

**Planning Permission 12/00001/FUL
at
Harlaw Reservoir
Harlaw Road
Balerno**

**Development Management Sub-Committee
of the Planning Committee**

1 Purpose of report

To consider application 12/00001/FUL, submitted by Balerno Village Trust - Mr Simon Dormer. The application is for: **The reuse, reconstruction and operation of Micro-Hydro Power Generation facilities.**

It is recommended that this application be **Granted** by Committee.

2 The Site and the Proposal

Site description

The site forms part of the area to the north and including the dam of the Harlaw reservoir. This lies to the west of Pentland Hills Ranger Centre around 2 miles south of Balerno. There are a number of disused former hydro electric generating structures within the site and the area is mostly wooded on steep slopes with natural undergrowth. There is a small rough path down to the base of the dam from the Pentland Hills Ranger Centre. There are three discharge channels associated with the reservoir of differing sizes and locations. The Harlaw reservoir forms an important part of the City of Edinburgh Council's Flood Prevention scheme.

Site History

There is no relevant planning history for this site.

Pre-Application Process

Pre application advice indicated that the proposal may be acceptable subject to environmental impacts being acceptable.

Description Of The Proposal

The proposal is to utilise 2 water outflows from the Harlaw reservoir to generate hydro electric power. One outflow located high on the dam would be connected to approximately 70 metres of 0.6 metre diameter black polyethelene pipe which would be laid within the existing stone outflow channel to a point located high above the base of the dam. The pipe would then descend down a steep slope supported above ground on concrete blocks at approximately 10 metre centres, across the lower water course to a proposed reconstructed former turbine house. The former turbine house is a common brick structure with a flat concrete roof and it is proposed to replace this with a more traditionally designed building finished in wet dash render, stone corner detailing and a curved metal roof. The new turbine house would measure approximately 6.5 metres long by 4.5 metres wide by 3.3 metres high. Two trees are proposed for removal along with an area of vegetation immediately around the turbine house.

The second outflow connection is at the base of the dam and would be connected to a pipe approximately 10 metres long leading to the new turbine building.

The operation of the scheme to generate electricity would depend upon the water levels in the Harlaw reservoir and flows from it which are managed by the City of Edinburgh Council Flood Prevention Scheme. This ensures the maintenance of a water supply for habitat purposes within the Bavelaw Burn. It is estimated that the scheme will generate approximately 261MWh of electricity which is equivalent to the power consumed by around 60 typical residential properties. The electricity generated would be connected to the existing 11kV grid pole adjacent to the Pentland Hills Ranger Station. No details of how this connection would be achieved have been submitted. An access track between the top of the dam near the Pentland Hills Ranger Station down to the turbine house is proposed for construction and maintenance purposes; no details of this access track have been submitted.

Supporting Documents

Planning Application Supporting Statement.

This document describes the development and provides technical information relating to the proposal.

Ecological Walkover Assessment

This document describes ecological issues and relates them to the site highlighting the likely impacts upon the natural environment.

These documents are available to view on the Planning and Building Standards Online Services.

3. Officer's Assessment and Recommendation

Determining Issues

Do the proposals comply with the development plan?

If the proposals do comply with the development plan, are there any compelling reasons for not approving them?

If the proposals do not comply with the development plan, are there any compelling reasons for approving them?

ASSESSMENT

To address these determining issues, the Committee needs to consider whether:

- a) the principle of the development is acceptable
- b) the proposal is sustainable
- c) the design of the development is acceptable within this countryside location and area of outstanding landscape quality
- d) the proposal adversely affects the natural environment
- e) the proposal adversely affects residential amenity

a) The locational requirements of this type development are specific to sites where there is a large body of water providing a head sufficient to generate electricity by means of hydro turbines. Such reservoir sites are normally only located within countryside areas and providing the proposal complies with other policy requirements, the principle of the proposal is acceptable within this countryside policy area.

b) If the impact of the development on the natural environment is acceptable, the use of the site to generate electricity by means of hydro power is a sustainable approach which is welcomed. The impact of the development upon the natural environment is assessed later in this report.

c) The new turbine house is of a traditional design which copies the style of the original structures associated with the dam. The removal of the redundant

brick building is welcomed. The new pipes are to be located on the surface and will be visible within this area of woodland and associated undergrowth. The surface location will reduce the disturbance to roots and enable future maintenance to be carried out without further serious disruption. The visual impact of the pipes will be minimal given their location in association in relation to other existing dam infrastructure. Through natural regeneration the pipes will ultimately become well screened. However appropriate compensatory planting can be required via a condition.

No details of the access path have been provided but the applicants are keen to minimise damage to the environment and are also aware of the need not to encourage public access into this area. It is hoped to combine planned repair works to the dam required as part of the Council's Water of Leith Flood Prevention Scheme with the construction of the proposal. This would enable two sets of engineering works to be carried out utilising the same access track. The detailed specification, location and design of the access path can be conditioned requiring the submission of details following consultation with the Council's Flood Prevention section and the Pentland Hills Regional Park.

No details of the proposed grid connection from the new turbine house have been provided. However this is a detail which can only be established following discussion with Scottish Power following a planning permission. Various options are possible and the applicant's aim is to minimise visual and physical damage to the environment. Given the small scale nature of the electricity generating capacity of the site, details of how the grid connection can be achieved can be required via a condition.

The proposal will not adversely affect the landscape character of the area.

d) The site is identified as being of importance for nature conservation. Both badgers and otters are known to be present within the vicinity of the site. Providing best practice, as stated in the submitted Ecological Walkover Statement is adopted during construction works, disturbance will be minimal. Best practice in relation to birds would require site preparation and ground clearance to be completed outwith the breeding season. The applicant is reminded about their responsibilities in relation to protected species legislation in an informative. The proposal does not adversely affect the natural environment.

Under the Water Environment (Controlled Activities) (Scotland) Regulations 2011 (CAR), the Scottish Environment Protection Agency (SEPA) require the submission of an application for a CAR Licence. This would allow consideration of the implications of the proposal on the water environment. The applicants have not submitted this licence and details of any subsequent changes to the scheme required following the granting of a CAR licence may require to be approved in writing by the Head of Planning. Similarly the Council's Flood Prevention section will require to agree to construction details and timings of works. Any material changes to the proposal will require to be the subject of further planning consideration. The applicants are reminded of their responsibilities in relation to making a CAR licence via an informative.

e) There are no residential properties within the vicinity of the site whose amenity would be affected by the proposal.

In conclusion, the proposal is acceptable. The proposed use is acceptable in this countryside location and it will not adversely affect the openness or qualities of the area of outstanding landscape value. The development is sustainable and will not adversely affect the natural environment or residential amenity. There are no material considerations which outweigh this conclusion.

It is recommended that the Committee approves this application subject to conditions requiring details of access, electrical grid connections, replacement planting, tree protection measures, and archaeological investigations. Also conditions relating to the protection of the natural environment.

REASON FOR DECISION

The proposals comply with the Development Plan and non-statutory guidance and are acceptable.

John Bury
Head of Planning & Building Standards

Contact/tel	David McFarlane on 0131 529 3512
Ward affected	A02 - Pentland Hills
Local Plan	Rural West Edinburgh
Statutory Development Plan Provision	Countryside Policy
Date registered	5 January 2012
Drawing numbers/ Scheme	1,2a,3-5 Scheme 1

Advice to Committee Members and Ward Councillors

The full details of the application are available for viewing on the Planning and Building Standards Portal : www.edinburgh.gov.uk/planning.

If you require further information about this application you should contact the following Principal Planner,

If this application is not identified on the agenda for presentation and you wish to request one at the Committee meeting, you must contact Committee Services by 9.00a.m. on the Tuesday preceding the meeting. Contact details can be found in the Committee agenda papers.

Appendix A



Application Type Planning Permission
Application Address: Harlaw Reservoir
Harlaw Road
Balerno

Proposal: The reuse, reconstruction and operation of Micro-Hydro Power Generation facilities.

Reference No: 12/00001/FUL

Consultations, Representations and Planning Policy

Consultations

BAA

The proposed development has been examined from an aerodrome safeguarding perspective and does not conflict with safeguarding criteria. We, therefore, have no objection to this proposal.

Services for Communities (Environmental Assessment)

The application proposes to erect micro-hydro power generation facilities within a countryside location adjacent to an existing reservoir to the south. A ranger centre is situated to the east.

Therefore, Environmental Assessment has no objections to this proposed development.

Transport Planning (Development Control)

I have no objections to the application

SEPA

We have no objection to this planning application. Please note the advice provided below.

Advice for the planning authority

1. Water Environment (Controlled Activities) (Scotland) Regulations 2011 (CAR)

1.1 The proposed scheme will require an authorisation from SEPA under The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (CAR) which was put in place to deliver Water Framework Directive objectives relating to the protection and improvement of the water environment. Many

hydro proposals will have a significant adverse effect on the water environment and are therefore contrary to the objectives of the Directive. The Directive does however make provision for a derogation (exemption) from Directive objectives where a proposal meets certain strict conditions. However, we have not yet received an application for this scheme and therefore, we cannot determine whether the proposals will be consentable under CAR.

1.2 Local authorities are designated as a 'responsible authority' under the Water Environment and Water Services (Scotland) Act 2003 (WEWS). We therefore remind you that you must carry out your functions in a way that secures compliance with WFD objectives (WEWS 2(2)). As such, we recommend that determination of the planning application is deferred until the corresponding CAR application has been processed to establish whether or not a derogation is required and can be granted.

2. Flood risk

2.1 We have reviewed the information provided and it is noted that the application site lies within the 1 in 200 year (0.5% annual probability) flood envelope of the Indicative River & Coastal Flood Map (Scotland), and may therefore be at medium to high risk of flooding. Scottish Planning Policy states in paragraph 203, that 'for planning purposes the functional flood plain will generally have a greater than 0.5% (1:200) probability of flooding in any year. Development on the functional flood plain will not only be at risk itself, but will add to the risk elsewhere.' Built development should not therefore take place on the functional flood plain.

2.2 However, we have no objection to the proposed development on flood risk grounds as we consider that the proposed development is considered an exception to the above as noted within SPP paragraph 204. Furthermore from the information we have received we are of the opinion that the proposals are not likely to have a significant effect on flood risk in the area.

2.3 It is recommended that contact is made with your local Flood Prevention Officer who should be able to provide further information regarding flooding in the area and further details on the Water of Leith flood prevention scheme which incorporates Harlaw & Threipmuir Reservoirs.

2.4 Please note that we are reliant on the accuracy and completeness of any information supplied by the applicant in undertaking our review, and can take no responsibility for incorrect data or interpretation made by the authors.

2.5 The advice contained in this letter is supplied to you by SEPA in terms of Section 72 (1) of the Flood Risk Management (Scotland) Act 2009 on the basis of information held by SEPA as at the date hereof. It is intended as advice solely to City of Edinburgh Council as Planning Authority in terms of the said Section 72 (1).

This advice is given without prejudice to any decision made on elements of the proposal regulated by us, which may take into account factors not considered at the planning stage.

Detailed advice for the applicant

3. Water Environment (Controlled Activities) (Scotland) Regulations 2011 (CAR)

3.1 We recommend that an application is submitted for a CAR licence at the same time as submitting a planning application to the local authority as it allows consideration of common details at the same time and should improve the efficiency of the consenting process. Therefore, as we have not received an application for a CAR licence we are unable to advise on the likely consentability of the scheme. In an attempt to address this issue we have recommended that determination of the planning application is deferred until the CAR application has been progressed. You may wish to discuss this issue with the planning authority.

3.2 If you would prefer the planning authority to go determine the planning application prior to the CAR licence being granted we consider it to be your commercial risk if the CAR licence is later refused. There is the chance that any significant changes required during the regulatory stage may also necessitate a further planning application and/or neighbour notification or advertising.

3.3 The proposal should meet the criteria set out in Part A of the SEPA guidance for developers of run-of-river hydropower schemes. All hydro schemes are also required to incorporate all practicable mitigation measures, as set out in Part B of the guidance, to reduce the impact on the water environment. The Guidance for applicants on supporting information requirements for hydropower applications provides details of the supporting information required with a licence application and includes information on fish and fish habitat. Any CAR licence issued will contain a condition requiring a Construction Method Statement (CMS) to be submitted and agreed with SEPA. Mitigation proposed for the construction of the access tracks, pipeline, impoundment, abstraction and return structures should all be included in the CMS.

3.4 We note that the proposed scheme is sub 0.35 gigawatt hours per year. Therefore, if the scheme satisfies Annex A checklist and incorporates the mitigation set out in Part B of the guidance noted above then it will not be required to go through the derogation procedure.

3.5 The applicant is advised to contact the local regulatory team if they require any further advice and guidance in relation to the CAR licensing process.

4. Flood risk

4.1 We do note that the access track to the site is within the 1 in 200 year flood extent and therefore is at risk of flooding, furthermore the village of Balerno downstream of the proposed site has been subject to flash flooding as recently as July 2011. We therefore support all necessary mitigation measures to reduce flood risk at the proposed site. We also strongly advise that the guidance outlined in Planning Advice Note 69, paragraphs 79 to 85 Water Resistant Materials and Forms of Construction is followed.

Regulatory advice

5. Regulatory requirements

5.1 Details of regulatory requirements and good practice advice for the applicant can be found on our website at www.sepa.org.uk/planning.aspx. If you are unable to find the advice you need for a specific regulatory matter, please contact a member of the regulatory team in your local SEPA office (tel: 0131 449 7296).

Culture and Leisure Archaeology Service

The proposed works affect the dam of Harlaw reservoir constructed between 1843 & 1848. Accordingly the site is considered to occur within an area of local archaeological importance. Therefore this application must be considered under terms the Scottish Government Historic Environment Policy (SHEP), Scottish Planning Policy (SPP), PAN 02/2011 and also CEC's Rural West Edinburgh Local Plan (2003) E30. The aim should be to preserve archaeological remains in situ as a first option, but alternatively where this is not possible, archaeological excavation or an appropriate level of recording may be an acceptable alternative.

The proposals will see the demolition of brick former machinery out buildings and structures associate with the dam, an impact which is considered to have a moderate-low archaeological impact. It is considered important therefore that an archaeological programme of works is undertaken to record these structures and any associated remains. This will require the undertaking of a watching brief during construction, a survey and plan of the surviving remains linked to a photographic and written historic building record of the upstanding structures. It is recommended that the following condition is attached if consent is granted to ensure that this programme of archaeological works is undertaken.

'No development shall take place on the site until the applicant has secured the implementation of a programme of archaeological work (excavation, historic building record, analysis & reporting) in accordance with a written scheme of investigation which has been submitted by the applicant and approved by the Planning Authority.'

The work must be carried out by a professional archaeological organisation, either working to a brief prepared by CECAS or through a written scheme of investigation submitted to and agreed by CECAS for the site. Responsibility for the execution and resourcing of the programme of archaeological works and for the archiving and appropriate level of publication of the results lies with the applicant.

Flood Prevention

The outflow from the reservoir will always be used for operational purposes and as such the flow supply to any hydro turbine cannot and will not be guaranteed.

Edinburgh Council is currently progressing with projects to carry out relining to the outlet pipes and possible replacement of the outlet valves. It should be noted that the hydro scheme will not be able to progress until this work is complete.

It is understood that the legal issues relating to this application are being considered separately. The Flood Prevention Team would like to be kept informed of any outcome in relation to any agreements.

It is accepted that an access road down to the worksite will be required during construction (of the works) and the location and detail of this will need to be agreed. Reference has been made to a permanent access road which in this area is not acceptable. Any access taken for construction would need to be reinstated to the current condition on completion.

All proposed details for the works will require to be discussed and agreed with the City of Edinburgh Council, Flood Prevention Team and the Reservoir Supervising or Inspecting Engineer.

It is essential that the position of the outlet discharge from the turbine house is upstream of the existing flow gauge weir.

Access to the upper outlet will be severely restricted.

** There are weight restrictions across the dam which would limit the construction traffic.*

** The steepness of the bywash channel and the adjacent slope may prove prohibitive for access.*

** No construction traffic would be allowed to access from the bywash channel or through the trees from the upper valve chamber.*

** The placement of the pipeline within the stone outlet channel would greatly reduce the flow capacity. It would need to be clearly demonstrated that this would not affect the reservoir operations.*

There are some errors in the document Planning Application Supporting Statement that should be amended:

** The title of this document is not strictly correct; there is no Reuse or Reconstruction as everything relating to the hydro scheme will be new.*

** Reference to Policy M6 should be M7;*

** In Location -there is no existing micro hydro electric generating site;*

-The reference to Nissan style hut should be changed to brick houses to avoid confusion with the existing valve house;

** Ownership of the reservoir did not transfer until 2007;*

** The reservoirs are managed by the Flood Prevention Team, remove references to and River Flow Management.*

Representations

The proposal was advertised on 20.01.2012 and one letter of representation has been received.

Material points addressed in assessment a)

- policy issues relating to the use within the Pentland Hills Regional Park are highlighted

Non material points raised related to monetary concerns in relation to the Council's land ownership of the site.

Full copies of the representations made in respect of this application are available in Group Rooms or can be requested for viewing at the Main Reception, City Chambers, High Street.

Planning Policy

The proposal lies within a countryside policy area on the Rural West Edinburgh Local Plan. The site also a site of importance for nature conservation and within an area of outstanding landscape quality.

Relevant Policies:

Relevant policies of the Rural West Edinburgh Local Plan.

Policy E1 seeks to prevent development which would be inconsistent with local plan objectives for sustainable development.

Policy E4 states that development proposals should fully take into account the likely effects on the environment and include measures to mitigate any adverse effects.

Policy E5 states that in order to protect the landscape quality, rural character and amenity of the Green Belt and countryside areas, development will be restricted.

Policy E6 states that where acceptable in principle, development proposals in the Green Belt or countryside must meet the criteria which aim to achieve high standards of design and landscaping.

Policy E8 states that development will not be permitted where it would adversely affect the special scenic qualities and integrity of the area of Great Landscape Value or Areas of Outstanding Landscape Quality. These landscape features include: the patterns of woodland, fields, hedgerows and trees; the special qualities of rivers and lochs; and skylines and hill features, including prominent views.

Policy E15 seeks to ensure the survival and retention of healthy mature trees as part of development proposals. Where the loss of woodland, trees or hedgerows is unavoidable, the developer will be required to undertake equivalent replacement planting.

Policy E18 protects identified sites of local nature conservation interest. Development within or affecting Sites of Interest for Nature Conservation will not be permitted unless there are appropriate mitigation measures to enhance or safeguard the nature conservation interest of the site.

Policy E22 says that development proposals which have the potential to harm a protected plant or animal species or its habitat will not be permitted unless the protection of species can be secured through the appropriate design and construction methods.

Policy E27 encourages and supports a number of measures for the protection and enhancement of the recreational potential of the River Almond, Water of Leith and their tributaries

Policy E41 encourages high standards of design for all development and its careful integration with its surroundings in terms of scale, form, siting, alignment and materials. New development should improve energy efficiency and reduce noise pollution.

Policy E42 requires new buildings to make a positive contribution to the overall quality of the environment and the street scene, making provision for high quality landscaping and, where appropriate, new open spaces.

Policy R45 says that as a general principle all new residential and business development should be designed to avoid or manage any threat to susceptible properties from a 200 year flood

Policy M7 says that proposals for the generation of renewable energy will be permitted unless there would be unacceptable harm to one of the environmental designations listed

Relevant Non-Statutory Guidelines

Non-statutory guidelines on BIODIVERSITY sets objectives for habitat creation and enhancement, lists protected species and how developments can make provision for these, and lists the sites of national and local nature conservation interest.

Non-statutory guidelines DEVELOPMENT IN THE COUNTRYSIDE AND GREEN BELT, provide guidance on development in the Green Belt and Countryside in support of relevant local plan policies.

Non-statutory guidelines on 'QUALITY OF LANDSCAPES IN DEVELOPMENT' sets detailed design principles for hard and soft landscaping, including the retention of existing features, and relates these principles to different types of development.

Non-statutory guidelines on "Trees and Development" provides guidance on the information required to support planning applications in respect of tree protection, the retention of trees of landscape, biodiversity or amenity significance, and encourages new tree planting where appropriate.

Appendix B



Application Type Planning Permission
Application Address: Harlaw Reservoir
Harlaw Road
Balerno

Proposal: The reuse, reconstruction and operation of Micro-Hydro Power Generation facilities.

Reference No: 12/00001/FUL

Conditions/Reasons associated with the Recommendation

It is recommended that this application be Granted by Committee, subject to the conditions, reasons and informatives stated below.

Conditions:-

1. Prior to the commencement of the development, details of the proposed access between the Pentland Hills Ranger Centre and the new turbine building shall be submitted to and approved in writing by the Head of Planning. Those details shall be in the form of a method statement and shall include a detailed specification, location and design of the access path together with the reinstatement of damaged ground. The approved method statement shall be fully implemented prior to the hydro power generating facilities being made operational and thereafter maintained.
2. Prior to the commencement of works on the site, details an electrical grid connection is to be formed shall be submitted to and approved in writing by the Head of Planning. The approved details shall be fully implemented prior to the hydro power generating facilities being made operational and thereafter maintained.
3. Prior to the commencement of the development details of compensatory screen planting shall be submitted to and approved in writing by the Head of Planning. Those approved details shall be fully implemented within one year of the completion of the development.
4. Only the tree/s shown for removal on the approved drawing/s shall be removed, and no work shall be carried out on the remaining trees at any time without the prior written consent of the Head of Planning.
5. Prior to the commencement of any work on the site details of tree protection measures shall be submitted to and approved in writing by the Head of Planning. These details shall be in accordance with BS5837.2005

'Recommendation for Trees in Relation to Construction' and shall remain during construction.

6. No development shall take place on the site until the applicant has secured the implementation of a programme of archaeological work (excavation, historic building record, analysis & reporting) in accordance with a written scheme of investigation which has been submitted by the applicant and approved by the Head of Planning.

Reasons:-

1. In the interests of protecting the environment.
2. In the interests of protecting the environment.
3. In the interests of protecting the environment.
4. In order to safeguard protected trees.
5. In order to safeguard protected trees.
6. In order to safeguard the interests of archaeological heritage.

Informatives

It should be noted that:

1. The development hereby permitted shall be commenced no later than the expiration of three years from the date of this consent.
2. The applicant should note that any changes required to the proposal following the granting of a CAR licence by SEPA and following discussions with the Councils Flood Prevention Section shall be submitted to and approved in writing by the Head of Planning.
3. The applicants should be aware that during the construction of the development, the best practice specified in the submitted document titled 'Ecological Walkover Assessment for Proposed Small-Scale Hydro Scheme at Harlaw Dam Balerno West Lothian, September 2011' by Acorna Associates (Ecological and Planning Consultancy) shall require to be fully adhered to.

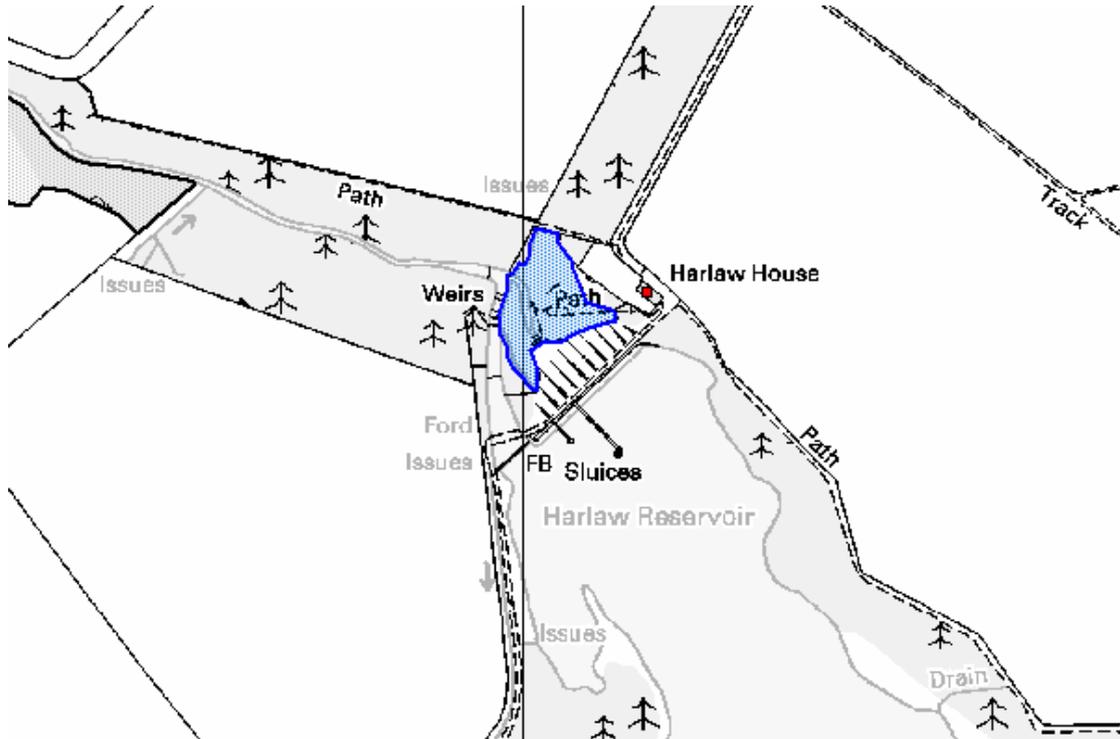
End

Appendix C

Application Type Planning Permission

Proposal: The reuse, reconstruction and operation of Micro-Hydro Power Generation facilities.

Reference No: 12/00001/FUL



Location Plan

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