Haydale Graphene Industries plc ("Haydale" or the "Company")

# Haydale enters into Memorandum of Understanding to Collaborate on Graphene Projects with Versarien plc ("Versarien")

Haydale Graphene Industries plc (AIM:HAYD) and Versarien plc (AIM:VRS) are pleased to announce they have signed a memorandum of understanding to collaborate on and accelerate the development of their respective graphene projects (the "Collaboration").

The Collaboration commences with immediate effect and provides the framework pursuant to which, Haydale and Versarien will work together to create solutions for the manufacturing and functionalisation of graphene on a large scale suitable for mass produced commercial applications. Both management teams expect to share resources to maximise the exposure and utilisation of the expertise of both organisations, which operate in different areas. In particular, Versarien through its subsidiary 2-D Tech will supply high quality graphene platelets for functionalisation using Haydale's proprietary technology. Haydale will also supply high quality sustainable graphite for use as feedstock by 2-D Tech and evaluate the resulting material.

Ray Gibbs, Haydale Chief Executive said:

"It is important we have a credible graphene presence to take to a global market that is still evaluating the materials available before embarking on procurement of commercial volumes. The 2-D Tech material has strong potential for a number of markets where we are focused, especially in the composites and coatings sectors. I have always said we need an array of high quality sustainable material, capable of scale to use in providing solutions for the customer requests we now regularly receive. The recent UK Trade Pavilion at Nano Korea attended by both Haydale and 2-D Tech, demonstrated the interest in the area for functionalised graphene. We have over 30 customers who have paid for graphene samples and none more so than in Korea where after a year of activity we now have 12 key accounts in various stages along the sales cycle. We look forward to working closely with the Versarien team in collaborative ventures at both a commercial and R&D level."

## Neill Ricketts, CEO of Versarien, said:

"We believe this to be a significant step forward. We will be working together with Haydale to best achieve the great global opportunity we have in front of both of us in the form of graphene. We will be collaborating in order to ensure that we minimise the time it takes us to commercialise this technology, playing to the strengths of both organisations. By working together we will be able to offer a complete supply chain from raw material, through graphene production to functionalisation depending on the customer application. The Collaboration follows our recent announcement about our breakthrough in scalable graphene production, experience of working with Haydale and exhibiting together at Nano Korea."

- Ends -

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## Notes to editors

For further information:

### About Haydale (www.haydale.com)

Haydale has developed a patent pending proprietary scalable plasma process to functionalise graphene and other nanomaterials. This enabling technology can provide Haydale with a rapid and highly cost efficient method of supplying tailored solutions to enhance applications for both raw material suppliers and product manufacturers.

Functionalisation is carried out through a low pressure plasma process that treats both organic mined fine powder and other synthetically produced nanomaterial powders producing high quality few layered graphenes and graphene nano platelets. The process can functionalise with a range of chemical groups, where the amount of chemicals can be tailored to the customer needs. Good dispersion improves the properties and performance of the host material and ensures it delivers as specified.

The Haydale plasma process does not use wet chemistry, neither does it damage the material being processed, rather it can clean up impurities inherent in the raw material. The technology is a low energy user and most importantly environmentally friendly. The Haydale method is an enabling technology where working with a raw material producer can add value to the base product and tailor the outputs to meet the target applications of the end user.

Haydale, based in South Wales, housed in a purpose built facility for processing and handling nanomaterials with a laboratory facility, is facilitating the application of graphenes and other nanomaterials in fields such as inks, sensors, energy storage, photovoltaics, composites, paints and coatings.

### About Versarien

**Versarien™ plc** (AIM:VRS) is an advanced engineering materials group. Leveraging proprietary technology, the group creates innovative engineering solutions for its clients in a diverse range of industries. Versarien has three subsidiaries:

Versarien Technologies Ltd. which owns the exclusive rights to a patent-protected additive process for creating advanced micro-porous metals targeting the thermal management

industry and manufactures extruded aluminium heat sinks for the electronics and computing industries. <u>www.versarien-technologies.co.uk</u>

Total Carbide Ltd, a leading manufacturer in sintered tungsten carbide for applications in arduous environments such as the oil and gas industry. <u>www.totalcarbide.com</u>

2-DTech Ltd., which specialises in the supply, characterisation and early stage development of graphene products. <u>www.2-dtech.com</u>