IPEM
Institute of Physics and Engineering in Medicine

Optical Radiation Physics Workforce Survey Summary Report 2023

Introduction

The data in this report is compiled from IPEM's Optical Radiation Physics Workforce Survey 2023, carried out in October and November 2023.

The surveys aim was to gather information on the service configurations and size of the Medical Physics and Clinical Engineering (MPCE) workforce supporting the use of optical radiation in the UK. An invitation to respond was sent to all known locations that provide optical radiation services.

At the time of compiling this report, we achieved responses from 45 organisations that provide optical radiation support, 44 of which are NHS and 1 is an independent organisation.

Information was gathered relating to the services and activities provided, staff whole time equivalent (WTE) spent providing optical radiation services, current staffing vacancies, staffing provision satisfaction and desirable staffing totals.

Key Findings

The Optical Radiation workforce consists of a small group of Clinical Scientists and Clinical Technologists, often only giving a fraction of their time towards supporting optical radiation. The vacancy rate for this specialism is quite high but does align with other vacancy rates within the NHS currently.

Optical Radiation Services have an average whole time equivalent establishment for Clinical Scientists between 0.125 and 0.75 and for Clinical Technologists between 0 and 0.35. With an individual Clinical Scientist who works in Optical Radiation giving 0.08 to 0.24 WTE of their time and an individual Clinical Technologist giving between 0.05 and 0.43 WTE.

Services provided within Optical Radiation differ between organisations, but the vast majority all provide Laser Protection Advice and UV Phototherapy services to their own organisation with 78% of respondents stating they provide external support to other organisations.

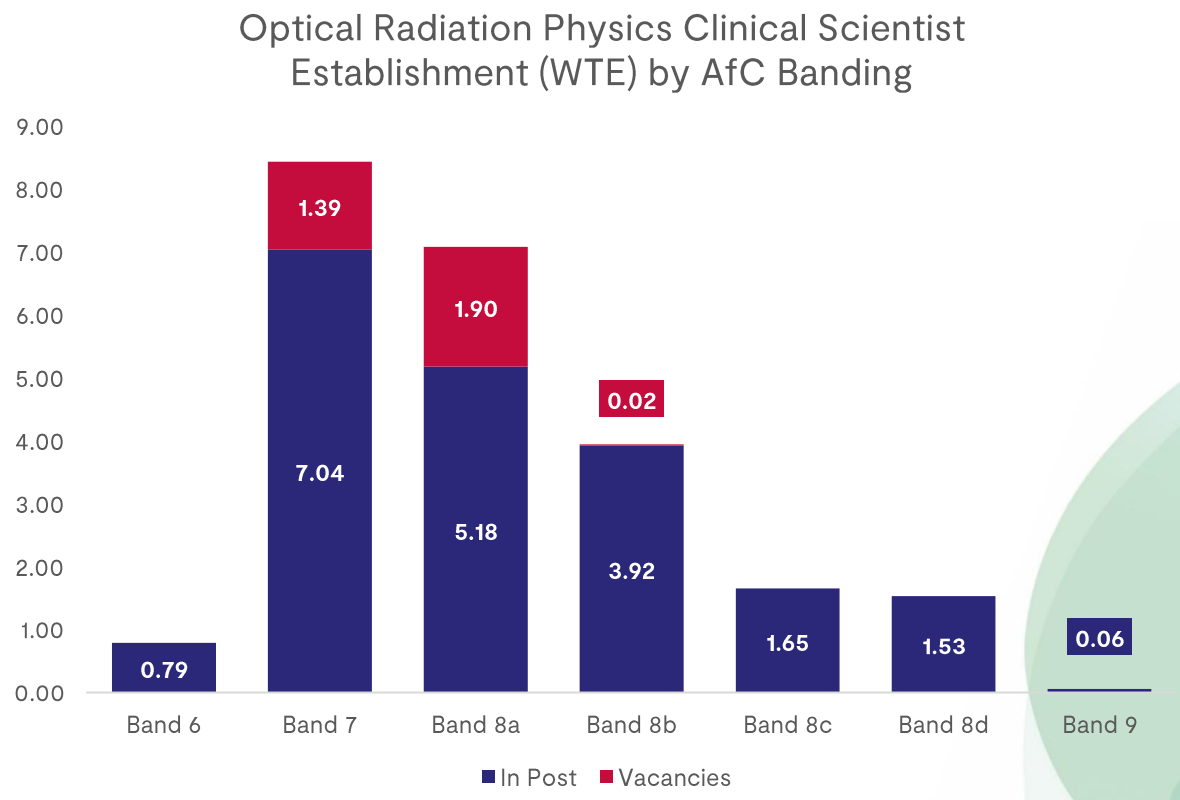
84% of respondents feel their staffing provision is below what it should be and when asked for desirable staffing levels they replied stating the profession needs an increase of 95% of Clinical Scientist establishment and an increase of 77% of Clinical Technologist establishment.

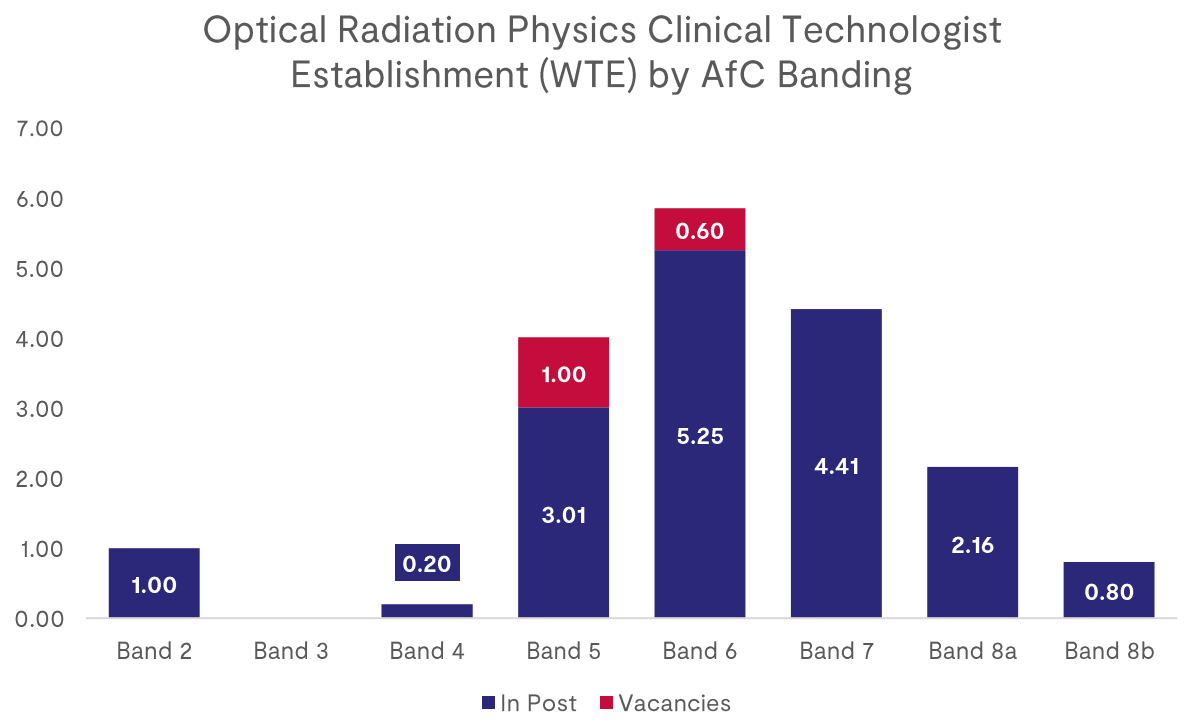
Establishment

Responders were asked to provide their establishment and vacancies for Clinical Scientist and Clinical Technologist posts working specifically with Optical Radiation, as shown in the table below. 1 of the 45 services reported no establishment of Clinical Scientists and 14 services reportedly run without any Clinical Technologist establishment.

	Headcount	Establishment WTE	Vacancies WTE	Vacancy Rate
Clinical Scientists	102	23.48	3.31	14%
Clinical Technologists	55	18.43	1.60	9%

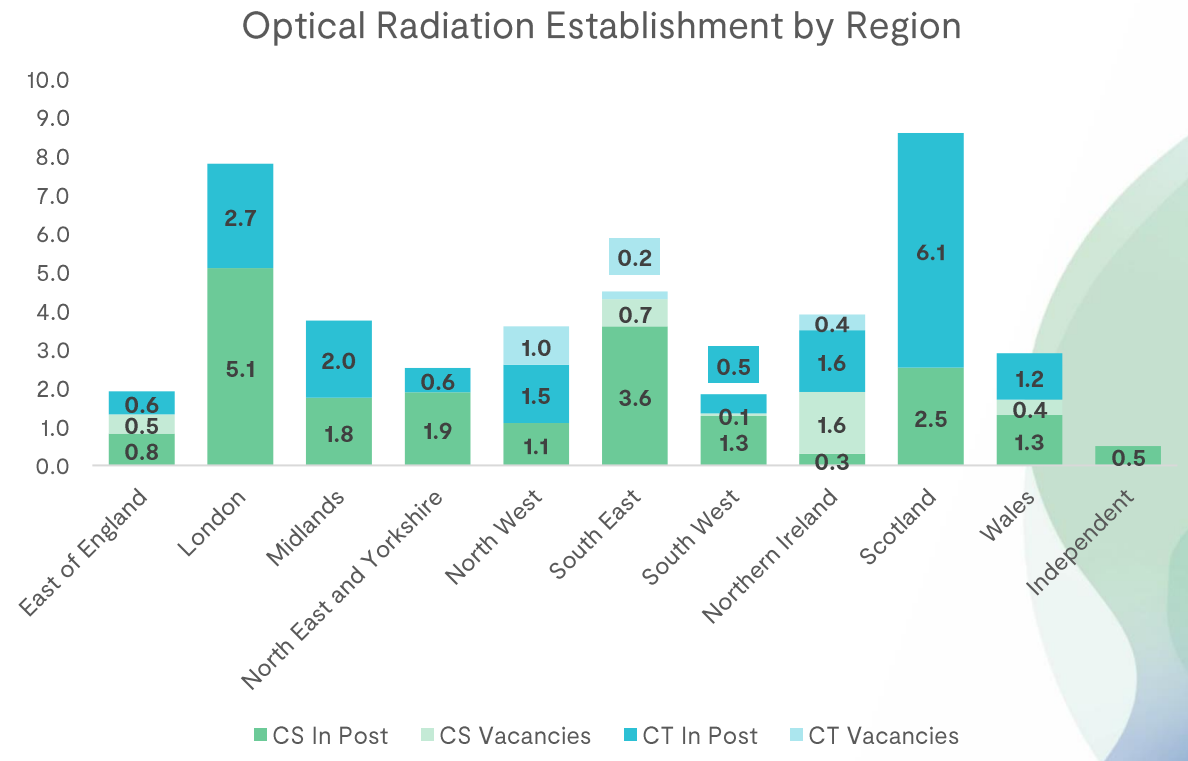
The following charts show this establishment, split between in post and vacancies, in NHS Agenda for Change banding.



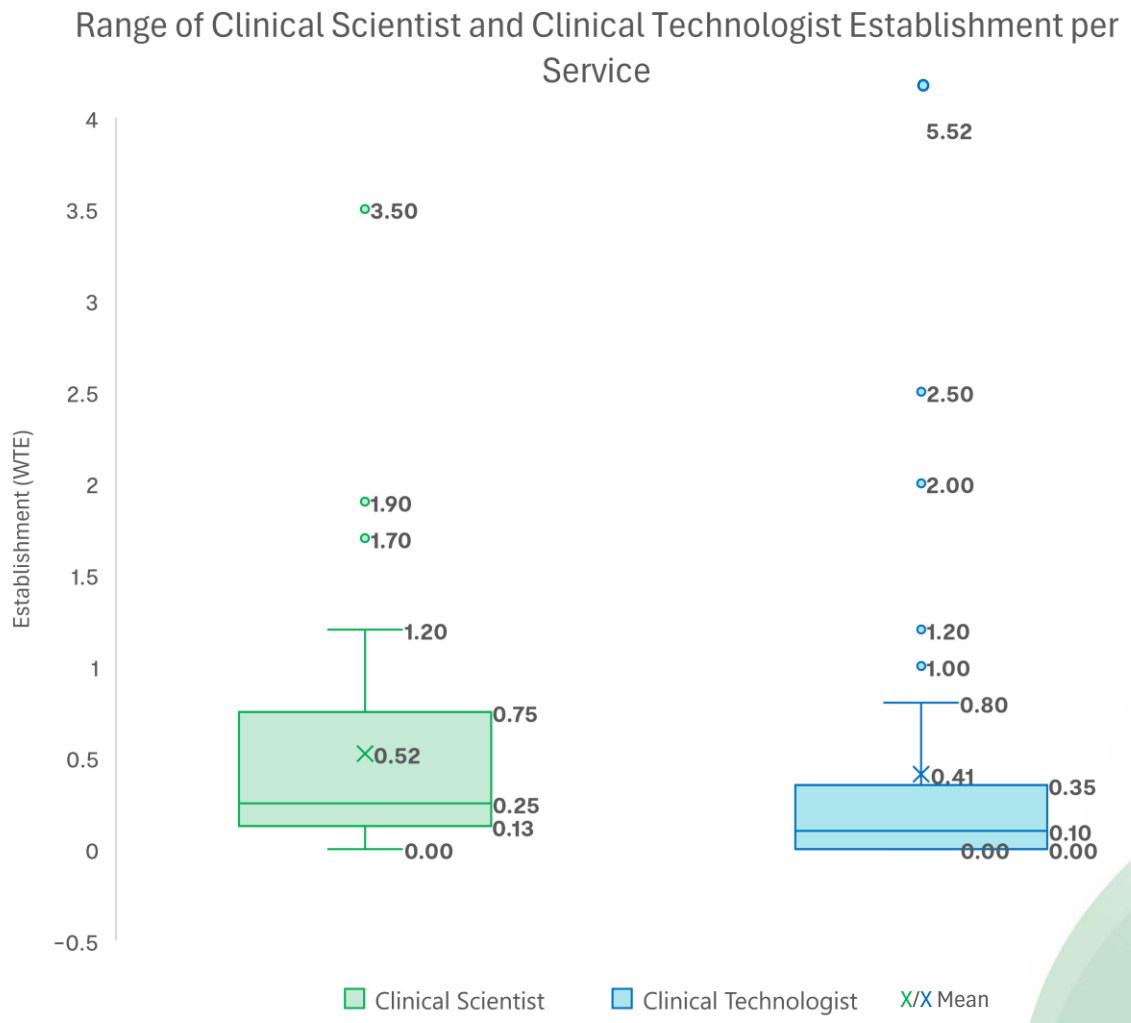


Establishment by Region

When broken down by region, Northern Ireland, North West and South East regions have the highest vacancy rates.

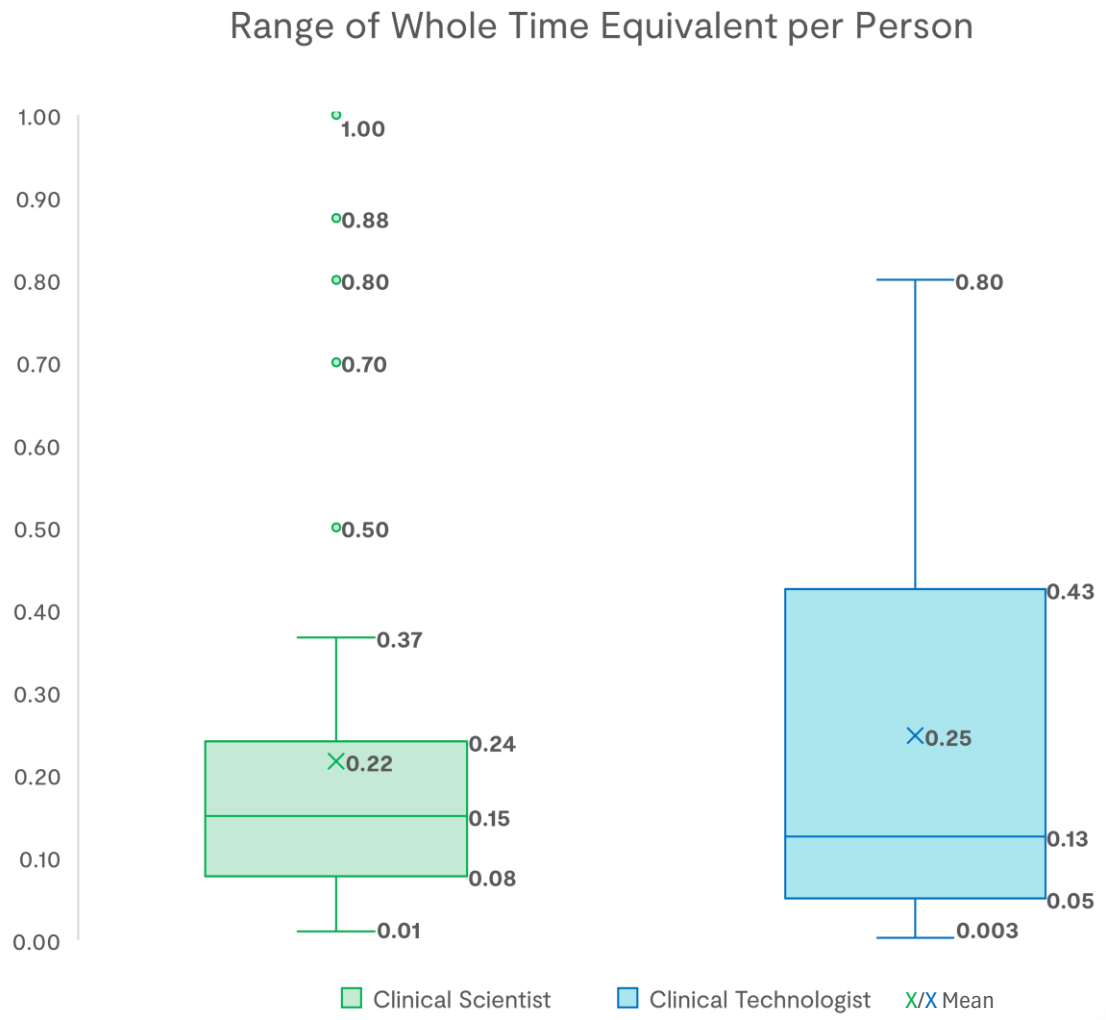


The range of reported Clinical Scientist establishment supporting the use of Optical Radiation in each organisation is shown below. The majority of organisations have between 0.125 and 0.75 whole time equivalent Clinical Scientists and between 0 and 0.35 whole time equivalent Clinical Technologists.



Range of reported Clinical Scientist establishment (Min – 0, Median – 0.25, Max 1.2, Max outlier – 3.5) and Clinical Technologist establishment (Min – 0, Median – 0.10, Max – 0.8, Max outlier – 5.52).

Comparing an organisations establishment against the headcount of staff gives us the range of reported individual Clinical Scientists working on average between 0.08 to 0.24 WTE in Optical Radiation and reported individual Clinical Technologists between 0.05 and 0.43 WTE.

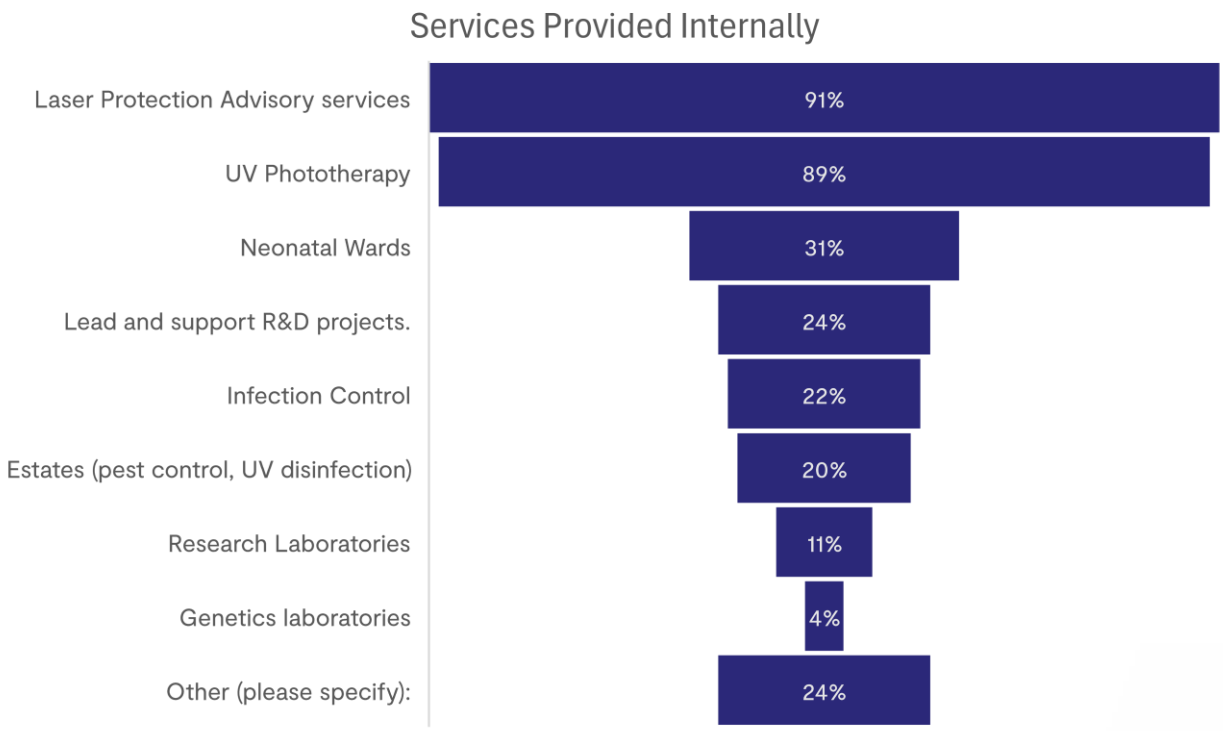


Range of reported individual Clinical Scientist establishment (Min – 0.01, Median – 0.15, Max – 0.37, Max outlier – 1.0) and individual Clinical Technologist establishment (Min – 0.003, Median – 0.13, Max – 0.8).

The participants were also asked how many of their staff are over the age of 55, this age being used as NHS staff are eligible to retire and are approaching retirement age. We found that 17% of the current workforce is over 55 years old, which is around the same percentage of other NHS professionals.

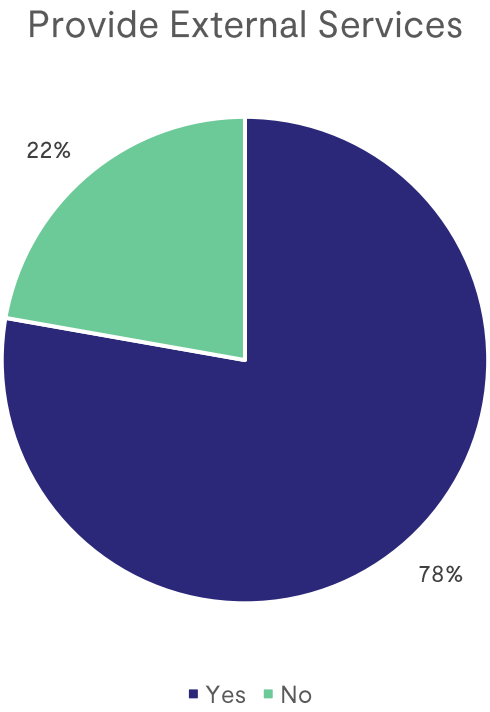
Services Profile

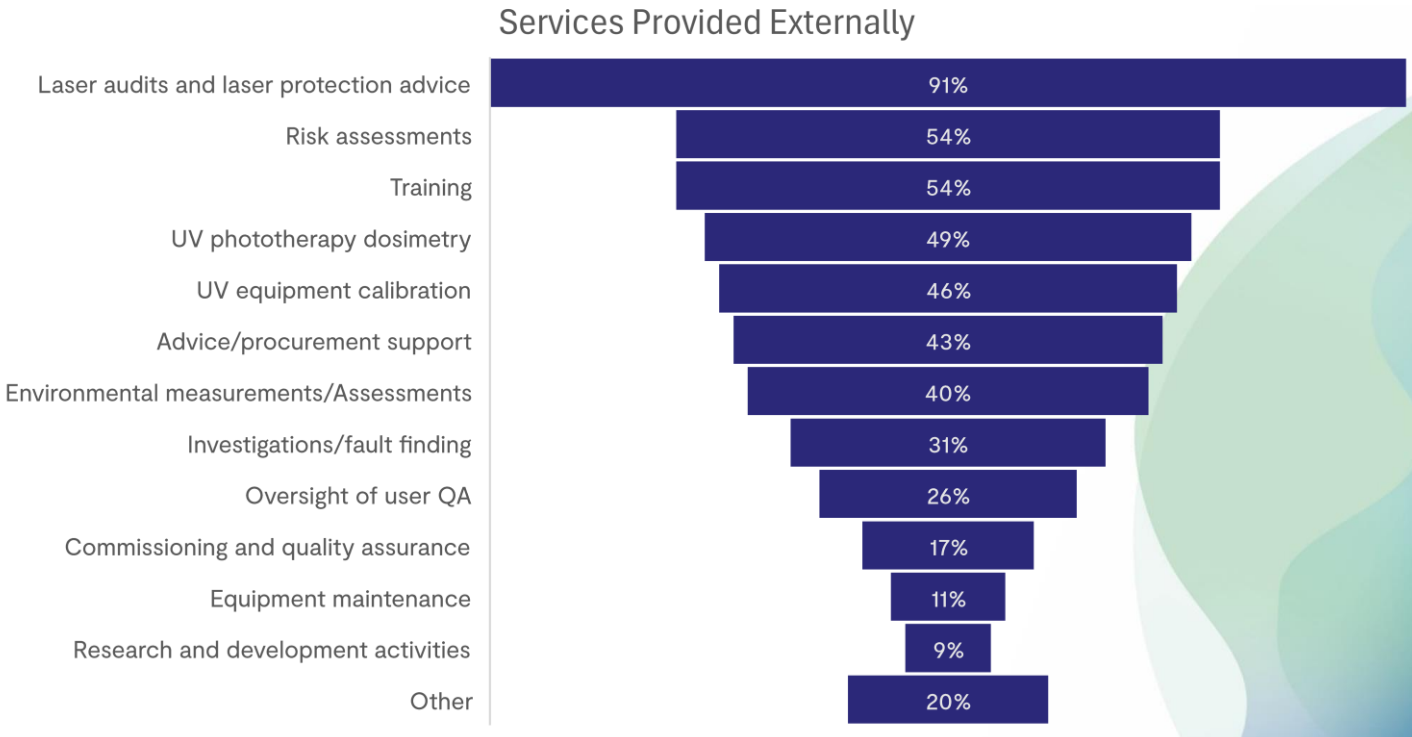
Survey respondents were asked to state which services were provided internally to their organisation, with the below categories to pick from and an “Other” option with a text box to specify which services.



Other includes: Photobiology services, UV safety advice, UV equipment calibration, Photodynamic therapy support, Lasers in ophthalmology, Ultrasound and Laser QA, Training, Writing of local rules

We then asked if they provided any external servicers to organisations outside of their own, which 78% of respondents stated they do and again were given a list of options of services to choose from with an “Other” option asking to specific which services.

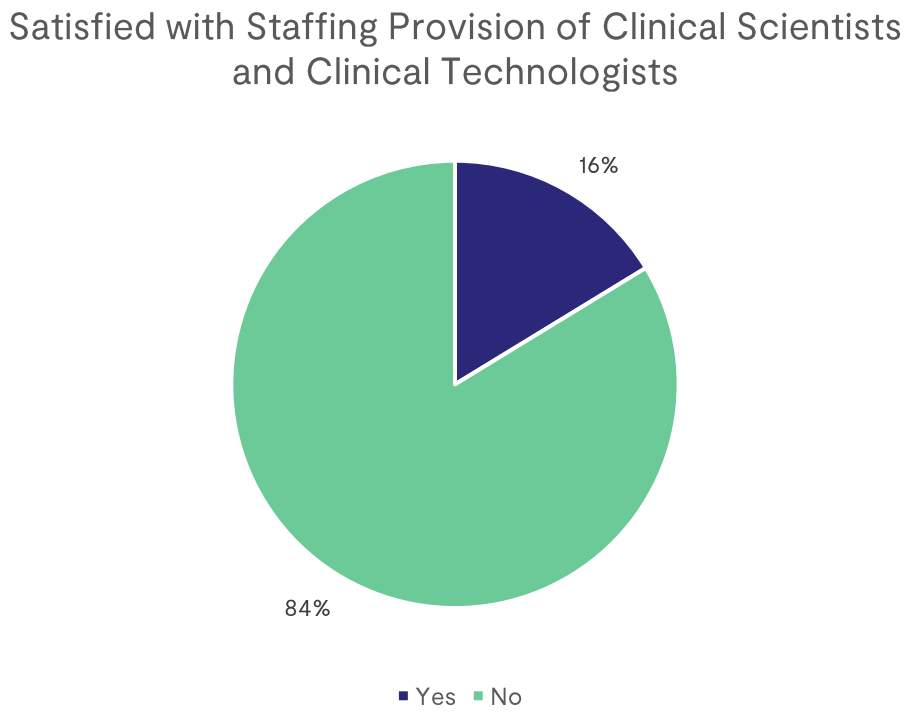




Other includes: UV Phototherapy safety advice and audits, Photodynamic therapy support, Blue light dosimetry, Writing local rules

Staffing Provision and Desired Establishment

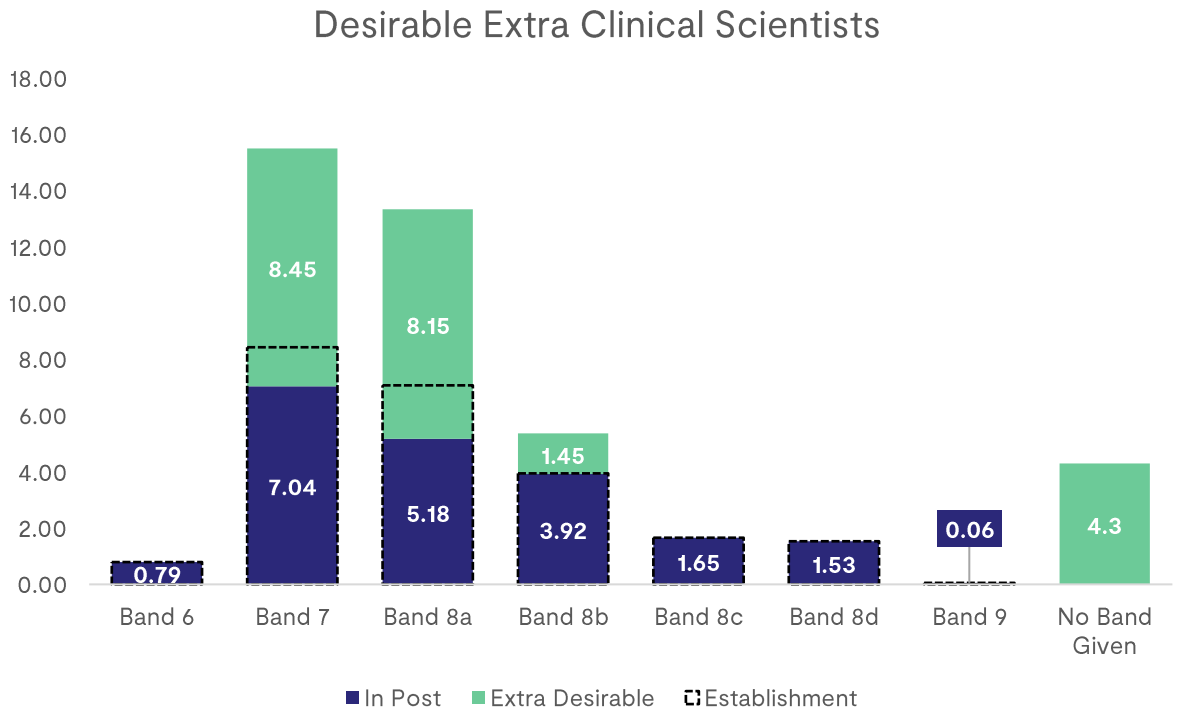
The majority of respondents stated that their provision of Clinical Scientists and Clinical Technologists was not enough to run a comprehensive service, with 84% saying they need more staffing.

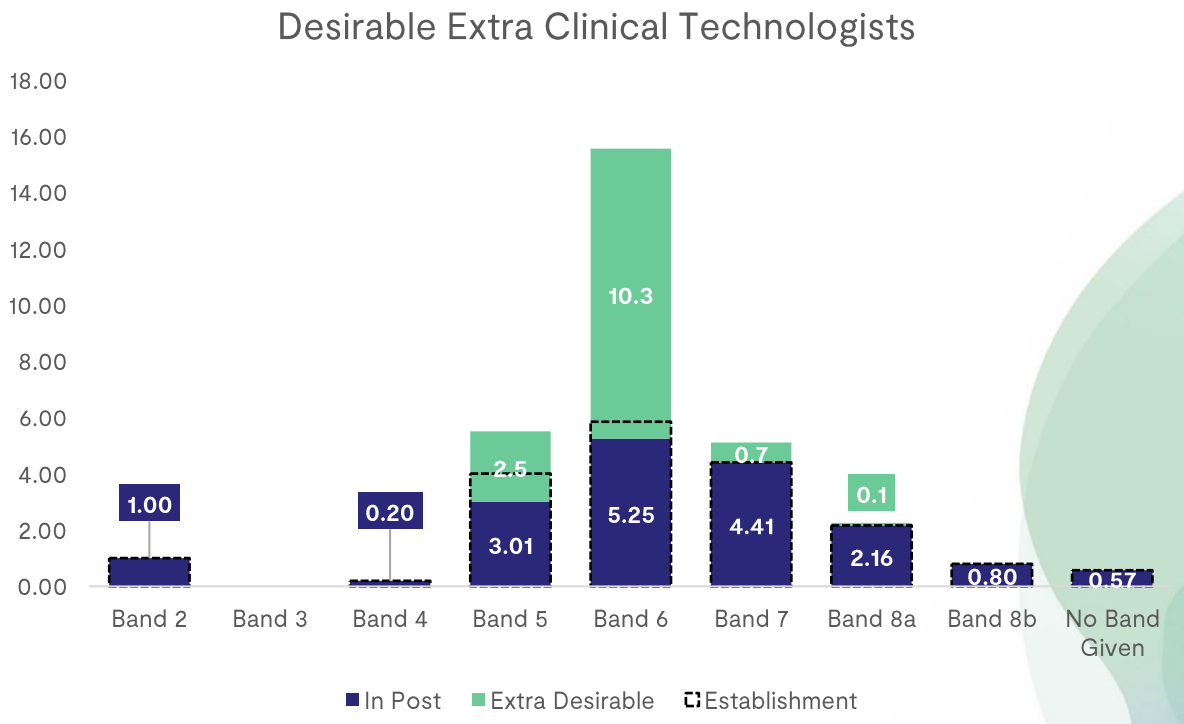


When asked how many extra staff services believe they need to run a comprehensive Optical Radiation service, respondents stated that they need to increase Clinical Scientist establishment by 95% and Clinical Technologist establishment by 77%, almost doubling the current workforce whole time equivalent.

	Establishment WTE	In post *WTE*	*Desirable Establishment WTE*	*Required to meet establishment in WTE*	*Required to meet desirable establishment in WTE*
Clinical Scientists	23.48	20.17	45.83	3.31	22.35
Clinical Technologists	18.43	16.83	32.60	1.60	14.17

Splitting this into Agenda for Change bands shows the majority of extra Clinical Scientists are needed at Band 7 and 8a and for Clinical Technologists they are needed at Band 6.





Summary

The Optical Radiation Physics workforce is currently on average just managing to provide a routine service but as workloads are increasing there is worry about being able to meet future demand, with 84% of respondents stating their provision of Clinical Scientists and Clinical Technologists is not enough.

This is a very small workforce, where the majority of staff are working within other departments or specialisms and only provide a fraction of their working time performing Optical Radiation services. Due to this there is a lack of service resilience and a feeling among some of the workforce that staff are being spread to thinly with not enough time devoted to Optical Radiation.

To meet this future demand and to make up for the lack of service resilience the workforce needs an uplift of 95% for Clinical Scientists and 77% for Clinical Technologists.

The majority of services also provide external services to other locations and with services already strained and with such a small workforce there is worry this becomes a single point of failure for multiple organisations.