



**AGGREGATE**  
INDUSTRIES

**45%**  
**CO<sub>2</sub> SAVING\***

**Life**<sup>™</sup>

The sustainable asphalt of choice



**AGGREGATE**  
INDUSTRIES

# What is Life™?

## The sustainable asphalt of choice

Life is a revolutionary sustainable, foamed mix process that provides the engineering performance of hot mix asphalt yet can be produced and laid at reduced temperatures. Life asphalt technology provides up to an impressive 45% reduction in carbon emissions per tonne.

**45%  
CO<sub>2</sub> SAVING**

Life is an innovative process to produce asphalts at temperatures below 100°C. This technology has been installed in Aggregate Industries' production operations across the UK for national delivery. This means that a significant carbon saving is achieved.

Life asphalt technology provides up to an impressive 45% reduction in carbon emissions per tonne compared to hot mix equivalents, making it the truly sustainable asphalt range.

**70%  
REDUCTION IN  
BINDER AGING**

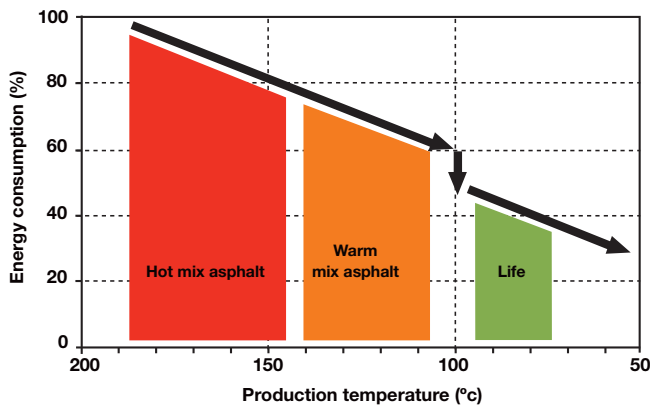
Additionally, typical asphalt mixtures will age harden by as much as 40% through the production cycle and specifications exist to limit this undesirable outcome. Using Life asphalts has shown that the age hardening process is reduced by 70% compared to hot mix asphalts. Hot mixes can result in the light oil bitumen fraction being boiled off, ultimately affecting the binder age. Life ensures that much of the binder is preserved and therefore leads to enhanced durability, long-term performance and an extended product life.

The Life process can be applied to all Aggregate Industries' asphaltic concrete ranges produced by Bardon Asphalt and Yeoman Asphalt to BS/EN standards and can be used in base, binder and surface course layers.

**▲ BARDON ASPHALT**

**▲ YEOMAN ASPHALT**

Asphalt produced using the Life process can be mixed and laid using conventional equipment within the asphalt industry. Our Bardon Contracting division is available to lay Life products providing a complete cradle to lay solution. Alternatively, approved contractors can equally lay Life materials with good compaction and workability at reduced temperatures.



\*based on a Carbon Trust baseline figure. For further information, please see the Life technical data sheet at [www.aggregate.com/life](http://www.aggregate.com/life)



# Life™ case study

## St Johns Hill, Shrewsbury

Bardon Asphalt provided Shropshire Council with a Life surface course that offered significant reductions in carbon. The 10mm close-graded asphalt demonstrated hot mix equivalence in terms of deformation resistance, stiffness and compactability but was produced and laid at a lower temperature.

Shropshire Council was looking for an environmental asphalt that could be used in a base, binder and importantly a surface course layer with a 125 pen.

Bardon Asphalt developed a Life mix using half warm mix technology that is not only revolutionary in the UK but also radical in terms of carbon footprint savings.

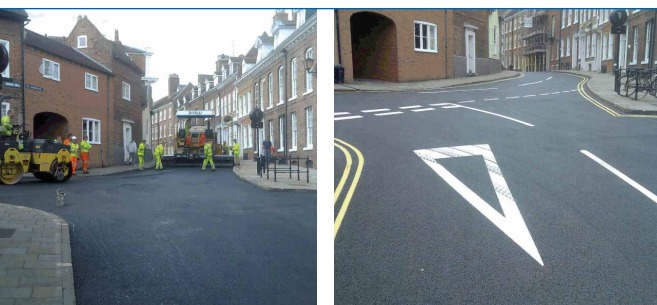
The embodied energy saving of the product supplied is the equivalent of 13,130 miles in an average car or taking one car off the road based upon an average mileage of 12,000 miles per year.

Produced at Aggregate Industries' Haughmond Hill plant, approximately 130 tonnes of Life 10mm close-graded surface course 100/150 was delivered to St Johns Hill in Shrewsbury. The asphalt was produced at temperatures between 95-100°C and laid at 70-85°C. This meant that the light oils in the mix never reached boiling point (140°C), allowing them to keep their structural integrity and reduce the binder aging process.

Bardon Asphalt not only met the client's sustainability agenda but also importantly satisfied material engineering criteria for durability and performance.

“When looking for a more sustainable asphalt solution for Shropshire, Life fulfilled all the right criteria. This was not only down to its sustainability and whole life cost credentials, but also for how well the material could be laid and how Bardon Asphalt supported us throughout the process.”

**Paul Smart - Programme and Contracts Manager, Shropshire Council**



**Client:** Shropshire Council

**Contractor:** Enterprise

**Material:** Life 10mm close-graded surface course 100/150

**Tonnage:** 130 tonnes

# The Responsible Source™

In 2009, Aggregate Industries became the first company in the world to be certificated to BES 6001 by BRE Global for the responsible sourcing of construction products, demonstrating our commitment to the use of sustainable materials and procurement.

BES 6001 is the BRE standard to assess whether construction products have been sourced and manufactured responsibly. The requirements for the standard are divided into three distinct sections which are each awarded points.

#### Organisational management requirements

- Responsible sourcing policy
- Legal compliance
- Quality management
- Supplier management system.

#### Supply chain management requirements

- Material traceability through the supply chain
- Environmental management in the supply chain
- Health and safety management in the supply chain.

#### Environmental and social requirements

- Greenhouse gas emissions
- Resource use
- Waste management
- Water extraction
- Life cycle assessment (LCA)
- Transport impacts
- Employment skills
- Local communities.

BES 6001 enables a universal rating system to assist customers, architects and specifiers to meet sustainability targets more easily, by identifying and classifying responsibly sourced products within the supply chain process.

**All Aggregate Industries' UK manufactured products have a certificated minimum rating of GOOD under the BES 6001 standard.**

#### Product categories

- Asphalt
- Aggregates and specialist sands
- Garden landscaping products
- Commercial hard landscaping
- Structural products
- Ready-mixed concrete
- Cementitious materials.

Using our products within your project can help you maximise potential points available within the following assessment and award schemes:

**BREEAM** - Building Research Establishment Environmental Assessment Method

**CEEQUAL** - Civil Engineering Environmental Quality Assessment and Award Scheme

#### Code for Sustainable Homes

Our technical teams will work with you to help you meet the government targets and support you in delivering a more sustainable project.

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