Online Appendix to:
Random Forests for Contingent Valuation

December 15, 2024

Abstract

The material contained herein is supplementary to the article named in the title.

Examples for nonparametric estimators

Table A1 and Figure A1 illustrate the lower and upper bound Turnbull estimator, using stylized bid values, and assuming the cut-off bid (P_{B+1}) in the main text is known. Table A2 and Figure A2, in turn, give an example of the Kriström estimator, using the same underlying data. As dictated by the underlying algebraic manipulations, the WTP estimate for the Kriström case is wedged between the lower and Upper Turnbull results.

Bootstrap procedure for standard errors

The following outlines the different steps of our bootstrap procedure to obtain standard errors for WTP estimates:

1. For an original sample of n individuals, draw n observations, with replacement and equal probabilities.

2. For the drawn sample, estimate the Logit model, and train an RF.

3. Use the estimated Logit coefficients to derive WTP estimates for each observation. Do the same for the forest-based approach, using the predicted YES probabilities produced by the RF in combination with the nonparametric estimators as discussed in the paper.

4. Repeat steps (1)-(3) J times to obtain J estimates of WTP for each original individual

5. Derive the standard error of WTP using the empirical standard deviation, and the lower and upper 95% confidence bounds using the corresponding tail percentiles of the bootstrapped distribution.

Simulation results for scenario M3

Figure A3 is the analog to Figures 1 and 2 in the main text, while Figure A4 is the analog to Figures 4 and 5. As observed for scenario M2, the Logit fails to accurately predict either choice probabilities or expected WTP for the piecewise-nonlinear scenario M3. The nonparametric estimators, in turn, are robust to this deviation from linearity. As shown in Figure A3, the RF closely traces the correct choice probabilities over the entire [0,1] range, with very few exceptions. Figure A4, in turn, essentially reproduces the patterns observed in Figure 4 of the main text, with the Logit entirely missing the true shape of the WTP distribution, and the nonparametric estimators correctly capturing its bimodal shape. As for M2, the range of the Tb.low distribution is shifted to the left, and that of the Tb.up to the right, while the K estimator captures both shape and range of the true pattern.

RUM and RF setup for empirical application

The Logit model for our empirical application is again based on an underlying RUM framework. Let $\mathbf{x}_{h,i}$ denote a vector of household characteristics and responses to attitudinal questions. Let $\mathbf{x}_{d,i}$ be a vector that captures the specific development features (nearby vs. far, small vs. large, affecting a local population with low, average, or high wealth). Let the corresponding coefficient vectors be denoted as $\boldsymbol{\beta}_h^*$ and $\boldsymbol{\beta}_d^*$, respectively. Status Quo and policy IUFs can then be expressed as:

$$
\begin{aligned}
\tilde{U}_{0i}^* &= \mathbf{x}_{h,i}'\boldsymbol{\beta}_h^* + \mathbf{x}_{d,i}'\boldsymbol{\beta}_d^* + \gamma m_i + \tilde{\epsilon}_{0i}^*, \\
\tilde{U}_{1i}^* &= \delta^* \left(1 + \mathbf{x}_{h,i}'\boldsymbol{\beta}_h^* + \mathbf{x}_{d,i}'\boldsymbol{\beta}_d^*\right) + \gamma \left(m_i - P_i\right) + \tilde{\epsilon}_{1i}^* \\
\tilde{\epsilon}_{ji} &\sim EV\left(0, 1\right), \quad j = 1, 2
\end{aligned}
\tag{1}
$$

where δ^* captures the improved natural enhancement via an Alternative-Specific Constant (ASC) for the policy scenario. To preserve development features and household variables after differencing, these need to be interacted with the ASC, as shown in the second line of (1). All other elements and notation are as in the main text. Differencing utilities then yields:

$$
\begin{aligned}
U_i^* = \tilde{U}_{1i}^* - \tilde{U}_{0i}^* &= \delta^* + \delta^* \left(\mathbf{x}_{h,i}'\boldsymbol{\beta}_h^* + \mathbf{x}_{d,i}'\boldsymbol{\beta}_d^*\right) - \left(\mathbf{x}_{h,i}'\boldsymbol{\beta}_h^* + \mathbf{x}_{d,i}'\boldsymbol{\beta}_d^*\right) - \gamma P_i + \epsilon_i^* = \\
&\delta^* + \mathbf{x}_{h,i}'\left(\left(\delta^* - 1\right)\boldsymbol{\beta}_h^*\right) + \mathbf{x}_{d,i}'\left(\left(\delta^* - 1\right)\boldsymbol{\beta}_d^*\right) - \gamma P_i + \epsilon_i^* \quad \text{where} \\
\epsilon_i^* &= \tilde{\epsilon}_{si}^* - \tilde{\epsilon}_{0i}^* \sim LOG\left(0, 1\right),
\end{aligned}
\tag{2}
$$

Switching to a surplus representation then produces

$$
\begin{aligned}
U_i = \frac{U_i^*}{\gamma} &= \delta + \mathbf{x}_{i,h}'\boldsymbol{\beta}_h + \mathbf{x}_{i,d}'\boldsymbol{\beta}_d - P_i + \epsilon_i \quad \text{where} \\
\delta &= \frac{\delta^*}{\gamma}, \quad \boldsymbol{\beta}_j = \frac{\left(\delta^* - 1\right)\boldsymbol{\beta}_j^*}{\gamma}, \quad j = h, d \quad \text{and} \\
\epsilon_i &= \frac{\epsilon_i^*}{\gamma} \sim LOG\left(0, \gamma^{-1}\right),
\end{aligned}
\tag{3}
$$

with the WTP portion given by

$$
w_i = \delta + \mathbf{x}_{i,h}'\boldsymbol{\beta}_h + \mathbf{x}_{i,d}'\boldsymbol{\beta}_d + \epsilon_i
\tag{4}
$$

This shows that household characteristics and - especially - development features are allowed to affect WTP via interaction with the policy ASC. Specifically, assuming as usual that the marginal utility of income $\gamma > 0$ a given covariate k will have a positive effect on WTP if $\delta^* > 1$ and $\beta_k > 0$, or $\delta^* < 1$ and $\beta_k < 0$, and a negative effect otherwise, under these structural specifications.

In contrast, as described in the main text, the RF treats all observed covariates as inputs into an unspecified nonparametric function that maps these features into the observed binary choice y_i:

$$y_i = g\left(\mathbf{x}_{h,i}, \mathbf{x}_{d,i}\right) + \epsilon_i, \quad \text{with}$$
$$E\left(\epsilon_i | \mathbf{x}_{h,i}, \mathbf{x}_{d,i}\right) = 0 \tag{5}$$

Sample CV question for empirical application

Figure A5 shows a sample CV question. This question was given to the split sample for who the new development was described as within 2 miles of their residence, including 100 new homes, and affecting a neighborhood of average wealth. The policy scenario, shown in the second schematic in the figure, describes the open land that would be enhanced to offset land lost due to the development. Its distance from the respondent and affected neighborhood wealth are copied from the corresponding split-sample specific development features. In contrast, all survey takers were given an identical biodiversity scenario of "moderate nature encancement," and thus saw the same last two images in the net gain schematic.

Variable definitions for empirical application

See Tables A3 and A4. Detailed variable descriptions are given in Faccioli et al. (2024).

YES and NO responses over bid levels

See Table A5.

WTP results for Kriström estimator with ad-hoc cut-off bids

See Figure A6.

Sensitivity analysis for monotonicity violations

See Table A6 and Figure A7

Variable Importance scores

See Figure A8

References for Online Appendix

Faccioli, M., Tingley, D., Mancini, M., Bateman, I., 2024. Who should benefit from environmental policies? Social preferences and nonmarket values for the distribution of environmental improvements. American Journal of Agricultural Economics , 1–27.
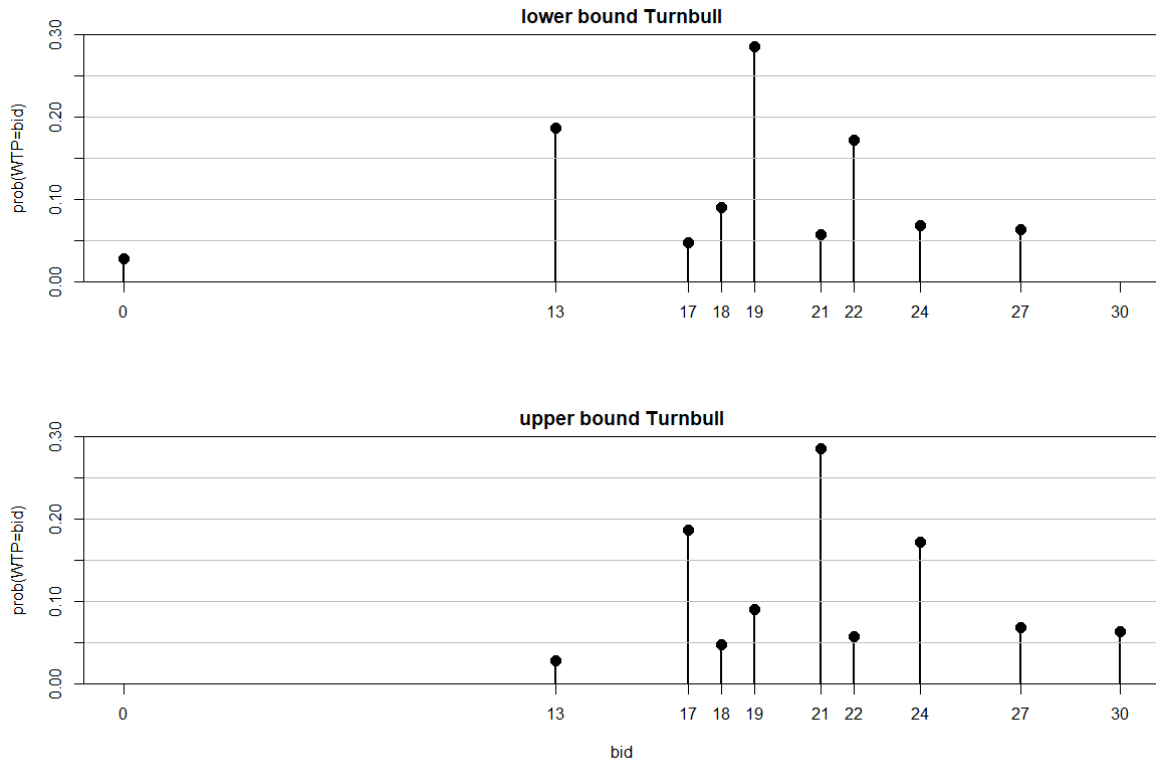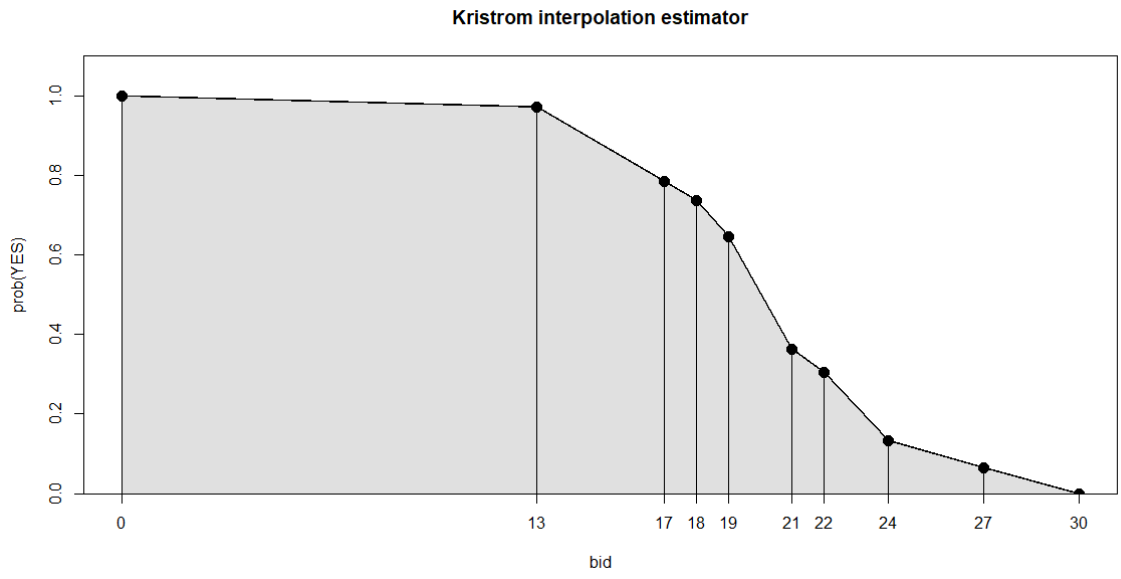
Figure A1: Stylized example for Turnbull estimators

Figure A2: Stylized example for Kriström estimator

true vs. predicted prob(YES), Logit
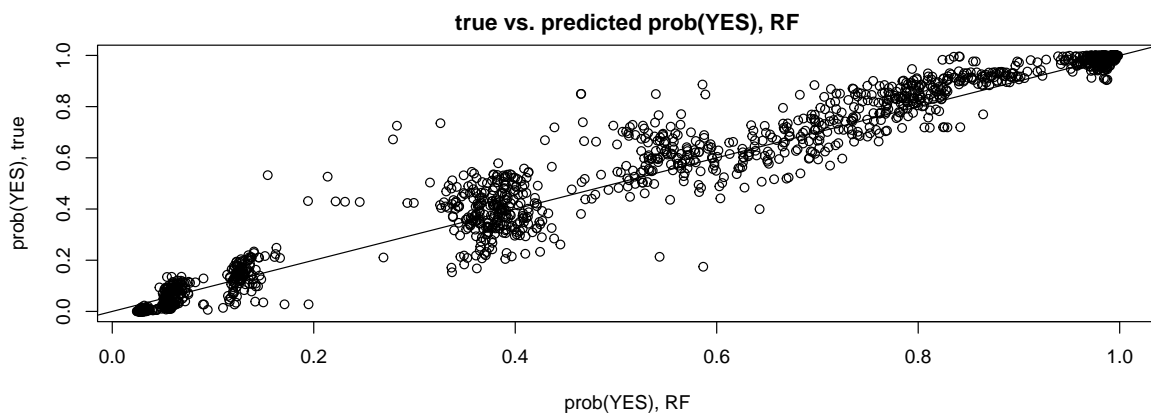

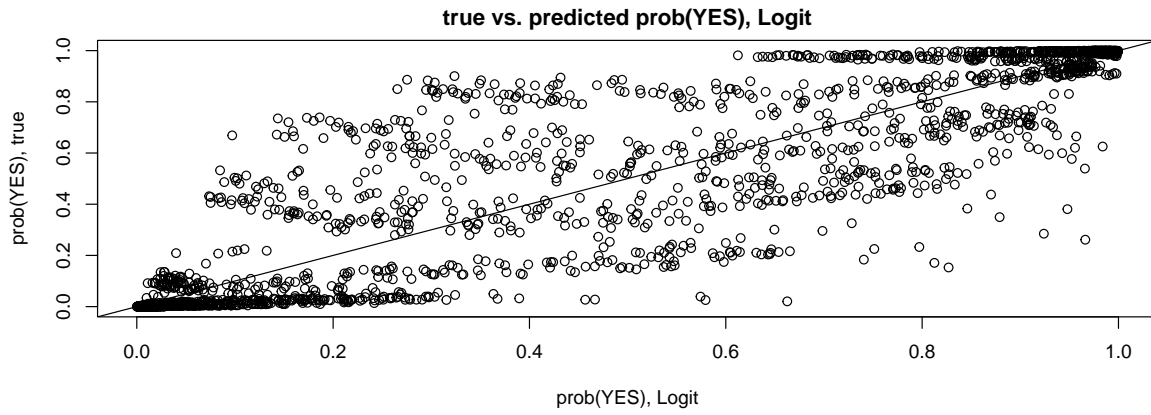**true vs. predicted prob(YES), RF**

Figure A3: true vs. predicted prob(YES), piecewise-nonlinear model (M3)
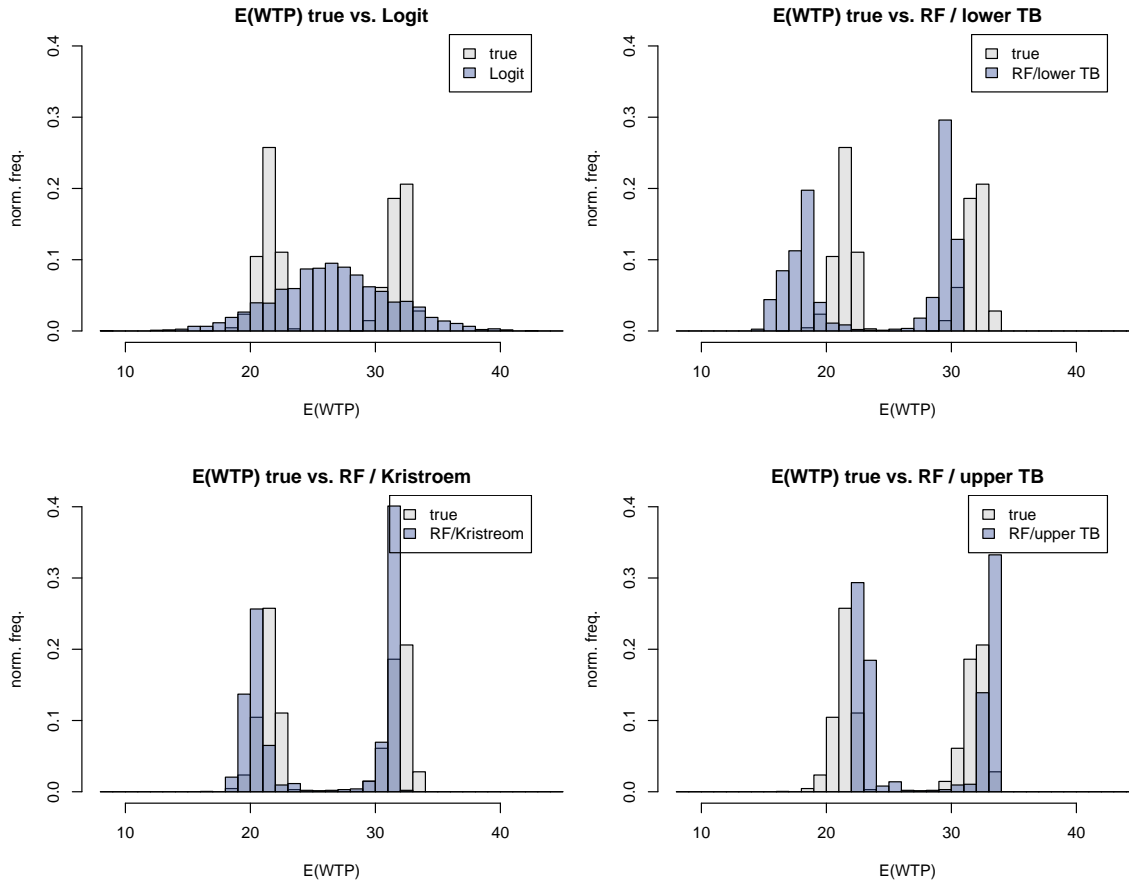
Figure A4: true vs. predicted WTP, piecewise-nonlinear model (M3)

We are now interested in finding out about your willingness to pay for Net Gain projects to improve the natural environment and wildlife.

As earlier in the survey, imagine that this year, planners need to build **about 100 new typical 3-bedroom houses in your area (e.g. 2 miles from where you live)** to meet local demand.

This is what the area would look like BEFORE and AFTER the development:

Please imagine that, in addition to the new housing development, a **Moderate Nature Enhancement** Net Gain project (as shown below) is delivered on a field with the same footprint (i.e. same sized area) as the development site. This Net Gain project aims to replace the nature lost due to the building works and to enhance nature further. We will now ask you a series of questions to find out how much you would be willing to pay for this **Moderate Nature Enhancement** project.

[Q16a]. **Would your household be willing to pay £__32___extra taxes per year (from now over the next 5 years) for this Net Gain project to be implemented (and maintained for 30 years)?**

☐ Yes
☐ No

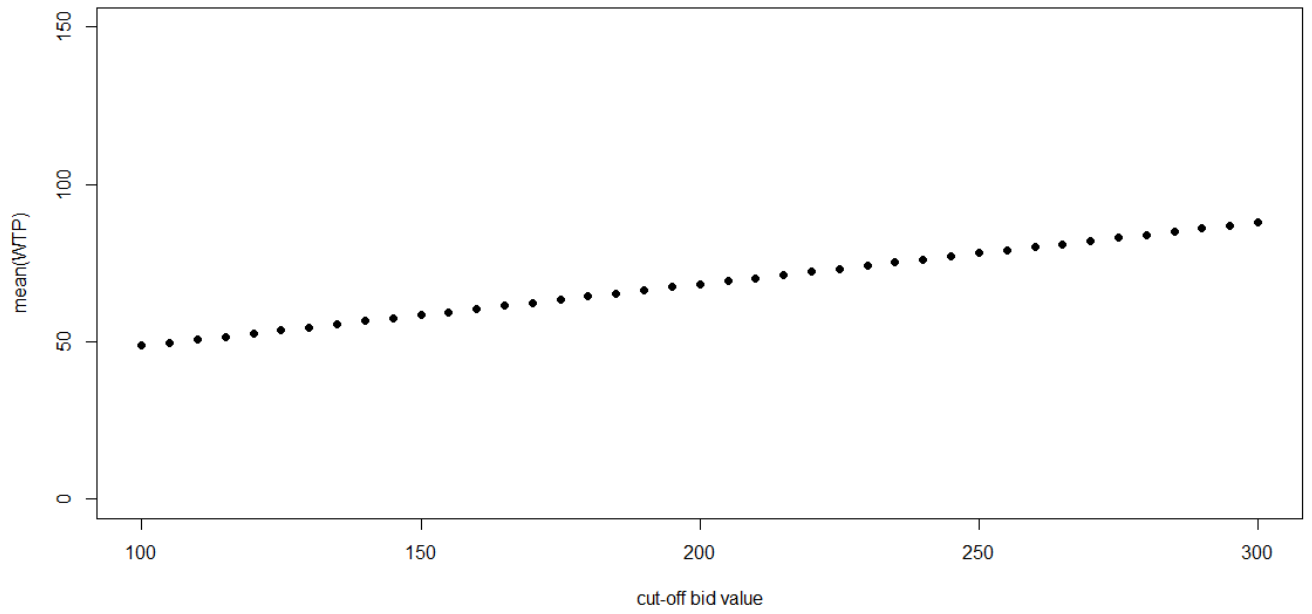Figure A5: Sample CV question for empirical application

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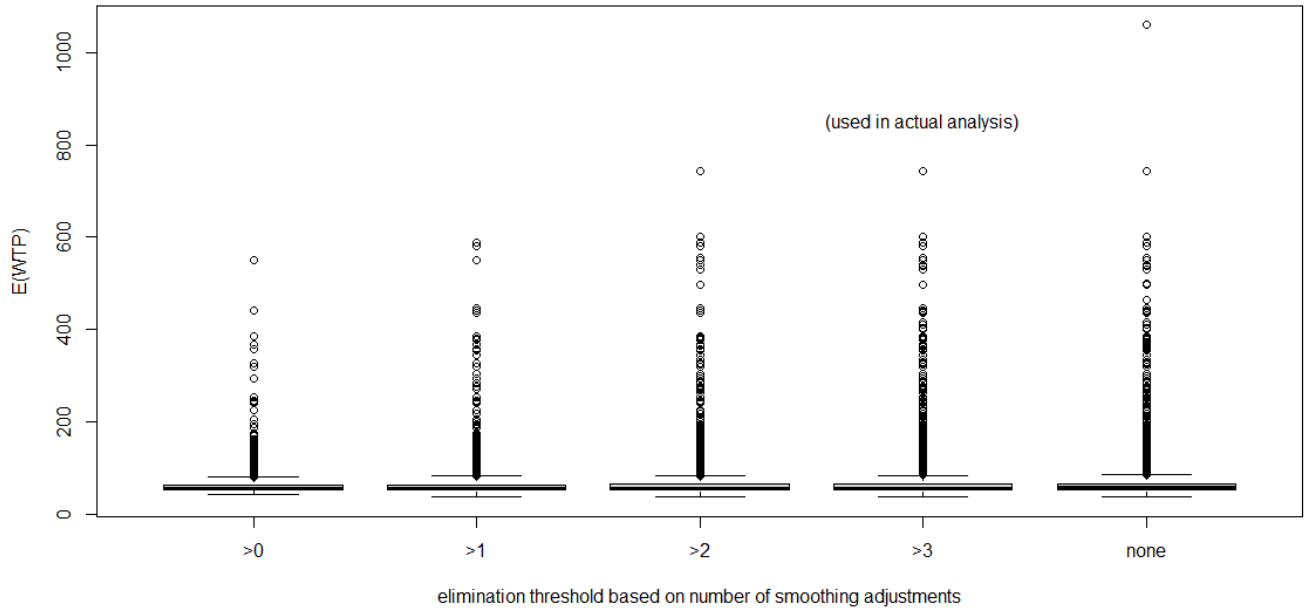Figure A6: Sample mean WTP estimates for Kriström with arbitrary cutoff bids, S1

Figure A7: Box plots of indiv. WTP estimates by elimination thresholds, S1

Example: > 1 implies observations were dropped if > 1 prob(YES) / bid pairs had to be eliminated for a given individual due to monotonicity violations. "None" indicates that no observations were eliminated, regardless of the number of smoothing interventions.

Variable importance, S1

bid	
occ_plan	
env_memb	
occ_build	
att3_agree	
own_wealth4	
children	
tax_exempt	
own_wealth2	
att7_agree	

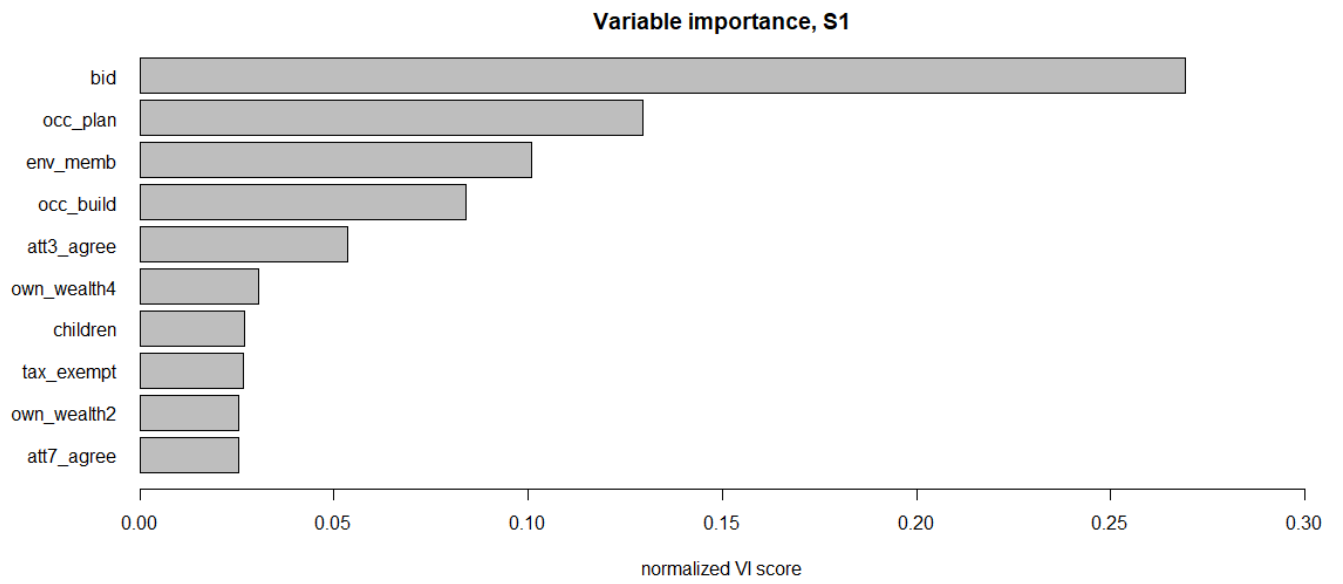0.00   0.05   0.10   0.15   0.20   0.25   0.30

normalized VI score

Figure A8: Variable Importance scores, S1

See Tables A3 and A4 for full variable labels

Table A1: Stylized example for Turnbull estimators

b	P(b)	p(b)	p(b+1)-p(b)		P(b)*[p(b+1)-p(b)]	
			Tb.low	Tb.up	Tb.low	Tb.up
0	0	0.000	0.028	-	0.000	-
1	13	0.028	0.187	0.028	2.427	0.364
2	17	0.215	0.048	0.187	0.821	3.174
3	18	0.263	0.090	0.048	1.628	0.869
4	19	0.353	0.285	0.090	5.409	1.719
5	21	0.638	0.057	0.285	1.206	5.978
6	22	0.696	0.172	0.057	3.780	1.264
7	24	0.867	0.069	0.172	1.654	4.123
B	27	0.936	0.064	0.069	1.721	1.861
B+1	30	1.000	-	0.064	-	1.913
wtp					18.646	21.264

b = counter for bid level (B = highest offered)
B+1 = counter for hypothetical / imposed cut-off bid level
P(b) = bid amount ($)
p(b) = prob(NO) to P(b)
Tb.low (Tb.up) = lower (upper) Turnbull
wtp = willingness-to-pay

Table A2: Stylized example for Kriström estimator

b	P(b)	y(b)	A P(b+1)-P(b)	B y(b+1)+ 0.5[y(b)-y(b+1)]	A*B
0	0	1.000	13	0.986	12.818
1	13	0.972	4	0.879	3.515
2	17	0.785	1	0.761	0.761
3	18	0.737	1	0.692	0.692
4	19	0.647	2	0.504	1.009
5	21	0.362	1	0.333	0.333
6	22	0.304	2	0.219	0.437
7	24	0.133	3	0.098	0.295
B	27	0.064	3	0.032	0.096
B+1	30	0.000	-	-	-
wtp					19.955

b = counter for bid level (B = highest offered)
B+1 = counter for hypothetical / imposed cut-off bid level
P(b) = bid amount ($)
y(b) = prob(YES) to P(b
Tb.low (Tb.up) = lower (upper) Turnbull
wtp = willingness-to-pay

Table A3: Variable definitions (cont.'d in next table)

index	variable	label
1	constant	constant term (logit model)
2	female	1=female
3	age1	18 to 29
4	age2	30 to 44
5	age3	45 to 64
6	reg_NW	region = North West
7	reg_NE	region = North East
8	reg_YH	region = Yorkshire - Humber
9	reg_WM	region = West Midlands
10	reg_EM	region = East Midlands
11	reg_EE	region = East of England
12	reg_GL	region = London & Greater London
13	reg_SE	region = South East
14	occ_sen	senior managerial or professional
15	occ_int	interm. managerial, admin. or prof.
16	occ_jun	junior manag., admin, or prof, supervisor, clerical
17	occ_man1	manual worker with industry qualification
18	occ_man2	manual worker, no ind. qual.
19	occ_unem	unemployed
20	occ_stud	student in higher ed.
21	risk1_top3	1=risk1 is top3 ("worried will take a while for nature to deliver benefits")
22	risk2_top3	1=risk2 is top3 ("env. improvements will not be delivered")
23	risk3_top3	1=risk3 is top3 ("Net Gain pledges will be poorly enforced")
24	risk4_top3	1=risk4 is top3: "Net Gain pledges will be poorly monitored")
25	risk5_top3	1=risk5 is top3 ("Actors involved will have insufficient expertise")
26	risk6_top3	1=risk6 is top3 ("Net Gain will not work for other reasons")
27	att1_agree	agree or strongly agree to: "building new houses = necessary"
28	att2_agree	agree or strongly agree to: "new houses should not be built on undeveloped land"
29	att3_agree	agree or strongly agree to: "support higher buidlings, smaller houses to protect env."
30	att4_agree	agree or strongly agree to: "new housing dev. = good for economy"
31	att5_agree	agree or strongly agree to: "reconversion, refurbishment before building new"
32	att6_agree	agree or strongly agree to: "people sufficiently consulted on new developments"
33	att7_agree	agree or strongly agree to: planning system is working effectively to min. damage to env."
34	att8_agree	agree or strongly agree to: "planning system not too complex, trust decisions"
35	att9_agree	agree or strongly agree to: " adding new houses will not change area in neg. way"
36	att10_agree	agree or strongly agree to: "building new houses = too noisy & disruptive"

Table A4: Variable definitions, cont.'d

index	variable	label
37	env_memb	1=membership with an env. organization
38	eng_nat1	very frequently, $>= 1$/week
39	eng_nat2	frequently, $>= 1$/month
40	eng_nat3	occasionally, $>= 1/3$ months
41	eng_nat4	rarely, $>= 1$/year
42	hhsize	HH size, 5= 5 or more
43	children	1= kids under 17 in HH
44	grandkids	1=have grandkids
45	ownhome	1= owns home
46	prop_flat	1=property = flat or apt.
47	prop_det	1=property = detached house or bungalow
48	prop_semi	1=property = semi-detached house or bung.
49	prop_terr	1=property = terraced house or bung.
50	bedrooms	num. bedrooms, 5= >4
51	edu_HS	high school or secondary
52	edu_coll	college or sixth form
53	edu_voc	vocational or professional
54	edu_ugrad	undergraduate degree
55	edu_grad	post-graduate or doctoral degree
56	occ_build	1=occupation related to dev sector
57	occ_plan	1=occupation related to planning sector
58	own_wealth1	1=low HH wealth
59	own_wealth2	1=low/avg HH wealth
60	own_wealth3	1=avg HH wealth
61	own_wealth4	1=avg/high HH wealth
62	tax_exempt	1=HH is tax exempt
63	urb_rural1	city
64	urb_rural2	medium/large town
65	urb_rural3	small town
66	urb_rural4	village
67	dist	1=development 2 miles from respondent, 0=50 miles
68	average	1=affected pop. = avg. wealth
69	high	1=affected pop. = high wealth
70	dev_size	1=development = 100 homes, 0=2000 homes

Table A5: CV responses by bid level

bid	NO	YES	Total	% YES
2	68	336	404	83.17%
4	81	347	428	81.07%
8	121	273	394	69.29%
16	128	258	386	66.84%
32	195	196	391	50.13%
48	212	163	375	43.47%
64	241	156	397	39.29%
96	290	138	428	32.24%
Total	1,336	1,867	3,203	58.29%

Table A6: Sensitivity analysis, smoothing cases

estimator	mean	std	min	max	range
drop no observations (n=3203)					
Turnbull.low	44.223	7.769	7.184	87.688	80.504
Kristrom, trunc.	48.045	6.905	35.688	87.834	52.145
Kristrom, adj.	70.979	55.518	37.450	1059.029	1021.579
drop if > 3 smoothing adjustments (n=3156)*					
Turnbull.low	44.570	7.059	25.277	84.158	58.880
Kristrom, trunc.	47.955	6.857	35.688	84.435	48.747
Kristrom, adj.	69.407	50.324	37.450	744.082	706.632
drop if > 2 smoothing adjustments (n=3131)					
Turnbull.low	44.618	7.010	27.971	84.158	56.186
Kristrom, trunc	47.847	6.756	35.688	84.435	48.747
Kristrom, adj.	67.660	45.091	37.450	744.082	706.632
drop if > 1 smoothing adjustments (n=3089)					
Turnbull.low	44.539	6.777	27.971	84.158	56.186
Kristrom, trunc	47.599	6.386	35.688	84.435	48.747
Kristrom, adj.	64.791	33.494	37.450	589.204	551.754
drop if > 0 smoothing adjustments (n=2753)					
Turnbull.low	44.233	6.116	33.090	83.677	50.587
Kristrom, trunc.	47.313	5.785	35.688	83.967	48.278
Kristrom, adj.	62.687	24.997	42.981	550.564	507.583

* = actual smoothing criterion implemented in the main text
std = standard deviation
min (max) = minimum (maximum)
range = (max - min)

SURVEY SCRIPT EMPLOYED TO COLLECT THE DATA USED IN THE MANUSCRIPT:

"Random Forest for Contingent Valuation"

Michela Faccioli and Klaus Moeltner

Note:

This document contains the main sections of the survey instrument used to collect the data for this manuscript. Further questions and data were collected but, since not used for this paper, they are not reported here.

This version is the latest survey version produced prior to the online programming of the questionnaire. It therefore does not represent the very final version that was displayed to respondents, but it matches it very closely.

This document includes some text and questions that were common to all split sample versions and some text and questions that varied across split sample treatments. To help the reader, we hereby include a summary table which indicates the naming convention used to identify the different split samples in this document and the main differences across the treatments.

Split sample (treatment) identifier	Distance (from the respondent) of the development (and of the population losing the greenspace)	Type of population harmed by the loss of greenspace	Size of the development
Split sample 1	Near (2 miles from the respondent)	Low wealth	100 houses
Split sample 2		Average wealth	100 houses
Split sample 3		High wealth	100 houses
Split sample 7		Average wealth	2000 houses
Split sample 4	Far away (50 miles from the respondent)	Low wealth	100 houses
Split sample 5		Average wealth	100 houses
Split sample 6		High wealth	100 houses
Split sample 8		Average wealth	2000 houses

This survey script also contains some instructions – some of them [in blue text] were shared with the market research company for programming purposes and some others [in purple text] are useful for the reader of this document.

Thank you for agreeing to answer this survey which will ask about your views regarding housing development and the design of new land use policies. There are no right or wrong responses. Please answer as honestly and accurately as you can, based on what you think.

This survey has been designed by the University of Exeter for **public research purposes** and **the findings will not be used for any private or commercial reasons. Your answers will be kept confidential and anonymous.** The responses from all participants will be used to advise local and central government on the design of future planning and environmental strategies in England.

Completing the survey takes about 20 minutes. **If you decide to answer this survey, we understand that we have your consent to anonymously and confidentially record and use your responses for research purposes.** You can stop and return to the questionnaire as many times as you wish, although once submitted you will not be able to enter again. You can withdraw from this survey at any time, without having to provide a reason for doing so.

Many thanks,

The Research Team

UNIVERSITY OF
EXETER

To begin with, we will ask you a couple of questions about yourself to make sure that we interview a range of different people and to check that you are eligible to take part in this research. These questions are not linked to any record which can identify you.

Q1. **Are you...**

☐ Male   ☐ Female   ☐ Neither male nor female. Prefer to self-describe: _____

[CHECK QUOTAS]

Q2. Please tell us your age

	years

Q3. **Which region of England do you live in?**

☐	North West
☐	North East
☐	Yorkshire and the Humber
☐	West Midlands
☐	East Midlands
☐	East of England
☐	London and Greater London
☐	South East
☐	South West

[CHECK QUOTAS]

Q4. How would you describe the type of occupation of the chief income earner in your household?

- [ ] **Senior** managerial or professional [AB]
- [ ] **Intermediate** managerial, administrative or professional [AB]
- [ ] **Junior** managerial, administrative or professional; supervisor, clerical [C1/C2]
- [ ] Manual worker (with industry qualifications) [C1/C2]
- [ ] Manual worker (with no qualifications) [DE]
- [ ] Unemployed [DE]
- [ ] Retired
- [ ] Student in higher education [C1/C2]
- [ ] Do not wish to say   [THANK & CLOSE]

Q5. [IF Q4=RETIRED, ASK else SKIP] **Does the chief income earner have a state pension, a private pension or both?**

☐	State only [DE]
☐	Private only
☐	Both

Q6. [IF Q5=PRIVATE OR BOTH, ASK else SKIP] **How would you describe the chief income earner's type of occupation before retirement?**

- [ ] **Senior** managerial or professional [AB]
- [ ] **Intermediate** managerial, administrative or professional [AB]
- [ ] **Junior** managerial, administrative or professional; supervisor, clerical [C1/C2]
- [ ] Manual worker (with industry qualifications) [C1/C2]
- [ ] Manual worker (with no qualifications) [DE]
- [ ] None of these [DE]

[CHECK QUOTAS]

Thank you. I can confirm you are in scope for the study. You will now be presented with some information about housing development plans in England and, in this context, you will be asked about your views concerning policies to preserve and enhance the environment and what it does for people.

Housing development and environmental impacts

Due to housing shortages and an increasing population, **300,000 new homes will need to be built in England each year**.

Despite efforts being made to avoid using new land, space constraints mean that **about half of the new homes will need to be built on sites that have not been developed yet, mostly farmland, at the edges of existing residential areas**.

This is an example of typical farmland that could be built upon:

And here are some of the common wildlife species that can be found on it:

New housing development on farmland will lead to a **loss of natural environment and the wildlife species** that live in these fields.

Options for replacing lost nature and improving it further

The government is introducing new legislation which will require a **'sustainable' approach to the house building sector.** The objective is to address the environmental impacts of new housing developments going forwards, while helping to reverse the decline in nature experienced in the past.

Under the new law, developers will have to **minimise damage to the natural environment** expected from building works, **restore any nature lost** due to the development, as well as **deliver an <u>overall increase</u> in natural environment and wildlife species** (an extra 10% as the Minimum Legal Requirement).

The new approach is called **'Net Gain'** and its goal **is to leave nature in a better overall state than it was in before the development**.

'Net Gain' could be delivered by planting <u>extra</u> trees, creating new hedgerows, seeding new wildflower meadows, etc.

| Planting trees | Creating hedgerows | Seeding wildflower meadows |

Beyond the Minimum Legal Requirement for Net Gain

The Government and experts however advise that, where possible, Net Gain projects should be designed to achieve more than the Minimum Legal Requirement to help nature thrive and to provide additional benefits for people.
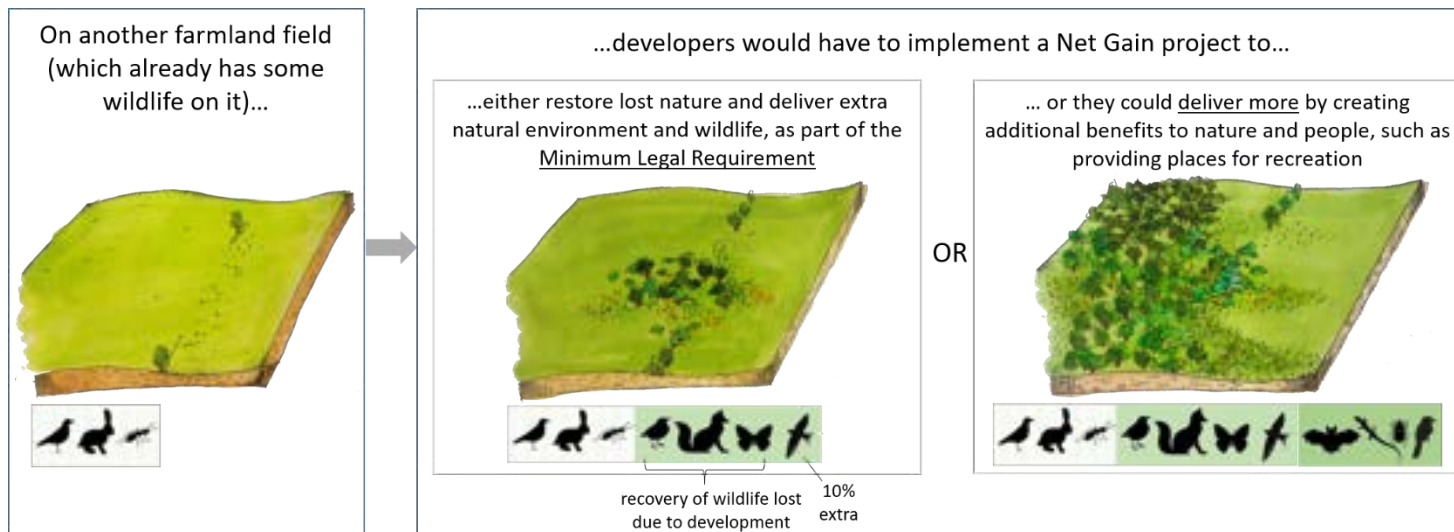
In summary, for each **development project** taking place on a farmland field, a **Net Gain project** would be implemented on another field and this is how it could work:

DEVELOPMENT PROJECT:

A farmland field…

… is built upon by developers to create new houses …

… leading to a loss of nature & wildlife
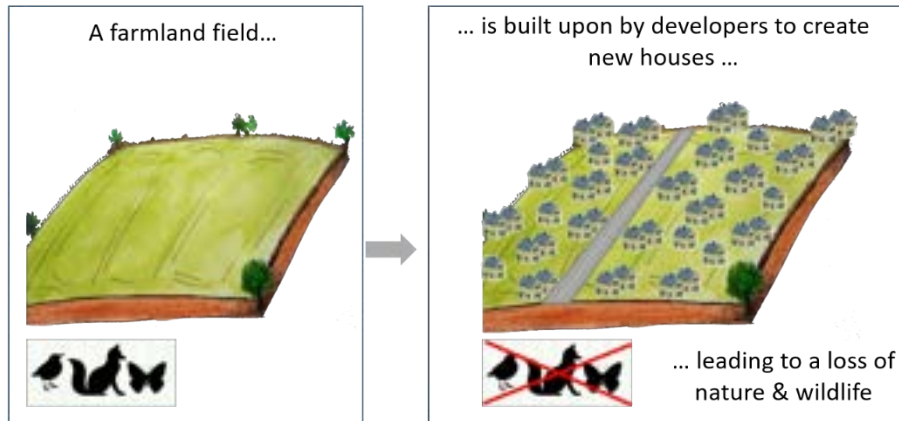
NET GAIN PROJECT:

Net Gain ensures that any lost nature due to development is not only restored, but also enhanced

On another farmland field (which already has some wildlife on it)…

…developers would have to implement a Net Gain project to…

…either restore lost nature and deliver extra natural environment and wildlife, as part of the Minimum Legal Requirement

… or they could deliver more by creating additional benefits to nature and people, such as providing places for recreation

OR

recovery of wildlife lost due to development

10% extra

Options to design Net Gain projects

Net Gain projects can be designed in various ways, which require the consideration of different issues. We are now going to set out some of these issues.

NATURAL ENVIRONMENT AND WILDLIFE

The new legislation will require developers to replace lost nature and deliver an extra 10% of wildlife, as part of the Minimum Legal Requirement for Net Gain.

And, with more effort, an even greater improvement could be achieved.

Minimum Legal Requirement for Net Gain	
Moderate Enhancement of natural environment and wildlife	

High Enhancement of natural environment and wildlife	

PUBLIC ACCESS.

The new legislation on Net Gain only focuses on nature enhancement. However, if public access was additionally allowed to Net Gain sites, people would have more opportunities to enjoy spending time in nature.

No public access allowed

Public access allowed

LOCATION [SPLIT SAMPLES 'NEAR' – split sample 1,2,3,7]

The new legislation recommends that Net Gain projects are created as close as possible to the development site, but they could also be delivered in different locations closer or further away from you .
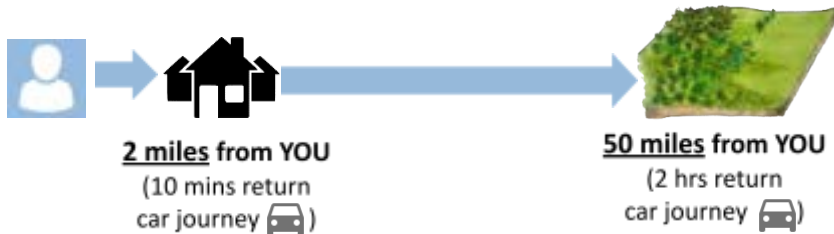
For example, the development site could be:

2 miles from YOU
(10 mins return
car journey 🚗)

And the Net Gain site could be:

2 miles from YOU
i.e. next to development site
(10 mins return
car journey 🚗)

OR

2 miles from YOU
(10 mins return
car journey 🚗)

50 miles from YOU
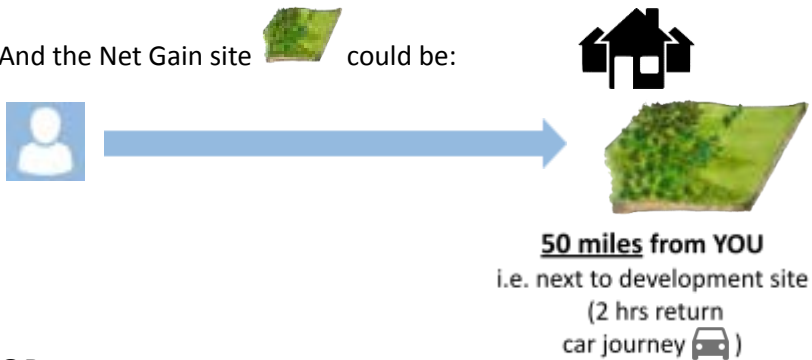(2 hrs return
car journey 🚗)

LOCATION [SPLIT SAMPLES 'FAR' – split sample 4,5,6,8]

The new legislation recommends that Net Gain projects are created as close as possible to the development site, but they could also be delivered in different locations closer or further away from you.

For example, the development site could be:

50 miles from YOU
(2 hrs return
car journey)

And the Net Gain site could be:

50 miles from YOU
i.e. next to development site
(2 hrs return
car journey)

OR

10 miles from YOU
(30 mins return
car journey)

50 miles from YOU
(2 hrs return
car journey)

PEOPLE AFFECTED

Spending time in nature, and enjoying views of it, has a positive influence on our wellbeing and quality of life.

People living close to the new housing development will lose a local green space (i.e. the farmers field), whilst those living near to a Net Gain project will gain an improved green space. If the Net Gain project is situated near to the new housing development, the same group of people will be affected. However, if the Net Gain project and the new housing development are further apart, different groups of people will be affected.

People may experience changes in local green space differently depending on their wealth. For example, if those living in a 'low wealth neighbourhood' lose a local green space, they may find it more difficult to enjoy or gain access to nature when it is further away, often due to a lack of public transport opportunities or high travel costs. However, if those living in a 'high wealth neighbourhood' lose a local green space, they may suffer less as they are often still able to afford access to nature, even when it is further away. For these reasons, enhancing nature close to lower wealth neighbourhoods could help improving the wellbeing and quality of life of especially the most disadvantaged communities.

Low wealth neighbourhood

Average wealth neighbourhood

High wealth neighbourhood

COSTS

The cost of a single Net Gain project **will differ** depending on what it delivers.

According to the new legislation, **developers will be legally obliged to pay for the cost of providing the Minimum Legal Requirement** of **Net Gain** (I.e. to restore the nature and wildlife lost due to the development and deliver a 10% uplift on top of this).

The delivery of any <u>additional</u> change or improvement beyond the Minimum Legal Requirement would have to be funded by taxpaying households in England via a new tax, starting this year and spread over 5 years. This new tax would cover the initial Net Gain project investments plus ongoing costs needed to maintain the Net Gain site for 30 years. The tax would be collected and managed by a Net Gain Trust consisting of scientists, members of government agencies, farmer and land owner organisations, nature conservation and community representatives.

We are now going to present a housing development project and different options for designing Net Gain projects.

Imagine that this year planners need to build **about 100 new typical 3-bedroom houses in your area (e.g. 2 miles from where you** [icon] **live)** to meet local demand.

Imagine that these houses would be built on land that is currently:

- **a farmland area** [icon] **of about 3 hectares (or 7 acres; equivalent to 4 football pitches)**
- **home to some plants and wildlife**
- **not accessible to the public**
- **located next to an 'average wealth' neighbourhood** ['average', 'low' or 'high wealth', depending on the split sample]

This is what the area would look like BEFORE and AFTER the development: [Adjust neighbourhood wealth information below, depending on split sample]

Housing Development project [SPLIT SAMPLE 7]

Imagine that this year planners need to build **about 2,000 new typical 3-bedroom houses in your area (e.g. 2 miles from where you** **live)** to meet local demand.

Imagine that these houses would be built on land that is currently:

- **a farmland area** **of about 60 hectares (or 140 acres; equivalent to 80 football pitches)**
- **home to some plants and wildlife**
- **not accessible to the public**
- **located next to an 'average wealth' neighbourhood**

This is what the area would look like BEFORE and AFTER the development:

Housing Development project [SPLIT SAMPLE 'FAR' – split sample 4,5,6, with Information to be adjusted depending on split sample. Example provided for split sample 5]

Imagine that this year a new housing development of **about 100 new typical 3-bedroom houses will need to be built 50 miles away from you** to meet local demand.

Imagine that these houses would be built on land that is currently:

- **a farmland area** of about 3 hectares (or 7 acres; equivalent to 4 football pitches)
- **home to some plants and wildlife**
- **not accessible to the public**
- **located next to an 'average wealth' neighbourhood** ['average', 'low' or 'high wealth', depending on the split sample]

This is what the area would look like BEFORE and AFTER the development: [Adjust neighbourhood wealth information below, depending on split sample]

Housing Development project [SPLIT SAMPLE 8]

Imagine that this year a new housing development of **about 2,000 new typical 3-bedroom houses will need to be built 50 miles away from you** to meet local demand.

Imagine that these houses would be built on land that is currently:

- **a farmland area** **of about 60 hectares (or 140 acres; equivalent to 80 football pitches)**
- **home to some plants and wildlife**
- **not accessible to the public**
- **located next to an 'average wealth' neighbourhood**

This is what the area would look like BEFORE and AFTER the development:

LOCATION	NEIGHBOURHOOD WEALTH	BEFORE DEVELOPMENT	AFTER DEVELOPMENT

50 miles from YOU
(2 hrs return car journey)

Next to average wealth neighbourhood

2,000 new 3-bedroom houses

In the next pages, we are going to show you a series of different **Net Gain projects.** Each project is designed to make up for the nature lost due to the housing development just described and also deliver an overall increase in natural environment and wildlife species, while potentially providing further benefits for people.

Each Net Gain project will be described in terms of:

(*) should you struggle with distances, you can always click on the help button 🌀. A map-based internet platform will open. Underneath the map, this is what you will see:

First, please type in your postcode. Then, in the field 'Radius', type in the distance to plot (in miles). Next, click 'Plot' to draw a circle (centred on your postcode) to see the specified distance from you on the map.

In the next pages, we are going to show you a series of different **Net Gain projects.** Each project is designed to make up for the nature lost due to the housing development just described and also deliver an overall increase in natural environment and wildlife species, while potentially providing further benefits for people.

Each Net Gain project will be described in terms of:

(*) should you struggle with distances, you can always click on the help button [?] . A map-based internet platform will open. Underneath the map, this is what you will see:
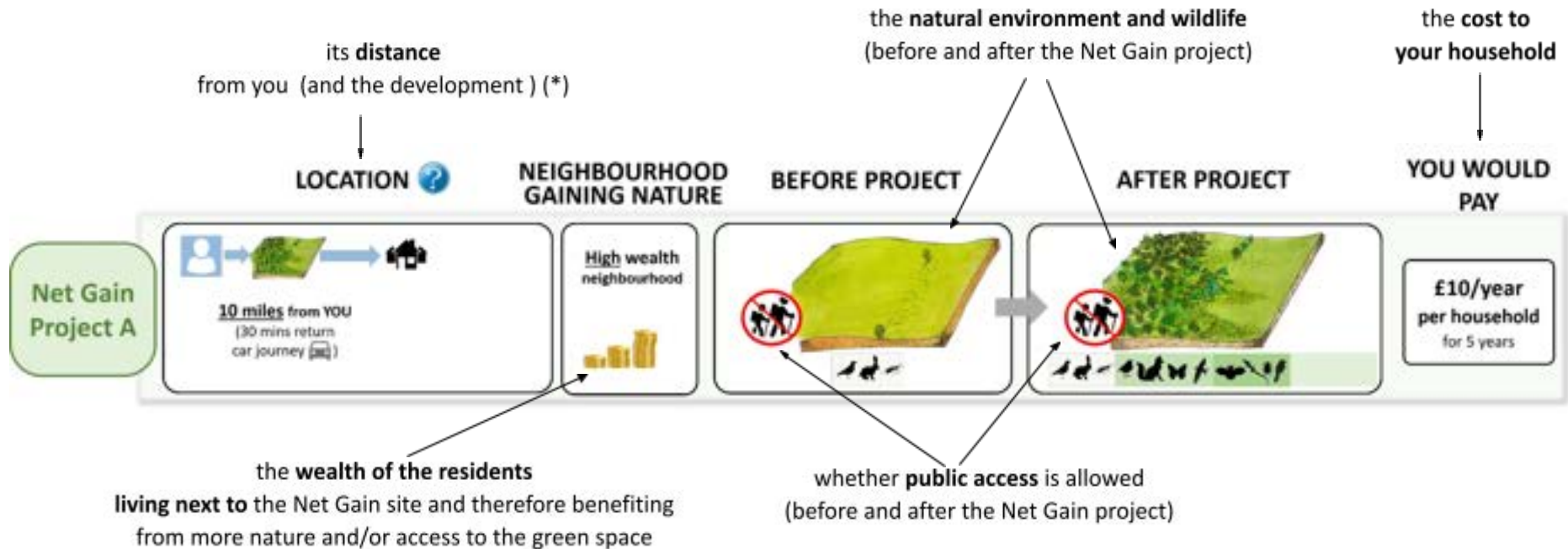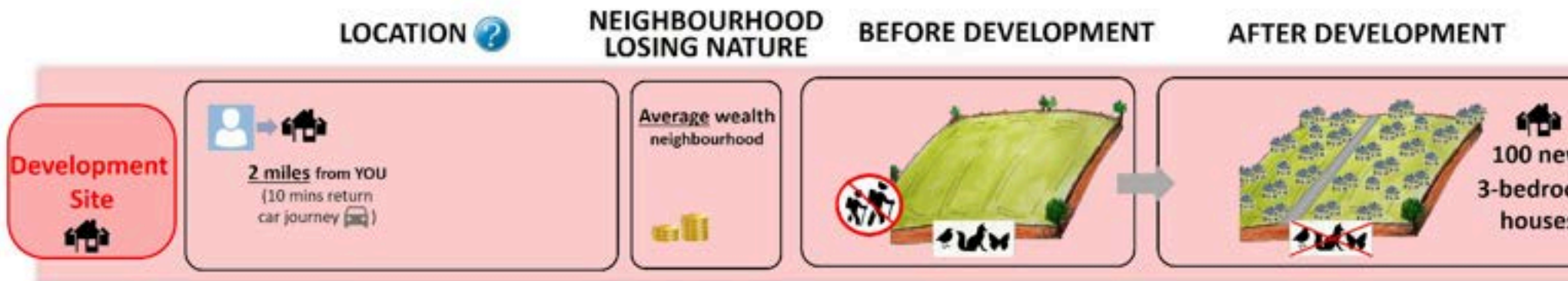
First, please type in your postcode. Then, in the field 'Radius', type in the distance to plot (in miles). Next, click 'Plot' to draw a circle (centred on your postcode) to see the specified distance from you on the map.

This is an example of what you will see on each page:

In the top row, highlighted in red, you will see a reminder of the description of the **development site**, before and after the house building proj

Underneath, in green, you will see information about **the Net Gain projects that could be implemented.** The first two Net Gain projects (A ar Gain project **(C) will always stay the same and it describes the Minimum Legal Requirement that developers have to provide at no extra cost**

Each time, you will be asked to indicate which of the 3 Net Gain projects you prefer given the development project presented, and you will b total.

	LOCATION ❓	NEIGHBOURHOOD LOSING NATURE	BEFORE DEVELOPMENT	AFTER DEVELOPMENT
Development Site	👤→🏘️ **2 miles** from YOU (10 mins return car journey 🚗)	**Average** wealth neighbourhood		100 new 3-bedroom houses

Which Net Gain project would you prefer given that the above development will take

	LOCATION ❓	NEIGHBOURHOOD GAINING NATURE	BEFORE PROJECT	AFTER PROJECT
Net Gain Project A	👤→🏘️→🟩 **10 miles** from YOU (30 mins return car journey 🚗)	**High** wealth neighbourhood		
Net Gain Project B	👤→🏘️→🟩 **50 miles** from YOU (2 hrs return car journey 🚗)	**Low** wealth neighbourhood		
Net Gain project C (Developer's Legal Requirement)	👤→🏘️🟩 **2 miles** from YOU, i.e. next to development site	**Average** wealth neighbourhood (same people living next to development site and losing nature)		

This is an example of what you will see on each page:

In the top row, highlighted in red, you will see a reminder of the description of the **development site**, before and after the house building pro

Underneath, in green, you will see information about **the Net Gain projects** that could be implemented. The first two Net Gain projects **(A a** Gain project **(C) will always stay the same and it describes the Minimum Legal Requirement that developers have to provide at no extra cost**

Each time, you will be asked to indicate which of the 3 Net Gain projects you prefer given the development project presented, and you will b total.

	LOCATION ?	NEIGHBOURHOOD WEALTH	BEFORE DEVELOPMENT	AFTER DEVELOPMEN
Development Site	2 miles from YOU (10 mins return car journey 🚗)	Next to average wealth neighbourhood		

Which Net Gain project would you prefer given that the above development wi

	LOCATION ?	NEIGHBOURHOOD WEALTH	BEFORE PROJECT	AFTER PROJECT
Net Gain Project A	10 miles from YOU (30 mins return car journey 🚗)	Next to high wealth neighbourhood		
Net Gain Project B	50 miles from YOU	Next to low wealth neighbourhood		

This is an example of what you will see on each page:

In the top row, highlighted in red, you will see a reminder of the description of the **development site**, before and after the house building proj

Underneath, in green, you will see information about **the Net Gain projects that could be implemented.** The first two Net Gain projects (A ar Gain project **(C) will always stay the same and it describes the Minimum Legal Requirement that developers have to provide at no extra cost**

Each time, you will be asked to indicate which of the 3 Net Gain projects you prefer given the development project presented, and you will b total.

	LOCATION ❓	NEIGHBOURHOOD LOSING NATURE	BEFORE DEVELOPMENT	AFTER DEVELOPMENT
Development Site	50 miles from YOU (2 hrs return car journey 🚗)	**Average** wealth neighbourhood		100 ne 3-bedro house

Which Net Gain project would you prefer given that the above development will take

	LOCATION ❓	NEIGHBOURHOOD GAINING NATURE	BEFORE PROJECT	AFTER PROJECT
Net Gain Project A	10 miles from YOU (30 mins return car journey 🚗)	**High** wealth neighbourhood		
Net Gain Project B	25 miles from YOU (1 hr return car journey 🚗)	**Low** wealth neighbourhood		
Net Gain project C (Developer's Legal Requirement)	50 miles from YOU, i.e. next to development site (2 hrs return	**Average** wealth neighbourhood (same people living next to development site and losing nature)		

This is an example of what you will see on each page:

In the top row, highlighted in red, you will see a reminder of the description of the **development site**, before and after the house building pro

Underneath, in green, you will see information about the **Net Gain projects** that could be implemented. The first two Net Gain projects **(A a** Gain project **(C) will always stay the same and it describes the Minimum Legal Requirement that developers have to provide at no extra cost

Each time, you will be asked to indicate which of the 3 Net Gain projects you prefer given the development project presented, and you will b total.

For each choice you make:

- keep in mind that developers have to provide the Minimum Legal Requirement at no extra cost to your household, but **you will have to pay if you would like to see any additional improvement or a different Net Gain project implemented**;

- please think carefully about whether **the Net Gain projects presented are worth the extra tax burden on your household** (where applicable). Paying higher taxes means that your household will have less money available to spend on other things. For example, assuming that your household budget stays the same, paying £50 towards a tax to fund Net Gain projects would mean giving up a 2-course meal out for two people;

- keep in mind that **other natural areas may already exist around where you live and/or others may have already been lost** through development.

CHOICE EXERCISE:

Here is a practice question to help you become familiar with the scenarios and alternatives presented.

Please take your time to make sure you understand how it works and then choose the one option you prefer.

[DISPLAY PRACTICE CHOICE CARD, available from the corresponding author upon request]

CHOICE 1:

Now that you've familiarised yourself with the choice task, you are ready to start!

Please choose the one option you prefer.

Please take your time to make your choice.

[DISPLAY CHOICE CARD NR. 1, available from the corresponding author upon request]

CHOICE 2:

Please choose the one option you prefer.

Take your time to make your choice.

[DISPLAY CHOICE CARD NR. 2, available from the corresponding author upon request]

CHOICE 3:

Please choose the one option you prefer.

Take your time to make your choice.

[DISPLAY CHOICE CARD NR. 3, available from the corresponding author upon request]

CHOICE 4:

Please choose the one option you prefer.

Take your time to make your choice.

[DISPLAY CHOICE CARD NR. 4, available from the corresponding author upon request]

CHOICE 5:

Please choose the one option you prefer.

Take your time to make your choice.

[DISPLAY CHOICE CARD NR. 5, available from the corresponding author upon request]

CHOICE 6:

Please choose the one option you prefer.

Take your time to make your choice.

[DISPLAY CHOICE CARD NR. 6, available from the corresponding author upon request]

CHOICE 7:

Please choose the one option you prefer.

Take your time to make your choice.

[DISPLAY CHOICE CARD NR. 7, available from the corresponding author upon request]

CHOICE 8:

Please choose the one option you prefer.

Take your time to make your choice.

[DISPLAY CHOICE CARD NR. 8, available from the corresponding author upon request]

You chose the project showing the developer's Minimum Legal Requirement for Net Gain at least half of the time. What was the main reason for that? If your main reason is not listed, please tick 'Other' and enter your response in the box provided. [RANDOMISE ORDER OF DISPLAY, SINGLE CHOICE]

☐ It is fair that Net Gain projects are delivered as close as possible to the housing development, following the Minimum Legal Requirement for Net Gain.

☐ I don't think it is important to pay for nature enhancements beyond the Minimum Legal Requirement: I would rather spend my money in other ways.

☐ I should not be the one paying for nature enhancement which goes beyond the Minimum Legal Requirement; housing developers should pay.

☐ I just preferred the developer's Minimum Legal Requirement for Net Gain over the other options presented.

☐ The developer's Minimum Legal Requirement for Net Gain is a simple but straightforward approach to 'sustainable' housing development.

☐ I don't trust that the extra money paid would actually be used to improve nature.

☐ I didn't think there was a big difference between the developer's Minimum Legal Requirement for Net Gain and the other Net Gain projects presented.

☐ I wasn't sure which project to choose.

☐ I cannot afford the extra cost.

☐ Other (please specify): [_____]

Q8. How sure are you about the choices you made regarding your preferred Net Gain projects? [PLEASE ADD A LADDER, WHERE RESPONDENTS CAN MOVE THE MARKER TO PROVIDE THEIR ANSWER, SCALE 1 TO 5]

Very unsure ←————————————————————————→ Very sure

Q9. **In this survey we have asked you hypothetical questions about how much you would be prepared to pay to fund a new 'Net Gain Trust'. In reality, how sure are you that you would be prepared to pay the amounts that you indicated, if the government actually asked you to start paying them?** [PLEASE ADD A LADDER, WHERE RESPONDENTS CAN MOVE THE MARKER TO PROVIDE THEIR ANSWER, SCALE 1 TO 5]

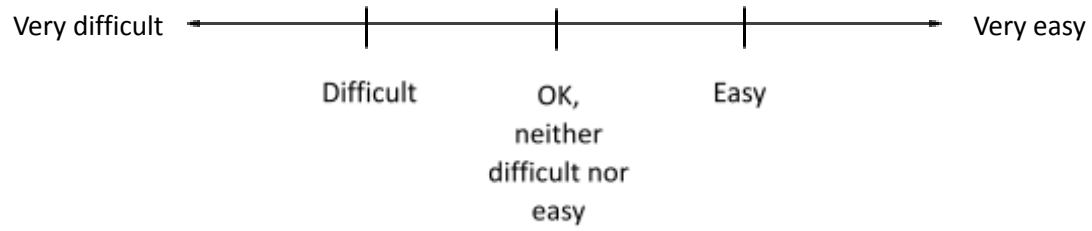Very unsure ◄─────────────────────────────► Very sure

Q10. The questions below are about your **beliefs**. Do you agree or disagree with the following statements?

	Completely disagree	Somewhat disagree	Somewhat agree	Completely agree
I believe that the results of surveys like this can influence future decisions about Net Gain projects and housing development in England				
I doubt that I would ever really be asked to pay for Net Gain projects by the government				
The ideas and projects presented in the choice tasks were credible and realistic to me				

Q11. [ASK IF RESPONDENT REPLIES 'SOMEWHAT DISAGREE' OR 'COMPLETELY DISAGREE' TO STATEMENT 3 in Q10, ELSE SKIP]. Why did you find the ideas and projects presented not credible or realistic? Please tick all that apply.

☐	There is no farmland at the distances set out in the survey that can be used for housing developments or Net Gain projects
☐	I don't believe the Net Gain approach to housing development will actually be implemented in the way it is described in this survey
☐	I felt that the description of 'neighbourhood wealth' near the housing development or Net Gain project was not realistic
☐	Other (please specify): _____

Q11b. **How easy or difficult was it for you to choose your preferred Net Gain projects among the alternatives presented?**

Very difficult ←———————|————————|————————|————————→ Very easy

                         Difficult   OK,   Easy

                                          neither

                                difficult nor

                                   easy

Q12. When choosing your preferred Net Gain project, **what were you mainly thinking of**?

For each of the issues below, please tick how often you considered them when making your choices. It's ok if you didn't consider all the aspects in the same way.

	Never considered	Not often considered	Mostly considered	Always considered
the change in **NATURAL ENVIRONMENT AND WILDLIFE** that would be achieved				
whether **PUBLIC ACCESS** would be provided				
the **DISTANCE** of the Net Gain site from me				
the **DISTANCE** of the Net Gain site from the development				
the **WEALTH** of the **RESIDENTS** living close to the Net Gain site and benefiting from the improvements in green space				
the **WEALTH** of the **RESIDENTS** living close to the development site and losing the original farmers field				
the **COST to the average HOUSEHOLD**				

Please read through and select the statement most relevant to you to help us understand why you didn't always focus on the COST of the Net Gain projects presented. If your main reason is not listed, please select 'Other' and enter your response in the box provided.

- [ ] The cost shown for the Net Gain projects seemed low and so it was less important to me than other issues
- [ ] I think that nature should be protected no matter what the cost will be
- [ ] I found the cost of the Net Gain projects very similar, so it was easier to make choices based on other issues
- [ ] I do not think that I would actually be asked to pay for Net Gain projects, so the COST seemed irrelevant to me
- [ ] I think that any improvement beyond the Minimum Legal Requirement should be paid by developers (rather than the general public), so I made choices based on other issues
- [ ] Other: _____

Q13. Is there anything else you would like to say about how you made your choices between the Net Gain projects presented? Please, explain below.

☐   Nothing else to add [respondents should be allowed to continue by either filling out the box above or clicking this statement]

[Q16a]. **The value to you of the natural environment and wildlife**

We are now interested in finding out about your willingness to pay for Net Gain projects to improve the natural environment and wildlife.

As earlier in the survey, imagine that this year, planners need to build **about 100 new typical 3-bedroom houses in your area (e.g. 2 miles from where you live)** to meet local demand.

This is what the area would look like BEFORE and AFTER the development [neighbourhood wealth information to be adjusted depending on split sample]:

Please imagine that, in addition to the new housing development, a **Moderate Nature Enhancement** Net Gain project (as shown below) is delivered on a field with the same footprint (i.e. same sized area) as the development site. This Net Gain project aims to replace the nature lost due to the building works and to enhance nature further. We will now ask you a series of questions to find out how much you would be willing to pay for this **Moderate Nature Enhancement** project. [neighbourhood wealth information below to be adjusted depending on split sample]

| LOCATION | NEIGHBOURHOOD WEALTH | BEFORE PROJECT | AFTER PROJECT |

Net Gain Project

2 miles from YOU, i.e. next to development site (10 mins return car journey)

Next to **average wealth** neighbourhood *(some people as living next to development site)*

[Q16a]. **Would your household be willing to pay £_____extra taxes per year (from now over the next 5 years) for this Net Gain project to be implemented (and maintained for 30 years)?**

☐   Yes
☐   No

Q16a. **The value to you of the natural environment and wildlife**

We are now interested in finding out about your willingness to pay for Net Gain projects to improve the natural environment and wildlife.

As described earlier in the survey, imagine that this year, planners need to build **about 2,000 new typical 3-bedroom houses in your area (e.g. 2 miles from where you live)** to meet local demand.

This is what the area would look like BEFORE and AFTER the development:

Please imagine that, in addition to the new housing development, a **Moderate Nature Enhancement** Net Gain project (as shown below) is delivered on a field with the same footprint (i.e. same sized area) as the development site. This Net Gain project aims to replace the nature lost due to the building works and to enhance nature further. We will now ask you a series of questions to find out how much you would be willing to pay for this **Moderate Nature Enhancement** project.

LOCATION	NEIGHBOURHOOD WEALTH	BEFORE PROJECT	AFTER PROJECT
2 miles from YOU, i.e. next to development site (10 mins return car journey)	Next to average wealth neighbourhood (some people as living next to development site)		

Q16a. **Would your household be willing to pay £_____extra taxes per year (from now over the next 5 years) for this Net Gain project to be implemented (and maintained for 30 years)?**

☐ Yes
☐ No

Q16a. **The value to you of the natural environment and wildlife**

We are now interested in finding out about your willingness to pay for Net Gain projects to improve the natural environment and wildlife.

As earlier in the survey, imagine that this year planners need to build **about 100 new typical 3-bedroom houses 50 miles away from you** to meet local demand.

This is what the area would look like BEFORE and AFTER the development [neighbourhood wealth information to be adjusted depending on split sample]:

Please imagine that, in addition to the new housing development, a **Moderate Nature Enhancement** Net Gain project (as shown below) is delivered on a field with the same footprint (i.e. same sized area) as the development site. This Net Gain project aims to replace the nature lost due to the building works and to enhance nature further. We will now ask you a series of questions to find out how much you would be willing to pay for this **Moderate Nature Enhancement** project. [neighbourhood wealth information below to be adjusted depending on split sample]

Q16a. Would your household be willing to pay £_____extra taxes per year (from now over the next 5 years) for this Net Gain project to be implemented (and maintained for 30 years)?

☐ Yes
☐ No

Q16a. **The value to you of the natural environment and wildlife**

We are now interested in finding out about your willingness to pay for Net Gain projects to improve the natural environment and wildlife.

As earlier in the survey, imagine that this year planners need to build **about 2,000 new typical 3-bedroom houses 50 miles away from you** to meet local demand.

This is what the area would look like BEFORE and AFTER the development:

Please imagine that, in addition to the new housing development, a **Moderate Nature Enhancement** Net Gain project (as shown below) is delivered on a field with the same footprint (i.e. same sized area) as the development site. This Net Gain project aims to replace the nature lost due to the building works and to enhance nature further. We will now ask you a series of questions to find out how much you would be willing to pay for this **Moderate Nature Enhancement** project.

Q16a. **Would your household be willing to pay £_____extra taxes per year (from now over the next 5 years) for this Net Gain project to be implemented (and maintained for 30 years)?**

☐ Yes
☐ No

We would now like to know **your views about the implementation and delivery of Net Gain projects**.

Q18x1. In your opinion, are there **major risks** associated with the adoption of a Net Gain approach to development?

☐   Yes [IF THIS STATEMENT IS SELECTED, SHOW RESPONDENT BOTH Q18X2 AND THEN Q18X3]

☐   No [IF THIS STATEMENT IS SELECTED, SHOW RESPONDENT Q21]

Q18x2. Please RANK the following major risks associated with the adoption of a Net Gain approach to development, by clicking on the statements and dragging them into your desired order. Place the issue you see as the biggest risk at the top. [RANDOMISE ORDER OF DISPLAY OF THE BELOW STATEMENTS]

•   I am worried that it will take a while for nature to deliver the expected benefits
•   There is a risk that environmental improvements are actually not delivered
•   I am concerned that Net Gain pledges will be poorly enforced
•   I am worried that Net Gain projects will be poorly monitored
•   There is a risk that the actors involved will have insufficient specialist expertise
•   I am worried that the Net Gain approach to development will not work for other reasons

Q18x3. Please give details of **any other major risks or concerns** you have with the Net Gain approach to development in general.

┌─────────────────────────────────┐
│   │
└─────────────────────────────────┘

☐   No other risks or concerns [RESPONDENTS SHOULD BE ALLOWED TO CONTINUE BY EITHER FILLING OUT THE BOX ABOVE OR CLICKING THIS STATEMENT]

Q21. **Your attitudes towards housing development:**

Please indicate your level of agreement or disagreement with the below statements: [RANDOMISE ORDER OF DISPLAY]

	Completely disagree	Somewhat disagree	Somewhat agree	Completely agree
Building new houses is necessary to tackle the housing affordability crisis in England				
Under no circumstances should new houses be built on undeveloped land (e.g. farmers' fields, green belt land, heathland, etc.)				
I would support the building of higher storey buildings (blocks of flats) or smaller houses to reduce the negative impacts of housing development on the environment				
New housing developments are good for jobs and the economy				
The reconversion of existing buildings or refurbishment of vacant properties should be prioritised, before new houses are built				
I feel that people are sufficiently involved in consultations around new housing development plans				
I think that the planning system works effectively to minimise damage to the environment				
In my view, the planning system in England is not too complex and I trust the decisions taken as part of it.				
Adding more houses in a given area will not change it in a negative way				
The process of building new houses will be too noisy and disruptive				

About Yourself

To finish off, we just have **a few more questions about you and your household** to find out how well our sample represents the population in England.

Q22. Are you a member of any **environmental/conservation organisation** such as RSPB, National Trust, WWF, etc.?

	Yes
	No

Q23. How frequently do you engage with nature for leisure purposes?

☐ Very frequently (at least once a week)
☐ Frequently (at least once a month)
☐ Occasionally (at least once every 3 months)
☐ Rarely (at least once a year)
☐ Never

Q24. **How many people normally live in your household?**

NOTE: *A household is defined by one or more people that normally live together and, to some degree, share expenditures. For example, a group of students sharing a flat is therefore not a household.*

- [ ] 1
- [ ] 2
- [ ] 3
- [ ] 4
- [ ] 5 or more

Q25. Do you have children?

☐ Yes
☐ No

Q26. **If yes, are any of your children aged 16 or younger?** [IF YES TO Q25]

☐ Yes
☐ No

Q27. **Do you have grandchildren?** [IF YES TO Q25]

☐ Yes
☐ No

Q28. Do you (or does your household) **own or rent the accommodation where you currently live**?

☐ I/we live in an owned property
☐ I/we live in a rented property

Q29. What **type of property** do you (does your household) currently live in?

☐	Flat or apartment
☐	Detached house or bungalow
☐	Semi-detached house or bungalow
☐	Terraced house or bungalow
☐	Other: _____

Q30. **How many bedrooms** has the property where you (your household) currently live (lives)? Please, include all rooms built or converted for use as bedrooms, even if they are not currently used as bedrooms

☐ 1 bedroom
☐ 2 bedrooms
☐ 3 bedrooms
☐ 4 bedrooms
☐ 5 or more bedrooms

Q31. Which of the categories below best describes your **highest level of educational attainment**? If you are currently at school or college, please mark the level you expect to complete.

- [ ] No qualifications
- [ ] High school/Secondary school qualification (such as GCSEs)
- [ ] College/Sixth Form qualification (such as AS level or A level)
- [ ] Vocational/professional qualification
- [ ] University (undergraduate) degree
- [ ] Postgraduate or doctoral diploma/degree
- [ ] Prefer not to say

Q32. Is your job, or that of anyone else in your household, connected to the building/development sector?

☐ Yes
☐ No

Q33. Is your job, or that of anyone else in your household, connected to the planning sector?

☐ Yes
☐ No

To ensure that we have interviewed a representative sample of people, please tell us the approximate annual gross income (before tax) of your household (including yourself). This cannot be linked to who you are, as we do not ask your full address or name.

Q34. Please tick the corresponding box from the list.

☐	Less than £20,000
☐	£20,000 - £39,999
☐	£40,000 - £59,999
☐	more than £60,000

☐	Prefer not to say

Q35. Using the sliding tab, **how would you classify your household's wealth?** [CREATE A LADDER/SLIDER FOR THE BELOW, ADDITIONALLY ALLOWING FOR ONE INTERMEDIATE STEP BETWEEN THE 'LOW' AND 'AVERAGE', AND 'AVERAGE' AND 'HIGH' WEALTH LEVELS]

Low wealth   Average wealth   High wealth
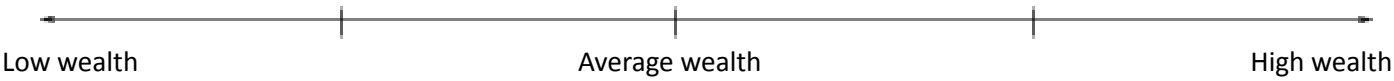
Q36. **Is your household entitled to tax exemption** (meaning it does not pay e.g. income tax, council tax, etc.)?

☐ Yes
☐ No

Q37. Which of the following best describes the **place where you live**?

☐ City (between 10,000 and several hundred thousand inhabitants, and usually with a cathedral)
☐ Large-/medium-sized town (more than 10,000 inhabitants)
☐ Small town (from 3,000 to 10,000 inhabitants)
☐ Village (up to 3,000 inhabitants)
☐ Rural (not in village)

Q38. What is your full postcode? E.g. GS4 4PU

This information will be used to make sure that we have interviewed people from different parts of England and to analyse the data for different geographical areas. It cannot tell us your full address, so we will not be able to identify you. For further information on the University of Exeter's Privacy and Personal Data Protection Policy, please click here. [please allow respondents to only provide between 5 and 7 characters in this box].

☐   Prefer not to say

[IF 'PREFER NOT TO SAY' IS SELECTED, THEN SHOW:] If you'd rather not give us the full postcode, please provide at least the first part of your postcode (e.g. GS4) [please allow respondents to only provide between 2 and 4 characters in this box]

Thank you for participating in our survey.

Q39. Before we finish, are there any comments or suggestions that you want to add about either this survey or its contents?

☐ No other comment or suggestion to add, thank you.

After collecting and analysing the data, the results of this survey will be outlined in a report and academic publication, which will be made available to the UK Government and relevant public agencies and bodies to inform decisions regarding future environmental and planning policies in England.

If you have any questions regarding the survey, the project or if you are interested in the results of this study, do not hesitate to contact us at leep@exeter.ac.uk.