

Creating Material Change

Interim Results Presentation

March 2018

haydale

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Creating Material Change

Industry leader applying advanced materials, including graphene, to enhance existing products across a wide range of industries

We bring advanced engineering and materials know how to unlock the performance potential of targeted next generation products

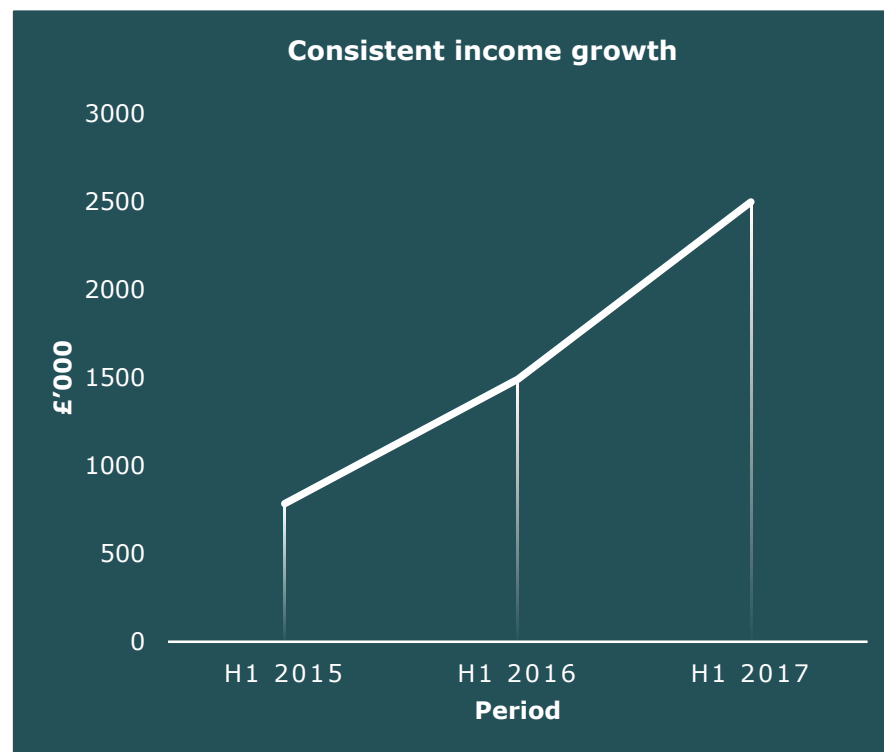
Ray Gibbs
Matt Wood

CEO
CFO

Financial Highlights

Income growth

- 67% increase in total Group income to £2.49m (H1FY17: £1.49m)
 - AMAT SBU £1.3m (up £0.5m)
 - RPC SBU £1.2m (up £0.5m)
- 85% increase in commercial revenues to £2.04m (H1FY17: £1.11m)
- R&D investment of £0.5m in the period (H1FY17: £0.7m)
- Reduced Group loss from operations at £2.2m (H1FY17: £2.4m)
- Successful placing and subscription of £9.3m (before costs)
- Cash at period end of £8.0m (June 2017: £2.1m)



Financial Review

Consolidated Profit & Loss (*unaudited*)

6 months ended 31 December	H1 2017	H1 2016	Y/E June 2017
	<u>£'000</u>	<u>£'000</u>	<u>£'000</u>
Revenue	2,041	1,106	3,004
Cost of sales	<u>(852)</u>	<u>(313)</u>	<u>(894)</u>
Gross Profit	1,189	793	2,110
Other income	456	384	901
Group income	2,497	1,490	3,011
	+67%		
Expenses			
R & D expenditure	(433)	(548)	(908)
Share based payment expense	(114)	(187)	(351)
Other administrative expenses	<u>(3,768)</u>	<u>(3,037)</u>	<u>(7,090)</u>
Group costs	<u>(4,313)</u>	<u>(3,772)</u>	<u>(8,349)</u>
Loss from continuing operations	(2,182)	(2,403)	(4,752)
Loss per share (£)	(0.10)	(0.15)	(0.28)

Financial Review

Consolidated balance sheet (*unaudited*)

	(<i>unaudited</i>) Dec 2017	(<i>unaudited</i>) Dec 2016	30 June 2017
	<u>£'000</u>	<u>£'000</u>	<u>£'000</u>
Non-current assets	9,582	7,329	10,020
Inventories	1,237	1,048	1,212
Trade and other receivables	1,017	1,350	1,333
Corporation Tax	441	547	280
Cash	<u>7,992</u>	<u>1,127</u>	<u>2,091</u>
Total Assets	20,269	11,401	14,936
Current:			
Trade and other payables	2,041	1,935	2,558
Bank loans	<u>272</u>	<u>506</u>	<u>359</u>
	2,313	2,441	2,917
Non-current: Bank loans	752	1,120	911
Deferred tax and pension obligations	<u>1,782</u>	<u>-</u>	<u>2,203</u>
	2,534	1,120	3,114
Total Liabilities	4,847	3,561	6,031
Total Net Assets	15,422	7,840	8,905

Financial Review

Consolidated cash flow (*unaudited*)

	H1 2017	H1 2016	Y/e June 2017
	<u>£'000</u>	<u>£'000</u>	<u>£'000</u>
Loss before taxation	(2,739)	(2,624)	(5,635)
Non cash items	<u>676</u>	<u>501</u>	<u>1,442</u>
Operating cash flow	(2,063)	(2,123)	(4,193)
Working capital movement	(226)	(244)	64
Cap Ex / investing activities	(307)	(221)	(1,069)
Net cash from equity issues	8,757	2,434	6,058
Finance costs	(69)	(29)	(297)
Net borrowing movements	(259)	(1,516)	(1,409)
FX	<u>68</u>	<u>(36)</u>	<u>75</u>
Net increase / (decrease) in cash	5,901	(1,735)	(771)
Cash at the beginning of the period/year	<u>2,091</u>	<u>2,862</u>	<u>2,862</u>
Cash at the end of the period/year	7,992	1,127	2,091

Advanced Materials

Strategic Business Unit

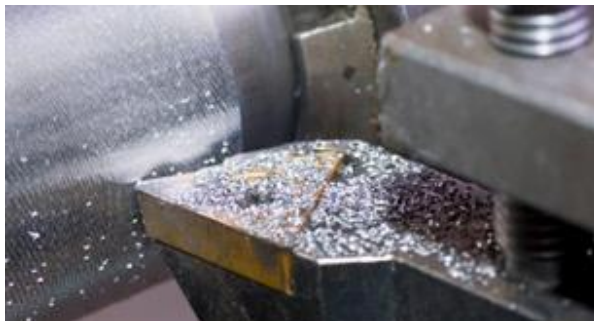
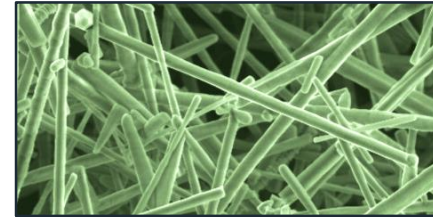


Operational Highlights

Advanced Materials SBU ('AMAT')

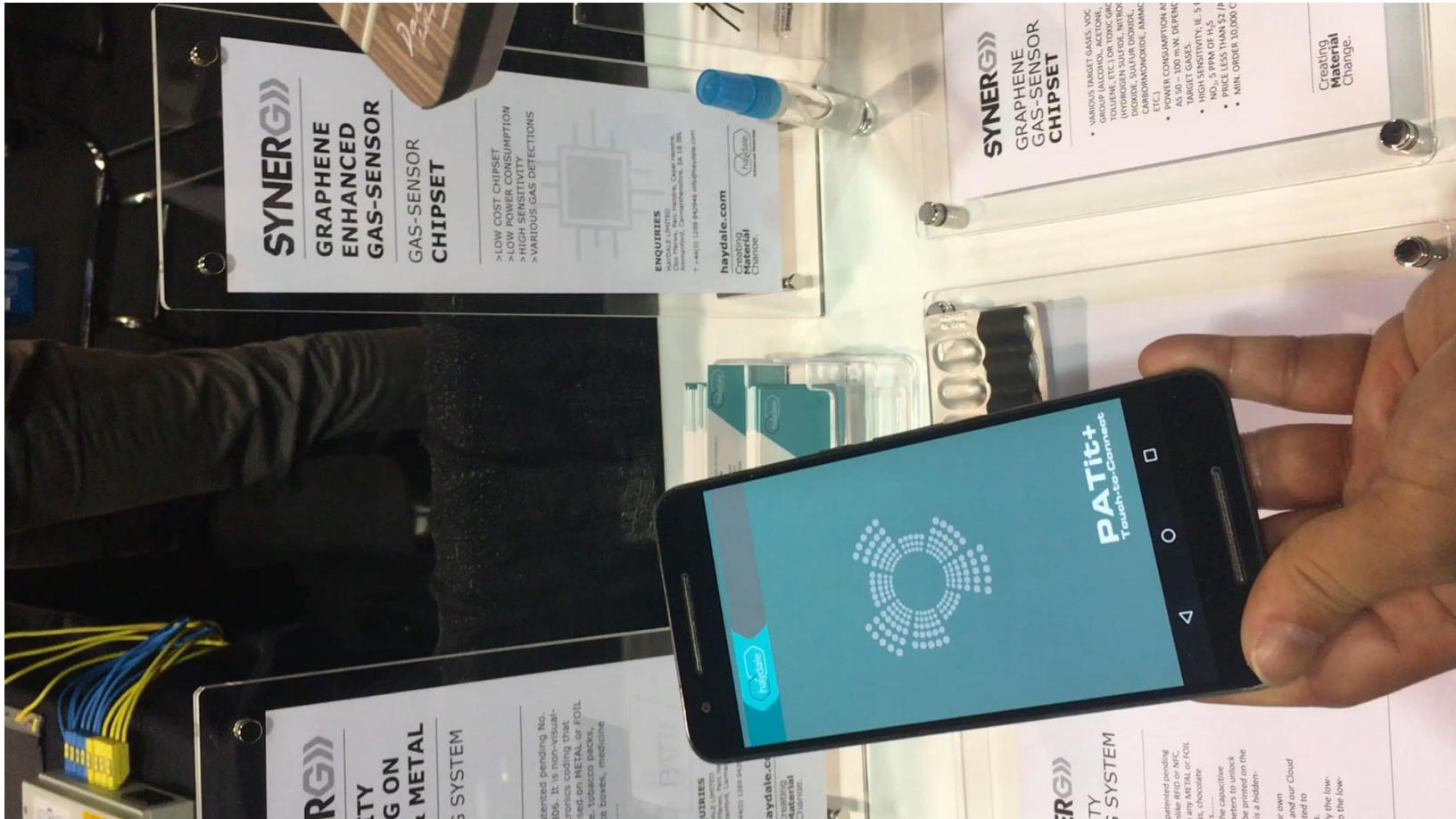
Total income of £1.3m (H1FY17: £0.8m)

- 45% uplift in SiC sales to £1.1m (H1FY17: £0.8m)
- Doubled number of customer engagements
- Maiden sales of in house cutting tool product
- Rebranded Haydale Ceramic Technologies (HCT)
- Taiwan temporary facility set up for sample production of graphene and functional inks
- Supplied bespoke ink samples to >30 customers in APAC region
- Successfully audited by two ink printers, one in biomedical sensors
- Anti-counterfeiting patent applied for – PATit



PATit

Every day example



AMAT: Post Period end Highlights

- New orders secured of £0.5m
 - £0.3m IRPC HT60 reactor & research contract
 - c£0.1m SiC fibre1 sales to S.Korean company
- £0.1m sales YTD of SiC fibre1 for anti-corrosion powder coating market
- Maiden sales of c£0.1m YTD of newly developed SiC hard-edged cutting tool product
- Supply agreement with Graphene Platform Corp (Japan) for ink for printed electronics
- Talga Resources collaboration – transparent conductive ink
- HTW to move to new 10,000sqft facility in Kaohsiung by June 2018



Resins & Polymer based Composites

Strategic Business Unit



Operational Highlights

Resins, Polymers & Composites ("RPC")

- SBU total income of £1.2m (H1FY17: £0.7m)
- £0.5m new grant wins in period
 - Elastoplas: £280k;
 - Paek: £131k; and
 - Cocasil: £90k
- In-house dispersion capabilities at Ammanford enhanced for Flowtite
- 11 functionalisation reactors now deployed
- US patent granted for functionalisation process
- Sale of panel fabricating prototype to Everpower (Xiamen) for automotive and aerospace sector



RPC: Post Period end Highlights

- **RPC** new orders secured of £0.7m
 - Lightning strike follow on project;
 - Graphene conductive adhesive to replace lead-based solder for aerospace;
 - Graphene sensors in composites for real time defect sensing; and
 - Gas Transition Piece (GTP) for National Grid
- Second Flowtite trial
 - Additional impact testing now successfully completed
 - Results expected by June '18

Outlook

Building blocks in place for growth

- Focus on sales growth from expansion activities of prior periods
- Engineering solutions that enhance applications for customers
- Driven through SBU's – working well
- Infrastructure and platform now in place to deliver sales to meet expected demand
- Funds raised being invested for growth – e.g. Taiwan facility & new SiC cutting tools product
- Unique industrial position in the graphene and advanced materials world today:
 - geographic coverage
 - increased product portfolio
 - significant markets
- Look to continue building on the c.70% sales growth in the period

Creating Material Change

Additional slides / Appendices



Board of directors

- David Banks, Non-Executive Chairman

David started in Stock Broking in Birmingham in 1979 with Harris, Allday, Lea and Brooks before moving to London and becoming an Institutional Salesman at Panmure Gordon where he was acclaimed in the Automotive, Engineering, Aerospace and Motor Distributors sectors. He subsequently became a Corporate Broker advising many companies on their Corporate Structure, Strategy, Messaging and Presentations. He also raised the Capital for many of these Companies both at IPO and in Secondary fund raises.

- Ray Gibbs, Chief Executive Officer

Ray is a Chartered Accountant, and former Deloitte audit and corporate finance partner for 9 years. He has spent the last 21 years in industry as CFO or commercial director of high technology and fast-moving consumer goods businesses both in the quoted and private arenas with sales ranging from £0.5 million to £500 million. He was a former CFO of Chemring Group Plc. Ray is a Board Member of the USA based National Graphene Association and is the UK Chairman of the UK and China Joint Working Group on Graphene Standardisation, organised by the BSI Group. Ray was part of the original Haydale Graphene Industries' management team that acquired Haydale Limited in 2010, becoming CEO in 2013, and leading the Group through its AIM IPO in 2014.

- Matt Wood, Chief Financial Officer

Matt Wood is a Chartered Accountant and experienced finance director and corporate finance professional with a background in advising quoted growth companies. A former nomad, since 2006, Matt has worked as a finance and non-executive director with a variety of companies and joined Haydale in early 2014 before its AIM IPO. Matt is also Managing Director and founder of ONE Advisory Group Ltd, a City-based corporate advisory firm. Matt holds a first-class degree in Economics.

Board of directors (cont'd)

- Roger Smith, Executive Director

Roger Smith graduated with a degree in physics and has worked in the global oil and gas sector for the past 30 years. He has set up and invested in businesses in Europe, Middle East and North America. Roger has started up, managed and subsequently sold 2 successful consulting businesses and in doing so has worked with venture capital and private equity houses. He has also held the post of commercial director with Bureau Veritas and Senior Vice President with Petrofac Plc. Roger was part of the original Haydale Graphene Industries' management team that acquired Haydale Limited in 2010.

- Roger Humm, Non-Executive Director

Roger is an experienced Commercial and Finance Director with extensive knowledge of high-growth technology companies. He held corporate, financial and senior management roles with Oxford Instruments plc both in the UK and USA, including responsibility for corporate. Roger gained his BSc in microbiology and virology from Warwick University before qualifying as a chartered accountant with Grant Thornton. He has an MBA from the University of Bath.

- Graham Eves, Non-Executive Director

Graham Eves joined GKN plc in 1967 setting up and running a special operation for GKN plc's head office in Switzerland. He returned to the UK in 1980 to work in venture capital and establish his own international business consultancy. His main activities covered advising a range of German, North American and Japanese automotive component/technology suppliers. Graham is a non-executive director of AB Dynamics plc. He was on the AIM advisory committee of the London Stock Exchange and has a Master of Arts degree in Modern and Medieval Languages from the University of Cambridge.

Senior Management

SBU Managing Directors

- Trevor Rudderham, Managing Director of Advanced Materials SBU (“AMAT SBU”)

Trevor Rudderham joined Haydale Technologies Inc. as President and CEO, following Haydale’s acquisition of Advanced Composites Materials, in 2016. Trevor now heads up the AMAT SBU that principally hosts the Group’s SiC products and the newly developed graphene inks and pastes. Trevor’s role as MD of AMAT SBU is to focus on driving product delivery and sales. Trevor brings a 35-year long career in the automotive industry, in which he held senior positions at Blue Bird Corp. and Ford Motor Co. in the UK, Germany, and the US, which the Group will look utilise as it continues to service the automotive industry with its graphene-based inks. Trevor was also a founder and officer of Carbon Motors Corp. – a new American automotive company. Trevor has a B.Tech (Honors, First Class) in Automotive Engineering from Loughborough University in the UK and attended Ford’s executive management training at INSEAD, France.

- Keith Broadbent, Managing Director of Resins, Polymers and Composite SBU (“RPC SBU”)

As Managing Director of the RPC SBU, Keith concentrates on marketing and selling the newly developed graphene infused carbon fibre pre-impregnated materials. Keith has a track record of strategically implementing increased efficiency and significant bottom line improvement in the most challenging of manufacturing and field installation environments whilst being able to manage highly specific customer needs and will draw on this extensive experience as MD of this SBU. Keith’s experience includes having worked as operations director at Princess Yachts International and at Sunseeker where he was part of the senior management team. Keith has an MBA in Strategic Management; a Postgraduate Diploma in Management Studies and a 2(i) BA (Hons) Degree in English.

Major Shareholders

	Investor	% Issued Share Capital	Holding as at 31 Dec'17
1	HARGREAVES LANSDOWN	8.4	2,295,656
2	INDIVIDUALS & PRIVATE CLIENTS	8.09	2,212,555
3	EVERPOWER INTERNATIONAL HOLDINGS CO LIMITED	7.17	1,958,451
4	OCTOPUS INVESTMENTS LIMITED	5.01	1,369,619
5	HARGREAVE HALE & CO	4.6	1,257,412
6	LEGAL & GENERAL INVESTMENT MANAGEMENT	4.57	1,250,000
7	QUILTER CHEVIOT	4.43	1,210,475
8	INTERACTIVE INVESTOR TRADING LIMITED	4.26	1,163,160
9	CHARLES STANLEY & CO	4.19	1,146,415
10	EUROPEAN CLEARING	4.02	1,099,721
11	TD DIRECT INVESTING	3.12	853,415

***Source Argus Vickers



Thank you

