

WIRRAL COUNCIL

CABINET

16 OCTOBER 2008

REPORT OF THE DIRECTOR OF FINANCE

DATA CENTRE

1 EXECUTIVE SUMMARY

- 1.1 This report presents Members with issues to be considered in determining the future provision of the data centre.
- 1.2 Members are requested to approve the engagement of an appropriate consultant to advise on options for the future.

2 BACKGROUND

- 2.1 The data centre accommodates the principal servers and data storage for the main IT systems.
- 2.2 The increasing focus on risk management requires a review of the suitability of the current data centre arrangements in the context of the ability to support Council services.

3 THE CURRENT POSITION

- 3.1 The data centre consists of two discreet areas within the Treasury Building/ Link Building at Cleveland Street, Birkenhead which are approximately 100 meters apart. One area is on the first floor of the Treasury Building, the other is in the Link Building above the underground garage.
- 3.2 The two areas are individually secured within the separately secured area of the buildings and restricted access applies to the data centre areas.
- 3.3 The data centre areas are air conditioned, individually alarmed for fire detection with FM200 gas release systems for automatic fire suppression, have environmental monitoring systems and sub floor water detection.
- 3.4 The two areas have separate power supplies.

- 3.5 The air conditioning for the data centre areas was renewed in 2007 as the original systems were increasingly unreliable and causing operational problems. The work was completed at a cost of approximately £60,000 and has resulted in a reduction in electricity cost of approximately £35,000 per annum. Any variation of temperature or humidity beyond parameters set by the hardware manufacturers results in an automatic, controlled close down of the data centres.
- 3.6 In terms of IT hardware, the main processors and data storage are split between the two data centre rooms so that in the event of a failure in one room, major services automatically “fail over” to the other room. This does not apply to Windows based servers including, currently, the e-mail servers.
- 3.7 There is no history of unauthorised attempts at access or of vandalism and the buildings’ security consists of card access, fencing, shutters and fire and intruder alarms linked to the Council control centre.

4 A BRIEF OVERVIEW OF RISKS

4.1 Treasury Building Data Centre

- 4.1.1 The data centre room is on the first floor. The basement is occupied by the Printing Section which uses flammable chemicals which are secured in a fireproof cabinet each evening.
- 4.1.2 The power supply is shared with the rest of the Treasury Building.
- 4.1.3 There have been periodic incidents of flooding from the Treasury roof, two floors higher.

4.2 Link Building Data Centre

- 4.2.1 The data centre is on the ground floor of the Link Building which is mainly of a single storey construction. However, beneath the data centre is the Treasury Building garage which, apart from daytime use is used to store vans overnight. Smoke detectors are fitted to the garage area.
- 4.2.2 The power supply is shared with the rest of the Link Building.
- 4.2.3 The flat roof above the data centre is in poor condition and is the subject of current repair works.
- 4.2.4 The data centre is located above the Queensway Mersey Tunnel.

4.2.5 The Link data centre is the location for the Treasury Building hub of the Mitel telephone system. In the event of this part of the system being unavailable, the in-built resilience in other parts of the system would ensure that communication to and between the other main sites would continue.

4.3 **Common Risks**

4.3.1 The data centre rooms are separated by 100 meters within two buildings which, although built 10 years apart in 1955 and 1965, are joined and used as one building. Fire in one building could pass to the other although there is separation by fire doors.

4.3.2 The separate power supplies do not give protection in the event of a general power failure in the locality.

4.3.3 There is no standby or backup power for either of the data centre rooms.

4.3.4 Any local emergency which prevented access to the buildings would affect both data centre rooms.

5 **ALTERNATIVES TO CURRENT PROVISION**

5.1 This is an area which many local authorities are reviewing and a survey of those on Merseyside is being undertaken.

5.2 In general terms, it appears that most local authorities are satisfied with a single data centre provided it has the following features:

- A sufficient and secure mains power supply
- Back-up power in the event of mains failure
- Adequate network provision
- Secure premises
- A secure location away from identifiable local risks
- Adequate air conditioning.

5.3 The alternatives for Wirral could include:

- hardening the existing provision, for instance by providing a standby power supply and improving the fire separation of the two buildings
- investigating the use of another site on Wirral not exposed to local risks in the Birkenhead/ east Wirral area either as a single site or back up site
- seeking a partner to enter into a shared services arrangement.

6 ASSET REVIEW

6.1 A strategic asset review is currently being undertaken and is reported elsewhere on this agenda.

6.2 It is proposed that future data centre requirements should be taken into account in that review.

7 THE NEXT STEPS

7.1 Contact has been made with other local authorities to examine any synergy between their position and Wirral. Any opportunities for collaboration will be carefully considered.

7.2 It is proposed to engage the services of a consultant to advise the Council on the adequacy of its current arrangements and future requirements in the light of an assessment of risks and current best practice.

8 FINANCIAL AND STAFFING IMPLICATIONS

8.1 Other local authorities which have recently established single data centres have done so at costs varying widely from £750,000 to over £3m.

8.2 Costs will depend on availability of a suitable site and building, network and power supply provision in the chosen area etc.

8.3 Consultancy services are estimated to cost in the region of £10,000 which can be financed from within existing resources.

9 EQUAL OPPORTUNITIES IMPLICATIONS

9.1 There are none arising directly from this report.

10 HUMAN RIGHTS IMPLICATIONS

10.1 There are none arising directly from this report.

11 LOCAL AGENDA 21 IMPLICATIONS

11.1 Data centres are large consumers of electricity both to power the hardware installed within them and to provide adequate air conditioning.

11.2 Replacement of the air conditioning in the current data centre rooms has led to a reduction in electricity consumption of £35,000 per annum.

12 COMMUNITY SAFETY IMPLICATIONS

12.1 There are none arising directly from this report.

13 PLANNING IMPLICATIONS

13.1 There are none arising directly from this report.

14 LOCAL MEMBER SUPPORT IMPLICATIONS

14.1 The data centre is located in the Birkenhead and Tranmere Ward.

15 BACKGROUND PAPERS

15.1 No background papers have been used in the preparation of this report.

16 RECOMMENDATION

16.1 That the services of an appropriate consultant be engaged to advise on options for future data centre provision.

IAN COLEMAN
DIRECTOR OF FINANCE