



ANNUAL REPORT 2011

ON AIR



GuernseyWater

A DIVISION OF THE PUBLIC SERVICES DEPARTMENT



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FOREWORD



2011 has proven to be another successful year for Guernsey Water, with a number of highlights that have been achieved thanks to the commitment and abilities of the water services team. On behalf of the Public Services Board and the whole community, I thank them all.

The major highlight of the last year for Guernsey Water was undoubtedly the centralisation of all staff into the new operational depot at Brickfield House, St Andrews. This move has been a number of years in the making, and it is gratifying to see staff working together in ways that they wouldn't have been able to in the past, when the workforce was split across a number of locations.

As many will be aware, the States approved the Department's recommendation to amalgamate Guernsey Water and Guernsey Wastewater. However, an amendment was passed which asked for more detail on the impacts of commercialising this joint entity. Past reports from the National Audit Office and the Office of Utility Regulation have suggested that a joint water company could thrive as a commercialised entity, which we feel would bring benefits to customers. We will be looking to bring a more detailed report back to the States as soon as possible.

Guernsey Water has enjoyed a successful year with capital projects. The ongoing programme to optimise all the major pumping stations on the Island continued as state-of-the-art mechanical screens (*right*) were installed at La Vrangue stream intake and on the newly-commissioned station at Douit du Moulin. This new station replaces the old Pre du Murie station, and improves upon it through a combination of new technology and its position nearer to the coast.



Other completed capital projects included the rehabilitation of the raw water transfer main between the Kings Mills and St Saviours water treatment works', which has added further resilience to the water infrastructure by allowing raw water to be transferred between plants depending on operational requirements.

Other pleasing aspects of 2011 include:

- Despite an unusually dry spell towards the end of the year, the level of water in reservoirs has once again been maintained at a very high level, negating the need for any supply restrictions. This is especially pleasing in the context of the water supply problems experienced in other areas.
- The quality of tap water continues to be very good indeed. The recorded figure for 2011 was 99.75% - identical to last year's high result.
- Results from the customer feedback survey continue to tell a very positive story - the overall customer satisfaction rating recorded in 2011 was 93%. This is the result of the business' efforts to be as customer-focused as possible, including specialist staff training and the increasing use of electronic communications.

The next 12 months promise to be exciting and challenging in equal measure both for Guernsey Water and the Public Services Department as a whole.

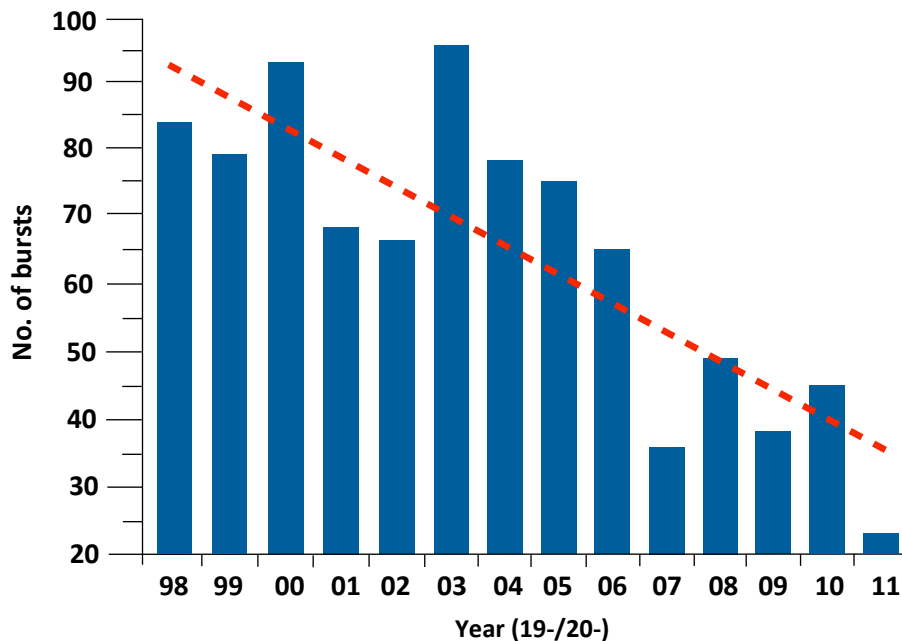
I am pleased to be associated with such a successful undertaking as Guernsey Water and I look forward to its continued success in the future.

BERNARD FLOUQUET
MINISTER, PUBLIC SERVICES DEPARTMENT



Looking back on 2011, I am once again amazed by how quickly the year has gone, and how much has happened over the past 12 months. The obvious highlight would have to be completing the development of Brickfield House, and our subsequent centralisation of the business. However, just as important to me is the fact that during 2011 our water distribution team managed to lay, slipline and replace over 6km of water main.

The constant improvement of our water main network has helped us to record some excellent main burst figures - for 2011, the number of main bursts was the lowest on record - just 23.



The graph on the left shows the improvement in the resilience of the water main network as the programme of mains rehabilitation has progressed over the years. This is a clear indication of the importance of appropriate capital investment in order to protect and improve assets.

To put these figures in perspective, an average UK water company experiences 190 main bursts per 1,000km of water main - whereas in Guernsey the figure is just 46.

Customer service continues to form the foundation of our business, although in this regard 2011 was a challenging year. The introduction of the wastewater charge, for example, created a large volume of work for staff and required a lot of communication with customers to ensure that they knew exactly what the charge was for and how it would be collected. Another challenge involved the seamless transition of our services when moving into Brickfield House. I am very grateful to the staff who worked extra hours to ensure that, come the Monday morning after the move, everything was running as normal and that customers did not notice any difference.

We continue to embrace new communication technologies such as the distribution of electronic newsletters to an ever-growing database of customers. We have used these e-newsletters to interact with the public by carrying out surveys on subjects such as water usage habits and the difference between tap and bottled water. We have also recently set up a Twitter account on a trial basis - please come and follow us and we will keep you updated with what is happening in the world of water in Guernsey.

On more operational matters, we are constantly keeping a close eye on the latest developments regarding water supply in the future. This takes into account a number of factors including climate change, population levels, patterns in water demand and our water storage capabilities - see page 28 for more details. While we can do nothing about climate change and population levels, we can still continue to be vigilant enough to act proactively, rather than reacting when the challenge hits us.

ANDREW REDHEAD, DIRECTOR OF WATER SERVICES
ON BEHALF OF THE MANAGEMENT TEAM, GUERNSEY WATER

VISION AND KEY POLICIES



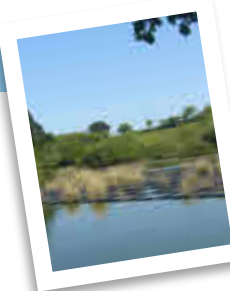
Guernsey Water's vision continues to be fundamental to our operations:

'To deliver to our customers a reliable supply of high quality drinking water in sufficient quantities that satisfy normal daily demand at the lowest cost, consistent with meeting a high level of customer service and confidence.'

In order to support this vision, a number of Key Policies have been formed and are shown below:

WATER RESOURCES

In order to meet reasonable demand, precipitation must be collected when available and operational plant equipment must be effective and reliable. Storage reservoirs must be kept as full as possible.



CATCHMENT PROTECTION

Ensure that by rigorous enforcement, all streams are capable of being used for the public water supply. Guernsey Water has a responsibility to ensure that it conserves and enhances the Catchment Area's natural environment.

WATER PRODUCTION

Water Treatment Works (WTW's) must be capable of producing consistently high quality water in sufficient quantities that satisfy demand. Guernsey Water must ensure that it is well-equipped to manage future demand for drinking water.



WATER DISTRIBUTION

Ensure that water stored in service reservoirs is kept at a high quality. Ensure that over 400km of potable (drinkable) water main is in a suitable condition to transfer water to customers while retaining it at the highest standard possible. Reduce leakage and minimise bursts through proactive monitoring.

VISION AND KEY POLICIES/2011 REVIEW

CUSTOMERS

Guernsey Water believes it is crucial that our customers feel they receive a good value-for-money service. We are always eager to receive feedback on the service that we provide.



These Key Policies are supported by another Policy - **Management**, which incorporates the core business functions of staff, information technology, property, finance, performance monitoring, PR and health and safety.

MANAGEMENT

People are our most important asset. Staff at all levels are encouraged to participate in business improvement initiatives and are appreciated for their contribution. Guernsey Water is run as a commercial entity with an emphasis on efficiency, financial transparency and good people management.



2011 REVIEW

A review of the objectives set for Guernsey Water in 2011 (taken from our Business Plan) can be found over the proceeding pages, split into the six Key Policies described in this section. Each Policy has an introduction of the type of work carried out by that section and a general review of 2011, including key events and the measurement of performance against set targets.

A detailed list of all the objectives that were carried out under each Key Policy, and whether they were achieved or not, can be found in **Appendix B** on page 33.

WATER RESOURCES



- Collect and store precipitation
- Optimise pumping stations to ensure maximum amount of precipitation is collected
- Maintain reservoirs and water storage quarries
- Maximise raw water pumping capabilities from one area to another
- Consider climate change and its potential effect on future water resources

STATS

- 16 raw water storage reservoirs
- 14 pumping stations
- 100 km of raw water main
- Full storage capacity - 4,425ML (Megalitres)
- 3 water supply zones (Longue Hougue, St Saviours and No.2)



- WATER STORAGE TARGET - 95% level to be recorded on 1st April

PERFORMANCE FOR 2011 - 100% recorded on 1st April

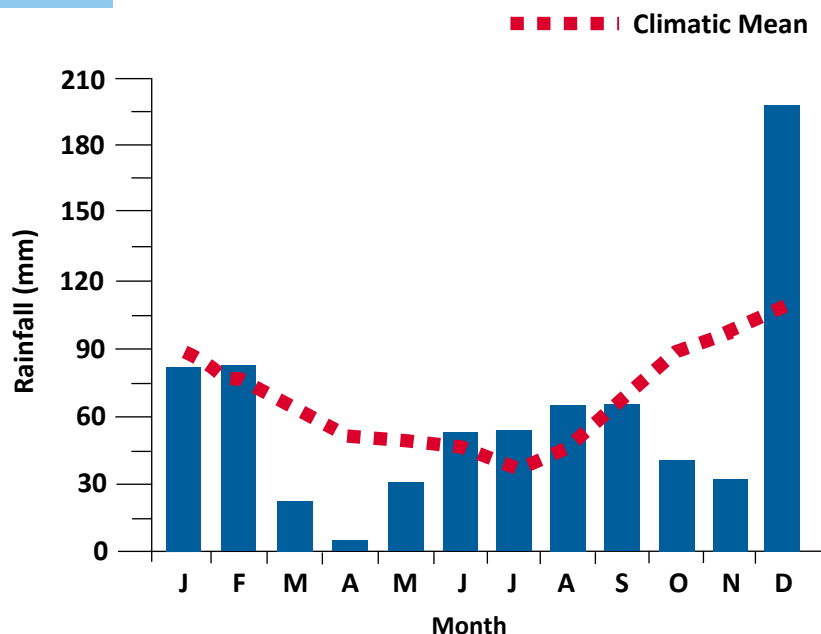
“In order to meet reasonable demand, precipitation must be collected when available and operational plant equipment must be effective and reliable. Storage reservoirs must be kept as full as possible.”

The collection and storage of precipitation represents the first step in the treatment and distribution process for potable water. Given the uncertainty regarding climate change and its potential effects on precipitation levels, it is vital that Guernsey Water captures as much rainwater as possible.

The latest expert advice suggests that in future there will be fewer wet days but rainfall will be heavier and more intense, putting additional pressure on pumping stations and streams. Data from the Island’s Met Office demonstrates that average annual rainfall figures have decreased over the last 150 years, so the continuation of this trend in the future is a pressing concern, especially when coupled with predicted higher temperatures leading to greater levels of evaporation and transpiration of water.

Guernsey’s storage infrastructure holds approximately 11 months capacity of stored water. With virtually no underground sources, we are almost entirely reliant on the water stored in its reservoirs.

RAINFALL



As shown on the graph, rainfall during 2011 showed some unusual patterns when compared to the climatic mean of rainfall in Guernsey taken from between 1970 and 2001. The early winter months showed fairly typical rainfall levels, but the months of March, April and May were very dry. Conversely, the usually dry summer months of June, July and August were actually fairly wet.



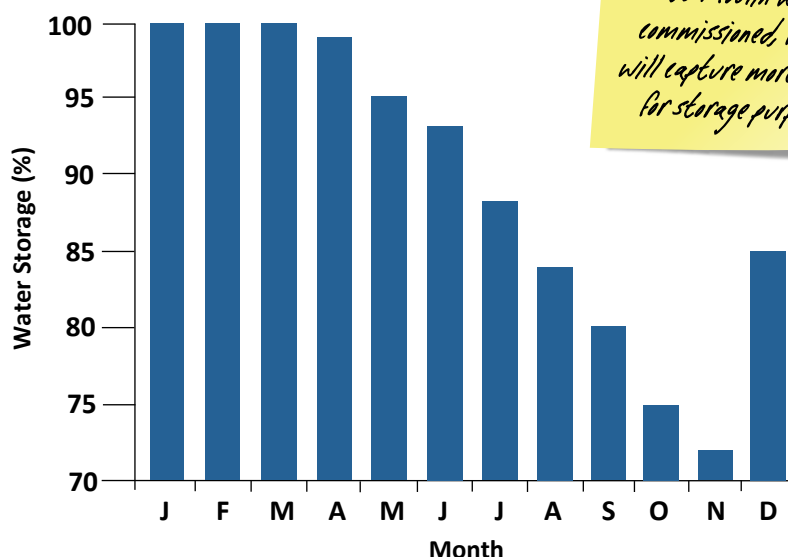
To add to these unusual patterns, the typically wet autumn months were actually very dry. As an example of this, the climatic mean for November is 97.9mm, yet in 2011 only 31.7mm fell - a third of the usual amount. At this stage in the year, Guernsey was heading for one of its driest years for a long time. Fortunately, a very wet December (198.7mm) replenished supplies and recharged capacity.

The total rainfall level for the year was 727.5mm which is over 17% lower than 2010's figure, and 11.7% down on the climatic mean. This represents the lowest yearly rainfall figure since 1997. However, thanks to the technological advances of our pumping stations, we were still able to collect enough water to ensure a reliable supply to our customers.

STORAGE

Despite the unusual rainfall pattern in 2011, water storage levels followed the usual trend during the year, with high levels early in the year before peak summer demand diminished reserves. The significant rainfall in December replenished supplies before the start of 2012, and at the time of writing (early March) the storage is just over 90%.

Reserves of water fell to their lowest in November, dropping to 3,184ML (72%). This is 200ML less than the lowest point recorded in 2010.



Key Event 2011 - A new pumping station at Douit du Moulin was commissioned, which will capture more water for storage purposes.

PROJECTS

Guernsey Water is continuing to install new mechanical screens on all key pumping stations as part of a major project to improve water catchment capability. The new screens (*diagram below left*) are more adept at filtering out objects such as leaves and therefore reduce the possibility of pump blockages which can reduce the amount of water collected by the station. The new station at Douit du Moulin had one of these screens installed, and was commissioned early in 2011. A similar installation at La Vrangue stream intake was completed during the summer.



A project started in 2010, the sliplining of 2.3km of strategically important raw water main from Kings Mills to St Saviours WTW, was completed in early 2011. By carrying out the sliplining process in-house rather than using external contractors, we were able to save significant amounts of time and money.

Sliplining involves inserting a lower diameter pipe into the existing one, using a material called HPPE (High Performance Polyethylene). HPPE is a very strong but flexible material, which allows the pipes to bend as they are inserted. This process is cheaper, less time-consuming and requires smaller excavations in the public highway than pipe replacement, therefore minimising public inconvenience.

CATCHMENT PROTECTION



- Protect Catchment Area
- Liaise with farmers and business owners
- Carry out raw water quality tests
- Publish information on preventing stream contamination
- Carry out benthic surveys to ascertain the 'health' of streams
- Carry out annual pollution audits at industrial units, schools, hospitals, residential care homes, supermarkets

STATS

- 43km² of Catchment Area in Guernsey
- 20 streams used for raw water collection



- **WATER CATCHMENT ASSESSMENT AUDITS TARGET**
- 100% of scheduled site visits must be carried out during the year
- PERFORMANCE** - 100% of scheduled sites were visited during 2011

“Ensure that by rigorous enforcement, all streams are capable of being used for the public water supply. Guernsey Water has a responsibility to ensure that it conserves and enhances the Catchment Area’s natural environment.”

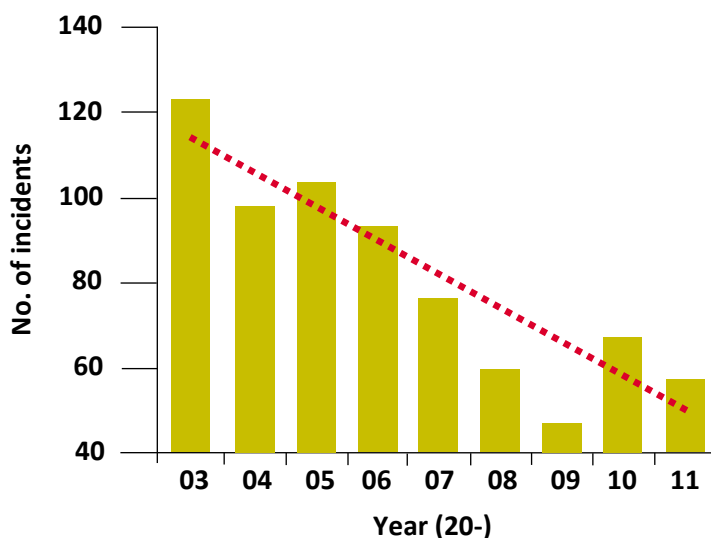
The Catchment Area is the area around storage reservoirs where precipitation collects and flows through streams or pipelines into reservoirs, or is pumped in from one of the stations dotted around the Island. Catchment protection is a fundamental step in the water treatment process, and given the size of the area it is a significant task to ensure that every square metre remains pollution-free.

Guernsey Water staff work in liaison with farmers, industrial companies, environmental agencies and the Guernsey Fire & Rescue Service to minimise contamination of the Catchment Area. Closer liaison with the Public Services Department’s wastewater function has improved communications regarding cesspits, allowing investigations to be made into cesspits that have not been emptied for a long time, and may be leaking (or on the verge of doing so).

PREVENTING POLLUTION

Guernsey Water carried out many inspections during 2011 in order to prevent the Catchment Area becoming polluted and to ensure that pollutants were being stored and disposed of correctly. While Guernsey Water has the means to instigate prosecution in the event of water pollution incidents, we prefer to liaise with and educate potentially contaminating organisations and build positive relationships with them in order to prevent pollution incidents occurring in the first place.

Looking at the pollution incidents from 2011 below, there is a decrease on 2010:



The linear trendline on the graph (shown in red) demonstrates the general reduction in pollution incidents since 2003. The proactive approach taken by the catchment protection team is the key to this decrease.

The breakdown of 2011 figures shows that the biggest incident type involves cesspit leakage and fuel spillages/leakage (mainly oil). These two make up nearly 75% of reported incidents, hence why Guernsey Water puts so much time into inspecting sites and giving out guidance to people regarding cesspits and oil installations.

Regardless of the above, higher numbers of pollution incidents can actually be seen as positive - our team has worked closely with local oil companies and the Environment Department in putting together detailed guidelines on the installation of oil apparatus. This has raised people's awareness of incorrect oil installations, and therefore resulted in more incidents being reported. In the same vein, the closer liaison with the wastewater function has given rise to further information about leaking cesspits, again increasing the number of reported incidents.

Key Event 2011 - A number of leaking cesspits were identified as potential stream polluters, and these were fixed before problems could occur.

PROJECTS

Looking at the 'Key Event 2011' above right, the success in identifying leaking cesspits and remediation of this stream pollution can be seen in the bathing water quality results for 2011, which show the highest results for some years. Cobo achieved the 'Guideline' standard* with 95% compliance following its failure to comply with the directive in 2010. This is the first time Cobo has achieved the Guideline standard since 1998.



During 2011, Guernsey Water published literature in the Guernsey Press on pollution prevention. This included guidance on the safe disposal of swimming pool and spa waste water and the correct application of herbicides and pesticides within the Catchment Area. We also created 'Oil Installation Fault Notification' sheets, which allow oil companies to note faults with tanks and catchment pits while in the process of filling up the tanks. This has prompted a very good response from oil companies, and has allowed a number of faulty installations to be identified and remedied.

During 2011 we also created a leaflet entitled 'Oil and the Aquatic Environment' for public and oil company use (*right*). This leaflet explains the procedures to follow in the case of a leaking tank or an oil spill.

Most of our documents and leaflets can be downloaded from our website at www.water.gg.

**The Guideline standard consists of:*

- Total coliform no more than 500 per 100ml
- Faecal coliform no more than 100 per 100ml
- Faecal streptococci no more than 100 per 100ml

To achieve this overall result for a season, 80% of all samples must be equal to, or better than the above standards for total and faecal coliform and 90% must be equal to or better than the standard level for faecal streptococci.



WATER PRODUCTION



- Maintain and supervise the Island's water treatment works
- Sample treated water from WTW's to ensure it meets stringent quality criteria
- Order treatment chemicals and promote their safe usage
 - Provide and service electrical instrumentation, vehicles, plant and equipment

STATS

- 4 water treatment works (Longue Hougue, St Saviours, Kings Mills and Juas)
- Water samples tested against over 130 chemical and bacteriological criteria



- **WATER TREATMENT WORKS - WATER QUALITY TARGET** - Take a minimum of 4,000 water quality samples and achieve 99.5% compliance

PERFORMANCE - 4,843 samples were taken and 99.96% compliance achieved

- **COST OF WATER PRODUCTION** - Keep cost to produce water below £375 per ML

PERFORMANCE - Cost to produce a ML of water was £431

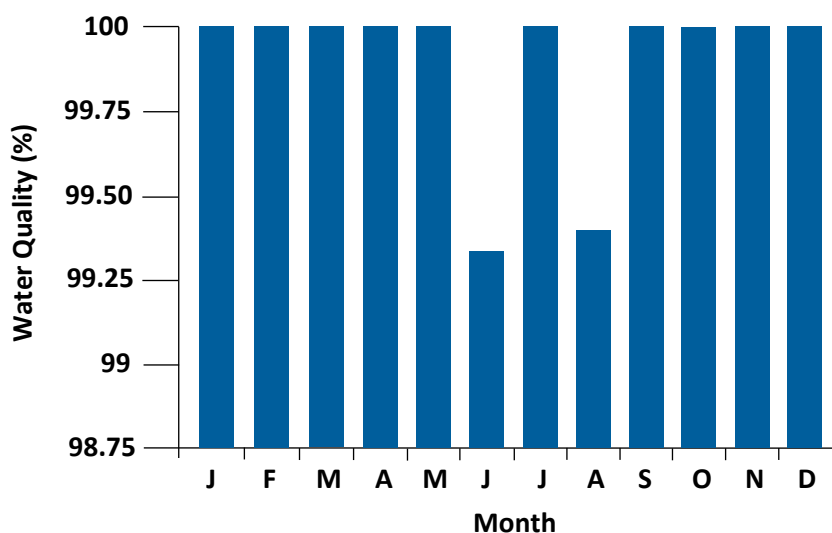
“Water Treatment Works must be capable of producing consistently high quality water in sufficient quantities that satisfy demand. Guernsey Water must ensure that it is well-equipped to manage future demand for drinking water.”

Guernsey Water runs four Water Treatment Works (WTW's) at St Saviours, Longue Hougue, Kings Mills and Juas. The plants at Longue Hougue and St Saviours both utilise state-of-the-art membrane technology to treat water. The plants at Kings Mills and Juas are traditional clarification and filtration systems. For maximum resilience at the correct economic level, we require three treatment plants to be operable in the Island. For this reason, Kings Mills is currently being upgraded to meet the standards of the membrane-equipped plants (*see facing page*) and Juas will shortly be taken out of commission and used solely for water storage.

An interactive model of how the water treatment process works in Guernsey can be found on our website at www.water.gg.

WATER QUALITY

The graph below shows the water quality figures for WTW's in 2011, broken down by month. Compliance for WTW's in 2011 was 99.96%, which is 0.06% up on last year's figure and is the highest figure on record for Guernsey Water.



During 2011 we took 4,843 samples from our WTW's. Each sample was tested against a list of over 130 bacteriological and chemical elements. A failure against any of these criteria is investigated thoroughly by staff to find the cause, and solve the problem. The percentage compliance figure for each month represents the number of these samples that passed these criteria. The slight dips in June and August were caused by turbidity failures (cloudiness in the water). Turbidity does not pose any threat to health and the cause of the failures was quickly identified and remedied.

PROJECTS



2011 saw the installation of an onsite electrolytic chlorination system at St Saviours WTW.

Chlorine is used for the treatment of water, and previously Guernsey Water would import the chemical from off-Island. However, this is an expensive process, and could potentially be dangerous if not handled correctly.

As the name suggests, the electrolytic chlorination system (*below left*) works by running an electric current through a saltwater solution, which gives off the sodium chloride gas needed for treatment. As the system is located on-site, there is no need to transport the potentially hazardous chemical over large distances which saves on cost.



In other capital projects, Guernsey Water has been carrying out improvements to the Kings Mills WTW. This is an important part of improving the resilience of the plant in order for it to reach the same high quality operating levels as Longue Hougue and St Saviours WTW's.

These improvements included amendments to the contact tanks to improve their integrity, and changes to the basic control and operations of the works. As a whole, the improvements will decrease the chance of water quality failures should the plant be commissioned.

As part of the project, contractors ATM installed new filter nozzles in four of the sand filters. This consisted of installing 1,300 nozzles within a 3mm tolerance over the course of four days. The contact tanks will be covered by a waterproof membrane, which will maintain the integrity of the tanks and keep the stored water in the best possible condition. A new control panel has also been fitted and work will begin to connect this early in 2012.

Key Event 2011 - Water quality results for the Water Treatment Works was 99.96% - the highest on record for Guernsey Water!

As with many of Guernsey Water's key sites, Kings Mills will be linked to the Brickfield House control room through the SCADA (Supervisory Control and Data Acquisition) system. This utilises fibre optic links (or broadband where fibre optic is not possible) which send real-time data from the site to the control room, so that control room operators are aware of any problems with the site instantly, and can act accordingly.

The issue of resilience within the water infrastructure is very important, as evidenced by the priority that UK regulator Ofwat has afforded it in the Asset Management Plan returns that it expects from UK water and sewerage companies. An excerpt from one of its documents states:

"There are a number of hazards outside the companies' control that can have a negative impact on the delivery of water and sewerage services. These can be both natural and man-made, including landslides, subsidence and acts of terrorism. But some of the biggest and most visible hazards are weather-related events, such as droughts and floods.

The future is likely to bring more extreme weather events because of climate change. Dealing with these events may become progressively more difficult as other challenges, such as population growth and higher living standards, put additional pressure on services. So, there is a need for a common and clear understanding of how best to plan and develop resilience in the future."

WATER DISTRIBUTION



- Oversee distribution of drinking water from WTW's/Service Reservoirs to customer taps
- Maintain, improve and extend over 400km of pipework
- Sample treated water at service reservoirs & customer taps to ensure it meets stringent quality criteria
- Deal with customer queries on supply interruptions & quality issues

STATS

- 2 service reservoirs (Forest Road - 2 tanks and a water tower; and Frie Plaidy - 1 tank)



- **SERVICE RESERVOIRS - WATER QUALITY TARGET** - Taking a minimum of 750 water quality samples, achieve 98% compliance

PERFORMANCE - 734* samples taken, 99.05% compliance achieved

- **DISTRIBUTION ZONES - WATER QUALITY TARGET** - Taking a minimum of 1,800 water quality samples, achieve 99% compliance

PERFORMANCE - 1,738 samples taken, 99.48% compliance achieved

- **DISCOLOURATION** - Reduce no. of complaints from previous year

PERFORMANCE - 34 complaints received in 2011 v 73 in 2010

- **COST OF WATER PRODUCTION** - Keep cost to distribute water below £28 per service

PERFORMANCE - Cost to distribute a ML of water was £29

“Ensure that water stored in service reservoirs is kept at a high quality. Ensure that over 400km of potable water main is in a suitable condition to transfer water to customers while retaining it at the highest standard possible. Reduce leakage and minimise bursts through proactive monitoring.”

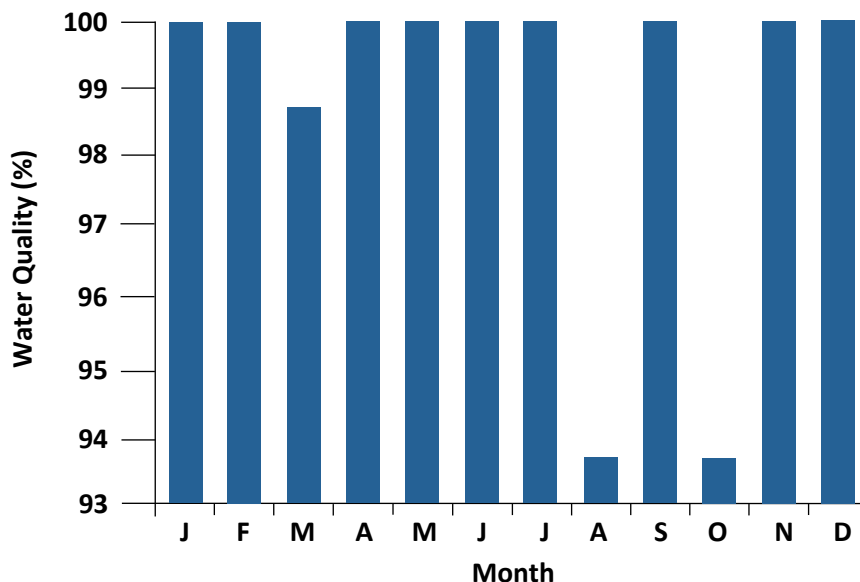
Once water is treated, some of it is stored in service reservoirs until it is needed by customers. Service reservoirs are used to smooth out the peaks and troughs in customer demand.

The rest of the water is transported directly to customer taps through over 400km of water distribution main. Due to the scale of the network, an ongoing programme of maintenance is needed as the pipes vary in material, age and reliability.

Our staff carry out random checks at customer homes to take samples of water from the kitchen tap. The results of these samples provide a good indication of the condition of the distribution system. The water will have been treated at one of the WTW's and potentially stored at a service reservoir (where it may have been mixed and boosted with chlorine), so any deterioration in quality could indicate a problem in the distribution network.

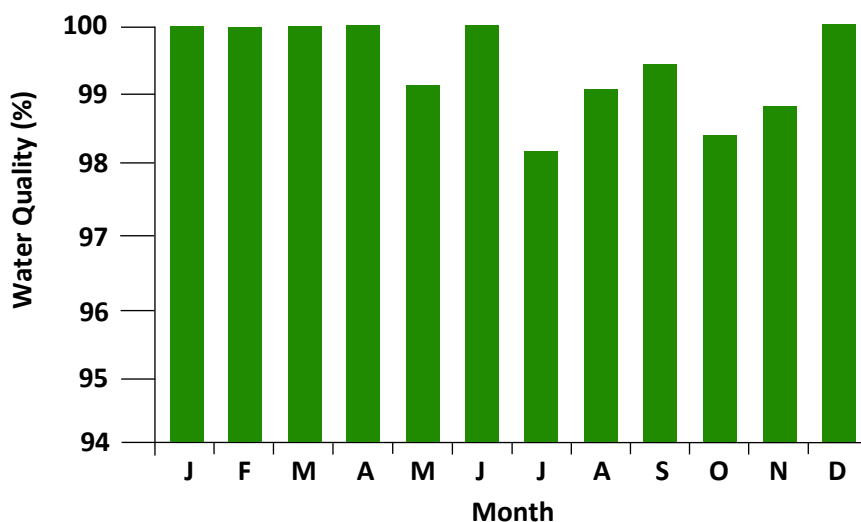
Another key to good distribution performance is the reduction of mains bursts and the minimisation of leakage, which is achieved through a combination of replacement/maintenance programmes and increased monitoring through new technologies. We can detect potential pipe bursts through flow/pressure monitoring systems, so we can know when a burst has occurred before customers do. Efforts can then be made to repair the main as quickly as possible, minimising public inconvenience.

WATER QUALITY - Service Reservoirs



*Number was affected by a tank at Forest Road being out of commission for a period of time during the year. The number of samples would otherwise have been higher.

WATER QUALITY - Distribution Zones

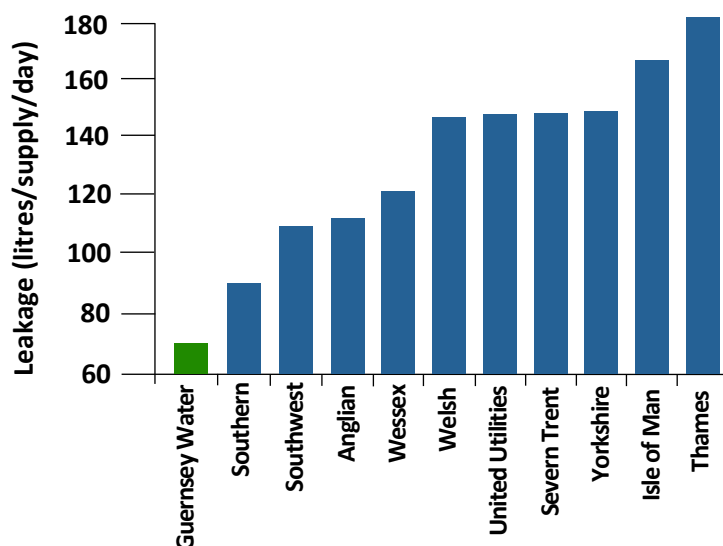


Key Event 2011 - Only 23 mains bursts were recorded - this is the lowest ever annual figure for Guernsey!

The graphs (previous page and above) show the 2011 water quality figures for service reservoirs (blue) and the distribution network (green - where samples are taken from customer taps). The overall compliance level for water distribution was recorded as 99.27%. This high figure once again demonstrates the importance of the proactive sampling and remedial work that our staff carry out during the year. The lower figures for service reservoirs in August and October were due to a problem with the No.2 Tank at Forest Road. The tank was taken out of commission and remedial works are being carried out to improve its performance.

BURST MAINS & LEAKAGE

Guernsey Water has invested significantly in the mains network over the last few years in an effort to reduce bursts and control leakage. This has involved a rolling mains replacement programme and the systematic replacement of major trunk mains. The reward for this investment is that the number of burst mains recorded in 2011 was the lowest on record. The graph shown in the 'Introduction' on page 5 shows how this investment has reaped rewards.



During 2011, a root and branch review of how we report leakage was carried out, and it was decided that reporting methods would be altered to align more with the UK. This will allow us to benchmark more accurately with other water companies. As a result of these changes, the leakage figure for 2011 has come out at 636ML, which appears higher than previous years. However, being able to compare this with UK figures shows that Guernsey Water is one of the best companies, if not the best, at managing leakage as shown on the graph (left).

As a result of the above, the revised leakage target for future years is being set at 650ML per annum.

CUSTOMERS



- First point of contact for customers
- Calculate and issue bills and deal with queries for clean water and wastewater
- Read all water meters on the Island
- Manage the second-largest Direct Debit scheme on the Island

STATS

- Around 25,000 customers
- 62% of customers are metered, 38% charged by the TRP of their property
- Approximately £9.7m billed in 2011



- **CUSTOMER SATISFACTION** - Achieve a customer satisfaction rating of 80%
- PERFORMANCE** - Customer satisfaction rating of 93% achieved for 2011

- **TELEPHONE RESPONSE** - Ensure that less than 2% of main number calls per year are unanswered for over 10 seconds

PERFORMANCE - 1.63% of main number calls were unanswered over 10 seconds for 2011

“Guernsey Water believes it is crucial that our customers feel they received a good value-for-money service. We are always eager to receive feedback on the service that we provide.”

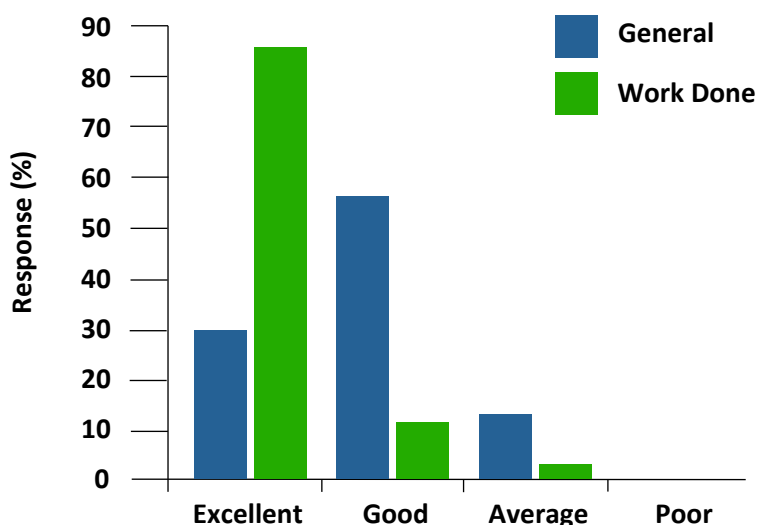
Guernsey Water believes that customer service is at the centre of all of its operations and processes, and is always looking for new and improved ways of communicating with and serving customers.

Guernsey Water’s website (www.water.gg) contains all of the information and advice that customers may need about billing, water meters, water quality, saving water and treatment methods. Customers can also fill out feedback questionnaires online to let us know what we are doing well, and what we are not doing so well. Our customer panel, the Guernsey Water User Group (GWUG) continues to provide a very useful conduit for communications between the business and its customers.

CUSTOMER FEEDBACK

There are two types of customer questionnaire that we use to gather feedback. The first is for general use, which is either filled in when customer service staff speak to customers over the phone, or can be completed online.

The second questionnaire (‘Work Done’) is specifically for customers who have either had work carried out for them by Guernsey Water staff, or who have been impacted upon by Guernsey Water’s work. This could range from the installation of a water meter to the replacement of a burst water main outside a property or business.



The figures in the graph above show that the majority of customers believe our service to be either ‘Excellent’ or ‘Good’. It is especially pleasing that, of the customers we have significant contact with through the ‘Work Done’ questionnaire, 86% feel that the service we provide is ‘Excellent’.

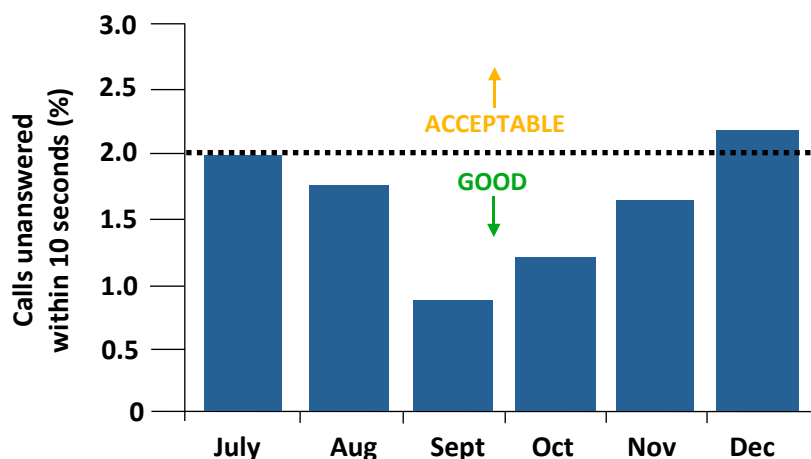
Looking more closely at responses from some of the questions in the 'General' questionnaire, 95% of customers feel that the reliability of the water supply in Guernsey is either 'Excellent' or 'Good', while 83% believe that the quality of tap water is either 'Excellent' or 'Good'.

Looking at the 'Work Done' questionnaire results, 78% of respondents felt that the quality of work carried out by our staff was 'Excellent', while 98% of customers felt that the attitude and behaviour of our staff/contractors on site was either 'Excellent' or 'Good'. While these results are generally all very positive, we will continue to look at ways to improve our service to customers.

Key Event 2011 - The centralisation of staff into Brichfield House was a success, & the customer service function transferred to the new building seamlessly.

CUSTOMER SERVICE

Guernsey Water aims to provide an excellent service for customers, so in order to measure how we are progressing towards this aim we have set up some key performance indicators (KPI's). The first of these measures how our customer service staff respond to telephone calls from customers. By using a call logging system, we are able to detect how many incoming calls are answered, and what proportion of answered calls are picked up within ten seconds.



The graph (left) shows the percentage of incoming calls on Guernsey Water's main switchboard number that were unanswered for over 10 seconds for each month from July onwards (when the system was introduced). The black dotted line represents the transition between 'Good' and 'Acceptable' performance as stated by Ofwat (the UK water industry regulator). The results demonstrate that Guernsey Water's performance was 'Good' for all months bar December.

Another measure that we are using to gauge the level of our customer service is the number of complaints we receive. The table below right shows how the complaints were received, and what they concerned (2010 results are in brackets).

The data shows that customers seem to prefer an instant two-way conversation when making a complaint, hence the reliance on the telephone. However, our customer service e-mail address is being well-used for complaints and enquiries. Many of the billing complaints tend to relate to simple administrative issues, and we work hard to ensure that these are kept to a minimum.

	Billing	Staff	Leaks
Written	9 (2)	0 (0)	0 (0)
E-Mail	12 (16)	0 (0)	0 (0)
Telephone	38 (32)	0 (0)	1 (1)

PEOPLE



- Multi-skilled staff with a range of qualifications and experiences
- Business operates 24 hours a day, 365 days a year
- Business operates apprenticeship schemes, and gets involved with management shadowing and work experience initiatives

STATS

- 74 members of staff



- 2 members of staff became members of CIWEM (Chartered Institute of Water and Environmental Management)
- 3 members of staff received awards for Health and Safety from the Guernsey Occupational Safety and Health Association (GOSHA)
- Guernsey Water as a company was awarded a 'Highly Commended' accreditation by GOSHA



"People are our most important asset. Staff at all levels are encouraged to participate in business improvement initiatives and are appreciated for their contribution."

Guernsey Water currently employs 74 staff with a range of skills and disciplines. Initially located across three sites, in April 2011 all staff were centralised into a new operational depot at Brickfield House, St Andrews.

All staff play a vital part in the operation of the organisation and Guernsey Water is keen to ensure that all staff have job satisfaction and are challenged and stimulated in their jobs.

Guernsey Water staff have been liaising closely with PSD's wastewater section, and in February 2012, the States of Guernsey approved the Department's recommendation to amalgamate the two sections into a single entity.

PROJECTS

Guernsey Water continues to prepare for its future through a number of initiatives such as succession planning and the support of apprenticeships throughout the business. We have a few young apprentices who are developing through the College of Further Education, and we have also recently appointed young members of staff who we hope can develop within the business.

Key Event 2011 - In a short space of time, staff had to quickly learn everything about the Wastewater Charge in order to answer a wide variety of queries from the public.

Active steps have also been taken to ensure vital knowledge and experience is passed down to potential managers of the future, and that staff fully understand their colleagues' roles and responsibilities should they be required to provide cover - this has helped to create a multi-skilled operational team.

Guernsey Water understands the importance of helping younger members of the community to understand life in the workplace. A number of management shadowing and work experience placements took place during 2011, all of which were successful learning experiences for the students.



We also said goodbye to a number of long-serving members of staff during 2011. Six employees retired with an incredible total of 195 years combined service between them.

The longest-serving employee was mechanical fitter John Henry, who retired in November 2011 after an amazing 47 years with Guernsey Water (and the States Water Board). We wish John and the other retirees a happy and relaxing retirement!

INFORMATION TECHNOLOGY

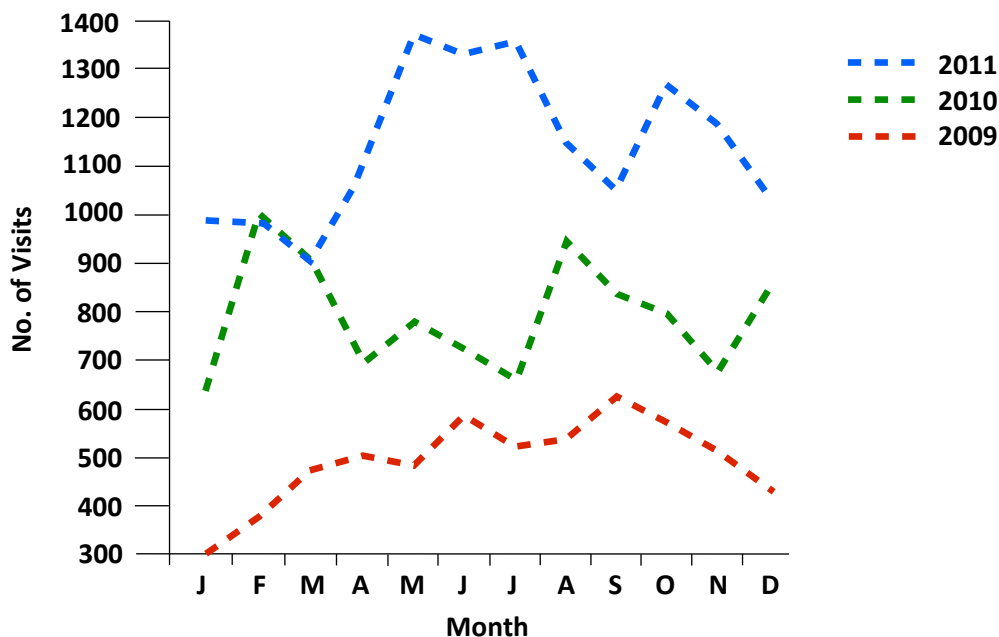
"Information Technology plays an essential role in everyday operations at Guernsey Water, so it is vital that the hardware and software provide a reliable and user-friendly platform."

Without resilient information technology systems, Guernsey Water would not be able to function as a water supply company. Systems such as SCADA and Navision are vital to the efficient running of the business.

The SCADA system allows Guernsey Water staff to remotely monitor key sites from the Brickfield House control room, and ascertain whether pumping stations and water treatment works are operating correctly. The plants can also be controlled remotely if any changes need to be made quickly e.g. turning pumps on/off. In addition to SCADA and Navision, we also use Digimap for mapping water assets (mainly pipework).

PROJECTS

The Guernsey Water website (www.water.gg) was created at the end of 2008 and has been steadily improved and upgraded since then. The site is maintained in-house and is updated regularly to keep it fresh and relevant. The graph below shows how visits have increased significantly year-on-year as the site has developed:



In other projects, the 'InTouch' system for SCADA is still being rolled out in order to connect all key sites to the main system for remote monitoring from the control room and to upgrade and improve the existing system. The system uses either fibre-optic cables, or where this is not possible, broadband connections.



- Maintain and extend SCADA (Supervisory Control and Data Acquisition) system
- Maintain Navision billing system
- Ensure that all staff IT requirements are met
- Ensure that customer service standards are optimised through the use of IT

STATS

- SCADA system is currently linked to 13 key sites - more will follow in due course



- Over 100 desktop computers, faxes, printers and telephones were successfully moved into the new Brickfield House building from other sites when centralisation took place



PROPERTY



- Maintain and improve all of Guernsey Water's property assets
- Rationalise property assets for cost savings and efficiencies where necessary
- Maintain the Millennium Walk around St Saviours reservoir in liaison with Environment Guernsey

STATS

- Over 40 property assets
- Estimated asset replacement cost of £500m



- The Brickfield House operational depot development was completed by April 2011, and staff moved in shortly after



“Guernsey Water’s varied portfolio of assets provides the basic infrastructure for collecting, treating and distributing potable water to the population of Guernsey.”

Guernsey Water’s property assets include water treatment works, storage reservoirs, pumping stations, service reservoirs, a water tower, wells, an operational depot and other pieces of property and land.

Given the size of this portfolio and the cost to maintain all of these assets, we are always looking to rationalise property in order to make the most efficient use of the infrastructure. A good example of this is water storage reservoirs - the business currently owns 17 of these reservoirs, but some of them are very small and would not be easily useable in the event of low capacity.

Disposing of these assets would save maintenance expenditure and free up capital that could be better used elsewhere.

PROJECTS

Undoubtedly the biggest property event during 2011 was the completion of the development of ‘Brickfield House’, the new operational depot at St Andrews. The building received the first staff influx at the end of April 2011, and by June all Guernsey Water staff were settled in.

Key Event 2011 – Two properties that were no longer needed were sold – the original ‘Brickfield House’ residential building and the former Town Office at South Esplanade.

The development of Brickfield House (*below*) and the centralisation of staff into it was essential for a number of reasons. Firstly, two of the three sites that our staff were initially housed in (South Esplanade and the former St Andrews depot) were in a poor state of repair, and would have been uneconomical to repair.



Secondly, the centralisation of staff would yield so many benefits, including: improved communication and morale amongst staff, a reduction in overhead costs from only running one building and a reduction in cost and time-loss from staff having to travel from site to site.



In other projects, consideration is being given to creating a nature walk around part of the St Andrew’s site in a similar vein (albeit smaller-scale) to the Millennium Walk at St Saviours reservoir. The latter has proved to be very popular with locals and visitors alike, and the information leaflet which we created in-house to

accompany the walk continues to be well utilised by walk users. The leaflet can be downloaded from www.water.gg.

“Guernsey Water is run as a commercial entity with an emphasis on efficiency, financial transparency and good people management.”

Guernsey Water is funded entirely from water charges which are kept separate from the States’ general revenue. Our aim is to keep water charges as low as possible while meeting international water quality standards and generating enough revenue to maintain the Island’s water infrastructure. Income is used for the implementation of the Capital Development Programme (CDP), which ensures that our infrastructure is of a high standard and is as resilient as possible. A list of the work carried out on the CDP for 2011 can be found on page 30, with **Financial Statements** in **Appendix A** on pages 31-32.

As a business unit of PSD, Guernsey Water operates in the same manner as a commercial business, so it is vital that we are seen to be providing a value-for-money service. Data from customer feedback questionnaires in 2011 showed that 41% of customers felt Guernsey Water provided either an ‘Excellent’ or ‘Good’ value-for-money service.

Key Event 2011 – Guernsey Water had a good financial year. Cashflow forecasts were achieved and overheads and operational costs stayed within budget.

This is a lower result than last year’s 57%, but one that can probably be attributed to the introduction of the wastewater charge in April 2011.

PSD recently took a report to the States of Guernsey recommending that Guernsey Water be merged with Guernsey Wastewater, and that this new joint body be commercialised to become a States Trading Company.

The States agreed to the amalgamation of Guernsey Water and Wastewater, but an amendment was raised on the commercialisation issue. This amendment called for a more detailed business case to be presented to the States before members could vote on the commercialisation of the joint body.



The concept behind commercialising the amalgamated body was so that funds from the clean water function could be used for wastewater, and commercial borrowing could be considered to improve the wastewater network, which is in a poor state of repair.

By joining the two functions but not yet commercialising them, this has left Guernsey Water in a situation where further communications will be required with the Treasury & Resources section to ascertain exactly how the business can be run over the next few months. The future of Guernsey Water is discussed in more detail on page 27.



- Ensure that revenue from water charges is sufficient to cover expenditure and the Capital Development Programme
- Ensure that all financial transactions are correctly recorded and presented in year-end accounts
- Ensure that stakeholders receive relevant, reliable and timely information

STATS

- 2011 income - £9.9m
- 2011 expenditure - £5.2m



- **OPERATING SURPLUS** - Ensure that the operating surplus remains above £4.2million

PERFORMANCE - Operating surplus in 2011 was £4.7million

- **VALUE FOR MONEY RATING FROM CUSTOMERS** - Improve on previous year’s result

PERFORMANCE - 2010 result - 57% rated value for money as ‘Excellent’ or ‘Good’.

2011 result - 41% rated value for money as ‘Excellent’ or ‘Good’.

PERFORMANCE MONITORING & PR



- Regularly measure performance against targets and communicate this to stakeholders
- Benchmark with other jurisdictions to assess performance in a wider arena
- Ensure that Guernsey Water's PR output is proactive and commensurate with its aims
- Ensure that Guernsey Water maintains a positive relationship with customers through the appropriate dissemination of information

STATS

- Nearly 3,000 customers in our e-mail database
- 17 media releases were sent out during 2011



- 23 objectives were set in the 2011 PR Strategy, and 20 of these were completed to time and budget.

Two of the remaining three were postponed until 2012 due to factors beyond our control, and the final one was cancelled due to the sad death of a charity founder whose event we were going to support.

“Guernsey Water places a strong emphasis on monitoring and measuring its performance, which allows the organisation to improve working practices and provide the best possible service.”

There are a number of ways in which Guernsey Water monitors and reports on its performance - through Annual Reports like this, monthly Business Plan updates, KPI's, data from customer questionnaires, and a user group which meets up every quarter to give feedback on business initiatives and key issues.

We also measure our performance against the indicators set by Ofwat (the UK regulator for all water and sewerage companies in the UK). The business is not obliged to do this as we do not yet come under regulation, but we are aware that the indicators represent best practice. Data from the 2011 Ofwat indicator performance is detailed on page 25.

BENCHMARKING OUR PERFORMANCE

Guernsey Water has been in close liaison with the Isle of Man Water company, and we have agreed to exchange key performance data in order to set benchmarks for each other's performance. The Isle of Man is a useful jurisdiction to benchmark with as it is similar to us in terms of population and how the company is positioned within the government:

WATER QUALITY - Overall drinking water quality figure for 2011:

Guernsey - 99.75%
Isle of Man - 99.72%

LEAKAGE - Overall network leakage in 2011:

Guernsey - 1.74ML per day
Isle of Man - 6.85ML per day

Overall leakage per supply in 2011:

Guernsey - 70.02 litres/supply/day
Isle of Man - 164.80 litres/supply/day

SUPPLY INTERRUPTIONS - Percentage of properties experiencing unplanned water supply interruptions in 2011:

Guernsey - 0.18%
Isle of Man - 7.6%*

BURST MAINS - Number of burst mains per 1,000km of network in 2011:

Guernsey - 46
Isle of Man - 140

**High figure due to a single burst on a pumping main feeding the south of the Island, out of hours, and the difficulties of locating, shutting it down and repairing it. Over 3,000 properties were without mains water for over 6 hours. If this incident is not included the % of properties experiencing unplanned water supply interruptions would have been 0.4%, in the acceptable range under Ofwat's reporting regime.*



PUBLIC RELATIONS

During 2011, Guernsey Water sent out a total of 17 media releases and provided statements and responses to a number of media enquiries. Media release topics included:

- Our move to Brickfield House
- Winter care of pipes and oil tanks
- The retirement of an employee after 47 years of service
- Promoting our chemical amnesty
- Keeping dogs on leads at the Millennium Walk

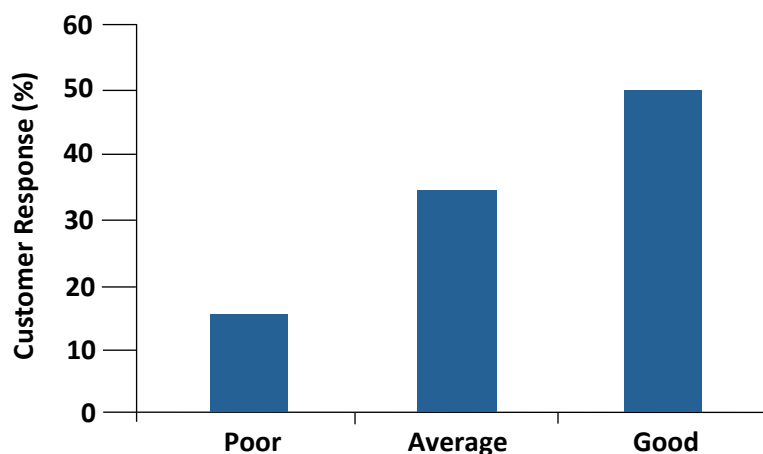
Key Event 2011 - All Guernsey Water literature had to be amended for the move to Brickfield House, so a full literature audit was carried out as a result of this.

PROJECTS

Early in 2011, the Guernsey Water website was updated with an interactive 'Water Treatment Process' made using Flash software. With descriptive images and simple text, the process is described from start to finish and is much easier to understand than just text on its own. This interactive process can be seen by logging on to www.water.gg and visiting 'Water Treatment'.

During 2011, we issued two electronic newsletters, the second of which featured a 'Water Wise Survey'. This was created to try and obtain information from customers about their water usage practices by asking questions such as: 'How long do you spend in the shower?', 'What type of flush systems do your toilets have?', 'What time of day do you water your garden?', 'Are you on a water meter?' etc.

131 customers took the survey, and the results made for interesting reading. To summarise the responses, the graph below was created which showed how good customer water usage practices were based on the results. As the graph demonstrates, 50% of customers appeared to have 'Good' water usage habits, compared to only 16% that could be classed as 'Poor'. This is a positive result, and suggests that customers have a good understanding of how to use water sensibly.



In order to further improve customers' water usage habits, a 'Water Wise Action Sheet' was created which demonstrated the water and money savings that could be made by taking simple measures e.g. reducing the time taken in the shower from 10 to 5 minutes and fitting dual instead of single flush toilets could save customers over £50 per year on their water bills.

For more information on this, please visit www.water.gg and click on 'Saving Water'.

HEALTH & SAFETY



- Implement strict but sensible health and safety procedures

- Carry out training and toolbox talks to improve employee understanding of health and safety issues, and encourage staff to report all incidents and near misses

- Record and monitor health and safety data to identify trends



- **INCIDENT RATE** - Achieve an incident rate below 25/100 employees

PERFORMANCE - Incident rate for 2011 was 15.8/100 employees

- **ACCIDENT FREQUENCY** - Achieve an accident frequency below 15/100,000 working hours

PERFORMANCE - Accident frequency in 2011 was 8.7/100,000 working hours

- **DAYS LOST THROUGH INJURY** - Achieve a mean duration of days lost through injury below 2 days

PERFORMANCE - Mean duration of days lost through injury was 1.96 days

- 4 awards were received from GOSHA in 2011 (p 18)

“Nothing that we do in Guernsey Water is so important that we cannot find the time to do it safely. We recognise that good safety performance, and the safety of everyone who works for us or is affected by our work, is critical to the success of our business.”

The issue of health and safety is particularly important for an organisation like Guernsey Water where staff are dealing with dangerous chemicals, automated machinery and outside working in all weather conditions on a daily basis.

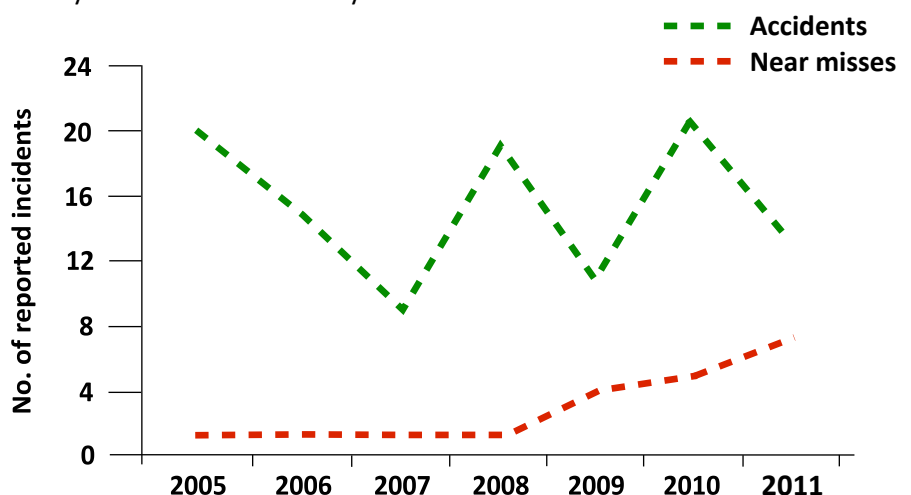
Guernsey Water’s Health and Safety Policy was updated in 2011, and under the umbrella of this policy are a number of documents including the Health and Safety Handbook, Safe Working Procedures Manual and Confined Spaces Procedures. All of these documents can be viewed on our website (www.water.gg) in the ‘Health and Safety’ section.

Hygiene standards are continually maintained through staff workshops and the implementation of best practice procedures in order to achieve high standards. Regular health and safety meetings are scheduled to proactively assess situations which may have an impact on staff.

Key Event 2011 – Health and Safety handbooks were drawn up for both employees and contractors with simple and effective information in an attractive booklet layout (see www.water.gg).

INCIDENTS

The graph below shows the number of near misses and accidents recorded by Guernsey Water in the last few years:



The graph shows that the number of reported accidents has fluctuated over the last few years, but the peaks in 2008 and 2010 could be explained by the release of the Guernsey Water Health & Safety Handbook (2008) and increased in-house staff training (2010). The increase in reported near misses is positive - it demonstrates that staff are becoming more aware of the need to report incidents even if they are avoided, in order to avoid a repeat of the incident which may have more serious consequences.

OFWAT 'DIRECTOR GENERAL' INDICATORS

In 2009, Guernsey Water adopted performance indicators set by Ofwat (see box below right) known as the 'Director General' indicators. These KPI's are used by all water companies in the UK for reporting to Ofwat and are the benchmark for measuring performance.



Note: The indicators marked with an *asterix have not been reported on for 2011, as we require a Contact Management system to do so. This should be in place in 2012.

The indicators (which have been slightly amended in order to reflect Guernsey Water's circumstances) are:

- **GW1 - Inadequate Pressure**
- **GW2 - Supply Interruptions**
- **GW3 - Billing Contacts***
- **GW4 - Written Complaints***
- **GW5 - Written Complaints Requiring a Site Visit***
- **GW6 - Bills for Metered Customers**
- **GW7 - Ease of Telephone Contact**

OFWAT is the regulator for all water (and sewerage) companies in the UK. They set targets and benchmarks for companies to achieve in order to provide the best possible service to customers.

Details of the business' performance in 2011 is noted below against each indicator:

GW1 - INADEQUATE PRESSURE GOOD <0.05% ACCEPTABLE 0.05 - 0.5% NEEDS IMPROVEMENT >0.5%

RESULT - Acceptable - 0.07% - February saw a few instances of low pressure due to a closed valve at the Forest Road service reservoir. This was quickly remedied.

GW2 - SUPPLY INTERRUPTIONS GOOD <0.5% ACCEPTABLE 0.5 - 2.0% NEEDS IMPROVEMENT >2.0%

RESULT - Good - 0.18% - there were a low number of supply interruptions over the course of 2011.

GW6 - BILLS FOR METERED CUSTOMERS

a). GOOD >99.5% ACCEPTABLE 98 - 99.5% NEEDS IMPROVEMENT <98%

RESULT - Good - 100% - all metered customers received a bill based on an actual reading at least once in 2011.

b). GOOD >0.15%

RESULT - Good - 0% - no meters were unread in 2011 by Guernsey Water.

GW7 - EASE OF TELEPHONE CONTACT

a). GOOD <2.0% ACCEPTABLE 2.0 - 4.0% NEEDS IMPROVEMENT >4.0%

RESULT - Acceptable - 2.56% - this represents the number of calls abandoned (rang off) during 2011.*

b). Our current phone logging system does not record the percentage of calls lost due to all lines being busy.

c). GOOD >85% ACCEPTABLE 75 - 85% NEEDS IMPROVEMENT <75%

RESULT - Good - 92% - this represents the percentage of '4/5' or '5/5' responses from Question E in the 'General' questionnaire.

**Phone logging system was only in place from July 2011 onwards as a result of the move to Brickfield House*

GUERNSEY WATER IN THE COMMUNITY



Guernsey Water gets involved in a number of initiatives in the community, both on the Island and further afield. We have supported WaterAid since 2004, which is a global charity that uses practical solutions to provide clean water, safe sanitation and hygiene education to the world's poorest people. They carry out work in 27 countries in Africa, Asia, the Pacific region and Central America.

In 2011, Guernsey Water received a letter from WaterAid informing us that our customers had raised an amazing £142,520 for the charity since we began our support. This is an excellent reflection of the generosity of the Guernsey public and justifies our decision to keep supporting the charity.

The funding from customers has been used directly in a number of recent projects. An example of this is the installation of a toilet block at Mondar High School in the Dadu District, Pakistan. Originally the school had no toilet facilities at all, meaning that students had to defecate in the open. The installation of the new toilets has led to better health, lower absenteeism and more students enrolling for future years.

ON ISLAND

Guernsey Water once again supported the ITEX Walk in 2011 (*right*), by supplying a number of standpipes so that walkers could rehydrate during the 38.5 mile route. In previous years, we have also supplied reusable water bottles for walkers to use during the event.

The ITEX Walk raises money for a variety of local charities; in 2011 more than £50,000 was raised for charities including the Women's Refuge and the Teenage Cancer Trust.



Credit: Mike Reeves (www.mikereeves.co.uk)

Guernsey Water also supported the Careers Show which took place in April at Beau Sejour Leisure Centre. A PSD stand was manned for the show to educate school leavers about the Department and its business units (including Guernsey Water of course!)



We took the opportunity during the Careers Show to carry out a blind taste test between tap and bottled water to demonstrate the quality and value for money of our local tap water. The test revealed that 73% of those who took part either could not tell the difference between the two or preferred the tap water!

In September, Guernsey Water manned a stand at the Healthy Hearts Day event (*left*). The concept behind the business' presence at the event was to promote the hydration of the body as being vital to our wellbeing, and to point out that tap water was a much cheaper way of hydrating than bottled water, despite being just as high-quality and tasty as bottled water, if not more so.

Another taste test was carried out in a similar vein to the Careers Show to back up our theory, and the results that came out were virtually identical to the previous test.

GUERNSEY WATER - THE FUTURE



Since the Machinery of Government changes in 2004, Guernsey Water has operated as a business unit of the Public Services Department. Despite being part of the States of Guernsey, Guernsey Water has always been run as a trading board, with all income derived from water charges, and none taken from the States' central revenue. PSD has always encouraged this commercial outlook.

It is essential for a lifeline service such as water to be planned and funded in an appropriate manner, and with PSD providing authority over transactions, Guernsey Water has been able to make significant improvements to the water infrastructure, and provide reliable high-quality drinking water at the lowest possible cost. From 2009 onwards, PSD decided that there would be merit in a closer liaison between Guernsey Water and the Department's wastewater function, as there would be synergies between the two units which could result in cost savings and efficiencies.

A central issue to a potential amalgamation was the funding of the two bodies - Guernsey Water is funded entirely through water charges, whereas wastewater was funded centrally by the States. In addition to this, the wastewater side had been under invested for some years, and a lot of the infrastructure was in need of urgent attention. The introduction of the Wastewater Charge in April 2011 was a step towards the wastewater function being self-funding, although it was acknowledged that the initial charge would only bring in a small amount of the income needed to meet wastewater's required expenditure needs.

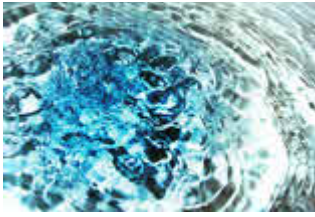


In early 2012, PSD took a paper to the States which recommended that the two water units be amalgamated, and the joint body then be commercialised. The concept behind this was to allow Guernsey Water (and the wastewater business) to continue to operate as a 'business' despite all the changes that the States of Guernsey were going through, and would be facing in the future. PSD also believed that the commercialisation of the whole water business would allow savings and efficiencies to be made which could be passed on to the customer.

The amalgamation was accepted by the States, but the commercialisation decision was subject to an amendment which asked PSD to report back to the States in due course with a more detailed business case laid out.

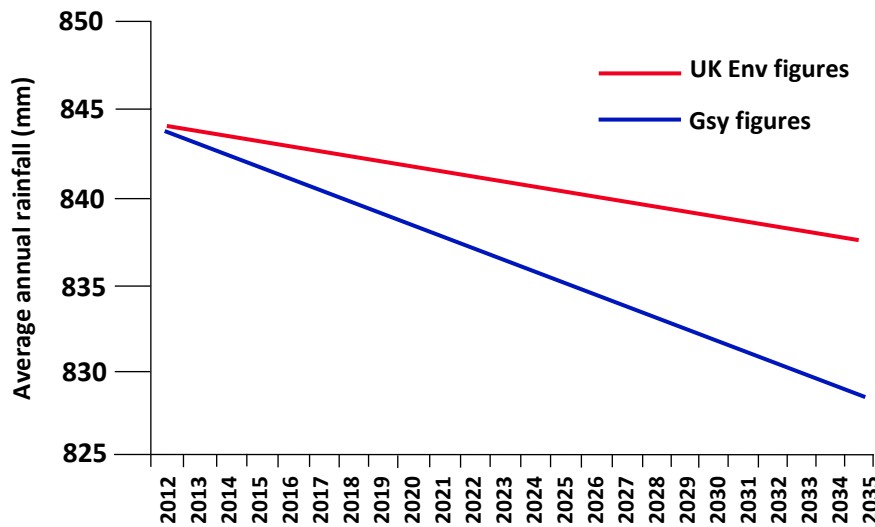
Guernsey Water is now working on altering the staff structure to absorb the wastewater function in the most efficient and productive manner. This will allow the benefit of the obvious synergies to be realised. In terms of funding, we are in liaison with the Treasury and Resources Department to come to an agreement about where we go from here regarding funding. It is essential for the water business to be able to operate commercially and to be allowed to apportion funding in the manner that is decided by water business experts. The Public Services Board has been supportive of our business over the last few years, but with a new Board being elected in April 2012, there is an element of the unknown about our future.

WATER RESOURCES SUSTAINABILITY



The availability of water for future generations is a key concern for Guernsey Water. There are a number of factors to take into account when considering how we might meet the demands of customers in the future, such as **climate change**, which covers rainfall levels/intensity and temperature levels.

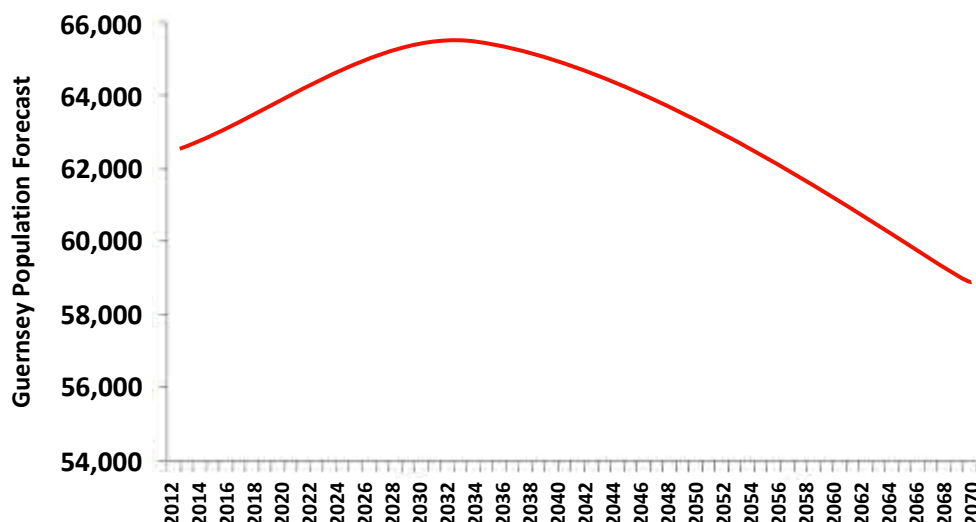
The graph below shows the climate change data formulated by the UK's Environment Agency (red line) which is used as a template for water companies in the UK. The blue line data has been extrapolated by studying Guernsey's rainfall data from the mid 1800's to date, and continuing the linear trend into the future.



As the graph demonstrates, both data sources predict that average rainfall will decrease in the future. With temperatures expected to increase, evaporation and transpiration are also likely to increase. This would reduce the amount of water that remains on the ground and flows into streams and our reservoirs. Hotter and drier summers will also lead to more demand during the peak summer months.

While rainfall levels are predicted to decrease, conversely rainfall intensity is expected to increase. This makes it essential that our pumping stations are fitted with the new mechanical screens which are much more capable of dealing with twigs and leaves, which can block the stations during heavy rainfall and cause them to stop functioning.

Population figures supplied by the States of Guernsey's Policy and Research Unit suggest that the population is likely to peak at 65,500 in the 2030's, before diminishing to 59,000 by 2070, as shown on the graph below. We need to ensure that we are prepared for this forthcoming growth which will inevitably increase demand.



WATER RESOURCES SUSTAINABILITY

Customer demand shows signs of remaining fairly static in the near future, although this is difficult to predict due to the many factors involved. While today's customer is more environmentally aware and more likely to save water, they also have additional amenities e.g. multiple power showers, garden irrigation systems etc.



A static level of demand combined with a higher population and less rainfall will inevitably put pressure on the Island's resources.

Guernsey's storage capability is therefore very important, as is **waste minimisation** (leakage reduction). The Island's storage capacity is currently satisfactory, but increased demand may change this situation. Guernsey Water is focusing on two future storage elements - the quarry at Les Vardes and the possibility of a desalination plant.

Les Vardes quarry will be fully excavated by 2030, and given its large capacity (roughly three times that of St Saviours reservoir) it has been earmarked for water storage by the States of Guernsey. This extra capacity would allow us to appropriately dispose of a number of smaller quarries in our possession, making storage much more efficient to maintain. If we were not able to utilise Les Vardes quarry in the future, then we would need to factor-in the potential development of a desalination plant into our business forecast. Desalination is a very expensive and energy-hungry process of creating raw water from seawater, which would still need to be treated before it could be distributed to Islanders.



For all water companies, **waste minimisation** in the mains network is vital for the efficiency of the water supply. Guernsey Water oversees around 500km of raw and treated water main on the Island and invests significant capital expenditure in making sure these pipes are in the best possible condition. Given the size of the network, a rolling programme is needed to replace failing asbestos cement and uPVC mains with the more resilient HDPE/MPPE pipes (*left*).

We also utilise pressure monitoring technology which can tell operatives when and where a pipe has burst in the Island, sometimes before any customers are aware. Our leakage figures have improved significantly over the last decade, and compare very favourably with other water companies in the UK as well as similar jurisdictions such as the Isle of Man, as shown in the graph on page 15.

In order to prepare for the future, we have a number of objectives in place that will ensure the sustainability of our valuable resource. These include:

- **Increasing supply:** improve existing pumping stations, consider installing more stations and consider use of Les Vardes quarry/desalination
- **Reducing waste:** replace failing raw water and trunk mains, ensure quick repair of burst mains
- **Reducing demand:** ongoing installation of water meters, the promotion of water efficiency initiatives and the education of the public about waste minimisation

CAPITAL DEVELOPMENT PROGRAMME



The Capital Development Programme (CDP) controls how Guernsey Water spends its money on major projects and equipment/systems that add value to the business. Much of the work carried out on the CDP improves the efficiency and reliability of the Island's water infrastructure through the creation or enhancement of pumping stations, treatment works and the mains network. For a project to be considered for the CDP, it must be either:

- Part of the Business Plan which has been approved by the PSD Board, or
- A project that has been put before the Board separately and approved.

If a project is to be included in the CDP then a justifiable business case must be put together to prove that value for money will be achieved. The commercial test applied to any project that will require capital investment must be: "Would a greater return on investment be achieved if the money was invested elsewhere?"

If the Guernsey Water Formal Management Team and the Board both agree that the project should be included in the CDP, then the project is measured against a set of criteria to determine its relative priority, taking into account importance, impact and urgency. The higher the score, the sooner the project will commence.

The table below lists the major capital projects that were carried out during 2011 and the capital spend during that 12-month period:

Section	Project	Timeframe	2011 Costs
Water Resources	St Saviours Reservoir Bypass Main	2011-12	£350,000
Water Resources	Kings Mills Interim Refurbishment Works	2011-12	£176,000
Water Resources	La Vrangue Stream Intake Works	2011	£70,000
Water Resources	Juas WTW PLC upgrade	2011	£33,000
Water Resources	Kings Mills - Conversion to Pumping Station	2011	£28,000
Water Resources	Longue Hougue Slope Stabilisation	2011-12	£61,000
Water Production	OSEC Plant Installation at St Saviours WTW	2011-12	£106,000
Water Production	Kings Mills WTW Upgrade	2011-12	£104,000
Water Production	Longue Hougue WTW Improvements	2011	£26,000
Water Distribution	Forest Road Tank Remedial Works	2011-12	£92,000
IT	Installation of radio equipment - various sites	2011-12	£39,000
IT	SCADA Upgrade - various sites	2010-12	£80,000
Property	Site Security Measures - various sites	2009-11	£52,000
Property	St Andrew's Main Site Development	2011	£97,000
Property	Operational Depot Development - main contract	2011	£2,111,000
Customers	Remote Meter Reading Equipment replacement	2011	£37,000

APPENDIX A - FINANCIAL STATEMENTS

FINANCIAL STATEMENT - REVENUE

	Accounts 2011 Probable Outturn		Accounts 2010	
INCOME - Water Supplies				
Unmeasured	£3,576,792		£3,571,114	
Measured	£6,152,898		£6,119,306	
Total		£9,729,690		£9,690,420
Surplus on other trading activities (before management expenses and depreciation)		£217,925		£315,629
Total Operating Income		£9,947,615		£10,006,049
EXPENDITURE				
Operating Expenses -				
Water Production	£2,032,206		£1,867,263	
Water Distribution	£714,847		£730,057	
Asset Management	£421,543		£385,806	
Total		£3,168,596		£2,983,126
Management Expenses -				
Management and General	£232,216		£226,294	
Compliance	£156,988		£151,590	
Customer Services	£976,731		£822,378	
Finance	£323,864		£328,241	
Support Services	£366,789		£313,096	
Total		£2,056,588		£1,841,599
Total Expenditure		£5,225,184		£4,824,725
OPERATING SURPLUS BEFORE DEPRECIATION		£4,722,431		£5,181,324
Depreciation		(£1,636,077)		(£1,477,513)
(Loss)/Surplus on disposal of fixed assets	(£140,870)		£9,027	
OPERATING SURPLUS		£2,945,484		£3,712,838
Net Interest Receivable		£117,400		£89,484
Surplus on Sale of Fixed Assets		£1,658,721		£257,821
SURPLUS		£4,721,605		£4,060,143
Transfer to Reserves for Renewal of Assets		£1,223,053		£1,531,514
RETAINED SURPLUS, TRANSFERRED TO RESERVES		£3,498,552		£2,528,629

APPENDIX A - FINANCIAL STATEMENTS (cont...)

FINANCIAL STATEMENT - CAPITAL

	Accounts 2011 Probable Outturn	Accounts 2010
Water Resources	£681,833	£990,394
Water Treatment	£624,846	£448,636
Water Distribution	£311,827	£348,123
General	£3,083,964	£3,206,496
GROSS CAPITAL INVESTMENT	£4,702,470	£4,993,649
Customer Contributions & Asset Sales	(£21,230)	(£42,637)
NET CAPITAL INVESTMENT	£4,681,240	£4,951,012

APPENDIX B - COMPLETE OBJECTIVES LIST

A number of objectives (set out in our Business Plan) cascade from the six Key Policies outlined on pages 6 - 7 and these are reviewed below and over the next few pages. Each individual objective is measured against its allotted timeframe and financial resources to give an 'at a glance' view of exactly how Guernsey Water is progressing. The following colours are used to demonstrate the progress of each objective:



Objective has been completed, or is on course for completion within time and on budget



Objective will not be completed within original timeframe and/or budget, but will be completed in due course without any negative operational consequences



Objective has either failed or will not be completed at all, and needs to be reconsidered

Guernsey Water considers all of its objectives to be SMART-compliant (Specific Measurable Achievable Realistic Time-based) and our philosophy is to 'measure what can be measured' rather than relying on soft, anecdotal data which can be entirely subjective.

Out of the 64 stated objectives, 52 of them were classified 'Green', 9 were 'Orange', and 3 of them were 'Red'. This gives an overall objective success rate of 81%. However, it should be noted that some of the 'oranges' were prevented from being completed due to reasons outside of Guernsey Water's control.



WATER RESOURCES - PAGE 8

Objective	Timescale	Comments	Progress
Draw up Water Safety Plans	2009-11	Progressing - to be completed in 2012	Orange
Carry out stream diversion works to protect storage reservoirs and quarries	2010-11	Progressing - to be completed in 2012	Orange
Continue quarry stabilisation works	Ongoing	Progressing	Green
Keep raw water storage as full as possible each year (target: over 95% on 1 April each year)	Annual	Achieved - 100% storage	Green
Repair/rebuild Marais Stream pumping station	2009-11	Progressing - to be completed in 2012	Orange
Replace raw water transfer main from Kings Mills to St Saviours	2010-11	Completed	Green

Objective	Timescale	Comments	Progress
Investigate stream pollution from cesspits and review drainage systems within Catchment Area	Ongoing	Progressing	
Continue to use streamflow/nitrate monitoring data to assist water resource planning and to determine the nutrient loadings of streams	Ongoing	Progressing	
Carry out a biannual survey to monitor freshwater invertebrates in a range of streams within the Catchment Area (Benthic surveys)	Biannual (Spring/Autumn)	Completed	
Visit all vinery sites (and sites using rockwool) and inform growers of any problems	Annual	Completed	
'Police' unsatisfactory oil installations in liaison with oil companies/Environment Department and upgrade/empty old, redundant or defective oil installations	Ongoing	Progressing	
Continue to promote the safe use of pesticides	Ongoing	Progressing	
Visit 100% of sites as scheduled according to risk assessments (Water Catchment Audits)	Annual	Achieved: 100% of sites visited	
Continue to liaise with the Airport regarding forthcoming modifications to the area	Ongoing	Progressing	

Objective	Timescale	Comments	Progress
Install and maintain surveillance cameras and other security measures at WTW's and service reservoirs	2009-12	Progressing	
Install electrolytic chlorine generation plant at St Saviours WTW	2009-11	Completed	
Taking a minimum of 4,000 water quality samples achieve 99.5% compliance for Maximum Admissible Concentrations (MAC) at WTW's	Annual	Achieved: 4,843 samples taken, 99.96% compliance	
Produce various water quality reports on a monthly, quarterly and annual basis (also a Water Distribution objective)	Ongoing	Progressing	
Ensure that the cost to produce water remains below £375 per ML	Annual	Failed: Cost to produce water per ML - £431	
Replace membranes at St Saviours WTW	2011-12	Progressing	



WATER DISTRIBUTION - PAGE 14

Objective	Timescale	Comments	Progress
Install electrolytic chlorine generation plant at No.2 (West) Tank	2011	Completed	
Continue with rolling uPVC mains replacement programme	Ongoing	Progressing	
Carry out mains extension work for properties not yet on the main supply	Ongoing	Progressing	
Continue to split common services to enable more water meters to be fitted	Ongoing	Progressing	
Monitor and reduce the number of discolouration complaints on a yearly basis	Annual	Achieved: 34 complaints reported in 2011 v 73 in 2010	
Taking a minimum of 750 water quality samples, achieve 98% compliance for MAC at service reservoirs	Annual	Partly achieved: 734 samples taken, 99.05% compliance	
Taking a minimum of 1,800 water quality samples, achieve 99% compliance for MAC at customer taps	Ongoing	Achieved: 1,738 samples taken, 99.48% compliance	
Proactively manage leakage to ensure that 'unaccounted for' water remains below target of 550ML per year	Annual	Failed: 636ML leakage in 2011*	
Endeavour to repair 75% of mains bursts within 24 hours	Annual	Achieved: 100% of bursts repaired in 24h	
Ensure that the cost to distribute water remains below £28 per supply	Annual	Failed: cost to distribute water per supply - £29	

**See page 15 for further details*



CUSTOMERS - PAGE 16

Objective	Timescale	Comments	Progress
Monitor and review a Guernsey Water User Group	Ongoing	Progressing	
Encourage universal metering and consider introducing mandatory metering legislation as appropriate	Ongoing	Progressing	
Monitor compliance to the GW Customer Charter	Ongoing	Progressing	
Monitor complaints policy and identify trends	Ongoing	Progressing	
Achieve a customer satisfaction rating of 80% through the distribution of feedback questionnaires	Annual	Achieved: 93% satisfaction rating	
Replace automated metering equipment in order to maintain and improve efficiency and accuracy	2011	Completed	



PEOPLE - PAGE 18

Objective	Timescale	Comments	Progress
Develop a set of key competencies for Guernsey Water staff	2011	Objective led by Policy Council's HR Unit	
Set up a system of reward and recognition for Guernsey Water staff	2011	Objective led by Policy Council's HR Unit	
Encourage & support more social activities for staff	Ongoing	Progressing	
Implement a succession planning arrangement within Guernsey Water	Ongoing	Progressing	
Put together and advertise a set of organisational 'values' for Guernsey Water that could be used as a recruitment tool	2011	Completed	
Continue to support CPD (Continuous Professional Development) within the organisation, including the support of apprenticeships	Ongoing	Progressing	
Manage sickness levels within Guernsey Water using Bradford Factor, and use as an indicator of morale	Ongoing	Progressing	
Improve communications within Guernsey Water through the use of data gathered through repeatable employee satisfaction surveys	Biennial	Progressing	



IT - PAGE 19

Objective	Timescale	Comments	Progress
Roll out SCADA's 'In Touch' system and make appropriate modifications to instrumentation	2010-2012	Progressing	



PROPERTY - PAGE 20

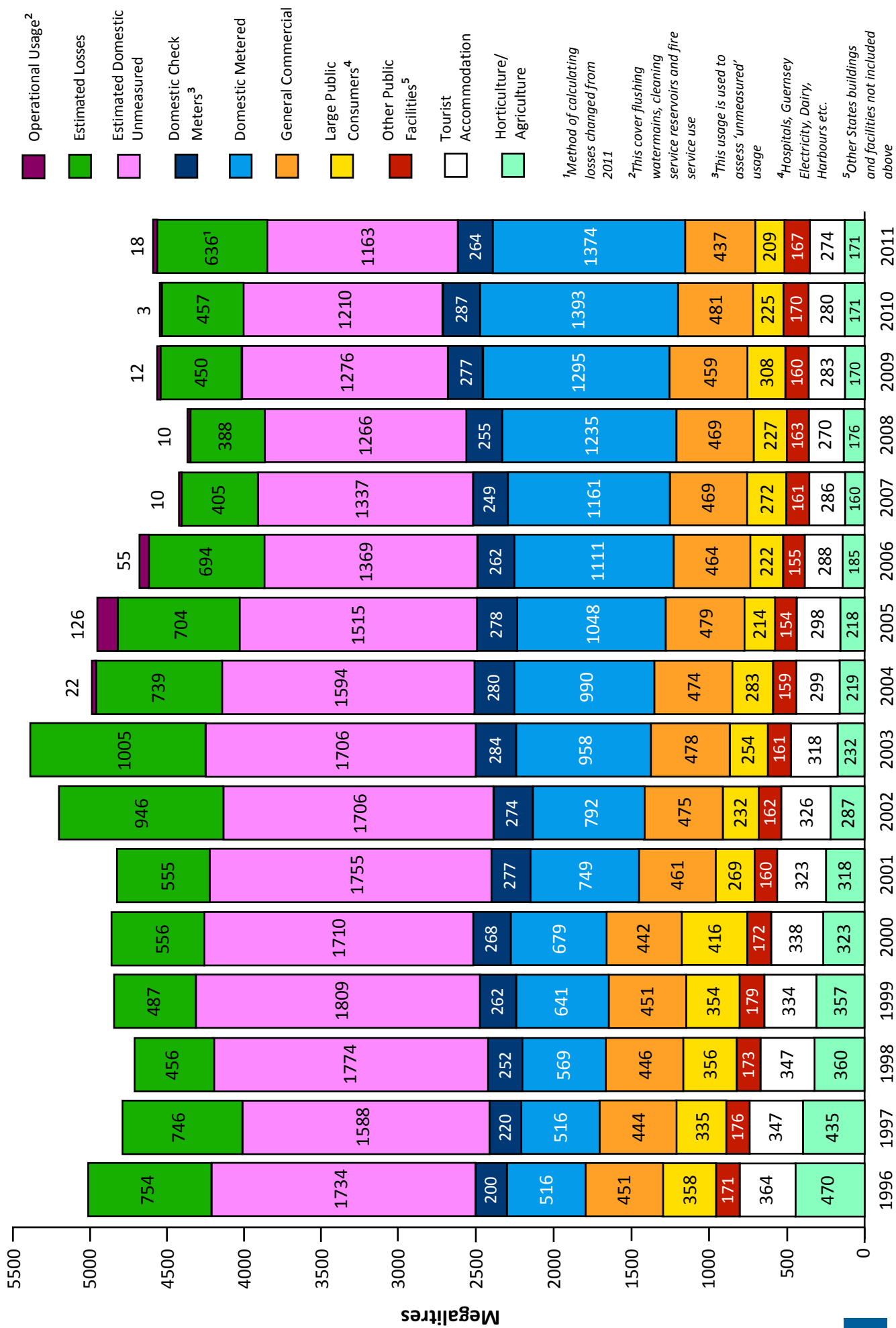
Objective	Timescale	Comments	Progress
Build a new operational depot at St Andrews and centralise Guernsey Water's activities on one site	2010-11	Completed	
Dispose of unused assets and review usage of current properties	Ongoing	Progressing	
Decommission Juas WTW and use as a storage reservoir only	2011	Work to begin in 2012	
Build a light industrial park at St Andrews site	2012	Treasury & Resources seeking to dispose of industrial unit land	

Objective	Timescale	Comments	Progress
Ensure cashflow forecasts are produced, managed and targets achieved	Ongoing	Progressing	
Minimise Guernsey Water's bad debts where possible	Ongoing	Progressing	
Ensure that the operating surplus remains above £4.2million	Annual	Achieved: Operating surplus - £4.7million	

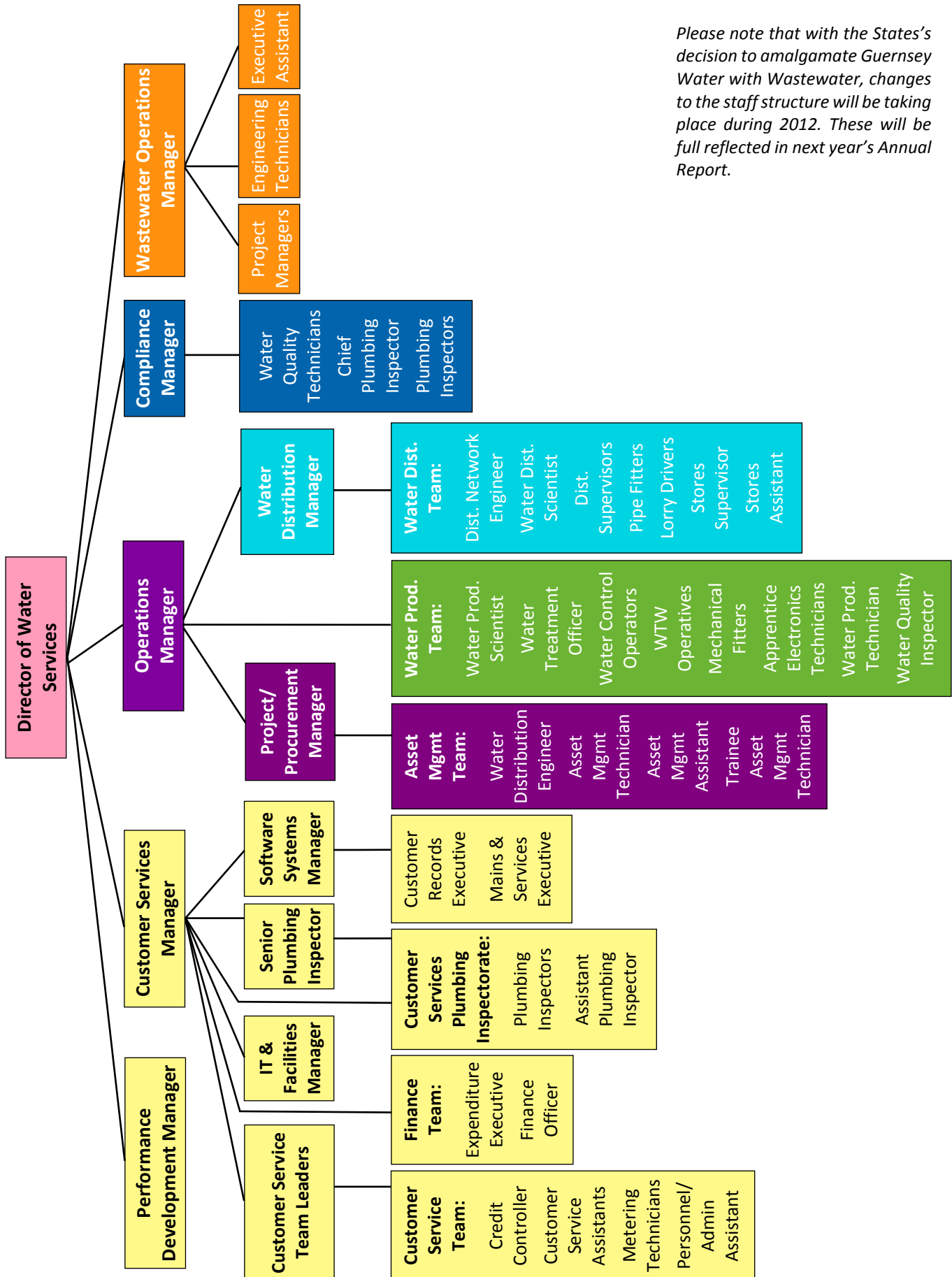
Objective	Timescale	Comments	Progress
Review and update Guernsey Water's Business Plan 2009-19	Annual	Completed	
Review and update Guernsey Water's PR Strategy and ensure objectives are actioned	Annual	Completed	
Regularly review the CDP and ensure that it is kept updated and accurate	Ongoing	Progressing	
Maintain and review Guernsey Water's set of KPI's and continue to benchmark against other jurisdictions	Ongoing	Progressing	
Produce a series of Annual Reports	Annual	Completed	
Review and update internal procedures	Ongoing	Progressing	
Continue to collaborate and liaise with Alderney on water industry matters	Ongoing	Progressing	

Objective	Timescale	Comments	Progress
Carry out regular reviews of Guernsey Water's Health & Safety handbook	Ongoing	Progressing	
Ensure that four Health & Safety meetings are held per annum	Annual	Completed	
Continue to improve and benchmark accident statistics in order to provide a safe working environment for all staff, with appropriate facilities in place	Annual	Achieved - see page 24 for more details	
Carry out reviews of property assets in liaison with Health & Safety consultant	Biennial	Progressing	

APPENDIX C - WATER CONSUMPTION



APPENDIX D - STAFF STRUCTURE



Please note that with the States's decision to amalgamate Guernsey Water with Wastewater, changes to the staff structure will be taking place during 2012. These will be full reflected in next year's Annual Report.

GLOSSARY

ML	Megalitre/s (1,000,000 litres or 1,000 cubic metres)
WTW	Water Treatment Works
PSD	Public Services Department
GWUG	Guernsey Water User Group
TRP	Tax on Real Property
CPD	Continuing Professional Development
KPI	Key Performance Indicator
OSEC	On Site Electrolytic Chlorine generation
SCADA	Supervisory Control and Data Acquisition (remote monitoring system)
CDP	Capital Development Programme
OFWAT	UK water industry regulator
MAC	Maximum Admissible Concentrations
uPVC	Unplasticised Polyvinyl Chloride
DGPS	Digital Global Positioning System
Raw water	Untreated water
Potable	Treated (drinkable) water
Transpiration	The loss of water from plants (similar to evaporation)
Benthic survey	A study of invertebrates in a stream to assess the 'health' of the water
Sliplining	A method of inserting a smaller-diameter pipe into an existing pipe instead of replacing it
Desalination	The removal of salt from sea water in order to turn it into raw water
Bar	A unit of pressure

ACKNOWLEDGEMENTS

As always, I am indebted to the hard work and dedication of Guernsey Water staff, many of whom have to put up with working in difficult situations during unsocial hours in order to ensure that a continuous supply of high quality water is delivered to our customers. Guernsey Water would not have been able to achieve the success that it did during 2011 without the commitment and skills shown by staff, so I am very grateful to them, and hope for a successful 2012!

As always, we value your feedback, so if you wish to get in touch with us either call us on 239500, or e-mail us at customer.service@water.gg. We are also on Twitter (under *GuernseyWater*) - please come and follow us!

ANDREW REDHEAD
DIRECTOR OF WATER SERVICES

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