There are just a few days to go until the Opening Ceremony of the London 2012 Olympic Games, when our Capital – and our Country – welcomes the world to watch the greatest sporting event on Earth. We are ready. From infrastructure and planning to security and transport, I am as confident as I possibly can be that we will deliver a safe and successful Games.

It is no secret that in the sporting world, science and medicine programmes play an invaluable role, from helping our athletes stay in peak condition, to fighting drugs in sport. In the run-up to 2012, I want to mention two specific organisations using science to help the athletes and sports governing bodies. The English Institute of Sport (EIS) are the ‘team behind the team’ supporting athletes in their training, physical fitness and psychological preparations. The UK Anti-Doping Agency has an excellent programme educating athletes about drugs as well as ensuring that cheats have no place to hide with its investigative and testing work.

The EIS delivers a range of science and sport medicine services to over 40 Olympic and Paralympic sports. It helps keep our athletes injury free and prepared for competition. Our last four gold medals in Beijing were won by an aggregate time of 0.87 of a second, so the margin between getting on the medal podium and finishing fourth are slim. Sports science can often help make that little difference between a medal and going home with nothing.

UK Anti-Doping, working with its international partner, the World Anti-Doping Agency, is best placed to assess the threat of doping in this country. They do this by identifying changes and trends in doping activity and ensuring that there are strategies to deal with them. Work undertaken in this area includes the introduction of a blood profiling programme which helps to detect changes in the body which may be caused by the use of performance-enhancing drugs or methods.

In January this year, I helped the London Organising Committee open the Anti-Doping Laboratory for London 2012 with GlaxoSmithKline and King’s College London. This lab is at the forefront of the fight against doping. It will be populated with scientists from King’s at the top of their field during the Games who will carry out an exhaustive testing process.

They will analyze over 6,000 samples throughout the Games – up to 400 each day, more than at any other Games in history. Our message to any athlete thinking about doping is simple – we’ll catch you. And, none of this would be possible without science in sport. From helping our elite athletes stay in top shape, to helping us combat the threat of doping, the Games would simply not be the greatest sporting event in the world without Science.