

FALKIRK COUNCIL

SHQS: The Delivery Plan, March 2004 to March 2015. Methodological Statement: Completion of Appendices 2, 3 & 4.

1.0 The 100% Housing Database ("Collection and analysis of stock condition"):

1.1 Existing Survey Data

Falkirk Council commissioned a 10% (c.1000 property) random sample house condition survey of its Council tenure housing during 1999, its prime purpose being to provide a 30 year Cost Generation Model for stock valuation purposes. Since that time it has maintained records as to capital expenditure programmes of work.

Against this background, Falkirk Council elected to explore application of this 1999 Survey data (Survey Data), updated to reflect capital works, to its current housing investment needs and options appraisal, whereby SHQS compliance status and forward delivery planning are the principal information objectives.

David Adamson & Partners Ltd. (David Adamson), a firm of Chartered Surveyors and Housing Consultants with longstanding experience in largescale social housing physical and social research, was instructed to interrogate the Survey Data. If adjudged feasible and prudent in context of the information objectives, the Survey Data was to be cloned on an appropriate archotyping basis to achieve a 100% populated housing database. This would provide the platform for Falkirk's strategic Council tenure housing investment planning.

David Adamson's audit of the Survey Data involved four broad areas of fit-for-purpose assessment, namely:

- Sample Design
- Data Scope
- Data Accuracy and Completeness; and
- Survey Methodology

1.1.1 Sample Design

We found the Survey Data to be generated from an apparent 10% random design. Falkirk were unable to advise of any stratification controls, although we understand that at the time of the 1999 study meaningful electronic dwelling descriptive information suitable for mass condition survey sample control purposes was not available.

On scrutinising the Survey Data sample addresses we found the sample to be representative at whole stock level, (within +/- 4% sample error at 95% statistical confidence). Furthermore, all typically adopted Resource Accounting archetypes and main variants were represented. The sample was

suitably representative by dwelling type to facilitate the 100% housing database cloning process.

1.1.2 Data Scope

The Survey Data file was tested for its capacity to inform two areas of analysis:

- a) A 30 year Forward Capital Works Maintenance Programme (Planned Renewals and Improvements); and
- b) SHQS Criteria.

The **Forward Capital Works Maintenance Programme is defined** as all planned renewals to building and landscaping/boundary components required over the following 30 years in order to retain existing provision in serviceable order and added provision required to comply with an authorities defined standard. Falkirk Council advised us that for the purpose of this study SHQS is Falkirk's standard.

Survey Data file heads incorporated all main components required to forecast planned renewals to the housing asset required over the following 30 years. The Survey Data file descriptors were found to be sufficiently transparent to permit updating from Council records of capital works undertaken since 1999.

Clearly **SHQS** was developed some time after the 1999 survey design and therefore it is of no surprise that the Survey Data is not directly informative as to a dwellings compliance status against all SHQS measures. Indeed, unless a Survey has been commissioned and reported upon post December 2004, it is extremely unlikely that an authority will possess a full and directly compatible SHQS dataset. Accordingly, Council information is typically resourced where survey information gaps occur. Our review of the Survey Data against SHQS criteria is as follows:

Tolerable Standard:

The Survey Data did not specifically address the Tolerable Standard measures, however there was sufficient correlating building condition, amenity and performance data to output a robust Tolerable Standard indicative assessment. Falkirk Council's housing technical personnel validated this assessment.

Serious Disrepair:

Survey Data was sufficiently comprehensive to inform the considerable majority of primary and secondary building elements. Where expected data gaps were encountered, for example "Underground drainage, Foundations and Wall structure", Council records of specialist investigations of designated defective house types, and localised drainage collapse were resourced.

Energy Efficiency:

Dwelling specific description of heating and insulation was provided within Survey Data., however its format and extent did not permit an NHER level 1 transfer file to be informed. Survey Data required to be augmented from

alternative Council information sources in order to inform this Criteria determination.

Modern Facilities and Services:

Survey Data scope was sufficient.

Healthy, Safe And Secure:

Survey Data was able to inform the "Healthy" standards and partially inform "Safe" standards. Information gaps were able to be informed from alternative Council sources, for example all dwellings currently possess hardwired smoke detectors and are double-glazed.

1.1.3 Data Accuracy and Completeness

A random selection of 50 properties was drawn from the Survey Data file and made subject of an internal/external resurvey by David Adamson's. The purpose of the resurvey was to assess the accuracy of the Survey Data representation of dwelling characteristics and main component materials. These are the non-subjective data elements to the database. We found the relevant fields of Survey Data to be reasonably accurate, having strong correlation with our resurvey data.

Survey Data completeness was variable. Against dwelling descriptive and main material fields it was generally completed to an acceptable level. In respect of remaining data fields high levels of missing entries were encountered (refer, Survey Methodology).

1.1.4 Survey Methodology

So as to establish the prior survey methodology, we have liaised directly with the consultant (Survey Consultant) that undertook the 1999 Survey.

The Survey Consultant confirmed the survey was for Tenanted Market Valuation purposes only and that its principal objective was to output a 30 year forward maintenance cost forecast for application within a typical social housing valuation model.

Surveyors were briefed to complete all applicable survey questions and to record against each building material or component a remaining life (just-in-time approach first renewal). Thereafter, in the usual manner, industry life periods had been applied to forward forecast renewals.

The Survey Consultant could not explain the reason for missing data with certainty, although suspected that some field staff may not have omitted to make entry where a life period was deemed to exceed 30 years.

We found the Survey Data file to contain some quantities and rates against building components, however these appeared incomplete and at variance with our benchmark expectations.

1.2 100% Database Development

1.2.1 ***Survey Data***

In reporting our audit of the Survey Data, we recommended that two core aspects of this previous work were suitable for application to development of the cloned 100% database, namely:

- Dwelling characteristic and main component materials; and
- Archetype and main variant representation across management areas.

1.2.2 ***Populating omitted entries and updating the data***

As previously discussed the Survey Data contained a high incidence of missing entries where an earlier response indicated a mandatory recording, for example, on numerous occasions a component and material were not informed by a surveyor just-in-time first renewal assessment. Other examples include incomplete recording of amenity and attribute data.

The approach to population of missing entries was twofold. In the first instance completed entries for comparable dwellings in closest proximity to a missing entry was adopted as the source for population. Thereafter, comprehensive Council records of capital works undertaken since 1999 fieldwork, were utilised to populate remaining missing entries and overwrite Survey Data.

In this manner the dual objectives of data completion and update were realised.

1.2.3 ***Cloning methodology***

Having developed a complete and updated survey dataset, cloning (copying on a dwelling like-for-like basis) was implemented. This process does not, in the first instance, provide a statistically more reliable basis to producing SHQS outputs than the original sample design, however it does provide a more transparent commencement in the process of achieving a comprehensive and accurate database, reliable at dwelling level for works programming purposes.

Cloning was implemented on an MS Access platform, macros being applied in order to match Survey dwellings with non-surveyed dwellings of the same type, within closest proximity. Once identified, the non-surveyed dwellings (clones) are populated with survey data from the donor surveyed dwelling.

Controls for matching are first run at resource accounting archetype level and thereafter further variant differentiation is applied. Proximity is a vital consideration in the cloning process, management area and estate identifiers being a cloning limiting control. For some dwelling types, location is less crucial as a cloning control, for example, non-traditional dwellings.

In this manner the draft 100% housing stock database was derived. A second overwrite from Council capital works records was implemented and the finalised dataset obtained.

2.0 A Priced 30 Year Forward Capital Works Maintenance Programme

2.1 Planned Renewals: Quantities

As previously expressed Survey Data quantities were inconsistent and incomplete. David Adamson applied its social housing dwelling archetype quantities for the purposes of this study.

2.2 Planned Renewals: Schedule of Rates

David Adamson's schedule of rates was modified in consultation with the Councils technical personnel and David Adamson's quantity surveyors in order to reflect local price levels. Preliminaries and Professional fees were set at 18% of the building works cost.

2.3 Planned Renewals: Material/Component Life Periods

From new Life Periods were agreed with the Council prior to final forecast output. The principal influences in determining life periods were the achievement and maintenance of SHQS compliance. Examples include:

- Kitchens: 20 years .
- Bathrooms: 30 years
- Windows 30 years
- Central Heating Boilers 15 years
- Central Heating Distribution 30 years
- Hard wired smoke detectors 10 years .
- Electrics 30 years

2.4 Forward Capital Works Maintenance Programme and Expenditure

Capital works were assessed under the following categories:

- a) Planned Renewals
- b) Major Contingent Repairs
- c) Extensive Exceptional Works; and
- d) Improvements.

Planned Renewal Costs were primarily informed from the MS Access Cost Generation Model, which utilised the 100% cloned relational database, archetype quantities and schedule of rates.

Major Contingent Repair Costs primarily relate to the non-traditional housing, expenditure forecasts being based on Consulting Engineers, David Adamson's and Councils predictions of likely future performance and

expenditure obligations. Also included are cost areas which are pending specialist investigations, however on balance of probability will require expenditure, for example, asbestos removal and/or management.

Extensive Exceptional Works Costs relate to known exceptional items such as underground drainage remedial works, costs being informed by specialist invasive work and/or historical costs.

Improvement Costs primarily relate to SHQS compliance not satisfied by the foregoing capital works and responsive/voids/cyclical expenditure.

3.0 SHQS Compliance Delivery March 2015 and Maintenance Thereafter

SHQS Criteria standards are in most areas transparent e.g. Kitchen Facilities, Sufficient power outlets (6 or more sockets), whilst in others open to interpretation e.g. Modern Facilities And Services, Kitchen Condition, Kitchen fittings in good and usable condition, an item fails where it requires repair or replacement of more than 25%. With respect to the latter would a 35 year old kitchen in generally good condition be deemed a "Modern Facility" by a reasonable social landlord? Probably not.

The SHQS encompasses all main building components in context of ensuring provision of an acceptable quality of social housing by and beyond 2015.

Renewal of components within acceptable life periods and installation of new SHQS compliant provision, coupled with robust cyclical, voids and responsive regimes will ensure that SHQS is delivered by 2015 and maintained thereafter.

Against this background and the methodology underlying the Forward Capital Works Maintenance Programme and Expenditure Forecast, we shall address the basis adopted in completing SHQS Delivery Plan Appendices 2,3 & 4.

SHQS Delivery Plan, Appendix 2:

The baseline SHQS position, assuming no capital investment over the planning period, was established by relying upon the 100% cloned housing dataset, Council alternative information sources (e.g. Specialist reports) and David Adamson's understanding of the assets performance.

Failures beyond Year 1. were primarily informed from component life periods forecast to conclude within the Planned Renewal Cost Generation Model. For example, it cannot be predicted when a Kitchen will exhibit 25 % disrepair, however it is a reasonable assumption that once a kitchen's life is beyond its predicted physical life it is likely to be in disrepair. It also follows that a renewal on this life basis is likely to ensure that kitchens remain in good condition, ergo SHQS compliant.

SHQS Delivery Plan, Appendix 3:

Capital investment to meet and maintain the Standard has been extrapolated from the Forward Capital Works Maintenance Programme and Expenditure Forecast.

Improvement expenditure relates primarily to additional investment in enhancing energy performance of dwellings to achieve an NHER Rating of 5, for example insulated render to non-cavity buildings.

SHQS Delivery Plan, Appendix 4:

The delivery plan is based on a robust strategic understanding of the assets investment needs as reflected within the Capital Works Forecast. Global capital works costs lie within our benchmark expectations having regard to prior studies of comparable housing stocks. We are confident that, subject to best practice works procurement and rationalised programming of work, SHQS delivery as depicted at Appendix 4 will be realised.

4.0 Monitoring and Implementing SHQS Delivery.

The 100% cloned dataset is sufficient for immediate SHQS whole stock delivery planning, however clearly it does not provide a basis to programming of works or compliance monitoring at dwelling level.

Falkirk must now proceed to develop a dataset, ideally relational within a stock cost generation operating system, that is *inter alia* capable of reporting robust SHQS status at dwelling, group, estate, management area, and stock level. It should also be able to be updated to reflect capital works and other changes (e.g. cost basis, life periods and stock composition).

Specifications for procurement of such systems are well established and typically commence with a programme of 100% stock survey over a requisite period. Value for money survey options should also be considered, for example, limiting fieldwork to detailed surveys at Archetype and main Variant level within estates and/or by unique dwelling type.