

Appendix 2 Comparison of the Options (Whole of Life) for Replacing the Roof and the Windows

The Roof Options – the following options have been considered:

a) continue to repair the roof elements – not really advised as the coverings are at the end of their useful life and the risks of continuing water penetration will remain. Landlord’s repair responsibility not fully met. Claims for water damage, poor roof insulation will continue. Works estimate is £120,000, which will be borne by the Housing Revenue Account (HRA) and contribution from long lessees.

b) replace the roof - with an option having the best whole of life cost. From the comparative table below the best option is the lightweight pitched roof, estimated at £342,000 is best.

George Elliston House & Eric Wilkins House - Roof Works Options Estimates & Whole Life Costs

Roof Type	George Elliston (£)	Eric Wilkins (£)	Total Capital Cost (£)	Life Expectancy (Years)	Annual Maintenance Budget (£)	Annual Cost at NPV (£)
Option 108 (High Performance Felt Roofing)	167,000	71,000	238,000	30	2,000	6,380
Option 110 (Single Ply Membrane with insulation deck)	160,000	68,000	228,000	30	2,000	6,196
Option 109 (Green Roof)	260,000	113,000	373,000	50	2,000	4,772
Option 107 (Lightweight Pitched Roof)	239,000	103,000	342,000	60	2,000	3,737

Assumptions:

1. Discount rate (supplied by City of London) : 2%
2. Life expectancy based on advice of supplier - each system is guaranteed for 20 years and is BBA certified to 30 years. The green roof is expected to last longer due to the absence of UV degradation.
3. Maintenance is based on a visit every 6 months to inspect roof, clear drainage and make occasional minor repairs based on the advice of the supplier.
4. Capital costs as per 24/02/12 feasibility estimate
5. Window and roof works undertaken together
6. Prices are based at 3Q 2011

The Windows Options (including associated repairs and redecoration)

a) continue to repair and repaint – not really advised as the windows condition survey indicates that the windows are at the end of life expectancy and not up to modern standards. The estimated works cost is £220,000. Of this, £120,000 is for the windows repairs and redecoration, £100,000 for the blocks 'other common elements redecoration – front doors, staircase walls, balconies, ironmongery, etc.). This is borne by the HRA and contributions from long lessees.

b) replace with modern double glazed windows – with an option having the best whole of life cost. From the comparative table below there is a slight whole life cost advantage for the steel windows compared to the aluminium clad timber windows. But aluminium clad timber windows tend to have the advantage in terms of sustainability and are chosen subject to final planning approval at an estimated £523,000.

George Elliston House & Eric Wilkins House - Windows Options Estimates & Whole of Life Costs

16/03/2012

Window Type	George Elliston (£)	Eric Wilkins (£)	Windows Cost (£)	Lintel repairs (£)	Year 1 Capital Cost (£)	Life Expectancy (Years)	Annual Maintenance Budget (£)	Annual Cost at NPV (£)
Double Glazed Crittall (Steel)	355,300	137,500	492,800	75,000	567,800	60	11,855	26,489
Double Glazed PVCu	323,000	125,000	448,000	75,000	523,000	40	11,130	28,164
Double Glazed Aluminium Clad Timber	323,000	125,000	448,000	75,000	523,000	50	11,855	26,569

Assumptions:

1. Discount rate (supplied by City of London) : 2%
2. Quantity of windows: 442
2. Life expectancy based on advice of City of London.
3. Window maintenance assumptions for annualised cost calculations indicated in table overleaf.
4. Assumed external decoration requires scaffold on basis of City of London advice.
5. Windows frames are suitable for each type of window installation and do not require adaptation or significant repair.
6. Window and roof works undertaken together.
7. Prices are based at 3Q 2011.
8. Costs / frequencies from Phillip Hawes email 08/03/12 used in calculations.