Highly experienced team with track record of value creation in specialty materials
WHY GRAPHENE?

“GRAPHENE HAS THE POTENTIAL TO BE THE MOST DISRUPTIVE MATERIAL OF THE 21ST CENTURY”

Graphene

- Mechanical
  - 100X stronger than steel
  - Stiffer than diamond

- Electrical
  - 60% greater conductivity than copper

- Thermal
  - 5X conductivity of Aluminum

- Impermeable
  - Vacuum tight to helium gas

- Transparent
  - Circa. 98% optical transmission

- Lubricating
  - Very low surface shear

Significant challenges to produce, disperse and format for customers
Significant progress on multiple fronts in recent months

- Several significant coatings opportunities are progressing towards commercial maturity
- Composite opportunities being developed across an array of industries
- Customer recently launched Graphenics® range of oil based products
- Structural Ink® programme making significant progress with notable developments anticipated in 2018
- Genable® product range launched focused on the coatings industry
- Additional patent applications filed with focus on formatting and dispersing
- Placing completed for £9.77m (before expenses)
- Successfully secured two further grant awards with other applications pending
- Search for J Mabbitt replacement at an advanced stage
COATINGS SECTOR

Market requirements
- Excellent barrier properties
- UV absorption
- Electrical conductivity
- Resistance to scratch and abrasion
- Adhesion to substrate
- Thermal conductivity
- Foul release

£8.1bn Anti-corrosion coatings opportunity (2013)

Routes to market
- Coatings market formulators
- Additives manufacturers
COMMERCIAL HIGHLIGHTS

• HMG Paints completed live trials with customer
  • Customer now intend to acquire graphene product
  • HMG looking at rolling out both primer and top coat to customer base- additional interest from other customers
• James Briggs at advanced stage of accelerated development programme
• Positive trial results from barrier testing resulting in increased engagement with a number of customers
• Genable® product range launched specifically for coatings sector
COATINGS SECTOR - CASE STUDY

HMG PAINTS

Background

• The largest independent paint producer in the UK
• Products used in a number of hostile environments, including industrial vehicles, automotive and general industrial applications
• Launch customer keen to exploit graphene containing product to improve condition of fleet

Latest developments

• Internal testing complete
• Field trials with customer successfully completed
• Looking to launch production volumes with customer
• Applications for both primer and top coats
• A number of HMG customers are currently in discussions about the graphene enhanced product range
Control totally fails after around 900 hours in salt spray tests
Graphene plates show very little deterioration even after 3,000 hours
**Market requirements**
- Improved fracture toughness
- Thermal conductivity
- Electrical conductivity
- Enhanced fatigue performance
- Improved flame, smoke, toxicity and heat release
- Increased moisture and barrier properties
- Low shrinkage

**Materials opportunity**

**Routes to market**
- Formatted materials-pre-impregnated composites
- Infusion systems-bulk resin suppliers
- Adhesive producers
- End users

€37bn
COMMERICAL HIGHLIGHTS

- Magna Exteriors- tier 1 automotive supplier engagement
  - Included graphene on Fenyr supercar
  - Exploring possibilities of expanding programme to allow greater graphene inclusion
- SHD composites gaining greater market penetration in many different sectors
- Airbus have extended their programme to include additional applications-launch still targeted for 2018
- Significant interest in Structural Ink® – programme moving ahead with increased momentum
- Strong levels of interest at recent JEC show in Paris, the premier global composites exhibition- 42,000 attendees at the show
COMPOSITES SECTOR- CASE STUDY

STRUCTURAL INK®

What is it?

• Highly targeted delivery of graphene onto composites
• Combination of two technologies: printing and dispersing graphene
• Accurately applied- greater precision and performance where its properties are required

Latest developments

• Patent application filed
• Test equipment acquired
• Testing underway of initial batches
• Successfully demonstrated at JEC- high levels of interest
• Installation of larger scale unit at the Advanced Manufacturing Research Centre (AMRC) during 2018
FUNCTIONAL MATERIALS

COMMERCIAL HIGHLIGHTS

• Puraglobe at point of commercialisation:
  • Completed extensive testing and performance evaluation
  • Launched Graphenics® range at target customers
• Down hole field trials being undertaken in oil and gas industry
OPPORTUNITY PIPELINE MATURITY

Agreement on scope of sampling and engagement
Initial testing and interpretation of results
Repeat testing for consistency and review of results
Final product trials formulation and specification
Final commercial engagement

Short approval
8 9 10 4 2

Medium qualification time
10 28 15 5 1

Long approval process
3 12 5 0 0

Technology scouting or timeframe unclear currently
3 1 5 0 0

INCREASING MATURITY
BUILDING ON THE FOUNDATIONS

**PRODUCTION**
- New A-GNP line operational
- Structural Ink® scale up work commenced
- Ongoing process engineering initiatives

**TECHNICAL**
- Extended barrier protection work completed
- Additional patent applications filed
- REACH application

**FINANCE**
- Placing and open offer complete
- Two new grants secured
- Additional significant grant applications submitted with key partners
**WHY AGM?**

**IP and Know-how**
- Patent protection
- Range of graphene
- Formatting knowledge
- Structural Ink®

**Operational**
- Bottom up process
- Successful scale up
- Modular capacity expansion
- Consistency of product

**Commercial**
- Extensive databases
- Focus on core markets
- Key partner collaborations
- Increasing number of production orders

**Not all graphene is the same**
### WHY NOW?

<table>
<thead>
<tr>
<th>AGM</th>
<th>2014-15</th>
<th>2016-17</th>
<th>2017-18 and onwards</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Increasing graphene awareness</strong></td>
<td>• First patent awarded</td>
<td>• First commercial order received</td>
<td>• HMG complete live trials</td>
</tr>
<tr>
<td>• 2004 discovered</td>
<td>• Commercial plant built</td>
<td>• Repeat orders received</td>
<td>• Engagement with Magna organisation</td>
</tr>
<tr>
<td>• 2010 Nobel prize awarded</td>
<td>• A-GNP 35 introduced</td>
<td>• Over 100 evaluation samples issued</td>
<td>• Progress on Structural Ink®</td>
</tr>
<tr>
<td>• Extensive press coverage</td>
<td></td>
<td>• Airbus successfully test graphene product</td>
<td>• Anticipated additional orders of increasing magnitude</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Airbus production anticipated in 2018</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Group on path to break even</td>
</tr>
</tbody>
</table>

**Increasing momentum towards commercial success**
**INCOME STATEMENT SUMMARY**

- Revenues for H1 in line with prior year, with notable orders from Airbus.

- Other income relates to grants received primarily for the development of graphene applications. Down year on year but potential to exceed PY

- Operating expenses in line with PY when exceptionals are excluded

- Exceptional costs relate primarily to fund raising

- Depreciation up year on year as production capacity comes on stream.

<table>
<thead>
<tr>
<th></th>
<th>Interims 2018</th>
<th>Interims 2017</th>
<th>FY 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Revenue</strong></td>
<td>£’000</td>
<td>£’000</td>
<td>£’000</td>
</tr>
<tr>
<td></td>
<td>54</td>
<td>53</td>
<td>97</td>
</tr>
<tr>
<td><strong>Other income</strong></td>
<td>30</td>
<td>115</td>
<td>168</td>
</tr>
<tr>
<td></td>
<td>84</td>
<td>168</td>
<td>265</td>
</tr>
<tr>
<td><strong>Cost of sales</strong></td>
<td>(120)</td>
<td>(189)</td>
<td>(385)</td>
</tr>
<tr>
<td><strong>Gross loss</strong></td>
<td>(36)</td>
<td>(21)</td>
<td>(120)</td>
</tr>
<tr>
<td><strong>Operating expenses</strong></td>
<td>(2,275)</td>
<td>(2,054)</td>
<td>(4,190)</td>
</tr>
<tr>
<td><strong>EBITDA</strong></td>
<td>(1,952)</td>
<td>(1,957)</td>
<td>(4,059)</td>
</tr>
<tr>
<td><strong>Exceptional costs</strong></td>
<td>(205)</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td><strong>Depreciation</strong></td>
<td>(154)</td>
<td>(118)</td>
<td>(251)</td>
</tr>
<tr>
<td><strong>Operating loss</strong></td>
<td>(2,311)</td>
<td>(2,075)</td>
<td>(4,310)</td>
</tr>
<tr>
<td><strong>Net finance income</strong></td>
<td>20</td>
<td>22</td>
<td>33</td>
</tr>
<tr>
<td><strong>Loss before tax</strong></td>
<td>(2,291)</td>
<td>(2,053)</td>
<td>(4,277)</td>
</tr>
<tr>
<td><strong>Tax on loss</strong></td>
<td>—</td>
<td>—</td>
<td>1,234</td>
</tr>
<tr>
<td><strong>Loss for the period</strong></td>
<td>(2,291)</td>
<td>(2,053)</td>
<td>(3,043)</td>
</tr>
<tr>
<td><strong>Diluted EPS (pence)</strong></td>
<td>(6.4)</td>
<td>(9.3)</td>
<td>(13.8)</td>
</tr>
<tr>
<td><strong>Adjusted diluted EPS (pence)</strong></td>
<td>(6.4)</td>
<td>(9.3)</td>
<td>(13.8)</td>
</tr>
</tbody>
</table>
CASH FLOW SUMMARY

- Net cash of £12.0m on deposit with maturity of less than one year
- Capital expenditure down year on year following completion of new A-GNP 35 facility
- Gross proceeds from placing and open offer £9.7m
- Cash from R&D tax credits anticipated in H2
- Interest likely to increase in H2 following receipt of funds

<table>
<thead>
<tr>
<th></th>
<th>Interims 2018</th>
<th>Interims 2017</th>
<th>FY 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Loss</td>
<td>(2,311)</td>
<td>(2,075)</td>
<td>(4,310)</td>
</tr>
<tr>
<td>Depreciation</td>
<td>154</td>
<td>118</td>
<td>251</td>
</tr>
<tr>
<td>IFRS 2 Share based payments</td>
<td>138</td>
<td>78</td>
<td>192</td>
</tr>
<tr>
<td>Net working capital movement</td>
<td>21</td>
<td>(161)</td>
<td>(95)</td>
</tr>
<tr>
<td><strong>Cash used in operations</strong></td>
<td>(1,998)</td>
<td>(2,040)</td>
<td>(3,962)</td>
</tr>
<tr>
<td>Interest received</td>
<td>15</td>
<td>19</td>
<td>52</td>
</tr>
<tr>
<td>Tax received</td>
<td>—</td>
<td>—</td>
<td>1,234</td>
</tr>
<tr>
<td>Capital expenditure</td>
<td>(133)</td>
<td>(272)</td>
<td>(725)</td>
</tr>
<tr>
<td><strong>Free Cash Flow</strong></td>
<td>(2,116)</td>
<td>(2,293)</td>
<td>(3,401)</td>
</tr>
<tr>
<td>Proceeds from issue of shares</td>
<td>9,369</td>
<td>145</td>
<td>407</td>
</tr>
<tr>
<td>Opening cash at bank</td>
<td>4,708</td>
<td>7,702</td>
<td>7,702</td>
</tr>
<tr>
<td><strong>Cash at bank</strong></td>
<td>11,961</td>
<td>5,554</td>
<td>4,708</td>
</tr>
</tbody>
</table>
SUMMARY

• Notable commercial progress in the coatings sector with a number of exciting opportunities getting very close to production order stage

• Increased momentum in the composite sector in a multitude of applications and industries.

• A number of milestones within the technical and operational teams, including:
  • Breakthrough in barrier protection;
  • Launch of Genable® range;
  • Filing application patents; and
  • Commissioning of new production line.

• Focus remains on targeting additional and larger production orders during 2018.

• AGM remains confident that its adopted strategy will enable it to become the UK’s leading producer of graphene.
# SHAREHOLDER STRUCTURE

<table>
<thead>
<tr>
<th>Significant shareholders</th>
<th>%</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Directors</td>
<td></td>
<td>4.3%</td>
</tr>
<tr>
<td>IP Group</td>
<td>19.1</td>
<td></td>
</tr>
<tr>
<td>Insight</td>
<td>11.4</td>
<td></td>
</tr>
<tr>
<td>Herald Investment</td>
<td>10.0</td>
<td></td>
</tr>
<tr>
<td>Ruffer</td>
<td>9.0</td>
<td></td>
</tr>
<tr>
<td>Eden Tree</td>
<td>7.6</td>
<td></td>
</tr>
<tr>
<td>Hargreaves Lansdown, Stockbrokers (EO)</td>
<td>6.2</td>
<td></td>
</tr>
<tr>
<td>Baillie Gifford</td>
<td>4.8</td>
<td></td>
</tr>
<tr>
<td>City Financial</td>
<td>2.8</td>
<td></td>
</tr>
<tr>
<td>Interactive Investor</td>
<td>2.7</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td>73.6%</td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td>22.1%</td>
</tr>
</tbody>
</table>

Percentages may not sum due to rounding.
AGM PRODUCTION PROCESSES

Unique, proprietary bottom-up processes

Feedstock
- Liquid
- Solid
  - Readily available
  - Low cost
  - Recyclable

Production
- Reactor unit

Processing
- Washing & drying
- Scalable
  - Continuous

Multiple dispersion techniques
- Value-added products
- Ease of handling

Scalable, high-purity, easy to handle, controllable properties
# Alternative Production Techniques

<table>
<thead>
<tr>
<th>Technique</th>
<th>Description</th>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Top-down</strong></td>
<td>Reduced graphene oxide</td>
<td>Oxidation of graphite • Sonication / heat to separate layers • Reduction to graphene nanoplatelets</td>
<td>Established process</td>
</tr>
<tr>
<td></td>
<td><strong>Liquid phase exfoliation</strong></td>
<td>Graphite in solvent • Sonication to separate layers • Graphene nanoplatelets</td>
<td>Can be low temperature</td>
</tr>
<tr>
<td></td>
<td><strong>Chemical vapour deposition</strong></td>
<td>Deposition of graphene films onto metal substrates • Film removed from metal substrate • Produces films rather than nanoplatelets • Different end markets to AGM</td>
<td>Able to produce large films with roll-to-roll approach • High purity with good electrical properties</td>
</tr>
<tr>
<td><strong>Bottom-up</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>