

**Joint response by the Minister for the Environment and the Minister for Infrastructure
on the report by Save Our Shoreline Jersey: *The Nitrate Problem in Jersey and its
Consequences: Death by Neglect – Jersey’s Environmental Time Bomb***

24 January 2017

The report by SOS Jersey (SOSJ) ***Death by Neglect – Jersey’s Environmental Time Bomb*** was sent to the Minister for the Environment, Deputy Steve Luce, and the Minister for Infrastructure, Deputy Eddie Noel. The report is SOSJ’s submission to the Environment, Housing and Infrastructure Scrutiny Panel as part of its current review ‘Nitrate Levels in Jersey’s Water’¹.

In general, none of the issues highlighted is new to either department, and much of what is raised has been the subject of previous complaints by, or discussions with SOSJ. Where genuine, robust evidence of a breach of a law or a regulation has been highlighted, officers from the Department of the Environment (DoE) have investigated appropriately, and in accordance with the law and their enforcement protocols². In our view, the SOSJ report often presents information in a selective fashion, which is out of context, not reflective of the wider data and not in the robust and scientific manner that is required by a public authority undertaking its public duty.

We are concerned that this may cause undue concern to the public and to the industries³ mentioned in the report. The report also doesn’t fully reflect the large amount of work and progress made by DoE, the Department for Infrastructure (DfI) and the States as a whole.

¹ See <http://www.scrutiny.gov.je/Pages/Review.aspx?ReviewId=254>

² Enforcement approaches or protocols that are agreed with the Attorney General

³ For example to those households on private boreholes and wells and the oyster industry

We have therefore made several comments on the report. In doing so, we have also read it with open minds, with a view to extracting any areas of work or evidence of environmental concern that the departments have not considered.

As Minister for the Environment and as Minister for Infrastructure, we have limited our responses to those areas in the report that relate to the work undertaken by our departments. For DoE, this includes the monitoring, management and regulation of water quality and waste management activities. For DfI, this includes the operation of the sewage network (including the sewage treatment works (STW) at Bellozanne) and the various waste activities at La Collette.

Our comments firstly focus on the work and progress of the departments to date and then highlight some examples in the report that are considered inappropriate or unjustified.

1. Work and progress to date

As Ministers for the Environment and Infrastructure, we take the Island's water quality very seriously and have prioritised, and are urgently addressing water quality issues across the Island.

The report highlights several water quality issues. These include the Island's high nitrate levels in streams, high levels of green seaweed (*Ulva*) in St Aubin's Bay and that the fact that the STW exceeds its current nitrogen limit as specified in the discharge permit⁴. These issues have been well documented, widely publicised and have formed the focus of our departments' work for some time. The real question for us is what are we doing to address these issues?

We have long recognised that work to protect and improve our Island's water quality needs to be a joint effort. We, and our departmental officers, are working closely with representatives from Jersey Water, the farming community (growers, dairy, JFU and the RJA&HS⁵), and officers from Environmental Health⁶.

The Environmental Protection team in DoE is responsible for safeguarding the quality and quantity of the Island's water resources. The officers are highly experienced and qualified⁷ and work to strict legal, regulatory and scientific protocols which are overseen at the highest

⁴ The discharge permit places limits on the treated effluent entering St Aubin's Bay and is regulated by Environmental Protection (DoE).

⁵ JFU - Jersey Farmers Union, RJA&HS Royal Jersey Agricultural and Horticultural Society

⁶ Coordinated through regular meetings of the Action for Cleaner Water Group (formerly the Nitrate Working Group)

⁷ All officers are members of the Chartered Institute for Water and Environmental Management (CIWEM)

level⁸. The responsibilities and work streams of Environmental Protection are outlined in its recent service review.

Central to the work of improving our Island's water quality, is the new five-year Water Management Plan (WMP) for Jersey that was presented to the States at the end of last year⁹. This important document is informed by best practice and EU protocols and focuses on three main areas; nitrate, phosphate and pesticide control in groundwater, streams and reservoirs. The new Rural Economy Strategy will interlink with and support the WMP.

The current Scrutiny review is focusing on the nitrate element of the WMP and we welcome the Panel's review. DoE has worked to reduce nitrates for a number of years and we are encouraged that levels of nitrates in our streams are reducing. There is, however, still much work to be done.

Other progress by DoE and DfI that relates to those water quality issues raised in the SOSJ report includes the following:

1. The farming community is actively working to limit the negative environmental impact caused by fertiliser and pesticide use. Earlier this year, the JFU, the RJA&HS and potato growers (the Jersey Royal Company and Albert Bartlett) commissioned Audax, a firm which manages pesticide control for UK and EU supermarket chains, to review how pesticides are used in Jersey.

During the current planting season, many of the fertilisers imported by farmers contained no phosphates. Farmers are also undertaking extensive trials to limit future fertiliser use. The trials include the use of slow release fertiliser and placement of fertiliser in the rows (rather than broadcasting across the field). These are positive steps.

It is anticipated that these actions will further lower nitrate levels (and possibly the amount of green seaweed and the pressure on the nitrate dispensation issued to Jersey Water). We shall be closely monitoring the progress by the farmers and the improvements to water quality and demanding tighter measures if these fail to deliver.

⁸ Enforcement and Prosecution policies as agreed and overseen by the Attorney General

⁹ The Water Management Plan 2017-2021 was developed by DoE and sets out the steps the Island needs to take to ensure clean and sustainable water supplies. It builds on an assessment of the condition of Jersey's water and the pressures on it. The five-year plan aims to ensure better water and improve the quality of the Island's water resources (streams, ponds, reservoirs and groundwater) from 'moderate' to 'good' status. The plan is linked to the States Strategic objective to improve health and wellbeing. You can see the Water Plan at: <https://www.gov.je/Government/Pages/StatesReports.aspx?ReportID=2147>

Dfl will shortly be applying for planning permission for a replacement STW¹⁰ that will also result in improvements to the quality of treated effluent entering St Aubin's Bay.

2. As recommended in the previous Scrutiny Panel review of marine water, DoE officers have carried out a status assessment of St Aubin's Bay according to Water Framework Directive principals¹¹. This has provided important base line data, and improved our understanding of the bay, informing discussions on the replacement STW, our regulatory approach to the bay and the sea lettuce nuisance issue.
3. The key indicator, however, is the fact that the Island's water quality is improving. This is evidenced by Island-wide sampling of the Island's water. For example;
 - i. Stream quality is improving, as evidenced by regular surveys of insect life (macro-invertebrates).
 - ii. The annual average nitrate concentration in Island streams has reduced from a peak of 69 mg/l (milligrams per litre) in 1994 to 46 mg/l in 2015.
 - iii. The dispensation for nitrate issued to Jersey Water has not been used since 2013.
 - iv. The number of large-scale pollution incidents has reduced.
 - v. The number of storm overflows from pumping stations has reduced through prioritised work by Dfl.

Notwithstanding these actions, we fully recognise that we can always improve and acknowledge that there are still many challenges ahead. However, water quality is improving and by working together and prioritising our work we can ensure that this continues.

We are definitely not at the 'environmental tipping point' that SOSJ refers to and we therefore make a few comments on the report that will reassure the public.

2. Comments on the SOSJ report

2.1 General comments

1. The SOSJ report makes little reference to DoE's ongoing work on water quality. In particular, it makes no reference to the new Water Management Plan that sets out action to be taken on nitrates, phosphates and pesticides.

¹⁰ Environmental Protection regulates the discharge of the treatment works via a discharge permit that defines the quality of effluent entering the bay.

¹¹ <https://www.gov.je/sitecollectiondocuments/government%20and%20administration/r%20st%20aubins%20bay%20interim%20water%20quality%20status%20report%2020130713%20clem.pdf>

2. The report covers a multitude of concerns, which are not directly related to the current Scrutiny Panel review of nitrate levels in Jersey.
3. Many of these non-related issues have previously been raised by SOSJ and have been fully addressed, either through the 2009 Review of Marine Waters by the Panel or by separate meetings and correspondence.

Examples include the investigation in 2009 of alleged pollution during the construction of the Energy from Waste Plant (which was reviewed by the Attorney General) and the potential contamination of shellfish beds by bacteria.

It is our view that there is little to gain from diverting resources and revisiting these areas which have already been fully investigated and answered at the highest level.

4. The report suggests that only a few of the Panel's previous recommendations were taken forward by the departments. This is not the case. Since the review, both the DoE and Dfl have progressed many of the recommended areas.

Examples include the extensive monitoring of St Aubin's Bay in line with Water Framework (WFD) principles¹², targeted work of bacterial loading in the shellfish beds and increased sampling for heavy metals at the STW, St Aubin's Bay and La Collette. The WFD work has also been extended across the Island as part of the new WMP.

5. Officers from both departments have discussed these issues with SOSJ on a number of occasions in the past and are always available to provide information and context to stakeholders when asked.

2.2 Specific comments relating to each topic area covered in the SOSJ report

2.2.1 Excess nitrates in Jersey's water supplies

The report mentions that leaching of fertiliser enters streams and creates '*unhealthily and illegally high nitrate levels in drinking water*'.

¹² The Water Framework Directive is being implemented throughout Europe with the overall goal of reaching 'good status'. Jersey is following this well tested and tried approach.

We agree that the main source of nitrates in streams is from fertilisers. This is well documented and currently being addressed through the WMP, the Rural Economy Strategy and actions by farmers through the 'Action for Cleaner Water Group'.

The term used: '*unhealthily and illegally high nitrate levels in drinking water*' sounds alarmist. In fact, Jersey Water comprehensively monitors all raw water supplies in streams and reservoirs and blends/manages water from differing sources to ensure the drinking water remains safe, and compliant¹³ with the Jersey (Water) Law 1971 as amended.

The SOSJ report mentions the dispensation for nitrate. Jersey Water has not used this dispensation since 2013. The report also refers to the STW discharging into St Aubin's Bay at a rate of 18 million gallons a day. This is the absolute maximum for the plant and it would only run at this rate with significant prolonged rainfall. Average daily discharge across a year is more like 5.5 to 6.0 million gallons per day.

The report contains a graph based on limited data that appears to link high levels of green seaweed with high levels of nitrates from the STW. We would urge caution. It is not possible to robustly conclude from this evidence alone that high levels of nitrogen from the STW is the primary cause of high levels of green seaweed.

Likewise, in Fig. 3 SOSJ tell us '*that the picture shows how the Bellozanne outfall influences the distribution of sea lettuce*'. Again, care is needed as it is not possible to conclude from this evidence alone that the STW is primarily responsible for green seaweed.

The annual presence of the nuisance green seaweed is a rightly an Island concern. The cause, or rather the solution, is not as easily linked to the sewage treatment plant as SOSJ imply. DoE and DFI have both carried out a considerable amount of research and continue to carry out comprehensive environmental monitoring in the bay.

The long-term solution is to reduce nitrates at source and this work is already happening with our work alongside farmers. The new Water Management Plan will support this work and the replacement STW will also improve water quality. The fact is that green seaweed exists in many parts of the world and we will never be able to eradicate it completely. What we must do is limit our contribution of nitrates in the bay and this work is already well underway.

¹³ During 2015, the maximum concentration of nitrates detected in treated water was 42.8 mg/l, below the regulatory limit of 50 mg/l and lower than the maximum of 46.9 mg/l in 2014. <https://issuu.com/jerseywater/docs/water-quality-report-2015>

Green seaweed is not bulldozed down the beach across the eel grass beds as SOSJ state. DoE places strict restrictions on Dfl for the clearance and disposal of green seaweed through FEPA permits¹⁴.

2.2.2. Pesticides, heavy metals and bacterial loads

SOSJ suggest that Islanders only knew of the pesticide problem because Val de la Mare reservoir was taken out of service. This is not correct. All pesticide breaches are reported to all users of pesticides and the Minister for the Environment has published regular, detailed public information about water quality and the steps being taken to address the issue following the discovery of Oxadixyl early last year.

The report states that *'partially treated sewage pour onto our beaches'*. For clarity, this only happens during major rainfall events when large volumes of surface water enter the sewage system. This is part of the system's design to prevent flooding (diluted sewage entering houses). Dfl has been working to limit such instances and to minimise any surface water ingress.

The report suggests that excessive bacteria loads pollute the shellfish beds and have caused 80% mortality of juvenile stock. This is misleading and potentially damaging to our Island's oyster industry. The facts are that the mortality was due to an oyster disease that spread from France and it was not caused by bacteria.

As is the case for all our regulatory and monitoring activities, stringent sampling and legal protocols are in place to safeguard the public and this industry. In the case of bacteria, this includes testing oyster beds for bacteria every month¹⁵, sampling of drainage outfalls, licensing of holdings and bespoke sanitary surveys to identify all potential bacterial loadings¹⁶. Dfl has also prioritised work to limit spillages from the east coast pumping stations and informs the industry as soon as any spill occurs.

All monitoring for bacteria is carried out to defined standards and time limits, with samples refrigerated immediately after collection. Public health measures referred to by SOSJ, such as oyster farms requiring filtration tanks are not special or the result of an Island problem, rather they are a recognised standard across Europe.

2.2.3. Heavy metal pollution event

As mentioned above, the alleged pollution incident during the construction of the Energy from Waste Plant in 2009 was previously dealt with when SOSJ wrote to the Chief Minister

14 Permits issued under the Food and Environmental Protection Act 1985 (Jersey) Order 1987

15 According to protocols as defined in Annex 2 of EU Regulation 854/2004

16 <https://www.gov.je/industry/farmingfishing/fishing/pages/fishfarming.aspx>

who liaised with the Attorney General approximately two years ago. SOSJ accepted the assurances of the Chief Minister at the time and we don't think it's necessary to revisit this issue again in this report.

2.2.4 The Esplanade car park and Building 4 of the International Finance Centre

The redevelopment of this contaminated site was considered at the planning application stage. As part of the planning permission, a number of conditions were included on the permit to address these issues and put appropriate controls in place. This included the requirement to have a construction and environmental management plan (CEMP) which includes appropriate monitoring that is audited by an independent body.

As the development of Building 4 has proceeded, any issues that have arisen have been fully investigated and addressed. These investigations considered all evidence at the time. Department officers continue to receive weekly audit reports from the independent auditor for both Building 4 and Building 5.

2.2.5 La Collette

The section on La Collette in the SOSJ report suggests that the older ash pits are 'probably leaking' and that heavy metals are then consumed by people eating shellfish. SOSJ presents no scientific evidence to justify these claims and the departments have no evidence that this is the case.

Again, DoE administer strict criteria on Dfl to control such pollution. This includes a Waste Management License for the La Collette site that requires extensive quarterly monitoring of water quality for heavy metals and priority chemicals within the reclamation site groundwater, containment cells, lagoon and coastal waters.

The departments also undertake monitoring of heavy metals at the STW and in St Aubin's Bay. All these safeguards are put in place to protect both the surrounding environment and consumers of shellfish etc.

2.2.6 Ramsar Management Authority

Recognising the need to maintain focus on the management of the Island's four Ramsar sites against a backdrop of reducing government resource, DoE has consulted the wide ranging stakeholders of the existing Ramsar Management Authority (RMA).

A proposal to significantly increase the political visibility of Ramsar matters was shared with the RMA and some interest has been shown in this. Included within this proposal was the consideration of an independent chair, and the opportunity for representation of the body on

the Fisheries and Marine Resources Panel, the principal policy advisor on marine matters to the Minister for the Environment. Work with stakeholders to progress this change will continue in 2017.