Commission for
Communications Regulation

Universal Service Requirements

Provision of access at a fixed location (AFL)

Quality of Service (QoS) - Schedules

Response to Consultation and Decision - Schedules

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"Schedules"

Schedule 1 ("*USO Quality of Service - Calculation Methodologies*")

Schedule 2 ("*National and Sub-National Areas*")

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Schedule 1

USO Quality of Service - Calculation Methodologies

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2. Fault Repair - annual

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Schedule 1

A. Definitions and Interpretations

"Access Line" means a Connection from the NTP to the entry point or to the local switch or remote concentrator, whichever is nearer; which is in many cases the main distribution frame (MDF) or optical distribution frame (ODF);

"Act" means the Communications Regulation Act 2002 (as amended);

"Aggregation Node" means a network concentration point for access path;

"All Connections" means the sum of In-Situ Connections and All Other Connections;

"All Other Connections" means Lines that are not In-Situ Connections and are not Connections with an Agreed Date and includes, without limitation, new build and pre-cabled Connections;

"Agreed Date" means the date that a Customer has requested and that eir and a Customer have agreed for the completion of a Valid Service Order;

"All Repairs" means all Fault Repairs, including Fault Repairs with an Agreed Date or a Revised Agreed Date;

"**Average Fault Repair Time**" means the sum of the average Fault Repair Times for each Working Days range, calculated on the basis of the formulas and tables set out in Sections C (II)(3) and D (II)(3) of Schedule 1;

"Average Number of Lines within the Data Collection Period" means the sum of the number of Lines on the 2nd Thursday of each month in the Data Collection Period, divided by three;

"Bill Correctness Complaint" means an expression of dissatisfaction with a bill received from a Customer but for the avoidance of doubt, is not a billing query (a request for information) or a Fault Report;

"Bills Issued" means the number of bills dispatched to a Customer during the Data Collection Period;

"Business customer" is a "User" within the meaning of Regulation 2 of the Framework Regulations who is not a "Residential customer"

"Business Process Change" means any change to the manner of collection or processing of "Data" that may affect the integrity of the Data to be reported in accordance with Section 6.1.1 of this Decision Instrument;

"ComReg" means the Commission for Communications Regulation, established by Part 2 of the Communications Regulation Act 2002;

"Connection" means a connection to the public communications network within the meaning of Regulation 3 (1) of the Universal Service Regulations and provided pursuant to a reasonable request as set out in ComReg Decision D05/16;

"Connection Performance Targets" means the quality of service performance targets specified by ComReg in respect of Connections in relation to eir's universal service obligations for the provision of access at a fixed location, as set out in Section 4.3 of this Decision Instrument;

"Customer" means a "subscriber" within the meaning of Regulation 2 of the Framework Regulations or the Customer's representative, and in the case of requests for Connection, means an "End-User";

"**Customer Visit Record**" means the system date and time stamp generated when an eir technician records arrival at the Customer premises in respect of the repair of a Fault with an Agreed Date or a Revised Agreed Date;

"Customer Introduced Delay" or "**CID**" is explained by reference to the flow charts at Schedule 1 (section E) of this Decision Instrument and means either (i) the time between when the Customer contacts eir and the soonest time that the Customer is available for the appointment (Ts –Td), or (ii) the time between when eir is available to meet the Customer and the time of the agreed appointment date and time (Te – To);

"**Current generation access"** or "**CGA"** means current generation access provided over the current generation copper access network (including any self-supply by eir for the purposes of serving its downstream markets) that is copper based.

"Data" means any information, data, calculations, figures or metrics relevant to eir's performance, as further specified in Schedule 1 of this Decision Instrument;

"Data Collection Period" means the quarterly period in respect of which ComReg collects Data from eir. There are four Data Collection Periods in each Year, the timing of which is set out in Schedule 3(A);

"Day" means a calendar day;

"Decision Instrument" means this Decision Instrument and its Schedules ComReg Document 19/21a hereto, which is made pursuant to, *inter alia,* Regulation 10 of the Universal Service Regulations;

"D02/19" means the Decision and Decision Instrument issued by ComReg on 13 March 2019, entitled "*Universal Service Requirements – Provision of Access at a Fixed Location (AFL) – Quality of Service (QoS)"*;

"Effective Date" means the date this Decision Instrument becomes operative and fully effective as specified in Section 12.1 of this Decision Instrument;

"eir" means Eircom Limited and its subsidiaries and any related companies, and any undertaking which it owns or controls or any undertaking which owns or controls Eircom Limited, its successors and assigns and including agents, contractors or sub-contractors of any of the latter. For the purposes of this Decision Instrument the terms "subsidiary" and "related company" shall have the meanings ascribed to them in the Companies Act 2014;

"eir-introduced delay" is any delay where there is no recorded or fully auditable evidence of any "Customer-Introduced Delay";

"Elapsed Days" means the number of Working Days elapsed from the Fault Report to the repair of a Valid Fault, resulting in the restoration of the network to normal working order less the number of Customer Introduced Delay (CID) Working Days;

"Electronically Enabled" means that the activation of a Line can be carried out remotely, through systems configuration, without the need for physical intervention;

"End-User" has the same meaning as it has in Regulation 2 of the Framework Regulations;

"Exchange Fault" means a Fault which is attributable to an exchange or core Network issue (and for the avoidance of doubt, excludes Line Faults, Faults due to Vandalism, Faults due to Third Party Damage and Other Faults);

"Failed electronic enablement" means a situation where eir has failed or it has not been possible to activate a Line such that it is Electronically Enabled;

"Fault" means an incident of disrupted or degraded Network service;

"Fault due to Vandalism" means a Fault that has occurred due to Vandalism;

"Fault due to Third Party Damage" means a Fault that has occurred due to Third Party Damage;

"Fault Occurrence" is a measurement of the rate at which Faults occur and may refer to either the "**LFI**" ratio and / or the "**Total Faults**" ratio specified in Schedule 1;

"Fault Repair" means the repair of a Valid Fault resulting in the restoration of the Network to normal working order;

"Fault Repair Time" means the duration from the occurrence of a Fault Report to the occurrence of Fault Repair;

"Fault Report" means the report of either a Valid Fault or Invalid Fault by a Customer, referred to respectively as a **"Valid Fault Report"** or a **"Fault Report not deemed valid";**

"Fibre Network" means an electronic communications network which is used to provide public telephony services; it supports the transfer between NTPs of speech communication and also other forms of communication, such as facsimile and data;

"FTTC" means fibre to the cabinet, which is a variant of the FTTN access network architecture where the Node is housed in a street cabinet with the End-User's premises connected to Node using metallic sub-loops;

"FTTH" means fibre to the home, which is a variant of the FTTN access network architecture where the Node is housed passive in the street cabinet or equivalent with the End-User's premises connected to the Node using fibre cables;

"FTTN" means an access network architecture whereby active or passive equipment is installed in the access network Node e.g. DSLAM, optical splitter etc., with the Node connected to the MPoP using a fibre optic cable. The connection between the Node and the End-User's premises is by way of a copper sub-loop or fibre cable;

"Hour" means 60 minutes;

"In-Situ Connection" means a Connection via an Electronically Enabled Line, excluding Connections with an Agreed Date**;**

"**Independent Audit Report"** means a report prepared by an independent auditor pursuant to Regulation 10 (6) of the Universal Services Regulations, in respect of the Data provided by eir to ComReg, as referred to in Section 6 of this Decision Instrument;

"Initial Data Collection Period" means the period from 1 April 2019 to 30 June 2019. References to "Data Collection Period" in these schedules, insofar as they relate to obligations referred to in Section 6 of this Decision Instrument, and where the context so admits, shall be interpreted as being references to the Initial Data Collection Period.

"Invalid Fault" means any Fault reported by a Customer which can be reasonably attributed to components outside the Network;

"Line" means an Access Line which is providing a Network to a Customer;

"Line Fault" means a Fault which is attributable to a Line (and for the avoidance of doubt, excludes Exchange Faults, Faults due to Vandalism, Faults due to Third Party Damage or Other Faults);

"LFI" means the number of Line Faults per 100 Lines;

"MDF" means main distribution frame;

"Ministerial Policy Directions" means the policy directions made by Dermot Ahern TD, the then Minister for Communications, Marine and Natural Resources, pursuant to Section 13 of the Act, dated 21 February 2003 and 26 March 2004;

"Month" means a calendar month;

"National Area" means all the MDF areas (or as the case may be, ODF areas) within the State as specified by the table in Schedule 2(A), or the sum of the Sub-National Areas;

"National Service Availability Target" means the performance target eir must achieve for National Service Availability in respect of the National Area, as set out in Section 4.4 of this Decision Instrument and calculated by reference to Schedule 1;

"Network" means any electronic communications Network which eir uses to fulfil its universal service obligations, including the Public Switched Telephone Network or Fibre Network;

"NGA" means wired access network, which includes wholly or part optical elements and which are capable of delivering access services with enhanced characteristics as compared to those provided over exclusively copper access networks e.g. FTTN;

"NTP" means the network termination point, which is the physical point at which a Customer is provided with access to a public communications network; in the case of networks involving switching or routing, the NTP is identified by means of a specific network address, which may be linked to a Customer number or name;

"**NTU"** means network termination unit, which is the physical interface between the Access Line and the Customer's Premises Equipment (CPE), and which marks the boundary between the Network and the Customer's private wiring, which includes anything connected on the Customer's side of the NTU;

"Node" means a point of connection on a Network;

"ODF" means optical distribution frame;

"Optical Network Termination" or **"ONT"** means the device that terminates the fibre access at the Customer's or End-User's premises;

"Other Fault" means a Fault which lies within the Network, excluding a Line Fault, Exchange Fault, Fault due to Vandalism, or Fault due to Third Party Damage;

"Performance Targets" mean the Service Availability Targets and / or the Connection Performance Targets specified by ComReg in relation to eir's universal service obligations for the provision of access at a fixed location, as set out in Section 4 of this Decision Instrument;

"Public Switched Telephone Network" or "PSTN" means an electronic communications switched network which is used to provide publicly available telephone services; it supports the transfer between NTPs of speech communications and also other forms of communications, such as facsimile and data;

"Residential customer" is a "Consumer" within the meaning of Regulation 2 of the Framework Regulations;

"Revised Agreed Date" in the case of Connections, means a change to an Agreed Date, at the Customer's request, for a deferred installation of an In-Situ Connection only. In the case of Fault Repair, the Revised Agreed Date means a change to an Agreed Date for eir to visit a Customer's premises in respect of a Fault Repair, made either at the Customer's request or at eir's request;

"Service Availability Targets" refers to both the National Service Availability Target and the Sub-National Service Availability Target, as set out in Section 4.4 of Decision Instrument and calculated by reference to Schedule 1;

"Sub-National Area" means a collection of MDF areas (or as the case may be, ODF areas) within the State as specified by the tables in Schedule 2(B);

"Sub-National Service Availability Target" means the performance target eir must achieve for service availability in respect of each Sub-National Area, as set out in Section 4.4 of the Decision Instrument and calculated by reference to Schedule 1;

"Supply Time" means the duration from the date all Valid Service Orders in respect of a Line are received by eir to the occurrence of a working service available for use. For the avoidance of doubt, Supply Time calculations for "Fastest 95% All Connections" and "Fastest 99% All Connections" do not include Connections pursuant to an Agreed Date;

"Third Party" means any person other than eir;

"Third Party Damage" means unintentional damage to or destruction of the Network caused by a Third Party;

"Total Faults" means the sum of Line Faults plus Exchange Faults, plus Faults due to Vandalism, plus Faults due to Third Party Damage plus Other Faults;

"USO" means universal service obligation;

"Universal Service Regulations" means the European Communities (Electronic Communications Networks and Services) (Universal Service and Users' Rights) Regulations 2011;

"**User**" has the same meaning as it has in Regulation 2 of the Framework Regulations;

"Valid Service Order" means an order by a Customer for a Line at a specified address (whether made orally, or in writing, including by any electronic means, or in any other acceptable form), that is not later deemed invalid;

"Valid Fault" means a Line Fault, Exchange Fault, Other Fault, Fault due to Vandalism or Fault due to Third Party Damage affecting the Network, which cannot reasonably be attributed to components outside the Network;

"Vandalism" means intentional damage of or destruction to the Network caused by a Third Party, or theft by a Third Party;

"Week" means 7 consecutive Days;

"Working Day" means 8 Working Hours;

Working Days Outage per Line" means the average number of Working Days that a Line is without Network service, calculated by reference to Schedule 1;

"Working Hour" means 60 minutes duration between 09:00 – 17:00, from Monday – Friday (excluding Saturday, Sunday and public holidays);

"Year" means an annual period from either 1 July 2019 to 30 June 2020 or from 1 July 2020 to 30 June 2021.

B. GENERAL PROVISIONS RELATING TO THE CALCULATION, MEASUREMENT, COLLECTION OF DATA

1. AGREED DATE

A Connection with an "Agreed Date" is defined above and arises exclusively when the "Customer" requests a particular date and eir agrees to connect the Line.

In real terms this occurs when the "Customer" requests service to be set up at a particular date in the future, and eir agrees to provide service at this time.

The Agreed Date is captured by eir setting a "Due Date" at a different date to the "application date" for all "In-Situ Connection" orders.

For the avoidance of doubt, a date can only be agreed and revised for In-Situ Connections where a Customer requests a deferred installation. All such Agreed Dates shall be recorded and fully auditable.

Data relating to "Connections" with an "Agreed Date", shall be reported in the "% (percentage) of Connections by Agreed Date" metric and shall not be reported in the "In-Situ Connection" metrics.

eir shall also not report "Data" relating to "Connections" with an "Agreed Date", in the "Supply Time Fastest 95%" and "Supply Time Fastest 99%" for "All Connections" metrics.

In the case of a "Revised Agreed Date" that is requested or required by a Customer ("Customer-Introduced Delay"), such a "Revised Agreed Date" shall replace the "Agreed Date" and shall be counted as a "Valid Service Order" that is completed by the "Agreed Date". In this case, eir shall not report Data relating to "Revised Agreed Dates" when calculating the "Supply Times % (percentage) within X Days" metrics (see further below at Section B (4)-(6)).

2. BUSINESS AND RESIDENTIAL DATA

All Data as collected in its raw form shall be provided by eir to ComReg in comma separated variable ("CSV") format on appropriate electronic media.

All Data provided by eir during "Data Collection Periods" shall be provided by eir, both separately and combined, for Business and Residential customers.

3. DECIMAL PLACES AND ROUNDING

All Data provided by eir to ComReg shall be performed to 3 decimal places.

In the case of assessing compliance with the "Connection Performance Targets", the final calculated figures shall be rounded up by ComReg to the nearest 1 decimal place.

In the case of assessing "Fault Occurrence" and "Fault Repair" measurements, the final calculated figures shall be rounded by ComReg to the nearest 4 decimal places.

In the case of assessing compliance with the "Service Availability Targets", the final calculated figures shall be rounded up by ComReg to the nearest 3 decimal places.

4. CALCULATION OF SUPPLY TIME

Data collected for measurement shall be reported by eir in Elapsed Days. The unit of measurement for all calculations for Connections shall be Days, but the calculations will be shown in Hours for the "Fastest % Completed" measurements.

Where a "Valid Service Order" is placed on one Day and completed on another Day, the "Supply Time" shall be measured in "Days" and calculated as" Hours".

ComReg notes that eir's system TIS does not currently have the functionality to record in units of "Hours", but in Days. However ComReg may request that "Supply Times" be measured in Hours if at any time TIS is updated and can record in "Hours".

5. SUPPLY TIME - FASTEST 95% FOR ALL CONNECTIONS (Based on ETSI EG 202 057-1 V1.3.1)

This figure shall be collected and calculated by eir for each "Data Collection Period". The figure for each "Data Collection Period" shall be calculated as follows:

- The measurements taken shall give a list of times recorded for the events, i.e. a list of "Supply Times" for "All Connections". The list of "Supply Times" shall be counted and sorted into ascending order.
- The shortest 95% of the measurements shall be selected and then the longest of these measurements shall be selected.
- The "Supply Time" of this measurement, rounded to the nearest integer Elapsed Day(s) shall be reported.
- eir shall exclude any "Connections" with an "Agreed Date" or "Connections" with a "Revised Agreed Date" where the "Revised Agreed Dates" following "Customer-Introduced Delays" are recorded and fully auditable.

6. SUPPLY TIME - FASTEST 99% FOR ALL CONNECTIONS (Based on ETSI EG 202 057-1 V1.3.1)

This figure shall be collected and calculated by eir for each "Data Collection Period". The figure for each "Data Collection Period" shall be calculated as follows:

- The measurements taken shall give a list of times recorded for the events, i.e. a list of "Supply Times" for "All Connections".
- This list of times shall be counted and sorted into ascending order.
- The shortest 99% of the measurements shall be selected and then the longest of these measurements shall be selected.
- The "Supply Time" of this measurement, rounded to the nearest integer Elapsed Day(s) shall be reported.
- eir shall exclude any "Connections" with an "Agreed Date "or "Connections" with a "Revised Agreed Date" where the "Revised Agreed Dates" following "Customer-Introduced Delays" are recorded and fully auditable.

7. CUSTOMER-INTRODUCED DELAY FOR ALL OTHER CONNECTIONS

For any "Valid Service Orders" where there is recorded and fully auditable evidence of any "Customer-Introduced Delay", eir may exclude these "Valid Service Orders" for the purposes of calculating the Connection Performance Targets but if the delay is deemed to be "eir-introduced delay", eir shall include these "Valid Service Orders" in those calculations.

8. IN-SITU CONNECTIONS VERSUS ALL OTHER CONNECTIONS

ComReg recognises that the unit of measurement in eir's order management system ("TIS") is "Days". To address this, In-Situ Connections shall assume to have been completed within 24 Hours, unless it is found that an In-Situ Connection(s) was not successfully completed by the next Day.

In-Situ Connection orders which fail must follow the "failed electronic enablement" process (outlined in Section B(9) below) once reported by the Customer and should not be recorded among the "80% of In-Situ Connections within 24 Hours".

9. FAILED IN-SITU CONNECTIONS

eir shall not reclassify "In-Situ Connections" as "All Other Connections" because they have failed.

eir must also ensure it has a mechanism in place to ensure that any failed "In Situ-Connections" are not recorded as having been completed within the 24 Hours metric.

In some cases where an "In-Situ Connection" fails, ComReg recognises that eir may not be aware of such failure until such time that the Customer reports that the service is not working.

Upon receiving such a report from the Customer, eir must record that there has been a "failed electronic enablement" and must record the "Supply Time" as being the "Supply Time" for the "failed electronic enablement" order, plus 1 Day.

10. CUSTOMER FAULT REPORTING

A Customer can report a "Fault" to eir in a number of ways, including interactive voice response ("IVR") on the phone, on-line report, or by talking to an eir representative.

eir shall properly capture all "Fault Reports" and all attempts to log "Fault Reports" in its fault handling system ("FHS") or any replacement system.

Data collected for Fault measurement shall be reported in "Days". The unit of measurement for all calculations for "Faults" shall be "Hours".

11. CUSTOMER-INTRODUCED DELAY FOR FAULT REPAIRS WITH AN "AGREED DATE" OR "REVISED AGREED DATE"

For any "Fault Repairs" with an "Agreed Date" or "Revised Agreed Date" where there is recorded and fully auditable evidence of any "Customer-Introduced Delay", eir shall exclude the "Customer-Introduced Delay" from these "Fault Repairs" for the purposes of calculating the "Fault Repair Time".

For the avoidance of doubt, where there is no recorded or fully auditable evidence of any such "Customer-Introduced Delay", the delay shall be deemed to be "eir-Introduced Delay".

eir shall include the "eir-introduced delay" in Data relating to "Fault Repairs" with an "Agreed Date" or a "Revised Agreed Date", for the purposes of calculating the "Fault Repair Time".

Schedule 1(E) provides a worked example of how to calculate the "Fault Repair Time" for "Fault Repairs" with an "Agreed Date" or with a "Revised Agreed Date"**.**

12. FAULT REPAIRS WITH AN AGREED DATE OR A REVISED AGREED DATE

"Fault Repairs" with an "Agreed Date" shall only arise when an appointment is required for a technician to visit the premises of a "Customer" to enable the "Fault Repair" process.

If the "Agreed Date" needs to be revised by eir or if the work needed to be done is not completed by eir during the appointment for whatever reason, a further visit may be necessary. In this event, the date of the further appointment shall be deemed to be a "Revised Agreed Date."

eir shall use best endeavours to meet the "Agreed Date". If the "Agreed Date" cannot be met, eir shall use best endeavours to meet the earliest possible "Revised Agreed Date".

Until such time as eir's systems can record all "Revised Agreed Dates", eir shall, as a minimum, record the "Agreed Date" and, if applicable, the final "Revised Agreed Date" for the purposes of measuring performance in respect of "Fault Repairs with an Agreed Date". This possibility is subject to ongoing monitoring and approval by ComReg.

eir shall include "Fault Repairs" with an "Agreed Date" or a "Revised Agreed Date" in reports on the "% (percentage) of Fault Repairs by Agreed Date" metric.

eir shall include the "Fault Repair Time" for "Fault Repairs" with an "Agreed Date "or a "Revised Agreed Date" in the following metrics:

1. "X% of Fault Repairs completed within X Working Days;"
2. "Fastest 80% completed for All Repairs"; and
3. "Fastest 95% completed for All Repairs".

13. CALCULATION OF FAULT REPAIR TIME - FASTEST 80% COMPLETED FOR ALL REPAIRS (Based on ETSI EG 202 057-1 V1.3.1)

This figure shall be collected and calculated by eir for each "Data Collection Period". "Data" collected for measurement shall be reported in "Working Hours". The figure for each "Data Collection Period" shall be calculated as follows:

- The measurements taken shall give a list of times recorded for each event, i.e. a list of "Fault Repair Times".
- This list of "Fault Repair Times" shall be counted and sorted into ascending order.
- The shortest 80% of the measurements shall be selected and then the longest "Fault Repair Time" of these measurements shall be selected.
- The "Fault Repair Time" for this measurement, rounded to the nearest "Working Hour(s)" shall be reported to ComReg.

14. CALCULATION OF FAULT REPAIR TIME - FASTEST 95% COMPLETED FOR ALL REPAIRS (Based on ETSI EG 202 057-1 V1.3.1)

This figure shall be collected and calculated by eir for each "Data Collection Period". "Data" collected for measurement shall be reported in "Working Hours". The figure for each "Data Collection Period" shall be calculated as follows:

- The measurements taken shall give a list of times recorded for each event, i.e. a list of "Fault Repair Times".
- This list of "Fault Repair Times" shall be counted and sorted into ascending order.

- The shortest 95% of the measurements shall be selected and then the longest "Fault Repair Time" of these measurements shall be selected.
- The "Fault Repair Times" for this measurement, rounded to the nearest "Working Hour(s)", shall be reported to ComReg.

15. NUMBER OF FAULT REPORTS NOT DEEMED VALID

eir shall not amend its "Fault" categorisation processes or definitions for any reason, including for example, changing "Fault Reports not deemed valid" (e.g. Customer Premises Equipment or similar) to "Valid Fault Reports", or vice versa. There may be circumstances where legitimate changes are appropriate. In advance of any changes being made, eir must notify ComReg of the requested change and seek approval from ComReg of same, in accordance with the procedure set out at Section 7 of this Decision Instrument.

Only "Faults" which occur on the "Network" are taken into account for the purpose of the "Performance Targets". If, on entering the Customer's premises, the technician discovers the "Fault" to be on the exchange and / or cabinet side of the Customer's NTU or ONT, then the Fault is deemed to be on the Network and can therefore be considered for the purpose of calculating "Fault Occurrence" / "Fault Repair" metrics relevant to the "Service Availability Targets".

However, if the "Fault" is found to be on the NTU or ONT or on the Customer's side of the NTU and/or the ONT, the "Fault" is not deemed to be on the "Network", and shall not be considered for the purpose of calculating "Fault Occurrence" / "Fault Repair" metrics relevant to the "Service Availability Targets".

16. FAULTS DUE TO VANDALISM / FAULTS DUE TO THIRD PARTY DAMAGE

In accordance with Section 6 of this Decision Instrument, eir shall provide ComReg with audited Data in relation to the number of "Fault Reports" classified as either "Faults due to Vandalism" or "Faults due to Third Party Damage", both of which affect "Line" performance.

eir shall provide the above "Data" to ComReg at the same time as the submission of "Data" relating to eir's quarterly and annual performance but should outline it separately in the excel file submitted and entitle it, "*For ComReg information purposes only*". Such "Data" will not be published by ComReg.

eir shall not amend the "Fault" categorisation processes or definitions for any reason including, for example, changing "Valid Fault Reports" classified as "Faults due to Vandalism" to "Faults due to Third Party Damage" or vice versa. There may be circumstances where legitimate changes are appropriate. In advance of any changes being made, eir must notify ComReg of the requested change and seek approval from ComReg of same, in accordance with the procedure set out at Section 7 of this Decision Instrument.

17. RATIO BETWEEN LINE FAULTS AND TOTAL FAULTS

eir have confirmed that the ratio of "Line Faults" to "Total Faults" should remain relatively constant on a quarterly and annual basis and from "Year" to "Year".

eir shall not therefore amend its "Fault" categorisation processes or definitions for any reason including for example, any alterations which may affect the classification, numbers or ratios of

"Line Faults" or "Total Faults". There may be circumstances where legitimate changes are appropriate. In advance of any changes being made, eir must notify ComReg of the requested change and seek approval from ComReg of same, in accordance with the procedure set out at Section 7 of this Decision Instrument.

C. CALCULATION METHODS FOR QUARTERLY DATA[1]

I. CONNECTION MEASUREMENTS - QUARTERLY

In-Situ Connections & All Other Connections

The Connections metrics and / or calculations described in Section C (I) of this Schedule 1 are relevant to assessing compliance with the Connection Performance Targets (set out in Section 4.3 of this Decision Instrument) for each Year.

Data relating to the Connections metrics and / or calculations shall be collected by eir for each Data Collection Period and submitted to ComReg pursuant to Section 6 of this Decision Instrument.

a. Percentage In-Situ Connections

1. IN-SITU CONNECTIONS IN 24 HOURS

$$\frac{Number\ \ of\ In-Situ\ Connections\ completed\ within\ the\ Data\ Collection\ Period\ where\ the\ Supply\ Time\ is\ within\ 24\ hours}{Total\ number\ of\ In-Situ\ Connections\ completed\ within\ the\ Data\ Collection\ Period} * 100$$

2. IN-SITU CONNECTIONS IN 2 WEEKS

$$\frac{Number\ of\ In-Situ\ Connections\ completed\ within\ the\ Data\ Collection\ Period\ where\ the\ Supply\ Time\ is\ within\ 2\ Weeks}{Total\ number\ of\ In-Situ\ Connections\ completed\ within\ the\ Data\ Collection\ Period} * 100$$

3. IN-SITU CONNECTIONS IN 2 MONTHS

$$\frac{Number\ of\ In-Situ\ Connections\ completed\ within\ the\ Data\ Collection\ Period\ where\ the\ Supply\ Time\ is\ within\ 2\ Months}{Total\ number\ of\ In-Situ\ Connections\ completed\ within\ the\ Data\ Collection\ Period} * 100$$

b. Percentage All Other Connections

4. ALL OTHER CONNECTIONS IN 2 WEEKS

$$\frac{Number\ of\ All\ Other\ Connections\ completed\ within\ the\ Data\ Collection\ Period\ where\ the\ Supply\ Time\ is\ within\ 2\ Weeks}{Total\ number\ of\ All\ Other\ Connections\ completed\ within\ the\ Data\ Collection\ Period} * 100$$

5. ALL OTHER CONNECTIONS IN 4 WEEKS

$$\frac{Number\ of\ All\ Other\ Connections\ completed\ within\ the\ Data\ Collection\ Period\ where\ the\ Supply\ Time\ is\ within\ 4\ Weeks}{Total\ number\ of\ All\ Other\ Connections\ completed\ within\ the\ Data\ Collection\ Period} * 100$$

1 [1] Data relevant to this section should be collected for each Data Collection Period and by reference to the National Area and Sub-National Area definitions by MDF, or ODF as the case may be, in Schedule 2. ComReg is also imposing an obligation on eir to report on its connection performance for the period 1 April 2019 – 30 June 2019. For the avoidance of doubt this obligation is solely a reporting obligation.

6. ALL OTHER CONNECTIONS IN 8 WEEKS

$$\frac{Number\ of\ All\ Other\ Connections\ completed\ within\ the\ Data\ Collection\ Period\ where\ the\ Supply\ Time\ is\ within\ 8\ Weeks}{Total\ number\ of\ All\ Other\ Connections\ completed\ within\ the\ Data\ Collection\ Period} * 100$$

7. ALL OTHER CONNECTIONS IN 13 WEEKS

$$\frac{Number\ of\ All\ Other\ Connections\ completed\ within\ the\ Data\ Collection\ Period\ where\ the\ Supply\ Time\ is\ within\ 13\ Weeks}{Total\ number\ of\ All\ Other\ Connections\ completed\ within\ the\ Data\ Collection\ Period} * 100$$

8. ALL OTHER CONNECTIONS IN 26 WEEKS

$$\frac{Number\ of\ All\ Other\ Connections\ completed\ within\ the\ Data\ Collection\ Period\ where\ the\ Supply\ Time\ is\ within\ 26\ Weeks}{Total\ number\ of\ All\ Other\ Connections\ completed\ within\ the\ Data\ Collection\ Period} * 100$$

II. FAULT MEASUREMENTS – QUARTERLY

The Fault Occurrence and Fault Repair metrics and / or calculations described in Section C (II) (1-3) of this Schedule 1 are relevant to assessing compliance with the Service Availability Targets (set out in Section 4.4 of this Decision Instrument) for each Year.

Data relating to the above metrics and / or calculations shall be collected by eir for each Data Collection Period and submitted to ComReg pursuant to Section 6 of this Decision Instrument.

1) FAULT OCCURRENCE - QUARTERLY

a. TOTAL FAULTS PER 100 LINES

This figure is calculated using the Data collected for each "Data Collection Period" as follows:-

$$\frac{Number\ of\ Total\ Faults\ for\ the\ Data\ Collection\ Period}{Average\ Number\ of\ Lines\ within\ the\ Data\ Collection\ Period} * 100$$

This calculation is illustrated below using eir's figures from 2014[2], which are confidential:-

[redacted]

2 2014 relates to the period Q3 2013 – Q2 2014 inclusive

b. LINE FAULTS PER 100 LINES

This figure is calculated using the Data collected for each "Data Collection Period" as follows:-

$$\frac{Number\ of\ Line\ Faults\ for\ the\ Data\ Collection\ Period}{Average\ Number\ of\ Lines\ within\ the\ Data\ Collection\ Period} * 100$$

This calculation is illustrated below by using data submitted by eir for 2014[3] – this data is confidential:

[redacted]

[3] 2014 relates to the period Q3 2013 – Q2 2014 inclusive

2) FAULT REPAIR - QUARTERLY

a. PERCENTAGE FAULT REPAIRS WITH AN AGREED DATE

This figure is calculated using the Data collected for each "Data Collection Period" as follows:-

$$\frac{(Total\ number\ of\ Customer\ Visits\ for\ the\ Data\ Collection\ Period\ which\ are\ by\ the\ Agreed\ Date\ or\ Revised\ Agreed\ Date)}{Total\ number\ of\ Agreed\ Dates\ or\ Revised\ Agreed\ Dates\ within\ the\ Data\ Collection\ Period} * 100$$

b. PERCENTAGE FAULT REPAIRS WITH AN AGREED DATE VERSUS ALL REPAIRS

This figure is calculated using the Data collected for each "Data Collection Period" as follows:-

$$\frac{(Total\ number\ of\ Fault\ Repairs\ with\ an\ Agreed\ Date\ or\ Revised\ Agreed\ Date\ within\ the\ Data\ Collection\ Period)}{Total\ of\ All\ Repairs\ completed\ within\ the\ Data\ Collection\ Period} * 100$$

c. PERCENTAGE FAULT REPAIRS WITHIN 2 WORKING DAYS

This figure is calculated using the Data collected for each "Data Collection Period" as follows:-

$$\frac{(Number\ of\ All\ Repairs\ completed\ within\ the\ Data\ Collection\ Period\ where\ the\ Fault\ Repair\ Time\ is\ within\ 2\ Working\ Days)}{Total\ of\ All\ Repairs\ completed\ within\ the\ Data\ Collection\ Period} * 100$$

d. PERCENTAGE FAULT REPAIRS WITHIN 4 WORKING DAYS

This figure is calculated using the Data collected for each "Data Collection Period" as follows:-

$$\frac{(Number\ of\ All\ Repairs\ completed\ within\ the\ Data\ Collection\ Period\ where\ the\ Fault\ Repair\ Time\ is\ within\ 4\ Working\ Days)}{Total\ of\ All\ Repairs\ completed\ within\ the\ Data\ Collection\ Period} * 100$$

e. PERCENTAGE FAULT REPAIRS WITHIN 5 WORKING DAYS

This figure is calculated using the Data collected for each "Data Collection Period" as follows:-

$$\frac{(Number\ of\ All\ Repairs\ completed\ within\ the\ Data\ Collection\ Period\ where\ the\ Fault\ Repair\ Time\ is\ within\ 5\ Working\ Days)}{Total\ of\ All\ Repairs\ completed\ within\ the\ Data\ Collection\ Period} * 100$$

f. PERCENTAGE FAULT REPAIRS WITHIN 10 WORKING DAYS

This figure is calculated using the Data collected for each "Data Collection Period" as follows:-

$$\frac{(Number\ of\ All\ Repairs\ completed\ within\ the\ Data\ Collection\ Period\ where\ the\ Fault\ Repair\ Time\ is\ within\ 10\ Working\ Days)}{Total\ of\ All\ Repairs\ completed\ within\ the\ Data\ Collection\ Period} * 100$$

3) SERVICE AVAILABILITY - WORKING DAYS OUTAGE PER LINE - QUARTERLY

- Eir's performance against the National Service Availability Target and the Sub-National Service Availability Target (as specified in Section 4.4 of this Decision Instrument) shall be assessed on a quarterly basis in accordance with the calculations set out in this Section C(II)(3) of Schedule 1 (based on a combination of the Line Faults per 100 lines and Average Fault Repair Time).

- The calculations shall be based on the Data submitted to ComReg for each Data Collection Period, and by reference to the MDF areas (or ODF areas, as the case may be) for the National Area and the individual Sub-National Areas, specified in Schedule 2.

$$Service\ Availability\ \ (expressed\ as\ the\ maximum\ Working\ Days\ Outage\ per\ line) = \ (X\ x\ Y)$$

Where:

X= Line Faults per 100 lines/100 (calculated to 4 decimal places)

Y = Average Fault Repair Time (calculated to 4 decimal places) - calculated as:

$$Y = \sum_{i=1}^{5} a_i \times\ b_i$$

Tables 1(a), 1 (b) and 1 (c) show the workings for "Y" where:

- a_i = (Working Days Mid-point)$_i$
- b_i = (Percentage Fault Repairs)$_i$

Calculations for Average Fault Repair Time ("Y")

Table 1 (a)

a_i = Working Days Mid-point		
Working Days	**Working Days Mid-point[4]**	
0-2 working days	1	a_1
2-4 working days	3	a_2
4-5 working days	4.5	a_3
5-10 working days	7.5	a_4
Above 10 working days	10	a_5

Table 1 (b)

b_i = Percentage of Fault Repairs completed within each range of Working Days (using the Fault Repair calculations specified in section C (II) above)	
Working Days	**Percentage Fault Repairs (%)**
0-2 working days	b_1
2-4 working days	b_2
4-5 working days	b_3
5-10 working days	b_4
Above 10 working days[5]	b_5
	$\sum_{i=1}^{5} bi = 100\%$

Table 1 (c)

"Y" = Average Fault Repair Time

$$Y = \sum_{i=1}^{5} y_i$$

Working Days Mid-point a_i	**Percentage Fault Repairs (%) b_i**	**Average Fault Repair Time for each range (a_i x b_i)**
1	b_1	$1 \times b_1 = y_1$

[4] For the avoidance of doubt, the mid-point figure indicated for each Working Days range must be used when performing this calculation.

[5] The calculation for the percentage of Fault Repairs completed in > 10 Working Days is not included in Section C(II)(2) as the value of b5 can be derived from the other percentage of Fault Repairs calculations.

3	b_2	3 x $b_2 = y_2$
4.5	b_3	4.5 x $b_3 = y_3$
7.5	b_4	7.5 x $b_4 = y_4$
10	b_5	10 x $b_5 = y_5$
Average Fault Repair Time (in Working Days Outage per Line) Y = Sum of $y_1 + y_2 + y_3 + y_4 + y_5$		

Worked example for calculation of Average Fault Repair Time

(*based on eir's 2015[6] data)*

Table 2

Working Days	**Working Days Mid-Point (a_i)**	**Percentage Fault Repairs (%) (b_i)**	**Average Fault Repair Time (Y)**
0-2 working days	1	74.806%	0.7478
2-4 working days	3	14.6252%	0.4388
4-5 working days	4.5	3.2652%	0.1469
5-10 working days	7.5	5.6051%	0.4204
> 10 working days	10	1.7239%	0.1724
		100%	**1.9263**
Y = Sum of Average Fault Repair Times = 1.9263 Working Days			

[6] ComReg Information Notice 16/46

D. CALCULATION METHODS FOR ANNUAL DATA[7]

In-Situ Connections & All Other Connections

The Connections metrics and / or calculations described in Section D(I) of this Schedule 1 are relevant to assessing compliance with the Connection Performance Targets (set out in Section 4.3.1 of this Decision Instrument) for each Year.

Data relating to the Connections metrics and / or calculations shall be collected by eir for each Data Collection Period and submitted to ComReg pursuant to Section 6.

I. CONNECTION MEASUREMENTS - ANNUAL

a. Percentage In-Situ Connections

1. MEASUREMENT OF IN-SITU CONNECTIONS COMPLETED WITHIN 24 HOURS

$$\frac{Sum\ of\ In-Situ\ Connections\ where\ the\ Supply\ Time\ is\ within\ 24\ Hours\ for\ the\ 4\ Data\ Collection\ Periods\ within\ the\ Year}{Sum\ of\ total\ In-Situ\ Connections\ completed\ for\ the\ 4\ Data\ Collection\ Periods\ within\ the\ Year} * 100$$

2. MEASUREMENT OF IN-SITU CONNECTIONS COMPLETED WITHIN 2 WEEKS

$$\frac{Sum\ of\ In-Situ\ Connections\ where\ the\ Supply\ Time\ is\ within\ 2\ Weeks\ for\ the\ 4\ Data\ Collection\ Periods\ within\ the\ Year}{Sum\ of\ total\ In-Situ\ Connections\ completed\ for\ the\ 4\ Data\ Collection\ Periods\ within\ the\ Year} * 100$$

3. MEASUREMENT OF IN-SITU CONNECTIONS COMPLETED WITHIN 2 MONTHS

$$\frac{Sum\ of\ In-Situ\ Connections\ where\ the\ Supply\ Time\ is\ within\ 2\ Months\ for\ the\ 4\ Data\ Collection\ Periods\ within\ the\ Year}{Sum\ of\ total\ In-Situ\ Connections\ completed\ for\ the\ 4\ Data\ Collection\ Periods\ within\ the\ Year} * 100$$

b. Percentage All Other Connections

4. MEASUREMENT OF ALL OTHER CONNECTIONS COMPLETED WITHIN 2 WEEKS

$$\frac{Sum\ of\ All\ Other\ Connections\ where\ the\ Supply\ Time\ is\ within\ 2\ weeks\ for\ the\ 4\ Data\ Collection\ Periods\ within\ the\ Year}{Sum\ of\ total\ All\ Other\ Connections\ completed\ for\ the\ 4\ Data\ Collection\ Periods\ within\ the\ Year} * 100$$

5. MEASUREMENT OF ALL OTHER CONNECTIONS COMPLETED WITHIN 4 WEEKS

$$\frac{Sum\ of\ All\ Other\ Connections\ where\ the\ Supply\ Time\ is\ within\ 4\ weeks\ for\ the\ 4\ Data\ Collection\ Periods\ within\ the\ Year}{Sum\ of\ total\ All\ Other\ Connections\ completed\ for\ the\ 4\ Data\ Collection\ Periods\ within\ the\ Year} * 100$$

[7] Data relevant to this section should be collected for each Data Collection Period and by reference to the National Area and Sub-National Area definitions by MDF, or ODF as the case may be, in Schedule 2.

6. MEASUREMENT OF ALL OTHER CONNECTIONS COMPLETED WITHIN 8 WEEKS

$$\frac{Sum\ of\ All\ Other\ Connections\ where\ the\ Supply\ Time\ is\ within\ 8\ weeks\ for\ the\ 4\ Data\ Collection\ Periods\ within\ the\ Year}{Sum\ of\ total\ All\ Other\ Connections\ completed\ for\ the\ 4\ Data\ Collection\ Periods\ within\ the\ Year} * 100$$

7. MEASUREMENT OF ALL OTHER CONNECTIONS COMPLETED WITHIN 13 WEEKS

$$\frac{Sum\ of\ All\ Other\ Connections\ where\ the\ Supply\ Time\ is\ within\ 13\ weeks\ for\ the\ 4\ Data\ Collection\ Periods\ within\ the\ Year}{Sum\ of\ total\ All\ Other\ Connections\ completed\ for\ the\ 4\ Data\ Collection\ Periods\ within\ the\ Year} * 100$$

8. MEASUREMENT OF ALL OTHER CONNECTIONS COMPLETED WITHIN 26 WEEKS

$$\frac{Sum\ of\ All\ Other\ Connections\ where\ the\ Supply\ Time\ is\ within\ 26\ weeks\ for\ the\ 4\ Data\ Collection\ Periods\ within\ the\ Year}{Sum\ of\ total\ All\ Other\ Connections\ completed\ for\ the\ 4\ Data\ Collection\ Periods\ within\ the\ Year} * 100$$

II. FAULT MEASUREMENTS - ANNUAL

The Fault Occurrence and Fault Repair metrics and / or calculations described in Section D (II)(1-3) of this Schedule 1 are relevant to assessing compliance with the Service Availability Targets (set out in Section 4.4 of this Decision Instrument) for each Year.

Data relating to the above metrics and / or calculations shall be collected by eir for each Data Collection Period and submitted to ComReg pursuant to Section 6 of this Decision Instrument.

1) FAULT OCCURRENCE – ANNUAL

a. TOTAL FAULTS PER 100 LINES – ANNUAL

This figure is calculated using the Data collected for each "Data Collection Period" to assess performance for each Year, as follows:

$$\frac{Sum\ of\ Number\ of\ Total\ Faults\ for\ the\ 4\ Data\ Collection\ Periods\ within\ the\ Year}{(Sum\ of\ Average\ Number\ of\ Lines\ reported\ to\ ComReg\ for\ each\ Data\ Collection\ Period\ for\ the\ Year/Number\ of\ Data\ Collection\ Periods\ in\ a\ Year)} * 100$$

This calculation is illustrated below using eir's figures from 2014[8] which are confidential:-

[redacted]

[8] 2014 relates to the period Q3 2013 – Q2 2014 inclusive

b. LINE FAULTS PER 100 LINES - ANNUAL

This figure is calculated using the Data collected for each "Data Collection Period" to assess performance for each Year, as follows:

$$\frac{(Sum\ of\ Number\ of\ Line\ Faults\ for\ the\ 4\ Data\ Collection\ Periods\ within\ the\ Year)}{(Sum\ of\ Average\ Number\ of\ Lines\ reported\ to\ ComReg\ for\ each\ Data\ Collection\ Period\ for\ the\ Year\ \ /\ Number\ of\ Data\ Collection\ Periods\ in\ a\ Year)} * 100$$

This calculation is illustrated below by using data submitted by eir for 2014[9] – this data is confidential:

[9] 2014 relates to the period Q3 2013 – Q2 2014 inclusive

2) FAULT REPAIR – ANNUAL

a. PERCENTAGE FAULT REPAIRS WITH AN AGREED DATE – ANNUAL

This figure is calculated using the Data collected for each "Data Collection Period" to assess performance for each Year, as follows:

$$\frac{(Number\ of\ Customer\ Visits\ by\ the\ Agreed\ Date\ or\ Revised\ Agreed\ Date\ for\ the\ 4\ Data\ Collection\ Periods\ within\ the\ Year)}{(Total\ number\ of\ Agreed\ Dates\ or\ Revised\ Agreed\ Dates\ for\ the\ 4\ Data\ Collection\ Periods\ within\ the\ Year)} * 100$$

b. PERCENTAGE FAULT REPAIRS WITH AN AGREED DATE *VERSUS* ALL REPAIRS - ANNUAL

This figure is calculated using the Data collected for each "Data Collection Period" to assess performance for each Year, as follows:

$$\frac{(Total\ number\ of\ Fault\ Repairs\ with\ an\ Agreed\ Date\ or\ Revised\ Agreed\ Date\ within\ the\ 4\ Data\ Collection\ Periods)}{Total\ number\ of\ All\ Repairs\ completed\ within\ the\ 4\ Data\ Collection\ Periods} * 100$$

c. PERCENTAGE FAULT REPAIRS WITHIN 2 WORKING DAYS

This figure is calculated using the Data collected for each "Data Collection Period" to assess performance for each Year, as follows:

$$\frac{(Number\ of\ All\ Repairs\ where\ the\ Repair\ Time\ is\ within\ 2\ Working\ Days\ for\ the\ 4\ Data\ Collection\ Periods\ within\ the\ Year)}{(Sum\ of\ All\ Repairs\ completed\ for\ the\ 4\ Data\ Collection\ Periods\ within\ the\ Year)} * 100$$

d. PERCENTAGE FAULT REPAIRS WITHIN 4 WORKING DAYS

This figure is calculated using the Data collected for each "Data Collection Period" to assess performance for each Year, as follows:

$$\frac{(Number\ of\ All\ Repairs\ where\ the\ Repair\ Time\ is\ within\ 4\ Working\ Days\ for\ the\ 4\ Data\ Collection\ Periods\ within\ the\ Year)}{(Sum\ of\ All\ Repairs\ completed\ for\ the\ 4\ Data\ Collection\ Periods\ within\ the\ Year)} * 100$$

e. PERCENTAGE FAULT REPAIRS WITHIN 5 WORKING DAYS

This figure is calculated using the Data collected for each "Data Collection Period" to assess performance for each Year, as follows:

$$\frac{(Number\ of\ All\ Repairs\ where\ the\ Repair\ Time\ is\ within\ 5\ Working\ Days\ for\ the\ 4\ Data\ Collection\ Periods\ within\ the\ Year)}{(Sum\ of\ All\ Repairs\ completed\ for\ the\ 4\ Data\ Collection\ Periods\ within\ the\ Year)} * 100$$

f. PERCENTAGE FAULT REPAIRS WITHIN 10 WORKING DAYS

This figure is calculated using the Data collected for each "Data Collection Period" to assess performance for each Year, as follows:

$$\frac{(Number\ of\ All\ Repairs\ where\ the\ Repair\ Time\ is\ within\ 10\ Working\ Days\ for\ the\ 4\ Data\ Collection\ Periods\ within\ the\ Year)}{(Sum\ of\ All\ Repairs\ completed\ for\ the\ 4\ Data\ Collection\ Periods\ within\ the\ Year)} * 100$$

3) SERVICE AVAILABILITY – WORKING DAYS OUTAGE PER LINE - ANNUAL

- Eir's performance against the National Service Availability Target and the Sub-National Service Availability Target (as specified in Section 4.4.1 of this Decision Instrument) shall be assessed for each Year in accordance with the calculations set out in this Section D(II)(3) of Schedule 1 (based on a combination of the Line Faults per 100 lines and Average Fault Repair Time).

- The calculations shall be based on the Data submitted to ComReg for each Data Collection Period, and by reference to the MDF areas (or ODF areas, as the case may be) for the National Area and the individual Sub-National Areas, specified in Schedule 2.

$$Service\ Availability\ \ (expressed\ as\ the\ maximum\ Working\ Days\ Outage\ per\ line) = \ (X\ x\ Y)$$

Where:

X= Line Faults per 100 lines/100 (calculated to 4 decimal places)

Y = Average Fault Repair Time (calculated to 4 decimal places) - calculated as:

$$Y = \sum_{i=1}^{5} a_i \times b_i$$

Tables 1(a), 1 (b) and 1 (c) show the workings for "Y" where:

- a_i = (Working Days Mid-point)$_i$
- b_i = (Percentage Fault Repairs)$_i$

Calculations for Average Fault Repair Time ("Y")

Table 1 (a)

a_i = Working Days Mid-point		
Working Days	**Working Days Mid-point[10]**	
0-2 working days	1	a_1
2-4 working days	3	a_2
4-5 working days	4.5	a_3
5-10 working days	7.5	a_4
Above 10 working days	10	a_5

Table 1 (b)

b_i = Percentage of Fault Repairs completed within each range of Working Days (using the Fault Repair calculations specified in section D (II) above)	
Working Days	**Percentage Fault Repairs (%)**
0-2 working days	b_1
2-4 working days	b_2
4-5 working days	b_3
5-10 working days	b_4
Above 10 working days[11]	b_5
	$\sum_{i=1}^{5} bi = 100\%$

Table 1 (c)

"Y" = Average Fault Repair Time

$$Y = \sum_{i=1}^{5} y_i$$

Working Days Mid-point a_i	**Percentage Fault Repairs (%) b_i**	**Average Fault Repair Time for each range (a_i x b_i)**
1	b_1	$1 \times b_1 = y_1$

[10] For the avoidance of doubt, the mid-point figure indicated for each Working Days range must be used when performing this calculation.

[11] The calculation for the percentage of Fault Repairs completed in > 10 Working Days is not included in Section C(II)(2) as the value of b5 can be derived from the other percentage of Fault Repairs calculations.

3	b_2	3 x $b_2 = y_2$
4.5	b_3	4.5 x $b_3 = y_3$
7.5	b_4	7.5 x $b_4 = y_4$
10	b_5	10 x $b_5 = y_5$
Average Fault Repair Time (in Working Days Outage per Line) Y = Sum of $y_1 + y_2 + y_3 + y_4 + y_5$		

Worked example for calculation of Average Fault Repair Time

(*based on eir's 2015 data*[12])

Table 2

Working Days	Working Days Mid-Point (a_i)	Percentage Fault Repairs (%) (b_i)	Average Fault Repair Time (Y)
0-2 working days	1	74.806%	0.7478
2-4 working days	3	14.6252%	0.4388
4-5 working days	4.5	3.2652%	0.1469
5-10 working days	7.5	5.6051%	0.4204
> 10 working days	10	1.7239%	0.1724
		100%	**1.9263**
Y = Sum of Average Fault Repair Times = 1.9263 Working Days			

[12] ComReg Information Notice 16/46

E. WORKED EXAMPLES - CALCULATING THE "FAULT REPAIR TIME" FOR "FAULT REPAIRS" WITH AN "AGREED DATE" OR WITH A "REVISED AGREED DATE"

Note: T_d, T_s, T_o and T_e must be recorded at the point where the customer is requesting an appointment.

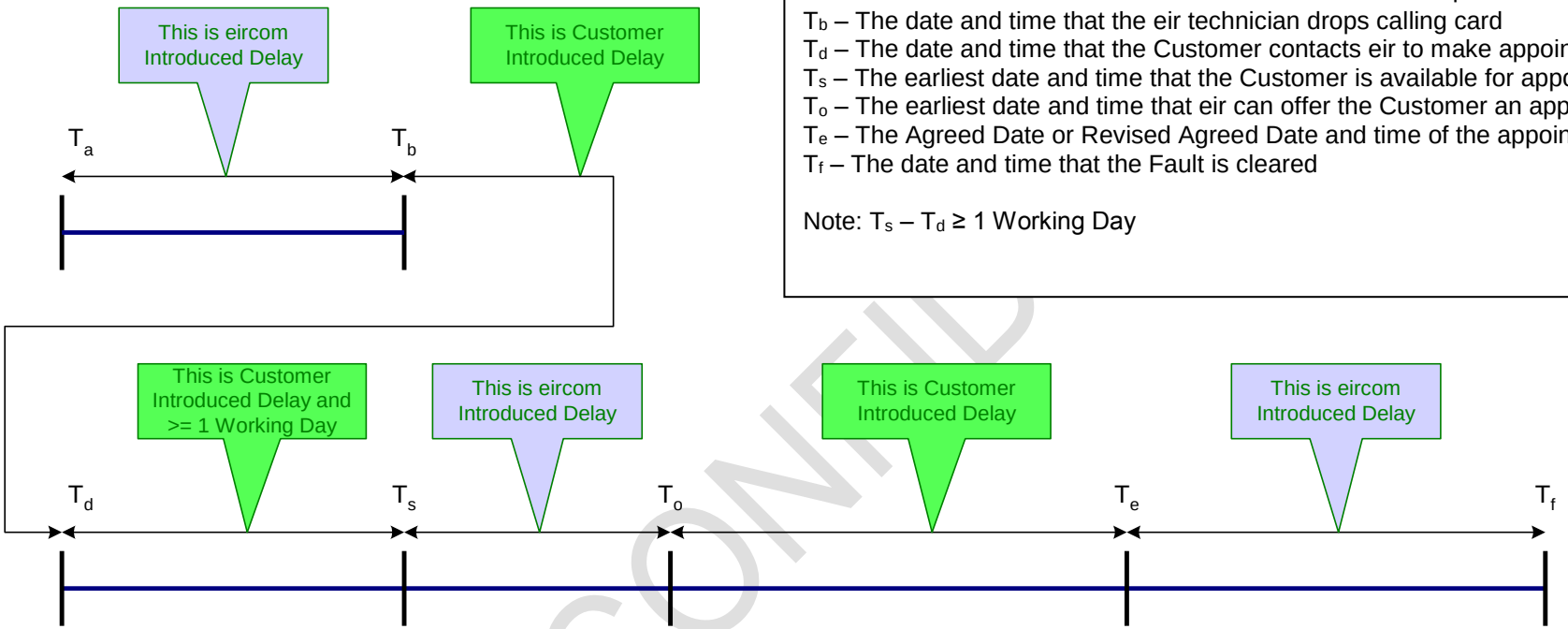
The final date and time that eir must be able to record is the time that the Fault is cleared.

In the diagram below this time is recorded as T_f.

Calling Cards initiated Fault Repair Time for Faults with an "Agreed Date" or "Revised Agreed Date"

- A small percentage of Faults with an "Agreed Date" or "Revised Agreed Date" occur as a result of an eir technician dropping a calling card at the Customer premises where they are unable to gain access to investigate the Fault Report.
- If the Customer calls for an appointment within 2 Working Days of the calling card being dropped, then the Fault Repair Time of the Fault with an "Agreed Date" or a "Revised Agreed Date" (as detailed above) will include the amount of time from when the Fault was logged to when the calling card was dropped.
- These times are recorded as Ta and Tb in the diagram below.

Flowchart of the Fault Repair Time for Agreed Date Faults



Key:
T_a – The date and time that the Customer contacts eir to report a Fault
T_b – The date and time that the eir technician drops calling card
T_d – The date and time that the Customer contacts eir to make appointment
T_s – The earliest date and time that the Customer is available for appointment
T_o – The earliest date and time that eir can offer the Customer an appointment
T_e – The Agreed Date or Revised Agreed Date and time of the appointment
T_f – The date and time that the Fault is cleared

Note: $T_s - T_d \geq 1$ Working Day

WORKED EXAMPLES FOR CALCULATING "FAULT REPAIR TIME"

For simplicity all events occur at 12noon

SCENARIO 1 – CALLING CARD DROP

T_a = Monday
T_b = Wednesday
T_d = Thursday
T_s = Monday next week
T_o = Tuesday next week
T_e = Wednesday next week
T_f= Thursday next week

Customer Introduced Delay ("CID") is the time

- From when the calling card is dropped to the earliest date that the Customer is available (Ts-Tb) = 3 Working Days and,
- From when eir offers an appointment to the Customer to the Agreed Date. (Te-To) = 1 Working Day

Total CID is 4 Working Days

Elapsed Time is 8 Working Days

So the Fault Repair Time for this Fault is:

Elapsed Time (8 Working Days) less the CID (4 Working Days) = 4 Working Days

SCENARIO 2 – NO CALLING CARD DROP

T_d = Monday
T_s = Wednesday
T_o = Thursday
T_e = Thursday
T_f= Friday

Customer Introduced Delay ("CID") is the time:

- From when the calling card is dropped to the earliest date that the Customer is available (Ts-Td) = 2 Working Days and,
- From when eir offers an appointment to the Customer to the Agreed Date. (Te-To) = 0 Working Day

Total CID is 2 Working Days

Elapsed Time is 4 Working Days

So the Fault Repair Time for this Fault is:

Elapsed Time (4 Working Days) less the CID (2 Working Days) = 2 Working Days

Schedule 2

National Area and Sub-National Areas

The Main Distribution Frames ("MDFs") in the State are divided into three categories of Sub-National Areas:

a) "Area 1"[13] (***Schedule 2(B), Table 1****);*
b) "Area 2"[14] (***Schedule 2(B), Table 2;*** and
c) "Area 3"[15] (***Schedule 2(B), Table 3***).

Notes:

(1) The National Area = The sum of MDF areas in Schedule 2(A) or the sum of MDF's in Table 1, Table 2 Table 3 and Table 4 of Schedule 2(B).

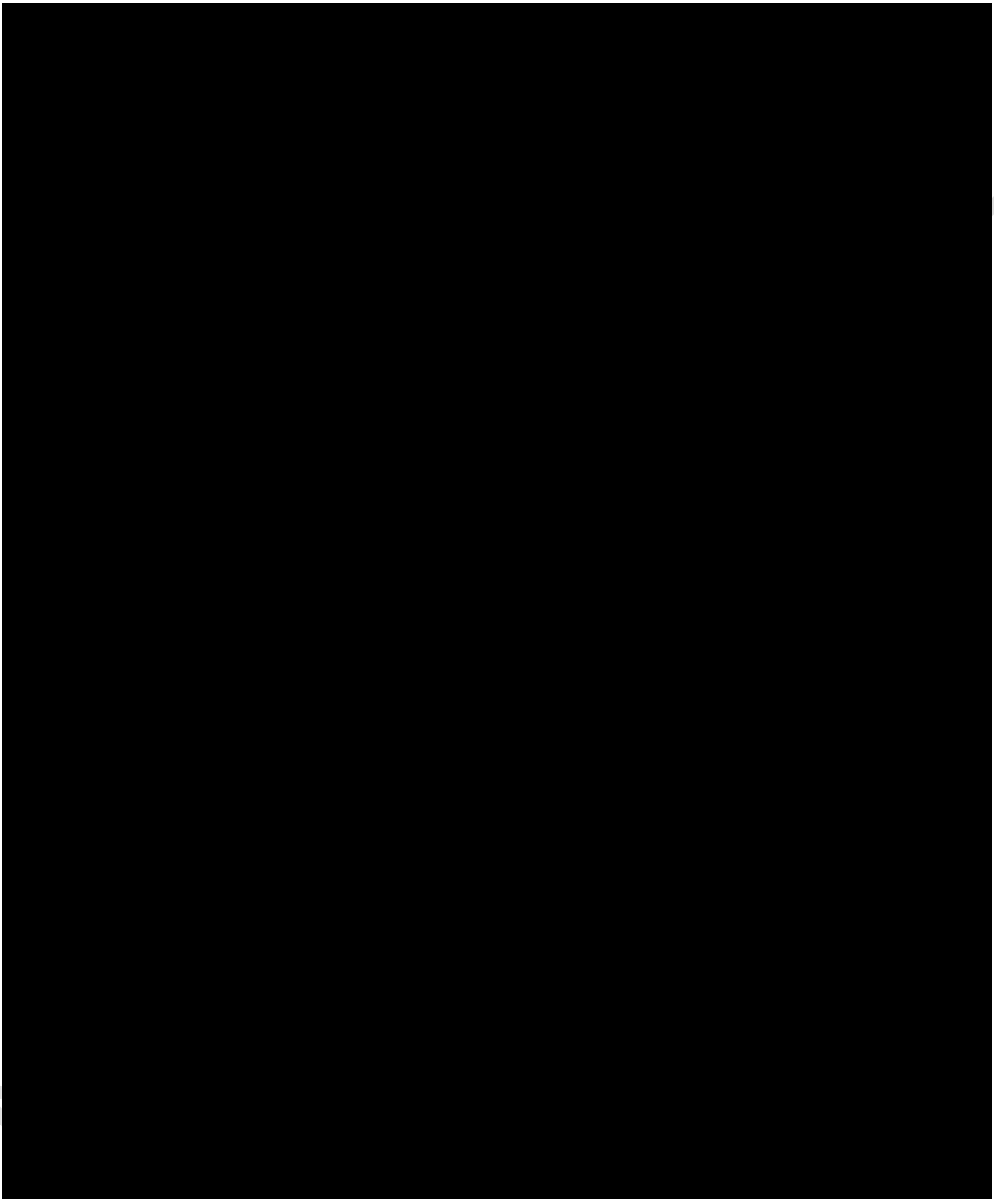
(2) The Schedule 2 tables may be updated by ComReg, or following a request by eir (pursuant to the process set out in Section 7 of this Decision Instrument) to reflect ODFs and Aggregation Nodes as they become applicable, based on CGA and NGA.

[13] This Sub-National Area comprises the MDF areas where eir faces greater market-driven infrastructure-based competition, including, from Vodafone/ESB/SIRO or UPC.

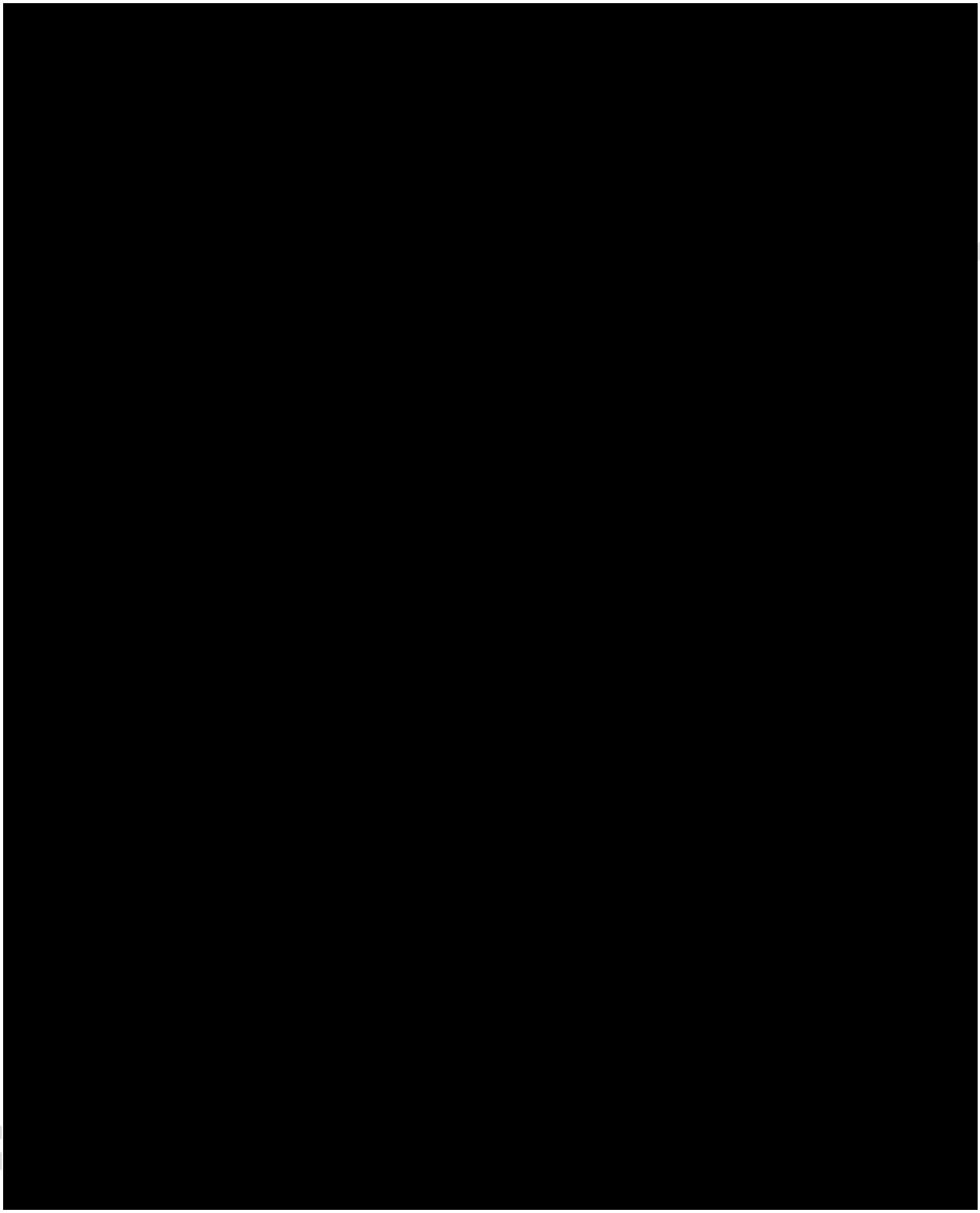
[14] This Sub-National Area reflects the original NBP intervention area (i.e. 750,000) (https//www.dccae.gov.ie/en-ie/news-and-media/press-releases/Pages/National%/20Broadband&20Plan%20State%20Intervention.aspx); it comprises the MDF areas where a high capacity broadband access network is intended to be made available through Irish government subsidies.

[15] This Sub-National Area comprises the MDF areas where eir currently faces no competition from any provider of fixed infrastructure but could face competition from mobile networks providing fixed access solutions.

Schedule 2(A) – Table of National Area [✂]

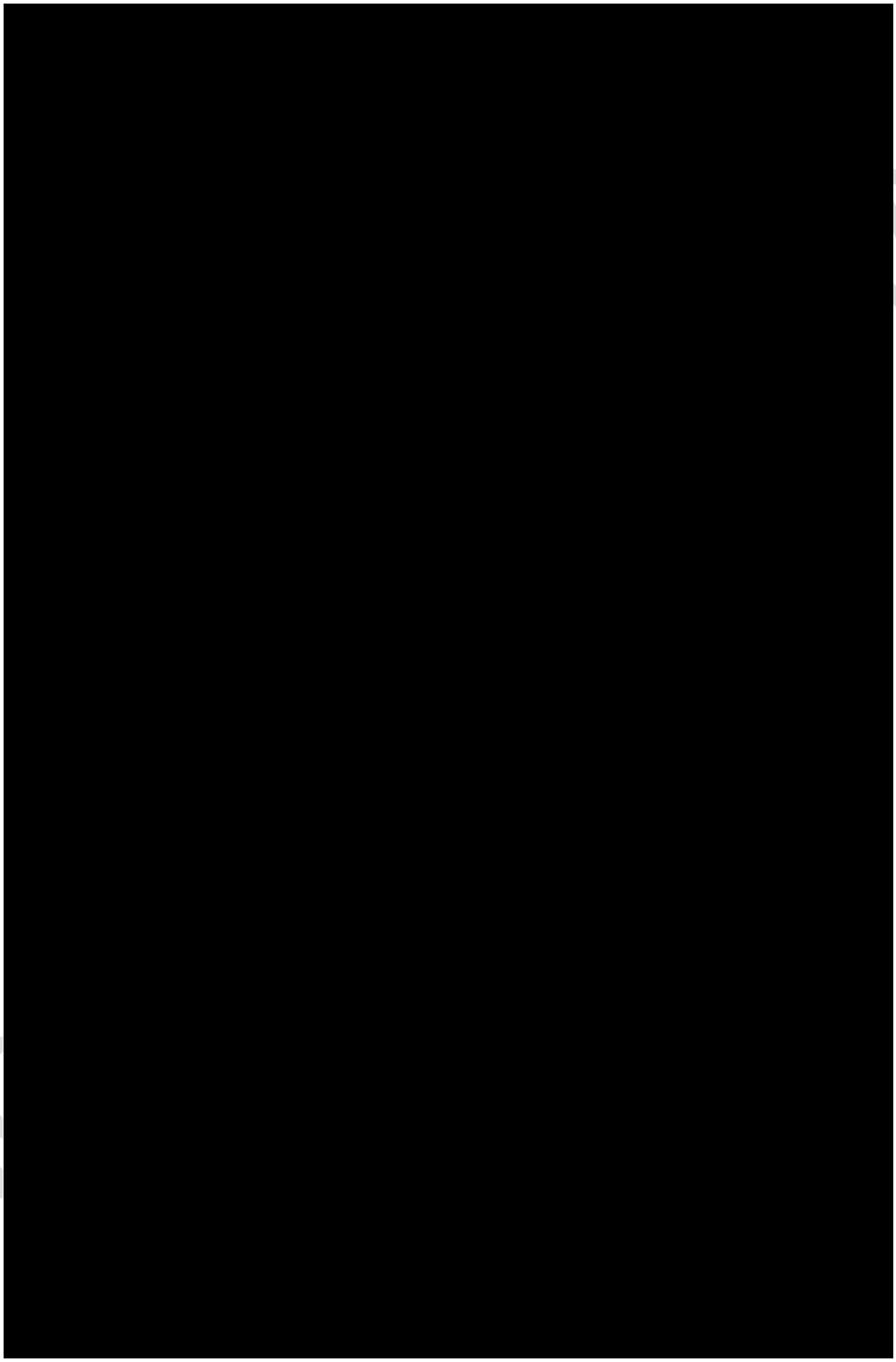


Schedule 2(A) – Table of National Area (continued) [✂]



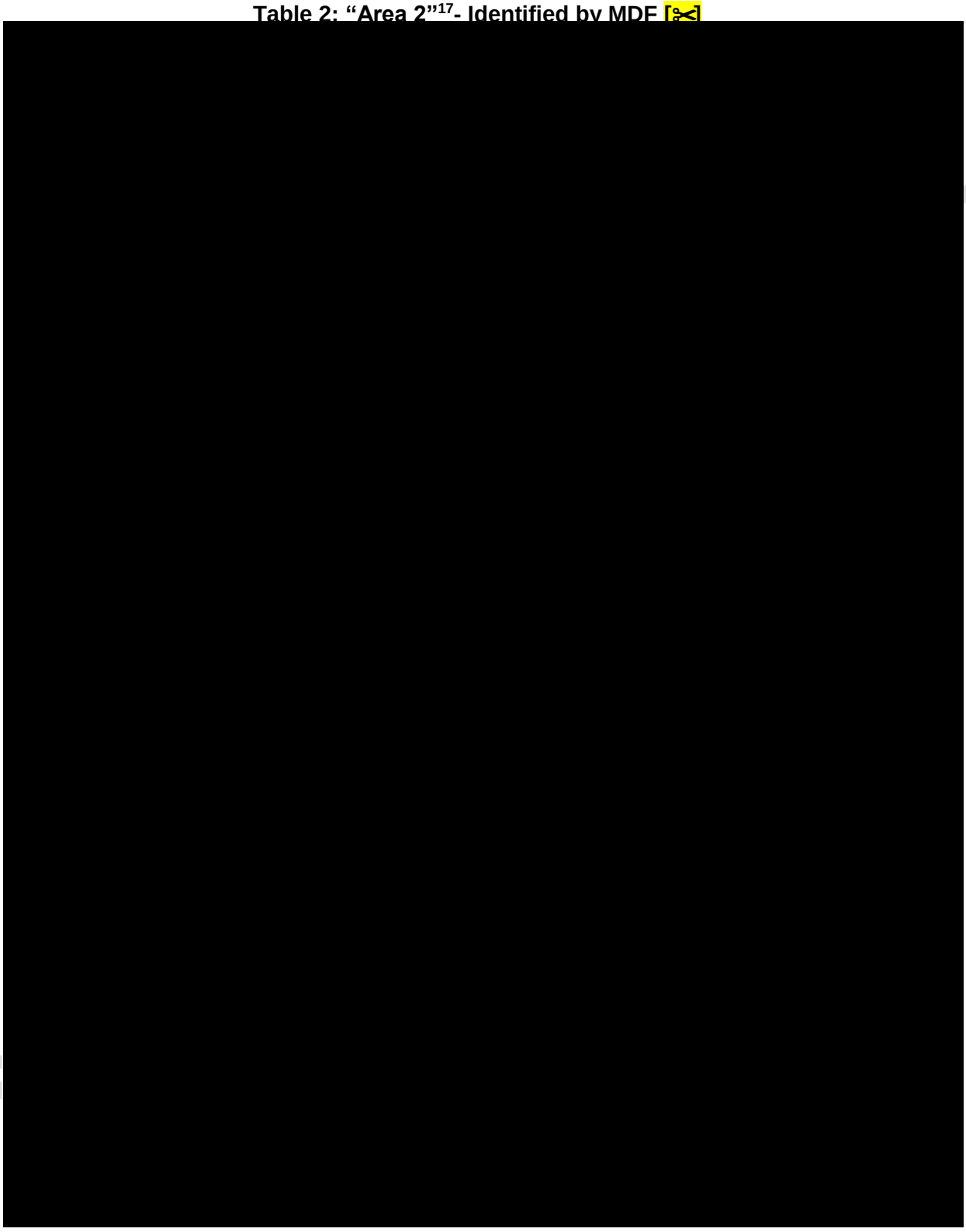
Schedule 2(B) – Tables of Sub-National Areas

Table 1: "Area 1"[16]– Identified by Main Distribution Frame (MDF) [✂]



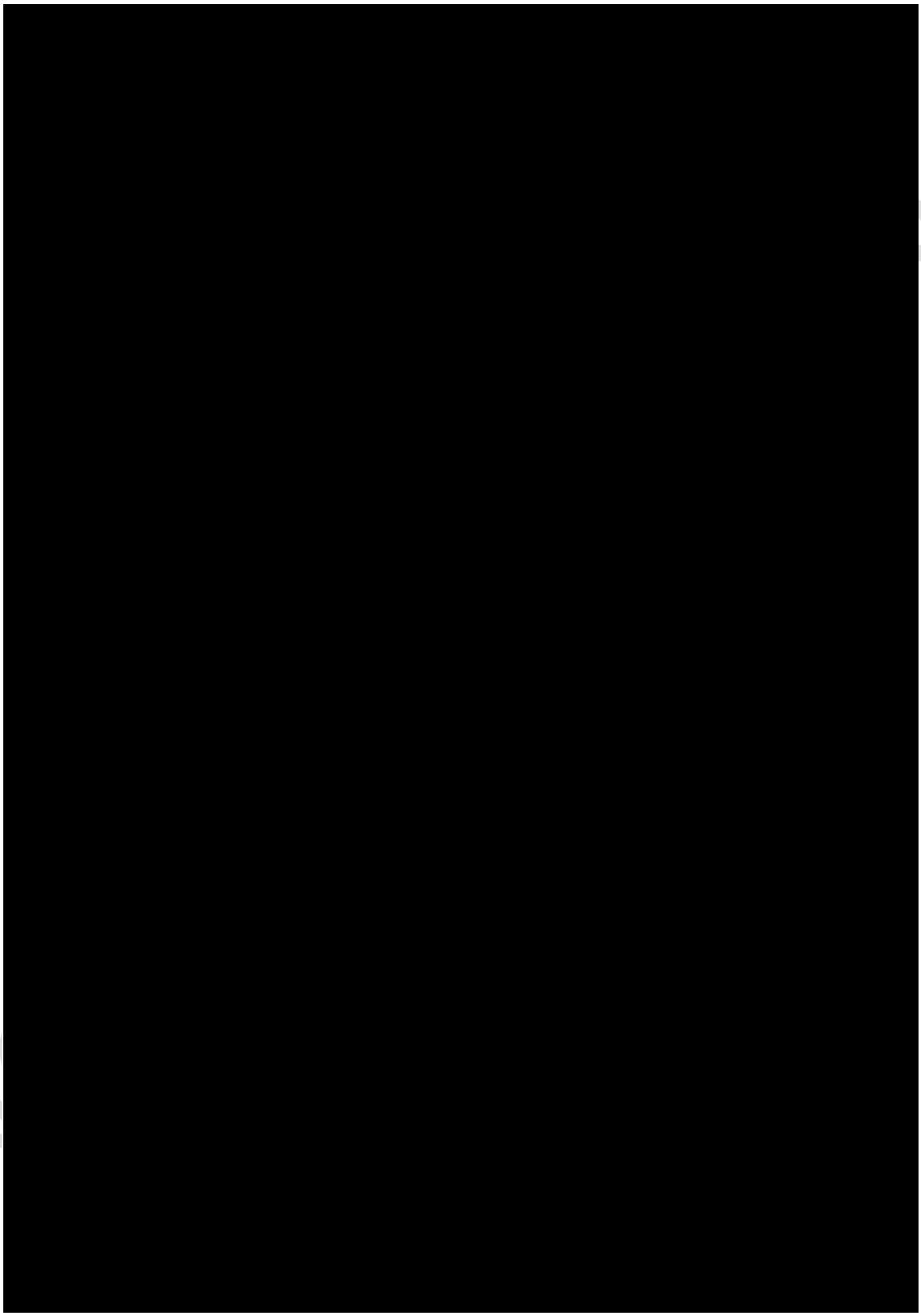
[16] This Sub-National Area (Area 1) comprises the MDF areas where eir faces greater market-driven infrastructure-based competition, including, from Vodafone/ESB/SIRO or UPC.

Table 2: "Area 2"[17]- Identified by MDF [✂]



[17] This Sub-National Area (Area 2) reflects the original NBP intervention area (i.e. 750,000) (https//www.dccae.gov.ie/en-ie/news-and-media/press releases/Pages/National%/20Broadband&20Plan%20State%20Intervention.aspx); it comprises the MDF areas where a high capacity broadband access network is intended to be made available through Irish government subsidies.

Table 3: "Area 3"[18]- Identified by MDF [✂]



[18] This Sub-National Area (Area 3) comprises the MDF areas where eir currently faces no competition from any provider of fixed infrastructure but could face competition from mobile networks providing fixed access solutions.

Schedule 3

Reports to ComReg

Schedule 3(A)

Timing for eir's reports of Data to ComReg

Table 1

Reporting Periods	Reporting Period Commencement Date	Reporting Period End Date	Latest Submission Date to ComReg
For each of the 9 reporting periods.	01/xx/20xx	31/xx+3/20xx	31/xx+2/20xx

Year (as set out in Schedule 1(A))	Reporting Periods	Reporting Period Commencement Date	Reporting Period End Date	Latest Submission Date to ComReg
N/A*	**Q2 2019**	**01/04/2019**	**30/06/2019**	**31/08/2019**
Year 1 July 2019 – 30 June 2020	Q3 2019	01/07/2019	30/09/2019	30/11/2019
	Q4 2019	01/10/2019	31/12/2019	28/02/2020
	Q1 2020	01/01/2020	31/03/2020	31/05/2020
	Q2 2020	01/04/2020	30/06/2020	31/08/2020
Year 1 July 2020 – 30 June 2021	Q3 2020	01/07/2020	30/09/2020	30/11/2020
	Q4 2020	01/10/2020	31/12/2020	28/02/2021
	Q1 2021	01/01/2021	31/03/2021	31/05/2021
	Q2 2021	01/04/2021	30/06/2021	31/08/2021

** The Data to be reported in respect of the Initial Data Collection Period relates only to that period, and is not required to be reported on an annual basis in accordance with Schedule 1 D.*

Schedule 3(B)

Sample Report to ComReg of Data

(*Note: this sample report is generated using actual 2016 Data collected from eir, applying the calculation methodologies set out in Schedule 1 and, having regard to the designation of the National Area and the Sub-National Areas by MDF, as specified in Schedule 2*)

Table 1

[✂]

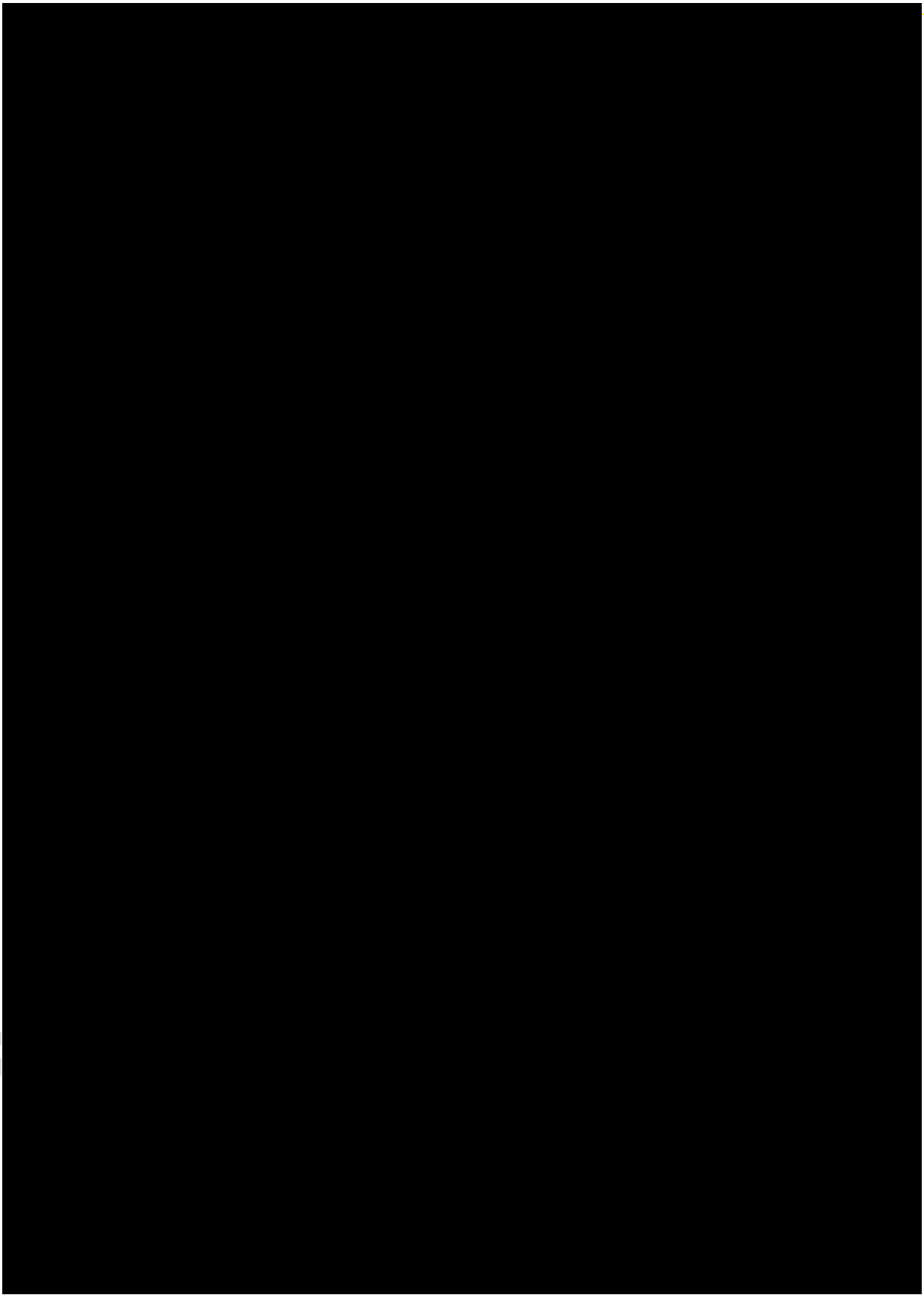


Table 2

[✂]

Table 3

[✂]