile anaesthetic agent would be additional, although N<sub>2</sub>O will allow a mild MAC-reduction in animals. A free app; 'The Anaesthetic Impact Calculator' ([rcoa.ac.uk/about-college/strategy-vision/environment-sustainability/anaesthetic-impact-calculator](http://rcoa.ac.uk/about-college/strategy-vision/environment-sustainability/anaesthetic-impact-calculator)) helps to calculate and compare the GWP of anaesthetic agents.

### Originally published to accompany the lecture

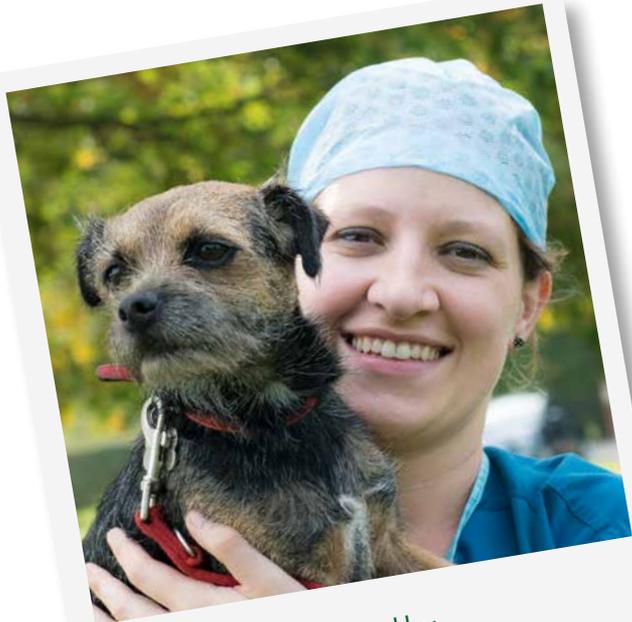
"What is happening in veterinary sector - high-level perspective" in the Sustainability stream | Friday 26th March | BSAVA Virtual 2021. References on request.



Ellie West  
(Sustainability Lead)

## THE LATEST IN LOWER FLOW

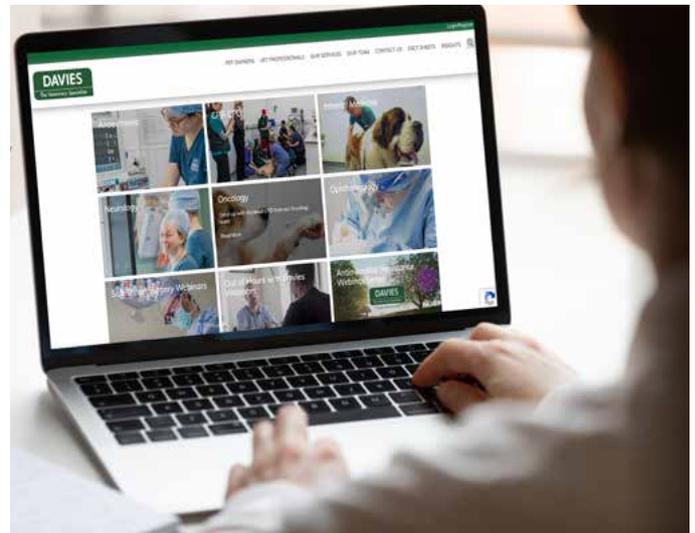
The latest action in Linnaeus' 'We Go For Lower Flow' campaign, launched in June 2021, sees a **£480,000 investment in anaesthetic equipment** rolled out to over 50 Linnaeus practices across the UK. The equipment includes handheld pulse oximetry and capnography monitors and 105 multi-parameter monitors with pulse oximetry, capnography, temperature, ECG and blood pressure monitoring. The equipment will allow practices to conduct safer lower flow anaesthesia, reducing the levels of volatile anaesthetic agents and associated emissions.



Kim Buckley

## A HAIRY SITUATION

A **MASSIVE THANK YOU** to Kim Buckley and the theatre team who have been saving clean fur clippings from theatre for donation to Matter of Trust, who felt fur and hair donations into mats which are then used to soak up oil spills or divert harmful chemicals away from waterways. **We recently donated another 7-8 kg of clippings!**



## CPD AND RESOURCES

Becoming Carbon Neutral—A Guide to Why, How and When with Chantelle Brandwood;  
[thewebinarvet.com/webinar/becoming-carbon-neutral-a-guide-to-why-how-and-when?](http://thewebinarvet.com/webinar/becoming-carbon-neutral-a-guide-to-why-how-and-when/)

Building a sustainable future veterinary profession through curriculum change:  
[vetsustain.org/work/building-a-sustainable-future-veterinary-profession-through-curriculum-change](http://vetsustain.org/work/building-a-sustainable-future-veterinary-profession-through-curriculum-change)

BVA Webinar Series Greener Veterinary Practice Webinar Series;  
[bva.co.uk/take-action/working-towards-a-greener-profession/](http://bva.co.uk/take-action/working-towards-a-greener-profession/)

### BVA Articles

[bva.co.uk/news-and-blog/blog/](http://bva.co.uk/news-and-blog/blog/)

- Sustainability—what difference can one person make? *With Ellie West*
- How do I get my boss to care about sustainability? *With Helen Swift*
- How can RVNs help empower the veterinary team to go green? *With Jo Oakden*

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Members of Davies Green Group left to right; Ben Orton – Hospital Director, Nat Whitley – Internal Medic, Emma-Louise Hiddle – Student RVN, Daisy-May Molyneaux – Client Care, Zoe Halfacree – Soft Tissue Surgeon

## RESOURCE LIBRARY

### What we're listening to



#### **VETchat by The Webinar Vet'**

Exploring diverse topics with sustainability titles including;

- Bringing Back The Great Bustard
- Can You Carbon Offset Your Pet?
- Feeding the Future: Climate Change, Population Growth and Technology

[www.thewebinarvet.com/pages/vetchat-podcasts/](http://www.thewebinarvet.com/pages/vetchat-podcasts/)

### What we're reading



#### **Sustainability—what difference can one person make?**

Read Ellie West's recent article with the British Veterinary Association:

[www.bva.co.uk/news-and-blog/blog-article/sustainability-what-difference-can-one-person-make/](http://www.bva.co.uk/news-and-blog/blog-article/sustainability-what-difference-can-one-person-make/)

