Ingleborough Soundscape Project Presentation of Results

On April 4th and May 5th, the authors of the Ingleborough Soundscape Project – Final Report presented the findings of this two-year Citizen Science project to delegates from the landscape management and conservation sectors.

The format of the two sessions followed the structure of the Final Report submitted to Natural England on April 1st, 2022. Rob Pheasant (Principal Investigator) opened the session by thanking Natural England for the opportunity to conduct the first combined ecological and bio-acoustic survey of Colt Park Wood and South House Moor, both of which form part of the Ingleborough National Nature Reserve. He also thanked UKAN and Defra for providing essential monitoring equipment and the numerous individual partners who helped make the study successful.

Mark Fisher (Co-investigator) then set the scene by explaining that the overall aim of the Ingleborough Soundscape Project was to examine whether the success of contrasting re-wilding initiatives; could be gauged by using acoustic monitoring. He then followed this by giving an overview of the history of soundscape ecology and a detailed land-use timeline for each study site. John Perry (ornithologist) followed this by presenting the findings of a year's worth of fortnightly bird surveys of Colt Park Wood that provided essential ground-truthing evidence used to validate the acoustic data for the same period.

Dave Melling (Co-investigator) then presented a very informative overview of the success of the camera trapping aspect of the study. Through a series of videos, he showed how mammal species counts for both study sites could be increased by using small-mammal boxes. He also showed how useful camera trapping is in observing the behavioural activity of larger mammals such as badgers and Roe deer.

Rob then presented how the visual information provided a measure of Ecological Richness that, once reconciled with one for Acoustic Richness, resulted in a score for Acoustically Enhanced Ecological Richness (AEER) as developed by Agius from the University of Leeds. He then went on to show how once AEER was slightly modified; it was possible to create a re-wilding rating scale that ranged from 0-10+. He then gave examples of the modified AEER applied to Colt Park Wood and South House Moor. Rob ended this presentation by acknowledging that the grading parameters used to score AEER might not apply to all landscape types and scope existed for them to be validated further and refinements made if required.

David Winterbottom followed the AEER presentation by providing a brief introduction to the theory of SoundPlan modelling before showing how transportation noise impacted the whole of the Ingleborough National Nature Reserve. These noise sources included: commercial aircraft overflights, freight, passenger trains, loading noise from the Ribblehead Virtual Quarry, transportation noise, and most importantly, the noise emitted from accelerating motorcycles, which was evidenced by recordings from Colt Park Wood. David then introduced Greg Watts (Co-investigator), who demonstrated how SoundPLan could be used to plot tranquillity contours within the National Park.

The presentations were followed by a half-hour question and answer session, which led to several new partnerships being explored and further discussions arranged. Each event ended with Rob thanking everyone who had taken part in the project and reminding the audience that the Final Report is stored on the UKAN website, along with Appendices containing spectrograms and SoundPLAN maps and 450GB of raw acoustic data (WAV files).