



Leicester  
City Council

**WARDS AFFECTED  
CASTLE**

**FORWARD TIMETABLE OF CONSULTATION AND MEETINGS:**

**OSMB  
CABINET**

**8 July 2010  
12 July 2010**

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**STRUCTURAL REPORT ON NEW WALK CENTRE**

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**Report of the Strategic Director of Development, Culture and Regeneration**

**1. Purpose of Report**

- 1.1 This report outlines the actions that the Council are required to take in the light of the conclusions of the structural report on New Walk Centre. The report concludes that based on the assessment of the structure and an interpretation of the investigation test results Arups have shown that the structure falls short of the recommendations in current codes in terms of the current loading. The buildings therefore need structural strengthening to take full office loadings although it is Arups opinion that the buildings have sufficient redundant strength to continue to be used safely while strengthening works are designed and procured and subject to the rigorous management of the overall significantly reduced managed load regime and a series of 'no imposed load zones'. The report outlines the scope of an options appraisal project established in response to the findings.

**2. Summary**

- 2.1. Ove Arup were commissioned to undertake a full survey of NWC to assess its suitability for continued office use and they have now provided their report, the Executive Summary of which is attached.
- 2.2. The report concludes that based on the assessment of the structure and an interpretation of the investigation test results Arups have shown that the structure falls short of the recommendations in current codes in terms of the current loading. The buildings therefore need structural strengthening to take full office loadings although it is Arups opinion that the buildings have sufficient redundant strength to continue to be used safely while strengthening works are designed and procured and subject to the rigorous management of the overall significantly reduced managed load regime and a series of 'no imposed load zones'. The British Standard loading regime for offices is 2.5+1kN/m<sup>2</sup> and Arups' assessment of the imposed loading is

1.5kN/m<sup>2</sup>. The structural strengthening works must be designed and procured over the next 12 months ready for works to commence and be completed to an agreed programme during which time further reviews will be necessary to ensure that the load management regime is not being compromised.

In response to this the Council have set up a project within the ODI Board portfolio to assess options available for the future provision of the Council's office estate which will provide costed options for refurbishment and strengthening of NWC, and for relocation to new build or other alternative locations.

### **3. Recommendations**

#### **3.1. It is recommended that Cabinet:-**

- i) note the content and conclusions of the Ove Arup report and
- ii) note the commencement of an options appraisal project in response

### **4. Report**

**4.1.** Ove Arup were commissioned in Autumn 2009 to undertake a structural report on NWC to ascertain its capability to continue to take office loads and their report has now been issued and the Executive Summary is attached.

**4.2.** In late December 2009 Ove Arup issued an interim report advising that their initial work had indicated a need to reduce load from particular areas of the buildings and since then the Council have been undertaking various moves to clear such "no imposed load zones". As at the end of May over 700 staff have been moved and 78% of the "no imposed load zones" have been vacated. It is anticipated that the remainder of the moves, involving nearly 260 staff, will be finished by the end of July / early August when works to fire damaged B5 are completed. Out of all the above staff 89 people will have had to relocate away from New Walk Centre to other Council owned buildings.

**4.3.** Since the interim report substantial further testing has been undertaken on the concrete and reinforcement within the structure and Ove Arup have provided their report. This concludes that based on the assessment of the structure and an interpretation of the investigation test results they have shown that the structure falls short of the recommendations in current codes in terms of the current loading. The buildings therefore need structural strengthening to take full office loadings although it is Arups opinion that the buildings have sufficient redundant strength to continue to be used safely while strengthening works are designed and procured and subject to the rigorous management of 'no imposed load zones'. The British Standard loading regime for offices is 2.5+1kN/m<sup>2</sup> and Arups assessment of the imposed loading is 1.5kN/m<sup>2</sup>. The structural strengthening works

must be designed and procured over the next 12 months ready for works to commence and be completed to an agreed programme during which time further reviews will be necessary to ensure that the load management regime is not being compromised.

**4.4.** It has been recommended that the B3 computer suite and ground floor Customer Services Centre are propped as further mitigation during this period.

**4.5.** The effective monitoring of the 'no imposed load zones' is a critical mitigating factor in Arups being comfortable with continued Council occupation while strengthening works are progressed. Options for more formal demarcation of these areas are being considered with a view to ensuring zones are clearly identified and a communications plan will continue to ensure that staff are informed of their responsibilities towards these areas and are vigilant. Weekly inspections will be undertaken of the zones with reporting to Directors should zones be found to be being compromised by static or transient loads.

**4.6** Feedback during their work from Ove Arup has been clear that the Council do not have a 'do nothing' option for NWC and in response to this an option appraisal project has been set up within the ODI Board portfolio to look at the options available for the Council for its future provision of offices in the light of the position with NWC. The Project Executive is the Strategic Director of Development, Culture and Regeneration. This project will build upon and refresh past work undertaken on options for future office accommodation, modern ways of working and locational dependencies of staff to provide costed options around:

- 1) refurbishment and strengthening of NWC
- 2) new build alternatives on NWC site or elsewhere
- 3) other relocation opportunities including locating some staff into neighbourhoods.

Options around NWC will inevitably have to look at decant arrangements should staff need to be re-housed during works and a programme for each option will be provided in response to the survey findings and current limitations of NWC. The work will include initial design for NWC strengthening works in accordance with Arups' recommendations.

**4.7** The considerations against which the project will assess options include:

- Costs
- Improved use of space
- Opportunity to enhance Neighbourhood Working
- Reducing the City Council's Carbon Footprint
- Disturbance
- Impact on the City centre
- Travel and transport
- Provision of Customer Service facilities

Further complexity will be added by the need to involve our partners in seeking joint solutions and the project being a catalyst for cultural change and greater partnership working. It is anticipated that this work will be completed by September.

## **5. FINANCIAL, LEGAL AND OTHER IMPLICATIONS**

### **5.1. Financial Implications (Nick Booth, Financial Services Extn 297460)**

Feedback from Ove Arup regarding NWC has indicated that a do nothing approach to the building is not a viable option, and that significant costs will have to be incurred either at NWC or elsewhere. Options are currently being worked up and it is anticipated that this work will be completed in September. These options will then be the subject of a further report.

The total budget potentially available for the CLABs review is estimated at £54.9 million made up as follows:

CLABs capital provision	£13.8m
Revenue funding for new capital	£39.6m
Revenue savings 09/10	£1.5m
Total	£54.9m

None of the existing options have been costed and there is potential that the costs could exceed the available funding by a significant amount. In such circumstances if costs could not be pared down to budget (which would be the preferred solution) any additional provision would be likely to be have to be found from additional borrowing which would have a consequent impact on the Councils revenue budget which is currently under great pressure.

### **5.2. Legal Implications (John Mclvor, Legal Services Extn 297035)**

The Council is under a statutory duty to ensure the health and safety of its employees and visitors to its premises. As the Council is the occupier of the building the Council will be under a duty of care to any visitors to the building, pursuant to the Occupier's Liability Acts 1957 and 1984. The Council is required to take such care as in all the circumstances of the case is reasonable to see that the visitor will be reasonably safe in using the building for the purposes for which they are invited or permitted by the occupier to be there. The Council must also ensure that any visitors are provided with reasonable protection from risks on the building.

### **5.3. Climate Change Implications (Helen Lansdown Extn: 296770)**

Whilst this report in itself does not contain any significant climate change implications the options that may arise as a result of this report, regarding the future provision of offices, would be expected to have a significant impact on the Council's ability to meet climate change targets. It is possible that some options arising from the appraisal project would reduce the

Council's carbon emissions however, there is also the possibility of options being presented that would lead to an increase in carbon emissions thereby adversely impacting on the Council's ability to meet the climate change targets. Each option will need to be considered on a case by case basis.

*Helen Lansdown, Senior Environmental Consultant - Sustainable Procurement*

## 6. Other Implications

<b>OTHER IMPLICATIONS</b>	<b>YES/ NO</b>	<b>Paragraph/References Within Supporting information</b>
Equal Opportunities	NO	
Policy	NO	
Sustainable and Environmental	YES	5.3
Crime and Disorder	NO	
Human Rights Act	NO	
Elderly/People on Low Income	NO	
Corporate Parenting	NO	
Health Inequalities Impact	NO	

## 7. Background Papers – Local Government Act 1972

Ove Arup report

## 8. Consultations

Financial Services  
Environment Team

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<b>Key Decision</b>	No
<b>Reason</b>	N/A
<b>Appeared in Forward Plan</b>	N/A
<b>Executive or Council Decision</b>	Executive (Cabinet)

# Structural Appraisal of New Walk Centre

## Executive Summary

Arup have been commissioned by Leicester City Council to assess the structural safety of the New Walk Buildings for current staffing levels and office layouts and to provide strengthening recommendations, if required, to achieve full office loadings that comply with the relevant and current British Standards.

The New Walk Centre comprises two reinforced concrete framed buildings that are eight and thirteen tall and were constructed in 1972.

Over the last few years Leicester City Council have been implementing a Load Management regime to significantly reduce the imposed loads on the building. Our current assessment of the imposed loading has been determined as being 1.5kN/m<sup>2</sup>. This allows for the four desks per bay configuration together with some allowance for congregation of staff at any work station.

The structure of the two blocks of the New Walk Centre have been analysed and a series of intrusive investigations have been undertaken to assess the material strengths of the concrete and reinforcement.

Based on the assessment of the structure and an interpretation of the investigation test results we have shown that the structure falls short of the recommendations in current codes in terms of the current loading. We have recommended, and these are being implemented progressively, a series of 'no imposed load zones'. If these zones, together with the Load Management Regime, are rigorously enforced and identified propping to the computer suit and customer services locations installed, it is our opinion that the building has sufficient redundant strength to continue to be used safely in the short term. The recommended strengthening proposals must be designed, tendered and procured within a 12 month period to ensure that full levels of safety can be reached. Once the proposals have been agreed then further reviews will be necessary during the phased refurbishment programme to ensure that the Load Management regime is not being compromised.

If strengthening proposals are not developed and procured within this time frame we may not be able to provide continued reassurance of the buildings ongoing safety.

It must be recognised that there is no specific time dependent deterioration of the concrete and the reinforcement. The risk of failure of the structural frame is based on the potential for increased loading of the structure. Over time there is an increased risk that the imposed load on the structure will be increased to unacceptable levels. The complacency of maintaining the status quo is not an acceptable solution.

As the computer room and customer services area are located in 'no imposed load zones' temporary propping must be installed at the earliest opportunity to ensure acceptable levels of ongoing safety.

The primary reasons for the structural shortcomings are low reinforcement strength, marginally low concrete strength, lack of consideration to the combined effects of lateral and vertical loading, reinforcement detailing rules relating to minimum link reinforcement not been met and the impact of geometric eccentricities in the columns and edge beams.

Based on the assessment of the current loading it has also been shown that the structure does not comply with the current standards for the full British Standard loading regime of  $2.5+1\text{kN/m}^2$ .

Consideration has been given to Fibre Reinforced Plastic (FRP), concrete and steel frame strengthening solutions.

The strengthening solution that is considered to be the most practical and least labour intensive, with the least impact to the building operation, is the provision of a secondary steelwork frame. The spine and edge beams would be supported on steel beams that span on to steel columns, which sit beside the existing concrete columns.

These potential remedial solutions need to be considered as part of the development of a strategic plan for the continued use of the New Walk Centre.