Cambridgeshire County Council

Better Utilisation of Property Assets Programme

Outdoor Education Centres
Business Case

Cambridgeshire County Council
Strategy & Estates
Box: RES 1302
Shire Hall
Cambridge
CB3 0AP
Telephone: 01223 699089
Facsimile: 01223 699682
tobin.stephenson@cambridgeshire.gov.uk

January 2010

Beacon Council 2005-2006 Asset Management

Content

A **Technical Brief** has been produced to contain all common assumptions or definitions for each element of the Business Case, e.g. financial model, sensitive analysis.

1. Executive Summary

2. Background and Context

2.1 The Need for Change

2.1.1 Background – Learning Outside the Classroom and Cambridgeshire Outdoors

Cambridgeshire Outdoors comprises three separate service areas, which deliver a high standard of teaching and learning and a coherent approach to Learning Outside the Classroom (LOTC).

The three services - Grafham Water Centre, Burwell House and CEES – provide different areas of focus at a time when LOTC is taking a higher profile nationally. The recent LOTC Manifesto and Ofsted report on LOTC emphasise the role of LOTC not only in the development of a children's social skills and their self esteem but, crucially, in their academic attainment.

The aims of Cambridgeshire Outdoors are:
- to provide a wide RANGE of outdoor learning experiences and choice
- to ensure HIGH QUALITY outdoor learning experiences
- to ensure COST EFFECTIVENESS
- to ensure high standards of SAFETY across the provision
- to make a clear case for the VALUE of learning outside the classroom
- to improve INFORMATION for schools, youth groups and the wider community
- to broaden UNDERSTANDING and provision of Learning Beyond the Classroom through other agencies.

External professional evaluations, responses directly from customers and a consultation with senior managers in schools reflect the high standards of Cambridgeshire Outdoors provision and the value placed on the current LOTC arrangements in Cambridgeshire.

The high quality and national reputation of Cambridgeshire's Learning Outside the Classroom is one of the elements, which sets Children's Services in Cambridgeshire apart from other Local Authorities and contributes to the Council's three star rating for quality of service.

2.1.2 Background – Cambridgeshire Outdoors centres at Stibbington and Burwell

Throughout 2008/09 discussions have been ongoing with regards to the properties making up Cambridgeshire Outdoors (with the exception of

Grafham Water Centre). There are concerns about the condition of the properties at Burwell House and Stibbington.

Burwell House provides opportunities for children, young people and members of the wider community to participate in LOTC, which enables them to grow and develop through a range of cultural, environmental and adventurous opportunities that support and enrich classroom learning and the goals of "Every Child Matters". The aim is to provide a nurturing and friendly environment in which there are formal and informal opportunities for learning beyond the classroom so that all children feel secure, supported, challenged, valued and motivated. Within such an environment children will develop as confident, independent learners.

Burwell House provides 'tailor-made' courses, offering support across the whole curriculum. Courses are planned in consultation with visiting groups and designed to meet each group's individual needs and aims.

Burwell's setting provides a rich historical and varied learning environment including: hands-on TV studio, photographic darkroom and craft studio, Devil's Dyke (largest Anglo Saxon earthwork in the country); Wicken Fen; Burwell Museum; Burwell Castle; 14th Century Church; Fenland Studies; village studies within a thriving and ancient settlement; 220 year old property; mature grounds and trees of uncommon species.

Stibbington is part of Cambridgeshire Environmental Education Services, whose main activities can be summarised as:

- improving knowledge and understanding about the environment
- offering first hand experience in the environment
- developing skills through the environment
- encouraging informed concern and action for the environment and for sustainable lifestyles.

The centre at Stibbington provides a nationally unique range of heritage education courses based on historical re-enactment using real people, local buildings and genuine documentary evidence from the past.

A former Victorian village school building serves as Stibbington's Day Centre which contains a large classroom - providing a base for a wide range of environmental courses – and a smaller classroom furnished and equipped for either Victorian lessons or for a World War II evacuation experience.

Three and five day environmental education courses are provided from the purpose-built residential centre at Stibbington. Programmes are designed to support the curriculum with a focus on learning for sustainable lifestyles. Occupancy is near 100% at peak times with some seasonal dips. Around 65% of the schools using Burwell House are from Cambridgeshire and this figure is approximately 55% for Stibbington.

The grounds include imaginatively designed play and study areas, mini vegetable plots, renewable energy installations, picnic tables and a wildlife garden. The centre is ideally located for access to a wide range of study locations, including woodland and wetland nature reserves, rivers and streams, farms, a quarry and a steam railway centre, as well as the village itself.

In addition to courses for children and young people, Burwell and Stibbington also serve a wider community, providing professional development, training and facilities for school staff, youth groups, charity organisations, music groups, faith groups, County Council staff and various adult education groups.

2.1.3 Background – Upgrading of centres at Stibbington and Burwell

Each service is required to operate on a traded basis and attendance is paid for by schools and other users on a voluntary basis to enhance learning experiences. The revenue stream recovered from those making use of the centres covers much of the cost running the centres; however properties at Burwell and Stibbington have suffered form a historic lack of investment. As a result, the properties have deteriorated and now require significant investment both to improve their energy efficiency and to deal with emerging health and safety risks.

Upgrades to mitigate health and safety risks include:
- Sprinkler systems (Burwell and Stibbington) – See appendix 2 (5.18 and 5.19)
- Low surface temperature radiators (Stibbington)

The residential properties at Stibbington and Burwell were identified in 2004 as ‘category one’ properties by the Chief Fire Officer. Recommendation to provide funding to support a programme of sprinkler installation in all category one properties where there is a sleeping risk was endorsed by Cabinet in January 2005. Cabinet approved a further report on 17/10/2006, which stated it is now the express responsibility of organisations themselves to ensure that they comply with fire safety regulations.

Upgrades to improve the energy efficiency include:
- New heating system, hot water and boilers (Burwell)
- New domestic hot water system (Stibbington)
- Relighting both blocks (Stibbington)
- Destratification fans for Victorian Building (Stibbington)
- Improved Insulation (Stibbington)

Without urgent upgrades to the boilers and heating systems in Burwell and Stibbington there would be a significant risk of temporary closure in the event of a failure. The absence of sprinkler systems and low surface

temperature radiators also present a risk both to users and employees of the facilities.

As well as being necessary upgrades to these properties if they are to continue operating, investment in these areas could also serve to reduce the running costs of the properties in the future through both lower insurance payments (due to reduced risk of fire damage) and lower energy costs (due to energy efficiency measures).

2.2 The Objectives

For the main BUPA Programme objectives, see the accompanying Technical Brief.

The objectives particular to this project include:

Quality and Performance – Substantial improvement to performance through removal of risk.

Environmental sustainability - Contributes to the reduction of the County's "Carbon footprint" through property rationalisation and increased use of energy efficient buildings

Efficiency Gain:
- Reduce revenue cost by ensuring the estate is more efficient to run and maintain and adopting the principles of whole life costing.
- Protecting and enhancing capital values of property assets through reinvestment.

Reputation - Improve the public perception of the Authority through improvements to the buildings

2.3 The Challenge

To carry out vital improvement works as efficiently as possible to ensure the centres continue to operate safely and with improved energy performance.

3. Scope

The table below details the two buildings within the scope of the project:

USRN	Property	Tenure	Suitability Survey Designation	GIA (sqm)	CCC employees	Capital Receipt/Lease Value
00063	Burwell House	Freehold	BU	910	18	£2,100,000

00323	Stibbington Centre	Freehold	BU	730	11	£980,000

Table 1. Details of Facilities in Scope

As would be expected, in addition to the work detailed above, there will be a need for general ongoing property maintenance (particularly as some are historical buildings) and, as with all properties, additional investment may be required as issues arise.

The outdoor education centres at Grafham Water and Upware are excluded from the scope of this project.

4. Options Appraisal

4.1 Options considered

Only 2 Options have been considered as part of this project. These options are as follows:

Option 0 (Baseline Option) – To continue to operate both facilities without significant investment and accept the resultant risks to service delivery including facility closures.

Option 1 (Invest) – To invest in the upgrades detailed in section 2.1 amounting to an estimated £733,000 thereby mitigating against health and safety and operational risks whilst realising some reductions in revenue expenditure. It is believed that this figure could be reduced through value engineering which has led to the emergence of option 1a which shows a 20% reduction in capital spend, falling to £631,000.

4.2 Assessment Criteria

Both a financial and non-financial appraisal were carried out for each option. The bullet-points below briefly outline the financial and non-financial criteria against which both options have been assessed:

- Financial – Investment cost and revenue before and after investment.
- Non-financial – This appraisal represents a summary of the risks associated with the baseline position as compared to Option 1 as well as summarising from section 2.2 the objectives that Option 1 would meet.

4.3 Evaluation of Options

4.3.1 The Financial Appraisal

Financial information from this project was obtained through Facilities Management and the Head of Education Support Services. The main source for estimates provided was a recent energy study, whilst Mouchel provided estimates for the installation of sprinklers.

	Baseline	Option 1	Option 1a
Capital Costs	£0	£733,337	£631,196
Revenue Costs (Year 5)	£0	£1,200	£1,200
Net Present Costs (6 Years)	£0	£677,728	£584,195

Table 2 - Investment Costs and Revenue Costs at Year 5.

The financial appraisal above indicates that option 1 would require significant investment above the baseline position in capital terms. No allowance has currently been made in the financial appraisal from savings in energy and insurance costs that could result from the investment.

There would be a temporary loss of revenue (minimised through careful timing) and additional ongoing revenue cost associated with Option 1. As traded units, the centres would deal with the additional ongoing revenue and the short term losses.

4.3.2 The Non-financial Appraisal

The non-financial appraisal shows that gains against the BUPA programme objectives in areas of Quality and Performance, Environmental Sustainability, Efficiency Gain and Reputation could be achieved through Option 1 (see section 2.2).

As well as this Option 1 presents the opportunity to mitigate against the risks of fire and injury to users of the facilities, and disruption to service delivery – possibly resulting in a temporary closure to one or both facilities. Were any of these risks to be realised they would result in both financial and reputational damage to CCC. For further risk assessment see section 5.5.

4.4 Preferred Option

In conclusion investment in these properties will be essential to continue current use and the preferred option is Option 1. The position of Option 1 would be further enhanced when revenue savings from improved energy efficiency and lower insurance costs are taken into account in the financial appraisal however these figures are not expected on first assessment to cover the £1,200 for additional maintenance per year.

5. Preferred Option

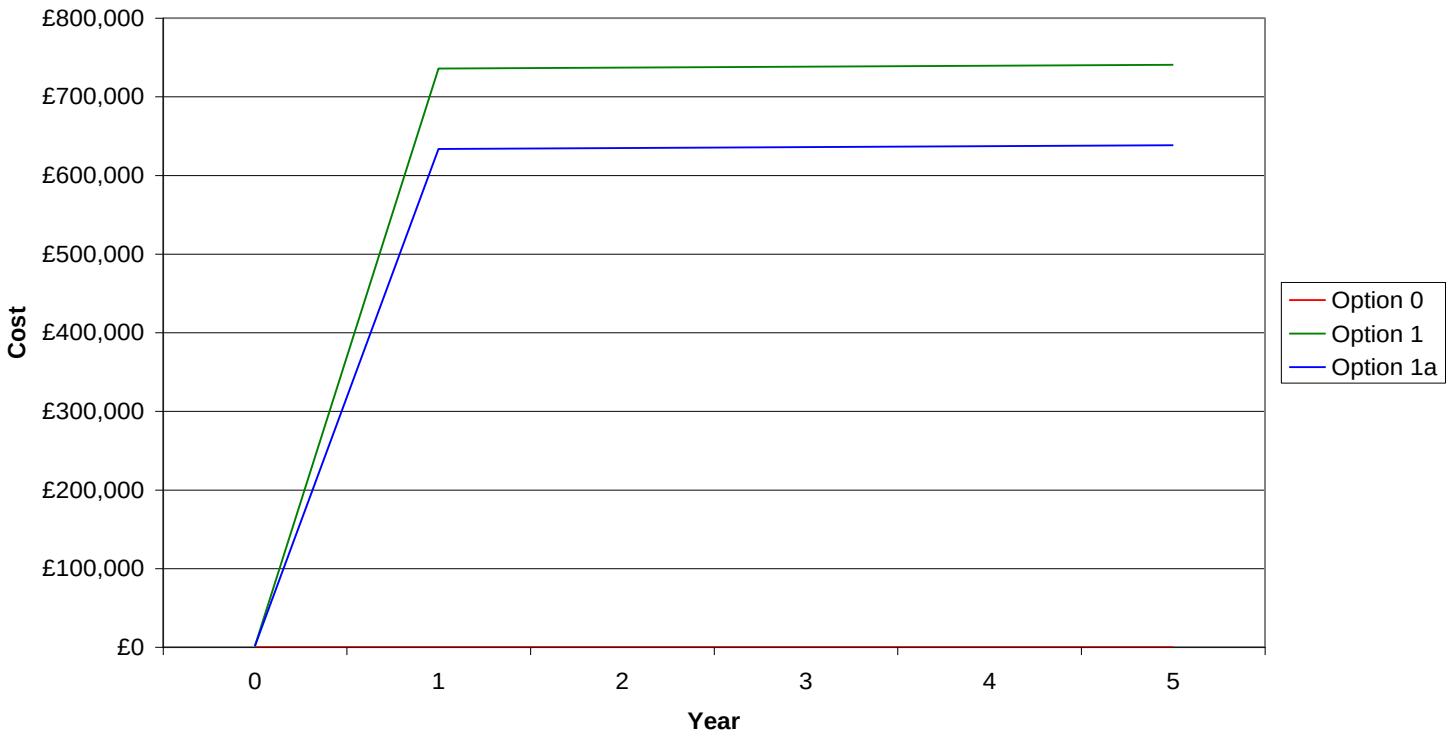
5.1 Affordability

5.1.1 Cost

This information is laid out in section 4.3.1.

5.1.2 Affordability Diagram

Diagram 1 - Affordability (Cumulative)



The diagram above describes the cumulative expenditure for the options over a 6-year period. As Option 0 represents the baseline which is shown as nil cost, this line cannot be seen.

For Option 1 this diagram shows an initial investment of just under £750k in years 0 and 1 followed by 4 years of maintenance payments at £1.2k pa. A sensitivity has also been shown (Option 1a). This displays the implications of a 20% reduction in the costs of all upgrades based on the acknowledged potential for greater value engineering in estimates. This Option shows a substantially reduced investment of £631k in Year 1.

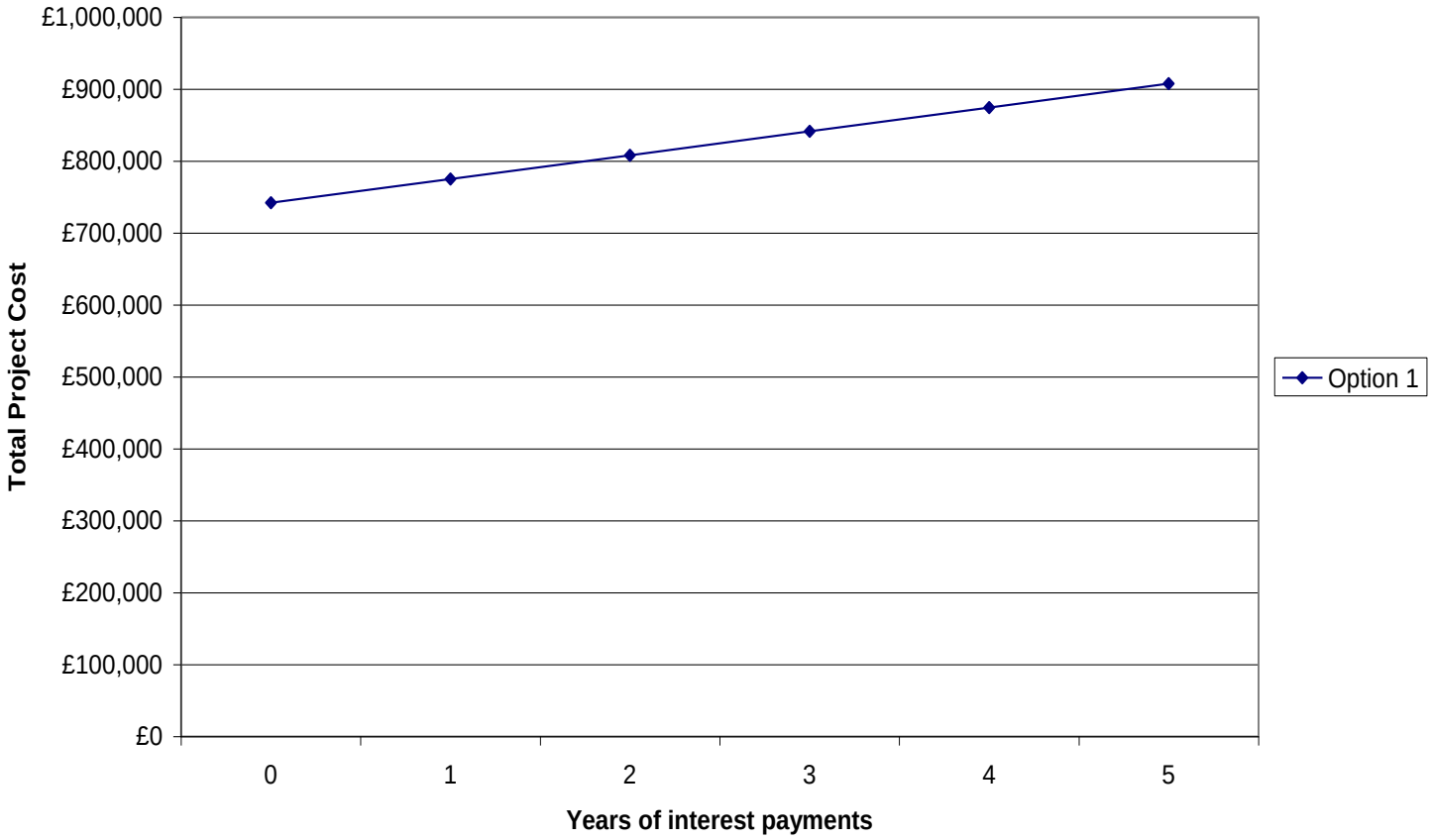
5.1.2 Funding Source

For this project it has been assumed that all capital expenditure would be met with capital receipts and therefore no borrowing costs have been included.

The revenue implications of Option 1 are currently unknown as the impact of savings in energy and insurance payments has not been accounted for. However, it is assumed that remaining cost would be counteracted by savings realised through other projects.

Diagram 2 (below) shows the impact if capital receipts to fund the project are delayed and prudential borrowing is required to plug the gap.

Diagram 2 - Impact of Delayed Funding



The diagram above shows the implications on total cost of delaying payback on any prudential borrowing taken on by the project. Interest payments on the entire capital investment would amount to approximately £36,500 pa assuming a 4.5% cost of borrowing.

5.2 Achievability

5.2.1 Timescale

The project finances assume that all upgrades would be carried out in Year 1 (2010/11).

5.3 Investment Appraisal

As the financial appraisal clearly shows the baseline position represents the cheapest option in pure financial terms. However the potential of Option 1 to meet project objectives and mitigate against serious risks indicates that this option would reflect the best value for money and should be taken forward.

5.4 Benefits

As the financial appraisal above demonstrates Option 1 does not out-perform the baseline position in financial terms although it is assumed that Option 1 could generate a small saving in the operating expenditure of both Stibbington and Burwell (when discounting additional maintenance burden brought about by the installation of sprinklers).

The table below lays out in more detail the benefits that could be realised through the preferred option (1):

Benefit category	Potential benefit
Service Modernisation/ Transformation	Benefit to buildings not to services.
Environmental Sustainability	Contribution to reducing energy use through boiler improvements.
Economic Regeneration	Little benefit.
Efficiency Gain	Some in terms of revenue associated with heating though continued maintenance of sprinkler system will outweigh benefit,
Quality and Performance	Substantial improvement to performance through removal of risks.
Reputation	Mitigates significant risk of damage to reputation.
Partner Working	No contribution.
Deliverability	Good.

Table 3. The Non-financial Benefits Associated with Option 1.

5.5 Risks/Issues and Actions

The major risks associated with both options 0 and 1 will be described in separate tables below:

Risk/Issue	Mitigating action
Fire impacting on people working in and using centres.	Option 1.
Fire damage to buildings.	Option 1.
Poor heating performance in buildings.	Option 1.
Failure to comply with heath and safety regulations leading to risk of closure	Option 1.

Table 4a. Key risks associated with Option 0

The planned investment detailed in Option 1 is deemed essential and if elements such as the fire sprinklers are not put in place it will be necessary to close the facilities. Therefore the risks associated with this option are too high and Option 0 should not be considered as viable. This was backed up by cabinet through a report approved on 17/10/2006 (Item 11b), which stated it is now the express responsibility of organisations themselves to ensure that they comply with fire safety legislation. See the hyperlink below for the report itself:

for County Council 17/10/2006

Risk/Issue	Mitigating Action
Delivery of option impacts on service delivery particularly in term time.	Plan work to take place in school holidays as far as possible.
Loss of future bookings: a. During work. b. In future years	Allowances made in current bookings. Discussions with customers. Use of other Centres not undergoing work.
Additional work uncovered during delivery	Contingency and on-site flexibility to carry out any additional work required.
Early capital receipt to cover cost not achieved	Examine list of expected receipts and identify those that could help meet cost. Bring forward receipts if possible to ensure ongoing prudential borrowing is not required.

Table 4b. Key risks associated with Option1

6. Delivery Approach

6.1 Governance Arrangement

The project will adhere to the corporate approach to Programme and Project Management.

The governance of the project will be through the existing BUPA Programme structure. Table 5 shows the key decisions and responsibilities.

Key decision	Timing	Responsible
Cabinet approval to proceed to Stage 1	November 2009	Cabinet
Stage 1		
Sign-off the project plan	Winter 2009/10	Project Sponsor
Agree the resource allocation	Winter 2009/10	BUPA Programme Board
Sign-off the work specification/s	Spring 2010	Project Board
Agree the appointment of contractor/s	Spring 2010	Project Sponsor
Stage 2		
Deliver improvements to buildings	TBC	Project Board
Sign-off work	TBC	Programme Board

Table 5. Governance for the Delivery of Option 1.

6.2 Approach for Procurement

The procurement rules for Cambridgeshire County Council will be followed.

Briefly the steps are:

- Create a design specification.
- Undertake the procurement process.
- Appoint a contractor.
- Deliver the building improvements.
- Close the workstream to deliver the building improvements.

6.3 Use of Resources

There are a number of parallel workstreams running along with the building. The resources in Table 6 are required to deliver all workstreams.

Resource	Type	Area of responsibility
BUPA project management	Internal - project delivery.	The work associated with delivering the project.
Services based in the facilities in scope	Internal - service delivery input.	Advice and input into the solution design and use.
Internal property, finance and legal professionals	Internal - project delivery.	Professional advice and input into the delivery of the project.
Consultants	External - delivery.	Specialist advice in relation to delivering elements of the project (if required).
Contractors	External - delivery.	Delivery of the building improvements

Table 6. The Use of Resources to Deliver the Preferred Option

7. Suggested Course of Action

There is serious continued risk to the Council associated with the baseline option. Without essential work to meet fire regulations both centres will face closure. Therefore Option 1 is recommended.

A **Technical Brief** will be produced to contain all common assumptions or definitions for each element of the Business Case, e.g. financial model, sensitive analysis.

8. Appendix

8.1 Appendix 1

Below is the financial pro-forma for the Outdoor Education Centres project. To access the full pro-forma including timings see this link: OEC Financials.xls

	Option 0	Option 1	Option 1a
CAPITAL			
1) Non-Recurrent Setup Costs			
Stibbington			
Domestic Hot Water System	£0	£17,000	£13,600
Low surface temperature radiators	£0	£55,000	£44,000
Upgrade insulation for residential building	£0	£79,000	£63,200
Insulate Victorian building roof	£0	£20,000	£16,000
Improved glazing and draught proofing	£0	£20,000	£16,000
Destratification fans	£0	£3,000	£2,400
Relighting both blocks	£0	£10,000	£8,000
Fire Sprinklers Stibbington	£0	£94,160	£94,160
Sub-total (Stibbington):		£298,160	£257,360
Burwell House			
Burwell House heating system, hot water and boilers	£0	£175,000	£140,000
Fire Sprinklers Burwell	£0	£114,690	£114,690
Sub-total (Burwell):		£289,690	£254,690
Project Management (specialist) Costs @ 6%	£0	£35,271	£30,723
Professional fees @ 16.5%	£0	£62,535	£50,028
Contingency @ 10%	£0	£47,681	£38,395
Sub-total	£0	£733,337	£631,196
2) Recurrent Capital Running Costs			
	£0	£0	£0
Sub-total (pa)	£0	£0	£0
3) Non-Recurrent Capital Returns			
Residual Value	£0	£0	£0
Capital Receipts	£0	£0	£0
Sub-total	£0	£0	£0
Net Capital Cost (6 Years)	£0	£733,337	£631,196
Capital Costs/Savings (vs Baseline)			
REVENUE			
4) Recurrent Running Costs			
Additional Maintenance	£0	£1,200	£1,200
Sub-total (pa)	£0	£1,200	£1,200
5) Non-Recurrent Running Costs			
	£0	£0	£0
Sub-total	£0	£0	£0
Net Revenue Costs (6 Years)	£0	£1,200	£1,200
Revenue Costs/Savings (vs Baseline)			
OVERALL			
Total Project Cost (6 Years)	£0	£740,537	£638,396
Net Present Cost*	£0	£677,728	£584,195

8.2 Appendix 2

Attached overleaf is the report and costings from Mouchel on the installation of sprinkler systems in both the Stibbington Centre and Burwell House.

STAGE C/D REPORT

Sprinkler Installations

Various Properties

30 March 2007

Produced for

Cambridgeshire County Council

Prepared by

Gary J Benn

Senior Building Surveyor

Mouchel Parkman

Box 1221

Shire Hall

Cambridge

CB3 0AP

T *+44 (0)1223 718500*

F *+44 (0)1223 717774*

E *gary.benn@mouchelparkman.com*

Document Control Sheet

Project Title Sprinkler Installations, Various Properties

Report Title STAGE C/D REPORT

Revision A

Status

Control Date 30th March 2007

Record of Issue

Issue	Status	Author	Date	Check	Date	Authorised	Date
		G Benn	19.3.07	S Wilson	19.3.07	S Harrington	19.3.07
A		G Benn	30.3.07	S Wilson	30.3.07	P Dixon	30.3.07

Distribution

Organisation	Contact	Copies
Cambridgeshire CC	Mr E Garner	1
Cambridgeshire CC	Mr R Drayton	1 (elec)

Contents

Executive Summary

1.01 In October 2006 Mouchel Parkman was commissioned by Cambridgeshire County Council to design and project manage the installation of sprinkler fire-protection systems at eighteen of its residential properties. This was driven by a commitment of the County Council and insurers to protect buildings and life.

1.02 There have been some delays affecting the production of this report, mainly to try to ensure that the report was comprehensive and robust. In seeking the detail to inform the report and the estimate, Mouchel Parkman engaged the services of Armstrong Priestley (a leading installer in the field) in order that the full requirements of the proposed installations were taken into account.

1.03 There are a number of factors, detailed within the report, that affect the ease of installation at each property. There are also many managerial aspects that will have a strong bearing on the duration of installations and the programme as a whole, mainly in regard to the levels of occupancy of the properties and the nature of facilities provided. The programme of works will therefore be subject to further detailed discussions.

1.04 The revised estimated cost of these works is £1,077,640 compared to a project budget of £735,600. A major reason for the disparity of the figures appears to be that the budget was informed by estimates obtained in February 2004. It is not known what was included within these estimates but comparison of figures is given within Section 9, 'Quantity Surveyor's Report' for information. However, if BCIS indices are applied to the budget at 2004 levels it would be 'lifted' to £871,686.

1.05 It is noted that there is uncertainty regarding the proposed works at Burwell House proceeding. Works to this site are estimated at £114,690. If these works were to be omitted from the scope the total estimated costs would be £962,950, reducing the increase over the advised budget sum to £227,350.

1.06 Key actions now required are:

- Discussion and development of suitable programme of works (CCC/MP)
- Confirmation of budgets (CCC)
- Clarification of scope of works if additional budget is not available (CCC/MP)

Introduction

2.01 In October 2006 Mouchel Parkman was commissioned by Cambridgeshire County Council to design and project manage the installation of sprinkler fire-protection systems at a number of residential properties.

2.02 A meeting was held between Roy Drayton (Project Sponsor), Peter Murphy (MP Principal Mechanical Engineer) and Gary Benn (MP Senior Building Surveyor) to ascertain the scope of the project and to establish which areas of the buildings were to be protected by the proposed sprinkler systems.

2.03 CCC arranged a seminar, presented by Armstrong Priestley Ltd (a leading sprinkler installation company) where the technical aspects of sprinkler installations were discussed. This seminar was also attended by representatives of regional water companies, Cambridgeshire Fire and Rescue Service, Mouchel Parkman and various delegates from the properties involved in this project.

2.04 AutoCAD drawings were supplied for some of the properties whilst paper plans were available for some others. Five of the properties have no plans available. It is intended that 'sketch' plans of these properties will be prepared to inform the installations. Should planning permission be required for these properties it may be that the preparation of more sophisticated plans and elevations will be necessary.

2.05 During the process of commissioning for the project, Mouchel Parkman advised that a Feasibility Report should be produced to ascertain constraints and to establish the scope of the project. The client declined this as such a report was considered unnecessary.

2.06 An implementation plan was prepared, setting out proposed dates for the project. This was renegotiated by the client as there is a desire to have the work completed during the financial year 2007 / 8. A revised implementation plan was then submitted and agreed.

2.07 During the course of the initial design stage it became apparent that specialist input was required in order to ensure that the report – and the project design as a whole – could be considered robust. Armstrong Priestley were chosen as that specialist provider due to their familiarity with the client's desires and the general ethos of the scheme. In procuring this input the process was delayed and Mouchel Parkman requested and extension of time for the submission of the report. It was agreed that the report would be submitted on the 19th March 2007.

2.08 After submission, the client required further detail and amendments were suggested and agreed upon. This report, 'Revision A', is the amended report and provides further break down of costs and clarity over the scope of works at each site.

Background

3.01 Cambridgeshire County Council owns a great number of buildings around the county, all of which will be at some risk in relation to fire.

3.02 Some of the properties are used as residential accommodation, whether as care facilities, children's homes or for educational purposes. A decision, informed by elected members of the Council and by the County's insurers, was taken that some of these properties should be protected by sprinkler systems as a safeguard both to life and to the properties.

3.03 Eighteen such properties were identified and included within this project.

3.04 The brief of the project is to analyse the issues arising with the proposal to install sprinklers, as well as to form the basis of a project to install the systems.

3.05 The design of the systems is to be in accordance with British Standards and Loss Prevention Council (LPC) requirements, although this will need to be discussed with the County's insurers prior to installation in order to ensure compliance with any particular specification requirements.

3.06 Building Regulation Approval
Building Regulation approval may be required; discussions will be held with Building Control to establish any further constraints and, if appropriate, a submission will be made as and when approval to proceed is given before Stage E.

3.07 Planning Approval
Planning approval may also be required where a supply tank is to be located within the grounds of individual properties. These tanks will need to have a pump to serve the sprinklers and will need to be enclosed in small buildings. The requirements for each property will need to be discussed with the Planning Authority to establish if any applications are necessary. Accordingly, submissions will be made, where necessary, during the development of Stage E of the project.

Proposals

4.01 The project is intended to protect both the lives of anyone within the properties concerned as well as the buildings themselves. Generally, sprinkler systems might not be extended to protect areas such as bathrooms and WCs. However, CCC and their insurers have indicated that the systems involved in this project should cover all living and sleeping areas, all cupboards greater than $2m^2$ in floor area, all bathrooms and toilets, as well as any loft space the properties may have.

4.02 Some of the properties are of a size that may allow a sprinkler system to be served by water mains alone. British Standards dictate that any property defined as 'Residential' must have a delivery system of 200L/min. Where this is the case (as will be seen, it is most of the properties), there is a need to provide a 6000L supply tank.

4.03 Such tanks will require to be housed in secure 'sheds'. Subject to planning constraints, it is intended that these are single skin brick built and flat roofed buildings, in the order of 3.5m long by 2m wide by 2.4m high. The bases will need to be of reinforced concrete to support the six tonnes weight of the water alone, with a modified raft foundation. The estimate within this report includes for such design but may be subject to variation, dependent upon the ground conditions at each site.

4.04 A pump will support each tanked supply. These will need to have an electrical supply as described in the Electrical Engineer's section of this report but, again, subject to the scrutiny and confirmation of the County Council's insurers.

4.05 Some of the installations not defined as 'Residential' but as 'Domestic' may be supplied directly by the water mains. This affects 5No properties. This is subject to a number of constraints and will have to be assessed on an individual basis and with close consultation with the appropriate water Authority. MP will investigate if an independent mains supply is required after the approval of Stage D – this potential cost is not factored into the estimate in this report.

4.06 The construction form of each property has a bearing upon the ease of installation of the systems, the time period required to install and the visibility and neatness of the completed installations. The constraints of each property are discussed individually within the Surveyor's report section but the issues may be, broadly, discussed as follows.

Where a property has timber / plasterboard ceilings, the sprinkler distribution pipes may be run above the ceiling and only the sprinkler heads would be visible upon completion. To some extent the same may be said where the ceiling is at the underside of the floor above.

However, where the ground floor of a property has a timber first floor and a plasterboard ceiling, the floor finish will need to be disturbed to allow the installation to be carried out. In many cases the upper floor has a carpet finish which has been stuck down. Where this is the case it is not certain (but is unlikely) that the carpet may be re-laid upon completion. In these instances new carpeting has been included for and relevant allowance made in the cost estimates.

Some of the properties have upper storeys that are constructed with concrete in some form (either beam and block or suspended RC slabs). Obviously these floors cannot have pipes installed within the 'floor zone' and, in most cases, they have little or no void space between the structural floor and the ceiling finish. In these cases it is necessary to run pipes on the surface – across ceilings and along walls – to serve sprinkler heads. It may be possible to encase these pipes within boxing (either site formed or bought from a supplier such as Pendock Profiles) which will, again, impact upon project costs. The estimate within this report only makes provision for the pipes to be decorated in with the background, although note should be made in relation to 4.07 below.

4.07 Many of the properties are the permanent or temporary home of vulnerable people. This may make the surface mounting of pipes undesirable – either due to the possibility of ligatures being fixed to them or due to the possibility of the pipes being wrenched off of the walls or ceilings. These properties may need the pipes to be encased in some way but, where the pipes run across a ceiling, this may well result in unsightly installations. It is likely that pipes fixed at the junctions of walls and ceilings can be disguised with boxing and made to 'blend' rather more easily with the décor.

4.08 At the properties where a tanked supply is required, if the 'shed' has to be separated from the building, the supply pipes will be buried in trenches until the point of entry to the building. In some instances the pipes will need to be fixed vertically up the outside face of the property wall in order to enter the building at eaves level; this is the case where the tanks may only be sited to a side of the building that does not have a suitable space (such as an office, cupboard or store) along its elevation to accommodate a service entry.

4.09 Within the Surveyor's report section, approximate durations for the installations are given for each property. There are many implications that need to be considered when it comes to developing a programme for this project. As mentioned earlier, some of these properties are home to individuals and the properties and users will endure disturbance which needs careful future planning in order to minimise. Also the circumstances are peculiar to each property and each property has individual issues that govern the ease (or otherwise) with which such disturbance may be dealt with. Consequently, it is felt that close consultation will be required with each group of end users (and their management organisations) to inform an overall programme. It is, therefore, anticipated that this report will be circulated to all interested parties so that they may establish any acceptable period(s) of the

year during which the works may be accommodated or to formulate plans for the properties (or parts of the properties) to be emptied so that the works may be carried out. This will be an exercise that MP will undertake with the property users and CCC jointly.

Surveyors Report

5.01 As mentioned previously, the properties vary in size and constructional form and so the ease, speed and design of installation will be different for each property.

5.02 Where properties have timber (upper) floors and are carpeted the majority appear to be stuck down. In a very few instances the carpets may not be glued, but inspection has not been able to establish the absolute case. Where a carpet will need to be lifted to install sprinkler heads in the room below we have, therefore, assumed that the carpet is stuck. Generally, where a carpet is glued down, if it is lifted for whatever reason it will become stretched and so will not be re-laid satisfactorily. Consequently, the costs reflect the precaution of having to replace carpets where they need to be lifted.

5.03 It has already been stated that, where supply pipes must be exposed, they will be decorated in (painted) to suit the background. Should boxing be required, it must be noted that there are distinct aesthetic differences between site fabricated enclosure and proprietary systems, along with associated cost differences. Should it be decided that boxing-in is required, advice shall be sought to determine the appropriate form.

5.04 Where a property is deemed to require a 6000L tanked supply, the proposed enclosure for the tank and its pump is a half-brick skin building with a flat, felt roof on a reinforced raft foundation. As far as practicable, the walls will be built with bricks to match with the property. (The planning authority, where planning consent is required, will have jurisdiction over this.)

5.05 With the advice of Armstrong Priestley, each property listed below has an estimate of the likely period required for installation. This does not take account of any restrictions to installation that each property may impose as further meetings with users will be required for any accurate assessment to be made. Many of the properties have high occupancy levels and may be able to vacate individual rooms, but some may not be able to do this. Piecemeal availability of working area, however, may not be sufficient to a contractor and so there are two potential solutions; either properties are decanted or contractors have very limited and restricted access. The first option will have financial implications to the County Council directly, whilst the second option will have an impact upon the estimate and ultimate cost and duration of these works.

5.06 12 London Rd, Harston

This is a large, bungalow style property that is used as children's accommodation and is deemed to be 'residential' as far as sprinkler design is concerned. There is sufficient space at the rear of the property to site a tank shed. The property has plasterboard ceilings that, in the main, allow sprinkler

heads to be installed from the loft space. The only room that may not be serviced in this manner is the lounge which has a vaulted ceiling. For this room, greater disturbance may be necessary but it is anticipated that this would be minimal. The estimated period for installation at this property is **4 weeks**. Separated Cost **£59,470**

5.07 204 Norwich Rd, Wisbech

This is a two storey property that is also used as children's accommodation. The building has reasonably sized grounds in which it is anticipated that a tank shed may be sited without too much issue. Whilst the upper floor is of timber construction the carpets do appear to be stuck down. The property appears to be fully occupied and the advised period for installation is **4 weeks**. Separated Cost **£66,010**

5.08 41-44 Russel Street, Cambridge

This property is a residential care home of two storey, concrete (upper) floor construction, along with the added complexity that some parts of the ground floor have private accommodation directly above. This will make pipe routing particularly complex, although not impossible. Subject to planning constraints, there is space to house a tank for the supply but pipes will need to be surface mounted on the ground floor due to the solid construction. The estimated period for installation at this property is **6 weeks**. Separated **Cost £97,520**

5.09 24 Darthill Rd, March

This property is, essentially, a small detached house. Armstrong Priestley have identified that it would be classed as 'Residential' but, provided the water main in the area carries sufficient pressure this may be subject to alteration.
The property has timber floors and the carpets appear to be stuck down. The ceilings are lath and plaster which, although not as easy to deal with as plasterboard, should not be too much of a hindrance to the installation. If a tank should be required there is sufficient space within the garden to house it and the supply would be brought in through the single storey extension at the rear of the house. It is anticipated that the installation might take **2 weeks** to complete. Separated Cost **£52,430**

5.10 Hawthorns Adolescent Unit

This is a large, two storey property that provides a home for a number of children as well as providing office accommodation. It has a pitched roof that will allow sprinkler pipe runs to be installed within the roof and enable sprinkler heads for the rooms on the first floor to be installed through the ceilings. The first floor itself, however, is of concrete construction but with a plasterboard soffit beneath. It is not possible to ascertain (without invasive investigation) what depth of void there may be between the plasterboard and the concrete but, for the purposes of this report it has been assumed that there will be insufficient space to house the sprinkler supply pipes and heads. The sprinklers that serve the ground floor, therefore, will need to have exposed pipe runs and, as far as possible, sprinkler heads that are wall mounted. Whilst efforts will be made to install pipes in unobtrusive areas and

feed sprinkler heads through walls there will, inevitably, be pipes across rooms to ensure adequate distribution of the system. This could leave the system vulnerable to vandalism. The design of pipe routes will attempt to minimise this risk but it may not be possible to eliminate the risk entirely. Indications are that the installation of sprinklers at this property will take approximately **7 weeks** to complete. There is sufficient space within the grounds to house a tank store and a plant room to the side of the property should afford a suitable entry point for the sprinkler supply. Separated Cost **£82,470**

5.11 33 Haviland Way

This property is adjacent to the Hawthorns and has exactly the same constraints and issues to be negotiated. Indications are that the installation will take **6 weeks** to complete. It may be possible that the system at the Hawthorns could be linked to this property – this will be the subject of discussion at detailed design stage, including with the County's insurers. Separated Cost **£64,728**

5.12 17 Upherds Lane

This is a 3 bedroom semi-detached property where a sprinkler installation would be classed as 'domestic' and might not, therefore, need a tanked supply (dependent upon the water main pressure). The installation for the first floor rooms can be routed within the roofspace, whilst the timber first floor will allow sprinkler heads and pipe runs to be installed within it. The carpets do not appear to be stuck down within this property so it should be possible to avoid the expense of replacing them. If a tanked supply should be required then there is sufficient space within the garden to accommodate the necessary store. We anticipate that the installation could be complete in **2 weeks**. Separated Cost **£24,790**

5.13 Jasmine House

This is a detached property that sleeps 6 people and is classed as Residential for sprinklers. Most of the upstairs rooms can be serviced from the loft space (although one has a vaulted ceiling that will have some surface mounted pipes). The first floor is timber, allowing pipes and heads to be sited within, but again the carpets are stuck down and will possibly need to be replaced once lifted. This property will take **4 weeks** for installation. Separated Cost **£64,340**

5.14 20 Alder Close

In essence, this property is a very large bungalow. There is space within the gardens to house a supply tank and it is anticipated that the supply would be taken up the face of the building, through the eaves and into the loft space, from where all of the rooms can be serviced by the sprinkler system. The ceilings are plasterboard and the property's features suggest that this should be a reasonably straightforward installation that would take **5 weeks** to complete. Separated Cost **£64,800**

5.15 78 Victoria Rd

No drawings were available for this property, although the staff had copies from an old project which were borrowed for information. The property is an extended, two storey Victorian house that is used as a children's home. Some of the supplies to the first floor will need to be surface mounted, but it is thought that these can be within the staircase area, with feeds through the walls to the adjacent rooms. This is to cover rooms that are with a flat roofed extension at the rear of the building. Other rooms on the first floor should be covered by the system being installed in the roof space. The carpets to the first floor are stuck down over the timber floor and some of the ceilings on the ground floor are very ornate and will require careful siting of sprinkler heads. The property will require a tanked supply but space within the grounds is quite restricted; the position of the tank will, therefore, require careful consideration in order that the facilities are not overly compromised. It is felt that the best place will be adjacent to the existing garden store, although the configuration of the tank and housing may be very much 'bespoke' to limit its impact upon facilities. This will bring the supply toward an extended part of the building where it may be taken up the external wall, into the eaves and, thereby, into the loft space of this single-storey extension and into the upper floor zone of the main building for further distribution.
It is anticipated that this installation will require **5 weeks** to complete. Separated Cost **£71,770**

5.16 6 St Lukes Close.

This property is similar in style to Alder Close, being a 'large bungalow'. The grounds can accommodate a tank store, possibly at the side of the building where it should be less obtrusive and the installation will require **5 weeks** for completion. Separated Cost **£58,390**

5.17 Fitzwilliam Road Hostel

This is a large, two storey property with a concrete intermediate floor, although areas of the construction have a suspended ceiling that will afford concealment to some of the distribution pipes and sprinkler heads. The suspended ceilings are within the corridor areas but the bedrooms and office areas do not have suspended ceilings, dictating that there will be a need for some surface mounting of pipes. These pipes may be vulnerable to abuse. The garden is not overly large but there is sufficient space to accommodate a tank, albeit with some loss of amenity. During our site visit MP detected a degree of resistance to the proposed installation at this property and some negotiation will be necessary in order to deliver a successful solution. The installation will need **5 weeks** to be completed. Separated Cost **£76,818**

5.18 Stibbington Centre

This property has an unusual form in that it is, essentially, comprised of mobile unit bays built together to form dormitory style bedrooms that are used for residential courses. As such, there is no roof zone to accommodate pipe runs and so all pipework will need to be surface mounted. The grounds do have some space to place a supply tank and it is anticipated that the installation would take **3 weeks** to complete. Separated Cost **£85,600**

5.19 Burwell House

This is the largest property under consideration for this project, being a large detached Victorian house, sleeping 60 people and used as a residential centre. The grounds are extensive, providing a number of possible tank locations, but internally the property could be described as 'rambling' with a number of constraints upon the proposed installation – ornate finishes, limited loft spaces, stuck down carpets and a high occupancy rate being the main issues to be addressed. In order to be sympathetic to the property the designed pipe routes will be intricate and complex, with a period of **8 weeks** being required for the installation. There has been some discussion that the sprinkler installation may not proceed at this property and confirmation to proceed or otherwise is awaited. Separated Cost **£114,690**

5.20 6a Holme Close

This is a detached bungalow that is used as a staff house by the County Council. It would be classed as 'domestic' in sprinkler terms and so will probably be supplied by the water mains. The loft space will accommodate the pipe distribution system and it is expected **2 weeks** would be sufficient to complete the installation. Separated Cost **£26,580**

5.21 29 Bushel Lane

This is a small (2 bedroom) property. It is anticipated that the supply would be from the water mains, thereby removing the need for a tank. Should the water pressure be insufficient, the gardens are large enough to accommodate a tank. The property has a timber upper floor and a roof space, with plasterboard ceilings. The carpets do not appear to be stuck down, and all of these factors combine to suggest that the installation could be completed fairly simply within a **2 week** period. Separated Cost **£ 21,500**

5.22 Caretaker's Bungalow, Whittlesford.

This is another CCC staff house and is single storey. The proposed sprinkler system can be accommodated above the ceilings and fed from the water main, provided that pressure is sufficient. A period of **2 weeks** will be sufficient to complete the installation. Separated Cost **£26,580**

5.23 203 The Rowans

This property has been omitted from the project at the request of the client.

5.24 In all properties, where possible, the sprinkler heads will be concealed within the construction if ceiling mounted but as has been discussed this will not be possible in some locations. In some instances there will be a need for wall-mounted heads that cannot be concealed in the same way as some ceiling heads.

5.25 A great deal of planning must be undertaken to successfully programme the works, and detailed liaison will have to take place between a number of CCC departments and management functions. As reported, there will be a large degree of inconvenience and disturbance associated with the execution of these works. As a result, Mouchel Parkman cannot determine the programme

for the full project but we can give some indication of what may be afforded within one financial year (based upon the project budget).

5.26 As can be seen, the estimate for this project exceeds the allocated budget by £342,040; see also paragraph 1.05 in "Executive Summary".

5.27 Whilst Mouchel Parkman have visited the properties and, therefore, have some knowledge of the levels of occupancy, that can only be considered as a snapshot and it is essential that Departmental information is taken into consideration as well. There will also be information such as potential disposals that will be pertinent to the final decision of whether to install in a given year – if at all. Similarly, it is not the remit of this report to evaluate whether one property should be prioritised over another in terms of vulnerability of residents and we look forward to discussing programme options with the Project Sponsor. However, on the following page we have printed a suggested approach that could form the basis of further discussion.

5.28 The order of installation presented is mainly influenced by the intention to protect the maximum number of people as quickly as can be afforded. After that, the estimated age of the property is factored in as that might have a bearing on the protection of the building provided by its construction.

PROPERTY	**NUMBER OF RESIDENTS** (and type)	**COST OF INSTALLATION**
Burwell Hse	60 (temporary residents)	£114,690
Stibbington Centre	40 (temporary residents)	£85,600
41-44 Russel St	9 (respite care, vulnerable adults)	£97,520
Hawthorns	8 (children's home)	£82,470
33 Haviland Way	7 (family shelter) [adjacent to Hawthorns]	£64,728
78 Victoria Rd	7 (children's home)	£71,770
204 Norwich Rd	7 (children's home)	£66,010
29 Bushel Lane	4? (Staff house)	£21,500
6a Holmes Close	4? (Staff house)	£26,580

17 Upherds Lane	3 (believed to be adults)	£24,790
Jasmine House	6 (vulnerable adults)	£64,340
	Budget cut off point	£719,998*
Caretakers Bungalow, Whittlesford	4? (Staff house)	£26,580
1 Fitzwilliam Rd	7 (children's home)	£76,818
St Lukes Close	7 (vulnerable adults)	£58,390
20 Alder Close	5 (vulnerable adults)	£64,800
12 London Rd	6 (children's home)	£59,470
24 Darthill Rd	3 (was empty)	£52,430
	Second tranche	£338,488*

* figures have slight disparity accounted for elsewhere

Electrical Engineer's Report

6.01 Electrical Scope

For every property with a tanked supply the following will apply:

A dedicated electrical supply will be provided to the sprinkler pump control panel from the main electrical distribution board. All control and communications cabling associated with the sprinkler system will be provided by the electrical contractor.
The supply to the sprinkler panel will be labelled to identify its use.
The sprinkler pump panel will be connected to an approved alarm receiving centre to indicate that the following alarms: -

1. Loss of power.
2. Pump Running.
3. Pump start failure.
4. Pressure loss.

The electrical installation shall comply with the following:
BS 5306: Part 2: 1990 Ordinary Hazard Class 1 with reference to LPC Technical Bulletin 36
BS EN 12845: 2003
The Contractor shall allow for the connection of a dedicated telephone line to the sprinkler control panel, this shall be connected to a remote monitoring station via a monitored telephone line.

Upon activation of the sprinkler system a signal shall be transmitted to the remote monitoring station and to the fire alarm panel.

The supply to the sprinkler pump control panel shall be engraved 'SPRINKLER PUMP MOTOR SUPPLY – NOT TO BE SWITCHED OFF IN THE EVENT OF FIRE'. The lettering shall be 10mm high and shall be white on a red background. A padlock shall be installed to the isolator.

The cable supplying the sprinkler panel shall be to BS:7846. It shall be installed to cable tray, surface clipped using metallic clips or buried below ground in a trench.

Mechanical Engineer's Report

7.01 The sprinkler installations would be designed and installed by a licensed sprinkler contractor in accordance with BS 9251 for life protection. BS 9251 designates two categories of occupancy for the properties in which sprinklers are to be installed i.e. 'Domestic' and 'Residential', domestic being accommodation for one family and residential being accommodation for more than on family.

7.02 The domestic category of occupancy would be provided with a sprinkler system either:-

Connected directly to the incoming cold water main and relying on the mains pressure and flow rate available from it to supply the sprinklers within the occupied building. The incoming water supply would be taken into an external enclosure containing a sprinkler test valve. A drainage connection would be required for waste water when testing.

Or

Provided with 2,500 litres of water storage back-up for 30 minutes continuous operation of the activated sprinklers, the water being supplied via a sprinkler pump. The cold water storage tank, sprinkler valve set, sprinkler pump, controls, etc., would be located in an enclosure constructed external to the building. Weekly testing of sprinkler pumps and controls would be carried-out by the building manager. A drainage connection would be required for waste water when testing.

The choice of domestic system connected directly to the external main would be determined following the survey and establishment of the adequacy of the water flow rate and pressure at the particular premises.

7.03 The residential category of occupancy would be provided with 6,000 litres of storage for 30 minutes continued operation of the activated sprinklers, the water being supplied via a sprinkler pump. The cold water storage tank, sprinkler valve set, sprinkler pump, controls, etc., would be located in an enclosure constructed external to the building. Weekly testing of sprinkler pumps and controls would be carried-out by the building manager. A drainage connection would be required for waste water when testing.

7.04 All rooms including bathrooms, shower rooms, WC's, walk-in cupboards, stores, etc would be provided with sprinklers. Roof voids would also be provided with sprinklers.

7.05 To avoid unnecessary damage to the fabric of the building in residential accommodation, due to the activation of sprinkler heads by the occupants in

areas designated high risk, it is proposed to install dry pipework. The pipes would be filled with water only in the event of a fire. A satisfactory method of operating the system would need to be determined and require the approval of the insurance company.

7.06 All pipework would be enclosed and would be copper, steel or plastic. Sprinkler pipework in roof voids and the pump room would be steel. Sprinklers other than where providing void protection would be installed complete with ceiling plates.

7.07 Where connected directly to the incoming main, all other outlets served by the incoming main would be automatically isolated when the sprinkler system operated so that all water would be directed via the sprinkler system.

7.08 The following table provides information relating to the various installations that has been used to inform the project estimate

	Address	**HHS m**	**No Heads**
1	204 Norwich Rd, Wisbech	6	63
2	41 Russel St, Cambridge	9	150
3	24 Darthill Rd, March	9	30
4	Hawthorns Children's Home, Haviland Way, Cambridge	9	117
5	33 Haviland Way, Cambridge	9	96
6	17 Upherds Lane, Ely	7	35
7	12 London Rd, Harston	6	60
8	Jasmine Hse, Ely	9	40
9	20 Alder Close, March	5	64
10	78 Victoria Rd, Wisbech	7	90
11	6 St Lukes Close, Huntingdon	6	66
12	1 Fitzwilliam Rd, Cambridge	9	77
13	Stibbington Centre, Stibbington	5	43
14	Burwell House, Burwell	12	117
15	29 Bushel Lane, Soham	7	35
16	Staff house 1	7	35
17	Staff house 2	7	35

Risk Register

PROJECT RISK EVALUATION

where IMPACT OF RISK x LIKELIHOOD OF RISK OCCURING = DEGREE OF RISK

IMPACT				
Rating	**Project Aims/Objectives (PAO)**	**Programme/Budget (P/B)**	**Safety/Health/Environmental (SHE)**	**Commercial**
5	-Threat to project survival	-Budget overrun which impacts on client's programme of works -Client/Business stakeholder interests severely damaged	-Multiple fatality -Major environmental incident involving threat to public health or safety -Criminal liability	> £1m
4	-Significant threat to project aims and objectives	-Significant and non-recoverable impacts in budget spend -Programme overrun resulting in penalties and additional audits	-Worker/Public fatality -Environmental incident leading to breach -Criminal liability and compensation costs	£100k - £1m
3	-Client dissatisfaction and damage to stakeholder relationships	-Minor and recoverable budgetary fluctuations -Minor and recoverable programme overrun that impacts	-Major injury to worker or third party -Operation likely to cause damage, complaint or nuisance	£10k - £100k
2	-Client and stakeholder relationships strained -Negative feedback received	-Minor budgetary fluctuations within allowance given by client -Minor delays not impacting on critical path	-Minor injury to worker or third party -Environmental impact requiring management response to recover	£1k - £10k
1	-Negligible impact	-Negligible impact	-Negligible impact	<£1,000

X

LIKELIHOOD	
5	Almost Certain (>70%)
4	Probable (50-70%)
3	Possible (30-50%)
2	Unlikely (10-30%)
1	Negligible (<10%)

=

DEGREE OF RISK					
Impact (max rating) **5**	5	10	15	20	25
4	4	8	12	16	20
3	3	6	9	12	15
2	2	4	6	8	10
1	1	2	3	4	5
	1	**2**	**3**	**4**	**5**
	Likelihood (L/H)				

Degree of Risk	Risk Level
1 to 4	Trivial
5 to 8 9 to 12	Tolerable Substantial
13 to 25	Unacceptable

CONTRACT RISK ASSESSMENT

Client: **Roy Drayton**
Contract: **Sprinkler Systems**
Provider:

No.	Risk	Consequence	Assessment before Mitigation						Risk Mitigation Measure	Assessment after Mitigation								Comments (Include details of costings included in bid to cover risk mitigation measure)
			Impact				Likelihood	Degree of Risk (max)		Impact				Likelihood	Degree of Risk (max)	Remaining average cost risk	Remaining average progme risk	
			PAO	P/B	SHE	Com				PAO	P/B	SHE	Com					
1	Confirmation of Project Brief - Suitability to project objectives	Scheme fails to meet project needs	2	3			2	6	Detailed Brief in standard format signed off prior to commencement of Stage C	3				1	3			
2	Decision making authorities	Decisions delayed causing delay to programme, make suitable decanting arrangements	3	4			3	12	Have minimum number of decision making authorities. CCC to make necessary arrangements to decant residents - crucial to success of project.	3	3			3	9			
3	Decision making authorities - external bodies	Decisions delayed causing delay to programme	3	3			3	9	Have minimum number of decision making authorities	3	3			3	9			
4	Specialist requirements - DDA, Acoustic, specialist furniture	Scheme will not meet project needs & legislation	3				2	6	Identify specialist areas & consult specialist at early design stage	3				1	3			
5	Specialist contractors/consultants - meeting programme requirements & co-ordination of information	Delay to programme	3	3			2	6	co-ordinate specialist contractors at early design stage	3	3			1	3			
6	Building Regulations - changes to the regulations during the life of the project	Abortive work/delay to programme/increase in costs	3				2	6	early discussion with building control.	3				2	6			
7	Tender price inflation over long period	High tender price with fixed price contract	3				2	6	Fluctuation price contract	3				2	6			
														Total		**0 £**	**0 Weeks**	**Carried to Stage Report**

Quantity Surveyors Report

9.01 These prices each include main contractor's preliminary costs (15%), contingencies and design development (10%) and the BCIS update noted below.
The total value of the works described in the attached Stage C/D report, based upon the works being executed to individual properties, is **£1,077,640**
The following items are excluded from this estimate:

VAT
Consultants Fees
Moving loose furniture
Asbestos removal
Diversion of services
Legal costs
Building Control Fees
Costs of decanting occupiers

The above cost has been broken down to each property within the main body of this report. The costs vary from property to property and are not directly related to the number of heads required. The estimate reflects the varying property types and their individual complexities ie Burwell House is an extensive Victorian property where BWIC, access and making good in keeping with the building will be costly

The items on the BCIS cost sheet are as follows:

5H Electrical Installations; This includes cabling, Monitoring Station Connections and upgrading the existing distribution board where required. **£11,080**

5M Specialist Installations; This includes the estimate of the sprinkler installation as estimated by Armstrong Priestly Ltd of **£483,000** plus **£188,000** for the cost of tanks and pumps where needed.

5N BWIC; An allowance of **£ 27,500** for builders work in connection with the sprinkler installation

The amount of **£18,900** set against alterations is for the lifting and refitting /replacement of carpets along with the painting of pipe work where boxing in is not currently included.

External services costs of **£34,400** is for trenching for buried pipes and cables

Minor Building Works is for the construction of pump/tank housings at a cost of **£ 78,364**

The balance between the sum of these figures and the overall total is comprised of allowances for Preliminaries and Contingencies.

These estimates are based on the known area requirements and the Building Cost Information Service Tender Price Indices updated to **Q2 2007.** These sums should be regarded as approximations and should be reassessed when the full extent of the brief is developed and the engineering consultants have independently established their precise requirements.

9.02 The following table gives the BCIS split costs for the various elements against each property that combine to inform the overall estimate. It also gives the CCC supplied estimate for the installation to the properties that, as far as we can ascertain, served to inform the original budget.

9.03 Please note that, due to anomalies in 'rounding' within the CCC outline cost sheets (when the installation costs are spread over individual properties) there is a discrepancy of c£6,000 in the above sums when compared to the project estimate. Whilst this is a large sum, it equates to 0.6% of the overall cost and, for the purposes of the report, we trust is acceptable.

Better Utilisation of Property Assets Programme
Outdoor Education Centres
Business Case

ADDRESS	Sprinkler installation estimate from Armstrong Priestley	Electrical installation estimate	BWIC estimate	Alterations (carpets, etc) estimate	External Services estimate	Tank housing + pump + tank estimate	NET TOTAL	TOTAL PER PROPERTY WITH PRELIMS & CONT	Original estimate
12 LONDON RD, HARSTON	£25,000	£700			£2,700	£18,028	£46,428	£59,470	£10,000
204 NORWICH RD, WISBECH	£25,000	£700		£5,100	£2,700	£18,028	£51,528	£66,010	£14,000
41-44 RUSSEL ST, CAMBRIDGE	£50,000	£700	£4,200		£3,200	£18,028	£76,128	£97,520	£19,000
24 DARTHILL RD, MARCH	£18,000	£700		£1,500	£2,700	£18,028	£40,928	£52,430	£6,000
HAWTHORNS ADOLESCENT UNIT, CAMBRIDGE	£46,000	£350				£18,028	£64,378	£82,470	£23,000
33 HAVILAND WAY, CAMBRIDGE	£41,000	£700	£3,400		£1,600	£18,028	£64,728	£64,728	£19,000
17 UPHERDS LANE	£10,000	£350	£1,000			£8,000	£19,350	£24,790	£6,000
JASMINE HOUSE	£23,000	£700	£2,000	£2,700	£3,800	£18,028	£50,228	£64,340	£19,000
20 ALDER CLOSE, MARCH	£30,000	£700			£1,850	£18,028	£50,578	£64,800	£10,000
78 VICTORIA RD, WISBECH	£30,000	£700	£1,000	£3,600	£2,700	£18,028	£56,028	£71,770	£14,000
6 ST LUKES CLOSE	£25,000	£700			£1,850	£18,028	£45,578	£58,390	£9,000
1 FITZWILLIAM RD, CAMBRIDGE	£33,000	£700	£5,800		£3,200	£18,028	£60,728	£76,818	£23,000
STIBBINGTON CENTRE	£45,000	£700	£400		£2,700	£18,028	£66,828	£85,600	£30,000
BURWELL HOUSE	£54,000	£700	£5,400	£6,000	£5,400	£18,028	£89,528	£114,690	£132,000
6A HOLME CLOSE, HISTON	£10,000	£750	£2,000			£8,000	£20,750	£26,580	£6,000
29 BUSHEL LANE, SOHAM	£8,000	£480	£300			£8,000	£16,780	£21,500	£6,000
CARETAKERS BUNGALOW, WHITTLESFORD	£10,000	£750	£2,000			£8,000	£20,750	£26,580	£6,000
203 THE ROWANS	£0	0	0	0	0	0	0		£6,000
Subtotal	£483,000	£11,080	£27,500	£18,900	£34,400	£266,364	£841,244	SEE NOTE	
ORIGINAL ESTIMATE FOR 'WATER STORAGE' @ £10K PER PROPERTY									£180,000
									£538,000
ORIGINAL ESTIMATE FEES AT 13.5%									£72,630
SUBTOTAL									£610,630
ORIGINAL ESTIMATE 'GRAND TOTAL' UPLIFTED "TO OCT 04" TO INFORM BUDGET (13% added)									**£690,012**
MP PRELIMS @ 15%							£126,186.60		
MP CONTINGENCY @ 10%							£96,743.06		
PROTECT ESTIMATE							**£1,064,173.66**		**BCIS Uplift to 2Q07 £1,077,640**

Unclear as to what was done with this figure to produce budget guide of £735,600

KEY
Cells in yellow are MP estimates
Cells in blue are MP subtotals
Cells in red are MP Totals
Cells in green are original budget info

NOTE
Column will not add up correctly as CCC outline cost sheet, when used for individual properties, rounds up and down, causing discrepancy

Programme

10.01 As has been mentioned previously it is not possible within this report to identify a clear programme for the project. Issues such as the expected life of the buildings, the possible future disposal, levels and types of occupancy and, not least, the available budget must all be considered in order that the priority of installation may be determined. Even then there will need to be consideration given to the most opportune period of the year for the installation to be carried out - on a property by property basis.

10.02 We propose further detailed meetings between MP and the Project Sponsor to distil a programme that can then be addressed in terms of resources for each site. This may then lead to ‘batching’ of the properties for different contracts in order to achieve the desired end date for the project.

10.03 Once available budgets have been determined and the majority of the above issues resolved, Mouchel Parkman will actively work with the Project Sponsor to develop an achievable programme for the project.