

Edinburgh Drinking Water Project – Response to Consultation Exercise

Planning Committee
5 October 2006

1 Purpose of report

- 1.1 To bring to the attention of the Committee Scottish Water's proposals to improve the quality of Edinburgh's drinking water: the Edinburgh Drinking Water Project, and to agree a consultation response to its proposals.

2 Summary

- 2.1 Scottish Water recognises that it has an important part to play in allowing Edinburgh to continue to grow and develop. Existing water treatment facilities that serve the City need to be upgraded and/or replaced to accommodate this growth and to meet stricter drinking water quality standards. Scottish Water is taking a long-term view of Edinburgh's needs and is proposing a multi-million pound investment in the city's water supply. The Edinburgh Drinking Water Project promotes a redevelopment option that would see a new water treatment works built on Scottish Water's existing site at Fairmilehead, including a new link main to Alnwickhill, and a new build option on a site located in Midlothian. Before identifying a preferred option to take forward to the detailed design and planning stage, Scottish Water is seeking the views of key stakeholders, including this Council, on its proposals.
- 2.2 It is important that the City's water quality is improved, that appropriate water treatment facilities are delivered that are capable of meeting future demand and that the growth of the City is not constrained by inadequate facilities. The Council therefore supports in principle the redevelopment of Scottish Water's existing site at Fairmilehead to meet the requirements of the Edinburgh Drinking Water Project. However, if a suitable site in Midlothian is identified that is considered to be a better option to meet operational requirements, is acceptable in planning and environmental terms, is supported by Midlothian Council and is deliverable by 2010, this Council would not raise objections to such a proposal.

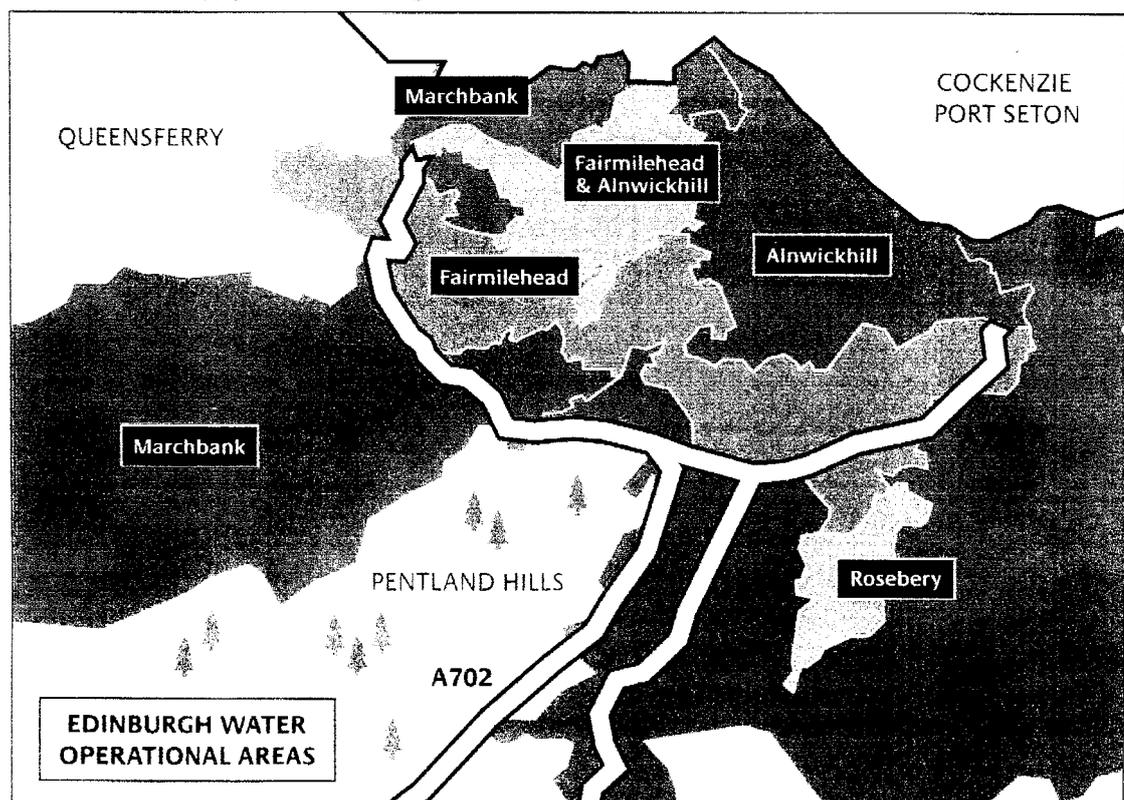
3 Main report

Background

3.1 The two main water treatment works at Alnwickhill and Fairmilehead have served the City since 1879 and 1909 respectively. Scottish Water recognises that there is a need to invest in the City's water supply to meet new drinking water quality standards and to keep in step with the City's present and anticipated growth. At present, separate areas of Edinburgh are supplied with drinking water from one of four water treatment works (WTW)s, namely (see figure 1 below):

- **Marchbank WTW:** located to the south of Balerno. A relatively new works, but requires investment to improve the quality of the drinking water. An upgrade of the plant is in preparation and the investment is programmed to be completed by 2010;
- **Rosebery WTW:** Located south of Temple, Midlothian. Work currently in progress to increase the quantity and improve the quality of drinking water;
- **Fairmilehead & Alnwickhill WTWs:** Located in the south and south-east of Edinburgh respectively and serve by far the largest part of the City. Although both facilities have been expanded, they no longer have the capacity to treat sufficient water supplies to meet anticipated future demand; neither do they consistently provide drinking water at the desired quality standard.

Figure 1: Water supply areas of Edinburgh



3.2 The project, when complete (2010), will meet enhanced water quality standards required under the terms of the Water Supply (Water Quality) (Scotland) Regulations 2001 and the Cryptosporidium Directions 2000 and 2002, which in turn will implement a European Union Directive on the quality of drinking water. The project will also tackle the problem of water leakage in Edinburgh by reducing the amount of water lost to acceptable economic levels. For these reasons, Scottish Water considers it necessary to build modern facilities to replace Fairmilehead and Alnwickhill WTWs that can cope with the amount of water needed to meet future demand and treat the water to meet new regulation standards. The aim of the Edinburgh Drinking Water Project is therefore:

- to deliver consistently high quality drinking water, and
- to deliver increased water services capacity to accommodate future growth of the City.

The Options

3.3 In 2000, Scottish Water commissioned the Edinburgh and Lothian Area Water Strategy Review, the purpose of which was to inform the development of an integrated strategy for water supply, treatment and distribution to meet current and future demands (to 2025). This work, and an investigation of the existing WTWs in Edinburgh, identified three options to improve the water quality currently supplied from the Fairmilehead and Alnwickhill WTWs:

- build new WTWs at the existing Scottish Water sites at Fairmilehead and Alnwickhill;
- build a new WTW works at the existing Scottish Water site at Fairmilehead and stop treating water at Alnwickhill; and,
- build a new WTW at a new location and stop treating water at both Fairmilehead and Alnwickhill.

Option 1

3.4 The physical size of Alnwickhill and the need to maintain supplies during construction present major constraints to development. Land at Alnwickhill is fully utilised by the existing WTW. In addition, the elevation of the site (50m lower than Fairmilehead) is such that it cannot be used to supply areas currently fed by Fairmilehead without the use of pumping machinery. This would require significant energy use over the life of the plant and therefore would not support the desired sustainability and economic requirements of the project. Consequently, the lack of available land, higher risk to supplies and higher costs associated with this option mean that an upgrade at Alnwickhill is not viable and will not be pursued any further.

Option 2

- 3.5 The option of using the existing Scottish Water site at Fairmilehead has been assessed on engineering requirements and has been determined as a viable option for further detailed consideration. Its redevelopment would involve the construction of a new WTW within its existing boundaries. In addition to supplying the existing treated water treated from Fairmilehead, a new WTW at this location would need to provide water to the distribution network currently supplied by Alnwickhill. This would be likely to be delivered via a new link main across the Braids to Alnwickhill WTW.

Option 3

- 3.6 Option 3 involves the acquisition of a new site beyond the City boundary. A new WTW would link into the existing raw water mains running from reservoirs in the Borders and deliver treated water back into the existing distribution network. New pipes for treated water would therefore have to be laid from the new WTW to Fairmilehead and Alnwickhill, where they would link into the network. Scottish Water note that as the project is at an early stage it does not have finalised details of the type, size or numbers of buildings required.

The decision making process

- 3.7 Scottish Water is progressing consideration of two options (2 & 3 above) - to build a new treatment works at its existing site at Fairmilehead and stop treating water at Alnwickhill – the redevelopment option, or to build a new treatment works at a new location – the new development option.

Phase 1: Agreeing the search area November 2005 – April 2006

- 3.8 An initial assessment of engineering and hydraulic requirements for a new treatment works has been undertaken. This has confirmed that the Fairmilehead redevelopment option meets these requirements - a number of alternative solutions have been considered for the potential layout of new buildings at Fairmilehead, along with possible routes for the required link main to Alnwickhill WTW.
- 3.9 A new location will be required for the new development option. The site search criteria include:
- a location between the raw water sources in the Borders and the existing works and infrastructure in Edinburgh;
 - a site close to an existing raw water mains;
 - an elevation between 235m and 185m to reduce the need for pumping; (the two raw water conduits delivering water to Edinburgh meet north-west of Penicuik. The height at this point determined the upper contour of the search area at 235m. The lower contour of 185m is determined by the hydraulic head required to gravitate treated water to the existing storage area reservoirs at Fairmilehead);

- land availability.

Within the search area, 26 potential development areas have been identified. All sites are within Midlothian Council area; located close or adjacent to the A702 between 1.7km and 5.9km south of the City By-pass.

Phase 2: Short Listing

3.10 Scottish Water held a number of workshops with key stakeholders, including this Council, Midlothian Council, SEPA, SNH and Historic Scotland, prior to producing a short list of options to take forward for further consideration. In short, the feedback with regard to the redevelopment option at Fairmilehead concluded that:

- construction work and development within a residential area would require careful site design and landscaping;
- there would be increased traffic movements during construction;
- removal of spoil from site due to space restrictions on site;
- pipeline to Alnwickhill would require careful routing and mitigation techniques to reduce impact;
- developing a new facility on an existing WTW site will introduce additional complexities to the project as the treatment works must remain operational at all times during construction; and,
- while final water storage options have yet to be finalised. It is envisaged that the existing buried water storage tanks at both Fairmilehead and Alnwickhill may continue to be utilised to some extent.

In light of the above, Scottish Water believe that there are no significant objections in principle to this option and will take it forward to the next phase for further consideration.

3.11 With regard to the new development option, the principal concerns relate to the visual impact of a new WTW and the creation of a new access onto the A702. The consultation document considers 26 possible sites and comments on their suitability in terms of their accessibility, the length of new pipes required, availability of power supply. All 26 sites lie in Midlothian Council area.

Phase 3: Detailed Surveys : August – October 2006

3.12 Scottish Water is undertaking a 12 week consultation exercise with key stakeholders and residents. This report and responses to the questionnaire, attached as Appendix 1, will contribute to this exercise. During this period, Scottish Water will also undertake Environmental Screening surveys for the redevelopment option.

Phases 4 & 5: Preferred Options (autumn 2006) & Planning Application (2007)

- 3.13 During the Autumn, Scottish Water will assess the results of the environmental surveys and responses to public consultation exercise to identify a preferred option to take forward to the detailed design and planning stages. It is intended to submit a planning application for the preferred option during summer of 2007.
- 3.14 Scottish Water makes clear that the future of its sites at Fairmilehead and Alnwickhill are not part of the consultation exercise. Neither are issues related to the drinking water supply in Midlothian.

Consultation Questionnaire

- 3.15 A consultation questionnaire, with proposed responses, is attached to this report as Appendix 1.

4 Financial Implications

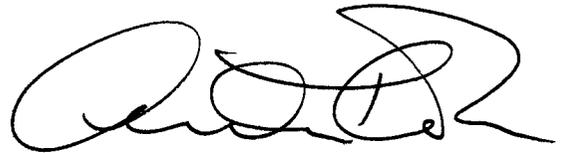
- 4.1 There are no financial implications for the Council arising from this project.

5 Conclusions

- 5.1 Scottish Water's proposals will deliver significant improvements to the City's water treatment facilities and the quality of its drinking water. It will also create additional capacity in the network to serve future development programmed in structure and local plans. In planning terms, there are no objections in principle to the redevelopment of the existing site at Fairmilehead for this purpose, provided that there will be no adverse impacts on residential amenity. Neither are there objections in principle to the provision of the required link main to Alnwickhill, provided appropriate tunnelling techniques and mitigation measures are employed to protect the ancient Galachlaw woodland (a Scheduled Ancient Monument), the nature conservation interests of the woodland and the Braids and the Green Belt located between the water treatment works at Fairmilehead and Alnwickhill.
- 5.2 In this context, the acceptability of any works in the City will depend critically on an assessment of detailed proposals as they come forward, to ensure no adverse visual or other environmental impacts.
- 5.3 The Council supports in principle the redevelopment option at Fairmilehead to meet the requirements of the Edinburgh Drinking Water Project. However, if a suitable site in Midlothian is identified that is considered to be better for operational purposes, that is acceptable in planning and environmental terms, that is supported by Midlothian Council, and is deliverable by 2010, that this Council would not raise any objection to such a proposal.

6 Recommendations

- 6.1 It is recommended that the Committee approves the report and responses set out in Appendix 1, the questionnaire, as the Council's formal response to the proposals of the Edinburgh Drinking Water Project.



Andrew M Holmes
Director of City Development

Appendices	Appendix 1: Edinburgh Drinking Water Project Consultation Questionnaire.
Contact/tel	Andrew Sikes 0131 469 3412 andrew.sikes@edinburgh.gov.uk
Wards affected	City Wide, 52 and 53 in particular
Background Papers	Edinburgh Drinking Water Project: project Overview & Consultation Document

Edinburgh Drinking Water Project consultation questionnaire

Scottish Water's consultation process gives our customers the opportunity to be involved and influence decisions that impact on the delivery of water and waste water services within the communities we seek to serve.

Please take a few moments to complete this consultation questionnaire, by placing a cross in the relevant boxes and writing your answers in the spaces provided. Once completed please return to **Scottish Water, PO Box 13251, Galafoot Office, Galashiels, TD1 2WT or e-mail to edinburghwater@scottishwater.co.uk** Alternatively you can complete and return this questionnaire electronically on our website: **www.scottishwater.co.uk/edinburghwater**

Please return this questionnaire by the **7 November 2006**.

We need to know whether you are happy for your response to be made public. Please complete and return the attached respondent information form. If you ask for your response not to be published we will regard it as confidential, and we will treat it accordingly. However, Scottish Water is subject to the provisions of the Freedom of Information (Scotland) Act 2002 and we would have to consider any request for information on responses to this consultation paper.

Where respondents have given permission for their response to be made public, these will be made available on our website, www.scottishwater.co.uk/edinburghwater

Respondent information

Name: **Andrew Sikes**

Name of group/organisation (if applicable): **City of Edinburgh Council**

Address: **Planning & Strategy**

City Development Department

1 Cockburn Street

EDINBURGH

Postcode: **EH1 1ZJ**

Daytime telephone (optional): **0131 469 3412**

E-mail: **andrew.sikes@edinburgh.gov.uk**

1 Are you responding: (please put a cross in one box only)

a) as an individual please go to Q2a

b) on behalf of a group/organisation please go to Q3

Individuals

2a Do you agree to your response being made public?

- YES (go to 2b)
- NO (we will treat your response as confidential)

2b Where confidentiality is not requested we will make your response available to the public on the following basis (please cross one of the following boxes)

- YES make my response, name and address available
- YES make my response available, but not my name or address
- YES make my response and name available but not my address

On behalf of groups or organisations

3 The name and address of your group/organisation will be made available to the public. Do you also agree to your response being made available?

- YES
- NO (we will treat your response as confidential)

Consultation questions

During this consultation we are seeking your early views on various aspects of the different options and whether you have a preference as to which option is chosen.

Comments on the following aspects are welcome:

The re-development option – the Fairmilehead site

- Should we build the new water treatment works (WTW) on the existing Fairmilehead site;
- What would be your concerns about this development at Fairmilehead;
- What specific issues should we consider in the design.

The new development site

- What do you think about a possible new site on the A702 corridor;
- Which of the five areas we have highlighted would you prefer to be used for a new WTW;
- What specific issues should we consider in the design.

The final preferred option

- Do you have a preference between the re-development of Fairmilehead and the new development option;
- What criteria should be considered when making this final decision.

Please continue your comments on a separate sheet if necessary, clearly stating which question you are commenting on.

The re-development option – Fairmilehead

Q1 What do you think about a new water treatment works (WTW) on the existing Fairmilehead site? (please give reasons for your answer)

The development plan - the Edinburgh and the Lothians Structure Plan 2015 and South West Edinburgh Local Plan - support in principle the redevelopment of the existing WTW at Fairmilehead to provide new water treatment facilities, subject to there being no adverse impact on residential amenity and provided appropriate mitigation measures can be incorporated into the development to enhance or safeguard the nature conservation interests of the site and its surroundings.

In this regard, it is noted that new buildings, storage areas and compounds are envisaged beyond the existing treatment facilities at the top of the site, along its north and north-east boundaries, close to existing residential properties. Careful consideration will need to be given to location and design of these facilities if new development is to be carefully integrated into its surroundings and amenity and landscape features protected. Should this prove to be the preferred option the Council would encourage early pre-planning application discussion with planning and other relevant officials.

It is also noted that the proposed link main from Fairmilehead to Alnwickhill would pass under ancient woodland at Galachlaw, a Scheduled Ancient Monument and urban wildlife site, and cut across the Braids at Mortonhall, an Area of Great landscape Value, an urban wildlife site and part of the Green Belt. However, it is understood that the depth and length of tunnelling under the woodland at Galachlaw would be such that this could be undertaken without damage to the woodland. The Council would wish to be fully satisfied on this point prior to any development taking place. With regard to the remaining areas, new tree planted areas should be avoided, as should field boundaries such as hedging and mature trees. If the route has to cross a field boundary it should do so with as little impact as possible i.e. at one point.

Q2 Is this option something you would support?

YES

NO (Please give reasons for your answer)

Subject to the considerations set out in Q1, the Council supports the redevelopment option at Fairmilehead in principle. The Council will only be able to fully support this option once it has had the opportunity to consider detailed proposals, necessary supporting environmental information, the views of statutory consultation bodies and the general public.

Q3 What would be your greatest concerns regarding development of a new WTW at Fairmilehead?

See response to Q1.

Q4 What specific issues should we consider in the design?

See response to Q1. In addition, the Council would direct Scottish Water to the 'Design of New Development' policies contained in relevant local plans and to supplementary planning guidance. The Council would expect to participate fully in the development design stage of this project and is happy to set out in more detail relevant planning policy considerations and its information needs.

The new development site

Q5 What do you think about a possible new site on the A702 corridor?

No comment. The new development option is a matter for Midlothian Council.

Q6 Is this something you would support?

YES

NO (Please give reasons for your answer)

See response to Q5.

Q7 Which of the five areas we have highlighted would you prefer to be used for a new WTW?

Please tick one box and give reasons for your answer.

Area A

Area B

Area C

Area D

Area E

See response to Q5.

Q8 What specific issues should we consider in the design?

See response to Q5.

The final preferred option

Q9 Do you have a preference between the re-development and new development options?
Please tick one box and give reasons for your answer.

- Re-development New development No preference

It is important that the City's water quality is improved, that appropriate facilities are procured that are capable of meeting future demand and that the growth of the City is not constrained by inadequate facilities. To this end, the Council supports in principle the redevelopment option at Fairmilehead to meet the requirements of the Edinburgh Drinking Water Project. However, if a suitable site in Midlothian is identified that is considered to be a better option for operational purposes, that is considered acceptable in planning and environmental terms, that is supported by Midlothian Council and is deliverable by 2010, the City of Edinburgh Council would not raise objections to such a proposal.

Q10 What criteria should be considered when making this final decision?

There a number of considerations that should be taken into account when making a final decision on the preferred option. From a planning perspective these are set out in the development plan, particularly the local plan, and supplementary planning guidance. Important also will be the views of the public, particularly those living in close proximity to the existing WTW at Fairmilehead, whose amenity may be affected by, and the construction of, new treatment facilities.

Thank you for participating in our consultation, your feedback will assist in our strategic decision making process.