Historic Scotland - Survey results

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This short report presents the results obtained after the analysis of the survey responses. The aim of the survey was to gather data on Scottish population's willingness to pay for the protection of 6 different historic sites: Aberlemno Cross, Calanais, Kilchurn Castle, Maclellan's Castle, Mousa Broch and St Andrews Cathedral. Beyond the question of whether the general public is willing to contribute to the protection of historic sites through their taxes, we will also analyse whether individuals would prefer to target funding at specific sites, if yes to which ones, and whether their familiarity with and distance to these sites influences this choice.

We will first provide a brief description of the sample, then analyse the WTP results. Tables are presented in the appendices.

1/ General sample description

Each respondent was asked to state his/her willingness to pay for the conservation of two of the 6 sites. 309 respondents answered the questionnaire concerning Aberlemno Cross and Kilchurn Castle, 302 answered the questionnaire concerning Calanais and Maclellan's Castle, and finally 336 answered the one concerning Mousa Broch and St Andrews Cathedral (**Table 1**).

On average 67% of the respondents did not recognise the site presented on the picture, 20 % recognised it but had never visited it, and 12% recognised and had visited the site. **Table 2** shows that Calanais is the most recognised (but not visited) site, and St Andrews Cathedral the most visited. Aberlemno Cross, Maclellan's Castle and Mousa Broch are unknown to more than 80% of the respondents. On average, respondents live 128.95 mile away from the site they are presented. On average, respondents live further away from Calanais (189 miles) and Mousa Broch (285 miles) than from the other sites (**Table 2b**).

Tables 3 to 8 give the socio-demographic characteristics of the respondents.

2/ Analysis of willingness to pay (WTP)

A total of 1738 stated WTP were collected through the survey (**Table 9**). A bidding game format was used. We will first focus our analysis on the zero bids (WTP = 0) and identify the protest bids amongst these. Then, we will present the analysis of the average willingness to pay, estimated after excluding the previously identified protest bids.

2.1/ Analysis of zero bids

2.1.1/ Differentiation of protest and true zero bids

Two types of respondents can state zero bids:

(i) Protest bidders, i.e. those who state a zero value when they actually value the good, perhaps due to a lack of credibility of the hypothetical market;

(ii) True zero bidders, i.e. those who actually give a null value to the project presented (protection of the historic building). This can be either because they gain no utility from the site, or because they are unable to afford to pay to protect it.

The answer to the follow-up question has been used to distinguish protest from true zero bids, using the following criteria (**Table 10**):

Table 10: follow-up zero bids	Freq.	Percent	True / Protest
Already donate (enough) to charities	3	0.34	Protest
Don't know\can't remember	18	2.02	Protest
Government/local authority should pay	13	1.46	Protest
I am a member of the National Trust	3	0.34	Protest
I am a non-tax payer/I am not working	11	1.24	Protest
I am not concerned about the condition of this site	236	26.55	True
I cannot afford to pay any more in taxes, even if that means the site will deteriorate	515	57.93	True
I do not know it/have never heard of it	6	0.67	True
I do not know where the money will go/not clear where it will be spent	7	0.79	Protest
I pay enough tax/do not want to pay more tax	12	1.35	True
It is not a priority/other things are more important (all references)	10	1.12	True
It is not local/I would rather support local area	4	0.45	Protest
Nothing	3	0.34	Protest
Other	20	2.25	Protest
People with (more) money should pay	4	0.45	Protest
Should go towards ALL sites/should go towards other sites	4	0.45	Protest
They get enough money	9	1.01	Protest
Visitors/tourists should pay an entrance fee/people who go there should pay	11	1.24	Protest
Total	889	100	

Amongst the 889 zero bids, 110 are identified as protest bids and are dropped for the analysis of the average WTP. **Table 11** shows the partition of the protest and true zero bids amongst the sites. It appears that Calanais and Maclellan's Castle (presented in the same questionnaire) received a higher proportion of protest bids; while Aberlemno Cross and Kilchurn Castle received fewer true zero bids.

After dropping the 110 protest bids the sample includes 1628 observations on WTP, stated by 836 respondents.

2.1.2 / Analysis of protest bids

A probit regression was run in order to analyse the propensity of respondents to be protest bidders (**Table 12**). As we observed previously, Calanais and Maclellan's Castle are more likely to receive protest bids (the questionnaire concerning these two sites was answered by a higher proportion of protest bidders). The propensity of a protest bid also increases with age, if respondent has children,

belong to the social class B or C2 rather than class E, if they are not working rather than full time employed and if they are rural inhabitant (rather than urban inhabitants or from conurbation). Finally, the propensity of being a protester decreases with the distance to the evaluated site, which means that respondents leaving nearby the evaluated site were more frequently giving protest bids.

2.1.3/ Analysis of true zero bids

Just as with the protest bids, the true zero bids are analysed with a probit regression. The results of 3 probit models are presented in **Table 13**, each one introducing different explanatory variables. Respondents who recognise the site they are presented on the picture are less likely to state a zero willingness to protect this site, but having actually visited the site has no significant impact. As we previously observed in Table 11, Aberlemno Cross and Kilchurn Castle received significantly fewer true zero bids. As for protest bids, the propensity of a true zero bid also increases with age and if respondents are not working rather than full time employed and decreases if they are urban rather than rural inhabitants. However, inhabitants from a conurbation and non-workers are more likely to state a true zero willingness to pay than, respectively, rural inhabitants and full time workers. Finally, respondents belonging to higher income classes (A, B and C1) are less likely to have a null WTP to protect historic sites than lower income classes.

2.2/ Analysis of WTP, protest bids excluded

The following analysis is based on 1628 observations of WTP (**Table 14**), including 779 true zero bids. These 1628 observation come from the answers of 836 respondents. 699 of these respondents (84%) have systematically the same WTP for the 2 sites they are presented, while only 93 adjust their stated WTP depending on the site and 44 have a missing value for one of the 2 sites.

The average willingness to pay to protect across all the 6 historic sites is £2.79/year/site for 10 years. Note that this refers to the "alternative future with no increase in funding" scenario presented for each site. The site which received the lowest average WTP is Maclellan's Castle with £2.26/year, while the site with the highest average WTP is Kilchurn Castle with an average of £3.77/year.

Since these differences in mean WTP may reflect differences in respondent characteristics as well as differences in the utility of each site, we will need to analyse these differences parametrically. We first present the results of a series of models analysing the WTP on the whole (pooled) sample, and then analyse the 6 sites separately.

2.2.1/ WTP analysis: all sites pooled

We started the analysis with Ordinary Least Square (OLS) regressions (**Table 15**). We then analysed the WTP results using Tobit models which should be more adapted to the distribution of the WTP data as these models take into account that WTP cannot have a negative value[1] (**Table 16**). We also incorporated random effects in a Generalized Least Square (GLS) regression in order to account for individual effects as each respondent assesses successively 2 different sites (**Table 17**). The Tobit models perform best, so we will focus our analysis on these.

[1] Tobit models are also known as censored normal regression model. The idea is that the WTP would be normally distributed but part of the distribution is not observed (censored). In our case, this is because the WTP cannot be negative. Therefore the WTP takes the value 0 as a minimum and then is a continuous random variable over strictly positive values (zero can be seen as a corner solution). The Tobit model estimates the parameters through maximum likelihood estimation.

Table 16 presents the results of 6 different Tobit models. Tobit 1 and 4 test the effect of individual characteristics on WTP. Tobit 2 and 5 test the site effect. And Tobit 3 and 6 test both. Models 4, 5 and 6 account for the correlation of variance between the 2 answers of a same respondent.

The fact that respondents recognise the site on the picture has a significant and positive effect on their WTP to protect it and this effect is consistent across models. We see that in Tobit 2, Kilchurn Castle and Aberlemno Cross appear to have a significantly higher WTP than Mousa Broch but when allowing for correlation of variance in Tobit 4 this effect is not significant anymore. Consequently, the higher WTP is more likely to be due to the specificities of respondents who answered this questionnaire (Kilchurn Castle and Aberlemno Cross were presented in the same questionnaire) than to a real preference difference for these two sites relative to the other sites. Therefore there is no significant difference in the average WTP for the different sites. This is consistent with the result of Tobit 3 and 6, showing that when controlling for individual characteristics, the effect of site label on the WTP is not significant. We can then conclude that the WTP of respondents for the protection of the sites depends on (i) whether they recognise the site on the picture or not and (ii) on their age and income (social class). → Respondents prefer to protect sites they know.

2.2.2/ WTP analysis site by site

Finally, we treated each site independently. **Table 18** and **19** present the results of respectively OLS regressions and Tobit models. Again, we will focus on the results of the Tobit models. Note that sample sizes are much lower here than in the pooled model.

Results show that for a specific site, respondents have a higher WTP for its protection if they recognise it, except for Kilchurn Castle. Again, having visited the site has no effect on their WTP.

Concerning individual characteristics, we should first mention that the number or respondents belonging to social class A is too low to measure any significant effect of this variable on WTP. It also appears that different variables have significant impacts of WTP depending on the questionnaire version. For sites presented in Questionnaire 1, inhabitants of conurbations are willing to pay lower amounts than rural inhabitants for the protection of Kilchurn Castle and Aberlemno Cross, as well as non-workers compared to full time workers. Within respondents of questionnaire 2, those belonging to social classes B and C1 have higher WTP than respondents belonging to class E for the conservation of Calanais and Maclellan's Castle. Finally, the WTP for St Andrews cathedral and Mousa Broch (questionnaire 3) is driven by social class, with all classes WTP more than class E, with higher income and lower age being associated with higher WTP.

Interestingly, the distance to the site systematically has a significant impact on the WTP for the least famous of the two sites presented in each questionnaire (Aberlemno Cross, Maclellan Castle and Mousa Broch), but no impact on the WTP for the more famous one (Kilchurn Castle, Calanais and St Andrews Cathedral). However the sign of the effect differs: distance has a positive impact of the WTP for Aberlemno Cross or Mousa Broch, but has a negative impact on the WTP for Maclellan Castle. In other words, the further away respondents are from Aberlemno Cross or Mousa Broch, the more they are willing to pay for their protection but, the further away they are from Maclellan Castle, the less they are willing to pay. It is always tricky to interpret what "distance" is picking up in stated preference surveys, since it may represent variations in socio-economic conditions as well as familiarity with a site or possible use. In Table we control for whether people "recognise" or have visited each site, so the effect of distance on WTP for Aberlemno, Maclellan's castle and Mousa may

be picking up a mixture of un-measured socio-economic variability as well as how much "ownership" or local price people have in the site – although the sign is puzzling for Maclellan's castle.

Conclusions:

There is evidence here that people do care about the protection of HS sites, even if they do not visit them, indeed whether people have visited a site has no significant effect on willingness to pay to protect it for any of the 6 sites modelled. Being able to recognise a site is important to the magnitude of willingness to pay, as is socio-economic class (higher socio-economic group households, on the whole, are willing to pay more), although this pattern varies across sites. Once we control for observable differences in respondent characteristics, we find little evidence of significant differences in WTP across sites. This is interesting, since the sites range from the "famous" to the "relatively obscure", and vary greatly in actual visitor numbers. Familiarity with a site increases how much people are willing to pay to protect it. The number of zero bids (zero WTP) as a fraction of total bids does not vary much by site.

It is unfortunate that the survey company changed the design of the payment question. It is impossible to say whether we would have observed significant differences in WTP across sites with a different payment question (eg the payment card that was supposed to have been used). One pleasing finding is that the level of protest bidding is rather low, certainly compared to other UK studies. This implies that (i) people found the hypothetical market to be credible (ii) people, on the whole, support the idea that public tax revenues are an appropriate way of funding the conservation of historic sites in Scotland.

Appendices

1/ Descriptive statistics of the sample

Table 1: Number of responses by site

Site	Freq.	Percent	Cum.
Aberlemno Cross	309	16.31	16.31
Calanais	302	15.95	32.26
Kilchurn Castle	309	16.31	48.57
Maclellan's Castle	302	15.95	64.52
Mousa Broch	336	17.74	82.26
St Andrews Cathedral	336	17.74	100
Total	1 894	100	

Table 2: Do you recognise this picture? And if so, have you visited it before today?

First line: freq. ; second line: %

	Site						
	Aberlemno	Calanais	Kilchurn	Maclellan	Mousa	StAndrews	Total
Don't know	3	2	2	1	3	0	11
\can't remember	0.97	0.66	0.65	0.33	0.89	0	0.58
No - don't recognise	257	136	221	257	278	117	1 266
and have not visited	83.17	45.03	71.52	85.1	82.74	34.82	66.84
Yes - recognise and	19	36	24	10	14	127	230
have visited	6.15	11.92	7.77	3.31	4.17	37.8	12.14
Yes - recognise but	30	128	62	34	41	92	387
have not visited	9.71	42.38	20.06	11.26	12.2	27.38	20.43
Total	309	302	309	302	336	336	1 894
	100	100	100	100	100	100	100

Chi2 test:

		Pr =	
Pearson chi2(15)	471.1205	0.000	--> site and knowledge not independently distributed

Table 2b: distance by site

Site	Obs	Mean	Std. Dev.	Min	Max
Aberlemno Cross	308	71.21	26.75	5	181
Calanais	302	188.57	18.56	103	249
Kilchurn Castle	308	67.02	24.24	25	164
Maclellan's Castle	302	94.78	38.36	38	212
Mousa Broch	336	285.13	42.77	122	374
St Andrews Cathedral	336	59.59	31.55	5	191
Total					

Table 3: Gender

Gender	Freq.	Percent	Cum.
Male	886	46.78	46.78
Female	1 008	53.22	100
Total	1 894	100	

Table 4: Working Status

Working Status	Freq.	Percent	Cum.
Full time	592	31.26	31.26
Not work Not look	972	51.32	82.58
Not work look	112	5.91	88.49
Part time	218	11.51	100
Total	1 894	100	

Table 5: Tenure

Tenure	Freq.	Percent	Cum.
Mortgage	364	19.22	19.22
Other	40	2.11	21.33
Owned outright	614	32.42	53.75
Rent local authority	588	31.05	84.79
Rent private	288	15.21	100
Total	1 894	100	

Table 6a: Social class

Social class	Freq.	Percent	Cum.
A	18	0.95	0.95
B	268	14.15	15.1
C1	512	27.03	42.13
C2	396	20.91	63.04
D	284	14.99	78.04
E	416	21.96	100
Total	1 894	100	

Table 6b: Marital Status

Marital Status	Freq.	Percent	Cum.
Married\Living as Married	954	50.37	50.37
Not Married	940	49.63	100
Total	1 894	100	

Table 7: Population density

Population density	Freq.	Percent	Cum.
Conurbation	580	30.62	30.62
Rural	694	36.64	67.27
Urban	620	32.73	100
Total	1 894	100	

Table 8: Child

Variable	Obs	Mean	Std. Dev.	Min	Max
child	1894	0.227033	0.419025	0	1

2/ WTP treatments

Analysis of WTP = 0

/* Table 9: Number of wtp = 0 (protest AND true) */

site	wtp = 0	wtp > 0	Total wtp>=0	Missing	Total
Aberlemno Cross	130	152	282	27	309
Calanais	150	127	277	25	302
Kilchurn Castle	127	159	286	23	309
Maclellan's Castle	163	115	278	24	302
Mousa Broch	166	140	306	30	336
St Andrews Cathedral	153	156	309	27	336
Total	889	849	**1738**	156	1894

/* Table 10: If you answered £0, why was this? */

whywtp0	Freq.	Percent	Cum.
Already donate (enough) to charities	3	0.34	0.34
Don't know\can't remember	18	2.02	2.36
Government/local authority should pay	13	1.46	3.82
I am a member of the National Trust	3	0.34	4.16
I am a non-tax payer/I am not working	11	1.24	5.4
I am not concerned about the condition of this site	236	26.55	31.95
I cannot afford to pay any more in taxes, even if that means the site will deteriorate	515	57.93	89.88
I do not know it/have never heard of it	6	0.67	90.55
I do not know where the money will go/not clear where it will be spent	7	0.79	91.34
I pay enough tax/do not want to pay more tax	12	1.35	92.69
It is not a priority/other things are more important (all references)	10	1.12	93.81
It is not local/I would rather support local area	4	0.45	94.26
Nothing	3	0.34	94.6
Other	20	2.25	96.85
People with (more) money should pay	4	0.45	97.3
Should go towards ALL sites/should go towards other sites	4	0.45	97.75
They get enough money	9	1.01	98.76
Visitors/tourists should pay an entrance fee/people who go there should pay	11	1.24	100
Total	889	100	

Highlighted : True 0

/* Table 11: Number of protest 0 */

	True 0	Protest	Total 0	Total resp	True / tot resp	Protest / Tot resp
Aberlemno Cross	116	14	130	282	41.13%	4.96%
Calanais	122	28	150	277	44.04%	10.11%
Kilchurn Castle	114	13	127	286	39.86%	4.55%
Maclellan's Castle	137	26	163	278	49.28%	9.35%
Mousa Broch	153	13	166	306	50.00%	4.25%
St Andrews Cathedral	137	16	153	309	44.34%	5.18%
Total	779	110	889	1738	44.82%	6.33%
		Dropped				

/* Table 12: Who are the protest bidders? */

Probit regression — Nb of obs 1730; LR chi2(14) 79.45; Prob > chi2 0; Log likelihood = -369.79; Pseudo R2 0.0970

protest	Coef.	Std. Err.	z	P>z	[95% Conf.	Interval]
kilchurn (ref Mousa)	-0.566	0.361	-1.57	0.117	-1.275	0.142
aberlemno (ref Mousa)	-0.529	0.363	-1.46	0.145	-1.241	0.182
calanais (ref Mousa)	0.193	0.217	0.89	0.372	-0.231	0.618
maclellan (ref Mousa)	-0.051	0.320	-0.16	0.874	-0.678	0.576
standrews (ref Mousa)	-0.656	0.367	-1.79	0.074	-1.375	0.063
recognise	0.134	0.131	1.02	0.306	-0.123	0.390
visited	0.156	0.170	0.91	0.361	-0.179	0.490
csex (1 if female)	-0.171	0.106	-1.61	0.107	-0.379	0.037
child	0.451	0.133	3.4	0.001	0.191	0.712
exactage	0.009	0.003	2.66	0.008	0.002	0.015
urban (ref rural)	-0.417	0.127	-3.28	0.001	-0.667	-0.168
conurbation (ref rural)	-0.209	0.123	-1.7	0.089	-0.450	0.032
classA (ref E)	0.361	0.443	0.82	0.414	-0.506	1.229
classB (ref E)	0.409	0.168	2.44	0.015	0.080	0.739
classC1 (ref E)	0.201	0.159	1.27	0.205	-0.110	0.513
classC2 (ref E)	0.302	0.159	1.9	0.057	-0.009	0.614
classD (ref E)	0.136	0.186	0.73	0.464	-0.228	0.500
nowork (ref work full time)	0.458	0.137	3.35	0.001	0.190	0.726
workparttime (ref work full time)	0.075	0.205	0.37	0.715	-0.326	0.476
distance	-0.003	0.002	-1.94	0.053	-0.006	0.000
constant	-1.801	0.506	-3.56	0.000	-2.793	-0.809

Reference levels for categorical variables: *site reference level is Mousa Broch; population density reference level is rural; social class reference level is Class E and finally, working status reference level is "work full time". Variable csex takes the value 1 if gender is female, 0 if male.*

/* Table 13: Analysis of WTP = 0 (true 0) */

Probit regression : dependent variable wtp0 = 1 if wtp = 0, wtp0 = 1 if wtp > 0

	Probit 1	Probit 2	Probit 3
recognise	-.359***	-.432***	-.429***
visited	-0.123	-0.131	-0.156
csex	0.099		0.088
child	0.135		0.128
exactage	.012***		.012***
urban	-.152*		-.161**
conurbation	.266***		.271***
classA	-.835**		-.777*
classB	-.548***		-.499***
classC1	-.325***		-.303***
classC2	-0.009		0.032
classD	-0.128		-0.118
nowork	.150*		.150*
workparttime	0.020		0.010
distance	0.000		-0.001
kilchurn		-.201*	-0.332
aberlemno		-.216**	-0.345
calanais		0.105	0.073
maclellan		0.054	-0.055
standrews		0.119	-0.087
_cons	-.564***	.126*	-0.294

Reference levels for categorical variables: *site reference level is Mousa Broch; population density reference level is rural; social class reference level is Class E and finally, working status reference level is "work full time". Variable csex takes the value 1 if gender is female, 0 if male.*

Analysis of WTP (True zeros and > 0)

Table 14:	**Summary of wtp**				
Site	Freq.	Mean	Std. Dev.	Min	Max
Aberlemno Cross	268	3.22	13.84	0	200
Calanais	249	2.54	9.95	0	150
Kilchurn Castle	273	3.77	14.92	0	200
Maclellan's Castle	252	2.26	9.76	0	150
Mousa Broch	293	2.32	5.10	0	50
St Andrews Cathed.	293	2.65	5.20	0	50
Total	1628	2.79	10.41	0	200

Total resp	1894	
Protest	110	dropped
Don't know	155	missing value
No limit	1	missing value
Total	1628	for analysis

/* Table 15: OLS All sites pooled */[2] legend: * p<.1; ** p<.05; *** p<.01

Variable	OLS1	OLS2	OLS3
recognise	0.999	1.402**	1.168*
visited	-1.234	-1.012	-1.136
csex	-0.476		-0.428
child	-0.210		-0.177
exactage	-0.001		-0.002
urban	1.025		1.076*
conurbation	0.355		0.348
classA	2.985		2.691
classB	2.246**		2.067**
classC1	3.097***		3.026***
classC2	1.253		1.107
classD	0.886		0.842
nowork	-0.359		-0.357
workparttime	-0.669		-0.663
distance	-0.002		0.008
kilchurn		1.304	2.651
aberlemno		0.913	2.246
calanais		-0.263	0.350
maclellan		-0.058	1.194
standrews		-0.031	1.816
_cons	1.419	2.144***	-1.154

--> different explanatory variables

[2] **Reference levels for categorical variables**: *site reference level is Mousa Broch; population density reference level is rural; social class reference level is Class E and finally, working status reference level is "work full time". Variable csex takes the value 1 if gender is female, 0 if male.*

/* Table 16: Tobit All sites pooled */[3] legend: * p<.1; ** p<.05; *** p<.01

Variable	Tobit 1	Tobit 2	Tobit 3	Tobit 4	Tobit 5	Tobit 6
recognise	3.625***	4.560***	4.221***	3.625**	4.560***	4.221**
visited	-0.937	-0.414	-0.584	-0.937	-0.414	-0.584
csex	-1.170		-1.097	-1.170		-1.097
child	-0.926		-0.858	-0.926		-0.858
exactage	-.081***		-.082***	-.081***		-.082***
urban	2.174**		2.272**	2.174		2.272
conurbation	-1.324		-1.272	-1.324		-1.272
classA	8.513*		7.648*	8.513***		7.648**
classB	6.610***		6.138***	6.610***		6.138***
classC1	6.483***		6.270***	6.483**		6.270**
classC2	2.259		1.882	2.259		1.882
classD	2.570		2.480	2.570		2.480
nowork	-1.343		-1.264	-1.343		-1.264
workparttime	-0.885		-0.843	-0.885		-0.843
distance	-0.003		0.016	-0.003		0.016
kilchurn		2.988**	5.583		2.988	5.583
aberlemno		2.637*	5.219		2.637	5.219
calanais		-0.957	0.254		-0.957	0.254
maclellan		-0.456	2.158		-0.456	2.158
standrews		-0.712	3.131		-0.712	3.131
_cons	-3.172	-6.044***	-8.510*	-3.172	-6.044**	-8.510
Sigma / _cons	15.364***	15.555***	15.329***	15.365***	15.555***	15.329***

[3] **Reference levels for categorical variables**: *site reference level is Mousa Broch; population density reference level is rural; social class reference level is Class E and finally, working status reference level is "work full time". Variable csex takes the value 1 if gender is female, 0 if male.*

/* Table 17: Random effects GLS regression ; All sites pooled */

	xtreg1	xtreg2	xtreg3
recognise	.389***	.374***	.373***
visited	.256*	.262*	.272*
csex		-0.630	-0.595
child		-0.247	-0.235
exactage		-0.007	-0.008
urban		1.110	1.118
conurbation		0.272	0.255
classA		2.677	2.515
classB		2.147	1.961
classC1		3.264***	3.171***
classC2		1.290	1.134
classD		0.872	0.789
nowork		-0.189	-0.148
workparttime		-0.595	-0.537
distance		-0.000	0.000
kilchurn			1.053
aberlemno			0.915
calanais			-0.215
maclellan			-0.172
standrews			0.036
_cons	2.674***	1.521	1.290

/* Site by site */

Table 18: OLS site by site

Variable	kilchurn	aberlemno	calanais	maclellan	standrews	mousa
recognise	-0.315	0.896	1.706	5.474***	1.002	0.684
visited	-1.429	-1.783	-1.493	-2.630	-0.259	-0.755
csex	-2.098	-1.005	0.475	1.237	-0.525	-0.721
child	-0.912	-0.302	-0.866	-0.756	1.320	1.247
exactage	-0.003	0.025	0.024	0.037	-.040**	-.041**
urban	3.326	2.172	0.272	-0.844	-0.243	-0.783
conurbation	-1.920	-2.588	2.377	1.582	0.244	-0.058
classA	2.989	3.208	4.371	5.833	5.727	0.950
classB	-0.031	-0.401	2.775	2.837	4.812***	4.332***
classC1	3.830	2.832	5.010**	4.859**	1.721*	1.321
classC2	-0.312	0.036	1.946	2.406	2.239**	2.062**
classD	-0.126	-0.065	2.424	2.595	1.854*	1.303
nowork	-2.399	-4.515**	1.957	1.451	2.137***	1.962**
workparttime	0.057	-1.418	-0.519	-0.412	0.109	0.434
distance	0.007	.061*	-0.013	-0.016	0.005	0.013
_cons	4.616	0.092	-1.498	-2.966	0.659	-1.755

legend: * p<.1; ** p<.05; *** p<.01

Reference levels for categorical variables: *population density reference level is rural; social class reference level is Class E and finally, working status reference level is "work full time". Variable csex takes the value 1 if gender is female, 0 if male.*

Table 19: Tobit site by site

	Questionnaire 1		Questionnaire 2		Questionnaire 3	
Variable	kilchurn	aberlemno	calanais	maclellan	standrews	mousa
recognise	2.989	8.591**	4.169*	8.161**	2.232*	2.984*
visited	0.183	-5.149	-1.120	-0.082	0.534	-1.568
csex	-1.960	0.738	-0.265	0.500	-1.345	-1.761
child	-1.622	-0.845	-2.879	-3.152	1.476	1.660
exactage	-0.118	-0.082	-0.052	0.006	-.103***	-.103***
urban	4.180	3.676	-1.314	-5.837*	1.408	0.149
conurbation	-13.455***	-10.974***	2.176	-2.034	0.514	-0.082
classA	8.834	11.250	7.946	16.5033*	9.897	-40.723
classB	-0.061	-0.395	6.487*	8.723**	8.386***	8.099***
classC1	6.178	6.267	6.822**	9.740***	4.178**	3.521**
classC2	-3.833	-1.991	2.102	3.115	4.777***	4.288**
classD	-2.046	-0.261	1.657	3.063	4.808***	3.354*
nowork	-6.232*	-9.605***	2.727	1.413	3.106**	2.667*
workparttime	0.633	-0.881	-3.078	-1.376	0.705	1.384
distance	-0.042	.107**	0.027	-.090**	0.022	.0246*
_cons	9.482	-4.072	-13.108	-1.853	-4.533	-8.597*
Sigma / _cons	19.867***	18.570***	14.478***	14.757***	7.472***	7.857***

Reference levels for categorical variables: *population density reference level is rural; social class reference level is Class E and finally, working status reference level is "work full time". Variable csex takes the value 1 if gender is female, 0 if male.*