

Automatic Public Conveniences

Reported by John Blair, Director Resources

1 Purpose of Report

The purpose of this report is to explore further the option of installing automatic public conveniences across a range of sites in Midlothian as agreed by Council on 26 September 2017.

2 Background

At the meeting on 26 September 2017 the Council considered a report entitled Midlothian Public Conveniences by the Director Resources.

Following consideration of the report the Council agreed to

- a) *Note the options as set out in report.*
- b) *Option 2 as set out in the report, i.e. to keep the five public conveniences open with reduced staffing levels.*
- c) *Receive further reports in relation to the option of automated facilities.*

In the intervening period the Director Resources has taken steps to implement Option 2 as agreed by the Council which keeps all 5 public conveniences open, reducing the staffing levels from 2 full time equivalents to 1.07 full time equivalents and reduce staffing cover to the following functions and hours of operation.

| Open | Clean | Clean and Close |
|---------------|---------------|-----------------|
| 08.30 – 09.30 | 12.00 – 14.00 | 16.30 – 19.00 |

3 Present Locations

Presently there are five public conveniences located in Midlothian situated at:-

| Location | Average Daily Usage | Average Daily Usage | Annual Usage |
|--|---------------------|---------------------|----------------|
| | Mon-Fri | Sat-Sun | |
| Penicuik, Bank Street, EH26 9BG | 140 | 49 | 41,496 |
| Loanhead, Station Road, EH20 9RQ | 76 | 14 | 21,216 |
| Bonnyrigg, Woods Court, EH19 3JR | 146 | 92 | 47,528 |
| Gorebridge, Hunterfield Road, EH23 4TS | 15 | 14 | 5,356 |
| Dalkeith, Eskdaill Court, EH22 1AG | 280 | 185 | 92,040 |
| Total | 657 | 354 | 207,636 |

As previously reported the facilities are prone to vandalism and the table below details the amount of days in 2016/17 when the public toilets have been closed due to vandalism:-

| Location | Total Days Closed |
|---------------------------|--------------------------|
| Bonnyrigg Public Toilets | 84 days |
| Dalkeith Public Toilets | 66 days |
| | |
| Gorebridge Public Toilets | 12 days |
| Loanhead Public Toilets | 5 days |
| Penicuik Public Toilets | 27 days |
| Total | 194 days |

Furthermore on Sunday 5 November 2017 the toilets at Dalkeith were set on fire and extensive interior damage occurred.

The estimated costs of returning this facility to a reusable condition is estimated to be in the region of £10,000 and will take approximately six weeks to complete.

These repairs have been put on hold pending consideration of this report coupled with the financial position facing the Council in the current year.

In the interim the Director Resources has reached agreement with the Art Centre and Morrisons Supermarket to allow access to their existing toilet facilities.

4 Review of Public Conveniences

It is proposed to close all five existing public conveniences and to market the resultant vacant land where possible. Furthermore it is proposed to install new automatic self-cleaning, opening and closing public conveniences in the 3 town centres of Bonnyrigg, Dalkeith, and Penicuik. Examples and full details of these units in appendix 1 of this report.

For clarity the proposal as costed and set out in this report is for a one cubicle facility.

In Loanhead the Paradykes Hub would be available for the public to use allowing the closure of the Loanhead facility. In Gorebridge the Gorebridge Hub would be available for the public to use this allowing the closure of the Gorebridge facilities. In the short term the Leisure Centre would be available.

The operation of the Automated Facilities at Dalkeith, Bonnyrigg and Penicuik are self-cleaning, opening and closing. There would still be a need to check the facilities daily and to replenish supplies and collect money etc. This would be overseen by existing members of the Facilities Services Team.

Income would be generated by charging 20p admission fee. Current usage is estimated at approximately 180,000 users per annum at the three locations. Based on an estimated drop in usage of 50% following introduction of a charge, income is estimated at:-

| Projected No's | Charge | Projected Yearly Income |
|----------------|--------|-------------------------|
| 90,000 | 20p | £18,000 |

However at this stage it is challenging to predict income levels and the Director Resources would establish the necessary monitory arrangements.

Report Implications

5.1 Resource

Council on 26 September 2017 approved reducing the Public Toilet service as set out in section 2 of this report.

The option of complete closure of all existing facilities and to install new automatic self cleaning, opening and closing public conveniences in the 3 town centres of Bonnyrigg, Dalkeith, and Penicuik would result in a additional full year revenue saving of £46,700 however an initial £289,000 one off investment would require to be made in order to purchase the 3 new automatic public toilets.

Note the additional allocation of £289,000 of capital costs in the General Services Capital Plan will increase the overall level of debt outstanding (which is already significantly above the cap set by the Council) and will have a corresponding increase in loan charges as shown in the table below.

| | Baseline Budget | Required Full Year Budget |
|-----------------------|-----------------|---------------------------|
| Employee Costs | £27,000 | £0 |
| Premises Costs | £53,000 | £30,000 |
| Transport Costs | £2,700 | £0 |
| Supplies and Services | £1,000 | £1,000 |
| Loan Charges | £0 | £24,000 |
| Income | £0 | £(18,000) |
| Total | £83,700 | £37,000 |
| Saving | | £(46,700) |

It is envisaged that this proposal would not be in place until 2018/19 due to the requirement to consult on locations to obtain planning permission, installation of services and the delivery of the units.

5.2 Indicative Timescales

Tabled below are the projected timescales for the planning and installation of the new automated units.

| Procedure | Week Commencing | | | | | | | | | | | | | | | | | | | | |
|-------------------------------------|-----------------|----|----|----|-----|---|----|----|----|-----|----|----|----|-----|----|----|----|-----|---|----|----|
| | Dec | | | | Jan | | | | | Feb | | | | Mar | | | | Apr | | | |
| | 4 | 11 | 18 | 25 | 1 | 8 | 15 | 22 | 29 | 5 | 12 | 19 | 26 | 5 | 12 | 19 | 26 | 2 | 9 | 16 | 23 |
| Report to Council | | | | | | | | | | | | | | | | | | | | | |
| Identify Sites | | | | | | | | | | | | | | | | | | | | | |
| Procure Units | | | | | | | | | | | | | | | | | | | | | |
| Planning Permission | | | | | | | | | | | | | | | | | | | | | |
| Ground Works | | | | | | | | | | | | | | | | | | | | | |
| Install Services | | | | | | | | | | | | | | | | | | | | | |
| Unit Delivery and Install Dalkeith | | | | | | | | | | | | | | | | | | | | | |
| Unit Delivery and Install Bonnyrigg | | | | | | | | | | | | | | | | | | | | | |
| Unit Delivery and Install Penicuik | | | | | | | | | | | | | | | | | | | | | |
| Contingency | | | | | | | | | | | | | | | | | | | | | |
| Go Live | | | | | | | | | | | | | | | | | | | | | |

6 Risk

A risk assessment of the cleaning standards for has been undertaken.

Income may be less than projected depending on public usage.

Overall any changes to the public toilet position may lead to criticism of the Council.

6.1 Single Midlothian Plan and Business Transformation

Themes addressed in this report:

- Community safety
- Adult health, care and housing
- Getting it right for every Midlothian child
- Improving opportunities in Midlothian
- Sustainable growth
- Business transformation and Best Value
- None of the above

6.2 Impact on Performance and Outcomes

The review of public conveniences will alter the way in which the services are provided and if approved public access to facilities could be reduced.

6.3 Adopting a Preventative Approach

Provision of facilities in town centres adds to the range of services offered and may influence public choice in where to visit.

6.4 Involving Communities and Other Stakeholders

Full consultation will be undertaken with staff, local members and publicity campaign will operate alongside the option of automated public conveniences if approved..

6.5 Ensuring Equalities

An equalities input assessment has been carried out.

6.6 Supporting Sustainable Development

Changes to the way in which public conveniences are operated will contribute to the overall financial viability of the Council.

6.7 IT Issues

There are no IT issues arising from this report.

7 Recommendations

The Council are recommended to:

- a) note the option of automated toilets set out in this report
- b) instruct the Director Resources to progress the installation of the automatic public conveniences located in Dalkeith, Bonnyrigg and Penicuik
- c) to close Loanhead and Gorebridge facilities with a view to marketing the sites for future development and if this proves unsuccessful then the buildings would be demolished.

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Background Papers:

Appendix 1: Automatic Toilet Specification and Operations

Automatic Toilet Specification and Operations



Automatic Cubicle Specification Summary

Interior Dimensions

- DDA compliant – minimum dimensions of cubicle 2.2m * 1.5m
- Ambulant Cubicle – 1.5m by 1.5m

Materials

- Cubicle Lined full height in Trespa Virtuon.
- Non Slip aluminum extrusion floor
- High security stainless steel door
- Roof in Trespa or equivalent

Automation

- Diagnostic computer and remote Fault detection and relay
- Full Bowl, wall and floor wash after each user
- Weight Plate to prevent door closing with less than 30kg or more than 130kg inside (adjustable)
- Anti-Bacteria atomizer to operate once per day
- Automatic remote locking/unlocking
- Vandal detection high pressure spray
- Smoke detection and sprinkler system

Specification

- Stainless Steel Toilet Bowl
- Automatic hand washing unit
- No-Touch toilet flush sensor
- High specification baby change facilities
- Automatic Toilet paper dispenser, positioned in service area

- Stainless steel mirror
- Two stainless steel coat hooks per cubicle
- Automatic ventilation system

User Considerations

- Door open and lock buttons by automatic electronic operation (LED ILLUMINATED) including Braille
- Sliding door
- Two emergency exit buttons by automatic electronic operation
- DDA compliant Toilet Alarm
- Automatic lighting on entry
- Emergency lighting in the event of power failure
- External coin plate indicating 'in service', 'vacant' or 'out of service'
- Validator coin system capable of managing different denominations
- RADAR key operation for disabled access
- Computer controlled operation to allow 15 mins usage
- 24/7 access
- External signage
- External lighting

Cubicle Technical Specification

The fully self-cleaning automatic toilets provide a clean, safe and economic alternative to traditional toilets. The specification provides each user with the best possible environment within the bounds of a public toilet. It simultaneously provides the best environment to stop anti-social behaviour and vandalism.

User Experience

An external visual display provides instructions to the user on entry into the toilet. Users can enter by a simple coin entry or via a RADAR key (DDA cubicle only).

Once inside, the user will receive full audio instructions on the use of the toilet. Occupation is limited to fifteen minutes, at which point the door will open after an audio warning.

Users entering the toilet with a RADAR key will render inoperative the restricting control features of the unit during their period of occupation.

- Timed access restriction is not operated
- The weight plate is disconnected

In this way, a wheel chair user can be accompanied.

Exit is typically afforded through a simply press of the illuminated and Braille 'exit' button positioned beside the door. In the DDA cubicle, two further buttons marked 'SOS', positioned at mid and floor level beside the toilet bowl will also operate the door.

In the unlikely event of an emergency, it is possible for an approved third party to enter the toilet via two separate and independent methods. In the first instance, it is possible to send a simple pre coded SMS text message to the toilet, which will instruct the system to release the valve holding the door closed. This text can be sent by the Council, the emergency services or other

third party. Secondly there is a manually operated switch which can be accessed by the emergency services.

Remote Operation, Diagnostic and Fault Repair

The cubicles are fitted with two-way modems that can send as well as receive messages. The communication system is cellular so does not require the installation of a telephone line.

The operator of the toilet can monitor a cubicle activity remotely, can request that it performs certain actions, for instance 'open the door', 'run through a clean cycle after next user' or 'switch off'. All actions that occur, for instance 'cleaner on site' or 'vandal attack' are all logged.

The cubicles are fitted with fault sensors which trigger messages via the unit modem both to the provider. The Council can monitor this activity on the Web. In the event of minor problems, (for instance, a door jammed open), the engineer can run through a number of fault repairing routines remotely in order to rectify the problem. In the event of this not working, the engineer is then dispatched to fix the problem.

Cleaning

All cubicles are fitted with a standard 'break the beam' flush. In the event that the user exits without having flushed the toilet, this will operate automatically.

All our cubicles are fitted with a bowl, wall and floor wash. This can either be operated either on the number of users or at certain times of day.

The wash is activated by the user leaving the cubicle and the door shut, once there is zero weight on the floor and the "across the bowl" infra-red sensor is satisfied that the cubicle is empty the walls are washed to 1 meter high using a combination of water and disinfectant. The second stage of the cleaning involves the toilet bowl, a panel situated behind the toilet bowl opens and upon contact with the edge of the toilet bowl sprays a combination of water and disinfectant to the inside and outside of the bowl. If the toilet has not been flushed manually it automatically flushes at this point. The toilet will continue to be cleaned until the washing equipment reaches ninety degrees and the whole toilet has been washed, then a large volume fan operates to dry the bowl, the washing equipment will return across the bowl to dry and return into its rest position in the wall. The third stage of the cleaning involves the cleaning of the floor, at the end of the bowl wash two panels either end of the cubicle open a floor level allowing the floor washing equipment to enter, the equipment transverses across the floor spraying a mixture of water and disinfectant and pushes any debris left on the floor into a receptacle in the service area. Once the washing equipment has reached its full stroke the water and disinfectant mixture is turned off and the equipment returns back across the floor removing any excess water.

Paper Dispenser

It is proposed to fit automatic paper dispensers in each unit, which will give a pre-defined amount of paper per user to limit malicious use.

Weight Sensitive Floor

As standard, all cubicles are fitted with a floor based on load cells. The unit is calibrated to allow a certain weight on the unit, if the minimum weight is not reached, for an example a small child enters the toilet the door will not close likewise if the maximum weight is reached, for example a group of people enter the toilet the door will not close. Both these parameters can be altered to the Councils wishes but are factory set at 30kg minimum and 130kg maximum. This feature is easily switched off if requested by the Council.

If the RADAR key is used this will turn off the maximum weight setting and the occupancy time to allow a disabled person and helpers to enter the toilet.

Washbasin Unit

The washbasin is designed to maximise ease of use, while aiming to reduce utility costs through wasteful action. It serves soap, water and hot air into a stainless steel basin, which are automatically triggered by proximity switch. In the event of the user exiting the cubical during the water or air cycle, the service will immediately stop. The sink is designed to allow a wheel chair to enter under the sink thus allowing easy access without being too far away while washing hands.

The sink also incorporates a system for the collection of needles, if a needle is thrown into the sink it falls through a chute into the service area into a collection point for easy removal to a sharps box.

Fire Dousing Equipment

Sinks, Bowls, Litter bins are all potential fire traps for the energetic vandal. These are fitted with smoke and heat detectors and associated sprinkler equipment. If the detector senses smoke or heat it immediately opens the door for the egress of the person and triggers localised solenoids to operate to douse the area in question. A signal from our monitoring equipment is immediately sent to the Engineer and our operations service centre.

Vandal Resistance

All materials used are highly vandal resistant.

- The walls are made from Trespa Virtuon, which is the market leading fire resistant (class "O"), hard wearing. The material is resistant to scratching, acid, alkali and graffiti can be easily removed.
- The toilet bowl can be in stainless steel
- All buttons are fully encased and resistant to menace. They also incorporate a visual ring of "LED" lamps to indicate the status of the button.
- All services into the cubicle are not accessible from within the cubicle
- The roof and lighting are well protected and built to withstand vandalism.

In the event of the robust movement sensor being triggered by extreme and violent movement within the cubicle, the door automatically opens, a high pitch alarm will sound and a fine water jet thoroughly soaks the interior of the unit. A signal is also sent by the monitoring equipment to the local Engineer and operations service centre.

As part of the maintenance contract, the supplier will repair all damage caused by vandalism.

Automatic Lighting and Heating

The cubicles will only be lit and the heaters on within the interior of the unit when it is occupied. This is backed up with emergency lighting in the event of power failure, and double cubicle lights to allow for local bulb failure.

Automatic and Definable Locking

The units are fitted with electronic locking which is infinitely flexible and reliable. It is assumed the units will be operating twenty four hours, but the toilets can operate to any variation of times which the Council specify.

In addition, all cubicles are fitted with timers which will automatically open the door after an audible warning and twenty minutes have elapsed. This can be programmed to the Council requirements.

RADAR operation

All users entering using a RADAR key will disable the majority of the control features of the unit during their period of occupation. In this way, a wheel chair user can be accompanied and spend as long as required in the unit.

Compliance with Legislation & Specification

The DDA units comply with Disabled Discrimination Act 2005 and Building Regulations.

The Interior of an Automatic Public Toilet

