

Finding and Procuring Innovative Solutions

Evidence-based practical approaches

Her Majesty's Prison Service (HMPS) Market Sounding exercise

Case Study 3a	Market Sounding exercise	Renewing and improving on existing contracts	View to procuring within a defined timescale
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A3.3 'Innovation in the sustainable supply and waste management of mattresses and pillows'

This project is described by HMPS as a pre-procurement exercise to inform the specification for possible future procurement calls. It is not a call for tenders or a pre-qualification exercise. The aim is also to stimulate thinking around engagement with suppliers with innovative ideas that go beyond the current separated processes of supply and disposal, but it is linked to a known procurement need.

A3.4 Background

HMPS purchases around 60,000 highly flame retardant, polyurethane foam mattresses and pillows each year and dispose of circa 40,000 per year. The mattresses are designed to last four years, but in the conditions of the prison environment last on average only 17 months. Arrangements for disposal are handled separately by each prison area under local disposal contracts. The vast majority are sent to landfill with the remainder classed as clinical or hazardous waste and disposed of through high-level incineration. This is costly and environmentally unsustainable and out of step with HMPS and wider government waste policy and targets.

The contract for supply of mattresses is nearing its end and HMPS took this as an opportunity to overhaul its arrangements for supply, use and disposal of mattresses and pillows. Its aspiration is a zero waste solution.

A3.5 What they want to achieve

HMPS would like to achieve the best innovative solution which provides value for money for the product's/service's entire lifespan and has a beneficial environmental solution to waste. Hopefully this will also result in a lower turnover of mattresses and pillows, possibly as an outcome of longer life and without any extra administrative burden or costs.

HMPS are seeking to increase efficiency and improve disposal targets to satisfy their waste strategy as set out in the *Framework for Sustainability on the Government Estate* – the 'unmet need':

- Requirement for zero waste prison mattress and pillow that meets or exceeds current operational needs in terms of health and safety and whole life cost efficiencies
- By 2012 all pillows and mattresses not classified as hazardous waste to be recycled or reused instead of going to landfill
- A reduction to 2% the number of those disposed of as hazardous or clinical waste

This market sounding exercise should determine solutions to reduce waste and secure cost effectiveness whilst satisfying demanding operational requirements. A desirable outcome from a new solution would be a four-year life span for the mattresses which was cost neutral and easy to implement. Some areas where innovation, ideas and improvements could be possible but not mandatory are:

- New and alternative materials for the mattresses and covers
- Fire proofing which is safe and facilitates sustainable disposal and recycling
- Sustainable waste disposal solutions
- The scope of the criteria in relevant eco-labels
- Systems that support cleaning and refurbishments for reuse after soiling
- Anti-bacterial treatments
- Whole life cycle management and innovative commercial arrangements which takes into account geographical considerations
- Leasing
- Incorporation of social benefits
- Limiting the creation of any extra work for prison officers

However, all potential solutions are being called for and considered to encourage innovation.

This is in addition to basic operational requirements of the product:

- Minimum four year lifetime
- High flame retardancy
- Prevention of concealment of goods and weapons
- Vandalism resilience
- Health and safety features which also limit the risk of self harm

A3.6 Request for information to stimulate ideas

A Prior Indicative Notice (PIN), shown below in this Appendix was issued to the Official Journal of the European Union (OJEU) on 31 October 2006 as '[A call for innovative solutions and information](#)' for a market sounding exercise regarding:

- A zero waste mattress system for HM Prison Services
- Innovation in the delivery of environmental sustainability throughout the life cycle of prison mattresses'

A fuller prospectus, giving information on the requirement, was also made available on the HMPS web site and also linked from the PIN.

Submissions were invited from all sectors and for any part of the supply and disposal chain and this extended to SMEs and third sector organisations with an emphasis on the use of innovative and pre-commercial approaches and technologies. A number of intermediary organisations were approached and agreed to make their members or networks aware of the call for solutions (the summary document is set out below in this Appendix). The notice stated that the information gathered in response to the request would inform the specification for a call for tender in the medium term with an assurance that all information would be treated confidentially. Submissions were requested by 15 December 2006, and for interested suppliers to register online.

In January 2007 HMPS reported the PIN produced a good response both in quality and quantity from a wide range of responders, which included multinationals, SMEs and social enterprises. There were also a number of partial solutions, improvements to existing products, and indeed a number of spurious ideas too. It was found that more assessment was needed on origination of the ideas as to how truly novel they were. The call via HMPS intermediaries also proved worthwhile.

The details of those who assisted in the exercise would be published in a Contact Directory on the HMPS web site; this would be optional but most of the respondents were happy to have their details published. A representative sample of these companies were invited to attend an information exchange in a [Concept Viability](#) event on 23rd April 2007 to develop ideas further before an Invitation to tender is issued after June.

Once HMPS have completed the Market Consultation exercise, the information gathered will direct the way requirements are to be satisfied and will inform decisions in the contracting approach, ensuring that requirements are realistic in terms of market capabilities. The current contract has been renewed for a further

year to June 2008, which will allow approximately 18 months to develop a more innovative solution.

HMPS have allowed sufficient time for a thorough market consultation exercise and to undertake development of the best potential idea(s). In the meantime, they have the option to use any interim solutions that the exercise will produce to carry the business forward to that stage.

A3.7 Future procurement opportunities for responders

It is the intention of HMPS to undertake a formal procurement exercise that will commence with the issue of an advertisement in the OJEU at a later date. All suppliers who responded to the market consultation exercise will be informed when the advertisement is released.

A3.8 Materials Knowledge Transfer Network (KTN) Event – November 2006

One of the organisations targeted by the call for innovative solutions was the Materials KTN. The KTN is an overarching network of networks in Materials, set up to bring together the views of business, designers, research and technology organisations, trade associations, the financial market, academia and others in the value network across the materials community. The KTN provides a range of activities and initiatives to enable the exchange of knowledge and the stimulation of business innovation.

As well as publicising the call on its website and through electronic dissemination, the KTN ran a workshop to discuss the need and possible innovative solutions to enable a collective response to HMPS.

The main purpose of the event was to demonstrate some innovative thinking to HMPS so that the KTN was seen as a credible organisation for HMPS to engage with and to establish what further information was required from HMPS and why it was needed.

The event brought together about 20 participants from a variety of backgrounds ranging from product design to textiles to foam manufacture. They discussed possible improvements to the mattresses/pillows currently used as well as to the process of supply, use and disposal. The main information that the Group wanted was to know where the main costs and blockages in the current process are and the nature of the problems eg why do so many mattresses/pillows get discarded so early?

HMPS were not involved in this event as they could not give an undue advantage to the Group and did not have the resources to attend other such events to create a level playing field. However, the Group had researched the existing product and

processes and had a prison mattress to examine which helped them visualise the challenges. The KTN collated their thoughts and needs for information and submitted them to HMPS.

A3.9 Documents related to this study are:

[Prospectus for the Market Sounding Exercise](#) (available at HMPS web site)

Also see below:

[Draft PIN and Notice of Publication](#)

[Response form](#)

[Note to intermediaries](#)

Case Study 3a**Notice of PIN publication –
HM Prison Service, (October 2006)**

HMPS has published a PIN in the Official Journal of the European Union (OJEU) as part of a pre-procurement market sounding activity relating to its requirement for a zero waste mattress system.

A PIN is considered best practice for large public sector projects such as this its purpose is to:

- Forewarn the market that a procurement may begin in the future.
- Alert the market to high-level potential requirements, prior to any potential procurement process.
- Facilitate international participation in the market consultation exercise and help to ensure that this pre-procurement process is open and transparent

The PIN is an indication of potential future procurement activity and is subject to change. This notice makes no commitment to procure anything. The PIN is not part of any pre-qualification or selection process.

A3.11 PIN

UK-Croydon: environmental improvement services

2006/S 210-224476

PRIOR INFORMATION NOTICE**Supplies****SECTION I: CONTRACTING AUTHORITY**

- I.1) **NAME, ADDRESSES AND CONTACT POINT(S):**
 HM Prison Service, AMP House, Dingwall Road, Contact: Corporate Procurement Unit, Attn: See e-mail address, UK-Croydon CR0 2LX. Tel. See e-mail address. E-mail: procurement.cpu@hmprisons.gsi.gov.uk.
Internet address(es):
 General address of the contracting authority:
<http://procurement.hmprisonservice.gov.uk>. See section titled 'About the Unit' then 'Procurement Initiatives' for Prospectus and Response Form.
Further information can be obtained at: As in above-mentioned contact point(s).
- I.2) **TYPE OF THE CONTRACTING AUTHORITY AND MAIN ACTIVITY OR ACTIVITIES:**
 Body governed by public law.

General public services.

SECTION II.B: OBJECT OF THE CONTRACT (SUPPLIES OR SERVICES)

- II.1) **TITLE ATTRIBUTED TO THE CONTRACT BY THE CONTRACTING AUTHORITY:**
 Zero Waste Mattress System: Market Sounding Exercise regarding a Zero Waste Mattress system: Innovation in the delivery of environmental sustainability throughout the life cycle of prison mattresses. This market sounding exercise is likely to be of interest to both supplies and service providers and is being advertised under supplies only to avoid confusion.
- II.2) **TYPE OF CONTRACT AND PLACE OF DELIVERY OR OF PERFORMANCE:**
 Supplies.
 Main place of performance or of delivery: Supply to Public Sector Prison Locations in England and Wales - information on locations supplied on HM Prison Service web site.
 NUTS code: UK.
- II.3) **SHORT DESCRIPTION OF NATURE AND QUANTITY OR VALUE OF SUPPLIES OR SERVICES:**
 Her Majesty's Prison Service serves the public by keeping in custody those committed by the courts. Our duty is to look after them with humanity and help them lead law-abiding and useful lives in custody and after release. HMPS currently buy in the order of 60 000 highly flame retardant, polyurethane foam mattresses and pillows of the same material per year and, due to their limited life span in this environment, currently dispose of around 40 000 mattresses and pillows per year. At the end of their life the majority of mattresses are sent to landfill with the remainder being classed as clinical or hazardous waste and disposed of accordingly. The cost of mattress supply and disposal is estimated to be in excess of 3 million GBP annually. The life span of mattresses is, on average, less half that of the life expectancy of the mattress as supplied (at around 17 months as opposed to 4 years), but in some situations mattresses last only days or weeks due to soiling and misuse. This situation is costly and unsustainable and as the current supply contract is approaching the end of its life we are taking the opportunity to look at this problem holistically and rethink our approach to both supply and disposal. The requirement we have identified is for the technical and commercial means to deliver a zero waste mattress system that meets the demanding operational requirements of the prison environment. This call has been issued to communicate this unmet need, stimulate innovative solutions and pull together the necessary technical and market information to develop a procurement strategy that can deliver a more sustainable and cost effective solution in the short, medium and long term. We also wish to understand what the market can deliver and its appetite for providing innovative technical and commercial approaches. In order to enable the take up of innovative solutions HMPS is willing to consider a 'forward commitment contract'. Interested parties are invited to download a Prospectus and a Response Form at <http://procurement.hmprisonservice.gov.uk> (see About the Unit/Procurement Initiatives). Only submissions made using this form will be accepted. HMPS regrets that they cannot respond to individual requests for further information.

Further information relating to this notice may be available on the myTenders.org web site at http://www.myTenders.org/Search/Search_Switch.aspx?ID=45491.

- II.4) **COMMON PROCUREMENT VOCABULARY (CPV):**
90315200, 24100000, 24000000, 24140000, 24135000, 24130000, 74844000, 74843000, 74840000, 72241000, 90122220, 90122240, 74231430, 90310000, 90300000, 74231300, 75251110, 25212700, 36100000, 36000000, 36120000, 36140000, 36133100, 24800000, 74232300, 74141520, 36133112, 17216120, 90315300, 29241400, 90122210, 90122200, 17400000, 90121000, 90122000.
- II.5) **SCHEDULED DATE FOR START OF AWARD PROCEDURES:**
1.8.2007.
- II.6) **CONTRACT COVERED BY THE GOVERNMENT PROCUREMENT AGREEMENT (GPA):**
Yes.
- II.7) **ADDITIONAL INFORMATION:**
This PIN is being published as part of the pre-procurement market sounding activity to investigate options and ideas for the sustainable supply and disposal of mattresses and pillows for use in a prison environment.
The purpose of the PIN is to:
1. Forewarn the market that a procurement exercise may begin in the future.
2. Alert the market to high-level potential requirements, prior to any potential procurement process.
3. Facilitate international participation in the market consultation exercise and help to ensure that this pre-procurement process is open and transparent.
The PIN is an indication of potential future procurement activity and is subject to change. This notice makes no commitment to procure anything.
The PIN is not part of any pre-qualification or selection process.

SECTION III: LEGAL, ECONOMIC, FINANCIAL AND TECHNICAL INFORMATION

- III.1) **CONDITIONS RELATING TO THE CONTRACT**
- III.1.1) **Main financing conditions and payment arrangements and/or reference to the relevant provisions regulating them:**
- III.2) **CONDITIONS FOR PARTICIPATION**
- III.2.1) **Reserved contracts:**

SECTION IV: ADMINISTRATIVE INFORMATION

- IV.1) **Reference number attributed to the file by the contracting authority:**

SECTION VI: COMPLEMENTARY INFORMATION

- VI.1) **CONTRACT RELATED TO A PROJECT AND/OR PROGRAMME FINANCED BY COMMUNITY FUNDS:**
- VI.2) **ADDITIONAL INFORMATION:** (MT Ref:45491).

VI.3) **INFORMATION ON GENERAL REGULATORY FRAMEWORK:**

VI.4) **DATE OF DISPATCH OF THIS NOTICE:**
31.10.2006.

Case Study 3a**HMPS Response form****A3.12HMPS Response form**

Thank you for your interest in this market sounding exercise

Completing the form

We are interested in information and innovation from all sectors that could:

- contribute to achieving improvements in one or more aspects of the requirement
- contribute to a new total solution
- provide a total solution
- involve incremental improvements or a step change in the short, medium and long term.

We are interested in your views on the feasibility of the requirement, the capability and capacity of the market, and the wider market potential.

We recommend that you complete the form after reading the Prospectus which sets out our requirements and context for the call.

Please try to complete the form as fully as you can and include as much information as possible. You can add any supporting material or additional information in section 7.

Questions and clarifications

Please note any questions you may have in section 2 to help us prepare our follow up to this market sounding exercise.

If there are any questions or points of clarification that would help you to complete the form more fully, or require the Form or Prospectus in an alternate format, you can send an email to us at: procurement.cpu@hmps.gsi.gov.uk and answers to frequently asked questions (FAQs) will be posted on the HMPS website.

Please submit your completed forms, (quoting Market Sounding Response as the subject) to: procurement.cpu@hmps.gsi.gov.uk by 17.00 hrs on the 15th of December 2006.

There follows a list of questions from the original form – spaces for comments have been omitted for conciseness.

Idea(s) to achieve a more sustainable prison mattress system

The response form was specifically designed to allow submitters to describe their idea or innovation in more detail, and to identify the main benefits. It was not intended as a means of establishing the submitter's ability to supply the innovation, but some indication of this was helpful.

Main areas covered were:

- Area of interest / expertise.
- Your suggestion, idea, innovation or information.
- How and to what extent could this contribute to achieving the unmet need and operational requirements set out in the Prospectus?
- Details of environmental benefits and contribution.
- Details of operational benefits and contribution.
- Financial benefits and contribution.
- Other benefits and contributions.
- Is this solution currently commercially available, in whole or in part?
- If not, how far is this from the market?
- Are there other developments that could contribute to meeting or building on HMPS requirements in the longer term?
- What other markets or potential markets might exist?
- What would be needed to successfully commercialise this idea? (Development of supply chain, product development, pre-commercial trials etc.).
- What barriers or problems (practical, commercial, technical etc) might there be to implementing this solution and how might they be addressed? What are the cost implications of this solution for the company and HMPS?
- How useful would a **'forward commitment' contract** be in bringing this to market? What difference would it make to you?

Submitters were also asked if they would like their business names and product information entered into a publicly available register. The reason behind this was to allow businesses and innovators to decide if there were potential business partners interested in collaboration, although any discussion in this area was left to the businesses to carry out.

Submitters were also asked they would be interested in participating in a supplier workshop, to be called subsequently.

HMPS also supplied links to guidance on IPR, and for submitters to track progress of the call for solutions and subsequent procurement.

Case Study 3a**HMPS Intermediaries document****A3.13 Innovative procurement - opportunity for new solutions**

HM Prison Service has published notification in the EU Official Journal of a market consultation exercise relating to an 'unmet need' for a **zero waste mattress system** and is seeking innovative solutions and information to inform its procurement strategy.

Future procurement opportunity

HMPS currently buy in the order of 60,000 highly flame retardant, polyurethane foam mattresses and pillows per year and dispose of around 40,000. The combined cost of supply and disposal is estimated to be in excess of £3 million per year. In short, the current solution is costly and environmentally unsustainable.

Supply arrangements for mattress and pillows are being reviewed with a view to re-tendering in 2007/8.

Finding a sustainable solution

HMPS aspires to a **zero waste prison mattress** and pillow that meets or exceeds current operational requirements in terms of health and safety.

By 2012, HMPS wants all its mattresses and pillows not classified as hazardous waste to be recycled or reused instead of going to landfill; and to reduce to 2 % pa the number of mattresses disposed of as hazardous or clinical waste.

Innovative solutions are needed

Innovative ideas and information to support HMPS in moving towards this goal are requested from a wide range of market sectors and on **any aspect**

of the mattress and pillow supply, consumption and disposal life cycle.

Why we are issuing this call

The aim of the market sounding exercise is to allow potential suppliers to put forward innovative solutions for the reduction of waste arising from the mattress life cycle and secure cost efficiencies, while delivering demanding operational requirements. In order to deliver the best possible solutions in the short, medium and longer term we wish to:

- **present our needs** to potential suppliers and collaborators;
- explore both innovative **technical and commercial solutions**;
- **gain information** that will inform our specification and help us to future-proof our procurement strategy.

Why change the current specification?

Although the current specification (for a solid foam mattresses covered in calico designed to rigorous safety and fire retardant requirements) is considered a success, the mattress has a short life span (due to soiling and misuse), and disposal is unsustainable (landfill or clinical waste).

In moving towards a new solution, demanding operational requirements related to the nature of the prison environment will need to be met. These include:

- High flame retardancy
- Designed to prevent concealment of goods / weapons
- Must not facilitate self harm / suicide
- Be resilient to vandalism, mis-use and soiling
- Designed to last a minimum of 4 years
- Present no health or safety risks to prisoners
- Not add to the workload of Prison Officers

Potential for innovation

Some examples of the areas where innovation and information are sought include:

- New and alternative materials for the mattress and coverings
- Whole life cycle management arrangements
- Innovative commercial arrangements,
- Incorporation of social benefits
- Fire proofing that is safe and facilitates sustainable disposal / recycling
- Sustainable waste disposal / recycling or reuse solutions
- Alternate mattress design

How to make a submission

You can download a **Prospectus**, giving further information, terms of agreement etc. and a **Response Form** at:
<http://procurement.hmprisonservice.gov.uk>;

In moving towards its goals HMPS would plan for incremental progress, which may involve:

- Managing disposal of current mattresses
- Extension of the mattress life span
- Improving the current product and system
- Transition to a new business model
- Introducing new products

Forward commitment for innovation

In planning its procurement strategy, HMPS would consider facilitating the take up of **innovative and pre-commercial technologies** and approaches through a forward commitment to purchase products and services that are near market and not yet in commercial production or commercially available, subject to agreed performance targets being met. A forward commitment procurement is defined as:

A commitment to purchase, at a point in the future, a product or service that does not yet exist commercially, against a specification that current products do not meet, at a sufficient scale to enable the investment needed to tool up and manufacture products that meet the cost and performance targets in a specification.

click through - About the Unit / Procurement Initiatives / Mattress Marketing Sounding Prospectus and Mattress Marketing Sounding Response Form.

Submissions are requested by the **15th December 2006**.

Contributions from SMEs and third sector organisations are welcomed and **innovative solutions are encouraged**.

What happens next?

A **Directory** listing those who have responded (optional) will be published shortly after the closing date.

The submissions will be reviewed and options assessed. Further market **consultation** may take place in 2007 leading to a call for competition in 2007 / 2008.

If you have any problems accessing the prospectus and response form, or if you require this information in an alternative format, you can contact procurement.cpu@hmps.gsi.gov.uk quoting Market Sounding Enquiry in the subject bar of the email.

London Fire and Emergency Planning Authority – Disposal of kitchen waste from fire stations

Case Study 3b	Market Sounding exercise	New requirement to satisfy policy	Potential for roll out across other departments/sectors
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A3.14 Background of the Procurement

London Fire and Emergency Planning Authority (LFEPA) forms part of a family of organisations under the 'umbrella' of the [Greater London Authority](#) (GLA). The Authority is the largest fire and rescue service in the United Kingdom and has responsibility for the services provided by the London Fire Brigade and some emergency planning functions. It is a corporate body subject to fire service and (some) local government legislation.

The Authority employs nearly 7,400 staff, some 6,000 of which are operational fire fighters. The Brigade operates 24 hours a day every day. The area covered for fire fighting purposes is 620 square miles (1,587 square kilometres) with virtually every known type of fire risk, from high risk, densely populated inner city areas to lower risk suburban locations.

A3.15 Waste management improvements

LFEPA operates 111 fire stations over London, each one housing staff operating on a 24-hour basis and producing domestic waste, much of which can be dealt with by the LFEPA recycling scheme. However, after recycling, residual waste is currently disposed of into landfill, a situation which LFEPA is keen to avoid in order to reduce damage to the environment, as part of its ISO 14001 accreditation.

LFEPA has a target to reduce waste to landfill by at least 25% over the next two years. As a result, LFEPA is seeking a waste solution that will reduce the environmental impact of the municipal waste arising from its fire stations by eliminating waste to landfill by 2010.

A3.16 Procurement options and procedures

Having established the unmet need for the means to reduce or remove waste from fire stations, LFEPA began to consider options for procurement. Technologies for reducing waste volume (for example, pyrolysis) exist in the marketplace, although not necessarily in the format which could be supplied

immediately to meet the stated need. There was therefore a perception that any solution identified would need some form of development to be supplied.

The fact that potential solutions exist meant that LFEPA felt more confident to consider a direct procurement approach, such as Competitive Dialogue. The procurement team decided to publish a PIN to test market response.

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The Service Desk will also channel queries to the appropriate second-line support. We look forward to hearing from you.

You can contact the Service Desk 8am - 6pm Monday to Friday

T: 0845 000 4999

E: ServiceDesk@ogc.gsi.gov.uk

W: www.ogc.gov.uk

Press enquiries

T: 020 7271 1318

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