

## Analysis of the Toll Payers Questionnaire 2009

MSc Felipe de Jesús Colón-González

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## Overview

The present study analyses the perception of toll payers with regard to the performance of the Authority, present and future charges, and possible future expenditures. These perceptions were collected in the Toll Payers Questionnaire 2009.

The analysis of the questionnaire was broken down into several stages in order to determine the number of valid cases of toll payers; assess the representativeness of the sample; identified possible biases in the responses given; and calculate statistical similarities or differences in the answers provided by the surveyed individuals.

The document is divided into eight sections. The first one provides with a raw summary of the data. The second section explains the data and methods used for the analysis of the questionnaire. On the third one, the assessment of the representativeness of the sample is presented.

From the fourth to the sixth sections, the document provides with a detailed presentation of the results obtained on each of the chi square tests of independence that were conducted during the study. Each of the sections corresponds to a possible bias in the response of individuals (i.e. geographical location, type of boat owned (powered or unpowered), and size of the boat owned).

The seventh section provides a summary of the main results obtained from the analysis as well as an identification and explanation of the biases detected. The last section states the conclusions of this study.

## I. Raw data summary

### 1. Toll Payers

#### 1.1 Distribution according to the county of residence

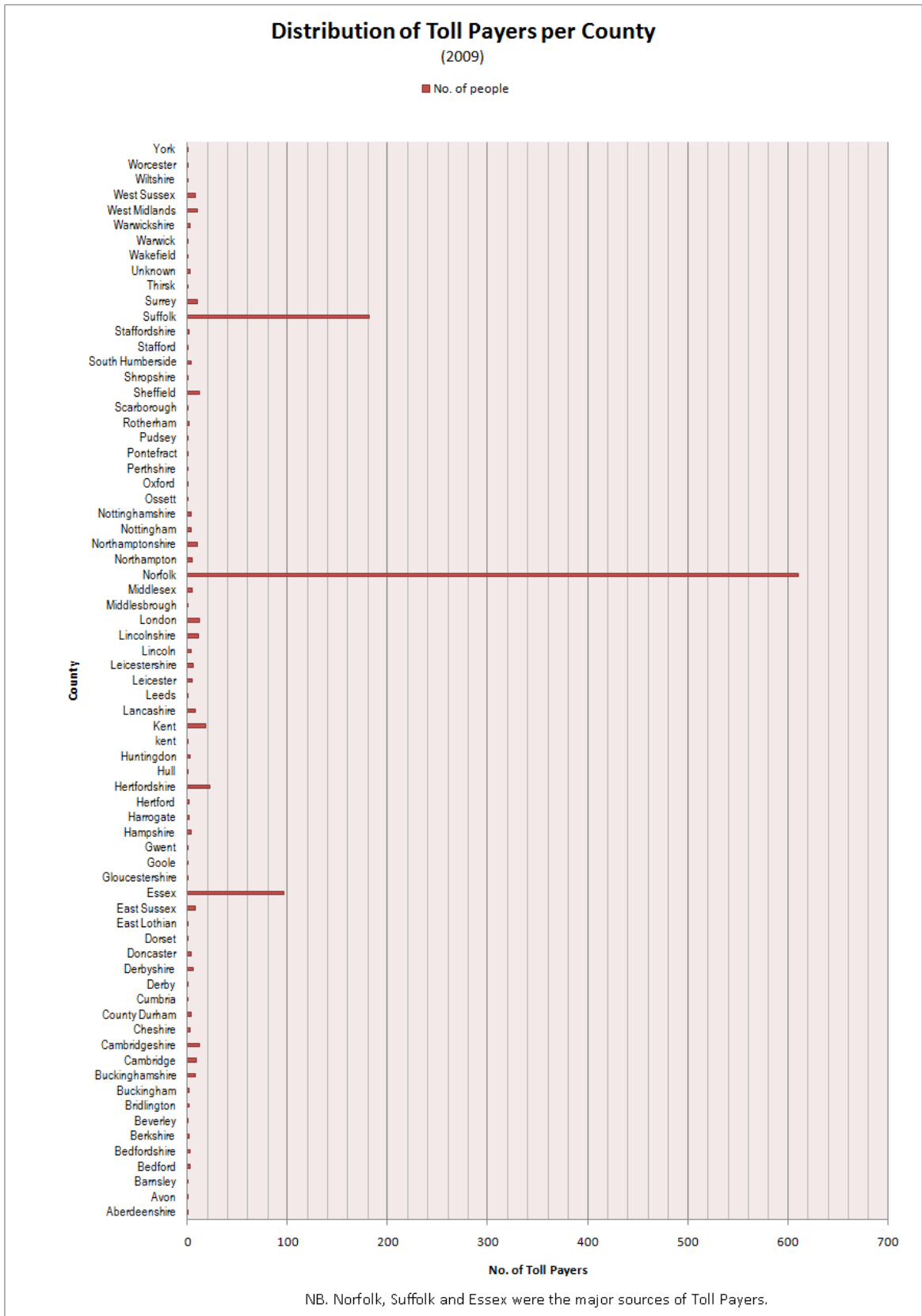
From the 18,048 Toll Payers registered in the database proportioned, 1,167 of them answered the "Toll Payers Questionnaire 2009". The counties with the largest contribution of toll payers for the sample were Norfolk (611), Suffolk (182) and Essex (97). Respondents were distributed in the following way according to the County of residence:

County	Number of Toll Payers	County	Number of Toll Payers
Aberdeenshire	1	Leicestershire	6
Avon	1	Lincoln	4
Barnsley	1	Lincolnshire	11
Bedford	3	London	13
Bedfordshire	3	Middlesbrough	1
Berkshire	2	Middlesex	5
Beverley	1	Norfolk	611
Bridlington	2	Northampton	5
Buckingham	2	Northamptonshire	10
Buckinghamshire	8	Nottingham	4
Cambridge	9	Nottinghamshire	4
Cambridgeshire	12	Ossett	1
Cheshire	3	Oxford	1
County Durham	4	Perthshire	1
Cumbria	1	Pontefract	1
Derby	1	Pudsey	1
Derbyshire	6	Rotherham	2
Doncaster	4	Scarborough	1
Dorset	1	Sheffield	12
East Lothian	1	Shropshire	1
East Sussex	8	South Humberside	4
Essex	97	Stafford	1
Gloucestershire	1	Staffordshire	2
Goole	1	Suffolk	182
Gwent	1	Surrey	10
Hampshire	4	Thirsk	1
Harrogate	2	Unknown	3
Hertford	2	Wakefield	1
Hertfordshire	23	Warwick	1
Hull	1	Warwickshire	3
Huntingdon	3	West Midlands	10
Kent	20	West Sussex	8
Lancashire	8	Wiltshire	1

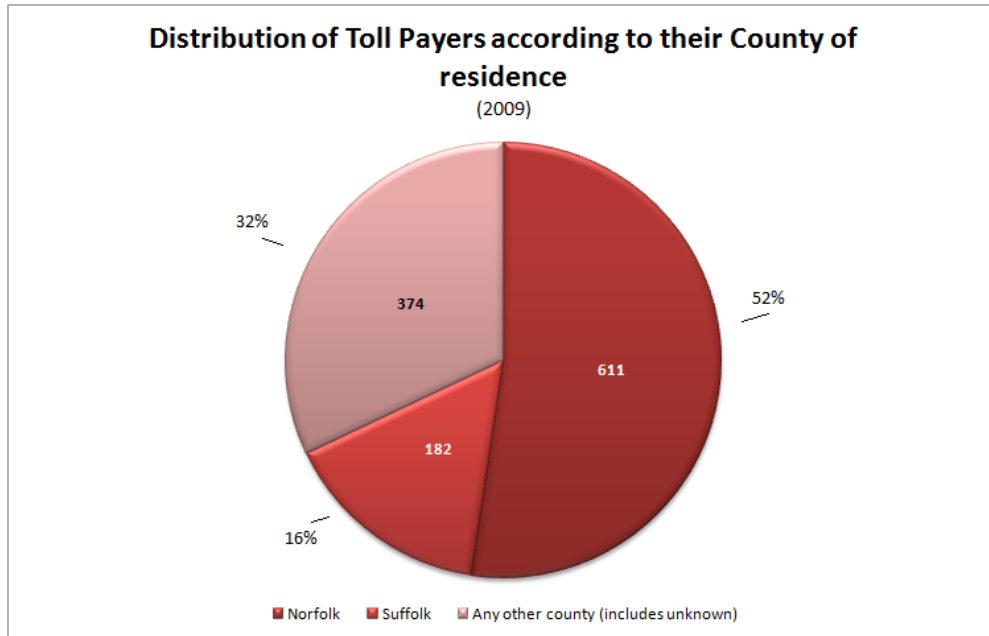
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Leeds	1	Worcester	1
Leicester	5	York	1
<b>TOTAL</b>			<b>1167</b>

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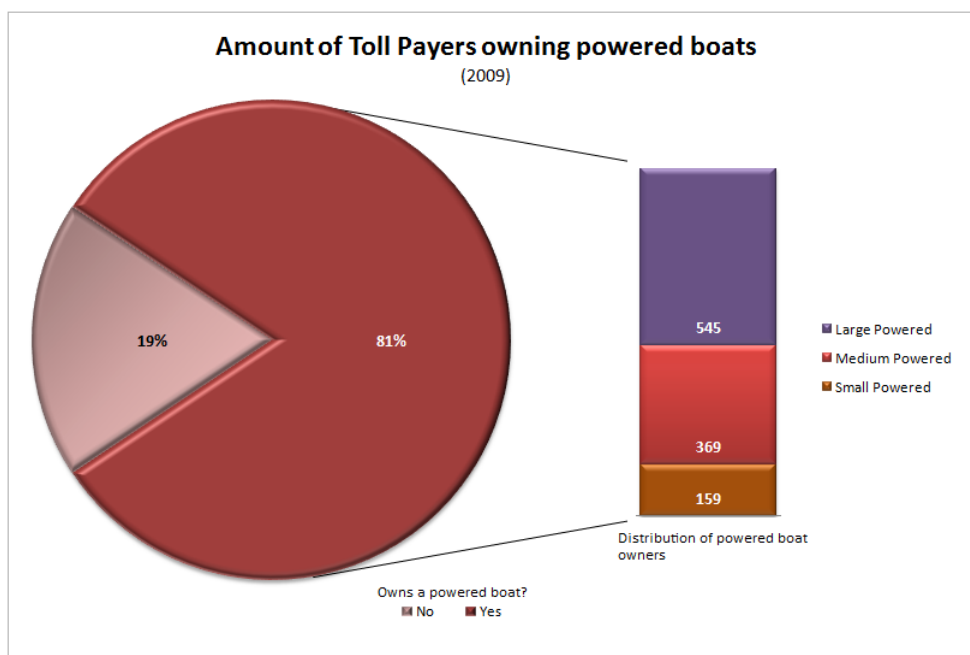


Toll payers were then subdivided into three geographical categories (i.e. Toll Payers living in Norfolk, Toll Payers living in Suffolk and Toll Payers living in any other county). The results are shown in the following figure:

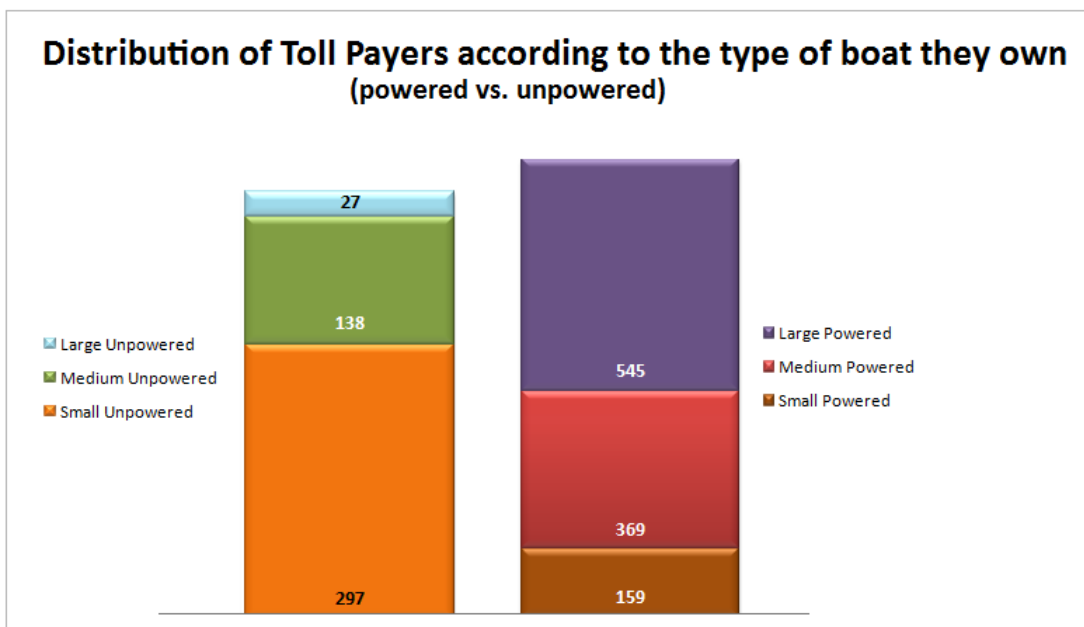
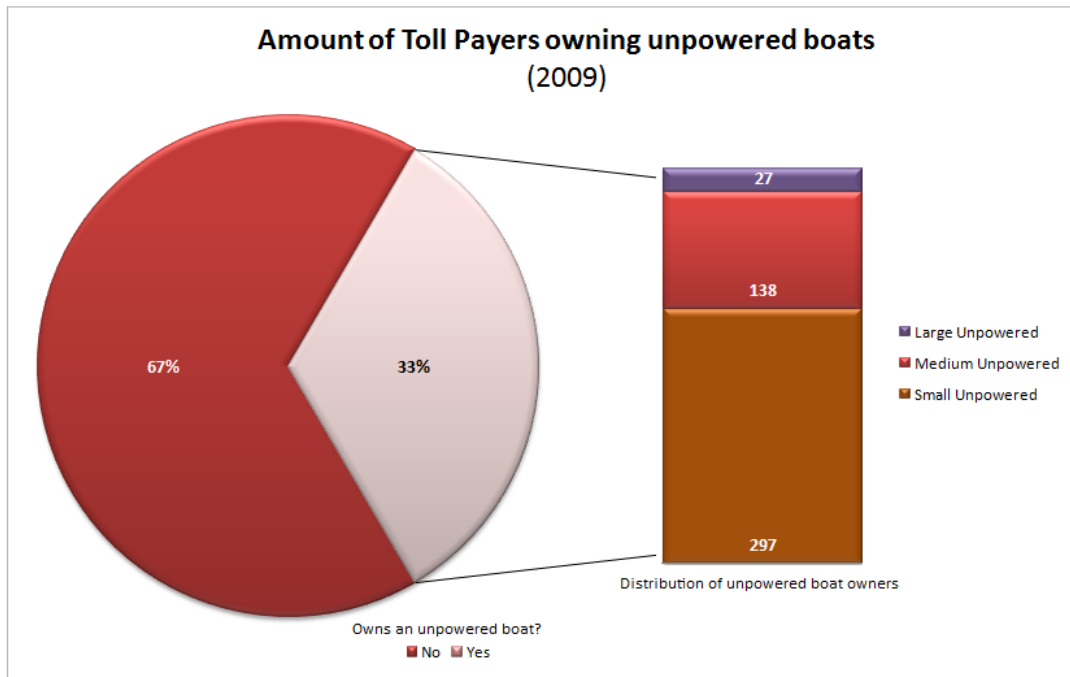


**1.2 Distribution according to the type of boat(s) owned**

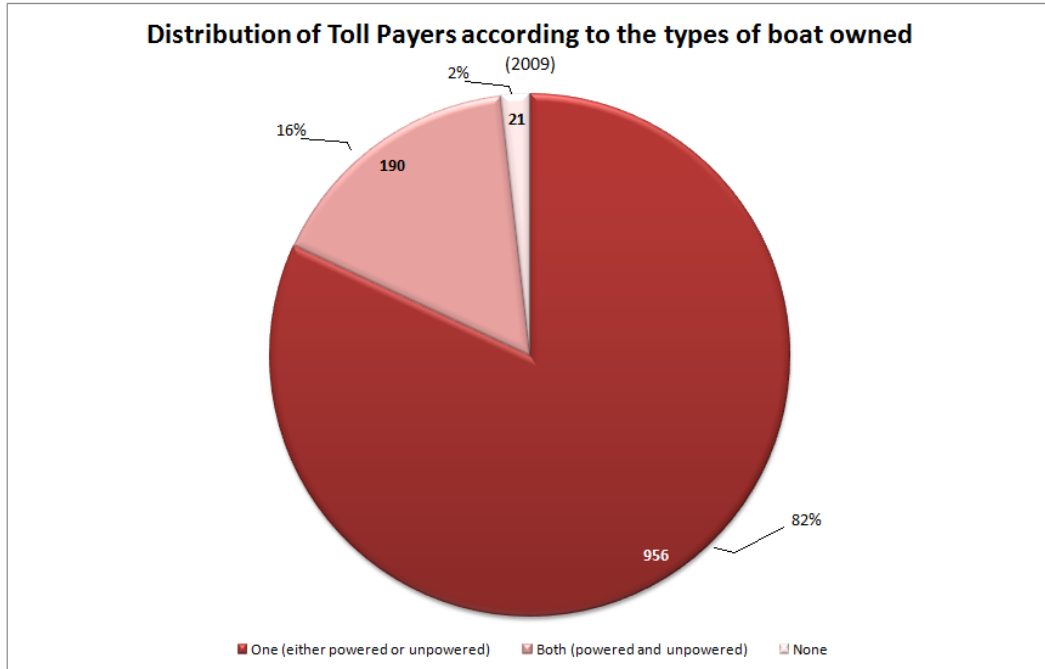
From the 1,167 Toll Payers in the sample, 949 own powered boats. From those, 159 own small powered boats, 369 medium powered boats, and 545 more own large powered ones. It is worth mentioning that some of the respondents own more than one type/size of boat.



From the 1,167 toll payers in the sample, only 387 own unpowered boats. The number of toll payers owning unpowered boats is much lower than the ones that do not own this type of vessel (i.e. 780). From those respondents with unpowered boats, 297 own small boats, 138 medium boats and 27 large ones. The following image represents their distribution, whereas the next one compares them with the previous category. Again, one person may have more than one type/size of boat.

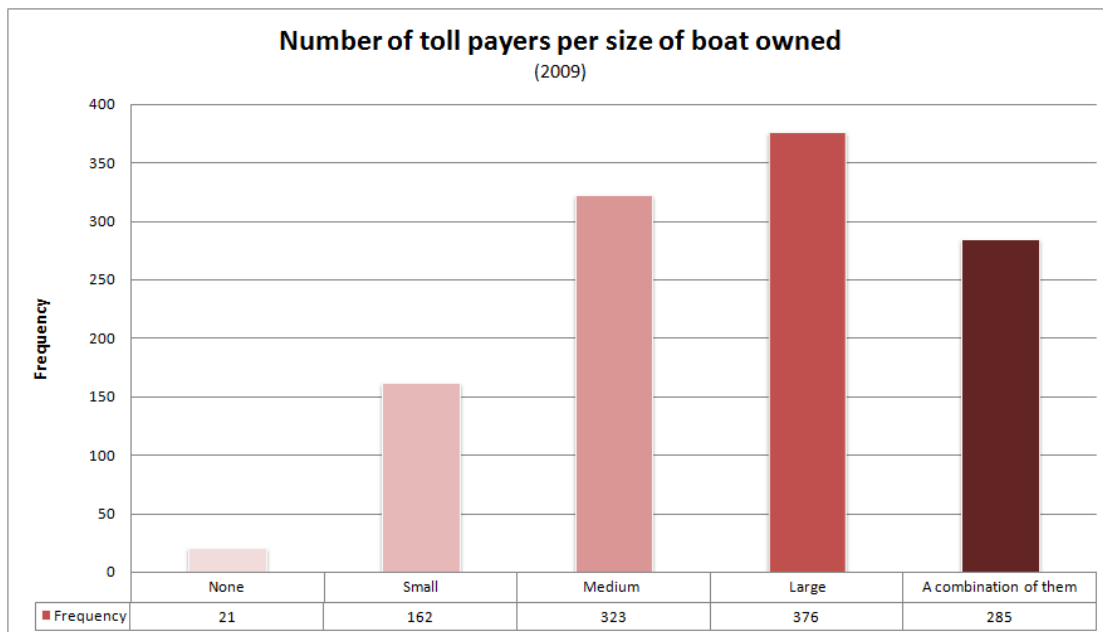


Some of the respondents own multiple boats. Therefore, respondents were divided into categories depending on whether they own one type of boat (i.e. powered or unpowered), both types of them, or none. The results are represented in the following image.



### 1.3 Distribution according to the size of the boat(s) owned

Toll Payers were also classified according to the size of boat(s) owned (i.e. small, medium or large). The results are shown in the following picture.



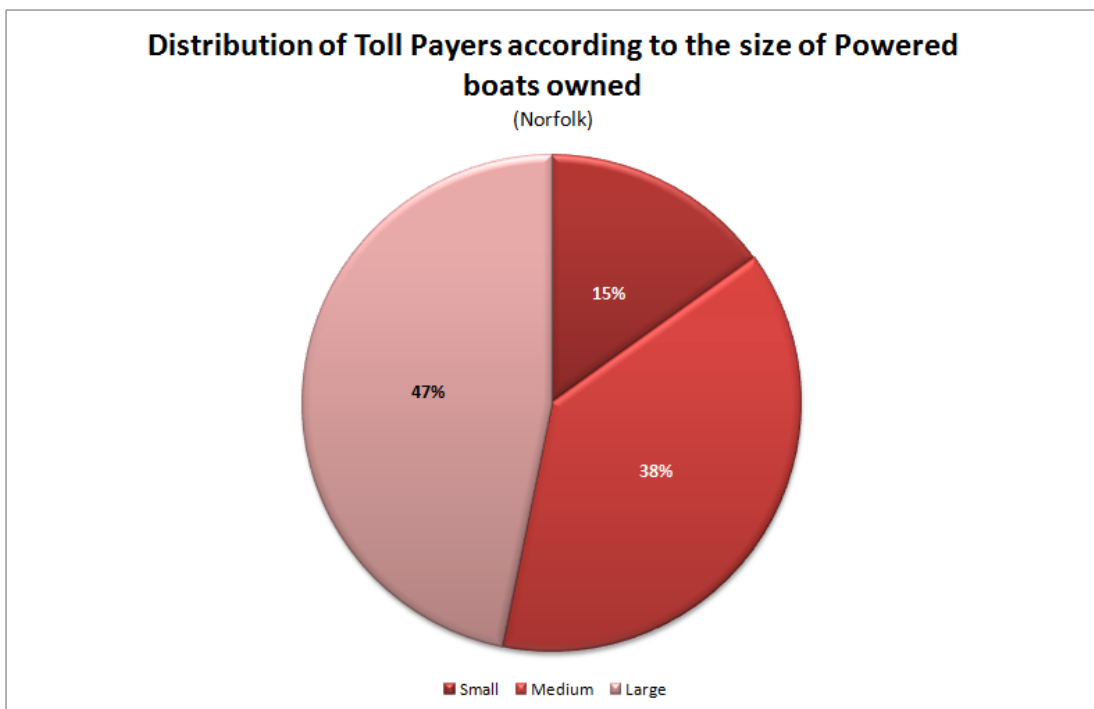
**1.4 Distribution according to the county of residence, type and size of the boat(s)**

When divided per county, size and type of boat owned, two trends were identified within Toll Payers. The first one indicates that the majority of respondents have a propensity to own large powered boats. The second shows that the majority of respondents have a propensity to own small unpowered boats.

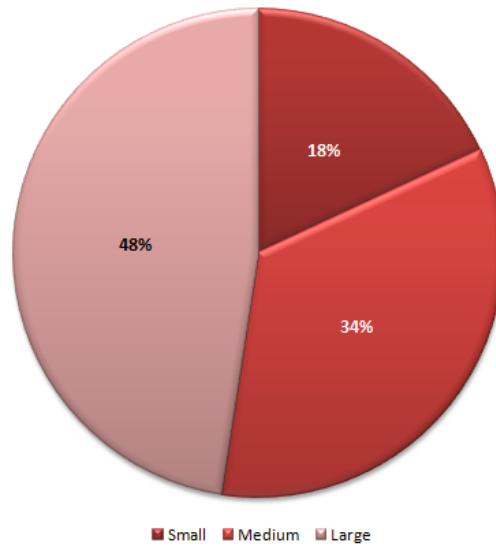
County	Powered boats		
	Small	Medium	Large
Norfolk	78	197	242
Suffolk	30	57	79
Any other county	51	115	224
<b>Total</b>	<b>159</b>	<b>369</b>	<b>545</b>

County	Unpowered boats		
	Small	Medium	Large
Norfolk	168	81	16
Suffolk	46	23	4
Any other county	93	34	7
<b>Total</b>	<b>307</b>	<b>138</b>	<b>27</b>

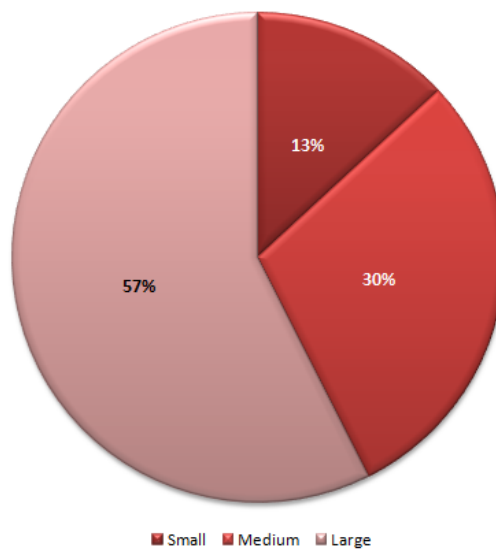
Observe that even though the absolute values substantially differ amongst counties, the relative values are not that dissimilar.



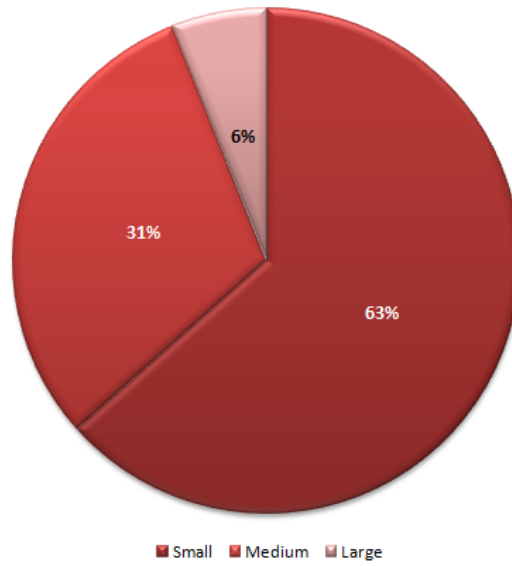
**Distribution of Toll Payers according to the size of Powered boats owned**  
(Suffolk)



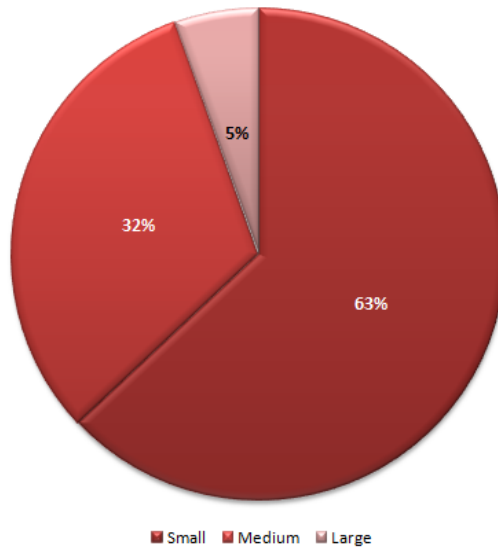
**Distribution of Toll Payers according to the size of Powered boats owned**  
(Rest of Counties)



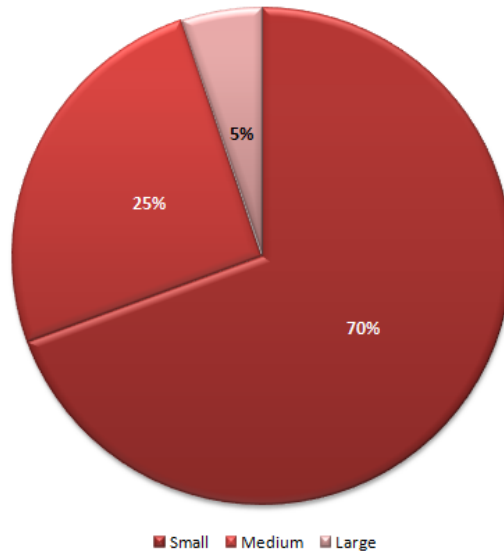
**Distribution of Toll Payers according to the size of Unpowered boats owned**  
(Norfolk)



**Distribution of Toll Payers according to the size of Unpowered boats owned**  
(Suffolk)



**Distribution of Toll Payers according to the size of Unpowered boats owned**  
(Rest of Counties)



## II. Data and methods

Data with the responses to the “Toll Payers Questionnaire 2009” recorded on “Survey Monkey” were provided by the Broads Authority. Additionally, an extract from the database with the records from 18,048 entries of registered toll payers was provided by the same institution.

Data about the questionnaire were verified looking for duplicated entries. From these duplicated entries, those with the largest number of information were used for the analysis, whereas the rest were excluded from the analyses.

A case-by-case verification was conducted contrasting the “Survey Monkey” data against the Toll Payers database in order to identify respondents as Toll Payers or not. The identification was carried out using 3 indicators, namely: a) Registration Number, b) Name, and c) Postcode (NB. Personal data (e.g. name and address) were not included in the databases used for the analysis).

Respondents that did not match 2 out of the 3 indicators were identified as Non Toll payers and registered into a separate database. Consequently, from 1293 initial respondents, only 1167 were considered for the sample used in the analysis.

A Chi Square test for goodness of fit was conducted to assess the representativeness of the sample. The variable used to conduct this test was the classification of the vessels into “Powered” and “Unpowered” boats. Since some of the questions on the questionnaire asked about the possession of powered and unpowered boats, the identification of the respondents as owners of either powered or unpowered boats was straightforward.

For this test requires a previously observed proportion of cases, the proportion of owners of powered and unpowered boats in the Toll Payers database (i.e. the one with 18,048 entries) was obtained. To do so, toll payers with the indication of having boats requiring petrol, diesel, gas, steam or electricity were classified as “Powered boat owners” (68.1%). The rest (31.9%) were classified as “Unpowered boat owners”. In this latter category toll payers with the indications “N/A” and “TBA” were initially included. A first test for goodness of fit was conducted.

After the detection of several cases where people with the label “TBA” were detected to have a powered boat, the decision to take them out from the analysis was taken. A second classification

identified a 28.3% of owners of unpowered boats and 71.7% of owners of powered ones. A second test for goodness of fit was conducted.

Data on the questionnaire were measured on nominal and ordinal scales. Therefore, Chi Square tests for independence were used to assess the relationship between the variables. This test allowed the identification of differences in the response to specific questions from people from particular counties, or with different boat ownerships.

Statistical significance was accepted at the 95% confidence level ( $P \leq 0.05$ ). All the statistical analyses were conducted using SPSS (Version 16.0).

### III. Representativeness of the sample

A Chi Square test for goodness of fit was conducted to assess the representativeness of the sample. This test compared the proportion of cases from the sample with the values of the whole population of toll payers.

The analysis of the population's database indicated that 68.1% of the toll payers own a powered boat. The rest (i.e. 31.9%) therefore, were classified as owner of unpowered boats. In this latter category toll payers with the indications "N/A" and "TBA" were included. A first test for goodness of fit was conducted.

Category	Frequency	Percentage
Powered	12288	61.8%
Unpowered	5760	31.9%
<b>Total</b>	<b>18048</b>	<b>100.0%</b>

These values were used in the test as the hypothesized proportion to look for in the sample. The results of the Chi square test indicated that there is a highly significant difference in the proportion of owners of powered and unpowered boats in the current sample. Therefore the sample is not representative of the population.

Category	Observed N	Expected N	Chi square
Powered	384	425	
Unpowered	949	907	
<b>Total</b>	<b>1333</b>		<b>5.869 (p &lt; 0.05)</b>

After the detection of several cases where people with the label "TBA" were detected to have a powered boat, the decision to take them out from the analysis was taken. A second classification identified a 28.3% of owners of unpowered boats and 71.7% of owners of powered ones. A second test for goodness of fit was conducted.

Category	Frequency	Percentage
Powered	12252	71.7%

Unpowered	4825	28.3%
<b>Total</b>	<b>17077</b>	<b>100.0%</b>

The results of the second Chi square test indicated that there is no significant difference in the proportion of owners of powered and unpowered boats in the current sample. Therefore the sample may be considered as representative of the population under these circumstances.

Category	Observed N	Expected N	Chi square
Powered	384	377	
Unpowered	949	955	
<b>Total</b>	<b>1333</b>		<b>0.169 (p &gt; 0.05)</b>

Unfortunately, due the characteristics of the database containing the information from the whole population, no more inferences could be made. Decision-makers should take into account the considerations presented in this section.

## IV. Results per County (Toll Payers)

### Section 1: Acceptance or rejection of the Null Hypothesis

The null hypothesis [ $H_0$ ] stated that *“The perception of the respondents to each of the items in the questionnaire is independent of the geographical region”*. This hypothesis was represented and tested as follows:

- $TP_N = TP_S = TP_{RC}$

Where:

- $TP_N$  = Toll Payers living in Norfolk
- $TP_S$  = Toll Payers living in Suffolk
- $TP_{RC}$  = Toll Payers living in any other county outside the Norfolk/Suffolk area.

The hypothesis was tested at the significance level of 0.05 [ $\alpha = 0.05$ ]. The following table summarizes the broad results indicating whether the  $H_0$  was accepted or rejected.

Item	Status of the $H_0$	Item	Status of the $H_0$
1	Rejected	6.4	Accepted
2	Rejected	6.5	Accepted
3	Rejected	6.6	Accepted
4.1	Rejected	6.7	Accepted
4.2	Accepted	6.8	Rejected
4.3	Accepted	7	Rejected
4.4	Accepted	8.1	Accepted
4.5	Rejected	8.2	Accepted
4.6	Rejected	8.3	Accepted
4.7	Rejected	8.4	Accepted
6.1	Accepted	8.5	Accepted
6.2	Rejected	8.6	Accepted
6.3	Rejected	8.7	Rejected

The  $H_0$  was rejected in 46.2% of the questions. Therefore, the perception of the toll payers and their answers to those questions depend on the geographical location of the respondent. Thus,



results will vary depending on the county of residence of the respondent. The following sections will provide with details of the analysis of each item.

## Section 2: Results related to present charges

### Item 1

1.1 The analysis of **Question 1** indicates that there is a significant statistical association ( $\chi^2 = 7.659$ ,  $P < 0.05$ ) between the County of residence and the perception in the fairness in present charges between small and large boats. This indicates that even though the majority of the surveyed people (54.5%) think that the present charges are fair, the percentage of people amongst Counties varies significantly. People living in Norfolk have the lowest perception (only 51.1% compared with 60.3% in most of the other counties) regarding the fairness of the fees when compared to the other counties, followed by Suffolk with 54.3%.

County	Do you think the present charges between small and large boats are fair?		Total
	No	Yes	
Norfolk	48.9%	51.1%	100%
Suffolk	45.7%	54.3%	100%
Any other County	39.7%	60.3%	100%
<b>Total</b>	45.5%	54.5%	100%

### Item 2

1.2 The analysis of **Question 2** indicates that there is a significant statistical association ( $\chi^2 = 19.425$ ,  $P \leq 0.001$ ) between the County of residence and the perception that the amount of money smaller boats should pay when compared to the current toll. Whereas in Norfolk and Suffolk the difference between surveyed people thinking that tolls should be lower or same is not dramatic (47.4% vs. 46.6%, and 46.5% vs. 44.8% respectively); in other counties this difference is almost 20% (34.6% vs. 54.4%).

In the Norfolk/Suffolk area the majority of respondents (47.4% and 46.5% respectively) think that smaller boats should pay less than the current toll. The majority of respondents in other counties (54.4%) indicated that these boats shall pay the same as the pay now. In general terms, however, the majority of respondents (48.8%) think that smaller boats should pay the same toll as they do now.

[N = 1,110]

County	How much do you think smaller boats should pay compared to the current toll?			Total
	Less	Same	More	
Norfolk	47.4%	46.6%	6.0%	100%
Suffolk	46.5%	44.8%	8.7%	100%
Any other County	34.6%	54.4%	11.0%	100%
<b>Total</b>	<b>43.2%</b>	<b>48.8%</b>	<b>8.0%</b>	<b>100%</b>

### Item 3

1.3 The analysis of **Question 3** indicates that there also is a significant statistical association ( $\chi^2 = 18.699$ ,  $P \leq 0.001$ ) between the County of residence and the perception about the amount of money larger boats should pay when compared to the current toll. The vast majority of surveyed people (54.6%) think larger boats should pay the same current toll. Notice, however, that a large percentage (31.2%) thinks that larger boats shall pay more than the current toll.

The conducted test indicates that differences in the response of people living in Norfolk, Suffolk and other counties are statistically significant. Norfolk respondents observe a lower tendency to think that larger boats shall pay the same as now than the rest of the respondents (50.4 vs. 58.4 and 59.7% respectively).

[N = 1,114]

County	How much do you think larger boats should pay compared to the current toll?			Total
	Less	Same	More	
Norfolk	13.5%	50.4%	36.1%	100%
Suffolk	11.0%	58.4%	30.6%	100%
Any other County	16.9%	59.7%	23.4%	100%
<b>Total</b>	<b>14.2%</b>	<b>54.6%</b>	<b>31.2%</b>	<b>100%</b>

## Section 3: Results related to future charges & priorities

### Item 4

2.1 The analysis of **Question 4** has been subdivided into seven different vessel categories.

2.1.1 For **Category 1** (i.e. Canoe paying £25.86), the analysis indicates that there is a significant statistical association ( $\chi^2 = 19.491$ ,  $P < 0.05$ ) between the County of residence and the amount of money respondents think that canoes should pay for a year's toll.

In the Norfolk and Suffolk areas, the majority of surveyed people (49.3% and 41.1% respectively) think that canoes should pay under £20. In the rest of counties the majority (39.4%) think that the same vessel category should pay £25. The majority of respondents (43.9%) agree that canoes should pay under £20. Nonetheless, differences amongst counties are significant.

County	How much do you think Canoes paying £25.86 should pay for a year's toll, compared to the figures for 2009/10?				
	Under £20	£25	£30	£35	Over £40
Norfolk	49.3%	33.1%	14.1%	2.7%	0.8%
Suffolk	41.1%	37.7%	15.9%	4.6%	0.7%
Any other County	36.6%	39.4%	16.7%	4.4%	2.8%
<b>Total</b>	43.9%	35.9%	15.2%	3.6%	1.4%

2.1.2 For **Category 2** (i.e. 5m<sup>2</sup> Dinghy paying £43.60), the analysis indicates that there is no significant association ( $\chi^2 = 9.503$ ,  $P > 0.05$ ) between the County of residence and the amount of money respondents think that 5m<sup>2</sup> Dinghies should pay for a year's toll. Thus, responses are not statistically different amongst counties. The observed differences are likely to be due to random.

The majority of respondents in the Norfolk and Suffolk areas (34.4% and 37.1% respectively) think that 5m<sup>2</sup> Dinghies should pay £35 whereas the majority of respondents in other counties (32.4%) tend to think that they should pay £45. In general terms, however, the majority of respondents (32.3%) thinks 5m<sup>2</sup> Dinghies should pay £35. Observe that the percentage of respondents choosing the "Under £35" and "£45" categories are not that dissimilar from those choosing "£35" (29.2% and 28.8% respectively).

[N = 980]

**How much do you think 5m<sup>2</sup> Dinghies paying £43.60 should pay for a year's toll, compared to the figures for 2009/10?**

County	Under £35	£35	£45	£50	Over £50
Norfolk	29.9%	34.4%	27.1%	6.5%	2.2%
Suffolk	26.5%	37.1%	27.2%	7.9%	1.3%
Any other County	29.4%	26.9%	32.2%	8.8%	2.8%
<b>Total</b>	29.2%	32.3%	28.8%	7.4%	2.2%

2.1.3 For **Category 3** (i.e. 5m<sup>2</sup> Motor Boat paying £87.20), the analysis indicates that there is no significant association ( $\chi^2 = 12.117$ ,  $P > 0.05$ ) between the County of residence and the amount of money surveyed people think that 5m<sup>2</sup> Motor Boats should pay for a year's toll. Thus, as in the previous case responses are not statistically different amongst counties and the observed differences are likely to be due to random.

The majority of respondents in all areas (45.2%) agree that 5m<sup>2</sup> Motor Boats should pay £90. Notice that Suffolk respondents show the lowest percentage in this category (only 35.3% vs. 45.9% in Norfolk and 48.7% in the rest of counties). Additionally, Suffolk respondents show a fairly similar percentage for categories "£70" and "£90" (32.7% and 35.3% respectively).

[N = 969]

**How much do you think 5m<sup>2</sup> Motor Boats paying £87.20 should pay for a year's toll, compared to the figures for 2009/10?**

County	Under £70	£70	£90	£100	Over £100
Norfolk	13.3%	21.6%	45.9%	15.6%	3.6%
Suffolk	12.7%	32.7%	35.3%	14.7%	4.7%
Any other County	12.1%	21.0%	48.7%	15.05	3.2%
<b>Total</b>	12.8%	23.1%	45.2%	15.3%	3.6%

2.1.4 For **Category 4** (i.e. 18m<sup>2</sup> Auxiliary Yacht paying £130.56), the analysis indicates that there is no significant association ( $\chi^2 = 10.718$ ,  $P > 0.05$ ) between the County of residence and the amount of money surveyed people think that 18m<sup>2</sup> Auxiliary Yachts should pay for a year's toll. Therefore, responses are not statistically different amongst counties and the observed differences are likely to be due to random.

The majority of respondents (46.8%) in all areas agree that Auxiliary Yachts should pay £135. Notice that responses from Norfolk and Suffolk for this category (i.e. "£135") are around 5% lower than in the other counties.

County	How much do you think 18m <sup>2</sup> Auxiliary Yachts paying £130.56 should pay for a year's toll, compared to the figures for 2009/10?				
	Under £120	£120	£135	£160	Over £160
Norfolk	9.5%	20.6%	45.2%	15.7%	9.1%
Suffolk	7.3%	19.3%	44.0%	22.7%	6.7%
Any other County	6.1%	18.8%	50.6%	14.3%	10.2%
<b>Total</b>	8.0%	19.8%	46.8%	16.4%	9.1%

2.1.5 For **Category 5** (i.e. 11m<sup>2</sup> Motor Boat paying £127.88), the analysis indicates that there is in fact, a statistical association ( $\chi^2 = 17.984$ ,  $P < 0.05$ ) between the County of residence and the amount of money surveyed people think that 11m<sup>2</sup> Motor Boats should pay for a year's toll. This indicates that even though the majority of respondents in all areas (48.8%) agree that this vessel category should pay £130, responses amongst counties differ in a significant statistically way. Notice that Norfolk shows the lowest percentage (45.9%) of respondents indicating £130 as the most adequate fee for this vessel category.

County	How much do you think 11m <sup>2</sup> Motor Boats paying £127.88 should pay for a year's toll, compared to the figures for 2009/10?				
	Under £110	£110	£130	£150	Over £150
Norfolk	4.8%	11.5%	45.9%	24.1%	13.7%
Suffolk	1.3%	18.1%	48.3%	22.1%	10.1%
Any other County	6.1%	11.5%	53.7%	20.4%	8.3%
<b>Total</b>	4.7%	12.5%	48.8%	22.6%	11.4%

2.1.6 For **Category 6** (i.e. 25m<sup>2</sup> Motor Boat paying £222.80), the analysis indicates that there is a significant statistical association ( $\chi^2 = 38.267$ ,  $P < 0.001$ ) between the County of residence and the amount of money surveyed people think that 25m<sup>2</sup> Motor Boats should pay for a year's toll. Therefore, even though the majority of respondents in all areas (34.4%) agree that this vessel category should pay £230, responses between counties differ statistically amongst counties.

Observe that Norfolk shows again the lowest percentage (29.6%) of respondents thinking that £230 is the most adequate fee for this vessel category. In addition, it can be noticed (within Norfolk respondents) that there is a difference of only 1% with those feeling 25m<sup>2</sup>

motor boats should pay £250, whereas in other counties this difference is between 6% and 20.7%.

[N = 976]		<b>How much do you think 25m<sup>2</sup> Motor Boats paying £222.80 should pay for a year's toll, compared to the figures for 2009/10?</b>				
<b>County</b>	<b>Under £210</b>	<b>£210</b>	<b>£230</b>	<b>£250</b>	<b>Over £250</b>	
Norfolk	7.4%	8.7%	29.6%	28.6%	25.6%	
Suffolk	6.0%	14.7%	32.0%	26.0%	21.3%	
Any other County	8.4%	14.6%	42.7%	22.0%	12.4%	
<b>Total</b>	7.5%	11.6%	34.4%	26.0%	20.6%	

2.1.7 For **Category 7** (i.e. 38m<sup>2</sup> Motor Boat paying £310.94), the analysis indicates that there also is a significant statistical association ( $\chi^2 = 31.194$ ,  $P < 0.001$ ) between the County of residence and the amount of money surveyed people think that 38m<sup>2</sup> Motor Boats should pay for a year's toll. This indicates that results are not likely to be due to random.

Notice that this time Norfolk shows the larger percentage of people (40.1%) thinking that this vessel category shall pay the highest toll (i.e. over £350). A similar trend is followed by people living in Suffolk (where 32.7% answered chose the same amount as before). In the rest of the counties the amount of people with the same idea is around 15% lower (i.e. 25.2%) than in Norfolk. Notice that in these latter counties, the majority of respondents (33.1%) think that this vessel category should pay £320. In general, the vast majority of respondents (34.0%) feel that the adequate amount for this vessel category is over £350.

[N = 983]		<b>How much do you think 38m<sup>2</sup> Motor Boats paying £310.94 should pay for a year's toll, compared to the figures for 2009/10?</b>				
<b>County</b>	<b>Under £300</b>	<b>£300</b>	<b>£320</b>	<b>£350</b>	<b>Over £350</b>	
Norfolk	7.3%	6.9%	22.4%	23.2%	40.1%	
Suffolk	6.5%	14.4%	24.2%	22.2%	32.7%	
Any other County	9.5%	9.8%	33.1%	22.4%	25.2%	
<b>Total</b>	7.9%	9.1%	26.2%	22.8%	34.0%	

## Item 6

2.2 The analysis of **Question 6** has been subdivided into eight different categories, each of them corresponding to a priority proposed by the Broads Authority.

2.2.1 For **Category 1** (i.e. Dredging), the analysis indicates that there is not significant association ( $\chi^2 = 11.249$ ,  $P > 0.05$ ) between the County of residence and the classification of Dredging as a priority. Therefore, the observed differences are likely to be due to random.

In all the counties, the majority of surveyed people (61.0%) think that Dredging is a high priority. Observe that the lower percentage of people (59.3%) agreeing with the previous classification is seen in Norfolk (NB Suffolk is behind just by 0.6%).

[N = 1,109] County	What do you think the priorities should be for future expenditure and activity? (Dredging)			
	Not a priority	Low priority	Medium priority	High priority
Norfolk	0.3%	6.7%	33.6%	59.3%
Suffolk	1.7%	4.1%	34.3%	59.9%
Any other County	0.8%	3.1%	31.8%	64.3%
<b>Total</b>	0.7%	5.1%	33.1%	61.0%

2.2.2 For **Category 2** (i.e. Free 24-hours moorings), the analysis indicates that there is a significant association ( $\chi^2 = 25.511$ ,  $P < 0.001$ ) between the County of residence and the classification of Free 24-hour Mooring as a priority. In Norfolk and Suffolk, the majority of respondents (38.3% and 39.4% respectively) think that this is a medium priority. In the rest of the counties, 46.7% of the respondents classified this action as a high priority.

The majority of respondents (38.0%) classified the free 24-hours mooring as a high priority. However, the percentage is fairly similar (37.3%) to that indicating that it is a medium priority.

[N = 1,125] County	What do you think the priorities should be for future expenditure and activity? (Free 24-hours moorings)			
	Not a priority	Low priority	Medium priority	High priority
Norfolk	5.7%	23.4%	38.3%	32.6%
Suffolk	5.1%	18.3%	39.4%	37.1%
Any other County	5.4%	13.0%	34.8%	46.7%
<b>Total</b>	5.5%	19.2%	37.3%	38.0%

2.2.3 For **Category 3** (i.e. Facilities at moorings), the analysis indicates that there is a significant association ( $\chi^2 = 12.773$ ,  $P < 0.05$ ) between the County of residence and the classification

of Facilities at moorings as a priority. In Suffolk, respondents voted in the same proportion (30.6%) to classify this option as low and medium priority. Notice that Suffolk was the county with the lowest percentage of people classifying this action as medium priority.

In the rest of the counties, there was a trend to classify it as a medium priority. The majority of respondents (35.4%) classified having facilities at mooring as a medium priority. This percentage is followed in frequency by the classification as medium priority (29.2%).

[N = 1,118]				
County	What do you think the priorities should be for future expenditure and activity? (Facilities at moorings)			
	Not a priority	Low priority	Medium priority	High priority
Norfolk	11.8%	31.2%	35.3%	21.7%
Suffolk	15.9%	30.6%	30.6%	22.9%
Any other County	9.1%	25.3%	37.9%	27.7%
<b>Total</b>	11.5%	29.2%	35.4%	23.9%

2.2.4 For **Category 4** (i.e. Improved water quality), the analysis indicates that there is no significant association ( $\chi^2 = 2.821$ ,  $P > 0.05$ ) between the County of residence and the classification of improved water quality as a priority. The observed differences are likely to be due to random.

The majority of respondents (45.1%) classified this option as a high priority. However, the percentage of people classifying this action as medium priority is fairly similar (39.9%). The classification of improved water quality as a high priority is fairly homogeneous amongst counties.

[N = 1,107]				
County	What do you think the priorities should be for future expenditure and activity? (Improved water quality)			
	Not a priority	Low priority	Medium priority	High priority
Norfolk	3.8%	11.6%	39.2%	45.4%
Suffolk	4.7%	7.7%	42.6%	45.0%
Any other County	4.7%	10.8%	39.9%	44.6%
<b>Total</b>	4.2%	10.7%	39.9%	45.1%

2.2.5 For **Category 5** (i.e. Bank side tree and scrub clearance), the analysis indicates that there is no significant association ( $\chi^2 = 3.335$ ,  $P > 0.05$ ) between the County of residence and the classification of banks side tree and scrub clearance as a priority. The observed differences are likely to be due to random.

The majority of respondents (43.0%) classified this option as a medium priority. Norfolk was the county with the lowest percentage of people (41.0%) classifying this action as medium priority. Observe that the proportion of respondents seems to be fairly similar within each of the categories.

[N = 1,121]				
County	What do you think the priorities should be for future expenditure and activity? (Bank side tree and scrub clearance)			
	Not a priority	Low priority	Medium priority	High priority
Norfolk	4.8%	18.0%	41.0%	36.2%
Suffolk	4.6%	19.7%	44.5%	31.2%
Any other County	4.4%	18.6%	45.5%	31.5%
<b>Total</b>	4.6%	18.5%	43.0%	33.9%

2.2.6 For **Category 6** (i.e. Patrolling), the analysis indicates that there is no significant association ( $\chi^2 = 6.975$ ,  $P > 0.05$ ) between the County of residence and the classification of patrolling as a priority. The observed differences are likely to be due to random.

In general, there is a clear trend (46.1% chose this option) towards the classification of patrolling as a medium priority. Notice that this classification is more evident in Suffolk (51.1%) than in any other county. The lowest percentage (42.5%) is observed outside the Norfolk-Suffolk region.

[N = 1,113]				
County	What do you think the priorities should be for future expenditure and activity? (Patrolling)			
	Not a priority	Low priority	Medium priority	High priority
Norfolk	4.7%	22.3%	46.8%	26.3%
Suffolk	4.6%	18.4%	51.1%	25.9%
Any other County	4.2%	20.6%	42.5%	32.8%
<b>Total</b>	4.5%	21.1%	46.1%	28.3%

2.2.7 For **Category 7** (i.e. Enforcement of byelaws), the analysis indicates that there is no significant association ( $\chi^2 = 2.281$ ,  $P > 0.05$ ) between the County of residence and the

classification of the Enforcement of byelaws as a priority. The majority of respondents (43.3%) classified this action as a medium priority. The trend towards this classification is fairly clear. However, the observed differences are likely to be due to random.

Suffolk showed the largest percentage of respondents (47.0%) classifying that this action as a medium priority. The lowest percentage (42.4%) was observed in Norfolk.

[N = 1,111]				
County	What do you think the priorities should be for future expenditure and activity? (Enforcement of byelaws)			
	Not a priority	Low priority	Medium priority	High priority
Norfolk	4.8%	18.8%	42.4%	34.0%
Suffolk	3.0%	16.7%	47.0%	33.3%
Any other County	4.1%	17.6%	43.0%	35.3%
<b>Total</b>	4.3%	18.1%	43.3%	34.3%

2.2.8 Finally, in **Category 8** (i.e. Access for small crafts), the analysis indicates that there is a significant association ( $\chi^2 = 50.363$ ,  $P < 0.001$ ) between the County of residence and the classification of the access for small crafts as a priority. The majority of respondents (39.1%) classified this action as a medium priority. However, the majority of Norfolk respondents (36.0%) classified it as a high priority. It is worth mentioning that the percentage of Norfolk respondents (35.5%) classifying this action as a medium priority is fairly similar to the previously mentioned.

Counties outside the Norfolk-Suffolk area showed the largest percentage of respondents (43.6%) classifying that this action as a medium priority. In these counties, and in Suffolk, the second main classification was “Low priority”.

[N = 1,107]				
County	What do you think the priorities should be for future expenditure and activity? (Access for small crafts)			
	Not a priority	Low priority	Medium priority	High priority
Norfolk	8.0%	20.5%	35.5%	36.0%
Suffolk	6.0%	28.0%	41.7%	24.4%
Any other County	9.7%	31.5%	43.6%	15.2%
<b>Total</b>	8.2%	25.2%	39.1%	27.5%

## Section 4: Perception on the performance of the Authority

### Item 7

3.1 The analysis of **Question 7** indicates that there is a significant statistical association ( $\chi^2 = 28.881$ ,  $P < 0.001$ ) between the County of residence and the perception of the respondents regarding the Authority's performance in terms of value for money [VFM]. The majority of respondents (40.9%) perceive the performance of the Authority as "Good". A fairly close percentage (35.0%) classified the performance as "Fair". The lowest percentage (2.1%) amongst the whole sample just did not know how this performance is.

In Norfolk, the majority of respondents (37.5%) think that the performance of the Authority is "Fair". However, a fairly similar percentage (35.5%) perceives it as "Good". In the rest of the counties, the majority of respondents perceive the performance of the Authority as "Good".

County	What do you think of the Authority's performance in terms of offering toll payers good value for money?				
	Don't know	Poor	Fair	Good	Excellent
Norfolk	2.5%	18.4%	37.5%	35.5%	6.1%
Suffolk	2.9%	15.5%	31.6%	46.0%	4.0%
Any other County	1.1%	10.0%	32.6%	47.4%	8.9%
<b>Total</b>	2.1%	15.3%	35.0%	40.9%	6.7%

### Item 8

3.2 The analysis of **Question 8** has been subdivided into seven different categories, each of them corresponding to a different statement about the performance of the Authority

3.2.1 In **Category 1** (i.e. The Authority listens to the concerns of toll payers) the results of the test indicate that there is no significant statistical association ( $\chi^2 = 11.432$ ,  $P > 0.05$ ) between the County of residence and the perception of respondents regarding the Authority's willingness to listen to the concern of toll payers. Therefore, the observed differences are likely to be due to random.

The majority of respondents (33.2%) tend to agree with the statement. A fairly close percentage (30.2%) indicated that neither agree nor disagree with the statement.

Suffolk respondents showed a different trend. In Suffolk, the majority of respondents (35.8%) neither agrees nor disagrees with the statement. A fairly close percentage (31.2%) tends to agree that the Authority listens to the concerns of toll payers.

[N = 1,122]      **Please indicate to what extent you agree with the statement: The Authority listens to the concerns of toll payers**

County	Don't know	Strongly disagree	Tend to disagree	Neither agree or disagree	Tend to agree	Strongly agree
Norfolk	8.7%	7.7%	17.4%	29.2%	31.7%	5.3%
Suffolk	6.9%	7.5%	14.5%	35.8%	31.2%	4.0%
Any other County	11.0%	5.2%	13.2%	29.2%	36.4%	5.0%
<b>Total</b>	9.2%	6.9%	15.6%	30.2%	33.2%	5.0%

3.2.2 In **Category 2** (i.e. The Authority lets toll payers know what it is doing) the test indicates that there is no significant statistical association ( $\chi^2 = 8.501$ ,  $P > 0.05$ ) between the County of residence and the perception of respondents regarding the Authority letting know toll payers what it is doing. The observed differences are likely to be due to random.

The majority of respondents (63.0%) tend to agree with the statement. The trend towards the selection of this response is very clear and fairly homogeneous amongst counties. The lowest percentage of respondents tending to agree with the statement was observed in Norfolk (61.0%).

[N = 1,133]      **Please indicate to what extent you agree with the statement: The Authority lets toll payers know what it is doing**

County	Don't know	Strongly disagree	Tend to disagree	Neither agree or disagree	Tend to agree	Strongly agree
Norfolk	0.8%	2.2%	6.1%	14.2%	61.0%	15.7%
Suffolk	1.7%	1.1%	8.5%	11.4%	64.2%	13.1%
Any other County	1.1%	1.6%	5.8%	9.9%	65.7%	15.9%
<b>Total</b>	1.1%	1.9%	6.4%	12.4%	63.0%	15.4%

3.2.3 In **Category 3** (i.e. I know the full range of services that the Authority offers) the test indicates that there is no significant statistical association ( $\chi^2 = 5.414$ ,  $P > 0.05$ ) between the County of residence and the perception of respondents regarding the knowledge about the full range of services offered by the Authority. The observed differences are likely to be due to random.

The majority of respondents (38.4%) tend to agree with the statement. The trend towards the selection of this response is fairly homogeneous amongst counties. The lowest number of respondents tending to agree with the statement was observed in Suffolk (36.2%).

[N = 1,121]

**Please indicate to what extent you agree with the statement: I know the full range of services that the Authority offers**

County	Don't know	Strongly disagree	Tend to disagree	Neither agree or disagree	Tend to agree	Strongly agree
Norfolk	7.2%	4.3%	16.4%	27.4%	38.5%	6.3%
Suffolk	9.8%	3.4%	13.2%	29.9%	36.2%	7.5%
Any other County	5.6%	5.0%	15.8%	27.8%	39.4%	6.4%
<b>Total</b>	7.0%	4.4%	15.7%	27.9%	38.4%	6.5%

3.2.4 In **Category 4** (i.e. I know how to contact the Authority when I need help or information) the test indicates that there is no significant statistical association ( $\chi^2 = 7.228$ ,  $P > 0.05$ ) between the County of residence and the perception of respondents regarding the knowledge about how to ask for help or information to the Authority. The observed differences are likely to be due to random.

The majority of respondents (55.9%) tend to agree with the statement. The trend towards the selection of this option is very clear, and is fairly homogeneous amongst counties. The lowest number of respondents tending to agree with the statement was observed in Suffolk (53.4%).

[N = 1,130]

**Please indicate to what extent you agree with the statement: I know how to contact the Authority when I need help or information**

County	Don't know	Strongly disagree	Tend to disagree	Neither agree or disagree	Tend to agree	Strongly agree
Norfolk	1.7%	0.7%	3.2%	5.9%	56.1%	32.4%
Suffolk	2.8%	1.1%	1.7%	9.1%	53.4%	31.8%
Any other County	1.9%	1.4%	3.6%	4.9%	56.9%	31.3%
<b>Total</b>	1.9%	1.0%	3.1%	6.1%	55.9%	31.9%

3.2.5 In **Category 5** (i.e. The Authority provides a good response when I request help or information) the results indicate that there is no significant statistical association ( $\chi^2 = 11.657$ ,  $P > 0.05$ ) between the County of residence and the perception of respondents

regarding the Authority’s performance when asked for help or information. The observed differences are likely to be due to random.

The majority of respondents (28.6%) neither agree nor disagree with the statement. However, the percentage of people tending to agree with the statement is fairly similar (27.9%). The trend towards the selection of this option is not very clear. Whereas in Norfolk the majority of respondents (29.5%) neither agree nor disagree with the statement; in Suffolk and the rest of the counties, the majority of respondents (31.8% and 29.0% respectively) tend to agree with it.

[N = 1,118]

**Please indicate to what extent you agree with the statement: The Authority provides a good response when I request help or information**

County	Don't know	Strongly disagree	Tend to disagree	Neither agree or disagree	Tend to agree	Strongly agree
Norfolk	21.0%	3.1%	5.6%	29.5%	26.1%	14.7%
Suffolk	17.9%	3.5%	5.8%	28.3%	31.8%	12.7%
Any other County	19.8%	2.2%	2.8%	27.3%	29.0%	18.9%
<b>Total</b>	20.1%	2.9%	4.7%	28.6%	27.9%	15.7%

3.2.6 In **Category 6** (i.e. The Authority is remote and impersonal) the results indicate that there is no significant statistical association ( $\chi^2 = 9.027$ ,  $P > 0.05$ ) between the County of residence and the perception of respondents that the Authority is remote and impersonal. The observed differences are likely to be due to random.

The majority of respondents (29.9%) neither agree nor disagree with the statement. However, the percentage of people tending to disagree with the statement is fairly similar (28.4%). The distribution of responses within each of the possible options is rather homogeneous.

[N = 1,110]

**Please indicate to what extent you agree with the statement: The Authority is remote and impersonal**

County	Don't know	Strongly disagree	Tend to disagree	Neither agree or disagree	Tend to agree	Strongly agree
Norfolk	5.7%	15.0%	27.5%	28.7%	18.2%	4.8%
Suffolk	5.8%	9.8%	28.9%	32.4%	16.8%	6.4%
Any other County	6.2%	16.3%	29.5%	30.6%	13.5%	3.9%
<b>Total</b>	5.9%	14.5%	28.4%	29.9%	16.5%	4.8%

3.2.7 Finally, in **Category 7** (i.e. The Authority does a good job) the results indicate that there is a significant statistical association ( $\chi^2 = 20.315$ ,  $P < 0.05$ ) between the County of residence and the perception of respondents regarding the Authority's performance. The majority of respondents (51.2%) tend to agree with the statement.

The trend towards the selection of this option is very clear in all counties, and homogenous to some extent. However, in Norfolk the percentage of respondents tending to agree with the statement is almost 10% lower than in other counties (i.e. 47.7% vs. 57.5%).

[N = 1,106]

**Please indicate to what extent you agree with the statement: The Authority does a good job**

County	Don't know	Strongly disagree	Tend to disagree	Neither agree or disagree	Tend to agree	Strongly agree
Norfolk	2.2%	3.8%	10.5%	25.4%	47.7%	10.5%
Suffolk	1.8%	5.9%	10.6%	18.8%	50.0%	12.9%
Any other County	1.1%	3.4%	6.5%	17.8%	57.5%	13.6%
<b>Total</b>	1.8%	4.0%	9.2%	22.0%	51.2%	11.8%

## V. Results per type of boats (Toll Payers)

### Section 1: Acceptance or rejection of the Null Hypothesis

The null hypothesis [ $H_0$ ] stated that *“The perception of the respondents to each of the items in the questionnaire is independent of the type of the boat(s) owned”*. This hypothesis was represented and tested as follows:

- $TP_P = TP_U = TP_B$

Where:

- $TP_P$  = Toll Payers owning only powered boats
- $TP_U$  = Toll Payers owning only unpowered boats
- $TP_B$  = Toll Payers owning powered and unpowered boats

The hypothesis was tested at the significance level of 0.05 [ $\alpha = 0.05$ ]. The following table summarizes the broad results indicating whether the  $H_0$  was accepted or rejected.

Item	Status of the $H_0$	Item	Status of the $H_0$
1	Accepted	6.4	Rejected
2	Rejected	6.5	Accepted
3	Rejected	6.6	Accepted
4.1	Rejected	6.7	Accepted
4.2	Rejected	6.8	Rejected*
4.3	Accepted	7	Rejected
4.4	Accepted	8.1	Rejected
4.5	Rejected*	8.2	Rejected
4.6	Rejected*	8.3	Accepted
4.7	Rejected	8.4	Accepted
6.1	Rejected	8.5	Accepted
6.2	Rejected*	8.6	Accepted
6.3	Rejected	8.7	Accepted

\* Indicates a strong association between the variables under study.

The  $H_0$  was rejected in 57.7% of the questions. Therefore, the perception of the toll payers and their answers to those particular questions depend on the type of boats owned by the

respondent. Thus, results will vary depending on whether he/she owns a powered, unpowered or both types of boat. The following sections will provide with details of the analysis of each item.

## Section 2: Results related to present charges

### Item 1

1.1 The analysis of **Question 1** indicates that there is no significant statistical association ( $\chi^2 = 5.611$ ,  $P > 0.05$ ) between the type of boat owned (i.e. powered or unpowered) and the perception in the fairness in present charges between small and large boats. This indicates that even though the majority of the surveyed people (54.5%) think that the present charges are fair, the percentage of people amongst categories varies significantly. The observed differences are likely to be due to random.

People with unpowered boats have the lowest perception (47.1%) regarding the fairness of the fees when compared to the other categories. In addition, this was the only category where the majority of respondents (52.9%) perceive the present charges as unfair. Notice that the highest difference in perception is observed within the “Powered” category (i.e. 13.4%)

Category	Do you think the present charges between small and large boats are fair?		Total
	No	Yes	
None	47.4%	52.6%	100%
Powered	43.3%	56.7%	100%
Unpowered	52.9%	47.1%	100%
Both	46.1%	53.9%	100%
<b>Total</b>	45.5%	54.5%	100%

### Item 2

1.2 The analysis of **Question 2** indicates that there is a significant statistical association ( $\chi^2 = 53.323$ ,  $P \leq 0.001$ ) between the type of boat owned and the perception that the amount of money smaller boats should pay when compared to the current toll. Even though the majority of respondents feel that smaller boats should pay the same amount as they do now, this perception is not similar within all the vessel categories.

The majority of respondents with unpowered boats (63.1%) think that smaller boats should pay less than they do now. The difference in proportion with those that feel that smaller boats should pay the same or more is somewhat dramatic (i.e. between 27% and 62%).

In the categories “Powered” and “Both”, the majority of respondents (52.3% and 48.6% respectively) indicated that smaller boats should pay the same as they do now. Those respondents with no boats owned indicated in the exactly same proportion (47.4%) that smaller boats should pay either the same amount or less.

[N = 1,110]				
Category	How much do you think smaller boats should pay compared to the current toll?			Total
	Less	Same	More	
None	47.4%	47.4%	5.3%	100%
Powered	37.0%	52.3%	10.7%	100%
Unpowered	63.1%	35.8%	1.1%	100%
Both	46.9%	48.6%	4.5%	100%
<b>Total</b>	43.2%	48.8%	8.0%	100%

### Item 3

1.3 The analysis of **Question 3** indicates that there also is a significant statistical association ( $\chi^2 = 77.527$ ,  $P \leq 0.001$ ) between the type of boat owned and the perception about the amount of money larger boats should pay when compared to the current toll. The vast majority of surveyed people (54.6%) think larger boats should pay the same current toll. Notice, however, that a large percentage (31.2%) thinks that larger boats shall pay more than the current toll. The conducted test indicates that differences in the response are statistically significant.

In this occasion, the lowest percentages of respondents indicating that larger boats should pay the same amount as they do now were observed within the “None” and “Unpowered” categories (36.8% and 38.8% respectively). Observe that again, those respondents with no boats chose options “Same” and “More” in the same proportion (i.e. 36.8%). The majority of respondents with unpowered boats (56.9%) think that larger boats should pay more than the current toll. Conversely, a fairly similar proportion of respondents with either powered or both types of boats (58.5% and 57.1% respectively) think that they should pay the same amount.

[N = 1,114]				
Category	How much do you think larger boats should pay compared to the current toll?			Total
	Less	Same	More	
None	26.3%	36.8%	36.8%	100%
Powered	15.9%	58.5%	25.6%	100%
Unpowered	4.3%	38.8%	56.9%	100%
Both	16.4%	57.1%	26.6%	100%
<b>Total</b>	14.2%	54.6%	31.2%	100%

## Section 3: Results related to future charges & priorities

### Item 4

2.1 The analysis of **Question 4** has been subdivided into seven different vessel categories.

2.1.1 For **Category 1** (i.e. Canoe paying £25.86), the analysis indicates that there is a significant statistical association ( $\chi^2 = 54.639$ ,  $P < 0.05$ ) between the type of boat owned and the amount of money surveyed people think canoes should pay for a year's toll. The majority of respondents within the sample (43.9%) indicated that canoes should pay under £20 for a year's toll. However, there are some differences amongst vessel categories.

The majority of respondents with no boats (53.3%) think that canoes should pay £25 for a year's toll. In the rest of categories the majority think that the same vessel category should pay under £20. However, whilst 62.2% of the respondents with unpowered boats chose this option (i.e. "Under £20"), only 37.9% of respondents with powered boats and 48.4% with both types of boats selected the same option. Notice that the difference in the proportion of respondents with powered boats answering "Under £20" and "£25" is just about 1.8%.

[N = 979]		How much do you think Canoes paying £25.86 should pay for a year's toll, compared to the figures for 2009/10?				
Category	Under £20	£25	£30	£35	Over £40	
None	40.0%	53.3%	6.7%	0.0%	0.0%	
Powered	37.9%	36.1%	19.7%	4.8%	1.6%	
Unpowered	62.2%	31.4%	5.2%	0.6%	0.6%	
Both	48.4%	37.9%	9.3%	2.5%	1.9%	
<b>Total</b>	43.9%	35.9%	15.2%	3.6%	1.4%	

2.1.2 For **Category 2** (i.e. 5m<sup>2</sup> Dinghy paying £43.60), the analysis indicates that there is a significant association ( $\chi^2 = 67.023$ ,  $P < 0.05$ ) between the type of boat owned and the amount of money respondents think that 5m<sup>2</sup> Dinghies should pay for a year's toll. Thus, responses are statistically different amongst vessel categories. The test results indicate that the majority of surveyed people (32.3%) think that 5m<sup>2</sup> Dinghies should pay £35.

However, a deeper analysis shows that there are some substantial differences amongst the vessel categories.

The majority of respondents with no boats and with powered ones (50% and 33.2% respectively) feel that 5m<sup>2</sup> Dinghies should pay £45 for a year's toll. Conversely, people with unpowered boats and with both types of them feel that this vessel category should pay under £35 for a year's toll.

[N = 980]

**How much do you think 5m<sup>2</sup> Dinghies paying £43.60 should pay for a year's toll, compared to the figures for 2009/10?**

Category	Under £35	£35	£45	£50	Over £50
None	12.5%	37.5%	50.0%	0.0%	0.0%
Powered	23.7%	30.2%	33.2%	10.2%	2.9%
Unpowered	42.6%	39.1%	16.6%	0.6%	1.2%
Both	38.2%	33.3%	22.4%	4.8%	1.2%
<b>Total</b>	29.2%	32.3%	28.8%	7.4%	2.2%

2.1.3 For **Category 3** (i.e. 5m<sup>2</sup> Motor Boat paying £87.20), the analysis indicates that there is no significant association ( $\chi^2 = 18.644$ ,  $P > 0.05$ ) between the type of boat owned and the amount of money respondents think that 5m<sup>2</sup> Motor Boats should pay for a year's toll. Thus, responses are not statistically different amongst vessel categories, and the observed differences are likely to be due to random.

The majority of respondents (45.2%) agree that 5m<sup>2</sup> Motor Boats should pay £90. Notice that respondents with no boats show the same percentage in this category than in the "£70" one (i.e. 40.0%).

[N = 969]

**How much do you think 5m<sup>2</sup> Motor Boats paying £87.20 should pay for a year's toll, compared to the figures for 2009/10?**

Category	Under £70	£70	£90	£100	Over £100
None	0.0%	40.0%	40.0%	13.3%	6.7%
Powered	13.9%	23.7%	45.4%	14.5%	2.5%
Unpowered	9.8%	20.1%	42.7%	20.1%	7.3%
Both	12.8%	22.4%	47.4%	13.5%	3.8%
<b>Total</b>	12.8%	23.1%	45.2%	15.3%	3.6%

2.1.4 For **Category 4** (i.e. 18m<sup>2</sup> Auxiliary Yacht paying £130.56), the analysis indicates that there is no significant association ( $\chi^2 = 13.559$ ,  $P > 0.05$ ) between the type of boat owned and the amount of money respondents feel that 18m<sup>2</sup> Auxiliary Yachts should pay for a year's

toll. Therefore, responses are not statistically different amongst vessel categories, and the observed differences are likely to be due to random.

The majority of respondents (46.8%) agree that Auxiliary Yachts should pay £135. Notice that responses for this category (i.e. “£135”) are fairly homogeneous amongst the vessel categories. An exception is observed with respondents with no boats where the percentage is much larger than in the other categories (60.0%).

[N = 960]					
How much do you think 18m <sup>2</sup> Auxiliary Yachts paying £130.56 should pay for a year’s toll, compared to the figures for 2009/10?					
Category	Under £120	£120	£135	£160	Over £160
None	6.7%	13.3%	60.0%	20.0%	0.0%
Powered	6.4%	19.0%	48.9%	16.5%	9.3%
Unpowered	11.8%	19.3%	42.2%	18.0%	8.7%
Both	10.8%	24.1%	41.8%	13.9%	9.5%
<b>Total</b>	8.0%	19.8%	46.8%	16.4%	9.1%

2.1.5 For **Category 5** (i.e. 11m<sup>2</sup> Motor Boat paying £127.88), the analysis indicates that there is a strong and significant statistical association ( $\chi^2 = 111.300$ ,  $P < 0.05$ ) between the type of boat owned and the amount of money respondents think that 11m<sup>2</sup> Motor Boats should pay for a year’s toll. This indicates that results are not likely to be due to random.

The majority of respondents (48.8%) agree that this vessel category should pay £130 for a year’s toll. However, this view is not shared by all the respondent categories.

The majority of respondents with unpowered boats (32.3%) think that this vessel category should pay £150; and a similar percentage (31.1%) indicated that they should pay over £150 for a year’s toll. Observe that the largest percentage (54.6%) feeling that 11m<sup>2</sup> Motor Boats should pay £130 comes from respondents with powered boats.

[N = 965]					
How much do you think 11m <sup>2</sup> Motor Boats paying £127.88 should pay for a year’s toll, compared to the figures for 2009/10?					
Category	Under £110	£110	£130	£150	Over £150
None	6.7%	6.7%	53.3%	33.3%	0.0%
Powered	5.1%	14.0%	54.6%	19.5%	6.8%
Unpowered	3.7%	3.1%	29.8%	32.3%	31.1%
Both	3.8%	17.0%	44.7%	23.9%	10.7%
<b>Total</b>	4.7%	12.5%	48.8%	22.6%	11.4%

2.1.6 For **Category 6** (i.e. 25m<sup>2</sup> Motor Boat paying £222.80), the analysis indicates that there is a strong and significant statistical association ( $\chi^2 = 107.800$ ,  $P < 0.001$ ) between the type of boat owned and the amount of money respondents think that 25m<sup>2</sup> Motor Boats should pay for a year's toll. This indicates that results are not likely to be due to random.

The majority of respondents (34.4%) agree that this vessel category should pay £230. However, the majority of respondents with unpowered boats (34.0%) feel that this vessel category should pay more (i.e. £250). The largest percentage is observed amongst those respondents with no boats; however, these are only 10 individuals (out of 1,167).

[N = 976]					
How much do you think 25m <sup>2</sup> Motor Boats paying £222.80 should pay for a year's toll, compared to the figures for 2009/10?					
Category	Under £210	£210	£230	£250	Over £250
None	13.3%	0.0%	66.7%	20.0%	0.0%
Powered	8.5%	13.6%	38.7%	25.1%	14.1%
Unpowered	4.3%	2.5%	16.0%	34.0%	43.2%
Both	6.2%	13.7%	32.3%	22.45	25.5%
<b>Total</b>	7.5%	11.6%	34.3%	26.0%	20.6%

2.1.7 For **Category 7** (i.e. 38m<sup>2</sup> Motor Boat paying £310.94), the analysis indicates that there also is a significant statistical association ( $\chi^2 = 65.205$ ,  $P < 0.001$ ) between the type of boat owned and the amount of money respondents think that 38m<sup>2</sup> Motor Boats should pay for a year's toll. This indicates that results are not likely to be due to random.

The majority of respondents (34.0%) indicated that 38m<sup>2</sup> Motor Boats should pay over £350 for a year's toll. However, this was not the case within all the vessel categories. The majority of respondents with no boats (33.3%) feel that this type of boat should pay strictly £350. On the other hand, the majority of respondents with powered boats (30.1%) indicated that this category should pay £320 for a year's toll. A substantially larger percentage of people with unpowered boats (56.1%) responded that these motor boats should pay over £350. This trend was followed by the majority of respondents with both types of boats (35.6%)

[N = 983]					
How much do you think 38m <sup>2</sup> Motor Boats paying £310.94 should pay for a year's toll, compared to the figures for 2009/10?					
Category	Under £300	£300	£320	£350	Over £350
None	13.3%	20.0%	20.0%	33.3%	13.3%

Powered	8.2%	10.6%	30.1%	22.7%	28.4%
Unpowered	3.0%	3.0%	13.4%	24.4%	56.1%
Both	11.2%	8.1%	24.4%	20.6%	35.6%
<b>Total</b>	<b>7.9%</b>	<b>9.1%</b>	<b>26.2%</b>	<b>22.8%</b>	<b>34.0%</b>

## Item 6

2.2 The analysis of **Question 6** has been subdivided into eight different categories, each of them corresponding to a priority proposed by the Broads Authority.

2.2.1 For **Category 1** (i.e. Dredging), the analysis indicates that there is a significant association ( $\chi^2 = 27.262$ ,  $P \leq 0.001$ ) between the type of boat owned and the classification of Dredging as a priority. This indicates that results are not likely to be due to random.

The majority of surveyed people (61.0%) think that Dredging is a high priority. This vision is shared within each vessel category. The lower percentage of people agreeing with the previous classification (56.9%) is found within the “Unpowered” category.

[N = 1,109] <b>What do you think the priorities should be for future expenditure and activity? (Dredging)</b>				
<b>Category</b>	<b>Not a priority</b>	<b>Low priority</b>	<b>Medium priority</b>	<b>High priority</b>
None	0.0%	0.0%	31.6%	68.4%
Powered	0.4%	4.7%	35.7%	59.1%
Unpowered	1.6%	10.1%	31.4%	56.9%
Both	1.1%	2.2%	24.4%	72.2%
<b>Total</b>	<b>0.7%</b>	<b>5.1%</b>	<b>33.1%</b>	<b>61.0%</b>

2.2.2 For **Category 2** (i.e. Free 24-hours moorings), the analysis indicates that there is a strong significant association ( $\chi^2 = 110.500$ ,  $P < 0.001$ ) between the type of boat owned and the classification of Free 24-hour Mooring as a priority. This indicates that results are not likely to be due to random.

The majority of respondents (38.0%) classified the free 24-hours mooring as a high priority. Notice that a fairly similar percentage of respondents (37.3%) classified this action as a medium priority.

The majority of respondents with unpowered boats (36.2%) think that this is a low priority. A fairly similar percentage of people within the same vessel category (33.5%)

classified this action as a medium priority. Only 16.2% of the respondents with unpowered boats classified free 24-hours mooring as a high priority.

[N = 1,125]				
What do you think the priorities should be for future expenditure and activity? (Free 24-hours moorings)				
Category	Not a priority	Low priority	Medium priority	High priority
None	10.5%	15.8%	31.6%	42.1%
Powered	3.2%	14.2%	37.2%	45.3%
Unpowered	14.1%	36.2%	33.5%	16.2%
Both	5.6%	22.8%	42.2%	29.4%
<b>Total</b>	5.5%	19.2%	37.3%	38.0%

2.2.3 For **Category 3** (i.e. Facilities at moorings), the analysis indicates that there is a significant association ( $\chi^2 = 35.984$ ,  $P < 0.001$ ) between the type of boat owned and the classification of Facilities at moorings as a priority. This indicates that results are not likely to be due to random.

The majority of respondents (35.4%) classified having facilities at moorings as a medium priority. However, there are some differences amongst the vessel categories. The majority of respondents with either unpowered boats or both types of them (39.8% and 33.1% respectively) classified this action as a low priority. Observe that the percentage of people classifying it as a medium priority within this vessel categories is fairly similar (i.e. 37.0% and 29.3% respectively).

[N = 1,118]				
What do you think the priorities should be for future expenditure and activity? (Facilities at moorings)				
Category	Not a priority	Low priority	Medium priority	High priority
None	10.5%	26.3%	31.6%	31.6%
Powered	10.3%	25.6%	36.6%	27.4%
Unpowered	13.3%	39.8%	37.0%	9.9%
Both	14.9%	33.1%	29.3%	22.7%
<b>Total</b>	11.5%	29.2%	35.4%	23.9%

2.2.4 For **Category 4** (i.e. Improved water quality), the analysis indicates that there is a significant association ( $\chi^2 = 35.032$ ,  $P < 0.001$ ) between the type of boat owned and the

classification of improved water quality as a priority. This indicates that results are not likely to be due to random.

The majority of respondents (45.1%) classified the improved water quality as a high priority. This vision is not shared by the majority of respondents with powered boats (43.9%) who think that it is a medium priority. Notice, however, that the percentage of respondents with powered boats classifying it as a high priority (40.9%) is fairly similar to the previously mentioned.

[N = 1,107]				
What do you think the priorities should be for future expenditure and activity? (Improved water quality)				
Category	Not a priority	Low priority	Medium priority	High priority
None	6.2%	6.2%	31.2%	56.2%
Powered	3.7%	11.6%	43.9%	40.9%
Unpowered	3.8%	7.5%	25.8%	62.9%
Both	6.7%	11.2%	39.3%	42.7%
<b>Total</b>	4.2%	10.7%	39.9%	45.1%

2.2.5 For **Category 5** (i.e. Bank side tree and scrub clearance), the analysis indicates that there is no significant association ( $\chi^2 = 6.990$ ,  $P > 0.05$ ) between the type of boat owned and the classification of banks side tree and scrub clearance as a priority. This indicates that the observed differences are likely to be due to random.

The majority of respondents (43.0%) classified this option as a medium priority. This vision was not shared by the majority of respondents with unpowered and both types of boats (41.5% and 41.0% respectively). These segments classified the bank side tree and scrub clearance as a high priority.

[N = 1,121]				
What do you think the priorities should be for future expenditure and activity? (Bank side tree and scrub clearance)				
Category	Not a priority	Low priority	Medium priority	High priority
None	5.6%	27.8%	38.9%	27.8%
Powered	4.3%	19.9%	45.3%	30.4%
Unpowered	3.7%	16.0%	38.8%	41.5%
Both	6.7%	14.0%	38.2%	41.0%
<b>Total</b>	4.6%	18.5%	43.0%	33.9%

2.2.6 For **Category 6** (i.e. Patrolling), the analysis indicates that there is no significant association ( $\chi^2 = 6.990$ ,  $P > 0.05$ ) between the type of boat owned and the classification of patrolling as a priority. This indicates that the observed differences are likely to be due to random.

The majority of respondents (46.1%) classified patrolling as a medium priority. Notice that the percentage of respondents that chose this classification is fairly similar within all the vessel categories, with the exception of those with no boats that show the lowest percentage (38.9%).

[N = 1,113] <b>What do you think the priorities should be for future expenditure and activity? (Patrolling)</b>				
<b>Category</b>	<b>Not a priority</b>	<b>Low priority</b>	<b>Medium priority</b>	<b>High priority</b>
None	5.6%	33.3%	38.9%	22.2%
Powered	4.5%	20.5%	46.3%	28.7%
Unpowered	5.4%	25.4%	44.9%	24.3%
Both	3.4%	18.0%	47.2%	31.5%
<b>Total</b>	4.5%	21.1%	46.1%	28.3%

2.2.7 For **Category 7** (i.e. Enforcement of byelaws), the analysis indicates that there is no significant association ( $\chi^2 = 10.190$ ,  $P > 0.05$ ) between the type of boat owned and the classification of the Enforcement of byelaws as a priority. This indicates that the observed differences are likely to be due to random.

The majority of respondents (43.3%) classified this action as a medium priority. The trend towards this classification is fairly clear considering the whole sample. However, some differences are observed within the vessel categories. For instance, the majority of respondents with no boats (38.9%) indicated that the enforcement of byelaws is a low priority. In addition, the percentage of respondents with unpowered boats (38.1%) is the same for those who identified this action as a medium priority and those who classified it as a high one.

[N = 1,111] <b>What do you think the priorities should be for future expenditure and activity? (Enforcement of byelaws)</b>				
<b>Category</b>	<b>Not a priority</b>	<b>Low priority</b>	<b>Medium priority</b>	<b>High priority</b>
None	5.6%	38.9%	27.8%	27.8%
Powered	4.2%	16.9%	45.7%	33.2%
Unpowered	4.3%	19.6%	40.2%	35.9%

Both	4.5%	19.3%	38.1%	38.1%
<b>Total</b>	4.3%	18.1%	43.3%	34.3%

2.2.8 Finally, in **Category 8** (i.e. Access for small crafts), the analysis indicates that there is a strong significant association ( $\chi^2 = 96.052$ ,  $P < 0.001$ ) between the type of boat owned and the classification of the access for small crafts as a priority. This indicates that the observed differences are unlikely to be due to random.

The majority of respondents (39.1%) classified this action as a medium priority. However, this perception was not shared in all the vessel categories. The vast majority of respondents with unpowered boats (55.4%) classified the access for small crafts as a high priority. This was the only segment in which the majority of respondents exceeded the 50%.

[N = 1,107]

**What do you think the priorities should be for future expenditure and activity? (Access for small crafts)**

Category	Not a priority	Low priority	Medium priority	High priority
None	10.5%	31.6%	36.8%	21.1%
Powered	8.7%	28.9%	41.8%	20.6%
Unpowered	3.8%	11.3%	29.6%	55.4%
Both	10.9%	24.0%	38.3%	26.9%
<b>Total</b>	8.2%	25.2%	39.1%	27.5%

## Section 4: Perception on the performance of the Authority

### Item 7

3.1 The analysis of **Question 7** indicates that there is a significant statistical association ( $\chi^2 = 25.243$ ,  $P < 0.05$ ) between the type of boat owned and the perception of the respondents regarding the Authority's performance in terms of value for money [VFM]. This indicates that the observed differences are unlikely to be due to random.

The majority of respondents (40.9%) perceive the performance of the Authority as "Good". However, the majority of respondents within most of the vessel categories (i.e. "None", "Unpowered" and "Both") classified the Authority's performance as "Fair". The classification of the performance as "Good" was only observed within the segment "Powered". This has to do with the vast majority of respondents having powered boats (i.e. 733 out of 1,167)

[N = 1,127]					
<b>What do you think of the Authority's performance in terms of offering toll payers good value for money?</b>					
Category	Don't know	Poor	Fair	Good	Excellent
None	5.3%	10.5%	47.4%	26.3%	10.5%
Powered	1.8%	12.7%	34.5%	44.6%	6.4%
Unpowered	4.1%	20.7%	34.7%	33.2%	7.3%
Both	1.1%	20.3%	36.3%	35.7%	6.6%
<b>Total</b>	2.1%	15.3%	35.0%	40.9%	6.7%

### Item 8

3.2 The analysis of **Question 8** has been subdivided into seven different categories, each of them corresponding to a different statement about the performance of the Authority

3.2.1 In **Category 1** (i.e. The Authority listens to the concerns of toll payers) the results of the test indicate that there is a significant statistical association ( $\chi^2 = 31.231$ ,  $P < 0.05$ ) between the type of boat owned and the perception of the respondents regarding the Authority's willingness to listen to the concern of toll payers. This indicates that the observed differences are unlikely to be due to random.

The majority of respondents (33.2%) tend to agree with the statement. A fairly close percentage (30.2%) indicated that neither agree nor disagree with the statement. Notice that in the segment “Both”, the majority of respondents (30.3%) neither agree nor disagree with the sentence.

[N = 1,122]

**Please indicate to what extent you agree with the statement: The Authority listens to the concerns of toll payers**

Category	Don't know	Strongly disagree	Tend to disagree	Neither agree or disagree	Tend to agree	Strongly agree
None	5.9%	5.9%	17.6%	11.8%	47.1%	11.8%
Powered	8.9%	5.2%	15.6%	31.9%	33.7%	4.8%
Unpowered	13.2%	6.3%	14.3%	25.4%	34.9%	5.8%
Both	6.5%	14.1%	16.8%	30.3%	28.1%	4.3%
<b>Total</b>	9.2%	6.9%	15.6%	30.2%	33.2%	5.0%

3.2.2 In **Category 2** (i.e. The Authority lets toll payers know what it is doing) the test indicates that there is a significant statistical association ( $\chi^2 = 28.936$ ,  $P < 0.05$ ) between the type of boat owned and the perception of the respondents regarding the Authority letting know toll payers what it is doing. This indicates that the observed differences are unlikely to be due to random.

The majority of respondents (63.0%) tend to agree with the statement. The trend towards the selection of this response is very clear and fairly homogeneous amongst the vessel categories. The lowest percentage of respondents tending to agree with the statement was observed within the “Unpowered” segment (59.5%).

[N = 1,133]

**Please indicate to what extent you agree with the statement: The Authority lets toll payers know what it is doing**

Category	Don't know	Strongly disagree	Tend to disagree	Neither agree or disagree	Tend to agree	Strongly agree
None	0.0%	5.6%	5.6%	11.1%	61.1%	16.7%
Powered	0.7%	1.4%	6.9%	13.4%	63.5%	14.2%
Unpowered	3.7%	2.1%	4.7%	8.9%	59.5%	21.1%
Both	0.0%	3.2%	5.9%	11.9%	64.9%	14.1%
<b>Total</b>	1.1%	1.9%	6.4%	12.4%	63.0%	15.4%

3.2.3 In **Category 3** (i.e. I know the full range of services that the Authority offers) the test indicates that there is no significant statistical association ( $\chi^2 = 13.862$ ,  $P > 0.05$ ) between the type of boat owned and the perception of the respondents regarding the knowledge about the full range of services offered by the Authority. This indicates that the observed differences are likely to be due to random.

The majority of respondents (38.4%) tend to agree with the statement. The majority of respondents within the categories “None” and “Unpowered” (33.3% and 31.2% respectively), however, neither agree nor disagree with the statement.

[N = 1,121] Please indicate to what extent you agree with the statement: I know the full range of services that the Authority offers						
Category	Don't know	Strongly disagree	Tend to disagree	Neither agree or disagree	Tend to agree	Strongly agree
None	5.6%	11.1%	11.1%	33.3%	27.8%	11.1%
Powered	6.4%	4.1%	16.4%	27.1%	40.1%	5.9%
Unpowered	9.0%	4.8%	14.8%	31.2%	30.7%	9.5%
Both	7.7%	4.4%	14.2%	27.3%	41.0%	5.5%
<b>Total</b>	7.0%	4.4%	15.7%	27.9%	38.4%	6.5%

3.2.4 In **Category 4** (i.e. I know how to contact the Authority when I need help or information) the test indicates that there is no significant statistical association ( $\chi^2 = 18.150$ ,  $P > 0.05$ ) between the type of boat owned and the perception of the respondents regarding the knowledge about how to ask for help or information to the Authority. This indicates that the observed differences are likely to be due to random.

The majority of respondents (55.9%) tend to agree with the statement. The trend towards the selection of this option is very clear, and is fairly homogeneous amongst the vessel categories. Observe that the percentage of people tending to agree within the category “None” is substantially higher than the other categories (72.2%). However, the amount of respondents within this segment is considerably low (18 out of 1,121).

[N = 1,130] Please indicate to what extent you agree with the statement: I know how to contact the Authority when I need help or information						
Category	Don't know	Strongly disagree	Tend to disagree	Neither agree or disagree	Tend to agree	Strongly agree
None	0.0%	5.6%	0.0%	0.0%	72.2%	22.2%

Powered	2.2%	0.9%	3.1%	5.7%	57.5%	30.6%
Unpowered	2.6%	1.1%	3.7%	4.8%	51.9%	36.0%
Both	0.5%	0.5%	2.7%	9.7%	52.4%	34.1%
<b>Total</b>	1.9%	1.0%	3.1%	6.1%	55.9%	31.9%

3.2.5 In **Category 5** (i.e. The Authority provides a good response when I request help or information) the results indicate that there is no significant statistical association ( $\chi^2=19.827$ ,  $P > 0.05$ ) between the type of boat owned and the perception of the respondents regarding the Authority’s performance when asked for help or information. This indicates that the observed differences are likely to be due to random.

The majority of respondents (28.6%) neither agree nor disagree with the statement. However, the percentage of people tending to agree with the statement is fairly similar (27.9%). The majority of respondents within the vessel categories “None” and “Powered” (38.9% and 30.1%), however, tend to agree with the statement.

[N = 1,118] Please indicate to what extent you agree with the statement: The Authority provides a good response when I request help or information						
Category	Don't know	Strongly disagree	Tend to disagree	Neither agree or disagree	Tend to agree	Strongly agree
None	16.7%	5.6%	0.0%	16.7%	38.9%	22.2%
Powered	19.8%	3.0%	3.9%	26.7%	30.1%	16.5%
Unpowered	23.3%	3.2%	6.3%	31.2%	21.7%	14.3%
Both	18.5%	1.6%	7.1%	34.8%	24.5%	13.6%
<b>Total</b>	20.1%	2.9%	4.7%	28.6%	27.9%	15.7%

3.2.6 In **Category 6** (i.e. The Authority is remote and impersonal) the results indicate that there is no significant statistical association ( $\chi^2 = 8.649$ ,  $P > 0.05$ ) between the type of boat owned and the perception of the respondents that the Authority is remote and impersonal. This indicates that the observed differences are likely to be due to random.

The majority of respondents (29.9%) neither agree nor disagree with the statement. The percentage of people tending to disagree with the statement is fairly similar (28.4%). The distribution of responses within each of the possible options is rather homogeneous. Notice that the majority of respondents within the segment “Unpowered” tend to disagree with the statement.

[N = 1,110]      **Please indicate to what extent you agree with the statement: The Authority is remote and impersonal**

Category	Don't know	Strongly disagree	Tend to disagree	Neither agree or disagree	Tend to agree	Strongly agree
None	5.6%	16.7%	16.7%	33.3%	27.8%	0.0%
Powered	5.7%	13.8%	29.6%	30.3%	15.5%	5.1%
Unpowered	6.4%	17.0%	28.7%	26.1%	18.1%	3.7%
Both	6.1%	14.9%	24.3%	32.0%	17.7%	5.0%
<b>Total</b>	5.9%	14.6%	28.4%	29.9%	16.5%	4.8%

3.2.7 Finally, in **Category 7** (i.e. The Authority does a good job) the results indicate that there is no significant statistical association ( $\chi^2 = 24.039$ ,  $P > 0.05$ ) between the type of boat owned and the perception of the respondents regarding the Authority's performance. This indicates that the observed differences are likely to be due to random.

The majority of respondents (51.2%) tend to agree with the statement. The trend towards the selection of this option is fairly clear in all the vessel categories, and homogenous to some extent. Notice that the proportion of respondents within the "None" category, tending to agree and neither agreeing nor disagreeing with the statement is the same (i.e. 38.9%).

[N = 1,106]      **Please indicate to what extent you agree with the statement: The Authority does a good job**

Category	Don't know	Strongly disagree	Tend to disagree	Neither agree or disagree	Tend to agree	Strongly agree
None	0.0%	11.1%	0.0%	38.9%	38.9%	11.1%
Powered	1.9%	3.3%	8.7%	20.5%	53.4%	12.2%
Unpowered	3.2%	3.2%	10.2%	23.5%	46.0%	13.9%
Both	0.0%	6.7%	11.2%	24.7%	48.9%	8.4%
<b>Total</b>	1.8%	4.0%	9.2%	22.0%	51.2%	11.8%

## VI. Results per size of boats (Toll Payers)

### Section 1: Acceptance or rejection of the Null Hypothesis

The null hypothesis [ $H_0$ ] stated that *“The perception of the respondents to each of the items in the questionnaire is independent of the size of the boat(s) owned”*. This hypothesis was represented and tested as follows:

- $TP_S = TP_M = TP_L = TP_C$

Where:

- $TP_S$  = Toll Payers with small-sized boats
- $TP_M$  = Toll Payers with medium-sized boats
- $TP_L$  = Toll Payers large-sized boats
- $TP_C$  = Toll Payers with a combination of boat sizes

The hypothesis was tested at the significance level of 0.05 [ $\alpha = 0.05$ ]. The following table shows the broad results indicating whether the  $H_0$  was accepted or rejected.

Item	Status of the $H_0$	Item	Status of the $H_0$
1	Rejected	6.4	Rejected
2	Rejected	6.5	Accepted
3	Rejected	6.6	Accepted
4.1	Rejected	6.7	Accepted
4.2	Rejected	6.8	Rejected*
4.3	Rejected	7	Accepted
4.4	Accepted	8.1	Rejected
4.5	Rejected*	8.2	Accepted
4.6	Rejected*	8.3	Accepted
4.7	Rejected	8.4	Accepted
6.1	Rejected	8.5	Accepted
6.2	Rejected*	8.6	Accepted
6.3	Rejected	8.7	Accepted

\* Indicates a strong association between the variables under study.

The  $H_0$  was rejected in 57.7% of the questions. Therefore, the perception of the toll payers and their answers to those particular questions depend on the size of the boat(s) owned by the

respondent. Thus, results will vary depending on whether the respondent has a small, large or medium boat or a combination of them.

## Section 2: Results related to present charges

### Item 1

1.1 The analysis of **Question 1** indicates that there is a significant statistical association ( $\chi^2 = 29.368$ ,  $P < 0.001$ ) between the size of the boat owned (i.e. small, medium or large) and the perception in the fairness in present charges between small and large boats. The observed differences are unlikely to be due to random.

The majority of respondents (54.5%) find the present charges fair. However, when analyzing each of the vessel size categories it can be seen that the majority of respondents with small boats and with a combination of sizes (58.6% and 52.2% respectively) do not find them fair.

Category	Do you think the present charges between small and large boats are fair?		Total
	No	Yes	
None	47.4%	52.6%	100%
Small	58.6%	41.4%	100%
Medium	43.7%	56.3%	100%
Large	36.0%	64.0%	100%
Combined	52.2%	47.8%	100%
<b>Total</b>	45.5%	54.5%	100%

### Item 2

1.2 The analysis of **Question 2** indicates that there is a significant strong statistical association ( $\chi^2 = 147.200$ ,  $P < 0.001$ ) between the size of the boat owned and the perception that the amount of money smaller boats should pay when compared to the current toll. Thus, the observed differences are unlikely to be due to random.

The majority of respondents (48.8%) think that smaller boats should pay the same as the current toll. However, the majority of respondents with small, medium and combined sizes of boats (68.6%, 48.9%, and 50.4% respectively) feel that smaller boats should pay less than the current toll. Notice that the largest percentage of people (68.8%) agreeing with one option is

found within the small boat owners that feel that smaller boats should pay less than the current toll.

Notice as well the large percentages shown in option “Less” for small boat owners, and “Same” for large boat owners (68.6% and 61.8% respectively). People with no boats are distributed in the same proportion between the “Less” and “Same” options.

[N = 1,110]

Category	How much do you think smaller boats should pay compared to the current toll?			Total
	Less	Same	More	
None	47.4%	47.4%	5.3%	100%
Small	68.6%	31.4%	0.0%	100%
Medium	48.9%	47.2%	3.9%	100%
Large	21.3%	61.8%	16.9%	100%
Combined	50.4%	43.8%	5.8%	100%
<b>Total</b>	<b>43.2%</b>	<b>48.8%</b>	<b>8.0%</b>	<b>100%</b>

**Item 3**

1.3 The analysis of **Question 3** indicates that there also is a significant strong statistical association ( $\chi^2 = 145.500$ ,  $P < 0.001$ ) between the size of the boat owned and the perception about the amount of money larger boats should pay when compared to the current toll. Therefore, the observed differences are unlikely to be due to random.

The majority of surveyed people (54.6%) think larger boats should pay the same current toll. Small boat owners feel that larger boats should pay more than the current toll. This trend is followed to some extent by respondents with medium-sized boats for the percentage of people feeling that larger boats should pay same is fairly similar to that feeling that they should pay more (48.2% and 45.0% respectively). Notice that the highest percentage of respondents feeling that large boats should pay the same as the current toll corresponds to the large boat owners (63.6%).

[N = 1,114]

Category	How much do you think larger boats should pay compared to the current toll?			Total
	Less	Same	More	
None	26.3%	36.8%	36.8%	100%
Small	2.6%	42.9%	54.5%	100%
Medium	6.8%	48.2%	45.0%	100%

Large	22.7%	63.6%	13.7%	100%
Combined	17.1%	57.8%	25.1%	100%
<b>Total</b>	14.2%	54.6%	31.2%	100%

## Section 3: Results related to future charges & priorities

### Item 4

2.1 The analysis of **Question 4** has been subdivided into seven different vessel categories.

2.1.1 For **Category 1** (i.e. Canoe paying £25.86), the analysis indicates that there is a strong significant statistical association ( $\chi^2 = 92.194$ ,  $P < 0.001$ ) between the size of the boat owned and the amount of money surveyed people think canoes should pay for a year's toll. Therefore, the observed differences are unlikely to be due to random.

The majority of respondents within the sample (43.9%) indicated that canoes should pay under £20 for a year's toll. However, this vision is not completely shared in all the vessel categories. The majority of respondents with no boats and with large boats (53.3% and 37.8% respectively) think that canoes should pay £25 for a year's toll. Notice the large proportion of small boat owners feeling that canoes should pay under £20 (67.1%).

[N = 979]					
How much do you think Canoes paying £25.86 should pay for a year's toll, compared to the figures for 2009/10?					
Category	Under £20	£25	£30	£35	Over £40
None	40.0%	53.3%	6.7%	0.0%	0.0%
Small	67.1%	30.7%	2.1%	0.0%	0.0%
Medium	48.3%	33.5%	14.2%	2.7%	1.5%
Large	29.2%	37.8%	25.4%	6.0%	1.6%
Combined	45.1%	37.8%	11.4%	3.7%	2.0%
<b>Total</b>	43.9%	35.9%	15.2%	3.6%	1.4%

2.1.2 For **Category 2** (i.e. 5m<sup>2</sup> Dinghy paying £43.60), the analysis indicates that there is a significant association ( $\chi^2 = 63.347$ ,  $P < 0.001$ ) between the size of the boat owned and the amount of money respondents think that 5m<sup>2</sup> Dinghies should pay for a year's toll. Thus, responses are statistically different amongst vessel categories and unlikely to be due to random.

The test results indicate that the majority of surveyed people (32.3%) think that 5m<sup>2</sup> Dinghies should pay £35. However, a deeper analysis shows that there are some substantial differences amongst the vessel categories.

The majority of respondents with no boats and the majority of those with large ones (50% and 37.5% respectively) feel that 5m<sup>2</sup> Dinghies should pay £45 for a year's toll. The majority of respondents with small and medium boats, however, feel that this vessel category should pay £35 for a year's toll. Only the majority of respondents with a combination of boat sizes (36.3%) felt that this category should pay under £35.

[N = 980]

**How much do you think 5m<sup>2</sup> Dinghies paying £43.60 should pay for a year's toll, compared to the figures for 2009/10?**

Category	Under £35	£35	£45	£50	Over £50
None	12.5%	37.5%	50.0%	0.0%	0.0%
Small	33.6%	46.7%	16.1%	2.9%	0.7%
Medium	31.8%	32.2%	26.1%	7.7%	2.3%
Large	20.3%	27.6%	37.5%	11.4%	3.2%
Combined	36.3%	30.3%	26.3%	5.2%	2.0%
<b>Total</b>	<b>29.2%</b>	<b>32.3%</b>	<b>28.8%</b>	<b>7.4%</b>	<b>2.2%</b>

2.1.3 For **Category 3** (i.e. 5m<sup>2</sup> Motor Boat paying £87.20), the analysis indicates that there is a significant association ( $\chi^2 = 55.422$ ,  $P < 0.05$ ) between the size of the boat owned and the amount of money respondents think that 5m<sup>2</sup> Motor Boats should pay for a year's toll. Thus, the observed differences are unlikely to be due to random.

The majority of respondents (45.2%) agree that 5m<sup>2</sup> Motor Boats should pay £90. This situation was shared in all the segments with the exception of respondents with no boats that showed the same percentage (40.0%) in this category than in the "£70" one.

[N = 969]

**How much do you think 5m<sup>2</sup> Motor Boats paying £87.20 should pay for a year's toll, compared to the figures for 2009/10?**

Category	Under £70	£70	£90	£100	Over £100
None	0.0%	40.0%	40.0%	13.3%	6.7%
Small	20.4%	19.7%	36.5%	18.2%	5.1%
Medium	13.4%	27.1%	44.7%	12.6%	2.3%
Large	5.4%	18.2%	52.4%	20.1%	3.8%
Combined	18.2%	26.0%	47.1%	10.3%	3.7%
<b>Total</b>	<b>12.8%</b>	<b>23.1%</b>	<b>45.2%</b>	<b>15.3%</b>	<b>3.6%</b>

2.1.4 For **Category 4** (i.e. 18m<sup>2</sup> Auxiliary Yacht paying £130.56), the analysis indicates that there is no significant association ( $\chi^2 = 15.971$ ,  $P > 0.05$ ) between the size of the boat owned and the amount of money respondents feel that 18m<sup>2</sup> Auxiliary Yachts should pay for a year's toll. Therefore, the observed differences are likely to be due to random.

The majority of respondents (46.8%) agree that Auxiliary Yachts should pay £135. All vessel categories coincide when choosing the amount of money a 18m<sup>2</sup> Auxiliary Yacht should pay for a year's toll. Notice that the largest percentage of respondents with boats agreeing with this amount is observed within the large boat owners (50.6%).

[N = 960]					
<b>How much do you think 18m<sup>2</sup> Auxiliary Yachts paying £130.56 should pay for a year's toll, compared to the figures for 2009/10?</b>					
Category	Under £120	£120	£135	£160	Over £160
None	6.7%	13.3%	60.0%	20.0%	0.0%
Small	8.5%	16.9%	41.5%	21.5%	11.5%
Medium	9.5%	19.8%	46.6%	16.0%	8.0%
Large	5.4%	19.2%	50.6%	16.7%	8.0%
Combined	9.5%	22.4%	44.0%	13.3%	10.8%
<b>Total</b>	8.0%	19.8%	46.8%	16.4%	9.1%

2.1.5 For **Category 5** (i.e. 11m<sup>2</sup> Motor Boat paying £127.88), the analysis indicates that there is a significant statistical association ( $\chi^2 = 67.885$ ,  $P < 0.05$ ) between the size of the boat owned and the amount of money respondents think that 11m<sup>2</sup> Motor Boats should pay for a year's toll. This indicates that results are not likely to be due to random.

The majority of respondents (48.8%) agree that this vessel category should pay £130 for a year's toll. This view is shared by all the respondent categories. Notice that the largest percentage (58.4%) feeling that 11m<sup>2</sup> Motor Boats should pay £130 comes from respondents with large boats, and the lowest one from small boat owners (36.9%).

[N = 965]					
<b>How much do you think 11m<sup>2</sup> Motor Boats paying £127.88 should pay for a year's toll, compared to the figures for 2009/10?</b>					
Category	Under £110	£110	£130	£150	Over £150
None	6.7%	6.7%	53.3%	33.3%	0.0%
Small	3.1%	3.1%	36.9%	33.8%	23.1%
Medium	6.0%	15.7%	45.5%	20.1%	12.7%
Large	5.2%	14.2%	58.4%	16.8%	5.5%
Combined	3.3%	12.4%	46.3%	26.0%	12.0%
<b>Total</b>	4.7%	12.5%	48.8%	22.6%	11.4%

2.1.6 For **Category 6** (i.e. 25m<sup>2</sup> Motor Boat paying £222.80), the analysis indicates that there is a strong and significant statistical association ( $\chi^2 = 150.800$ ,  $P < 0.001$ ) between the size of the boat owned and the amount of money respondents think that 25m<sup>2</sup> Motor Boats should pay for a year's toll. This indicates that results are not likely to be due to random.

The majority of respondents (34.4%) agree that this vessel category should pay £230. However, the majority of respondents with small and medium-sized boats (40.5% and 33.5% respectively) feel that this vessel category should pay more (i.e. £250 or more). The largest percentage is observed amongst those respondents with no boats; however, these are only 10 individuals (out of 1,167).

[N = 976]					
How much do you think 25m <sup>2</sup> Motor Boats paying £222.80 should pay for a year's toll, compared to the figures for 2009/10?					
Category	Under £210	£210	£230	£250	Over £250
None	13.3%	0.0%	66.7%	20.0%	0.0%
Small	2.3%	1.5%	22.9%	32.8%	40.5%
Medium	4.5%	7.1%	28.2%	33.5%	26.7%
Large	12.9%	19.1%	42.6%	18.2%	7.2%
Combined	6.1%	12.7%	34.3%	24.9%	22.0%
<b>Total</b>	7.5%	11.6%	34.3%	26.0%	20.6%

2.1.7 For **Category 7** (i.e. 38m<sup>2</sup> Motor Boat paying £310.94), the analysis indicates that there also is a strong and significant statistical association ( $\chi^2 = 100.900$ ,  $P < 0.001$ ) between the size of the boat owned and the amount of money respondents think that 38m<sup>2</sup> Motor Boats should pay for a year's toll. This indicates that results are not likely to be due to random.

The majority of respondents (34.0%) indicated that 38m<sup>2</sup> Motor Boats should pay over £350 for a year's toll. However, this was not the case within all the vessel categories. The majority of respondents with no boats (33.3%) feel that this type of boat should pay strictly £350. On the other hand, the majority of respondents with large boats (35.1%) indicated that this category should pay £320 for a year's toll. A substantially larger percentage of people with small boats (52.6%) responded that these motor boats should pay over £350.

[N = 983]

**How much do you think 38m<sup>2</sup> Motor Boats paying £310.94 should pay for a year's toll, compared to the figures for 2009/10?**

Category	Under £300	£300	£320	£350	Over £350
None	13.3%	20.0%	20.0%	33.3%	13.3%
Small	2.2%	1.5%	17.0%	26.7%	52.6%
Medium	4.5%	6.7%	20.5%	22.8%	45.5%
Large	11.9%	12.5%	35.1%	21.3%	19.1%
Combined	9.3%	10.6%	26.4%	22.0%	31.7%
<b>Total</b>	<b>7.9%</b>	<b>9.1%</b>	<b>26.2%</b>	<b>22.8%</b>	<b>34.0%</b>

## Item 6

2.2 The analysis of **Question 6** has been subdivided into eight different categories, each of them corresponding to a priority proposed by the Broads Authority.

2.2.1 For **Category 1** (i.e. Dredging), the analysis indicates that there is a significant association ( $\chi^2 = 40.395$ ,  $P < 0.001$ ) between the size of the boat owned and the classification of Dredging as a priority. This indicates that results are not likely to be due to random.

The majority of surveyed people (61.0%) think that Dredging is a high priority. This vision is shared within each vessel category. The lower percentage of people agreeing with the previous classification (46.7%) is found within the small boat owners.

[N = 1,109]

**What do you think the priorities should be for future expenditure and activity? (Dredging)**

Category	Not a priority	Low priority	Medium priority	High priority
None	0.0%	0.0%	31.6%	68.4%
Small	0.7%	11.8%	40.8%	46.7%
Medium	0.7%	7.6%	33.0%	58.7%
Large	0.6%	3.1%	33.5%	62.8%
Combined	1.1%	1.8%	28.5%	68.6%
<b>Total</b>	<b>0.7%</b>	<b>5.1%</b>	<b>33.1%</b>	<b>61.0%</b>

2.2.2 For **Category 2** (i.e. Free 24-hours moorings), the analysis indicates that there is a strong significant association ( $\chi^2 = 104.300$ ,  $P < 0.001$ ) between the size of the boat owned and the classification of Free 24-hour Mooring as a priority. This indicates that results are not likely to be due to random.

The majority of respondents (38.0%) classified the free 24-hours mooring as a high priority. Notice that a fairly similar percentage of respondents (37.3%) classified this action as a medium priority.

The majority of respondents with small boats (37.0%) think that this is a low priority. A fairly similar percentage of people within the same vessel category (33.8%) classified this action as a medium priority. Only 17.5% of the respondents with unpowered boats classified free 24-hours mooring as a high priority.

The majority of respondents with medium-sized and a combination of boats (36.7% and 39.6% respectively) also differed from the general majority. These segments classified the action under study as a medium priority.

[N = 1,125]				
What do you think the priorities should be for future expenditure and activity? (Free 24-hours moorings)				
Category	Not a priority	Low priority	Medium priority	High priority
None	10.5%	15.8%	31.6%	42.1%
Small	11.7%	37.0%	33.8%	17.5%
Medium	7.7%	19.9%	36.7%	35.7%
Large	1.4%	9.8%	38.0%	50.8%
Combined	4.7%	21.1%	39.6%	34.5%
<b>Total</b>	5.5%	19.2%	37.3%	38.0%

2.2.3 For **Category 3** (i.e. Facilities at moorings), the analysis indicates that there is a significant association ( $\chi^2 = 38.878$ ,  $P < 0.001$ ) between the size of the boat owned and the classification of Facilities at moorings as a priority. This indicates that results are not likely to be due to random.

The majority of respondents (35.4%) classified having facilities at moorings as a medium priority. However, there are some differences amongst the vessel categories. The majority of respondents with small and combined types of boat (38.8% and 34.1% respectively) classified this action as a low priority. Notice that the percentage of people classifying it as a medium priority within this small boat category is fairly similar (i.e. 38.2%). Lastly, the percentage of people with no boats classifying this activity as a medium priority is exactly the same that classified it as a high one (31.6%).

[N = 1,118]				
What do you think the priorities should be for future expenditure and activity?				

Category	activity? (Facilities at moorings)			
	Not a priority	Low priority	Medium priority	High priority
None	10.5%	26.3%	31.6%	31.6%
Small	7.9%	38.8%	38.2%	15.1%
Medium	12.9%	28.5%	38.2%	20.4%
Large	10.4%	22.2%	34.8%	32.6%
Combined	13.6%	34.1%	31.9%	20.5%
<b>Total</b>	<b>11.5%</b>	<b>29.2%</b>	<b>35.4%</b>	<b>23.9%</b>

2.2.4 For **Category 4** (i.e. Improved water quality), the analysis indicates that there is a significant association ( $\chi^2 = 39.985$ ,  $P < 0.001$ ) between the size of the boat owned and the classification of improved water quality as a priority. This indicates that results are not likely to be due to random.

The majority of respondents (45.1%) classified the improved water quality as a high priority. This vision is not shared by the majority of respondents with large boats (45.2%) who think that it is a medium priority. The highest percentage of respondents classifying the improved water quality as a high priority can be found within the small-sized boat owners (65.4%).

[N = 1,107]

Category	What do you think the priorities should be for future expenditure and activity? (Improved water quality)			
	Not a priority	Low priority	Medium priority	High priority
None	6.2%	6.2%	31.2%	56.2%
Small	2.0%	5.9%	26.8%	65.4%
Medium	3.2%	10.3%	41.3%	45.2%
Large	4.8%	13.2%	45.2%	36.8%
Combined	5.9%	11.0%	39.3%	43.8%
<b>Total</b>	<b>4.2%</b>	<b>10.7%</b>	<b>39.9%</b>	<b>45.1%</b>

2.2.5 For **Category 5** (i.e. Bank side tree and scrub clearance), the analysis indicates that there is no significant association ( $\chi^2 = 5.556$ ,  $P > 0.05$ ) between the size of the boat owned and the classification of banks side tree and scrub clearance as a priority. This indicates that the observed differences are likely to be due to random.

The majority of respondents (43.0%) classified this action as a medium priority. This vision was shared by the majority of respondents within all vessel categories.

[N = 1,121] <b>What do you think the priorities should be for future expenditure and activity? (Bank side tree and scrub clearance)</b>				
<b>Category</b>	<b>Not a priority</b>	<b>Low priority</b>	<b>Medium priority</b>	<b>High priority</b>
None	5.6%	27.8%	38.9%	27.8%
Small	6.5%	16.2%	42.9%	34.4%
Medium	4.5%	17.9%	45.1%	32.5%
Large	3.8%	20.5%	42.2%	33.4%
Combined	4.7%	17.0%	42.0%	36.2%
<b>Total</b>	<b>4.6%</b>	<b>18.5%</b>	<b>43.0%</b>	<b>33.9%</b>

2.2.6 For **Category 6** (i.e. Patrolling), the analysis indicates that there is no significant association ( $\chi^2 = 9.293$ ,  $P > 0.05$ ) between the size of the boat owned and the classification of patrolling as a priority. This indicates that the observed differences are likely to be due to random.

The majority of respondents (46.1%) classified patrolling as a medium priority. Notice that the percentage of respondents that chose this classification is fairly similar within all the vessel categories, with the exception of those with no boats that show the lowest percentage (38.9%). The highest percentage of people classifying this action as a medium priority is observed within the small-sized boat category (49.7%).

[N = 1,113] <b>What do you think the priorities should be for future expenditure and activity? (Patrolling)</b>				
<b>Category</b>	<b>Not a priority</b>	<b>Low priority</b>	<b>Medium priority</b>	<b>High priority</b>
None	5.6%	33.3%	38.9%	22.2%
Small	4.6%	23.5%	49.7%	22.2%
Medium	5.1%	21.8%	46.5%	26.6%
Large	4.5%	19.1%	47.2%	29.2%
Combined	3.6%	20.8%	42.7%	32.8%
<b>Total</b>	<b>4.5%</b>	<b>21.1%</b>	<b>46.1%</b>	<b>28.3%</b>

2.2.7 For **Category 7** (i.e. Enforcement of byelaws), the analysis indicates that there is no significant association ( $\chi^2 = 12.821$ ,  $P > 0.05$ ) between the size of the boat owned and the classification of the Enforcement of byelaws as a priority. This indicates that the observed differences are likely to be due to random.

The majority of respondents (43.3%) classified this action as a medium priority. The majority of respondents with no boats (38.9%) indicated that the enforcement of byelaws

is a low priority. Conversely, the majority of respondents with combination of boats (39.6%) classified this action as a high priority.

[N = 1,111]

**What do you think the priorities should be for future expenditure and activity? (Enforcement of byelaws)**

Category	Not a priority	Low priority	Medium priority	High priority
None	5.6%	38.9%	27.8%	27.8%
Small	3.3%	19.6%	44.4%	32.7%
Medium	4.8%	16.1%	46.3%	32.8%
Large	4.2%	18.1%	45.1%	32.6%
Combined	4.4%	18.1%	37.8%	39.6%
<b>Total</b>	<b>4.3%</b>	<b>18.1%</b>	<b>43.3%</b>	<b>34.3%</b>

2.2.8 Finally, in **Category 8** (i.e. Access for small crafts), the analysis indicates that there is a strong significant association ( $\chi^2 = 152.900$ ,  $P < 0.001$ ) between the size of the boat owned and the classification of the access for small crafts as a priority. This indicates that the observed differences are unlikely to be due to random.

The majority of respondents (39.1%) classified this action as a medium priority. However, this perception was not shared in all the vessel categories. The vast majority of respondents with small boats (60.0%) classified the access for small crafts as a high priority.

[N = 1,107]

**What do you think the priorities should be for future expenditure and activity? (Access for small crafts)**

Category	Not a priority	Low priority	Medium priority	High priority
None	10.5%	31.6%	36.8%	21.1%
Small	2.6%	8.4%	29.0%	60.0%
Medium	6.1%	18.8%	43.4%	31.7%
Large	11.0%	36.0%	41.4%	11.6%
Combined	10.0%	27.7%	37.3%	25.1%
<b>Total</b>	<b>8.2%</b>	<b>25.2%</b>	<b>39.1%</b>	<b>27.5%</b>

## Section 4: Perception on the performance of the Authority

### Item 7

3.1 The analysis of **Question 7** indicates that there is no significant statistical association ( $\chi^2 = 20.771$ ,  $P > 0.05$ ) between the size of the boat owned and the perception of the respondents regarding the Authority's performance in terms of value for money [VFM]. This indicates that the observed differences are likely to be due to random.

The majority of respondents (40.9%) perceive the performance of the Authority as "Good". However, the majority of respondents with none and large boats (47.4% and 39.2% respectively) classified the Authority's performance as "Fair". Notice that amongst the respondents with large boats the percentage of people classifying the performance as "Good" (36.0%) is fairly similar to the previously mentioned.

[N = 1,127]					
What do you think of the Authority's performance in terms of offering toll payers good value for money?					
Category	Don't know	Poor	Fair	Good	Excellent
None	5.3%	10.5%	47.4%	26.3%	10.5%
Small	3.1%	20.6%	22.8%	36.2%	6.2%
Medium	2.2%	14.1%	32.1%	43.6%	8.0%
Large	1.7%	12.0%	34.4%	45.3%	6.7%
Combined	1.8%	18.0%	39.2%	36.0%	5.0%
<b>Total</b>	2.1%	15.3%	35.0%	40.9%	6.7%

### Item 8

3.2 The analysis of **Question 8** has been subdivided into seven different categories, each of them corresponding to a different statement about the performance of the Authority

3.2.1 In **Category 1** (i.e. The Authority listens to the concerns of toll payers) the results of the test indicate that there is a significant statistical association ( $\chi^2 = 33.583$ ,  $P < 0.05$ ) between the size of the boat owned and the perception of the respondents regarding the Authority's willingness to listen to the concern of toll payers. This indicates that the observed differences are unlikely to be due to random.

The majority of respondents (33.2%) tend to agree with the statement. A fairly close percentage (30.2%) indicated that neither agree nor disagree with the statement. Notice that the majority of respondents with large boats (34.6%) neither agree nor disagree with the sentence.

[N = 1,122]

**Please indicate to what extent you agree with the statement: The Authority listens to the concerns of toll payers**

Category	Don't know	Strongly disagree	Tend to disagree	Neither agree or disagree	Tend to agree	Strongly agree
None	5.9%	5.9%	17.6%	11.8%	47.1%	11.8%
Small	10.1%	7.6%	12.7%	30.4%	35.4%	3.8%
Medium	10.5%	3.9%	15.1%	28.2%	36.4%	5.9%
Large	8.6%	5.3%	14.1%	34.6%	31.9%	5.5%
Combined	8.2%	11.7%	19.6%	27.8%	29.2%	3.6%
<b>Total</b>	9.2%	6.9%	15.6%	30.2%	33.2%	5.0%

3.2.2 In **Category 2** (i.e. The Authority lets toll payers know what it is doing) the test indicates that there is no significant statistical association ( $\chi^2 = 31.087$ ,  $P > 0.05$ ) between the size of the boat owned and the perception of the respondents regarding the Authority letting know toll payers what it is doing. This indicates that the observed differences are likely to be due to random.

The majority of respondents (63.0%) tend to agree with the statement. The trend towards the selection of this response is very clear and fairly homogeneous amongst the vessel categories. The lowest percentage of respondents tending to agree with the statement was observed within the owners of large boats (60.1%).

[N = 1,133]

**Please indicate to what extent you agree with the statement: The Authority lets toll payers know what it is doing**

Category	Don't know	Strongly disagree	Tend to disagree	Neither agree or disagree	Tend to agree	Strongly agree
None	0.0%	5.6%	5.6%	11.1%	61.1%	16.7%
Small	2.5%	1.3%	8.3%	7.6%	65.6%	14.6%
Medium	0.8%	1.9%	3.6%	13.9%	64.1%	15.9%
Large	1.4%	0.5%	9.2%	12.5%	60.1%	16.3%
Combined	0.4%	3.6%	4.6%	13.2%	64.4%	13.9%
<b>Total</b>	1.1%	1.9%	6.4%	12.4%	63.0%	15.4%

3.2.3 In **Category 3** (i.e. I know the full range of services that the Authority offers) the test indicates that there is no significant statistical association ( $\chi^2 = 20.911$ ,  $P > 0.05$ ) between the size of the boat owned and the perception of the respondents regarding the knowledge about the full range of services offered by the Authority. This indicates that the observed differences are likely to be due to random.

The majority of respondents (38.4%) tend to agree with the statement. The majority of respondents with no boats (33.3%) however, neither agree nor disagree with the statement.

[N = 1,121] Please indicate to what extent you agree with the statement: I know the full range of services that the Authority offers						
Category	Don't know	Strongly disagree	Tend to disagree	Neither agree or disagree	Tend to agree	Strongly agree
None	5.6%	11.1%	11.1%	33.3%	27.8%	11.1%
Small	9.0%	3.9%	11.0%	33.5%	38.7%	3.9%
Medium	8.7%	3.2%	16.2%	24.6%	38.8%	8.4%
Large	5.6%	5.3%	16.7%	30.3%	36.9%	5.3%
Combined	6.1%	4.3%	16.8%	25.1%	40.5%	7.2%
<b>Total</b>	7.0%	4.4%	15.7%	27.9%	38.4%	6.5%

3.2.4 In **Category 4** (i.e. I know how to contact the Authority when I need help or information) the test indicates that there is no significant statistical association ( $\chi^2 = 15.625$ ,  $P > 0.05$ ) between the size of the boat owned and the perception of the respondents regarding the knowledge about how to ask for help or information to the Authority. This indicates that the observed differences are likely to be due to random.

The majority of respondents (55.9%) tend to agree with the statement. The trend towards the selection of this option is very clear, and is fairly homogeneous amongst the vessel categories. Notice that the highest percentage of people tending to agree with the statement (72.2%) is observed within the group with no boats. The amount of respondents within this segment is nonetheless, considerably low (18 out of 1,121).

[N = 1,130]

**Please indicate to what extent you agree with the statement: I know how to contact the Authority when I need help or information**

Category	Don't know	Strongly disagree	Tend to disagree	Neither agree or disagree	Tend to agree	Strongly agree
None	0.0%	5.6%	0.0%	0.0%	72.2%	22.2%
Small	1.9%	1.3%	2.6%	5.8%	57.4%	31.0%
Medium	2.9%	0.6%	3.2%	5.8%	57.0%	30.4%
Large	2.2%	0.8%	3.8%	6.5%	55.9%	30.8%
Combined	0.7%	1.1%	2.5%	6.4%	53.0%	36.3%
<b>Total</b>	1.9%	1.0%	3.1%	6.1%	55.9%	31.9%

3.2.5 In **Category 5** (i.e. The Authority provides a good response when I request help or information) the results indicate that there is no significant statistical association ( $\chi^2 = 18.562$ ,  $P > 0.05$ ) between the size of the boat owned and the perception of the respondents regarding the Authority's performance when asked for help or information. This indicates that the observed differences are likely to be due to random.

The majority of respondents (28.6%) neither agree nor disagree with the statement. However, the percentage of people tending to agree with the statement is fairly similar (27.9%). The majority of respondents with none and with large boats (38.9% and 31.6% respectively) however, tend to agree with the statement.

[N = 1,118]

**Please indicate to what extent you agree with the statement: The Authority provides a good response when I request help or information**

Category	Don't know	Strongly disagree	Tend to disagree	Neither agree or disagree	Tend to agree	Strongly agree
None	16.7%	5.6%	0.0%	16.7%	38.9%	22.2%
Small	21.0%	5.1%	3.2%	31.2%	24.8%	14.6%
Medium	20.7%	2.3%	5.6%	28.0%	26.3%	17.1%
Large	20.9%	2.5%	4.7%	24.3%	31.6%	15.9%
Combined	18.1%	2.5%	5.0%	34.2%	26.0%	14.2%
<b>Total</b>	20.1%	2.9%	4.7%	28.6%	27.9%	15.7%

3.2.6 In **Category 6** (i.e. The Authority is remote and impersonal) the results indicate that there is no significant statistical association ( $\chi^2 = 12.291$ ,  $P > 0.05$ ) between the size of the boat

owned and the perception of the respondents that the Authority is remote and impersonal. This indicates that the observed differences are likely to be due to random.

The majority of respondents (29.9%) neither agree nor disagree with the statement. The percentage of people tending to disagree with the statement is fairly similar (28.4%). None of the categories' majorities had a difference in perception.

[N = 1,110] **Please indicate to what extent you agree with the statement: The Authority is remote and impersonal**

Category	Don't know	Strongly disagree	Tend to disagree	Neither agree or disagree	Tend to agree	Strongly agree
None	5.6%	16.7%	16.7%	33.3%	27.8%	0.0%
Small	5.8%	14.9%	30.5%	32.5%	11.0%	5.2%
Medium	5.6%	12.3%	27.8%	28.8%	19.9%	5.6%
Large	5.6%	15.6%	29.0%	30.6%	15.0%	4.2%
Combined	6.5%	15.5%	27.8%	28.5%	17.0%	4.7%
<b>Total</b>	5.9%	14.6%	28.4%	29.9%	16.5%	4.8%

3.2.7 Finally, in **Category 7** (i.e. The Authority does a good job) the results indicate that there is no significant statistical association ( $\chi^2 = 29.014$ ,  $P > 0.05$ ) between the size of the boat owned and the perception of the respondents regarding the Authority's performance. This indicates that the observed differences are likely to be due to random.

The majority of respondents (51.2%) tend to agree with the statement. The trend towards the selection of this option is fairly clear in all the vessel categories, and homogenous to some extent. Observe that the proportion of respondents with no boats tending to agree and neither agreeing nor disagreeing with the statement is the same (i.e. 38.9%).

[N = 1,106] **Please indicate to what extent you agree with the statement: The Authority does a good job**

Category	Don't know	Strongly disagree	Tend to disagree	Neither agree or disagree	Tend to agree	Strongly agree
None	0.0%	11.1%	0.0%	38.9%	38.9%	11.1%
Small	1.9%	5.2%	9.0%	18.1%	54.2%	11.6%
Medium	2.3%	3.6%	8.9%	19.7%	49.5%	16.1%
Large	1.4%	2.5%	7.8%	24.6%	51.3%	12.3%
Combined	1.8%	5.2%	12.2%	22.1%	52.0%	6.6%
<b>Total</b>	1.8%	4.0%	9.2%	22.0%	51.2%	11.8%





## VII. Summary of the results and biases

The results of the conducted tests for assessing the representativeness of the sample show that the sample used for the present study fairly represents the conditions of the population of toll payers. However, bear in mind that because of the lack of some important information not all the toll payers were included in the Chi Square test for Goodness of Fit. Therefore, there is a chance that the sample does not represent with 100% of accuracy the characteristics of the entire population.

This situation does not undermine the presented results at all; nor does it decrease their veracity. It only means that if it happens that the sample is not an accurate representation of the population, these results cannot be generalized to the latter. Under this scenario, even though the obtained results are a good indicator of the perception of toll payers, they can only be strictly attributed to those individuals within the sample.

This study demonstrates that the perception of toll payers regarding the fairness of the present charges between small and large boats is dependent on the geographical location of the respondent and the size of the boat he/she owns. However, the same variable is independent of the type of boat (i.e. powered or unpowered) toll payers own.

Biases are likely to be observed when the results of the conducted tests show that the variables are mutually dependent on each other. In this study, three possible causes of bias were investigated: a) geographical location, b) type of boat, and c) size of boat. Consequently, based on the results presented in the previous paragraph, the perception of toll payers regarding the fairness of the present charges that is likely to be biased by their county of residence and the size of the boat they own.

The perception of toll payers about the amount of money small and large boats should pay for a year's toll is mutually dependent on their geographical location, the size and type of boats their own.

The perception of toll payers on the amount of money canoes, 11m<sup>2</sup>, 25m<sup>2</sup> and 38m<sup>2</sup> motor boats should pay for a year's toll is mutually dependent of the geographical location of the respondent

and the type and size of the boats owned by him/her. Conversely, the perception about the amount of money 5m<sup>2</sup> motor boats should pay for a year's toll does not depend on these factors.

The perception of toll payers on the amount of money 5m<sup>2</sup>, dinghies should pay for a year's toll is mutually dependent of the type and size of the boats owned by the responder; however, is dependent of the geographical location. Similarly, the perception of toll payers on the amount of money 18m<sup>2</sup> auxiliary yachts should pay for a year's toll is mutually dependent of the size of the boats owned by the respondent but dependent of their geographical location and the type of boat owned.

The perception of toll payers on the prioritisation of dredging, free 24-hours mooring, facilities at moorings, improved water quality and access for small crafts are mutually dependent with the type and size of the boats owned by the respondents. Only the free 24-hours moorings, facilities at moorings and access for small crafts were also dependent from the geographical location. The prioritisation of dredging, and improved water quality is independent from the geographical location of the respondent. The rest of the proposed activities related to future expenditure are independent from the geographical location, type and size of the boats owned by the respondents.

The perception of toll payers about the Authority's performance in terms of value for money depends on the geographical location of the respondent and the type of boat owned. Thus, special attention should be paid to these biases before making decisions. This perception is, on the other hand, independent from the size of the boat owned.

The agreement of toll payers with the statement "The Authority listens to the concerns of toll payers" is dependent from the type and size of the boats owned by the respondents, but independent from the county they live in.

The agreement of toll payers with the statement "The Authority lets toll payers know what it is doing" is dependent from the type of boat owned but independent from the geographical location and the size of the boats of the respondent.

The agreement of toll payers with the following four statements: a) "I know the full range of services that the Authority offers"; b) "I know how to contact the Authority when I need help or information"; c) "The Authority provides a good response when I request for help or information"; and d) "The Authority is remote and impersonal" is independent from the

geographical location of the respondents, and the type and size of boats owned by them. Therefore, biases due to these factors are not likely to be observed.

The agreement of toll payers with the last statement: “The Authority does a good job” is dependent from the geographical location but independent from the type and size of boat owned by the respondents. Therefore, biases are only expected from one of the three possible factors.

## Conclusions

This study suggests that the Questionnaire under analysis is a fair reflection of the points of view of the general population of registered toll payers. Nevertheless, there is some uncertainty to this respect due the lack of specific information about the whole population. This uncertainty however, does not undermine the obtained results or decreases their validity. It only indicates that the perception of the sample might be somewhat different to that from the population. Therefore, more precise information about the toll payers is required to decrease the levels of uncertainty found in the current study.

Within all the county categories, there is a propensity to own large powered boats rather than medium or small ones. This trend has its lowest percentage in Norfolk (i.e. 47% vs. 48% in Suffolk and 57% in the rest of the counties). Conversely, there is a propensity to own small unpowered boats. In this case both Norfolk and Suffolk share the lowest percentage when compared with the other counties (i.e. 63% vs. 70%).

There is strong evidence suggesting that there are some biases in the responses of toll payers. These biases are related to the geographical location, the type of boat owned (i.e. powered, unpowered or both) and the sizes of these boats (i.e. small, medium or large). Consequently, special attention needs to be paid to those responses where possible biases are likely to be found, when interpreting the results of the questionnaire.

Nonetheless, there is enough statistical evidence to support that a fair amount of the responses given by the surveyed people are not biased by any of the previously mentioned factors. The responses, used with care, provide the Authority with valuable feedback on its performance, views on present and future charges and priorities for future expenditure.