Supplemental File 3: Appendix C

Reflexivity Statement

One of the key challenges that emerged during the interviews was the difficulty in defining the concept of gamification and effectively communicating this to participants. Gamification is inherently related to various overlapping concepts, and to ensure consistency in understanding, participants were shown explanatory slides distinguishing gamification from related concepts. This distinction was often unfamiliar to interviewees, occasionally resulting in hesitation when responding to questions. To facilitate a smoother interview process, more accessible and encompassing terms, such as "games-based approach" or "gamified approach", were frequently adopted. This allowed participants to speak more broadly about their experiences without being constrained by specific definitions or technical terminology.

From the lead researcher's perspective, who conducted all the interviews and also has a game design background, it was intuitive to conceptualise gamified applications in terms of discrete game elements, such as leaderboards, narratives, or avatars. This led to recognising these elements that participants referred to instantly and has also been used to give examples in the analysis. In the early stages of the study, a question was posed regarding which gamification elements participants would like to see implemented in citizen science. It became apparent that this line of questioning was problematic, both due to the lack of shared terminology and because it was often difficult to envision a gamified application as a collection of discrete features. This question was hence dropped completely. Although all interviews were conducted in English, participants were located in

diverse geographic regions and had varying levels of English proficiency. This may have contributed to minor transcription errors or the loss of nuance during translation and interpretation.

The primary researcher had an academic and professional background in game design and psychology, which influenced the themes that were actively constructed during the process. The theme refinement process was further informed by the extensive research experience that the two other lead researchers had. The citizen science research background of one of the researchers informed the analysis by determining the aspects that would be most useful for citizen science.