

Determination Report

REPORT OF AN APPLICATION FOR A DROUGHT PERMIT UNDER SECTION 79A OF THE WATER RESOURCES ACT 1991 (AS AMENDED)

Executive Summary

The Environment Agency has decided to grant this application with amendments agreed with South West Water.

In determining this application, the Environment Agency has exercised its duties and powers under the Water Resources Act 1991 (as amended) and the Environment Act 1995.

1. Summary of the proposal

This is an application for a drought permit from South West Water (SWW), relating to the River Fowey abstraction at Restormel Water Treatment Works (WTW) in the South West of England. The abstraction acts as source of water for the Colliford Water Resource Zone (WRZ). The existing abstraction licence number 15/48/018/S/040 authorises SWW to abstract from the River Fowey at a rate of 110,000 m³/d and 28,900,000 m³/y for Public Water Supply (PWS).

SWW are applying to the Environment Agency for a drought permit to:

- (i) increase the annual abstraction volume in the calendar year of 2022 from 28,900 MI to 32,200 MI
- (ii) increase the annual abstraction volume in 2023 by 3600MI to be taken from 1 January 2023 to 31 March 2023 inclusive. This is in addition to the current annual licence limit for 2023.

The proposal allows water to be abstracted from the River Fowey and either treated at Restormel WTW for direct supply, or pumped to Colliford reservoir for future PWS abstraction by release from Colliford and re-abstraction at Restormel.

This drought permit application if granted, will help to refill Colliford Reservoir for public water supply. SWW have outlined in their statement how the proposal meets the criteria for serious deficiency of supplies and how the deficiency has been caused by an exceptional shortage of rainfall. As part of this determination, we will consider SWW's justification to apply for a drought permit, and whether the proposal appropriately balances the need for public water supply with the impact to the environment.

1.1 Departures from application forms

We wrote to SWW on 21st October 2022 - see email saved in our Document Management System (DMS) requesting:

- Additional information about leakage and pressure management. This information was not provided and will not prevent the drought permit from being issued. The decision to proceed with the application without this information was made due to the urgent need for the drought permit to secure public water

supply. SWW have been informed that this information will be required to inform future EA assessment of the abstraction.

- An improved Environmental Monitoring Plan (EMP), including at least the following:
 - **Preliminary habitat walkover survey** - pre-implementation walkover survey to identify and map spawning habitats and lamprey ammocoete habitat, measure wetted widths at key locations and take a baseline photo record of all key locations. Data to be submitted prior to implementation.
 - **Preliminary salmonid walkover survey** – detailed walkover survey of pools recording the number of adult salmonids holding below Restormel weir.
 - **Weekly habitat walkover surveys** - walkover survey of the reach from Restormel intake to the A390 bridge at Lostwithiel to identify signs of environmental stress.
 - **Weekly salmonid walkover survey** – Conducted between November – January inclusive, including one survey the week before implementation, recording the number of adult salmonids holding below Restormel weir.
 - **Redd counting and mapping** – Conducted twice weekly between November – January inclusive below Restormel weir.
 - **Water quality monitoring** – Continuous monitoring (15 minute intervals) of a suite including water temperature and dissolved oxygen as a minimum for the duration of the permit.
 - **Counter data analysis** – Weekly analysis/review of the fish counter data at Restormel.
 - **Reporting** – SWW to provide a final report after the spawning run providing a review of the counter data and the ‘potential spawning population’ data gathered during the walkovers.

SWW submitted a revised monitoring schedule on 26 October 2022, in the form of an Appendix in a revised draft permit containing the above information and some further detail. This was edited and included within the drought permit conditions.

1.2 Details of proposal

Administrative details	
Drought permit number	DP2022-1548018S040
Existing licence number	15/48/018/S/040
Applicant name and address	South West Water Limited Peninsula House Rydon Lane Exeter Devon

	EX2 7HR
Application contact details	Dr Lisa Gahan Group Director of Regulatory Strategy and Asset Management (South West Water) Phone: 01392 443878 Email: lgahan@southwestwater.co.uk
Catchment	Fowey C048015B
Agency Area	Devon, Cornwall and Isles of Scilly
Application received as complete date	13/10/22
Determination date	24/10/22
Date of hearing	Not required
Date Inspector's report received	Not required
Revised determination date	28/10/2022*
Applicant Entitled to apply	Yes - Only public water supply companies are able to apply for drought permits. Therefore, the standard declaration is not required.
Supplementary reports	See drought permit checklist below.










* As the application was considered valid on 13/10/2022, the 12-calendar day determination period would have encompassed four weekend days. We agreed an alternative determination date of 28 October 2022 to account for the additional time required to consider SWW's proposal after the objections to the proposal had been withdrawn (see section 5).


Abstraction details	Existing Licence	Drought permit application changes
Location of abstraction	Restormel WTW intake	No change
Duration of drought permit	N/A	Up to 31 March 2023
Source of supply	River Fowey	No change
Point of abstraction	SX 097 624	No change
Purpose(s) of abstraction	Public water supply	No change
Period of abstraction	All year	No change
<u>Quantities and rates</u>	110,000 m ³ /d 28,900,000 m ³ /y	Until 31 December 2022 110,000 m ³ /d 32,200,000m ³ /y
		January to December 2023 110,000 m ³ /d 32,500,000 m ³ /y
Aggregate conditions	None	No change
Means of abstraction	Pumps	No change
Measurement of abstraction	Meter	No change
Minimum Residual Flow	None	No change

Note: a small modification has also been made to the reporting frequency of the 15/48/018/S/032 which is detailed in condition 2.2 of the drought permit and highlighted in section 11.

The applicant has submitted all the required information to enable us to determine the application.

Validation checklist:

Information	Check
Draft drought permit, to include description of proposals and proposed schedule of conditions	
Statement of reasons for the application, to include: <ul style="list-style-type: none"> ▪ Monthly rainfall figures for relevant period, with LTA figures; ▪ Effect of shortage of rain on relevant sources; ▪ Population impacted by deficiency of supply; ▪ Daily water demand by population and how it is supplied by source(s); ▪ Measures taken to reduce demand and their effects; ▪ Operation of any relevant water resource management agreements; ▪ Any proposed changes to operational policies or practices to alleviate future drought problems; ▪ Other steps to conserve resources; ▪ Other options considered and reasons for rejection; ▪ Consequences of the drought permit application being rejected. 	
Location map, to provide position of relevant sources and watercourses/wetlands	
Consent of navigation authority, if not required application must state this	N/A
Notice(s) on local authorities, copy	
Notice(s) on specified protected bodies, if permit relates to suspending or modifying any statutory obligations, copy, if applicable	N/A
Notice(s) on other water undertakers, copy, if applicable	N/A
Notice(s) on navigation authorities, copy, if applicable	N/A
Notice(s) on internal drainage boards, copy, if applicable	N/A
Advertisement in local newspaper, actual page if possible	
Advertisement in London Gazette, copy	
Description of public inspection arrangements, to include where and when this happened	
Existing abstraction or impounding licence, copy	
Existing statutory instrument or local act of parliament governing the abstraction restrictions	N/A
Water shortage strategy, for dealing with water shortage throughout the WR zone, to include information on strategic measures and timings, publicity and liaison with other authorities and water users	

Environmental report	
Water quality information, if proposals use water from a new source	N/A
Comments received from any consultees, if applicable	N/A
Objections received, and any agreements made with objectors	N/A

2. Case history

Date	Event
08/04/1987	Abstraction licence 15/48/018/S/040 issued.
22/08/2022	Pre-application for the Restormel drought permit started.
13/10/2022	SWW advertise their drought permit application.
13/10/2022	Formal application for the drought permit accepted as valid.
20/10/2022	Representations window closed.

Background of Supply System

Within the South West Water supply area, South West Water uses three Water Resource Zones (WRZs), each centred around a strategic reservoir – Colliford WRZ, Roadford WRZ and Wimbleball WRZ. The Restormel WTW is within the Colliford WRZ.

The Colliford WRZ encompasses almost all of Cornwall, with the exception of the North East of the County. The Colliford WRZ serves a population of around 567,000 people and approximately 276,000 domestic and commercial properties within the zone.

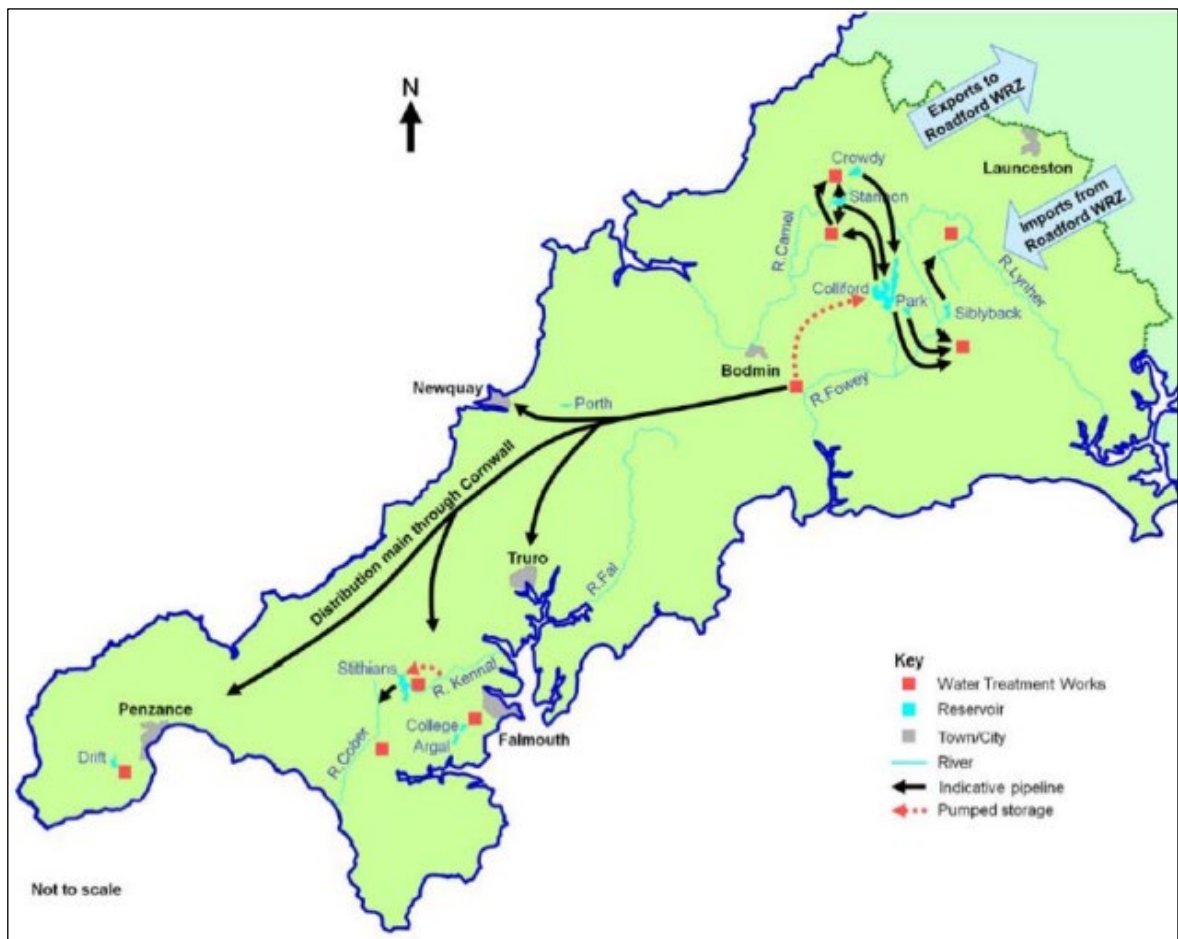


Figure 1 – Colliford Water Resource Zone.

Colliford Reservoir, conjunctively with local reservoirs, two disused former china clay pits (one of which is Stannon Lake) and river intakes, form the Colliford WRZ. These sources are supplemented by a bulk transfer from Roadford WRZ of up to c.3 Mld.

The supply system in Colliford WRZ is reliant upon the strategic Colliford Reservoir. A number of supply sub-systems are supported by Colliford Reservoir and Restormel WTW, especially during periods of peak demand, via the Cornwall Spine Main.

It is vital to retain some water within the smaller reservoirs in the supply sub-systems to maintain supply to local isolated customers (not backed up by Colliford Reservoir or Restormel WTW). These 'isolated' customers can be broken approximately into the following property numbers:

- Drift reservoir: 12,580
- Argal/college reservoir (which can be used conjunctively): 13,027
- Sithians reservoir: 10,091 (which can be used conjunctively for treatment via Wendron WTW)
- Crowdy reservoir: 6663

Colliford and Stithians reservoirs can be used conjunctively, and there is also a link between Stithians and Wendron water treatment works because when there is not enough river flow to supply treatment at Wedron, the water is released from Stithians into the river, to then be abstracted for treatment there.

Events preceding application

Colliford Reservoir is a multi-season reservoir and hence is more susceptible to longer periods of drought. Colliford has a large net capacity but does not refill every year, and in the past has taken up to five years or more to refill (e.g. Colliford Reservoir 2001 – 2008). The storage of Colliford Reservoir can be supplemented by pumped transfers from Restormel.

Water resources in the Colliford supply area consist of seven impounding reservoirs, severn river intakes and two groundwater fed disused china clay pits. The total available reservoir capacity in the zone is 43,482 MI, with around 66% of that being from Colliford Reservoir.

This drought permit application has been deemed necessary due to the prolonged period of dry weather experienced in the South West England. The storage levels entered Drought Level 2 in September 2022 (as shown in Figure 2).

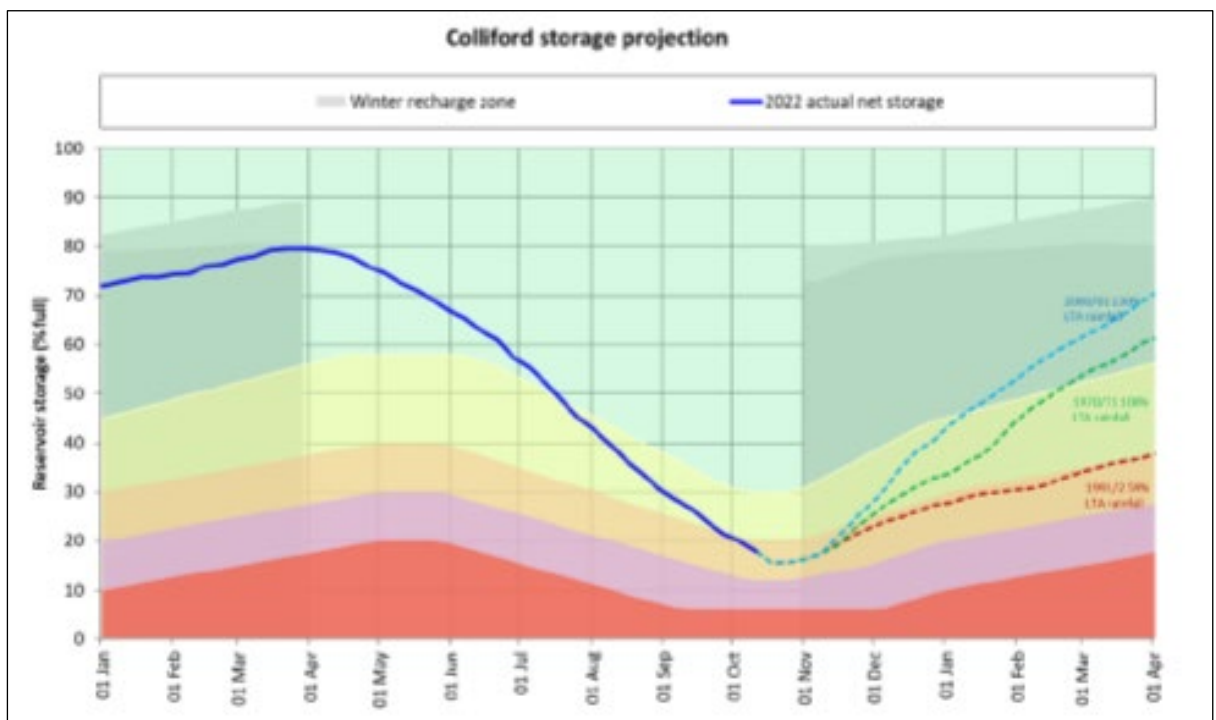


Figure 2 - Colliford storage projection

A temporary ban on water use (TUB) was applied, coming into effect on 23 August 2022. However, if below average rainfall persists, the reservoir will not refill adequately for supply in 2023. Action is required now to minimise the risk of supply problems and the need for more severe measures, which would have greater impacts on SWW's customers and the environment as it would likely be during summer months, when flows are lower.

Further details of the conditions leading to the drought, the water resources situation and SWW's actions to date are provided in Section 4.

Previous drought permit applications

A drought permit has not previously been applied for in respect of the abstraction at Restormel. It is included within their drought plan as option C1.

3. Water Resources (Environmental Impact Assessment Regulations) 2003 as amended by the Water Resources (Environmental Impact Assessment) (England and Wales) (Amendment) Regulations 2006.

The applicant has consulted the Environment Agency and it has confirmed that the proposal is not a “relevant project”, as defined by the Regulations. No environmental statement is therefore required by the Environment Agency to be submitted in respect of this application and project proposal.

4. Justification of requirements and water efficiency

The Agency’s ability to grant a drought permit is set out in section 79A of the Water Resources Act 1991. In order for the Agency to grant a drought permit, we need to be satisfied that a serious deficiency of supplies of water in an area exists or is threatened and that the reason for the deficiency is an exceptional shortage of rain.

The information in the following sections has been taken from the Statement of Need report provided by South West Water in support of this application followed by the Agency’s conclusion.

4.1 Has there been an exceptional shortage of rain in the resource zone?

An Exceptional Shortage of Rainfall (ESoR) assessment has been undertaken by South West Water (SWW) as evidence of the need for a drought permit for the Restormel abstraction licence to protect public water supply. This is in line with the legal requirement for a drought permit application to demonstrate that the reason a serious deficiency of supplies exists is due to an ESoR.

South West Water submitted their final ESoR to the Environment Agency on 13 October 2022. SWW found that for the Colliford Zone, over the period of analysis of November 2021 to September 2022:

- The SPI was -1.753, which is in the “severely dry” category
- The SPI ranked in the ten lowest values in a period dating back to 1891
- The ranked cumulative rainfall was the tenth driest in a record starting in 1891, and is drier than the equivalent period in 1995
- The rainfall for the period was in the “notably low” probability category, and was 75% of the LTA

SWW also present figures for a shorter analysis period of November 2021 to August 2022, which ranked 4th driest in a record starting 1891, had an SPI in the ‘extremely dry’ category, and cumulative rainfall in the ‘exceptionally low’ category.

The EA have checked SWW’s results for ranked cumulative rainfall totals, rainfall probability bands and the SPI values and we agree with the results presented by SWW.

SWW’s report concludes that *“The slightly shorter duration period (August month end) demonstrated an “extremely dry” SPI and “exceptionally low” probability band. Although adding the month of September 2022 into the analysis produces slightly less extreme results, it is still considered that an ESOR has been clearly demonstrated, with SWW advising that the exceptionally low rainfall has been, and still is, critical to the water resource situation in Colliford WRZ”.*

There is no justification given in the report for using this shorter period. SWW have presented some information on SMD, which they suggest demonstrates that the September rainfall had a negligible impact on runoff and reservoir refill. They also provided a hydrograph showing the gauged flow at Restormel, which they use to show that the flows have been consistently below the prescribed flow since March 2022, necessitating supply releases from Colliford Reservoir to meet the demand at Restormel WTW downstream.

The results presented by SWW support the case for an Exceptional Shortage of Rain in the Colliford WRZ between November 2021 and August 2022. The data does not conclusively support the case for an ESoR over the period November 2021 to September 2022. However, the extremely high soil moisture deficit over September will have reduced the benefit of the September rainfall. The reservoir has not started to refill, and therefore the rainfall has not yet reduced the risk to security of supplies.

4.2 Potential drought permit sites must be identified in water company drought plans.

The SWW Drought Plan uses a combination of three triggers to take a flexible approach to drought response – groundwater triggers, surface water triggers and demand triggers. They have derived a series of drought triggers which encompass forecasting, monitoring and discussions with the Environment Agency as a drought develops. Data used includes current river and rainfall data, weather forecasts and resultant river flow forecasts, time of year and likely customer demand levels.

For each of their reservoirs used for public water supply, SWW have developed drought levels to inform the drought severity level for each water resources zone and the actions required as set out in their drought plan. SWW have tracked the reduction in storage in UTL over the year and it has fallen through drought levels one and two. In response, SWW have undertaken demand side options outlined in their drought plan as required at drought severity levels 1 and 2. This has included introducing a Temporary Use Ban in the area supplied by Restormel WTW on 23 August 2022.

The Drought Permit for increasing the annual licence volume at Restormel WTW is included within the SWW Drought Plan (Option C1). The Drought plan indicates that the permit would be used for pumped storage to refill Colliford reservoir and therefore the public water supply abstraction included in the permit application appears to deviate from the Drought Plan (see A3.2.3 in Drought Plan). Action C1 is outlined in the plan as being a level 1 action and is the first supply side action for the zone (see Table 3.1 in Drought Plan). The company has implemented demand side actions in this WRZ before applying for a permit. However, this action was not anticipated to be required for a drought severity lower than a 1 in 500 by SWW in their plan. Therefore, although identified in their Drought Plan, limited preparatory work to be 'drought permit ready' had been completed for this proposal.

4.3 Does a serious deficiency of supplies or water exist (or is threatened) in the resource zone?

SWW have tracked the reduction in storage in Colliford reservoir and other smaller reservoirs in the WRZ over the year. Colliford has fallen through drought levels one and two. It is forecast to enter drought level 3 in early 2023, under a 66% LTA rainfall scenario.

We have considered the information taken from the statement of reasons submitted by SWW. In summary, SWW have undertaken publicity campaigns, leakage control, outage management, pressure reduction and temporary restrictions on water uses through the implementation of a TUB across the area on 23 August 2022.

The companies forecasts that under 100% LTA rainfall, Colliford would recover to 60% without the drought permit. The company perceives that the risk to supplies will affect the whole WRZ. The company has outlined that the threat to customers is not an immediate threat however would occur during the summer of 2023 if storage in Colliford reservoir has not recovered to a suitable level (see figure 2).

High demand over the Summer of 2022, combined with a sustained period of low rainfall, meant that storage in Colliford Reservoir had dropped to 22% by the end of September 2022. It has since dropped to 17% (data up to 12 October 2022). See figure 3 below:

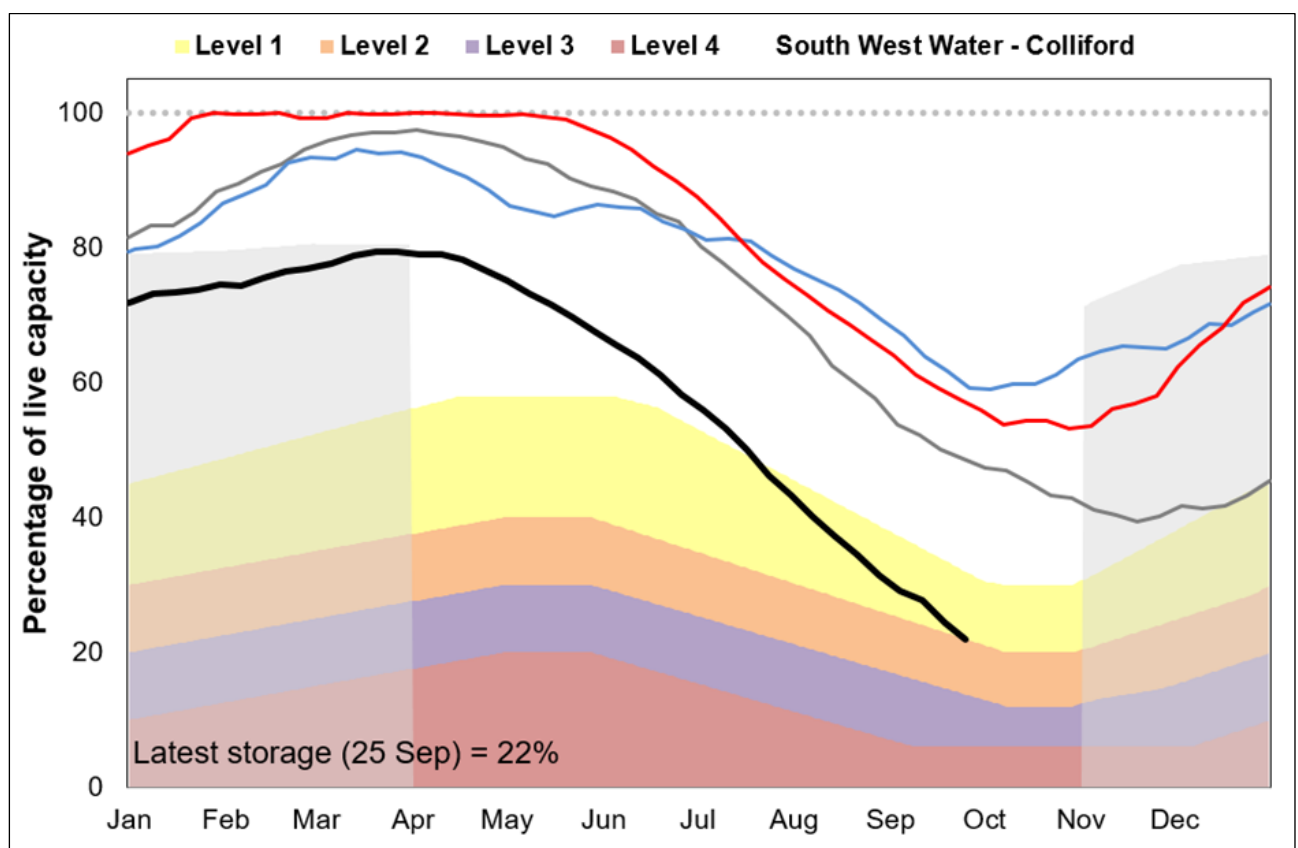


Figure 3 - Colliford Reservoir storage chart, showing SWW's drought levels, and reservoir storage data for 2022 (black), 2021 (blue), 2018 (grey) and 1995 (red). Pumped storage curve in transparent grey block.

SWW expect to require all their existing annual licence quantity to meet the public water supply requirements at Restormel WTW. SWW expect to reach the total annual limit on the licence in November 2022, purely as a result of providing water for public water supply from the intake at Restormel WTW. This would leave them unable to utilise the pumped storage scheme in 2022. The possibility of dry conditions continuing into the autumn and winter of 2022-23 means that there is a risk of Colliford reservoir starting the 2023 spring/summer drawdown with storage too low to meet demand. The drought permit would allow additional water to be

abstracted on top of their annual licensed volume and therefore allow for additional refill of the reservoir over the winter period.

Restormel has been required to pick up some of the demand from satellite reservoirs in order to maintain their levels, as there are some properties on the network which can only be supplied by these reservoirs. Restormel will need to continue to meet this demand whilst those reservoirs refill naturally over winter.

4.4 Water companies must prepare environmental reports addressing the anticipated effects of the proposal.

SWW submitted a Draft Environmental Assessment Report (EAR) on 24 September 2022 and final version with the application 13 October 2022.

The full report by APEM can be found on DMS dated 13 October 2022 but the conclusion is as follows:

“A medium impact of the drought permit was predicted for the hydraulic pathway. The impacts on all other pathways were low or negligible.”

“The effect of the drought permit is predicted to be minor on almost all receptors in comparison with the baseline.”

“Moderate impacts on receptors were only predicted for fish. The drought permit is predicted, due to the additional abstraction at Restormel, to have Moderate impacts on the Lower River Fowey water body (GB108048001420) in some months for upstream fish passage for Atlantic salmon, brown trout, adult eels and for habitat availability for the ammocoete life stage of lamprey in comparison with the baseline scenario”

Although the final version submitted included information under the key headers expected in an EAR, the Monitoring and Mitigation Plan was not sufficient.

As a result, we agreed that SWW would provide an alternative Environmental Monitoring Plan for Agency approval as a licence condition as outlined in section 1.1 and section 7.4, which would include appropriate monitoring and mitigation to address the risks of the current proposal as outlined in section 7. This was submitted to the Agency on 26 October 2022 and was adapted to be included within the Environmental Monitoring Schedule Appendix 1 in the drought permit.

4.5 Other supply side drought management options

‘Document 2.1 Statement of Reasons’ outlines that this drought permit enables the company to secure a larger volume of water with a lower environmental impact than other interventions. The company is accelerating other supply side options. They will be bringing forward engineering works for Porth Reservoir. The company will also be seeking a drought permit (and then a permanent abstraction licence) for Stannon Lake.

Section A 4.2 of the company’s Drought Plan outlines additional “More before 4” drought actions the company could take in the Colliford WRZ. The company is currently looking at options CS2/E Park Lake and CS6/E Hawk’s Tor from this list. In a recent letter to the Secretary of State, the company stated that it is seeking to licence these.

SWW have also been advised to apply to vary their licence for Restormel to increase their quantities to prevent the requirement for future drought permits at this site.

4.6 Additional demand management

South West Water have outlined additional demand management measures within their statement of reasons. This includes implementing a variety of measures prior to the submission of this application to try to reduce water demand, such as publicity campaigns, leakage control, outage management, pressure reduction and temporary restrictions on water uses through the implementation of a TUB across the area from 23 August 2022.

Water companies must implement demand management techniques before they apply for a drought permit. There are two key areas for this. One is to reduce the demand for water and the other is for the applicant to manage all the water sources available to them in the most effective way.

Metering

Metering was not addressed by SWW in their application.

Water Efficiency Campaign

SWW launched a 5-litre challenge campaign in May 2022. This was communicated to customers through a range of channels. SWW continued to offer free water saving devices and services. From August 2022, the campaign shifted to an urgent call to customers to reduce water consumption. In September 2022, SWW communicated to customers reservoir levels.

Temporary Use Bans

The company implemented temporary use bans on the 23rd August. The company are keeping the ban in place until it is deemed no longer necessary (section 4.1 of 2.1 Statement of Reasons)

Non essential use bans

SWW have informed DEFRA they intend to apply for a Drought order to ban non-essential use.

4.7 Leakage control

SWW has previously reported region wide leakage numbers. This needs revising to WRZ level. This information was requested via email to SWW on 14/10/22 following review of application documents. On 21/10/2022, SWW commented that they were finalising an updated leakage document including actions specific to the Colliford area. This information was not provided and will not prevent the drought permit from being issued. The decision to proceed with the application without this information was made due to the urgent need for the drought permit to secure public water supply. SWW have been informed that this information will be required to inform future EA assessment of the abstraction.

4.8 Mains pressure reduction

As for Leakage control information discussed above in section 4.7, mains pressure reduction specific to the Colliford area has not been provided by the water company. However, an updated document including information on leakage and mains pressure reduction is expected to be provided. This information was not provided and will not prevent the drought permit from being issued. The decision to proceed with the application without this information was made due to the urgent need for the drought permit to secure public water supply. SWW have been informed that this information will be required to inform future EA assessment of the abstraction.

4.9 Re-zoning Supplies

This section provides an explanation of the action SWW has taken to rezone supplies to try and manage the situation prior to submitting a drought permit application. As stated in the document '1.3 Drinking Water Services Report':

Strategic network options are listed below, these are operated flexibly throughout a given year as and when water is available and demand conditions dictate available headroom at supporting WTWs.

- *Increased flow from Delank to Racecourse Service Reservoir (SR) and onward to Beacon SR. This reduces demand on Fox Park SR, which is normally supplied from Restormel WTW, maximum benefit of 3Mld.*
- *Increased flow Delank to Bears Downs SR via Tin Farr valve – operation of an automated valve to maximise flows from Delank WTW into Bears Down SR. This reduces demand on Fox Park SR which is normally supplied from Restormel WTW, maximum benefit of 1Mld.*
- *Stithians support to Threemilestone area – operation of a manual valve at Kerly to rezone the Threemilestone supply zone and provide support to Kilaganoon SR. This reduces demand on the Cornwall Spine Main, normally supplied from Restormel WTW, maximum benefit of 2Mld.*
- *Stithians support to Trevu SR – operation of an automated valve to divert flow from Lanner Hill SR via Dulcoath Water Booster Station (WBS) into Trevu SR. This reduces demand on the Cornwall Spine Main, normally supplied from Restormel WTW, maximum benefit of 4Mld*
- *Wendron support to Tregonning Hill – pumping from Trelissick WBS to increase flow from Wendron WTW into Tregonning Hill SR. This reduces the need to pump from Trevelyan SR and reduces demand on the Cornwall Spine Main, normally supplied from Restormel WTW, maximum benefit of 1.5Mld.*
- *Carnmenellis SR support to Wendron – operation of a manual valve to increase flow from Carnmenellis SR into Wendron WTW. This further reduces the need to pump from Trevelyan SR and reduces demand on the Cornwall Spine Main, normally supplied from Restormel WTW, maximum benefit of 1Mld*
- *Increased flow from Drift WTW into East Penzance – manual valving to increased supply areas fed from Drift WTW, additional properties in East Penzance supported. This reduces demand on the Cornwall Spine Main, normally supplied from Restormel WTW, maximum benefit of 1Mld.*
- *Drift support to Ludgvan SR – automated valving to support Ludgvan SR, via Kerris SR. This reduces demand on the Cornwall Spine Main, normally supplied from Restormel WTW, maximum benefit of 2Mld.*

4.10 Publicity Campaign

SWW has engaged in a publicity campaign in line with its drought management plan, as reported in the document '4.0 Appendix 1 Enhanced Media Campaign'.

Various activities including social media campaigns, community engagement events, and customer email / letters / SMS communication with strong situational messaging have been undertaken.

4.11 Other options considered

All options considered are contained in SWW's drought management plan. Evidence that SWW has followed this plan is signposted in the document '4.0 Evidence the Company has followed its Drought Plan'.

4.12 What will happen if the permit is not granted?

Based on the information provided in the '2.1 Statement of Reasons', SWW do not believe that Colliford reservoir will recover to a suitable level to meet demand in Summer 2023 without the drought permit. The company is investigating and accelerating other supply schemes to help the resource position in Colliford. SWW state that the whole WRZ is at risk of supply issues in 2023, this equates to around 567,000 people and approximately 276,000 domestic and commercial properties. The company is not able to fully rely on other sources within the zone to meet any shortfall/ reduce the drawdown from Colliford as some of the smaller reservoirs serve isolated communities which cannot receive water from elsewhere.

Considering the graphs provided showing the decline in Colliford storage and the projected recovery curves under various rainfall scenarios, SWW have demonstrated a potential risk to supplies in 2023. This risk can be reduced by increasing capacity by pumping additional water from Restormel over the winter.

4.13 Conclusion

This drought permit application is present as an option in the SWW Drought Plan which has just been published and finalised. However, it was not 'application ready' as the company did not perceive they would need it in an event of less than 1:500 return period. Demand in Colliford region has been very high in 2021 and 2022, with very high temperatures experienced and high visitor numbers during the spring and summer, with demand peaks when the weather is hot. The company has implemented a water efficiency campaign and TUBs to reduce demand as required in advance of the drought permit application. The benefit of this is unclear due to changes in weather and schools returning which will have also led to reductions in demand. SWW have presented that under a 100% of Long-Term Average rainfall scenario, Colliford reservoir storage can only recover to 60% of capacity without a drought permit. The company is also seeking additional supply side actions to ensure security of supplies in 2023. Without this drought permit, SWW state that the whole WRZ is at risk of supply issues in 2023, this equates to around 567,000 people and approximately 276,000 domestic and commercial properties

SWW have demonstrated that there was an Exceptional Shortage of Rain in the Colliford WRZ over the period November 2021 to August 2022. The data do not conclusively support the case for an ESoR over the period November 2021 to September 2022. However, the extremely high soil moisture deficit over September will have reduced the benefit of the September rainfall. The reservoir has not started to refill, and therefore the rainfall has not yet reduced the risk to security of supplies.

5. Advertising

The water company must advertise the proposal and serve notice on specified bodies before the formal application is sent to us.

They published the statutory press notice in the Western Morning News, Daily Express and London Gazette on 13 October 2022.

The notice complied with the requirements in Schedule 8 of the Water Resources Act 1991.

The application and associated documents were made available for public inspection at the following locations during the period specified in the statutory press notice (deadline for comments was 23:59 on 20 October 2022):

- South West Water Head Office, Peninsula House, Rydon Lane, Exeter, EX2 7HR
- Sir John Moore House, Omaha Road, Bodmin, Cornwall, PL31 1EB
- Bude Post Office, Belle Vue, Bude, EX23 8LU
- Online at <https://www.southwestwater.co.uk/advice-and-services/save-water/hosepipeban/>

It is confirmed that the notice appeared in all papers on the date specified and that the wording was satisfactory to the Agency.

Application was advertised	
Date when advertised	13/10/2022
Representations were received and these are addressed in section 5.2.	

The water company has served notice, where appropriate, on the following bodies in accordance with the Defra guidance 'Drought permits and drought orders' (May 2011) (these are only notified when an application is advertised):

Notifiable Bodies	Yes / No / Not applicable	Comments
Internal Drainage Board (IDB)	Not applicable	
Navigation Authority (NA)	Not applicable	
Harbour Authority (HA)	Not applicable	
Conservancy Authority (CA)	Not applicable	
Statutory Water Undertaker (SWU)	Not applicable	
Local authorities	Yes	Cornwall Council (UA)
BC = Borough Council DC = District Council UA = Unitary Authority		

In addition to the above bodies, notice was also served on the following organisations:

- Angling Trust
- Community Network Cornwall Councillors (Council Network Area 13 Officer, Fowey, Tywardreath & Par, Lostwithiel & Lanreath, Roche and Bugle, St Blazey, Council Network Area 15 Officer, Liskeard

Central, Liskeard South and Dobwalls, Looe East and Deviock, Looe West, Pelynt, Lansallos and Lanteglos, Lynher, St Clear and Menheniot)

- Consumer Council for Water
- Cornwall Catchment Partnership
- Cornwall Wildlife Trust
- Environment Agency
- Fowey Harbour
- Fowey Harbourmaster
- Natural England
- Parish Councils (Boconnoc, Broadoak, Fowey Town Council, Lanlivery, Lostwithiel, Luxulyan, St Blaise, St Sampson, St Veep, St Winnow, Tywardreath and Par, Deviock, Dobwalls, Duloe, Lanreath, Lanteglos by Fowey, Liskeard Town Council, Looe Town Council, Menheniot, Morval, Pelynt, Polperro, Quethiock, St Cleer, St Keyne, St Martin by Looe, St Neot, St Pinnock, Warleggan
- South West Lakes Trust
- South West Regional Flood and Coastal Committee
- South West Rivers Association
- Westcountry Rivers Trust

5.1 Representations

Four objections were received within time. These objections were received from:

- The South West Rivers Association
- Liskeard and District Angling Club
- Restormel Anglers Ltd
- Fowey Rivers Association (FRA)

The objections were discussed amongst the Virtual Permitting Team and it was agreed that they were 'reasonable' objections to the drought permit application. The objections were shared with SWW to see if they could be resolved without a hearing. A summary of the objections are shown below.

South West Rivers Association summary:

- *The severe drought this year has exacerbated the pressures on migratory fish and SWW's response to the protection of public water supplies and its abstraction plans, however necessary, carry the potential for further significant negative impacts –as confirmed by the Company's APEM environmental assessment report.*

Liskeard and District Angling Club summary:

- *Additional abstraction could have a catastrophic affect on already depleted salmonid stocks; interfering with both runs of fish returning to the sea (adult salmon, sea trout and smolts) and those entering the catchment in the Spring of 2023. Whilst monitoring of the fish barrier at Restormel Weir has been discussed by SWW there is no clear plan, no access to necessary infrastructure, no process of decision-making and no method of engaging with stakeholders and riparian owners if fish stocks are being affected.*

Restormel Anglers Ltd summary:

- *Our stretch of water is already at record low levels and any incremental abstraction upstream will likely interfere with already difficult migration pathways encountered by salmonids. The SWW Environmental Assessment*

Report itself recognises that up to 2/3 of adult salmon and sea trout may be unable to pass the weir and all juvenile salmon may find the barrier totally impassable if low-water conditions were to be allowed to continue. Further abstraction would not help this situation.

Fowey Rivers Association (FRA)

- *Our objection concerns the impact of further abstraction on a river already significantly stressed by historic low levels in 2022. The impact of the proposed incremental abstraction at key moments in the life-cycle of protected salmonids cannot be underestimated.*

Subsequent discussions and a meeting took place between the representees and SWW on 21st October 2022, and all four objections were withdrawn and therefore no hearing was required.

A revised monitoring plan was submitted to the Agency on 26 October 2022 which included additional monitoring and mitigation conditions to help protect migratory salmonids in the affected waterbodies, across three sites. This has been adapted into an Environmental Monitoring Schedule in the drought permit. The monitoring is also linked to a series of mitigation conditions which would prevent SWW from abstracting when they have gone over their usual annual licensed limit (during the operation of the drought permit), in the event of any environmental impacts. There are also conditions which specifically require salmon monitoring and reporting to be done by the Water Company and specific mitigation actions within the Mitigation Plan in the permit to help protect migrating salmonids (see section 7.4 for further details)

6. External consultation

The Agency are not required to formally consult any external bodies (except under Habitats Directive/Wildlife and Countryside Act 1981 obligations) as part of the pre-app or determination process.

No Habitats Directive or CRoW Act sites were identified within the impacted area of this permit application and therefore no consultation with Natural England was required.

7. Technical assessment of the proposal

Information based on abstraction taking place at NGR SX 09788 62473, immediately next to Restormel WTW on the River Fowey.

Category	Comments/Name
Name of licensing strategy	North Cornwall, and Seaton, Looe and Fowey WFD Management Area Abstraction Licensing Strategy 227_10_SD01 Licence strategy template (publishing.service.gov.uk) Note that the CED for this ALS was 31 March 2017.
Licensing strategy Assessment Point (AP)	Lower Fowey, AP3

<p>Current resource status and surface water licensing strategy (or other strategy) for this location</p>	<p>In the Water Resources Charging Mapping Tool, availability is 'Restricted Water (Yellow)'.</p> <p>North Cornwall, and Seaton, Looe and Fowey WFD Management Area Abstraction Licensing Strategy 227_10_SD01 Licence strategy template (publishing.service.gov.uk)</p> <p>Current resource status based on the ALS is restricted water available for licensing at Q30, with water not available for licensing at Q50, and Q70, but water available for licencing at Q95.</p> <p>In Easimap the status at Q30 is Water available, at Q50 and Q70 is 'water not available', and at Q95 is 'restricted water available'.</p> <p>In the Lower Fowey catchment according to WRGIS when it was last updated, the surface water body resource and downstream resource is showing as Green at Q30 – water available and Red at Q50 and Q70 Recent Actual flows below the EFI – no water available and Yellow at Q95 fully licensed flows below the EFI – no water available.</p> <p>According to the Seaton, Looe and Fowey Ledger this is showing the CAMS colour at AP3, Lower Fowey at fully licensed to be Yellow at Q30, Orange at Q50 and Q70 and Yellow at Q95. The Recent Actual Scenario is showing as Red at Q50 and Q70. The abstraction reliability is only 27% and water available for any new consumptive licences would only be available at very high flows with a minimum Hands off Flow of HoF6 of 518.4ml/day with a remaining TAKE of 115.8 ml/day. Because this assessment point reliability is only 27% we would normally shut this AP down for new consumptive abstractions and investigate this water stressed catchment.</p> <p>The downstream surface waterbody is GB510804806400 Fowey transitional waterbody not assessed in CAMS as it is below the lowest CAMS assessment point but according to WRGIS this catchment is Green at all q values – water available.</p>
<p>WFD Integrated Water Body (name/ID)</p>	<p>Lower River Fowey, GB108048001420</p>
<p>Unit Status/2nd cycle licensing strategy surface water availability colour (@ Qn95% flows)</p>	<p>At Q95, water availability colour is:</p> <p>(3)Yellow: FL flows < EFI (within 10% below)</p> <p>Note that the water availability colour is red at Q50 and Q70, and Green at Q30.</p>
<p>Artificial or Heavily Modified Water Body?</p>	<p>No</p>

WFD Surface Water Ecological Status/Potential 2009 Baseline	C2 2013 Baseline Ecological Status: Good
WFD Surface Water Ecological Status/Potential most recent	C2 2019 (most recent) Ecological Status: Good
Morphology Status 2009 baseline	C2 2013 Baseline Hydromorphological Supporting Elements Status: Sup Good
Morphology Status most recent	C2 2019 (most recent) Hydromorphological Supporting Elements Status: Sup Good
Hydrology Status 2009 baseline	C2 2013 Baseline Hydrological Regime Status: Sup Good
Hydrology Status most recent	C2 2019 (most recent) Hydrological Regime Status: Sup Good

The proposal sits in groundwater body Looe and Fowey, GB40802G806600 and according to the Ledger the resource availability after GWABS and SWABS already licensed shows Red – water not available for licensing. This is because over the whole groundwater body there is a deficit in water available for groundwater (even though some assessment points have water available) due to several water bodies in this groundwater body that’s resource is showing at fully licensed and recent actual being below the EFI at some Q values and at risk of deterioration.

As this Drought Permit is only until the end of March 2023, this would not be entered onto the CAMS Ledger. However, the water company have been advised that they should consider applying for a variation to increase their annual limit on their abstraction licence (which would go into the CAMS ledger). If this was a new consumptive abstraction application/variation we would only possibly consider it with a very high Hands off Flow (HoF) of Q30 or above.

While this proposal does not fit strictly into the CAMS process, it does need to be WFD compliant.

The table below provides a summary for the one freshwater (Lower River Fowey, GB108048001420) and one transitional (FOWEY (GB510804806400)) waterbodies located on the River Fowey downstream of abstraction with the targets and appropriate measures as stated within the South West River Basin District River Basin District River Basin Management Plan ([South West river basin district river basin management plan - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/614442/South-West-river-basin-district-river-basin-management-plan-2015-2021.pdf)). These are also depicted in figure 4, with the water bodies labelled as per the table.

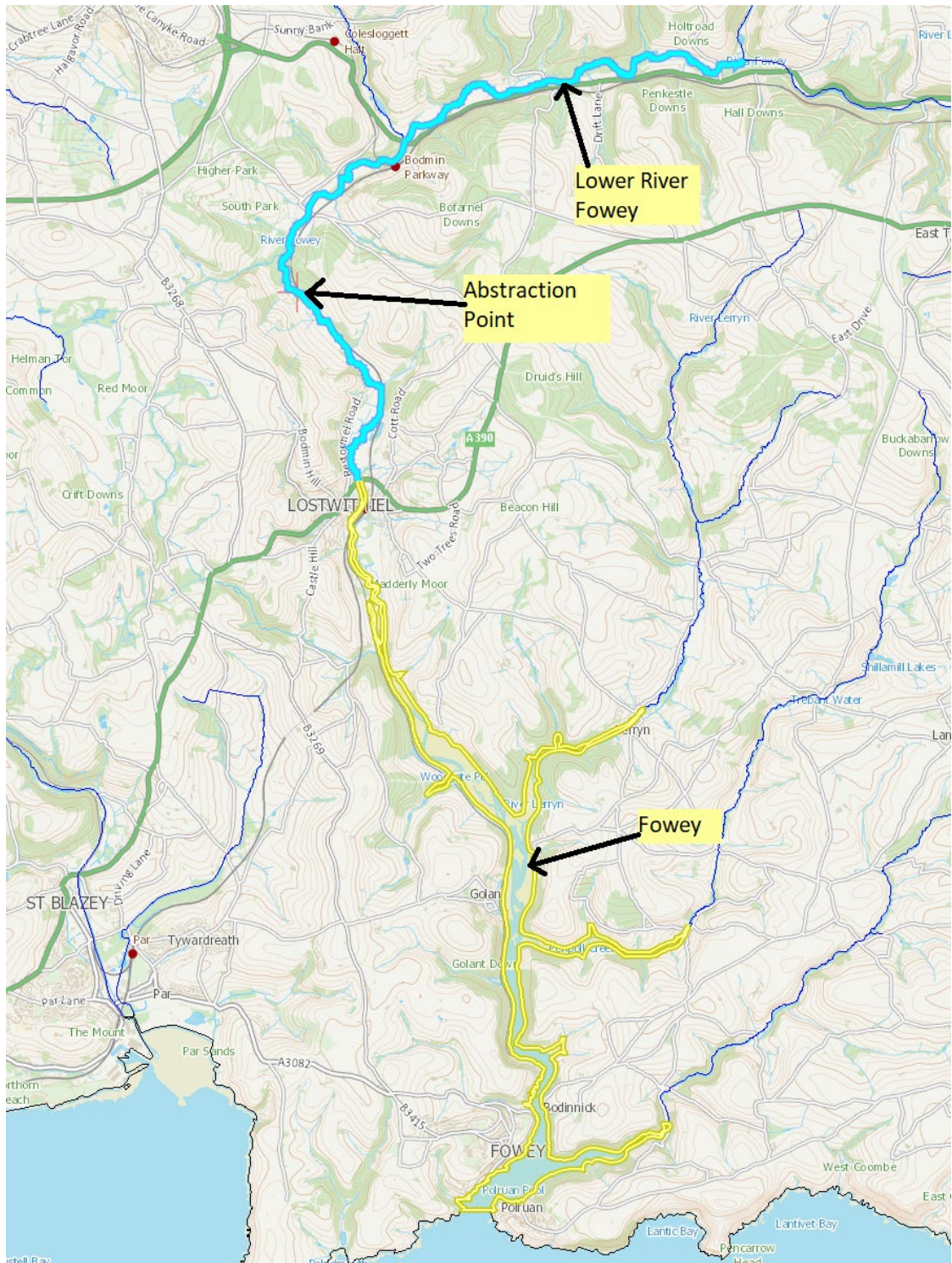


Figure 4: Map showing WFD waterbodies downstream of the abstraction point (marked by a red cross). The Lower River Fowey WFD water body is marked in aqua blue, and the Fowey transitional water body is outlined in yellow.

In order to meet the WFD objectives of the downstream waterbodies there must be measures in place to ensure that elements within the water bodies return back to the conditions before the drought permit is issued/used. This ensures that any impact is temporary and does not cause deterioration in status. In this case the applicant will be asked to continue any water quality monitoring beyond the end of the abstraction period for the drought permit.

The applicant has stated in the 1.1 Description of the Proposals October 2022 document that the overall classification of the Lower River Fowey was Good in 2019. However, the overall classification is in fact Moderate under Cycle 2 2019.

The ecological status is Good but under new WFD 2019 classification this waterbody for Chemical Status is now classed as failing on Mercury and Its Compounds and Polybrominated Diphenyl Ethers (PBDE). Under new chemical classifications no surface water bodies have met the criteria for achieving good chemical status (compared to 97% pass in 2016). This significant change is due to new substances, new standards and improved techniques and methods. Chemical classification results do not mean water quality has deteriorated. The changes in chemical classifications are due to new approaches and methods that enables us to more accurately assess the environment.

The WFD Cycle 2 2019 status of the groundwater body of Looe and Fowey GB40802G806600 is Poor. The Chemical Dependent Surface Water Body status was failing in previous cycles, but this is now Good however, if it has now deteriorated on Chemical Drinking Water Protected Area from Good to Poor but there is no reason for this in CPS

This drought permit is not considered to pose a risk in terms of WFD deterioration or current status. The daily abstraction quantity is the same as on the existing abstraction licence.

Table 1 - Details of the WFD water bodies downstream of the abstraction point, using C2 2015 and 2019 Final data from the Catchment Planning System.

WFD water body ID	Classification	Ecological	Biological elements				Phys-Chem Status		Hydrology	Specific Pollutant Status	Mitigation Measures Assessment	Chemical Status	Overall WB status
Name: Lower River Fowey ID: GB108048001420 Not Designated A/HMWB	Cycle 2 2015	Good	Good	Fish	High	DO	High	Sup Good	High	Not assessed	Good	Good	
				Invertebrates	High	Phosphate	High						
				Macrophytes	High	pH	High						
				Phytobethos	Good	Ammonia	High						
	Cycle 2 2019	Good	Good	Good	Fish	High	DO	High	Sup Good	High	Not assessed	Fail (Uncertain) Due to Mercury and its compounds and Polybrominated diphenyl ethers (PBDE) RFFs note that 'measures delivered to address reason, awaiting	Moderate
					Invertebrates	High	Phosphate	High					
					Macrophytes	High	pH	High					
					Phytobethos	Good	Ammonia	High					
Name: Fowey ID: GB510804806400 Not Designated A/HMWB	Cycle 2 2015	Moderate (Uncertain)	Moderate (Uncertain)	Fish	Not assessed	DO	High	Sup Good	High	Not assessed	Good	Moderate	
				Invertebrates	Moderate (uncertain)	Phosphate	Not assessed						
				Macrophytes and Phytobethos	Not assessed	pH	Not assessed						
				Macroalgae	High	Ammonia	Not assessed						
	Cycle 2 2019	Good	Good	Good	Fish	Not assessed	DO	High	Sup Good	High	Not assessed	Fail (Uncertain) Due to Mercury and its compounds and Polybrominated diphenyl ethers (PBDE) RFFs note that 'measures delivered to address reason, awaiting recovery'.	Moderate
					Invertebrates	Good	Phosphate	Not assessed					
					Macrophytes and Phytobethos	Not assessed	pH	Not assessed					
					Macroalgae	High	Ammonia	Not assessed					

7.1.1 Hydrology and impact on flows

Background

Restormel Intake is part of an interconnected system of abstractions and reservoirs in the River Fowey catchment in Cornwall. These sources provide public water supply for a large part of Cornwall. Siblyback Reservoir impounds the Siblyback Stream which is a tributary of the upper Fowey. Releases are made from Siblyback reservoir for abstraction for public water supply at Trekeivesteps or at the Restormel Intake. Colliford Reservoir impounds the St Neot River, which is also a tributary of the River Fowey. Releases are made from Colliford Reservoir for abstraction at Restormel Intake.

River Fowey:

Abstraction at Restormel Intake is subject to a prescribed flow (HOF) of 1.207 m³/s, equivalent to ~104 Ml/d. There is also a condition which states that when the flow at Restormel is above 1.207 m³/s then no more than half the additional water may be abstracted, except to the extent that water is released from Colliford and/or Siblyback Reservoirs. This is a '50% take' condition, therefore any abstraction in excess of half the flow above the HOF must have been released from one of the reservoirs.

Calculation of compliance with these conditions is complex, requiring the travel times from the reservoirs, and the abstraction at Trekeivesteps to be accounted for. The Trekeivesteps licence is extremely complex, including a prescribed flow that varies with the abstraction rate.

The existing authorised quantities for the Restormel Intake are as follows:

Annual quantity: 28900000 m³/a

Daily quantity: 110000 m³/d

These conditions mean that it is not possible to abstract the full daily quantity every day of the year, without exceeding the annual quantity (i.e. the annual quantity is less than 365 times the daily quantity).

In addition to providing water to Restormel Water Treatment Works for public water supply, abstraction at Restormel can be used to top up Colliford Reservoir by means of a 'pumped storage scheme'. The licence year runs from 1 January to 31 December.

The Drought Permit application is for an increase to the annual limit, with no changes to the daily quantity, HOF or percentage take condition proposed. This means that:

- Abstraction will be dependent on river flows being sufficient (only half the flow above the HOF, up to 110 Ml/d may be abstracted). A dry autumn or winter would therefore reduce the amount of water available.
- Abstraction for pumped storage cannot take place while releases are being made for public water supply abstraction at Restormel, therefore river flows will need to be high enough to meet the demand at Restormel WTW without requiring supply releases before any pumped storage can occur.

The maximum abstraction cannot occur until flows are above 3.8 m³/s (=324 Ml/d), which is equivalent to roughly Q50. The existing conditions on the licence do not provide the level of protection that would meet the requirements to 'support good' WFD status (flows would be below the 'EFI' at Q70 and Q50). However, this is an inherent issue with the existing licence which would remain in effect without this drought permit. Our assessment has therefore focused on the increased stress posed by granting additional annual quantity of water, therefore prolonging the period in which abstraction at the existing daily rate may occur. The mitigation conditions on the licence are subject to the period in which the existing annual quantity of 28,900,000 cubic metres has been exceeded. As the annual quantity resets at the end of December and the duration of the permit is until 31 March, the conditions are framed accordingly depending on the period:

During the period from 1 November to 31 December 2022, if:

- a) the quantity of water abstracted within the calendar year has exceeded 28,900,000 cubic metres, and*
- b) environmental impacts are notified under condition 4.1 by the Water Company, or if the Agency so specify in writing, the Water Company shall cease abstraction, and if the Agency so notifies in writing, undertake the mitigation actions identified in the Mitigation Plan specified in Appendix 3.*

During the period from 1 January to 31 March 2023, if environmental impacts are notified under condition 4.1 by the Water Company, or if the Agency so notify in writing, undertake such of the mitigation actions identified in the Mitigation Plan specified in Appendix 3 as the Agency may specify in writing.

Any abstraction from the time of notification under (i) above until condition 4.3 has been satisfied will form part of the 28,900,000 cubic metres per annum limit in the Licence for the calendar year 2023.

Therefore, although the proposal has increased the additional stress on flows for the duration of the permit, further restrictions will come into effect when SWW are operating under the additional rates as opposed to their existing licence rates. If the results of the monitoring confirm any environmental impacts during this time, SWW must cease operation under this drought permit and undertake the mitigation actions outlined in the mitigation plan within the permit (see sections 7.2-7.4 for further details). During the period 1 January to 31 March, SWW must undertake mitigation actions to address any environmental impacts. However they would be able to continue to abstract, but any abstraction during this period while remedial action is being undertaken will count towards their 28,900,000 annual limit. This will therefore not form part of the additional rates proposed under this permit.

Navigation:

The Fowey Harbour Commissioners (<http://www.foweyharbour.co.uk>) is a navigation authority downstream.

Statutory Notification was not required as the area covered by this navigation authority is outside of the area predicted to be impacted by this proposal. However, the applicant did notify this authority as part of their stakeholder engagement.

Conclusion:

The Restormel abstraction licence has a prescribed flow of 104 Ml/d (equivalent to approximately Q97) and a condition that only permits half the flow above the

prescribed flow to be abstracted (known as a 50% take condition). This ensures protection of the very lowest flows (via the prescribed flow), and some flow variability (via the 50% take condition). The maximum impact occurs at approximately Q50, when abstraction could be up to 34% of the flow. No change to these conditions are proposed under the drought permit application, and therefore SWW must continue to operate the abstraction under the existing conditions. However, as this permit will increase the period in which they could continue to abstract from the river, further restrictions will come into effect once SWW begin to operate under the 'additional' rates, which includes a cessation of flow if environmental impacts are identified and the implementation of appropriate mitigation measures.

7.2 Impact on water quality

The Environmental Assessment Report (EAR), prepared by APEM on behalf of South West Water, final report dated 11 October 2022, has medium confidence that there will be a negligible impact on water quality in the Lower River Fowey water body due to the lack of any notable discharge. (see below)

Several sewage treatment works (STWs) discharge directly into the River Fowey. The STWs are located several kilometres upstream of the abstraction at Restormel and include Common Moor STW, St Neot STW and East Taphouse STW. There are no STWs downstream of the abstraction and within the Lower Fowey water body. Reduced dilution of these point sources could result in an increase in biochemical oxygen demand (BOD), suspended solids, total ammonia and orthophosphate concentrations; it could also result in an increase in concentrations of WFD chemicals (specific pollutants, priority hazardous substances and priority substances), or could affect physico-chemical parameters such as dissolved oxygen (DO), temperature and pH.

Further to the above, clarification was sought from SWW regarding the impact of the permitted discharge from Restormel STW as this had not been included as part of the water quality modelling. On 20 October 2022, the applicant confirmed that this discharge is not actually in operation therefore does not require consideration.

Section 4.5 of the EAR sets out that an assessment was completed based on EA monitoring baseline data for two sites in the Lower River Fowey water body. SIMCAT modelling was completed to assess the impact of reduced dilution and this looked at BOD, nitrate, orthophosphates, total ammonia and total phosphates. Modelling showed that only a very slight increase may occur due the abstraction proposed. As a result, no impact is expected on the water quality elements of WFD.

The drought permit will include a condition for environmental monitoring, which also includes water quality monitoring. In the event of an incident, any abstraction above the usual annual abstraction quantity (as permitted by the drought permit) will have to cease and mitigating actions from the Mitigation Plan will be required to be implemented by the water company.

7.3 Impact on geomorphology

No impact on geomorphology is foreseen, as the abstraction will be short term, and no additional infrastructure is required to allow the abstraction (as stated in the Description of the Proposals document).

7.4. Impact on ecology and conservation sites

Nearest Conservation Sites (Distance searched downstream to the tidal limit at the A390 road bridge at Lostwithiel (SX 10555 60108)) and Potential Impacts			
Designation Types	Name of Site	Distance & Direction	Potential Impacts
Special Area Conservation (SAC)	None	-	-
Ramsar	None	-	-
Special Protection Area (SPA)	None	-	-
Site of Special Scientific Interest (SSSI)	None	-	-
National Nature Reserve (NNR)	None	-	-
Local Nature Reserve (LNR)	None	-	-
Ancient Woodland	Higginsmoor Wood	0.09km d/s	
	Slip Wood	0.58km d/s	
	Polscoe/Trap Woods	1.57km d/s	
	Churchpark Wood	1.60km d/s	
Scheduled Ancient Monuments (SAMs)	Restormel Castle: motte, bailey and shell keep	1.13km d/s	
ESA	None	-	-
Local Wildlife Site	Lanhydrock	0km	
National Parks	None	-	-
Area of Outstanding Natural Beauty (AONB)	None	-	-
Heritage Coast	None	-	-
Restoring Sustainable Abstraction Programme (RSAP)	None	-	-
Protected Species	Sea Trout migratory route	0km	
	Atlantic Salmon migratory route	0km	
	European Eel migratory route	0km	
	Brown/Sea Trout	1.39km d/s	
	Bullhead	1.49km d/s	
	Atlantic Salmon	1.54km d/s	
	European Eel	1.54km d/s	
	Unidentified shad	1.65km d/s	

	Unidentified Shad migratory route	1.72km d/s	
	Allis Shad migratory route	2.49km d/s	
Protected Habitats	Deciduous woodland	0km	

No impact on Ancient Woodlands, SAMs, or local wildlife site is foreseen, as the abstraction will be short term, and operated under the same flow restrictions as the current licence.

Impact on protected species

There are concerns around fish migration this year, as migration has not yet taken place due to low flow in the Fowey. Monitoring and mitigations are needed to ensure there is not any significant impact on fish.

Risks to other elements of ecology (e.g. macroinvertebrates, macrophytes) are judged to be low.

Fish bank volumes are displayed within the net storage figures of the reservoir. The existing Colliford fisheries water bank has conditions relating to volume and repeat frequency (909 MI which is reset every 3 years and/or at 100% fill at Colliford). We will include details in the Mitigation Plan stating that the full volume of the existing water bank is made available for the November - March duration of the drought permit independent of the current recharging conditions (i.e. the full 909 MI is available and, if used, the water bank would reset at the end of the drought permit regardless of reservoir storage).

In the event of a significant pollution incident, SWW must make provision to release water from Colliford (separate to the fisheries water bank) and cease abstraction at Restormel at the request of the EA (when they are abstracting above their annual quantity in line with the drought permit).

There are concerns about the potentially large number of salmon in the Fowey below Restormel which may be impacted if there is not significant rain until December and abstraction is authorised to continue over at higher annual rates under this permit. This could create a large-scale incident. Consideration of this circumstance has been included in the monitoring and mitigation reports. The Mitigation Plan in the drought permit will prevent further abstraction if it becomes a contributor to a significant risk to the fish until the end of December when salmon no longer have the potential to migrate.

The permit will require environmental monitoring to be undertaken by the water company, if the environmental monitoring or the Agency identify any environmental impacts then mitigation measures will be required. The monitoring will be carried out prior to the implementation of the drought permit and during the operation of the drought permit, and as a minimum involve:

- A preliminary habitat walkover pre-implementation to identify and map salmonid spawning habitat and lamprey ammocoete habitat, measure wetted widths at key locations and take a baseline photo record of all key locations. This should cover from the Restormel intake to the A390 bridge at Lostwithiel.

- Weekly habitat walkovers to include: walkover survey of the same reach to identify signs of environmental stress (fish in distress, dry channel in identified spawning areas, etc.). The first survey should be timed to coincide with day one of implementation of the drought permit. These walkover surveys should be undertaken at least three times before their need is reviewed (over the first month of the drought permit implementation) if climatic conditions should change (heavy rainfall), but by default should be carried out throughout the duration of the DP.
- Weekly walkover survey conducted November to January inclusive recording the number of adult salmonids holding below Restormel weir (in the reach from Restormel Weir to the A390 Bridge). Reports to IEP inbox within one week of survey. Liaison will be required between the consultant undertaking this work and EA Fisheries prior to work commencing.
- Redd counting and mapping conducted twice weekly Nov-Jan inclusive below Restormel weir (in the reach from Restormel Weir to the A390 Bridge). Liaison will be required between the consultant undertaking this work and the Agency prior to work commencing.
- Counter data analysis - of upstream migrating adult salmonids and downstream migration of fish and eels. We would like weekly reviews of the fish counter data at Restormel to assess whether fish are able to migrate over the weir. We have been talking to WCRT who have staff available (at a cost) to do some video validation of the counter data in Nov/Dec - Working on previous year's event numbers we have approximated the required hours that need to be funded to carry out the following: -
 - Blind watching (BW) watching video data and then matching up events to the counter data allows us to estimate how many fish the counter may have missed (detection efficiency). It takes about 1 hour to review 1 hour of footage.
 - Measuring only (MO) – this is for all the u/s events and d/s in the counter data, verifying they are fish/eels and taking a length measurement. This allows us to calculate a sizing efficiency for the counter.
 - A MO review for 10 events takes approximately 1 hour so looking for and measuring.
 - In total BW and MO review of both months would take approximately 180 hours to be paid for by SWW.
 - Environment Agency staff need to carry out QA on the results. Approx. 37 Hours for this will need to be agreed and recharged.
- We will also require SWW's consultant to provide a final report after the spawning run providing a review of the counter data and the 'potential spawning population' data gathered during the walkovers and subsequent analysis against flow/level/rainfall/tidal data with consideration of
 - a) fish counts, patterns and trends,
 - b) minimum flow value required at Restormel to initiate upstream migration and
 - c) the influence of the DP on migration during implementation.
 The report needs to be started at the end Jan, draft submitted end Feb, final submitted end March, regardless of whether the DP continues this long.

The monitoring plan included within the permit ensures that if any environmental impacts are reported, or as so direct in writing by the Agency, SWW must cease abstraction under the additional rates of water. In doing so they must also undertake the mitigation measures within the mitigation plan as agreed in writing with the Agency, and these shall remain in effect until we are satisfied the remedial

action has been undertaken. In addition, we have included the following further protection when abstraction has is occurring in the form of the below condition:

During the period 1 November to 31 December 2022 inclusive, after abstraction has exceeded 28,900,000 cubic metres within 2022, the Water Company must not abstract for up to five consecutive days following a prior written notification from the Agency where,

- (i) following any antecedent period of at least two weeks, flows in the River Fowey as measured at the Restormel gauge have remained below 1.488 m³/s, and*
- (ii) The Agency consider, based on the best available information, that continued abstraction could result in a significant impact on migratory salmonid migration or wider fish populations;*

unless an equivalent simultaneous release to the amount abstracted under the Licence that day is made from Colliford reservoir to St Neot River at National Grid Reference SX 17940 70990 and/or from Siblyback reservoirs to Siblyback Stream at National Grid Reference SX 23200 70300.

The total period of cessation of abstraction arising from such notifications shall not exceed 10 days.

This condition ensures further protection for migratory salmonids and other fish when SWW have exceeded the annual rate on their current licence, to address the additional stress that an increase in annual rates under this drought permit could have on fish populations.

Summary:

7.5 Habitats Directive Regulations and Countryside and Rights of Way Act

The Environment Agency is of the opinion that the proposal is not likely to have a significant effect on any sites designated under the Habitats Directive or CRoW Act for the reasons given below and is not directly connected with the management of the site for nature conservation.

No Habitats Directive or CRoW Act sites have been identified within the impacted area of this permit application.

Natural England were informed of this by email on 20 October 2022.

7.6. Other considerations & consents

Consideration	Impact Yes/No	Comments
Flood Defence Consent & Flooding	No	As this proposed drought permit application is to increase abstraction, it is not anticipated that the drought permit will have any adverse impacts on flooding. A Flood Risk Activity Permit is not required for this site.
Reservoir Act	No	Not applicable for this application.

Recreation/amenity	Yes	<p>There are a number of high profile angling clubs who have fishing rights along the River Fowey, these would be impacted if the drought permit impacted upon fish stocks in the river. The angling clubs were consulted and four objections were received and later withdrawn following a meeting with SWW. There is a mechanism in place for them to claim compensation should there be an impact on their business.</p> <p>Defra's guidance on drought permits states a water company is liable to pay compensation for any loss or damage caused by a drought permit. The following can claim compensation:</p> <ul style="list-style-type: none"> • the owners of the water source associated with the drought permit • anyone with an interest in that source (for example, fishing clubs, navigation clubs, biodiversity groups) <p>We would not become involved in any compensation claims. This is between SWW and the claimants. Disputes regarding compensation claims are referred to the Lands Tribunal.</p>
Subsidence and desiccation	No	Not applicable to this application.
Other	No	No other considerations to note.

The close season for fishing will be in effect for the whole of the drought permit. Fishing of salmon, migratory trout, and brown trout will recommence after 31 March 2023.

Four objections to the drought permit were received from organisations associated with fishing. However, following a meeting with SWW these objections were withdrawn, see section 5 for further information.

8 Cost benefits and environmental mitigation or gain

Options considered	<ol style="list-style-type: none"> 1. Refuse 2. Issued as applied for 3. Issue with changes to the proposal
Preferred option	2. Issued with changes to the proposal, as resubmitted by SWW on 26/10/2022.
Reason for choosing preferred option	South West Water have applied to increase their abstraction rate from Restormel WTW. The application is in line with their published Drought Plan, however the water company were under-

	<p>prepared for the application. They have demonstrated a clear justification of need, including the exceptional shortage of rain and a potentially serious deficiency in supplies for 2023 if the reservoir isn't topped up in a timely manner. Therefore, there would not be justification to refuse the drought permit.</p> <p>Significant environmental impacts will be avoided and/or mitigated against with the inclusion of mitigation and monitoring conditions on the permit, and potential costs to the general public reliant on Colliford for mains water supply would be very high if rejection of the drought permit application resulted in failure of the mains water supply. The drought permit will aid in the quick recovery of water levels within the reservoir, whilst allowing SWW to supply their customers.</p> <p>The conditions will ensure that there is a balance between the need for public water supply and the needs of the environment.</p>
Assessment of likely benefits and costs of proposed option to:	
Water Resources/ The Environment	<p>There is low risk of environmental damage occurring as a result of this proposal.</p> <p>The inclusion of flow conditions will ensure there is enough water for the environment.</p> <p>Monitoring and mitigation will be implemented to ensure there is no significant environmental damage.</p>
The Applicant	<p>The applicant will benefit from the availability of water for their operation.</p> <p>The applicant will be recharged for the EA's costs involved with determining the permit</p>
Environment Agency	<p>The Environment Agency will incur the cost of determining the application and enforcing the licence. These costs will be recovered through the drought permit cost recovery process and recharged to the water company.</p> <p>In determining the licence in accordance with local and national policy, the Environment Agency is fulfilling its duties as a regulator.</p>
Rural Community	<p>No adverse effects upon on the social and economic well being of local communities in the rural area are perceived as a result of this proposal due to the conditions associated with the drought permit and the responses received from the advertisement.</p> <p>The impacts of the proposed drought permit are likely to be positive to the regional community through the provision of essential, safe drinking water supplies.</p>

9. Biodiversity and sustainable development

This application is for a drought permit and therefore sustainable development will not be considered in detail due to the short term nature of proposal. Biodiversity has been considered and is embedded within the conditions of the drought permit.

If granted the drought permit will recognise the needs of society by providing the applicant with a reliable water source to supply potable water to the public, improving the security of supply set against the background of exceptional shortage of rainfall.

10 Time limit

Unless revoked, the permit will expire on 31 March 2023. The abstraction period will be limited to 01 November 2022 to 31 March 2023 only and the conditions that specifically relate to this period will be clearly marked. From 1 April 2023 abstraction will revert back to the existing licence. Drought Permits are normally issued for up to 6 months, however, this expiry date was agreed because the environmental impacts would need to be re-assessed before summer months as the impacts would be different than those over winter.

11. Measurement of water abstracted

The Drought Permit application does not propose any changes to the compensation flow. Colliford compensation flows are measured by the EA at the Colliford Weir gauging station. Some of the flow bypasses the gauging weir. This is measured by SWW and the data provided to the EA as 'Colliford Res release flow by-passing Agency GS'. The Restormel abstraction prescribed flow and 50% take are measured at the EA's Restormel gauging station. No changes are proposed to the prescribed flow or 50% take.

The EA will request that the daily mean abstraction data from the Restormel abstraction (including separate data for the water going direct to the WTW and the water transferred to Colliford), together with the 'Colliford Reservoir release flow bypassing EA Gauge' data and the Trekeivesteps abstraction data, submitted weekly during the term of the drought permit. The requirement for more frequent data from the Trekeivesteps abstraction has been made through a modification of licence number 15/48/018/S/032 for the duration of the permit. This data should be submitted to: Hydrology.dandc@environment-agency.gov.uk for compliance review.

12. Special agreements

There is a draft Colliford Water Resource Zone operating agreement and operating manual which is a WRA 1991 Section 20 agreement between the EA and SWW. These documents include operational matters relating to the pump storage from Restormel to Colliford reservoir.

13. Duties arising under legislation

Section 4 Environment Act 1995 (pursuit of sustainable development).

Consideration has been given to whether additional requirements should be imposed in relation to the Agency's principal aim to contribute to attaining the objective of sustainable development under section 4 of the Environment Act 1995, but it is felt that existing requirements are sufficient in this regard and no other appropriate requirements have been identified.

The Agency has had regard to Government guidance issued under section 4(2) of the Act, namely 'The Environment Agency's Objectives and Contribution to Sustainable Development: Statutory Guidance (December 2002)'. Regarding the exercise of its water resources functions, this requires the Agency:

'To plan to secure the proper use of water resources by using strategic planning and effective resource management which takes into account environmental, social and economic considerations, and in particular: ' to ensure that the abstraction of water is sustainable, and provides the right amount of water for people, agriculture, commerce and industry and an improved water-related environment; and to develop and maintain a framework of integrated water resources planning for the Agency and water users.'

Section 6(1) Environment Act 1995 (conservation duties with regard to water)

Consideration has been given to the Agency's duty to promote the conservation and enhancement of the natural beauty and amenity of inland and coastal waters and the land associated with such waters, and the conservation of flora and fauna which are dependent on an aquatic environment. It is felt that the conditions of the licence as a whole will be sufficient in this regard and no other appropriate requirements have been identified.

The Agency has had regard to these factors by informing SWW of the key concerns with the proposal, and requiring appropriate monitoring and mitigation actions to address the environmental impact.

Section 6(2) Environment Act 1995

In reaching this determination the Agency has taken all such action as it considers necessary or expedient for the purposes of conserving, redistributing or otherwise augmenting water resources, and securing their proper and efficient use.

The Agency has had regard to these factors by ensuring the proposal appropriately balances the impact to the River Fowey.

Section 6(6) Environment Act 1995

It is the duty of the Agency to maintain, improve and develop fisheries of salmon, trout eels, lampreys, smelt and freshwater fish.

The Agency has had regard to these factors by requiring SWW to follow an appropriate monitoring schedule, which will identify any fish in distress and alleviate the impacts of the proposal through mitigation actions contained in a mitigation plan.

Section 7 Environment Act 1995 (pursuit of conservation interests)

Section 7(1)(c) of the Environment Act 1995 places a duty on the Agency, when considering any proposal relating to its functions, to have regard amongst others to any effect which the proposals would have on sites of archaeological, architectural, or historic interest; the economic and social well-being of local communities in rural areas; and to take into account any effect which the proposals would have on the beauty or amenity of any rural or urban area.

The Agency has had regard to these factors as indicated in 7.4 and 7.6

above.

Section 8 Environment Act 1995 and Sections 28G and 28I Wildlife and Countryside Act 1981

Under section 28G of the Wildlife and Countryside Act 1981, as inserted by CROW, the Agency has a duty to take reasonable steps to further the conservation and enhancement of the flora, fauna or geological or physiographical features by reason of which a site is of special scientific interest (SSSI). Under section 28I the Agency must assess whether any permission is likely to damage the special interest features for which a site is designated as a SSSI.

The Agency has applied this duty as indicated in section 7.5 above.

Section 39 Environment Act 1995

The Agency has a duty under section 39 of the Environment Act 1995 to take into account the likely costs and benefits of granting the applications ('costs' being defined as including costs to the environment as well as any person.).

The Agency has taken these factors into account as indicated in section 8 above.

The Conservation of Habitats and Species Regulations 2017

Under regulation 63 of these Regulations, the Agency must, before granting any abstraction or impoundment licence, assess whether it is likely to have a significant effect on a European site (Special Areas of Conservation or Special Protection Area), either alone or in combination with other projects; and if so assess the implications of the abstraction upon that site in light of its conservation objectives. In the light of the conclusions of the assessment (and subject to regulation 64) the Agency shall grant the applications only after having ascertained that they will not adversely affect the integrity of the European site.

The Agency has applied this duty as indicated in section 7.5 above.

Section 85 Countryside and Rights of Way Act 2000

Section 85 places a duty on Agency to have regard to the purpose of conserving and enhancing the natural beauty of the area of outstanding natural beauty (AONB) when exercising or performing any of our functions in relation to, or so as to affect, land in an such an area.

The Agency has applied this duty as indicated in section 7.4 above.

Section 40 Natural Environment and Rural Communities Act 2006

Section 40 of the Natural Environment and Rural Communities Act 2006 places a duty on the Agency to have regard, so far as is consistent with the proper exercise of its functions, to conserving biodiversity. 'Conserving biodiversity includes, in relation to a living organism or type of habitat, restoring or enhancing a population or enhancing a population or habitat.

The Agency has applied this duty by ensuring the habitat of the River Fowey is protected through monitoring and mitigation conditions on the permit.

Water Environment (Water Framework Directive) (England and Wales) Regulations 2017

As required by regulations 3 and 33 of these Regulations, in reaching these determinations the Agency has exercised its water resources functions so as to secure compliance with the Water Framework Directive and has had regard to the River Basin Management Plan for this river basin district which has been approved under regulation 31 of these Regulations.

The relevant provisions of the relevant River Basin Management Plan are set out in section 7 above.

For the reasons given in section 7 the Agency is satisfied that granting this application on the conditions proposed will not cause the current status of the water bodies to deteriorate, and that it will not compromise achieving good ecological potential and good surface water chemical status by the deadline specified in the River Basin Management Plan.

Section 15 Water Resources Act 1991 (particular regard to duties of water and sewerage undertakers imposed by Parts II-IV of the Water Industry Act 1991)

In considering this application the Agency must have particular regard to the duties imposed upon water undertakers under Parts II –IV of this Act, which include the water supply duties in Part III, and specifically the section 37 duty imposed on every water undertaker *‘to develop and maintain an efficient and economical system of water supply within its area, and to ensure that all such arrangements have been made for providing supplies of water to premises in that area and for making such supplies to persons who demand them....’*

The Agency has applied this duty by appropriately balancing the impact to the environment with the need to address the serious deficiency of supplies in the area.

Marine and Coastal Access Act 2009

Section 58 of this Act requires us to act in accordance with appropriate marine policy documents, unless relevant considerations indicate otherwise.

Section 125 of this Act requires that, so far as is consistent with their proper exercise, we exercise our functions in a manner that we consider best furthers the conservation objectives stated for Marine Conservation Zone(s) (MCZs) certain features of which are capable of being affected by our determination (to more than an insignificant degree) or else, where this is not possible, which least hinders the achievement of those objectives.

Section 126 of this Act requires that, before granting a Permit capable of affecting certain features of a MCZ(s) (to more than an insignificant degree), we consult with Natural England and that we are satisfied that there is no significant risk of the operation hindering the achievement of the conservation objectives stated for any relevant MCZ(s).

We have considered the Application and are satisfied that it would not affect, to more than an insignificant degree, the protected features of MCZs or the ecological or geomorphological process on which the conservation of such features are dependent.

Marine Strategy Regulations 2010

In relation to Regulation 9 of the Marine Strategy Regulations 2010 we have had regard to the marine strategy (in so far as it has been developed and published to date) and consider that there is nothing in it which would lead us to any different conclusions from those we have already reached through our other marine assessments.

Section 108 Deregulation Act 2015 – Growth duty

We have considered our duty to have regard to the desirability of promoting economic growth set out in section 108(1) of the Deregulation Act 2015 and the guidance issued under section 110 of that Act in deciding whether to grant this licence.

Paragraph 1.3 of the statutory guidance issued by the Department of Business, Energy and Industrial Strategy in March 2017 says:

“The primary role of regulators, in delivering regulation, is to achieve the regulatory outcomes for which they are responsible. For a number of regulators, these regulatory outcomes include an explicit reference to development or growth. The growth duty establishes economic growth as a factor that all specified regulators should have regard to, alongside the delivery of the protections set out in the relevant legislation.”

We have addressed the legislative requirements and environmental standards to be set for this abstraction in the body of the decision document above. The guidance is clear at paragraph 1.5 that the growth duty does not legitimise non-compliance and its purpose is not to achieve or pursue economic growth at the expense of necessary protections.

We consider the requirements and standards we have set in this permit are reasonable.

14. Conclusion and recommendation

Conclusion

This application is to allow SWW to abstract a greater volume of water from Restormel in 2022 and 2023 than would be allowed under their current licence. This is necessary due to an exceptional shortage of rain (the EA agrees with the case made by SWW for this). Contributing factors are judged to be the failure of SWW to apply for a variation when advised, and a failure to pump sufficient water into Colliford reservoir in previous years.

Full and due consideration has been given to any comments or representations made, and due regard has been taken of protected rights and other lawful interests.

The conditions incorporated on the licence are considered to be necessary and reasonable in the light of the available and presented evidence. The conditions are also considered to be consistent with appropriate standards for enforcement by the Environment Agency.

Recommendations:

The Agency has therefore decided to grant a drought permit under section 79A of the Water Resources Act 1991 subject to conditions, as drafted and attached to this report. The permit will be time limited to 31 March 2022.


Monitoring and mitigation conditions are necessary to ensure the environmental impact of the drought permit is acceptable, and therefore there is a requirement for SWW to submit relevant plans to the EA for approval.

A condition requiring SWW to release water from Colliford if requested by the EA, to mitigate a significant pollution incident for example, will be required.

Other conditions (including a 50% take condition and hands off flow condition) should be based on the existing Restormel abstraction licence.

15. Authorisation

Applicant :	South West Water Limited
Application Reference:	DP2022-1548018S040

Report by: Elizabeth Dean Position: Permitting Officer	Date: 21/10/2022	Signed: E E Dean
Report by: James McWhinney Position: Permitting Officer	Date: 27/10/2022	Signed: J.McWhinney
Report by: Colleen Wood Position: Permitting Officer	Date: 27/10/2022	Signed: C.wood 27.10.22
Peer Review (Audit) by: Adam Korzeniowski Position: Senior Permitting Officer I have reviewed all permitting documents in line with appropriate regime specific check lists and I hereby approve the proposed permit for issue. A record of this has been saved to EDRM and named Peer review sign off”.	Date: 28/10/2022	Signed: A.Korzeniowski
Audit by: Lynsay McLean Position: IEP – (Acting) Senior Environmental Planning Officer	Date: 31/10/2022	Signed: LJ McLean
Audit by: Lucy Ives Position: OCS – Area Drought Lead	Date: 28/10/2022	Signed: L.Ives
Authorised by: Tim De Winton Position: Area Manager	Date: 31/10/2022	Signed:  Tim De Winton