

Private (Dark) Fibre Implementation

Project Background

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As part of two data centre construction and migration projects, Mafi Mushkila was retained to implement a private / dark fibre network to connect three data centres.

To connect Datacentre (a) to Datacentre (b) required a dig / duct run of 5.6km. To connect Datacentre (b) and datacentre (c) required a dig / duct run of 12.6km. Each path consisted of two diverse routes, each route consisting of two 90mm ducts. Seven sub-ducts were inserted into each duct to protect fibres and to allow the use of blown fibre to ease future fibre installations. To provide connectivity between Datacentre (a) and Datacentre (c) additional ducts were installed bypassing Datacentre (b), connecting the other routes.

Additional chambers and ducts were implemented at each of the datacentres to provide final routes into the facilities. Fibre bundles were blown into the routes and terminated in Optical Distribution Frames (ODF) within the datacentres.

The routes passed through housing estates, beneath a river with endangered species, adjacent to trees with protection orders, past a fire station, over bridges and under a railway line requiring dual directional drills; all of which had to be managed, permissions sought and mitigating actions taken.

Mafi Mushkila negotiated significant cost reductions and managed both deliveries to successful outcome, on time and below budget.



Mafi Mushkila was responsible for:

- preparing and managing project plans
- identifying and coordinating technical resources
- managing 3rd party suppliers
- coordinating site surveys and access
- management of customer change process for on-site works