



Network Installation Solutions Ltd: **University of Warwick – STEM Connect Fibre Rollout**

Site Address:

University of Warwick, Westwood Campus, Avon Road, Coventry, CV4 7AL.

About the University:

The University of Warwick founded in 1965 is now one of the UK's leading higher education institutions (ranking 74th on the global scale) and the youngest member of the Russell Group.

The University currently hosts over 29,000 students upon the Campus, ranging from approximately 150 countries around the world. Students currently have access to a diverse range of clubs & societies, encouraging the building of new friendships, doing something they love, or trying something new.

In 2023 the University of Warwick awarded 122,410 first-class honours qualifications (which includes graduates from various programmes), which is a large reason for the University being the fifth most targeted by the UK's top 100 employers in 2024.

Our Partnership:

NIS have a prestigious contract in place with the University as their sole supplier for installation projects – includes both day to day activities and large Capital Expenditure Projects (either direct award or through third party contractors).

NIS are required to undertake all cabling projects which includes multiple manufactured solutions and includes CAT6 and CAT6A dependent upon building requirements.

All installations include containment where necessary, and the supply of data cabinets/PDU's and the mounting of wireless solutions as further examples.

All internal installations are cabled utilising CCA grade fire rated copper and fibre or above. All copper/fibre is tested to the highest standards.

Since contract commencement, NIS have held a permanent engineering presence on site due to the large volume of works generated through the IT team directly and Capital Expenditure projects and typically have as many as 6/8 engineers on site to manage the many varying projects which need simultaneous attendance. At all times NIS engineers are required to comply with strict on-site Health and Safety procedures and work precisely to University Cabling Standards documentation.

Stem Connect:

NIS Ltd recently completed phase 1 & 2 of an exceptionally large multi-phased rollout referred to as the STEM Connect project. The University has a new once-in-a-generation opportunity to invest in and reimagine the STEM research and teaching spaces. Through the STEM Connect Programme, the University are creating a £425m Science and Engineering Precinct, providing a state-of-the-art environment that combines disciplinary excellence with interdisciplinary working.

To facilitate the overall requirements for the completely new Science and Engineering Precinct, a significant section of the Universities land is to undergo major redevelopment.

The University were presented with a major issue as many of the Campus' fibre backbone network ran through the plot of land being redeveloped and the risk of damage to any of its infrastructure would have been catastrophic to network services.

Phase 1:

The University and the Project determined that a new cable duct route was to be created to bypass the plot of land, and that all existing fibres were to be re-cabled in full following the new routes at which point the old fibre cables could be cut out. The University had a need to fully determine without error the number of cables, whether cables are live or redundant, and the origin/destination locations and routes of each live fibre.

NIS had worked directly with the University providing multiple teams of engineers to physically identify, label and trace every single cable running through the impacted land. The cables were traced in full back to source at both point to point locations to fully determine if the cables were live or redundant. At the completion of the investigation phase in 2024, working collaboratively with the University it had been identified that out of the over 100 existing cables, the requirement to cable as new was reduced to 45.

Phase 2:

NIS Ltd were then tasked to cable the new routes, which consists of both Multimode and singlemode fibres (as high as 96 cores) and several voice cables. In total over 50km of cable had been installed by 6+ engineers. The core delivery methods of the prestigious project included.

- Precision management
- Adherence to ultra-critical timelines
- Management of H&S on a busy University Campus
- Deploying multiple teams simultaneously
- Constant communication with the University over progress management, reporting and risk mitigation

Through its management and delivery approach, NIS are set to complete the entire project on time and within budget and gained exceptional praise for the quality of both workmanship and project management.

Future Works:

In 2026 NIS are set to undertake the full infrastructure cabling for the first of the new buildings to be created within the Science & Engineering Precinct. This project is a once in a generation opportunity for the University to reimagine their spaces (both new builds & repurposing existing buildings), with the aim of creating a dynamic environment for staff and students to take advantage of for decades to come.

This new project is expected to include the installation of.

- Supply and installation of 30 x 47U Floor standing Data Cabinets to a total of 10 x Comms Room locations, inclusive of all cable management and intelligent PDU's.
- Supply and installation of a new Voice and Fibre backbone connections from the existing Campus to the new MER Comms Rooms
- Supply and installation of a new Voice backbone between the new Comms Room locations
- Supply and installation of a new Copper backbone between the new Comms Room locations
- Supply and installation of a new Fibre backbone between the new Comms Room locations, inclusive of the latest OM5 technology.
- Supply and installation of approximately 4000 x CAT6A Data Outlets to locations throughout the new Building.
- Supply of labour to mount all new wireless access points
- Supply and Installation of all required patch leads at both outlet and cabinet locations

There is to be a new Science & Engineering Building created for the provision of both teaching and research in Physics, Chemistry and Engineering as well as the wider faculty.

The project has been planned to utilise a phased approach to the developments, which will be implemented over a 10 Year period.

See below the Universities Illustrative Science and Engineering Precinct Vision Sketch.

