



Annex D – ORDERS, SERVICE ASSURANCE AND SERVICE PERFORMANCE

FIRST DRAFT

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The following is a brief summary of the most recent revisions to the document. Details of all revisions prior to these are held by the issuing department.

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1 Purpose and Scope

- 1.1** This Annex sets out the processes and procedures that apply to the operational aspects of the supply of Regulated Services by Oman Broadband to Requesting Licensee under this Agreement.
- 1.2** This Annex covers operational processes such as:
- (i) placing different types of Orders (Connect, Modify, Disconnect, Cancel);
 - (ii) raising trouble tickets;
 - (iii) exchanging notifications between Oman Broadband and Requesting Licensee; and
 - (iv) measuring service performance and service assurance for Regulated Services provided to Requesting Licensee.

2 Definitions

2.1 See Definitions in Annex A of the Agreement.

3 Service Orders: Basic End-User Connection (BEUC)

Types of Provision Orders for BEUCs

- 3.1 There are five types of orders which may be placed for BEUC Service:
- (i) Connect Order: a basic request for a new connection for End-User;
 - (ii) Connect with ONT: a variation of the Connect Order where the installation and activation of the Optical Network Terminal (ONT) is also included;
 - (iii) Modify Order: a request to modify the network within End-User's Premises (e.g. relocation of Customer Access Point (CAP) or the fibre cable within the Premises);
 - (iv) Cancel Order: a request to cancel an In-Flight Connect or Modify Order prior to completion;
 - (v) Disconnect Order: a request to terminate service for End-User connection.
- 3.2 There are four End-User types who might be required to provide specific proof of identity:
- (i) Residential: End-Users may prove that they form part of the Residential category by providing a Residential ID;
 - (ii) Business: End-Users may prove that they form part of the Business category by providing a Business CRN in the Order request;
 - (iii) Health and Education: Justification for Health and Education orders must be provided to Oman Broadband Commercial Affairs team before such orders will be accepted;
 - (iv) Riyadh Connection: Justification for Riyadh orders must be provided to Oman Broadband before such orders will be accepted.

Placing a BEUC Connect Order

- 3.3 The information required by Oman Broadband to deliver a Connect Order for a BEUC Service is shown below.

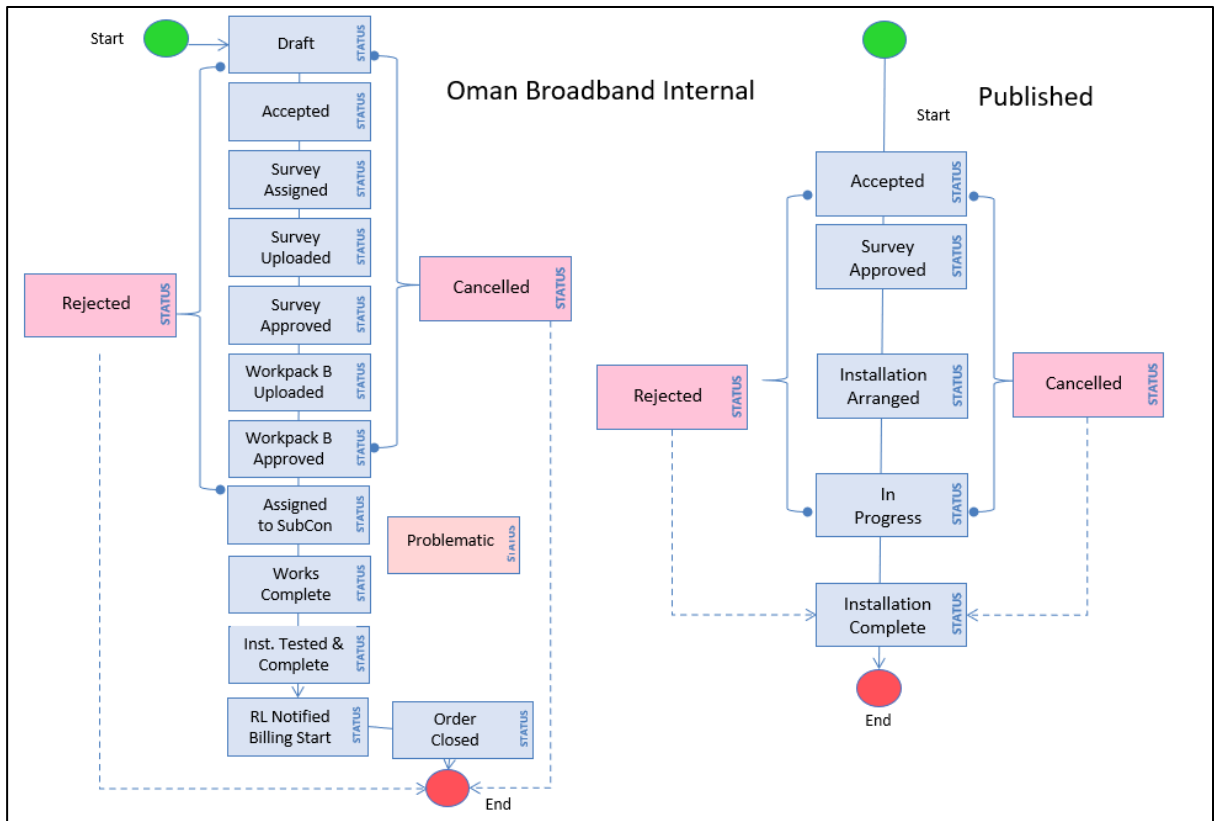
| Field | Description |
|-------------|-----------------------------|
| Product* | BEUC |
| Order Type* | Connect Or Connect with ONT |

| Field | Description |
|---|---|
| End-User type* | Residential, Business, Health and Education, and Riyadh |
| Tag* | The Tag identifier obtained from the GIS files of the footprint |
| Requesting Licensee reference number* | Reference Number provided by Requesting Licensee number* |
| End-User name* | Contact Name |
| End-User GSM* | Mobile Number to contact for appointment |
| Second Contact Number* | Alternative number to contact End-User |
| End-User Resident ID or Business CRN* | ID or CRN* - only Business CRN is mandatory |
| Date and Time that order is submitted by Requesting Licensee* | Date: day/month/year (xx/xx/xxxx) Time: hour/minute (xx:xx) |
| Building Name and Number* | |
| Way Number* | |
| Locality | |
| Wilaya | |
| Governorate | |
| Comments | Free Filed comments if required |

* Mandatory fields

- 3.4** The information may be provided through a set of Application Programming Interfaces (APIs) from Oman Broadband or by email.
- 3.5** If information is incomplete, then Oman Broadband may reject the order by sending a notification to Requesting Licensee.
- 3.6** Figure 3.1 shows the status flows that the order moves through during the workflow process. Only the Published Status (see table in Clause 3.8) will be referred to Requesting Licensee. The 'In Progress' status refers to several internal status changes whilst the order is being processed by Oman Broadband. Notification of the Order status will be sent to Requesting Licensee, based on the Published Status.

Figure 3.1: Status flow for a Connect Order



3.7 The order may be cancelled or rejected at different status points, as illustrated above. An order may only be cancelled at the request of Requesting Licensee.

3.8 A more detailed summary of Oman Broadband’s Internal and Published Status categories are provided in the table below:

| Internal Status | Published Status | Description |
|------------------------------------|------------------|---|
| Draft | | Draft order record entered into Oman Broadband system. |
| Order Accepted | Accepted | Order validated by SOC and data entered in OM System. |
| Order Rejected (by Oman Broadband) | Rejected | Can occur at many points. Order may have inaccurate data or End-User may not be contactable or may refuse admission. Requesting Licensee may re-submit order. |
| Survey Arranged | Survey Arranged | The SOC has contacted End-User and arranged a slot for survey. |
| Survey Complete | In Progress | Oman Broadband’s site technician has completed the survey and gained acceptance of the works from End-User. The technician has also completed first part of the Works Instructions. |

| Internal Status | Published Status | Description |
|---|-------------------------|---|
| Workpack Complete | In Progress | Oman Broadband planning team has completed second part of the Works Instructions, added to the first part, and forwarded to manager for approval. |
| Workpack Approved | In Progress | Manager approves the works. |
| Workpack Received | In Progress | Sub-contractor acknowledges receipt of Works Instructions. |
| Installation/ Modification Complete | Complete | Installation tested and accepted by Oman Broadband, and billing begins. |
| Order Closed | Complete | Order closed. |
| Order Cancelled (by Requesting Licensee) | Cancelled | Cancelled by Requesting Licensee. |
| Problematic | Problematic | Order which has encountered an issue during delivery, and which may result in delay. Typical example is End-User not responding. |

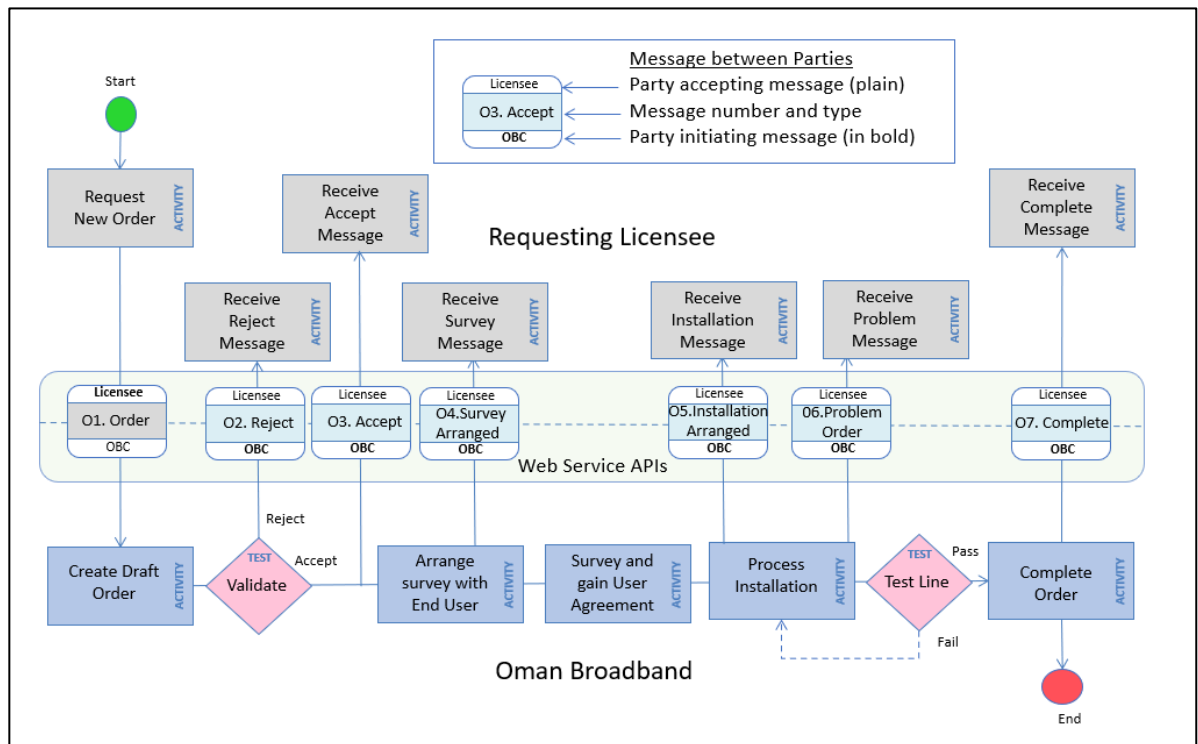
3.9 Message notifications will be provided as system-to-system messages through APIs provided by Requesting Licensee, as part of systems integration, or by email, and will provide information concerning the status of the order. Notifications will be sent for individual orders as they progress through the order journey.

3.10 Messages are exchanged through web-based APIs, provided by the respective Parties. Message 1 refers to the Order request received and processed by Oman Broadband. Messages 2 to 7 are notifications sent by Oman Broadband to Requesting Licensee.

3.11 As the order is progressed its status will change according to Figure 3.1.

3.12 Figure 3.2 outlines the order process and exchange of notifications between the Parties.

Figure 3.2: Exchange of notifications for a Connect Order



3.13 The information contained in each of the respective messages exchanged during the Connect Order is shown in the table below. The information will be delivered to Requesting Licensee using email, in the first instance. Service will be deemed to have started when an Order Complete message is submitted to Requesting Licensee.

| Status to trigger notification message | Message no. | Information provided |
|--|-------------|---|
| Draft Order | O1 | Request for new Order is placed and a draft order is created in Oman Broadband system |
| Order Rejected | O2 | Requesting Licensee reference number Field with reason for rejection |
| Order Accepted | O3 | Requesting Licensee reference number Oman Broadband reference number Date and time order accepted |
| Survey Arranged | O4 | Requesting Licensee reference number Oman Broadband reference number Date and time of survey |
| Installation Arranged | O5 | Requesting Licensee reference number Oman Broadband reference number Date and time of planned installation Update End-User tag |
| Problematic Order | O6 | Requesting Licensee reference number |

| Status to trigger notification message | Message no. | Information provided |
|--|-------------|---|
| | | Oman Broadband reference number Details of Problem |
| Installation Complete | O7 | Requesting Licensee reference number Oman Broadband reference number Date and time of completion Network routing information Received optical power level from test |

* Notifications provided by system messages or by email

Basic End-User Connection (BEUC) Modify Orders

- 3.14** In certain circumstances, End-User may wish for a modification to its environment, for example re-positioning the CAP to a different location, or even re-routing of the conduit and fibre cable across its Premises.
- 3.15** Oman Broadband allows Requesting Licensee to place a request for the modification as a Modify Order, and Oman Broadband will charge for this order, as described in Annex E.
- 3.16** The information required by Oman Broadband to deliver a Modify Order for a BEUC Service is shown below. The information may be provided through a set of APIs from Oman Broadband or by email.

| Field | Description |
|--|--|
| Product* | BEUC |
| Order Type* | Modify |
| Tag* | The tag identifier obtained from the GIS files of the footprint |
| Requesting Licensee reference number* | New reference number provided by Requesting Licensee (not pertaining to original connection order) |
| Oman Broadband reference number for original Connect Order | Oman Broadband reference return from original connection order (if possible) |
| End-User name | Contact name |
| End-User GSM* | Mobile number to contact for appointment |
| Date and time that order is submitted by Requesting Licensee | Date: day/month/year (xx/xx/xxxx) Time: hour/minute (xx:xx) |
| Details of modification required* | Free field for requirements |

* Mandatory fields

- 3.17** The status flow diagram for a Modify Order is the same as for a Connect Order (the latter is shown in Figure 3.1). These are the status flows that the order moves through during the workflow process. Only the Published Status will be referred to Requesting Licensee. The ‘In Progress’ status refers to several internal status changes whilst the order is being processed by Oman Broadband. Notification of the Order status will be sent to Requesting Licensee, based on the Published Status.
- 3.18** The diagram outlining the Modify Order process, showing when notifications are exchanged, is the same as the Connect Order process shown in Figure 3.2.
- 3.19** The information contained in each of the respective messages exchanged during the Modify Order is similar to that described in Clause 3.13. The information may be provided through a set of APIs provided by Requesting Licensee, or by email.
- 3.20** Requesting Licensee may make available to its Customers (Oman Broadband End-Users) a Relocation service, for people wishing to re-locate property.
- 3.21** Oman Broadband shall support this Relocation service by installing (where applicable) a new Basic End-User Connection at the new End-User Premises, followed by disconnection of the existing End-User connection at the former Premises. The new End-User Premises must lie inside the Coverage Area.
- 3.22** Two separate orders should be submitted to Oman Broadband: a Disconnect Order (as per Clause 3.31) at the former Premises and a new Connect Order (as per Clause 3.3) at the new Premises.
- 3.23** Requesting Licensee shall make payment of the applicable charges in accordance with Annex E.
- 3.24** Service-Level Guarantees (SLGs) pertaining to End-User Relocation will be composed of standard Connect and Disconnect Order SLGs.

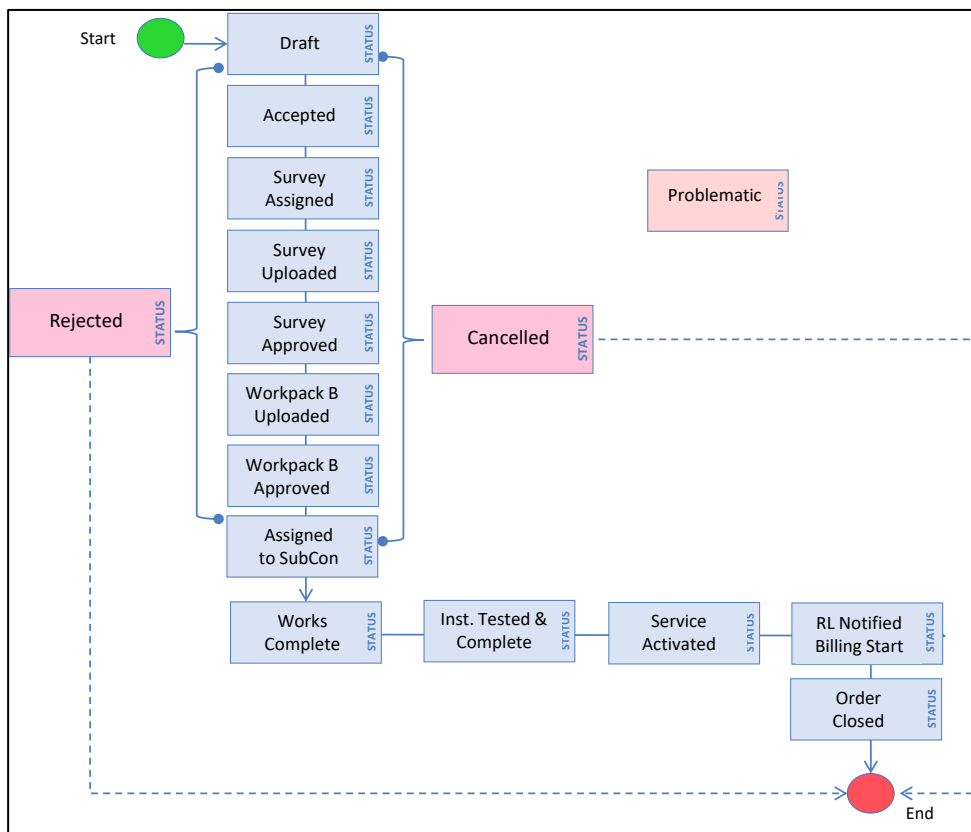
Basic End-User Connection (BEUC) ‘Connect with ONT’ Orders

- 3.25** A Connect with ONT Order is a Connect Order that also includes a request to install and activate the Optical Network Terminal (ONT).
- 3.26** The information required by Oman Broadband to deliver a Connect with ONT Order for a BEUC service is the same as for a Connect Order (described in Clause 3.1), but also includes additional information, as shown in the table below. The exact details of the additional information required may vary by Requesting Licensee according to the agreed process for ONT installation.

| Field |
|------------------|
| Type of ONT |
| Serial number |
| Router details |
| IP address |
| MAC address |
| Internet package |

3.27 The status flow diagrams for a Connect with ONT Order are similar to a Connect Order (the latter is shown in Figure 3.1), but with some additional status categories, such as ‘Service Activated’.

Figure 3.3: Status flow for a Connect with ONT Order



3.28 Service notifications for Connect with ONT are the same as for a Connect Order (see Clause 3.13), with one difference: the final notification, sent out at the Service Activated point of the process, also includes the ONT completion certificate. This certificate contains a more detailed list of the parameters used to set up the ONT, such as IP address, among others. The exact format of the ONT completion certificate is agreed with Re questing Licensee.

BEUC Disconnect Orders

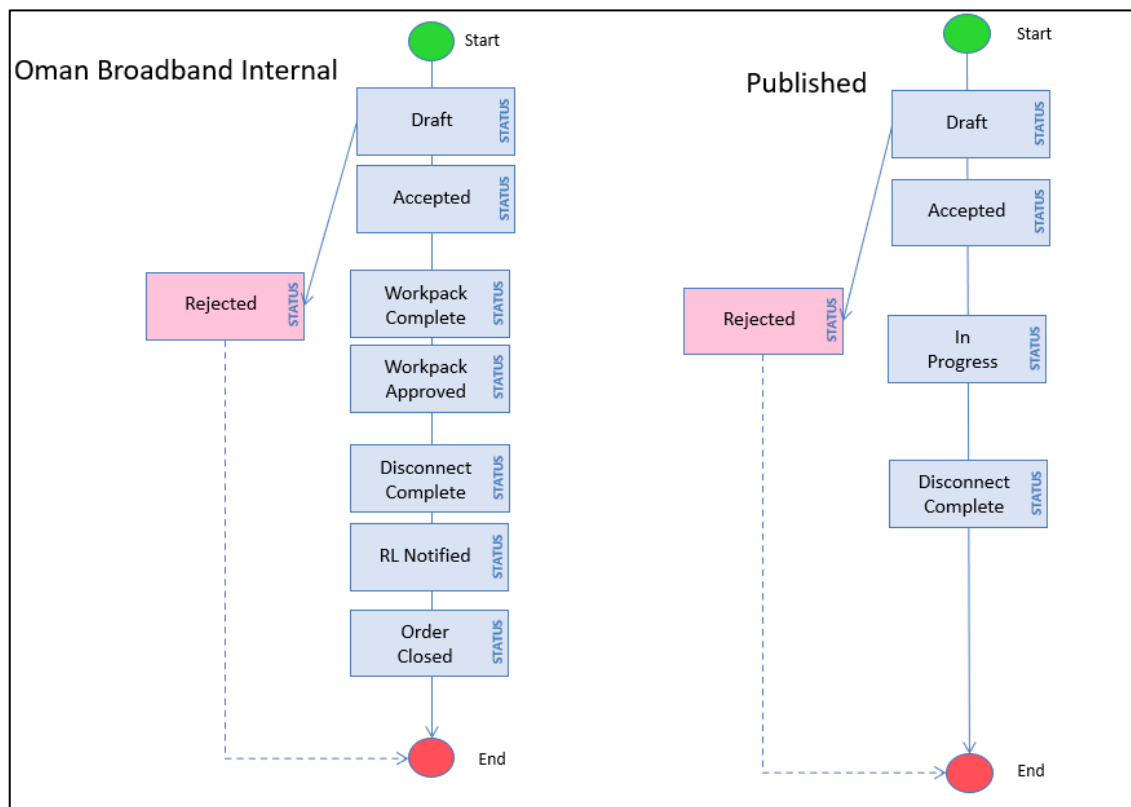
- 3.29** A Disconnect Order is a request from Requesting Licensee to Oman Broadband to disconnect End-User from the network, generally following a request made by End-User to Requesting Licensee.
- 3.30** It is Oman Broadband's policy to leave the CAP and End-User fibre cable in place following a Disconnect Order, and the works generally relate to routing activities within the main network.
- 3.31** The information required by Oman Broadband to deliver a Disconnect Order for a BEUC Service is shown below. The information may be provided through a set of APIs from Oman Broadband or by email.

| Field | Description |
|--|--|
| Product* | BEUC |
| Order Type* | Disconnect |
| Tag* | The tag identifier obtained from the GIS files of the footprint |
| Requesting Licensee reference number* | Reference number provided by Requesting Licensee |
| Oman Broadband reference number for original Connect Order | Oman Broadband reference return from original connection order (if possible) |
| End-User name | Contact name |
| End-User GSM* | Mobile number to contact for appointment |
| Date and time that order is submitted by Requesting Licensee | Date: day/month/year (xx/xx/xxxx) Time: hour/minute (xx:xx) |
| Comments | Free field for comments if required |

* Mandatory fields

- 3.32** Figure 3.4 shows the status flow diagrams for the Disconnect Order. These are the status flows that the order moves through during the workflow process. Only the Published Status will be referred to Requesting Licensee. The 'In Progress' status refers to several internal status changes whilst the order is being processed by Oman Broadband. Notification of the Order status will be sent to Requesting Licensee, based on the Published Status.

Figure 3.4: Status flows for a Disconnect Order



3.33 A more detailed summary of Oman Broadband’s Internal and Published Status categories is provided in the table below:

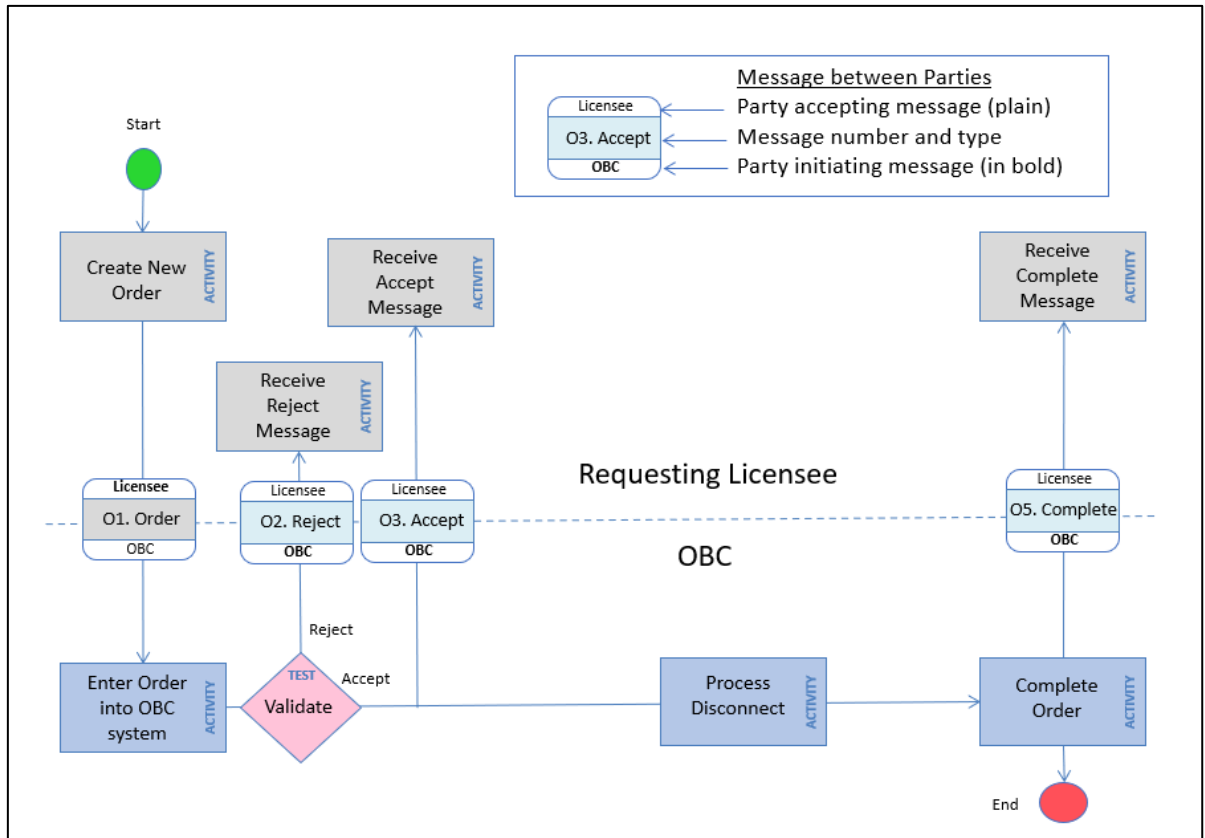
| Internal Status | Published Status | Description |
|---|------------------|--|
| Draft | | Draft order record entered into Oman Broadband system |
| Disconnect Order Accepted | Accepted | Order validated by SOC and data entered in OM System |
| Disconnect Order Rejected (by Oman Broadband) | Rejected | Can occur at many points. Order may have inaccurate data. Requesting Licensee may re-submit order. |
| Various activities | In Progress | Covers Oman Broadband activities required for Disconnect Order |
| Disconnect Complete | Complete | Works completed and billing ends subject to minimum contract period. |
| Order Closed | Complete | Order closed |

3.34 Notifications will be provided to Requesting Licensee at various points during the order process. Message notifications will be sent by email to Requesting Licensee and will provide

information concerning the Order status. An email will be sent for each individual message in the context of each order.

3.35 Figure 3.5 below outlines the Disconnect Order process and exchange of notifications. Message 1 refers to the Disconnect Order request received and processed by Oman Broadband. Messages 2 to 5 are notifications sent by Oman Broadband to Requesting Licensee.

Figure 3.5: Exchange of notifications for a Disconnect Order



3.36 The information contained in each of the respective messages exchanged during the Disconnect Order is shown in the table below. The message numbers related to the messages illustrated in the diagram above. The information will be delivered to Requesting Licensee using email, in the first instance.

| Status to notification | trigger | Message No. | Information provided |
|------------------------|---------|-------------|---|
| (Order request) | | O1 | Request for new Order is placed and a draft order is created in Oman Broadband system |
| Order Accepted | | O3 | Requesting Licensee reference number Oman Broadband reference number Date and time order accepted |

| Status to trigger notification | Message No. | Information provided |
|------------------------------------|-------------|--|
| Order Rejected (by Oman Broadband) | O2 | Requesting Licensee reference number Free field with reason for rejection |
| Disconnect Complete | O5 | Requesting Licensee reference number Oman Broadband reference number Date and time of completion Comments field |

* Notifications provided by email or into the systems of Requesting Licensee

BEUC Order Cancellations

3.37 Oman Broadband has made provision for Requesting Licensee to cancel In-Flight Connect and Modify Orders before they are complete.

3.38 Cancellations can only be initiated by Requesting Licensee.

3.39 An In-Flight Connect or Modify Order may be Cancelled by Requesting Licensee at any time before completion, but penalties may apply according to the table below.

| Order status at Cancellation | Penalty incurred by Requesting Licensee |
|-----------------------------------|---|
| Order Accepted or Survey Arranged | No charge |
| Survey Complete or In Progress | Annex E |
| Install Complete | Disconnect Order |

3.40 Once a Connect or Modify Order reaches Complete status, only a Disconnect Order will terminate or cancel the order. Oman Broadband does not allow the Cancellation of a Disconnect Order. If service is still required following the acceptance of a Disconnect Order, then a new Connect Order should be processed.

3.41 The information required by Oman Broadband to Cancel an In-Flight Connect or Modify Order for a BEUC Service is shown below. The Cancel request must pertain to an existing Order; if it does not, the request will be rejected by Oman Broadband. The information may be provided through a set of APIs from Oman Broadband or by email.

| Field | Description |
|-------------|---|
| Product* | BEUC |
| Order Type* | Cancellation |
| Tag* | The tag identifier obtained from the GIS files of the footprint |

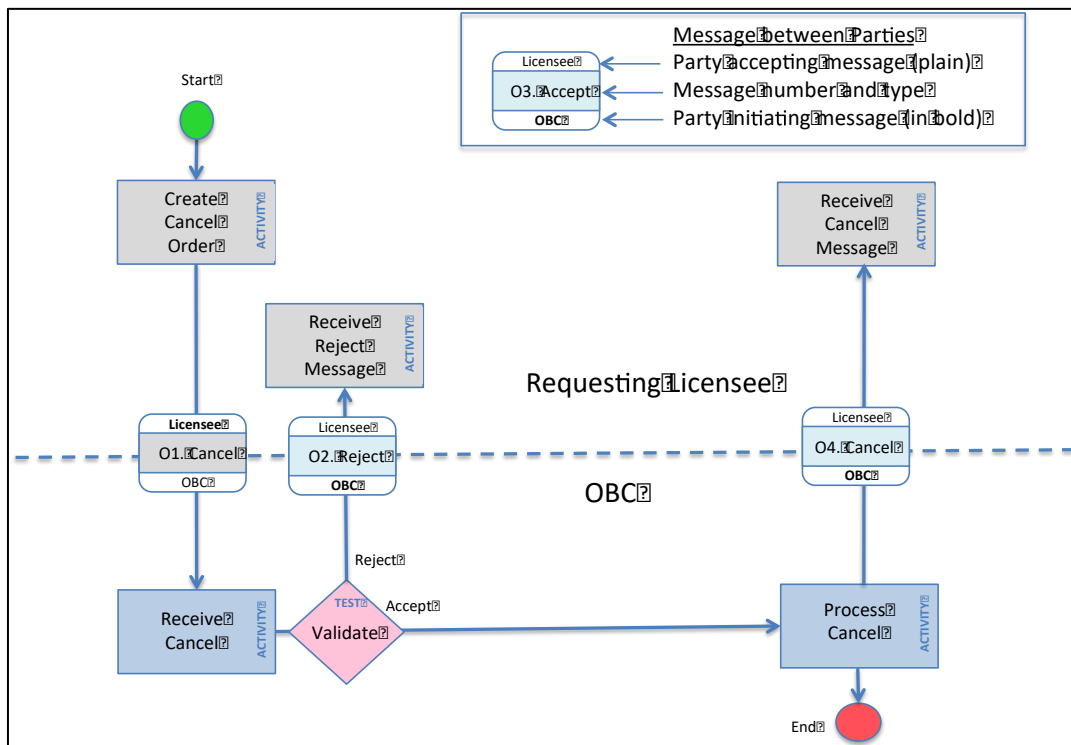
| Field | Description |
|--|---|
| Requesting Licensee reference number for original Connect or Modify Order* | Reference number provided to Requesting Licensee for original Connect or Modify Order |
| Oman Broadband reference number for original Connect or Modify Order | Oman Broadband reference return from original Connect or Modify Order |
| End-User name | Contact name |
| Date and time that order is submitted by Requesting Licensee | Date: day/month/year (xx/xx/xxxx) Time: hour/minute (xx:xx) |
| Reason for cancellation | Free field |

* Mandatory fields

3.42 Notifications are returned to Requesting Licensee at various points during the Cancellation process. Message notifications will be provided by email to Requesting Licensee and will provide information concerning the status of the order. An email will be sent for each individual message in the context of each order.

3.43 Figure 3.6 outlines the Cancel Order process and notifications exchange. Message 1 refers to the Cancel Order request received and processed by Oman Broadband. Messages 2 to 4 are notifications sent by Oman Broadband to Requesting Licensee.

Figure 3.6: Exchange of notifications for a Cancel Order



3.44 The information contained in each of the respective messages exchanged during the Cancel Order is shown in the table below. The message numbers relate to the messages illustrated in Figure 3.6.

| Status to trigger notification | Message No. | Information provided |
|---|-------------|--|
| (Cancellation Request) | O1 | Request for Cancel Order is placed |
| Cancellation Rejected (by Oman Broadband) | O2 | Requesting Licensee reference number Free field with reason for rejection |
| Cancellation Accepted (by Oman Broadband) | O3 | Requesting Licensee reference number Free field |
| Cancellation Complete | O4 | Requesting Licensee reference number Oman Broadband reference number Date and time cancellation complete |

* Information will be delivered to Requesting Licensee using email, in the first instance.

BEUC Order Rejections

3.45 All BEUC Order types may be rejected by Oman Broadband at any time before completion of the order due to any of the following reasons:

| Reason for Rejection | Order status at rejection |
|--|---------------------------|
| Incomplete information on order form | Received |
| Inaccurate data on order form | Order Accepted |
| Unable to contact End-User for appointment after repeated attempts | Order Accepted |
| End-User does not accept proposed works | Survey Arranged |
| Unable to gain access to Premises for installation | Workpack Complete |

3.46 Oman Broadband will provide an explanation of the reason for rejection in the rejection acknowledgement. Oman Broadband will not charge for orders that are rejected.

3.47 The order will only be rejected if Oman Broadband is not able to continue with the order under reasonable circumstances.

3.48 Oman Broadband will attempt to contact End-User via call and text message three times over a period of 3 days. If there is no response, then the order will be rejected.

- 3.49** If Oman Broadband is not able to access the Customer Premises either for a survey or for an installation at the agreed appointment time, then the order will also be rejected.
- 3.50** In practice, Oman Broadband will on many occasions seek an alternative appointment slot.
- 3.51** A rejected order may be re-submitted by Requesting Licensees, once they are able to make contact with End-Users.
- 3.52** Orders may be rejected by Oman Broadband if more than three attempts are required to arrange the first survey.
- 3.53** Rejected orders shall be excluded from Service performance targets.
- 3.54** On occasion, simultaneous orders for connections to the same Customer may be received from different service providers, for example during the release of a new area. In such cases, specific procedures will be agreed with Requesting Licensee to handle these exceptions. Such procedures may include placing the order on hold until confirmation to proceed is obtained from Requesting Licensee. Such cases may be discussed during Governance Meetings.

4 Service Orders : Direct Connectivity to the Building (DCTB)

4.1 Orders for Direct Connectivity to the Building (DCTB) services may be placed by Requesting Licensee to Oman Broadband. There are two types of orders which may be placed for DCTB services:

- (i) DCTB Connect Order;
- (ii) DCTB Disconnect Order.

4.2 The DCTB service is provided between a Data Centre and a specific building within the FTTH footprint, as defined by the Geotag.

DCTB Connect Orders

4.3 The information required to place a DCTB Connect Order is shown in the table below.

| Field |
|--|
| Product Type, i.e. DCTB |
| The initiating Requesting Licensee |
| Building geotag |
| Contact details of building owner or manager |
| Contact details within Requesting Licensee |
| Date requested |
| Special instructions or comments |

4.4 Delivery dates for the DCTB service will be communicated to Requesting Licensee following receipt of order and will be subject to feasibility.

DCTB Disconnect Orders

4.5 A DCTB Disconnect Order is a request from Requesting Licensee to Oman Broadband to disconnect End-User from the network, generally following a request made by End-User to Requesting Licensee. The information required to place a DCTB Disconnect Order is a similar to the information required for a DCTB Connect Order.

4.6 It is Oman Broadband's policy to recover Oman Broadband assets at End-User Premises following a Disconnect Order, and the works generally relate to activities within the network.

5 Service Orders: Co-location

5.1 The information required to place a Co-location Order is shown in the table below:

| Field |
|---|
| Data Centre location |
| Date required |
| Type of co-location required (e.g. Secure Cage Space or Shared Co-location Space, either indoor or outdoor) |
| Space required if Shared Co-location Space |
| Details of equipment to be co-located |
| People to be authorised for site access |
| Proof of competence |
| Backhaul connections already ordered |
| Cable termination requirements, if any |

- 5.2 Orders may generally be placed once the Data Centre site is declared Ready For Service (RfS), subject to approval for use and feasibility by Oman Broadband, on a case by case basis, although pre-orders may be accepted.
- 5.3 Once the Data Centre has been declared RfS, and availability has been confirmed, the orders should be processed within fifteen (15) Business Days from the date of receipt of Order.
- 5.4 In the event that Co-location Space is unavailable, this will be communicated to Requesting Licensee.
- 5.5 The service shall be deemed to have commenced once access to the Co-location Space is granted, assuming that power is available.
- 5.6 There will be no automatic acceptance, rejection or cancellation of these orders.
- 5.7 Status updates will be communicated to Requesting Licensee on an ad-hoc basis either by email or phone call, or during Governance Meetings.

6 Service Orders: Cross-Connect

- 6.1 Orders for Cross-Connect Services may only be placed if both Requesting Licensees already have a Co-location service in the relevant Oman Broadband Data Centre.
- 6.2 The information required to place a Cross-Connect Order is shown in the table below:

| Field |
|--------------------------------|
| Initiating Requesting Licensee |
| Data Centre location |
| Interconnecting parties |
| Points of interconnect |
| Number of fibre pairs |
| Date required |
| Special instructions if any |

- 6.3 Following a Cross-Connect Order request, Oman Broadband shall conduct a feasibility study and then communicate the delivery dates to initiating Requesting Licensee within 15 Business Days.

7 Service Orders: Duct Access

7.1 The information required to place a Duct Access Order is shown in the table below:

| Field |
|---|
| Details of the duct route requested |
| Details of the end-points of the Sub-Duct |
| Details of handover points |
| Preferred delivery dates |
| Details of the connecting duct |
| Details of handholes to be installed by Requesting Licensee |
| Details of Fibre Optic cables that would be installed in the Sub-Duct |
| Confirmation that the Duct will be used for FTTH Access services |

7.2 Following a Duct-Access Order request, Oman Broadband will acknowledge receipt of the Order within 5 Business Days.

7.3 Oman Broadband will inform Requesting Licensee whether the request is reasonable and if any additional information is required.

7.4 Further, Oman Broadband will conduct a feasibility study to confirm whether it is possible to connect the end-points as requested by Requesting Licensee. The feasibility study will consist of two survey stages:

- (i) The first survey will involve a desktop review of records stored within the systems;
- (ii) If the first survey does not reveal any issues or exemptions, a field survey will be conducted, which will include a visit by field engineers to inspect the duct routes involved.

7.5 Once the survey stages are completed, a feasibility report will be sent to Requesting Licensee, outlining the feasibility of providing Sub-Duct in the specifies route(s).

7.6 The feasibility report will provide estimates of delivery dates, assuming that all works required by Requesting Licensee are completed prior to installation of Sub-Duct.

7.7 Indicative pricing would also be provided, subject to the terms outlined in Annex E.

- 7.8** For the avoidance of doubt, maps of duct routes built and utilized by Oman Broadband will not be provided to Requesting Licensee for security reasons.
- 7.9** Responsibilities of each party and any exclusions to the service offering are provided in Sub-Annex B5.

8 Service Assurance

8.1 This Clause 8 describes the activities and procedures for Requesting Licensee to raise Trouble Tickets for faults relating to Oman Broadband products. It discusses the information flows required to process Trouble Tickets and to receive acknowledgements from Oman Broadband on the Ticket Status.

Assurance Support

- 8.2 First-line support will be offered from the Network Operations Centre (NOC) on a 24-hours-a-day, 7 days-a-week basis.
- 8.3 Requesting Licensee may raise Trouble Tickets at any time using the B2B Gateway or email/telephone, as defined in Annex G.
- 8.4 The NOC will be operational continuously.
- 8.5 Before reporting the fault to Oman Broadband, it is Requesting Licensee's responsibility to determine the source of the fault at its own cost and to ensure that the fault does not lie within its network.
- 8.6 Oman Broadband provides monitoring of network-related alarms in Oman Broadband NOC on a 24-hours-a-day, 7 days-a-week basis.
- 8.7 An alarm results in the immediate creation of a Trouble Ticket in order to clear the issue.
- 8.8 Requesting Licensees may also request Trouble Tickets with Oman Broadband due to complaints received from End-Users.
- 8.9 Requesting Licensee should only raise a Trouble Ticket with Oman Broadband once it has determined that the issue lies in Oman Broadband domain.

Types of Trouble Ticket

- 8.10 There are different types of Trouble Ticket which may be raised for Oman Broadband products:
- (i) BEUC: Individual End-User connection incidents reported by Requesting Licensee:
 - a) Residential;
 - b) Business;
 - c) Health and Education;

- d) Riyadh.
- (ii) DCTB: End-User connection incidents reported by Requesting Licensee;
- (iii) Co-location Type: Individual Co-location Service incidents reported by Requesting Licensee;
- (iv) Cross-Connect Type: Cross-Connect Service incidents reported by Requesting Licensee;
- (v) Duct Access Type: Duct Access Service incidents reported by Requesting Licensee;
- (vi) Network Type: Incidents reported by Requesting Licensee or an Oman Broadband source for general network incidents impacting multiple users.

Prioritisation of Trouble Tickets

8.11 Each type of Trouble Ticket will be handled differently by Oman Broadband and will receive a different priority, with 1 being the highest priority and 3 being the lowest priority.

| Type of Trouble Ticket | Priority Assigned |
|-------------------------------|--------------------------|
| Network | 1 |
| Cross-Connect | 1 |
| Duct Access | 1 |
| BEUC: Business | 2 |
| BEUC: Health and Education | 2 |
| BEUC: Riyadh | 2 |
| DCTB | 2 |
| Co-location | 2 |
| BEUC: Residential | 3 |

BEUC Service Trouble Tickets

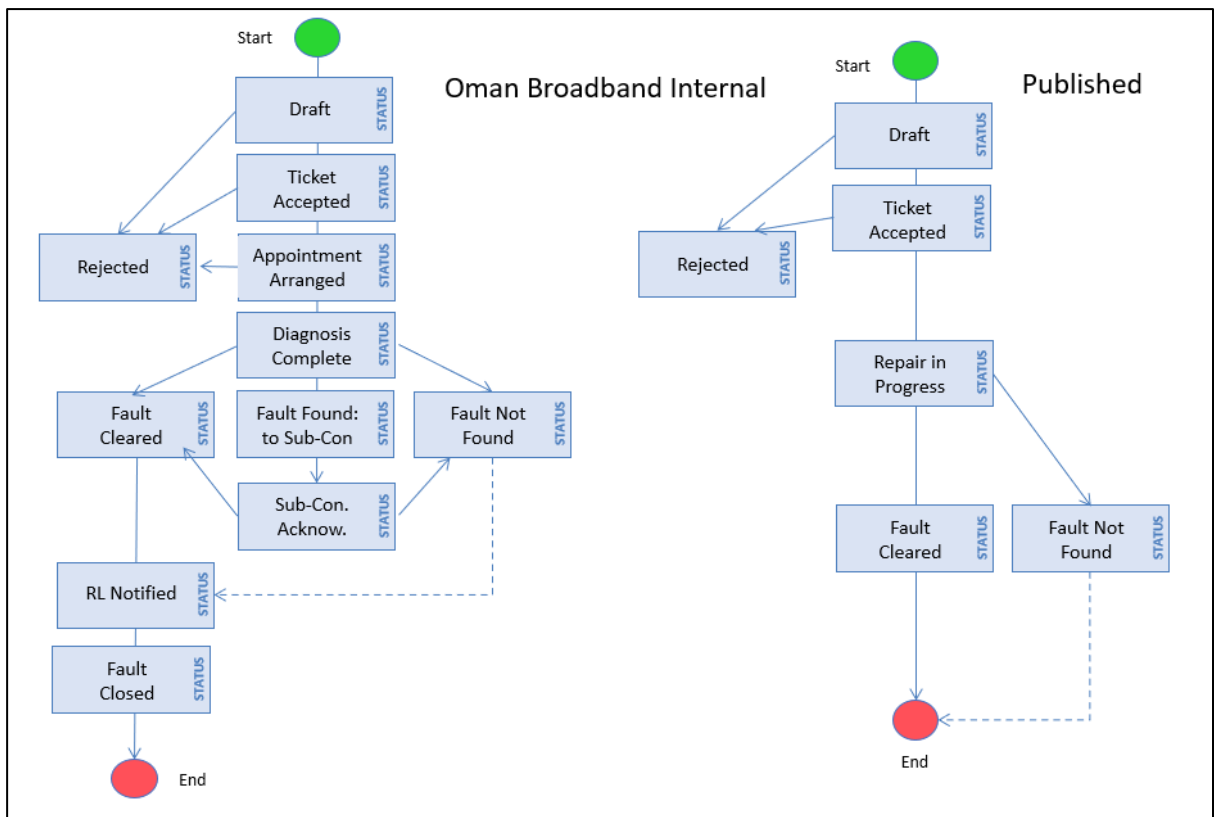
8.12 The information required by Oman Broadband to raise a Trouble Ticket for a BEUC Service is shown below. The information may be provided by email or using a works order system provided by Requesting Licensee, providing Oman Broadband has access to the system.

| Field | Description |
|---|--|
| Trouble ticket type* | End-User |
| End-User type* | Residential, Business, Health and Education, Riyadh |
| Tag* | The tag identifier obtained from the GIS files of the footprint |
| Requesting Licensee reference number* | Reference number provided by Requesting Licensee |
| Oman Broadband reference number for original BEUC Order | Oman Broadband reference return from original Connect Order |
| End-User name | Contact name |
| End-User GSM* | Mobile number to contact for appointment |
| Date and time that ticket is submitted by Requesting Licensee | Date: day/month/year (xx/xx/xxxx) Time: hour/minute (xx:xx) |
| Details of fault diagnosis from Requesting Licensee* | <ul style="list-style-type: none"> • Time fault occurred • Nature of fault (e.g. End-User reports no service) • Location of fault (if possible) • Are other users also affected and if so, how many? • Results of Requesting Licensee diagnostic tests • Reason why ticket raised to Oman Broadband • Free field for other information, if relevant |

* Mandatory fields

8.13 Figure 8.1 shows the status flow diagrams for the BEUC Trouble Ticket. These are the status flows that the ticket moves through during the workflow process. Only the Published Status will be referred to Requesting Licensee. The ‘In Progress’ status refers to several internal status changes whilst the ticket is being processed by Oman Broadband. Notifications of the Ticket Status will be sent to Requesting Licensee, based on the Published Status.

Figure 8.1: Status flows for BEUC Trouble Ticket



8.14 A more detailed summary of Oman Broadband’s Internal and Published Status categories are provided in the table below:

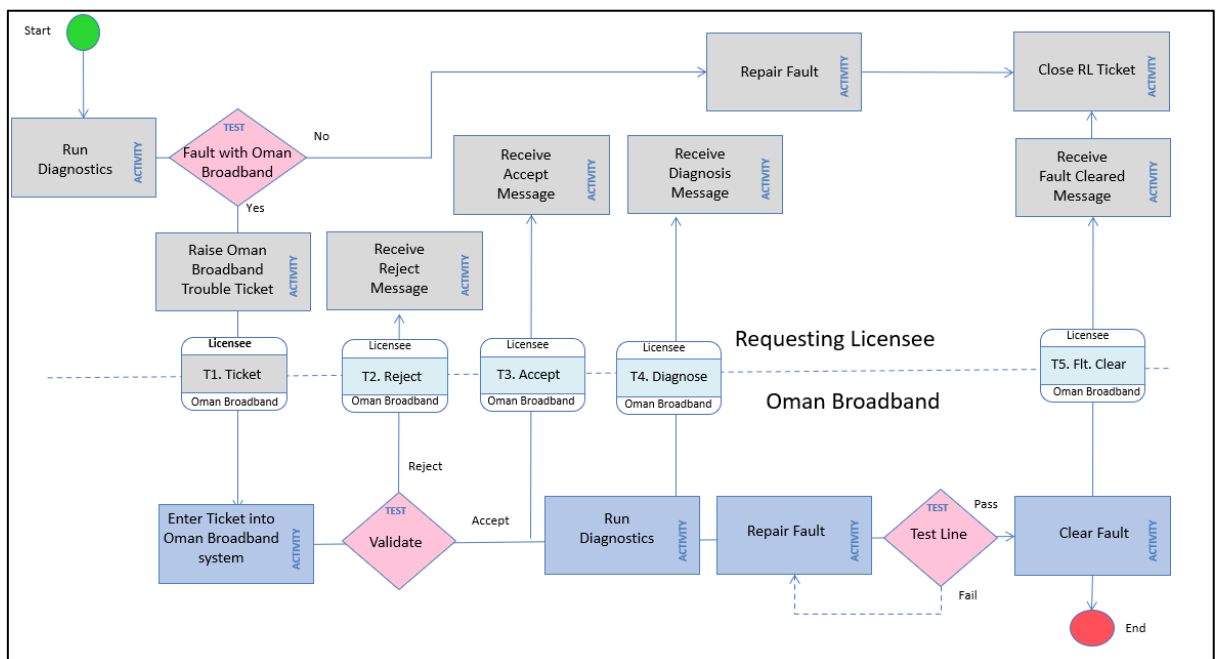
| Internal Status | Published Status | Description |
|-------------------------------------|--------------------|--|
| Draft | | Draft ticket record entered into Oman Broadband system. |
| Ticket created | Ticket created | Ticket validated by NOC and data entered in FM System. |
| Ticket Rejected (by Oman Broadband) | Rejected | Can occur at many points. Ticket may have inaccurate data or End-User may not be contactable or may refuse admission. Requesting Licensee may re-submit order. |
| Appointment Arranged | Diagnosis Complete | The NOC has contacted End-User and arranged a slot for fault investigation, as well as assigning Oman Broadband engineer. |
| Diagnosis Complete | Diagnosis Complete | Oman Broadband’s site technician has visited the site and diagnosed the problem. |
| Assigned to Sub-contractor | In Progress | The NOC agent has forwarded the ticket to sub-contractor to process. |

| Internal Status | Published Status | Description |
|------------------------------|------------------|---|
| Sub-contractor Acknowledges | In Progress | Sub-contractor acknowledges receipt of Ticket. |
| Fault Not Found | Fault Not Found | After testing, the Network is found to have no fault. |
| Fault Cleared | Fault Cleared | Works are complete and network tested. |
| Requesting Licensee Notified | Fault Cleared | Status update sent to Requesting Licensee. |
| Ticket closed | Fault Cleared | Ticket closed. |

8.15 Notifications will be returned to Requesting Licensee at various points during the ticket process. Message notifications will be provided by email to Requesting Licensee and will provide information concerning the status of the ticket. An email will be sent for each individual message that relates to a particular ticket.

8.16 Figure 8.2 outlines the ticket process and notifications exchange. Requesting Licensee is represented at the top of the diagram and Oman Broadband is represented at the bottom. Message 1 refers to the Trouble Ticket request received and processed by Oman Broadband. Messages 2 to 5 are notifications sent by Oman Broadband to Requesting Licensee.

Figure 8.2: BEUC Trouble Ticket process and exchange of notifications



- 8.17** Figure 8.2 also shows the requirement that Requesting Licensee first conducts a test to determine if the fault lies with Oman Broadband’s network or within Requesting Licensee’s own network.
- 8.18** If a trouble ticket is raised and no fault is found within Oman Broadband, then Requesting Licensee will be notified as per Clause 8.44.
- 8.19** The information contained in each of the respective messages exchanged during the Trouble Ticket process is shown in the table below. The message numbers relate to the messages illustrated in Figure 8.2 above. The information will be delivered to Requesting Licensee using email, in the first instance.

| Status to trigger notification | Message No. | Information provided |
|-------------------------------------|-------------|--|
| (Raise Ticket) | T1 | Raise Trouble Ticket with Oman Broadband |
| Ticket Rejected (by Oman Broadband) | T2 | Requesting Licensee reference number Free field with reason for rejection |
| Ticket Accepted | T3 | Requesting Licensee reference number Oman Broadband ticket reference number Date and time ticket accepted Date and time of End-User appointment |
| Diagnosis Complete | T4 | Requesting Licensee reference number Oman Broadband ticket reference number Time to attend site Free field for diagnosis Estimated time to restore |
| Fault Cleared | T5 | Requesting Licensee reference number Oman Broadband reference number Received optical power level from test |
| Fault Not Found | T6 | Requesting Licensee reference number Oman Broadband reference number Received optical power level from test |

* Notifications provided by email or into the systems of Requesting Licensee, if available

DCTB Trouble Tickets

- 8.20** The information required to raise a DCTB Trouble Ticket is shown in the table below:

| Field | Description |
|----------------------|---|
| Trouble ticket type* | DCTB |
| GeoTag * | The tag identifier obtained from the GIS files of the footprint |

| Field | Description |
|---|---|
| Requesting Licensee reference number* | Reference number provided by Requesting Licensee |
| Oman Broadband Order Reference | Details of the Original Oman Broadband order reference that was given at the time of provision |
| Building contact details* | Contact name |
| Building contact GSM* | Mobile number at the relevant Premises to contact for appointment |
| Date and time that ticket is submitted by Requesting Licensee | Date: day/month/year (xx/xx/xxxx) Time: hour/minute (xx:xx) |
| Details of fault diagnosis from Requesting Licensee* | <ul style="list-style-type: none"> • Time fault occurred • Nature of fault (e.g. End-User reports no service) • Location of fault (if possible) • Free field for other information, if relevant |

* Mandatory fields

8.21 There will be no automatic acceptance, rejection or cancellation of these Trouble Tickets. Status updates will be communicated to Requesting Licensee either by email or phone call.

Co-location Trouble Tickets

8.22 The information required to raise a Co-location Trouble Ticket is shown in the table below:

| Field | Description |
|---|--|
| Trouble ticket type* | Co-location |
| Requesting Licensee reference number* | Reference number provided by Requesting Licensee |
| Oman Broadband Order Reference | Details of the Original Oman Broadband order reference that was given at the time of provision |
| End Points | Cable A/B End or Data Centre location |
| Fibre identifier | Identification of specific fibre |
| Date and time that ticket is submitted by Requesting Licensee | Date: day/month/year (xx/xx/xxxx) Time: hour/minute (xx:xx) |
| Details of incident* | Free field |
| Details of fault diagnosis by Requesting Licensee* | <ul style="list-style-type: none"> • Time fault occurred • Nature of fault • Location of fault (if possible) • Free field for other information, if relevant |

| Field | Description |
|-------|-------------|
|-------|-------------|

* Mandatory fields

8.23 Since the activities within the Secure Cage Space are under the control of Requesting Licensee, it is also responsible for any damage caused within this area.

8.24 There will be no automatic acceptance, rejection or cancellation of these Trouble Tickets. Status updates will be communicated to Requesting Licensee either by email or phone call.

Cross-connect Trouble Tickets

8.25 The information required to raise a Cross-Connect Trouble Ticket is shown in the table below:

| Field | Description |
|---|--|
| Trouble ticket type* | Cross-Connect |
| Requesting Licensee reference number* | Reference number provided by Requesting Licensee |
| Oman Broadband Order Reference | Details of the Original Oman Broadband order reference that was given at the time of provision |
| End Points | Cable A/B End or Data Centre locations |
| Fibre identifier | Identification of specific fibre |
| Date and time that ticket is submitted by Requesting Licensee | Date: day/month/year (xx/xx/xxxx) Time: hour/minute (xx:xx) |
| Details of incident* | Free field |
| Details of fault diagnosis by Requesting Licensee* | Free field |

* Mandatory fields

8.26 There will be no automatic acceptance, rejection or cancellation of these Trouble Tickets. Status updates will be communicated to Requesting Licensee either by email or phone call.

8.27 Oman Broadband accepts no liability for any damage caused to the Cross-Connect cable inside the caged Co-location space of Requesting Licensees. Since the activities within the space are under the control of Requesting Licensees, they are also responsible for any damage caused within the area.

Duct Access Trouble Tickets

8.28 The information required to raise a Duct Access Trouble Ticket is shown in the table below:

| Field | Description |
|---|--|
| Trouble ticket type* | Duct Access |
| Requesting Licensee reference number* | Reference number provided by Requesting Licensee |
| Oman Broadband Order Reference | Details of the Original Oman Broadband order reference that was given at the time of provision |
| End Points | A/B End or location |
| Date and time that ticket is submitted by Requesting Licensee | Date: day/month/year (xx/xx/xxxx) Time: hour/minute (xx:xx) |
| Details of incident* | Free field |
| Details of fault diagnosis by Requesting Licensee* | <ul style="list-style-type: none"> • Time fault occurred • Nature of fault • Location of fault (if possible) • Free field for other information, if relevant |

* Mandatory fields

8.29 Once a diagnosis is made Requesting Licensee will be notified of the results and will be provided with an estimate of the time required to resolve the issues.

8.30 Following resolution of the complaint, a subsequent notification will be sent to Requesting Licensee.

Network Incident Trouble Tickets

8.31 On occasions Requesting Licensee may suffer a network incident fault that may impact a large number of End-Users within one area at the same time.

8.32 In such cases, Oman Broadband will accept a Network Incident Trouble Ticket.

8.33 The information required by Oman Broadband to raise a Trouble Ticket for a Network Incident is shown below. The information may be provided by email or using a works order system provided by Requesting Licensee, providing Oman Broadband has access to the system.

| Field | Description |
|--------------------------|------------------|
| Trouble ticket type* | Network Incident |
| Description of Incident* | Free field |

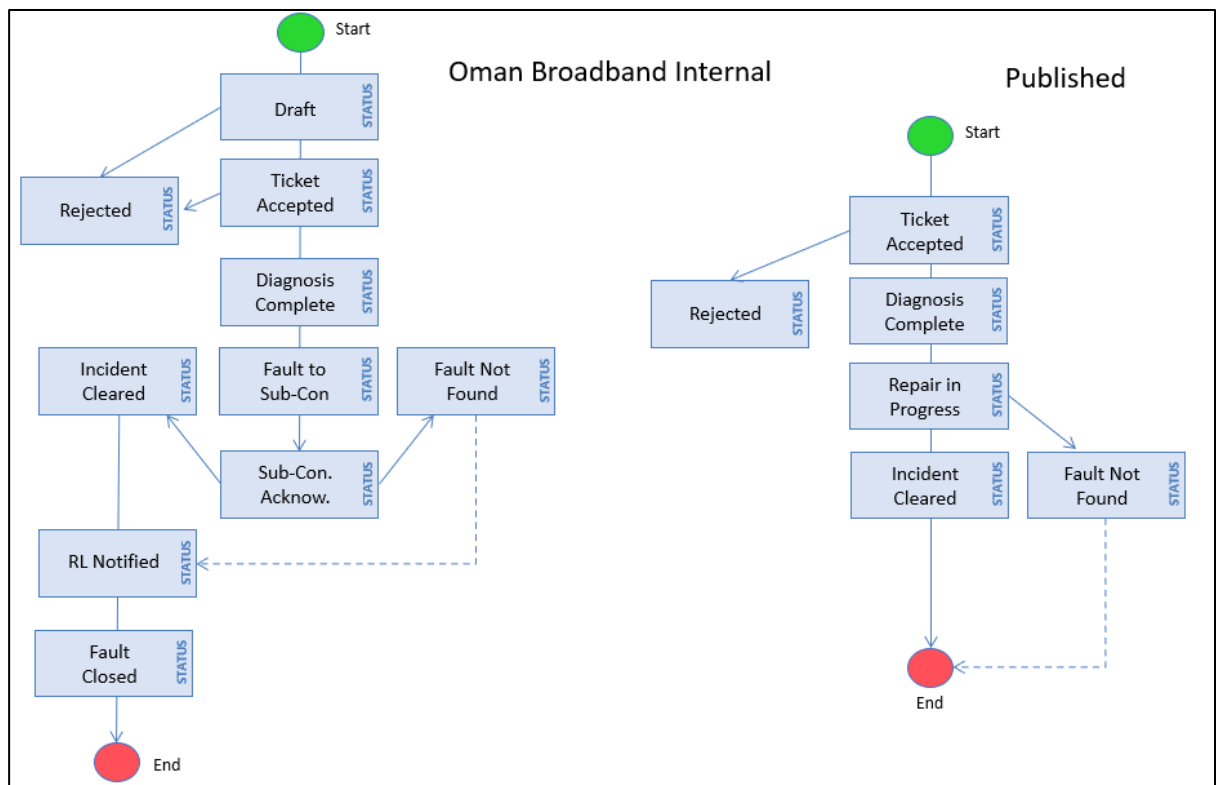
| Field | Description |
|---|--|
| Requesting Licensee reference number* | Reference number provided by Requesting Licensee |
| Date and time that ticket is submitted by Requesting Licensee | Date: day/month/year (xx/xx/xxxx) Time: hour/minute (xx:xx) |
| Details of fault diagnosis by Requesting Licensee* | Free field |

* Mandatory fields

8.34 Network Incident tickets take priority over End-User tickets in Oman Broadband systems, therefore a full description of the incident together with a summary of the preliminary diagnosis by Requesting Licensee must be provided. Failure to do so may result in a rejection of the ticket.

8.35 Figure 8.3 shows the status flow diagrams for the Network Incident Trouble Ticket. These are the status flows that the ticket moves through during the workflow process. Only the Published Status will be referred to Requesting Licensee. The ‘In Progress’ status refers to several internal status changes whilst the ticket is being processed by Oman Broadband. Notifications of the Ticket Status will be sent to Requesting Licensee based on the Published Status.

Figure 8.3: Status flows for Network Incident Trouble Ticket



8.36 A more detailed summary of Oman Broadband’s Internal and Published Status categories are provided in the table below:

| Internal Status | Published Status | Description |
|-------------------------------------|-------------------------|--|
| Draft | | Draft ticket record entered into Oman Broadband system. |
| Ticket accepted | Ticket accepted | Ticket validated by NOC and data entered in FM System. |
| Ticket Rejected (by Oman Broadband) | Rejected | Can occur at many points. Ticket may have inaccurate data or End-User may not be contactable or refuse admission. Requesting Licensee may re-submit order. |
| Diagnosis Complete | Diagnosis Complete | Oman Broadband’s site technician has visited the site and diagnosed the problem. |
| Assigned to Sub-contractor | In Progress | The NOC agent has forwarded the ticket to sub-contractor to process. |
| Sub-contractor Acknowledges | In Progress | Sub-contractor acknowledges receipt of ticket. |
| Fault Not Found | Fault Not Found | After testing, the Network is found to have no fault. |
| Fault Cleared | Fault Cleared | Works are complete and network tested. |
| Requesting Licensee Notified | Fault Cleared | Status update sent to Requesting Licensee. |
| Ticket Closed | Fault Cleared | Ticket closed. |

8.37 Notifications are exchanged in the same way as for the BEUC Trouble Ticket shown in Figure 8.2.

8.38 The information contained in each of the respective messages exchanged during the Network Incident Trouble Ticket is shown in the table below. The information will be delivered to Requesting Licensee using email, in the first instance.

| Status to trigger notification | Message No. | Information provided |
|---------------------------------------|--------------------|--|
| (Raise Ticket) | T1 | Draft ticket record entered into Oman Broadband system. |
| Ticket Rejected (by Oman Broadband) | T2 | Requesting Licensee reference number Free field with reason for rejection |
| Ticket Accepted | T3 | Requesting Licensee reference number Oman Broadband ticket reference number |

| Status to notification | trigger | Message No. | Information provided |
|------------------------|---------|-------------|--|
| | | | Date and time ticket accepted |
| Diagnosis Complete | | T4 | Requesting Licensee reference number Oman Broadband ticket reference number Time to attend site Free field for diagnosis Estimated time to restore |
| Fault Cleared | | T5 | Requesting Licensee reference number Oman Broadband reference number Free field of details of incident |
| Fault Not Found | | T6 | Requesting Licensee reference number Oman Broadband reference number Free field with evidence of Fault Not Found (FNF) |

8.39 Requesting Licensee acknowledges that Oman Broadband may temporarily disconnect Requesting Licensee’s BEUC to perform reasonable fault analysis and line testing on the BEUC. Oman Broadband shall conduct such disconnection only as it reasonably considers necessary.

8.40 The BEUC is deemed to be restored when Oman Broadband has delivered a Fault Cleared message to Requesting Licensee. Oman Broadband will notify Requesting Licensee on the cause of the fault.

Fault Not Found (FNF) or Damage Caused by End-User (DCEU)

8.41 If a Trouble Ticket is raised and after diagnosis by Oman Broadband no fault is found, then Requesting Licensee will be notified.

8.42 Additionally, if a Trouble Ticket is investigated and a fault is found that has been caused by End-User, through no fault of Oman Broadband, then a charge may be made according to Annex E.

8.43 DCEU includes any damage within End-User’s Premises to the fibre-optic cable or to the CAP, rendering the service inactive, once the cable has been installed and tested, through no fault of Oman Broadband. The types of damage include:

- (i) Damage to the conduit and enclosed fibre-optic cable across the courtyard between the boundary wall and the building, for example through civil works;
- (ii) Damage to the internal conduit or fibre-optic cable within the building;
- (iii) Obvious damage to the CAP causing a degradation to the service.

- 8.44 Notification messages will be returned to Requesting Licensee with FNF and DCEU information.
- 8.45 Faults categorised as FNF or DCEU will be excluded from performance measures and SLGs.
- 8.46 If Requesting Licensee wishes to dispute these findings, then a joint investigation may be held at the request of Requesting Licensee.

| Fault Status | Penalty incurred by Requesting Licensee |
|--------------|---|
| FNF | No charge |
| DCEU | Annex E |

Cancellation of Trouble Tickets

- 8.47 Oman Broadband does not make provision for cancellation of Trouble Tickets. Once a ticket is accepted, it will be processed according to the relevant workflows.
- 8.48 If Requesting Licensee asks that an In-Flight Trouble Ticket be cancelled, its status will be set to FNF by Oman Broadband.

Scheduled Oman Broadband Maintenance and Service Interruptions

- 8.49 Oman Broadband shall provide Requesting Licensee with at least five (5) Business Days’ notice in advance of any Scheduled Maintenance that is not impacting the live service.
- 8.50 In addition, Oman Broadband shall provide Requesting Licensee with at least ten (10) Business Days’ notice in advance of any scheduled service interruption.
- 8.51 Oman Broadband shall take all reasonable steps to ensure that the interruption is minimised.
- 8.52 Information relating to scheduled Oman Broadband network works that may be service interrupting will be sent to Requesting Licensee via email and Oman Broadband will include the following details:
 - (i) Affected location;
 - (ii) Date and time of occurrence;
 - (iii) Duration of works;
 - (iv) Reason for works;
 - (v) Likely impact of works.
- 8.53 Scheduled service interruptions will be excluded from Key Performance Indicator (KPI) measurements, as defined in Clause 9.4, Clause 10.4 and Clause 11.4.

8.54 For other maintenance procedures, refer to Main Body of the Agreement and individual service Sub-Annexes.

9 Service provision KPIs and SLGs

- 9.1 This Clause 9 sets out the service provision measures (KPIs) and the targets that Oman Broadband has set with respect to these measures. Oman Broadband will report its performance against these KPIs as part of the Governance Meetings.
- 9.2 In addition, this Clause also sets out the SLGs that Oman Broadband commits to meet in respect of its Regulated Services. Not all KPIs are offered as SLGs. SLGs would be discussed as a part of the Governance Meetings.
- 9.3 A failure by Oman Broadband to meet any Service provision target or SLG does not constitute a breach of the Agreement.
- 9.4 All SLG's would be measured excluding agreed travel time per region, scheduled service interruptions and occurrence of any force majeure event, where applicable.
- 9.5 We also note here the new procedure initiated by the Telecommunications Regulatory Authority (TRA) to monitor compliance to the QoS KPIs for fixed services, originally defined in TRA Resolution No 28/16; Issuing Quality of Service Requirements. This new procedure was outlined in TRA communication TRA/QoS/1815/2017, and stipulates that passive infrastructure providers, such as Oman Broadband, also make records available to TRA in the event of an audit of the QoS KPIs, and report the reasons for any non-compliance; the KPI's target values are to be recorded and reported to TRA (with justification and supporting proof), in order to ascertain the reasons and circumstances causing the delays.

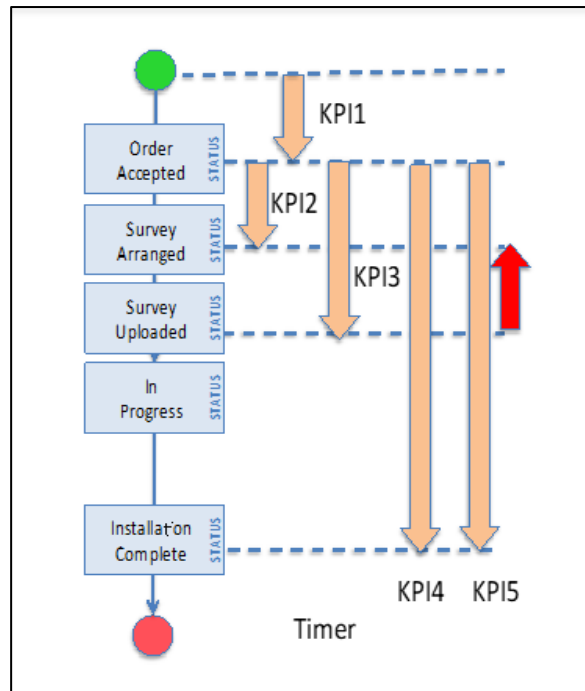
BEUC Service Provision KPIs

- 9.6 Oman Broadband has defined five KPIs to assess the performance of its BEUC Service provision processes:

| KPI | Description |
|------|--|
| KPI1 | Time to acknowledge order |
| KPI2 | Time to arrange survey (Survey Assigned) |
| KPI3 | Time to complete Survey from accepted status |
| KPI4 | Time to complete Order from accepted status |
| KPI5 | Time to complete Order from acceptance to delivery |

9.7 These KPIs are illustrated below in Figure 9.1 with respect to Order status. Some KPIs will be offered as SLGs, and all KPIs will be reported on at Governance Meetings.

Figure 9.1: BEUC Service provision KPIs



BEUC Service provision SLG for Connect Order

9.8 The SLG for BEUC Service provision Connect Order is defined as follows:

| SLG | KPI | Measure* | Target/threshold |
|------|------|--|--|
| SLG1 | KPI5 | Time to complete order from acceptance to delivery | 90% <= 8 Business Days** 75% <= 5 Business Days** |

* Assessed on a quarterly basis

* Excludes agreed travel time, scheduled service interruptions and occurrence of any Force Majeure event

** Business Hours/day:

- For responding to order: 09.00–17.00, Sunday to Thursday
- For installation, including engineering visits to End-User site: appointments arranged between 08.00 and 20.00, Saturday to Thursday

BEUC Service provision SLG for Connect with ONT Order

9.9 Since Connect with ONT Orders require an additional stage to be undertaken, namely ONT installation, one extra day will be added to SLG1. The extra day is to allow for

many cases where there is a delay between installation of the FTTH connection (Connect Order) and the installation and activation of the ONT on behalf of Requesting Licensee.

| SLG | KPI | Measure* | Target/threshold |
|------|------|--|--------------------------|
| SLG1 | KPI5 | Time to complete order from acceptance to delivery | 90% <= 9 Business Days** |

* Assessed on a quarterly basis

* Excludes agreed travel time, scheduled service interruptions and occurrence of any Force Majeure event

** Business Hours/day:

- For responding to order: 09.00–17.00, Sunday to Thursday
- For installation, including engineering visits to End-User site: appointments arranged between 08.00 and 20.00, Saturday to Thursday

9.10 Since the placement of a Connect with ONT Order reduces the activities required by Requesting Licensee to complete its end-to-end process, the inclusion of an extra day within the SLG does not impact the QoS KPIs required of Requesting Licensee by the TRA.

BEUC Service provision SLGs for Modify Order

9.11 SLGs are not provided for the Service provision of Modify Orders.

9.12 However, KPIs are defined according to Clause 9.1, with a target for the delivery of Modify Orders equal to the SLGs defined in Clause 9.8 and Clause 9.9.

9.13 KPIs may be shared with Requesting Licensee at relevant Governance Meetings.

10 Service assurance KPIs and SLGs

- 10.1** This Clause 10 sets out the service assurance measures (KPIs) and the targets that Oman Broadband has set with respect to these measures. Oman Broadband will report its performance against these KPIs as part of the Governance Meetings.
- 10.2** In addition, this Clause also sets out the SLGs that Oman Broadband commits to meet in respect of its Regulated Services. Not all KPIs are offered as SLGs. SLGs would be discussed as a part of the Governance Meetings.
- 10.3** A failure by Oman Broadband to meet any Service assurance target or SLG does not constitute a breach of the Agreement.
- 10.4** All SLG's would be measured excluding agreed travel time per region, scheduled service interruptions and occurrence of any force majeure event, where applicable.
- 10.5** We also note here the new procedure initiated by the Telecommunications Regulatory Authority (TRA) to monitor compliance to the QoS KPIs for fixed services, originally defined in TRA Resolution No 28/16; Issuing Quality of Service Requirements. This new procedure was outlined in TRA communication TRA/QoS/1815/2017, and stipulates that passive infrastructure providers, such as Oman Broadband, also make records available to TRA in the event of an audit of the QoS KPIs, and report the reasons for any non-compliance; the KPI's target values are to be recorded and reported to TRA (with justification and supporting proof), in order to ascertain the reasons and circumstances causing the delays.

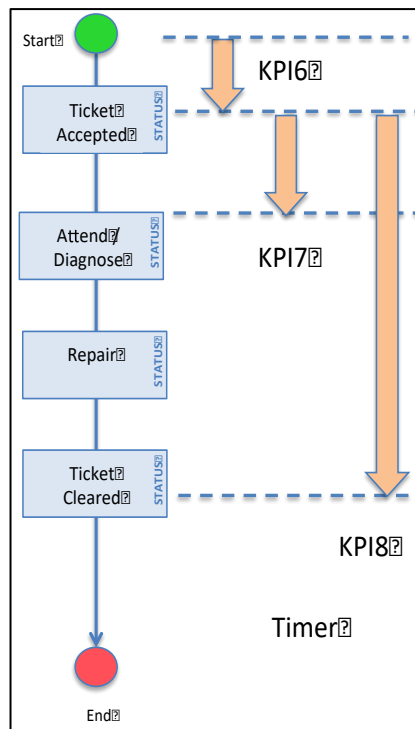
BEUC and DCTB Service assurance KPIs

- 10.6** Oman Broadband has defined three KPIs to assess the performance of its Service assurance processes:

| KPI | Description |
|------|---|
| KPI6 | Time to acknowledge Trouble Ticket |
| KPI7 | Time to attend fault site from Accepted status |
| KPI8 | Time to clear fault from acknowledgement of ticket, excluding time to appointment, assuming unrestricted access to site |

- 10.7** These KPIs are illustrated below in Figure 10.1 with respect to Order status. Some KPIs will be offered as SLGs, and all will be reported on at Governance Meetings.

Figure 10.1: Service assurance KPIs



Residential BEUC Service assurance SLGs

| SLG | KPI | Measure | Target/threshold |
|------|------|---|----------------------------|
| SLG2 | KPI6 | Time to acknowledge residential ticket* | 90% <= 2 Business Hours** |
| SLG3 | KPI8 | Time to clear fault from acknowledgement of ticket, assuming unrestricted access to site* | 90% <= 30 Business Hours** |

* Assessed quarterly

* Excludes agreed travel time, scheduled service interruptions and occurrence of any Force Majeure event

** Business Hours for Residential BEUC:

- For responding to tickets: appointments arranged and visit 08.00 am to 20.00, 5 days per week
- Clearing faults: appointments arranged and visit 08.00 to 20.00, 5 days per week

Business, Health and Education, Riyadh BEUC Service assurance SLGs

| SLG | KPI | Measure | Target/threshold |
|------|------|---|----------------------------|
| SLG2 | KPI6 | Time to acknowledge ticket* | 90% <= 2 Business Hours** |
| SLG3 | KPI8 | Time to clear fault from acknowledgement of ticket, assuming unrestricted access to site* | 90% <= 24 Business Hours** |

* Assessed quarterly

* Excludes agreed travel time, scheduled service interruptions and occurrence of any Force Majeure event

** Business Hours for BEUC:

- For responding to tickets: appointments arranged and visit made 08.00 to 20.00, 6 days per week
 - Clearing faults: appointments arranged and visit made 08.00 to 20.00, 6 days per week
-

DCTB Service assurance SLGs

| SLG | KPI | Measure | Target / Threshold |
|------|------|---|----------------------------|
| SLG2 | KPI6 | Time to acknowledge DCTB ticket* | 90% <= 2 Business Hours** |
| SLG3 | KPI8 | Time to clear fault from acknowledgement of ticket, assuming unrestricted access to site* | 90% <= 24 Business Hours** |

* Assessed quarterly

* Excludes agreed travel time, scheduled service interruptions and occurrence of any Force Majeure event

** Business Hours for DCTB:

- For responding to tickets: appointments arranged and visit made 08.00 to 20.00, 6 days per week
 - Clearing faults: appointments arranged and visit made 08.00 to 20.00, 6 days per week
-

Cross-Connect Service assurance SLGs

| SLG | KPI | Measure | Target / Threshold |
|------|------|---|---------------------------|
| SLG2 | KPI6 | Time to acknowledge Cross-Connect ticket* | 90% <= 1 Business Hour** |
| SLG3 | KPI8 | Time to clear fault from acknowledgement of ticket, assuming unrestricted access to site* | 90% <= 6 Business Hours** |

* Assessed quarterly

* Excludes agreed travel time, scheduled service interruptions and occurrence of any Force Majeure event

** Business Hours for Cross-Connect:

- For responding to tickets: 24x7
 - Clearing faults: 24x7
-

Duct Access Service assurance SLGs

10.8 Resolution of Duct Access service complaints may require cooperation between Oman Broadband and Requesting Licensee. Therefore, no guarantees of resolution time are offered.

11 Service availability KPIs and SLGs

- 11.1** This Clause sets out the service availability measures (KPIs) and the targets that Oman Broadband has set with respect to these measures. Oman Broadband will report its performance against these KPIs as part of the Governance Meetings.
- 11.2** In addition, this Clause also sets out the SLGs that Oman Broadband commits to meet in respect of its Regulated Services. Not all KPIs are offered as SLGs. SLGs would be discussed as a part of the Governance Meetings.
- 11.3** A failure by Oman Broadband to meet any Service availability target or SLG does not constitute a breach of the Agreement.
- 11.4** All SLG's would be measured excluding agreed travel time per region, scheduled service interruptions and occurrence of any force majeure event, where applicable.
- 11.5** We also note here the new procedure initiated by the Telecommunications Regulatory Authority (TRA) to monitor compliance to the QoS KPIs for fixed services, originally defined in TRA Resolution No 28/16; Issuing Quality of Service Requirements. This new procedure was outlined in TRA communication TRA/QoS/1815/2017, and stipulates that passive infrastructure providers, such as Oman Broadband, also make records available to TRA in the event of an audit of the QoS KPIs, and report the reasons for any non-compliance; the KPI's target values are to be recorded and reported to TRA (with justification and supporting proof), in order to ascertain the reasons and circumstances causing the delays.

Co-location Service availability SLGs

| SLG | KPI | Measure | Target / Threshold |
|------|-------|---|---|
| SLG4 | KPI9 | Power availability* | >99.99% offered over a quarter |
| SLG5 | KPI10 | Cooling availability (indoor only)** | >99.9% cooling at below 25°C over a quarter |

*Calculated as:

- $(A-B)/A \times 100\%$, where A=Total power minutes per quarter; and, B=Total Minutes of down time, i.e., minutes per quarter where power is unavailable
- Total power minutes do not include Scheduled Maintenance timeframes
- Excludes agreed travel time, scheduled service interruptions and occurrence of any Force Majeure event

**Calculated as:

- $(A-B)/A \times 100\%$, where A=Total cooling minutes per quarter; and, B=Total Minutes of down time, i.e., minutes per quarter where cooling is unavailable
 - Total cooling minutes do not include Scheduled Maintenance timeframes
 - Cooling is measured by the average return air temperature of the active recirculation units within the Oman Broadband Data Centre
 - Excludes agreed travel time, scheduled service interruptions and occurrence of any Force Majeure event
-

Cross-Connect Service availability SLGs

| SLG | KPI | Measure | Target / Threshold |
|------|-------|-----------------------|---|
| SLG6 | KPI11 | Service availability* | 99.5% for regular Cross-Connect Service orders 99.95% for high availability Cross-Connect Service orders |

*Average valued assessed quarterly and annually

*Excludes agreed travel time, scheduled service interruptions and occurrence of any Force Majeure event

Duct Access Service availability SLGs

11.6 Requesting Licensee and Oman Broadband will negotiate individual Service Agreements for the requested routes specified in the Duct Access Service Order, provided that both parties agree to the results of the feasibility report.

11.7 The Service Agreement will detail the specific terms and conditions agreed upon by both parties.

12 Procedures for non-compliance to SLGs

- 12.1** In the event that the provision of services by Oman Broadband does not comply with the respective SLGs set out in this Agreement, Requesting Licensee may provide a written notice to Oman Broadband within thirty (30) Calendar Days of the completion of the relevant quarter in which the respective SLGs were measured.
- 12.2** Requesting Licensee acknowledges that a failure to provide notification within the specified timeframe means that Requesting Licensee waives any entitlement to further actions in respect of that notification.
- 12.3** Oman Broadband must respond within thirty (30) Calendar Days from the date of the notification stating whether the claim is valid:
- (i) If the claim is deemed to be valid then Oman Broadband shall provide a list of remedial actions in order to ensure that the chances of repeat failures are minimised. Requesting Licensee will be provided with an opportunity to comment on these remedial actions.
 - (ii) If the claim is deemed to be invalid, Oman Broadband will explain the basis or require Requesting Licensee to provide additional information.
- 12.4** In the event of a dispute as to whether Requesting Licensee has been provided with a justified claim, the dispute shall be resolved in accordance with the Dispute Resolution Procedures mentioned in Clause 20 of the Main Agreement.