## PALAEOECOLOGY AND PEATLAND RESTORATION: UNDERSTANDING THE PRACTITIONERS' PERSPECTIVE

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KEY

## PROJECT BACKGROUND AND OBJECTIVES

1) Designing Research Aim: Frame research aims in the context of practical restoration work Co-creating research questions based on relevance and feasibility

2) Doing Research **Aim:** Data collection and analysis Practitioner involvement depends on time, expertise, research techniques

3) Implementing Research **Aim:** Translate research into practical action Practitioner-led decision making

FIGURE 1: THREE MAIN PHASES OF PRACTITIONER ENGAGEMENT IN THE RESEARCH PROCESS (ADAPTED; [3])

The potential of palaeoecological research to inform practical ecosystem conservation is increasingly recognised in the literature yet an acknowledge research-practice gap may limit actual impact on restoration practice<sup>1,2</sup>. A focus on effective research – practice collaboration, inspired by translational sciences, may be necessary to address this gap.

This project aims to develop a process of palaeoecology-practice collaboration (Figure 4) with practitioners from the Wildlife Trusts to inform the practical restoration of three lowland raised bog sites (Figure 2). We present methods for engaging practitioners in early project stages of research design (Figure 1) to ensure relevance of research questions for practical restoration and increase research impact.



knowledge flow/co-production



The project utilized surveys and an online workshop (Figure 3;  $\triangle$ ) to co-produce three questions most relevant to the ongoing restoration work, guided by earlier conversations practitioners. Participants including practitioners responsible for the restoration of the study sites and academics engaging in relevant research. These activities also focused on barriers to effective collaboration and potential solutions.



eak out 1

and 2

Top for group 1

Hydrology

Water table is

change

key - first

Palaeo ecology is key to understanding how ecosystem will react

## **RESULTS: WORKSHOP OUTCOMES**



why current mgmt nay need tweaking to understand Understand in contect of future past change climate change predictions How best to which should we

2

a limit?

Dif starting

to build

resilience

Important because

lowland sites on

behaviour/amor

urban fringe -

need a plan

use water be aiming for? on site Get as much wet Sphag bog as pos - then look at mosaic of other habitats	What is current mgmt not impacting? Because M62 is having greater effect	e.g iitrogen imiting Sphag	conditions - same trajectory in past/future?	FIGURE 3: WORKSHOP OUTCOMES:- UPPER LEFT RAW WORKSHOP CONVERSATION REGARDING RESEARCH FOCUS RECORDED BY	integration		)23
Are the water tables at optimal levels or can they be improved? How resilient will each bog be to future fluctuations?		What optima site?	is the achievable al water level on	PARTICIPANTS; LOWER LEFT EXAMPLE OF ACADEMIC VERSUS PRACTITIONER-FRAMED RESEARCH QUESTIONS, AS LANGUAGE WAS IDENTIFIED AS A KEY COLLABORATIVE BARRIER; UPPER RIGHT KEY IDENTIFIED BARRIERS AND SOLUTIONS FOR FEFECTIVE	Thesis completion	N 20	/lar.
4. CONCLUSIONS Evidence suggests that palaeoecological research is not achieving its full potential impact on peatland restoration practice. A focus on developing methods for practitioner engagement in palaeoecology is suggested, inspired by translational sciences. Combining meetings, site visits, surveys, and a workshop enabled the co-production of research questions with practitioners from the perspective of restoration needs.							
[1] Nel, J. L., Roux, D. J., Driver, A., Hill, L., Maherry, A. C., Snaddon, K., Petersen, C. R., Smith-Adao, L. B., Van Deventer, H.,							

Reyers, B. (2016). Conservation Biology. 30(1), 176-188. [2] McCarroll, J., Chambers, F. M., Webb, J. C., Thom, T. (2017). Quaternary International, 432, 39-47. [3] Froyd, C. A. and Willis, K. J. (2008). Quaternary Science Reviews, 27, 1723-1732.



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