DETAILED ENVIRONMENTAL OVERVIEW FOR HARLAW HYDRO-ELECTRIC SCHEME





Completed by

RD Energy Solutions

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Document Issue Record

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Executive summary

This detailed Environmental Overview for a micro hydro scheme at Harlaw Reservoir on the Water of Leith has being completed as part of a detailed feasibility study for Balerno Village Trust (BVT). The project is reviewed in terms of:

- Relevant policy documents
- Stakeholder consultations and
- Planning consents

Relevant policy documents

The installation of a hydro scheme at the Harlaw reservoir is in keeping with the City of Edinburgh local development plan and the Pentland Hills Regional Park Plan. These highlighted the need to take into account the visual and environmental impact of the hydro scheme in this area. In terms of relevant policy documents, under the terms of the Water environment, (Controlled Activities) (Scotland) Regulations 2005, a simple licence will be required from SEPA at a cost of £594 + VAT. A full Environmental Impact Assessment and building warrant will not be required.

Stakeholder consultations

A landscape and visual impact assessment will be required as requested by The City of Edinburgh Council and Scottish Natural Heritage. In addition a walk over environmental survey will be required. This will update previous surveys carried out by Arup on the Water of Leith. SEPA has indicated that control of water flow will be required to ensure sufficient river flow and prevent erosion at the tailrace exit. The Flood Prevention Scheme has stated that the designs will need to be assessed by the supervising engineer.

Planning consents

Planning consent from the City of Edinburgh Council, Grid connection consent from Scottish Power and a simple CAR licence from SEPA will be required to allow this project to proceed.

The costs of all aspects of the detailed environmental overview are summarised in the table below.

Item	Cost
Walk-over survey of protected species	£1,000
Planning consent from City of Edinburgh Council	£210
Grid connection study from Scottish power	£480 + VAT
SEPA simple CAR licence application fee	£594 + VAT
RDES consultancy fee for planning and consents applications	£2,000
Subtotal	**£4,472**

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1. Overview

1.1. Introduction

Community Energy Scotland (CES) is a community organisation committed to developing local renewable energy projects to fund community development. A previous study on the feasibility of micro-hydro on the Water of Leith was carried out by RD Energy Solutions (RDES) in 2005 and identified the most suitable sites for further development. CES is now working with four community groups and the City of Edinburgh Council on the development of five potential hydro sites on the Water of Leith.

As a part of this project wish to develop a micro hydro scheme on the Water of Leith at Harlaw Reservoir which is situated south east of Balerno, on a tributary which joins the Water of Leith at Balerno. Harlaw Reservoir is one of three reservoirs built and enlarged between 1848 and 1890 to compensate for the loss of water caused by the tapping of the Colzium springs in the 19th century to supply the City of Edinburgh. Water could be stored during the winter and ensure that the mills had a constant water supply during the summer. Since 2006 the reservoirs have been maintained and operated by the Flood Prevention Scheme (FPS) to prevent flooding on the Water of Leith. Work is planned to be carried out by the FPS on the Harlaw Reservoir dam outlet which is anticipated to incorporate a hydro scheme.

BVT and CES have appointed RDES to act as lead consultant for the project. A detailed design study has already been completed which looks examines the technical and financial aspects of the project. This document is the environmental overview which contains sections on relevant policy documents to the scheme, results of consultations with stakeholders in the project and the consents which are required

1.2. Aims and Objectives

The overall aim of the project is to develop an operational, optimised hydro generation scheme which will provide a revenue stream for the community in the medium and long term. The development of the project will take place over a number of phases. The first phase is to carry out

a detailed cost and design study followed by a business plan in the second phase and a detailed environmental overview in the third. This report has been compiled to provide full details of the consents required to implement the project. Within this broad aim, the objectives are:

- Review relevant policy documents
- Obtain project feedback from all stakeholders of the project
- Identify the required consents and any environmental works required to obtain them

This scope of work will allow BVT to go forward to achieve planning permission and other regulatory approvals.

This report will achieve these aims based on the following structure:

- Relevant Policy Documents
- Stakeholder Consultations
- Consents
- Conclusions and Recommendations

2. Relevant Policy Documents

2.1. Edinburgh and Lothians Structure Plan

The Structure Plan, prepared jointly by the four Lothian Councils (City of Edinburgh Council, East Lothian Council, Midlothian Council and West Lothian Council), provides a long-term planning vision for development and the environment in Edinburgh and the Lothians until the year 2015. The Edinburgh & Lothians Structure Plan is based on the National Planning Policy Guidelines (NPPG6 – Renewable Energy) and contains the following relevant section on renewables:

ENV 6: Renewable Energy - *The development of renewable energy resources will be supported where this can be achieved in an environmentally acceptable manner.*

Policy guideline NPPG6 gives guidance on the issue that need to be considered and addressed. These include:

- **Natural & cultural heritage –** hydro developments are often located in rural areas, some parts of which are valued for their nature conservation interest. Each proposal should be considered to determine the degree of sensitivity. Sensitive and imaginative design of the scheme and ancillary buildings and facilities can successfully minimise some effects. Early dialogue with Scottish National Heritage (SNH) is recommended.
- **Water Regime –** The Scottish Environment Protection Agency (SEPA) has a duty to promote the cleanliness of controlled waters and to conserve, so far as practicable, water resources. Consultation with SEPA should, therefore, be undertaken for all proposed hydro developments.
- **Fisheries -** Care is required with the protection of all species of fish, particularly migratory species such as salmon and sea trout. Consultation with the local District Salmon Fishery Board is advised when a hydro scheme is proposed and throughout the planning process.
- **Aquatic Habitats and Species -** different species will be affected in different ways, some of which such as the freshwater pearl mussel are protected under the EC Habitats Directive. Discussion with SNH will provide guidance on the species which require to be considered in a particular location.

The project is in agreement with the above policies and therefore it is unlikely that City of Edinburgh Council will have any objections in principle.

2.2. Local Plan

The local plan is the main mechanism by which structure plan policies are taken forward to specific land allocations and policies for the control of development.

The transport and infrastructure section of the City of Edinburgh Council Local Plan sets out the council's policies for renewable energy. This states that:

Planning permission will be granted for development of renewable and sustainable energy schemes such as small-scale wind turbine generators, solar panels and combined heat and power/district heating/energy from waste plants and biomass/woodfuel energy systems provided the proposals:

a) *Do not cause significant harm to the local environment, including the character and appearance of listed buildings and conservation areas and*
b) *Will not unacceptably affect the amenity of neighbouring occupiers by reason of, for example, noise emission or visual dominance.*

Any proposed scheme located within these areas will need to set out mitigation measures for any adverse effects on the character, visual integrity or recreational qualities of the area. It is not anticipated that this hydro scheme will have any impact on the character, visual integrity or recreational qualities of the area.

The built heritage of the location is also taken into account in the development control criteria. Any developments on areas of archaeological importance will require a full archaeological assessment and mitigation measures for any impacts identified. As the site is not located on a site of archaeological importance there is no anticipated requirement for an archaeological assessment.

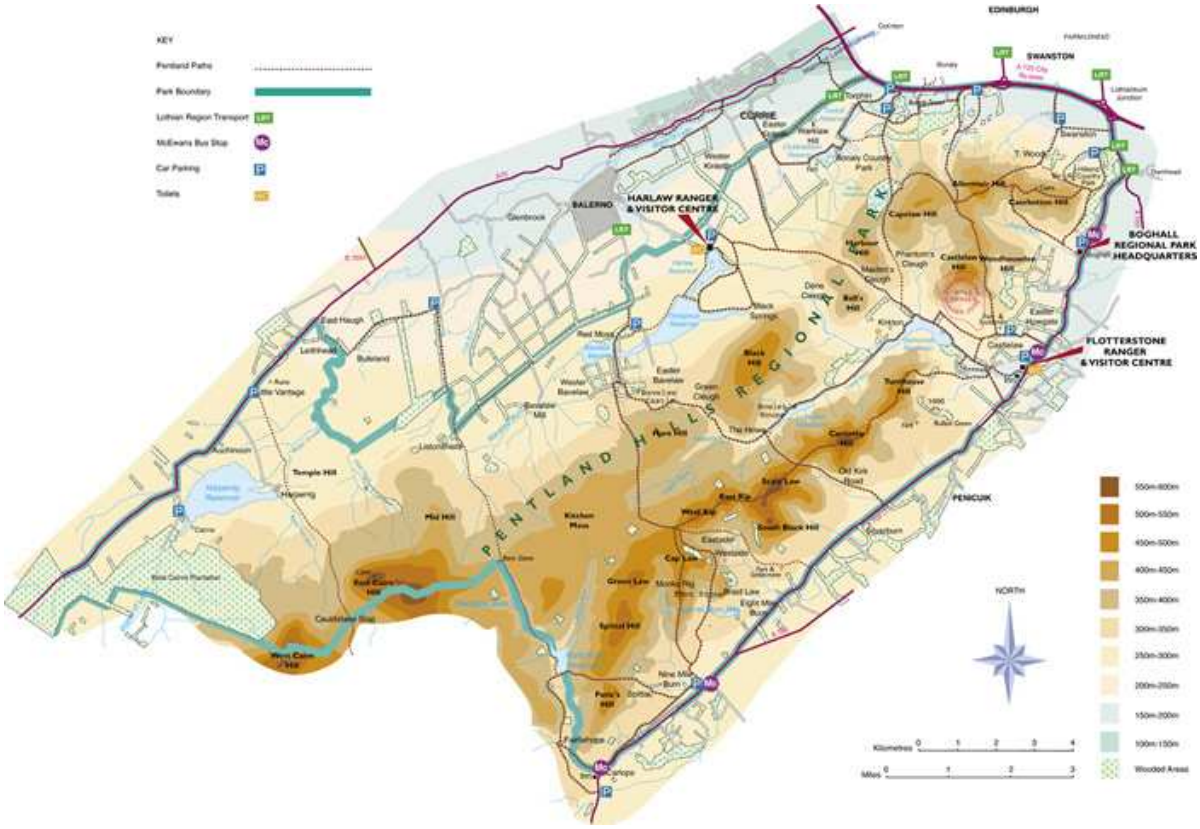
Any hydro scheme on the Water of Leith will need to take into account flood prevention measures in the design and planning of the scheme. The local plan states that:

Planning permission will not be granted for development that would:

a) *Increase a flood risk or be at risk of flooding itself*
b) *Impede the flow of flood water or deprive a river system of flood water storage within the areas shown on the Proposals Map as areas of importance for flood management*
c) *Be prejudicial to existing or planned flood defence systems.*

Flow from the reservoirs is controlled by the flood prevention scheme and any hydro scheme that affects flow down the Water of Leith requires assessment by the Flood Prevention Scheme officers to ensure there are no negative impacts. The design drawings are currently being reviewed.

2.3. Pentland Hills Regional Park Plan



The Pentland Hills Regional Park (PHRP), in association with Edinburgh and Lothians Councils, SNH and Scottish Water, has published the Pentland Hills Regional Park Plan 2007-2017 which lays out the objectives of the park. A map of the PHRP is shown in the figure above.

With the aim of achieving enhanced environmental sustainability of the Pentland Hills Regional Park economy the plan promotes an increase in the use of energy from renewable energy

resources by businesses and communities which contributes living and/or business operational cost savings for those living and working within the PHRP.

It can be viewed therefore that the Harlaw hydro project will aid the PHRP in meeting its objectives.

2.4. Environmental Impact Assessment

The EIA (Scotland) Regulations 1999 state with reference to hydropower that

"In addition to the physical scale of the development, particular regard should be had to the potential wider impacts on hydrology and ecology. EIA is more likely to be required for new hydro-electric developments which have more than 500 kW of generating capacity."

Therefore an EIA will not be required for this development.

2.5. Water Environment

The Water Environment (Controlled Activities) (Scotland) Regulations 2005 (CAR) were passed by the Scottish Parliament on 1 June 2005. These regulations are the means by which SEPA controls and authorises activities which can impact on the water environment. Regulation 12 covers authorisation for abstraction and impoundment activities. A Practical Guide, March 2006 describes the implementation of the regulations and the authorisations required by activities.

The Practical Guide states that the regulations classify activities into four regimes:

- Pollution control and the point source
- Abstraction
- Impoundment
- Engineering

Based on the guidance, the Harlaw Hydro project will impact on the abstraction and impoundment regimes only.

For each regime Authorisations are classified into different categories according to the perceived risk to the water environment:

- General Binding Rules
- Registration
- Simple License
- Complex License

In discussions with SEPA any hydro development less than 100kW will be subject to a simple licence application fee which for this project will cost £594 + VAT.

2.6. Building Standards

As defined by Schedule 3 of the Building Standards Technical Handbook – Non Domestic, 2005

"A detached single-storey *building*, having an area exceeding 8 square metres but not exceeding 30 square metres." Does not require a warrant with the following exceptions: "A *dwelling* or *residential building*. A *building* ancillary to, or within the *curtilage* of, a *dwelling*. A *building* within 1 metre of a *boundary*. A *building* containing a fixed combustion appliance installation or *sanitary facility*. A swimming pool deeper than 1.2 metres."

Therefore the Harlaw Hydro project will not require a Building Warrant.

3. Stakeholder Consultations

The following stakeholders were contacted as part of this initial consultation.

- Edinburgh City Council
- Flood Prevention Scheme
- SEPA
- SNH
- Forth District Salmon Fisheries Board
- Water of Leith Honorary Board

Each of these was contacted by telephone in the first instance and received a letter containing relevant information in which they were asked to provide feedback as to key issues relating to the project and whether they would have any objections.

Details of the consultation response from each of these stakeholders are included in the following sections.

3.1. City of Edinburgh Council

Edinburgh Council has responded to the screening request letters for all the relevant schemes. In this response, the City of Edinburgh Council confirmed that a full Environmental Impact Assessment (EIA) will not be required although consideration will need to be given to the impact on the landscape and the construction method will be important in terms of works and timings with regards to any protected fauna within the area. The correspondence received from the City of Edinburgh Council is included in appendix B of this document.

3.2. Flood Prevention Scheme

The Water of Leith Flood Prevention Scheme of the City of Edinburgh Council has indicated by email on 1st July 2010 that all detailed proposals will need to be approved by the supervising engineer and the Flood prevention officer. In terms of the reservoir, they have indicated that it will be the responsibility of the City of Edinburgh Council to ensure that reservoir safety matters are

addressed and that consideration be given to other users of the reservoir such as West Lothian Council and landowners with fishing rights.

3.3. Scottish Environmental Protection Agency

The Scottish Environment Protection Agency (SEPA) was contacted by telephone and letter. They provided a response in their letter of 26th March 2010.

The response draws attention to the SEPA guidance for developers of run-of river hydro schemes which sets out the level of information and detail that would be expected as part of any licence application. This guidance sets out the criteria for an acceptable scheme and the mitigation requirements to include in the designs of the scheme. These mitigation measures include the following:

Protection of river flows – This includes low flows, variability of flows, high flows, and flows for the upstream movement and spawning of fish.
Protection of fish movements – This includes downstream and upstream passage of fish and upstream movement and spawning of fish.
Management of sediment – This aims to enable the natural erosion and downstream migration of sediment.
Management of erosion – This aims to prevent erosion of river banks from the water exiting from the tailrace of the scheme.

Water flow into the hydro scheme will be controlled to ensure that there is the required compensation flow, thereby protecting the river flows. The design of the scheme ensures that water does not exit the tailrace at high velocity, thus ensuring there is no erosion around the tailrace exit.

3.4. Scottish Natural Heritage

Scottish Natural Heritage (SNH) was contacted by telephone and letter with details of the project. They responded with a letter, dated 6th April 2010.

They note that the Water of Leith is an important and popular watercourse for recreation and environmental education. Hence they have requested a basic landscape and visual impact assessment which would include a summary of the landscape and visual baseline; identification of direct, indirect and cumulative effects; evaluation of significance and magnitude of impact; and a montage.

With regards to the ecology, it is recommended that a walk-over survey is undertaken to check for protected species around the site, in particular otters, bats and nesting birds.

Environmental surveys have been carried out along the Water of Leith, including Harlaw, by Arup as part of the Flood Prevention Scheme. The community group has been given access to these surveys for inclusion into the planning application. Further discussions with Fraser Maxwell of Arup have highlighted the following:

- Otters may use the banks of the river for movement and due to the foliage cover in the vicinity it is possible that there will be otter shelters in the area, though none were recorded in the previous surveys.
- Due to the presence of mature trees in the area it is possible that there are bat colonies and nesting birds in the area. Clearing of the site prior to construction should not occur during bird nesting season between March and August.

The walk over survey will highlight any issues with the above points and update the prior survey. It will identify otter shelters, bats and bird nesting sites and has been costed in at £1,000. The correspondence received from SNH is included in appendix B of this document.

3.5. Forth District Salmon Fisheries Board

The Forth District Salmon Fisheries Board was contacted by telephone and letter with details of the project. They have yet to respond officially but in conversation they have indicated that a fish pass would be required for any scheme, where the situation would allow.

3.6. Water of Leith Honorary Board

The Water of Leith Honorary Board was contacted by telephone and letter with details of the project. A meeting on the 3rd May discussed issues with regards to fish in the watercourse and mitigation requirements. The main points of this were as follows:

- Fish passes:
    - It is thought that any fish pass requirements should be part of a longer-term vision for all weirs on the Water of Leith. Funding for these should come from funds for river improvements, SEPA and the government and should be coordinated by the salmon fisheries board, SEPA and the Council.
    - Fish passes must not be accessible by the general public and will therefore require covering (possibly wire mesh) for protection.
- Fish spawning areas – Fish spawning occurs in areas where a shallow layer of aerated water passes over pebble beds. There are fish spawning areas along the length of the Water of Leith. The design of any hydro scheme would need to ensure no silting of spawning areas occur due to the scheme's impact on river flows.
- Construction of scheme
    - Construction will need to be carried out outside of spawning season of October to April.
    - Any silt will need to be removed to the bank of the river and left for two weeks to allow resident invertebrates an opportunity to return to the watercourse.
    - Contractors will need to be supervised to ensure no material (in particular raw cement) is released into the river.
- Maintenance – Removal of large debris is the responsibility of the landowner.
- Land ownership – Access and exclusivity or lease agreements need to be in place before planning is obtained.

With respect to the Harlaw Reservoir hydro scheme, there are no fish spawning areas in the vicinity and no fish pass or fish study is required. Construction of the scheme will need to occur outside of the fish spawning season, to ensure sediment does not disrupt that spawning at sites further downstream. Access to and from the hydro scheme and grid connection routing will need to be agreed with all landowners affected.

4. Consents

This section provides details on the consents required to develop this project.

4.1. Planning Consent

Planning consent will be required for the project to be submitted to City of Edinburgh Council.

The planning submission will require:

- A description of the proposed development
- The location of the proposed development
- Existing use of land
- Previous Developments
- Arrangements for road vehicles
- Proposed external building materials
- Industrial/commercial uses
- Landscape and Visual Impact Assessment
- Environmental Statement
- Plans:
    - Site plan
    - Block plan
    - Floor plan
    - Cross section
    - Elevations
    - Neighbour notification plan

The fee for submission of a planning application is £319 per 0.1 hectares. As it is envisaged that the development will not require more than 0.1 hectares and utilising the 50% discount offered by The City of Edinburgh Council to applications made on or on behalf of community councils, a fee of £160 is costed in for planning applications. An additional charge for publications of £50 will be required bringing the total cost for planning consent to £210.

The planning application and environmental statement that goes with this would be completed by RDES as part of this phase of work at a cost of £1,150.

4.2. Grid Connection Consent

The project will be grid connected therefore consent is required from the District Network Operator (DNO). In this case the DNO is Scottish Power. Consent is obtained by commissioning a grid connection study. This requires submission of Standard Planning Data (SPD) sheets along with an appropriate fee. The sheets include:

- General information on project location and grid connection location
- Real and reactive generation capacity data
- Generation equipment data
- Connection line diagram

Scottish Power has been contacted and an informal confirmation that the generator can be connected has been given in addition to costs for the grid connection. Notification must be given before commissioning in order that the DNO can have the opportunity to witness the tests.

The cost of the grid connection study is included in the overall grid connection costs outlined in the detailed feasibility study but can be estimated to be approximately £480 + VAT. This is payable prior to the study being carried out. The DNO then has 3 months in which to complete the study after which they will issue a Grid Connection Offer including a quotation for any works required. BVT will have 1 month to accept the grid connection offer and any payments will be required on acceptance of the offer.

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4.3. CAR Licensing

All hydropower developments require a CAR licence from SEPA for all abstractions, impounding works and any other engineering works associated with the scheme. Since the installed capacity of this project is <100kW, a simple license will be required under CAR for abstraction and impoundment of water. This requires a submission which will include:

- General applicant information
- Site details
- Site plan
- Details of other permissions applied for

- Activities applied for
- Details of installation
- Abstraction quantities
- Intake structure drawings
- Details of operation range
- Construction method statement
- Land leasing details
- Construction dates
- Maintenance requirements
- Fish screening details

This submission also requires the payment of a fee. The scheme is rated at less than 100 kW and therefore will be eligible for the abated charges (SEPA confirmed this in their letter). The abated charges are currently £594 + VAT including the cost of advertising. The CAR licence application forms and procedures would be completed by RDES at a cost of £825. The correspondence received from SEPA is included in appendix B of this document.

4.4. Planning & Consents Overview and Costs

Application for planning consent from The City of Edinburgh Council will be made on behalf of BVT. Since BVT is a community council this entitles the group to half of the standard application fee which brings the cost of planning application to £210 including publication charges. The fee for completion of the application by RDES will be £1,150.

Consent for grid connection is required from Scottish power. A connection study will be completed by them at a cost of £300 + VAT. There will also be a charge following this for witnessing electrical commissioning of the system but this is not included in this overview.

Application to SEPA for a simple CAR license will be completed by RDES. The cost of the application is £594 + VAT payable on application and the cost of RDES completing the application will be £825.

5. Conclusions and Recommendations

- The project is in agreement with the Edinburgh and Lothians structure plan therefore it is unlikely that there would be any objections in principle.

- A full EIA is not required as part of a planning application but some aspects need to be considered such as impact on local nature designations, construction methodology regarding local fauna and archaeological impacts.

- A building warrant is not required.

- After preliminary consultations no stakeholders have 'in principle' objections to the project and there are no major barriers to development of the project.

- An environmental survey consisting of a walk over survey for protected species in the area is recommended.

- Planning Consent, Grid Connection Consent and CAR Licenses for Abstraction and Impoundment are required to allow this project to go ahead.

- The Flood Prevention Scheme has stated that the designs will need to be approved by the supervising engineer.

- The costs associated with the detailed environmental overview are summarised in the table below

Item	Cost
Walk-over survey of protected species	£1,000
Planning consent from City of Edinburgh Council	£210
Grid connection study from Scottish power	£480 + VAT
SEPA simple CAR licence application fee	£594 + VAT
RDES consultancy fee for planning and consents applications	£2,000

Subtotal	**£4,472**

6. Appendix A - Stakeholder Contact Details

City of Edinburgh Council

Dave Anderson, Director,
City Development, Planning,
Waverley Court G.2,
4 East Market Street,
Edinburgh,
EH8 8BG.

Scottish Natural Heritage

Susan Sweetman, Area Officer, Forth & Borders,
Scottish Natural Heritage,
Lothians Area Office,
Silvan House,
3rd Floor East,
231 Corstorphine Road,
Edinburgh,
EH12 7AT.

Scottish Environmental Protection Agency

Graeme Brown, Environmental Protection Officer,
Clearwater House, Heriot Watt Research Park,
Avenue North, Riccarton,
Edinburgh EH14 4AP.

7. Appendix B- Stakeholder Correspondence

City of Edinburgh Council

·EDINBVRGH·
THE CITY OF EDINBURGH COUNCIL

Mr Jonathan Webb
Renewable Devices Energy Solutions Ltd
SAC Bush Estate
EDINBURGH
EH26 0PH

Date 8 April 2010
Your ref
Our ref JM4

Dear Sir,

TOWN AND COUNTRY PLANNING (SCOTLAND) ACT 1997
THE ENVIRONMENTAL IMPACT ASSESSMENT (SCOTLAND) REGULATIONS 1999
PROPOSED INSTALLATION OF HYDRODYNAMIC SCREWS LOCATED IN FOUR LOCATIONS AT VARIOUS POINTS WITHIN THE WATER OF LEITH,
AT REDBRAES WEIR, REDBRAES PLACE,
DEAN WIER, WEST MILL LANE,
SAUGHTON WEIR, FORD'S ROAD, &
HARLAW RESERVOIR, HARLAW ROAD.

Thank you for your letters dated 10 March and received on 16 March 2010 with regard to the above proposal and requesting a Screening Opinion of the Planning Authority, under the provisions of Regulation 5(1).

This letter constitutes the City of Edinburgh Council's formal response to your request under the provisions of Regulation 5(4) of the above regulations.

As the proposed schemes for microgeneration would have power outputs of some 12kW, 50kW, 18kW and 36kW respectively, they fall short of the 0.5 megawatts output as stipulated in Schedule 2 of the Regulations and as such an Environmental Impact Assessment will not be required for any of the four proposals as identified in your submissions.

Nonetheless, there are a number of planning issues that would need to be fully addressed by subsequent planning applications for these sites. These relate to impact on the local nature designations for the Water of Leith and landscape impact assessments. The proposed construction method will be important in terms of works and timings with regard to protected fauna within the water course. Also there may be archaeological impacts given the industrial heritage of some of the site.

Dave Anderson, Director, City Development
Planning, Waverley Court G.2, 4 East Market Street, Edinburgh EH8 8BG

INVESTORS IN PEOPLE

SEPA should also be notified given the licensing requirements for the installations and you are advised to carry this out prior to the submission of any applications.

The concept of installing these hydrodynamic screws into the water is a relatively new form of development and as such it is probable that there will be a significant interest in the proposed developments. As such is difficult to advise you on the likely level of support for these proposals at this stage, without additional details and information regarding the proposed developments.

If you have any further queries, please telephone John Maciver on (0131) 529 3918 (Direct Dial) regarding the sites at Redbraes and Dean Weirs; and Michael Paton on (0131) 529 3902 (Direct Dial) regarding the sites at Saughton Weir and Harlaw Reservoir.

Yours sincerely

Paul V Devaney

Paul V Devaney
Principal Planner
East Local Development Team

Scottish Natural Heritage

Scottish Natural Heritage
All of nature for all of Scotland

Jonathan Webb
Renewable Devices Energy Solutions Ltd
SAC Bush Estate
Edinburgh
EH26 0PH

06 April 2010
Our ref: MAN/LIA/OTH/WLCT

Dear Mr Webb

WATER OF LEITH MICRO HYDRO-ELECTRICITY DEVELOPMENT

Thank you for your consultation regarding the above proposal. The development consists of five separate micro hydro-electricity schemes at five locations along the length of the Water of Leith. Two of the five schemes will utilise the drawdown pipe from the Harperrig and Harlaw Reservoirs as a penstock for the turbine. A further two schemes will consist of a hydrodynamic screw situated in a concrete trough to be cut out of Saughton and Redbraes Weirs. The final scheme will comprise a crossflow turbine or water wheel at Dean Weir.

Scottish Natural Heritage has the following comments to make, which should be considered as part of the environmental study of the micro hydro-electric schemes.

Landscape
The Water of Leith is an important and popular site in Edinburgh for recreation and environmental education. It is therefore important to protect the rural character of the river within its busy urban setting. We would request a basic Landscape and Visual Impact Assessment for each scheme. Although any impact may not be substantial, the sites are sensitive due to their rural character.

Further information we would like to see included in the assessment of the development is:

- A summary of the landscape and visual baseline describing the character, quality, sensitivity and value of each site. This should also identify the sensitive receptors within view of the schemes.
- Identification of direct, indirect and cumulative (landscape and visual) effects with an evaluation of significance and magnitude of impact.
- Given the sensitivities of the sites, we think a montage for each site and a better understanding of the exact design would also be very useful.

The key landscape issue we would like to see addressed is a sensitive design that respects the rural surroundings as much as possible.

Ecology
The Water of Leith is designated in the City of Edinburgh Local Plan as an Urban Wildlife Site as it supports a great variety of animals and plants. We recommend that a walk-over survey is

Scottish Natural Heritage, Lothians Area Office, Silvan House, 3rd Floor East, 231 Corstorphine Road, Edinburgh, EH12 7AT
Tel 0131 316 2600 Fax 0131 316 2690 email: forename.surname@snh.gov.uk www.snh.org.uk

carried out by a suitably qualified ecologist at each of the proposed scheme locations to check for protected species. We have highlighted some species of particular concern along the Water of Leith below.

Otter
There are known records of otter at various points along the river. Otters are protected under the Conservation (Natural Habitats &c) Regulations 1994 as 'European Protected Species' and also under the Nature Conservation (Scotland) Act 2004. It is an offence to damage or disturb an otter holt whether or not an otter is present, unless licensed to do so by the Scottish Executive.

Bats
Bats, a European Protected Species (EPS), are known to occur along the Water of Leith and could potentially occupy roosts in trees along the river bank.

Bats and their roosts are protected as 'European protected species' under the Conservation (Natural Habitats &c.) Regulations 1994 (as amended), as well as under the Wildlife and Countryside Act 1981 (as amended) and Nature Conservation (Scotland) Act 2004. Under the Habitats Regulations, consideration of European Protected Species will be included as part of the planning application process.

Nesting birds
There is a wide range of bird species that use the Water of Leith including species such as moorhens, dippers and kingfishers that could be using sites in and around the river for nesting. Disturbance during construction in the form of noise and human activity may disturb wild birds from their nests, which would be an offence under the Wildlife & Countryside Act 1981 (as amended) and Nature Conservation (Scotland) Act 2004. These effects can be mitigated through carefully planning the construction timings and methods.

Public access
An assessment should be made of how public access to and along the river may potentially be affected both during and after the works. As already mentioned, the Water of Leith is a popular leisure resource and it is important that safe access is maintained where possible.

Further comments
We would further recommend that SEPA is consulted with regard to ensuring that the proposals adhere to the objectives of the Water Framework Directive.

I hope that these comments have been useful to you. Should you have any further queries, please don't hesitate to contact me using the details provided.

Yours sincerely

pp. S Sweetman

Susan Sweetman
Area Officer
Forth & Borders

Scottish Environmental Protection Agency

SEPA
Scottish Environment Protection Agency

Our Ref: GB/VL/18/03/000/0000
Your Ref:

Renewable Devices Energy Solutions Ltd
SAC
Bush Estate
EDINBURGH
EH26 0PH
FAO : Jonathon Webb

If telephoning ask for:
Graeme Brown

26 March 2010

Dear Sir

THE WATER ENVIRONMENT (CONTROLLED ACTIVITIES) (SCOTLAND) REGULATIONS 2005
PROPOSED HYDROPOWER SCHEME SITES ALONG THE WATER OF LEITH, EDINBURGH

I write in response to your letters on the above matter. I can confirm that engineering activities in / in the vicinity of surface waters and surface water abstractions require to be regulated by SEPA under the terms of the above legislation.

It is likely that this regulation would be via the terms of an appropriately conditioned license document. License application forms, associated guidance and information on license application fees are available at the following internet address - http://www.sepa.org.uk/water/water_regulation/car_application_forms.aspx and you may find it useful to familiarise yourself with these. I would add however that SEPA would expect to be involved in pre-license application discussions prior to any formal application being made and it would be advisable to get in touch at as early a stage as possible once plans for the scheme begin to take shape.

I would also draw your attention to guidance documents which you may find useful and describe the level of information / detail SEPA would expect to form part of any license application. These can be found at the following internet sites - SEPA Guidance for Developers of Run-Of River Hydropower Schemes http://www.sepa.org.uk/about_us/consultations.aspx, and http://www.british-hydro.org/mini-hydro/index.html

I appreciate you taking the time to make SEPA aware of the proposed micro hydropower schemes and would invite you to contact me directly to discuss your proposals as details become available, or indeed if you have any queries regarding the above.

Yours sincerely

Graeme Brown

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