

Role: **Test Engineer**

Directorate: Information Systems

Salary Band:	Associate Test Engineer	Band 5
	Test Engineer	Band 6
	Senior Test Engineer	Band 7
	Lead Test Engineer	Band 8

Post reference: IS183

Job Evaluation Ref & Date: 05/08/19

Role statement of purpose: A Test Engineer is responsible for the testing of technology products and services. A Test Engineer is responsible for the operational stability of the products under test, and affects change in the on-going robustness, resilience and stability of those products through continuous quality assurance and throughout the lifetime of the product

Reports to:	Associate Test Engineer	Senior or Lead Test Engineer
	Test Engineer	Senior or Lead Test Engineer
	Senior Test Engineer	Lead Test Engineer
	Lead Test Engineer	Head of IS Technology

	Key Role Outputs (KROs) <i>these set out what must be achieved for the post holder to be successful in the role</i>	Key Actions <i>These set out how the KROs will be achieved – the activities required.</i>
<p align="center">Associate Test Engineer</p> <p>An Associate Test Engineer is able to perform basic product and service testing activities, following requirements sourced from the business. They support Test Engineers and other members of the Practice in ensuring products and services are tested to a high-quality before delivery to customers.</p>		
1.	Application test services delivered are high quality	<ul style="list-style-type: none"> Transform business requirements into a test scripts that can be used to accurately assess product and service quality Assist in the development of comprehensive suites of tests to ensure code quality Identify and create test data requirements Produce comprehensive test documentation that support the long-term objectives of the team

2.	Test engineering practices and tools are efficient and support the delivery team timelines and goals	<ul style="list-style-type: none"> Identify and communicate process or test issues preventing delivery or continuation of test engineering activities Maintain requirement and test information to a high standard within required delivery and testing tools
3.	Test methodology, code, data and environments are well managed and reflect current industry best practice	<ul style="list-style-type: none"> Assist in the development of reusable libraries and services Identify opportunities to optimise the current test process Maintain test scripts, code and data in accordance with practices and standards for the Test Practice
4.	High customer satisfaction is achieved for the delivery of testing services	<ul style="list-style-type: none"> Works with the Practice and team to ensure that releases are of a high quality Assist in the investigation and resolution of defects and problems Receives customer feedback and adapts working practices to resolve identified issues Works with the Practice team to improve deliveries that can positively impact customer satisfaction
5.	Makes a positive contribution to the Testing Practice at TfGM	<ul style="list-style-type: none"> Is committed to continuous development of the Practice and products and services delivered Contribute to community discussions about best practice within the Test Practice

Test Engineer

A Test Engineer is able to perform comprehensive products and service testing activities, taking ownership of identifying requirements from the business. They take ownership of ensuring products and services are tested to a high-quality level before delivery to customers.

1.	Application services are of a high quality from both a business and technology perspective	<ul style="list-style-type: none"> Create and deliver test products that ensure TfGM services are fit for purpose for our customers and are delivered through a high-quality test service Transform business requirements to test scripts that can be used to accurately assess product and service quality Develop comprehensive suites of tests to ensure test coverage Own the traceability of test requirements to test delivery and ensure comprehensive test performance documentation is present at all times Deliver a fit for purpose, robust test suite and where gaps are indicated ensure these are escalated to the Practice and team Carry out agreed test maintenance tasks Identify and create test data requirements
----	--	--

		<ul style="list-style-type: none"> Develop comprehensive technical documentation for use in the testing and certification of products and services
2.	Test engineering practices and tools are efficient and supportive of delivery team timelines and goals	<ul style="list-style-type: none"> Identify and resolve issues preventing delivery or continuation of test engineering activities Collaborate across teams and liaise with others in the Software Development Lifecycle to investigate technical solutions
3.	Test methods, code, data and environments are well managed and reflect current industry best practice	<ul style="list-style-type: none"> Design and develop reusable libraries and services and promote reuse across the department Assist in the development of medium to long term strategies for products Champion technical evolution within the Practice Innovate and identify new ways of working and new toolsets and processes that will benefit the Test Practice and team
4.	Customers are satisfied by the quality of application services operated by TfGM	<ul style="list-style-type: none"> Identify and drive resolution of issues in system robustness, resilience and stability Takes ownership of defects, working within a multi-disciplinary team to ensure they are addressed
5.	Makes a positive contribution to the Testing Practice at TfGM	<ul style="list-style-type: none"> Contribute to and influence community discussions about best practice within the Test Practice Be committed to continuous development Provide coaching and mentoring to Associate Test Engineers, colleagues and peers

Senior Test Engineer

A Senior Test Engineer is able to perform comprehensive testing activities for the most complex products and services, taking ownership of identifying requirements from the business and providing experienced feedback to the business. They take ownership of ensuring products and services are tested to a high-quality level before delivery to customers and take ownership of directing more junior members of the team and Practice.

1.	Application services are of a high quality from both a business and technology perspective	<ul style="list-style-type: none"> Lead in setting the strategic direction for the Test Engineering Practice Work closely with the Service Management and Operations teams to ensure quality issues with live services are pro-actively addressed Monitor delivery quality and constantly adjust processes and services to ensure customer needs are met
2.	Test engineering practices and tools are efficient and supportive of delivery team timelines and goals	<ul style="list-style-type: none"> Design and lead the strategy for building reusable libraries and services for the Test Practice Plan testing within the multi-disciplinary team to ensure that quality is assessed and addressed appropriately during delivery

		<ul style="list-style-type: none"> Identify 'lessons learnt' and their application to current team practices
3.	Test methods, code, data and environments are well managed and reflect current industry best practice	<ul style="list-style-type: none"> Own the development of medium to long term strategies for product lines and the Test Practice Champion technical evolution within the organisation, find, test, agree and adopt emerging technologies
4.	Customers are satisfied by the quality of application services operated by TfGM	<ul style="list-style-type: none"> Takes ownership and supports the resolution of defects or problems across the team Acts as an escalation point for Test issues and takes ownership of resolution across the Test Practice, teams and other functions in the IS Department Conducts and reports on the findings of complex non-functional testing
5.	Makes a positive contribution to the Testing Practice at TfGM	<ul style="list-style-type: none"> Be committed to continuous development of the Test Practice and the identification and adoption of new processes and methods of working Lead community discussions about best practice within Test Engineering Collaborate across teams and liaise with others in the Test Community Lead the sharing of knowledge and good practices with the wider Test Practice Lead Test teams, providing technical leadership and guidance, and coaching and mentoring their professional development

Lead Test Engineer

A Lead Test Engineer is able to perform comprehensive testing activities for the most complex products and services, taking ownership of identifying requirements from the business and providing experienced feedback to the business. They take overall Practice ownership of ensuring products and services are tested to a high-quality level before delivery to customers, are a functional escalation point for all test activities and take ownership of ensuring all more junior members of the team and Practice deliver high quality output.

1.	Application services are of a high quality from both a business and technology perspective	<ul style="list-style-type: none"> Work with teams of Test Engineers and key technical decision makers to define the strategic future of products and services Identify and communicate risks and issues to senior stakeholders and the business and produce effective plans to address these
2.	Test engineering practices and tools are efficient and supportive of delivery team timelines and goals	<ul style="list-style-type: none"> Collaborate across teams and liaise with others in the Software Engineering and Service Operations Practices to continuously improve on the efficiency of the IS Department

		<ul style="list-style-type: none"> • Champion technical evolution within the Test Practice and innovate, find, test, agree and adopt emerging technologies • Design and lead the strategy for building reusable libraries and services
3.	Test methods, code, data and environments are well managed and reflect current industry best practice	<ul style="list-style-type: none"> • Owns test craftsmanship practices across the Test Engineering Practice. • Champions best practices for the Test Engineering Practice and improvements in processes, toolsets and their application
4.	Customers are satisfied by the quality of application services operated by TfGM	<ul style="list-style-type: none"> • Champions software stability, availability and quality and best practices methods to identify issues • Diagnose issues, take ownership for all requests for support and their management according to standards and procedures • Leads the Test Engineering Practice to ensure usability, accessibility, security, stability and capacity are embedded into the development of services and products
5.	Leadership of the Testing Practice at TfGM	<ul style="list-style-type: none"> • Leads the Test Engineering Practice in delivering the teams and the Departments strategic vision for test quality • Leads a number of multi-functional delivery teams, guiding Test Engineers to adopt quality as an approach and to use best practice across our products and services • Builds Test Engineering capabilities and provides career development for the Test Engineer Community • Develop TfGM's Test Engineering capability by rewarding high performers, shaping careers paths and recruiting talent to the organisation • Identifies skills gaps and key dependencies across our test capabilities
Compulsory Outputs (COs) <i>these set out what must be achieved for the post holder to be successful in the role</i>		Key Actions <i>These set out how the COs will be achieved – the activities required.</i>
C1	Ensure you comply with all applicable organisational legislation and policy:	<ul style="list-style-type: none"> • TfGM Safety Management System (In particular section SMS 201 Roles and Responsibilities) • PCI DSS standards, policies and procedures • Bus Operator contractual management • Dignity at Work policy; • Information assurance and security in line with Cabinet Office requirements; • Risk management

		<ul style="list-style-type: none"> TfGM policies and procedures Equality and diversity legislation TfGM Vision & Values Act in accordance with TfGM's behaviours and competencies IS Operations policies and procedures IS Security Policies and Procedures
C2	Any other reasonable duties as required	<p>The post holder is representative of IS and is expected to:</p> <ul style="list-style-type: none"> Conduct themselves in a professional manner and with due courtesy at all times Be flexible within the workplace and adapt to meet the requirements of service, specifically within this role, by providing cover for extended service hours

Key Interdependencies

Key Contacts	<ul style="list-style-type: none"> Partners and suppliers People within the IS Department Business Partners within HR, Procurement and Finance Practice Leads within IS Department "Heads of" within IS Department Product Owners and "Heads of" across the business 	
Direct reports	Associate Test Engineer Test Engineer Senior Test Engineer Lead Test Engineer	None None Test Engineers and Associate Test Engineers Senior Test Engineers, Test Engineers and Associate Test Engineers
Budgetary responsibility	None	
Location	TfGM, 2 Piccadilly Place, Piccadilly, Manchester, M1 3BG	

Office Use Only	Updated	Updated	Updated	Updated	Updated
Created					
By: Simon Mather Nov 2018					

Person Specification

	ROLE: Test Engineer		<i>(Knowledge, skills and experience required at selection stage)</i>	
E	Essential Experience:			
	Associate Test Engineer	Test Engineer	Senior Test Engineer	Lead Test Engineer
E1	TECHNOLOGY DELIVERY <ul style="list-style-type: none"> • Able to understand user stories, convert business requirements into test scripts, and manage defects • Keeps team members informed on progress and shares the findings of their work in a clear way • Understanding of the theory of Agile Delivery Methods 	TECHNOLOGY DELIVERY <ul style="list-style-type: none"> • Experience working in a multi-disciplinary environment, delivering products on time and engaging Stakeholders • Shares their findings and progress clearly, assessing and reporting on readiness • Experience of working with the controls needed to manage live defects • Familiar with Agile Delivery Methods 	TECHNOLOGY DELIVERY <ul style="list-style-type: none"> • Experience of leading small multi-disciplinary teams, delivering products on time • Experience working with others in the Software Development Lifecycle to create test approaches • Has defined the controls needed to manage defects during delivery and in live service • Experienced in Agile Delivery Methods 	TECHNOLOGY DELIVERY <ul style="list-style-type: none"> • Experience of leading multi-disciplinary teams, delivering products on time and working alongside Stakeholders • Experience of managing and reporting on delivery quality simultaneously across multiple products • Expert in the use of Agile methods and quality techniques
E2	NON-FUNCTIONAL TESTING <ul style="list-style-type: none"> • Awareness of the process of integrating systems and testing interfaces 	NON-FUNCTIONAL TESTING <ul style="list-style-type: none"> • Ability to test interfaces between systems • Experience of testing digital application conformance to WCAG, device compatibility and responsivity 	NON-FUNCTIONAL TESTING <ul style="list-style-type: none"> • Experience of Performance and Integration Testing with SoapUI, JMeter, Blazemeter or similar tools • Experience of basic security and pen testing (OWASP) 	NON-FUNCTIONAL TESTING <ul style="list-style-type: none"> • Extensive experience of delivering highly available, high performing, highly scalable, highly stable applications and services
E3	TEST TOOLS AND TECHNIQUES <ul style="list-style-type: none"> • Experience with a range of tools and techniques for test 	TEST TOOLS AND TECHNIQUES <ul style="list-style-type: none"> • Test automation with tools such as Selenium, Katalon 	TEST TOOLS AND TECHNIQUES	TEST TOOLS AND TECHNIQUES <ul style="list-style-type: none"> • Commercial experience managing delivery and

	<p>automation and an awareness of the importance of test process efficiency</p>	<ul style="list-style-type: none"> • Experience of Continuous Integration (GIT, Jenkins, or similar) • Experience of compatibility testing with physical devices or Browserstack or similar • Understands the value of continuous inspect tools such as SonarQube or similar • Familiar with Agile Delivery Methodologies 	<ul style="list-style-type: none"> • Experience managing tools and subscriptions to support testing • Able to set up and configure test tools • Able to train others on test automation and advise on other frameworks • Experience of Continuous Integration (GIT, Jenkins or similar) • Experience of compatibility testing with physical devices or Browserstack or similar • Experienced in creating and maintaining test suites 	<p>release processes in a Continuous Delivery environment</p> <ul style="list-style-type: none"> • Understand the pros and cons of different technologies e.g. Cucumber vs Jasmine • Experience of a range of testing tools and services used for testing web sites, digital and application services • Experienced in creating sustainable test suites, managing ongoing refactoring needs during delivery
E4	<p>BEST PRACTICE</p> <ul style="list-style-type: none"> • An awareness of the Test Engineering profession and its principles • Aware of testing standards and approaches (ISEB, ISTQB) 	<p>BEST PRACTICE</p> <ul style="list-style-type: none"> • Understands modern testing principles and standards, and able to apply under guidance • Analysed testing processes and contributed to their optimisation • Experience of utilising and implementing Test Engineering best practice 	<p>BEST PRACTICE</p> <ul style="list-style-type: none"> • Extensive experience implementing and overseeing Test Engineering practices • Experience of using a modern and standards-based approach, guiding others in their work • Experience of analyzing and optimising the software test process and tooling 	<p>BEST PRACTICE</p> <ul style="list-style-type: none"> • An understanding of delivery approaches, software craftsmanship best practices and micro-service architectures • Knowledge of emerging tools and techniques. Has actively promoted the benefits and their use to stakeholders • Experienced integrating test processes alongside ITIL, ISO9001, ISO20001

			<ul style="list-style-type: none"> Experienced working within teams using ITIL, ISO9001 and/or ISO20001 standards 	
E5	<p>COMMUNITY CONTRIBUTION</p> <ul style="list-style-type: none"> Understands the nature of a testing community and able to clearly express their ideas Able to communicate and present to small groups 	<p>COMMUNITY CONTRIBUTION</p> <ul style="list-style-type: none"> Able to develop and present ideas that improve on the methods and tools used by the community Able to communicate and present to small groups 	<p>COMMUNITY CONTRIBUTION</p> <ul style="list-style-type: none"> Experience of sharing and encouraging best practice Good communication and presentation skills Able to support recruitment and to manage a small number of less experienced testers 	<p>COMMUNITY CONTRIBUTION</p> <ul style="list-style-type: none"> Experienced in the recruitment and retention of test engineering teams Experience of leading and continuously improving Test Engineering practices in a complex, multidisciplinary environment Leading teams in the delivery of products within specific timescales whilst working alongside stakeholders Able to train, coach and mentor others
D	Desirable Experience – SFIA version 6:			
	Associate Test Engineer	Test Engineer	Senior Test Engineer	Lead Test Engineer
D1	Requirements Definition & Management - Level 3	Requirements Definition & Management - Level 4	Requirements Definition & Management - Level 5	Requirements Definition & Management - Level 6
D2	Testing - Level 4	Testing - Level 5	Testing - Level 6	Testing - Level 6
D3	Programming / Software Development - Level 3	Programming / Software Development - Level 4	Programming / Software Development - Level 5	Programming / Software Development - Level 5
D4	Database Design - Level 4	Database Design - Level 5	Database Design - Level 6	Database Design - Level 6
D5	Technical Specialism - Level 4	Technical Specialism - Level 5	Technical Specialism - Level 6	Technical Specialism - Level 6
D6	Relationship Management - Level 4	Relationship Management - Level 5	Relationship Management - Level 6	Relationship Management - Level 6

D7				IT Management – Level 6
EQ	Essential Qualifications – Technical, Vocational or educational:			
EQ1	GCSEs or an equivalent			
DQ	Desirable Qualifications – Technical, Vocational or educational:			
DQ1	A degree or equivalent industry experience			
DQ2	ISEB/ISTQB Foundation level or equivalent experience			
DQ3	Agile / Scrum certified			
EA	Essential Attributes:			
EA1	RELIABLE by doing what we say we will do			
EA2	HONEST in our communications and our feedback			
EA3	RESPECTFUL in how we behave			
EA4	REWARDING by recognising a job well done			
EA5	EMPOWERING by enabling potential to be realised			
DA	Desirable Attributes:			