

EAST HERTS COUNCIL

CORPORATE BUSINESS COMMITTEE – 30 NOVEMBER 2010
THE EXECUTIVE – 1 DECEMBER 2010

REPORT BY THE EXECUTIVE MEMBER
FOR RESOURCES AND INTERNAL SUPPORT

WALLFIELDS REFURBISHMENT

WARD(S) AFFECTED: ALL

Purpose/Summary of Report

- To ask Members to consider taking the opportunity to upgrade ITC cabling and data centre, during the upcoming Wallfields refurbishment at a substantial saving on the costs of completing the works at a later date. Members may wish to consider approving virements for this work and including them in the refurbishment. Members may also wish to agree to defer or decide not to proceed with some other additional works.

<u>RECOMMENDATION FOR DECISION BY CORPORATE BUSINESS SCRUTINY COMMITTEE: that</u>	
(A)	the Committee considers, comments on and recommends the proposed works on data cabling and the virement of capital for the Wallfields Refurbishment scheme to meet the costs of replacement data switches and cabling;
(B)	the Committee considers, comments on and recommends to defer other works as explained in paragraphs 2.15 to 2.19 of this report; and
(C)	the Executive be informed of any comments and recommendations arising from these discussions.

<u>RECOMMENDATIONS FOR EXECUTIVE TO COUNCIL:</u> that:	
(A)	Council be recommended to agree an amendment to the capital programme to provide additional funding for the Wallfields Refurbishment scheme to meet the costs of replacement data switches and cabling, to minimum standard of Category 5E at a cost of up to £89,000;
	OR
(B)	Council be recommended to agree an amendment to the capital programme to provide additional funding for the Wallfields Refurbishment scheme to meet the costs of replacement data switches and cabling, to minimum standard of Category 6a at a cost of up to £104,000;
(C)	other works be deferred as explained in paragraphs 2.15 to 2.19 of this report;
(D)	the progress of the tender negotiations be noted and Officers be instructed to obtain the most advantageous price for the works agreed above during post tender negotiation; and
(E)	it be noted that post-tender negotiations may delay commencement of the works until January 2011 in which case completion may be deferred to August 2011.

1.0 Background

1.1 In August 2009 Members of Corporate Business Scrutiny Committee discussed the proposals for the offices at Wallfields and asked that further investigations be undertaken on work on the greenhouse roof, cooling system and lighting/energy system controls. They asked for consideration to be given to providing an additional lift to improve disabled access. They recognised the urgent need for more interview rooms in the reception area which has already been addressed.

1.2 In September 2009 the Executive commended to Council amendments to the agreed capital programme and new capital items for the infrastructure works to Wallfields associated with the Changing the Way We Work Programme (C3W). On 30 September these recommendations were approved by Council.

1.3 There is already provision in the capital budget for upgrading the data cabling on the ground floor to Category 5E. Officers considered if there might be greater value for money by investigating consolidating some additional works in the contract.

2.0 Report

Tender issued and scope of works

2.1 As a result of these decisions, Officers invited a number of surveyors to provide quotes for professional support to prepare specification documents and drawings and obtain competitive tenders for refurbishment and to provide support to tender adjudication stage. In February 2010, this contract was awarded to Lambert Smith Hampton (LSH).

2.2 When developing the tender LSH consulted with staff and developed plans and a specification that met the outcomes sought by the Council. The scope of works in the specification included as a minimum:-

- Total refurbishment of ground floor office accommodation
- Refurbishment of windows throughout the building
- Power and data enhancement to the ground floor office accommodation
- Upgrade/overhaul of the power supply
- Minor refurbishment of the office accommodation to the upper floors
- Replacement of elements of furniture and the relocation of staff
- Replacement of the ground floor glazed roof
- Installation of natural ventilation/cooling/shading measures and energy controls

2.3 In addition to the above scope, the following items have been added to the scope of work as tendered:-

- 1) Replacement of data switches and renewal/replacement of fibre connectivity and upgrade whole building to Cat 6A cabling to meet ICT needs for the foreseeable future
- 2) Installation of mechanical cooling to reprographics and printing areas
- 3) Installation of mechanical cooling and natural ventilation to reception area
- 4) Refurbishment of physical toilet accommodation
- 5) Installation of new ventilation system to toilet accommodation
- 6) Refurbishment of rear stairwell
- 7) Installation of disabled access lift within rear stairwell
- 8) Replacement of hot and cold water pipe work to toilet accommodation in conjunction with the installation of solar collectors, hot water cylinders, cold-water booster pumps, thermostatic mixing valves and Building Management System (BMS) controller.

Additional Works

2.4 In addition to the steer given by Members, all items were included first, in order to achieve cost efficiencies in conjunction with the original works detailed at 2.2. The second aim was to reduce maintenance costs and thirdly to enhance the life and value of the existing asset.

2.5 Items 1, 2 and 3 were identified from pre tender survey and assessments carried out by LSH. The issues found with Item 1 (Upgrade of data cabling and switches) are explained in paragraph 2.23.

2.6 When carrying out surveys and consultation LSH found that there was anecdotal evidence that the reception area became uncomfortably hot during the summer and carried out thermal modelling to test this. This showed that the current construction and arrangements indicate that this area was in excess of 28°C for 579 hours per annum.

- 2.7 From the results it can be concluded that even though the construction of the Automatic Payment Machine within the reception provides considerable reduction in the number of hours of over heating. It is not enough to reach our target of not exceeding 28°C for more than 22 hours per annum without carrying out additional works.
- 2.8 Items 4 and 5 (the refurbishment of physical toilet accommodation, the installation of new ventilation system to toilet accommodation) and Items 6 and 7, (refurbishment of rear stairwell and installation of disabled access lift within rear stairwell) were considered to be desirable but optional enhancements. Some of these facilities have not been replaced since the new extension to the original building was constructed in 1985. Whilst the building is DDA compliant it was felt that an additional lift for disabled access would enhance compliance and allow more flexible circulation within the building.
- 2.9 Members of Corporate Business Scrutiny Committee asked that “Further investigations be undertaken on work on the greenhouse roof, cooling system and lighting/energy system controls.” The proposed funded works already include a number of energy saving items and only a solar power hot water system is not being included, hence Item 8’s inclusion here. It was also included to meet the Council’s ambition to reduce its carbon footprint.
- 2.10 The minimum works (set out in 2.2) included within the specification can be covered by the sum allocated by the Council in September 2009. However, following completion of the tender exercise it is clear that the budget will not cover all the other optional works.

What should be included?

- 2.11 The total approved budget of £1,345k must cover the provision for fees, expenditure to date on the reception area and enabling works, provision for works to complete the reception area and to undertake works in Old Wallfields. Allowing for these costs,

the budget available for the tendered works is reduced to £1,077k.

- 2.12 When this figure is considered, it is not intended to pursue Items 3 to 8 on the additional scope of works list. Many of them are considered to be desirable items that may be included in the on-going maintenance of the building and others do not deliver good value for money.
- 2.13 Optional works Item 1 (Upgrade of data cabling and switches) is the subject to more detailed explanation in the next section of this report.
- 2.14 Officers have also been able to accommodate Item 2 (installation of mechanical cooling to reprographics and printing areas) within the sum of the main works.
- 2.15 Officers anticipate that works for cooling to reception (Item 3) should be considered only after we have assessed the impact of installing the ATM in reception and monitored the position next summer. There is little difference in the cost of completing this work separately from the main works and if it is considered to be needed it could be recommended in future capital programmes.
- 2.16 Items 4,5 and 6 refurbishing the physical elements of the toilet accommodation and the stairs provides a more inclusive level of refurbishment, not solely focused on the performance of the organisation. The toilets and the stairwell could be refurbished as part of the Council's annual programme of refurbishment of other toilets from April 2012. However these works will be prioritised annually against other planned maintenance works, offset by a reduction in the cost of responsive maintenance
- 2.17 As also requested by Corporate Business Scrutiny Committee an additional lift to improve disabled access (Item 7) has also been investigated. Wallfields currently complies with the Disability Discrimination Act with its current lift. People who need to use this lift from the new building face a long walk and may have the embarrassment of having to walk through the

Council Chamber when a meeting is in progress. This lift which is of a platform type and accessible by wheelchairs would stop that problem. The proposed lift would not be used normally by other staff, but would provide an alternative for people with disabilities in the event of the main lift being out of use.

- 2.18 It is recommended that the requirement for a second lift be subject to a further business case if in the light of 12 months operational experience following staff relocation from the Causeway. We can determine at this time if a second lift can be shown to be required for operational efficiency.
- 2.19 The annual savings likely to be achieved by utilising the solar collectors and associated plant (Item 8) equate to approximately £1,500 for a cost of over £70,000 and for this reason, the proposal is not economically attractive.

Data Cabling

- 2.20 The planned refurbishment of Wallfields provides a unique opportunity to upgrade the whole building (including our data centre) at a significantly lower cost than if the work was carried at a later date by, achieving cost efficiencies by completing the works in conjunction with the works being carried out during the refurbishment.
- 2.21 The works proposed, include upgrading the backbone of our system with new cabinets, cabling and switches in our data-centre. As well as standardising and replacing/upgrading the data to Cat5E cabling throughout the building.
- 2.22 Wallfields currently has a mixture of Category 5 and Category 5e cabling. Both the current scope of works and the budget allow for an upgrade to the industry standard of Cat5e cabling on the ground floor.
- 2.23 When carrying out work to prepare the tender specifications LSH have noted that most of our cabling is now at least, 8 to 10 years old. There is mixed cabling of Cat 5 and Cat 5e, the network will always be limited to the slowest connection and

Cat 5 does not fully support Gigabyte networks, which our applications require, this is causing bottlenecks and slow speeds. We have noticed physical degradation on the cable wiring and on the plastic ends. Movement of or re-patching cables can mean we have to replace a cable or the end.

- 2.24 Our current cabling does not fully meet business continuity cabling standards for example we do not have multiple fibre cabling going to different conduit routes in case of damaged fibre, we are also “daisy chaining” on our switches due to the nature of the cabling meaning that losing one switch can affect multiple floors or the whole building. The new cabling will eliminate this issue.
- 2.25 Category 5 cable is a currently outdated standard that provides support for up to 100 MHz operation. Ratified in 1999, Category 5e cable generally provides the best price for performance and it is to a minimum of this standard that we should refurbish to.
- 2.26 Discussions between our ITC department and cabling experts who are working with LSH to write our specification conclude that the system does require an upgrade and that this is an opportunity to do this at a significant saving. These companies are not undertaking any of the works and are merely providing specialist support in specifying the works.
- 2.27 The upgrade will provide better transmission performance than we currently have. With each upgrade in cable, there is less signal loss, less cross talk, and more bandwidth. The current business continuity issues are also addressed.

Upgrade Costs

- 2.28 The costs in the table below have been provided by LSH. Replacing cables at a later date will not only incur further costs but is likely to result in disruption in service and increases in risk of disruption to customer facing services as we become more reliant on IT. The increase in cost reflects this.

Item	Indicative cost if included now	Estimated cost if completed later
Replacement of data switches and renewal/replacement of fibre connectivity and upgrade whole building to Cat 5e cabling	£89,000	£311,000
Replacement of data switches and renewal/replacement of fibre connectivity and upgrade whole building to Cat 6A cabling	£104,000	£331,000

Additional Future Proofing

- 2.29 Cat 5e cabling is not the latest standard and Cat 6a cabling is the latest offering. It is worth considering this option when proposing an upgrade.
- 2.30 Defined in 2008, Category 6a allows up to 10GbE with a length u both of these 5e and 6a cables utilise four twisted pairs of copper cable in a common jacket. They use the same style jacks and plugs. The parts are interchangeable, so you can use a Cat5e patch cable with Cat6 house cabling. The system will perform at the level of the lowest link, in this example the Cat5e patch cable.
- 2.31 It is apparent that an upgrade of the network to Cat 5A will deliver the network speed needed by East Herts there is the opportunity to further upgrade to Cat 6A cabling.

Cat 5e or Cat 6a?

- 2.32 Both Cat 5e and Cat 6a support gigabit, which is enough for most networks. It is unlikely East Herts will require 10 gigabit to the workstations, and at this point we cannot say that any of our applications will require this speed in the future. The role of Cat 6A is to support 10GbE. That is its only advantage over Cat 5e, but a ten-fold improvement in bandwidth is impressive.
- 2.33 However, technology changes significantly on a regular basis and seems to demand more bandwidth and speed; and some may feel it reasonable to design a new system with these unknown future needs in mind. If East Herts wants a system that will last into the foreseeable future, then Members may feel that the extra investment in Category 6a would be the most cost-effective solution.
- 2.34 In conclusion, Cat5e will provide East Herts with all the performance needed today for workstations. Cat6a will not deliver any visible increase in speed at the workstation. It is considered to be, the best option if we want some future proofing (but East Herts cannot predict that we will operate systems that need this) albeit at an extra cost.

3.0 Financial Implications

- 3.1 Existing budgets provide for the works previously envisaged and set out in 2.2. The cost of the additional works set out above at paragraph 2.10 will, to the extent approved, require provision to be made in the capital programme.
- 3.2 A proportion of the cost might be met by virement without adding to the overall capital programme. Possible virements have been identified as follows, where savings in 2010/11 might be made without the need to make good the funding in later years.

£000

<u>Instant message archiving</u>		<u>20</u>
<u>ICT micro systems</u>		<u>16</u>
<u>ICT back office systems</u>		<u>16</u>
<u>ICT small systems</u>		<u>10</u>
<u>ICT C3W contingency</u>		<u>27</u>

3.3 The renewal of cabling is regarded as of a higher priority than allowing these budgets to be carried forward to supplement existing provision in later years. These virements would fund Cat 5e.

3.4 If Members wished to fund Cat 6a or any other of the additional works this would involve either virements from other parts of the capital programme; and/or additional supplementary capital estimates. There are no revenue implications.

4.0 Implications/Consultations

4.1 Information on any corporate issues and consultation associated with this report can be found within **Essential Reference Paper 'A'**.

Background Papers

Original tender documents, tender submissions and various correspondence from LSH which may contain information considered commercially confidential.

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ESSENTIAL REFERENCE PAPER 'A'

Contribution to the Council's Corporate Priorities/ Objectives	Fit for purpose, services fit for you <i>Deliver customer focused services by maintaining and developing a well managed and publicly accountable organisation.</i>
Consultation:	The initial specification and plans were consulted on at length with staff. Senior officers have considered the cabling need.
Legal:	Post tender negotiations are appropriate at this time however it is important that all the companies who have placed a bid are treated in the same manner. All negotiations must be carried out in accordance with the constitution.
Financial:	Included within the report
Human Resource:	There are no direct implications arising from this report
Risk Management:	The main issues associated of this work are: <ul style="list-style-type: none">• Failure to upgrade the IT cabling may result in degradation in service and ultimately impact on service delivery.• Investment in council assets that is considered as being inappropriate may result in adverse comment