

**HAMPSHIRE COUNTY COUNCIL****Report**

<b>Committee/Panel:</b>	Buildings, Land and Procurement Panel
<b>Date:</b>	25 June 2012
<b>Title:</b>	Fire Safety in County Council Buildings and the Approach to Sprinkler Provision
<b>Reference:</b>	4910
<b>Report From:</b>	Director of Culture, Communities and Business Services

**Contact name:** Steve Clow

**Tel:** 01962 847858

**Email:** steve.clow@hants.gov.uk

## **1. Executive Summary**

- 1.1. This report is intended to update the Buildings, Land and Procurement Panel on the current procedures and progress in relation to fire safety and the provision of sprinklers within County Council buildings. It also recommends and re-affirms the continuing commitment to a risk based approach to the management of fire safety and the application of sprinklers on construction projects in the context of the Corporate Policies and Strategies.
- 1.2. The report states the details within the recently issued Hampshire Fire and Rescue Authority "Sprinkler position statement" and confirms its alignment with the County Council's policy.
- 1.3. This report also details that over £3.4 million has been spent on sprinkler installations to improve asset and life safety in 27 buildings. In addition, around £12.5 million has been invested over the last eight years in fire safety improvements across the whole estate on a prioritised basis.
- 1.4. The report recommends that further technical review of new primary schools is undertaken to ascertain whether an asset protection sprinkler system may be fitted in a cost effective way and deliverable within funding available to the Council.

## **2. Contextual information**

### **2.1. Partnership for Safety**

The County Council's successful partnership with the Hampshire Fire and Rescue Service (HFRS) (dating from October 2005), provides a structured and integrated approach to achieve the desired outcomes of effective fire risk reduction in Hampshire County Council (HCC) premises and service delivery.

The common objectives are set out below:

- To reduce the risk of fires in HCC premises
- To increase the awareness of key issues in fire safety management within HCC premises including arson prevention and the reduction of unwanted fire alarms.
- To concentrate resources on reducing risk from fire in high life risk premises.
- To mitigate the effects of fires that do occur by ensuring appropriate responses by local management and the provision of appropriate improvements to structural fire precaution measures and through a risk based methodology, the installation of automatic sprinkler installations into new and refurbished buildings, where resources permit.

As part of the Partnership, a senior Hampshire Fire and Rescue Service Fire Prevention Officer is co-located within Property Services, working with the in house Fire Management Team and liaising with colleagues on construction projects. The arrangement has been in place since 2006 and supports the delivery of a collaborative, risk assessed approach to fire safety across HCC's built estate.

The HFRS Partnership Fire Safety Officer, Vinnie Stapleton, was asked to state his views on the success of the relationship and he has confirmed that:

“The Partnership to date has delivered its expectation by reducing the risks of fires starting in HCC premises and by mitigating the effects of fire, should one occur. This in turn has greatly reduced the risk to life, property and the environment.”

This is very much in line with the aim of HFRS that “Together, we make Hampshire Safer.”

## 2.2. Joint Audit Programme

HCC and HFRS operate a joint audit programme to highlight and respond to fire safety within the HCC built estate. The approach was established in 2006 and continues a rolling programme to create a pro-active approach to eliminating the requirement for potential enforcement by HFRS. Following completion of building assessments in relation to fire safety on all HCC buildings, priority lists have been established. These lists are used for the basis of the joint audit process where the HCC Fire Safety Team undertakes pre-audit reviews on buildings initially selected by HFRS and carry out a detailed premises and management survey to create an action plan of proposed fire safety improvement actions. An update on the extent of completed joint audits is attached in Appendix 1.

## 2.3. Programme of Improvement Works

A programme of improvement works are on going, informed by the outcomes from the joint audits and action plans produced. Improvements have been made to fire safety within the built estate, such as multi storey secondary school buildings and elderly persons' homes.

Over the period of the last eight years 2005 -2014, the programme will have invested nearly £12.5 million (refer to appendix 2) in improvement works from various funding sources, including Policy and Resources Landlord capital,

New Deals for Schools grant, Children's and Adult Services capital programmes.

As with such a vast existing building stock (totalling around 1.4 million m<sup>2</sup>), there is still an on-going programme of schools which require joint fire audits to be completed. This is all part of a long-term programme to audit the entire estate and is the principal reason why the corporate risk performance remains at 'amber' for 'Fire and Arson'.

#### 2.4. Risk Assessed Approach to Fire Safety / Policy and HFRS position statement / Provision of Sprinklers

Life safety has always been the first priority for action, investments and improvement above asset protection. A balanced approach is taken to ensuring that financial resources are targeted at the most appropriate areas to reduce risk.

As well as the approach to existing fire improvements noted above, for new building projects including extensions and refurbishments, a risk based methodology is adopted for the assessment of fire precaution works. This responds to the Corporate Strategic Risk Register, for the risk of 'Fire Including Arson', and County Council Corporate Policy for the provision of sprinklers.

The sprinkler policy dating from February 2004, states **"The County Council continue with its policy of installing sprinkler systems where appropriate, based on a risk management methodology. The decision to be made on consideration of the risk assessment."**

The risk assessment is determined using a standard methodology, developed jointly with Hampshire Fire and Rescue Service for this specific purpose, and is supported by a Practice Note to ensure a consistent approach is retained.

In relation to sprinklers, Hampshire Fire and Rescue Authority (HFRA) issued a "position statement" dated September 2012, to clarify the fire authorities current stance on the provision of sprinklers in various types of building. A full copy can be viewed in appendix 3

Specifically for schools, this states *"HFRA recommends that new schools should have sprinklers fitted. In exceptional circumstances, where the risk is determined to be low, alternative fire precautions may be considered."*

This is prefaced within the statement by "Hampshire Fire and Rescue Authority play a key leadership role in promoting a better understanding of the benefits of sprinkler systems. Accordingly, the Authority works to encourage building owners and developers to install these systems where there is a case for doing so, for example, where there are risks to people, or where there is a clear business case in terms of cost and benefit."

This is consistent with our fire precautions risk assessed approach and the HCC sprinkler policy.

The completed fire strategy risk assessment will indicate the suggested approach to sprinkler provision, based on the resultant risk conclusion and a number of trigger points relating to: Building use (vulnerable users); sleeping risk; vertical evacuation; heritage loss; continuity of business and rebuild cost.

The completed form and fire strategy is then submitted to the HCC 'Fire Safety Review Group', for comments and approval, including the final recommendation for provision of sprinklers.

The existing risk assessment document is being reviewed with HFRS, to update the reported arson information, and areas such as consideration of rebuild cost, where a clearer distinction between existing and new is required. (total loss / part loss). From the review an additional template is to be produced specifically for new and major extension projects, looking closely at deliberate fires in the immediate locality, over a given period and to assess the risk from these external factors. The standards beyond compliance, increased detection, reduced potential fabric loss etc will also be included, and considered in the risk analysis.

#### 2.5. Installed Sprinkler Systems

Since the introduction of the sprinkler policy in 2004, a total of 27 systems have been installed across the built estate. These are all installed in addition to any structural fire precautions and statutory requirements and primarily to provide asset protection. In the exceptional cases of buildings with sleeping risk accommodation (e.g. nursing homes), systems installed provide life enhancements, to support the management procedures. A list of all properties with sprinklers is included within Appendix 4.

#### 2.6. Sprinklers: Responding to the On-going Local and National Debate

There continues to be an ongoing debate both locally and nationally about the appropriate deployment of sprinkler systems in the built estate. Fires in the County Council estate are very rare and, with a few exceptions, the risk profile of the majority of our buildings is low. This does not, however, mean that County Council Members and officers are not engaged in on-going dialogue with the Fire Authority, Rescue Service, other public bodies and interested groups about a general increase in sprinkler installations to mitigate against the loss of property and improve life safety. It is important for the County Council to actively participate in this to assist in the policy making and ensure the County Council's actions and policy are explained and recognised. This is being led by the Director of Culture, Communities and Business Services (CCBS).

A continued priority is to protect the most vulnerable users of our buildings, against the risk of fire. For example, a programme of new children's homes is being developed to replace existing older buildings, with bespoke new properties all of which will include the provision of a residential sprinkler system.

Specifically in relation to schools, HCC have continued to provide sprinklers in new secondary school facilities, to protect the significant investment together with the impact on the local communities in the event of a loss through fire. New special schools are also provided with sprinklers to protect the investment and maintain the continuity of the specialist facilities, which cannot be easily re-provided in the event of a fire.

To date new primary schools have not been sprinklered, in line with the agreed HCC policy for sprinklers, based on risk assessment as the risk is low. However with the projected growth in pupil numbers and the potential for a

greater number of new primary schools over the next few years, coupled with the rising costs of school construction due to inflation it is timely to undertake a review of the Council's approach. It is proposed to carry out a technical review of the potential for cost effective sprinkler systems for asset protection in new primary schools. This will need to be undertaken in consultation with the Director of Children's Services as downward pressure on funding for school places is expected now and in future years.

It should be noted that the provision of sprinklers in these facilities would always be in addition to any statutory provision, with the risk assessment having to conclude as a low risk to property and life.

### **3. Technical Advancements and Future Direction and Sprinkler System Types**

- 3.1. Previously, sprinkler systems included within HCC projects have been designed to meet the full requirements of the British Standard for residential and non-residential buildings as applicable. It is recognised that this can impose onerous requirements, particularly when systems are being added to provide basic asset protection only. With the knowledge and experience gained, the Director of CCBS is working closely with HFRS officers and the technical specialist industry to consider proposals for alternative, cost effective, 'property protection' sprinkler systems. This will explore efficiencies in the design, installation and revenue maintenance costs. It will still be an appropriate and pragmatic solution to respond to our risk assessed approach.

A current secondary school under construction is piloting a hybrid sprinkler system for asset protection, which has been developed closely with HFRS and representatives from the sprinkler industry, with the brief to deliver a pragmatic solution at best value.

- 3.2. It is recognised that a full British Standard system will still be applicable on certain building types where life enhancements are required, such as residential homes and other sleeping accommodation. The fire assessment for sprinklers and subsequent technical solution will always be carried out on an individual project-by-project basis.

### **4. Conclusion**

- 4.1. The joint approach with Hampshire Fire and Rescue Service and the risk assessed approach adopted by Hampshire County Council, provides both a measured and robust approach to fire safety, responding to the Corporate Strategic Risk Register for fire, sprinkler policy and current statutory requirements.

### **5. Recommendations**

**That the Panel advises the Executive Member for Policy and Resources that:**

- 5.1. The successful improvements to Fire Safety through Partnership working with the HFRS, risk assessment, targeted capital expenditure and a comprehensive Fire Safety Audit process be noted.

- 5.2. The County Council's risk based approach to sprinkler installations in new and refurbished buildings projects be re-affirmed and endorsed.
- 5.3. The alignment between the new HFRA sprinkler provision statement and the County Council's risk based approach to sprinkler installations is noted.
- 5.4. Members note that over £3.4 million has been spent on sprinkler installations to improve asset and life safety in 27 higher risk buildings.
- 5.5. The work to continue to develop a hybrid, property protection sprinkler system be endorsed.
- 5.6. A technical review of new Primary Schools is undertaken to ascertain whether an asset protection sprinkler system may be cost effective and deliverable within funding allocations.

**CORPORATE OR LEGAL INFORMATION:****Links to the Corporate Strategy**

<b>Hampshire safer and more secure for all:</b>	Yes
Corporate Improvement plan link number (if appropriate):	
<b>Maximising well-being:</b>	Yes
Corporate Improvement plan link number (if appropriate):	
<b>Enhancing our quality of place:</b>	Yes
Corporate Improvement plan link number (if appropriate):	

**Other Significant Links**

<b>Links to previous Member decisions:</b>		
<u>Title</u> Sprinkler Policy Review of Fire Safety in County Council Buildings and the Approach to Sprinkler Provision	<u>Reference</u> 4044	<u>Date</u> February 2004 03.07.2012
<b>Direct links to specific legislation or Government Directives</b>		
<u>Title</u> Building Regulations		<u>Date</u> 2000

**Section 100 D - Local Government Act 1972 - background documents**

The following documents discuss facts or matters on which this report, or an important part of it, is based and have been relied upon to a material extent in the preparation of this report. (NB: the list excludes published works and any documents which disclose exempt or confidential information as defined in the Act.)

<u>Document</u>	<u>Location</u>
None	

## **IMPACT ASSESSMENTS:**

### **1. Equalities Impact Assessment:**

1.1. Not applicable to this report.

### **2. Impact on Crime and Disorder:**

2.1. Fitting of sprinkler systems and the impact of the Arson Reduction Strategy has a direct positive impact on the risk of fire and the reduced cost of reinstatement.

### **3. Climate Change:**

a) How does what is being proposed impact on our carbon footprint / energy consumption?

Not applicable

b) How does what is being proposed consider the need to adapt to climate change, and be resilient to its longer term impacts?

Not applicable

## REVIEW OF FIRE SAFETY IN HAMPSHIRE BUILDINGS

**Property Fire Risk Assessment Review of Progress**

The County Council have a Risk Profile of the Property Estate and use this to ensure resources are best used to manage fire safety effectively. This means that the premises are matched to the Risk Profile.

In summary, the areas of the estate are divided into different Customer Groups and the details of the progress in each area are given below.

**1. Non-Education**

There are approximately 655 buildings in the Non-Education sector ranging from Older Persons Residential Homes to Domestic Residential Properties.

All Residential, Day Service, Public Buildings including Libraries and Museums which equates to 290 (44%) of the Non-Education building list, have had a Joint Fire Safety Audit. The remaining premises are in the lower risk categories and surveys will be undertaken in due course.

We are currently undertaking in 2013/14 re-visits to all Adult Residential and Nursing Homes as part of HFRS Joint Safety Audit programme (Phase 10)

**2. Secondary Schools**

There are approximately 771 buildings in the Secondary School estate ranging from 4 storey system built structures to numerous small single storey buildings. All Secondary Schools have had a Management Review on at least one occasion. 120 of the buildings (16%) have had a Joint Fire Safety Audit and subsequent significant investment in improving the property fire precautions. The most recent Joint Fire Safety Audits (Phase 8) focussed on the next phase SCOLA schools.

**3. Primary/Infant and Junior Schools**

There are approximately 441 Primary, Infant and Junior Schools. Of these ,38 (9%) have had a Fire Safety Audit and the most recent Joint Fire Safety Audits (Phase 8) focussed on the single staircase SCOLA school buildings, the identified highest risk.

The programme for 2013/14 (Phase 11) includes structural fire precautions surveys to fire safety audit standards of another 20 school buildings in this sector.

**4. Special Schools/Nurseries/Education and Study Centres**

There are approximately 63 buildings in the Special Schools, Nurseries, Early Years and Study Centres estate. Of these, 53 (84%) have had a Joint Fire Safety Audit as these are all in the higher risk category of buildings. Work is on-going to address the remainder, following an internal assessment of use and risk.

## REVIEW OF FIRE SAFETY IN HAMPSHIRE BUILDINGS

**5. Overall Assessment**

25% of the whole estate has been subject to a Joint Fire Safety Audit. These have all been targeted to those properties and buildings from the higher risk categories.

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**Fire Improvements – Budget Expenditure from 2005/06 to 2012/13**

<b>2005/06</b>	£700,000 Total (£430,000 P&R Capital and £270,000 NDS) Adult Services EPH's, R&H Residential Centres, Residential School Buildings, Four Storey SCOLA Blocks, Fire Alarm Systems in Secondary Schools etc.
<b>2006/07</b>	£1,100,000 (P&R Capital) Adult Services EPH's.
<b>2007/08</b>	£2,745,000 (£1,500,000 P&R Capital, £1,000,000 NDS and £245,000 Adult Services) Adult Services EPH and Day Centres, Accessible Secondary Schools etc.
<b>2008/09</b>	£2,500,000 (£900,000 P&R Capital and £400,00 Children's Services and £1,200,000 Adult Services) Adult Services EPH upgrading and multi-storey SCOLA buildings in Secondary Schools.
<b>2009/10</b>	£1,800,000 (£250,000 NDS and £100,000 Children's Services and £1,450,000 P&R) Fire Alarms in Primary Schools, multi-storey SCOLA and single staircase SCOLA buildings, principally in Secondary Schools.
<b>2010/11</b>	£700,000 (P&R Capital and NDS). Spending on Special Schools and remaining 3 Storey School Buildings.
<b>2011/12</b>	£700,000 (£550,000 P&R Capital and £150,000 Children's Services) Commencing single staircase SCOLA buildings principally in Primary Schools.
<b>2012/13</b>	£560,000 (£410,000 P&R Capital and £150,000 Children's Services) Completing single staircase SCOLA buildings in Primary Schools and commencing single staircase traditional school buildings.
<b>2013/14</b>	£1,812,000 (£168,000 P&R, £459,000 Schools delegated capital, £1,035,000 Capital Maintenance Grant and £150,000 Children's Services) Primarily single staircase buildings in Primary Schools.

<b>Key:</b>	NDS	New Deals for Schools	P&R	Policy & Resources
	R&H	Recreation and Heritage	EPH	Elderly Persons Homes



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## **Hampshire Fire and Rescue Authority (HFRA) Position Statement for Sprinklers – September 2012**

### **Sprinklers**

Hampshire Fire and Rescue Authority play a key leadership role in promoting a better understanding of the benefits of sprinkler systems. Accordingly, the Authority works to encourage building owners and developers to install these systems where there is a case for doing so, for example, where there are risks to people, or where there is a clear business case in terms of cost and benefit.

Sprinklers can add clear value and are proven to save lives and property; they improve firefighter safety; minimise environmental damage and reduce the economic cost of fire. Hampshire Fire and Rescue Authority proactively endorses the installation of sprinkler systems.

### **Refurbished Buildings (Retro Fit)**

Where significant refurbishment or upgrade is being planned in buildings which are occupied by vulnerable people, we advocate the installation or retro fitting of sprinklers. In older buildings, built to earlier standards, the level of risk may no longer be acceptable and the retro fitting of sprinklers may be appropriate to overcome the risks.

*HFRA will promote and campaign for the use of fire sprinklers in high risk premises to enhance and improve public and firefighter safety.*

### **Sprinklers in Schools**

The prevention of fires in educational establishments remains a priority for us because of their standing as a public and community asset and their importance for the educational well-being of children. Moreover the loss of course-work, the implications in terms of wider economic and social costs, property protection and environmental damage means fires in schools have far reaching consequences. Schools also tend to be a target for arsonists.

*HFRA recommends that new schools should have sprinklers fitted. In exceptional circumstances, where the risk is determined to be low, alternative fire precautions may be considered.*

### **Sprinklers in Residential Care Premises**

Fire deaths and injury data indicates that those most at risk are children, older people, people with mental health problems, and particularly those with mobility

## REVIEW OF FIRE SAFETY IN HAMPSHIRE BUILDINGS

problems who are unable to leave buildings easily. These buildings are an asset to the community due to their importance in looking after those most vulnerable and remain a priority for us to protect.

*HFRA strongly recommends that all new residential care homes should be fully fitted with sprinklers for the protection of residents from fire.*

#### Sprinklers in High Rise Buildings

Fires in this type of building can present additional risks and considerations for the occupants and firefighters. The design and construction of these buildings delay intervention by the fire service meaning fires can escalate.

*HFRA will campaign for sprinklers to be a mandatory requirement in all buildings above 30 metres in height..*

#### Sprinklers in Commercial Buildings

The risks to fire-fighters in large commercial buildings are substantial due to the size and potential for rapid collapse of the building. This is particularly relevant when considering modern methods of construction. Sprinklers would assist to reduce risks associated with firefighting operations. The presence of more large commercial buildings with sprinklers will aid growth in the economy as it will reduce business losses from fire as fewer businesses will financially fail or be forced to relocate. It has been recorded that the carbon footprint of a building increases by a factor of 3 when destroyed by fire. The environmental impact of fires in commercial premises is great. Using sprinklers to control fires will reduce this impact on the environment.

*HFRA will promote the installation of sprinklers in all large commercial buildings on the basis of improved fire-fighter safety.*

#### Sprinklers in Timber Framed Constructed Buildings

Unlike traditionally built property, a timber framed building is at the greatest risk of fire during the construction phase due to the amount of exposed and unprotected combustible elements. Fires in timber framed buildings have resulted in very rapid fire development leading to early structural collapse, and the severity of radiant heat generated has caused fire spread to neighbouring buildings up to 30 metres away.

*HFRA recommend that substantial timber framed buildings are installed with sprinklers and installation should be completed early to protect the building during the highest risk construction phase.*

#### Sprinklers in Domestic Premises

Fire safety measures such as smoke detectors may sometimes not be sufficient to protect the most vulnerable when there is a fire within their home, due to their

## REVIEW OF FIRE SAFETY IN HAMPSHIRE BUILDINGS

inability to evacuate themselves. This vulnerability can be due to a number of factors including lifestyle characteristics and physical mobility. The ageing population and changes in social care policy mean that more vulnerable people are remaining in their own homes.

*HFRA recommends that sprinklers should be installed in people's homes, such as Social Housing, where those people are more likely to be vulnerable from fire.*

## REVIEW OF FIRE SAFETY IN HAMPSHIRE BUILDINGS

**Schedule of current projects where sprinklers have been Installed, are in construction or are planned as at May 2013**

<b>Programme</b>	<b>Project</b>	<b>Approx Costs (£'000) of sprinkler installations, incl fees</b>
Nursing Care New Build & Residential Home Refurbishments	Bickerley Green, Ringwood	105
	Emsworth House	117
	Fleming House, Eastleigh	114
	Hawthorne Court (Coldeast, Park Gate, Fareham)	151
	Marfield, Alton	117
	Oakridge House, Basingstoke	128
	Tatchbury Mount Hospital, Totton	146
	Ticehurst, Aldershot	128
	Westholme, Winchester	99
	Willow Court, Andover (Andover Hospital)	146
	Malmesbury Lawn, Havant	58
	West Street, Havant	tbc
Education Projects	John Hunt of Everest Secondary School, Basingstoke	466
	Minstead Study Centre, New Forest	35
	East Hampshire Special School	151
	Lakeside Special School	58
	Costello Technology College, Fire Replacement Block	140
	Woodlands	117
	Prospect School, Havant	128
	Hollywater	170
	Forest Park	231
	Park Community School	221
Recreation and Heritage Projects	Winchester Discovery Centre	193
	Calshot Activities Centre New Dormitory Buildings	29

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<b>Programme</b>	<b>Project</b>	<b>Approx Costs (£'000) of sprinkler installations, incl fees</b>
	Runways End Residential Building	128
	Basingstoke Discovery Centre	41
	Winchester Park and Ride	6
Buildings with Sprinklers Fitted Prior To 2004 Policy	EII Court Basement Car Park	N/A
	Mottisfont Court Offices	N/A
	Winchester Law Courts Car Park	N/A
<b>Total Cost of Sprinkler Installations in HCC Buildings</b>		<b>3,423</b>

## REVIEW OF FIRE SAFETY IN HAMPSHIRE BUILDINGS

**The Reinstatement Expenditure Costs Across All Hampshire Estate**

The following figures show the fire reinstatement expenditure claims.

2002 / 2003	£353,355.82
2003 / 2004	£556,344.44
2004 / 2005	£547,609.30
2005 / 2006	£1,980,992.00
2006 / 2007	£3,482,702.00
2007 / 2008	£1,168,886.21
2008 / 2009	£324,192.74
2009 / 2010	£351,971.22
2010 / 2011	£20,717.74
2011 / 2012	£53,209.82
2012 / 2013	£278,043.58

The notable increase in expenditure between 2003 and 2008 included the major fire damage to Romsey Mountbatten, Costello and the Woodlands Education Centre. These were projects constructed prior to the sprinkler policy being implemented. The replacement buildings at Costello and Woodlands are now fitted with sprinklers in line with the risk assessed methodology and policy.

The reinstatement works, following the recent fire at the Clere School, will be shown against the 2013 / 2014 budget, and is likely to be in the region of £800k