



**Environment
Agency**

Drought Permit – Modify existing abstraction

- Section 79A Water Resources Act 1991 as amended by the Environment Act 1995

The Environment Agency grants this drought permit to:

South West Water Limited (“the Water Company”)

Peninsula House
Rydon Lane
Exeter
EX2 7HR

Company registration number: 02366665

This drought permit authorises the Water Company to abstract water pursuant to licence number SW/049/0281/001/R01 (“the Licence”) but with the provisions of that Licence modified as set out in the Schedule to this drought permit. This drought permit commences from the effective date shown below and shall remain in force until the date of expiry shown below.

All other provisions of the said Licence remain in full force and effect.

Signed

Date of issue.....11 November 2022

Date effective11 November 2022

Date of expiry.....31 March 2023

.....
Mark Rice
Area manager

Environment Agency
Manley House
Kestrel Way
Exeter
EX2 7LQ

Note: References to "the map" are to the map which is attached to this drought permit

SCHEDULE OF CONDITIONS

1 PURPOSE OF ABSTRACTION

1.1 The following purpose is added to the Condition 4 of the Licence:

“Transfer to the Stannon Stream the for the purpose of flow augmentation.”

2 POINTS OF ABSTRACTION

2.1 The following point is added to Condition 2 of the Licence:

“For the purpose of transfer to the Stannon Stream:

At National Grid Reference SX 123 809 marked ‘B’ on the map.”

3 MEANS OF ABSTRACTION

3.1 The following means of abstraction is added to Condition 3 of the Licence:

“For the purpose of transfer to the Stannon Stream:

A pump.”

4 MAXIMUM QUANTITY OF WATER TO BE ABSTRACTED

4.1 Condition 6.1 of the Licence shall be substituted with the following:

“For the purpose of public water supply:

262.8 cubic metres per hour

6,000 cubic metres per day, subject to conditions 6.1.3, 6.1.4 and 6.1.9 below
1,746,000 cubic metres per year

At an instantaneous rate not exceeding 73 litres per second.

For the purpose of transfer to the Stannon Stream:

864 cubic metres per day.

Note: an hour means any period of 60 consecutive minutes, a day means any period of 24 consecutive hours and a year means the 12 month period beginning on 1 April 2022 and ending on 31 March 2023.”

5 RECORDS

5.1 Condition 8.4 of the Licence shall be substituted with the following:

“The Water Company shall send a copy of the records required by conditions 8.1, 8.2 and 8.3 of the Licence, or summary data from them, to the Agency at the same time each week or within 24 hours of being so directed in writing by the Agency.”

5.2 The following condition is added to Condition 8 of the Licence:

The Water Company shall measure and record the volume of water abstracted from Stannon Lake which is pumped to Colliford Reservoir each day. The Water Company shall send a copy of these records, or summary data from them, to the Agency at the same time each week or within 24 hours of being so directed in writing by the Agency.

6 FURTHER CONDITIONS

6.1 The following further conditions are added to Condition 9 of the Licence:

6.1.1 Unless no abstraction is taking place by virtue of condition 9.1 of the Licence, when the daily mean flow in the New North Leat as measured at National Grid Reference SX 12248 80927 marked 'Z' on the map is less than 13 litres per second for any period of five consecutive days, the Water Company shall make a continuous transfer of water at a daily mean rate of 10 litres per second from Stannon Lake to the Stannon Stream at the Stannon Lake Overflow at National Grid Reference SX 12246 80799, marked 'Y' on the map.

Note: a day means any period of 24 consecutive hours.

6.1.2 The flow augmentation invoked under condition 6.1.1 of this permit shall not cease until the daily mean flow in the New North Leat measured at National Grid Reference SX 12248 80927 is equal to or greater than 13 litres per second for a period of 5 consecutive days.

6.1.3 Abstraction under condition 4.1 of this permit for the purpose of public water supply shall not exceed 4,000 cubic metres per day unless the requirements of conditions 6.1.1 and 6.1.2 above are met; and the total daily abstraction for both purposes specified in condition 4.1 shall not cause the level of water in Stannon Lake as measured at the Stannon Lake Outfall to fall below the point 3 metres below the outfall's invert level.

6.1.4 Within 7 calendar days from the date that this permit is issued the Water Company shall install the infrastructure to enable the transfer of water from Stannon Lake to Stannon Stream as specified in condition 6.1.1.

6.1.5 (i) The Water Company shall install a screen with maximum 9mm aperture size to prevent the entrapment, entrainment or impingement of eel at the point of abstraction specified in condition 2.1 of this permit.

(ii) The Licence Holder shall maintain, repair or replace the eel screen to ensure that it remains effective at all times and keep records of such maintenance.

(iii) The Licence Holder shall keep records of such maintenance for 6 years and shall make them available during all reasonable hours for inspection by the Agency.

Environmental monitoring

6.1.6 The Water Company shall undertake environmental monitoring as set out in the 'environmental monitoring schedule' attached to this permit at Appendix 1.

- 6.1.7 The Water Company shall undertake flow monitoring as set out in the 'Flow measurement survey schedule' attached to this permit at Appendix 2A.
- 6.1.8 The Water Company shall undertake water quality monitoring as set out in the 'water quality monitoring schedule' attached to this permit at Appendix 2B.
- 6.1.9 Abstraction under condition 4.1 of this permit for the purpose of public water supply shall not exceed 4,000 cubic metres per day until the pre-implementation surveys specified in the 'Timing of monitoring' section of Appendix 1 and Appendix 2B have been completed, and the Agency has confirmed this in writing.

Mitigation Conditions

- 6.1.10 The Water Company shall notify the Agency by telephone as soon as reasonably practicable on 0800 807060 to provide details of any environmental impacts as specified in Appendix 1.
- 6.1.11 If environmental impacts are notified under condition 6.1.10 by the Water Company, or if the Agency so notifies the Water Company in writing, the Water Company shall undertake such of the mitigation actions identified in the Mitigation Plan specified in Appendix 3 as the Agency may specify in writing, and in accordance with the Agency's written specifications.
- 6.1.12 Should the mitigation actions need to be implemented as set out in Appendix 3, the Water Company shall submit updates weekly, or as otherwise agreed in writing with the Agency. The updates shall include but not be limited to the following: the mitigation(s) implemented, and the effect of the mitigation(s) implemented.
- 6.1.13 Following the cessation of any implemented mitigation action set out in Appendix 3 a complete summary report shall be sent to the Agency within 7 working days.

APPENDIX 1 – ENVIRONMENTAL MONITORING SCHEDULE

Assessment Type:	<p>Visual monitoring “walkover surveys” of the New North Leat and the Stannon Stream to the confluence with Crowdy Stream, to identify environmental impacts as a result of the Water Company abstracting above 4,000 cubic metres per day from the Lake.</p> <p>The Water Company shall discuss and agree with the Agency any proposed changes to this monitoring schedule in advance of carrying out any of the survey work.</p>
Duration of Monitoring:	The environmental monitoring surveys shall take place from the first day that this drought permit becomes effective, until this drought permit expires or is revoked.
Environmental Impacts:	<p>The following are suggested signs of environmental impacts but are not exhaustive. If advice is required then the Agency can be contacted on 0800 807060.</p> <ul style="list-style-type: none"> • Fish in distress, for example gasping at the surface or leaping out of the water. • Dead fish. • Concentration of fish in restricted areas/pools which could increase susceptibility to predation. • Inhibition of movement of fish past river structures or other barriers. • Low levels of dissolved oxygen. • Increased turbidity in the watercourse. • Signs of polluting discharges (e.g. increased sediment in the watercourse) during walkover surveys, impacts exacerbated during lower flows and/or reduced dilution. • Algal blooms. • Establishment and/or expansion of invasive non-native species.
Monitoring Method & Standard of Assessment:	<p>a) ‘Preliminary habitat walkover’ 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, conducted by a suitably experienced fisheries ecologist.</p> <p>b) ‘Habitat impact assessment walkovers’ to identify signs of environmental stress (fish in distress, dry channel in identified spawning areas, etc.), conducted by a suitably experienced fisheries ecologist. Particular attention needs to be given to known spawning areas/mapped redds to ensure there is sufficient flow over them and that they are not at risk of exposure.</p> <p>c) ‘Redd counting and mapping’: Digital mapping of salmonid redds providing location, redd size/area, and georeferenced photos.</p> <p>Where an environmental impact is identified, the Water Company shall measure and record the following information.</p>

	<p>For all environmental impacts identified:</p> <ul style="list-style-type: none"> • The date, time and location of the site of environmental impacts observed. • Dissolved oxygen concentration, water temperature, suspended solids, ammonia and pH measurements shall be taken and recorded anywhere in the survey area where (if) signs of environmental stress are identified. • A photo or photos shall be taken of any signs of environmental distress. • Weather conditions at the time of the observations. <p>Where relevant to the environmental impacts observed:</p> <ul style="list-style-type: none"> • Approximate number of dead fish. • Any signs of damage or disease. • Approximate number of fish in distress, gasping at the surface or leaping out of the water. • Whether the fish are being stranded in shallow pools. • Description of structures and stretches of any watercourses that have no flow or significantly reduced flow. • Approximate size of the fish affected. • The species affected. • Signs of pollution. • Presence of algal blooms/scums. • Species, location and extent of invasive non-native species.
Timing of Monitoring:	<p>a) 'Preliminary habitat walkover' to be completed immediately prior to the first day on which the water company abstract above 4000 m³ for the purpose of public water supply</p> <p>b) 'Habitat impact assessment walkovers': First survey on the first day on which the water company abstract above 4000 m³ for the purpose of public water supply, then weekly thereafter for the duration of the drought permit.</p> <p>c) 'Redd counting and mapping': First survey on the first day on which the water company abstract above 4000 m³ for the purpose of public water supply, then weekly for the period 1 November 2022 to 31 January 2023.</p> <p>The Water Company shall discuss and agree with the Agency any proposed changes to the frequency of monitoring.</p>
Location of Monitoring:	<p>1) The reach of Stannon Stream between National Grid References SX 12246 80799 (Stannon Lake) and SX 11067 79997 (upstream of Crowdy Stream confluence).</p> <p>2) The full length of New North Leat between National Grid References SX 13270 81476 and SX 12040 80501.</p>
Results:	<p>In addition to any notification given under condition 6.1.10 a copy of the survey results shall be sent to the Environment Agency IEP (Integrated Environmental Planning) team ieppdevonandcornwall@environment-agency.gov.uk within 7 calendar days of each survey taking place.</p>

Environment Agency Reference:	DP2022-SW0490281001R01
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	<p>A final report shall be sent to the Environment Agency IEP team after the spawning run has finished, providing a review of the potential spawning population data gathered during the walkovers, and subsequent analysis against flow/level/rainfall data including consideration of:</p> <ul style="list-style-type: none"> a) fish/redd counts, patterns and trends, b) the influence of the drought permit on migration during implementation.
Responsibility:	<p>Unless otherwise discussed and agreed in writing with the Agency, the Water Company will be responsible for all of the costs associated with this monitoring programme.</p> <p>Health and safety requirements whilst carrying out the surveys are the responsibility of the Water Company.</p>

APPENDIX 2A - FLOW MEASUREMENT SCHEDULE

Assessment Type:	Flow measurement in the Stannon Stream.
Duration of Monitoring:	The flow measurement surveys shall start within seven days from the first day that this drought permit becomes effective, until this drought permit expires or is revoked.
Monitoring Method & Standard of Assessment:	<p>Unless otherwise advised by the Agency, the flow measurements shall be conducted using either:</p> <ul style="list-style-type: none"> i) An impellor type current meter, or ii) acoustic doppler current profiling. <p>Within each survey the date, time and local weather conditions shall be recorded, along with comment on any significant weather events during the preceding days that could influence the survey results.</p>
Timing of Monitoring:	Weekly
Location of Monitoring:	<ol style="list-style-type: none"> 1) The Stannon Stream at National Grid Reference SX 11195 80020 (upstream of Crowdy Stream confluence) 2) The Stannon Stream at National Grid Reference SX 10983 79943 (downstream of Crowdy Stream confluence)
Standard	<p>All current meter flow measurements shall be conducted to ISO 748:2007 standard, or current equivalent.</p> <p>All flow measurement using an ADCP (Acoustic Doppler Current Profiler) method shall be conducted to the appropriate and accepted standard.</p>
Results:	<p>Following the completion of each of the flow measurements the Water Company shall provide confirmation of the calculated flow value.</p> <p>The flow monitoring results shall be sent to the Environment Agency IEP (Integrated Environmental Planning) team ieppdevonandcornwall@environment-agency.gov.uk each week.</p>
Responsibility:	<p>Unless otherwise discussed and agreed in writing with the Agency, the Water Company will be responsible for all of the costs associated with this monitoring programme.</p> <p>Health and safety requirements whilst carrying out the surveys are the responsibility of the Water Company.</p>

APPENDIX 2B - WATER QUALITY MONITORING SCHEDULE

Assessment Type:	Water quality monitoring in the Stannon Stream to assess the effect the change in abstraction has upon the water quality in Stannon Stream
Duration of Monitoring:	The water quality monitoring shall take place from the first day that this drought permit becomes effective, until this drought permit expires or is revoked.
Monitoring Method & Standard of Assessment:	The Water Company shall take readings of the following parameters at fortnightly intervals: <ul style="list-style-type: none"> • dissolved oxygen content; • water temperature; • pH; and • turbidity.
Timing of Monitoring:	A survey immediately prior to the first day on which the water company abstract above 4000 m ³ for the purpose of public water supply and then fortnightly thereafter for the duration of the drought permit.
Location of Monitoring:	<ol style="list-style-type: none"> 1) The Stannon Stream at National Grid Reference SX 11195 80020 (upstream of Crowdy Stream confluence) 2) The Stannon Stream at National Grid Reference SX 10983 79943 (downstream of Crowdy Stream confluence)
Results:	A summary of the water quality monitoring results shall be sent to the Environment Agency IEP (Integrated Environmental Planning) team ieppdevonandcornwall@environment-agency.gov.uk within 7 days of completion of the measurements.
Responsibility:	<p>Unless otherwise discussed and agreed in writing with the Agency, the Water Company will be responsible for all of the costs associated with this monitoring programme.</p> <p>Health and safety requirements whilst carrying out the surveys are the responsibility of the Water Company.</p>

APPENDIX 3 - MITIGATION

Environmental Impact	Mitigation Plan
Pollution incident, where there is evidence of ecological distress and/or if reduced flows are having detrimental environmental consequences on the water quality of downstream waterbodies.	Releasing additional flows from Stannon Lake to Stannon Stream via temporary pumps. An eel screen with maximum 9mm aperture size shall be installed on the pump(s) installed for this purpose.
Salmonid redds at risk of exposure during salmonid spawning season	Releasing additional flows from Stannon Lake to Stannon Stream via temporary pumps. An eel screen with maximum 9mm aperture size shall be installed on the pump(s) installed for this purpose.
<ul style="list-style-type: none"> • Fish in distress, for example gasping at the surface or leaping out of the water. • Dead fish. • Concentration of fish in restricted areas/pools which could increase susceptibility to predation. • Inhibition of movement of fish past river structures or other barriers 	<p>Releasing additional flows from Stannon Lake to Stannon Stream via temporary pumps. An eel screen with maximum 9mm aperture size shall be installed on the pump(s) installed for this purpose.</p> <p>A number of additional mitigation measures can be taken, and the decision on which method to deploy shall be taken in discussion with the Agency, and according to the specific nature of the problem. Options may include:</p> <ul style="list-style-type: none"> a. Deployment of localised aeration; b. Installation of fish refugia in spatially limited areas; c. Fish rescue and relocation if no other suitable alternative is available. d. Funding of appropriate reasonable measures (e.g. habitat restoration) could be made in mitigation of ecological damage occurring in reaches affected by reduced flows in the longer term.

ADDITIONAL INFORMATION

Note: the following information is provided for information only. It does not form part of the licence.

REASONS FOR MODIFICATIONS

Conditions 6.1.6 to 6.1.9 require the Water Company to monitor for signs of environmental impacts that may be caused by or affected by a reduction in overflows at the Stannon Lake Outflow, as a result of the increased abstraction from the Lake.

Conditions 1.1, 2.1, 3.1, 6.1.1 to 6.1.3, and 6.1.10 to 6.1.13 have been included to mitigate against any environmental impacts that may be caused by or affected by a reduction in overflows at the Stannon Lake Outflow, as a result of the increased abstraction from the Lake.

Conditions 6.1.1 and 6.1.2 require augmentation of flow in the Stannon Stream during dry periods, as defined by low flows measured in the New North Leat. The augmented flows are designed to compensate any spill water that does not occur due to the increased draw down of the lake from this drought permit. Though not hydrologically linked to the lake, using the existing gauging equipment in the New North Leat avoids the need for the installation of continuous flow monitoring in the Stannon Stream.

Condition 6.1.5 has been included to prevent the entrapment or entrainment of European Eel at the intake from the Stannon Lake used for flow augmentation.

Condition 5.1 increases the frequency at which the Water Company must send the Agency their records of daily abstraction volumes, water levels in Stannon Lake, the outflow from Stannon Lake and flows in New North Leat, to weekly for the duration of this drought permit.

Condition 5.2 has been included to verify that this drought permit is contributing to refill of Colliford Reservoir.

IMPORTANT NOTES

Environmental Monitoring Plan

The conditions and monitoring incorporated on this permit is in addition to the Environmental Monitoring Plan agreed annually between the Environment Agency and South West Water.

Reports

The records required in conditions 5.1 and 5.2 should be sent to the Environment Agency IEP (Integrated Environmental Planning) team mailbox at: ieppdevonandcornwall@environment-agency.gov.uk

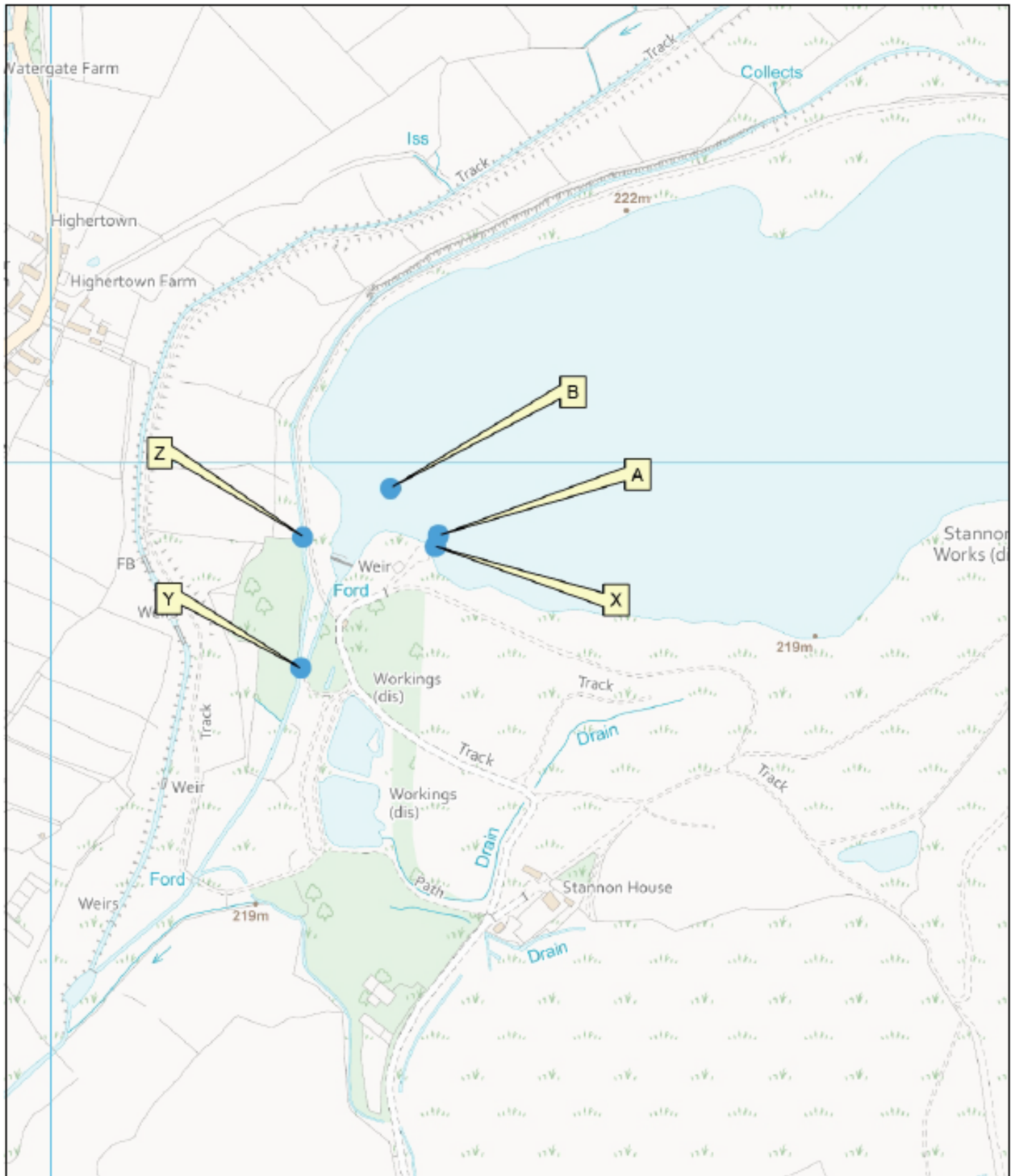
Screening

The Agency may have regard to its best practice guide, the Eel Manual: Screening at intakes and outfalls: measures to protect eel (or equivalent guidance) in agreeing where, how and what type of eel screen should be installed and together with the results of any

monitoring in determining whether the eel screen is properly effective and maintained, and in judging whether it is necessary to require repair or replacement of the eel screen.

Augmentation flows

At all times when augmentation flows are required under condition 6.1.1 or 6.1.11, the water company should either make a daily inspection with a site diary record or telemeter this activity with alarms to be monitored remotely to check the augmentation flow is operating.



**MAP ACCOMPANYING DROUGHT PERMIT
NUMBER DP2022-SW0490281001R01**

Scale 1:5,000



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