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Understanding the interactions that children and young people have with their natural and built environments

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Understanding the intersections that children and young people have with their natural and built environments

SUPPORTING INFORMATION: FILE 3

Annex 1: The base case model was specified as:

$$U_i = \beta_0 + \beta_1 (\text{landscape_residential}) + \beta_2 (\text{landscape_rural}) + \beta_3 (\text{travel_active}) + \beta_4 (\text{travel_motorised}) + \beta_5 (\text{time}) + \varepsilon$$

Where:

U_i = utility derived by individual

β_0 = constant term

β_i = estimated coefficient for each attribute (variable)

ε = error term

Marginal rates of substitution of journey time for landscape and travel type were calculated as:

$$MR_{Stime} = - \beta_i / \beta_{time}$$

The expected 'utility' of four alternative journey options was calculated by weighting and summing the coefficients (β) from the respective regression models:

$$Utility = \sum(\beta_i * J_i)$$

Where J_i is the journal parameter of the associated coefficient, and the expected probability of uptake is derived as:

$$P = \exp(\text{utility } J_i) / \sum \exp(J_j)$$