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# Service Specification

GLOSSARY

Definitions additional to those found in the Contract Conditions Clause 1 Interpretations	
Change Request	Order for additional works as set out in the Change Procedure
Contract	The Council enters into a Contract with the Supplier for the provision of Services under this Contract
CCTV	Closed Circuit Television
Dark Fibre services	The practice of leasing unlit optical fibre from a network service provider
GIS	Geographical Information System
Non-Service Affecting Fault	Means any fault, repair or condition that does not cause the Council to suffer a service loss
OTDR	Optical Time Domain Reflectometry - A common test of optical fibre circuits
PoP	Point of Presence - A network service provider's central point of delivery of services for a given geographic area/catchment
Service Affecting Fault	Means any fault or condition affecting the Council's ability to convey electronic or optical communications traffic across the circuit
WAN	Wide Area Network – the Council's part of its telecommunications network that spans a large geographic area typically interconnecting different buildings.
DWDM	Dense Wavelength Division Multiplexing

## **1. GENERAL REQUIREMENTS**

- 1.1 This Specification is for the replacement access circuits in the form of Point-to-Point (P2P) dark fibre circuits to a number of public sector locations across the city.
- 1.2 The list of sites, current serving Point-of-Presence (PoP), diversity requirements etc. are provided in the Annexes.
- 1.3 The Supplier shall take full responsibility for:
- Solution design;
  - Detailed survey in relation to any proposed installation;
  - Installation, including supply of materials and testing;
  - On-going support and maintenance once installed.
- 1.4 The Supplier shall
- provide dark fibre connectivity to all sites listed in the core sites; and
  - provide dark fibre connectivity to as additional sites listed in Annex 02 as ordered
- 1.5 Annex 01 and 02 of this Schedule indicate the required termination points for these circuits (B end).
- 1.6 All sites/circuits will be used to deliver services over the Council's Wide Area Network (WAN) and must terminate in one of the WAN Points-of-Presence to allow the patching of circuits to the WAN routing equipment without further investment in infrastructure. The current serving WAN PoP for these circuits is indicated for information, but the Supplier is free to terminate the dark fibre circuits in any of the WAN PoPs that best suit their network design.
- 1.7 The Council has the option of ordering additional sites and specific information will be provided in each change request.
- 1.8 The Supplier is free to choose the routes, location of splice points and fibre interconnects to deliver the solution as long as the Point-to-Point fibre circuits meet the performance requirements specified in this Specification. However, when designing the routes, the Supplier shall take into account the most cost-effective route for the Council.
- 1.9 The Supplier shall work with the Council and to ensure that the Council's WAN connectivity is maintained during the migration of transmission services to the Dark Fibre infrastructure and is supported throughout the life of the Contract.
- 1.10 Sites requiring resilience shall be served by two fully diverse dark fibre paths to protect against a fibre outage (separate ducts and minimum separation of 2 meters between ducts).
- 1.11 Diverse fibre paths should be served from two separate WAN PoPs. Where the Supplier chooses to propose a solution relying on circuits served from a single PoP, the dark fibre paths must remain fully diverse, and the Supplier must provide physically different entry points into both the WAN PoP and the Council's site along with separate fibre termination points on physically separate patch panels.
- 1.12 Optical fibre utilised for this project should meet the following version of standard, ITU-T G.657/G.652. The Supplier's choice of fibre shall be future proofed to allow potential future upgrades in speeds to 100 Gbps and to potentially support DWDM transmission in the access layer, over the next 25 years.
- 1.13 Should a Change Request be instructed for Optional sites the Supplier will manage the delivery of the that service for the remaining duration of the Contract.

## **2 IMPLEMENTATION MILESTONES**

- 2.1 The Supplier shall provide a phased delivery schedule, referred to as the Implementation Plan and informed by the Project Plan, which identifies several delivery Milestones for the following key phases of the service delivery phase which will include but not limited to:

- Mobilisation (M0): one Milestone;
- Planning, Survey and Design (M1): one or more Milestones;
- Infrastructure Build (M2): one or more Milestones;
- Circuit Handover (M3): one or more Milestones to mark handover of logical Segments (group of Circuits).

2.2 Following handover of all circuits, the project shall enter the Operation and Maintenance phase.

2.3 The supplier shall identify Milestone Dates as the dates specific Milestones are to be achieved in the Implementation Plan.

2.4 Implementation of the connectivity of the core requirements shall be complete according to the following Milestones:

- For the main Contract, the last circuit ordered shall be live and available for use by the Council by 31 March 2021.
- All circuits will co-terminate at the expiry of the contract
- The Dates of the expiry of the councils existing circuits and the cancellation terms as identified in Annex 1
- For future Change Requests, milestones will be specified and agreed with the Council at the time of requesting Services.

2.5 If the Supplier fails to meet a Milestone Date from the Implementation Plan, subject to delays caused by the Council, it shall work with the Council to agree a Correction Plan in line with the error correction process (Correction Plan). If the Supplier fails to meet any Milestone Date from the Correction Plan the Council shall be entitled to a credit for any of the services not received in accordance with the following table.

Number of Working Days a Supplier fails to meet a given Milestone Date in the Correction Plan	Service Credits
1 to 5 days	£1000
6 to 10 days	£1500
11 to 20 days	£2000
More than 21 days	£100 per day

2.6 The Council will assist in the planning of the migration of current existing circuits and will require the Supplier to co-operate with its existing service suppliers to migrate the Council's circuits to the circuits delivered by the Supplier, including committing to cease dates on current circuits based on the Milestone schedule and/or Migration Plan agreed with the Supplier.

### 3 STREET WORKS

3.1 The Supplier shall obtain all necessary approvals for any work on the public highway.

3.2 The Supplier shall provide appropriate notification of all works on the public road network to the local Highway Authority in accordance with the New Roads and Street Works Act (NRSWA) 1991 and the current Code of Practice for Co-ordination of Works in Roads.

3.3 The Councils Highways department seek early involvement to actively support the Supplier in developing the Implementation Plan to inform on Highways constraints and share visibility of where opportunities and challenges are on the highways. Current planned works are detailed in Annex 3 Highways Information. This should be seen as guidance and is subject to change.

3.4 The Councils Highways department will support the use of new more efficient and cost-effective rollout techniques as long as the quality and durability of the work can be guaranteed.

The Highways department is currently experiencing mixed results with the deployment of narrow trenching techniques and would look to review and sign-off the details of any future narrow trenching techniques and materials in advance of any deployment should the Supplier intend to use them. The Council's Highways department would only consider the use of narrow trenching for extremely difficult sections of cabling and/or ad-hoc cable spurs.

- 3.5 Where the supplier chooses to excavate surfaced footway or highways that have been resurfaced in the last three years they must reinstate with a large width patch (minimum 2m wide) on a highway or full width reinstatement for footways.
- 3.6 The Supplier shall make arrangements in relation to other statutory undertakers, utility companies and others concerned for the co-ordination of all works. The Supplier shall take full responsibility for identifying other services in the area and to make arrangements as required.
- 3.7 The Council's Highways department is introducing a Road Permit Scheme which is likely to be implemented in March 2019. A draft of this scheme is provided in Annex 04
- 3.8 The Supplier shall schedule works, road closures and traffic control at times as required by the Highway Authority and book road space for all work on the public highway in accordance with the Highway Authority's permit scheme.
- 3.9 There will be no permitting charges to the Supplier during the implementation phase of the core sites.
- 3.10 All excavation work on public highways must be undertaken in accordance with New Roads and Street Works Act (NRSWA) 1991 and more particularly the current version of the Specification for the Reinstatement of the Highway (SROH).
- 3.11 The following web portal provides access to the street records gazetteer, which among other information, provides details of streets with traffic sensitive classification and streets with Substantial Engineering Difficulties (SEDs). Note this is currently under review and will be subject to consultation in association with the implementation of the permit scheme.

<https://www.geoplace.co.uk/helpdesk/library/technical-guidance-streets>.

#### **4 EXTERNAL WORKS**

- 4.1 The Supplier shall allow for carrying out all building and civil works necessary to complete the duct and cable installations and shall fully restore all surfaces within the curtilage of the Council's sites.
- 4.2 The duct network shall be separate from ducts used for other services and laid at minimum depths in accordance with the latest standards and regulations.
- 4.3 All installed items of equipment shall be clearly labelled stating their function and supply circuit information by the Supplier. This shall include all cabling above and below ground and the terminating circuits at both A end and B end.
- 4.4 All external works on the public highway must be undertaken and supervised by operatives with the relevant accreditations as required by regulations (Section 67 of the New Roads and Street Works Act 1991).

#### **5 CLEARING OF SITE**

- 5.1 Upon completion of works at individual locations the Supplier shall remove all debris and surplus materials from site. The sites shall be cleared of all debris by the Supplier on a regular basis while carrying out installations so as not to unduly disrupt the environment of the premises or area.
- 5.2 The Supplier shall be responsible for the proper fencing, guarding, lighting and watching (including traffic management) made necessary by operations undertaken by the Supplier in connection with the carrying out of the works and for the proper provision of temporary guards

and fences as far as may be necessary for the carrying out of the works and for the accommodation and protection of Customers, the owners and occupiers of adjacent property, the public and others.

- 5.3 The Supplier shall make their own arrangements for the disposal of excavated spoil, rubbish, surplus material and the like and shall pay all charges in connection therewith.

## **6 WORKING ON PREMISES**

- 6.1 For all work on the premises, the Supplier shall adopt the normal working hours for carrying out the works. Any works proposed outside these periods shall only be carried out with the prior permission of the Council. It is the Supplier's responsibility to make necessary access arrangements for staff, giving reasonable notice of the intention to carry out the work.
- 6.2 The normal working hours on the Council's sites shall be 08:00 hours to 17:00 hours Monday to Friday excluding public and bank holidays.
- 6.3 The Council or the managers of any site may reasonably refuse access to the Suppliers' personnel, agents or sub-contractors to any premises where they believe that such persons represent a threat to safety, security or confidentiality or would be in breach of any relevant rules and regulations.
- 6.4 The Supplier must prepare and issue a practical programme of intended installations prior to any works starting on any of the Council's sites. The Supplier must provide a copy of the full works package, including but not limited to, method statement and risk assessment, prior to beginning works on site.
- 6.5 Suitably qualified and equipped personnel from the Council's, or a nominated Advisor may attend site to monitor the installation work at his discretion, and without warning. Free access to the site must be afforded to such staff at all times.
- 6.6 The Supplier shall perform the installation with due care and regard to safety, minimising loss and/or damage to any goods, property, fixtures and fittings in question. Any damage or faults should be reported before the Supplier departs from the property.
- 6.7 The Supplier shall be liable to pay the Council the cost of any such maintenance repair or replacement of equipment made necessary as a result of loss or damage, caused deliberately or negligently by the Supplier or his staff.

## **7 INTERNAL WORKS**

- 7.1 Transition from external grade to internal fibre cabling as required will be provided no further than 2m from ingress to a building at a point to be agreed with the Council.
- 7.2 The optical fibre cable installed within buildings shall be single mode with low-smoke halogen-free sheath.
- 7.3 Unless otherwise specified optical fibre cables shall be installed to provide the required fibre count and connectivity as specified in the fibre allocations provided in the Annexes.
- 7.4 The Supplier shall ensure that spare fibre capacity is available to all sites should the Council need to procure additional circuits over the same fibre path during the duration of the Contract.
- 7.5 The supplier shall provide a minimum of 1 fibre pair to sites providing connectivity speeds of up to 10 Gbps
- 7.6 The supplier shall provide a minimum of 16 fibre pairs between Points of Presence sites to provide connectivity speeds of up to 100 Gbps with redundancy along with the capability of utilising Wavelength Division Multiplexing ( WDM ) for secure applications that cannot be put on the IP network.
- 7.7 The internal cabling will be contained in existing containment wherever possible. Where no containment, or insufficient capacity or other considerations make this not possible or impractical then new containment will be provided and installed into agreed locations within the

building in accordance with the site owner's specification.

- 7.8 Fibres will be terminated onto agreed existing locations where possible. Where no fibre patch panels, insufficient capacity or other considerations make this not possible or impractical then new fibre patch panels will be provided and installed into agreed locations in racks or in some instance fibres will be terminated on fibre termination boxes attached to the wall.
- 7.9 Fibres will be terminated with LC type connectors.
- 7.10 Fibre cables are to be terminated either directly or fusion spliced using pigtails to connectors in fibre patch panels. Each fibre optic cable run should have at least 5 metres of excess cable at each end to allow for the termination.
- 7.11 Where fibres are terminated in a cabinet, each fibre optic cable run should have at least 5 metres of cable coiled up at the cabinet after termination, to allow for future relocation of the patch panel within the cabinet. The minimum bend radius of the cable must be adhered to.
- 7.12 Each end of the fibre circuit shall be clearly labelled at both A-end and B-end to identify routing of the fibre and to clearly differentiate between circuits.

## **8 TESTING, COMMISSIONING AND ACCEPTANCE**

- 8.1 Throughout the installation period the works will be checked and inspected by the Supplier as required to establish that the installation has been completed in accordance with but not limited to:
- Specification/Drawings;
  - Method Statements;
  - Standards & Local Regulations.
- 8.2 The installation by the Supplier shall be carried out, documented and tested so that the Supplier can demonstrate compliance with these requirements to the full satisfaction of the Council's representative. No payment will be made for any works until there has been an inspection and agreed sign off by the Council.
- 8.3 All equipment & materials shall follow a system of inspection and testing prior to final acceptance. The stages of installation, and at which point the equipment & materials are accepted, will be as follows:
- Stage 1 - Factory Acceptance Testing by means of manufacturer's test certificates (where applicable) to ensure products meet specification;
  - Stage 2 – Acceptance Testing - Full link test after installation including as a minimum an optical power loss test at 1310nm and 1550nm or at 1550nm and 1625nm, depending on final fibre specification, and bi-directional Optical Time Domain Reflectometry (OTDR) traces (see section 11 for applicable performance targets).
- 8.4 The Supplier shall be responsible for the provision of all measuring apparatus and equipment that may be required to carry out Acceptance Testing. All test equipment used to verify installation performance shall be calibrated as required by the manufacturer. The Council shall have the right to inspect any or all calibration certificates.
- 8.5 The Supplier shall submit a Test Plan as part of its initial design and planning phase for approval by the Council.
- 8.6 The Supplier shall provide notice of Acceptance Testing and associated procedures to the Council, no less than five (5) Business Days prior to commencement of testing by issuing a Ready for Testing Notice. The Council may attend any or all Acceptance Tests.
- 8.7 Prior to the testing and acceptance of the fibre installation or a segment of the fibre installation, the Supplier shall ensure that all installation activities and relevant documentation are completed and signed off ready for testing to commence.

- 8.8 Every fibre optic cabling link in the installation shall be tested against conformance with this Specification. Any failing link must be documented, diagnosed, corrected and re-tested. The final and passing result of the tests for all links shall be provided in the test results documentation. On completion of testing, the Supplier shall provide the Council with full test results for each individual fibre link installed.
- 8.9 Any circuits not in full compliance will be brought into compliance by the Supplier at no cost to the Council.
- 8.10 For a given Segment (group of circuits), the Ready For Acceptance (RFA) date shall be the day after of the completion of successful end-to-end testing of all circuits in the Segment. From the RFA date, all circuits will be made available to the Council for completion of its own Acceptance Testing (if so desired) and migration.
- 8.11 The Supplier shall assist the Council during migration of services.

## **9 GOVERNANCE**

- 9.1 The Supplier shall be required to have an experienced Project team and structured interaction with the Council during implementation and on-going delivery of the dark fibre service.
- 9.2 The Supplier shall identify and allocate the necessary level of resource with the required skill sets throughout the various stages of the project including network deployment and on-going support.
- 9.3 The Authorised Representatives e.g. Account Manager, Project Director/ Manager, and escalation points of contact assigned to the project shall have a demonstrable track record of successful completion of projects of a similar nature and scope.
- 9.4 A Council Representative shall be appointed by the Council to carry out such duties issuing instructions and decisions and certifying the payment of invoices as specified in the contract. The Supplier shall be informed of the named individual upon contract signature.
- 9.5 The Councils Representative appointed may from time to time delegate any of their duties and may at any time revoke such delegation. Any delegation or revocation shall be communicated to the supplier in writing.
- 9.6 The Councils Representative shall to attend review meetings with the Council during the implementation stages of the contract and the migration of circuits by the Council's chosen Service Provider. Following these stages, a Contract/Account Manager shall be expected to attend review meetings with the Council.

## **10 DOCUMENTATION**

- 10.1 Upon completion, the Supplier shall provide the following documentation:
- As installed drawings, GIS files and supporting documentation that shows cable containment sizes, internal cable containment routes, end to end fibre routes and schedules, fibre termination, ports, designated access chambers and joints, fibre grade and core count, tubes used in fibre cable etc. for all installations on Council's premises;
  - Full test results for fibre-optic installations in electronic format;
  - Copies of Manufacturers' Warranties for any installed equipment.
- 10.2 All installed items of equipment shall be clearly labelled stating their particular function and supply circuit information by the Supplier. This shall include all cabling above and below ground and the terminating circuits at both A end and B end.
- 10.3 The Supplier will provide the reporting information detailed in Schedule 8 of the Contract.

## **11 REGULATIONS AND STANDARDS**

- 11.1 The optical fibre cables installed shall comply with either of the following specifications:



ITU-T G.652.D standard:

Minimum operational life expectancy of 25 years.



T-REC-G.652-201611  
-!!!PDF-E.pdf

Or:

ITU-T G.657 standard:

Minimum operational life expectancy of 25 years.



T-REC-G.657-201611  
-!!!PDF-E.pdf

- 11.2 All testing shall be performed in accordance with ITU-T G.650, Definition and Test Methods for the relevant parameters of single mode fibres.
- 11.3 All work undertaken by the Supplier shall be carried out in full compliance with the latest relevant legislation, regulations, standards and codes of practice from the following bodies:
- British Standards Institute (including but not limited to BS 6701, BS 7671, BS EN 50174-1, BS EN 50174-3);
  - National Joint Utilities Group (NJUG);
  - ISO/IEC;
  - CENELEC;
  - ANSI/TIA/EIA.
- All applicable standards for the scope of work specified must be adhered to. In the case of conflict between standards the most onerous standard must be adhered to for the individual section under discussion.
- 11.4 The Supplier shall comply with all regulations and guidance specified by the products manufacturers (ducts, subducts, cables, joints, etc...) during installation to ensure integrity of the connectivity infrastructure.
- 11.5 All work shall be carried out within the requirements of the Health & Safety Work Act 1974 and Management of Health & Safety at Work Regulations 1999 and any other legislation or regulations that affect the task in hand. The Supplier shall implement arrangements for meeting their duties under Regulation 11 of Construction (Design and Management) Regulations 2015 (CDM2015) and will be responsible for providing their employees with all training, equipment and protective clothing necessary to carry out the work safely and correctly.
- 11.6 The Supplier shall ensure that these standards are updated as replaced by regulation, guidance or Good Industry Practice.

## **12 SUPPORT AND MAINTENANCE**

- 12.1 From the date a Segment (i.e. group of circuits within an Order) is Ready For Service the Supplier shall provide the support and maintenance detailed below.
- 12.2 Within Council's premises, the service demarcation point shall be the connector or patch panel, at the end of the fibre.
- 12.3 In the context of dark fibre services, incidents shall be classified according to their severity as either a Service Affecting Fault or Non-Service Affecting Fault.
- 12.4 The support is expected to include the following target metrics:

- Means for the Council to report any incidents 24/7/365;
- Response to reported incidents within 1 hour of the incident being reported detailing the course of action towards rectification and associated timescales;
- Fault rectification within 8 hours where a fibre break has resulted in a Service Affecting Fault at one or more sites with no resilience. The time is measured from the point of the incident being logged to the point of the service being accepted as being restored by the Council
- Fault rectification within 12 hours where a fibre break has resulted in a Service Affecting Fault and impacted a primary circuit resulting in failover to a backup circuit (still in operation), and is the time measured from the point of the incident being logged to the point of the primary service to the site being accepted as being restored by the Council. In the event of a fault affecting both the primary and backup circuit, fault rectification shall occur within 8 hours;
- Fault rectification within 5 days where a fibre break has resulted in a Non-Service Affecting Fault.

12.5 The Supplier shall be added to the Council's fault identification and resolution process as part of a resolver group. Upon identification of a fault, a trouble ticket would be raised by the user on the IT integrator's service desk for investigation. The first line support will carry out the initial investigations and only if the fault is identified to be associated with the Supplier's services would an incident be reported on the Supplier's own service desk.

12.6 Where repair time guarantee falls below target levels, the Council shall be entitled to Service Credits as described below.

Number of hours beyond target repair time	Service Credits
1 to 4 hours	£1000
4 to 8 hours	£1500
8 to 12 hours	£2000
>12 hours	£2000 for every 12 hours

12.7 If there has been more than one service failure in a 12 months period incurred as a direct result of the Supplier's actions, then it may be subject to a repeat failure multiplier. The third failure in 12 months becomes the first repeat failure and a multiplier of 1.5 is added to the service credit amount. This increases by 0.5 for every subsequent failure up to 3.5 and continues at 3.5 until repeats no longer apply. The site has to go a full 12 months without failure to remove the multiplier.

12.8 The Supplier shall be expected to undertake regular monitoring of its infrastructure to proactively identify and solve potential faults.

12.9 The Supplier shall have experience in providing fault repair and maintenance services for the infrastructure that forms the Solution. Ad-hoc maintenance services shall be at the request of the Council with the Supplier repairing any damage found.

12.10 The Supplier shall be responsible for liaising with the Council and relevant parties where any works are required within the public road boundary and for obtaining any necessary permissions or consents to enable them to carry out the works.

12.11 The Supplier shall provide quarterly reports on its fault management performance, including as a minimum the number and nature of the faults incurred during the period, and the time to respond and restore service after each fault was reported.

## 13 IN-LIFE VARIATIONS IN SCOPE

- 13.1 The Council may require the opening or de-commissioning of sites which will impact its connectivity requirements. Such in-life variations of connectivity scope shall be addressed in accordance with the Change Procedure.

#### **14 ENVIRONMENTAL AND SOCIAL CONSIDERATIONS**

- 14.1 The Supplier shall be expected to deliver the works in a manner that limits as much as possible its impact on the environment in line with typical UK and EU environmental standards and in particular:
- Ensure that no equipment, product used or activities endangers the health and safety of the consumers, employees or others;
  - Ensure that no equipment, product causes significant damage to the environment during manufacture, use, or disposal;
  - Ensure that no equipment or product consumes a disproportionate amount of energy during manufacture, use, or disposal, which causes unnecessary waste because of over- packaging or because of an unusually short shelf life;
  - Ensure that no equipment or product contains materials derived from threatened species or threatened environments;
  - Ensures that it limits the power consumption and generation of pollutants (CO<sub>2</sub> and other gases, dust, etc..) throughout the implementation and operation of any required infrastructure.

#### **15 ANNEXES**

- 15.1 The following supporting documents are being made available. Please note that for further Change Requests the information in these Annexes will be updated to reflect the specific requirements/circumstances of the Council:
- Annex 01 List of Core Sites and PoP Sites
  - Annex 02 List of Optional Sites
  - Annex 03 Highways Information
  - Annex 04 Permit Information

**Annex 1 List of Sites****Core Sites**

Postcode	x	y	Provider	Notice Period
WV1 1RY	391262	298989	Virgin Media	Nov-20
WV14 0HU	393918	296674	Virgin Media	Nov-20
WV14 0DP	394872	296272	Kentons	30 days
WV2 3ET	391318	296930	Kentons	30 days
WV11 1XU	391184	297612	Kentons	30 days
WV2 3AS	391184	297612	Virgin Media	Nov-20
WV11 1DD	393594	301236	Virgin Media	Nov-20
WV10 8LX	393393	302135	Kentons	30 days
WV1 1TQ	391414	298667	Virgin Media	Nov-20
WV14 0LT	394445	296344	Virgin Media	Nov-20
WV3 0HY	390358	297716	Virgin Media	Nov-20
WV1 2ND	393497	298427	Kentons	30 days
WV3 0QW	390621	298212	Virgin Media	Nov-20
WV1 2QY	392926	298518	Virgin Media	Nov-20
WV1 2QY	392871	298563	Virgin Media	Nov-20
WV3 0NU	391000	298217	Kentons	30 days
WV3 0PR	390653	298218	Virgin Media	Nov-20
WV1 2TX	393429	297674	Kentons	30 days
WV1 2BY	393163	298281	Virgin Media	Nov-20
WV3 9DU	389662	300193	Virgin Media	Nov-20
WV10 9JT	392340	301523	Virgin Media	Nov-20
WV14 7HF	395985	296794	Virgin Media	Nov-20
WV14 6DJ	394388	297522	Kentons	30 days
WV14 7LU	395238	296709	Kentons	30 days
WV3 0JE	390289	297651	Virgin Media	Nov-20
WV6 8EL	387759	299181	Virgin Media	Nov-20
WV10 9LA	391499	300947	Kentons	30 days
WV1 4SZ	390352	299003	Kentons	30 days
WV14 6HF	394456	297954	Kentons	30 days
WV11 1QP	394109	300190	Kentons	30 days
WV6 8XG	387746	300053	Kentons	30 days
WV11 1XU	394627	300182	Kentons	30 days
WV6 0AF	390127	299249	Kentons	30 days
WV11 1PE	394145	300249	Virgin Media	Nov-20
WV4 6JP	393781	296265	Kentons	30 days
WV4 6ED	392730	296771	Virgin Media	Nov-20
WV11 3QP	394662	299784	Virgin Media	Nov-20
WV2 3AE	391383	297076	Virgin Media	Nov-20

WV2 3JS	391774	296927	Virgin Media	Nov-20
WV11 1XT	394394	300054	Virgin Media	Nov-20
WV2 3AS	391418	297174	Virgin Media	Nov-20
WV10 6US	390760	302394	Virgin Media	Nov-20
WV10 OPR	392725	299475	Kentons	30 days
WV1 4AL	390902	299185	Virgin Media	Nov-20
WV1 4AL	390902	299185	Virgin Media	Nov-20
WV6 0UB	389737	300408	Virgin Media	Nov-20
WV10 8BN	393002	301515	Virgin Media	Nov-20
WV10 0UG	393011	300004	Kentons	30 days
WV10 9LE	391565	300880	Kentons	30 days
WV1 2QP	392695	298635	Kentons	30 days
WV11 2LH	396126	301802	Kentons	30 days
WV14 6EH	394173	297654	Kentons	30 days
WV11 1TH	394513	300377	Kentons	30 days
WV6 0DD	389541	299601	Kentons	30 days
WV14 6LU	395153	297541	Kentons	30 days
WV3 0UP	390196	298107	Virgin Media	Nov-20
WV3 9LQ	389656	298026	Virgin Media	Nov-20
WV1 2BH	394166	298641	Kentons	30 days
WV1 2BH	394166	298641	Kentons	30 days
WV11 2QE	396436	301529	Kentons	30 days
WV3 8BA	388760	297967	Virgin Media	Nov-20
WV1 2BS	393117	298096	Virgin Media	Nov-20
WV11 3ES	395161	300364	Kentons	30 days
WV1 4PJ	390549	299358	Kentons	30 days
WV4 4LU	389065	296791	Virgin Media	Nov-20
WV10 0EG	392267	299345	Kentons	30 days
WV10 9JG	392334	301740	Virgin Media	Nov-20
WV1 3AG	391562	298620	Kentons	30 days
WV1 3NP	391351	298639	Kentons	30 days
WV14 6PR	394869	297162	Virgin Media	Nov-20
WV6 0JB	389062	302240	Kentons	30 days
WV11 1EB	394096	301637	Virgin Media	Nov-20
WV10 8JP	392356	302496	Virgin Media	Nov-20
WV6 9JU	389601	301073	Virgin Media	Nov-20
WV6 0RH	389871	299965	Virgin Media	Nov-20
WV3 9DU	389110	299185	Virgin Media	Nov-20
WV4 6HB	392496	296441	Virgin Media	Nov-20
WV3 9EP	388491	298201	Virgin Media	Nov-20
WV11 1PG	394350	300278	Virgin Media	Nov-20
WV4 5ET	392918	298452	Virgin Media	Nov-20
WV1 1NQ	391589	299228	Kentons	30 days

WV10 OUB	392974	299817	Virgin Media	Nov-20
WV3 7LE	389187	300065	Virgin Media	Nov-20
WV11 3TG	394741	301061	Virgin Media	Nov-20
WV11 1RD	393339	300209	Kentons	30 days
WV11 2QQ	396317	301271	Virgin Media	Nov-20
WV10 0LH	392161	299581	Virgin Media	Nov-20
WV11 2PF	396510	301975	Virgin Media	Nov-20
WV10 6NN	391487	302821	Virgin Media	Nov-20
WV6 0BY	389538	299258	Kentons	30 days
WV4 5ET	391682	296195	Virgin Media	Nov-20
WV6 9DF	388824	301822	Virgin Media	Nov-20
WV11 1PW	393950	300781	Virgin Media	Nov-20
WV10 0BB	392597	299579	Virgin Media	Nov-20
WV11 1YQ	394493	301352	Virgin Media	Nov-20
WV4 4AG	389950	296683	Virgin Media	Nov-20
WV6 8XL	387442	299943	Virgin Media	Nov-20
WV1 1DU	391485	298789	Virgin Media	Nov-20
WV1 3AX	391627	298381	Kentons	30 days
WV1 3PR	391367	298432	Virgin Media	Nov-20
WV1 3AA	391655	298506	Virgin Media	Nov-20
WV1 4BE	390812	299308	Kentons	30 days
WV1 4PS	390769	298821	Virgin Media	Nov-20
WV10 0QP	393526	300185	Kentons	30 days
WV10 7JF	392938	303213	Virgin Media	Nov-20
WV10 8BL	392765	301472	Kentons	30 days
WV10 8BY	392862	302146	Kentons	30 days
WV10 9JN	392327	301542	Kentons	30 days
WV10 9JJ	392308	301579	Virgin Media	Nov-20
WV11 1RH	393468	300695	Virgin Media	Nov-20
WV11 1YG	394383	301589	Kentons	30 days
WV11 2JW	395984	301756	Kentons	30 days
WV13 3TT	394955	298081	Virgin Media	Nov-20
WV14 0AT	395046	296510	Kentons	30 days
WV14 6PW	394913	296661	Virgin Media	Nov-20
WV14 7LU	395252	296703	None	0 days
WV3 7AE	395637	296890	Kentons	30 days
WV3 7LT	390229	296616	Virgin Media	Nov-20
WV3 8HS	387706	297917	Kentons	30 days
WV4 4PT	388863	296764	Virgin Media	Nov-20
WV4 6EL	392857	296486	Virgin Media	Nov-20
WV4 6JW	393782	296208	Kentons	30 days
WV4 6AW	392165	296284	Virgin Media	Nov-20
WV6 8QF	387750	299175	Virgin Media	Nov-20

WV8 1UD	389534	302210	Virgin Media/Kenton	30 days
WV8 1TX	389527	302322	Virgin Media	Nov-20
WV9 5NJ	390281	302777	Virgin Media	Nov-20
WV10 8EA	392217	302818	Virgin Media	Nov-20
WV10 0HL	392630	299263	Kentons	30 days
WV6 0PW	390552	299699	Kentons	30 days
WV14 0LX	394324	296519	Kentons	30 days
WV10 8DS	392687	302160	Virgin Media	Nov-20
WV1 2EE	393769	298133	Virgin Media	Nov-20
WV10 8NZ	393673	302553	Kentons	30 days
WV2 3LY	391662	297518	Virgin Media	Nov-20
WV1 3PR	391367	298432	Kentons	30 days
WV2 1EL	392244	297787	Kentons	30 days
WV3 0EG	390734	297151	None	0 days
WV3 7BW	389618	297647	None	0 days
WV6 0NH	391058	299788	None	0 days
WV6 8NF	387809	299156	None	0 days
WV10 0JN	391662	299894	Kentons	30 days
WV9 5EU	389603.7	303318.8	Virgin Media	Nov-20
WV6 8LG	388105	299569	None	0 days
WV11 2LT	396151	301914	None	0 days
WV3 8HU	387512	298220	None	0 days
WV6 0DT	389641	298987	None	0 days
WV10 8PG	393065	301036	None	0 days
WV6 9AF	389205	300037	None	0 days
WV3 9DU	389347	299278	None	0 days
WV1 3AU	391670	298404	None	0 days
WV11 3RT	395795	300607	None	0 days
WV10 6SE	390639	302624	None	0 days
WV14 6BT	0	0	None	0 days
WV10 6NW	391541	303131	None	0 days
WV10 9HS		None	None	0 days
WV10 9JP		None	None	0 days
WV3 0JH		None	None	0 days
WV3 0RE			Kentons	30 days
WV1 2BS		None	None	0 days
WV10 8NZ		None	None	0 days
WV14 9NE		None	None	0 days
WV6 0NH		None	None	0 days
WV3 0EG		None	None	0 days
WV10 9TR		None	None	0 days
WV14 7AE		None	None	0 days
WV2 1HZ		None	None	0 days



WV11 3TG		None	None	0 days
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## Point of Presence Sites

<b>FID</b>	<b>Property Name</b>	<b>UPRN</b>	<b>x</b>	<b>y</b>
11	Pendeford Library	100071566880	390286	302790
15	Wolverhampton Civic Centre,	100071554662	391328	298814
16	Highfields Science Specialist	100071405509	388006	296401
17	Bob Jones Community Hub	10090013682	391419	297172
19	Wednesfield Community Hub	10090013615	394401	300059
21	Aldersley Leisure Village	100071566475	390045	301056
22	Hickman Avenue Depot	10090640748	0	0
23	Bert Williams Leisure Centre	010090014742		



**Annex 2 Optional Sites****2a Sites out of scope for LFFN for capital works that require connection**

Postcode	x	y	Provider	Notice
WV1 1HP	391695	298872	Virgin Media	Nov-20
WV10 8NS	392971	303009	Kentons	30 days
WV14 6BN	394249	297029	Kentons	30 days
WV6 9BS	387993	300668	None	0 days
WV1 1LD	391834	298739	Kentons	30 days
WV1 1RQ	391238	298761	CWC Fibre	0 Days
WV1 3NN	391416	298597	Kentons	30 days
WV6 9NW	389897	300866	Virgin Media	Nov-20
WV1 4EG	390957	298888	Virgin Media	Nov-20
WV3 7AE	390038	297942	None	0 days
WV1 4PH			Virgin Media	Nov-20
WV14 0EF			Virgin Media	Nov-19

**2b Education Off Area Sites which require connection**

FID	UPRN	Postcode	Provider	Notice
1	The Towers Outdoor Centre	LL24 0DR	Kenton	30 days
2	Eastwood Village Primary	S65 1RD	Kenton	30 days
3	East Dene Primary School	S65 2DF	Kenton	30 days
4	Coleridge School,	S65 1LW	Kenton	30 days
5	St James CoE School,	B69 1BG	Virgin Media	30 days
6	Milton Keynes	MK14 6LY	Kenton	30 days
7	Palfrey Infant School,	WS1 4HY	Kenton	30 days
8	Lodge Farm Primary	WV12 4BU	Virgin Media	30 days
9	The Delves Primary	WS54PU	Virgin Media	30 days
10	Palfrey Primary	WS1 4HY	Virgin Media	30 days
11	Chad Vale Primary School,	B15 3JU	None	0 days
12	St Bernadette Catholic School	WV5 8DZ	None	0 days
13	St Christopher Catholic School	WV8 1PF	None	0 days
14	St Benedict Biscop School	WV5 9DZ	None	0 days

**2c Wolverhampton Homes CCTV Sites**

FID	UPRN	Name	Address	Location	Postcode	x	y
0	10003591087	Arthur Greenwood Court	CORONATION ROAD	BILSTON	WV14 0HS	394167	296570
1	100071583451	BIRCH COURT	BOSCOBEL CRESCENT	WOLVERHAMPTON	WV1 1QJ	391417	299652
2	100071583738	BROCKFIELD HOUSE	HOBGATE ROAD	HEATH TOWN	WV10 0PW	392787	299580
3	100071583739	CAMPION HOUSE	HOBGATE ROAD	HEATH TOWN	WV10 0PX	392939	299548
4	200001174833	Clem Atlee	PARKVIEW	BILSTON	WV14	394517	297955

		Court	ROAD		6HG		
5	100071584180	CONNAUGHT HOUSE	UPPER VAUXHALL	WOLVERHAMPTON	WV1 4SZ	390361	298934
6	10007121481	Control	Parkview Road	Stowlawn	WV14 6HF	394456	297954
7	100071156083		Evans Street	WOLVERHAMPTON	WV6 0PL	390520	299680
8	100071583700	Graisely Court	HALLETT DRIVE		WV3 0NT	390998	298218
9	100071583756	Gregory Court	PICKERING ROAD	WOLVERHAMPTON	WV11 3RE	395019	300179
10	100071583701	Grosvenor Court	HALLETT DRIVE		WV3 0NU	391021	298164
11	100071583757	Grosvenor Court	PICKERING ROAD	WOLVERHAMPTON	WV11 3RD	395029	300230
12	10090010598	HARROWBY COURT	CHETTON GREEN	HARROWBY ROAD	WV10 6EP	390994	303060
13	100071583578	HAWTHORN HOUSE	CLOVER LEY	HEATH TOWN	WV10 0HE	392767	299129
14	100071583771	Highfield Court	LEASOWES DRIVE	MERRY HILL	WV4 4QA	388505	296868
15	100071583970	Hugh Gaitskell Court	PARKVIEW ROAD	BILSTON	WV14 6HF	394404	297921
16	100071583452	KILLSALL COURT	BOSCOBEL CRESCENT	WOLVERHAMPTON	WV1 1QF	391438	299695
17	100071583453	LANE COURT	BOSCOBEL CRESCENT	WOLVERHAMPTON	WV1 1QH	391438	299580
18	100071583758	Lathe Court	PICKERING ROAD	WOLVERHAMPTON	WV11 3RB	394978	300228
19	100071584169	LINCOLN HOUSE	TREMONT STREET	HEATH TOWN	WV10 0HE	392465	299153
20	100071583795	LING HOUSE	LONG LEY	HEATH TOWN	WV10 0HH	392741	299199
21	100071584168	LONGFIELD HOUSE	TITHE CROFT	WOLVERHAMPTON	WV10 0HX	392955	299341
22	10003591002		Manby Close	WOLVERHAMPTON	WV6 0QR	390543	299734
23	100071583773	Pennwood Court	LEASOWES DRIVE	MERRY HILL	WV4 4PX	388605	296805
24	100071583556	Redoak House	CHERVIL RISE	HEATH TOWN	WV10 0HL	392630	299263
25	100071583702	Russell Court	HALLETT DRIVE		WV3 0NX	390949	298116
26	100071583650	St Andrews House	EVANS STREET	WOLVERHAMPTON	WV6 0PW	390552	299699
27	100071583774	St Josephs Court	LEASOWES DRIVE	MERRY HILL	WV4 4QB	388562	296921
28	100071584181	SUTHERLAND HOUSE	UPPER VAUXHALL	WOLVERHAMPTON	WV1 4ST	390295	299043
29	100071583454	TONG COURT	BOSCOBEL CRESCENT	WOLVERHAMPTON	WV1 1QQ	391485	299550
30	100071584170	TREMONT HOUSE	TREMONT STREET	HEATH TOWN	WV10 0JD	392475	299193
31	100071584182	VAUXHALL HOUSE	UPPER VAUXHALL	WOLVERHAMPTON	WV1 4SX	390319	298963
32	100071583455	WESTON COURT	BOSCOBEL CRESCENT	WOLVERHAMPTON	WV1 1QG	391460	299619
33	100071583801	Whitmore House		WOLVERHAMPTON	WV6 0PN	390444	299724

34	100071583678	William Bentley Court 1-57	PLYMM CLOSE, Off Graisle Lane	WEDNESFIELD	WV11 1QW	394248	300226
35	100071583678	William Bentley Court 58-114	PLYMM CLOSE, Off Graisle Lane	WEDNESFIELD	WV11 1QN	394248	300226
36	100071583971	Winston Churchill Court	PARKVIEW ROAD	BILSTON	WV14 6HF	394457	297934
37	10090010605	WOBASTON COURT	CHETTON GREEN	Stowlawn	WV10 6ER	390948	303059
38	100071584001	Wodnesfield Tower 1-57	PLYMM CLOSE, Off Graisle Lane	WEDNESFIELD	WV11 1QP	394103	300191
39	100071584001	Wodnesfield Tower 58-114	PLYMM CLOSE, Off Graisle Lane	WEDNESFIELD	WV11 1QR	394103	300191
40	100071201043	UPPER VAUXHALL		WOLVERHAMPTON	WV1 4SU	390323	299070
41	100071174862	LOWER VAUXHALL		WOLVERHAMPTON	WV1 4SP	390262	299014
42	100071201274		VAUXHALL AVENUE	WOLVERHAMPTON	WV1 4TA	390268	299000
43	10090010599	PATSHULL COURT		CHETTON GREEN	WV10 6RA	391004	303099

## 2d Council CCTV Sites

FID		Name	Postcode	x	y
1	CCTV- Council site	Stafford Road Ring Road	WV1 1RY	391439	299129
2	CCTV- Council site	Broad Street Ring Road	WV1 1JJ	391792	299035
3	CCTV- Council site	Bilston Road Ring Road	WV2 1BP	391912	298304
4	CCTV- Council site	Snowhill Ring Road	WV2 4DP	391574	298125
5	CCTV- Council site	Penn Road Ring Road	WV2 4HD	391037	298056
6	CCTV- Council site	Chapel Ash Island Ring Road	WV1 4JT	390818	298677
7	CCTV- Council site	Chapel Ash	WV3 0UF	390563	298607
8	CCTV- Council site	Five Ways Island	WV1 4RA	391293	299752
9	CCTV- Council site	Willenhall Road Neachells Lane	WV13 3QY	394736	298371
10	CCTV- Council site	Deans Road Wednesfield Road	WV1 2AA	393353	299392
11	CCTV- Council site	Parkfields Road Birmingham New Road	WV4 6ER	392392	296591
13	CCTV- Council site	Cosley Road Bilston	WV14 0EZ	394576	296162
14	CCTV- Council site	Bilston Bus Station	WV14 0ST	395130	296235
15	CCTV- Council site	Church Street	WV14 0BJ	394822	296352
16	CCTV- Council site	Litchfield Street Bilston	WV14 0AJ	395081	296549
17	CCTV- Council site	A41 Albert Road	WV6 0BZ	389766	299282
18	CCTV- Council site	Princess Square	WV1 1HL	391594	298805
19	CCTV- Council site	Central Library Garrick St	WV1 3AX	391616	298379
20	CCTV- Council site	Avion Centre Library	WV6 0QW	390416	299591
21	CCTV- Council site	Sharrock Street A41	WV2 2PT	392170	298080
22	CCTV- Council site	Bilston Road Chillington St	WV2 2QE	392567	298030
23	CCTV- Council site	Bilston Rd Ettingshall Rd	WV2 2BU	392942	297473
24	CCTV- Council site	Bilston Rd Monmore Green	WV2 2NN	393465	297278
25	CCTV- Council site	Bilston St Wellington Rd	WV14 6BD	394177	296861
26	CCTV- Council site	Bilston Rd Prouds lane	WV14 6AA	394954	296619

27	CCTV- Council site	School St Salop St	WV3 0RX	391183	298393
28	CCTV- Council site	Victoria St Bell St	WV1 3PJ	391254	298435
29	CCTV- Council site	Queens Square Victoria Street	WV1 1TQ	391395	298659
30	CCTV- Council site	Worcester St Temple St	WV2 4LQ	391206	298280
31	CCTV- Council site	SnowHill Temple St	WV2 4AD	391592	298250
32	CCTV- Council site	Pipers Row	WV1 1LD	391828	298673
33	CCTV- Council site	North Street	WV1 1SR	391234	298831
34	CCTV- Council site	Peel Street	WV3 0SF	391126	298389
35	CCTV- Council site	Dudley Street Wulfrun Square	WV1 3EY	391529	298571
36	CCTV- Council site	Barclays Bank Queen Square	WV1 1TQ	391395	298659
37	CCTV- Council site	Broad Street	WV1 1HZ	391639	298879
38	CCTV- Council site	Market St Queen St	WV1 3AG	391560	298586
39	CCTV- Council site	Tempest Street	WV2 1AA	391633	298167
40	CCTV- Council site	Science park CP	WV10 9RU	391487	300475
41	CCTV- Council site	Tettenhall Pool CP	WV6 9AX	388748	300306
42	CCTV- Council site	Wednesfield Old market CP	WV11 1XU	394622	300152
43	CCTV- Council site	High StNeachelles LaneWednesfield	WV11 1TF	394668	300382
44	CCTV- Council site	Alfred Suqire Road March End	WV11 3QZ	394925	300135
45	CCTV- Council site	Wednesfield Market	WV11 1XU	394622	300152
46	CCTV- Council site	High St Church St	WV11 1ST	394540	300287
47	CCTV- Council site	Rookery lane Well lane	WV11 1XT	394488	299984
48	CCTV- Council site	Dudley Street	WV1 3EY	391529	298571
49	CCTV- Council site	Willenhall Road Plascom Road	WV1 2DE	393297	298333
50	CCTV- Council site	Corsser Street CP	WV1 2EU	392720	298414
51	CCTV- Council site	Corn Hill	WV1 3JE	391911	298678
52	CCTV- Council site	Oxford Street Bilston	WV14 7DE	395246	296389
53	CCTV- Council site	Hall St Car park	WV14 0AB	395176	296389
54	CCTV- Council site	Pinfold St Market Carpark	WV14 0BJ	394822	296352
55	CCTV- Council site	Pinfold Street CP BCR	WV14 0EZ	394576	296162
56	CCTV- Council site	Batchcroft CP GreenCroft End	WV14 0DF	394790	296512
57	CCTV- Council site	Batchcroft Cp Broad St End	WV14 0BP	394710	296403
58	CCTV- Council site	Oxley More Rd	WV10 6UG	391185	302197
59	CCTV- Council site	3 Tuns	WV10 6BD	391422	302510
60	CCTV- Council site	Tettenhall Rock	WV6 8PT	389015	299953
61	CCTV- Council site	Penn Rd Coalway Rd	WV2 4PZ	390477	296771
62	CCTV- Council site	Devon Road	WV1 4BE	390808	299293
63	CCTV- Council site	West Park Landsdown Road	WV1 4PZ	390902	298935
64	CCTV- Council site	West Park Park Cresent	WV1 4PZ	390902	298935
65	CCTV- Council site	West Park South Gate	WV1 4PT	390818	298820
66	CCTV- Council site	West park Summerfield	WV1 4RP	391030	299617
67	CCTV- Council site	West Park Upper Vauxhall	WV1 4PN	390401	299008
68	CCTV- Council site	West Park Albert Road	WV1 4PJ	390559	299211
69	CCTV- Council site	West park Kingsland Road	WV1 4PJ	390559	299211
70	CCTV- Council site	Newhampton Rd Hunter St	WV6 0RT	390170	299638
71	CCTV- Council site	Avion Centre	WV6 0PL	390538	299658
72	CCTV- Council site	Fighting Cocks	WV4 6BD	391813	296470
73	CCTV- Council site	Ryehope Square North	WV9 5NJ	390267	302799
74	CCTV- Council site	Ryehope Square East	WV9 5NJ	390267	302799
75	CCTV- Council site	Stafford Road nr Polish Club	WV10 6JS	391246	301039
76	CCTV- Council site	Compton	WV6 8AA	388274	298793

77	CCTV- Council site	Stafford St University	WV1 1RY	391439	299129
78	CCTV- Council site	Molineux University	WV1 1RY	391439	299129
79	CCTV- Council site	Stubby Lane	WV11 3NF	395907	300997
80	CCTV- Council site	Bradmore	WV3 7HX	389536	297606
81	CCTV- Council site	Sun St	WV10 0DX	392365	299080
82	CCTV- Council site	Wulfruna St	WV1 1RJ	391304	298917
83	CCTV- Council site	Darlington Street	WV1 4LY	391118	298633
84	CCTV- Council site	Litchfield St	WV1 1DU	391475	298778
85	CCTV- Council site	Molineux Street	WV1 1RY	391439	299129
86	CCTV- Council site	Railway Drive	WV1 1LF	391789	298748
87	CCTV- Council site	Vine island	WV10 6PZ	391393	303517
88	CCTV- Council site	Stafford Road M54 Junction 2	WV10 6NT	391631	303682
89	CCTV- Council site	Stafford Rd Springfield Rd	WV10 6NU	391682	304062
91	CCTV- Council site	Youth Zone (West)	WV2 4EN	391180	298040
92	CCTV- Council site	Youth Zone (East)	WV2 4EN	391180	298040
93	CCTV- Council site	Youth Zone (Half)	WV2 4EN	391180	298040
94	CCTV- Council site	Wobaston	WV10 6HA	391309	303419
97	CCTV- Council site	Waddens Brook W-field Way	WV11 3QR	394934	300052
98	CCTV- Council site	NewX Avenue W-field Way	WV10 0TQ	393693	299471
99	CCTV- Council site	Wednesfield Way Neachells Lane (to be Installed)	WV11 3PS	394662	299923
100	CCTV- Council site	Cannock Rd, Raynor Rd (to be installed)	WV10 0RH	392953	300624
101	CCTV- Council site	Data Centre Cam 1	WV1 1RR	391314	298823
102	CCTV- Council site	Data centre	WV1 1RR	391314	298823
103	CCTV- Council site	Data Centre Cam 3	WV1 1RR	391314	298823
104	CCTV- Council site	Data Centre	WV1 1RR	391314	298823
105	CCTV- Council site	Broad Street Car Park	WV1 1JD	391687	298948
106	CCTV- Council site	Broad Street Car Park Entrance	WV1 1JD	391687	298948

**2e Urban Traffic Control Backhaul/Mobile Network Devices/Variable Message Signs**

UTC Backhaul	100071374207.00	School Street / Skinner Street (28B)
UTC Backhaul	10093323212.00	Ring Road / Stafford Street (4B)
UTC Backhaul	10007117606.00	Fryer Street / Broad Street (23B)
UTC Backhaul	10090644033.00	Ring Road / Snow Hill (5B)
UTC Backhaul	10093323277.00	Penn Road / Coalway Road (19B)
UTC Backhaul	10093323289.00	Dudley Road / Parkfield Road (12B)
UTC Backhaul	10093327125.00	Birmingham New Road / Shaw Road (11B)
UTC Backhaul	100071562520.00	Ettingshall Road / Millfields Road (21B)
UTC Backhaul	10093323233.00	Wellington Road / Wolverhampton Street (7B)
UTC Backhaul	10033905160.00	BCR near Oxford Street WB (8B)
UTC Backhaul	10093326968.00	Highfields Rd / Dudley Street (29B)
UTC Backhaul	10033905487.00	Compton Road / Chapel Ash (10B)
UTC Backhaul	10093323276.00	Tettenhall Road / Henwood Road
UTC Backhaul	100071161956.00	Stafford Road / Greenfield Lane (15B)
UTC Backhaul	10003592713.00	Stafford Road / near Lodge Road (14B)
UTC Backhaul	10003594035.00	Wolverhampton Rd / Deans Rd / Tudor Rd (24B)
UTC Backhaul	10093323261.00	Neachells Lane / Alfred Squire Road



UTC Backhaul	10090011563.00	Cannock Road / Raynor Road (27B)
Mobile network devices	10033906833.00	Bilston Road / Moseley Road
Mobile network devices	10093323294.00	Trysull Road / Broad Lanes
Mobile network devices	10003594132.00	Bridgnorth Road / Wightwick Bank
Mobile network devices	10003592255.00	Blaydon Road / nr Halesworth Road
Mobile network devices	100071352699.00	Codsall Road / nr Claregate Public House
Variable message signs	10093323229.00	Bilston Road I/B near Steelhouse Lane
Variable message signs	10093323233.00	Wellington Road I/B near Wolverhampton Street
Variable message signs	100071405799.00	Stafford Road I/B near The Maltings
Variable message signs	10090013276.00	Wednesfield Way I/B near Bowmans Harbour
Variable message signs	10003592281.00	Oxford Street I/B near Hare Street
Variable message signs	10003593641.00	Horseley Fields I/B near St James Street
Variable message signs	10033905914.00	Dudley Road I/B near Bell Place
Variable message signs	10003593187.00	Penn Road I/B near Lea Road
Variable message signs	10093327125.00	Birmingham New Road I/B near Shaw Road
Variable message signs	10003592769.00	Lichfield Road I/B near Lyndale Drive
Variable message signs	100071173444.00	Wednesfield Road I/B near Lincoln Road
Variable message signs	10093324971.00	Cannock Road I/B near Old Hampton Lane
Variable message signs	100071559479.00	Willenhall Road I/B near Vaughan Road
Variable message signs	10003592002.00	Stafford Road I/B near Farmbrook Avenue
Variable message signs	10007118920.00	Compton Road I/B near Canal bridge
Variable message signs	100071153201.00	Wolverhampton Road East I/B near Dudding Road
Variable message signs	10093323229.00	Bilston Road O/B near Steelhouse Lane
Variable message signs	10003594442.00	Black Country Route I/B near Lunt Island
Variable message signs	10003593187.00	Penn Road O/B near Lea Road
Variable message signs	10093323216.00	Birmingham Road O/B near Lever Street
Variable message signs	10090015039.00	Stafford Road I/B near Goodyear Island
Variable message signs	10033904615.00	Stafford Street O/B near Nursery Street
Variable message signs	100071173444.00	Wednesfield Road O/B near Lincoln Street
Variable message signs	10003594058.00	Wergs Road
Variable message signs	10033905035.00	Coseley Road (leading to Black Country Route)
Variable message signs	10093327138.00	Stourbridge Road
Variable message signs	10003594143.00	Willenhall Road - Lower Horseley Fields

## 2e - New Sites

FID	Description	Distance from Fibre
1	New site with connection with connection within:	30 m of existing cable
2	New site with connection with connection within:	100m of exiting cable
3	New site with connection with connection within:	200m of existing cable
4	New site with connection with connection within:	400m of existing cable

	within:	
5	New site with connection with connection within:	600m of existing cable

## Annex 3 Highways Information

## Footpaths recently resurfaced:

Brooklands Parade and roads off – 2016/17  
 Wenlock Ave & Minsterley Close – 2017/18  
 Bushbury Lane – 2017/18  
 Spondon Close – 2018/19

## Planned to start :

Ruskin Road 2018/19  
 Pinfold Lane 2018/19

## Roads recently resurfaced

Detailed below and See [FIBRE NETWORK PLAN 3.pdf]

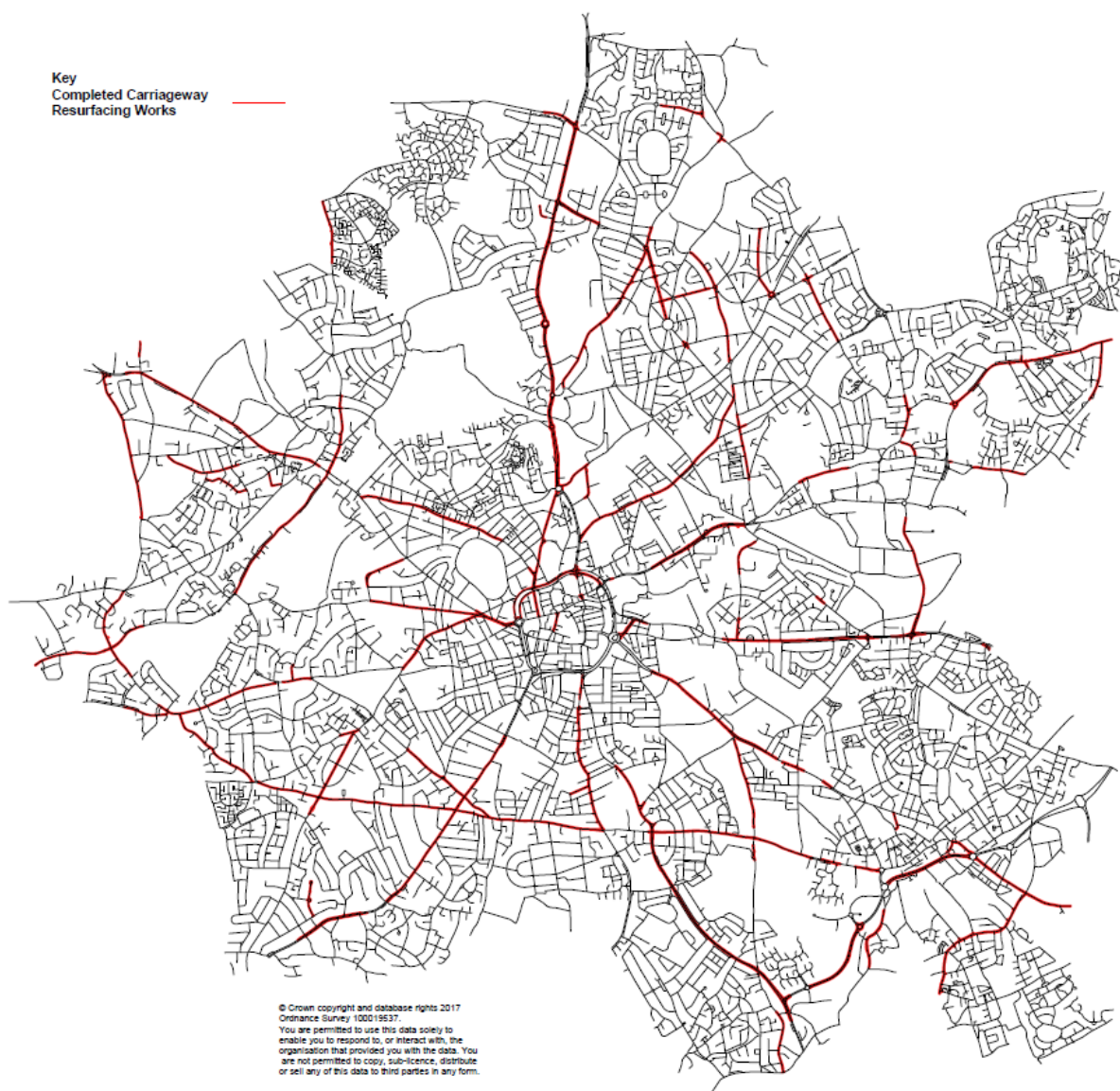
Year	Road Classification	Site Details	Work s	
2011-12		PAGET ROAD	CW	R S
2011-12		Kempthorne Avenue - Hammond Avenue to Bushbury Lane	CW	R S
2011-12		Thompson Avenue - Napier Road to Parkfield Crescent	CW	R S
2011-12		Birmingham New Road - Spring Road to Black Country Route (Phase II)	CW	R S
2011-12		Horseley Fields/Middle Cross - Shakespeare Street to Mary Ann Street	CW	R S
2011-12		Dudley Road - Frederick Street Junction (Bus Lane)	CW	R S
2011-12		Wood End Road/Lichfield Road	CW	R S
2011-12		Penn Road Outbound - Church Hill to Vicarage Road	CW	R S
2011-12		Penn Road Inbound - Hollybush Lane to Church Hill	CW	R S
2012-13		Willenhall Road - The Keyway Roundabout	CW	R S
2012-13		Willenhall Road - Hickman Avenue Junction	CW	R S
2012-13		Willenhall Road - Neachells Lane Junction	CW	R S
2012-13		Legs Lane - Northycote Lane Junction	CW	R S
2012-13		Broad Street - Under Railway Bridge	CW	R S
2012-13		Willenhall Road - Deans Road Junction	CW	R S
2012-13		Bilston Road - Dual Carriageway Section	CW	R S
2012-13		Parkfield Road - Phase 2 - Windsor Road to Railway Bridge	CW	R S
2012-13		Parkfield Road - Phase 1 - Thompson Avenue to Windsor Road	CW	R S
2012-13		Linden Lea - Finchfield Road West to Walnut Drive	CW	R S



2012-13		Finchfield Road West - Coppice Road to Broad Lane	CW	R S
2012-13		Keepers Lane - No 17 to City Boundary	CW	R S
2012-13		Millfields Road - Stom Road to Village Way	CW	R S
2012-13		Manor Road - Under Railway Bridge	CW	R S
2012-13		McLean Road - Front No 4 - Turning Circle	CW	R S
2012-13		Bilston Road - Culwick Street to Hargreaves Street	CW	R S
2012-13		Bilston Road / Wellington Road - Phase 2 - Wolverhampton Street to Texaco Petrol Station	CW	R S
2012-13		Black Country Route - Sedgemoor Park Island to Spring Vale Island	CW	R S
2015-16	U	DARLINGTON STREET - VICTORIA ST TO RING ROAD	CW	R S
2016-17		Bridgnorth Road - Phase 2 - Whighwick Bank to City Boundary	CW	R S
2016-17	U	OLD HEATH ROAD - 114 to 182	CW	R S
2016-17	U	OLD HEATH ROAD - Deansfield Road to Willenhall Road	CW	R S
2016-17	A	STAFFORD ROAD FROM 5-WAY RDBT TO OXLEY MOOR ROAD	CW	R C
2016-17	A	RING ROAD ST ANDREWS - CHAPEL ASH TO WATERLOO ROAD	CW	R S
2016-17	A	RING ROAD ST PETERS - WATERLOO ROAD TO STAFFORD STREET		
2017-18	C	THREE TUNS LANE - Stafford Road to Fordhouse Road	CW	R S
2017-18	A	COMPTON ROAD - Chapel Ash to Clark Road	CW	R S
2017-18	A	PENN ROAD - Stubbs Road to Coalway Road	CW	R S
2017-18	C	COALWAY ROAD - Trysull Road to Penn Road	CW	R S
2017-18	A	CHAPEL ASH - Tettenhall Road to Ring Road	CW	R S
2017-18	C	WARSTONES ROAD - Coalway Road to Billy Wright Close	CW	R S
2017-18	C	TRYSULL ROAD - Wenlock Avenue to Bamber Close	CW	R S
2017-18	A	BLACK COUNTRY ROUTE - Prose Street to Oxford Street	CW	R S
2017-18	A	Birmingham New Road - Spring Road to Parkfields Road	CW	R S
2017-18	C	LOWER STREET - Grotto Lane to Tettenhall Road	CW	R S
2017-18	A	MILLFIELDS ROAD - Union Street to Black Country Route	CW	R S
2017-18	A	BILSTON ROAD - Ring Road to Cullwick Street	CW	R S
2018-19	B	SALOP STREET - Loxdale Street to Baldwin Street	CW	R S
2018-19	A	BLACK COUNTRY ROUTE - Oxford Street Island to Prosser Street	CW	R S
2018-19	A	BIRMINGHAM NEW ROAD - Parkfield Rd to	CW	R

		Spring Rd - Outbound		S
2018-19	U	CHESTERTON ROAD - Dickens Road to Cannock Road	CW	R S
2018-19	U	DICKENS ROAD - Chesterton Road to Tennyson Road	CW	R S
2018-19	U	RANELAGH ROAD - Dudley Road to Haggard Road	CW	R S
2018-19	U	THE CRESCENT - Broad Street to Wellington Road	CW	R S
2018-19	A	CANNOCK ISLAND - All Island	CW	R S
2018-19	U	HIGHFIELDS ROAD - Dudley Street to Bankfield Road	CW	R S
2018-19	U	BROAD LANES - MTC to Gills Butchers	CW	R S
2018-19	B	ASH STREET - Highfields Road to Daisy Street	CW	R S

Key  
Completed Carriageway  
Resurfacing Works



[To be provided before the tender goes out]