FIFE COUNCIL
Building Services

PVC WINDOWS AND DOORS
2010 to 2015
BUILDING SERVICES

• Who are we?
• Property Procurement in Fife Council
• Scale of the business
• New relationships
• Architects taking specification advice !!!
HOUSING CLIENT

- 75% our turnover - £70m
- 31,000 houses
- £30m maintenance
- £40m component replacement works
- Scottish Housing Quality Standard
- £6m windows and doors replacement
OLD WINDOW PROCUREMENT

• 20 year old specification
• Pvc double glazed
• “C” – energy rating
• steel reinforcement
• heavy metal stabilisers
• evolving ironmongery schedule
• no recycling
OLD CONTRACT ARRANGEMENTS

- four suppliers
- window matrix
- averaged middle two suppliers prices
- Fife Council window matrix
- all suppliers signed up
- price fluctuations evidenced by all
NEW OBJECTIVES

• Best Value – cost and quality criteria
• bulk procurement
• community benefits
• sustainability
• energy efficiency
• recycling – no toxic landfill
• Health and Safety – manufacture process manual handling
OBSTACLES TO CHANGE

- existing specification did a job
- matrix arrangement worked
- risk mitigation worked
- good relationships built over years
- reluctance to accept new technology
- ignorance of environmental issues
- resource capacity for research and change
RESEARCH

• profile suppliers
• fabricators
• CDM Regulations
• internet
• Vinyl 2010
• HSE information
• pvc technical information
• environmental reports
PVC, TIMBER or ALUMINIUM

• Department for the Environment, Food and Rural Affairs
• Swiss Institute for Testing Materials
• German Federal Environmental Agency
• UK National Centre for Business and Ecology
• Australian Industrial Research Organisation
• EU and WHO advisory experts
• OSPAR Commission
PVC, TIMBER or ALUMINIUM

Life Cycle Cost against PVC over 30 years

- softwood  33% more expensive
- hardwood   23% more expensive
- aluminium  57% more expensive
The research dictated **Four Core Changes** to spec:

1. heavy metal free pvc
2. BFRC “A” – rated energy efficiency
3. pvc reinforcement
4. recycling
1. HEAVY METAL FREE PVC

VINYL 2010

“Voluntary 10 year commitment of the European pvc industry to sustainably develop all stages of the pvc lifecycle from production to disposal”

1. PVC manufacture process
2. PVC Additives
3. Waste Management
1. HEAVY METAL FREE PVC

CADMIUM / BARIUM / LEAD

Environmental Issues
- Ozone depletion
- Landfill contamination
- Groundwater contamination

Health Hazard
- Brain damage
- Cardiovascular disease
- Strokes
Calcium organic based stabilisers

- No toxicological issues whatsoever
- Safe for the environment
- Safe production
- Greater recycling opportunities
ENERGY SAVINGS TRUST DATA

A versus C on 3 bedroom house

• 0.4 u-value more efficient
• ½ tonne more Co2 saved per annum
• £40 energy saving per annum
• 11 tonnes more Co2 saved per life cycle
• £1,400 more cost saved per life cycle
Why move away from steel?

- Extremely heavy – manual handling injuries
- High energy use in manufacture process
- Not thermally efficient as a window component
3. PVC REINFORCEMENT

Why new PVC reinforcement system?

- Substantial weight reductions
- Low energy manufacture process
- Super enhanced thermal properties
- Superior screw holding properties
4. RECYCLING

Why start recycling?

- Fife Council green agenda
- Environmentally responsible thing to do
- Salvage value
- Removes lead from the pvc window loop
- Removes disposal problems and landfill costs
Final Sign Off

- Report on the proposals and full substantiation
- Housing Partnership Specification Group
- Remind Partners of the Council’s Objectives
- Sustainability / Energy Efficiency / H&S / Cost
TENDER CHALLENGES

Technical Specification – Input Method

• Too prescriptive and detailed
• Open to challenge on technicalities
• Excessive clarifications invited tender process challenges
• Too easy for process to be sabotaged
• Eventual failure – Council exposure
Technical Specification – Output Method

- Heavy metal free pvc windows
- BFRC “A” – rated windows
- PVC Reinforcement
- Recycling
TENDER REQUIREMENTS

- Current laboratory reports on pvc
- A rated certification for tender designs
- BS Standard certifications for tender designs
- Recycling method statements
- Waste licenses
- Audit trail for waste material movements
FALSE TENDER RETURNS

- Certification for different window designs
- Claims of equivalent quality with no evidence
- Fraudulent certification
- Out of date certification
- Mountains of disorganised paperwork
COUNTER MEASURES

- Painstakingly checked and reconciled certifications
- Contacted certification test centres for confirmations
- Sample pvc checks
- Requested original hard copy certifications
- Check carbon footprint of recycling arrangements
WHY THE SHARP PRACTICE？

• £15m contract spanning 5 years
• Success with less diligent organisations
• Reluctance to invest in new technologies
• Limited number of contracts with this spec
WHY WAS THE UK WINDOW INDUSTRY LAGGING BEHIND

- No legislation on lead free pvc
- Sustainability agenda was still growing
- Existing industry can't / won't invest
- Council's, Housing Associations and Large House Builders are slow to lead on major specification changes
WHAT WAS ACHIEVED BY FIFE COUNCIL

- environmentally friendly windows
- safer production and installation
- 5% cost saving on supply
- cheaper tenant fuel bills
- surpassed SHQS standards
- future proofed for carbon reduction targets
SHARING FIFE’S EXAMPLE

• The Fife window has won many awards
• The procurement story has been awarded
• APSE forum presentations
• Council roadshows
• Share documentation
• Results
Thank you

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