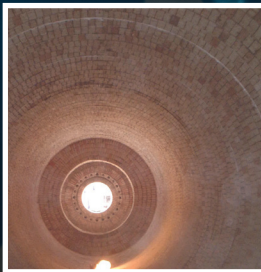


English 

# Large Incineration Solutions



International leaders of  
large scale incineration  
solutions since 1982  
[www.addfield.com](http://www.addfield.com)

**addfield**  
Incinerate • Cremate



**‘The most thermally efficient,  
robust and reliable incinerators  
on the market -  
Simply Built Better!’**



**Addfield is one of the UK's longest established manufacturers of large scale thermal treatment solutions. Addfield lead the way with unparalleled design, customer service and guaranteed build quality.**

**The Addfield range of incinerators have been in production for more than 35 years. British built and built to last.**

Addfield are the worldwide industry leaders in the design and manufacture of medical, animal, aquaculture, mobile and bespoke incinerators. Every machine is built by hand using time served craftsmen, with the fundamental underlying principle being that of quality.

This principle has lead the company to success with machines in every corner of globe. Over the years, the Addfield brand has firmly cemented itself as the industry leader in building robust, reliable and efficient machines across the globe. Our expertise in this area is unparalleled. Speak to the Addfield experts today.

Addfield - Simply Built Better.

## **Municipal Waste Disposal Systems – Addfield ‘G’ Range**

**Addfields range of municipal waste incinerators are specifically designed for the unpredictability of municipal waste streams and the low waste density design of 150-200kg/m<sup>3</sup> that municipal waste brings.**

The Addfield ‘G’ series of incinerators have a range of throughput capacities. Equipped with the latest technology and utilising best available waste management practices, the machines are widely regarded as the leading machines in their class.

1. Automatic hydraulic loading systems.
2. Robust refractory insulation.
3. Automatic de-ashing system combine to create the most reliable and efficient machines on the market today.



**Design, manufacturing,  
installation & service**

Compact Containerised Solutions  
Addfield G250 Municipal Waste Disposal System

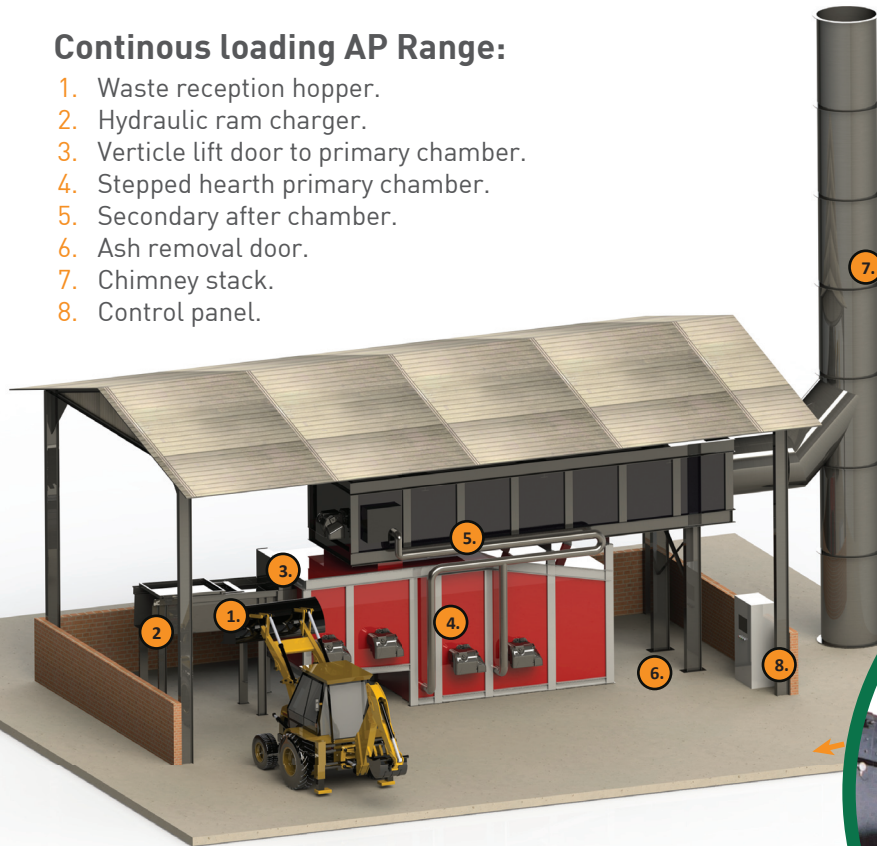


# Large Animal Waste Incineration Plants

The high capacity animal waste incineration range is made of two specific machine types. Continuous loading and batch loading. Each is capable of burn rates of up to 1000kg/hr

## Continuous loading AP Range:

1. Waste reception hopper.
2. Hydraulic ram charger.
3. Vertical lift door to primary chamber.
4. Stepped hearth primary chamber.
5. Secondary after chamber.
6. Ash removal door.
7. Chimney stack.
8. Control panel.



From concept to completion



## Addfield Rapid Response Incinerators Control & Destroy Waste at Source.

The Rapid™ range of incinerators are the ideal solution for batch load disposal of waste. This innovative system allows the operator to load large carcasses via the access door. This compact design allows fast deployment of a static or mobile version with a burn rate of up to 1000 kg/hr direct to the waste source, helping control site bio-security.



Strength, integrity  
& reliability



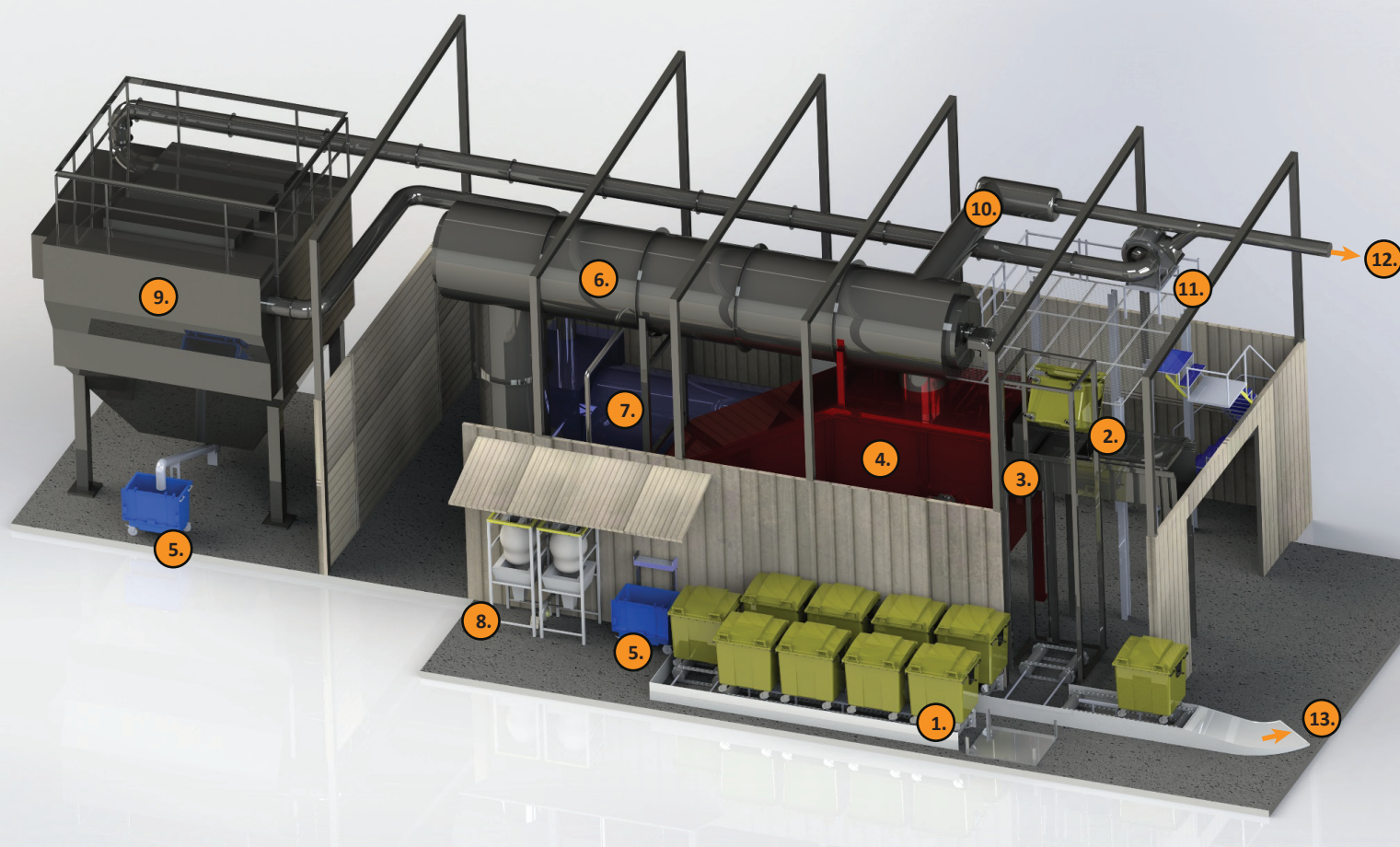
Visit us at: [www.addfield.com](http://www.addfield.com)

## Large Medical Waste Incineration Plants (150 - 2000kg/hr)

**Our high capacity plants are especially tailored, designed and manufactured to meet your sites specific needs.**

We offer a wide range of options with our large incineration plants as they are designed to meet the demands of the specific types of waste your site deals with.

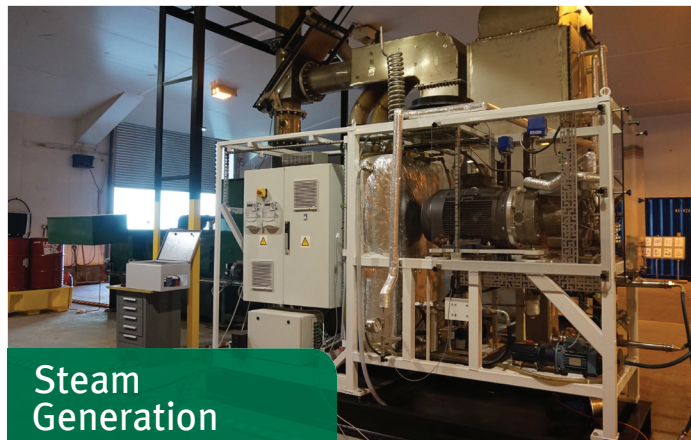
1. Bin marshalling management system
2. Automatic bin tipper system
3. Hydraulic waste charging system
4. Stepped hearth primary chamber
5. Automatic de-ashing system
6. Secondary after chamber
7. Heat recovery options including:
  - Hot water generation
  - Steam generation
  - Electricity generation
8. Sorbent powder injection
9. Filter system / Pollution Filtration System
10. Emergency by-pass stack
11. Draught induced fan
12. To main chimney stack
13. To bin washer system







**Waste Heat Boilers**



**Steam Generation**

## Waste to Energy Recovery Systems for Medical Waste Treatment

**Addfield can offer a range of recovery systems for medical incineration systems. Such recovery options include the following systems:**

### **Waste Heat Recovery:**

in form of hot water or hot air. A heat exchanger or boiler is used to exchange heat with the flue gas. Hot water can be used to heat local facilities, where as hot air can be used in drying processes.

### **Steam Generation:**

in form of unsaturated/saturated steam or superheated steam. Saturated steam is typically used in a variety of cleaning or humidity generation applications. Superheated steam is used almost exclusively to drive electric turbines.

### **Electricity Generation:**

(From the generation of superheated steam), Addfield offer a standard turbine capable of generating electricity from waste.

## Filtration Systems

**At Addfield we can provide a wide range of filtration systems suitable for various types of medical waste incineration systems. Contact Addfield for more information.**

### Gas Cleaning Wet Scrubber Systems

A water tower whereby the incinerator gas stream will traverse upward, while liquid is sprayed downward into the incoming gas stream. This countercurrent flow exposes the outlet gas to the scrubbing liquid. Particulates along with other components are intercepted and removed.



### Ceramic Filters

Gas is pulled through vacuum formed ceramic filter tubes, these filters remove the heavy particulates and used sorbent powders in an extremely efficient manner. A dry system that requires minimal long term maintenance and is up to 97% effective in removing particulates.



### Sorbent Injection

Sorbent powders come in two forms lime (or sodium bicarbonate) and activated carbon. Such powders are used to neutralise gases on large installations. Sodium Bicarbonate is used to neutralise acid gasses where as activated carbon is used to neutralise heavy metals, dioxins and furans. In small-medium scale installations good combustion in the primary and secondary chambers operating at 1150deg.C can be used to control such elements.

### De-Nox Systems

The Addfield De-NOx systems involves the use of Urea, a common, widely available harmless fertiliser to neutralise nitrogen oxides (NOx) formation. Nox is typically kept under control using good combustion however for unusual waste streams a De-Nox system may need consideration.



# Addfield Case Studies



Clinical Waste Plant - Macau - Addfield R1200 kg/hr



Animal & Clinical Waste Plant, UK - AP200

## Rotary Incineration Systems

The R1200 Rotary Kiln was a complete design, manufacture, install and commission contract in Macau for CSR a sister company of Swire SITA Waste Services Limited. The project was to provide a hazardous waste incinerator for the Government of Macau. In fact the incinerator was required to treat a wide spectrum of waste which included flammable liquids and solids. The solids were subdivided into hazardous (primarily pharmaceutical and printed circuit board manufacturers residues), shredded tyres, pets, abattoir waste, medical waste and entire horse carcasses from the local race track. The incinerator has a nominal capacity of 1200kg/hour and operates to the emission standards set out in the relevant European Union directives, for example the UESPA or the Industrial Emissions Directive.

The key elements of this plant are waste feeding systems for solids and liquids which included: a tyre shredder with screw conveyor, dedicated ram loading system capable of accepting an entire horse carcass and large Eurobins via the integrated automatic bin lift system, liquid injection, adapted dual fuel burner for hazardous solvent waste, the main rotary kiln combustion chamber, a highly efficient secondary combustion chamber, hot water waste heat recovery system, flue gas abatement system using sodium bicarbonate and activated carbon injection with bag house filter house with automated periodic cleaning and extraction system, inverter controlled induced draught fan, standalone chimney and automatic de-ashing system. The whole plant is controlled and monitored by a sophisticated control system that is designed and configured to provide the maximum supervision and sequenced operation but with the minimal operator intervention via SCADA and Windows based software. As part of our commitment to the client our overall aim was to provide a full turnkey package that satisfied their waste disposal requirement, makes significant contribution towards their energy needs and has a minimal impact on the local and global environment. Ref from the Chief Operating Officer at Swire SITA Waste Services Limited: "As anticipated with the unusual mix of wastes, there were problems during the commissioning. These problems were overcome due to the integrity and hands on perseverance of your staff. The project was completed to the satisfaction of CSR and the Macau government".

## High Capacity Incineration Systems

When a world renowned animal welfare research centre outgrew their original site close to the centre of Edinburgh they were encouraged by the Scottish Parliament to establish a new facility within a dedicated area that was to become the centre of the scientific research in Central and Southern Scotland and a new science park was developed.

The new facility included state of the art Post Mortem Suite and Veterinary Investigation Centre and as part of these we were commissioning to provide and install a Pyotec AP200 incinerator. The unit was originally configured to cater for all of the animal remains and carcasses that passed through the research based clientele. At this time it became apparent that there was a growing demand to treat more and more wastes and that these wastes were becoming more varied and as such needed a greater level of treatment. It was therefore decided that the incinerator should be upgraded to cater for the addition of a multitude of laboratory and medical based waste streams whilst still remaining the capability if carcase and animal remains disposal.

The upgrade included the fitting of a dedicated heat recovery system that provides steam to the site facilities and the installation of a sophisticated flue gas abatement system. As a consequence of these enhancements the whole incinerator package was deemed as being fully compliant with the EU Waste Incineration Directive 2000/76/EU. Since the initial installation in the early 1990's the plant has been fully maintained by Addfield and is still operating to exacting standards, which are now encompassed in the most recent legislative requirement the EU Industrial Emission Directive 2010/75/EU.

Quality is assured



# International Supply & Installation. TurnKey Operations



C1000 - 1000kg/hr Clinical Waste  
~ Isle of Man



Pharmaceutical Disposal Plant  
~ Constanine, Algeria



UNICEF Funded Treatment Center  
~ Dapaong, Togo



Environmentally  
Friendly

## Why Choose Addfield?

The name Addfield Environmental Systems has been synonymous with revolutionary thermal technology and innovative ideas since the firm was founded back in the early 1980's. Throughout our history, Addfield has become the chosen name for state-of-the-art thermal engineering. Today the Addfield brand is known and respected around the globe for quality and reliability. Servicing more than 80+ countries Addfield products are assisting to :-

1. Reduce hazardous waste.
2. Control bio security.
3. Convert waste to energy.
4. Reduce landfill obligation.
5. Meet emission compliance.

With our ISO Accreditation, world class on site engineering and technical support teams, it is little wonder Addfield are the preferred supplier to many of the worlds recognised aid agencies. Addfield provide simple yet cost effective turnkey solutions, to solve your waste stream problem, addfield are experts in thermal combustion.

All of our products are designed by our in house engineering team using the best available 3D solid-works & fluid dynamics software. Our team of design engineers regularly work alongside some of the most well respected healthcare organisations in the world.

In the current market, the after sales process is paramount to generate long term sustainable partnerships for continued growth. Given the structural investment in our after sales team, from back office services, to our time served field engineers, you are never too far away from the Addfield support mechanism that so many customers have come to rely upon.

*Addfield – Robust, Reliable, Efficient.... Simply built better.*

Call for FREE advice on +44 (0)1543 571 280  
or visit [www.addfield.com](http://www.addfield.com) for more information





Specialists in the design, manufacture and supply  
of Incineration and Cremation solutions

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Established • Trusted • Craftsmen

Quality is assured

**Animal | Medical | Marine | Pet Cremation | General/Municipal**

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