

**JOB DESCRIPTION**  
**Research Associate – DPAS Air quality sampling**  
**Vacancy Ref: A924**

<b>Job Title:</b>	Part-time Research Associate	<b>Present Grade:</b>	6
<b>Department/College:</b>	LEC		
<b>Directly responsible to:</b>	Dr Maria Angeles Solera Garcia (PDRA)		
<b>Supervisory responsibility for:</b>	Some potential for supervision of undergraduate & MSc students		
<b>Other contacts</b>			
<b>Internal:</b>			
Dr Duncan Whyatt (PI), Prof Roger Timmis (EA Partner), LEC & Engineering laboratory & workshop technical staff, LEC & Engineering postgraduate students; grounds & estates staff; admin staff			
<b>External:</b>			
Environment Agency staff (Charlie Harris, Ross Thompson, Gemma Tysoe, Sarah Watkins, Rob Kinnersley, Matt Shutt, John Dronfield); industrial site operators at Scunthorpe, including John Mawer (Tarmac); North Lincolnshire District Council; design & rapid prototyping companies; engineering component suppliers			
<b>Major Duties:</b>			
<p>This appointment is part of <i>Breathe Easier</i>, a project created out of an on-going collaboration between Lancaster University and the Environment Agency (EA). This collaboration focuses on the development of a directional passive air-quality sampler (DPAS) based upon a patent jointly developed by the two partners. The aim of the collaboration is to produce a DPAS prototype that is capable of measuring different pollutants of interest for environmental regulation and protection.</p> <p>Breathe Easier has secured funding to deploy DPASs in 2 different contentious &amp; disamenity situations, namely steelworks and waste transfer/processing site. The job holder will be responsible for engineering &amp; fieldwork activities and will be expected to:</p> <ol style="list-style-type: none"> <li>1. Review literature and reports of existing collaborative (Lancaster &amp; Environment Agency) studies on monitoring of airborne industrial particulates – especially fugitive releases.</li> <li>2. Ensure monitoring equipment is fit for purpose (liaise with workshop/technical staff if not) and prepare sampling media for fieldwork.</li> <li>3. Help project team to plan best field location of samplers.</li> <li>4. Set up and run samplers and other monitoring equipment in the field (Scunthorpe &amp; a NW site tbc) on a regular basis (~once/4 weeks/ each site), including changes to sampling media.</li> <li>5. Draft operational notes and advice on how samplers should be deployed for effective particulate measurements, including effective attribution of particulate impacts to sources.</li> <li>6. Identify and gather relevant meteorological data and work with PDRA in the analysis &amp; interpretation of results.</li> <li>7. Participate in refining the design of existing DPAS to maximize the collection of different types of particulates (e.g. wood dust), taking into account input from project team, designers and technicians; undertake and/or interpret computational fluid dynamics (CFD) modeling of airflows in the sampler in order to assist design.</li> <li>8. Assist with procurement of new DPASs, e.g. by engaging with rapid prototyping companies, and ensuring timely and cost effective delivery of high quality products.</li> <li>9. Help with the preparation of progress reports on fieldwork and engineering activities and results, including liaison with PDRA for contribution to a final report.</li> <li>10. Such other comparable duties as may be required e.g. by the PI or Head of Department</li> </ol>			