Abstract
Cycling and Trauma Workshop

‘Air pollution as a form of bodily, embodied trauma.’

Clare Nattress, Leeds Beckett University (UK)

The voice over PowerPoint describes an overview of my practice-based research in which I am using cycling as a performative method to research air quality, working in collaboration with atmospheric scientists at the Wolfson Atmospheric Chemistry Laboratories (WACL) University of York. My predominant research question asks, ‘How can cycling be a performative art methodology to investigate, reveal and disseminate the problem of air pollution?’

My work focuses on the embodied experience of gathering data of air pollution. I can emphasise that I am contributing to scientific research of this problem by my use of performative methods, in particular the centrality of my body, which is usually excluded from scientific research. Our bodies are within the environment, we are affected by the weather, as vessels we smell, feel and touch our surroundings. We are interconnected and intertwined with the non-human.

With poor air quality often seen as a ‘problem of urban and higher population areas, a lot of research is therefore absent in rural landscapes. (Gabrys 2012) In 2020, I cycled from Morecambe to Bridlington along the 171-mile Coast-to-Coast route. Cycling over a longer distance allowed me to gather a larger pool of Air Quality Index (AQI) data, photographs, notes, swabs, and sound recordings. I collected data along these rural routes, cycle paths and country lanes using a Plume Labs sensor. Every time the sensor registered moderate, high, or very high levels of air pollution I would stop pedalling, take a photograph and mark the location onto a map. Based on the data actively captured, pollution levels in these locations were surprisingly high. The highest PM_{10} recording was 142 (Very High) in the Yorkshire Dales, a location surrounded by fields and beautiful vistas. Particulate Matter consists of tiny particles suspended in the air and sources include transportation, agriculture, and manufacturing. It is considered to be the most dangerous air pollutant and causes the most damage to our health. To give an idea of the size, PM_{10} is any particle measuring 10 micrometres in diameter or below and often assimilated roughly to a tenth of the width of a human hair, highlighting the invisible danger air pollution poses.

My performative cycling continues with a MiniVol TAS sampler, a larger piece of equipment which is attached to the bicycle and collects ambient air pollution through a vacuum onto a filter, later tested by scientists at (WACL), York University. This data evidences that air pollution is not just a problem for big cities, but dirty air can also be present in the places where we least expect and cause irreversible harm.