

Investigating inclusivity in community engagement on nature-based solutions and climate resilience.

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Introduction

Scotland faces increasing climate challenges, with urban areas particularly vulnerable to flooding, heat stress, and biodiversity loss¹. Blue-green infrastructure (BGI), which integrates water management and green spaces, is essential for enhancing urban climate resilience and ecosystem health². However, creating effective BGI requires inclusive engagement to co-create nature-based solutions (NBS) that address local needs and benefit communities, fostering social, economic, and environmental well-being³.

The early stages of this work reviewed inclusivity in community engagement. This highlighted a lack of student engagement and a gap in research on this topic despite the important role that students play both now and in their future careers in shaping sustainable places and economies. Students represent a substantial and diverse demographic, making up 10% of Scotland's population^{4,5} and 20% in Dundee⁶. This diverse group is uniquely vulnerable to climate impacts due to factors like limited financial resources⁷, housing insecurity⁸, transience and high population density in urban settings. Addressing these vulnerabilities through BGI and NBS can strengthen climate resilience and promote equitable, inclusive development⁹.

Student survey

To explore the extent to which perceived students, perceived as transient, are engaged with urban planning, identifying the degree of participation and barriers to inclusive engagement with NBS.

Format and analysis
Semi-structured online questionnaire (Qualtrics) 28th Feb – 26th June 2024; 603 responses. Exploring themes from interviews with practitioners.



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Any university, college or apprentice student in Scotland can participate

Community engagement and climate resilience

Student Survey

25 questions taking around 10 minutes

CHANCE TO WIN
5 X £50 VOUCHERS



Objectives

- Collate background information; education institution, level of study, climate vulnerability, and personal demographics
- Determine student engagement in community consultations
- Identify barriers to inclusive student engagement
- Determine other issues raised throughout the survey relevant to the research
- Inform future focus group research aims and objectives

Example statements from student respondents related to climate resilience, and blue-green environments:

Roads flood around my town more regularly now, although always has been an issue from Oct-Mar (mostly). However, most of it happens due to building on the natural flood control we have (had) in abundance here! I'm therefore more concerned about human actions than climate change. (respondent 39)

In general, I feel satisfied with the amount of green space in my area. I live at the top of a weathered tenement and I can get a bit nervous about weather and will do more so within the next coming years. More could definitely be done in the area to reduce impacts. (respondent 313)

Lot of walking paths are muddy it flooded and aren't easy to access. (respondent 488)

I find being outdoors really helpful for grounding and in winter this was helping my SAD (seasonal affective disorder). I would like to express my feelings of benefit to value those green spaces. This is really important to me especially when city life can feel so exhausting where can we connect for free that's outside if not parks green spaces. (respondent 454)

Woodland trust has green spaces/tree canopy stays for postcode areas and mine is very poor. We desperately need more trees planted. At the local college a number of the landscape trees died and have not been replaced so it's very grey and mainly hard landscaped. (respondent 584)

You asked questions about green spaces, air pollution, litter etc. but you didn't ask anything about noise pollution. I think this is a huge issue that no one is really talking about - a lot of students in my city, myself included, live on busy main roads in properties with very poor noise insulation i.e. single glazed windows. These roads are frequently used by buses, emergency vehicles, bin lorries, delivery vehicles, and of course everybody else in their private vehicles. The traffic noise is pretty much constant - the only time it gets quiet at all is at night. This means it's often quite difficult to concentrate when working from home. I think people who live in suburbs or quieter neighbourhoods don't fully understand the impact this can have on your mental health. (respondent 197)

I hope this survey helps because I am really concerned about climate change. From the past 2 years there is no snow in winter and extreme heat that affects everyone. (respondent 382)

[I would take part in consultations to]...build improvement for the future generations as due to constant growth of new neighbourhoods and business areas people starting to lack green space. (respondent 216)

I don't feel safe walking around with my dog we need safe green spaces to enjoy play time with our dogs which will greatly help mental health issues. (respondent 419)

I moved from my accommodation in Dundee mainly due to an incredibly low EPC rating and pervasive mould. The amount of litter and lack of green spaces were also concerns for me. I have since moved over the river to Tayport, where my quality of life has been of a much higher standard. (respondent 470)

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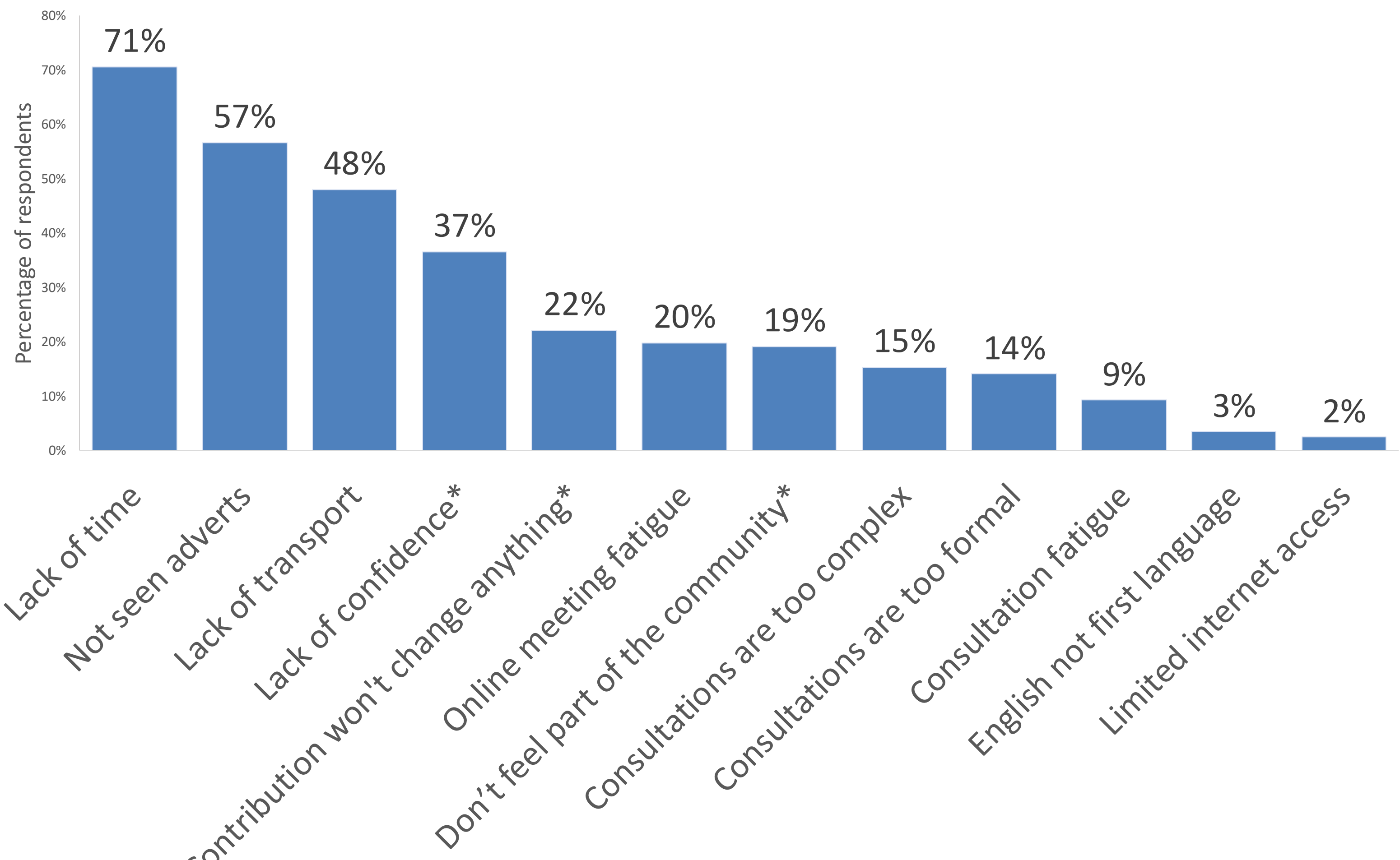
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Results

Students were asked a variety of questions relating to climate resilience and community engagement. Of particular interest were the barriers for taking part. Qualitative analysis identified 7 barrier themes:



In addition, quantitative results revealed the most common perceived barriers:



* Barriers with statistically significant influence on the likelihood of students participating in community engagement.

