

# Water body information sheet for water body 20174 in North Highland

## General details

|                             |                                                   |
|-----------------------------|---------------------------------------------------|
| Water body name:            | River Orrin - Conon confluence to Orrin Reservoir |
| Water body Identifier code: | 20174                                             |
| Length:                     | 15.07 km                                          |
| Water body category:        | River                                             |
| River basin district:       | Scotland                                          |
| Area advisory group:        | North Highland                                    |
| Catchment:                  | River Conon                                       |
| Associated protected areas: | River Conon - FRESHWATER FISH (EXISTING)          |
| Associated groundwater:     | Northern Highlands                                |
| Responsible body:           | SEPA<br>North Highland                            |
| Heavily modified:           | Yes                                               |
| Artificial:                 | No                                                |
| Typology:                   | Mid-altitude<br>Medium<br>Siliceous               |
| National Grid Reference:    | NH 42746 50417                                    |
| Latitude:                   | 57.51651                                          |
| Longitude:                  | -4.62707                                          |

## Current status of this water body

Classification results are updated annually, as part of SEPA's commitment to monitor and assess the condition of the environment.

Once the classification is agreed, as part of river basin management planning, the pressures and measures for every water body are reviewed to ensure that they reflect this improved understanding of the environment. Objectives are reviewed as part of the six yearly planning cycle and any proposed changes to objectives will be presented in the draft river basin plans [http://sepa.org.uk/water/river\\_basin\\_planning.aspx](http://sepa.org.uk/water/river_basin_planning.aspx).

This worksheet was produced using the most up to date classification results but the measures, pressures and objectives shown may not yet align to these classification results. Please contact [rbmp@sepa.org.uk](mailto:rbmp@sepa.org.uk) if you require further information on this water body.

We have classified this water body as having an overall status of Good ecological potential with Medium confidence in 2012 with overall ecological status of Poor and overall chemical status of Pass.

It is important to note that the five classification ecological potential classes for Heavily Modified Water Bodies (HMWBs) and Artificial Water Bodies (AWBs) combine the level of mitigation measures for water levels and flow and physical habitat with measurements of the biological and chemical water quality. For example, a HMWB could have all the mitigation measures in place to allow it to reach good ecological potential e.g. a fish pass installed on a dam required for hydropower generation, but if water quality is poor due to elevated phosphorus levels, its overall ecological potential assessment could be moderate, poor or bad depending on the severity of the impact.

The overall classification of status is made up of many different tiers of classification data. A complete set of classification data for 2012 is shown at the end of this document.

## Targets for the future status of this water body

We have set environmental objectives for this water body over future river basin planning cycles in order that sustainable improvements to its status can be made over time, or alternatively that no deterioration in status occurs, unless caused by a new activity providing significant specified benefits to society or the wider environment.

For this water body we have set the overall environmental objectives for the first, second and third River Basin Management Planning (RBMP) cycles as:

# Water body information sheet for water body 20174 in North Highland

|        |                           |      |      |      |
|--------|---------------------------|------|------|------|
| Year   | 2012                      | 2015 | 2021 | 2027 |
| Status | Good ecological potential | Good | Good | Good |
| Year   | 2012                      | 2015 | 2021 | 2027 |
| Status | Good ecological potential | Pass | Pass | Pass |

## Pressures and measures on this water body

We have established an ongoing programme of monitoring in order to identify pressures on our water bodies.

The pressures listed below contribute to this water body's failure to meet good ecological status or potential. River basin planning allows us to plan improvements for particular parameters over time. We have collaborated with others to identify measures which will act to protect or improve our water environment in order that all water bodies reach good status over successive RBMP cycles.

The following table shows our collated information on the pressures on this water body, their causes and the measures which could be introduced to mitigate their effects. We have also indicated the current funding status of the measure; with projected measures being potentially funded and agreed measures having funding in place. Finally, we have included information on the potential or actual owner of the measure, the date it will be effective and information on the justification for extending the deadlines or for setting an alternative objective, where appropriate.

| Pressure        | As a Result of                                                                                                      | Assessment Parameter                | Objective                    | Reasons for Failure |
|-----------------|---------------------------------------------------------------------------------------------------------------------|-------------------------------------|------------------------------|---------------------|
|                 | Measure                                                                                                             | Funding                             | Owner                        | Effective date      |
| Abstraction     | Production of renewable electricity (NB nuclear and pumped hydro are not renewable forms of electricity generation) | Change from natural flow conditions | Good by 2015                 |                     |
|                 | Control pattern/ timing of abstraction (Hands off flow/ utilisation of storage (new/existing))                      | Agreed                              | Scottish and Southern Energy | 31/12/2007          |
| Flow Regulation | Production of renewable electricity (NB nuclear and pumped hydro)                                                   | Change from natural flow conditions | Good by 2015                 |                     |

# Water body information sheet for water body 20174 in North Highland

| Pressure                  | As a Result of                                                                                                                              | Assessment Parameter                | Objective                    | Reasons for Failure |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|------------------------------|---------------------|
|                           | Measure                                                                                                                                     | Funding                             | Owner                        | Effective date      |
|                           | are not renewable forms of electricity generation)                                                                                          |                                     |                              |                     |
|                           | Provide appropriate baseline flow regime downstream of impoundment                                                                          | Agreed                              | Scottish and Southern Energy | 31/12/2007          |
| Abstraction               | Production of renewable electricity (NB nuclear and pumped hydro are not renewable forms of electricity generation)                         | Change from natural flow conditions | Good by 2015                 |                     |
|                           | Control pattern/ timing of abstraction (Hands off flow/ utilisation of storage (new/existing)                                               | Agreed                              | Scottish and Southern Energy | 31/12/2007          |
| Morphological Alterations | Production of renewable electricity (NB nuclear and pumped hydro are not renewable forms of electricity generation) Impounding - weir / dam | Fish passage                        | Good by 2015                 |                     |
|                           | Removal of barriers or provision of mechanisms to enable fish migration                                                                     | Agreed                              | Scottish and Southern Energy | 31/12/2007          |

Footnote – These results show current classification but the measures, pressures and objectives shown may not yet align to these classification results. Please contact [rbmp@sepa.org.uk](mailto:rbmp@sepa.org.uk) if you require further information on this water body.

## Future work

Additional work to identify pressures and to develop and implement measures to mitigate their impacts will continue over subsequent river basin cycles.

## Complete classification for this water body in 2012

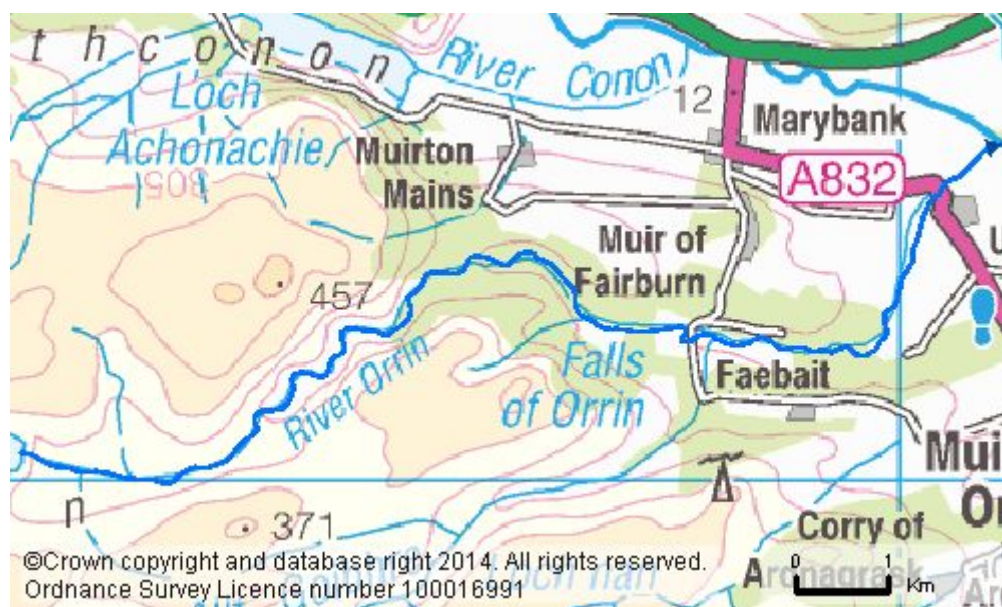
| Parameter                   | Status                       | Confidence of Class |
|-----------------------------|------------------------------|---------------------|
| OVERALL STATUS              | GOOD ECOLOGICAL<br>POTENTIAL | MEDIUM              |
| Pre-HMWB status             | Poor                         | Medium              |
| Overall chemistry           | Pass                         | Low                 |
| Priority substances         | Pass                         | Low                 |
| Overall ecology             | Poor                         | Medium              |
| Physico-Chem                | High                         | Low                 |
| Temperature                 | High                         | Low                 |
| Soluble reactive phosphorus | High                         | Low                 |
| pH                          | High                         | Low                 |
| Dissolved Oxygen            | High                         | Low                 |
| Biological elements         | High                         | Medium              |
| Phytobenthos                | High                         | Low                 |
| Macrophytes                 | High                         | Low                 |
| Benthic invertebrates       | High                         | Low                 |
| Macro-invertebrates (acid)  | High                         | Low                 |
| Macro-invertebrates (RiCT)  | High                         | Low                 |
| Macro-invertebrates (ASPT)  | High                         | Low                 |
| Macro-invertebrates (NTAXA) | High                         | Low                 |
| Alien species               | High                         | Low                 |
| Fish                        | High                         | Medium              |
| Fish ecology                | High                         | Medium              |
| Fish barrier                | High                         | Medium              |
| Specific pollutants         | Pass                         | Low                 |
| Hydromorphology             | Poor                         | Medium              |
| Morphology                  | Good                         | Medium              |
| Hydrology                   | Poor                         | Medium              |
| Hydrology (impoundment)     | Poor                         | Medium              |
| Hydrology (abstraction)     | Good                         | Medium              |
| Regulatory BOD              | High                         | Low                 |
| Regulatory ammonium         | High                         | Low                 |

## Water body information sheet for water body 20174 in North Highland

| Parameter               | Status | Confidence of Class |
|-------------------------|--------|---------------------|
| Water quality           | High   | Low                 |
| Morphological pressures | Good   | Medium              |

### Location of this water body

You can find the geographical location of this water body by searching on water body ID in the interactive maps at [www.sepa.org.uk/water/river\\_basin\\_planning.aspx](http://www.sepa.org.uk/water/river_basin_planning.aspx)



SEPA Contact Details: [rbmp@sepa.org.uk](mailto:rbmp@sepa.org.uk)  
© 2012 Scottish Environment Protection Agency