



3 Station Design

Highlights

- CCTV installation designs commissioned as part of larger project to replace footbridges at Llandaf, Radyr and Machynlleth stations
- CCTV had to integrate with existing legacy system and be capable of supporting future expansions.
- Delivered on-time and to customer satisfaction

Customer requirements

21st Century were enlisted to deliver the SISS design works for Llandaf, Radyr and Machynlleth stations.

The three Welsh stations were undergoing works to provide new DDA compliant footbridges and lifts, requiring cabling from the existing footbridges to be diverted to the new.

The works completed by 21st Century included the design for telecoms services associated with the provision of the new bridge and the recovery of the old. The designs included the replacement or diversion of all station cabling associated with the old bridges, to allow them to be demolished and the design for the new bridge CCTV to allow them to be installed to current Network Rail standards.

21st Century were required to provide both GRIP 4 (Approval in Principal) designs and GRIP 5 (detailed) designs.

Delivery

Utilising the in-house design team, 21st Century provided designs compliant to Network Rail standards.

The assets selected for the design were analogue and matched existing assets from the station to avoid any issues during integration. However, CAT 5e cabling was used to allow for an easier and lower cost migration to IP and digital camera technology in the future.

During the design process it was identified that some of the legacy equipment was no longer suitable as it could not support the additional equipment required. Where this was the case, a modern equivalent was substituted that would work with remaining legacy equipment and allow for future development.

The designs were approved against the additional work scopes.

21st Century were required to provide both GRIP 4 (Approval in Principal) and GRIP 5 (detailed) designs.