**Read me**

We appreciate your interest in our data set. Please read this file to navigate more easily through the contents of this data set.

Folder Content and Description:

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| Folder name | Sub-folder name | File Name and Description |
| None | None | *‘\_Read me\_.docx’*  The present document includes instructions on how to navigate through the data set. |
| ‘1\_Documentation’ | ‘1.1\_Survey’ | *‘Survey\_Questionnaire.pdf’*  A copy of the questionnaire we used for the survey. |
| ‘1.2\_Focus\_Groups’ | *‘\_Consent\_Form\_Focus\_Groups.pdf’*  An empty consent form used for the focus group participants. It was signed by participants before the focus groups. |
| *‘\_Participant\_Information\_Sheet\_Focus\_Groups.pdf’*  A copy of the participant information sheet that was given to each participant before the focus groups. |
| *‘MCM\_Ranking\_and\_Weighting\_Handout.pdf’*  A copy of the handout used for the Multi-Criteria Mapping workshops. |
| ‘2\_Data’ | ‘2.1\_Survey’ | *‘Dictionary\_of\_data\_Survey.docx’*  The document includes the list of variables, its corresponding questions in the survey, and the possible answers with its codes. |
| *‘Survey\_Results.xlsx’*  The spreadsheet includes two tabs: ‘CODES’ and ‘LABELS’. ‘CODES’ includes the answers of each participant transformed into codes. ‘LABELS’ includes the answers of each participant in text format. |
| ‘2.2\_Focus\_Groups’ | Folder: ‘2.2.1\_Brighton\_and\_NoT\_Transcriptions\_Focus\_Groups’  Sub-folders and files:   * ‘Brighton\_Transcriptions’   For each focus group, 25 participants were selected by the market research company, using random stratified sampling to ensure diversity in terms of gender, ethnicity, rural/urban location, employment and political party support. Participants were asked to discuss in groups.  The following folder includes a transcription from the conversation of the facilitator with Brighton participants, one for each table. All transcripts are anonymised.   * + *‘Brighton\_Table\_1.docx’*   + *‘Brighton\_Table\_2.docx’*   + *‘Brighton\_Table\_3.docx’*   + *‘Brighton\_Table\_5.docx’*   + *‘Brighton\_Table\_6.docx’* * ‘North\_of\_Tyne\_Transcriptions’   The following folder includes a transcription from the conversation of the facilitator with North of Tyne participants, one for each table. All transcripts are anonymised.   * + *‘NoT\_Table\_1.docx’*   + *‘NoT\_Table\_3.docx’*   + *‘NoT\_Table\_5.docx’*   + *‘NoT\_Table\_6.docx’*   + *‘NoT\_Table\_7.docx’* |
|  | Folder: ‘2.2.2\_Brighton\_Participants\_Scores\_and\_Notes’  In the focus group, participants scored a range of measures according to their contribution to a set of wellbeing indicators (see Table 2, below), using a version of a multi-criteria mapping (MCM) method. The following folder contains the scores and notes for Brighton participants.  Files in the folder:   * *‘Brighton\_Participants\_Notes.pdf’* * *‘Brighton\_Scores\_vs\_Health\_Ben.docx’* * *‘Brighton\_Scores\_vs\_Qual\_Jobs.docx’* * *‘Brighton\_Scores\_vs\_Safe\_and\_Clean\_Env.docx’* * *‘Brighton\_Scores\_vs\_Safe\_and\_Supportive\_Comms.docx’* * *‘Brighton\_Scores\_vs\_Tackling\_CC.docx’* * *‘Brighton\_Scores\_vs\_Value\_Money.docx’* |
| Folder: ‘2.2.3\_NoT\_Participants\_Scores\_and\_Notes’  In the focus group, participants scored a range of measures according to their contribution to a set of wellbeing indicators (see Table 2, below), using a version of a multi-criteria mapping (MCM) method. The following folder contains the scores and notes for North of Tyne participants.  Files in the folder:   * *‘NoT\_Participants\_Notes.pdf’* * *‘NoT \_Scores\_vs\_Health\_Ben.docx’* * *‘NoT \_Scores\_vs\_Qual\_Jobs.docx’* * *‘NoT\_Scores\_vs\_Safe\_and\_Clean\_Env.docx’* * *‘NoT \_Scores\_vs\_Safe\_and\_Supportive\_Comms.docx’* * *‘NoT\_Scores\_vs\_Tackling\_CC.docx’* * *‘NoT\_Scores\_vs\_Value\_Money.docx’* |
|  |  | Folder: ‘2.2.4\_Brighton\_and\_NoT\_MCM\_Weights\_per\_Indiv’  In the focus group, participants scored a range of measures (in folder 2.2.3) according to their contribution to a set of wellbeing indicators (see Table 2, below), and then to weight those indicators, using a version of a multi-criteria mapping (MCM) method. The following two folders contain weights for each individual. It also contains a data dictionary.  Files in the folder:   * *‘\_MCM\_Weights\_per\_Indiv\_Data\_Dictionary.docx’*, contains a data dictionary for the two files below. * *‘MCM\_Weights\_per\_Indiv\_Brighton.xlsx’*, contains data already described for participants in Greater Brighton. * *‘MCM\_Weights\_per\_Indiv\_NoT.xlsx’*, contains data already described for participants in the North of Tyne region. |
|  |  | Folder: ‘2.2.5\_Brighton\_and\_NoT\_MCM\_Weights’  Files in the folder:   * *‘MCM\_Weights\_Brighton\_and\_NoT.xlsx’* |

Level of Access: Closed access until the paper is published.

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Methods employed:

To investigate citizens’ attitudes to demand-side mitigation measures and their relation to wellbeing indicators, we undertook a survey and focus group in each case study region. For the survey, respondents were asked the extent of their approval or disapproval of 14 demand-side mitigation measures (see Table 1), and to choose their top 3 measures contributing to overall wellbeing, based on a set of 20 wellbeing indicators (see Table 2), as well as to give their preferences for different funding options. The survey was conducted in two phases between June and September 2022. In the first phase from June to July, two researchers conducted the survey face-to-face with randomly selected residents in Brighton, gathering 46 responses. To gain a higher number of responses, a second phase was conducted using a market research company to generate a range of online responses in the Greater Brighton (GRB) and North of Tyne (NoT) regions. This generated a further 566 respondents aged between 18-65+, giving a combined total of 621 respondents, of which 343 were in the Greater Brighton region and 269 in the North of Tyne region. From the findings of the survey, 6 mitigation measures were selected to be discussed in more detail in the focus groups – 2 of the most preferred, 2 mid-range and 2 least preferred measures, as shown in Table 3.

In the focus group, we asked participants to score a range of measures according to their contribution to a set of wellbeing indicators, and then to weight those indicators, using a version of a multi-criteria mapping (MCM) method (Stirling and Mayer, 2001). This provided empirical evidence to support the claim that demand-side measures would be seen as more beneficial when assessed in relation to wider wellbeing criteria, rather than being assessed on purely economic benefits (Creutzig et al., 2022).

For each focus group, 25 participants were selected by the market research company, using random stratified sampling to ensure diversity in terms of gender, ethnicity, rural/urban location, employment and political party support (Etikan and Bala, 2017). Participants were asked to discuss in groups and then score individually (with a brief justification) the selected set of 6 mitigation measures in relation to 6 wellbeing indicators. This provided qualitative insights into factors influencing participants’ responses, as well as quantitative insights into their relative preferences for different mitigation measures. The wellbeing indicators were selected based on the literature to include 2 social indicators, 2 economic indicators and 2 environmental indicators (see Table 3), in order to cover a range of potential benefits. The focus groups were held in accessible locations in Brighton in December 2022 for the Greater Brighton case study, and in Newcastle in February 2023 for the North of Tyne case study.

**Table 1. Demand-side mitigation measures for the survey**

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| **Demand-side mitigation measures** |
| 1. Household energy efficiency improvements (e.g., walls insulation, double glazing) |
| 1. Use of sustainable/recycled construction materials |
| 1. Car-free zones |
| 1. Car-sharing options |
| 1. Active travel (e.g., cycling, walking) |
| 1. Affordable public transport |
| 1. Dedicated cycling networks |
| 1. Park and ride options (parking areas and public transport facilities) |
| 1. Mobility hubs (e.g., cycle hire, station, parking and travel info point) |
| 1. Plant-based diet |
| 1. Extend of lifetime of food/products and materials |
| 1. Active community engagement in local decision-making |
| 1. Nature-based solutions (e.g., green areas) |
| 1. Place-based solution (focus on the local area) |

**Table 2. Wellbeing indicators for the survey**

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| **Wellbeing indicators** |
| 1. Access to affordable and high-quality sources of food |
| 1. Access to safe and clean water |
| 1. High local air quality |
| 1. Access to good health services |
| 1. Access to affordable energy |
| 1. Access to affordable housing |
| 1. Availability of safe and affordable forms of mobility |
| 1. Access to high-quality education |
| 1. Access to communication networks |
| 1. Ability to manage social and economic risks |
| 1. Ability to participate in local decision-making processes |
| 1. Safety from crime |
| 1. Being part of a supportive local community |
| 1. Enhancing equality of opportunity and access for all |
| 1. Good governance processes |
| 1. Access to high-quality jobs |
| 1. Access to material goods |
| 1. A safe and clean local environment |
| 1. Enhancing diversity of plants and animals |
| 1. Tackling climate change |

**Table 3. Energy demand mitigations options and wellbeing criteria for focus groups**

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| **Options** | **Scenarios**  2000 houses retrofitted to the UK Energy Performance Certificate C.[[1]](#footnote-1)  50% buses fare reduction  Significant expansion of cycle-hire and bike lanes  Extensive car-free zones to restrict driving through the town centre  All public building and school meals vegetarian and dairy free  Substantial rewilding of local countryside, new nature reserves | |
| Home energy efficiency |
| Affordable public transport |
| Active travel |
| Car-free zones |
| Plant-based diet |
| Nature-based solutions |
| **Criteria** | | **Description** |
| **Social** | Health benefits (mental and physical) | Improved physical and mental health |
| Being part of a safe and supportive community | Increased community resilience and connection, improved protection from crime, access to community services for all |
| **Economic** | Value for money | Optimising net social costs and benefits, increased benefits for all from public investment, public investments that considers both economic and social benefits, managing social and economic risks |
| Quality jobs creation | Creation of good quality, flexible and long-term jobs, fair pay and working hours, increased equality, diversity and inclusion, flexible and long-term opportunities to satisfy people’s working and life needs |
| **Environmental** | Safe and clean local environment | Increased safety in local areas, improved cleanliness of the local environment, access to safe, clean, green spaces for living, leisure and outdoor play |
|  | Tackling climate change | Reduce CO2 emissions through reduced fuel and energy consumption, public and active transit, buying local products, increasing building energy efficiency, reducing consumption and recycling, reusing and upcycling |

The focus groups allowed the triangulation of the data since participants contributed specific insights that could not be investigated in the survey (Punch, 2014). During the workshops, an adapted version of MCM was used as “an interactive appraisal method for exploring contrasting perspectives on complex strategic and policy issues. The tool aims to help 'open up' technical assessment by systematically 'mapping' the practical implications of alternative options, issues, uncertainties and values” (UoS, 2023).

MCM[[2]](#footnote-2) is conceived as a tool to be used for individual or small group interviews where participants define their own criteria. Given the number of participants in the workshops, the criteria were predefined by the research team. To analyse the data, we used the MCM scoring of the options and weighting of the criteria and adopted a thematic analysis, using Nvivo, of the qualitative data collected during the workshop.[[3]](#footnote-3) Thematic analysis is commonly used in qualitative analysis to allow the identification of key themes and patterns (Sgier, 2012). It is “an approach for extraction of meanings and concepts from data and includes pinpointing, examining, and recording patterns or themes. […] [Thematic analysis] is a method for detection, analysis and reporting the themes in data (Javadi and Zarea, 2016:34). The data was analysed through the lenses of the social, economic and environmental planetary boundaries.

1. The UK EPC provides a property with an energy efficiency rating from A (most efficient) to G (least efficient) with a validity of 10 years. [↑](#footnote-ref-1)
2. To read more about MCM please visit: <http://www.sussex.ac.uk/mcm/about> [↑](#footnote-ref-2)
3. Scoring the options indicates the performance of options by rating them under each individual criterion according to people’s personal scale. The weighting of criteria indicates “the process of assigning importance weights to the different criteria […] It involves thinking about subjective values rather than technical judgements” (Coburn et al., 2019:45). [↑](#footnote-ref-3)