

## Zero Waste Solution for NHS Trusts

Market sounding regarding the supply of an innovative Zero Waste Solution for The Rotherham NHS Foundation Trust

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## Market Sounding Prospectus

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February 2010

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This is not a call for tenders or a pre-qualification exercise.  
It is a market sounding exercise to provide advance information of requirements and open a dialogue with the supply chain.  
The results will be used to inform future procurement specifications and strategies.

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## Executive Summary

Rotherham NHS Foundation Trust

### Zero Waste Solution for NHS Trusts

Market sounding regarding the supply of an innovative zero waste solution for The  
Rotherham NHS Foundation Trust

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Rotherham NHS Foundation Trust has identified a requirement for an innovative Zero Waste Solution that;

- is able to meet its waste management needs now and into the future,
- eliminates waste to landfill,
- makes a significant contribution to reducing carbon and other greenhouse gas emissions,
- recovers value from waste,
- is cost effective

The solution must be capable of operating effectively and reliably in the demanding operational environment of an NHS Trust. The Rotherham NHS Foundation Trust is interested in exploring innovative technical solutions and innovative commercial and financial arrangements with potential suppliers in order to spread the costs of capital investment and facilitate take-up.

The solution is required if at all possible by March 2011 with the aim of being fully operational by March 2013.

Waste created by the NHS continues to increase both by tonnage and by disposal cost. In 2007/08 waste management cost the NHS £71.2 million. One in every 100 tonnes of domestic waste generated in the UK comes from the NHS, with the vast majority going to landfill. Consequently, it is widely recognised that NHS waste management practices are unsustainable, and investment is needed in sound and sustainable waste management solutions that reduce cost, recover value from waste and reduce carbon emissions. The Rotherham NHS Foundation Trust processes 1100 tonnes of both hazardous and non-hazardous waste annually – *for more details see Annex 1*. It is clear that current practises will not deliver what is required and new methodology within this area is urgently required.

This market sounding prospectus provides a framework to enable the supply chain to inform and shape the procurement strategy, and to design and develop the specification for a new approach to waste management for The Rotherham NHS Foundation Trust, and other NHS Trusts. The Trust and its partners recognise that the products and services to deliver the requirement set out within this market sounding may still be in development and / or not commercially available at present. For this reason we have adopted the *Forward Commitment Procurement (FCP)* approach, as recommended in the UK Government's Sustainable Procurement Action Plan and Low Carbon Industrial Strategy, to accelerate the market entry of innovative and sustainable technologies.

The Trust is prepared to consider the take up of innovative and pre-production technologies and approaches through forward commitment and to adopt products and services that are being developed or not yet in production, subject to agreed performance targets being met and following a public procurement process.

We would like to understand what *could* be achieved in this timeframe given favourable market conditions, what these conditions entail, and any barriers the supply chain may anticipate in delivery of an optimal solution. Based on this information, the Trust will develop a procurement strategy and specification that will support innovation and delivery of such a solution.

In line with the FCP approach, the Trust, BIS, and the Department of Health would facilitate routes to the wider NHS and public sector market through the UK Government's Innovation for Sustainability Programme.

This Market Sounding Prospectus has been prepared to provide the supply chain with the background information and context to this call, additional information on the requirement, how to respond to the consultation, and details of further market opportunities.

### Indicative timetable

Market sounding closes	11 <sup>th</sup> April 2010
Market consultation workshop	17 <sup>th</sup> & 18 <sup>th</sup> May 2010
Procurement strategy	June 2010
Procurement process begins	July 2010
<b>Solution required by</b>	<b>March 2011 and aiming to be fully operational by March 2013.</b>

## 1. Introduction to Market Sounding and Consultation

The Trust is hopeful that, by using this innovative approach, we will source a solution which meets all current and future needs, employs overall the 'best practicable environmental option', and reduces harm to the environment or to human health.

### 1.1. Why market sounding and consultation?

Market sounding is a way of "assessing the reaction of the market to a proposed requirement and procurement approach, in order to bring supplier perspectives to public sector procurements at an early stage" (ref: Early Market Engagement: principles and examples of best practice, Office of Government Commerce Guide 2006). This approach offers potential benefits to both the market place and the procuring organisation. Such early supplier engagement is recognised as best practice in procurement, particularly where there are new requirements that may require innovative solutions, or where currently available solutions cannot deliver the required outcomes.

This market sounding exercise is the first phase of a market consultation exercise being undertaken by the Trust in order to communicate a specific requirement to the market, and provide a framework and mechanism for the supply chain to respond.

We anticipate that the second phase of market consultation will take the form of a market consultation workshop. A representative cross section of those responding to this market sounding will be invited. This will facilitate further exchange of information between the Trust and the supply chain and enable the development of a procurement strategy and specification.

***NOTE:** This market sounding process is being carried out in advance of any formal procurement process and is fully in line with the public procurement regulations.*

*It is **not** a call for tenders or a pre-qualification exercise. The information gathered will be used to inform the procurement specification and approach and help to create the market conditions to support delivery of the required outcomes.*

### 1.1.1. Purpose

The purpose of the market consultation is to:

- inform the procurement strategy and specification for an innovative Zero Waste Solution for the Trust
- inform the procurement strategy and specification for waste management solutions in the NHS and other public sector organisations

### 1.1.2. Aims

The aims of this market sounding exercise are to:

- communicate needs and requirements to potential suppliers, investors, stakeholders and collaborators
- stimulate innovative technical and commercial solutions
- find out what the market can deliver and in what timeframes
- establish the degree of forward commitment required to leverage any investment needed by the supply chain to deliver the requirement

## 1.2. Who should respond

Submissions are invited from all parts of the supply chain. A total solution is likely to require new supply chain connections to be made. The Trust will assist this by, for example, publishing a directory of companies responding to this market sounding.

Innovative ideas, and pre-commercial approaches and technologies are encouraged, as is the participation of small and medium sized companies.

### 1.2.1. How to respond

Please make all submissions using the **Response Form** which can be found at: [Zero Waste - FCP Market Sounding](#) (website)

Completed response forms should be submitted via the following e-mail address: [FCP-Waste@rothgen.nhs.uk](mailto:FCP-Waste@rothgen.nhs.uk) no later than by **23.00 hrs on 11<sup>th</sup> April 2010**

*Note: email attachments must be no larger than 5 megabytes.*

Questions should be addressed to: [FCP-Waste@rothgen.nhs.uk](mailto:FCP-Waste@rothgen.nhs.uk). Answers to Frequently Asked Questions will be posted on the following website: [Zero Waste - FCP Market Sounding](#).

### 1.2.2. How the results will be used

A directory of the companies and organisations that make submissions will be published online to assist communication and facilitate collaboration. (You may decline to be included in this directory if you wish).

Once the results have been collated and analysed, follow up conversations and / or meetings with respondents may be arranged. It is anticipated that a workshop with a cross section of the supply chain will be organised to discuss issues raised in the market sounding and address barriers to delivery.

The information gained will be used to inform:

- the procurement strategy and specification (including commercial and financial arrangements) for the purchase of an innovative waste solution for the Trust
- future procurement strategies and specifications for the NHS community and wider public sector with similar requirements through the BIS Innovation for Sustainability Programme

### 1.2.3. Further information:

Please submit any questions to: [FCP-Waste@rothgen.nhs.uk](mailto:FCP-Waste@rothgen.nhs.uk) quoting **Market Sounding Enquiry** in the subject bar. For answers to frequently asked questions see: [Zero Waste - FCP Market Sounding](#) (website)

## 2. Context - the urgent need to reduce the environmental impact of waste and manage costs in the NHS



The Trust is a forward thinking, progressive organisation that is continually looking to introduce new and innovative processes, and to become a hospital of choice. This has led to the introduction of ‘Hospital of Tomorrow’ an improvement programme that comprises; infrastructure, technology and service delivery solutions. It is envisaged that these programmes will deliver a modernisation agenda across the entire hospital estate, realising benefits in excess of £48m.

### 2.1. Waste within the Trust

The Trust waste’s policy is to reduce waste streams, reuse, recycle and recover value from waste wherever possible, and then to reduce the environmental impact of any remaining waste in line with good corporate /social governance.

The Trusts performance on waste minimisation, reuse and recycling is steadily improving and measures are being taken to continue to improve performance. However, a significant volume of clinical and domestic waste remains which is currently transported away from the hospital site for disposal, and this represents a large and increasing cost to the Trust.

Current waste management is then both costly and unsustainable and the Trust wishes to explore differing waste management solutions that manage costs and reduce the environmental impact.

E.g.: elimination/reduction of waste storage, its transport by road, and waste management techniques often, relying on disposal principles set decades ago. If waste could be treated or disposed of as near to the point of production as possible, this would have the following benefits:

- Minimise the opportunity for waste to cause harm to human health or the environment,
- Minimise volume of valuable areas taken over for collection/storage of waste prior to being transported away from site,
- Remove the transportation of often bulky air filled material from public roads, lessening congestion, reducing vehicle pollution, removing the possibility of road incidents and contributing to in the reduction of the NHS Carbon footprint,
- Provide an improved/shorter “generation to final disposal” time frame for the wastes.
- Provide a shorter “Duty of Care” path,

## 2.2. NHS Carbon Reduction Strategy

The Trust not only strives to lead in the provision of health care to the local population but also takes seriously its responsibility under the NHS Carbon Reduction Strategy to minimise its local and global footprint in respect to environmental emissions emanating from this high class, ever increasing, health care demand.

The [NHS Carbon Reduction Strategy](#) was launched in January 2009 outlining details of the total NHS carbon footprint and actions that trusts can take to minimise this. Out of the total 18m tonnes of CO<sub>2</sub> generated by the NHS in England per annum, 60% (11m tonnes) is attributed to procurement and supply chain.

The key policy driver for Carbon Reduction is the Climate Change Act – the requirements of which are set out in the graph below:

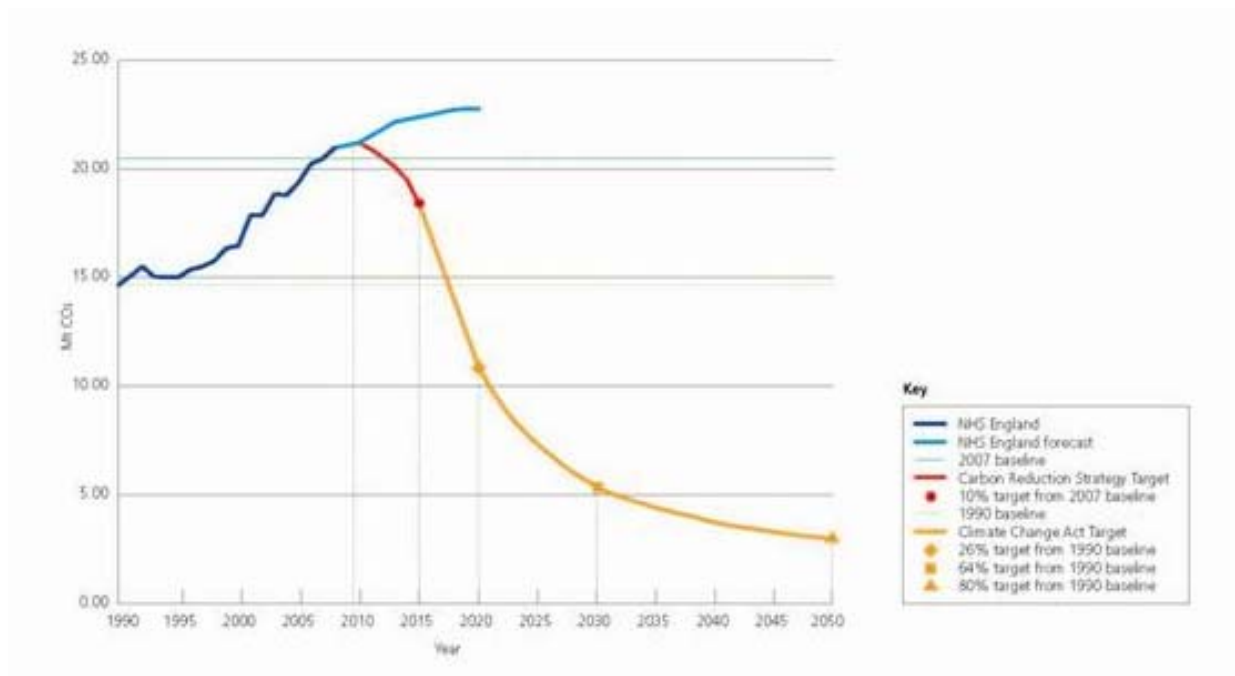


Figure 1: Graph of the NHS England CO<sub>2</sub> Emissions Baseline and Climate Change Act Targets

The Trust is committed to the NHS Carbon Reduction Strategy, with the identification and implementation of several projects. Over the past years, it has embarked upon a series of measures to reduce its consumption of resources and hence the impact on the planet.

### 3. The Requirement

#### 3.1. Core requirement

The Trust wishes to procure a cost effective Zero Waste Solution that; is able to meet its waste management needs now and into the future, eliminates waste to landfill, makes a significant contribution to reducing the Trust's carbon and other greenhouse gas emissions, and recovers value from waste. The solution must be capable of operating effectively and reliably in the demanding operational environment of an NHS Trust. The Trust is interested in exploring innovative technical, commercial and financial arrangements with potential suppliers, for example to spread the costs of capital investment and facilitate take-up.

The solution is required if possible by March 2011 with the aim of being fully operational by March 2013.

#### 3.2. Outcomes

Specifically, the following outcomes are sought:

- Elimination of waste to landfill,
- Minimisation of greenhouse gases and other emissions (e.g. bio-aerosols and chemicals) arising from the total waste management process (including transport),
- Recovery, recycling and re-use of waste prior to any treatment,
- Recovery of value from the waste process i.e. heat recovery,
- Reliability,
- Capable of adapting to changes in waste volumes and types,

A total solution would need to be able to handle all waste arising from the Trust, including hazardous waste streams, (offensive, infectious clinical, pharmaceuticals, radioactive, anatomical etc.). It should also facilitate recycling.

The solution would also need to demonstrate that it complies and/or exceeds the environmental requirements of Integrated Pollution Prevention and Control (IPPC) and environmental permitting, where required.

#### 4. Features

Any on site solutions would ideally have the following features:

- provide an automated service with the minimum of human intervention,
- automatic control and high turndown ratio when not processing waste,
- provide a mechanism to record the throughput of the waste and its type – i.e. automatic weighing and recording system,
- ability to deal with both hazardous and non-hazardous waste streams without any special precautions and/or minimal precautions for maintenance issues,
- have self diagnostics capabilities and recording of essential parameters to satisfy any legislative requirements,
- be so constructed that the maximum downtime periods for any planned annual maintenance is minimised and appropriate contingency plans are in place,
- be available on a continuous basis for at least 95% of a working week,
- Recovery of value from the waste process i.e. heat recovery,
- provide an automated bin washing facility,
- be fit for purpose for a minimum of 15 years,

#### 5. The wider public sector market

Approximately 400 NHS Trusts have a need to dispose of their waste responsibly, and the Trusts research indicates that within the NHS in England there are a further 100 NHS Trusts with a similar waste disposal output<sup>1</sup> to the Trust.

Although this market sounding exercise relates to a specific procurement opportunity to supply a Zero Waste Solution to the Rotherham NHS Foundation Trust, the following organisations have specifically expressed an interest in this exercise:

- Royal Devon and Exeter NHS Foundation Trust
- Doncaster and Bassetlaw Hospitals NHS Foundation Trust
- Northern Lincolnshire and Goole Hospitals NHS Foundation Trust

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<sup>1</sup> Further information regarding Trust profiles, waste generation and costs may be found at: [www.hefs.ic.nhs.uk](http://www.hefs.ic.nhs.uk)

- Barnsley Hospitals NHS Foundation Trust

***NOTE:** You are asked not to approach these organisations - they will be fully aware of the outcomes of this exercise and involved in any follow up to this initial market sounding exercise.*

It is our understanding that other organisations in the UK (Ministry of Justice, Local Councils, Private Hospitals and Pharmacies) also face similar dilemmas with their waste management practices and some of these are also looking into zero waste management solutions.

## 6. Procuring a solution

### 6.1. Procurement approach

This pre-procurement market sounding exercise was announced in a Prior Information Notice (PIN) published in the Official Journal of the European Union (OJEU).

The reason for publishing a PIN is to:

- Notify the market that a procurement exercise may begin in the future,
- Alert the market to high-level 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 procurement strategy will be largely determined by the response to this market sounding and subsequent consultations. Given the nature of the requirement being presented, and in line with the recommended FCP approach, it is anticipated that the competitive dialogue process will be used to enable further discussion with suppliers prior to final tenders being invited. The invitations to participate in dialogue will be based on an outcome based specification in line with the FCP approach and procurement best practice.

Please note that all public sector procurement has to comply with public sector procurement regulations. Further information on public procurement can be found at the following websites:

[Business Link](#)

[Supply2.gov](#)

[Office of Government and Commerce](#)

### 6.2. Procurement time table

The Trust will aim to publish a procurement strategy by the end of June 2010 and begin the procurement process by the end of July 2010. It is anticipated that any trials and demonstrations of the proposed solution will be incorporated into the procurement process.

#### 6.2.1. Forward Commitment Procurement (FCP)

The Trust recognises that a solution that will meet our requirements may not currently be commercially available or may be in development which may require new connections to be made within the supply chain. For this reason, we have adopted the Forward Commitment

Procurement approach, as recommended in the Governments Sustainable Procurement Action Plan, and Low Carbon Industrial Strategy.

See annex 2 for more information on FCP or visit [www.jeraconsulting.com](http://www.jeraconsulting.com)

## Annex 1: Supporting information

The Trust is a 600 bedded hospital which produces approximately 1140 tonnes of waste per annum.

This is broken down into the following typical waste streams:

Waste Stream	Tonnes per Annum
Cardboard – Flat packed for recycling	80
White office paper (Combined confidential & non-confidential)	70
Municipal Black Bag	450
Yellow (Clinical)	410
Cytotoxic Sharps	8
Medicinal sharps, not including Cytotoxic	50
Pharmaceutical waste other than Cytotoxic	14
Radioactive waste	0.5
WEEE waste	20 (best estimate)
Pallets wooden furniture	26 (best estimate)
Plastics (lighting diffusers etc)	5 (best estimate)
Estates – oils, batteries, chemicals	5

### The Trusts Waste Management Policy

The Trust, in the provision of healthcare activities and associated support functions, produces a wide and diverse range of wastes, including clinical and infectious wastes as well as non-hazardous and hazardous waste, ranging from domestic waste from offices to chemical or biological wastes from such departments as Estates or Pathology Laboratories.

The Trust is committed to disposing of these wastes, in compliance to all legislation and good guidance documents, to minimise and prevent significant risks to the health and safety of its staff, patients, the public and the environment.

The Trust's waste policy is to reduce waste streams, reuse, recycle and recover value from waste wherever possible and then to reduce the environmental impact of any remaining waste in line with good corporate /social governance.

The Trust is currently implementing the requirements of the Hazardous wastes regulations 2005, HTM 07-01 "Safe management of healthcare waste" and the requirements of European Waste catalogue (EWC) and will continue to ensure the correct identification and

segregation of waste at the point of generation into suitable colour-coded packaging or containers is essential to the safe storage, handling, internal movement, and disposal and/or external carriage/transport to the next person within the waste chain as defined with the Duty of Care regulations.

The Trust will continue to identify its wastes by the use of the above, in order to ensure that it can present a pedigree of information as to the wastes that have been passed either to 3rd party disposers or the proposed solution.

## Annex 2: Forward Commitment Procurement

The Forward Commitment Procurement (FCP) approach was pioneered by the business-led BIS/DEFRA Environmental Innovations Advisory Group (EIAG) to accelerate the development and market entry of cost effective environmental solutions.

It involves providing advance information of future needs, early engagement with potential suppliers and - most importantly – the incentive of a Forward Commitment: an agreement to purchase a product that may not currently exist, or is unaffordable, once they are available and at a price commensurate with their benefits, providing it delivers the agreed performance levels and cost and can be delivered in an appropriate timeframe.

To help deliver this most FCP projects will adopt the competitive dialogue procurement approach, undertake trials and/or demonstrations within the context of the procurement process and, in some cases, this may result in a forward commitment contract.

The first report of EIAG including information about FCP can be found at:



The FCP approach was one of the recommendations of the Sustainable Procurement Task Force in its report to UK Government published in June 2006 'Procuring the Future' and was subsequently adopted by the Government in its Sustainable Procurement Action Plan. It is also a key recommendation of the Commission on Environmental Markets and Economic Performance (CEMEP) in the report to Government published in November 2007:

[Department for Environment, Food and Rural Affairs](#)

and highlighted in the Governments Low Carbon Industrial Strategy:



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For more information on Forward Commitment Procurement contact the Innovation for Sustainability FCP Programme Manager, Gaynor Whyles:

E-mail: [gaynor.whyles@jeraconsulting.com](mailto:gaynor.whyles@jeraconsulting.com)

See also: [www.jeraconsulting.com](http://www.jeraconsulting.com)

### Annex 3: Glossary

**“the Trust”**

means The Rotherham NHS Foundation Trust

**“NHS”**

means the National Health Service within the United Kingdom

**“Forward Commitment Procurement” or “FCP”**

means the approach of providing information on the unmet need of the organisation

**“Business of Innovation and Sustainability” or “BIS”**

means the Department of Business of Innovation and Sustainability within the United Kingdom

**“Department of Health” or “DH”**

means the Department of Health within the United Kingdom

**“IPPC”**

means Integrated Pollution Prevention and Control

**“DEFRA”**

means Department for Environment, Food and Rural Affairs