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Isles of Scilly Water Legislation Consultation

20th November 2014

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# Executive Summary

**1.** Water legislation in the Isles of Scilly

Various key pieces of water legislation within England that protect public and environmental health do not apply to the Isles of Scilly (or have only been applied in part). Such legislative gaps mean that the Drinking Water Inspectorate (DWI) and Environment Agency (EA) have no enforcement powers in relation to water on the islands. This means that residents on and visitors to the Isles of Scilly (IoS) may not enjoy the same level of public health and environmental protection as is available elsewhere in England. Therefore Defra intends to introduce legislation in 2015 applying provisions of the relevant Acts to the IoS. This will also ensure that the Drinking Water Directive and other EU Directives are fully implemented in the IoS. In the meantime the DWI will continue to act on an informal basis in relation to the public water supply on St. Mary’s and Bryher and to private supplies on the off islands.

It is already clear that some water and sewerage infrastructure will need upgrading. This is necessary whether the legislation changes or not. A clear legislative framework will however allow such work to be properly planned. Work is already underway to better understand the cost of meeting and, where appropriate, going beyond any standards established by any changes to legislation. We have been discussing this with the Council and will continue to do so in the light of responses to this consultation and as further evidence is gathered.

There are a number of options to be considered to deliver compliance with any new regulatory framework for both infrastructure costs and administrative costs. These range from: the Isles of Scilly council raising funds locally; through central government or European grants; to potential part or full privatisation of water responsibilities and assets.

We want to ensure that that there will be enough time to plan for any upcoming costs and take decisions on the options outlined above. Although we aim to have the regulations in place for autumn 2015, we will work with those involved to develop transitional arrangements to control when the impact of costs will begin to take effect. No decision has been made regarding what proportion of these costs, if any, will be passed onto the bill payer. However affordability will be at the heart of any proposals put forward.

**2.** How the legislation will be applied

The gaps in water legislation in relation to the IoS (in particular the Water Industry Act 1991 (WIA91), the Water Resources Act 1991 (WRA91) and the Environment Act 1995 (EA95) will be filled by making an Order[[1]](#footnote-1) which will apply the appropriate provisions with any necessary modifications. For example, modifications will be needed so that where the legislation currently applies to statutory water and sewerage undertakers (i.e. water companies), it will instead be read as applying to the IoS Council. Other modifications may also need to be made to ensure the legislation works properly in the IoS. We propose to take a light touch approach to the application of this legislation and apply it in a proportionate way that is appropriate to the situation in the IoS. Some regulatory requirements will affect the Council and others on the IoS for the first time and we have set out the impacts of these changes below. The DWI and the EA will be given full regulatory and enforcement powers on the IoS equivalent to the mainland. We will work with the regulators, council and other key partners to ensure that any appropriate transitional arrangements are put in place to properly manage the implementation of legislation and any additional administrative costs which may be incurred.

The IoS Council already has certain statutory powers and duties in relation to the provision of public water supplies (which it provides for St Mary’s and Bryher) and sewerage services (which it provides on St Mary’s). Some powers and duties of local authorities relating to water and sewerage (such as provisions of the Public Health Act 1936 and the Water Act 1945) still apply to the IoS Council[[2]](#footnote-2) even though they no longer apply to other local authorities. In addition, some more recent pieces of water legislation, such as the Water Act 1989, have been applied to the IoS[[3]](#footnote-3) and may continue to have some effect there, although the relevant statutory mechanisms are complex. Whilst reviewing the gaps in water-related legislation for the IoS, Defra is therefore also considering the existing legislation, what now applies and whether it continues to be a suitable vehicle for the IoS. Where some of the older legislative provisions still apply, one option would be to instead apply the equivalent provisions of the more recent legislation to the IoS and repeal the old legislation. However, we would do this in such a way as to ensure that equivalent powers and duties apply, without adding any additional burdens to the IoS Council. We will continue to discuss this aspect of the legislative framework with the IoS Council.

We will also be discussing with the Duchy of Cornwall and the EAhow our proposals to apply the legislation to the IoS will affect the land which forms part of the Duchy (that owns the freehold of most of the Isles of Scilly land). This is because the WIA91, WRA91 and EA95 all apply to the Crown but contain some limitations as to the effect they can have on certain Crown and Duchy interests.

**3.** Regulatory Impacts and Benefits

Defra understand the importance of investing in our communities. We want to make clear that all options are being considered in a bid to find funding for both potential infrastructure and administrative costs. It is our aim to use this consultation to improve our knowledge and understanding of these potential costs, acknowledging that more money will be needed in the long run. This can come from a variety of sources such as: the IoS Council raising funds locally; through central government or European grants; to potential part or full privatisation of water responsibilities and assets. No decision has been made regarding what proportion of these costs, if any, will be passed onto the bill payer. However affordability will be at the heart of any proposals put forward and we will work with the IoS Council and the EA to find appropriate transitional arrangements.

Defra has made an initial assessment of the costs and benefits of applying the legislation to the IoS, and we are keen to use this consultation to further test this assessment. The Council has made improvements to the public drinking water infrastructure and is currently planning for improvements to the sewerage infrastructure. To date, £2.5 million in Defra grants (Annex 1) has already been paid to support the costs of this work. Over the past 50 years or so other capital investments have been put in place by the IoS Council to keep water and sewerage assets in good operational order and to make some larger investments (e.g. the Old Town, St. Mary’s Sewage Treatment Plant). Such investment amounts to an estimated £1.5 million. In view of the recent £2.5 million in Defra grants, we currently estimate that investment of up to £4 million may be needed over the next 50 or so years to maintain the assets.

We also estimate that a total of £23k of improvements (estimated as a maximum of £750 per supply for 30 premises) will be needed on a one-off basis to improve unsatisfactory private drinking water supplies, but this figure will be refined when the risk assessments for the private supply regulations are carried out. Although in the accompanying impact assessment we have assumed these costs will fall to the owners of those supplies such as the Duchy and Tresco Estates or to micro-businesses (hotels, B&B’s, campsites etc), the government is still looking at the most appropriate way to ensure fairness within the charging structure so as to ensure that no group is left disadvantaged.

Aside from this expenditure on infrastructure, we consider that the likely impacts of the proposed legislative changes would be the cost of obtaining environmental permits[[4]](#footnote-4) for water discharge activity and/or groundwater activity relating to sewerage discharges, and groundwater abstraction licences, as well as the overall administration costs that are likely to be incurred. Our initial estimates for these costs are £20-£30k in the first year and £10-£20k per annum thereafter. Long term benefits will include the improvement of coastal water quality by the removal of sewage derived debris and persistent plastics from the wastewater effluent before its controlled discharge to marine waters takes place. There are a number of options regarding these additional costs, which under normal circumstances would be borne by the body responsible for providing public water supplies and sewerage services. These options range from: the IoS Council raising funds locally; through central government or European grants; to potential part or full privatisation of water responsibilities and assets. No decision has been made regarding what proportion of these costs, if any, will be passed onto the bill payer. However affordability will be at the heart of any proposals put forward.

Other impacts to businesses (Duchy of Cornwall and Tresco Estates) and micro-businesses (hotels, B&B’s, campsites etc.) will be the need to obtain environmental permits for water discharge activity/groundwater activity and the costs of complying with the standards and requirements relating to the regulations for private water supplies. On both counts the benefits will be the control of pollution (such as nitrates and faecal bacteria) to the private supply wells and boreholes and improved drinking water quality. The risk assessments carried out under the Private Supply Regulations will bring the benefit of providing a mechanism for identifying risks to private supplies and subsequently making improvements to failing supplies.

The regulatory charges for water discharge activity/groundwater activity permits have been assessed as £3k in total to businesses that have large sewage discharges to surface waters and £125 per annum to an estimated 30 micro-businesses (totalling £3k) for small sewage discharges to surface and groundwaters which need permits, based on charges in 2014 in England.

### 4. Consultation

The purpose of this consultation is to consult on the proposed changes with the IoS Council[[5]](#footnote-5), the Duchy of Cornwall and Tresco Estates, and through its publication on the Defra website also with IoS residents and other interested members of the public.

This consultation document has a number of purposes:

* Where we think that applying provisions of the legislation is necessary to fully implement EU legislation, we would like to obtain any further information from consultees about the likely impacts of applying the legislation;
* For some proposals for inclusion of provisions which do not implement EU obligations, we have greater discretion over whether to apply to the IoS and are therefore seeking views from consultees on whether or how we should apply the legislation;
* We also want to use this consultation to provide information to readers about the existing domestic and EU regulation that already applies, but where it may have more of an impact due to the other changes we propose to make.

The consultation focusses on the key provisions we are proposing to apply and explains their impacts. The final Order is also likely to apply other provisions which relate to and supplement these main changes. We will be working with the IoS Council on the detailed contents of the Order itself.

We intend to consult for twelve weeks beginning on 20th November 2014. The consultation responses will be summarised into a key issues paper that will be published on the Defra website. The consultation responses will be taken into consideration in shaping the final package of legislative changes that lead to the Isles of Scilly Order.

The legislation referred to in this consultation document can be viewed on the legislation.gov website which contains[[6]](#footnote-6) revised versions of Acts of Parliament, and the original versions of secondary legislation such as regulations and orders. The website can be accessed at <http://www.legislation.gov.uk/>

# Water Legislation in the IoS

The application of water-related legislation to the IoS is complex. This is mainly due to the privatisation of the water industry elsewhere in England, which did not affect the IoS where, uniquely, the Council has continued to provide water and sewerage services. As a result, much of the newer water legislation which brought in this privatisation was not initially applied to the IoS. In particular, the Water Industry Act 1991 (WIA91) and the Water Resources Act 1991 (WRA91) apply throughout England, but specifically exclude the IoS unless an Order is made applying the Acts to the IoS. Similarly, generally speaking the Environment Act 1995 (EA95), which contains some of the EA’s key enforcement powers, does not currently allow these powers to be exercised in the IoS. However, an Order can be made to change this.

The IoS Council retains some powers and duties in legislation as old as the Public Health Act 1936, and some provisions of the Water Act 1989 were applied to the IoS[[7]](#footnote-7) and may continue to have effect. However, the current legislation does not enable the EA or the DWI to exercise regulatory powers there. To apply provisions of the WIA91, WRA91 or the EA95, we need to make an Order.

These Acts are important legislative vehicles for delivering environmental and drinking water quality policy in England, and ensuring that the Drinking Water Directive (DWD) and other EU Directives are fully implemented in the IoS. This means that there is a risk that the IoS do not benefit from the same levels of environmental protection, public health protection and drinking water quality as the rest of England.

## Water Act 2014

We will take into account the newly agreed Water Act 2014 which contains provisions affecting the privatised water industry, but also other amendments to the WIA91 which may affect the Order we propose to make.

# Structure of the Consultation Document

The water legislation is split for convenience into five policy areas:

1 Drinking Water;

2 Sewerage;

3 Environment Agency;

4 Environmental Directives;

5 Water Resources.

Sections 1-4 represent policy areas that are mainly related to water quality. Section 5 on Water Resources is mainly related to water quantity.

Each section identifies in broad terms the water legislation we propose to apply to the IoS, describes the effect of the legislation and how it applies on the mainland, and sets out how it is intended to apply on the IoS and the potential implications and benefits where known. Each section is prefaced with highlights relating to the legislative change and its application to the IoS. A list of questions will end each section where appropriate. The questions are collated at the end of the document along with some overall questions relating to the consultation itself.

In making a response to the consultation you can choose which sections you wish to respond to and answer questions on those sections only should you wish, or you can answer questions within all sections.

This consultation document has a number of purposes:

* Where we think that applying provisions of the legislation are necessary to fully implement EU legislation, we would like to obtain any further information from consultees about the possible impacts of applying the legislation;
* For some proposals which do not implement EU obligations, we have greater discretion over whether to apply to the IoS and are therefore seeking views from consultees on whether or how we should apply the legislation;
* We also want to use this consultation to provide information to readers about the existing domestic and EU regulation that already applies in the IoS but where it may have more of an impact due to the other changes we propose to make.

The consultation focusses on the key provisions we are proposing to apply and explains their impacts. The final Order is also likely to apply other provisions which relate to and supplement these main changes. We will be working with the IoS Council on the detail of the Order itself and to accommodate any changes to their existing water legislation that may be necessary.

# Section 1 Drinking Water

## 1.1 Role of the Drinking Water Inspectorate

### Highlights

The Drinking Water Inspectorate (DWI) has provided informal technical advice to the IoS since 2006 and their presence has greatly improved drinking water quality. We propose to apply the relevant provisions of the Water Industry Act 1991 (WIA91) to ensure they can exercise their regulatory powers on the IoS and ensure the public water supply meets the necessary standards.

### Application to England

The DWI is the regulatory body dealing with drinking water quality regulation and enforcement. Under the WIA91[[8]](#footnote-8) the Secretary of State has appointed a Chief Inspector of Drinking Water and other inspectors (who together are commonly referred to as the Drinking Water Inspectorate or DWI). These inspectors act on behalf of the Secretary of State in investigating and assessing whether water companies are meeting their statutory duties relating to drinking water quality and have various powers to assist them in this role including powers to enter premises and to require information and assistance from Water Companies. They also exercise the Secretary of State’s enforcement powers under section 18 WIA91 in relation to drinking water quality.

### Application to the Isles of Scilly

The DWI currently cannot exercise statutory powers in relation to the IoS as these powers are contained in the WIA which has not been applied to the IoS. The DWI has provided informal technical advice to the IoS Council at their request since 2006 and their presence has greatly improved drinking water quality. The proposed Order being consulted on here would change this by applying the Secretary of State’s enforcement and the DWI’s governance functions set out in the WIA91 to the IoS. This would then extend the DWI’s existing role as the independent inspector of drinking water quality to include the IoS, bringing it into line with the rest of England. This will ensure the DWI can use its powers to require the Council to maintain the necessary standards.

### Impacts and Benefits

Current Defra policy is for the inspection costs of the DWI to be recovered from Water Suppliers (using powers in the Public Bodies Act 2011 and regulations made under it), but the charging powers only apply to Statutory Water Undertakers and would exclude the IoS at present. However, there will be an opportunity to apply charges to the IoS when the current regulations are replaced using new powers in the Water Act 2014 which allow the Secretary of State to make an order conferring power on the Chief Inspector of Drinking Water to charge fees for the exercise of its regulatory function.

The likely costs levied against the responsible body would be £12.5k per annum. However, the benefits of the DWI continuing to give input and advice to audit and regulate drinking water quality for the benefit of residents and tourists has to be balanced against this.

The benefits of maintaining the drinking water supply to the high standard of the Drinking Water Directive (DWD) are high through the avoidance of any health implications associated with a poor quality water supply (the 1998 DWD covers both public and private supplies - these are described in detail in Sections 1.3 and 1.4). The regulatory efforts of the DWI will help to ensure the drinking water supply is maintained at this high standard equivalent to the standard on the mainland.

## 1.2 Water Supply Legislation - Directive (1998/83/EC) on the quality of water intended for human consumption – the Drinking Water Directive

The Government sets legal standards for drinking water quality in England, reflecting standards that come from EU legislation – the Drinking Water Directive (98/83/EC) - which is informed by the World Health Organisation’s (WHO) guidelines on drinking water quality. The objective of the DWD is to protect the health of the consumers in the European Union and to make sure the water is wholesome and clean.

The 1998 DWD requires that a total of 48 parameters must be monitored and tested regularly. These include bacteria, chemicals (such as nitrates and pesticides), metals (such as lead) and the way water looks and how it tastes. The DWD also specifies monitoring (sampling and analysis) requirements and actions that are required when there is a failure to meet a standard, including investigations, improvements and temporary departures (called authorised departures) from the standards for certain of the chemical parameters.

The 1998 DWD covers both public and private supplies. Its requirements are set out for England for public supplies in the Water Supply (Water Quality) Regulations 2000 (as amended in 2007 and 2010), and for private supplies in the Private Water Supplies Regulations 2009. These are described in detail in Sections 1.3 and 1.4.

## 1.3 Public Supplies and the Water Supply (Water Quality) Regulations 2000

**Highlights**

We propose to apply provisions of Chapter 3 of Part 3 of the WIA91 and of the Water Supply (Water Quality) Regulations 2000 (referred to here as the Public Supply Regulations) to the IoS so that the Council will be under duties to provide drinking water of the necessary standards and to monitor its quality and investigate and report any problems. The IoS Council has put in place many of the arrangements required to achieve full compliance with the Public Supply Regulations. This has included enhancements to the sampling, monitoring and reporting regimes. Recent asset improvements put in place on St. Mary’s (including the replacement de-salination plant) and Bryher funded through the Defra £1.5 million grant (Annex 1) will also enable compliance with these requirements.

### Application to England

The Public Supply Regulations set out the monitoring requirements and standards for wholesome drinking water quality. The majority of standards are derived from the 1998 DWD, but the regulations include some parameters for which the UK has implemented a tighter standard.

In England drinking water standards of *public supplies* are enforced by the DWI. The DWI implements this through technical audits of water suppliers’ activities. Water supply operations and regulatory monitoring are undertaken in England by water companies (water undertakers and licensed suppliers). Water suppliers are required to provide Inspectors with information set out in an Information Direction issued by the Chief Inspector under the WIA91. Inspectors independently scrutinise test results and have powers to audit all technical aspects of drinking water provision. Where deficiencies are identified, Inspectors may use their powers under the WIA91 to require the Water Company to make the necessary improvements. Inspectors use a risk-based better regulation approach in how they focus their resources of inspection to provide maximum benefit to the suppliers and consumers.

Another function of the DWI is the investigation of water supply incidents and the provision of independent reports of the cause with recommendations on how to prevent similar events from happening again. Investigations of incidents can lead to the Water Company being prosecuted if an offence under the WIA91 or the Public Supply Regulations was committed and the supplier did not have a due diligence defence. Inspectors will also intervene on behalf of a consumer if the water supplier has failed to resolve a drinking water quality complaint.

The Public Supply Regulations require water suppliers to carry out and keep under continuous review a risk assessment for each water supply system. This follows the principles of the water safety plan approach set out by the World Health Organisation and is based on managing the risks to drinking water quality through the whole of the water supply chain. Deficiencies identified by the risk assessment must be remedied by the supplier and the DWI independently scrutinises the supplier’s action plan to ensure that the short, medium and long term actions for mitigation are technically robust and cost effective. DWI has the power to make these action plans a legally binding requirement through notices. These formal risk assessments form the basis of the water supplier’s business plan for capital and operational expenditure on maintenance of the drinking water supply system.

### Application to the Isles of Scilly

The drinking water supplies on St Mary’s and Bryher are public water supplies within the meaning of the WIA91. The IoS Council is in the unique position in the UK in providing public water supplies instead of a private company acting as water undertaker. Its powers and duties in relation to the public water supply are set out in various pieces of legislation (see the previous section on Water Legislation). The IoS Council run their water and sewerage services as a not for profit trading service billed separately to the Council Tax. There are 900 water customers.

The historic water supply on St Mary’s is derived from groundwater (5 boreholes) which 20 years ago was first supplemented with seawater processed through a desalination plant. The continuous use of the desalination plant allows the IoS Council to blend sources for optimum water quality and to supplement the supply to avoid over-abstraction from the individual groundwater boreholes. These sources bring water to a single water treatment works (Porth Hellick) where water is blended and disinfected before being distributed across the island via a network of service reservoirs (three) and the mains network.

At the request of the IoS Council, since 2006, the DWI has been providing technical advice on an informal basis to help them work towards improving the water quality. This has included a number of site visits to support the development of a regulatory risk assessment, to bring the monitoring and reporting arrangements up to the required standard and to identify where the supplies require further improvement (where enforcement would be required if legislation was applied). This support has resulted in the IoS Council enhancing its operational and technical resources over the intervening period and in respect of monitoring and reporting. These DWI activities have also benefited consumers and the IoS Council through the identification of hazards and failures in relation to microbiological and chemical drinking water quality enabling the Council to implement appropriate short term remedial actions and to develop a business plan for the medium and long term improvements required.

As a result of their informal partnership with the DWI, the IoS Council are already meeting the more stringent sampling, monitoring and reporting regimes of the Public Supply Regulations. In terms of day to day operations, the application of these Regulations will therefore have little impact on the IoS Council.

### Defra grant

The identification of necessary medium and long term improvements to the public water supply resulted in a Defra grant of £1.5 million being paid to the IoS Council in full in February 2012. This funding has enabled the IoS Council and their consultants to put in place a programme of improvements listed in Annex 1. The largest improvements, the replacement de-salination plant and the repairs to Buzza reservoir, were completed ready for the 2013 summer season for the benefit of residents and tourists.

In addition to the enhancements on St. Mary’s the grant has also funded improvements to the IoS Council’s monitoring arrangements on Bryher and has enabled the drilling of new boreholes to supplement the supply there (Annex 1).

## 1.4 Private Supplies and the Private Water Supplies Regulations 2009

**Highlights**

There are private water supplies on Tresco (provided by Tresco Estates) and on St. Agnes and St. Martins (mainly provided by the Duchy of Cornwall). We propose to apply the Private Water Supply Regulations 2009 and the relevant provisions of the WIA91 to the IoS. This will mean that the private water supplies intended for human consumption must be wholesome, and that the IoS Council will be responsible for conducting risk assessments of all private supplies that are used for public consumption and for monitoring the quality of these private supplies. We propose to enable the Council to charge for these activities, so that those who own or manage private water supplies will meet the cost of risk assessments and water quality monitoring, as well as undertaking improvements to any failing supplies. Although the majority of these improvements and charges will fall to the Duchy and Tresco Estates, in some cases these may fall to small businesses, such as Hotels, B&B establishments and holiday lets.

### Application to England

A private water supply is a supply of water which does not come from a public water supply. Private supplies derive from either surface waters or groundwater and may come from a variety of sources, including wells, springs, boreholes and streams.

The Private Water Supplies Regulations 2009 came into force in England on the 1st January 2010 and apply to all private water supplies intended for human consumption. This means they apply to water for domestic purposes (e.g. drinking, cooking, food preparation and washing) and water used for food-production purposes. The Regulations set standards for wholesomeness for private supplies. They also set technical standards for materials used in the private supply such as tanks and pipework. Local Authorities are required to carry out periodic risk assessments to assess potential risks to human health from private supplies and to monitor the quality of the supplies against various parameters. Although they apply to all private supplies, if a supply is to a single domestic property that has no commercial use of its water, risk assessments do not need to take place (although the householder may request a risk assessment from the Local Authority and pay the appropriate charges).

The DWI is responsible on behalf of Defra for ensuring that Local Authorities undertake their duties under the legislation and for the provision of technical advice and guidance. Those who own or manage private supplies are required to meet the cost of risk assessments and water quality monitoring and to undertake improvements to any failing supplies. Local authorities are required to provide information to the DWI to enable national and EU reporting and scrutiny of enforcement activity.

### Application to the Isles of Scilly

The proposed application of the Private Supplies Regulations 2009 means the IoS Council will be responsible for implementing the Regulations on St Martin’s, St Agnes and Tresco where there are only private water supplies. The IoS Council will be responsible for conducting risk assessments and monitoring of these private supplies.

Where they own these private supplies, the Duchy of Cornwall will be responsible for improving the supplies on St Martin’s and St Agnes to meet the IoS Council’s risk assessment requirements and making sure that the supplies meet the drinking water quality standards. On Tresco, Tresco Estates lease the island from the Duchy and are similarly responsible for the private water supplies there. On all three islands tenants do not explicitly pay water rates, but these costs will form part of the property rental charges. However, in some cases where the properties are owned by hotels, B&B’s or holiday lets etc. the costs of the risk assessments, making improvements and the costs of analysis may fall to the owners themselves, although options are being explored around this.

There are around 39 small private supplies on St Martin’s and St Agnes mainly supplied by the Duchy. Tresco Estates has responsibility for a large supply to a hotel and public gardens on Tresco. The Impact Assessment carried out for the Private Supply Regulations 2009 in England identified that 40% of private supplies might fail over an eight year period with an average cost of remedial action at £750. Applying this in general terms to the IoS, this amounts to around £23,000 over eight years.

Applying the private water supply regulations to the IoS should be cost neutral for the IoS Council because we propose that they should be able to recover the costs of monitoring and risk assessment from the owners or managers of the private supplies. We propose to give the IoS Council the same cost recovery powers as all other local authorities in England. These are set out in the Private Supplies Regulations which set maximum amounts that can be charged. This would enable IoS to recover the costs of regulating the 39 private supplies and based on (2012/13 charges), this would amount to around £5000 per annum in total.

The benefits of maintaining the private drinking water supplies to the high standard required by the Private Supplies Regulations are high through the avoidance of any health implications associated with a poor quality drinking water supply. It is known that groundwater quality on at least one of the islands has been adversely impacted by poor control over sanitation (septic tanks). This is likely to be the most significant cause of failures requiring remedial action.

## 1.5 Water Supply (Water Fittings) Regulations 1999

### Highlights

We propose to apply the Water Supply (Water Fittings) Regulations 1999 to the IoS. These set out the standards for the design, installation and maintenance of water systems within buildings supplied with water by a water company. These standards are enforced by water companies and are necessary to ensure that customers do not waste or contaminate water supplies. Building owners are under a duty to notify the relevant water company if they intend to install certain types of water installation or fitting so that water companies are able to control the risk by, for example, refusing consent or carrying out an inspection. The general obligations fall on building owners and anyone they employ when installing, connecting, altering or using water fittings. This proposal will allow the IoS to become a member of the national industry Water Regulations Advisory Scheme, to promote the WaterSafe scheme for plumbers and ensure that all installers in the islands are trained and carry out work of the appropriate standard to safeguard the island supplies. There are unlikely to be any significant issues or additional costs from this proposal because staff already hold the appropriate qualifications.

### Application to England

The Water Supply (Water Fittings) Regulations 1999 are made under section 74 of the WIA91 to prevent the waste, misuse, undue consumption, contamination or erroneous measurement of drinking water. The Regulations set requirements for the design, installation and maintenance of plumbing systems and water fittings in England. Water systems and fittings in premises that are, or will be, connected to the public water supply must comply with the Regulations. Specific goals of the Regulations include:

* **Preventing drinking water contamination**
* **Water conservation**
* **Preventing misuse**

The Regulations are enforced by the Water Companies in their respective areas of supply.

### Application to the Isles of Scilly

The application of these Regulations to the IoS means the Council will be required to promote and enforce the fittings and plumbing control regime and these obligations apply to premises owners and anyone installing, connecting, altering or using water fittings. There is already in place a national industry wide scheme for the regulation and approval of water fittings therefore IoS will become a member and gain access to the scheme as a consequence of obtaining enforcement powers under the Fittings Regulations. The majority of plumbing fittings manufactured for sale in the UK already meet the requirements of the Fittings Regulations

The Council will be required to enforce contraventions of the requirements. Contraventions of some of the Regulations would be an offence. It is not expected that there will be any issues or significant costs falling on the IoS Council as a consequence of them gaining these powers; rather it empowers the IoS to manage water supply risks more effectively going forward.

Similar technical standards apply to private waters supplies through the Private Water Supplies Regulations 2009.

## 1.6 Security and Emergency Direction 1998

### Highlights

Our proposal is to apply the Security and Emergency Direction (SEMD) to the IoS Council. However, we want to take into consideration their existing responsibilities for emergency planning under local government legislation.  We propose that discussions should take place between Defra, the DWI and the IoS Council to ensure the Council’s emergency plans for drinking water (and sewerage) are in line with the application of the SEMD by water companies in England.

### Application to the Isles of Scilly

The aim of the Security and Emergency Direction 1998 is to protect public health and includes ensuring an adequate water supply (and sewerage services) in an emergency situation. The Direction is made under section 208 of the WIA91 which gives the Secretary of State powers to issue general or specific Directions to water and sewerage undertakers in respect of national security or to mitigate the effects of civil emergencies. SEMD sets out requirements on water companies to have plans in place to deal with any disruption to the water supply (or sewerage services).

We propose to apply Section 208 of the WIA 1991 to the IoS Council under our IoS Order. This means the Direction issued under that section could be used to place the same requirements for security and mitigating the effects of Civil Emergencies as for Water Companies on the mainland. We are aware that the IoS Council operates in accordance with the [Civil Contingencies Act 2004](http://www.scilly.gov.uk/link.htm?pk_link=166) to protect the community and essential services in the event of a major incident and will ensure the application of SEMD there takes this into consideration.

Due to the sensitive and confidential nature of the subject matter a direct dialogue between Defra, the DWI and the IoS Council will be the best way forward to make sure that the specific plans for drinking water (and sewerage) in the IoS are covered.

## 1.7 Water Industry Act 1991 - General Enforcement Powers

### Highlights

Various sections of the Water Industry Act 1991 (WIA91) will be applied to the IoS to ensure that the Secretary of State has regulatory powers over the IoS Council’s water supply and sewerage activities. On the mainland Ofwat takes this role for the privatised Water Companies, but this is not appropriate on the IoS.

### Application to England

The WIA91 (Chapter 2 of Part 2) empowers the Secretary of State and Ofwat (“the enforcement bodies”) to take enforcement action against water companies. The key mechanism is an enforcement order (section 18) setting out what the company must do to secure compliance with the requirements on it. The Secretary of State and Ofwat may also impose a financial penalty on a water company.

In practice, Ofwat is the primary enforcement body in relation to the economic regulation of water companies in England under a general authorisation issued by ministers. The DWI carries out drinking water quality functions on behalf of the Secretary of State and is therefore included in the definition of “enforcement bodies” and “the Secretary of State” for the purpose of this section. However, the Chief Inspector is also able to instigate proceeding against certain drinking water offences in her own right (see 1.1 Role of the Drinking Water Inspectorate).

### Application to the Isles of Scilly

The IoS Council provides the public water supply and sewerage on the IoS instead of a water company (as is the case elsewhere in England). It is not proposed to give Ofwat regulatory powers on the IoS given that its primary purpose is to be the economic regulator for the privatised water companies. We therefore propose that the Secretary of State should have sole responsibility for enforcing relevant statutory obligations, which will be mainly related to environmental and public health matters associated with the supply of water and sewerage services. The IoS will not be subject to the statutory standards of service applicable to customers of water companies. However, the IoS Council is already subject to other public service standards and guidance as to how it carries out its wider functions.

If the Secretary of State wishes to use an enforcement notice to ensure compliance by the IoS Council of any of its relevant statutory duties, the Secretary of State will be required to give notice to the IoS Council who will have 21 days in which to make any representations or objections. If the enforcement order is made and the Council does not think that due regard has been given to any objections, then it would be able to appeal to the civil courts to have the enforcement order quashed. However, if the courts find in favour of the Secretary of State, the order shall be enforceable by the courts.

We do not propose to give the Secretary of State powers to apply financial penalties or apply to the courts for a special administration order. These powers are designed to regulate private businesses that carry out public functions without receiving any form of public subsidy. These powers are not therefore appropriate for securing compliance by public authorities because ultimately the taxpayer would have to foot the bill for any financial penalties imposed on the IoS Council or fund any corrective measures to make the IoS Council compliant.

The Secretary of State will have powers to obtain information under section 203 of the WIA91 in order to assess whether enforcement action is required. The Secretary of State will also be able to accept an undertaking (under section 19 WIA91) from the IoS Council to take corrective action, instead of taking enforcement action.

## Questions on Section 1

1. **Have you experienced any challenges with the current regime for drinking water to date?**
2. **Have you any suggestions going forward as to how we may improve the drinking water regime?**
3. **Do you have any further information which would enhance our understanding of the costs?**

#

# Section 2 Sewerage

## 2.1 Public Sewerage Services for Hugh Town and Old Town, St. Mary’s

### Highlights

We propose to apply section 94 of the Water Industry Act 91 (WIA91) to the IoS to place the IoS Council under a duty to provide and maintain a system of public sewers to ensure the relevant area is effectually drained and to make provision for dealing with sewage. This is an important duty to help achieve full compliance with the Urban Waste Water Treatment Directive (UWWTD). The Council used to be under a similar duty[[9]](#footnote-9) but this was removed. The Council does already have other powers relating to the public sewerage system. Defra is looking at this existing legislation that continues to apply in the IoS and deciding whether it is sufficient and appropriate. If not we may decide to apply the equivalent provisions of the more recent legislation to the IoS that would address other sewerage duties (such as the adoption of sewers etc.). However, we would do this in such a way as to ensure that equivalent powers and duties apply, without adding any additional burdens to the IoS Council.

A full description of the sewerage network for Hugh Town and Old Town on St. Mary’s is given in relation to the current operation of the system and improvements identified under the Defra grant (Annex 1 and Annex 2).

### Application to England and the Isles of Scilly

The general duties of sewerage undertakers are defined in Section 94 of the WIA91, namely:

• to provide, improve and extend a system of public sewers, and to cleanse and maintain them to ensure its area is effectually drained; and

• to make provision for emptying its sewers and treatment of sewage.

This duty is enforceable by the Secretary of State.

The IoS Council provides public sewerage services on St Mary’s in Hugh Town and Old Town under a range of existing statutory powers, including the power to charge for its services. Elsewhere in England, sewerage is provided by water companies. The IoS Council run their sewerage services as a not for profit trading service billed separately to the Council Tax. There are 600 sewerage customers.

However, it is necessary to apply section 94 which will ensure the Council are under a continuing duty to provide and maintain the public sewerage system, and because this will help to ensure full compliance with the Urban Waste Water Treatment Directive (Section 2.2 UWWTD).

### St. Mary’s Sewerage Networks

WRc carried out a Water Interests Survey on behalf of Defra in 2011[[10]](#footnote-10). This provided us with detailed information on the sewerage network and sewage discharges to the environment.

The IoS Council owns and operates two sewerage systems on St Mary's for the domestic wastewater (there is very little industrial activity on the IoS), one for Hugh Town and another that serves Old Town. A full description of the Old Town and Hugh Town sewerage networks is given in Annex 2.

The Hugh Town system serves approximately 500 properties and the Old Town system serves approximately 100 properties. The population equivalent[[11]](#footnote-11) (PE) is therefore approximately 1250 for Hugh Town and 250 for Old Town, assuming 2.5 inhabitants per property. The PE at Hugh Town increases to over 2000 for part of the year during the peak summer tourist season. The significance of a PE of greater than 2000 for even part of the year is described later in Section 2.2 UWWTD. The PE at Old Town is always less than 2000 and a typical PE of 600 (to take into account the tourist season figures) has been used by WRc in their assessments.

Apart from the two systems operated by the Council, the wastewater assets (mainly septic tanks) are privately owned and the operation and maintenance of these are the responsibility of the property owners. These and the private sewerage arrangements for the off islands are further described in Section 3.2 Environmental Permitting regulations 2010.

In 2013 Defra gave a grant of £1 million to support improvement of the sewerage system.

## 2.2 Urban Waste Water Treatment Directive (1991/271/EEC)

### Highlights

As set out above, we propose to apply the general duty to provide and maintain a public sewerage system (section 94 of WIA91). This is important because compliance with this duty, together with the requirements of the Urban Waste Water Treatment (England and Wales) Regulations 1994, will ensure full compliance with the Urban Waste Water Treatment Directive (UWWTD).

### Application to England

The objective of the UWWTD is to protect the environment from the adverse effects of discharges of sewage from urban sources. To achieve this objective it specifies various levels of treatment for the sewage before discharge into receiving waters, depending on the size of discharges and the sensitivity of the receiving waters**Error! Bookmark not defined.**. The size of a discharge is defined by the term “population equivalent11” (PE) which is a measure of the organic material present in waste waters.

In general, *secondary treatment****Error! Bookmark not defined.***is the minimum standard of treatment for all discharges of greater than 2,000 PE made to freshwaters and estuaries and 10,000 PE made to coastal waters.

The requirements of the UWWTD are set out in the Urban Waste Water Treatment (England and Wales) Regulations 1994, as amended by the Urban Waste Water Treatment (England and Wales) (Amendment) Regulations 2003.

The water companies in England, as water and sewerage undertakers, are responsible for providing sewerage collection and treatment services, and ensuring that the level of treatment required by the UWWTD is applied. As (treated) sewage discharges are made to “controlled waters”[[12]](#footnote-12) as defined by the WRA91, the EA is responsible for consenting water discharge activities (where discharges are to surface waters) and groundwater activities (where discharges are to ground/groundwater) under the Environmental Permitting Regulations (2010) framework. Permits for water discharge activities/groundwater activities for large sewage plant discharges will therefore reflect the specific standards set out in the UWWTD as described in Section 2.2 Urban Waste Water Treatment Directive.

### Application to the Isles of Scilly

The Urban Waste Water Treatment (England and Wales) Regulations 1994 build on the duty in section 94. As described above, our proposal is to apply the duty in section 94, and also to ensure that the 1994 Regulations are tailored to the situation of the IoS Council since it is not a water company.

As explained above, the Regulations only require secondary treatment for coastal discharges of greater than 10,000 PE, and this will not apply in the case of the discharge from Hugh Town where the PE during the summer months is unlikely to exceed 10,000 PE. The sewage from Old Town is already subject to full secondary treatment through a bio-bubbler system but the PE received by this works is always less than 2000.

The crude discharge from Hugh Town at Morning Point needs capital expenditure to improve it to meet the UWWTD’s requirement for ‘appropriate treatment’. Based on WRc’s recommendations (with their initial costs estimates ranging from £450k to £700k), we have further explored the solution for appropriate sewage treatment for Hugh Town, St. Mary’s with the IoS Council and their consultants. The scheme consists of a new rising main from the Bishop and Wolfe sewage pumping station to a fine sewage screening plant on the Garrison. Following screening treatment, where sewage derived debris and persistent plastics will be removed and disposed of, the discharge will flow to a new outfall off Morning Point. The treated sewage will discharge below Low Water Spring tides and will have a low visual impact.

### Defra Sewerage Grant (£1 million)

On the basis of the design of the sewerage solution described above and with further work to refine WRc’s preliminary estimates, a grant for £1 million was awarded to the IoS Council in March 2013 (Annex 1). The IoS Council are committed to undergoing the detailed planning for this work and will use their consultant’s report as a technical document to improve the sewerage system for Hugh Town.

## 2.3 Trade Effluent to Sewers

### Highlights

We are considering whether fit for purpose trade effluent legislation already applies in the IoS through the existing legislation or whether it is necessary to update this legislation through the application of Chapter 3 of part 4 of the WIA91. The IoS Council already operates a charging scheme for the discharge of tankered septic tank effluent into its sewerage system, although it does not appear to operate a formal trade effluent discharge consents process similar to the current water company scheme on the mainland. The WIA91 scheme is currently under review with a view to improving its flexibility and reducing unnecessary burdens. We are therefore not intending to introduce the current trade effluent consenting regime under WIA91 to the IoS unless necessary to ensure the IoS Council continues to have the powers it needs to operate a suitable scheme for controlling trade effluent discharges.

### Application to England

The aim of trade effluent control is to ensure that discharges, either alone or in combination with other effluents or the contents of the sewer, cannot harm the sewerage system, the sewage treatment works, employees, the general public and the environment. Water and Sewerage Undertakers (water companies) have a responsibility under the WIA91 to restrict the type of trade effluent that drains to their sewage works for treatment by controlling the discharge of effluent into the public sewer network. A ’trade effluent’ is defined as ‘*any liquid with or without particles of matter in suspension which is wholly or partly produced in the course of a trade or industry carried on at trade premises*’. The majority of liquid waste arises as a result of industrial processes involving substances such as oils, solvents, chemicals, adhesives etc., commercial enterprises such as launderettes, car washes or public swimming pools and food manufacturing sites. Domestic sewage discharges and discharges from premises such as schools, restaurants, take-aways, public houses, holiday parks and nursing homes are not regarded as making trade effluent discharges and do not require consent to discharge to sewer.

If a water company considers that a discharge of liquid waste to the sewer network constitutes trade effluent (bearing in mind the substances and industrial processes which are included in that definition)[[13]](#footnote-13), their consent is required. Discharging without a trade effluent consent is a criminal offence which may result in a prosecution being taken and a fine imposed.

Applications for any special category effluent to be discharged to sewer have to be referred to the EA for approval before consent can be given. Special category effluent covers substances that are the most dangerous substances to the water environment based on their toxicity and bio-accumulation. The list of such substances includes the metals cadmium and mercury, chlorinated solvents and a range of pesticides.

### Application to the Isles of Scilly

We are considering whether the legislation which already applies in the IoS enables it to operate a system for controlling trade effluent or whether it is necessary to update this legislation through the application of Chapter 3 of part 4 of the WIA91. The IoS Council already has a charging scheme for the discharge of tankered septic tank effluent into its sewerage system, although it does not appear to have a formal trade effluent discharge consents process similar to the current water company scheme on the mainland. They may wish to put such a scheme in place in future to manage substances presenting a risk to its system, operational staff or the environment.

We understand that the majority of discharges into sewers on the IoS are discharges of domestic sewage effluent from domestic properties, shops, public houses and hotels. These would be very unlikely to constitute `trade effluent’ and would therefore not require a consent to discharge trade effluent to sewer. However, there may be other types of liquid wastes discharged to sewer by businesses (now or in future) which may be classed as trade effluent and would therefore require consent from the IoS Council if it were to put a formal scheme in place.

There are some commercial premises on the IoS that may attract the need for a trade effluent consent e.g. commercial brewing and launderettes. With waste water from this sector there is always an additional risk that the trade effluent will contain potentially harmful substances which would need to be specifically controlled with bespoke consent conditions (such as discharges from dry cleaners which could contain traces of potentially harmful chemicals). However even if we did introduce the WIA91 trade effluent consenting regime we would not include the requirement of seeking approval from the EA for special category effluents as we consider that the necessary environmental protection can be achieved through the EA’s permitting of discharges from the system.

## Questions on Section 2

1. **Are there any additional powers that need to be applied to the IoS Council to allow them to carry out their sewerage duties effectively?**
2. **Do you have any further information which would enhance our understanding of the costs?**

#

# Section 3 Environment Agency

## 3.1 Role of the Environment Agency

### Highlights

The Environment Agency’s general regulatory powers are set out in the Environment Act 1995 (EA95). However, these powers do not currently extend to the IoS. For example, the general power of the EA to charge for various licences and permits, and the power of entry for enforcement purposes, cannot currently be exercised in the IoS. We propose to use the Order to enable the EA to exercise the general regulatory powers set out in the EA95 on the IoS. This will mean that existing and new environmental legislation can be fully implemented on the ground.

### Application to England

The EA is a large environmental regulator, established by the Environment Act 1995 (EA95). The Environment Agency was established to protect and improve the environment and to contribute to sustainable development [(Environment agency website)](http://www.environment-agency.gov.uk/aboutus/149356.aspx). It is responsible for implementing and enforcing a significant amount of environmental legislation. Its operational activities are undertaken in six Regions throughout England[[14]](#footnote-14). These are further subdivided into operational areas. The IoS will come under the South West Region and under the Devon & Cornwall Area of the current structure although this may change as a result of a major restructuring exercise that the EA are carrying out in 2014.

One of the EA’s important roles is to operate and enforce the environmental permitting system, set out in the Environmental Permitting (England and Wales) Regulations 2010 and 2014. The permitting system is an important tool in delivering many domestic and EU obligations, including those on water quality (rivers, coastal waters and groundwaters). The EA also has other functions in relation to coastal and river flooding, air quality, environmental regulation of businesses (including water companies) and waste regulation.

The EA has bespoke enforcement powers set out in various pieces of legislation conferring functions on it. However, the EA95 gives it a range of general regulatory powers which support its role.

### Application to the Isles of Scilly

The EA’s powers in the EA95 are, generally speaking[[15]](#footnote-15), not able to be exercised in the IoS (this limitation is set out in section 117 of that Act). In particular they have no powers of investigation, powers of entry or ability to charge for the regulatory activities they undertake. Even where the EA has regulatory powers through various pieces of legislation such as the Environmental Permitting Regulations (which, for example, gives the EA powers to issue enforcement and suspension notices to deal with breaches of environment permits), they do not currently have all the necessary powers to support this regulatory role on the ground.

We intend to use the proposed Order to give the EA full powers on the IoS equivalent to those it can exercise on the mainland.

The key powers we propose to ensure EA can exercise on the IoS are

* the ability to charge for various of its functions, including the issue of water discharge activity permits and groundwater activity permits;
* powers of entry and related powers (e.g. to carry out investigations, take samples) in accordance with the safeguards set out in the legislation[[16]](#footnote-16);
* power to deal with the cause of imminent danger of serious pollution.

The biggest impact of this extension of EA powers will be to allow the EA to properly operate the environmental permitting system relating to the prevention and control of water pollution there (see further section 3.2 below). This will enable the EA to bring the discharge of substances to surface (mainly coastal) waters and groundwaters under control and prevent the contamination of potentially vulnerable drinking groundwater sources and the pollution of coastal waters around the islands. It will also enable the EA to deal properly with breaches of legal requirements and serious pollution incidents.

## 3.2 Environmental Permitting (England and Wales) Regulations 2010

### Highlights

Whilst the Environmental Permitting Regulations (EPR ) already apply to the IoS, due to the EA’s restricted powers on the IoS, the EA currently lack the ability to properly implement them on the ground. However, the proposed extension of the EA’s enforcement and charging powers to the IoS described above will mean that the environmental permitting regime to protect water resources will be fully rolled out on the IoS. Obtaining Water Discharge and Groundwater Discharge permits for the first time will mean costs arising, and options surrounding who will incur these costs is being evaluated. These have been estimated, but more information is required for the EA to refine those estimates. Legislation regarding septic tanks and sewage treatment plants has been recently amended, in particular the approach to managing exemptions from the need for an environmental permit has changed.

Following consultation on our proposals earlier in the year, the Government has decided to implement a simpler regulatory framework to control small sewage discharges in England.

New regulations [Statutory Instrument 2014 No. 2852] which amend the Environmental Permitting (England and Wales) Regulations 2010 come into effect from 1 January 2015 in England.

The amendments simplify existing regulation by removing the requirements to register, keep records of maintenance and notify when a discharge ceases. The requirements to prevent pollution are retained and will be known in future as the general binding rules - this means that the basic rules that people need to follow are not changing. The [general binding rules](https://www.gov.uk/government/publications/small-sewage-discharges-in-england-general-binding-rules) set out the conditions that allow a septic tank or sewage treatment plant to be used without an environmental permit.

Environmental permits for small sewage discharges will continue to be used in certain areas to protect drinking waters sources and other sensitive areas. Permits, where required, will set extra conditions in addition to the general binding rules.

**Application to England**

In April 2010, a major change took place to the way in which discharge consents are administered by the EA. In 2008, the first phase of the Environmental Permitting Programme integrated the permitting and compliance systems for waste management licensing and pollution prevention control. The second phase of the programme extended the common system by incorporating a number of additional permitting regimes, including the water discharge consenting regime and the groundwater authorisation scheme, into the Environmental Permitting (England and Wales) Regulations 2010 (EPR 2010). As a result, the EPR 2010 and 2014 now provides a standard, simplified approach to surface water discharges and groundwater activity permitting as well as many other types of permitting of activities which could cause pollution.

Under the EPR, the EA continues to have responsibility for the regulation of waste water discharges in England to controlled waters12. This is achieved by issuing environmental permits for water discharge activities or groundwater activities and subsequent monitoring by the EA to assess compliance. These permits cover a wide range of public and industrial sectors, and may also include private householders not connected to a mains sewer, where discharges are made into controlled waters (including to ground/groundwater). The EA sets conditions which may, for example, control volumes and concentrations of particular substances or impose broader controls on the nature of the effluent to be discharged. Each permit is assessed individually and based on the objectives set by the EA for the quality of the receiving water environment to which the discharge is to be made, as well as any relevant standards required from European Directives (such as the Water Framework Directive (WFD) or the Groundwater Directive (GWD).

The EPR states that it is an offence to discharge sewage or trade effluent into controlled waters without a permit from the EA. Therefore, in the majority of cases (i.e. where exemption criteria do not apply), anyone wishing to discharge such effluent in England must first make an application to the EA for a permit to discharge (as either water discharge activities or groundwater activities).

The EA’s responsibilities include ensuring that the permitting regime for discharges into surface or groundwater is operated in accordance with the requirements of the EPR, which themselves implement the UK’s EU obligations under the WFD and GWD. Operators may appeal to the Secretary of State against the refusal of a permit or the conditions imposed on a permit.

### Application to the Isles of Scilly

Full application of the permitting regime for discharges into surface waters would mean that the inland surface waters on the IoS and coastal waters (up to a 3 mile limit) surrounding the IoS are controlled waters. Anyone discharging wastewater effluent into these waters[[17]](#footnote-17) would require a permit from the EA (website: [EA Water Discharge Permits](https://www.gov.uk/government/publications/water-discharge-and-groundwater-activity-permits-additional-guidance)) to do so. This will include the IoS Council, businesses such as the Duchy of Cornwall and Tresco Estates and small businesses. Any discharge being made to ground/groundwater (that does not meet the exemption criteria) would also require a permit from the EA (website: [Groundwater Activity Permits](https://www.gov.uk/permit-discharges-surface-groundwater)).

Normally, the EA charges for any new permits it issues. Every applicant pays an application fee, and for every discharge, apart from the smallest (5 cubic metres or less per day to surface waters or 2 cubic metres or less per day to ground/groundwater), there is also an annual subsistence charge to be paid. This charging scheme has been in operation for many years and is a self-financing scheme which covers the costs to the EA of issuing permits, for sampling and monitoring discharges and their impact on the receiving water environment. For 2013/14, the application charges are £885 for a standard application charge, or £125 for a reduced application charge in relation to small sewage discharges. The annual charge is made up of a complex set of factors relating to volume, content of discharge and receiving water which are calculated and then multiplied by a financial factor, which is currently £684. Generally speaking, a small insignificant discharge going into a large, fast flowing river would be at the low end of the scale of charges, but a large discharge containing listed substances (see 4.4 Environmental Standards Directive) going to a small, slow flowing river would be at the top end of the scale.

The Water Interests Survey (conducted by the WRc in November 2011 on behalf of Defra10) looked at the size and distribution of effluent discharges on the five inhabited islands. This means we now have information detailed below that enables us to give a reasonable estimate of what is required (and the estimated costs[[18]](#footnote-18)) of applying the water discharge and groundwater permitting regime to the IoS.

### St. Mary’s – Public Sewerage System

The public sewerage system that is operated by the IoS Council on St Mary’s has two sewerage discharges from Hugh Town and Old Town respectively. The sewerage systems themselves are described in more detail in Annex 2.

The largest sewerage discharge (greater than 2000 Population Equivalent (PE) is from the sewerage system that serves Hugh Town. This currently discharges a crude effluent of untreated sewerage off Morning Point. Defra has awarded the IoS Council a £1 million grant (Annex 1) to support appropriate treatment as required by the UWWTD.

This discharge will need to be permitted by the EA and will be subject to an application charge (£885) and an annual charge payable to the EA (estimated at £5,472). The annual charge is based on the maximum estimated flow of 635 m3/per day at the height of the tourist season.

The Old Town Wastewater Treatment Works discharging into Old Town Bay was assessed as satisfactory by the WRc survey in 2011. Due to the size of the population served (always less than 2000) by this site it is not subject to the requirements of the UWWTD. However it will need to be permitted by the EA due to the volume of wastewater being discharged and may be subject to an application charge (£885) and an annual charge payable to the EA (estimated at £2000, based on a PE of 600).

A combined sewer overflow**Error! Bookmark not defined.** (CSO) that discharges to Town Beach close to the Atlantic Hotel at Hugh Town, St Mary's will undergo improvements funded by the Defra grant (Annex 1) and will also need permitting by the EA. As the frequency and volume of spillages after improvement is unknown it is difficult to estimate the charge for the IoS Council, but this will be a minimum of £125 to cover the application charge.

### Private Sewerage Systems

The secondary treatment plant owned by the Tresco Estate that serves most of the properties on Tresco and discharges to the coast will be subject to an EA permit estimated at £885 for the application charge and £2000 for the Annual Charge (based on a PE of 500).

Three private sewage treatment plants (STPs) serving the hotel on Bryher, the hotel on St Martin's and the hotel on Tresco that discharge to coastal waters will be permitted by the EA and will be subject to the reduced application charge (£125). If the discharge flow is greater than 5 cubic metres per day the charges will rise accordingly. Due to the size of the population served by these sites they are not subject to the requirements of the UWWTD.

Discharges from septic tanks are also regulated under the EPR 2010 and amendments in 2014, by the EA. The government policy on Small Sewage Discharges (such as from septic tanks) has been reviewed and new regulations look to minimise the administrative burden on householders. The rules set out the conditions that a septic should meet in order to be used without an environmental permit. Permits are still needed in the most environmentally sensitive areas, designated bathing waters, protected shell fisheries and to protect water supplies intended for human consumption.

The impact of point source pollution from septic tanks on groundwater quality via soakaways and the collection and disposal of septic tank sludge for all islands (including the large septic tanks serving the campsites on St Martin's, St Agnes and Bryher) will need to be permitted to protect drinking water quality. Some areas of the IoS are likely to be within a groundwater Source Protection Zone 1 (within a 50 m radius of a drinking water borehole or well) and these will need to be assessed by the EA. Due to the size of the population served, these discharges will not be subject to the requirements of the UWWTD, but the sites will be regulated by the EA.

There are approximately 250 septic tank discharges to ground on the IoS. Whilst most of these would be exempt from charges as they serve individual households (or a small number of households) and discharge 2 cubic metres per day or less (as above), an estimated 10% per island may need to be permitted (due to their proximity to wells/boreholes i.e. within a 50m radius) and subject to the reduced application charge. These are distributed throughout the islands:

i) St Mary’s - Some 130 septic tanks including septic tanks serving the campsite and part of the Star Castle Hotel located on The Garrison (10% = 13 \* £125 = £1625 in total).

ii) Tresco - 3 septic tanks that may be connected into the sewerage network in future (Tresco Estates has indicated that it wishes to make this connection). Tresco Estates are also considering the possibility of linking the septic tank at the Garden Visitor Centre to the rest of the sewerage network to remove the need for the septic tank in this location. When these discharges are connected to the sewerage network there may be an increase to the estimate already calculated for the single discharge from the Tresco Estates package treatment plant i.e. £885 for the application charge and £2000 for the Annual Charge (based on a PE of 500). In particular there may be a small increase in the Annual Charge based on the higher volume of effluent when the existing septic tanks are connected to the sewerage network.

iii) Bryher - Approximately 50 septic tanks (including a septic tank serving the island's campsite). It would appear that each of the boreholes that serve the public supply on Bryher are sufficiently remote from septic tank discharges to make the discharges exempt from charges. It is estimated that 5% may be above 2 cubic metres per day and would need to pay the one off reduced application charge (5% = 3 \* £125 = £375 in total).

iv) St. Agnes - Approximately 35 septic tanks including the septic tanks serving the island's campsite, pub and toilets close to the slipway (10% = 4 \* £125 = £500 in total). The potential for improvement in the long term is to connect sewage from septic tanks to package STPs with a coastal discharge.

v) St Martin’s - Approximately 40 septic tanks including the septic tanks serving the island's campsite and pub (10% = 4 \* £125 = £500 in total). The potential for improvement in the long term is to connect sewage from septic tanks to package STPs with a coastal discharge.

## Questions on Section 3

1. **What do you see as the main opportunities and challenges of working with the Environment Agency as a regulator in the IoS?**
2. **Do you have any further information which would enhance our understanding of the costs?**

#

# Section 4 Environmental Directives

## 4.1 Bathing Water Directive (1976/160/EEC) and Revised Bathing Water Directive (2006/7/EC)

### Highlights

The Bathing Waters Regulations 2013 set standards for coastal and inland waters that are used for bathing, reflecting the requirements of the Revised Bathing Water Directive (rBWD). The Regulations already apply to the IoS, but there are currently no designated bathing waters in the IoS. However, the IoS Council would be responsible for making an application to Defra to designate any future sites as bathing waters. In order for the application to be considered the Council’s application would need to provide sufficient supporting evidence and then following a local consultation, Defra would make a final decision based on the results of the consultation and the evidence supplied.

### Application to England

The objective of the 1976 Bathing Water Directive (76/160/EEC) is to protect public health and the environment from faecal pollution at bathing waters. This is achieved by identifying beaches and inland waters that are used by a large number of bathers and monitoring these sites for indicators of microbiological pollution throughout the bathing season (in England, 15 May – 30 September). The Bathing Water Directive (BWD) set two standards against which bathing waters are measured - the minimum mandatory standard and the tighter guideline standard. The original BWD is in the process of being superseded by the revised Bathing Water Directive (rBWD) (2006/7/EC) which sets two microbiological parameters of faecal indicator organisms (Faecal enterococci and *Escherichia coli*) and bases its classifications on a four year dataset. The current requirements are set out in the Bathing Waters Regulations 2013 along with the new requirements reflecting the rBWD which will take effect in March 2015. The EA started monitoring under the new parameters in May 2012 and the first results using these parameters will be issued in 2015. Until then, Defra will report the bathing water results using the current BWD’s standards.

The revised Directive will use four classifications:

* *Excellent* is approximately twice as stringent as the current guideline standard
* *Good* equates to the current guideline standard
* *Sufficient* is approximately twice as stringent as the current mandatory standard
* *Poor* are waters that fail to reach the current mandatory standard

Monitoring of water quality at bathing waters is carried out by the EA. Defra is responsible for: the maintenance of the list of bathing waters in England; reporting annually on compliance with the BWD’s standards for English bathing waters; reporting to Europe and to Parliament on overall results for the UK; for the implementation of the revised Directive in England, and for communicating with the EC on implementation in the UK as a whole.

### Application to the Isles of Scilly

The Bathing Waters Regulations 2013 (which contain the requirements of the BWD and the rBWD) apply to the IoS.

At present there are no designated bathing waters in the IoS, but it could be possible that some bathing waters meet the criteria (relating to the number of bathers during the period 15May – 30 September) in the future. The IoS Council will be responsible for making an application to Defra for designation of proposed bathing waters.

The WRc Water Interests Survey10 identified fourteen beaches where some bathing may occur. The beaches and their locations are Pelistry (St. Mary's), Porthcressa (St Mary’s), Town Beach (St. Mary's), Rushy Porth (Tresco), Appletree Bay (Tresco), Pentle Bay (Tresco), Green Bay (Bryher), Rushy Bay (Bryher), Lawrence's Bay (St. Martin's), Par Beach (St. Martin's), Great Bay (St. Martin's), The Bar (St. Agnes), Covean (St. Agnes) and Periglis (St. Agnes).

During the survey they saw people bathing at Porthcressa Beach and bathing is promoted on the islands by the IoS Council via the tourist information website ([Tourism Website](http://www.simplyscilly.co.uk/site/things-to-do/beaches)). It is therefore possible that some bathing waters could be identified on the IoS based on the highest number of users (this is unlikely to be all fourteen beaches).

WRc took microbiological samples on their visit from the potential bathing beaches described above and analysed for the bathing water microbiological parameters (Faecal enterococci and *Escherichia coli* (per 100 ml of seawater)). Although the results are limited in scope to a one off sample (microbiological samples of seawater are usually highly variable in their numbers and more samples would need to be taken to confirm the results), the microbial numbers at the IoS potential bathing beaches were very low (mostly less than 10 per 100 ml of seawater). This represents excellent water quality therefore few improvements may be needed to ensure compliance if any bathing waters are designated in future.

Since 2012 there is a requirement for information signs at designated bathing waters and the IoS Council would be responsible for providing the signs and other public information during pollution incidents for any designated bathing waters, even at privately owned sites. This means that where beaches adjacent to designated bathing waters are owned by the Duchy of Cornwall or Tresco Estates, the IoS Council would still be responsible for signage. However Defra will fund one sign per bathing water with a replacement every 5 years, plus a one off familiarisation time payment for IoS Staff if any bathing waters are designated.

## 4.2 Shellfish Waters Directive (2006/113/EC)

The aim of the Shellfish Waters Directive (SWD) is to protect or improve shellfish waters in order to support shellfish life and growth, therefore contributing to the high quality of shellfish products directly edible by humans. It sets physical, chemical and microbiological water quality requirements that designated shellfish waters must either comply with i.e. ‘mandatory’ standards or endeavour to meet i.e. ‘guideline’ standards. The SWD was repealed in December 2013 by the Water Framework Directive (WFD).The WFD is intended to provide at least the same levels of protection and the Water Environment (Water Framework Directive) (England and Wales) Regulations 2003 will be amended to reflect this and to ensure the level of protection remains the same. The SWD is designed to protect the aquatic habitat of bivalve and gastropod molluscs, including oysters, mussels, cockles, scallops and clams which are commercially fished for human consumption. It does not cover shellfish crustaceans such as crabs, crayfish and lobsters.

### Application to the Isles of Scilly

The requirements relating to shellfish waters are currently unlikely to have any impact on the IoS. Anecdotally, previous attempts to commercially harvest shellfish were thwarted by strong currents, storm damage and distance from markets. Any future development of shellfish harvesting activity in the IoS will be covered by the requirements under the WFD that will offer shellfish protection.

## 4.3 Water Framework Directive (2000/60/EC)

### Highlights

The obligations of the Water Framework Directive (WFD) are wide-ranging and are implemented through various pieces of legislation. Many of the obligations, including the process for river basin management planning, are set out in the Water Environment (Water Framework Directive) (England and Wales) Regulations 2003 and these already apply to the IoS. The IoS is included in the South West River Basin Management Plan which was published in 2009 and is due to be reviewed and updated in 2015. The extension of the EA’s enforcement powers will help ensure the full implementation of on the ground measures required to meet the WFD objectives set for the IoS.

### Application to England

The WFD is an overarching EU Directive for the protection and management of water resources and dependent ecosystems. The objective of the WFD is to prevent deterioration in the status of water bodies and to bring all surface water bodies (rivers, lakes, estuarine and coastal waters) to ’good ecological status’ and ‘good chemical status’ and all groundwater bodies to ‘good chemical status’ and ‘good quantitative status’ by December 2015 (subject to the limited ability to set a later deadline or a less stringent objective). With respect to groundwater protection, the WFD is supplemented by the requirements set out in the Groundwater Directive (2006/118/EC).

The WFD requires the production of River Basin Management Plans (RBMPs) for each river basin district. These set out: the current status of each water body (classification); status objectives for each water body; and programmes of measures to achieve those objectives. The current plans were published in 2009 and are due to be updated in 2015. Good Ecological Status for surface waters covers a variety of parameters, including chemical, biological and hydromorphological parameters that give an indication of the overall health of a water body and its ability to support life. The criteria for good chemical status of groundwater are set out in the Groundwater Directive (see Section 4.5).

The EA is the competent authority for the WFD. They are responsible for developing and consulting on the RBMPs, which are then signed off by the Secretary of State. They are also responsible for establishing a monitoring programme, classifying the current status of water bodies, setting objectives for water bodies and producing a programme of measures, many of which they implement (such as permitting under the EPR 2010).

### Application to the Isles of Scilly

The IoS are already included in the South West River Basin District Management Plan ([River Basin Management Plans](http://www.environment-agency.gov.uk/research/planning/33106.aspx)), referred to as ‘the plan’ below. There are six water bodies associated with the IoS: four groundwater and two coastal. All water bodies are currently at good status, and were predicted to remain at good status for 2015.

In the current RBMP there are five actions in the programme of measures which relate specifically to the IoS. These are:

* Establishing a groundwater monitoring programme by the EA;
* Reviewing hazardous and polluting substances legislation and implementation by the EA;
* Gathering data on reef habitats and to work with fishermen to secure long term protection by Isles of Scilly Wildlife Trust;
* The EA to work with the IoS Council to review and update waste management practices in order to minimise any risk to drinking water;
* The EA to work with the IoS Council to develop understanding of pressures and risks to groundwater and coastal waters.

To implement some of these measures the EA commissioned an Initial Groundwater Conceptual model in 2011/12. Due to an overall lack of data the model can only be regarded as the first step in robustly documenting and describing the groundwater resources of the IoS. Further work is required to move that initial technical and scientific understanding forward. As the EA investigatory measures deliver further evidence and information, a greater confidence in the risks, pressures, issues and classification of the water environment in the IoS will result. This may lead to reclassification in the future, especially for the next RBMP (2015-2021) and a changed programme of measures to deal with the pressures.

As the WFD Regulations and the South West River Basin Management Plan already apply to the IoS, the proposed Order will not include any additional regulatory burden as far as the WFD itself is concerned. However, many of the measures required by the WFD are implemented through the Environmental Permitting Regulations 2010 and the issuing of permits by the EA for water discharge activities and groundwater activities. The cost impacts of those changes have already been described in Section 3.2 Environmental Permitting Regulations 2010.

## 4.4 Environmental Quality Standards Directive (2008/105/EC)

### Highlights

The requirements of the Environmental Quality Standards Directive (EQSD) already apply in the IoS but to coastal waters rather than rivers, as there is only limited freshwater flow on the islands. The EA will undertake marine water monitoring when they have full powers there, and control of such chemicals in the environment around the coastal waters of the IoS will be applied through the issuing of permits for sewage discharges.

### Application to England

The EQSD supports the objectives of the WFD by setting out a European “priority list” of substances posing a particular threat to or are discharged via the aquatic environment. For these substances, the Directive establishes Environmental Quality Standards (EQS’s) which are essentially the levels of concentration of these substances which are safe for the aquatic environment and for human health. These standards must be met in a water body in order to achieve a ‘good chemical status’ under the WFD. The EA are required to apply these standards as a result of a Direction from the Secretary of State for Environment, Food and Rural Affairs to the EA dated August 2010[[19]](#footnote-19). This Direction also requires the EA to apply environmental quality standards for other ‘specific pollutants’ identified by other pieces of EU legislation.

As part of the WFD the list of Priority Substances is reviewed every six years by the European Commission. A review has recently been completed and the revised Priority Substances Directive (2013/39/EU) now has 45 chemicals listed as priority substances. There are detailed implementation dates for substances where the EQS has been revised and for the newly listed priority substances: broadly, 2015 for revised EQS’s and 2018 for new EQS’s. The 2010 Direction referred to above will be amended in due course to reflect the new priority substances and EQSs.

Plans under the RBMPs include a Chemical Investigations Programme (being completed by the Water Companies) to address knowledge gaps so that cost-effective measures for wastewater treatment may be introduced. Discharges containing Priority Substances and/or Specific Pollutants will require a Water Discharge Activity permit from the EA.

### Application to the Isles of Scilly

The preliminary River Basin Characterisation carried out in 2004 has not identified any of the IoS freshwaters as water bodies as they do not fall within the size criteria for the initial characterisation. However, the Priority Substance EQS’s and Specific Pollutant EQS’s apply to the WFD coastal water bodies on the IoS.

Only a small amount of environmental monitoring data has been gathered to date. During the WRc Water Interests Survey10 in November 2011, water and sewage effluent samples were collected at potential bathing beaches, at sewage effluent discharge points and from surface water outfalls. The Morning Point sewage discharge and other sewage effluent samples contained elevated levels of total metals from domestic sources, but these are expected to be below the EQS’s following mixing a short distance from the respective outfalls to the sea.

The EA will undertake marine water monitoring, and control of such chemicals in the environment around the coastal waters of the IoS will be applied through the issuing of permits for the sewage discharges by the EA under the Environmental Permitting Regulations 2010.

## 4.5 Groundwater Directive (2006/118/EC)

### Highlights

The Groundwater Directive 2006 supplements the provisions of the WFD aimed at preventing and controlling pollution of groundwater. An important element of the regulatory system implementing the Groundwater Directive in England is the environmental permitting system under the EPR 2010. The proposed extension of the EA’s regulatory and enforcement powers to the IoS will help ensure the full implementation on the ground of the necessary protections. Groundwater protection is important in the IoS as they rely on groundwater sources of drinking water for the public supplies on St Mary’s (supplemented by the de-salination plant) and Bryher, and for the private supplies on the other islands. Small sewage discharges that are a potential source of groundwater pollution are regulated under the EPR 2010 and 2014

### Application to England

Groundwater (underground water) is an important natural resource. Good quality groundwater is crucial as a source of drinking water - it supplies about one third of mains drinking water in England as a whole, as well as supporting thousands of private drinking water supplies and providing essential water for industry and agriculture. Groundwater also has an important role in sustaining water-dependent plants, animals and wetland habitats. Its contamination can therefore be dangerous to human, aquatic plant and aquatic animal health, and is difficult and expensive to remedy.

In accordance with Article 17 of the WFD, a new Groundwater Directive[[20]](#footnote-20) (2006/118/EC) (GWD) has been established which sets out provisions for the protection and conservation of groundwater.

The three key elements of the 2006 GWD relate to:

* chemical status – member states must set ‘threshold values’, and use them and ‘standards’ as triggers for investigation into whether the environmental and amenity requirements of good chemical status have been met;
* pollution trends – member states must identify significant and sustained upward trends and establish starting points for their reversal;
* prevention or limitation – member states must prevent inputs of hazardous substances into groundwater and limit the inputs of all other substances to avoid pollution.

The requirements of the GWD are set out in domestic legislation by Regulations (in particular EPR under which environmental permits are required for ‘groundwater activities’) and Directions to the EA. These are underpinned by a list of hazardous substances. The EA are required to exercise their permitting functions to meet the requirements of the GWD to prevent or limit the inputs of polluting substances into groundwater.

 A Government review has concluded [website: septic tanks](https://www.gov.uk/government/policies/improving-water-quality/supporting-pages/reducing-and-controlling-pollution-in-wastewater-discharges-sludge-and-septic-tanks) on how small sewage treatment plants and septic tanks should be regulated under the EPR 2010. A consultation closed on June 10th 2014 and a Government response has been published. There is no longer a requirement. for householders (the ‘operators’) to register their discharges with the EA, however there are a number of conditions to prevent pollution and to ensure systems are kept in good working order that need to be met in order for the system to be used without an environmental permit. Permitting applies in sensitive areas where a higher level of protection is needed. For example systems which are close to, or are within, Sites of Special Scientific Interest and/or within a 50m radius of drinking water sources. Further information is available on Gov.uk

### Application to the Isles of Scilly

On the IoS groundwater is the major source of drinking water (supplemented by the de-salination plant on St. Mary’s). A groundwater report commissioned by Defra in relation to the waste infrastructure on the islands was published by SLR consultants in December 2009[[21]](#footnote-21). Whilst there was no immediate cause for concern about the quality of drinking water from discharges to groundwater from the waste infrastructure, it is clear that there needs to be regular groundwater monitoring and permitting of small sewage treatment plants and septic tanks under the EPR by the EA ([EA Website: Groundwater protection: principles and practice](https://www.gov.uk/government/publications/groundwater-protection-principles-and-practice-gp3)). An estimate of the number of septic tanks on St. Mary’s and the off-islands and the likely charges associated is given in Section 3.2 Environmental Permitting Regulations 2010.

As described previously in Section 4.3 Water Framework Directive, the EA commissioned a Groundwater Conceptual model in 2011/12. Due to an overall lack of data the model can only be regarded as the first step in robustly documenting and describing the groundwater resources of the IoS. Further work is required to move that initial technical and scientific understanding forward. As the EA investigatory measures deliver further evidence and information, a greater confidence in the risks, pressures, issues and classification of the water environment in the IoS will result.

When the permitting controls are in place it is likely that drinking water quality and groundwater quality will improve. Therefore, it is more likely that benefits will arise in the future in terms of less treatment being required for drinking water. It should be noted that it may be necessary to establish groundwater ‘threshold values’ for the IoS as has been done for water bodies in England.

The control through permitting of the input of polluting substances, particularly hazardous ones, into groundwater will be beneficial as it is better to control these at source as remediation may either be too expensive or not technically feasible. A further benefit of having effective groundwater controls is that it will help to avoid saline intrusion of the groundwater by over-abstraction – see Section 5 Water Resources Legislation.

## 4.6 Nitrates Directive (1991/676/EEC)

### Highlights

The regulations which set out the obligations imposed by the Nitrates Directive already apply in the IoS. However, the requirements only apply to ‘nitrate vulnerable zones’ and there are currently no such zones on the IoS. Although the application of fertiliser is much reduced due to the decline of the horticultural industry and there is a limited dairy industry, there is evidence of nitrate in the groundwater that needs to be further investigated by the EA.

### Application to England

The objective of the Nitrates Directive (91/676/EEC) (implemented in England by the Nitrate Pollution Prevention Regulations 2008 (as amended)) is to reduce water pollution caused or induced by nitrates from agricultural sources and to prevent such pollution occurring in the future.

To achieve this objective EU Member States are required to identify nitrate polluted waters, to designate land draining to those waters as Nitrate Vulnerable Zones (NVZs), and apply an Action Programme of measures in those zones to tackle nitrate pollution from agriculture. Member States are also required to establish a voluntary code of good agricultural practice to be followed by farmers throughout the country.

The following criteria are laid down in the Nitrates Directive for use in identifying polluted waters:

* Surface freshwaters which contain or could contain (if preventative action is not taken) nitrate concentrations greater than 50mg/l (11 mg/l as N).
* Groundwaters which contain or could contain (if preventative action is not taken) nitrate concentrations greater than 50mg/l (11mg/l as N).
* Natural freshwater lakes, or other freshwater bodies, estuaries, coastal waters and marine waters which are eutrophic[[22]](#footnote-22) (or may become so in the near future if preventative action is not taken).

The rules in the mandatory Action Programme of measures relate to:

* periods when the land application of certain types of fertilizer is prohibited;
* the capacity of storage vessels for livestock manure;
* preventing the land application of fertilizer to steeply sloping, water-saturated, flooded, frozen or snow-covered ground;
* the conditions for land application of fertilizer near water courses;
* procedures for the land application, including rate and uniformity of spreading, of both chemical fertilizer and livestock manure;
* limits on the land application of fertilizers based on a balance between the foreseeable nitrogen requirements of the crops, and the nitrogen supply to the crops from the soil and from fertilization; and
* a limit on the amount of livestock manure applied to the land each year (170 kg N per hectare).

Member States are required to review the effectiveness of the Action Programme measures at least every four years and to make amendments if necessary taking into account changes and unseen factors from the previous review. The current review has been completed with the areas designated and the action programme revised in May 2013 and November 2013 respectively.

The EA is responsible for assessing farmers' compliance with the NVZ rules set out in the Nitrate Pollution Prevention Regulations 2008. The EA does this in conjunction with the Rural Payments Agency by visiting farms; part of the visit includes a walk around the farm and an inspection of field records. The EA take a risk-based approach to enforcement, prioritising farms that have the greatest potential for nitrate loss rather than visiting all farms.

Compliance with the rules is also a Statutory Management Requirement for cross compliance under the Single Payment Scheme (SPS). This means that farmers have to comply with full NVZ rules to be entitled to their full SPS payment. If they do not comply, their payment could be reduced.

### Application to the Isles of Scilly

There are currently no designated NVZs on the IoS, but consideration will be given to the possible designation of NVZs.

Due to the IoS southerly position and the influence of the Gulf Stream it has seasonally earlier warmer weather, and this had led to the development of the mono-culture of flowering bulbs. With relatively thin and nutrient poor topsoil, nitrates were extensively used to support plant growth. The legacy of this is that aquifers underlying former flower growing areas are still high in nitrates. The agricultural output from cut flower and bulb production has diminished in recent times therefore nitrate in groundwater is believed to be an historic problem. With the decline in bulb growing, the IoS economy is now 85% dependent on Tourism.

In 2009, Defra and the EA appointed SLR Consulting Ltd to complete hydrogeological site investigations in the vicinities of the Moorwell Landfill Site on St Mary’s, and the historic landfill sites located on the off-islands of Bryher, St Martin’s and St Agnes. The site investigation programme was developed based on recommendations made within Human Health and Environmental Risk Assessments for these landfill sites21. The study concluded that samples from the drinking water abstraction boreholes were within the drinking water nitrate standard.

In order to comply with the requirements of the Nitrates Regulations the quality of groundwater will need to be assessed by the EA using the methodology for Nitrate Vulnerable Zone (NVZ) reviews. A recommendation will need to be made on whether or not to designate NVZs on the IoS by the EA and Defra will make the final decision.

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## 4.7 Sewage Sludge Directive (1986/278/EC)

### Highlights

The regulations which set out the obligations imposed by the Sewage Sludge**Error! Bookmark not defined.** Directive already apply to the IoS. The aim of the legislation is to control the spreading of sewage sludge onto agricultural land. The EA will need to investigate sewage sludge disposal practices on each of the islands and effectively control any spreading of sludge to land.

### Application to England

The aim of the Sewage Sludge Directive (86/278/EC) is to protect the environment, and in particular the soil, vegetation, human and animal health when sewage sludge is spread on agricultural land; and to encourage its use on agricultural land as the practice has valuable agronomic properties. The Directive has the following key requirements:

* Establishes maximum limits for the concentrations of metals in soil and maximum annual quantities which may be introduced into the soil and
* Sets minimum periods for harvesting and grazing when sewage sludge has been applied to agricultural land.

The requirements of the Sewage Sludge Directive (SSD) are set out in the Sludge (Use in Agriculture) Regulations 1989 (as amended). These prohibit the use of sludge on agricultural land (or the supply of it for use by another) except in compliance with the restrictions set out. Failure to comply with the Regulations is an offence. A voluntary Safe Sludge Matrix (between the Water Companies and the British Retail Consortium) and voluntary Code of Practice are in place. The former deals with pathogen standards and the latter contains the more stringent metal standards that are in the Directive.

The current Sludge Regulations have the following key requirements:

* Testing requirements and standards for soil and sludge;
* Maximum statutory permissible concentrations of potentially toxic elements (PTE) (zinc, copper, nickel, lead, cadmium and mercury) in soil after application of sewage sludge ;
* Cropping and grazing restrictions following the application of sludge to agricultural land and
* Records must be kept by sludge producer and occupier of land where sludge is required.

The Code of Practice has the following objectives:

* No conflict with good agricultural practice;
* Long-term viability of agricultural activities is maintained;
* Public nuisance and water pollution are avoided;
* Human, animal or plant health is not put at risk;
* Maximum permissible concentrations of PTEs (zinc, copper, nickel, lead, cadmium, mercury, chromium, molybdenum, selenium, arsenic and fluoride) in soil after application of sewage sludge and
* Tighter limits on soil concentrations for zinc and cadmium.

Further advice is given on the EA’s website: [Sewage and Septic Tank Sludge spread to land](https://www.gov.uk/managing-sewage-sludge-slurry-and-silage)

### Application to the Isles of Scilly

From information given to Defra by the Duchy of Cornwall and the IoS Council it seems that sewage sludge is not spread on agricultural land currently on any of the islands, so the requirements of the SSD and the Sludge (Use in Agriculture) Regulations 1989 are not relevant. However, if there is any sewage sludge spreading in future, the relevant controls will need to be complied with.

The public sewerage network on St Mary’s has been described in Annex 2. We understand from the IoS Council that the sewage treatment works for Old Town produces a limited amount of sewage sludge. This is pumped into the Hugh Town sewage network and is currently discharged (untreated) through the crude sewage discharge from Hugh Town at Morning Point. This practise is expected to continue, but with the introduction of fine sewage screening as appropriate treatment under the Defra grant (Annex 1) will receive treatment in future before discharge at Morning Point.

The septic tank sludge from the properties on St. Mary’s that are not connected to the public sewerage network is collected by a contractor and tankered to the wet well of the Hugh Town sewerage network and disposed of via the outfall at Morning Point.

Of the four other inhabited islands septic tank sludge is not likely to be an issue on Tresco as most of the properties (apart from 3 properties) are connected to a sewerage network and receive full secondary treatment**Error! Bookmark not defined.**. However, the sewage sludge disposal mechanism for the treatment works is unknown and should be investigated by the EA when they are fully operative there.

On the three other islands (Bryher, St Martin’s and St. Agnes) there are mainly septic tanks (see section 3.2 Environmental Permitting Regulations 2010). It is understood that they have a mechanism for tankering up the septic tank sludge and disposing of it on the islands. The disposal routes will need to be investigated by the EA.

# Section 5 Water Resources Legislation

## 5.1 Water Resources Act 1991 Abstractions and Impounding

### Highlights

We propose to apply relevant sections of the Water Resources Act 1991 (WRA91) to the IoS. This would include the Abstractions Licensing regime which is operated by the EA. Licensing costs to the current statutory body for the abstraction of water for public supply have been estimated. Licences may also be needed for private supplies if the abstraction is greater than 20 cubic metres per day at times of peak demand. The benefits of implementing this licensing regime, which enables the EA to control amounts and locations of abstraction to protect the environment, will be the protection of the vulnerable groundwater system on the IoS against over-abstraction that may cause saline intrusion into the groundwater.

### Application to England

One of the EA’s key tools to manage water resources in England is the abstraction and impoundment[[23]](#footnote-23) licensing system set out in the WRA91 (website: [EA Abstraction licensing](https://www.gov.uk/water-management-abstract-or-impound-water)). An abstraction licence is generally needed for taking water from rivers and aquifers where the volume exceeds 20 cubic metres per day[[24]](#footnote-24), although there are some exceptions.

There are three types of abstraction licence:

* A "temporary licence" is required for any abstraction from a source of supply[[25]](#footnote-25) lasting fewer than 28 days.
* A "transfer licence" is available for abstraction of water for 28 days or more from one source of supply to another without intervening use - for example, transferring water from an excavation to a watercourse, or from one watercourse to another for the purposes of navigation.
* A "full licence" is required for any other abstraction for 28 days or more.

There is only one type of impoundment licence, which is needed before the construction of any structure, such as a weir or dam in a river, and for the continued operation of that structure.

The abstraction and impoundment licensing system forms part of the implementation of the Water Framework Directive (WFD) which requires prior authorisation of abstractions and impoundments unless they have no significant impact on water status[[26]](#footnote-26). The Water Act 2003 introduced a number of changes to improve compliance with the WFD through amendments to the WRA91 and Defra plans to commence the remaining elements of Water Act 2003 which will bring into force the remaining abstraction provisions in the Act (this will include licensing activities such as trickle irrigation and quarry dewatering).

The EA has a statutory duty (3.1 Role of the Environment Agency) to manage water resources in England. Currently abstraction charges are levied in nine charging regions, each of which has its own abstraction charges[[27]](#footnote-27), to recover the costs of EA activities in managing water resources in each region.

### Application to the Isles of Scilly

Abstraction of the groundwater (underground water) is the major source of drinking water on the IoS. The IoS Council are responsible for the public supply of water on St. Mary’s and Bryher (see 1.3 Public Supplies and the Water Supply Regulations for further details). Water is abstracted from boreholes and held in above ground storage reservoirs/tanks. The groundwater supply is supplemented by the de-salination plant on St. Mary’s.

A de-salination plant was first commissioned in the 1990s in response to concerns about water quantity and water quality of the groundwater for the supply on St. Mary’s. In February 2012 Defra gave a £1.5 million grant to the IoS Council for an upgrade to their public water supply on St. Mary’s and Bryher, including a replacement de-salination plant that is now (since October 2012) supplying good quality drinking water for the benefit of residents and visitors to St. Mary’s. Improvements to the supply on Bryher are also in place (Annex 1).

On St Martin’s, St Agnes and Tresco, there are only private water supplies (see 1.4 Private Supplies). The Duchy of Cornwall is responsible for these supplies on St Martin’s and St Agnes. There are around 39 small private supplies on St Martin’s and St Agnes that involve abstractions from boreholes. On Tresco, Tresco Estates lease the island from the Duchy and are responsible for the private water supplies there. Tresco Estates has responsibility for a large supply to a hotel and public gardens on Tresco.

The EA commissioned an Initial Groundwater Conceptual model in 2011/12. This model can only be regarded as the first step in robustly documenting and describing the groundwater resources of the islands. Further work is required to move that initial technical and scientific understanding forward. As the EA investigatory measures deliver further evidence and information, a greater confidence in the risks, pressures, issues and classification of the water environment in the IoS will result. For all island communities dependant on groundwater there are always concerns that over-abstraction may cause saline intrusion into the groundwater. However in relation to the public supplies on St Mary’s and Bryher, the IoS Council technical staff have a very good understanding of the risks to their groundwater sources from over-pumping their boreholes, and consequently have sophisticated control measures that allow them to operate their groundwater abstractions and desalination plant to best effect. Further information is needed in relation to the systems employed by the Duchy and Tresco Estates.

On St. Mary’s where the water is abstracted for public supply there are five boreholes. Each of these is likely to be in excess of the 20 cubic metres per day licensing threshold at times of peak demand. The abstractions from small wells for private supply in the off islands are not likely to exceed this licensing threshold, but the EA will gather information to check this. The application of the abstraction licensing legislation to the IoS will mean it is an offence to abstract without a licence granted by the EA, unless the abstraction is exempt[[28]](#footnote-28).

Annual subsistence charges are currently payable to the EA by those who hold Full Licences to Abstract Water. On the IoS this fee would be payable by the IoS Council for its abstractions. It may also be payable by other abstractors such as the Duchy or Tresco Estates if any of their abstractions exceed the 20 cubic metres per day licensing threshold. The charges enable the EA to recover the cost of its general water resource management functions.

An application charge, currently £135 (2013/14) is made for each application plus a fee of £100 to prepare and publish notice of an application in a local newspaper plus the actual cost of publication (unless the EA agrees that this can be dispensed with).

The licence normally lasts for a period of 12 years, but can be replaced thereafter subject to certain tests and by a simplified process if the terms remain the same. An applicant may be required to provide additional technical information or environmental reports. Provisional estimates suggest that this might cost £2000 on the basis that technical data on borehole performance will already be held by the IoS Council. It is likely to be less on replacement due to the reports being in place, unless significant changes were made e.g. greater abstraction. We have based this calculation on actual abstraction rates on St. Mary’s and the current South West Regional charges to give a reasonable indication of the likely charges. These are subject to further consultation by the EA when their powers are in place.

The benefit of introducing the abstraction licensing system on the IoS is to increase the ability of the EA to protect the groundwater abstracted by the IoS council, thereby helping to ensure the long-term sustainability of the source. The EA will be able to establish Source Protection Zones[[29]](#footnote-29) and formalised operating rules for the boreholes.

There are no impoundments on the IoS (and there are unlikely to be any impoundments in future) and therefore there is no need for anyone to obtain an impoundment licence.

## 5.2 Water Resources Act 1991 Drought

### Highlights

The IoS Council had powers enabling it to make drought orders through the 1990 Order (Isles of Scilly (Water and Sewerage) (Miscellaneous Provisions) Order 1990 (website: [IoS Order](http://www.legislation.gov.uk/uksi/1990/524/contents/made))) which applied the drought provisions in the Water Act 1989. The current position on whether that legislation still applies is complex and we are considering the legal position and whether we need to do anything in the proposed Order to ensure these drought permit and order provisions apply on the IoS as intended. However, in practice drought orders are likely to be exercised infrequently and the IoS Council has the additional flexibility of the greater use of its de-salination plant to mitigate the effects of a drought.

### Application to England

Chapter 3 of Part 2 of the WRA 91 (as amended by the Water Act 2003) allows a water company to apply to the EA for a drought permit if, by reason of an exceptional shortage of rain, a serious deficiency of water supplies exists. Similar powers enable an application to be made to the Secretary of State for a drought order.

A drought order or permit allows a water company to meet that deficiency by allowing it to abstract more water from existing or additional sources. A drought order goes further than a drought permit, dealing with discharges of water, abstraction and discharges by people other than the water company affected, and can provide for further restrictions on non-essential use. For emergency drought orders the Secretary of State must be satisfied that a serious deficiency of supplies of water in any area exists (or is threatened) and that the deficiency is likely to impair the economic or social well-being of persons in the area concerned. Only an emergency drought order can, in times of drought, authorise cuts to supplies or allow the supply of water by stand-pipes or water tanks.

### Application to the Isles of Scilly

The IoS Council had powers enabling it to make drought orders and drought permits through the 1990 Order (the Isles of Scilly (Water and Sewerage) (Miscellaneous Provisions) Order 1990 (website: [IoS Order](http://www.legislation.gov.uk/uksi/1990/524/contents/made))) which applied the drought provisions in the Water Act 1989. However, the drought provisions in the 1989 Act were repealed in 1991 by the Water Consolidation (Consequential Provisions) Act 1991 and re-enacted in the Water Resources Act 1991 (WRA91). We are considering the legal position and whether or not the WRA91 provisions still apply to the IoS. If they do not we intend to apply them through our proposed Order.

Drought order powers are likely to be exercised infrequently. The 2004-06 drought in south-east England was similar in severity to the worst droughts of the last 100 years, yet although drought order powers were granted to three water companies to restrict non-essential uses of water, only one company found it necessary to exercise its powers, and then not to the full extent possible. Following the two dry winters of 2010/11 and 2011/12 much of central, eastern and the south east of England were in drought. Seven water companies introduced temporary use bans on 4 April 2012. A number of drought permits were granted by the EA to assist with the filling of water company reservoirs.

The IoS Council on St. Mary’s can to a certain extent mitigate against drought by increasing use of the de-salination plant.

##

## 5.3 Water Industry Act 1991 Temporary Bans on Use

### Highlights

Our proposal is to ensure the IoS Council can impose temporary use bans although, similar to the situation for drought orders, we are considering the legal position as to whether these powers are already available to the Council. If they are not, we propose to ensure they are available to the Council by applying them through our proposed Order. The impact of these powers will depend on the frequency with which restrictions are put in place and this is difficult to estimate as it depends on how frequently the Council would need to use the powers.

### Application to England

Powers allowing water companies to impose temporary use bans are set out in Section 76 of the Water Industry Act 1991 (WIA91), as amended by Section 36 of the Flood and Water Management Act 2010. Before this amendment, bans were confined to restricting the use of hosepipes for watering private gardens or private motor cars. These new powers, which have been in force since 1st October 2010, enable water companies to restrict a wider range of uses in times of water shortage, enabling greater water savings to be made at an earlier stage in a drought. The use of temporary use bans, as a demand management tool, is normally one of the first steps taken by a water company to conserve its water supplies, and to protect the environment, when water resources are in short supply.

Before imposing a ban the company concerned has to be of the opinion that a serious deficiency of water available for distribution exists or is threatened. The powers could be used if a shortage of water is available due to supply failure in an emergency situation, as well as in a drought, but in practice the powers are mainly used in a drought.

The water company must give advance notice of the restriction or prohibition in two or more local newspapers, but does not need to seek the approval of the EA or Secretary of State. Consequently, the lead in time for implementation of a temporary use ban is short (approximately two weeks) allowing for the time needed for the publishing of the notices.

Temporary use bans may last for as long as the company considers necessary and may apply to the whole or any part of its area. The powers to restrict water use apply only to mains water supplied by the water company concerned. The powers do not extend to other sources of water, such as grey water or rainwater re-use.

The Water Industry Code of Practice sets out the principles by which water companies will operate to ensure that the practices they will follow when they are evaluating how and whether water restrictions will be implemented are consistent, transparent and proportionate.

Any person who, at a time when a prohibition or restriction under this section is in force, contravenes its provisions shall be guilty of an offence and liable to a fine (currently £1000 maximum).

### Application to the Isles of Scilly

Our proposal is to ensure the IoS Council can impose temporary use bans. The Council were given similar powers in the past[[30]](#footnote-30), but the legislative provisions have since been updated and we are considering the legal position as to whether the new provisions apply to the IoS Council. If they do not, we propose to ensure they do apply through our Order. We will also explore with the Duchy of Cornwall the issue of application of these provisions to Crown land.

The impact will depend on the frequency with which restrictions are put in place; most water companies in England plan to use restrictions in the event of a 1 in 10 years to a 1 in 20 years drought event up to a 1 in 50 years event (e.g. South West Water envisages a ban not more often than every 20 years on average). The frequency that the IoS Council would put in place restrictions is difficult to estimate as that depends on how frequently the Council would need to use the powers. It can also mitigate against drought by increasing use of its de-salination plant.

Applying these provisions to the IoS would mean that breach of a temporary use ban there will be an offence, carrying a maximum penalty of a £1000 fine.

## 5.4 Water Industry Act 1991 Duties to Maintain Water Supply Systems and Water Resources Management Plans

### Highlights

The IoS Council is already under duties to supply sufficient quantities of wholesome water[[31]](#footnote-31), although we may update these duties by applying the relevant provisions in the WIA91. However, we do not propose to apply the duties to produce statutory water resources management plans and drought plans to the Council. We are concerned that this would not be proportionate given the likely administrative burden required to produce the plans. The IoS Council already undertakes long term water resources planning such as that published in its Climate Change Strategy in 2011. It is likely that this information could be expanded on to meet the EA’s guidelines on producing water resource management plans[[32]](#footnote-32), but this will need to be confirmed in consultation with the EA.

### Application to England

Water companies have the statutory duty to supply sufficient quantities of wholesome water to domestic premises.

All water companies are required (by section 37A WIA 1991) to produce Water Resources Management Plans which look ahead 25 years and show projections of future demand for water, and how the companies aim to meet this demand. Water companies sustainably manage water resources using a combination of demand management measures, including water efficiency, metering and leakage control, with the development of new water supply resources where needed.

The statutory plans must take into account the implications of climate change in their supply and demand forecasts and also, housing numbers and population forecasts, using the most up-to-date forecasts available. Each plan must include the justification of the need for any new water supply resources (e.g. reservoirs), in parallel to assessing proposed demand side measures.

Water companies must complete an annual review of their published Water Resources Management Plans, and if the review indicates a material change of circumstances they will be required to prepare a revised plan. Water companies are required to consult on new 25 year plans every five years.

All water companies are also required (by section 39B WIA91) to produce drought plans, setting out how they will continue to supply water in a drought. Water companies’ drought plans list the actions which a company will deploy during the various stages of a drought to manage supplies and demand. They show the actions that a water company will take before they seek a drought order or permit. When there is a possibility of a drought occurring, one of the first actions a water company is expected to take is to restrict customers’ non-essential water use.

Water Resources Management Plans and Drought plans require approval from the Secretary of State (for English water companies) and the EA provides technical advice to the Secretary of State. The EA has also published the Government’s guidance32 to be used by water companies to produce their water resources management plans and has published similar guidance for drought plans.

### Application to the Isles of Scilly

The IoS Council already has duties to supply sufficient quantities of wholesome water31, although we may update these duties by applying the relevant provisions in the WIA91. However our proposal is not to apply the duties to produce statutory water resources management plans and drought plans to the IoS Council. We are concerned that this would not be proportionate given the likely administrative burden required to produce the plans.

The IoS Council are already required to produce 25 year plans. In their 2011 Climate Change Strategy Report examples of their long term water resources planning are as follows:

*‘A number of adaptive measures are currently in place and need to be built on to safeguard our water supplies:*

*Our water pipe infrastructure assessment carried out by the technical service department shows the network to be in excellent condition with minimal leakage loss. This should be monitored at regular intervals.*

*Grey water recycling is already considered at the planning stage for new applications and encouraged as part of the local design guide.*

*Public buildings design already specifies water capture where appropriate.*

*The number of boreholes is being extended to provide resting of aquifers thus preventing saline intrusion due to over abstraction.*

*Off-islands have local water abstraction management procedures.*

*Boreholes are monitored for conductivity and evaluated with pumping tests.*

*The Business Continuity Plan defines responsibilities and risks in the event of a water shortage.*

*A water business plan should be developed to include a strategy for replacing/upgrading the existing desalination plant and minimising water usage (now already in place).*

*Water usage statistics should be monitored & recorded annually.*

*It is recommended that the IoS Council promotes efficient water usage in the community with educational material. This could include help in reducing demand and includes information on water efficiency products such as Water Hippos for old style toilets and tap aerators.*

*Consider limiting new water hungry planning applications such as pools and having procedures in place to implement hose pipe bans.’*

It is likely that the information provided above could be expanded on to meet the EA’s guidelines on producing water resource management plans32 and replace the need for statutory plans. The IoS Council will need to liaise with the EA to achieve this.

## Questions on Section 5

* 1. **How should the Water Resources regime be implemented on the IoS?**
	2. **Do you have any further information which would enhance our understanding of the costs?**

#

# Consultation Questions

**Questions on section 1:**

1. **Have you experienced any challenges with the current regime for drinking water to date?**
2. **Have you any suggestions going forward as to how we may improve the drinking water regime?**
3. **Do you have any further information which will enhance our understanding of the costs?**

**Questions on section 2:**

1. **Are there any additional powers that need to be applied to the IoS Council to allow them to carry out their sewerage duties effectively?**
2. **Do you have any further information which will enhance our understanding of the costs?**

**Questions on section 3:**

1. **What do you see as the main opportunities and challenges of working with the Environment Agency as a regulator in the IoS?**
2. **Do you have any further information which will enhance our understanding of the costs?**

**Questions on section 5:**

1. **How should the Water Resources regime be implemented on the IoS?**
2. **Do you have any further information which will enhance our understanding of the costs?**

**Overall Questions on the Consultation:**

1. **Do you have any other feedback in relation to this consultation?**
2. **Is there any input from Defra that you require to support the changes set out within this consultation?**

# Annex 1: Defra Grant Funded Improvements for Drinking Water (£1.5 million) and Sewerage (£1 million)

As a result of the £1.5 million Defra grant paid in February 2012 to the IoS Council improvements to the drinking water assets on St. Mary’s (such as a replacement de-salination plant and repairs to Buzza reservoir) are now in place. Some additional expenditure has been incurred by the IoS Council recently to install a Ferrous Oxide removal system, but this has now been addressed and the good quality drinking water is in supply for the benefit of the residents of and tourists to St. Mary’s.

The grant also funded improvements to the public supply on Bryher, including two additional boreholes, to improve the sustainability of the groundwater supply there for the benefit of the residents of and tourists to Bryher.

Any headroom in the grant was intended to address early starts to the sewerage programme. The IoS Council prioritised the improvement of Manhole F4 that was a major cause of blockages in their sewerage system at Hugh Town, St. Mary’s. Improvements to the Atlantic Combined Sewer Overflow, sewer cleansing and sewer CCTV surveys in Hugh Town are still recommended to be completed by the IoS Council as part of the on-going sewerage improvements programme.

A second Defra grant for £1 million was paid to the IoS Council in March 2013 to fund the following sewerage improvements on St. Mary’s (along with the preliminary costs estimates):

**Rising Main**

New Rising Main from Hugh Town to the Proposed Sewerage Screening Site on the Garrison:

(£271k)

**Proposed Treatment Site and Process**

Proposed Sewerage Screening Plant and Processing Facility on the Garrison:

(£287k)

**Discharge and Outfall from Treatment Plant Site**

Discharge and Outfall from the Proposed Treatment Plant Site on the Garrison to Morning Point. The discharge will need to extend to below Mean Low Water Springs (an estimated 50 – 75m off the shore):

(£439k)

**Total: £997k**

The IoS Council’s consulting engineers are looking in further detail at the logistics and the options appraisal of putting the scheme in place. They will report in March 2014. Their initial views are that the scheme may prove more expensive than the £1 million Defra allocation, but this remains to be seen when the detailed estimates come in. If all goes to plan, the IoS Council expect the scheme to be in place in 2015.

# Annex 2: A description of the Sewerage Networks in Old Town and Hugh Town, St. Mary’s

**i) Old Town Sewerage Network**

The Old Town system comprises of gravity sewers and a sewage treatment works (a Bio-bubble Plant) commissioned in 2001 to provide full biological secondary treatment and tertiary treatment (through ultraviolet disinfection) before discharge through a short sea outfall pipe - there is also a sewage pumping station and rising main that still connects into the Hugh Town system for the disposal of liquid sludge from the Bio-bubble plant.

The operation and maintenance of the Old Town network is performed by the IoS Council. No problems were reported to WRc regarding any on-going issues with regard to the operation of the Old Town sewer network. Attention is therefore focussed on the Hugh Town sewerage network.

**ii) Hugh Town sewerage network**

The Hugh Town system comprises of the Hugh Town sewerage network, several sewage pumping stations and a rising main to a short sea outfall pipe fractured at Mean Tide Level where crude sewage is discharged into the Atlantic Ocean off Morning Point.

The majority of the foul sewerage network in Hugh Town was laid in 1939 as a gravity system. The sewer network is a foul and surface water combined system and collects surface water runoff and roof drainage. The extent of this sewerage network in Hugh Town totals approximately 3.07 km including 327 m of surface water sewer. The physical extent of the gravity sewer system extends from Star Castle Hotel on The Garrison in the west to the Industrial area and residential properties in the Porth Mellon area in the East. The most southerly points served by the Hugh Town sewer network are the Health Centre on Church Road. The foul system within Hugh Town is mainly 150 mm diameter and is of clay construction.

The Hugh Town foul sewer network drains via a small section of sewer (44 m in length) from Hugh Street to the Bishop and Wolf sewage pumping station (which is located behind the Bishop and Wolf Public House). The Bishop and Wolf pumping station have two (duty/assist) shaft-driven pumps with automated duty changeover. The pumps are controlled by level sensors located within the wet well. The IoS Council has indicated that, under normal flow conditions, one pump is adequate to handle incoming flows. The collected flows from the Hugh Town catchment are then pumped from the Bishop and Wolf pumping station via a rising main to the Garrison and then discharged through a fractured outfall at Mean Tide Level off Morning Point.

It is believed that the surface water system pre-dates the foul system laid in 1939 and the records for this system are incomplete. The recorded lengths of surface water sewer total 327 m in length with the largest pipe diameter recorded as 450 mm. The surface water sewer has an outfall at Town Beach close to the Atlantic Hotel. This arrangement allows high foul flows in the system to discharge from the foul network via a rough screened weir into the surface water sewer to discharge on the Town Beach via the Atlantic Hotel outfall. The sewer network may be prone to sea water ingress during high spring tides and storm events. Key points for possible sea water entry are from a low lying highway drain and a missing tide flap at the Atlantic Hotel outfall.

The operational maintenance of the sewerage system is performed by the IoS Council direct labour force. The IoS Council own and operate a high pressure water jetting system to clear blockages (as the sewer network is subject to blockages), the incidence of which has been reduced using fat digesting enzymes. Despite this the IoS Council clear blockages relatively frequently and more frequently in the summer (when the population using the mains system significantly increases). The cause of blockages were reported to WRc by the IoS Council as being due primarily to fat build up or sewer misuse from the disposal of large sanitary items into the network.

The enzyme dosing work is focused on the section of sewer network called the Mermaid run. This section of low lying sewers collects flows from the harbour end of Hugh Town including the flows from several hotels, public houses and restaurants. The IoS Council have reported that issues are exacerbated by poor flow due to flow restrictions arising at Manhole 4 (at the junction of Hugh Street and Garrison Lane), where flows from the Mermaid run meet flows from Church Street and The Strand.

The Old Town area was connected to the Hugh Town system in 1963 by means of a rising main which enters the Hugh Town system outside the old secondary school. Additional flows were connected in the Jackson Hill area of Hugh Town in the late 1960’s and this area includes the Council Depot, an industrial estate (with several small businesses) and an area of residential properties. The Jackson Hill flows are pumped into the Hugh Town network from a pumping station adjacent to the Council Depot.

1. Made under section 222 WIA91, s224 WRA91 and s117 EA95. One or more further instruments are likely to be needed to apply the secondary legislation already made under provisions which will be applied to the IoS. [↑](#footnote-ref-1)
2. See section 181 of the Local Government Act 1972 and the Isles of Scilly Order 1978 which makes certain modifications to that section for the IoS. [↑](#footnote-ref-2)
3. Provisions of the Water Act 1989 were applied to the IoS by the Isles of Scilly (Water and Sewerage) (Miscellaneous Provisions) Order 1990. In 1991 a major consolidation of water legislation was undertaken and provisions of the Water Act 1989 were repealed and re-enacted in either the Water Industry Act 1991 or the Water Resources Act 1991. Where this occurred, it appears that the new provisions of the 1991 Acts continue to apply to the IoS as a result of savings made by the Water Consolidation (Consequential Provisions) Act 1991. [↑](#footnote-ref-3)
4. Under the Environmental Permitting (England and Wales) Regulations 2010. [↑](#footnote-ref-4)
5. Consultation with the Council is a statutory requirement. [↑](#footnote-ref-5)
6. The ‘frequently asked questions’ section explains how up to date the legislation is and how to find out what amendments have been made. [↑](#footnote-ref-6)
7. By the Isles of Scilly (Water and Sewerage) (Miscellaneous Provisions) Order 1990. [↑](#footnote-ref-7)
8. Section 86. [↑](#footnote-ref-8)
9. Section 14 Public Health Act 1936. [↑](#footnote-ref-9)
10. Isles of Scilly Water Interests Survey Final Report. WRc Ref: Defra 8703 November 2011. [↑](#footnote-ref-10)
11. The Population Equivalent is a standard calculation to compare industrial sewerage strengths against domestic sewerage strengths. As there is very little industrial activity on the IoS, it equates directly to the population size. [↑](#footnote-ref-11)
12. 12 For a description of the technical terms in relation to sewage treatment the Defra website publication: [Sewage Treatment in the UK](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/69582/pb6655-uk-sewage-treatment-020424.pdf) provides a useful reference.

 Inland freshwaters, groundwaters or coastal waters (up to the 3 mile limit) (section 104 Water Resources Act 1991) [↑](#footnote-ref-12)
13. These are set out in the Trade Effluents (Prescribed Processes and Substances) Regulations 1989 and 1992 [↑](#footnote-ref-13)
14. The functions of the Environment Agency are now carried out in Wales by a new organisation called Natural Resources Wales (since March 2013). [↑](#footnote-ref-14)
15. Exceptions are that section 80 (national air quality strategy) and Part 3 (national parks) apply to the Isles of Scilly. [↑](#footnote-ref-15)
16. See section 108 of and Schedule 18 to EA 95. [↑](#footnote-ref-16)
17. Unless an exemption applies. [↑](#footnote-ref-17)
18. Please note that all the estimates given are based on preliminary data and will inevitably be subject to change. In addition, individual householders and their position as tenants of the Duchy of Cornwall may mean that any charges would be levied through the Duchy rather than households. [↑](#footnote-ref-18)
19. The River Basin Districts Typology, Standards and Groundwater Threshold Values (Water Framework Directive) (England and Wales) Direction 2010 [↑](#footnote-ref-19)
20. Replacing the previous Groundwater Directive (80/68/EC) which was repealed at the end of 2013. [↑](#footnote-ref-20)
21. SLR Consultancy Ltd. - Landfill Sites on St Mary’s, Bryher, St Martin’s and St Agnes – IoS Human Health and Environmental Risk Assessments (December 2009) [↑](#footnote-ref-21)
22. **Eutrophication** is the ecosystem response to the addition of substances, such as [nitrates](http://en.wikipedia.org/wiki/Nitrate) and [phosphates](http://en.wikipedia.org/wiki/Phosphate), through [fertilizers](http://en.wikipedia.org/wiki/Fertilizer) or [sewage](http://en.wikipedia.org/wiki/Sewage), to an aquatic system. One example is the "bloom" or great increase of [algae](http://en.wikipedia.org/wiki/Phytoplankton) in a water body as a response to increased levels of nitrates and phosphates. [↑](#footnote-ref-22)
23. An impoundment is any dam, weir or other structure that can raise the water level of a water body above its natural level. The above ground storage reservoirs of treated water within the IoS would not fall into the definition of an impoundment. [↑](#footnote-ref-23)
24. The EA may apply (or can be directed to apply) to the Secretary of State for an Order setting a different threshold, which may be greater or less than the normal figure in specified areas, inland waters or underground strata). [↑](#footnote-ref-24)
25. i.e. any watercourse (river, stream), aquifer, reservoir [↑](#footnote-ref-25)
26. Environmental standards and conditions underpin the implementation of the WFD [↑](#footnote-ref-26)
27. More information on the EA’s charges can be found athttps://www.gov.uk/government/publications/abstraction-charges-scheme-april-2014-to-march-2015 [↑](#footnote-ref-27)
28. A consultation in 2009 set out the abstractions to be brought within licensing control and those to remain exempt. [↑](#footnote-ref-28)
29. [EA Website: Groundwater Source Protection Zones](http://www.environment-agency.gov.uk/homeandleisure/37833.aspx) [↑](#footnote-ref-29)
30. Under the Water Act 1945, as applied to the IoS Council by section 181 Local Government Act 1972 and the Isles of Scilly Order 1978. [↑](#footnote-ref-30)
31. Under the Public Health Act 1936, as applied by section 181 Local Government Act 1972 and the Isles of Scilly Order 1978. [↑](#footnote-ref-31)
32. [EA Website: Water Resource Management Plans](http://www.environment-agency.gov.uk/business/sectors/32399.aspx) [↑](#footnote-ref-32)