National Assembly for Wales Petitions Committee

Petition P-03-238: Pollution of the Burry Inlet July 2012



The National Assembly for Wales is the democratically elected body that represents the interests of Wales and its people, makes laws for Wales and holds the Welsh Government to account.

An electronic copy of this report can be found on the National Assembly's website: **www.assemblywales.org**

Copies of this report can also be obtained in accessible formats including Braille, large print; audio or hard copy from:

Petitions Committee National Assembly for Wales Cardiff Bay CF99 1NA

Tel: 029 2089 8421 Fax: 029 2089 8021

Email: Petition@wales.gov.uk

© National Assembly for Wales Commission Copyright 2012

The text of this document may be reproduced free of charge in any format or medium providing that it is reproduced accurately and not used in a misleading or derogatory context. The material must be acknowledged as copyright of the National Assembly for Wales Commission and the title of the document specified.

National Assembly for Wales Petitions Committee

Petition P-03-238: Pollution of the Burry Inlet July 2012



Petitions Committee

The Petitions Committee was established on 15 June 2011. Its role is to consider all admissible petitions that are submitted by the public. Petitions must be about issues that the National Assembly has powers to take action on. The petitions process enables the public to highlight issues and directly influence the work of the National Assembly. Its specific functions are set out in Standing Order 23.

Current Committee membership



William Powell (Chair) Welsh Liberal Democrats Mid and West Wales



Russell GeorgeWelsh Conservatives
Montgomeryshire



Bethan Jenkins Plaid Cymru South Wales West



Joyce Watson Welsh Labour Mid and West Wales

Previous Committee Members



Christine ChapmanWelsh Labour
Cynon Valley



Val Lloyd Welsh Labour Swansea East



Sandy Mewies Welsh Labour Delyn



Andrew RT DaviesWelsh Conservatives
South Wales Central



Mike GermanWelsh Liberal Democrats
South Wales East



Veronica GermanWelsh Liberal Democrats
South Wales East

Contents

Ch	air's foreword	5
Int	roduction	7
٦	The scope of this report	8
1.	A protected area	9
2.	Burry Inlet Cockles	11
3.	The call for a public inquiry	13
4.	Prevention of further spills	15
S	17	
F	uture pressures	17
5.	Improving management of the site	19
6.	Support for the cockle industry in Burry Inlet	21
Annex A: Witnesses		
Annex B: List of written evidence		

Chair's foreword

The cocklers at Burry Inlet have every reason to feel impassioned about the mass cockle mortalities that have had a devastating effect on their once thriving industry. They have been struggling since 2002 to understand the reasons behind the mortalities and although a comprehensive study was commissioned by the Environment Agency Wales, the findings were inconclusive about the causes and the future of the cockles at Burry Inlet.

In September 2009, the Petitions Committee of the Third Assembly was presented with a petition calling for a public inquiry into the issue. That Committee considered the issue and welcomed the in-depth study that was carried out. The current Petitions Committee also welcomes that study, but recognises that there is more work to be done.

This report considers the situation at Burry Port and seeks to find a way forward that will provide support for the cockle industry in the area, and will ensure that the agencies concerned will continue to focus their efforts on finding solutions for the issues facing the area.

The Committee thanks the Welsh Government, the Environment Agency Wales, Dwr Cymru Welsh Water and Carmarthenshire County Council for their work on this issue, and for their assistance to the Committee's investigation.

The Committee also thanks the petitioners for their continued efforts to protect the environment in which they work. While the Petitions Committee cannot support their call for a public inquiry at this time, it does support the petitioners' desire to keep this issue very much in the minds of the agencies involved. Their understanding of the complex marine environment at Burry Inlet is an asset that the Committee hopes is fully utilised as further work is carried out to enhance the understanding and management of the many factors influencing the cockle mortalities. It is vital that this local knowledge is given full value in the work that lies ahead.

William Powell AM Chair, Petitions Committee

The Committee's Recommendations

The Committee's recommendations to the Welsh Government are listed below, in the order that they appear in this Report. Please refer to the relevant pages of the report to see the supporting evidence and conclusions:

Recommendation 1. The Committee recommends that the Welsh Government treats the need for improvements to the sewage system in the Llanelli area as a priority and works with Dwr Cymru Welsh Water to secure the necessary level of investment for the area. (Page 16)

Recommendation 2. The Committee recommends that the Welsh Government works with Welsh Water to put in place solutions that will ease pressure on the sewage system in the Burry Port area in the short term, until such time as the long term solutions planned for the area are fully implemented. (Page 17)

Recommendation 3. The Committee recommends that the Welsh Government actively supports Environment Agency Wales and Dwr Cymru Welsh Water to deliver an integrated drainage solution for Llanelli as soon as is practicable. The integrated drainage solution should aim to divert significant amounts of surface water from the sewage system in order to minimise future spills. (Page 18)

Recommendation 4. The Committee recommends that the Welsh Government works with the appropriate agencies to facilitate the further studies suggested by the Institute of Estuarine and Coastal Studies, and that the cocklers' experiences and observations of the cockle beds during the Neap Tides are considered as part of those further studies. (Page 20)

Recommendation 5. The Committee recommends that the Welsh Government requires Environment Agency Wales and any successor bodies and Carmarthen County Council to publish all water quality test results for the Burry Port Area, and strongly encourages Dwr Cymru Welsh Water to do the same. (Page 20)

Recommendation 6. The Committee recommends that the Welsh Government offers a similar level of support to those affected by the decline of the Burry Port cockle industry as it does to other areas who have suffered the loss of a major employer. (Page 21)

Introduction

- 1. The Petitions Committee exists to consider all admissible petitions submitted to the National Assembly for Wales.
- 2. In September 2009, the Petitions Committee of the Third Assembly was presented with a petition raised by Rhys Williams that had gathered 2,240 signatures in support of the following statement:

"Petition from Carmarthenshire residents requesting a public inquiry by the Welsh Assembly Government into the sewage pollution of the Burry Inlet and Carmarthen Bay"

- 3. The Burry Inlet and Carmarthen Bay area is popular with beach goers who bathe in the sea off the beaches. The area also has a long tradition of cockle farming.
- 4. The petition was raised following several incidents of the sewage system spilling into local rivers that fed into the sea at Burry Inlet and Carmarthen Bay area. These were in the main due to capacity issues of the local sewer system that was being put under enormous pressure in storm conditions when surface run off water was adding significantly to the volume of water being processed by the treatment plants.
- 5. In June 2005, significant spills occurred as a result of a broken pipe. The spills that summer led to some beaches being closed to bathers as untreated sewage was discharged into the sea.
- 6. Since 2002, annual mass cockle mortalities have been witnessed by the cockle gathers in the area but following the spills in 2005, anecdotal evidence has suggested that the annual mass cockle mortalities have become more severe. The high level of mortality has devastated the cockle industry in the area with cocklers estimating that they now have to get by on just 12 weeks work a year.¹ This is in stark contrast to the plans they made early in 2002 to increase export trade.
- 7. The spills resulted in a legal case being brought against Welsh Water. In April 2011, the courts fined Welsh Water £20,000 for discharging sewage but no compensation was awarded to the cockle

_

¹ Note of Petitions Committee Site Visit to Burry Port

industry as no link could be proven between the spills and the mass mortality of the cockles.

8. The Cocklers have since lodged a complaint with the European Commission. The petitioners have informed the Committee that a case is now being prepared by the European Environment Office for prosecution in the European Court of Justice.

The scope of this report

9. In January 2012, the Institute for Estuarine and Coastal Studies published the findings of its investigation into the Burry Inlet cockle mortalities. The Institute's original two-year programme was extended by one year to undertake more integrated data analyses, and the Committee has neither the wish nor the specialist knowledge to challenge the findings of that report. The report makes it clear that:

"there is no evidence that pollution in the water or sediment is related to the mortalities."²

10. The Committee recognises that the cocklers feel very strongly that the sewage spills, and particularly the spills in June 2005, are a contributory factor in the mass mortality of the cockles in Burry Inlet. However, the Petitions Committee of the Third Assembly was assured by the then Minister for Environment, Sustainability and Housing, Jane Davidson AM in October 2010 that:

"The June 2005 incident has been brought to the attention of the independent researchers investigating the ongoing cockle mortality. They have confirmed that this will be considered, along with all other evidence, as part of the ongoing cockle mortality investigation."

11. Given the report findings and the cocklers' complaint to the European Commission, it would not be appropriate for this Committee to consider the issue of blame or compensation.

³ Letter from Jane Davidson AM, Minister for Environment, Sustainability and Housing to the Chair of Petitions Committee, 25 October 2010.

² 'Environment Agency Wales update to the Welsh Assembly Petitions Committee on the outcome of the Burry Inlet Cockle Mortality Investigation Report 2009-2011, dated January 2012' Committee paper, 1 May 2012

1. A protected area

- 12. The Burry Inlet is located in Carmarthenshire in South Wales. The main tributaries of the inlet are the Rivers Loughor, Lliw and Llan. In addition to the rivers flowing into the area, there are tidal currents which add to the hydrodynamic regime and the associated sedimentation. Burry Inlet is designated under European legislation as part of the Carmarthen Bay and Estuaries site. The site is recognised internationally for the quality and quantity of its intertidal mudflats and sandflats and for the important populations of shellfish-eating birds. As such it is designated as a Special Area of Conservation (SAC), a Special Protection Area (SPA) and a Ramsar site. It is further designated nationally as a Site of Special Scientific Interest (SSSI).
- 13. There are beaches in the area that are popular with locals and tourists alike, some of which have attained Blue Flag status.
- 14. Petitioners told the Committee that the beach at Burry Port was a designated bathing beach and so the bathing water is expected to meet the EC Directive standard on Bathing Water. The cockle beds at Burry Inlet are also protected by European shellfish regulations.
- 15. In October 2009, The then Minister for Environment, Sustainability and Housing told the Committee:

"The Assembly Government is responsible for the implementation of a number of key European obligations relating to the prevention of pollution or protection of water quality which are relevant in this area. These include the Shellfish Waters Directive, the Urban Wastewater Treatment Directive and the Water Framework Directive."

16. The Minister also confirmed that:

"Dwr Cymru Welsh Water is responsible for the sewerage system and the Environment Agency has an obligation in ensuring water company discharges are compliant with European Council Directives to protect the Environment." 5

_

⁴ Letter from the Minister for Environment, Sustainability and Housing to the Petitions Committee Chair, 20 October 2009

⁵ ibid

17. Petitioners told the Committee that they felt that the local authority also has duties to test the water quality of non-bathing beaches in order to have proper regard to the safety of the general public who use those beaches. However, specific legislation relating to non-bathing beaches was not cited.

2. Burry Inlet Cockles

- 18. The petitioners told the Committee that since 2005, the mortalities have taken place each May.
- 19. The Institute of Estuarine and Coastal Studies report stated:

"the Burry Inlet populations have gone from an apparently stable population, composed of several age classes and supporting a lucrative fishery, to one in which high recruitment produces a first-year cohort which has good growth, and gives an early and successful reproduction (spawning) based on an increase in fatness. That spawning is then followed by death."

- 20. The cockle gatherers have welcomed the Institute's investigation into the mass mortalities, but have called for the investigation to be 'part of an on-going investigation' rather than a stand-alone project.
- 21. In fact, the Institute's report also recognises the need for further investigation in order to increase understanding of the issue and facilitate effective management of cockle beds.
- 22. The future of the cockles at Burry Inlet is unsure. The Institute's report states:

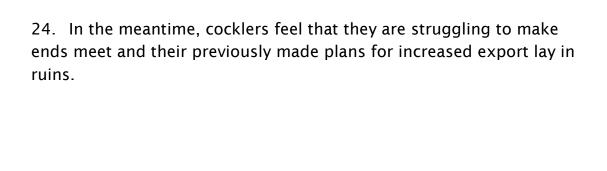
"With time, one would then expect one of two alternatives – <u>either</u> this new state stabilises and becomes typical for the area <u>or</u> the population gradually regains its former characteristics with an increasing number of older individuals remaining to rebuild the typical age structure."

23. It is suggested that the mortality levels of cockles in 2009 was a lot lower than that of 2005 and there are suggestions that more cockles are now surviving a second winter. But again, the Institute and the cocklers agree that further analysis of the data is required in order to fully understand the issue.

⁶ Institute of Estuarine and Coastal Studies, *Technical report to the Environment Agency Wales: Burry Inlet Cockle Mortalities Investigation 2009-2011*, 17 January 2012, page vi

⁷ Letter from the petitioner to the Petitions Committee Chair, 20 July 2010

⁸ Institute of Estuarine and Coastal Studies, *Technical report to the Environment Agency Wales: Burry Inlet Cockle Mortalities Investigation 2009-2011*, 17 January 2012, page vi



3. The call for a public inquiry

25. The petition calls for:

"a public inquiry by the Welsh Assembly Government into the sewage pollution of the Burry Inlet and Carmarthen Bay"

- 26. In 2009, the Welsh Government asked Environment Agency Wales to lead an investigation into cockle mortalities. Environment Agency Wales then commissioned the previously mentioned study, which was carried out by the Institute of Estuarine and Coastal Studies at Hull University in conjunction with representatives of ICES; Swansea University; Cefas; Bangor University; Countryside Council for Wales; School of Law, Swansea University and; National Oceanography Centre. The focus of the study was the cockle mortalities rather than sewage pollution of the area, although pollution was one of the issues considered.
- 27. Dwr Cymru Welsh Water has responsibility for the sewerage system and told the Committee:

"Our initial problem was that our understanding of how networks in the area worked was flawed. Once we went back in- and it started in 2010- we spent £1 million remodelling and re-examining how the network operates, and doing an awful lot more monitoring of how the network operates. That work highlighted the scale of the rainwater that enters our networks in those two catchments...Once we started to put that information into our models we realised that our combined sewer overflows (CSOs) were spilling more frequently. At the same time, unfortunately, like all the water industry, we did not routinely monitor CSO's for spills, but that is something that we are doing now. The most important CSO's in the area are now monitored and we have a programme in place for putting in spill monitoring for all CSO's in areas close to bathing waters and shellfish waters."9

28. Dwr Cymru Welsh Water has had its operations in the area scrutinised in court. In April 2011, it was fined £20,000 for

⁹ Record of Proceedings (ROP), Petitions Committee 1 May 2012

discharging sewage into the sea and the court's consideration of the issue is a matter of public record.

- 29. Given that the court's consideration of the sewage spills is a matter of public record, and the Institute's report considers the mass mortalities in a holistic manner, it seems unlikely that a public inquiry into the sewage spills could significantly add to the current understanding of the issue. Therefore, although the Committee is sympathetic towards the petitioners' situation and their desire to seek answers, it does not support the call for a public inquiry.
- 30. However, the Committee considers it essential that any successor body to the Environment Agency Wales continues to treat the issue as a priority.

4. Prevention of further spills

- 31. The European Commission is currently considering the petitioners' assertion that the sewage spills are a contributing factor in creating the current trend for mass cockle mortality in the area. The Committee does not seek to anticipate the outcomes of those deliberations in this report. However, the Committee does consider it imperative that all is done to minimise the possibility of further sewage spills in the area in order to protect the environmentally sensitive and bathing areas locally.
- 32. Environment Agency Wales told the Committee that:

"there are issues in relation to sewage treatment that needs to be addressed around the Burry Inlet. We accept that. There have been major improvements over the period since the mid 1990's. Those improvements continue... there are further proposals that would ensure that we meet the requirements of a variety of European Directives.

"However, to really resolve the issues that Llanelli faces -and, to an extent, west Swansea, which drains to the Gowerton works that discharges to the Burry Inlet - and to deal with this problem, with all the roof water and surface water going into the same pipes as the dirty water, the ultimate solution is to remove the clean water from the foul water system and discharge that separately into the local water courses." 10

33. Dwr Cymru Welsh Water is responsible for delivering the improvements needed in the area. As a not-for-profit company, the money it has to invest in improved infrastructure comes from its customers. Dwr Cymru Welsh Water told the Committee:

"There is always a difficult balance to be drawn between the pace of environmental improvements, which we know that we need to do, and the impact on customer bills, particularly at this particular time, given the way the economy is. That is why we must always sit down with colleagues in the Welsh Government and in the [Environment] Agency, because we would all like to do things much faster. However, in relation to

¹⁰ ROP Petitions Committee 1 May 2012

affordability, and particularly in relation to our least well-off customers, the impact of this type of investment can be quite considerable. It might drive bills up quite considerably."

- 34. Dwr Cymru Welsh Water also told the Committee that they had already invested 'something like £69 million of our customers' money' in improvements to the area and that there is a further improvement plan that will be in place for the next 10 years.
- 35. The Committee welcomes Dwr Cymru Welsh Water's desire to make improvements to the sewer system as quickly as possible, and notes the funding constraints faced by the not-for-profit company.
- 36. The Committee also notes the priority setting dynamic that Dwr Cymru Welsh Water described:

"The Welsh Government and the Environment Agency have essentially, for the past 25 years, always set the priorities for Dwr Cymru in terms of where we should focus our investment. It is true that in the past we have focused our investment on different places, but if there is a matter of importance to the Welsh Government, such as this issue and similar issues relating to the coast – whether it is the new bathing water directive or whatever water quality drive it happens to be – then that gets fed through the Environment Agency and effectively helps us in the business reprioritise where we place our customers' money."¹³

37. The Committee recognises the need to weigh up competing pressures on a limited budget and welcomes the collaborative approach of the Welsh Government, Environment Agency Wales and Dwr Cymru Welsh Water.

Recommendation 1

The Committee recommends that the Welsh Government treats the need for improvements to the sewage system in the Llanelli area as a priority and works with Dwr Cymru Welsh Water to secure the necessary level of investment for the area.

¹¹ ROP, Petitions Committee 1 May 2012

¹² ibid

¹³ ibid

Short term fixes

- 38. Petitioners told the Committee that in June 2008, the Llanelli water/sewerage Management Meeting agreed that that the sewage system was being put under pressure because of the large volume of surface water entering the sewage system. Members of the Management group agreed that tankering excess water out of the catchment area would go some way towards creating a short term solution to the spillage issue.
- 39. The Petitions Committee considers short term measures such as tankering excess surface water to a nearby system under less pressure as being a vital element of an effective management programme.

Recommendation 2

The Committee recommends that the Welsh Government works with Welsh Water to put in place solutions that will ease pressure on the sewage system in the Burry Port area in the short term, until such time as the long term solutions planned for the area are fully implemented.

Future pressures

- 40. Petitioners are concerned that the sewage system will be put under further pressure when 16,000 new homes are built as part of the Local Development Plan.
- 41. Environment Agency Wales told the Committee that:

"there are some provisions to ensure that any developments that take place do not make the situation any worse but can contribute to some of the solutions as well. There is a memorandum of understanding between us that requires developers to provide betterment to the situation, and not to provide additional impact, so that we can have a balanced approach to regeneration within the area."¹⁴

- 42. The Committee welcomes this approach.
- 43. Environment Agency Wales told the Committee that:

¹⁴ ROP, Petitions Committee 1 May 2012

"We have a much more fundamental understanding of what would be the best solutions, after the modelling work has been done on the surface and the sewage drainage systems so that we can come up with a proper integrated drainage solution for the whole town. There would be all sorts of additional gains from that, because it would involve sustainable drainage techniques, which would involve more green space, for example, and soak-away areas within the community. So, there is an opportunity for some enhancement of the urban environment alongside the drainage improvements." ¹⁵

- 44. Dwr Cymru Welsh Water felt that the improvements would increase resilience to 'climate change and carbon problems' too.
- 45. Dwr Cymru Welsh Water has admitted that 'inaccuracy in [their] network models'¹⁷ had resulted in spills occurring more frequently than they had anticipated in latter years. However, the current plans for improvements should go some way to reassuring cockle gatherers that the sewer capacity issue is now being taken seriously by all of the agencies involved.

Recommendation 3

The Committee recommends that the Welsh Government actively supports Environment Agency Wales and Dwr Cymru Welsh Water to deliver an integrated drainage solution for Llanelli as soon as is practicable. The integrated drainage solution should aim to divert significant amounts of surface water from the sewage system in order to minimise future spills.

17 ibid

¹⁵ ROP, Petitions Committee, 1 May 2012

¹⁶ ibid

5. Improving management of the site

- 46. The prevention of further spills will improve the water quality for bathers at local beaches, but the effects of spills on the cockle beds are unclear. Therefore it is unclear if improvements to the sewage system will slow the rate of cockle mortality.
- 47. The cockle gatherers have reported that the annual mass cockle mortality starts each year shortly after the smaller Neap Tides in May. They have told the Committee that they have seen algal bloom in the water at that time of year and wonder if a change in water temperature could be the catalyst for the mass mortalities.
- 48. The Institute's report has recognised the need for further study of the cockle beds in this area and for the need for further work to investigate:
 - whether causes of mortality in different years are the same;
 - the relationship between cockle density and behaviour, competition, survival and reproduction;
 - the role of parasites;
 - whether energy reserves and expenditure in cockles in less densely populated areas are similar to those in more densely populated areas;
 - further monitoring of the cockle population over longer periods of time;
 - further investigations into options for fishery management and their effectiveness, particularly for dividing Burry Inlet into management areas and/or better apportioning of the available cockle stock (e.g. one-third for the fishery, one-third for predators and one-third for sustaining the cockle population); and
 - whether there are any bio-security risks with the movement of humans and cockles in and out or Burry Inlet and whether this has, or could have, an effect on the cockle population.
- 49. In order to support further work on this issue, the Committee considers that in the future, the results of water quality tests commissioned by the local authority, Dwr Cymru Welsh Water or Environment Agency Wales should be made available to the public.

Not only would this facilitate further study of the area, but it would also go some way to improve transparency and reduce the air of suspicion with which the cocklers currently view the water quality testing regime.

Recommendation 4

The Committee recommends that the Welsh Government works with the appropriate agencies to facilitate the further studies suggested by the Institute of Estuarine and Coastal Studies, and that the cocklers' experiences and observations of the cockle beds during the Neap Tides are considered as part of those further studies.

Recommendation 5

The Committee recommends that the Welsh Government requires Environment Agency Wales and any successor bodies and Carmarthen County Council to publish all water quality test results for the Burry Port Area, and strongly encourages Dwr Cymru Welsh Water to do the same.

6. Support for the cockle industry in Burry Inlet

- 50. This report has already made it clear that the Petitions Committee does not consider it appropriate to pre-empt the outcomes of the European Commission's consideration of the case the cocklers have put to it. However, regardless of the cause of the mass cockle mortalities, the result is that cocklers in the area are now struggling to make a living.
- 51. The Committee therefore considers it appropriate that the Welsh Government works towards the regeneration of the Burry Port area

Recommendation 6

The Committee recommends that the Welsh Government offers a similar level of support to those affected by the decline of the Burry Port cockle industry as it does to other areas who have suffered the loss of a major employer.

Annex A: Witnesses

52. The following witnesses provided oral evidence to the Committee on the dates noted below. Transcripts of all oral evidence sessions can be viewed in full at:

 $\frac{http://www.senedd.assemblywales.org/ieListMeetings.aspx?CId=218\&\\Year=2012$

Meeting: 28 February 2012
Cllr Bill Thomas and petitioners

Meeting: 1 May 2012

Dr Kathryn Monk, Environment Agency Wales Steve Brown, Environment Agency Wales Tony Harrington, Welsh Water Fergus O'Brien, Welsh Water

Annex B: List of written evidence

The following people and organisations provided written evidence to the Committee. All written evidence can be viewed in full at http://senedd.assemblywales.org/ielssueDetails.aspx?lld=1287&Opt=3 and

http://www.assemblywales.org/bus-home/bus-third-assembly/bus-committees/bus-committees-third-pc-home/bus-committees-third-pc-agendas.htm

Evidence	Date of Considered by Committee
Llanelli Star News article 13 July 2009	22 September 2009
Correspondence from Minister for Environment, Sustainability and Housing, dated 20 October 2009	10 November 2009
Correspondence from Minister for Environment, Sustainability and Housing, dated 14 December 2009	19 January 2010
Correspondence from Minister for Environment, Sustainability and Housing, dated 28 February 2010	23 March 2010
Correspondence from Minister for Environment, Sustainability and Housing, dated 26 April 2010	11 May 2010
Correspondence from Minister for Environment, Sustainability and Housing, dated 14 June 2010	29 June 2010
Correspondence from Petitioner, dated 20 July 2010	28 September 2010
Correspondence from Minister for Environment, Sustainability and Housing, dated 25 October 2010	16 November 2010
Correspondence from Petitioner, dated 17 March 2011	29 March 2011
Note of Petitions Committee Site Visit to Burry Port	13 March 2012
Environment Agency Wales	1 May 2012
Dŵr Cymru Welsh Water	1 May 2012