

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| E. Economic Level of Leakage Target of 10.22 Mld, to be achieved by 2009/10. | x | x | x | x | x | x | x | x | x |
| F. Increased rate of mains renewal over the next five years, as part of the leakage control strategy | x | x | x | x | x | x | x | x | x |
| G. Continued provision of subsidised supply pipe repairs to all domestic customers | x | x | x | x | x | x | x | x | x |
| H. Continued promotion of the free optional meter policy to domestic customers. At the current rate of uptake (3.2% of unmeasured customers per year), DVW forecasts that meter penetration will exceed 80% by the end of the planning horizon | x | x | x | x | x | x | x | x | x |
| I. Continue the policy of distributing cistern displacement devices to customers on request. | x | x | x | x | x | x | x | x | x |
| Other Water Resources Plans | | | | | | | | | |
| Not Applicable* | - | - | - | - | - | - | - | - | - |
| Other External plans | | | | | | | | | |
| Not Applicable# | - | - | - | - | - | - | - | - | - |

* - The elements of the DVW WRMP are all within the provision of the existing licenced abstractions and are unlikely to produce hazards which lead to in- combination effects with other adjoining WRMP's over and above the effects of those plans. This has been demonstrated through the EA's Catchment Abstraction management Strategy and Review of Consents process. The hazards and effects of other such plans are being considered and assessed separately by the relevant responsible authorities. DVW Water Supply Area Adjoins the Supply Areas of Dwr Cymru Welsh Water, United Utilities and Severn Trent.

- The West Cheshire - North East Wales Sub Regional Spatial Strategy has identified non site specific policies. The RSS makes provision for any prioritised elements of the strategy to be subject to appropriate assessment, if appropriate, when site specific details and scheme promotion are put forward. Demand forecasts and related water resource requirements have been based on projected growth within the region and have been assessed as part of the development of the WRMP. Therefore, it is not appropriate to consider hazards associated with increased demand in combination.


2 Table 2 - Site details:

| Name, Legal Status, and Priority of the European site: | Name | Status | Priority Feature(s) |
|---|---|---------------|--|
| | River Dee and Bala Lake | SAC | None listed |
| | Deeside and Buckley Newt Sites | SAC | None listed |
| | Alyn Valley Woods | SAC | <i>Tilio-Acerion</i> forests Alluvial forests |
| | Johnstown Newt Sites | SAC | None listed |
| | Fenn's, Whixhall, Bettisfield, Wern & Cadney Mosses | SAC | Active raised bogs |
| | Berwyn and South Clwyd Mountains | SAC | Blanket bogs |
| | Midland Meres and Mosses (Phases 1 and 2) | RAMSAR | N/A |

3 Table 3 - Features List:

| | Features | Plan has associated hazards to which features are sensitive? | Details of Hazard (plan component reference) | Condition (SSSI Refs; Size) |
|---|--|--|--|--|
| River Dee and Bala Lake SAC (UK0030252) | | | | |
| 3260 | Watercourses of plain to montane levels with the <i>Ranunculus fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation | Yes | Increased abstraction (A, B). However, increase is marginal and within existing licence limits, thus presenting negligible risks | Total area: 1308.93 ha England SSSI: Fav: 234.7 ha Unf: 139.76 ha |
| 1106 | Atlantic Salmon <i>Salmo salar</i> | Yes | Increased abstraction and associated entrainment (A, B). However, existing screening arrangements have been assessed as adequate to not cause a significant risk to the designated fish populations. No increased risk over and above the existing situation. See Section 2 below. | Wales SSSI: Not available from CCW website |
| 1831 | Floating water-plantain <i>Luronium natans</i> | No | | |
| 1095 | Sea lamprey <i>Petromyzon marinus</i> | Yes | A, B: As above re <i>Salmo salar</i> | |
| 1096 | Brook lamprey <i>Lampetra planeri</i> | Yes | A, B: As above re <i>Salmo salar</i> | |
| 1099 | River lamprey <i>Lampetra fluviatilis</i> | Yes | A, B: As above re <i>Salmo salar</i> | |
| 1163 | Bullhead <i>Cottus gobio</i> | Yes | A, B: As above re <i>Salmo salar</i> | |
| 1355 | Otter <i>Lutra lutra</i> | No | | |
| Deeside and Buckley Newt Sites (UK0030132) | | | | |
| 91A0 | Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles | No | | Area: 207.52 ha |
| 1166 | Great crested newt <i>Triturus cristatus</i> | No | | |
| Alyn Valley Woods (UK0030078) | | | | |
| 9180 | <i>Tilio-Acerion</i> forests of slopes, screes and ravines | No | | Area: 168.3 ha |
| 6210 | Semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>) | No | | |

| | Features | Plan has associated hazards to which features are sensitive? | Details of Hazard (plan component reference) | Condition (SSSI Refs; Size) |
|--|---|--|--|-----------------------------|
| 91E0 | Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i>) | No | | |
| Johnstown Newt Sites (UK0030173) | | | | |
| 1166 | Great crested newt <i>Triturus cristatus</i> | No | | Area: 69.61 ha |
| Fenn's, Whixhall, Bettisfield, Wern & Cadney Mosses (UK0012192) | | | | |
| 7110 | Active raised bogs | No | | Area: 949.2 ha |
| 7120 | Degraded raised bogs still capable of natural regeneration | No | | |
| Berwyn and South Clwyd Mountains (UK 0012926) | | | | |
| 4030 | European dry heaths | No | | Area: 27221.21 ha |
| 7130 | Blanket bogs | No | | |
| 6210 | Semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>) | No | | |
| 7140 | Transition mires and quaking bogs | No | | |
| 8120 | Calcareous and calcshist screes of the montane to alpine levels (<i>Thlaspietea rotundifolii</i>) | No | | |
| 8210 | Calcareous rocky slopes with chasmophytic vegetation | No | | |
| Midland Meres and Mosses Phase 1 (UK11043) | | | | |
| 1 | The site comprises a diverse range of habitats from open water to raised bog | No | | Area: 510.88 ha |
| 2 | Supports a number of rare species of plants associated with wetlands including five nationally scarce species together with an assemblage of rare wetland invertebrates (three endangered insects and five other British Red Data Book species of invertebrates). | No | | |
| Midland Meres and Mosses Phase 2 (UK11080) | | | | |
| 1 | The site comprises a diverse range of habitats from open water to raised bog. | No | | Area: 1588.24 ha |

| | Features | Plan has associated hazards to which features are sensitive? | Details of Hazard (plan component reference) | Condition (SSSI Refs; Size) |
|---|---|---|---|------------------------------------|
| 2 | <p>Supports a number of rare species of plants associated with wetlands, including the nationally scarce cowbane <i>Cicuta virosa</i> and, elongated sedge <i>Carex elongata</i>. Also present are the nationally scarce bryophytes <i>Dicranum affine</i> and <i>Sphagnum pulchrum</i>.</p> <p>Also supports an assemblage of invertebrates including several rare species. There are 16 species of British Red Data Book insect listed for this site including the following endangered species: the moth <i>Glyphipteryx lathamella</i>, the caddisfly <i>Hagenella clathrata</i> and the sawfly <i>Trichiosoma vitellinae</i></p> | No |  | |

Part B: Conclusion

Can it be ascertained that the plan will have no likely significant effect on a European site(s)?

Yes

1 Existing Conditions

There are six European sites and one Ramsar site within and immediately adjacent to the Dee Valley Water (DVW) Supply Area (Table 2). The only European site where the identified 'key threats' are relevant to the DVW WRMP is the River Dee and Bala Lake SAC. DVW currently extracts water from the River Dee from its Chester (Barrelwell Hill) and Bangor-on-Dee intake sites.

During their Review of Consents (ROC) process the Environment Agency (EA) has identified a number of river abstractions on the River Dee SAC that may pose a risk to the integrity of the site through fish entrainment. DVW commissioned APEM Aquatic Scientists to assess their Chester (Barrelwell Hill) and Bangor-on-Dee intake sites. The study concluded that DVW's existing screening arrangements were adequate to not cause a significant risk to the designated fish populations within the river.

The EA's River Dee Catchment Abstraction Management Strategy (CAMS) sets out a future strategy for the renewal of existing time-limited abstraction licences and consideration of new applications for licensed abstractions. The CAMS splits the Dee Catchment into four component Water Resource Management Units (WRMUs). None of the DVW abstraction licences source water from WRMUs considered to be over licensed, whilst the provisions of the Dee Catchment CAMs should allow DVW to abstract up to their present abstraction limits without undue pressure on water resources in the applicable WRMUs.

2 Water Resources Management Plan

The WRMP predicts that total distribution input will rise by 0.75% from 2006/07 to 2034/35. This will require a marginal increase in abstraction from the River Dee, but the total volumes abstracted will remain within the existing licence limits. Furthermore, the Dee Catchment CAM has concluded that licensed limits do not place undue pressure on this water resource.

The assessment of the Chester (Barrelwell Hill) and Bangor-on-Dee intake sites carried out by APEM Aquatic Scientists included an examination of the potential impacts to fish populations if the extraction rates were increased to their full licensed potential. The study also concluded that the measures already in place at the river intakes, to screen fish from the intake at the two sites, were already adequate and neither intake posed a significant risk to the sampled fish species in the river (APEM, 2007).

The WRMP supply and demand assessment concluded that the water resources available are surplus to the demand predicted until 2034/35, and as such no new water resources development projects are planned within the Supply Area. Consequently, the WRMP does not consider any further supply options, but details plans to:

- Consider upgrading the Llwyn Onn Water Treatment Works (WTW) to implement washwater recycling to reduce treatment works losses;
- Continue with its leakage control strategy by:
 - renewing leaking pipes
 - implementing pressure control areas
 - reducing leak awareness times using new technology; and

- Continuing to encourage household water efficiency.

These plans alone or in combination with other Water Resource Management Plans or other spatial plans will not lead to measures or works that will increase the present risk to European sites within or immediately adjacent to the Supply Area. Therefore, it can be concluded that the WRMP will have no likely significant effects on any European site.

3 References:

APEM Scientific Report UU 886 (2007) *River Dee fish entrapment study*. APEM Aquatic Scientists, Stockport.

Hyder Consulting (2005). *West Cheshire and North East Wales Sub-Regional Spatial Strategy: Sustainability Appraisal Report*. North West Regional Assembly & Welsh Development Agency