
uPVC COMPOSITE DOORS

Report of the Director of Housing

1. PURPOSE OF REPORT

- 1.1 This report recommends to Members a change in policy, which will allow in future, tenants to have uPVC doors installed in their properties.
- 1.2 If approved, the doors would be made at the Window Fabrication Unit providing employment for up to eight people.
- 1.3 The doors have been designed at a high standard providing increased security and giving greater thermal comfort for tenants. The intention is that tenants would be able to select their door colour from a range of four different colours; red, burgundy, white or dark blue, and indicate whether they preferred a full door, i.e., no glass included or a 2XG door that, i.e., half glass included.
- 1.4 The report also suggests a programme of work on how the new policy could be introduced.

2. RECOMMENDATIONS

- 2.1 Cabinet is recommended to:
 - i) approve a change in Council policy to allow uPVC doors to be the standard replacement door to Council houses in future;
 - ii) agree that tenants should be given the option to select their preferred colour and design from a set range as outlined in paragraph 1.3 above;
 - iii) agree a charge of 10 pence per door for all uPVC doors installed under this programme;
 - iv) approve the work programme outlined in paragraph 2.1 of the supporting information attached to this report; and
 - v) delegate authority to the Director of Housing, in consultation with the Cabinet Lead for Housing, using DSO profits, to either purchase or lease additional accommodation in close proximity to the Window Fabrication Unit, and to the Town Clerk, to sign any contracts necessary.

3. **FINANCIAL IMPLICATIONS**

- 3.1 The cost of changing to a policy of installing uPVC doors is estimated at £50,000 in the first year (assuming a September start) and £96,600 in a full year. Against this is increased income of £7,000 per year assuming Members agree the 10p charge recommended in the report and £7,875 per year on ongoing maintenance and painting. This means that the overall saving over the life of the door is £294 per door because the costs are one off but the income is ongoing.
- 3.2 The cost of acquiring additional accommodation is, at this stage, unknown but would be kept within in year and/or accrued DSO profits.
- 3.3 The cost of agreeing to the ongoing replacement programme will have to be met from future years capital programme. Clearly, the level of resources allocated will determine the speed in which the programme is implemented.

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SUPPORTING INFORMATION/APPENDICES

1. BACKGROUND

- 1.1 The current policy of the Council is to replace wooden external doors on a like for like basis or by the use of a half wood/half glass door as standard. The only exception to this policy is when the external door is an integral part of a window frame, i.e., a combination frame or french door frame where in these instances, it would be replaced by a uPVC unit at the same time as the wooden windows are replaced.
- 1.2 At the present time to increase security of the doors, all new wood doors are fitted with 5 lever mortice locks and an insulated panel to the bottom half.
- 1.3 Whilst the wooden door is adequate for its purpose, tenants are increasingly requesting that the Council fit more secure uPVC type doors at the same time as they install uPVC double glazed windows, in an attempt to provide even higher levels of security and thermal warmth to their properties.
- 1.4 The current policy is that only windows are replaced leaving the existing wooden doors to be renewed during a future programme, the timescale of which has yet to be decided.
- 1.5 A move towards the inclusion of uPVC doors in the existing window replacement programme has to date been resisted on the grounds of cost and the priority to replace as many windows as possible within the resources identified for the window programme. However, in recent time there has been both a significant improvement in the design and quality of the doors together with a marked decrease in the unit cost.
- 1.6 As a result, officers have been considering the use of a uPVC composite door for which the leaf/components are available from our current uPVC supplier - WHS Halo, as an alternative to using wooden doors. These would then be assembled and stored at the Window Fabrication Unit. The door, a photograph of which is shown at Appendix 'A', is of good quality, provides high level security, low maintenance costs and delivers increased thermal comfort.

- 1.7 The use of these doors, although initially costing around £69 per door more to replace than the existing wooden doors (£400 compared to £331), actually shows an overall saving of £294 over the 40 year life cycle of the door, when ongoing maintenance and repainting cycles are taken into account.
- 1.8 In addition, the type of door proposed would give increased security and thermal comfort with estimated energy savings in the region of £10.00 per door per year. Also, over the life cycle of the door, a quarter of a tonne of CO² emissions will be saved per door.
- 1.9 Set out below is the advantages and disadvantages of moving to the uPVC composite doors away from the traditional wooden doors.

	Wooden	uPVC
Advantages	Easier to break into when access required	Very low Maintenance
	Initial installation costs cheaper	Extra security
		Increased thermal comfort – saving on CO ² emissions
		Tenants want them
		Provide training opportunities for making and fixing
		Saves money over the long term
		More pleasing appearance
		Lower household insurance
Disadvantages	Ongoing maintenance	Initial cost greater
	Less secure	Repair demand may increase as a result of policy change
	Draughty less energy efficient	More difficult to break into when required
	Cost more over life cycle	
	Need trained carpenters to maintain and fix them	
	Less pleasing appearance	

2. PROPOSAL

- 2.1 The proposal outlined below sets out a strategy to integrate the use of uPVC composite doors within the maintenance work of the Department, should Members wish:
- a) When external doors are determined to be beyond economical repair and, therefore, need replacing, they will be replaced with the new composite uPVC door. This would apply to approximately 1,400 doors per year;
 - b) Make provision within the future Capital Planned Maintenance Programme, commencing 2002/03, to replace doors to those properties that have already had new windows fitted as part of the window replacement programme, to provide complete whole house installation; and
 - c) Make provision within future Capital Planned Maintenance programmes, commencing 2002/03, for the replacement of external doors to those

properties that are not included in the window replacement strategy, i.e., those properties that had new windows fitted prior to the current window replacement programme, under some other uPVC window replacement programme or were built with aluminium windows.

- d) Make provision within the future Capital Planned Maintenance Programme, from 2002/2003, for the inclusion of door replacement alongside the window replacement programme (to provide a whole house replacement strategy).

2.2 The intention is to provide tenants with a choice of four standard colours - red, burgundy, white or dark blue and two types of door - solid or 2XG ie half glass/half solid. Members are recommended to agree to the installation of uPVC doors as the standard replacement door in the future.

2.3 As the fitting of this new type of door will be a considerable improvement for tenants on the present arrangement, Members may wish to provide it as a targeted rent item in the future. If they do, it is recommended that a charge of 10p per week per door is levied.

3. OTHER IMPLICATIONS

3.1 Should Members wish to proceed with this proposal then there are a number of implications that flow from the decision.

3.2 Accommodation

3.2.1 The Window Fabrication Unit is already experiencing some minor problems with storage accommodation as a result of the increase in production to meet the current years window replacement programme. Although this is not critical at this time, it clearly would become a problem should Members decide to adopt a policy to manufacture uPVC doors.

3.2.2 Members are therefore recommended to delegate authority to the Director of Housing, in consultation with the Cabinet Lead for Housing, using DSO profits, to either purchase or lease additional accommodation, in close proximity to the Window Fabrication Unit, should this prove necessary and authorise the Town Clerk to sign any resulting contracts.

3.3 Staffing

3.3.1 Should Members proceed with the initiative, it is highly likely that additional operatives will be required to meet the programme. At this stage it is estimated that 8 new jobs would be created and a number of operatives would need to be retrained. However, this figure may change as management gets more experience of operating the programme and develops over the next few years.

3.4 New Deal and SRB Schemes

3.4.1 In proposing this new initiative, officers have been in discussion with both New Deal for Communities in Braunstone and SRB in Beaumont Leys to see if they would be prepared to match fund some of the expenditure from their own resources. Although negotiations are at an early stage, the signs look very promising and if successful will lead to the Housing DSO training local people

from those two estates in return for investment from the two community based organisations.

4. ENVIRONMENTAL ISSUES

- 4.1 The manufacture of uPVC accounts for some 30% of worldwide Chlorine production. Chlorine and its derivatives in the uPVC production process are seen by some environmental pressure groups to pose a serious threat to the environment. The uPVC and chlorine industries counter these concerns by pointing to the increasingly stringent regulations covering manufacture and handling and to safer manufacturing techniques now in operation.
- 4.2 Whilst concern has also been expressed over possible hazards at disposal by incineration through the emission of dioxins and hydrogen chloride, in the case of uPVC at least, recycling is a rapidly evolving industry. Most plastic recycling companies in the UK process uPVC waste from door and window fabricators and currently, all such waste is directly collected from the Council's Fabrication Unit and recycled by a firm with experience in this area. Waste uPVC in this form is becoming an increasingly valuable resource in its own right, for instance, it can be used for the manufacture of underground drainage pipes as in the case of the waste collected from the Council's Fabrication Unit.
- 4.3 In addition, the Scrap Window Recycling Association, founded by a number of major uPVC fabricators is now also looking to develop the recycling potential of old uPVC windows and doors. At least one company in Germany already undertakes such recycling and the practice will no doubt spread as the first generation of uPVC windows and doors reach the end of their life, which in Germany has been shown to be in excess of 40 years.
- 4.4 Although clearly some uPVC still reaches the waste stream it is considered to be inert in landfill sites and, in modern plants, can be safely incinerated.
- 4.5 In terms of the energy used in the assembling of uPVC doors, it falls between hardwood timber (the lowest in energy use) and metal (the highest). However, recent developments in wooden door technology, inspired by the timber industries bid to recover ground lost to the uPVC market, suggest that energy used in the production of timber windows and doors, particularly softwood, is likely to be increasing as a direct consequence of such procedures as kiln drying, factory finishing and the additional machining required to incorporate security features.
- 4.6 Wooden doors installed since the 1960's are less mature and lack stability, durability and strength and despite improvements in design, have yet to demonstrate the durability of uPVC.
- 4.7 In addition, wooden doors will require painting approximately every 5-7 years, i.e. 5-6 times during their expected life. It is estimated that for each year of the painting cycle approximately 60,000 miles are travelled by staff in transporting paint and painters to carry out this work. This amount of travelling and, therefore, the resulting environmental impact would be significantly reduced by the use of uPVC composite doors.
- 4.8 uPVC windows and doors have been in use for over forty years. It is estimated that more than 100 million such windows and 15 million doors have been

installed in buildings throughout Europe and there appears to be no evidence to suggest that this has caused any particular safety hazard. Investigations carried out by the Fire Research Station concluded that the use of uPVC in place of wood for window frames and doors did not create an additional fire risk. In addition, specific fire tests under laboratory conditions also indicated that the concentrations of carbon monoxide were noticeably lower in fires involving only uPVC frames.

- 4.9 All building products affect the environment to a greater or lesser extent at every stage in their life cycle, from raw materials to manufacture, during everyday use and eventually at disposal. However, given the current limited level of research in to complete life cycles of such products, a fair comparison of the environmental performance of composite doors made from uPVC, timber and/or metal is not yet fully possible.
- 4.10 For instance, the arguments put forward in favour of timber, as a renewable natural resource (which also provides a sink for carbon dioxide during growth), need to be balanced against the still largely unregulated exploitation of natural forests, the energy involved in transport and the use of solvent-based preservatives in maintenance.
- 4.11 What can be said, however, is that no building material has been the subject of such scrutiny over the past 20 years as uPVC. As a consequence, vast improvements have been made in the manufacturing processes both in response to pressure from various environmental groups and health risks associated with uPVC, particularly at the two extreme ends of its life cycle, i.e. during manufacturing and at disposal (if by incineration) and these concerns continue to fuel a worldwide debate on what is an immensely complex issue.
- 4.12 As a product in use, however, there is no evidence to suggest that uPVC presents any greater threat to the environment than alternative materials and there are those who would argue that it is indeed more benign.
- 4.13 In considering the use of uPVC, the wishes of Council tenants also needs to be borne in mind as there is both a high demand for uPVC doors and a great deal of satisfaction where double glazed uPVC units have already been installed. In addition, given the low incomes of many tenants, there is a real benefit of reduced personal fuel bills for those households where double glazed units have been installed and/or an increase in affordable warmth and comfort.

5. EQUAL OPPORTUNITY IMPLICATIONS

- 5.1 There are no direct equal opportunity implications within this report.

6. LEGAL IMPLICATIONS

- 6.1 There are no legal implications associated with this report.

7. CRIME AND DISORDER IMPLICATIONS

- 7.1 The introduction of these doors to people's homes will increase the security to their property, therefore, reducing their fear of crime in the home.

8. DETAILS OF CONSULATION

8.1 There have been no consultation outside of the Department other than with tenants groups raising the issues of replacement doors as part of general consultation on planned maintenance.

9. AIMS AND OBJECTIVES OF THE HOUSING DEPARTMENT

9.1 This report meets the Committees overall Quality of Life Aim for the Department “A decent home within the reach of every citizen of Leicester” and within that key objective 1 “To improve the condition of Leicester’s housing stock and resolve unfitness in all sectors”.

9.2 Key objective 6.2 “to maximise home security in both the public and private sectors through advised and direct provision”.

10. LOCAL GOVERNMENT (ACCESS TO INFORMATION) ACT 1985

10.1 Background Papers

Report to Housing Directorate
Housing Department Files.

11. AUTHORS OF REPORT

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Other Implications	Yes/NO	Para within supporting papers	References
Equal Opps	No		
Policy	No		
Sustainable & Environmental	No		
Crime and Disorder	Yes	7	
Human Rights Act	No		

APPENDIX A



- P.V.C.U Composite door
- High security
- Multi-Point locking
- Fully reinforced door construction
- P.V.C.U outer frame

- Increased energy efficiency
- Virtually maintenance free
- No painting required
- Easy replacement if required

