

# **Water Management Strategy**

**INITIATIVES WHICH ARE INTENDED TO  
BE UNDERTAKEN BY THE PROPERTY  
SERVICES DEPARTMENT**

**21 June 2004**



# Water Management

## 1 INTRODUCTION

The Property Services department has made a commitment to contribute to the Council's Environmental Strategy Action Plan, see Appendix 1, and Local Agenda 21 Strategy for Angus, see Appendix 2, by introducing and maintaining sustainable practices in the design, construction, maintenance and management of its non-housing estate. Similar practices will also be applied when undertaking works on behalf of the Housing department.

A recent presentation to the Environment and Quality of Life Member/Officer Group detailed the contributions the department is currently making and planning to make by developing, implementing and co-ordinating its strategies for: -

- Energy Management
- Sustainable Properties
- Water Management
- Asset Management

## 2 BEST PRACTICE

Review of the techniques adopted for the management of energy consumption and the reduction of CO<sub>2</sub> production has confirmed that these are the techniques which would best implement the corporate management of water consumption and can be integrated into the standards and procedures adopted by the Property Services department for energy management and sustainability.

## 3 IMPLEMENTATION

If empowered to undertake corporate management, the department could adopt a two-stage approach with the first stage being completed and evaluated before moving to the second stage.

Its adoption will require adequate employee briefing, process monitoring to ensure that the practices are being employed and record keeping to demonstrate the level of achievement attained. This would enable the department to support the Council should it choose to aspire to ISO 14001 accreditation or alternative.

The Property Services department is already working with Scottish Water to address issues resulting from the introduction of the new water charging arrangements and the phasing out of the temporary "virtual" metering arrangements introduced for a limited period to off-set the significant increases in costs resulting from higher meter standing charges. Subject to approval from departments, action is planned to replace oversized water meters and regularise metering arrangements for fire fighting water supplies.

### 3.1 MAIN INITIATIVES

The main initiatives comprise:-

- corporate management by the Energy Management Unit
- introduction of water consumption monitoring, profiling and targeting
- water audits
- good housekeeping
- water consumption reduction Spend to Save project programmes
- performance review
- support to the water management strategy through: -
  - design and maintenance standards
  - extending the remit of the Energy Management Steering Group
  - education and awareness

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- contract management
- support to Local Agenda 21 and sustainability
- integration within corporate Asset Management Planning

### 3.1.1 CORPORATE MANAGEMENT

The benefits of a corporate approach to energy management are beginning to appear and can be expanded. The experience gained in achieving progress to date and the progress planned for the future are valuable to the management of water consumption and it would be irresponsible not to benefit from this knowledge and experience.

### 3.1.2 WATER CONSUMPTION BUDGET SETTING, MONITORING, PROFILING AND MANAGEMENT

The Energy Management Unit [EMU] already has the specialist software necessary to manage water data, namely the STARK system currently used to manage energy bills. It treats water in the same manner as energy fuels, as a valuable resource capable of being monitored, profiled, targeted and managed.

The data capture could be undertaken very easily by permanently redirecting all water bills to the EMU following the precedent established in the early years of the Council to accommodate energy bills for ex-district properties.

### 3.1.3 WATER AUDITS

The EMU have gained valuable experience in undertaking energy audits and reviews using on-site inspection, historical consumption and DETR benchmarks to assess individual property performance and identify costed opportunities for improvement. This expertise can be expanded to apply to water management.

### 3.1.4 GOOD HOUSEKEEPING

As with energy management, good housekeeping can contribute to the effective reduction of water consumption and when ably supported by education and awareness schemes will have an impact.

### 3.1.5 SPEND TO SAVE

As with energy management, whilst good housekeeping and general awareness can make a contribution, major change will occur as a consequence of Spend to Save investment and the adoption of best practice techniques in new development and refurbishment projects.

Spend to Save investment will facilitate projects to be undertaken to reduce water consumption, reduce effluent production and look at using rainwater, where appropriate, to replace conventional supplies for toilets and similar purposes.

### 3.1.6 PERFORMANCE REVIEW

It is essential that processes are in place to evaluate the success or failure of initiatives taken to reduce water consumption. This is particularly important when Spend to Save projects are being undertaken and when major new build or refurbishment projects are being undertaken.

Such "progress review" will identify those initiatives which have proven successful and should be repeated, those where some improvement could be achieved the next time opportunity permits and those which have failed, to identify causes and avoid repetition in the future.

Such exercises can only be undertaken effectively if detailed consumption data is available for both the year immediately before and the year immediately after any such initiative is undertaken. Consequently most reviews take place some 15 - 18 months after initiative completion.

It is also essential that the forecast impact of initiatives has been carefully calculated during the planning stage to establish a performance achievement target. Such calculations are generally necessary to secure approval to proceed.

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### 3.1.7 SUPPORT TO THE WATER MANAGEMENT STRATEGY

#### 3.1.7.1.1 DESIGN AND MAINTENANCE

Experience with energy management has demonstrated that the adoption of sound design and maintenance standards can make a significant contribution.

In the case of water, this means ensuring that all existing water consumption is optimised and swift action taken to address excess consumption whether as a consequence of failed infrastructure, old equipment, poor management or lack of awareness.

The adoption of best practice techniques in new development and refurbishment projects will make a major contribution but will require broad acceptance of a "pay now, benefit later" philosophy. Client budget holders will need to accept that the initial financing constraints imposed on projects must be relaxed to enable new approaches to be introduced which will provide significant benefit by reducing annual running costs and contributing to the Council's LA21 and sustainability objectives for Angus.

Such Best Practice can also be rolled out to departments to support their good housekeeping initiatives.

#### 3.1.7.1.2 STRATEGIC MANAGEMENT - ENERGY MANAGEMENT STEERING GROUP

A corporate water management strategy is best undertaken with the support and assistance of a inter-departmental support group and it is considered that the remit of the Energy Management Steering Group should be expanded to include these responsibilities.

#### 3.1.7.1.3 EDUCATION AND AWARENESS

Good house keeping can contribute to water conservation but requires a commitment to regular education and awareness to ensure that good practices are reinforced and bad practices negated. The extension of the remit of the Energy Management Steering Group will ably support this initiative.

#### 3.1.7.1.4 CONTRACT MANAGEMENT

Unlike energy management, the Council is currently unable to tender its purchase of water supplies and consequentially benefit from economies of scale from the Consortium approach.

It does however have the ability to work in partnership with other Scottish councils and CoSLA to apply pressure on the Scottish Executive and Scottish Water for beneficial action.

The EMU is well placed to assist in this process through the Local Authority Energy Managers Network which fulfils this role for energy management and where water management is already an active issue. The Maintenance and Energy Programmes Manager, responsible for the EMU, is an active member of this forum.

#### 3.1.7.1.5 SUPPORT TO LA21 AND SUSTAINABILITY

Effective water management and the reduction of demand on natural resources is an element of the LA21 and general sustainability strategy.

The Council can both demonstrate by its actions and inform and encourage the local community to contribute to addressing the protection of the environment by the adoption of the approach detailed in this report.

#### 3.1.7.1.6 INTEGRATION WITHIN CORPORATE ASSET MANAGEMENT PLANNING

The Property Services department is progressing the introduction of corporate asset management planning. The water consumption characteristics of buildings used by the council is a factor considered when examining the continued suitability of the existing council non-housing estate in meeting current and fixture council needs.

### 4 RECOMMENDATIONS

Recent research into water management best practice through discussions with Scottish Water, water management consultants and other Scottish councils have confirmed that the approach recommended in this report are both best practice and common sense.

The outcome of a cross-cutting review on water management is awaited and its is hoped that the report will be favourable and contain recommendations that:-

- the Council adopt a corporate approach to water management through a strategy, action plan and associated targets.
- the Property Services department be authorised to undertake the responsibilities for corporate water management and work in partnership with other departments to achieve the Council's objectives in accordance with the practices detailed in this report.
- the Council commits sufficient resources.
- departments accept the "pay now, benefit later" philosophy and relax the initial funding constraints imposed on new development and refurbishment projects to enable new approaches to be introduced which will provide significant benefit by reducing annual running costs and contributing to the Council's LA21 and sustainability objectives for Angus.

## Appendix 1 Environmental Strategy Action Plan

### Key Action Areas

1. Education and Awareness Raising
2. Natural Environment
3. Transport
4. Built Environment
5. Energy
6. Pollution
7. Waste
8. Purchasing
9. Working in Partnership
10. Public Participation

## Appendix 2 Local Agenda 21 Strategy for Angus

### The Thirteen Themes of Sustainability:

1. Resources are used efficiently and waste is minimised by closing cycles.
2. Pollution is limited to levels which natural systems can cope with and without damage.
3. The diversity of nature is valued and protected.
4. Where possible, local needs are met locally.
5. Everyone has access to good food, water, shelter, and fuel at reasonable cost.
6. Everyone has the opportunity to undertake satisfying work in a diverse economy. The value of unpaid work is recognised, whilst payments for work are fair and fairly distributed.
7. People's good health is protected by creating safe, clean, pleasant environments and health services, which emphasise prevention of illness as well as proper care for the sick.
8. Access to facilities, services, goods and other people is not achieved at the expense of the environment or limited to those with cars.
9. People live without fear of personal violence from crime or persecution because of their personal beliefs, race, gender, or sexuality.
10. Everyone has access to the skills, knowledge and information needed to enable them to play a full part in society.
11. All sections of the community are empowered to participate in decision-making.
12. Opportunities for culture, leisure, and recreation are readily available to all.
13. Places, spaces, and objects combine meaning and beauty with utility. Settlements are 'human' in scale and form. Diversity and local distinctiveness are valued and protected.