Royal Devon & Exeter NHS Foundation Trust
Data Protection Impact Assessment Toolkit **Version 5**

DPIA Reference	
DPIA Title	Use of the DNAnexus bioinformatics platform for cloud compute and cloud storage
Summary of Proposal This is provided to Information Governance Steering Group and Safety and Risk as an overview of the project. It is also published on the website and should provide the public with an understanding of the information asset and how data is protected as a standalone statement.	Exeter Genomics Laboratory is part of the South West Genomic Laboratory Hub (SWGLH). With the introduction of the Genomic Medicine Service to the NHS in England from April 2020, the complexity and scope of genomic testing, particularly utilising Next Generation Sequencing (NGS), is increasing massively. The laboratory performs a large number of genetic tests using high throughput sequencing technologies. The tests generate substantial quantities of data that require significant resource for: a) Compute: Processing computationally and bioinformatically. b) Storage: We are required to store this genetic data in an accessible format for at least 30 years. Exeter Genomics Laboratory must provide NGS testing at scale and within specified turnaround times as per the requirements of the National Genomic Test Directory as per our contractual requirements with NHS England. At current throughput, the laboratory does not have sufficient data storage and compute capacity to meet its requirements. In addition, demand for genomic testing is expected to more than double within the next 12 to 18 months. The requirement is for the provision of agile, scalable and affordable cloud hosted compute and data storage for the processing of next generation sequencing (NGS) data that is reactive to service needs and associated managed services. DNAnexus is a bioinformatics platform built on top of leading Cloud Service Providers including Amazon Web Services (AWS) and benefits from their best-in-industry processes. DNAnexus is backed by the native compute and storage services of AWS which have best in class accessibility and speed of transfer. The scalability of AWS ensures the demand of the SWGLH will not outstrip supply.
Date Ratified	04 April 2022