



## Proactive Investors Presentation

7<sup>th</sup> September 2011 - London



# A plastic affair



**1907** Leo Baekeland adds phenol to formaldehyde and invents Bakelite. Baekeland becomes very wealthy and the world becomes a very different place.

During **WWII** the military substitute plastics for the metals and rubber in short supply.



**Post war**, an excess supply means plastics hit the consumer market with a bang.

**Over the last half century**, improvements in chemical technology have led to an explosion in new forms of plastics, creating viable replacements for numerous traditional and natural materials.



# Plastic fantastic

In one year, **225 million tonnes** of plastic are produced worldwide.  
(That's the weight of one double decker bus a second.)



Every minute, **1 million plastic bags** are consumed worldwide.

The European plastics industry alone generated a total **turnover of EUR 300 billion** in 2008.

Plastic has revolutionised modern **medicine**, the **clothing** industry, **transport**, **consumer goods** and much more.



It's ventured to the bottom of the ocean and out into space.



# End of the affair?

***Apart from the small amount that's incinerated, every bit of plastic made over the last 50 years is still present somewhere in the environment.***

Whilst plastics were prized for their durability, light weight and long life, it is these very factors that make them one of the larger environmental threats of the modern world.



Litter



Plastic eaten by  
sea life



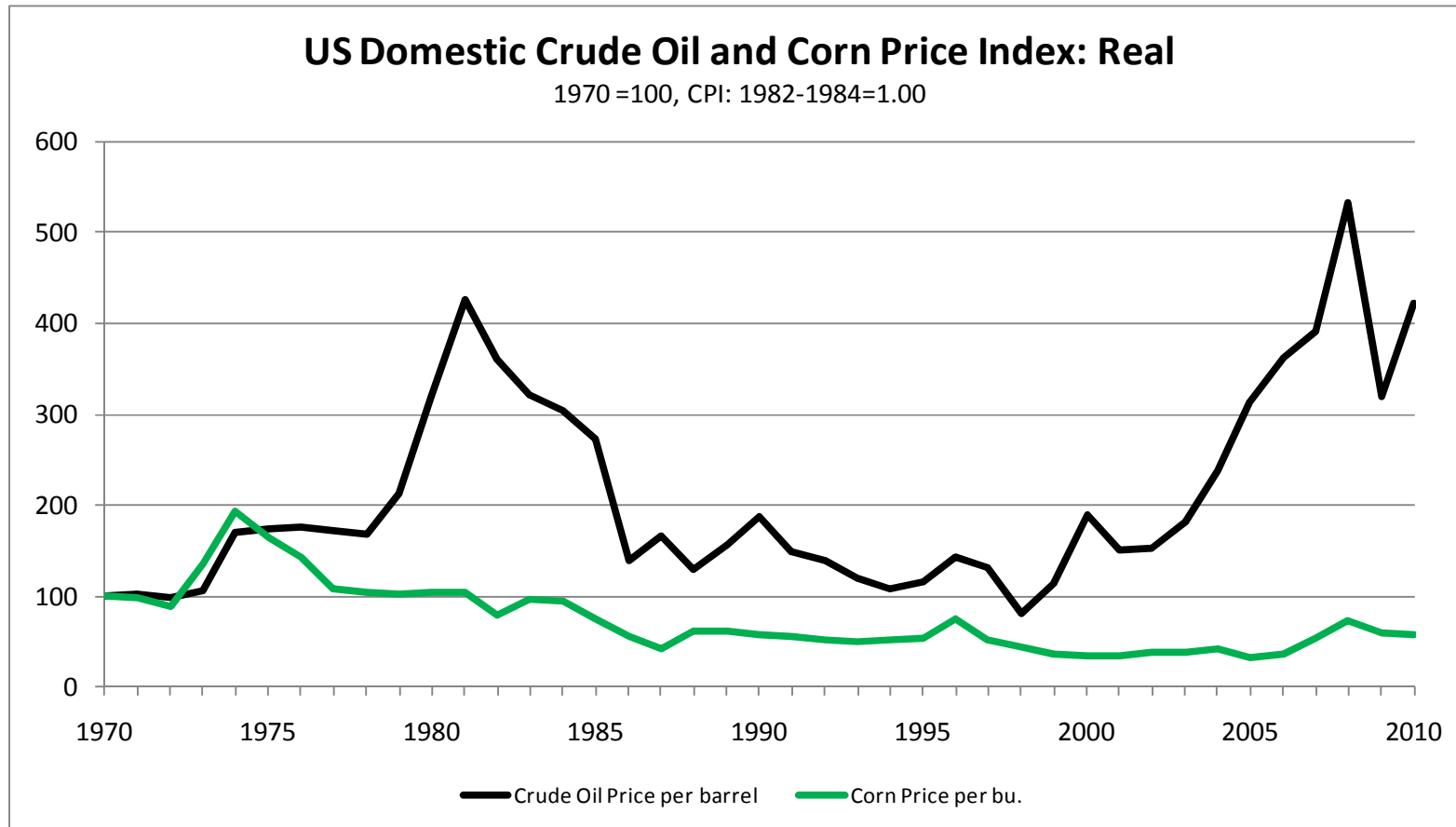
Endocrine disruptors  
'Gender benders'



Great Pacific  
Garbage Patch

**Plastics are made from ~4% of the oil that the world uses every year.**

# Oil Price & Availability



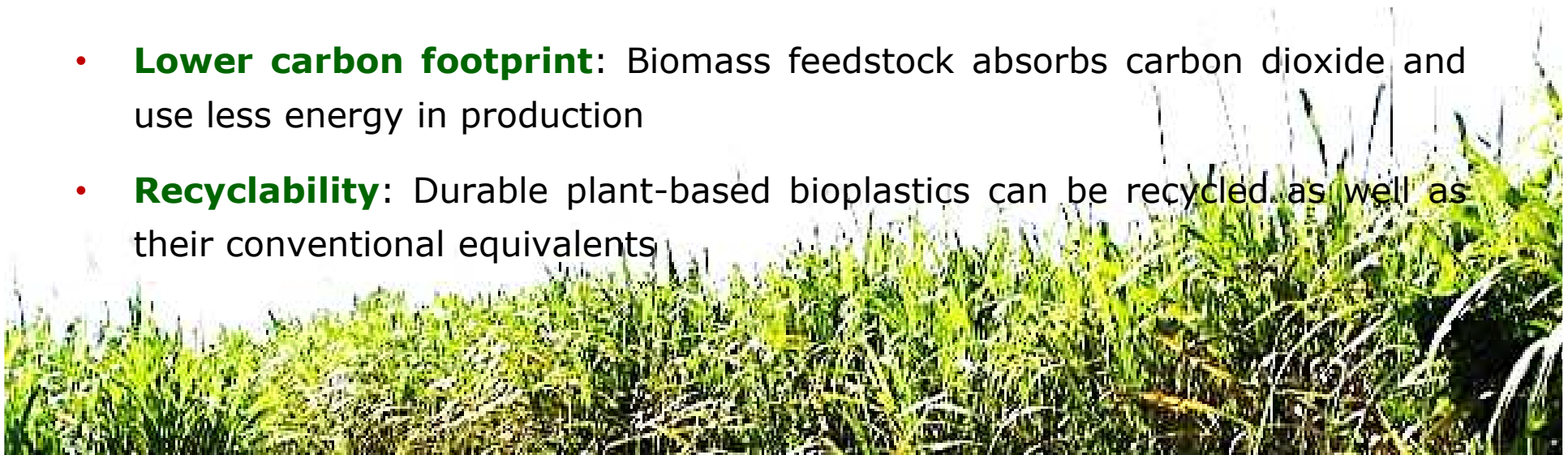
- The world's insatiable demand for oil drives a four fold real increase in 40 years

# Bioplastics: A better alternative

Bioplastics are **made from natural materials** such as potato starch and cellulose. As a result, bioplastics are **biodegrade and will compost** at the end of their useful lives.

Other major advantages:

- **Do not use crude oil:** Increasingly scarce and unstable price
- **Lower embodied energy:** Lowering manufacturing costs and lower emissions
- **Lower carbon footprint:** Biomass feedstock absorbs carbon dioxide and use less energy in production
- **Recyclability:** Durable plant-based bioplastics can be recycled as well as their conventional equivalents



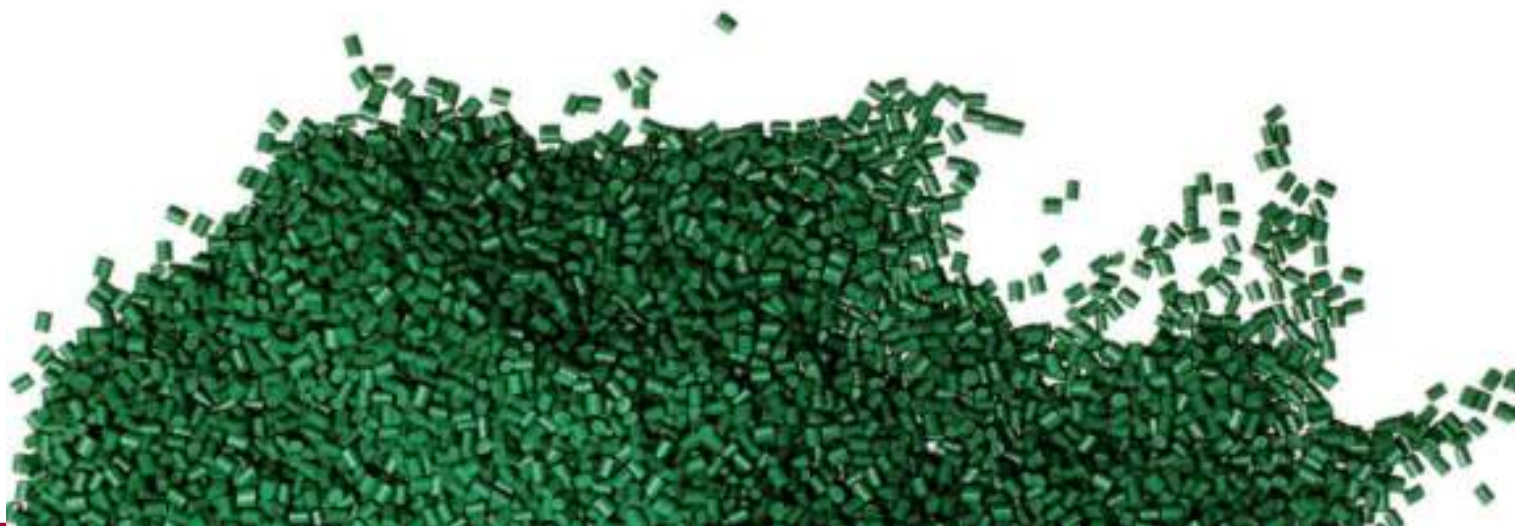
# Developing market

- **Coca Cola** aims at using bottles that are made with 100% plant-waste material while remaining completely recyclable.
- **Italy** has decided to block the use of non-biodegradable single use shopping bags from the beginning of 2012.
- **Seattle** has introduced an ordinance that obliges restaurants to only use bioplastics that will degrade in the city's composting plant.



# Sizeable market

- The annual output of the world's plastics industry is about **225 million tonnes** a year.
- The bioplastics industry is currently less than 0.5% of total world plastics output but is predicted to grow by **20% a year**.
- Estimates state that biodegradable plastics can replace about 45% of the total sales of oil-based plastics in **horticulture** and 25% of those used in **catering**.



# Biome Bioplastics



- UK's leading supplier of starch based bioplastics.
- Believe we are second biggest supplier of bio-based plastics in Europe.
- Broad portfolio of patents built up through almost 20 years of development.
- Biome has launched a number of innovative products and entered several new markets in the last 12 months.
- Resulting in 131% growth in sales made by Biome Bioplastics over the last year.

**DINCERTCO**



# Biome Bioplastics: Products

## Applications

- *Packaging*
- *Food service*
- *Industrial*
- *Horticulture/agriculture*
- *Construction*
- *Office products*
- *Personal care/cosmetic*
- *Fibres/non-wovens*
- *Electronics*
- *Automotive*



## Product Development

- Business based on 35 commercial products
- Continuing to increase innovative product offering.
- Product development often undertaken in collaboration with end customers.

# Biotec – Advanced Manufacturing Facility

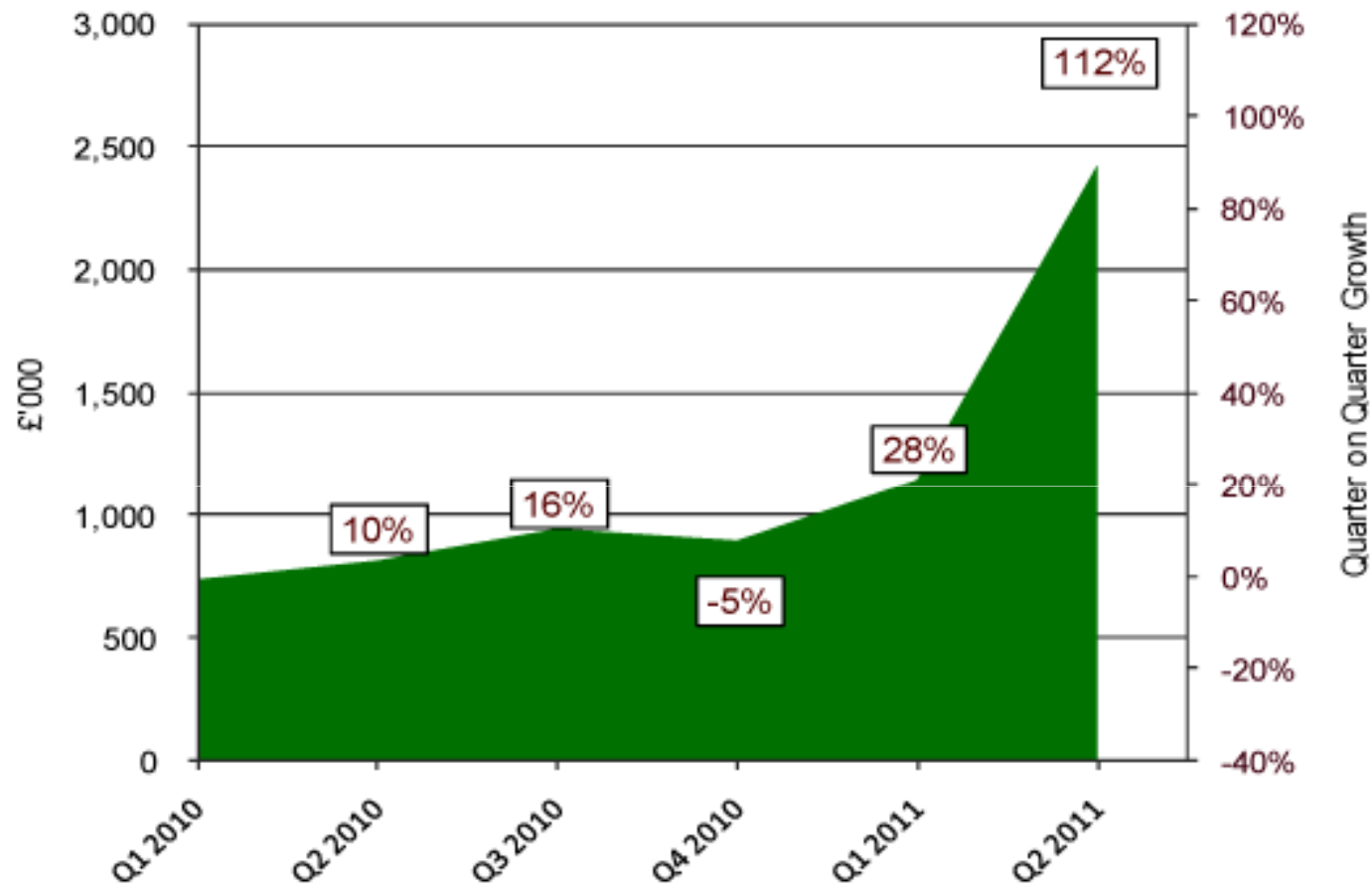


- Based in Germany – is a **highly capable** manufacturing and product industrialisation facility (50% Joint Venture).
- With **20kt capacity**, this is one of the few dedicated bioplastics facilities in the world;
- **Scalable to meet our ambitious growth trajectory** (currently operating at <60% utilisation).
- We believe we have one of the **lowest cost bases** in the industry to supply European market.

# The Market Opportunity for Biome

- The bioplastics market started in short life disposable items but is now expanding to include **durable goods**.
- Growth is being driven by both **legislation** on waste and **brand/consumer requirements** for sustainable products.
- Market growth is both **accelerating** and **broadening**.
- Recent market surveys estimate that global revenue growth will be **14% - 20% per annum**, exceeding \$1bn by 2012.
- **Europe** is at the forefront of adoption of bioplastics with ~73% of global market

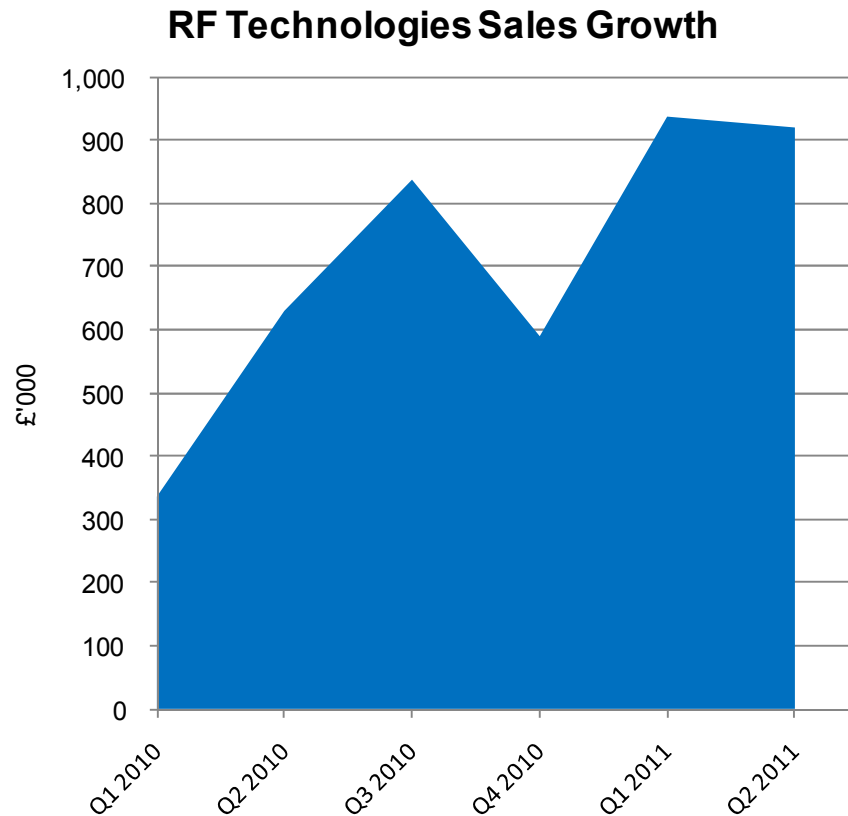
# Biome Bioplastics: Sales Growth



Biome Bioplastics is the wholly owned, UK-based sales, marketing and R&D unit.



# Stanelco RF Technologies



- This Division has grown rapidly and is **profitable** (£0.5m contribution in H1 2011).
- Sales order flow can be uneven as **large capital items** are manufactured and shipped.
- The business has seen a resurgence of its position as a **leading manufacturer** of optical fibre furnaces as well as a broadening of its general industrial business.
- Some interesting opportunities are now developing in **new industrial markets**.

# H1 Financial Highlights

	H1 2011 £m	H1 2010 £m	Comment
Revenue	10.4	6.7	Group revenues increases by 55% with growth in both divisions
Gross Profit	1.9	1.2	Gross profit increases in line with sales as margins remain comparable
Gross Profit %	18.5%	18.5%	
Operating Loss	(0.4)	(1.2)	Loss reduces by £0.8m
PBT	0.1	(1.7)	PBT positive assisted by exchange gain and VAT reclaim

See Interim Results 1 September 2011 for further details

# Divisional Revenue Growth

	H1 2011 £m	H1 2010 £m	Growth	Comment
Group Revenue	10.4	6.7	55%	Group revenues increased by 55% on both H1 and H2 2010
Bioplastics Division	8.6	5.8	49%	Step change in Bioplastics
Biome Bioplastics	3.6	1.5	131%	Wholly owned unit is up 131% on H1 2010 and 94% on H2 2010
Biotec 3rd Party	4.9	4.2	19%	H1 revenue limited by raw material bottlenecks
Stanelco RF Technologies	1.9	1.0	92%	RF business posts an excellent half as export led furnace sales surge

See Interim Results 1 September 2011 for further details

# Divisional Profit

	H1 2011 £m	H1 2010 £m	Comment
Bioplastics Division	0.1	(0.5)	Bioplastics Division moves into profitability for the first time as sales grow
Stanelco RF Technologies	0.5	0.2	Strong export sales & margins
Central Costs	(0.9)	(0.8)	Loss of building tenant gives small impact on central costs
Group Operating Loss	(0.4)	(1.2)	Loss substantially reduced

See Interim Results 1 September 2011 for further details

# Cash Position

- **Cash utilised** by operations just £0.3m in the first half.
- **Group cash balance** £3.6m at 30 June, up from £3.5m at 31 March 2011.
- The business put in place a **secured debt facility** of up to £2.0m with Fortis Commercial Finance during the period.
- Facility provides access to **additional working capital** funding for Biome Bioplastics. This may be useful if the business continues to grow at this accelerated rate.

# Investment case: Right market

## Right environment

- Public, government and industry pressure for alternative to conventional plastics.

## Viable alternative

- Biodegradable and compostable.
- Extensive range of functions, product types and life spans.
- Lower energy alternative to conventional oil-based plastics.

## Expanding market

- Bioplastics is a rapidly expanding marketplace with a range of positive drivers providing continuing growth prospects.
- Bioplastics market set to expand by 20% a year.

# Investment case: Right company

## Biome Bioplastics

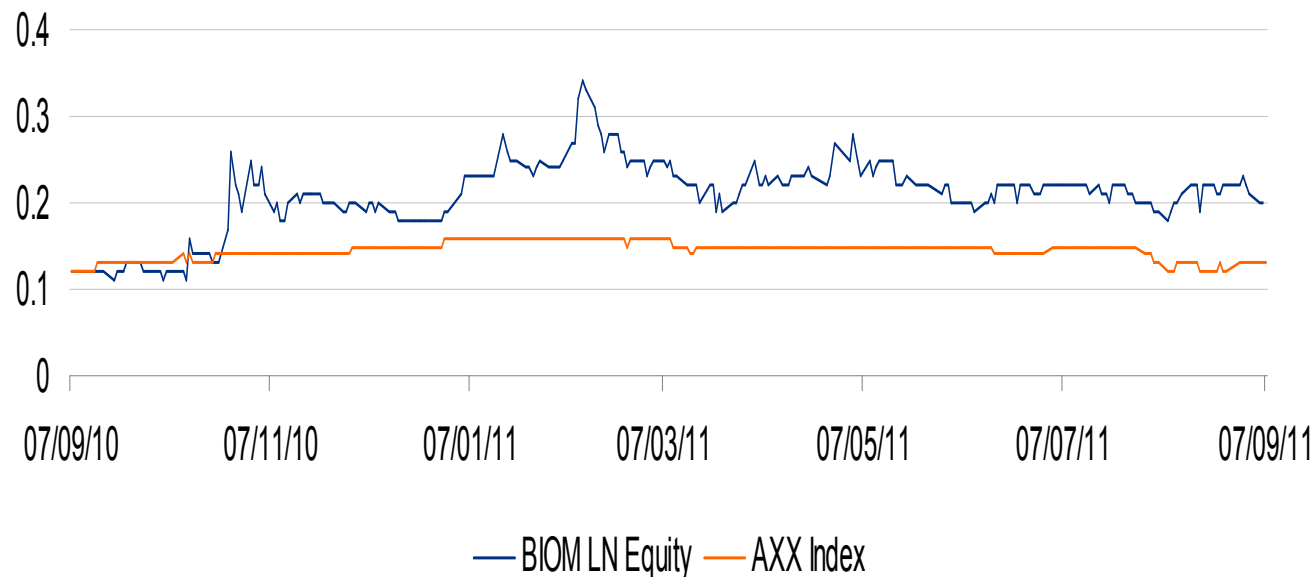
- A leading European bioplastics supplier.
- 20+ years of development.
- Large capacity manufacturing facility in Germany.
- Wide variety of innovative, proven products.

## Excellent growth

- Biome Bioplastics is growing fast in a **rapidly developing market**
- In H1 2011 the Group's performance was strong:
  - Group revenues well ahead of the same period in 2010 (up 55%)
  - Biome Bioplastics revenues increased by 131%
- The Biotec manufacturing asset is running at **<60% utilisation** – further growth should drop though to the bottom-line.

# Investment Case: Right time

- We believe a **point of inflexion** has been reached in the growth in demand for bioplastics.
- Biome Bioplastics **is well placed for profitable growth.**
- Significant scope for value appreciation.



Biome share price vs  
AIM all share - last  
12 months

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# Management

**John F Standen, Age 62, Non Executive Chairman**

John spent the majority of his career in corporate finance and was Chief Executive of Corporate Finance for BZW from 1993 to 1995. He retired from Barclays plc in 1998 and has since been a non-executive Chairman or Director of a number of quoted companies. He is currently Chairman of Lavendon Group plc and, in a voluntary capacity, Chairman of the Council of the University of Hull.

**Michael A Kayser, Age 55, Senior Independent Non Executive Director**

Michael has extensive experience in both the chemicals sector and in senior management positions. This experience includes being Group Finance Director at Laporte plc for five years and Finance Director of Guinness Brewing Worldwide. He is currently Non-Executive Director of Stobart Group plc and Chairman of their Audit Committee.

**Paul R Mines, Age 48, Chief Executive Officer**

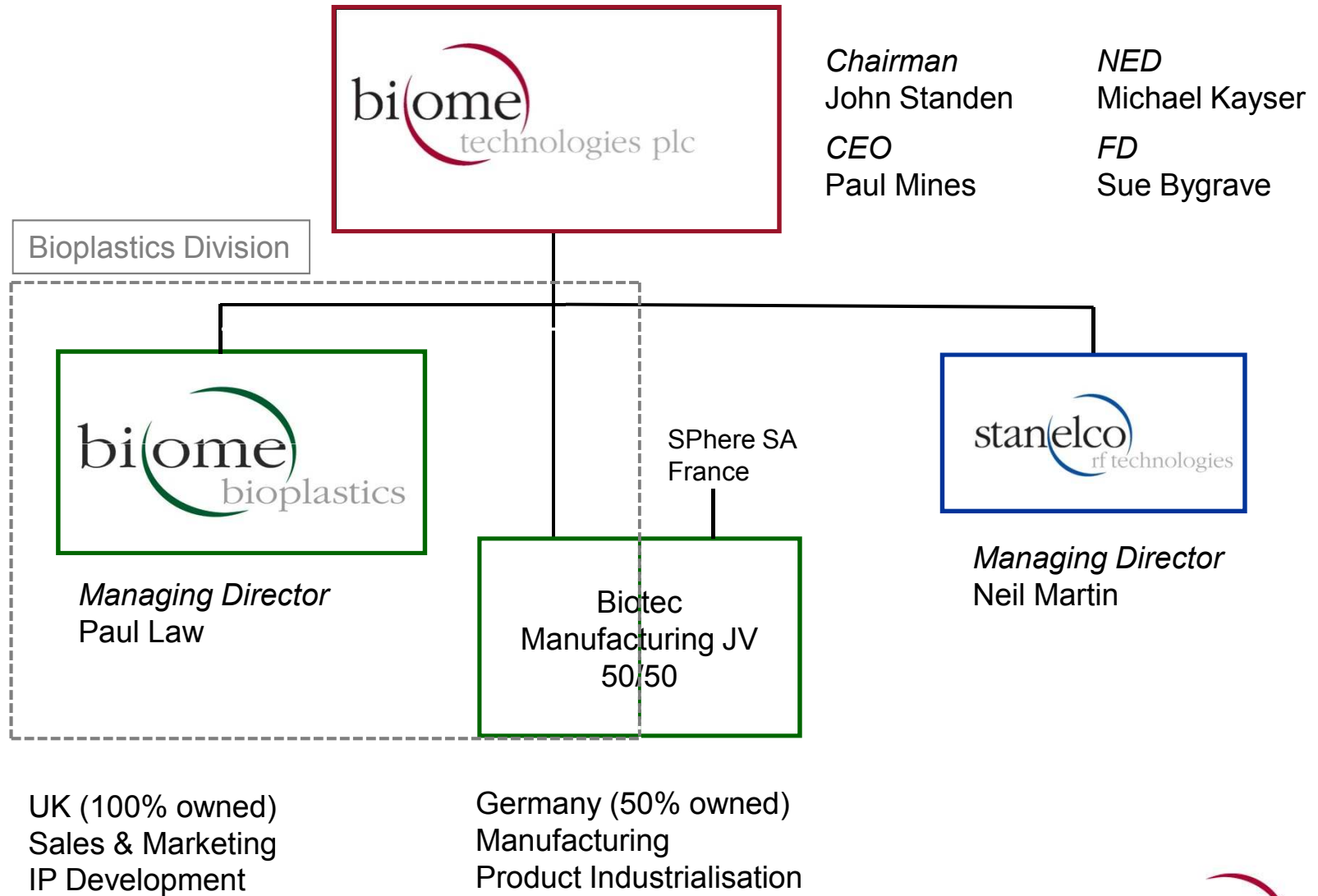
For the eight years to 2006, Paul was CEO of Betts Group Holdings Ltd having led a management buy-out of the company from Courtaulds plc. An engineer with an MBA from London Business School, Paul spent his earlier career at Courtaulds plc and ICI plc. He was recently Non-Executive Chairman of CEL-F Solar Systems Limited and is a Director of Windmine Limited.

**Susan J Bygrave, Age 45, Group Finance Director**

Prior to joining Biome Technologies plc, Sue was Group Finance Director of VEGA Group plc, a specialist professional services group then listed on the London Stock Exchange. Prior to this she worked for Mettoni Group plc, DCS Group plc and KPMG, with whom she qualified as a chartered accountant.

# Appendix

# Group Divisional Structure



# Group Strategic Intent

- Build a leading position in its chosen markets based on patented technology.
- Develop a range of new functional application areas where premiums can be obtained from its existing bioplastics IP base.
- Create and build new bioplastic applications by working intimately with consumer facing international businesses; development will be application led rather than technology led.
- Drive the businesses' differentiation by developing and retaining a team that is recognised as head and shoulders above the competition in application and product engineering.

# Plastic vs food?

- If half the world's plastics were made from crops grown on food land, the industry would only require 3% of the world's cultivated acreage
- If today's entire plastics production was made from biological sources it would consume between 0.1% and 0.2% of the globe's total annual production of organic matter
- For comparison, in the US, if only 10% of liquid fuel was provided by biofuel it would use 10% of the arable land.
- 10 of the 12 last products launched by Biome Bioplastics are derived from cellulose (a non-food crop)
- A significant proportion of Biomes production rests on use of reclaimed starch from industrial processes