

RAYMOND BROWN AGGREGATES  
in partnership with

**SMITHS**  
BLETCHINGTON

## Incinerator Bottom Ash Aggregate

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# Incinerator Bottom Ash Aggregate



Smiths of Bletchington is the sales and distribution partner to Raymond Brown Aggregates for Oxfordshire's Incinerator Bottom Ash Aggregate (IBAA), which is a sustainable and cost effective alternative to Type 1.

This secondary aggregate consists of fused clinker, ceramics, glass, stone and concrete. IBAA has been widely used in construction for nearly 20 years and over 7 million tonnes have been used to date in the UK. Its use has been approved by the Environment Agency, the Highways Agency and a number of local authorities.

IBAA is a by-product of raw ash produced from Oxfordshire's non-recyclable domestic waste which is burnt at temperatures exceeding 850°C in the Ardley Energy Recovery Facility operated by Viridor.

The raw ash is brought to Raymond Brown's on-site recycling facility at Ardley, where it is 'aged', processed to remove ferrous and non ferrous metals and then graded to meet EN and Highways Agency Specifications.

Over the last seven years, in excess of 600,000 tonnes of incinerator bottom ash has been processed by Raymond Brown Aggregates into IBAA in Hampshire for use in various construction applications including road construction and embankments.

In producing 1 tonne of IBA Aggregate:

- 4.76 tonnes of waste is processed through the Energy Recovery Facility
- 619kwh of power is supplied back into the National Grid

Product quality is managed by a factory process control system to ensure the product is fit for use. This ensures the IBA Aggregate meets the Environment Agency's requirements such that the product does not present a risk to human health or the environment.



# Frequently asked Questions

**What is IBA Aggregate?**

IBA Aggregate is a quality controlled heterogeneous construction material containing fused clinker, ceramics, brick, glass, stone and concrete that has good pozzolanic (cement-like) properties. The aggregates produced can replace or are equivalent to most primary and secondary aggregates whilst complying with EN and British Standards.

**Do we need a permit for use of IBA Aggregate?**

**No** - IBA Aggregate is not considered a waste when used in construction applications.

**What is the Environment Agency's position regarding IBA Aggregate?**

The Environment Agency fully supports the use of IBA Aggregate in construction.

**Does IBA Aggregate pose a risk to human health or the environment?**

Not when used correctly in suitable applications in line with EA guidance and our own Code of Practice.

**What technical data is available for IBA Aggregate?**

Particle Size Distribution (grading), LA Test (hardness), un-compacted/compacted density, bulk density, plasticity index, frost susceptibility, CBR values and sulphate information. Product data sheets and physical properties information sheets are also available.

**How much IBA Aggregate has been used in the UK and in what type of applications?**

In excess of 7 million tonnes of IBA Aggregate has been used in the UK in the last ten years. The type of products range from sub-base and capping materials to bound cementitious and foamed bituminous products. These materials have been used in airport, supermarket, road and bridge construction. Please visit our website to see a portfolio of projects which have used IBA Aggregate.

**What are the benefits of using IBA Aggregate at my sites?**

IBA Aggregate is a sustainable and cost effective alternative, which offers excellent characteristics such as pozzolanic properties that improves strength and a typical bulk density of 1.5 tonnes per cubic metre.

## Example Projects using IBAA



### Twin Sails Bridge, Poole

**Specifier:** Poole Borough Council (C A Blackwell)  
**Volume:** 30,000 tonnes  
**Use:** Sub base for road construction and embankment to the bridge crossing.



### Nursling Rail Embankment, Southampton

**Specifier:** Network Rail (Carillion)  
**Volume:** 15,000 tonnes  
**Use:** Sub base for road construction and embankment fill.



### Tipner Park & Ride, Portsmouth

**Specifier:** Portsmouth City Council (Volker/Colas)  
**Volume:** 35,000 tonnes  
**Use:** Sub base to road infrastructure, car park and footpaths.



### Broad Lane Depot, Yate

**Specifier:** South Gloucestershire Council  
**Volume:** 3,200 tonnes  
**Use:** 500mm thick sub base under the reinforced concrete slab.



### Slades Farm Cycle Track, Bournemouth

**Specifier:** Bournemouth Borough Council  
**Volume:** 18,000 tonnes  
**Use:** Sub base for embankments to the circuit and footpaths.



### Adanac Park, Southampton

**Specifier:** Barker Mill Estate (Trant)  
**Volume:** 18,500 tonnes  
**Use:** Sub base to infrastructure providing access to new Ordnance Survey head office.



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