

Closing remarks in five points

1// The impact of zero carbon strategies in heritage institutions on indoor air pollution

- Potential new sources of energy,
- potentially less strict environmental control in heritage institutions,
- the need to transition to net zero economy.

Impact on pollution-related damage in collections?

What new indoor pollution scenarios may emerge?

Do current best practices of pollution management need to be revised in net zero scenarios?

2// New sorbent materials

There has been intensive research into the development of new sorbents and pollutant scavengers, which is excellent.

What is less clear is how these sorbent materials need to be evaluated to ensure they provide the benefit, let alone that they are safe for use in collections.

3// Monitoring and testing

A lot of data generated about concentrations of pollutants in various scenarios.

Pooling of this data may provide new insight into the dependencies and variables of interest.

Additionally, this would allow us to cross-correlate and compare different techniques and measurement protocols, such as the Oddy test and its value to the conservation community.

4// Contextualising pollution-related damage

There still seems to be little research available on the relative importance of pollution-related degradation in comparison to that caused by RH or T.

An excellent example is research of Menart et al. in *Cellulose*, 2014 that compared the impacts of acetic acid, humidity and temperature on historic paper, which allows collection managers to prioritise risks appropriately.

We may need more such research.

5// Introduction of new pollutants: olfactory exhibitions

Engagement of visitors with smells is a new dimension in museum exhibitions, but it means introduction of new VOCs into institutions where we potentially don't know their specific impacts.

How does this potentially increased risk compare to the already existing VOCs in the indoor atmosphere?

How should health impacts be managed?