

1	PROPOSAL TO RELOCATE THE DATA CENTRE TO THE CIVIC SUITE CAR PARK
2	Purpose of Report
2.1	To consider a proposal to relocate the data centre to the civic suite car park to assist in planning for the complete redesign of the Council house complex and to improve efficiency and capacity
3	Background
	<p><u>Existing Provision</u></p> <p>3.1 The Council's data centre forms an essential part of its IT infrastructure, housing servers and storage equipment that run software and process and store data for the organisation. It is key to ensuring business continuity for all services within the Council.</p> <p>3.2 As technology has evolved over the past few years, the Council's business has become more IT-focused, and demand on this facility has continued to grow. The existing data centre is now operating at full capacity and does not have the capacity to cope with continually increasing demand.</p> <p>3.3 The current subterranean location of the data centre has been problematic, with a number of instances of flooding in recent years. A foul water pipe also runs alongside the data centre which could have a severe impact should damage to it occur.</p> <p>3.4 The risk of damage to the data centre will increase significantly as building works commence for the Church Hill House refurbishment project. A dust-free environment is essential to the operation of data centre equipment. If this is compromised as a result of building work an incident could occur that could cause the data centre to become non-operational and thus have a universal impact on business continuity affecting all Council services. The relocation of the data centre is therefore critical to facilitate the refurbishment of Church Hill House.</p> <p>3.5 Whilst efforts have been made to improve the energy efficiency of the existing arrangement as much as possible, for structural reasons, no more adjustments can be made, which will result in carbon penalties if the data centre remains in the same location.</p> <p><u>Recommended Action</u></p> <p>3.6 It is proposed that the data centre is relocated to the first floor of the Civic Suite car park, which would offer an increased capacity of 58 'racks' (currently 48 racks).</p> <p>3.7 The project will be managed in-house as a partnership between IT and Building Design Group, with the support of Cudd Bentley mechanical engineers. It is critical that construction is completed by March 2015 to allow for a migration period of 12-16 months prior to the commencement of the major Church Hill House project.</p> <p>3.8 The design proposed by Building Design Group and IT will provide a rationalised layout, space for further expansion and a resilient location free</p>

from the risks of flooding and dust. The plans for the layout of the new data centre are given in Appendix C.

Financing

- 3.9 The £200,000 IT underspend from 2013/14 has been earmarked to contribute towards the data centre relocation. Any costs in excess of this are proposed to be funded by prudential borrowing.
- 3.10 The existing data centre requires material capital expenditure to keep it operational: it is currently running at near-full capacity and thus needs expanding, as well as the replacement of a number of core components such as air conditioning and the Uninterruptible Power Supply (UPS), which will shortly be coming to the end of their useful lives.
- 3.11 However, even if these works were undertaken, the risks of flooding and damage from the Church Hill refurbishment would still exist, as well as operational and energy-related inefficiencies.
- 3.12 The table below details the costs of essential works required for the current data centre and the revenue implications after the 2013/14 IT underspend has been applied.

'Do Nothing' Option Costs	£000	Comments
Construction of a data centre extension	70	Required to facilitate growing demand
Professional fees	10	
Access control and CCTV	4	To cover extension of data centre Due for replacement shortly
Cooling & ventilation	150	
Fire detection improvements	15	
Cold aisle containment	25	
Uninterruptible power supply	120	
Power distribution unit	45	
Building/energy management system	50	
Reroute drainage pipes	8	Due to wider Church Hill House project
Subtotal	497	
Less IT underspend 13/14	(200)	
Net prudential borrowing requirement	297	
Annual revenue cost of borrowing	24	£4k liability mitigated by £1k by actions above Estimated energy reduction as a result of above spend
Carbon penalty	3	
Less estimated energy saving	(11)	
Net revenue (surplus)/deficit	16	

- 3.13 Building Design Group, in conjunction with IT, and advice from Cudd Bentley, have worked together to provide an estimate of the costs of replacing the data centre with a more desirable solution that fits the Council's growing needs, to be located on the first floor of the Civic Suite car park.
- 3.14 The design includes a more energy efficient layout and more efficient equipment, which offers an estimated energy saving of £37k per annum, which can contribute to the cost of prudential borrowing and also demonstrate the Council's commitment to reducing its environmental impact.
- 3.15 By relocating the data centre, additional space will be freed up that has value. The Council's Head of Strategic Land has estimated that the rental value is in the order of £20,000 per annum.

Preferred Option Costs	£000
Building cost	635
IT costs	334
Professional fees	82
Subtotal	1,051
Less IT underspend 13/14	(200)
Net prudential borrowing requirement	851
Annual revenue cost of borrowing	70
Less estimated energy saving	(37)
Less rental value from space created	(20)
Net revenue (surplus)/deficit	13

- 3.16 When combined with the basement storage proposals outlined in Appendix B, the net revenue budget requirement is £4k per annum. It is anticipated that the IT budget will be able to absorb this net requirement.
- 3.17 It is recommended that prudential borrowing of up to £900,000 is approved to ensure sufficient funds can be accessed for the project.
- 3.18 The cost of making good the old data centre area for third party use is captured as part of the Church Hill House refurbishment project.

4 Evaluation of Alternative Option(s)

A number of options were considered alongside this proposal:

Specialist contractors designing and building a new data centre in the Civic Suite according to SMBC's specifications

4.1 High level estimates were obtained from one Council partner and 2 specialist contractors. One of these proposals was significantly more expensive than the preferred option above. The other two proposals were of a good standard, however, it was felt that there was inherent risk in handing such a project over to a third party. By keeping the project 'in-house' the Council can maintain control and can mitigate risks to service provision during the construction phase.

Outsourcing provision to another Local Authority or private sector provider (Cloud or co-location)

4.2 Though the capital costs of these options were low, the revenue costs of this type of provision made this option unaffordable (up to £300k annually). There would have also been operational difficulties as these centres would be a large distance away from Solihull.

5 Reasons for Recommending Preferred Option

5.1 Reasons for recommending the preferred option are given in section 3 of this appendix.

6 Scrutiny

6.1 The redesign of Council offices is being monitored by OSMB on a regular basis.

7 Implications

7.1 Delivery of the Council's Priorities

The expansion of Touchwood, redesign of the Council offices and the promotion of agile working are key programmes under the Council priority to 'Deliver Value'. The proposed relocation of the data centre and improvements to storage are required at an early stage in these key programmes to contribute towards their overall delivery and to remove some of the risks to business continuity when the major redesign works take place.

7.2 **Policy/Strategy Implications** - N/A

7.3 **Meeting the duty to involve** - N/A

7.4 Financial Implications

As set out in this appendix.

7.5 **Legal implications** - N/A

7.6 Risk Implications

As Cabinet have previously been advised, the plans to expand the Touchwood shopping centre will not be confirmed until mid-2016 and until this time there remains a risk that the Church Hill House refurbishment project may not proceed. However, the proposal to relocate the data centre has been treated as a standalone business case as set out in this appendix.

Moving the data centre is a high risk project (amber 8 on the Corporate Risk Register). It is anticipated though, that proper project management will mean that there is no impact on service users.

In its current location, risk of flooding and other damage to the data centre represents an ongoing amber 7 risk on the risk register. By relocating the data centre to the Civic Suite as proposed, this risk would be fully addressed and could be removed from the register.

7.7 Statutory Equality Duty

There are no direct equality or diversity implications.

7.8 Carbon Management/Environmental

The data centre uses significant amounts of energy (roughly 70% of the energy usage for Church Hill House as a whole). In its current location, no further improvements can be made to energy efficiency, and in time, this will result in a carbon penalty of £3.5k (or £2.5k if the air conditioning system is replaced). If the data centre is moved to the Civic Suite, energy consumption in relation to air conditioning (50% of the data centre's total consumption) could be reduced by half, realising a saving of c.£37k per annum.

7.9 Partner Organisations

7.10 Safeguarding/Corporate Parenting Implications N/A.

7.11 Customer Impact

7.12 It is expected that the functions carried out by the data centre will continue without interruption during the build and migration period.

7.13 The suggested proposal will have an impact on the available car parking in the Civic Suite. A review is ongoing to assess the impact on staff that currently access parking provision on the first floor of the Civic Suite, and to assess the alternative options that are available.

7.14 Other implications - N/A.

8 List of appendices referred to

8.1 Appendix B - Proposal to rationalise basement storage facilities within Church Hill House

8.2 Appendix C - Planned layout of the data centre and basement storage facilities.

9 Background papers used to compile this report

9.1 None.

10 List of other relevant documents

10.1 None.