

States of Jersey  
States Assembly



États de Jersey  
Assemblée des États

# Environment Scrutiny Panel

## Protecting our Marine Environment



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### APPENDIX A: REVIEW OF MARINE ENVIRONMENTAL PROTECTION

## 1. CHAIRMAN'S FOREWORD

This report took longer than expected to produce, partly because my Panel had to stop working on it for three months to carry out another urgent review early this year. However, from the first the Panel had excellent co-operation from the Department of the Environment and especially the members of the Environmental Protection team, who responded very positively and have been helpful throughout. I would commend their approach to scrutiny; it is not always an easy process for a department.

While this has not influenced our findings, I am pleased that with the help of our experienced adviser, Mr Bruce Brown of wca environment, the Panel has many good things to say about the work of Environmental Protection. There are signs of real progress in many areas since the Panel's report on the Energy from Waste Plant and Ramsar: Review of Planning Process (S.R.1/2010). However, the underlying message is still worrying; they face an uphill struggle for want of sufficient funding and manpower. The lack of resources identified by our adviser raises doubts about how we can fill gaps in our understanding of the status of our coastal waters, for example to improve monitoring for priority hazardous chemicals, and address concerns about water quality within the aquaculture industry

I believe very strongly that we should do everything we can to correct any mistakes that may have been made in the past and spare no effort to ensure that the environment we pass on to our children and grandchildren is as clean and healthy as we can make it. Targeted work is needed to resolve issues identified in our report, establish baselines and ensure no deterioration in future. With that in mind, a report by the Transport and Technical Services Department's consultant into the disposal of ash cell leachate at the Bellozanne Sewage Treatment Works suggests that data on metals at Bellozanne and in the receiving water are limited, and recommends additional monitoring to clarify risks; the Panel agrees with this.

There is also a need to respond to the concerns of the aquaculture industry about occasional poor results in shellfish testing, which can affect the grading of shellfish beds. This is a complex problem, owing to the number of potential sources of pollution. A new study by Environmental Protection suggests that there may not have been a real drop in quality over time, despite industry concerns that there has been deterioration and that water quality is to blame. It is not going to be easy to resolve these differences. Aquaculture representatives rightly hold passionate views on a subject that directly affects their livelihood, but the department currently lacks the resources to launch a detailed investigation that may still not provide a definitive answer.

Notwithstanding this, the Panel believes that improved monitoring of outfalls and additional investigation are needed to try to get to the bottom of these problems. Even as this report was being drafted there was another poor result recorded in the Grouville Bay area, despite no reports of any known pollution incidents.

Other areas looked at by the Panel include historical pollution by PFOS, arising from use of fire-fighting foams at the Airport. The Panel believes that regular monitoring should continue for this very persistent chemical. Members also raised questions about Parish refuse dumps from the days before the Bellozanne incinerator. There were sites in St Ouen, St Peter, in the north of the Island at Mont Mado, North Road, and Les Platons as well as many others. Leaching from these old sites is not currently monitored, but the sites were used for disposal of all manner of waste, from heavy metals to oils, household waste and animal carcasses, and there is no doubt they are still capable of causing pollution, as for example at Bonne Nuit, where the sea turns red once or twice a year after heavy rainfall.

In fairness the authorities of the day may not have realised what pollution could be caused or how long it might continue. We now know better and should make sure we don't leave industrial

or household waste for future generations to clean up. However, even now we are proposing to dispose of ash from the new Energy from Waste plant in pits at La Collette for at least a further 25 years; similarly asbestos waste is being put into the ground. The Panel finds this unacceptable; it is up to us to lead the way and deal with our waste properly here and now, and I fail to see how a Minister could put forward such plans with a clear conscience.

As for the latest plans to build a new headland out of ash at La Collette, given climate change over the next several hundred years, any failure could mean the ash would finish up in the sea and contaminate the food chain in the marine environment. It seems unbelievable to me that the States gave agreement to the Energy from Waste plant without knowing exactly what would ultimately happen to the ash; now we hear that the favoured solution is to put it into what will amount to a slag heap in the gateway to St Helier, next to a Ramsar site. However well this might be landscaped afterwards the Panel sincerely hopes this will not be allowed to happen.

While intensive farming over the years has caused nitrate pollution and run-off to the sea via streams and outfalls is still a concern, this is an area that is being addressed by the department. However, the same or even greater effort needs to go into monitoring other known discharges. Given the small amount of funding currently in place, the Environmental Protection section has been doing sterling work. However, it is essential that the new House puts sufficient resources in place to enable the department to extend its monitoring and investigative activities for the good of the whole Island.

In closing, I would like to thank my Vice Chairman, Deputy Daniel Wimberley and Deputy Sean Power for making this a successful review; I have enjoyed working with them. I would also like to thank Connétable John Refault, who was an influential Panel member until moving across to become an Assistant Minister to the Treasury. My sincere thanks also go to our Scrutiny Officer, Malcolm Orbell, and of course our adviser, Mr Bruce Brown.



Deputy P Rondel  
Chairman, Environment Scrutiny Panel

## 2. OVERVIEW

### **Departmental co-operation**

The progress of this review has been greatly helped by positive co-operation offered from the outset by the Department of the Environment. The Environmental Protection (EP) section submitted a detailed account of their structure and functions to the Panel and subsequently (with one exception which will be discussed later) responded promptly to all requests for information and meetings to assist the Panel and its adviser through the review process.

### **What are we protecting?**

The importance of our marine environment may seem obvious to residents of a small island with a long history in fishing, a tourist industry boosted by natural beauty and stunning beaches, and a successful aquaculture industry which has developed rapidly in recent years. Traditionally all of these industries have prided themselves on the quality of our waters, and the reputation of their products has benefited greatly as a result.

However, many people will be unaware that the Island is home to the largest shellfish producer in the whole of the UK; the aquaculture industry's value to the local economy was reported as over £2 million in 2009, and rising fast. The total value of all fishing and aquaculture combined in 2008 was £6,744,675 (calculated as first hand landed value).

### **Lack of resources**

Set against this background, it is surprising that the biggest problem faced by EP is a lack of resources. The department's own submission makes it clear they are over-stretched. The Environmental Protection section comprises a very small team with wide-ranging responsibilities, which the Panel's adviser has confirmed in most areas is able to produce work comparable with the best standards elsewhere, but is hampered by inadequate funding and a lack of manpower. The team regularly reviews allocation of funding and manpower to try to ensure it is making the best use of its limited resources.

### **Environmental legislation**

As a non-member of the EU, Jersey is not legally bound by the numerous complex EU directives aimed at environmental protection. This has advantages and disadvantages. While it allows the Island to tailor legislation to its own needs, often that legislation is very slow in coming; and without specific protection in place it is all too easy for environmental issues to be ignored. A case in point is the Bellozanne incinerator, which according to EU regulations on air quality should have been closed many years ago. Instead it continued to operate for some 20 years after its failings were identified.

On the positive side, EU directives can provide a ready-made framework for Jersey to adopt, in the knowledge that they have been thoroughly researched and accepted throughout Europe. Thus the new Energy from Waste plant was designed to comply with the emissions limits specified in the European Waste Incineration Directive (WID). EP has issued a detailed Waste Management License requiring that it meets these standards, and compliance is regularly monitored. This will undoubtedly bring a major reduction in emissions compared with the old incinerator, clearly a positive outcome for the environment.

In the context of some EU standards for environmental protection, Jersey is playing 'catch-up', starting a long way behind the rest of the field. The Water Framework Directive (WFD) has been

described by the Panel's adviser as the most significant current piece of protective legislation for the marine environment; but also as one of the most ambitious pieces of environmental regulation in the EU's history. Meeting its requirements will be a big undertaking, but it is very important that Jersey is able to sign up to this and other recent directives, such as the Marine Strategy Framework Directive (2008/56/EC), with the full support and backing of the States.

In other areas Jersey fares better. EP is very much on target for the EU revised Bathing Water Directive (2006/7/EC), which is being implemented in stages leading up to 2015. Considerable work has already been done by EP, for example producing bathing beach profiles, which are now available on the internet with other bathing water data. This has involved cross-departmental working and will continue to place demands on the section to update and maintain.

Unfortunately requests for additional funding to enable the Island to meet international environmental agreements have not always met with States approval. The department is thus put in a position of having to stretch existing resources ever further to adapt to and incorporate relevant EU standards; some of these are then mirrored in local legislation, others may be followed 'in principle' pending adoption, which can lead to some confusion for the public about which standards are legally enforceable locally.

### **Need for investment**

A lot more work will continue to be needed to enable Jersey to comply with major EU initiatives such as the Water Framework Directive and the Marine Strategy Directive. These will no doubt be followed by other developments as standards of environmental protection remain a key focus for the European Union. The fundamental question that needs to be addressed at a political level is whether Jersey is prepared to pay what is needed to achieve the highest standards of environmental protection, in order to safeguard our environment for the health and enjoyment of future generations.

The present review indicates that while a lot of good work is being done, current levels of investment in environmental protection do not provide sufficient resources for the department to carry out this vital rôle in full. There are significant gaps in our knowledge of what may be going into local waters, and our ability to follow up problems that may be identified is also compromised. Until these areas can be addressed there is a risk that substances which might have harmful effects could enter the marine environment but remain undiscovered. In the event of an unforeseen incident the Island might suffer reputational damage which could harm our industries and affect our ability to export local produce.

In the meantime, sporadic inferior results in shellfish and water quality where the source of pollution is hard to pin down test the relationship between affected stakeholders and the Regulator. While public health is protected by the requirement for depuration of farmed shellfish from other than the highest quality, Grade A beds prior to sale for consumption, there are economic impacts on the aquaculture industry; the depuration process adds significant costs. Witnesses from the industry have also highlighted their belief that water (and thus shellfish) quality has fallen in recent years, leading to a drop in the number of Grade A shellfish beds, which affects the potential sale value of their stock. This matter is discussed in more detail in section 11.5 of this report.

To give added confidence about the future protection of our environment, clear direction is needed from the States to establish agreed aims and objectives and a mechanism for bringing them about. New requirements (such as Environmental Impact Assessments [EIAs] for all major developments) are already bringing improvements, but implementing new legislation and monitoring compliance effectively will generally incur additional costs.

The need for additional investment in this area must be recognised both in the States and at a departmental level. The Panel believes that protecting our environment for future generations is more important than short-term cost considerations. A clear political statement on the selection of environmental criteria and how Jersey will respond to EU and international initiatives would seem a good place to start.

### 3. BACKGROUND

The current report arose from a combination of circumstances. First, in 2009 the Environment Panel conducted a detailed review of the planning process for the Energy from Waste Plant and Ramsar (eventually presented as SR1/2010). This focused the Panel's attention on concerns about protection of the marine environment, giving a strong incentive to consider a follow-up review.

This was followed by news that the Comptroller & Auditor General was considering a review of all aspects of environmental protection. The Panel met with the C&AG to discuss the matter. It was agreed that the Panel would undertake a detailed review focusing on protection of the marine environment.

#### 3.1 *Terms of Reference*

##### **Protecting Our Marine Environment Monitoring and Regulation of Coastal Waters**

This review is being undertaken by the Environment Scrutiny Panel to evaluate:

- the importance of protecting Jersey's marine environment against pollution, and in particular,
- concerns about marine water quality and the potential effect on Island residents, recreational users and the Island's fish farming industry of any potential for reduction in water quality, and
- the effectiveness of States monitoring and regulatory activities in protecting the marine environment.

The review will examine the following in respect of the marine environment:

1. applicable environmental legislation, including consideration of relevant international standards and any anticipated developments
2. the remit of Environmental Protection, Health Protection, Harbours, Fisheries and Marine Resources, States Veterinary Officer and Transport and Technical Services Department
3. existing and potential sources of pollution
4. pollution prevention work undertaken
5. regulatory powers including enforcement activities, procedures for investigation, prosecution and sanctions
6. monitoring activities, current testing regimes, planning controls, emergency planning and discharge consents
7. laboratory resources and arrangements for analysis of results
8. information available to the public on environmental protection and health issues
9. resources available for marine environmental monitoring, regulation and protection
10. the role of, and engagement with stakeholders.

The review will also:

- investigate the collation and assessment of scientifically based evidence of water quality impacts arising from the sewerage network, other outfalls and discharges from the Fort Regent cavern
- identify and consult where appropriate with stakeholders involved in dealing with any potential impacts of marine pollution on human health, marine eco-systems and aquaculture, and recreational use of beaches and local waters

- consider relevant current organisational structures and departmental responsibilities with respect to policy and operations affecting the marine environment
- compare these to alternative best-practice models of environmental protection and regulation elsewhere
- assess the benefits and resource implications of implementing possible operational or organisational change

The Panel will report its findings to the States.

It is noted that while various submissions were received from other departments or sections mentioned in point 2 of the terms of reference, as the review developed the primary focus of the Panel's work was on the work of the Environmental Protection section of the Department of the Environment.

### **3.2 Panel membership**

The Environment Panel is constituted as follows:

Deputy Phil Rondel, Chairman	(Member for St John)
Deputy Daniel Wimberley, Vice Chairman	(Member for St Mary)
Deputy Sean Power (Joined the Panel on 15 <sup>th</sup> February 2011)	(Member for St Brelade)

Officer support: M Orbell

(Connétable John Refault [St Peter] was a member of the Panel at the commencement of this review, but left to take up new responsibilities as Assistant Minister for Treasury and Resources, being replaced subsequently by Deputy Power).

### **3.3 Methodology**

Following approaches to a number of recommended bodies the Panel considered expressions of interest and eventually appointed **wca environment** as expert advisers to the review in August 2010. Mr Bruce Brown of wca visited the Island on several occasions during the course of the review, meeting with the Panel, departments and stakeholders as well as visiting relevant sites, including the Sewage Treatment Works at Bellozanne, La Collette reclamation site and various aquaculture concessions on the south east coast. He also attended to advise the Panel at public hearings in September 2011.

Mr Brown's expertise in this area includes experience of working in senior positions with the Environment Agency in the UK. He produced a detailed report for the Panel which was shared with the department and stakeholders at the draft stage and incorporates feedback from all parties where appropriate.

The Panel also issued a public call for evidence and contacted a number of local organisations directly to ask for their views. Submissions received are available to view on the Scrutiny website, [www.scrutiny.gov.je](http://www.scrutiny.gov.je)

In view of the largely non-technical nature of Mr Brown's report it was decided to include it in full as an appendix to the Panel's report to the States. The Panel's report itself therefore

focuses on summarising important issues, key findings and recommendations, and matters arising from the public hearings in September.

## 4. KEY FINDINGS

1. Manpower and resources within the department cannot always meet legitimate stakeholder aspirations, and in the event of a serious environmental incident the regular workload of the Environmental Protection team is compromised
2. While some aspects of European legislation are adhered to locally, resources available are currently insufficient to permit full compliance with wider environmental directives, such as the Water Framework Directive. There is potentially some lack of clarity amongst the public concerning which elements are legally enforceable
3. Knowledge of the chemical status of Jersey waters is limited. Existing discharges and continuing development on the Island's coastline create pressures which are not adequately understood. Some important priority pollutants are not included in current monitoring
4. Excluding a service level agreement with the States Analyst, out of a total monitoring budget for all environmental purposes of only £10,000 per annum, only £3,000 is currently available for monitoring and analysis of results from inland and marine waters; this is insufficient to obtain a clear understanding of the main sources of marine pollution and its possible impacts
5. Existing laboratory arrangements are a barrier to meeting stakeholder expectations for investigative monitoring, and any significant additional work would need to be out-sourced. Solutions to chronic microbiological quality issues will not be found with existing approaches and resources
6. The Bellozanne Sewage Treatment Works (STW) fails nitrogen limits under the EU Urban Waste Water Directive
7. Public knowledge and access to the results of microbiological and other sampling carried out by different departments are currently limited. The transition to the new States website has made it more difficult for the public to access data held by Environmental Protection
8. There is currently no 'one-stop shop' for public or stakeholder enquiries about environmental or public health data relating to the marine environment
9. More investigation is needed into the metal burden entering the Bellozanne Sewage Treatment Works and its eventual disposal into the marine environment
10. The department's recent paper on trends in oyster contamination throws more light on a complex situation. However, in the time available the Panel has not been able to test its findings. An independent review of these is therefore desirable

## 5. RECOMMENDATIONS

**The Panel endorses the following recommendations of its adviser drawn from the evidence presented to him and from experience of other UK regulatory organisations:**

1. We recommend undertaking a risk-based assessment of the chemical contaminants most likely to be present in Jersey's waters, and the estimated reasonable worst case loads of these substances in the Bellozanne effluent and diffuse inputs from the La Collette reclamation site. This should not be a hazard assessment. This would deliver a clear list of potential contaminants of concern and evidence to support their selection. This exercise should then be followed up with limited, but targeted monitoring of effluents and sessile biota close to these sites
2. Having undertaken the above exercise, longer term monitoring can be refined and targeted to cover only key contaminants of concern, NOT all chemicals
3. The scope of marine chemical monitoring around Jersey should be reviewed to ensure that analytical data are compatible with EU regulatory requirements in order to allow effective comparison with international standards. This would deliver greater understanding of the status of waters, and provide confidence to those markets reliant upon Jersey's resources, such as shellfish and tourism
4. Additional resources and more flexible arrangements for aqueous microbiological sampling and testing on the island are essential to meet reactive monitoring demands and stakeholder expectations. A policy review of delivery capability for long term reactive monitoring is necessary
5. Structured microbiology monitoring surveys should be undertaken to characterise the sources and pathways of faecal pollution. These surveys will need to be significant in size and scope to be effective and will require external laboratory services
6. Monitoring data from sites of public interest such as Bellozanne should be more readily available. The establishment of public registers in a similar manner to the UK Environment Agency would help create a more informed dialogue with stakeholders and remove some of the prevailing suspicion.

**In addition the Panel recommends as follows:**

7. The use of external providers should be considered to address shortcomings in on-Island monitoring and analytical resources for the purposes of additional survey work (as recommended in 1 & 5 above)
8. Departmental resources should be increased to enable more emphasis to be given to marine monitoring
9. A position statement clearly defining aims and objectives for improving water and shellfish quality should be prepared in consultation with stakeholders and brought to the States for approval

10. Jersey should adopt all relevant sections of the European Water Framework Directive to enhance the protection of all local waters (both inland and coastal)
11. Jersey should also adopt and comply with the provisions of the Marine Strategy Directive as a framework for protection of the marine environment
12. A dedicated section of the States website (or a standalone site) should be created as a public register for easy access to all available environmental data. This should also feature relevant information from other departments such as public health data on the results of monitoring of commercial species for public consumption
13. There should be a presumption that all data held by States departments on environmental matters (other than commercially sensitive information relating to specific stakeholders) should be freely available to the public
14. Effluent monitoring data to include relevant information on heavy metal content, coliform counts and details of any exceptions and overflow events should be provided automatically to the aquaculture industry, with a failsafe system put in place to communicate urgent warnings
15. Additional laboratory capacity is required to permit microbiological samples taken throughout the week to be analysed. Incidents can occur 24/7 and laboratory services should be available to meet the needs of the industry
16. A task group involving both regulators and industry representatives should be set up to coordinate action on water quality. This should be separate from the Ramsar Management Authority, although that group could be represented
17. A review of the terms of reference and working of the Ramsar Management Authority should be carried out in consultation with stakeholders and other interested parties
18. To ensure the robustness of its findings, the paper 'Long-term trends of bacterial contamination in Oysters (*Crassostrea gigas*) cultured in South-East Jersey' should be submitted for independent peer review
19. A full explanation of the circumstances of the alleged environmental incident at the Energy from Waste plant construction site at La Collette in April 2009, together with the steps taken to investigate it should be published without delay

## KEY ISSUES IN DETAIL

### 6. *Resource limitations*

The underlying message from the Panel's review is that Environmental Protection does not have enough resources. The Panel's adviser confirms that the section's work is commendable, but EP is clearly under-resourced, with a very small team carrying out a range of tasks similar in scope to a national body in the UK, albeit on a more limited scale. As noted above, the department's own submission recognises these limitations, and EP routinely have to review how their limited budget and manpower resource can be used to maximise their impact island-wide:

Manpower and budget resources in Environmental Protection are extremely stretched - they have not increased over recent years and have not benefited from a recent assessment of the resources, given the expansion of the remit.

Funding for the recent additional initiatives undertaken by Environmental Protection to safeguard the environment, such as the Diffuse Pollution Pilot Project, the profiling of bathing water catchments and administering complex discharge permits has had to be delivered using existing resources.<sup>1</sup>

EP have delivered these tasks using existing resources and novel approaches to their work. However, looking to the future they may no longer be able to cope with additional demands because there is no further flexibility available within existing resources.

#### 6.1 Manpower

Part of the problem is simply a lack of manpower. When an environmental incident related to water quality occurs, one or more team members (out of a total of 5) are obliged to put aside other work to respond to the situation. In the case of a serious pollution incident, that may mean an extended period during which colleagues already with their own full workload have to cover for others, while an investigation (and associated documentation or case file) is completed. Historically, responding to pollution incidents involved the majority of the team's time. More recently it has focused on working efficiencies to allow time for more pro-active work in the areas of pollution prevention and education. However, statutory duties will continue to take up a large amount of the team's time.

In a public hearing with the Minister for Planning and Environment on 7<sup>th</sup> September 2011 the department's Chief Executive Officer likened the resource to a balloon, which if pushed on one side, would pop out on another:

**Chief Executive Officer, Department of the Environment:**

... The actual time we have to spend on strategy, policy making and therefore changing the regulatory regime is always impinged by the reaction work that we have to undertake because of things that are going on. So it is incredibly hard. When we are looking at reallocating resources, it is very hard to reallocate resources without impinging on another statutory area in the department. So it is a very hard balancing act.

<sup>1</sup> Environmental Protection submission to the Scrutiny Panel, Section 1.2 – Resources (p.1)

Given the continued emphasis on cutting spending within the States sector this comes as little surprise. However, it does mean that at best the section is just coping with a demanding (and increasing) workload, through a combination of goodwill and long working hours. When emergencies occur the available resources can quickly become over-stretched. As an example, the small number of staff already means that weekend callouts to environmental incidents are entirely voluntary, yet all team members respond to these.

Although this arrangement appears to be working at present, it puts a lot of pressure on the team and seems potentially risky, when the possible outcome of a breakdown could be a failure to protect the environment from harm.

While the Panel has no evidence of environmental problems arising as a result of the section's staffing pressures, this can also have other impacts on its work. For example, until very recently only one full-time equivalent (FTE) post was dedicated to the area of waste management, which has contributed to a very long lead-in time to finalise a waste management licence for the La Collette site. This was also raised at the public hearing:

**The Deputy of St. Mary:**

You are still working on the waste management licence.

**Director for Environment & Deputy Chief Officer, Department of the Environment:**

They have a transitional arrangement in place under the law in the same way as deemed permits work from the Water Pollution Law. The activity can be reviewed by the department and they can operate legitimately until such time as a new licence is given and if there is no significant changes required to make, material changes, in terms of mitigation in terms of the environmental perspective then they are free to carry on essentially. But we have been working with them over the past years to ensure that the works that they are doing are indeed mitigated.

**The Deputy of St. Mary:**

Is it a concern of yours that it takes 5 years to not issue a waste management licence, because you have not issued it yet and the law was put in place in 2005?

**Director of Environmental Protection:**

It would be a concern if we were not down there frequently and having many, many discussions with T.T.S. to ensure that ... the problem with the delay is T.T.S. have moved a long way along the road on the compost site. Now we have got a state of the art bespoke facility, but of course the working plan they put in when they applied for the licence is vastly different from what they are doing on site now. But so long as we as regulators understand that process and have guided them and advised within the process to get that bespoke unit, which we then can licence, I am happy with that as a regulator.

Stakeholders from the aquaculture industry have also referred to occasions when EP was unable to respond quickly to possible pollution incidents during times of heavy rainfall. While this is hard to pin down to specific events, the number of short, sharp rainfall events appears to be increasing. EP commented that they have encouraged shellfish farmers to phone and report incidents, and have given them high priority when this has happened. They have also provided sample bottles so that stakeholders can take their own samples. All incidents are documented in pollution reports.

## 6.2 Lack of monitoring data

Apart from these manpower constraints on the section, the Panel's adviser has identified a general concern that there is a shortage of monitoring data on some important chemicals in Jersey's marine environment, particularly priority hazardous chemicals. Some substances of concern are not currently monitored at all; others are tested for on a relatively limited programme at present. The department seems keen to improve this situation:

**The Deputy of St. John:**

It is of some concern to the Panel that monitoring of heavy metals content in local waters is relatively limited in scope and some toxic substances are not monitored at all. Do you agree that more work needs to be done in this area?

**Director of Environmental Protection:**

Yes.

**Minister for Planning and Environment:**

Yes.

**The Deputy of St. John:**

That is a nice easy one.

**Director of Environmental Protection:**

Particularly with mercury, P.C.B.s (Polychlorinated biphenyls), B.F.R. (Brominated flame retardants); at the moment we are looking into prices of that in the U.K., certainly the States analysts can do mercury, we will include that service.

**The Deputy of St. Mary:**

You will be monitoring live organisms rather than water, or as well as water?

**Director of Environmental Protection:**

The marine life; that is right.

It is noted that the Transport and Technical Services Department has commissioned extensive monitoring work around La Collette, to respond to concerns about potential contamination of the marine environment in that area. To address the lack of data on an Island-wide scale, the Panel's adviser recommends that additional short-term funding is needed for an increased monitoring budget to permit targeted surveys. In the longer term, budget requirements will depend on what (if any) risks are identified by initial surveys, modelling and risk assessment; but they are likely to be higher than at present.

## 6.3 Laboratory constraints

Another problem area raised by representatives of the aquaculture industry relates to a perceived lack of capacity at the States Analyst's laboratory. Jersey's laboratory normally only accepts microbiological samples between certain hours on Monday to Wednesday. This is partly to avoid the need for out of hours working, which would be required to complete scientific procedures if samples were accepted at other times. Capacity is further limited during the bathing season, when regular bathing water tests are carried out on a weekly basis.

This clearly gives rise to frustration amongst stakeholders, who point out that pollution incidents do not follow a convenient timetable<sup>2</sup>:

**Mr. C. Le Masurier:**

We feel that if there is an unexplained mortality in the shellfish, if there is pollution you have got to report it. The chain of reporting and who it goes to, it has got to go to Water Resources, it has got to go to the competent authorities who do not really have a grasp on the ability, the resources or sometimes the desire to send samples, get them tested, you know, if there is a source of pollution. I am not an expert on analysis. I need to be giving these samples to the competent authorities to get them done and when you get told: "Oh well, you can only bring a sample in between 10.00 a.m. and 4.00 p.m. on a Monday or Tuesday" because the States analyst, that is the only time they have got a gap, pollution does not happen like that.<sup>3</sup> Sporadic rainfall does not happen from 9.00 a.m. to 5.00 p.m. Monday to ...

**Deputy S. Power:**

People do not flush their toilets just on a Monday and a Tuesday. (See footnote.)

However, the Panel is informed that this matter has previously been discussed between EP and the Analyst in light of concerns, and an assurance given that samples will be received and overtime paid if necessary where EP request priority. EP have indicated that they are not aware of the hours limitation having caused specific problems with analysis of samples, and maintain that all major pollution incidents have been fully investigated.

In an industry where the inadvertent sale of contaminated product could cause consumers to fall ill, and unexplained results showing higher levels of coliforms in shellfish could lead to downgrading of beds and impact significantly on the sale value of the product, stakeholders need a high level of confidence in the ability of the local laboratory to identify problems swiftly and accurately when they occur. The limited window for the States Analyst's laboratory to accept and test samples has been mentioned to the Panel or its adviser on several occasions and obviously gives rise to some concern; however, the extent to which it may have caused problems for stakeholders is unclear.

The Panel's adviser has drawn attention to the fact that the UK Environment Agency uses a 'relaxed' maximum time of 48 hours between sampling and analysis; it is not known whether the local laboratory could gain any advantage from this, but even if that were possible it seems unlikely that stakeholders' expectations could be met in full under current arrangements.

The Panel concludes that capacity for 'reactive' monitoring and analysis of samples needs to be reviewed. There must be sufficient flexibility for samples from any suspected pollution incidents to be analysed, whenever they may occur. This may be achievable on-Island, but it seems likely that additional monitoring activity recommended in other sections of this report will probably require outsourcing of analytical workload.

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<sup>2</sup> Public hearing with Mr C Le Masurier, Jersey Oyster Company, 6<sup>th</sup> September 2011

<sup>3</sup> The Panel was subsequently informed that the correct delivery times for the analyst during normal working hours are Monday to Wednesday 8.30am-2.00pm (other times available on request). Total coliform and faecal coliform analysis can also be carried out on Thursdays.

## 6.4 Difficulty identifying sources of pollution

One of the biggest problems faced by EP and stakeholders stems from the complexity and large numbers of potential sources of pollution which may be responsible for occasional poor test results. These could include domestic or wild animals, birds, run-off from agricultural land, and occasional overflows from domestic or main drains at times of high rainfall. Previous studies by the department and the Centre for Research into Environment and Health (CREH) have shown that water quality in Grouville Bay deteriorates naturally as a result of high rainfall events washing off bacteria. Despite a great deal of work, a single large source of pollution has not been identified.

In order to be confident that all possible sources are being tested and to understand their relative contribution to the problem, as noted above there is a need for significant additional monitoring in the form of targeted surveys. These would have to be carefully designed, with the ability to react to extreme rainfall events and resultant sewer overflows, as well as taking into account regular discharges from various outfalls around the coast, including Bellozanne.

Some of the necessary analytical workload could be out-sourced to the UK, France, or to mobile laboratory facilities that could be brought to the Island. The adviser's report discusses these matters in more detail, including consideration of technologies that may assist in determining whether the source of any contamination is of human or other origin, together with estimates of the potential costs. These additional studies are considered essential by the Panel to deliver more clarity on a very complex issue, which has eluded past investigations but needs to be resolved so that appropriate prevention or mitigation measures can be put in place.

It is understood that Environmental Protection have previously considered and costed targeted surveys as described, but the high cost (estimated to be in the region of £100,000) has so far prevented this work being undertaken.

The Panel's adviser has proposed that it may be helpful to set up a task group involving both regulators and industry representatives to coordinate action on water quality. This would be a separate function to the Ramsar Management Authority (see section 11.4 below) although that group might have useful input.

## 6.5 Use of monitoring resources

The department carries out a wide range of monitoring activities including bathing water work, surface water monitoring, borehole monitoring, the diffuse pollution project, macro invertebrate sampling and the taking of regulatory samples at Crabbé and Bellozanne as well as outfall monitoring. While the Panel accepts that all of this work is necessary and appropriate, given the history of stakeholder and aquaculture industry concerns about the impact of discharges from Bellozanne, the cavern and the La Collette reclamation/JEC/Energy from Waste sites on marine water quality, it is felt that consideration should be given to whether more resources should be applied to monitoring in these areas. Additional funding would be required to enable this without affecting other priorities.

## 6.6 Monitoring budget

A Service Level Agreement (SLA) has been in place between Environmental Protection and the States Analyst since 2003 (updated in 2010). In respect of the marine environment this includes analysis of pollution incidents, routine monitoring of surface waters and outfalls, bathing waters and discharge permits. The annual cost of the SLA was set at £58,496 in 2003 and has not increased since.

Analysis not covered by the SLA is arranged by agreement, and funded from Environmental Protection's monitoring budget. The Panel was surprised (and dismayed) to be told at the public hearing with the Minister on 7<sup>th</sup> September that of a total monitoring budget for all environmental purposes of only £10,000 per annum, only £3,000 is currently available for monitoring and analysis of results from inland and marine waters.

Members consider the total departmental budget for monitoring (including the SLA) to be too small when compared with the overall value to the Island of the aquaculture, fishing and tourism industries and the positive benefits of having clean and healthy waters. The tragic outbreak of food poisoning in Germany in May 2011 had a huge impact on the Spanish agricultural industry as a result of reputational damage; similar harm could all too easily be envisaged to Jersey's reputation if we fail to protect our unique marine environment from pollution.

## **7. Approaches to risk**

Another aspect contributing to the sometimes difficult relationship of the Regulator (EP) and other official bodies with stakeholders relates to how the differing groups perceive risk. In an ideal world it would be easy to say 'we don't want anything at all going into our waters'. Unfortunately this is unrealistic. The Panel accepts that the only practical way to address concerns about potential pollution involves a risk-based approach as adopted by the department, taking an informed view of what substances are likely to be present in the environment naturally or as the product of human activities, and scientifically assessing whether they constitute a risk to the environment or human health. This also needs to take into account the latest research findings.

The Panel's adviser has drawn attention to the very limited extent of current monitoring for chemical contaminants in Jersey's marine waters, and has pointed to a need for a risk-based assessment of those most likely to be present to inform an enhanced programme of monitoring in future. The Panel is pleased that this approach appears to have been endorsed by the department. Preparatory work for this would involve a desk-top study of potential and known sources of hazardous substances in the Island, followed by initial sampling to identify which chemicals were present in sufficient concentrations to warrant further investigation, while others could be dropped from further testing if no risks were detected.

## **8. Specific concerns**

The Panel's adviser has identified the following important issues for additional investigation and/or monitoring:

- the nutrient status of Jersey's coastal waters, especially if the loads of nitrogen being discharged remain high. (This relates to the failure of the Bellozanne Sewage Treatment Works [STW] to meet nitrogen limits under the EU Urban Waste Water Directive – see section 5.1 below.)

- a limited assessment of Brominated Flame Retardants (BFRs) in shellfish would enable a comparison against concentrations reported in scientific literature. This could provide an indicator of any trace levels of bio-accumulating pollutants leaching from areas of land reclamation
- although Polychlorinated Biphenyls (PCBs) are a legacy chemical, a limited monitoring exercise of shellfish would help place the local concentrations into context
- Perfluoro Octane Sulphonate (PFOS). Shellfish and seaweed around the Bellozanne outfall are monitored for PFOS contamination by the airport authorities, but it is not clear whether similar monitoring of biota is undertaken in St Ouen's Bay. If not, obtaining such data should be a priority to allow comparisons against relevant standards. (It is understood that the airport authorities have now been asked by EP to include a sample for this in their next monitoring run.)

## 9. EU directives

The Department of the Environment aims wherever possible to observe major EU environmental directives as a matter of best practice, although as discussed above, resource implications and other practical considerations may significantly restrict the extent to which Jersey can follow the EU lead. The department's Director for Environment & Deputy Chief Officer was asked about possible constraints at the public hearing on 7th September 2011<sup>4</sup>:

**Deputy S. Power:**

... Obviously your department has to deal with a raft of decisions which come out of recommendations which come out as to what E.U. directives and other agreements are followed. Do you have an overall plan for that? Are you financially constrained? Is there a coherent policy? Could you just tell us how you do that? The reason we ask the question is that we know that Jersey not being in the E.U. has a certain degree of freedom as to what directive you choose to apply and what you do not, and we do not see the clarity there or we would like a kind of a heads-up on that.

**Director for Environment & Deputy Chief Officer, Department of the Environment:**

I think you use an interesting term: "financially constrained" in that respect, because I think not only are we financially constrained, but we are operationally constrained, and that is going to be improved and has indeed started to be improved by the implementation of the Jersey Brussels Group, which is now tasked with finding in a much, much more effective way where we should be complying with E.U. regulations directives. It is fair to say that we are limited in staff numbers to the point that we have a workload and we are very, very busy undertaking that workload. Trying to establish the direction forward for that workload is something that is done by our existing staff, but realistically should be done by that third party, which is hopefully the ... and increasingly so now the Jersey Brussels Group, the problem being with this new body is that it will no doubt bring to light more and more work that should be brought to our attention, and quite rightly so, you know, environmental improvements are happening all the time. So it is a double-edged sword. We will be passed on the information as to which direction we should be going and what we should be implementing. The flip side of that is do we have the resources to do it, and quite simply, the answer at the moment is no. We are doing our very best to try and accommodate changes. It has evolved, there has been an evolved and risk-based assessment of how we target the specific requirements from the E.U. or specific regulations directives coming out of the E.U. That is how we had to approach it with the staff we have got, with the risks to Jersey, with the specific Jersey-related issues, rather than simply wholly as taking on directives. So no, it is an evolving issue.

<sup>4</sup> Public hearing with Minister for Planning and Environment, 7<sup>th</sup> September 2011

The adviser's report discusses several key EU directives relative to water quality in some detail; these include:

- the Water Framework Directive (WFD) (2000/60/EC)
- the Shellfish Waters Directive (2006/116/EEC)
- the Shellfish Hygiene Directive (91/492/EEC)
- the Bathing Waters Directives (76/1160/EEC and 2006/7/EEC)
- the Urban Waste Water Directive (91/271/EEC)

The Marine Strategy Framework Directive (2008/56/EC) is a more recent development that aims to protect marine ecosystems from all potential pressures. The Panel recommends that Jersey should adopt all relevant sections of this and the Water Framework Directive to assist in the development of a comprehensive risk-based framework for protecting the Island's inland and coastal waters.

## **10. St Aubin's Bay, Bellozanne and La Collette**

### 10.1 Nutrient levels

The effectiveness of the Sewage Treatment Works (STW) in Bellozanne Valley and the quality of treated effluent discharged into St Aubin's bay have long been a subject for debate, partly owing to periodic appearances of sea lettuce, which are often unsightly and smelly, although rarely bad enough to cause beach businesses to close (as happened temporarily at La Haule in May 2011). The growth of sea lettuce is potentially linked to an excess of nutrients in the water allowing some organisms, particularly algae, to grow excessively, but reducing the levels of dissolved oxygen remaining which can lead other organisms to die off; this is known as eutrophication.

Bellozanne has been subject to a total nitrogen standard in line with EU Urban Wastewater Directive requirements for a sensitive area since 2006. However, nitrogen concentrations have consistently exceeded the standard, and despite changes to treatment processes to try to address the issue there is no evidence of improvement. During this period Environmental Protection has issued two formal warning letters to TTS and is now compiling a case file.

A series of studies have been undertaken in the bay by the Centre for Research into Environment and Health (CREH) over a number of years to look into this problem, which remains under discussion. The latest results suggest that the waters in St Aubin's bay are not technically subject to eutrophication (i.e. are not sensitive according to the EU Urban Wastewater Directive), but the issue appears to be finely balanced.

### 10.2 The Bellozanne outfall and UV treatment

Other concerns (particularly amongst recreational users of the bay, and the aquaculture industry) centre on the discharge from the Bellozanne outfall. The volume, appearance and odour of the effluent can vary at different times, and this has given rise to speculation that the effectiveness of the treatment process might be subject to fluctuation. At flood tides, the plume of effluent is carried in a south easterly direction by strong currents around the reclamation site, and thence around the coast towards the oyster beds in Grouville Bay.

While the treatment process at Bellozanne includes exposure to ultraviolet (UV) light which is highly effective at killing bacteria, at times when the plant is experiencing high volumes (during heavy rainfall events) the presence of suspended solids in the flow can reduce the ability of the UV light to penetrate, giving rise to some concern that bacteria may not be killed as effectively under those conditions. The Panel was told at the public hearing on 7<sup>th</sup> September that there was no evidence that this had adversely affected the 'kill rate' of bacteria passing through the plant, which was approximately 99% apart from a few 'blips'. A variation to the permit will enable UV 'dosage' to be measured in a different way, which should enable a clearer understanding of bacteriological loading and UV kill rate. However, historically the UV level has been increased during high flow conditions to maximise bacteriological kill rates, and there is no evidence that viable or live bacteria have reached the shellfish beds from the STW. EP stated that they have fully investigated all reports from the aquaculture industry where odour and appearance of effluent has been a concern.

### 10.3 The Fort Regent Cavern and overflows

A known source of occasional pollution to the bay is the outfall from the Fort Regent Cavern, which exits just outside the Elizabeth Marina. Owing to the function of the cavern in receiving excess flows from the sewerage system during high rainfall events, when this overflows untreated sewage will be released into the bay, although the huge volumes of water needed to fill the cavern mean that this is highly diluted. Although the number of occasions on which the cavern has overflowed since it was brought into operation has been slightly higher than expected owing to changing climatic conditions, it is hoped that once the north of town sewerage system (Philip Street shaft and separation scheme) is completed the situation will improve.

Until recently there was no way to sample the cavern discharge; a sampling point has now been established but no results have yet been seen, as rainfall has been relatively low recently and there has been no overflow. Once samples can be taken this may help to clarify the extent of any potential pollution from the cavern. Previous studies by EP have indicated some degree of correlation between the timing of overflows and subsequent elevated coliform counts in shellfish tests, but as wash-off from the land is also greater at times of high rainfall there is a need for more work to establish whether there are any direct links and/or to clarify the relative impacts.

It is clearly accepted that the current sewerage system has limitations<sup>5</sup>:

**Deputy S. Power:**

Let us say we have had heavy rain in the last 24 hours - I do not know how it works, I do not know how T.T.S. works, I do not know how your department works - is there a likelihood that there will be a deemed discharge because of that heavy rain and you will be notified of that?

**Head of Water Resources, Department of the Environment:**

We would be notified of any overflows from pumping stations, from the cavern, through the permit that is in place for those activities. So there are certain activities ... all the pumping stations have a permit, that basically says that they have to notify us that a discharge is going on. There are certain things that again you cannot do much about. The system is the system and it can only take so much.

<sup>5</sup> Public hearing with Minister for Planning and Environment, 7<sup>th</sup> September 2011

However, this brings no comfort to the aquaculture industry, whose shellfish bed grades have a direct effect on their livelihoods. They are effectively at the mercy of pollution events, whether caused by storms that can temporarily overload the system or by other means. Their frustration is evident<sup>6</sup>:

**The Deputy of St. Mary:**

A couple of questions, Chris, really picking up on things you have said. You said in response to one of the first questions that in recent years there has been a continued decline in water quality. Is the evidence just those sheets, the actual testing of the shellfish, or is there other evidence? If we looked at those over time would there be a trend of getting worse over the last few years?

**Mr. C. Le Masurier:**

Yes.

**The Deputy of St. Mary:**

There would be? Okay. I just wanted to be sure where the evidence was.

**Mr. C. Le Masurier:**

We have done graphs ourselves on our own test results, we have done graphs that shows that decline. Also we have tried on a couple of occasions to put in place things like when there is a sewage spill, be it the cavern or whatever, the T.T.S. call us. That works for a couple of months and then they tend to forget and then at the end of the year you get notified that there were 6 spills during the year. So where are my 6 phone calls? There is not enough in place to safeguard our industry and human health. At the end of the day this is what it boils down to and it is a lot of extra cost to ... when I got all my areas downgraded I got told by Public Health either I install purification or I stop selling for consumption, and that was a cost of £70,000 to myself just to carry on. I did not have time to ... I could not let the customers down. Previously one of the other shellfish companies ... put a claim in against the States back in the late 1990s and his purification system was installed by T.T.S. and paid for by T.T.S. as an out of court settlement.

The Panel understands the difficulties faced by the industry, but putting these concerns to the department it is apparent that there are very differing perceptions both of the nature of any problems and the possible reasons for them. Comments made in the above extract about a decline in water quality are challenged by a new paper produced by the department<sup>7</sup> analysing trends in oyster bed contamination, partly in response to the remarks made to the Panel at the above hearing. This is discussed further in section 11.5 of this report.

Environmental Protection also confirmed that on each occasion they had checked whether TTS had informed fish farmers of any spill from pumping stations they had done so; they could not recall any year in which pumping stations on the east coast over-spilled 6 times as suggested. It is noted that as Grade A beds are now uncommon<sup>8</sup>, most shellfish farms wishing to sell to the public would expect to have access to a depuration unit as part of their normal operations, although the Panel accepts that the situation may have been different a number of years ago.

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<sup>6</sup> Public hearing with Mr C Le Masurier, Jersey Oyster Company, 6<sup>th</sup> September 2011

<sup>7</sup> Long-term trends of bacterial contamination in Oysters (*Crassostrea gigas*) cultured in South-East Jersey, 28th October 2011

<sup>8</sup> This point is further explained in section 11.5

## 10.4 Heavy metals

Heavy metals are potential contaminants of real concern to both stakeholders and shellfish farmers. They have aroused increasing attention in recent years as a result of growing scientific knowledge of the process of bio-accumulation and the harmful effects of combinations of chemicals on different organisms. The presence at La Collette of a growing number of ash cells originally containing bottom ash from the Bellozanne incinerator naturally raises questions about whether any of this material, with its varying burden of heavy metal content may escape into the environment. Much of this ash was in fact moved to La Collette following excavation from the Waterfront area, where it was deposited during the early stages of reclamation activity in the 1980s.

Ash stored at the La Collette reclamation site is contained within butyl liners in engineered cells, which when filled are capped over to prevent rain entering the cell. Over time the ash dries out into a cement-like consistency which the Transport and Technical Services Department (TTS) confirm to be stable and because of the butyl lining material, not subject to penetration from below by hydraulic action from tidal movements affecting groundwater under the site.

These claims have been challenged by some stakeholders, perhaps partly because of the strength of feeling attaching to the preservation of the South East Coast of Jersey Ramsar site which borders La Collette. The Panel is therefore pleased that the Waste Management License for the Energy from Waste plant will require environmental monitoring and survey work around the La Collette site, which will contribute to greater knowledge of the chemical status of surrounding waters and help to establish baselines for water quality which may enhance future protection measures. As noted above, TTS has already commenced work on an extensive programme of monitoring but results were not known at the time of writing.

## 10.5 Tankering of ash cell leachate to Bellozanne

One aspect of the management of ash cells which has caused additional concern amongst some stakeholders has been the need to dispose of quantities of leachate, which collects in the bottom of cells during rainfall events while they are still open and being filled with ash. This has customarily been pumped out and tankered to Bellozanne, where it is added into the sewage treatment process. The volume and ultimate fate of the heavy metals contained in the ash cell leachate has previously been a matter of some debate, and the Panel was hoping to see a report on this subject produced by Capita Symonds consultants on behalf of Transport and Technical Services Department during the course of this review. Unfortunately this was somewhat delayed and copies were only delivered to the Regulator just before the public hearing on 7<sup>th</sup> September 2011; a copy was also made available to the Panel although there was little time for its adviser to study it in detail.

## 10.6 Capita Symonds report

The Capita Symonds report concludes that ash cell leachate makes a relatively small contribution to the total volume of metals discharged from Bellozanne in the form of effluent, and also that the metal content of 'sludge cake' spread on the land is not likely to have a negative impact on land quality.

The Panel's adviser has pointed out that a number of the marine water quality standards used in the Capita Symonds report are older standards which have been replaced by newer Environmental Quality Standards (EQSs) in the Water Framework Directive. The new marine EQSs tend to be more stringent than the previous standards, suggesting that a degree of caution

is required when comparing assessments of metal concentrations against marine standards in the report.

The Capita Symonds report also accepts that the data on metals both at Bellozanne and in the receiving water are limited. It recommends that additional monitoring is needed, which is supported by the Panel's adviser. In this context it is important to note that some of the existing limits of detection in the metals monitoring data are higher than the limits in the relevant EQS, so any future monitoring will need to ensure that equipment used provides a sufficient degree of sensitivity to permit a meaningful comparison with the relevant standards.

### 10.7 Ash 'headland'

Proposals have recently emerged from TTS for the future disposal of ash from the Energy from Waste plant into an artificial 'headland' to be constructed over the La Collette site. The plan includes the possibility of using relatively inert bottom ash as a construction material, possibly after treatment (slaking) to reduce its toxicity. However, within the proposed ash mound there would be a need to dispose of significant quantities of much more toxic fly ash, which contains a high proportion of heavy metals and other harmful substances such as dioxins. The old Bellozanne incinerator essentially allowed the majority of these substances to escape as pollution to air. Much better air pollution controls at the new EfW plant mean that they do not escape; the residues are collected in filters and then have to be disposed of.

It could be argued that this should have no effect on the marine environment, so the issue has no place in this review. However, the Panel has serious concerns about proposals to bag this material and dispose of it in an artificial headland, even if the new ash cells are designed to a higher standard than previously. The global spread of exceptional weather events such as the tsunami in Japan earlier this year adds to the Panel's concerns.

Jersey is not immune to climate change impacts, and has experienced a marked increase in heavy rainfall events in recent years. Sea levels are rising, and a 'mini tsunami' phenomenon was reported in the South West of England only a few months ago. The Island also experiences (admittedly relatively minor) earthquake tremors from time to time. Given this background the Panel is alarmed by proposals to store toxic ash residues in an artificially constructed headland in an exposed coastal location. The potential for some unforeseen future weather or geological event to compromise such a structure cannot be ignored, as this could cause irreparable harm both to the adjacent Ramsar site and the wider marine environment.

Having considered all the above the Panel is convinced that further studies are needed to investigate in depth the current status of Jersey's waters, what effect known factors are having on water quality, and what actions could be taken to improve it. This would potentially benefit not just the aquaculture and fishing industries but the Island as a whole, as a large part of Jersey's reputation relies on our superb beaches and unique marine environment, of which Islanders are rightly proud.

## **11. Need for transparency**

### **11.1 Lack of trust**

From evidence seen by the Panel and its adviser, EP has a highly dedicated and capable team who appear to be doing the best they can in sometimes difficult circumstances, and consistently respond in a professional and timely manner to requests from stakeholders. Nevertheless, on various occasions during the course of this review aquaculture representatives and other stakeholders have demonstrated frustration with what they suggest is a lack of action to address microbiological pollution.

The department has made various efforts to improve relations. As mentioned above, in one such initiative to try to overcome industry criticism about response times to pollution events, stakeholders have been provided with sampling bottles to take samples themselves. Unfortunately on one early occasion when these were used, results suggesting elevated levels of coliforms from several different sources were subsequently challenged. Reasons for this apparently included a delay in stakeholders providing the bottles to the Analyst and the fact that the samples had not been refrigerated, amongst others. Notwithstanding this EP undertook additional monitoring of the STW as a result, without finding any evidence of elevated coliform levels.

Although the initiative was presumably intended to give extra support and reassurance to stakeholders, in this case it had the opposite effect. The department continues to try to work with the industry and improve engagement with stakeholders, but as discussed above, positively identifying potential sources of pollution will require substantially more monitoring resources than are presently available. Until these problems are resolved it may be hard to improve the relationship between the aquaculture industry, other stakeholders and the Regulator.

### **11.2 Alleged environmental incident**

Given the importance of mutual trust and openness between the department and stakeholders it is ironic that the Panel should also have to record misgivings about an alleged pollution incident which took place at the La Collette site during the early stages of construction of the new Energy from Waste plant, in April 2009. This matter was reported to the Panel some time after it took place by Save Our Shoreline (SOS), who told the Panel of some of the circumstances as understood by them through contact with a former employee at the site, who was a witness to the alleged events.

Both SOS and the Panel were subsequently informed by the department that no information could be released about the alleged incident because a formal investigation had been launched by the Regulator. This was accepted by both parties, albeit perhaps with some reservations, as being in the best interests of the environment. A year then passed during which all enquiries were met with the assurance that the investigation was ongoing, followed eventually by the news that a case file was now in the hands of the Law Office for consideration.

After a considerable effort of persuasion, the Panel's adviser was permitted a short confidential briefing on the event during a visit to the department earlier this year, from which he has drawn brief conclusions in his report. He was able to report back to the Panel that on the basis of the information received, there was no evidence that a significant pollution event had occurred at the EfW construction site.

The Panel was finally informed in June 2011 that no prosecution would be forthcoming, and that there was now nothing to stop it considering this matter further. In view of its importance as a test case of the department's ability to protect the environment, during the States sitting of 5<sup>th</sup> July 2011 the Chairman requested that details of the incident be forwarded to the Panel<sup>9</sup>:

**5.12.3 The Deputy of St. John:**

Given that my Scrutiny Panel, of which the Deputy of St. Mary is the vice-chair, were reviewing the Energy from Waste plant/Ramsar scenario in 2009 and we requested on umpteen occasions to have this information; now that the Attorney General finds there is no case to answer, could the information now be forwarded to my panel so that we can close the file once and for all on this scenario?

**Deputy R.C. Duhamel:**

Probably; I will need legal advice on that. If indeed that is able to be done then I would be more than happy that that information be passed to the Scrutiny chairman

Subsequently the department was asked if this information could be received in the form of a briefing meeting for Panel members, which could be held in private if necessary. The suggestion was initially accepted by EP, but despite various dates being offered by the Panel, in the months since then neither a briefing nor further information have been forthcoming. Each time the request has been renewed the response has been that the department requires further guidance on what can be revealed. This position was maintained at the public hearing with the Minister on 7<sup>th</sup> September 2011:

**The Deputy of St. John:**

It is a matter of considerable disappointment to the Panel that, despite promises that we would finally be briefed on the circumstances of the alleged environmental incident at La Collette in April 2009, this has still not taken place. Can you summarise the timelines involved, i.e. when the incident took place, when it was reported to yourselves, when your department attended the site, how long the investigation took, and when the case file was completed and passed to the Law Officers?

**Director for Environment & Deputy Chief Officer, Department of the Environment:**

We can tell you when it was completed and given to the Law Officers, but our advice that we are waiting for in terms of what else can be disclosed thus far, which is preceding those, we cannot give to you.

**The Deputy of St. John:**

Not even the timeline?

**Director for Environment & Deputy Chief Officer, Department of the Environment:**

No, sorry, it is all part of the investigation.

The department has confirmed that they have to adhere to a formal enforcement policy agreed by the Law Office, and cannot disclose any information regarding a criminal investigation without approval. However, the Panel finds it unsatisfactory that the results of an exhaustive investigation of an alleged pollution incident should still continue to be a secret more than 2 years after the event.

<sup>9</sup> Hansard, 5<sup>th</sup> July 2011

The affair leaves a number of questions unanswered; for example SOS has publicly asked why the key witness was apparently never interviewed during the investigation. This matter was raised at the same States sitting (5<sup>th</sup> July 2011) by the Deputy of St Mary (Vice Chairman of the Panel), who found it hard to accept the then Assistant Minister's response that the EP investigation had obtained sufficient information about the incident without interviewing the witness. The fact that the witness' employment was terminated while the investigation was going on has potentially added to, rather than allaying any doubts.

The Panel has also seen a copy of a letter from the Regulator at the time indicating that an interview would take place. The same letter made it clear that the Regulator was distinctly concerned about the day-to-day management of arrangements for environmental protection on site.

It is unclear to the Panel what interests are served by maintaining official silence about a matter in which there is genuine public interest, and on which a considerable amount of information is held by stakeholders. Members consider that the longer the matter goes without explanation, the more it risks undermining public confidence.

This episode coincidentally followed a similar timeline to the Education and Home Affairs Scrutiny Panel's 'Review of Prison Board of Visitors', problems with which led that Panel's members to announce their intended resignation in July 2011. In a statement released to explain that decision, the Panel Chairman (Deputy R Le Hérissier) referred to 'two years of unreasonable delay and stonewalling' and 'the never-ending saga of the wait for legal advice'. He went on to add<sup>10</sup>:

This has been symptomatic of an attitude towards Scrutiny which borders on disrespect, which is not confined to this Minister. Hence we are calling for a long hard look at the role of Scrutiny in general and the value that should be placed on its work.
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While there are clearly many differences between the two scenarios, there is an uncomfortable similarity in the apparent challenge to the principles of open government and freedom of information which lies at their heart. To inform a Panel that there is no longer anything to stop it considering a matter, while still refusing to reveal any information about it, also seems to members to imply some degree of contempt for the rôle of Scrutiny; although it is acknowledged that this matter may not be within the department's control.

Considering all the good work that this review has uncovered, it is unfortunate that this episode has inevitably had an impact on the Panel's faith in the Regulator's ability to carry out his rôle not just effectively, but also transparently. It is strongly recommended that a full explanation of the alleged incident, the circumstances of the investigation, and some justification for the apparent reluctance to reveal information about this matter for so long be made public without further delay.

### 11.3 Public register for results

The Panel's adviser has recommended that in order to address stakeholder concerns about the performance of the Bellozanne Sewage Treatment Works, it would be helpful if there were greater openness about its operation, including the sharing of effluent monitoring data held by the Transport and Technical Services Department with the aquaculture industry. This concept

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<sup>10</sup> Education and Home Affairs Scrutiny Panel: Resignation from Scrutiny Statement, 21<sup>st</sup> July 2011

could helpfully be extended by the establishment of an online public register containing a wider range of environmental information. This type of service is now available in the UK, where it is possible to access a website, enter a postcode, and obtain details of a variety of monitoring results and other environmental information relevant to that location.

The department appears enthusiastic about providing more information to the public. However, it was mentioned during the public hearing that since the latest revision to the States website, the department is no longer able to upload as many documents for public access, something which was previously beneficial to them as it saved valuable officer time answering direct enquiries from the public. This would seem to be counter-productive and likely to reduce the department's ability to communicate with the public, while potentially increasing the costs of doing so. This appears to contradict the whole purpose of information technology and the Panel recommends that the matter be investigated further.

#### 11.4 Ramsar Management Authority

During the course of this review a number of comments have been made about the functioning of the recently-formed Ramsar Management Authority (RMA). Some have been relatively positive, others (particularly SOS) have voiced concerns about the way that the body is managed, suggesting that it is not functioning the way it should. In particular they believe that such a body should be led by non-governmental organisations, rather than a political representative. (It is currently chaired by the Minister for Planning and Environment, who took the chair in his capacity as Assistant Minister from the first RMA meeting.) They also appear to feel that the group is not paying sufficient attention to potential threats to the Ramsar sites.

Comments received by the Panel from the Marine Biology Section of the Société Jersiaise indicate that there may have been some confusion over the membership and working of the RMA main panel and technical sub-group which has contributed to some potential members becoming disenchanted; together with a view that departmental and political input seems to prioritise commercial interests over the needs of the environment and conservation. It was also noted that the results of a public consultation process around the establishment of the RMA were never made public, and submissions to it did not receive a response from the department.

The Panel has not looked into this matter in great detail. However, in view of the mixed feelings and contradictory accounts that it has encountered, the Panel concurs with its adviser that there may be some lack of clarity on the rôle of stakeholders and the aims and ambition for the group. In view of the fact that it has only been in existence for a relatively short time (and in light of its chairman's subsequent election as Minister for Planning and Environment) it may be appropriate for the RMA to review its terms of reference and procedures in full and open consultation with interested parties and stakeholders to see if any changes are needed.

#### 11.5 Long-term trends and grading of shellfish beds

The Panel received a paper on 2<sup>nd</sup> November 2011 (mentioned in section 10.3 above) prepared by EP following the review hearings. This addresses the evidence from testing of oysters over a number of years on a statistical basis, with the aim of identifying any long-term trends. The Panel has not had time to review the information provided fully, however the results suggest that statistical analysis of bacterial loading in oysters does not support a perception of falling water quality in recent years.

As briefly explained above, shellfish from Grade A beds can be sold for consumption without any further treatment, whereas stock from Grade B beds has to be subjected to depuration before consumption. Evidence previously presented to the Panel showed that in the past Jersey was able to boast more Grade A beds. In 2006, out of 10 oyster concessions, 5 were Grade A and 5 were Grade B, falling by early 2008 to 3 Grade A and 7 Grade B beds.

Subsequently in 2008 the number of Grade A oyster beds fell to only 1, with 9 beds rated as Grade B.<sup>11</sup> By way of comparison, the latest classification for England and Wales also reports only one Grade A bed, with 326 Grade B and 35 Grade C.

The department explained at the public hearing that the fall in number of local Grade A beds may partly have arisen through a change of laboratory. Until June 2008 samples were sent to Jersey's General hospital for testing. From 3<sup>rd</sup> June 2008 samples were sent to the Food Water and Environmental Microbiology Laboratory Porton in Wiltshire, which holds UKAS accreditation:

**Director of Environmental Protection:**

Another historic point is that we changed the laboratory undertaking the analysis for the grading of the shellfish beds and this changed from a lab at the general hospital to an accredited laboratory in the U.K. When you get 2 labs doing 2 sets of results they are never the same, there is quite a statistical difference in the results. But being that the U.K. is accredited that is the one that we need to go with and believe in. But it is true to say that the results received from the general hospital were statistically lower, or higher in grading terms, than the U.K. So that has caused a detrimental effect on the grading system.

There does appear to be some correlation between the timing of the move to UK-based analysis and the fall in number of Grade A oyster beds, although it is noted that a decline (from 5 down to 3 Grade A beds) had already occurred between 2006 and 2008.

However, EP's latest paper (looking at test results over the last 11 years) suggests that the perception of a continuing fall in water quality over the period (particularly since 2008) is inaccurate. The change of laboratory in 2008 together with unusually wet weather in 2008-9 probably contributed to relatively poor results in those years, but there is evidence of an improving trend since then. Both averaged quarterly results for *E.coli* loading and the frequency of intermittent 'spikes' have shown improvement during 2010-2011.

Unfortunately, under the shellfish bed classification system, even intermittent exceedances of the trigger values for contamination will result in a bed being downgraded. While statistical evidence of some recent improvement, rather than deterioration may give some encouragement to the industry, this may be short-lived and should not be seen as a cause for complacency. Further investigation could identify specific underlying causes for the occasional poor results that could enable some effective mitigation to be put in place. Specific funding would be needed for this work.

## 11.6 The way forward

Having heard representations from the department, aquaculture representatives and other stakeholders, the Panel believes that there is a need for clarity over Jersey's aspirations not just for clean waters (which should not be taken for granted) but also for the quality of its shellfish. The Panel's adviser has confirmed that the United Kingdom policy is to aim for Grade B shellfish beds, with an assumption of no deterioration of current status.

<sup>11</sup> Figures for 2011 show 2 Grade A beds, as a previously single bed has been split into two parts, both Grade A

The Panel concludes that there is a need to establish beyond doubt the current status of our coastal waters, to include setting a baseline against which no deterioration would be expected. To help give confidence to those engaged in the aquaculture and fishing industries as well as other stakeholders and the public, this should involve full and informed consultation with all parties, leading to a position statement from the Minister, agreed by the States, setting specific objectives for water and shellfish quality together with a coherent strategy for achieving these within a realistic timeframe.

At the hearing on 7<sup>th</sup> September the Minister indicated that a change in environmental philosophy may be the way forward:

**Minister for Planning and Environment**

The logical way to proceed must be to insist as far as is possible and keep ... to look for, as far as possible, the waters to be as clean as possible and that really means going back to the end of pipe conditions and not just relying on the fact that the seawaters around the Island could be seen to be an infinite dispersion pot into which all problems, if you kind of drip feed them in at low rates, could be not seen to be the problems that they are. It is a question of the environmental philosophy and I think we are starting at the wrong end.

The Panel believes that some of the problems of the past may have arisen from a lack of understanding of the longer term consequences of poor environmental management. However those days are long gone, and for the future we must ensure that we not only avoid making further mistakes, but also do what we can to identify and put right any problems that may have been left by previous generations.