

Hydroelectric-power schemes

Pre-application form



Please read through this form and the guidance notes (form guidance WR316) carefully before you fill this form in. Please write clearly in the answer spaces.

This form is designed to help you, and us, understand your hydroelectric-power scheme. It will help you to prepare the information we will need to consider a formal application for your scheme.

We will appoint an Account Manager to help you through the process, but first we will need some information from you.

There are two parts to the form – part A and part B. Fill in all of part A and as much of part B as you can. Send your filled-in form to us with the supporting information shown in section 8.

If you need more help, please phone the National Customer Contact Centre on 03708 506 506 (8am to 6pm Monday to Friday), or send an email to enquiries@environment-agency.gov.uk, so we can appoint an Account Manager for you.

It should take you about 30 minutes to fill in this form.

1 Part A

This part will not involve providing technical information.

For all schemes we need a basic level of information to allow us to identify any problems or issues. You need to read 'Guidance for run-of-river hydropower development', available from the National Customer Contact Centre (details above).

Please make sure you give as much detail as you can in this form so we can make an initial evaluation of your proposal. We do not expect you to be carrying out detailed work at this stage.

If you can provide more detailed technical information on your proposed scheme, please fill in part B.

2 Part B

This part will involve providing technical information on the design of the scheme. You do not need to fill in this part at the moment if you do not have the information we ask for.

Before we approve your scheme we need more detailed information on its design. Through discussions with us and your Account Manager we will tell you what information you need to provide and how you can get it.

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Part A

1 Contact details

1.1 Are you:

The applicant?

Give your details at 1.3 then go to question 1.4.

The applicant's agent?

Give your contact details in question 1.2 and the applicant's details in 1.3.

The applicant's advisor?

Give your contact details in question 1.2 and the applicant's details in 1.3.

1.2 Agent's or advisor's contact details

Title (Mr, Mrs, Miss and so on) _____

First name _____

Last name _____

Name of company or organisation, if appropriate

Address and postcode

1 Contact details, continued

Contact numbers, including the area code

Phone _____

Mobile _____

Email _____

1.3 Applicant's name

Title (Mr, Mrs, Miss and so on) _____

First name _____

Last name _____

Name of company or organisation, if appropriate

Address and postcode

1 Contact details, continued

1.4 Have you spoken to anyone in the Environment Agency about the proposal?

Yes Title (Mr, Mrs, Miss and so on) _____
 First name _____
 Last name _____
 Phone _____

No

1.5 Have you approached any of the conservation agencies (for example, Natural England) about your proposed scheme?

No

Yes Include details below and a copy of any comments they have made.

2 Site details

Please provide a map (see the guidance notes) labelling all the site details you give in the following section.

2.1 Site name

2.2 Name of watercourse

2.3 Location details – specify the location of the proposed scheme, using 10-figure National Grid References (NGRs; see the guidance notes).

NGR of abstraction point

NGR of discharge point

NGR of any proposed impoundment (for example, weir, sluice, hatch)

Description of any proposed impoundments

NGR of any existing impoundment

Description of any existing impoundment

2 Site details, continued

NGR of any proposed or existing water-control structure (for example, lock, waterwheel, fish pass or canoe pass)

NGR and description of any other relevant features

2.4 Please provide a brief description of the proposal.

2.5 Length of any depleted reach created

_____ metres

2.6 What type of turbine do you propose to use?

If you are using an Archimedes screw turbine, provide the following information.

Diameter

_____ metres

Number of blades

Tip speed

_____ metres per second

2.7 How many turbines do you propose to use?

Will the turbine be enclosed?

No

Yes

2.8 Proposed turbine flows

Maximum design flow (sometimes called the instantaneous turbine flow)

_____ litres per second

Maximum hourly turbine flow

_____ cubic metres per hour

Maximum daily turbine flow

_____ cubic metres per day

Maximum annual turbine flow

_____ cubic metres per year

Minimum turbine start-up flow

_____ litres per second

2 Site details, continued

2.9 How have you worked out the above quantities?

2.10 If you are proposing to raise the level of an existing impoundment, how much by (in millimetres)?

_____ millimetres

2.11 Does the applicant have or expect to have a current or proposed right of access to any proposed abstraction point? (Include any details on a separate map – see the guidance notes.)

Yes

No You will need to make arrangements to get access. You cannot make a formal application until you have or expect to have a right of access.

2.12 Have you applied for planning permission?

Yes Name of local planning authority

Application reference number

Status: pending approved refused

No

Part B

You may not yet have all the information we ask for below. We will, however, need this information for more detailed discussions on your proposed hydroelectric-power scheme.

3 Scheme details

3.1 Gross head

_____ metres

3.2 Net head

_____ metres

3.3 Estimated generating potential

_____ kilowatts

3.4 Annual generating potential

_____ kilowatt-hours

3.5 Explain how the scheme would be controlled

4 Water resource considerations

You will need to support this pre-application, and your formal application, with an assessment of the existing hydrology and hydromorphology (the physical properties of the watercourse and its effect on the land) at the site.

For more help please see the guidance notes (form guidance WR316) and ‘Guidance for run-of-river hydropower development’.

Questions 4.1 to 4.5 will give you your ‘indicative design flows’ for your scheme. These are only estimates and will need to be confirmed.

4.1 Flow duration statistics

Please send us a copy of the flow duration curve for the site (graph and data).

What are the relevant flow duration statistics?

Q₉₅

Q₈₀

Q₅₀

Q₄₀

Q₁₀

Q_{mean}

Are these flow duration statistics for natural or gauged flow?

4.2 Base-flow indicator value (BFIV)

You need your BFIV figure to help work out your indicative design flows.

Your BFIV figure is your Q₉₅ value divided by your Q_{mean} value.

Use the values in question 4.1 to work out your BFIV figure and enter it below.

BFIV

4.3 Abstraction sensitivity band (ASB)

We give all watercourses an ASB of either 3 for ‘high sensitivity’, 2 for ‘medium sensitivity’ or 1 for ‘low sensitivity’. Contact us to get your ASB figure and enter it below.

ASB

4.4 Indicative design flows

Using table A from the ‘Flow and Abstraction Management for hydropower’ section in ‘Guidance for run-of-river hydropower development’, give the indicative design flows for a hydropower scheme at your site.

Hands-off flow (HOF)

4 Water resource considerations, continued

Maximum abstraction

Percentage take above HOF

4.5 Applying for higher levels of abstraction

Do you want to apply for higher design flows than indicated in 4.4 above?

No Go to section 5.

Yes Hands-off flow (HOF)

Maximum abstraction

Percentage take above HOF

Describe any other design or operational features you are proposing for protection of flow variability.

5 Fisheries considerations

5.1 Give details of the fish and eel screening for both the intake and outfall proposed for your hydroelectric-power scheme.

	Intake	Outfall
Type of screen		
Screen size (mm)		
Screen dimensions (mm) (width x height)		
Angle to main flow path (degrees)		
Approach velocity (m/s)		
How did you work this out?		
NGR (10-figure)		

5 Fisheries considerations, continued

5.2 Is the fish and eel screening in line with the 'Screening guidance' section in 'Guidance for run-of-river hydropower development'?

No Explain why not in the space below.

Yes

5.2 Give details of any proposed bywash channel, if one is present, for your hydroelectric-power scheme.

Main features of the bywash channel

Flow needed to effectively operate the bywash channel, including units

5.4 Give details of any other screening methods proposed (for example, behavioural).

5.5 Does the proposed scheme include an upstream fish and eel pass or passes?

Yes What type of fish and eel pass are you proposing?

What are the intended target species?

What is the proposed flow for the fish pass?

_____ metres per second

No Explain why not and the reasons for not following our guidelines.

6 Flood risk considerations

6.1 Have you completed a flood risk assessment or flood consequence assessment?

- Yes Send us a copy with this form and go to section 7.
 No Go to question 6.2.

6.2 Give details of any proposed in-watercourse construction or modification which could change the flood risk.

7 Planning considerations

7.1 Have you asked the local planning authority what information you need to include in your planning application and to discuss issues that may arise for your proposal?

- Yes Please provide a copy of any written advice or summary of verbal advice you have received.
 No We recommend you do this before going further with your application.

7.2 Have you considered the need for an environmental impact assessment?

- Yes Go to question 7.5.
 No Answer questions 7.3 and 7.4.

7.3 Will your scheme produce 0.5 MW or more of power?

- Yes Go to question 7.5.
 No

7.4 Is your scheme in a sensitive area (for example, a site of special scientific interest, a nature reserve and so on)?

- Yes Please also answer question 7.5.
 No

7.5 Have you asked your local planning authority for a screening opinion to find out if you have to carry out an environmental impact assessment or provide an environmental statement with your planning application?

- Yes If you have received a screening opinion, please attach it to this form.
 No

7.6 Is land contamination potentially an issue:

With the existing use of the site?

- Yes
 No

7 Planning considerations, continued

From previous uses of the site?

- Yes
 No

7.7 Are you sending a preliminary risk assessment with this form?

- Yes
 No

8 Checklist

Please read through this list and tick the items you are sending to us:

- | | |
|---|--------------------------|
| Filled-in form | <input type="checkbox"/> |
| Copy of any comments made by conservation agencies | <input type="checkbox"/> |
| Map or sketch plan showing site details | <input type="checkbox"/> |
| Map or sketch plan showing rights of access | <input type="checkbox"/> |
| Design drawings of the scheme | <input type="checkbox"/> |
| Hydrology assessment | <input type="checkbox"/> |
| Flow duration curve (graph and data) | <input type="checkbox"/> |
| Environmental report (see question 4.5) | <input type="checkbox"/> |
| Flood risk assessment or flood consequence assessment | <input type="checkbox"/> |
| Advice from the local planning authority on information needed for the planning application and issues that may arise | <input type="checkbox"/> |
| Screening opinion from the local planning authority | <input type="checkbox"/> |
| Enough photographs of the site to give a clear impression of the proposed location of the scheme and any control structures | <input type="checkbox"/> |
| Continuation sheets for answers to questions | <input type="checkbox"/> |
| How many continuation sheets? | <input type="checkbox"/> |

9 The Data Protection Act 1998

We, the Environment Agency, will process the information you provide so that we can:

- deal with your application;
- make sure you keep to the conditions of the licence, permit or registration;
- process renewals; and
- keep the public registers up to date.

We may also process or release the information to:

- offer you documents or services relating to environmental matters;
- consult the public, public organisations and other organisations (for example, the Health and Safety Executive, local authorities, the emergency services, the Department for Environment, Food and Rural Affairs) on environmental issues;
- carry out research and development work on environmental issues;
- prevent anyone from breaking environmental law, investigate cases where environmental law may have been broken, and take any action that is needed;

9 The Data Protection Act 1998, continued

- assess whether customers are satisfied with our service, and to improve our service; and
- respond to requests for information under the Freedom of Information Act 2000 and the Environmental Information Regulations 2004 (if the Data Protection Act allows).

We may pass the information on to our agents or representatives to do these things for us.

10 Next steps

Please return this form and any supporting information to:

Permitting and Support Centre
Water Resources Team
Quadrant 2
99 Parkway Avenue
Parkway Business Park
Sheffield
S9 4WF.

Or send an email to
PSC-WaterResources@environment-agency.gov.uk.

If you are not sure about anything in this form, phone us on 03708 506 506 (8am to 6pm Monday to Friday).

We'll get in touch with you shortly, either to give you our decision and tell you the likely timescale, or to ask for more information.



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Date received (DD/MM/YYYY)

Our reference number

Account Manager
