



Putting the water into waterways

Water Resources Strategy

Summary of Consultation Responses



Canal &
River Trust

Report published
March 2015

Consultation Information

Consultation on the Water Resources Strategy for the Canal & River Trust (the Trust) began on 9 September 2014 and ran for eight weeks ending on 4 November 2014.

The consultation outlined the key issues that we wish to understand and manage better, and sought the views of all our customers and users to help influence the work we do in the future. The canal network is unique in the water supply sector due to its large geographical range and its age. The water supply companies in England and Wales undertake the most similar activities and operations to us and as such we aspire to work as closely as possible to water industry guidance and best practice whilst having no statutory obligation to do so.

In the consultation we specifically asked for views on 15 questions and we invited responses by online survey, email or post.

Introduction – why we need a Water Resources Strategy

Water is vital to the Trust as without enough, navigation would not be possible, the natural environment and canal side/boating businesses would suffer and the experience for many of our different towpath visitors (such as walkers, anglers and cyclists) would also be much poorer. The Trust has a vision of living waterways that transform places and enrich lives. To ensure we deliver this vision, and the six strategic goals that accompany it, it is vital that the Trust delivers a long term security of water supply to our canal network. To achieve this and building on previous work, we are developing a Water Resources Strategy (WRS) to allow us to plan successfully for the future.

The primary reason we have to carefully manage water resources is that the Trust needs a reliable supply of water to meet the various demands of an inland waterway network. These demands include visible uses of water, such as each time a lock is emptied to allow a boat to pass up or down a lock flight (there are nearly 1,600 locks across the network, which are used around 4 million times each year). However, there are also unseen demands for water, such as seepage and leakage through the canal bed (which may have a clay lining that was originally put in place over two centuries ago), use by vegetation and evaporation.

Due to the size and diversity of the waterway network we manage, we have split it up into 'hydrological units'. These units allow us to manage water resources more effectively and help us with strategic analysis.

Within the consultation we set out the overarching vision for how the Trust intends to manage water resources across the network through to 2050. We discussed 'levels of service' and their indicative costs, considered future pressures on water supply and demand, detailed our proposed actions over the next five years and looked at a variety of other water resource related issues.

Responses received: a summary

We received a total of 169 responses to the consultation, 154 via the online survey and 15 by email.

69 of respondents identified themselves by name and 49 by organisation or if they were an individual.

Respondents were asked to select one of the following options for 13 of the 15 questions:

- a) Strongly agree,*
- b) Agree,*
- c) Neither agree, nor disagree,*
- d) Disagree,*
- e) Strongly disagree*

Additional comments could be added to each question if needed.

Two of the questions (numbers 8 and 15) were open-ended and asked if there were additional future water resource pressures that the Trust should consider (8) and other water resource issues that the strategy should address (15).

Figure 1, below, summarises the responses received for all questions and the following pages provide a summary of responses for each question, along with our views on those responses and what further action we plan to take, where appropriate.

Next steps

A final Water Resources Strategy, taking account of the consultation responses provided (and summarised in this document) will be produced and published by the Trust during 2015.

Water Resources Strategy Consultation: Summary of all responses

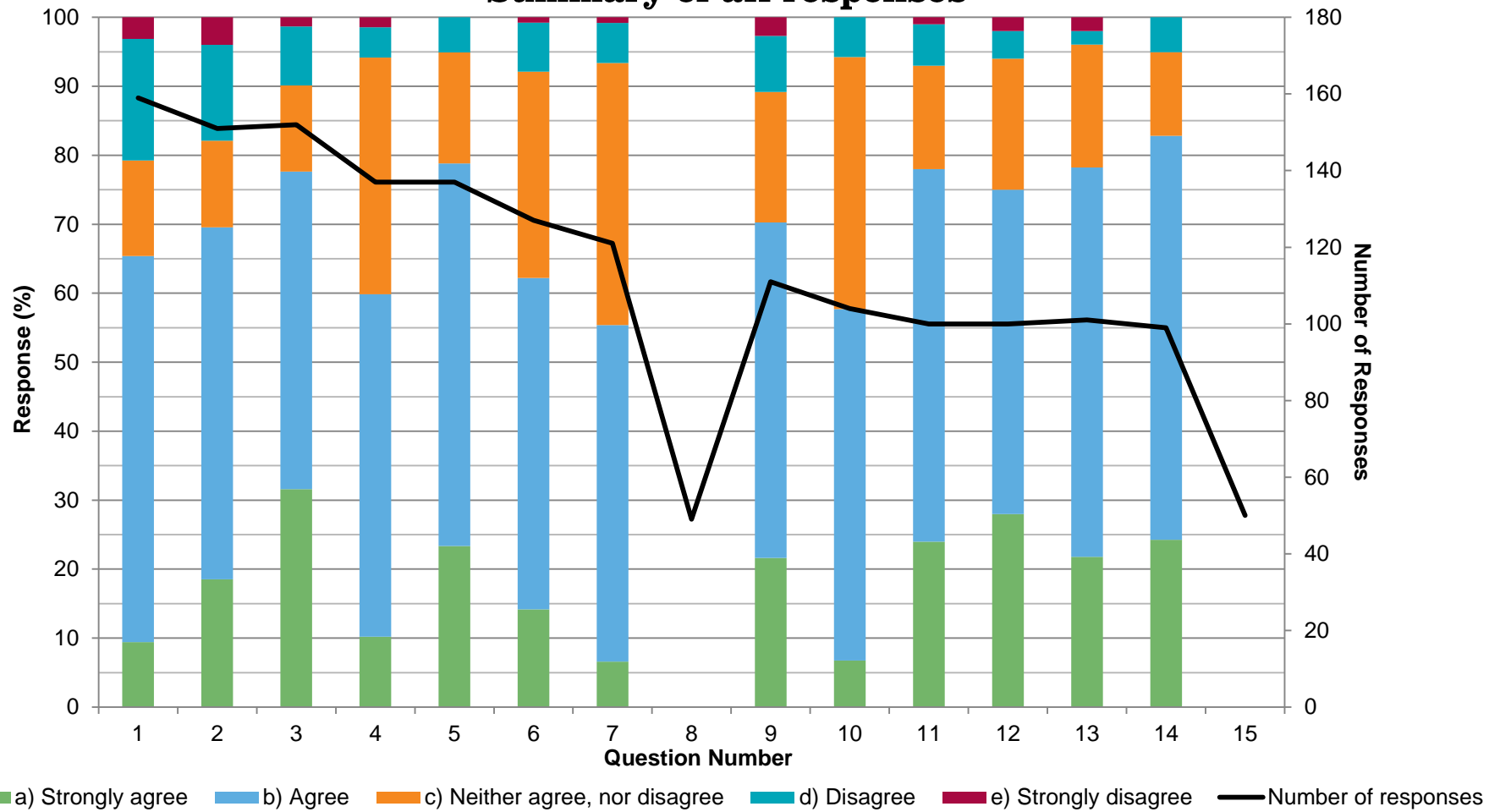


Figure 1

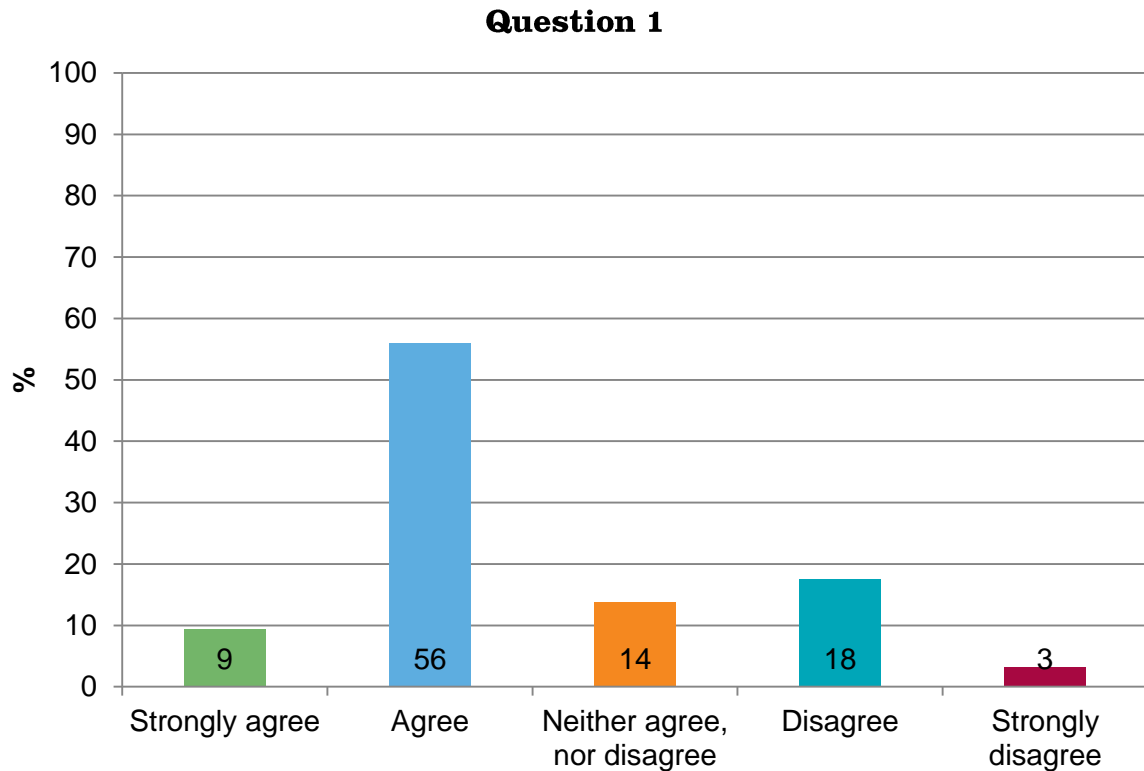
Summary of responses for each question

The following pages provide a summary of the responses received, including a graph, along with any key points. Against each question, the action that the Trust will take is presented in a text box.

Question 1

Do you think these definitions for level of service and navigational drought will be understood?

95% of respondents replied to this question and the range of responses is shown below.



There were 39 written comments to this question.

In the written responses there was positive endorsement from 8 respondents. These were mainly water industry professionals (e.g. water companies, CIWEM) who are familiar with working with similar definitions in their water resource planning activities.

There was however, significant criticism of the definition of “*navigational drought*” and the concept of “*hydrological units*” from boaters and other canal users (31 written responses).

There was a frequently expressed concern that the definition of a “*navigational drought*” was too complicated to be readily understood by the majority of canal users and used as a practical indicator during droughts, for example one respondent stated:

- *“I am not sure where 5 hours and 7 days come from other than as a definition, i.e. it is not related to the way boaters operate.”*

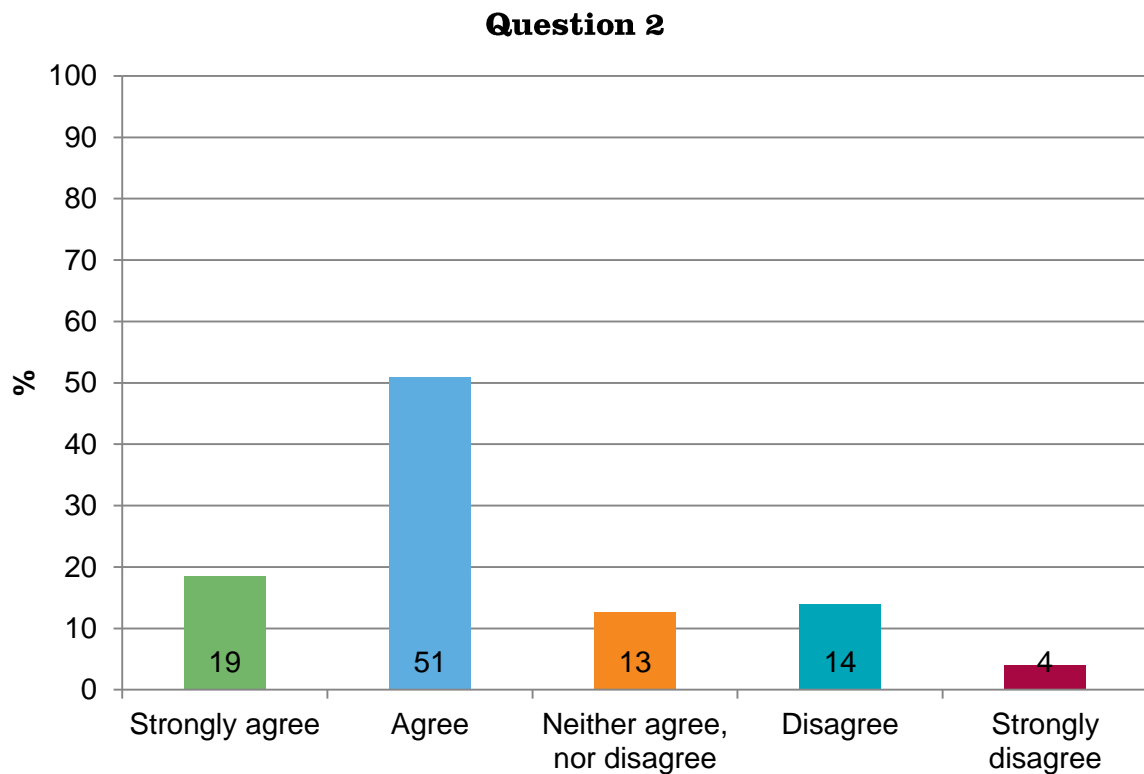
Our response:

We will work with stakeholders to try to improve the understanding of the definition of a “navigational drought” and consider if a single definition will fulfil both water resources planning and stakeholder requirements.

Question 2

Do you agree that the Trust should maintain the same aspirational minimum level of service of a 1 in 20 year drought and that this should apply across the network?

89% of respondents replied to this question and the range of responses is shown below.



There were 33 written comments to this question.

There was general agreement that at a 1:20 year level of service was appropriate. However several written responses demonstrated that the concept of an average return period for drought restrictions was not fully understood.

A significant number of the written responses questioned the wisdom of applying the 1:20 year level of service to the whole network, with the suggestion that a lower standard should be applied to less well used parts of the network and that this might be appropriate for restorations too.

The concept of an “aspirational minimum” level of service was questioned by a few respondents who thought it more appropriate to state a minimum acceptable standard and an aspirational standard to define a likely range of levels of service.

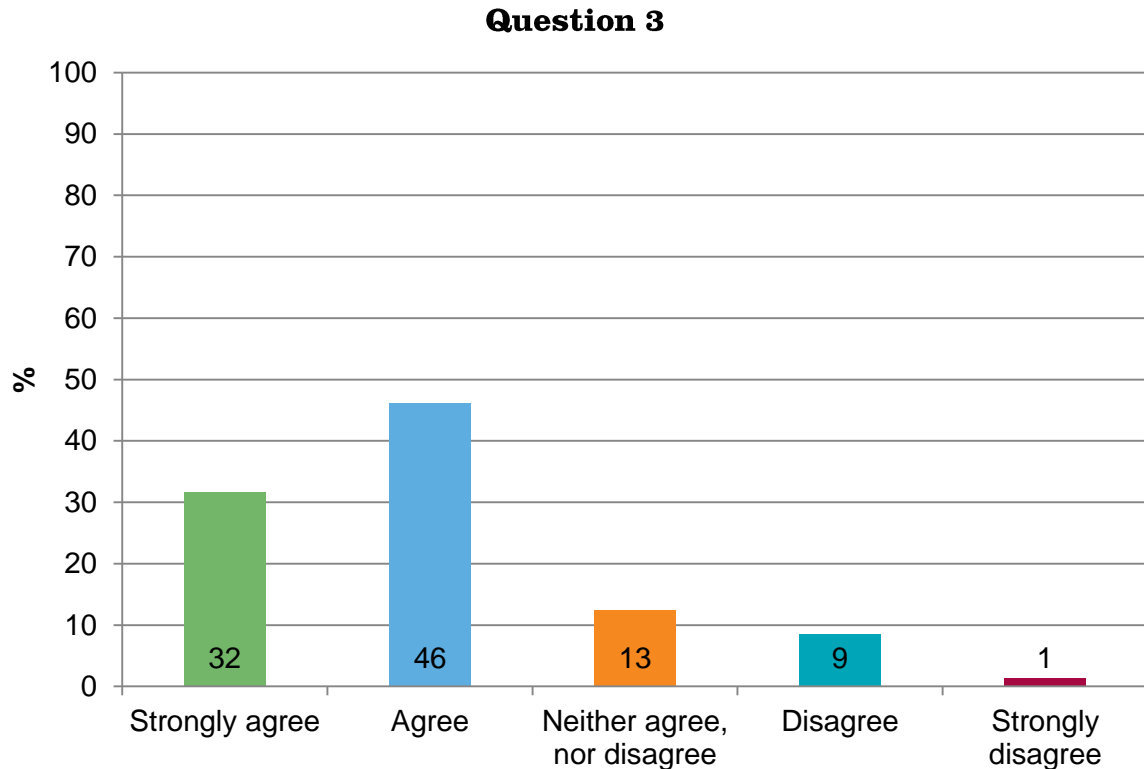
Our response:

We will work with stakeholders to understand the factors that might determine an appropriate level of service (e.g. navigational use) for different parts of the canal system. Through our water resource planning we will identify and cost a range of resource development schemes that will deliver different levels of service. This will allow the Trust and its stakeholders to make informed decisions on the appropriate level of service for specific parts of the canal network.

Question 3

Do you agree that the Trust should expect a water resources study to be undertaken for any proposed restoration or new canal, to assess the supply and demand of water and that there should be no net impact on levels of service of the existing canal network due to a restoration or new canal?

90% of respondents replied to this question and the range of responses is shown below.



There were 37 written comments to this question.

While there was general support in the written responses for a water resource study to be undertaken there was significant dissent that there should be no net impact on levels of service of the existing canal network. The following quote is typical of this view.

- *“Expect a water resources study but DO NOT arbitrarily refuse to allow some impact in some places, based on other factors. The water supply and demand are different in different places and each case should be looked at individually.”*

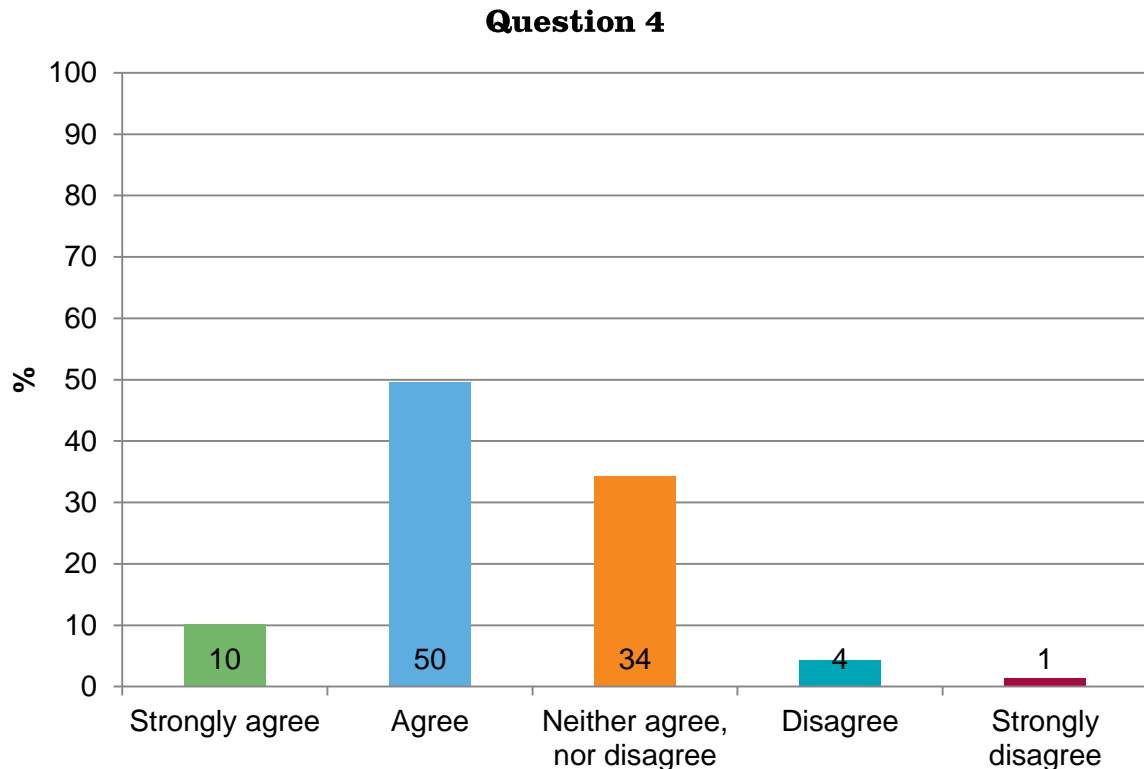
Our response:

We believe it is essential that a water resources study is undertaken for any proposed restoration or new canal, to assess the supply and demand of water so that its impact on the existing canal network can be quantified. However, we understand that there may be compelling arguments for accepting a reduction in the level of service for the existing network to allow a restoration or new canal if, for example, it enables the Trust to achieve other aspects of benefit and meet its charitable objects and wider aims/aspirations. The evidence from the restoration/new canal water resources study and modelling of our existing system will allow the Trust and its stakeholders to make informed decisions on the impact on levels of service for specific parts of the canal network.

Question 4

Do you agree with the current five year modelling plan?

81% of respondents replied to this question and the range of responses is shown below.



There were 16 written comments to this question.

Eight of the comments do not endorse the proposal. The majority of these comments reflect confusion between the modelling plan timetable and the modelling *horizon* to 2050. There is also criticism that the timescale for completing the modelling is not ambitious enough and should be accelerated.

The remainder of the comments are supportive of the modelling plan.

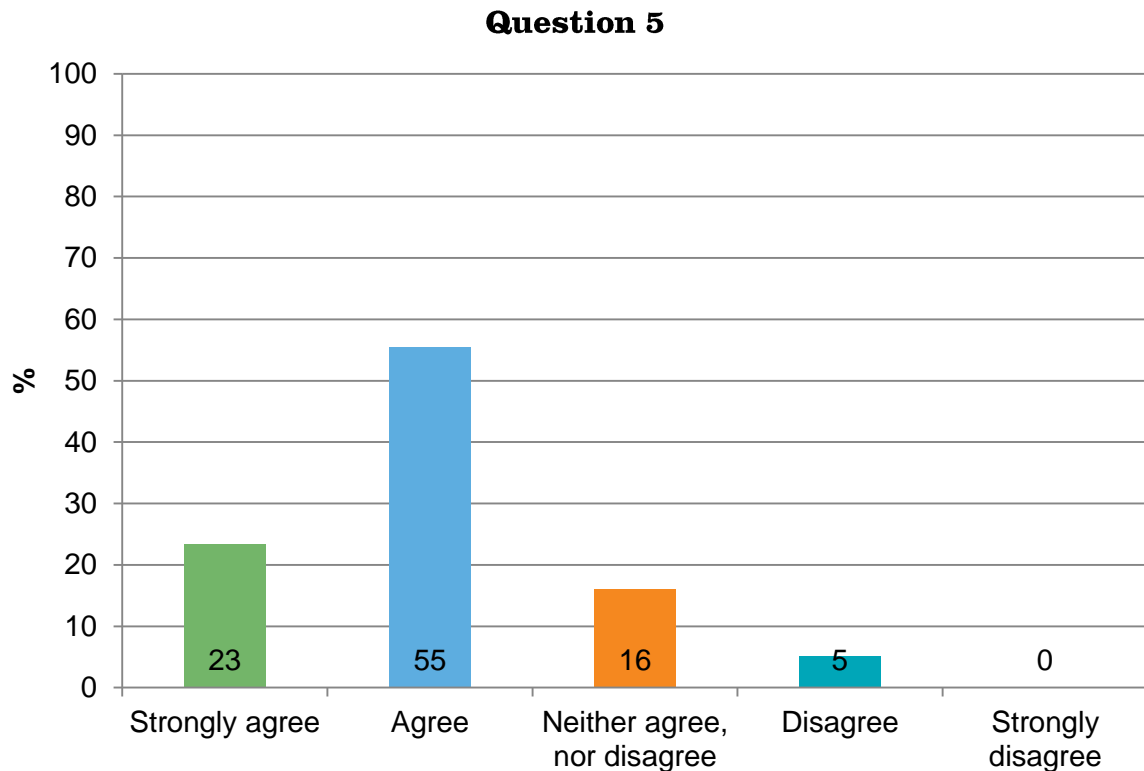
Our response:

We will regularly review progress against the plan over the first five year cycle of the water resources strategy and adjust our aspirations to reflect the needs of the Trust and our stakeholders. We will seek additional team resources to accelerate the modelling programme.

Question 5

Do you agree that we should continue with our current approach to minimise risks associated with uncertainty by concentrating on improving understanding and quality of water supply and demand profiles?

81% of respondents replied to this question and the range of responses is shown below.



There were 17 written comments to this question.

Most comments were generally supportive of our proposal. Two quotes reflect particular concerns:

- *“Scenario and sensitivity modelling of possible futures should be used to determine the robustness and resilience of decisions.”*
- *“Better data and understanding should always be sought, but not at the price of action.”*

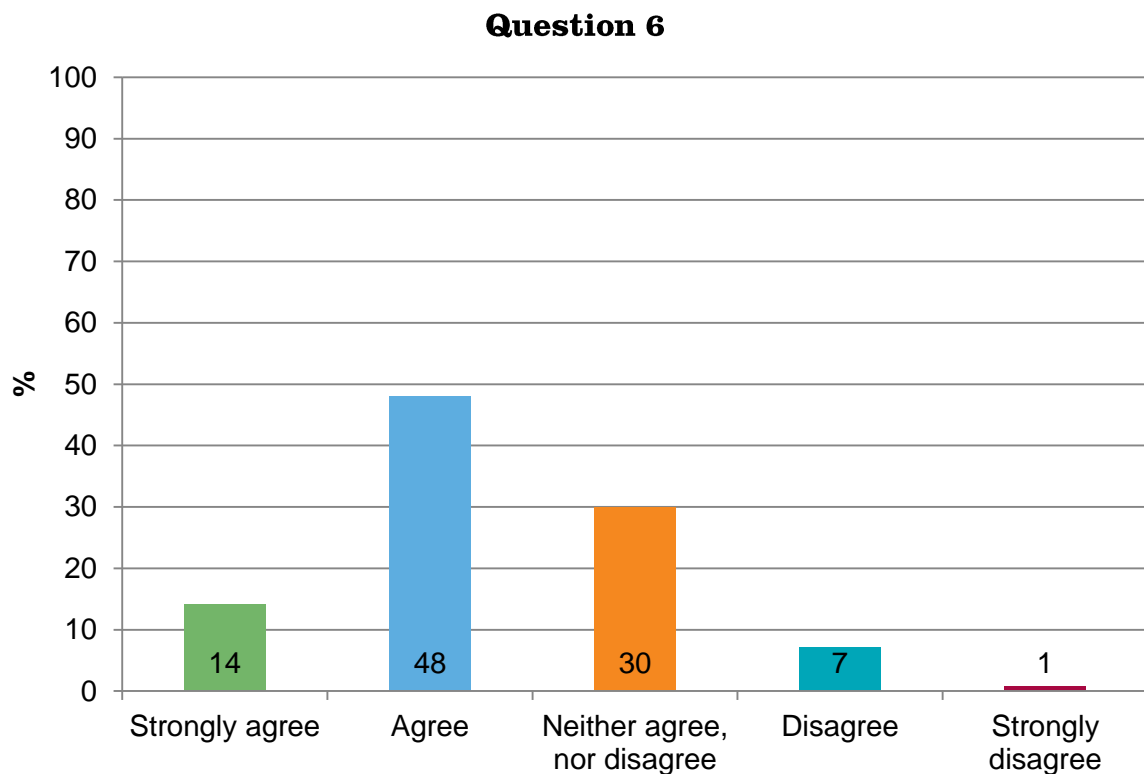
Our response:

We will continue with the approach set out in the consultation document.

Question 6

Do you think that we should use, where appropriate, techniques outlined in Environment Agency and Defra guidelines to determine our strategic water resource requirements, including the use headroom to account for uncertainty within our modelling output?

75% of respondents replied to this question and the range of responses is shown below.



There were 21 written comments to this question.

There was considerable support for the proposal that the Trust should follow Environment Agency and Defra guidelines to allow alignment with water companies, our closest industry comparator. However, it was widely recognised that the Trust should only use these guidelines where appropriate to the canal network. The use of headroom is generally accepted as a useful technique to accommodate inherent uncertainty in the analysis. Some respondents emphasised the need to explicitly demonstrate the risk factors, over the various time horizons that contribute to headroom.

- *“The water industry uses these approaches and a consistent approach would be beneficial.”*
- *“You should NOT follow guidelines as though they are infallible rules.”*

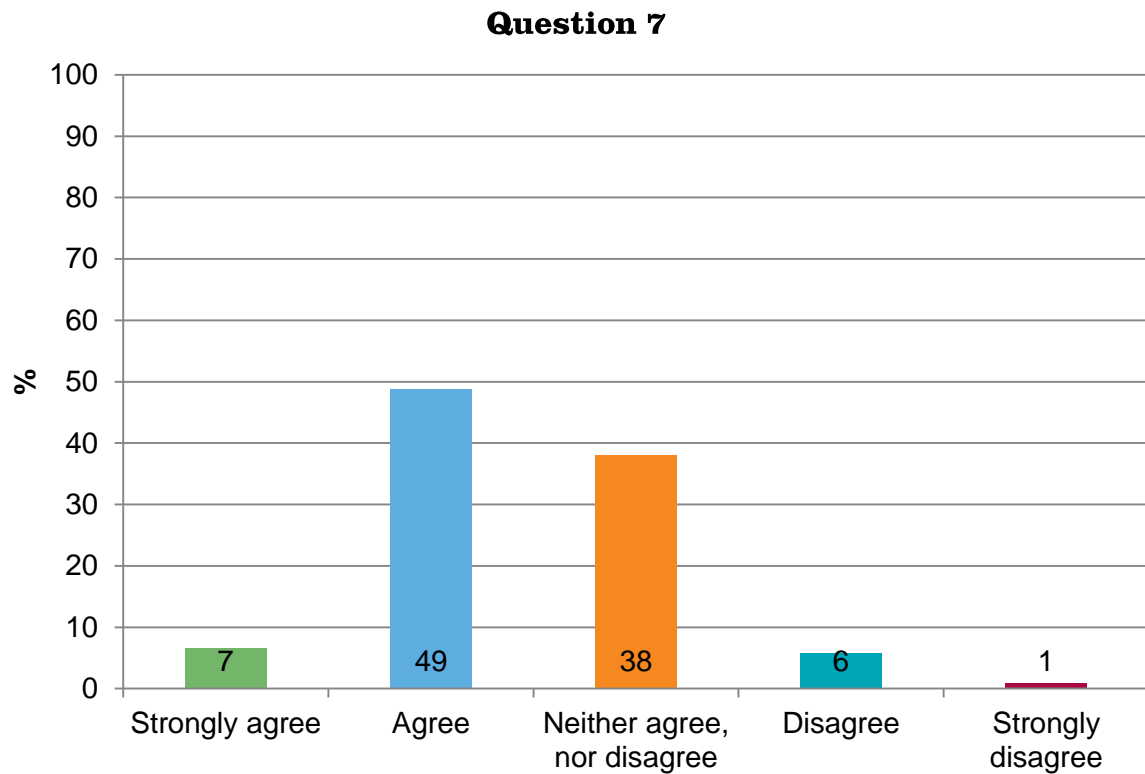
Our response:

We will regularly review EA and Defra guidelines (and input to their continued development, where appropriate) and our use of them over the first five year cycle of the water resources strategy and adjust our methodology if we deem it necessary.

Question 7

Do you agree with how we intend to progress with the future pressures we have listed and our modelling plan?

72% of respondents replied to this question and the range of responses is shown below.



There were 19 written comments to this question.

There were seven comments from those that disagreed with the way we proposed to deal with future pressures. A major concern was related to the range of lockage increases we proposed to model. One respondent thought that we should also model a reduction in lockage because *“...the increase in licenced boats in recent years is more because of better enforcement than increased boat numbers”*. Other respondents were concerned that a 2% increase in lockage over the planning horizon to 2050 would result in a doubling in lockage.

Our response:

We will continue with the approach set out in the consultation document.

Explanatory Note:

Doubling in lockage would occur if the 2% annual increase was cumulative.

However, our plan is only to apply the percentage increase derived from the baseline year to each subsequent year. This is illustrated in the table below.

Example Baseline lockage in 2015 = 1,000	Lockage in 2050	Actual % increase in lockage over planning horizon
1% annual increase from base line = 10 per year	$1000 + (35 \text{ years} \times 10) = 1,350$	35%
2% annual increase from base line = 20 per year	$1000 + (35 \text{ years} \times 20) = 1,700$	70%

Question 8 – Open ended

Do you think we have we missed out any future pressures? If so, please tell us about them.

There were 49 written comments to this open-ended question (29% of respondents).

Eight responses confirmed that we had correctly identified the most significant future pressures on water resources.

There were a wide range of responses to this question with many respondents reiterating or amplifying responses to other questions in the survey.

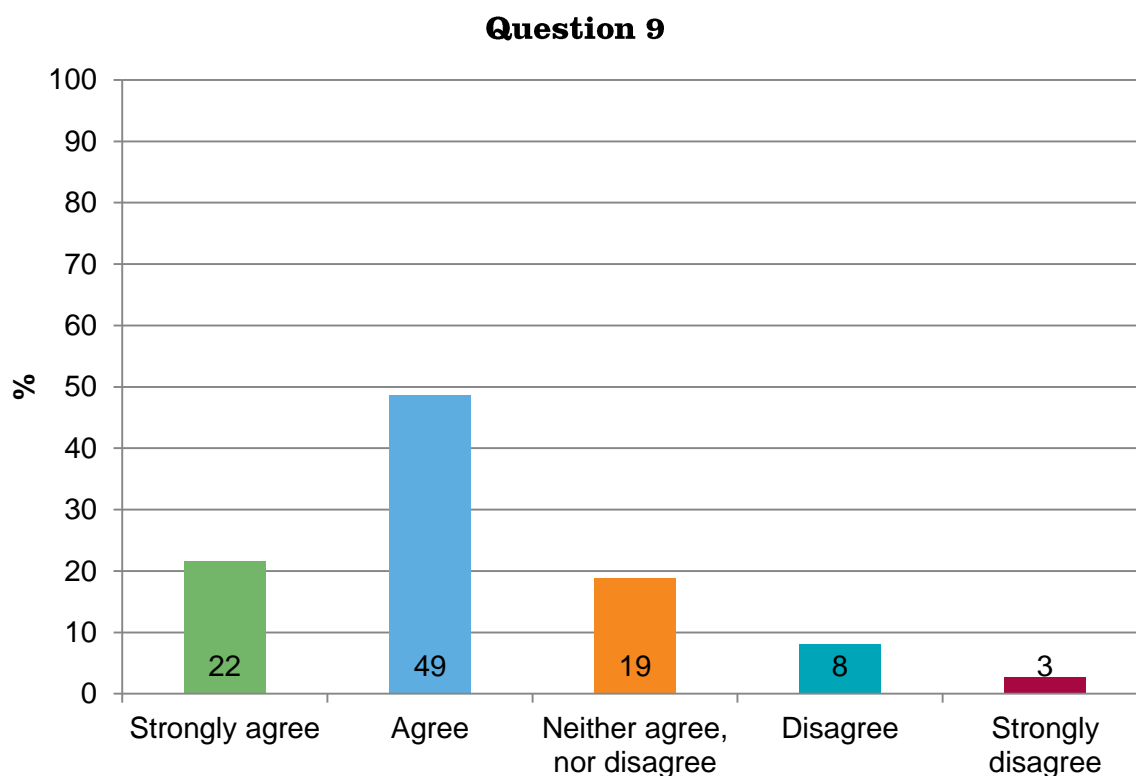
Some of the significant common themes and **our responses** are shown below:

- Legislative uncertainty, particularly in relation to the Water Framework Directive and the impacts of different possible outcomes from Defra's on-going Abstraction Reform programme. **We will continue to work closely with policy makers and regulators to try to minimise the impacts of new legislation on the Trusts water resources, and ensure adequate planning and preparation time is factored in to any legislative change. We will consider a more proactive lobbying approach where the likely impacts are disproportionately costly or burdensome to the Trust.**
- More attention should be given to understanding, and dealing with the causes and effects of the persistent waste of precious water resources. **We will continue to improve our understanding of these issues, encouraging everyone working for the Trust (including contractors, volunteers and seasonal staff) to be aware of the importance of water conservation and effective water management. Wherever possible, we will ensure that remedial works are prioritised to address persistent issues.**
- Scheduled closures of reservoirs etc. for maintenance should be included in the models. **We will ensure that reservoir engineering works (which are typically in the interests of safety) are carefully planned and executed to minimise the disruption that they may cause, seeking alternative supplies or mitigation measures where appropriate. We will endeavour to avoid more than one reservoir per hydrological unit being affected in any single year.**
- Commercial use has to be addressed and factored in more in the same manner as European canals. The majority of your plans appear to be for pleasure boats and hire boats. **We will take account of the impact of commercial use on our water resources, but it is worth noting that the majority of likely future freight opportunities will be on our large navigable rivers, which do not face the same water resources issues as the artificial canal network. The Trust has recently set out its policy in relation to freight on the waterways, and we will ensure our work takes account of this.**

Question 9

Do you agree with our proposal to assess future water resource schemes based on whole life costs (NPV) and water resources benefits (£ per MI/d), rather than only capital cost?

66% of respondents replied to this question and the range of responses is shown below.



There were 17 written comments to this question.

Eight of the comments do not endorse the proposal. Several respondents thought that social and economic costs and benefits should be included in the assessment of future water resources schemes. The concept of a triple bottom line was proposed.

Our response:

We will consult with colleagues to ensure that we are following the Trust's best practice in assessing social and economic costs and benefits, but reiterate the points made in the consultation, namely that all of the various approaches adopted elsewhere in the water sector (and beyond) have limitations and require considerable investment to properly assess the full range of social, economic and environmental costs and benefits.

Other respondents queried the NPV discount rate and the value used to determine energy costs.

Our response:

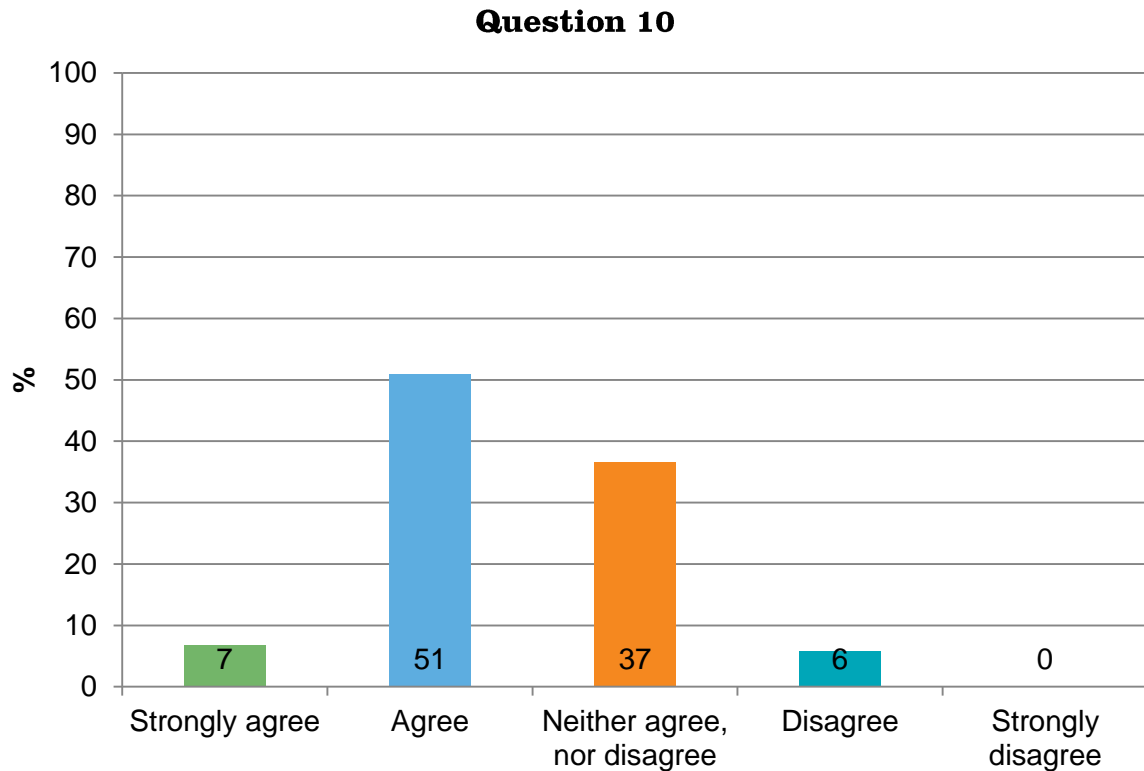
We will review these regularly and ensure that they represent the values used throughout the Trust and are broadly in line with external standards.

All other respondents were supportive of our proposals and judged them appropriate and proportionate.

Question 10

Do you agree that we should continue to phase the delivery of our water resource schemes using investment profile plots?

62% of respondents replied to this question and the range of responses is shown below.



There were 13 written comments to this question.

Four of the comments do not endorse the proposal with two respondents advocating that all recommended schemes should be delivered at the earliest opportunity. The concept of “just in time” delivery of water resource schemes was questioned and it was suggested that a contingency time margin should be considered for each scheme. Even among the positive feedback there was recognition that the investment profile needed to better represent the uncertainties associated with the analysis of resource shortfalls and the delivery mechanisms.

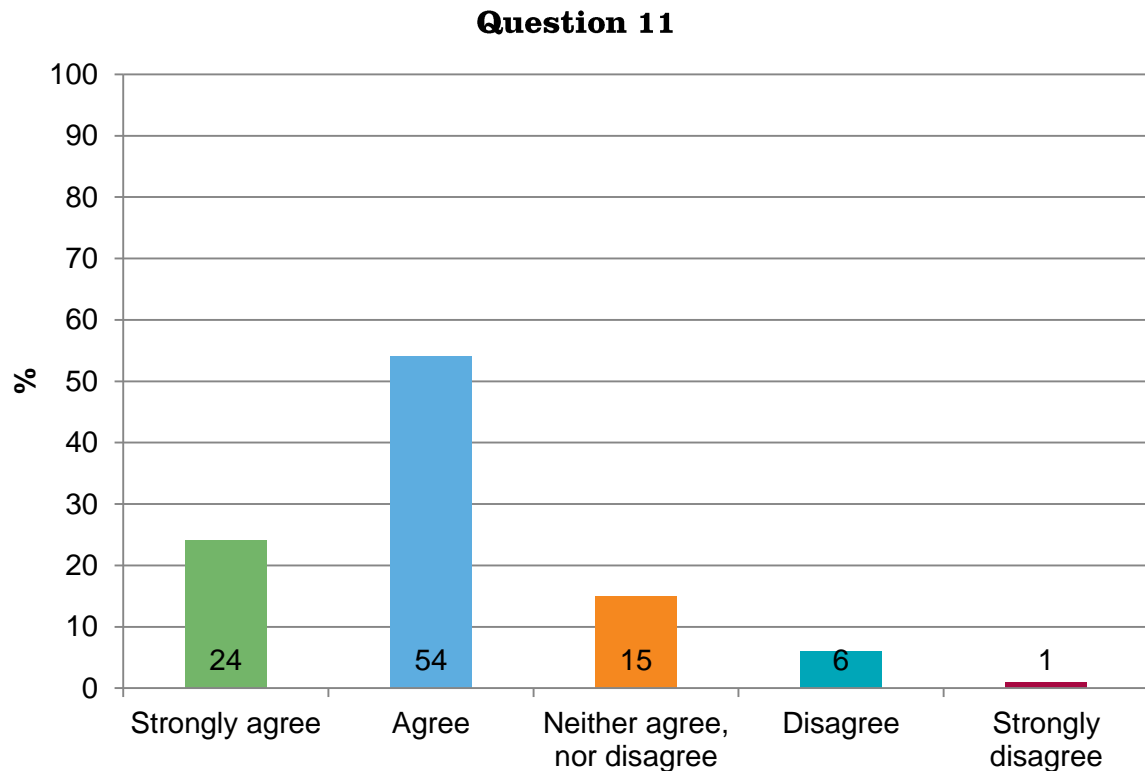
Our response:

We will review the phasing of scheme delivery to better reflect the uncertainties associated with the water resource planning process.

Question 11

Do you agree with our proposals for dredging for water resources?

59% of respondents replied to this question and the range of responses is shown below.



There were 19 written comments to this question.

This proposal was strongly supported by respondents with only three people not endorsing the proposal because they thought that the Trust's general dredging programme would also bring benefits to water resources by reducing top leaks etc.

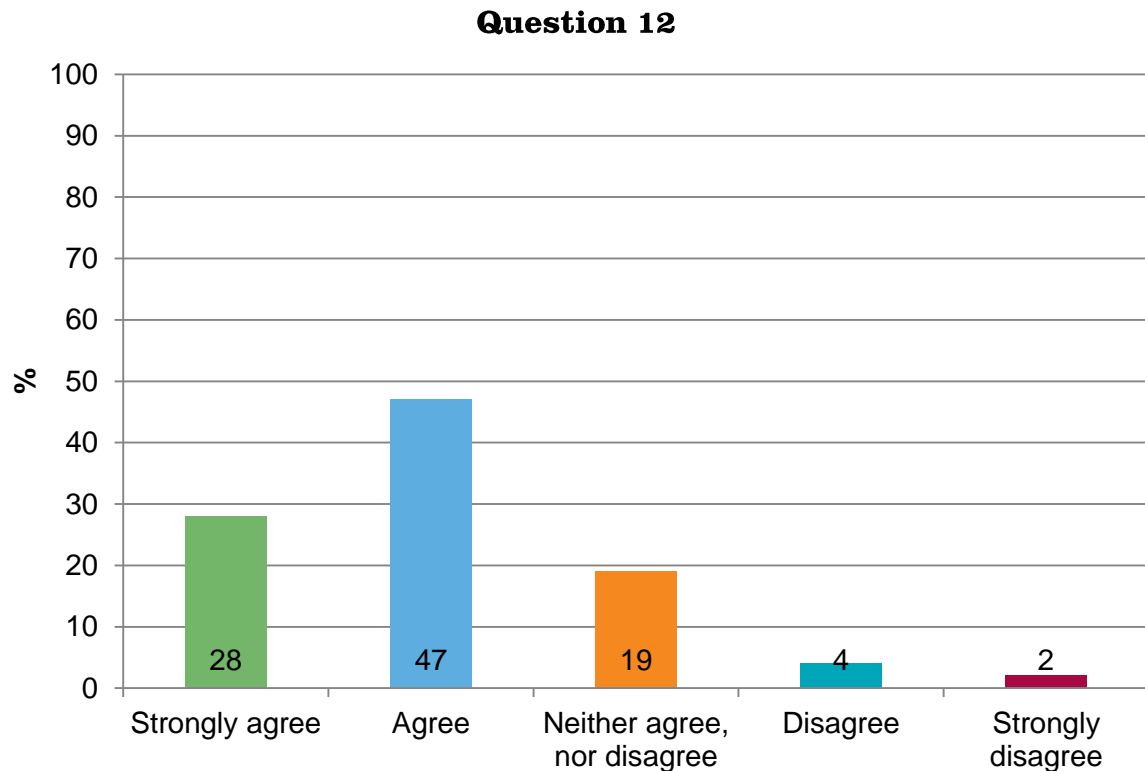
Our response:

We will continue with the approach set out in the consultation document.

Question 12

Do you agree with our proposals for side ponds?

59% of respondents replied to this question and the range of responses is shown below.



There were 13 written comments to this question.

Three of the responses did not endorse our proposals and thought that side ponds should be reinstated because of their heritage value. The benefits of side ponds as an educational tool to emphasise the need to conserve precious water was also mentioned. However, there was a recognition that use by inexperienced boaters may not bring any water resource benefits and may actually waste water.

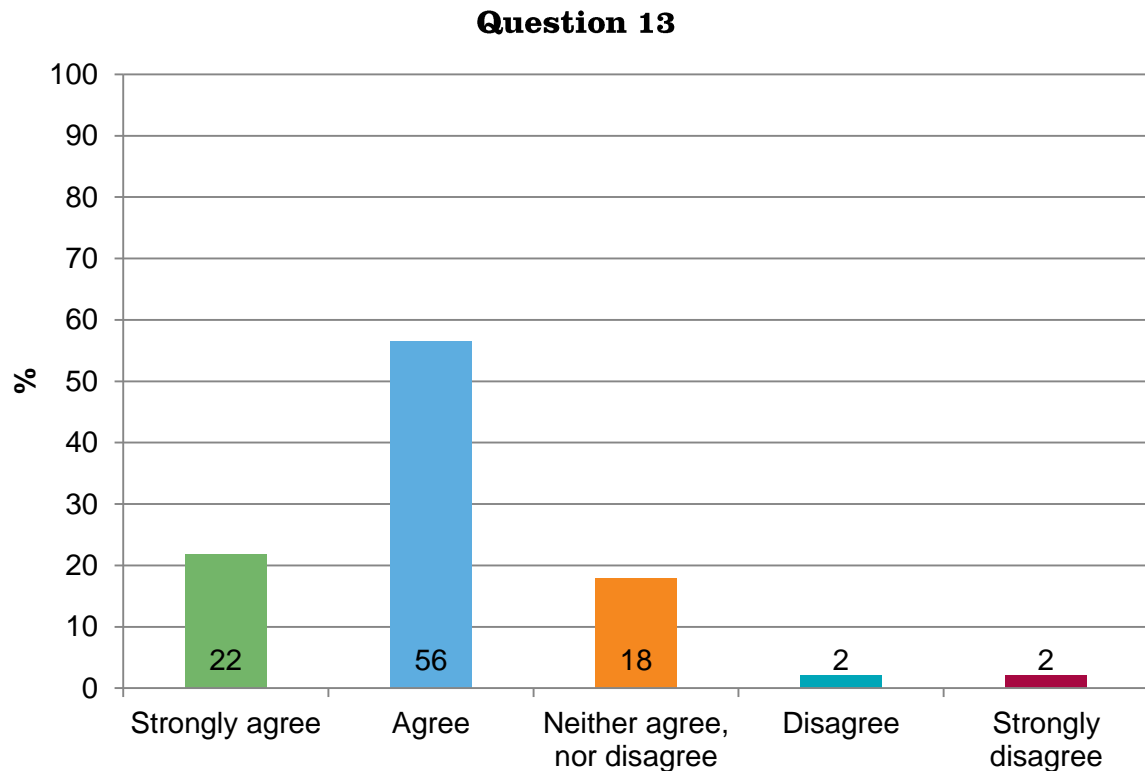
Our response:

We will continue with the approach set out in the consultation document.

Question 13

Do you agree with our proposals for lock leakage?

60% of respondents replied to this question and the range of responses is shown below.



There were 14 written comments to this question.

While the majority of respondents understood and agreed with our proposals there was a recognition that this may not be readily appreciated by the general public. Several respondents raised the issue of leakage of water from other parts of the lock infrastructure sidewalls, paddles, cills etc.

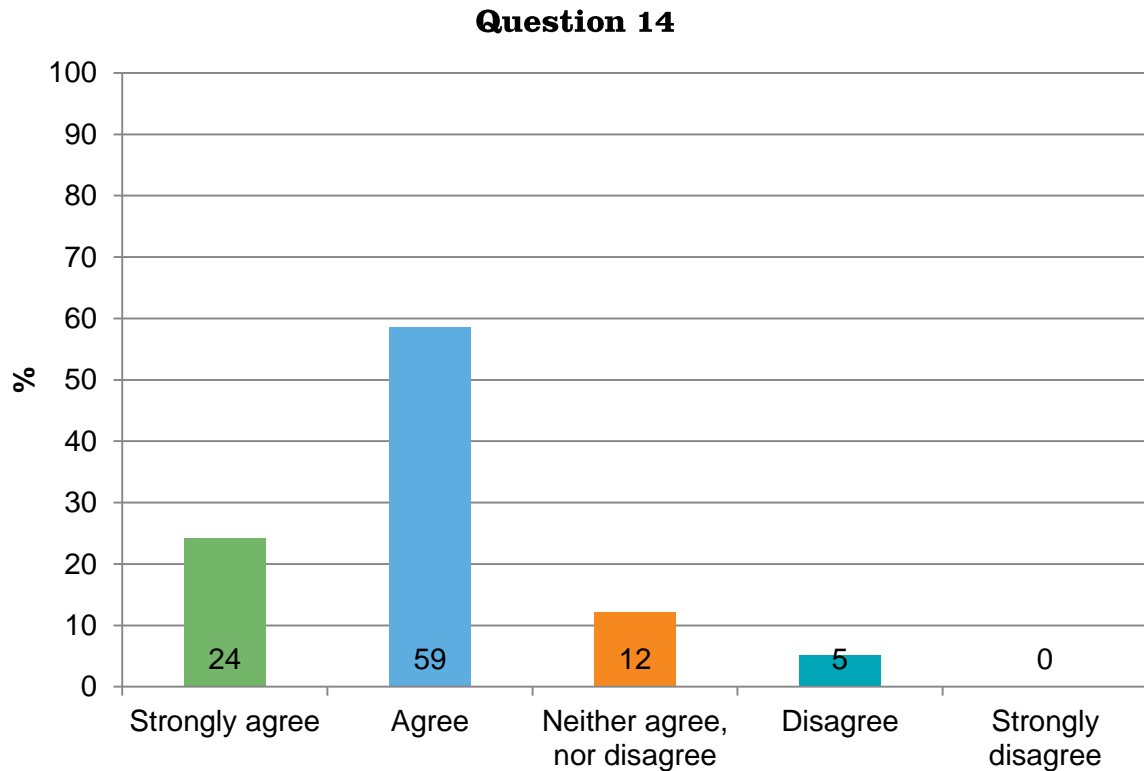
Our response:

We will continue with the approach set out in the consultation document.

Question 14

Do you agree that we should produce a Water Resources Strategy every five years, based on the cycle described?

59% of respondents replied to this question and the range of responses is shown below.



There were 14 written comments to this question.

There was considerable support for a five year strategy cycle, particularly from water industry respondents who work to a similar timescale. Where disagreement was expressed this demonstrated that there was some confusion between the strategy cycle and the planning horizon of the strategy (to 2050 in this cycle).

Our response:

We will continue with the approach set out in the consultation document.

Question 15 – Open ended

Do you have any further water resource related comments on our consultation? If so, please tell us about them.

There were 50 written comments to this open-ended question (30% of respondents). Some comments were specific to particular locations or canals and will be followed up when we model those parts of the network or when other activities by the Water Management team or the Trusts work in general provides a suitable opportunity to consider them.

A balanced selection of the general issues raised are given below:

- *“Water is the most precious asset of the waterway, and that most easily wasted.”*
- *“Good maintenance is a key factor.”*
- *“An emphasis on dredging is definitely needed not just for water management but also for navigation and flood management too. It would be better not to isolate water management strategy from these other aspects as they are all interlinked and with separate strategies comes the risk of conflicting strategies.”*
- *“Appraisal of applications for new marinas etc. should be concerned about water usage.....”.*
- *“Creation of more/better winding holes would prevent some unnecessary lock usage.”*
- *“ as a general principle, that winding holes should be provided above and below all significant lock-flights, and just before any lock leaving a summit pound.”*
- *“...in a drought more water would be transferred for water companies, which would mean canals would be less likely to suffer from drought.”*
- *“More effort to clear weeds from feeder channels.”*
- *“You should explore use of micro hydro to generate energy to use in further backpumping.”*
- *“Encourage better use of locks and water resources, possibly with use of high and low risk maps in drought years as previously.”*
- *“....there is no mention of the impact on fishing due to water shortages anywhere in the document.”*
- *“Under aspirational level of service perhaps some seasonal adjustment is appropriate? The other factor is the strategic value of a reach of canal (i.e.: if there is an alternative route then a lower level of service could be accepted than where a reach of canal is the only way to get from one part of the network to another.)”*

- *“The standard water industry approach to the financial assessment of water resource schemes uses the AISC methodology (Average Incremental Social Cost) which includes environmental and social cost determination. The proposal to carry out assessment of improvement schemes based solely upon the Net Present Value (NPV) assessment does not reflect this approach.....”*

Our response:

All of the points raised, including those shown above, have been carefully reviewed and we will endeavour to address them during the first and subsequent cycles of the Strategy. Some aspects raised via the consultation, such as assessing the impact of new marinas, are already in hand (the Trust has undertaken screening of all new marina proposals using the same methodology for nearly a decade, to allow informed decisions to be made). Similarly, the issue raised in relation to transferring more water for water companies during droughts is already the subject of ongoing feasibility work, in collaboration with a number of water companies, which we started during the 2011-12 drought.

Organisations that responded to the consultation

1	Swansea Canal Society
2	Roving Canal Traders Association
3	Lancaster Canal Trust
4	Historic Narrow Boat Club
5	The Commercial Boat Operators Association
6	Fernside Productions
7	Macclesfield Canal Society
8	Owd Lanky Boaters Group
9	Linnet's Circus
10	Consumer Safety UK
11	Association of Pleasure Craft Operators (APCO)
12	Somersetshire Coal Canal Society
13	Shrewsbury & Newport Canals Trust
14	Kings Langley Angling Society
15	ABP Marine Environmental Research Ltd
16	National Association of Boat Owners (NABO)
17	Southern Water
18	Nottinghamshire County Council
19	Herefordshire and Gloucestershire Canal Trust
20	DBA The Barge Association
21	South East Water
22	English Heritage
23	IWA Chester & Merseyside Branch
24	Lincolnshire Branch of the IWA
25	United Utilities
26	Inland Waterways Association (IWA)
27	National Farmers Union (NFU)
28	Colne Valley Anglers
29	W&B Canal Trust
30	Natural Resources Wales (NRW)
31	Welsh Water
32	Thames Water
33	Chartered Institution of Water and Environmental Management (CIWEM) - HQ Policy Team
34	Chartered Institution of Water and Environmental Management (CIWEM) - Chair, Water Resources Panel
35	Manchester & Pennine Waterway Partnership
36	Staffs & Worcester Canal Society

In addition there were responses from 10 named individuals.