

Risk Assessment - General Network Construction

This risk assessment covers the general construction activities required to build the F4RN broadband network. These include:

- Installing ducting - hand digging / mole ploughing / mini-digger
- Installing chambers - large / small
- Installing telecoms cabinets (including construction of the concrete plinth)
- Installing customer CPE
- Blowing and splicing fibre

It should be read in conjunction with the F4RN Method Statement for General Network Construction

Risk Assessment

Hazard	Typical Activity	Rating of Hazard			Current Control Method	Notes / Comments
		Harm or consequence (A)	Likelihood (B)	Risk (A)x(B)		
Manual handling	Movement of drums of ducting and fibre Installation of chambers - heavy concrete covers	3	3	9	SP1: Manual handling training Use of mechanical lifting aids Provision of gloves	
Electric Shock	Mini-digger cutting buried cable Drilling through wires when installing CPE Contact with overhead wires.	4	3	12	SP2 / SP3 Use of CAT scanner / cable scanner. Hand digging in vicinity of overhead lines. Mechanical plant not to be used in vicinity of overhead power lines.	Risk from electric shock reduced through use of suitable tools - eg. Double insulated electric drill.
Chemical Burns	Mixing / using cement (telecoms chambers / plinth for cubicles)	1	3	3	Provision of gloves	Precautions / instructions provided with bags of cement must be followed.
Use of hand tools	Digging trenches / telecoms chambers Cutting ducting	1	4	5	SP2: Appropriate footwear Provision of gloves	

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Use of power tools	Drilling to install CPE Cutting holes for ducting in telecoms chambers (hole saw)	2	3	6	SP2: Tools only used by competent persons Provision of PPE (eye protection, hearing protection, gloves)	
Slips, trips and falls	General risk - particularly around trenches and holes for telecoms chambers, but also where ducting is installed across drainage ditches	1	5	5	SP8: No excavation >1m; in general trenches and chambers will be no more than 600mm deep. Safe access and egress Good housekeeping / control of working area	Where work area is close to public footpath / highway then additional precautions (eg barriers) will be required.
Ladders and working at height	Installing ducting at high level	4	2	8	SP6: Correct use of ladders.	
Moving plant and machinery	Tractors and mini-diggers will be used in some phases of the project (eg for mole ploughing, larger trenches and for installing telecoms chambers)	5	2	10	SP3: High visibility clothing Use of banksman People not directly involved kept at a safe distance	Potential for serious injury / death managed through existing control. Mechanical plant only to be used by operators who are trained and competent or who, when being trained, are under the direct supervision of a competent operator.
Compressed air	Blowing fibre	3	3	9	Eye protection to be worn during any operation involving compressed air. Do not look down the ducting.	Potential for harm considerably higher if eye protection is not worn. Continuous monitoring of control measures is essential.
Glass fibres	Splicing fibre - it is necessary to cut the fibre which may create small glass fibre splinters.	2	4	8	SP12: Only approved technicians to splice fibre	

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Lasers	Used to transmit the signal down the glass fibre.	2	4	8	SP12: Do not look directly down a fibre or into the laser diode output on routers / switches Where possible, lasers will be used where the power output is too low to cause eye damage.	Likelihood of eye damage reduced by limiting the power of the lasers used in the residential gateway (CPE) and central routers.

NUMERICAL SCORING METHOD						GUIDANCE ON ANALYSIS OF NUMERICAL SCORES
Possible harm or consequence	Minor injury	Medical Treatment or Lost Time Injury 1 to 3 days	Lost Time Injury >3 days	Major Injury e.g. broken arm/leg	Death	SCORE 1-4 Low risk , work can proceed in accordance with method statement
Numerical score	1	2	3	4	5	SCORE 5-12 Medium risk , work can proceed but monitor and maintain control measures
Likelihood of harm Definition of events are based on BS 8800:2004	Extremely Unlikely Less than 1% chance of event during lifetime	Unlikely Will happen once in a lifetime	Likely Will happen once every 5 years	Very Likely Will happen once every 6 months	Almost Certain Will happen more than once every 6 months	SCORE above 12 High risk Work is not allowed to start. Redesign the work