

www.analysysmason.com

Report for Openreach

SLA and SLG comparisons for WLR and LLU MPF

14 February 2014

Rupert Wood, Gareth Williams



Notice

 Copyright © 2014. The information contained herein is the property of Analysys Mason Limited and is provided on condition that it will not be reproduced, copied, lent or disclosed, directly or indirectly, nor used for any purpose other than that for which it was specifically furnished



Abbreviations used for countries

AUS	Australia	NLD	Netherlands
AUT	Austria	NOR	Norway
BEL	Belgium	NZL	New Zealand
DEU	Germany	PRT	Portugal
DNK	Denmark	ESP	Spain
FRA	France	SWE	Sweden
IRL	Ireland	UK	United Kingdom
ITA	Italy		

• analysys mason

Executive summary [1/2]

- The purpose of the study is to provide Openreach with a report that conveys SLA/SLG KPI comparisons, for the UK compared with other countries, for both WLR and LLU MPF products, both simply and clearly
- The one-off connection and monthly line rental fees for WLR and LLU MPF products have also been taken into account when comparing SLAs/SLGs
- The study builds upon work Analysys Mason completed in May 2013 as part of the FAMR. All SLA/ SLG information is correct as of March/April 2013, unless otherwise stated
- When considering a *composite measure* (minimum/maximum elapsed time to repair a fault x WLR/LLU MPF monthly line rental) to compare WLR and LLU MPF SLAs, for:
 - LLU MPF, the UK's composite measure compares favourably with other countries
 - the UK's position is closely comparable to a leading group of Austria Belgium and Spain
 - WLR, the UK's composite measure favourably with other countries
 - the UK's position is closely comparable to an above average group of Denmark, Italy and Norway



Executive summary [2/2]

- Our finding above should take into account Analysys Mason's previous study (Fixed Market Access Review, 23 May 2013)
 - Openreach provides more SLAs than all other operators
 - Openreach is obliged by SLAs that are not comparable on a like-for-like basis with other operators. Approximately one third of Openreach activations require an engineer, and in these cases a maximum appointment availability lead time applies that incurs a penalty of missed, as well as an SLG that applies a penalty in the case of a missed appointment.
- Operators have differing approaches to provisioning times. It is common in Europe for a maximum overall elapsed provisioning time for WLR, LLU MPF and shared LLU to be set, although the duration varies greatly. Openreach has an approach that involves different SLAs that serve to guarantee performance with respect to an agreed activation date. However, in the third of activations that require it, Openreach sets a maximum appointment availability lead time SLA for engineer visits. For other order types there is no maximum lead time, but typically other factors control the lead time: e.g. activations and transfers cannot, because of consumer protection imposed by Ofcom, be conducted until a cooling-off period of 10 days has elapsed.
- The remainder of this draft report is structured as follows:
 - LLU MPF provision SLA/SLG comparisons, which provides :
 - an introduction to composite measures
 - composite measures comparisons
 - an introduction and definition of terms and key to SLA/SLG comparisons
 - SLA/SLG comparisons
 - LLU MPF provision SLA/SLG comparisons (using the same structure as above)
 - WLR repair SLA/SLG comparisons (using the same structure as above)
 - WLR provision SLA/SLG comparisons, which provides (using the same structure as above)
 - Annex: additional notes for WLR/LLU MPF SLAs/SLGs



Assumptions

- As part of our analysis, we have had to make some assumptions when comparing SLAs and SLGs:
 - Provision SLG penalties and repair SLG penalties: not all penalties that an operator pays if it fails to fulfil a provision request or a repair request are measured in numbers of days. Some operators pay a flat, one-off fee while others pay a sliding scale penalty based on the number of hours of the delay. In order to normalise the comparisons, we have made some assumptions, which we state where appropriate. The SLG penalty shown has been normalised for a delay of one day, so there are limitations when comparing WLR and LLU MPF SLGs
 - When calculating the minimum or maximum times within which a fault can be repaired in a normal working week, we have taken the elapsed time (a) counting from the *start of the first working day* of that week, (b) counting from the *end of the first working day* of that week, (c) counting from the *start of the last working day* of that week, and (d) counting from the *end of the last working day* of that week. From (a) to (d) we have then selected the minimum or maximum value, as appropriate
- It should be noted that WLR and LLU MPF line rental prices take into account many quite different and separate costs, including labour pay rates, loop lengths and density of lines, so there are limitations when comparing these prices in different countries
 - our analysis of the provision and repair SLAs and SLGs is based on our interpretation of the secondary sources that the operators and regulators have made available in the public domain



LLU MPF repair – Introduction to composite measures

- In the two slides that follow, we have taken an approach to attempt to take into account the value for money of LLU MPF SLA repairs, by taking into account monthly LLU MPF line rental. Our approach has been to multiply the minimum and maximum repair times by the LLU MPF line rental to produce a "composite measure," which is shown in the two bar charts that follow
 - It should be noted that LLU MPF line rental takes into account many quite different and separate costs, including labour pay rates, loop lengths density of lines, so there are limitations when comparing LLU MPF line rental prices/composite measure of different countries
 - It should also be noted that the following slides do not take into account the penalties that operators are obliged to pay if they fail to fulfil their SLAs. It is possible that an operator with punitive SLGs may not have an aggressive SLA and vice versa



LLU MPF repair - composite measures



- The UK is ranked fifth using a composite measure that takes account of SLA time to fix (min) and line rental cost
- Austria, Belgium, Spain and Germany are subject to faster (min) fix times, but LLU MPF line rental is lower in the UK when compared to Australia and Germany
- Australia's (min) SLA fix time is lower than in the UK, but only in urban areas. Meaning in practice a proportion of faults will
 not be required to be fixed in 24 hours



Maximum LLU MPF repair composite measure²

The UK is ranked second using a composite measure that takes account SLA time to fix (max) and line rental cost UK is subject to the lowest (max) SLA fix time of all 14 incumbent operators

1 – composite measure = Minimum time (hours) that a fault can take to be repaired in a normal working week, from when the fault is registered and accepted x LLU MPF line rental (Dec-13) Multiplier

2 – composite measure = Maximum time that a fault can take to be repaired in a normal working week, from when the fault is registered and accepted x LLU MPF line rental (Dec-13) Multiplier



LLU MPF repair – Maximum versus minimum composite measures



Maximum versus minimum LLU MPF repair composite measures

- The chart above illustrates the correspondence between the SLA composite measures in the previous two graphs (SLA hours to repair x monthly LLU MPF charge).
- An operator that has a combination of an aggressive SLA and a low monthly LLU MPF charge, would be represented by market in bottom left hand corner of the chart above. An operator that has a combination of a relaxed SLA and a high monthly LLU MPF charge, would be represented by marker in the top right hand corner of the chart.
- The France, Germany and Denmark SLGs are one-off charges
- Note that Portugal has a punitive penalty for failing to resolve a LLU MPF fault within 28 working hours and is offset by the fact that 5% of faults within any given three-month period may take longer without incurring a penalty. However, the incumbent operator is also bound to a mean fault repair time of 8 working hours for all faults in that three-month period.
- The UK's composite measures compares favourably with other countries
- UK's position is closely comparable to a leading group of Austria, Belgium and Spain
- The UK's position is comparable to Belgium's, whose line rental is GBP0.09 cheaper, and Spain's, whose line rental is GBP0.08 cheaper.



9

LLU MPF repair – Introduction and definition of terms and key to table

Service Level Agreement (**SLA**): the service an operator promises to deliver when a customer requires a repair on a standard LLU MPF line

Service Level Guarantee (**SLG**): The penalty that the operator promises to pay the customer if it fails to fulfil the SLA

LLU MPF %: percentage of operator's active copper accesses that are LLU MPF, excluding operator's retail services. 3Q 2013. Telecoms Market Matrix, 10 January 2014, Analysys

Mason

Line rental (**LR**): monthly fee (in GBP) for an LLU MPF line. Rates are given for December 2013 and December 2009

Hours: elapsed hours, including work and nonworking





LLU MPF repair – SLA and SLG comparison

	S	Service Level Agreement	Service Level Guara	ntee	LLU MPF%	LR (2013)	LR (2009)
UK	100%	31/64		6.99	28.9	6.99	7.43
AUS	100%	24/81/129		8.09	-	9.03	3.66
AUT	100%	24/84		60.22	13.6	4.88	5.35
BEL	100%	24/72		0.33	4.4	6.90	8.47
DNK	95%	84		13.70	10.3	7.11	8.45
FRA	85%	58/120		14.79	34.5	7.39	8.20
DEU	100%	24/79		10.59	27.6	8.46	9.29
IRL	100%	344/408		3.32	1.1	8.23	11.31
ITA	95%	32/96		3.85	26.0	7.71	7.93
NLD	100%	82/144		14.03	20.1	5.70	5.95
NZL	90%	Fault repaired within notified expected restoration time	•	3.34	-	N/A	N/A
NOR	100%	109/168		0.57	14.0	9.48	10.17
PRT	95%	76/139		179.22	6.4	7.47	8.19
ESP	100%	24/72		20.73	14.5	6.91	7.10
SWE	100%	51/113		0.45	8.0	9.84	8.52



LLU MPF provision – Introduction and definition of terms and key

Service Level Agreement (**SLA**): the service an operator promises to deliver when a customer requires the activation of a standard LLU MPF line (no technician required)

Service Level Guarantee (**SLG**): the penalty that the operator promises to pay the customer if it fails to fulfil the SLA

LLU MPF %: LLU MPF %: percentage of operator's active copper accesses that are LLU MPF, excluding operator's retail services. 3Q 2013. Telecoms Market Matrix, 10 January 2014, Analysys Mason

Line rental (**LR**): monthly fee (in GBP) for an LLU MPF line. Rates are given for December 2013 and December 2009

Days: calendar days, including work and weekends





LLU MPF provision – SLA and SLG comparison

	:	Service Level Agreement	Service Level Guara	ntee	LLU MPF %	LR (2013)	LR (2009)
UK	100%	Agreed with client – minimum 3 working days		6.99	28.9	6.99	7.43
AUS	95%	Agreed with client – minimum 3 working days		8.09	-	9.03	3.66
AUT	100%	10/12		60.36	13.6	4.88	5.35
BEL	99%	22/24	1 - C	8.39	4.4	6.90	8.47
DNK	95%	24/26		13.70	10.3	7.11	8.45
FRA	100%	9/11		0.74	34.5	7.39	8.20
DEU	100%	9/11	1	1.58	27.6	8.46	9.29
IRL	95%	5/7		10.55	1.1	8.23	11.31
ITA	100%	Agreed with client – minimum 5 working days	1 - C	3.85	26.0	7.71	7.93
NLD	100%	26/28		5.81	20.1	5.70	5.95
NZL	100%	3/5/11	1	2.60	-	N/A	N/A
NOR	100%	26/28		49.90	14.0	9.48	10.17
PRT	95%	9/11		31.56	6.4	7.47	8.19
ESP	100%	10/12		1.20	14.5	6.91	7.10
SWE	100%	9/11		0.45	8.0	9.03	7.31



WLR repair – Introduction to composite measure analysis

- In the two slides that follow, we have taken an approach to attempt to take into account the value for money of WLR SLA repairs, by taking into account monthly WLR line rental. Our approach has been to multiply the minimum and maximum repair times by the WLR line rental to produce a "composite measure," which is shown in the two bar charts that follow
 - It should be noted that WLR line rental takes into account many quite different and separate costs, including labour pay rates, loop lengths density of lines, so there are limitations when comparing WLR line rental prices/composite measure of different countries
 - It should also be noted that the following slides do not take into account the penalties that operators are obliged to pay if they fail to fulfil their SLAs. It is possible that an operator with punitive SLGs may not have an aggressive SLA and vice versa



WLR repair - composite measures



- The UK is ranked fifth using the composite measure, which takes account SLA time to fix (min) and line rental cost
 Australia, Denmark, Italy and Norway are subject to faster (min) repair times, but in all cases line rental cost is higher than in the UK
- Australia's (min) SLA fix time is lower than in the UK, but only in urban areas. Meaning in practice a proportion of faults will not be required to be fixed in 24 hours



Maximum WLR repair composite measure²

The UK is ranked second using the composite measure, which takes account SLA time to fix (max) and line rental cost

 Denmark along with four other operators are subject to faster (max) fix times, when compared to the UK, but the difference is less than 24 hours in most cases

1 – composite measure = Minimum time (hours) that a fault can take to be repaired in a normal working week, from when the fault is registered and accepted x WLR line rental (Dec-13) Multiplier

2 – composite measure = maximum time that a fault can take to be repaired in a normal working week, from when the fault is registered and accepted x WLR line rental (Dec-13) Multiplier



WLR repair – Maximum versus minimum composite measures



Maximum versus minimum WLR repair composite measures

- The chart above illustrates the correspondence between the SLA composite measures in the previous two graphs (SLA hours to repair x monthly WLR charge).
- An operator that has a combination of an aggressive SLA and a low monthly WLR charge, would be represented by market in bottom left hand corner of the chart above. An operator that has a combination of a relaxed SLA and a high monthly WLR charge, would be represented by marker in the top right hand corner of the chart.
- The SLG in France and Norway is a one-off charge
- The UK's composite measures compares favourably with other countries
- The UK's position is closely comparable to an above average group of Denmark, Italy and Norway
- Monthly WLR line rental in the UK is lower than in France, Denmark, Italy, Norway, Portugal and Spain



WLR repair - Introduction and definition of terms and key to table

Service Level Agreement (**SLA**): the service an operator promises to deliver when a customer requires a repair on a standard WLR line

Service Level Guarantee (**SLG**): The penalty that the operator promises to pay the customer if it fails to fulfil the SLA

WLR %: percentage of operator 's active copper access that are WLR, excluding operator's retail services. 3Q 2013. Telecoms Market Matrix, 10 January 2014, Analysys

Mason

Line rental (**LR**): monthly fee (in GBP) for a WLR line. Rates are given for December 2013 and December 2009

Hours: elapsed hours, including working and non working



WLR repair – SLA and SLG comparison





WLR provision – Introduction and definition of terms and key to table





WLR provision – SLA and SLG comparison

	:	Service Level Agreement	Service Level Guara	intee	WLR %	LR (2013)	LR (2009)
UK	100%	By 2359 of date agreed date with client		7.77	24.1	7.77	8.39
AUS	100%	2/4		8.09	_	12.72	14.18
DNK	100%	8/10		N/A	17.9	9.13	10.53
FRA	100%	8	1. State 1.	1.01	3.5	10.14	10.21
IRL	99%	3/5		10.55	29.3	14.97	16.42
ITA	100%	6/7		2.92	3.5	9.72	10.74
NLD	100%	31/33		4.15	7.3	12.27	12.25
NOR	98%	On date agreed with customer		4.99	8.9	12.98	11.35
PRT	100%	5/7		4.46	0.9	8.93	9.80
ESP	100%	2/4		1.25	3.3	9.29	10.28
SWE	100%	3/5	N/A	N/A	17.5	9.03	8.39

* There is no minimum number of days in which Openreach is required to provision a WLR line. For WLR lines that require a technician, the maximum provision time is 13 days, which is a standard SLA when compared to the SLAs offered for WLR in other countries. We have assumed a maximum of 13 days to provision.



Annex: LLU MPF repair – Additional notes [1/2]

	SLA	SLG
UK	 100% of repairs completed by 23.59 next working day 	 100% of monthly line rental (GBP6.99) per day of delay, up to max. of 60 consecutive working days
AUS	 100% of repairs completed within: Band 1 & 2: 1 clear working day Band 3: 2 clear working days Band 4: 3 clear working days Time counts start after the Fault report is logged by Telstra 	 GBP8.09 per day for first five working days After this, GBP26.95 per additional working day
AUT	■ 100% of repairs ≤ 24 hours	 GBP60.22 per day until a max. of GBP195, then GBP390 plus GBP195 per week of delay
BEL	 100% of repairs competed by the end of the next working day 	 150% of daily rental (GBP10.27) per day
DNK	 80% of repairs ≤ 60 hours 95% of repairs ≤ 84 hours 	 GBP13.70 one-off, payable only once per quarter
FRA	 85% of repairs by end of second working day 	 GBP14.79 one-off penalty (two months rental)
DEU	 100% of repairs ≤ 24 hours, during working days 	 <= 48 hours: GBP10.59 one-off penalty > 48 hours: GBP21.26 one-off penalty
IRL	 73% of repairs ≤ 3 working days 92% ≤ 6 working days 100% ≤ 11 working days 	 GBP3.32 per day for the first 3 days GBP5.81 per day for next 3 days GBP8.31 per day for next 5 days
ITA	 70% of repairs ≤ 1 working day 95% ≤ 2 working days 	 50% of monthly line rental (GBP3.85) per day
NLD	 80% of repairs ≤ 10 working hours 95% ≤ 20 working hours 100% ≤ 40 working hours 	 GBP5.84 per 10 working hours Penalty doubles after 100 working hours, up to a maximum penalty equal to 20 working days
NZL	 90% of repairs within notified expected restoration time 	 One-off: 7% of provisioning charge (GBP2.90) 1% every 12 consecutive working hours of delay
NOR	 90% of repairs ≤ 1 working day 100% of repairs completed ≤ 5 business days 	 6% of line rental (GBP0.57) per day, up to max. of 60 days
PRT	 95% of repairs within 28 working hours 	GBP7.47 per hour of delayPenalty after 24 hours is GBP6.67 × 24
ESP	 Low-priority: completed ≤ 72 hours – quality of service SLA Medium-priority: completed ≤ 24 hours – line fault (SLA selected) 	 For n hours of elapsed time over the 24 hours SLA the penalty is A x (n/24) x monthly rental, where a = 2 for high and low priority repair and a = 3 for medium priority



Annex: LLU MPF repair – Additional notes [2/2]

	SLA	SLG
SWE	 100% of repairs ≤ 24 working hours 	 5% of quarterly line rental (GBP1.6) every 3 days, up to max. of 100% of quarterly line rental Penalty for 24 hours is GBP1.6 / 3

Annex: LLU MPF provision – Additional notes [1/2]

	SLA	SLG
UK	 On date agreed with client (minimum lead time 3 working days). Date needs to be within 12 working days (13 days before 1/11/13) 	 GBP6.99 per working day of delay (or part of day) up to maximum of 60 consecutive working days
AUS	 On date agreed with client (minimum lead time 3 clear working days), but only when an intact metallic path is in place. 	 GBP8.09 per day for first five working days After this, GBP36.95 per additional working day
AUT	■ 100% of orders completed ≤ 8 working days	 GBP60.36 per working day
BEL	 95% of orders within 8 working days (without customer visit) 99% of orders within 18 working days (without customer visit) 	 GBP8.39 per working day for first 10 days After this, GBP4.19 per working day
DNK	 95% of orders on agreed date 95% within 18 working days (without technician's visit) 	 One-off penalty of GBP13.70
FRA	 75% of orders ≤ 3 working days 100% ≤ 7 working days 	 ≤ 30 days: 10% of line rental (GBP0.74) per day, up to maximum 200% of line rental After 30 days an additional penalty of 200% of line rental applies
DEU	 100% of orders ≤ 7 working days 	 ≤ 10 days: 10% of connection fee (GBP1.58) per day > 10 days: 100% of CF (GBP15.81) plus 5% of connection fee per day
IRL	95% of orders ≤ 5 working days	 GBP10.55 per working day (or part thereof)
ITA	 95% of orders on agreed date (minimum lead time 5 working days) 100% of orders ≤ 3 days of agreed date 	 50% of line rental (GBP3.85) per day
NLD	 100% of orders ≤ 20 working days 	 ≤ 10 days: GBP5817 per working day > 10 days: GBP11.64 per working day



Annex: LLU MPF provision – Additional notes [2/2]

	SLA	SLG
NZL	 100% of orders completed by date agreed with client (maximum lead time 3 days for transfers, 7 days for move address or new connection) 	 7% of connection fee (GBP2.60) + 1% every 9 consecutive business hours of delay (note: only upfront charge is shown in table)
NOR	 95% of orders on the agreed date 100% of orders ≤ 20 working days 	 One-off penalty of GBP49.90
PRT	 95% of orders (for delivery and transfer) completed ≤ 7 working days 	 GBP31.56 per day
ESP	 Delivery completed 8 working days from the receipt of the request 	 Up to 1 working day over: 6% of LLU one-off provision charge per working day Between and 3 working days over inclusive: 10% of LLU one-off provision charge per working day Over 3 working days: 16% of LLU one-off provision charge
SWE	 100% of orders ≤ 7 days 	 5% of quarterly subscription fee (GBP1.35) per 3 days, with maximum charge equal to line rental for a quarter Penalty for one day is GBP1.35/3

Annex: WLR repair – Additional notes

	SLA	SLG
UK	 100% of repairs competed by 23.59 of next working day plus one 	 1 month of line rental (GBP7.77) per day, capped at 60 days per line
AUS	 100% of repairs completed within: Urban – 1 clear working day after the Fault report is logged by Telstra Major Rural / Minor Rural – 2 clear working day after the Fault report is logged by Telstra Remote – 3 clear working day after the Fault report is logged by Telstra 	 GBP8.09 per day for first five working days After this, GBP26.95 per additional working day
DNK	 100% of repairs ≤ 1 working day (troubleshooting of minor failures) 	 N/A
FRA	 100% of repairs ≤ 48 hours during working days 	 2 months subscription (GBP20.28) one-off
IRL	 73% of repairs ≤ 2 working days 92% ≤ 5 working days 100% ≤ 10 working days 	 GBP3.32 per day for breaching 2-day target GBP5.81 per day for 5-day target GBP8.31 per day for 10-day target
ITA	 95% of repairs completed within the first 3 hours of first full working day, following the day in which the fault was reported 100% ≤ of repairs competed within the first 3 hours of second full working day ,following the day in which the fault was reported 	 5h delay: 30% of line rental (GBP2.92) 5-8h delay: 100% of line rental (GBP9.72) 8-10h delay: 150% of line rental (GBP14.63) >10h delay: lump sum of 200% of line rental (GBP19.44) plus 100% of line rental per extra hour beyond 10h
NLD	 80% of repairs ≤ 10 working hours (1 working day) 95% ≤ 20 working hours (2 working days) 100% ≤ 40 working hours (4 working days) for overground lines 	≤ 24h: GBP4.15 per 12h of delay
NOR	 100% of repairs ≤ 1 working day (service stopped) If registered 12pm to 7.30am fixed before 8pm, otherwise completed by 8pm next day 	 GBP9.05 one-off penalty
PRT	95% of repairs ≤ 2 working days	 GBP0.05 per hour (with maximum of monthly subscription, GBP8.93, per line) 24h: GBP1.22
ESP	 100% of repairs ≤ 2 working days 	 Double the percentage calculated as time of delay over guaranteed time, multiplied for the monthly rental 24h: 50% x 2 x GBP9.29
SWE	 100% of repairs ≤ 5 working days 	 GBP0.33 per day



Annex: WLR provision – Additional notes

	SLA	SLG
UK	 Activation and transfer orders by 23.59 on date agreed. For provisions that require a technician (from 1/11/12 to 31/10/13) the first available appointment offered needs to be within 13 working days. From 1/11/13 the first available appointment needs to be within 12 working days 	 1 month line rental (GBP7.77) per day of delay (or part thereof), up to max. of 60 days per line
AUS	 Provision 100% of lines completed ≤ 2 working days in all areas (urban, rural and remote) 	GBP8.09 per day for first five working daysAfter this, GBP26.95 per additional working day
DNK	 Creation/moving/change/reopening of 100% of WLR lines completed ≤ 6 working days (not requiring visit of technician) 	 N/A
FRA	 100% of lines ≤ 8 calendar days (not requiring visit of technician) 	 10% of monthly line rental per calendar day of delay. Maximum penalty of 2 months' line rental
IRL	 New order (existing line): 80% ≤ 1 working day New order (existing line): 99% ≤ 3 days 	 GBP10.55 per working day (or part thereof)
ITA	 Standard new order: 100% of lines ≤ 6 working days 	 30% of monthly subscription (GBP2.92) for delay of 1–2 calendar days; 100% (3–7 days); 150% (8–15 days); 200% lump sum plus 60% of monthly subscription per day (16 days or more)
NLD	 95% of lines ≤ 17 working days 100% ≤ 23 working days 	 GBP0.83 per day for delivery between the 18th and 23rd day GBP4.15 per order for 24th day plus GBP1.67 per additional day
NOR	 90% of lines ≤ 5 working days 98% of lines by date agreed 	 One-off penalty of GBP4.99
PRT	 100% of lines ≤ 5 days (in the provincial capitals) 	 ≤ 10 days: GBP4.46 per day > 10 days: (1/22) × monthly line rental (GBP8.93) per day, up to max. of 100% of monthly line rental
ESP	■ 100% of lines ≤ 2 working days	 GBP1.25 per day of delay
SWE	 100% of lines ≤ 3 working days (not requiring visit of technician) 	 N/A

