

	Optical Wavelength Service Schedule	LRE-TCO-006
Classification: External	Version 1.02	

Optical Wavelength Service Schedule (Version 1.02)

Optical Wavelength Services means the communication services supplied by Neos Networks at an agreed bandwidth which allows the Customer to pass Optical Wavelengths over specified circuits.

Optical Services

1. Optical

- 1.1. Optical Wavelength services are provided in a Point to Point (P2P) configuration.
- 1.2. Neos Networks Optical Wavelength P2P is provisioned as (i) On-Net i.e., between two PoPs or (ii) Off-Net i.e., using Off-Net Tail Circuit connection(s).
- 1.3. Bandwidth speed between PoPs can be provisioned using 10Gbps, 100Gbps and 400Gbps bearers. Capacity is specified by the Customer on a per node basis when the Order Form is completed.
- 1.4. Network diversity and resilience is not configured as standard for an Optical Wavelength P2P service.
- 1.5. Network diversity and resilience is available on request, including NND1 and NND2, and is also available from other third-party providers. Circuit diversity and resilience must be specified when the Order Form is completed.

- 3.1.1. Optical Services shall be charged via an Installation Charge and an Annual Rental Charge;
- 3.1.2. the Installation Charge shall be invoiced by Neos Networks on each relevant Service Commencement Date; and
- 3.1.3. the Annual Rental Charge shall be invoiced by Neos Networks quarterly in advance from the Service Commencement Date.

4. Additional Information

4.1. If the Service entails the procurement of an Openreach service (whether directly or indirectly), the Customer must promptly notify Neos Networks and self-certify whether it is (or will be) using the Service for the purpose of aggregating FTTP to multiple homes and business premises from aggregation nodes (e.g. a street-based cabinet) ("**Aggregation**"). If the Service is (or will be) used for Aggregation, a surcharge (calculated from the surcharge payable to Openreach plus a reasonable administrative charge) (the "**Aggregation Surcharge**") shall be payable by Customer, starting from the relevant Service Commencement Date.

4.2. The Customer acknowledges and agrees that if it fails to self-certify correctly or promptly, Neos Networks shall be entitled to levy the Aggregation Surcharge from the Service Commencement Date.

Optical Terms

2. Service Schedule

- 2.1. This Optical Wavelength Service Schedule ("**Service Schedule**") is effective as of the Effective Date of the Order Form between the Parties referencing this Service Schedule and incorporates by reference the General Terms executed or adopted by the Parties. Unless otherwise defined in this Service Schedule, capitalised terms in this Service Schedule shall have the definitions given to them in an Order Form or the General Terms.

3. Optical Charges

- 3.1. Unless otherwise specified in the relevant Order Form:

Service Level Agreement

5. Service Levels

- 5.1. The following service levels are applicable for the Network. Where a tail provider or third-party supplier delivers part of the Services, Neos Networks' liability will at no time exceed the

published contractual liability of the tail provider or third-party supplier.

Section Ref.	Service Level Measure	Service Level Agreement - Optical Wavelength
5.2	Delivery	Committed Delivery Date
5.3	Target Time to Repair – Equipment related fault, where Equipment has been provided by Neos Networks (note 1)	5 hours
5.3	Target Time to Repair - fibre-related fault (note 2, 3)	16 hours
5.4	Availability target	At least 99.85%
5.5	NND1 Availability target if terminating into a Neos Networks-managed NTE	Minimum Availability will be set out in the Order Form.
5.5	NND1/NND2 Availability target if terminating into a Customer-managed NTE, a Patch Panel, or an Optical Distribution Frame	As per Availability in Section 5.4

Note 1 – Network fault time to repair is calculated from the end of the notification period.

Note 2 - Excluding fibre faults involving overhead fibre and subsea fibre cables as they are subject to access restrictions and reasonable endeavours will be made to repair.

Note 3 - No Service Credits shall be payable for disruptions which involve repairs to the above exclusions.

5.2. Delivery

5.2.1. In the event that Neos Networks fails to meet the Committed Delivery Date for orders then the Customer may claim compensation as detailed below (except in relation to the supply of Tail Circuits):

Working Days past Committed Delivery Date	Service Credits (percentage of Month's rental for the affected Service) (note 1, 2)
1 – 5	5%
6 – 11	10%
12 – 30	25%
>30	50%

Note 1 - Calculated as 1/12th of the Annual Rental Charge.

Note 2 - Delivery credits payable capped at the equivalent of 1 Month's rental.

5.3. Network Fault

5.3.1. If Neos Networks does not meet the Target Time for Repair for the Optical Wavelength the Customer may claim Service Credits as follows:

Hours past Target Time	Service Credits
1	12% of one Month's rental for each hour or part thereof over the applicable Target Time to Repair, capped at 35% of the Month's rental

5.4. Availability

5.4.1. Neos Networks shall use its reasonable endeavours to ensure that the Connection is available for use twenty-four (24) hours a day throughout each calendar year. To achieve this, Neos Networks shall design the Connection to provide an Availability as set out in the table in section 5.1. The calculation used is based on the recorded number of Service-Affecting Faults per Connection within the Measurement Period.

5.5. NND1 and NND2 Availability

5.5.1. The minimum Availability for a Managed NND1 Connection will be detailed on the Order Form and will be based on the Neos Networks design of the Connection(s).

5.5.2. Neos Networks shall use its reasonable endeavours to ensure that the Connection is available for use twenty-four (24) hours a day throughout each calendar year service period. The Availability is based on the requested design and is in accordance with those set out in the table in section 5.1. The calculation used is based on the recorded number of Service-Affecting Faults per Connection within the Measurement Period.

5.5.3. NND2 and unmanaged NND1 Connections will have an Availability based on each individual Connection set out in Section 5.4.

5.6. Capacity Change Request

5.6.1. Neos Networks will deem any request for an increase in bandwidth as a new Order.

5.6.2. The Customer may not request a decrease of bandwidth below the initial capacity specified in the Order Form.

6. Fault Management

6.1. Faults may be reported to the NOC by the Customer on 0345 3053337 (or such other number as Neos Networks notifies the Customer) 24 hours a day, 7 days a week at which time a Fault Reference Number will be issued.

6.2. Neos Networks will in the Notification Period take reasonable steps to restore the Service if possible.

6.3. On notification of a fault by the Customer to Neos Networks, the Customer shall perform all necessary in-house tests to the demarcation point (being the Service boundary on the Network) and shall co-operate fully with the NOC in order to locate any fault.

6.4. In the event that Neos Networks' normal point of contact is not able to respond satisfactorily, the escalation procedure(s) should be used and any requests from either Party for the escalation procedure(s) to be implemented should be initiated through the relevant contacts identified in the table below:

Level	Network Operations Personnel	Escalation
1	NOC	4 hours after initial fault is reported
2	Duty Operations Manager	1 hour after level 1 escalation

3	Head of NOC	3 hours after level 1 escalation
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Neos Networks operates a personnel roster system for escalation purposes and provides a series of Duty Officers for all three levels. Accordingly, the dedicated telephone number for Duty Officers is the NOC fault report number.

Service Credits

All claims for Service Credits under the Agreement must be submitted to Neos Networks within thirty (30) days of the failure to meet the specified service level.

Any Service Credits shall be paid in the form of a credit to the Customer's account, except in the event that the contract expires, in which case Neos Networks shall make payment following the termination of the Agreement.

Neos Networks' total aggregate liability to the Customer under this Service Level Agreement in any twelve (12) month period shall not exceed an amount equal to one Month's charges for the individual Service which has the Service-Affecting Fault (calculated as 1/12th of the Annual Rental Charge).

If attributable to the same fault, only one type of Service Credit may be claimed by the Customer. Service Credits will be the Customer's sole remedy in respect of any failure of Neos Networks to meet the applicable service level.

Excused Outages

Planned maintenance

8.1.1. In maintaining the Service, Neos Networks may with reasonable notice request a temporary Outage or re-routing of the Service. Where reasonably possible, Neos Networks will notify the Customer of the Outage or re-routing at least twenty-eight (28) days in advance and will co-operate with the Customer as to timing. If Neos Networks and the Customer cannot agree, then the decision by Neos Networks shall be final. Where notice has been given of such Outage or re-routing, the Customer will not be entitled to any Service Credits or compensation and lack of Availability will not be counted in any Measurement Period. The Customer acknowledges that if the planned maintenance is cancelled by the Customer on less than fourteen (14)

days' notice, Clause 26.6 of the General Terms shall apply.

8.1.2. Planned maintenance may be required from time to time. Notice will be given to Customers that may be affected. Neos Networks will use reasonable endeavours to carry out this work without disruption, but if Neos Networks and the Customer cannot agree the timing of the Outage or re-routing, Neos Networks' decision shall be final. Where notice has been given of such planned maintenance, the Customer will not be entitled to any Service Credits for resulting Outages and lack of Availability will not be counted in any Measurement Period.

8.1.3. The Customer shall provide Neos Networks with reasonable written notice of any planned maintenance they intend to perform which could impact the Service.

8.2. Customer-responsible faults

8.2.1. Neos Networks is not responsible for any fault identified as attributable to Customer Apparatus, Customer's power supplies or the action or inaction of the Customer's employees and/or agents. In such event, reasonable costs (including engineer costs, travel costs and preparation costs) incurred by Neos Networks shall be recharged to the Customer.

8.2.2. Additionally, Neos Networks will quote its terms and conditions (including price) for any remedial work that is necessary to fulfil its obligations under the Agreement but the provisions relating to Target Times to Repair shall not apply and any downtime occasioned by such Customer fault shall not be included in Availability measurements.

8.2.3. In the event of responsibility being the subject of dispute between Neos Networks and the Customer, then the decision of Neos Networks in this regard shall prevail.

8.3. Third party-attributable faults

8.3.1. If a fault is identified as being attributable to a third party (i.e., neither the Customer nor Neos Networks), the fault shall be deemed to be the responsibility of Neos Networks, but no downtime will be included in Availability measurements. In such event, Neos Networks will use reasonable endeavours to restore the Service within the Target Time to Repair but will not be

liable to pay Service Credits to the Customer if it cannot do so.

8.3.2. Neos Networks' liability for Target Times to Repair or Availability of the Tail Circuit will at no time exceed the actual recovered amount from the third-party supplier of such Tail Circuit.

9. Optical Wavelength Interconnection

9.1. When the Customer is responsible for facilitating the interconnection to the Optical Coupler, the Customer shall be provided with details of the Maximum Initial Optical Injection Power Level acceptable to Neos Networks at the point of interconnection. The injection power level identified as acceptable for each Customer is calculated by reference to the activated wavelength services already utilised on the wavelength route. Neos Networks shall specify to the Customer acceptable Optical Injection Power Levels throughout the term of this Agreement. This ensures that the Wavelength and the Network operate at their Optimum State.

9.2. Once the Wavelength and the Network are operating at their Optimum State, any changes in the Customer's Optical Injection Power Level may only take place with the consent of Neos Networks, such consent not to be unreasonably withheld.

9.3. From time to time, Neos Networks may undertake work to maintain the Optimum State for the Wavelength and the Network. Neos Networks shall notify the Customer in advance of undertaking such work and, where necessary, the Customer shall use its reasonable endeavours to assist Neos Networks in undertaking such works, which may include, but will not be limited to, variation in the Optical Injection Power Level.

9.4. Failure by the Customer to comply with any reasonable request of Neos Networks in accordance with Section 9.3 may result in Neos Networks disconnecting the Customer's point of interconnection at the Optical Coupler to facilitate such works.

10. Definitions and interpretations

In the Agreement, unless the context otherwise requires, the capitalised terms shall have the following meanings:

"Access Tails" means the electronic communications network supplied by Neos Network to connect the Site to the Network;

"Availability" means the time for which a Service is available. A Service shall be deemed unavailable if it is completely interrupted for greater than ten consecutive seconds;

“Connection” means an electronic communication circuit(s) to be supplied by Neos Networks for the delivery of Services pursuant to this Agreement. Such Connections shall be supplied as point-to-point only;

“Diversely Routed” means the separation of circuits whereby they will not share the same duct or cable where possible;

“Duty Officer” means a person authorised to make decisions at the relevant level;

“Fault Reference Number” means the unique number issued when logging a fault with the NOC;

“Maximum Initial Optical Injection Power Level” means the highest power level in dBm at which the Customer may initially interconnect to the Optical Coupler;

“Measurement Period” means periods of twelve (12) Months, the first being calculated from the Service Commencement Date;

“Neos Networks Diversity 1” or “NND1” means two Diversely Routed fibre paths utilising a single set of NTE, patch panel or ODF at each end;

“Neos Networks Diversity 2” or “NND2” means two Diversely Routed fibre paths utilising separate NTE, patch panels or ODFs at each end;

“Managed NND1” means NND1 where Neos Networks is responsible for switching to the Diversely Routed path in the event of an Outage;

“Month” means calendar month;

“NTE” means the Network Terminating Equipment;

“NNI” means Network-to-Network Interface;

“NOC” means the Network Operations Centre sited at a Neos Networks’ office location from where Network management functions are directed;

“Notification Period” means the period of 1 hour from the time a fault is reported to Neos Networks, or an alarm is registered by the NOC;

“Optical Distribution Frame” or “ODF” means the frame used to house a point of interconnect;

“Optical Coupler” means the optical coupler (which is also known as the optical filter) owned by Neos Networks which combines multiple wavelengths over the Network;

“Optical Injection Power Level” means the power level in dBm specified by Neos Networks at which the Customer may interconnect to the Optical Coupler for the Wavelength and Network to operate at its Optimum State;

“Optimum State” means the operating conditions upon which multiple services can be provided by Neos Networks to the Customer under optimal conditions;

“Off-Net” means being provided by a third party from the Site or data centre up to the Service demarcation point on the Network;

“On-Net” means inside the demarcation point on the Service boundary of the Network, including any provision using Access Tails;

“Outage” means an event or action (not attributable to the act or omission of the Customer or arising at the request of the Customer) which prevents or restricts the passage of electronic communications signals across any Connection;

“Patch Panel” means a panel which houses ports where an interconnection can be made;

“Scheduled Outage” means a loss of the Services for an agreed period, communicated to and agreed by the Customer a minimum of twenty-eight (28) days in advance;

“Service-Affecting Fault” means any fault originating on the Network which causes an interruption to the actual use of the Service which is not attributable solely to latency in excess of 10 milliseconds;

“Service Credits” means an amount that the Customer may claim where the specified service level has not been met;

“Tail Circuit” means the electronic communications network supplied by a third-party provider to connect the Site to the Network;

“Target Time to Repair” means the target length of time to restore the Services which is measured from the end of the Notification Period registered by the NOC as designated in Section 5.1; and

“Wavelength” means the identified portion of fibre optics and associated facilities and equipment providing fibre optic capacity provided by Neos Networks and dedicated to the Customer in accordance with the Order Form.