

# WIRRAL COUNCIL

## TRANSFORMATION & RESOURCES POLICY & PERFORMANCE COMMITTEE – 21 SEPTEMBER 2015

### AUDIT AND RISK MANAGEMENT COMMITTEE – 28 SEPTEMBER 2015

<b>SUBJECT:</b>	<b>IT Services Business Continuity and Disaster Recovery Update</b>
<b>WARD/S AFFECTED:</b>	<b>None</b>
<b>REPORT OF:</b>	<b>Strategic Director for Transformation and Resources.</b>
<b>RESPONSIBLE PORTFOLIO HOLDER:</b>	<b>Cllrs A. McLachlan and A. Jones</b>
<b>KEY DECISION?</b>	<b>No</b>

#### 1.0 EXECUTIVE SUMMARY

- 1.1 Since mid-2014 Wirral IT has undertaken a programme of work designed to mitigate and ultimately remove risks associated with an underinvestment in IT infrastructure.
- 1.2 This report details the progress thus far and outlines the remaining major steps that need to be completed in order to fully mitigate the current risks.

#### 2.0 BACKGROUND AND KEY ISSUES

- 2.1 The Wirral Council IT infrastructure suffered from underinvestment for a number of years, such that by the middle of calendar year 2013, there were number of risks and issues related to reliability, resilience and availability that needed to be addressed:
- 2.2 Since mid-2014 Wirral IT has undertaken a programme of work designed to deliver a fit for purpose IT infrastructure that:
  - is cost effective, reliable, up to date, secure and well maintained;
  - supports the Council's priorities and objectives;
  - enables the digital delivery of services to the citizens and businesses of the borough and across the Council for members and officers.
- 2.3 The programme of work has, either delivered, or is in the process of delivering, a number of benefits that achieve the above stated objectives. This programme of work will remove multiple single points of failure/dependency and ultimately deliver an overarching IT Disaster recovery plan. Projects to date include: -

2.3.1 Windows 7 Project (2014/15) - This project has delivered;

2.3.1.1 A mobile end user computing solution (Windows 7 Laptops) addressing the issues of workplace business continuity across the council. In the event of the loss of key sites Council employees have the ability to work from alternative offices or connect remotely from other locations.

2.3.1.2 It has also delivered a distributed security and authentication system, removing the dependencies on the security and authentication systems located in the Treasury Building. This will help to maintain services in the event of major service incident within the Treasury Building.

2.3.2 Storage Area Network (SAN) Refresh (2014/15) – This project replaced the aging SAN infrastructure located within Treasury Building. Two SANs are now in operation, one in each data hall. The SAN infrastructure incorporates a number of recovery features including automatic replication between the two data centres within the Treasury Building and defined recovery points which aid recovery in the event of a server failure. This vastly reduces the risk of data loss in the event that one data centre is destroyed.

2.3.3 Virtualisation Refresh (2014/15) – Virtualisation of infrastructures helps organisations to make cost effective use of their IT resources (servers, storage, etc.). Wirral Council has invested in VMware's virtualisation technology. This solution works hand-in-hand with the SAN infrastructure to provide a highly available delivery platform. At present work is underway to consolidate the Council's physical IT estate using VMware. This will help to simplify the migration to new data centres and to reduce costs. Planning is underway to test the disaster recovery automation functions of this technology which will provide the cornerstone of an automated IT Services Disaster Recovery Plan.

2.3.4 High Availability Microsoft SQL Database Platform (2014/15) – a high availability SQL database platform has been implemented and is operational; this platform replicates Microsoft SQL databases between the two data centres, providing a failover mechanism from one data centre to the other. This vastly reduces the risk of data loss in the event that one data centre is destroyed. Wirral IT is currently working with business stakeholders to (wherever possible) migrate databases from legacy SPOF database systems to the new high availability database platform.

2.3.5 Email Office 365 (2015) this project is underway and will remove the Council's dependency on the legacy email infrastructure. It will provide members and officers with a robust, highly available, agile, hybrid cloud-based email messaging platform. The three week test phase is due to commence in October and assuming a successful test, the project will be rolled out from November and it is estimated that it will take about nine months to complete.

2.3.6 Wide Area Network Refresh (2015) this project has started. Working in partnership with BT, this project is refreshing the wide area network infrastructure. As sites are migrated, the refreshed network will provide a fault

tolerant network for the delivery of IT services and remove multiple single points of failure/dependency within the network. It is expected that the project will complete within 18 months.

2.3.7 Wirral Target Operating Environment (2015/16) this project is currently at tender evaluation stage. The project will migrate the server estate onto the most up to date version of Microsoft Windows Server, wherever practicable. It will also renew the server hardware, where needed and further rationalise physical servers wherever possible. The project also deliver complete application upgrades when required and further enhance the security, resilience and control capabilities of the network infrastructure.

2.3.8 Treasury Data Centre Project (2015) – The objective of this project is to mitigate the risk of a major IT incident if the Treasury building were to be destroyed. Options under consideration include co-locating some of the Council's equipment with a public sector partner or commercial organisation; relocation to alternative council facilities; utilising cloud recovery infrastructures. Two potential solutions are currently under review and close to confirmation:

2.3.8.1 Wirral IT Services is in discussion with a public sector partner to explore the possibility of co-locating half the Council's infrastructure in one or more of that public sector organisation's data facilities. This has many advantages: it reduces the need for capital investment; it improves the utilisation of that public sector organisation's assets, to the benefit of all stakeholders; the facilities are already in existence which could reduce the time needed to migrate the Council's systems, if technical and commercial terms can be agreed. Moving one of our data halls would quickly remove the risk posed by having both data centres in one building.

2.3.8.2 Wirral IT Services are working with the Council's Asset Management team to identify suitable premises in which to locate a new data centre. A number of Council buildings have thus far been investigated and discounted as unsuitable. There are currently two potential sites under review, one of which is likely to house one new data centre, assuming that no insurmountable problems come to light in the interim.

### **3.0 RELEVANT RISKS**

3.1 Until the two data centres are split onto separate locations, the significant risk remains; however, the overall risk level has been reduced by the above detailed programme of work.

### **4.0 OTHER OPTIONS CONSIDERED**

4.1 Detailed above.

### **5.0 CONSULTATION**

5.1 IT Services has consulted colleagues in the Asset Management Team, SLT Directors, the relevant Portfolio Holders, and external partners qualified to give advice about the construction and commissioning of IT data centres.

## **6.0 OUTSTANDING PREVIOUSLY APPROVED ACTIONS**

6.1 Detailed above.

## **7.0 IMPLICATIONS FOR VOLUNTARY, COMMUNITY AND FAITH GROUPS**

7.1 None.

## **8.0 RESOURCE IMPLICATIONS: FINANCIAL; IT; STAFFING; AND ASSETS**

8.1 Capital and Revenue funding is available within the approved budget.

## **9.0 LEGAL IMPLICATIONS**

9.1 The two data centre options will require contracts to be drawn up and a procurement exercise would have to take place to complete the construction of any data centre for the Council.

## **10.0 EQUALITIES IMPLICATIONS**

10.1 Has the potential impact of your proposal(s) been reviewed with regard to equality?

~~(a) Yes and impact review has been sent to the Equality and Diversity Co-ordinator.~~

(b) No because there is no relevance to equality.

~~(c) No because of another reason which is~~

## **11.0 CARBON REDUCTION AND ENVIRONMENTAL IMPLICATIONS**

11.1 Moving to modern power efficient data centres should reduce the Council's overall carbon footprint.

## **12.0 PLANNING AND COMMUNITY SAFETY IMPLICATIONS**

12.1 Planning permission may be required for the construction of a data centre.

## **13.0 RECOMMENDATION/S**

13.1 That the committee note the IT Services report.

13.2 That IT Services present a further progress report to the 22 March, 2016 T&R Policy and Performance Committee meeting.

**REPORT AUTHOR:** Mike Zammit, Chief Information Officer

telephone (0151) 666 3029  
email mikezammit@wirral.gov.uk

**APPENDICES**

**BACKGROUND PAPERS/REFERENCE MATERIAL**

**SUBJECT HISTORY (last 3 years)**

<b>Council Meeting</b>	<b>Date</b>