EPSRC National Epitaxy Facility - Risk Register **Version 1.3**

Risk Management in the NEF					
AREA	DESCRIPTION	IMPACT	PROBABILITY	MITIGATING ACTION	CHANGES THIS PERIOD
MBE Systems	Failure of MBE control hardware. Aging unsupported equipment fails catastrophically and cannot be replaced (Sheffield/UCL)	MEDIUM	HIGH	Regular Manintenance and upgrades budgeted	Spare modules kept in stock. New MBE system on order.
MOVPE Systems	Failure of MOVPE control hardware. Aging unsupported equipment fails catastrophically and cannot be replaced (Sheffield/Cambridge)	MEDIUM	MEDIUM	3 out of 5 reactors are relatively new. Two older reactors are well maintained and continue to be supported by the manufacturer. Sharing of MOVPE business between reactors or partners is possible.	TS hardware is stable for the moment, but replacement is challenging. Considering replacement in the NEF Renewal budget permitting.
MBE Systems	Failure of MBE system components e.g., cells, pumps etc.	MEDIUM	MEDIUM	Keep stock of parts and have trained technical staff available to replace quickly.	Restock for the final year of the grant.
MOVPE Systems	Failure of key componenents e.g., heater stages, MFCs etc.	MEDIUM	LOW	Keep stock of parts and have trained technical staff available to replace quickly.	None
MOVPE Systems	Failure of Hydrogen generator preventing growth on all reactors (Sheffield).	MEDIUM	MEDIUM	Bottled gas can be used as back-up.	New H2 gen due to be installed in spring 2026. Majority of the cells on the old generators are reasonably new.
Staffing	Loss of key staff	MEDIUM	MEDIUM	Share responsibilities across facility. Recruit and train new staff. Consider outsourcing of work to external wafer suppliers if major interruption to service.	DCA grower left, other MBE staff trained on the system before departure.
Act of God	Major loss of infrastructure for period of 6 months or more due to flood, fire, pandemic...	HIGH	LOW	Utilise spare capacity in other parts of the facility where possible. Outsourcing of wafer supply to external contractors. Discussions with EPSRC on amendments to contract.	None
Termination of contract	Decision could be based on a change of policy with regard to National Reserach Facilities, poor performance or change in financial circumstances	HIGH	LOW	The contractors will mitigate against the poor performace aspect of this perceived threat by delivering the service to the agreed level. Negotiation with funder on support for remaining business if decision to cancel is taken.	EPSRC funded new MBE system at Sheffield worth £7M, and NEF received top marks in mid-term review this year. Renewal process will be streamlined, and call is expected in September.
Decline in grants	Lack of demand from research community. Decline in Grant Funding from UKRI dueto changing priorities in this field leadds to undermining of Facility financial model.	LOW	LOW	Contniue to provide excellenat support to the community thus ensuring demand and maximising success through peer review. Diversity of portfolio and increase cost recovery through industrial or other funding until situation recovers. Migrate epitaxy infrastructure toward new materials.	A defunct risk in this contract (overcapacity problem now main risk).
User demand exceeds capacity	Increase in demand from community exceeds the contracted capacity (limited by staffing and consumables) in facility	HIGH	MEDIUM	Monitoring the demand and capacity closely on regular basis and reporting to the EPSRC through Annual Report and Steering Committee.	Additional funding for UCL received to meet the increased demand from the community. Cambridge and Sheffield are on track to fulfill their capacity.
Increase in cost of materials and services	Inflation and global issues affecting supply chain and costs of key materials and services. Fixed budget from EPSRC.	MEDIUM	HIGH	Look for cost saving in operation. Increase income from other sources outside of EPSRC. Negotiate increased budget from EPSRC or reduce expected delivery targets.	New users now charged consumable DI costs on their grants to meet the increasing costs. New industrial users secured.
Materials supply	Increasing regulation of materials such as Gallium due to geopolitical or other supply chain issues affecting costs and supply to Facility	MEDIUM	HIGH	Keeping good stock of wafers and review stock regularly. Identifying potential new suppliers.	Indium now also affected (not just Gallium). University now agrees to sign Chinese end-user agreement for export, giving access to more suppliers.

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