

Resource Zone**DYFFRYN CONWY****Ref No 8035**

Resource Location	LLYN CONWY
Licence Number	23/66/1/0004
Resource Type	IMPOUNDING RESERVOIR

Resource Location	LLYN COWLYD
Licence Number	SH 73750-63310
Resource Type	IMPOUNDING RESERVOIR

Resource Location	LLYN ANAFON
Licence Number	23/65/19/0004
Resource Type	IMPOUNDING RESERVOIR

Resource Location	LLYN ELSI
Licence Number	23/66/6/0004
Resource Type	IMPOUNDING RESERVOIR

Resource Location	CEUNANT Y GARNEDD
Licence Number	23/66/6/0007
Resource Type	IMPOUNDING RESERVOIR

The location of the resource zone is shown on the Map of the Company area earlier in the Plan document and the location of the resources are shown on the zonal map at the end of this section.

Current Resource Disposition

The principal resource in this zone is Llyn Cowlyd. The storage in Cowlyd is managed between Welsh Water and Innogy who operate a Hydro Electric Power scheme. The upper 47% of storage is shared between Welsh Water and Innogy. Below the 53% storage value the remaining water is for Welsh Water's exclusive use. There are no compensation water discharge requirements for Llyn Cowlyd.

Llyn Conwy is the secondary source in the zone which, along with its own supply area, can feed part of the 'normal' Cowlyd supply area. A compensation discharge of 0.91 Ml/d is required from Llyn Conwy.

Llyn Anafon, Llyn Elsi, and Ceunant y Garnedd have now been taken out of routine supply and are effectively mothballed.

Given the reliance of this zone on the reservoir storage this zone is considered to be a Resource

Category A.

During 2004 / 05 the average demand for this zone was 29.6 Ml/d and the peak week demand was 32.8 Ml/d.

Drought Actions - Sequence of Events

Developing Drought

It is most likely that the early indications of developing drought will be reflected in low rainfall values. The Company uses the monthly rainfall record from the Llwydiarth Esgob raingauge on Ynys Mon, and Cwm Dyli raingauge in Snowdonia together with the Alwen reservoir raingauge record to track the trend of rainfall in this area of North Wales. As described earlier in the general section, the 1-in-10 dry year Tabony sequence is used to provide an appropriate trigger, requiring two consecutive months to have fallen below the Tabony sequence before it will be necessary to call the Drought Liaison meeting with Welsh Assembly Government and EA Wales.

In addition Welsh Water will continue to track reservoir levels in Cowlyd and compare observed storage values with the Drought Diagram Figures North 10.

Even in significant drought years experienced since 1970, Llyn Cowlyd has seldom been drawn down significantly below the 50% full figure. The likely drought scenario for Llyn Cowlyd would be concerns for refill in a dry winter following a dry summer. For Llyn Cowlyd the Company has the option to negotiate to purchase additional quantities of storage from the shared volume at the expense of lost generation capability by Innogy. This approach would be most likely to be pursued in the period October to June following the drawdown of Cowlyd into the Drought Zone of the Drought Diagram to ensure sufficient refill for the following summer.

Drought

If Cowlyd storage (see Figure North 10) falls into the Drought Zone of the Drought Diagram and critical period demand exceeds 34 Ml/d, a referral will be made to the Dwr Cymru Executive to consider Demand Management alternatives, including increasing public awareness, requests for voluntary restraint, and subsequently hosepipe restrictions.

Estimated Savings from broad actions are as follows:

Increasing public awareness	-	MI/d
Requests for voluntary restraint	1.4	MI/d
Hosepipe restrictions (includes above)	4	MI/d

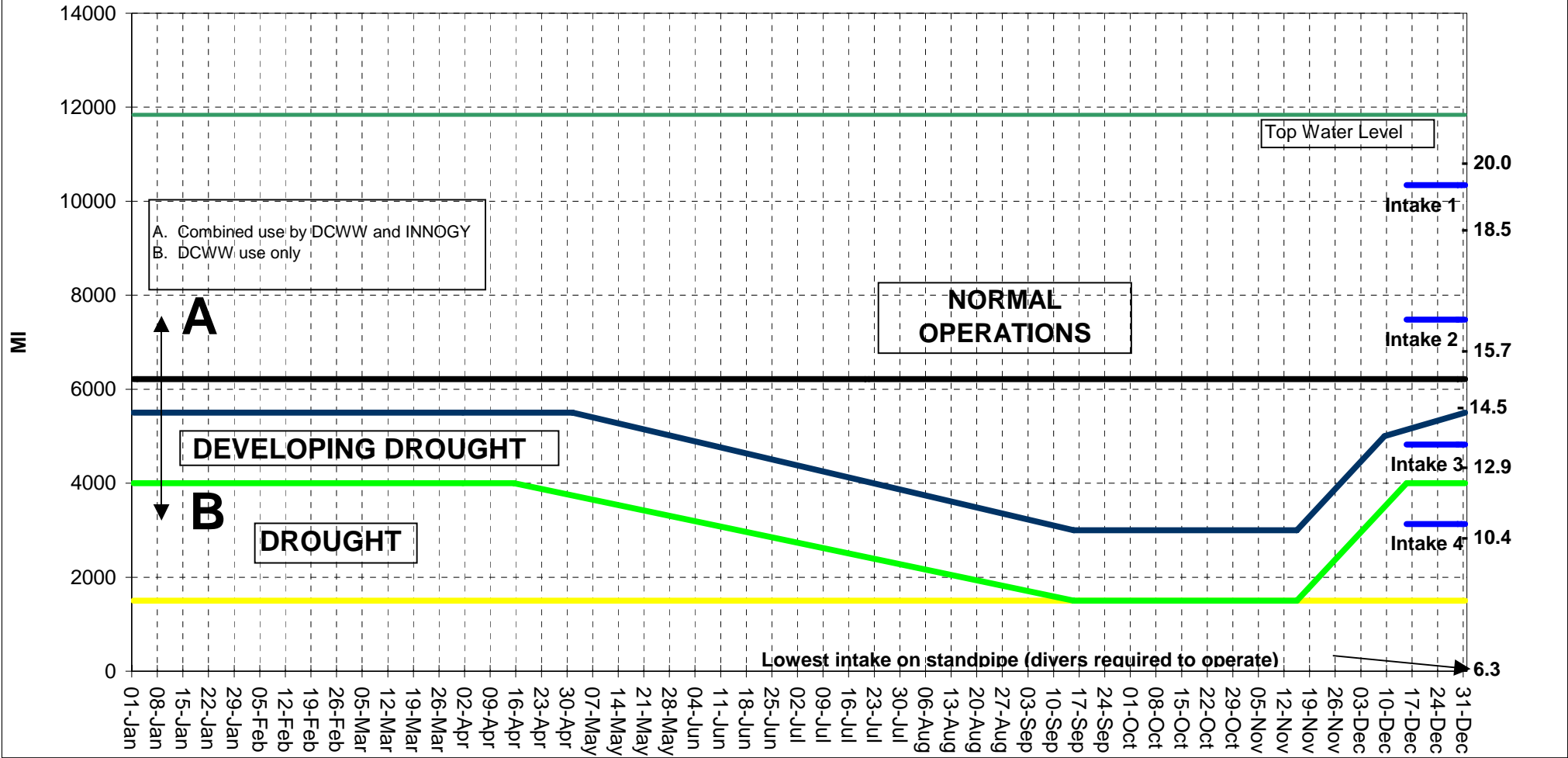
Should drought conditions continue to deteriorate the Company would consider how restrictions on non-essential use should be deployed to assist the position. Restrictions on useage such as the pressure-washing of buildings, or the use of automate car washing machinery which does not have a water recovery process for example, would be considered for restrictions before the Company pursued supply-side initiatives which would have a disproportionate environmental effect.

At the same time the Company will consider the opportunity to use the mothballed sources at Llyn Elsi and Llyn Anafon by the introduction of package treatment plants at each of these sites.

Severe Drought

There are no identified Severe Drought options for the Dyffryn Conwy zone as the Cowlyd storage is considered to be sufficiently robust even under extended drought conditions.

North 10 COWLYD DROUGHT DIAGRAM



DROUGHT PLAN DYFFRYN CONWY



Key

- IMPOUNDING RESERVOIR
- RIVER ABSTRACTION, SPRING
- BOREHOLES
- IMPORTED SUPPLY FROM SEVERN TRENT
- WATER TREATMENT WORKS