

**ROLE TITLE:** Associate Research Engineer

**Reports to:** Engineering Capability Lead

**Direct reports including contractors:** None

**Budget:** None

**Key relationships:**

- Reports to ECL
- Provides information to/ liaises with ECL, HoVS and TPMs and TPLs

## **ROLE PURPOSE:**

- To execute technical engineering tasks in line with project requirements. This will be under supervision in more complex circumstances.

## **MAIN ACTIVITIES:**

### Technical

- Carry out literature surveys through referencing, reviewing and summarising existing and state-of-the-art academic and industrial activities as a benchmarking exercise to produce a proposal to solve the technical challenge.
- Discuss how a capability could be developed to support engineering requirements by identifying and explaining the limitations and advantages of the process.
- Execute tasks to support project requirements by applying engineering mathematical and scientific theory and performing practical tasks to complete a range of technical activities with supervision in more complex circumstances.
- Apply innovative approaches to investigate, evaluate and develop technical solutions to solve non-complex technical challenges. This level of innovation may include changes including new features being added to existing technologies or processes where significant knowledge already exists. This is low risk.
- Produce documents detailing outcomes of the technical activity being assessed and recommendations going forward.

### Customer Interaction

- Show customer awareness (internal and external) through regular updates on progress, successes and challenges.
- Contribute to cross-functional activities through actively seeking and responding to requests to build internal relationships across the wider NCC.
- Identify the benefit of collaborative working by illustrating the value of the partnership for all parties and discussing issues and exchanges of information with stakeholders to identify mutual areas of interest and benefit to the NCC.

This Job Description is not an exclusive or exhaustive list of all activities that an individual in this position may be asked to perform. You may be required to undertake other responsibilities or activities, as requested by your line manager, to support your team or wider NCC activities.

## PERSON SPECIFICATION

Essential	Desirable
<u>Qualifications/Experience</u> <ul style="list-style-type: none"> <li>■ Masters in Mechanical/ Materials Engineering or other relevant degree/qualification with some engineering experience with non-composite materials</li> <li>■ Or:</li> <li>■ Significant engineering experience with no or limited experience with composite materials</li> <li>■ Or:</li> <li>■ PhD in composites with no industry experience</li> </ul>	<u>Qualifications/Experience</u> <ul style="list-style-type: none"> <li>■ Composite engineering work experience</li> </ul>
<u>Behavioural Competencies</u> <ul style="list-style-type: none"> <li>■ Able to apply engineering principles to a range of technical tasks to propose technical solutions</li> <li>■ Able to coherently summarise basic technical solutions and address engineering problems in a range of routine circumstances</li> <li>■ Able to earn the trust and confidence of colleagues through the competent and timely completion of tasks</li> <li>■ Willingness to seek out opportunities</li> <li>■ Awareness of the NCC's short term strategic technical engineering position</li> <li>■ Presents a professional image in all circumstances including relations with internal and external customers, visitors and other stakeholders</li> <li>■ Manages times effectively, prioritising tasks to achieve personal and assigned goals and objectives</li> <li>■ Understands the importance of and actively engages in learning and professional development. Committed to self-review and performance evaluation as a means of tracking development and achievements</li> </ul>	<u>Behavioural Competencies</u> <ul style="list-style-type: none"> <li>■ Understands the importance of being a member of a professional technical community and learning from its knowledge and standards</li> </ul>

**ROLE TITLE:** Research Engineer**Reports to:** Engineering Capability Lead**Direct reports including contractors:** None**Budget:** None**Key relationships:**

- Reports to ECL
- Provides information to/ liaises with ECL, HoVS and TPMs
- Mentors Graduate and Developing RE's

**ROLE PURPOSE:**

- To complete technical engineering tasks in line with project requirements. This will be unsupervised in some complex and non-complex contexts.

**MAIN ACTIVITIES:**Technical

- Complete literature surveys through the analysis of existing and state-of-the-art activities to make a qualitative assessment and justification for a recommended approach to the technical challenge.
- Prepare and examine how an NCC engineering capability can be developed by explaining how this will meet future engineering needs.
- Complete tasks to support project requirements by applying and analysing mathematical and scientific theory and performing practical tasks to complete a range of technical activities in complex and non-routine circumstances.
- Assist and leads Graduate Research Engineers and Associate Research Engineers with theoretical applications.
- Apply and analyse innovative approaches to investigate, evaluate and develop technical solutions in basic and some complex contexts. This level of innovation may include concepts for a new generation of an existing system or process where limited existing knowledge exists. This is medium risk.
- Complete technical documents giving a comparative assessment of the technical activity. Contribute to project proposals by identifying technical activities for the statement of work.

Customer Interaction

- Actively engage and present customers with informative updates on progress, successes and challenges until activity completion to enhance customer relationships.
- Pursue opportunities for multi-disciplined working (internally and externally) by proactively working with others to achieve shared goals and better position NCC technical capabilities/deliverables.
- Openly share information to facilitate the accomplishment of broader objectives.

This Job Description is not an exclusive or exhaustive list of all activities that an individual in this position may be asked to perform. You may be required to undertake other responsibilities or activities, as requested by your line manager, to support your team or wider NCC activities.

## PERSON SPECIFICATION

Essential	Desirable
<u>Qualifications/Experience</u> <ul style="list-style-type: none"> <li>■ Masters in Mechanical/ Materials Engineering or other relevant degree/qualification.</li> <li>■ Or considerable engineering experience with non-composite materials</li> </ul>	<u>Qualifications/Experience</u> <ul style="list-style-type: none"> <li>■ Considerable composite engineering work experience</li> <li>■ Working towards CEng</li> </ul>
<u>Behavioural Competencies</u> <ul style="list-style-type: none"> <li>■ Ability to produce technical solutions and construct substantiated conclusions.</li> <li>■ Competently address engineering problems involving some uncertainty, and non-routine technical and non-technical factors</li> <li>■ Ability to justify alternative engineering approaches and compare potential outcomes against appropriate criteria to justify an optimal or new engineering concept</li> <li>■ Awareness of the value of alternative and multi-disciplined viewpoints, academic advice and the importance of professional networking</li> <li>■ Attempts to seek out new developments in your engineering specialisation and apply technical knowledge and systematic processes to discover potential</li> <li>■ Able to prepare coherent engineering documents and presentations pertinent to the audience</li> <li>■ Understanding of the NCCs short term strategic technical engineering position</li> <li>■ Able to express both routine and some complex technical information effectively, including giving some technical direction to Graduates and Associate RE's, using appropriate media best suited to the audience and context</li> <li>■ Presents a professional image in all circumstances including relations with internal and external customers, visitors and other stakeholders</li> </ul>	<u>Behavioural Competencies</u> <ul style="list-style-type: none"> <li>■ Understands the importance of being a member of a professional technical community and learning from its knowledge and standards</li> </ul>