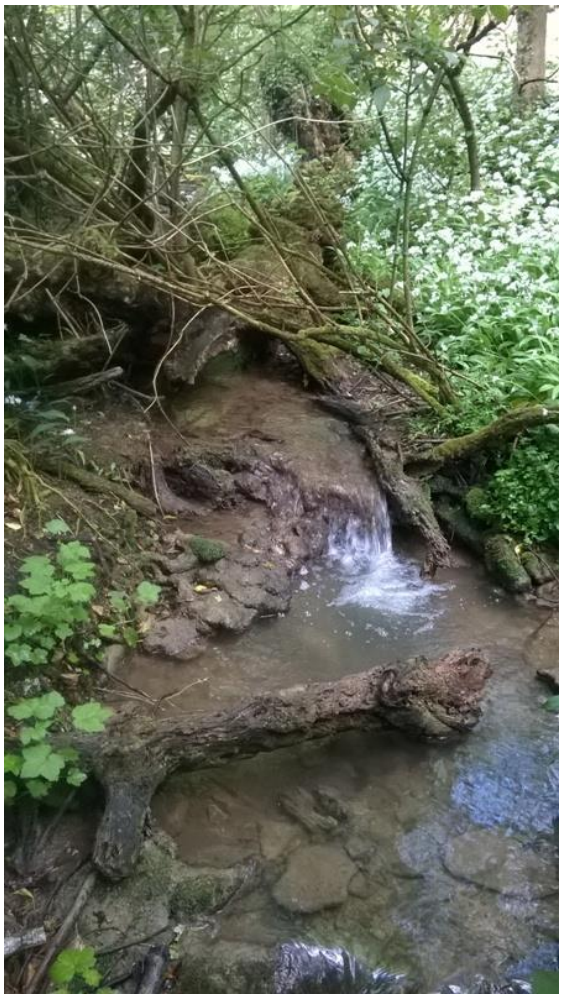
Annex II - Examples of allocating sites to naturalness classes

Example A



Component	Naturalness	Confidence
Physical	1	1
Hydrological	1	3
Chemical	1	3
Biological	1	2

Physical – No evidence of physical modifications, patchy riparian tree cover with good interaction between tree roots/fallen wood and the channel, semi-natural riparian vegetation.

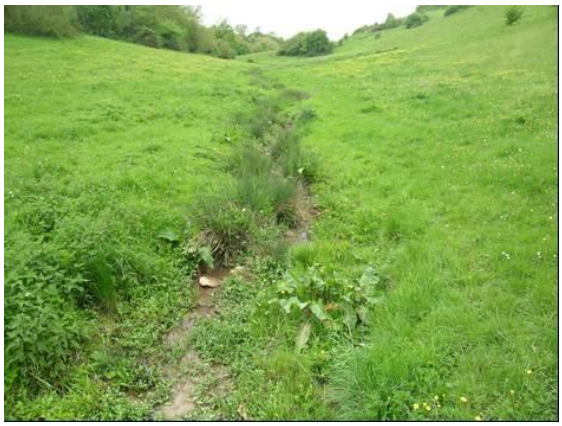
Hydrological – No evidence of direct abstractions or other hydrological modifications. Low confidence because there may be groundwater abstraction.

Chemical - No visible indications of pollution (sewage fungus, heavy algal growths). Low confidence because no test kit used and less visible forms of pollution may be present.

Biological – No non-native species in evidence. Moderate confidence because the channel was checked for non-native crayfish

Other comments – Grey coating on stones is natural deposition of calcium carbonate (tufa) from the very hard water from the limestone aquifer.

Example B



Component	Naturalness	Confidence
Physical	3	1
Hydrological	1	3
Chemical	1	3
Biological	1	2

Physical – No evidence of physical modifications but complete absence of riparian tree cover and the riparian zone is not semi-natural (improved pasture).

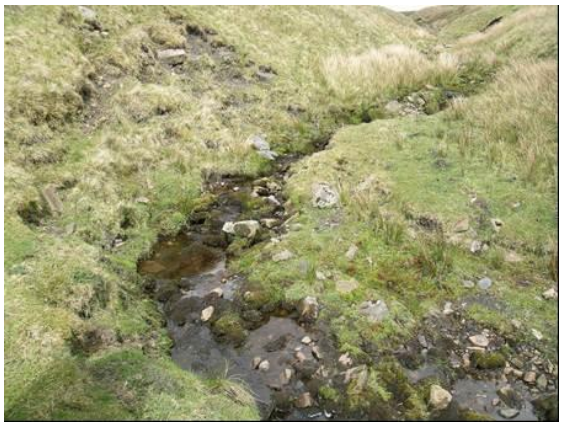
Hydrological – No evidence of direct abstractions or other hydrological modifications. Low confidence because there may be groundwater abstraction.

Chemical - No visible indications of pollution (sewage fungus, heavy algal growths). Low confidence because no test kit used and less visible forms of pollution may be present.

Biological – No non-native species in evidence. Moderate confidence because the channel was checked for non-native crayfish

Other comments – Whilst there are no obvious physical modifications the complete absence of influence of riparian trees means that the in-channel habitat mosaic lacks natural diversity.

Example C



Component	Naturalness	Confidence
Physical	3	1
Hydrological	1	3
Chemical	1	3
Biological	1	2

Physical – No evidence of physical modifications but complete absence of riparian tree cover and the riparian zone is very heavily grazed

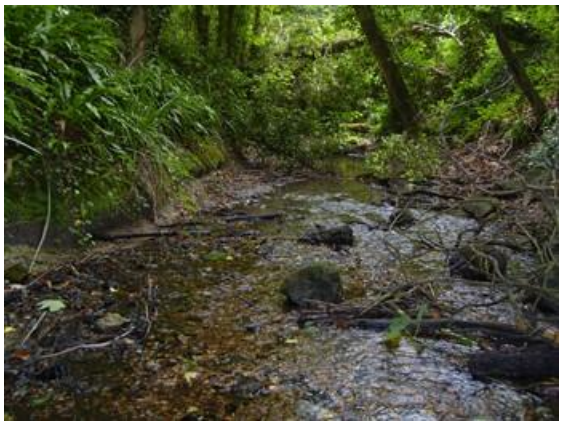
Hydrological – No evidence of direct abstractions. Moorland above has been hydrologically restored so should provide a natural flow regime. Moderate confidence because the likelihood of being affected by wider groundwater abstraction appears low.

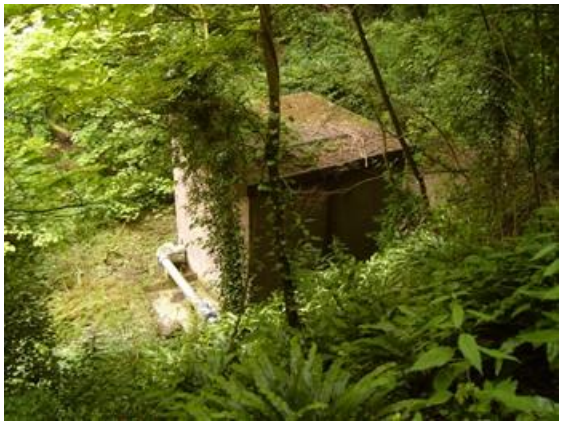
Chemical - No visible indications of pollution (sewage fungus, heavy algal growths). Low confidence because no test kit used and less visible forms of pollution may be present.

Biological – No non-native species in evidence. Moderate confidence because the site is very remote.

Other comments – This is quite a typical moorland stream, where prolonged intensive sheep grazing has eliminated trees and scrub and limited riparian herbaceous vegetation. Bedrock and boulders create some natural in-channel diversity but the lack of influence of trees is a major missing element.

Example D





Component	Naturalness	Confidence
Physical	2	1
Hydrological	3	2
Chemical	1	3
Biological	1	2

Physical – Small amounts of physical modification (including a broken weir), but good riparian tree cover and woody material in channel, natural riparian zone.

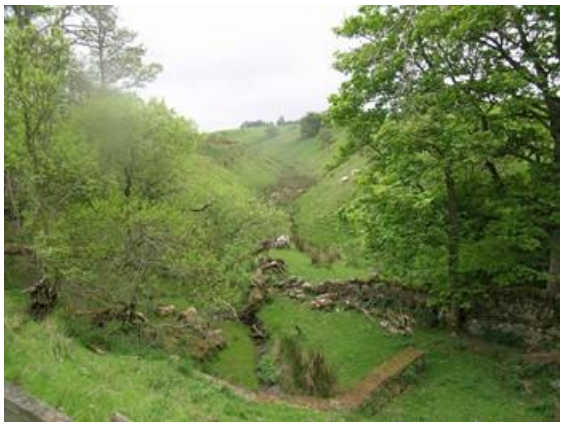
Hydrological – Pumping station located towards the upstream end of the channel. Seems to be well-maintained and actively used. Moderate confidence because extent of use is unknown and there may be wider groundwater abstraction effects.

Chemical - No visible indications of pollution (sewage fungus, heavy algal growths). Low confidence because no test kit used and less visible forms of pollution may be present.

Biological – No non-native species in evidence. Only moderate confidence because no check was undertaken for non-native stream invertebrates (e.g. signal crayfish).

Other comments – A hidden gem of a chalkstream headwater hidden in a dense tree-covered ravine (very unusual for the stream type). Physical modifications are easily removed but the pumping station may be more difficult to resolve

Example E



Component	Naturalness	Confidence
Physical	3	1
Hydrological	1	3
Chemical	1	3
Biological	1	2

Physical – Total absence of riparian trees caused by heavy and prolonged sheep grazing. This generates a very degraded in-channel habitat mosaic. Riparian vegetation is degraded by overgrazing.

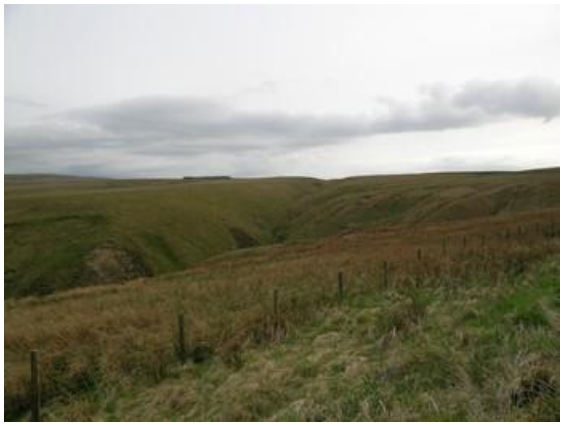
Hydrological – No evidence of direct abstraction or other flow modification. Low confidence because the condition of the moorland upstream is unknown and there may be wider groundwater abstraction pressure.

Chemical - No visible indications of pollution (sewage fungus, heavy algal growths). Low confidence because no test kit used and less visible forms of pollution may be present.

Biological – No non-native species in evidence. Only moderate confidence because no check was undertaken for non-native stream invertebrates (e.g. signal crayfish).

Other comments – This site is typical of upland streams with high sheep numbers.

Example F



Component	Naturalness	Confidence
Physical	3	1
Hydrological	1	3
Chemical	1	3
Biological	1	2

Physical – Total absence of riparian trees caused by heavy and prolonged sheep grazing. This generates a very degraded in-channel habitat mosaic. Riparian vegetation is degraded by overgrazing.

Hydrological – No evidence of direct abstraction or other flow modification. Low confidence because the condition of the moorland upstream is unknown and there may be wider groundwater abstraction pressure.

Chemical - No visible indications of pollution (sewage fungus, heavy algal growths). Low confidence because no test kit used and less visible forms of pollution may be present (e.g. acidification).

Biological – No non-native species in evidence. Moderate confidence because the site is very remote.

Other comments – This site is of similar naturalness to Example E but at higher altitude. There is no climatological reason why riparian trees should not be present (note forestry plantation in background).