CPI Build Demonstration Facility for Applied Graphene Materials

13th February 2014: The Centre for Process Innovation (CPI) has completed the build of a bespoke Graphene Demonstration Plant for Applied Graphene Materials (AGM). The demonstration plant is capable of producing up to 1 tonne of Graphene nanoplatelets per annum.

Widely regarded as the forerunner in the race to commercialise Graphene, AGM spun out of Durham University in 2010 and is working with many industrial partners to investigate different market applications. In November 2013 AGM floated on the AIM, achieving a 30% increase on starting share price, successfully raising the funds to develop personnel and expand capacity 8-fold.

Speaking at the HVM Summit, held by the High Value Manufacturing Catapult (HVMC) to showcase how HVMC centres are assisting businesses, CEO Jon Mabbitt said *"CPI listened to us and understood the process challenge and provided a turn-key design and build service*" highlighting how HVMC catapults are assisting innovative businesses such as AGM to commercialise their processes.

Graphene markets are predicted to be worth more than £800m by 2023, however since it was first isolated back in 2004, the path to the commercial production of this new material has been challenging.

Graphene is an incredibly strong and lightweight allotrope of carbon with many appealing properties. At only a single atom thickness, Graphene is so thin that it can be considered two-dimensional, yet despite this it has an incredibly high tensile strength and flexural modulus. It is a superb conductor of heat and electricity (even exceeding the conductivity of copper) and as such is widely considered as a material which is set to revolutionise a variety of end user markets, such as as construction, industrial products, consumer electronics and personal care, by greatly improving strength, reducing weight and increasing efficiency. IBM recently developed a

graphene-based transistor that is 50% more efficient and much smaller than conventional types, showcasing how Graphene has the potential to enhance the performance of everyday items in the future.