openreach

Openreach Industry Consultation on:

Upgrading the Access Network: the withdrawal of WLR products and the smooth transition to IP voice services

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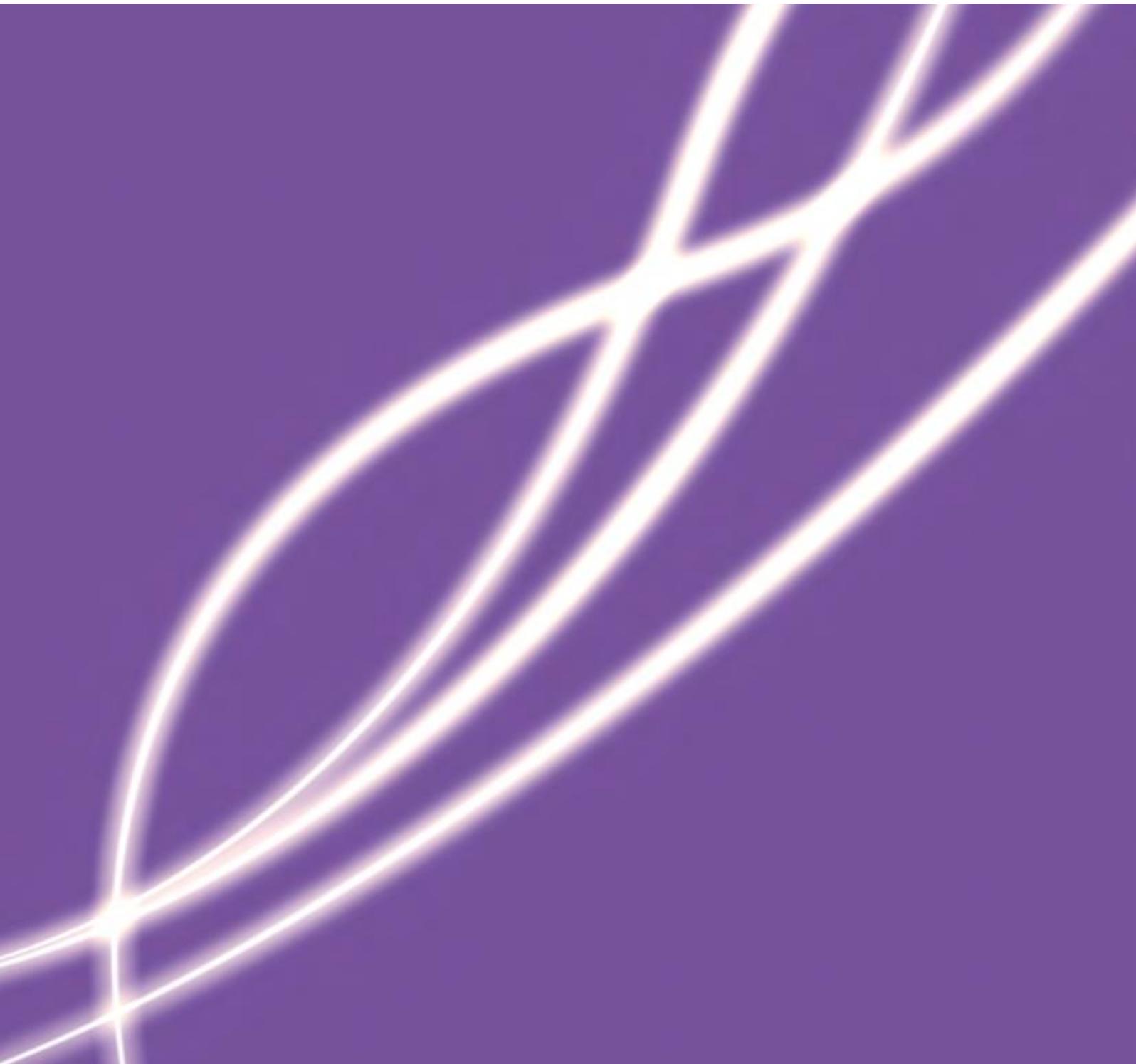
Responses due by 27 July 2018

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Revisions

Version	Author	Date	Description
Issue 1	Peter Roberts and Andy Wright	08/05/18	For industry consultation

1. Executive Summary

- Across the world telecoms companies are transitioning from digital (TDM) to IP networks for the delivery of all communications services including voice telephony. In France Orange has set a goal of having all IP networks by 2020, and Deutsche Telekom aims to migrate all its lines in Germany and elsewhere in Europe to digital by the end of 2018. AT&T and Verizon are also working on similar projects in the US.

- To ensure that the UK is not left behind we will also need to undertake a similar journey transitioning from analogue to fully digital delivery of voice services. Consistent with this BT has previously announced that it will be 'All IP' by 2025.

- In the UK today the majority of residential and business voice services are underpinned by the Public Switched Telephone Network (PSTN). This is a legacy analogue technology which it will not be possible to support and maintain beyond 2025.

- The PSTN supports a number of Openreach products: WLR3 analogue, ISDN 2, ISDN 30, LLU SMPF, SLU SMPF, Narrowband Line Share and Classic products. For the purposes of this consultation these are generically referred to as WLR products. When the PSTN closes, these products will no longer work.

- In this context it is important that Openreach and Communications Providers (CPs) consider how voice services will be provided over digital or All IP networks, rather than older analogue networks like the PSTN.

- Openreach has already started investing in infrastructure for this digital future and is introducing new products where broadband, which can be used to deliver voice, is the primary service. These include expanding coverage of Fibre to the Premises (FTTP) and Single Order Superfast and Ultrafast products that are currently in trial with CPs. As well as supporting digital services, these products will benefit CP customers through simpler single order processes (no voice just broadband in a single order) which will reduce costs and provide a more efficient service.

- As the PSTN reaches end of life, Openreach will need to withdraw WLR products that are supported by the PSTN. As a result instead of CPs providing voice services over analogue WLR, these will need to be provided over alternative products, such as the single order or FTTP products described above.

- Openreach is keen to provide industry with sufficient time to plan the move to alternative services and ensure a smooth transition for end customers. This means that Openreach is proposing a 5 year notification period for CPs to plan and start migrating end customers, which means that Openreach would stop selling new WLR lines from September 2023. A further 2 year period is then proposed to enable CPs to migrate all remaining end customers before WLR products are finally withdrawn by 31 December 2025.

- This is a significant change for CPs and the wider industry. Over 16m lines will need to migrate to alternative services by the end of 2025 and CPs will also need to consider how customer's equipment (both residential and business) may need to be upgraded to support All IP voice services.

- The withdrawal of WLR products and services will not only impact residential and business end customers but will also impact providers of special services (e.g. security alarms, lift phones, personal health alarms, etc.) that use the PSTN. It will be important that Openreach and CPs work closely with these special services providers to ensure a smooth transition to alternative products.

- Openreach recognises that the withdrawal of WLR products may leave some end customers without access to an alternative service capable of supporting voice, for example where there is no fibre broadband coverage or where LLU CPs (that offer voice and broadband services using Openreach's MPF product) do not have unbundled exchange presence.

- To support continued connectivity in the scenarios described above, Openreach proposes to introduce a new nationally available transitional copper product (referred to as the Single Order Transitional Access Product or SOTAP), providing CPs with continued access to a copper path using their unbundled exchange equipment to provide ADSL broadband.

- As this is a significant change for the industry Openreach is keen to work closely and collaboratively with CP customers throughout this period. The aim of this consultation is to get feedback and input on the processes and timescales for withdrawing WLR products and introducing SOTAP, to ensure that CPs are aware of the scope of Openreach proposals, and that Openreach understands the possible impacts on CPs and other interested parties. Openreach wishes to use this feedback to ensure migration processes are fit for purpose and that migration options and issues are fully considered to support a smooth transition for end customers.

- There is already an ongoing industry dialogue on the move to All IP with Ofcom through the 'All IP (Voice) Working Group' chaired by Huw Saunders. Industry (including CPs, the OTA2 and trade bodies representing 'special services' that use the PSTN network) are already discussing and planning for the move to All IP networks. Ofcom has also asked the NICC (Network Interoperability Consultative Committee) to create an industry standard testing framework to ensure all CPs adequately test 'special services' and third party devices over IP that currently use the PSTN. This working group, of which Openreach is already a participant, will continue to run in parallel to this consultation and Openreach would expect to discuss key themes and items arising from this consultation at that forum.

- To support this consultation Openreach is hosting four events (London, Leeds, Birmingham and Edinburgh) to which CPs and wider industry stakeholders are invited to understand more about the proposals and impacts and to ask questions. In addition Openreach proposes that an ongoing industry working group will be established once the consultation is closed to ensure continued close collaboration with industry as we move towards 2025.

2. Consultation Aims, Objectives, Process and Submission Details

- The consultation opens on 15 May 2018, with responses from CPs being requested by no later than 27 July 2018. During this period, Openreach will also engage directly with stakeholders to answer questions and explore potential points that participants may wish to include in their formal submissions.

- The consultation marks the start of our formal customer engagement process that will be conducted through the following industry communications channels:

  - Copper and Fibre Products Commercial Group (CFPCG)

  - Individual bi-lateral meetings as required with CPs and TPIs

  - Proactive multi-lateral meetings run by Openreach with CPs and TPIs on specific topics

  - Meetings with representative industry groups e.g. Federation of Communication Services (FCS)

  - A series of consultation launch events:
    - 21 May 2018 - Birmingham - Aston Villa - 11.45am - 3.45pm
    - 22 May 2018 - Leeds - Elland Road - 11.45am - 3.45pm
    - 24 May 2018 - London – Amba Hotel Marble Arch - 11.45am - 3.45pm
    - 30 May 2018 - Edinburgh – Murrayfield Stadium - 11.45am - 3.45pm

- In order to better understand specific points that have been raised during the consultation phase and to ensure collaborative working, Openreach proposes that Industry Working Groups be set up following the consultation period. These will run alongside standard industry fora and any bilateral sessions requested by CPs.

- The objectives for this consultation are to engage with our CPs and TPIs and offer the opportunity for wider industry stakeholders to feedback through this consultation (e.g. resellers, special services providers), in order to collect feedback and comments on:

  o How Openreach will withdraw the WLR products in the United Kingdom of Great Britain and Northern Ireland

  o How best to restrict new supply including by:
    - Order journeys
    - Geography

  o The alternative products available:
    - Existing products
    - The introduction of a new transitional product (SOTAP) and associated timeline

  o How best to minimise the impact on end customers

  o The migration options:
    - Approach and timeline for 'planned' migrations
    - Approach and timeline for end customers not migrated away from WLR products by the end of December 2025, referred to as 'orphaned end customers'

  o How best to manage special services (e.g. security alarms, lift phones, personal health alarms, etc.)

- Please note that the interconnect process for managing calls between communications providers is out of scope for this consultation.

- Openreach recognises that many CPs connect to EMP for WLR3 via a Third Party Integrator (TPI) to consume the order, fault and billing journeys. We anticipate that CPs and TPIs will reflect the views and future needs of their customers through the input they provide and as such we do not propose to engage directly with end customers.

- We encourage participants to be open and collaborative, recognising that at this stage we are consulting on how we achieve the successful withdrawal of WLR products by the end of December 2025.

- Individual responses will be treated as confidential by Openreach. Following closure of the consultation period we expect to produce an anonymous summary of the inputs from stakeholders. We will not disclose specific views or inputs from individual respondents without their prior approval. Openreach asks that respondents identify in their responses any confidential information that should not be shared.

- Responses should be sent by email to wlr.consultation.feedback@openreach.co.uk using the feedback template by no later than 27 July 2018.

Summary of Consultation Key Dates

- 15 May 2018 consultation document published
- 27 July 2018 Deadline for formal submission of responses
- August 2018 Openreach to issue anonymised summary of responses

- As an open invitation to ongoing dialogue on this consultation and if you wish to hold bi-lateral discussions with Openreach prior to submission of your response to the consultation, please do not hesitate to contact the Openreach consultation team at wlr.consultation.feedback@openreach.co.uk

CPs, Resellers and TPIs are invited to comment on the following question:

2.1 Do you agree with our proposal to set up on-going Industry Working Groups following the end of the consultation phase?

3. WLR Products Withdrawal

- Openreach has decided to withdraw the WLR product portfolio by the end of December 2025 in recognition of the ageing PSTN and Openreach's supplier of the PSTN, BT Technology, Service and Operations' (TSO) intention to sustain the PSTN up until the end of 2025 but not beyond.

- Openreach recognises that this will result in a significant number of migrations of lines from the existing WLR products to alternative products and is keen to work with CPs in order to plan and minimise any CP and end customer impacts.

3.1   WLR Products Withdrawal Proposed Timeline

- May 2018 – July 2018 – Industry consultation
  - o Industry consultation on how best to successfully implement the withdrawal of the WLR products.

- August 2018 - Summary of consultation responses
  - o An anonymised version of industry responses to the consultation.

- September 2018 – Formal notification of WLR product restriction of new supply (see section 3.5)
  - o A five year notification to inform WLR product CPs of Openreach intention to restrict the new supply of WLR products. The aim of the WLR product restriction of new supply is to ensure that the overall WLR product working system size does not grow during the two years prior to WLR and related products being withdrawn.

  - o Commencement of a series of monthly working group sessions between Openreach and CPs.

- December 2020 – Formal notification of WLR product withdrawal
  - o A formal five year notification period to inform WLR product CPs of Openreach intention to withdraw WLR products by the end of December 2025.

- April 2021 – March 2025 - Planned migration period
  - o Although CPs will be able to move end customers at any point, Openreach proposes to engage and work with CPs during a 'planned migration' window to ensure where possible all end customers are moved smoothly onto alternative products during this phase. It is estimated that the 'planned migration' phase will run until April 2025.

- September 2023 – WLR product restriction of new supply (see section 3.5)
  - From this point in time the WLR products working system size will no longer grow.
  - Restriction on EMP developments for WLR products (subject to Ofcom regulation change in the next market review).

- April 2025 – December 2025 – Management of CP WLR product 'orphaned end customers'.
  - All end customers will need to be moved off of the WLR products by the end of 2025 and Openreach would like to work with CPs during a final phase before the WLR product withdrawal to manage any 'orphaned end customers' that for whatever reason have not been migrated to alternative products.

  - Openreach would like to work collaboratively with CPs in creating a process to manage any 'orphaned end customers' remaining before the withdrawal of WLR products at the end of December 2025. Openreach suggests that this process should be subject to Industry Working Group discussions and would welcome CP feedback on the approach.

  - It is recognised that contractual changes will need to be made, introducing a migration schedule timeline in the contract, in order to move assets off of the WLR product base prior to withdrawal of WLR products at the end of December 2025. These proposals and changes are also covered in this consultation (see section 6).

  - The management of 'orphaned end customers' will require careful scheduling to manage engineering capacity, working collaboratively with CPs in order to ensure minimal impact on end customers and a smooth transition to alternative products.

- 31 December 2025 – WLR product remaining assets will be ceased
  - All remaining WLR product assets will be turned off and all WLR product contracts will expire.

  CPs, Resellers and TPIs are invited to comment on:

  3.1.1 The overall timeline, notification period and restriction of new supply.

  3.1.2 The proposed 'planned migration' phase.

  3.1.3 The approach to managing 'orphaned end customers'.

  ### 3.2   Number Portability

- Openreach expects that end customers being moved by their CP from WLR products to alternative products, or moving from one CP to another, will want to retain their existing telephone numbers. This will need to take place using the current number portability or number transfer processes unless a different process is agreed.

- Openreach recognises that there is already an Industry Number Porting Executive Steering Group discussing the future of number portability and that in the future it is proposed that the impact of WLR withdrawal on number portability should be managed through that Steering Group.

- Industry is asked to consider if the current number porting process will be robust enough to manage the anticipated volumes of number porting requests required to facilitate the retention of numbers during the migration of WLR product lines to alternative products. Feedback through this consultation will be referred to and discussed in more detail at the existing Number Portability Process and Commercial Group.

- The number portability process assumes an end customer is moving from CP1 to CP2 and contains elements of consumer protection meaning the minimum lead time is 4 working days.

- The number transfer process is designed to facilitate faster migrations of numbers where BT is the range holder and the end customer is moving from WLR products to alternative voice services, but staying with the same CP. The transfer process is designed to complete the move of the number within one hour on the condition the order does not fall to manual for any reason.

CPs, Resellers and TPIs are invited to comment on:

3.2.1 The robustness of the current number porting process and any changes required in order to minimise disruption including the proposal to manage these discussions through the existing Number Portability Process and Commercial Group.

3.3 Minimising End Customer Disruption

- It is important that industry works together to minimise the migration impact on CPs and their end customers. Openreach is committed to working with CPs to create the best migration processes and journeys. This will form part of the proposed Industry Working Group sessions, where options covering both singleton and bulk migration order journeys will be explored.

- Openreach is keen to work with CPs to ensure that the migration approach taken minimises any disruption. To help understand the impacts and plan the migration away from WLR products to an alternative product or products, it is important to work collaboratively in order to understand each other's plans which will be treated in commercial confidence.

- Close collaboration is required as in some but not all instances there will be exchange jumpering work required to be completed in conjunction with the number portability activity (to move the number), whilst coordinating any work required in the end customer's premises (e.g. CPE being plugged into the router or change of network termination point).

- There will be a number of migration paths that will impact on end customers and therefore will need careful planning in order to make the migration from WLR products to alternative products a smooth transition. Openreach asks CPs to carefully consider the impact of each migration journey and provide relevant user cases as appropriate (for example geographic, singleton and bulk migration journeys to alternative Openreach products). Openreach proposes these form part of a separate Industry Working Group.

- To enable the relevant WLR products contract to be withdrawn, all of the WLR products assets must have been migrated to an alternative product by December 2025. The concept of the proposed contract amendments will be covered in the migration schedule once agreed (see section 6). The migration schedule will lay out the timeline of activities aiming to reduce any impacts on end customers during the transition to an alternative product e.g. ensuring no one is left without service.

- The planned management of third party special services is covered in more detail in section 3.8. It is intended that this will be a subject of discussion as part of the support launch events where guest speakers will be available to talk through options for connecting their services once the PSTN is withdrawn.

CPs, Resellers and TPIs are invited to comment on:

3.3.1 How best to manage the migration windows in order to minimise disruption.

3.3.2 The collaborative approach suggested and sharing their migration plans either via a wider Industry Working Group or on a bilateral basis to ensure minimal disruption on their business and their end customers (all CP customer information will be treated in confidence where appropriate and requested).

3.3.3 The transition period proposed for the withdrawal of WLR products.

3.3.4 The impact of the migration journeys. Please consider the impact of voice only customers moving to IP voice, existing voice and broadband customers moving to broadband and IP voice and business customers moving from ISDN to alternative products via terminal adapters or gateways to keep the end customer legacy equipment compatible.

3.3.5 Additional user cases for migration journeys from WLR products to SOTAP.

3.3.6 How best to manage the customer experience whilst working with Openreach to plan the associated resource required.

3.4   Provision Order Journey Enhancements Enabling Restriction of New Supply

- The current WLR products ordered via EMP through the Provide, Modify and Cease order journeys cannot be switched off at the sub-order levels (order scenarios are defined in detail in Annex A), which Openreach deems to be too restrictive to manage the restriction of new supply effectively.

- Openreach proposes to introduce new internal functionality to provide this flexibility, not requiring CP consumption. This will provide the ability to manage the switch off of WLR in a phased approach by geographical location and sub-order type as required. Any restriction will be applicable to all WLR CPs.

- Please refer to Annex A where the Openreach proposal for restricting new supply by individual sub-order types is detailed, examples of which are given below:

    o   New Provide
    o   Increase of aux-lines
    o   Transfer (Change of CP)
    o   Conversion (Change of product – WLR3 to WLR3 and MPF to WLR3)
    o   Change of Address (Both Openreach and CP co-ordinated moves)
    o   Number Import
    o   Start of stopped line
    o   Working line takeover
    o   RCF New Presence
    o   Caller Redirect New Presences

    CPs, Resellers and TPIs are invited to comment on:

    3.4.1 The principle of restricting new supply by sub-order type

    3.4.2 The detailed list of proposals for restricting new supply in Annex A

    3.4.3 The implications of the restrictions being proposed

3.5   Restriction of New Supply

- In light of the planned withdrawal of WLR products Openreach intends not to further enhance the product set in terms of changes to process or enhancements to systems not critical to maintain service, after September 2023 when the intention is to restrict the new supply of the WLR products (as per the proposed list in Annex A). From this point Openreach is proposing that no industry SORs or CP

requested changes will be accepted. Any system developments will be restricted to critical updates required to maintain the product set until WLR product withdrawal in December 2025.

- Openreach intends to restrict the new supply of WLR products from September 2023 by switching off the order journeys as proposed in Annex A. This is required in order to ensure that the overall WLR product working system size does not increase between September 2023 and December 2025 in order to aid CPs and Openreach to plan a smooth transition to alternative products. However it is Openreach's intention not to restrict end customer choice, by allowing churn from WLR to WLR. This will be achieved by not restricting working line take over and transfer orders up to the point in time when all WLR product lines are expected to have migrated to other products in line with agreed migration schedules.

- A further option for CP consideration is to bring forward the Openreach suggested date for the restriction of new supply to an earlier point in time (to be agreed) than the suggested September 2023. This could be used to increase the time allowed for the migration window.

- CPs managing end customer home moves will be able to do so up until December 2025 in certain circumstances or as agreed as part of the migration schedule, specifically where the working line take over option is available. If, however, the only option is a new copper provide or the start of a stopped line (after the stop sell date), an alternative product will need to be consumed to fulfil the order request.

- Openreach intends to continue supporting reverse migrations from alternative products to WLR products until September 2023 when WLR product new supply is restricted.

- It is important throughout the withdrawal process for CPs to have the ability to manage their existing end customer assets, whilst restricting new supply to enable the migration activities to complete. It is key that CPs maintain the ability to manage debt and stop unwanted calls.

- Inevitably during the period between restriction of new supply and product withdrawal CPs will ultimately want to novate and consolidate their WLR product end customer assets. There is no intention to restrict this until the WLR product is withdrawn, however there is no plan to enhance the novation process to change the legal entity and migrate WLR product assets to any additional alternative products.

- Throughout the migration to alternative products further consideration and priority must be given to vulnerable end customers. These will need to be identified (in conjunction with the CP supplying the service) to minimise any chance of disruption to the end customer.

- Following the restriction of WLR products new supply in September 2023, the new supply of shared services (e.g. LLU SMPF) on existing WLR product assets will still be allowed (this applies to working line takeover order journeys used to manage home move scenarios or where a voice only customer decides to take a broadband service), as the addition of this service will not increase the working system size of the WLR product.

CPs, Resellers and TPIs are invited to comment on:

3.5.1 The proposals for the restriction of new supply.

3.5.2 The proposed reverse migration strategy.

3.5.3 The restriction of new supply detailed in Annex A.

3.5.4 The novation strategy.

3.5.5 How to define and identify vulnerable end customers.

3.6   Potential Additional Order Restriction Options - Geographical Considerations

• Openreach is proposing that options to restrict the order journey for new supply by geographical areas down to individual exchange location(s) will be available to Openreach. Should this be adopted, any geographical change will be subject to industry engagement and notification. Changes to restrict any order journey will not be CP specific and will be applicable to all established WLR3 CPs.

• Further consideration will also be given to premises that have access to GEA-FTTP (expected to be in excess of 3m homes and businesses by 2020) for new supply of WLR from September 2023 when the restriction of new supply of WLR commences.

  o There is an existing option available to Openreach that provides the ability to restrict the ordering of new copper circuits in a GEA-FTTP enabled fibre exchange using the Technology marker set against the address key.

  o This marker is visible to CPs as part of the address matching dialogue service, in advance of order placement.

  o As the fibre first GEA-FTTP plans progress, we may decide to consider in more detail at a later stage further options for ordering restrictions. This will be subject to a separate industry engagement at the appropriate time.

• In addition it is possible that Openreach could receive notification from its supplier that it has decided to rationalise its exchange estate (and announce specific exchange closures), post the September 2023 restriction of new supply for WLR products. Openreach will engage with all impacted CPs to agree a suitable transition plan to make sure all impacted WLR lines are moved and service re-provided where required on alternative products.

  CPs, Resellers and TPIs are invited to comment on:

  3.6.1 The use of the technology marker (which is common across all copper products) or something similar which could be designed, in order to restrict the ordering of copper lines in a GEA-FTTP fibre enabled exchange.

  3.6.2 The creation of a process for re-providing service post the restriction of new supply where specific exchange closures have been announced (this is expected to form part of an Industry Working Group session).

3.7   Modify and Cease Order Journeys Enhancements

• Openreach would like to propose that the Modify order journeys listed below remain in place until WLR product withdrawal at the end of December 2025, with the exception of the options marked with an * below which will be restricted from the point in time when the WLR product new supply is restricted because these options increase the working system size (see Annex A):

  o Add/Remove/Modify calling and network features
  o Modify directory entry
  o Modify end customer name
  o Renumber
  o Renumber with number import and export
  o Additional site visits via modify
  o Remove DDIs, SNDDIs (ISDN2/ISDN30)
  o Modify SML
  o Add/Remove debt management

- o   * Add to the number of channels (ISDN2/ISDN30)
- o   * Add DDIs, SNDDIs (ISDN2/ISDN30)

- Openreach would also like to propose that the Cease order journeys listed below remain in place until WLR products withdrawal at the end of December 2025.

  - o Cease (simple)
  - o Cease with line-plant/NTE removal
  - o Cease with RCF
  - o Cease with CR
  - o Cease with Number Preservation
  - o Cease of auxiliary lines (PSTN MLA)
  - o Cease with number export

- For the cease of a WLR line where no replacement WLR product services are being provided, the BAU rental liability charges will apply if the lead time for the cease is less than seven calendar days.

- The repair journey will be supported until the WLR product repair journey is withdrawn at the end of December 2025. The migration schedule (as detailed in section 6), to be agreed as part of the Industry Working Group supporting WLR withdrawal will determine the point at which end customers become 'orphaned end customers'. At that point the CP may have limited access to the repair journey. This process for maintaining the 'orphaned end customers' lines will be discussed as part of the Industry Working Group.

  CPs, Resellers and TPIs are invited to comment on:

  3.7.1 Openreach proposals for modify and cease journeys.

  3.8   Management of Special Services

- Openreach recognises that as part of the WLR product withdrawal process there will be a number of third party provided special services such as burglar alarms, ATMs etc. (see non exhaustive list below for examples), that will need to be re-provided on an alternative product solution or withdrawn:

  - o Fax
  - o Alarms e.g. fire, burglar and surveillance
  - o Health care services e.g. lifelines
  - o Telemetry devices e.g. traffic lights
  - o ATMs (cash machines)
  - o EPOS (Electronic Point of Sale)
  - o Installation types and any associated CPE:
    - ▪ Payphones
    - ▪ Lift lines

- This is an important customer group and Openreach encourages and will support CPs to engage with the suppliers of these special services to make sure that connectivity is maintained throughout the transition to an alternative product. CPs are encouraged to work with their suppliers to test in advance of any transition ensuring that connectivity is maintained once the service is moved to their new chosen product.

- It is planned to facilitate separate sessions with CPs to understand where Openreach may be able to offer support in ensuring engagement with special services providers to minimise any impact on end customers. Representatives from some of these special services detailed above will also be invited to the Openreach consultation launch events.

CPs, Resellers and TPIs are invited to comment on:

3.8.1 The approach to engaging with third party providers of these special services.

3.8.2 What additional support is required from Openreach to support the transition of third party services?

3.9   De-establishment, Orphaned Customers and Final Billing

- As CPs move their assets to the product of their choice the final WLR bill for the specific CLIs will be generated as per the current WLR product BAU process.

- Once CPs have moved their WLR product asset base to an alternative product or ceased any remaining services, Openreach proposes to de-establish each CP via the standard BAU process and access to EMP for WLR products will be removed.

- It is proposed that any assets remaining on WLR products post 2025 will need to be terminated. Openreach suggest a similar process to the WLR3 supplier of last resort process to manage WLR products 'orphaned end customers'. This will need to be developed as part of the Industry Working Group discussions and adopted by industry.

- The contract termination date can be no later than the end of December 2025.

    CPs, Resellers and TPIs are invited to comment on:

    3.9.1 The Openreach plan for final billing.

    3.9.2 The Openreach plan for de-establishment.

    CPs, Resellers and TPIS are invited to:

    3.9.3 Define or specify requirements for managing 'Orphaned End Customers'.

4. Alternative Product Options

- In order to enable the withdrawal of WLR products, all existing WLR and relevant product lines must be moved to an alternative product by December 2025. Openreach already offers a portfolio of access products that enables CPs to provide a broadband service to end customers. From the point in time when WLR products are fully withdrawn, Openreach does not intend to offer any mass market voice services as part of its portfolio.

- Openreach has a number of product options that CPs will have the ability to consume based on their own business requirements. Current product offerings available direct from Openreach where CPs have got their own networks or via wholesalers include:

    o Single Order GEA (SOGEA) - offers similar connectivity to GEA-FTTC without the need for an underlying voice access product, offering speeds up to 80Mb.

    o Single Order Gfast (SOGFast) - a cutting edge technology that allows us to deliver Ultrafast speeds over existing copper lines of up to 330Mbps through a single order variant which forms part of the Openreach developing product portfolio.

- o Fibre to the Premises (GEA-FTTP) - already enables CPs to offer Ultrafast broadband speeds of up to 1Gbps download and 220Mbps upload and can be purchased on its own.

- o Metallic Path facility (MPF) (this service is not affected by the withdrawal of WLR products) - by installing your own equipment in a BT exchanges in order to connect your customers' lines to your own network. It provides a two-wire metallic transmission path between the Network Terminating Equipment (NTE) at a customer's premises and a main distribution frame at the exchange.

- o Ethernet – a product that offers a wide choice of high bandwidth, permanently connected, point-to-point Ethernet services designed to help CPs extend their own networks and deliver a range of high quality services to their customers. The Ethernet fibre network that underpins them offers unrivalled geographic coverage of the UK, embracing many out-of-town locations where manufacturing takes place and where many data centres of the future will be located.

- o There are a number of options including Ethernet, Fibre and Session Initiation Protocol (SIP) which will provide alternative products for CPs to choose from when migrating their ISDN 2 and ISDN 30 circuits. These may require a number porting activity where number retention is required when migrating away from the WLR product.

- In addition, Openreach plans to develop Single Order Transitional Access Product (SOTAP) in the short to medium term, as an additional product with national availability, which will use broadband rather than voice as the primary service (the lifespan of this product will be reviewed periodically to ensure alignment with the Openreach strategy).

- The intention is that CPs will be able to use SOTAP to provide service to their customers in specific areas where there are limited other product options, which include no or low fibre availability (although we do not propose placing system order restrictions on CPs). SOTAP will deliver an access circuit enabling the CPs or a wholesaler of their choice to provide an IP type service including voice reinjection over a non-fibre circuit (see section 5).

- Openreach is happy to discuss and support any CP discussions to understand more about alternative product options.

  CPs, Resellers and TPIs are invited to comment on:

  4.1 CP plans and requirements to provide voice services once WLR is withdrawn or when CPs migrate their customers to alternative product options.

  4.2 CP plans to continue to offer ADSL services in the future and any timelines for migration away from ADSL services to alternative products.

5. SOTAP Proposed Features

5.1   SOTAP Introduction Timeline

- September 2018 – Commence monthly Industry Working Groups
  - o A monthly series of working group sessions between Openreach and CPs to enable CP input into the design of SOTAP.

- January 2019 – Commence SOTAP contractual discussions.

- March 2020 - Openreach transitional product SOTAP available for CP consumption and test
  - In order for CPs to consume SOTAP they may need to enhance their existing points of presence or build new points of presence in telephone exchange locations (if a new location for the CP) using the processes which exist today for LLU (this will be defined as part of the SOTAP development lifecycle C2M process). Once established with exchange presence a CP would be able to:
    - Sell SOTAP services directly to their end customers.
    - Wholesale SOTAP services to other CPs.

CPs, Resellers and TPIs are invited to comment on:

5.1.1   The overall timeline for the introduction of SOTAP

CPs, Resellers and TPIs are invited to share:

5.1.2   Their initial thoughts and timeline for consumption

5.2   SOTAP Overview

- SOTAP is a new product that is being proposed by Openreach to deliver a copper path between the end customer's premises and the SOTAP CPs exchange infrastructure, over which the SOTAP CP can provide broadband and IP voice services. This is different from MPF because it facilitates the use of existing exchange infrastructure which currently supports LLU SMPF and therefore provides a better customer experience for end customers migrating away from WLR products (with or without SMPF).

- The diagram below is an overview of the proposed architecture of SOTAP. The proposed product will be based on LLU infrastructure.
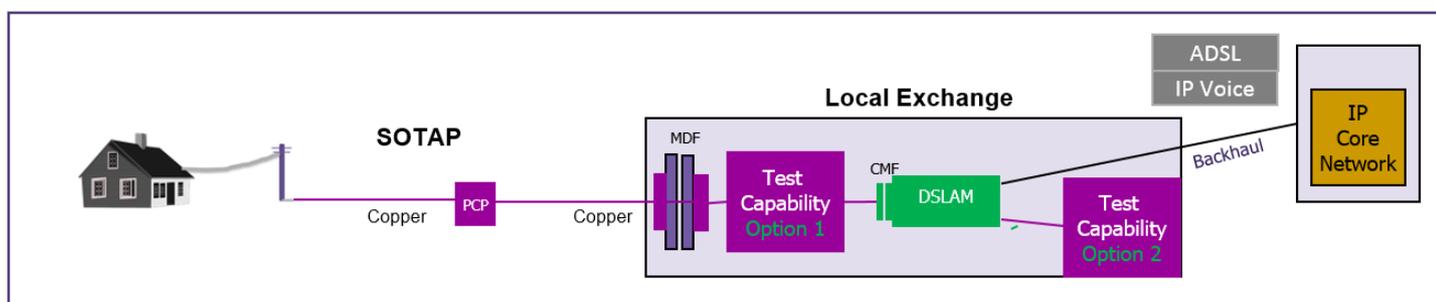
- Testing capability for SOTAP would consist of two variants (as shown in the diagram above)
  - Strategic Test Capability - Where an EvoTAM is available:

    - And already connected to an SMPF product with WLR, the wholesaler would re-use the EvoTAM equipment when the service is migrated to SOTAP.

    - And not connected and a new SOTAP line is requested the wholesaler would use the EvoTAM equipment details as part of the order.

  - Short Term Test Capability - Where an EvoTAM is not available then;

    - SOTAP would use the PSTN test capability in the shorter term.

    - The SOTAP CP could purchase from Openreach the required LLU tie pair infrastructure with an EvoTAM.

- When migrating WLR products to SOTAP the following customer experience scenarios will apply:

  - When WLR products with SMPF are migrated to SOTAP and the SMPF/SOTAP CPs are the same, then exchange work should not be required; this makes best use of the existing infrastructure to allow the most efficient migration experience.

  - Where WLR products are currently used as a standalone voice service without broadband (e.g. without SMPF) and are migrated to SOTAP then exchange work would always be required.

  - Where WLR products with GEA-FTTC are migrated to SOTAP then exchange work would always be required.

  - When WLR products with SMPF are migrated to SOTAP and the SMPF/SOTAP CPs are different then exchange work would always be required.

- The introduction of SOTAP is proposed to provide an additional alternative to WLR products for CPs to consume once developed and launched. It is proposed to provide an alternative option for those end customers who are unable to obtain service using a fibre provided service, traditional MPF or any other alternative product.

- CPs consuming SOTAP would either need a Point of Presence in the telephone exchange based on LLU infrastructure or they would need to consume the product via a wholesaler who is offering the product in that area.

- The proposal is to launch the product in March 2020, which would enable CPs time to consume and test, or consider alternative solutions, before the WLR products are restricted in 2023 and ultimately withdrawn in December 2025.

- The SOTAP service would provide a broadband circuit (ADSL) using the current SMPF technology.

- Openreach propose that SOTAP will not be compatible with GEA-FTTC. If a CP requires SOTAP combined with GEA-FTTC, it should purchase an alternative fibre product such as SOGEA, SOGFast or MPF and GEA-FTTC instead. This means no simultaneous provide journeys will need to be developed for this new product.

- Once the data circuit has been provisioned between the exchange and the customer's premises the CP offering the service should be able to apply any other features required by their end customers. These could include a voice type service if required, either directly if they have the capability or via an alternative voice provider.

- The intention until 2025 for some lines where an EvoTAM is not available, would be to continue to use the PSTN test capability. Post December 2025 another solution would be required which is outlined in the test option section 5.5.

- The new product is proposed as a transitional offering until all lines are eventually moved to a fibre provided service, traditional MPF or other alternative products. However, at launch, Openreach proposes to make the SOTAP product available nationally. The Openreach vision is to have SOTAP available in the short to medium term, withdrawing it once there are fibre product alternatives available that meet the coverage and commercial requirements of this market and there is no longer a need for the SOTAP product.

- The proposed technical solution has SOTAP terminating in the exchange on the (wholesaler's) LLU equipment and complying with the technical standard SIN349 (https://www.btplc.com/sinet/index.htm).

- It is proposed that the applicable SLGs would be subject to industry negotiation once the product is launched; specifically as there is likely to be a gap between availability of the product and CP consumption. It is anticipated that the SLA and SLGs would be in line with the current LLU contract and that SLGs for SOTAP would be introduced once the product is launched, stable and being consumed by CPs. The timeline for implementation would be subject to future industry engagement.

CPs, Resellers and TPIs are invited to comment on:

5.2. The SOTAP functionality as explained throughout section 5

5.2.1   Voice Re-injection

- Openreach proposes that SOTAP would not have a default voice service. Any requirement to provide a voice service would become the responsibility of the wholesaler or CP supplying the service.

- SOTAP would enable CPs to build their own voice services. In many properties, existing in-premises wiring beyond the Openreach NTE5 is currently used to support traditional analogue phones/telephony equipment on extension wiring. If a property were served with SOTAP it is possible that the extensions may not work, depending upon the solution deployed by the serving CP.

- CPs who decide to offer a voice service with SOTAP would need to consider which solution is most appropriate for them to provide, examples of which are to:

  o   Ensure the end customer has an IP voice hand set.

  o   Include an Analogue Telephony Adaptor (ATA) into the CP's CPE which enables the IP-telephony service to generate a normal analogue electrical signal for ringing and voice in the extension wiring. The ATA could then be used to directly drive a single phone or others via wired extensions in a property, and this is referred to as Voice Re-injection.

  o   Use exchange equipment (e.g. an MSAN as part of the end to end voice solution) to generate a normal analogue electrical signal for ringing and voice direct from the exchange to the end customer's premises.

5.2.2   SOTAP Deployment and CP Consumption

- Openreach proposes that SOTAP would be made available over a number of EMP releases following the C2M and industry engagement process. The target would be to have SOTAP fully available for CP consumption by March 2020. At this point CPs would be able to develop, test and launch their own solution, with an expectation that the product would be available to end customers at the earliest opportunity. This is in order to maximise the migration window, giving CPs the longest time possible to migrate their end customers' services.

CPs, Resellers and TPIs are invited to comment on:

5.2.2.1 The timescales to launch and consume SOTAP

5.2.3   Additional Responsibilities for CPs Consuming SOTAP

- Openreach proposes that CPs ordering SOTAP either via a wholesaler of their choice or directly from Openreach should be responsible for updating the 999/112 and directory entries for their end customers directly with the emergency services database and not via Openreach.

- Calling and Network Features on the new SOTAP would not be supplied by Openreach. Any features offered would be the responsibility of the CP offering the voice service, including telephone number allocation and management (via the number port process). During the migration phase from the WLR product to the new SOTAP offering, the gaining CPs would need to work with their voice supplier (this could be the same CP or their chosen wholesaler) to make sure similar features are activated to meet the end customers' choice.

- Openreach proposes it should be the responsibility of the CPs supplying SOTAP to the end customers to manage any fraudulent calls with their voice service provider if applicable or directly with their end customers.

   CPs, Resellers and TPIs are invited to comment on:

   5.2.3.1 The change of responsibilities for directory and 999/112 entries.

   5.2.3.2 The change of responsibilities for ordering Calling and Network Features and number management.

   ### 5.3   SOTAP Provision Journey

- In order for CPs to consume SOTAP directly from Openreach, they would need either an existing LLU point of presence or to establish a new point of presence within a telephone exchange. Once established, CPs would be able to:

   - Sell SOTAP services directly to their end customers.

   - Wholesale SOTAP CP services to other CPs.

- Openreach proposes to manage the provision of the copper bearer as one order; this order would drive the activity to connect the copper bearer onto the CP supplied LLU Tie Pairs.

- It is proposed that the demarcation points would remain as the NTE at the end customers' premises and the HDF/CMF in the telephone exchange building.

- Once SOTAP has been allocated and connected to a valid CP's Tie Pair, the CP providing the product (to its end customers or wholesale customers) would be responsible for adding its own additional features including voice type services.

- It is proposed to have the same provision lead times and SLAs for SOTAP as currently offered for the MPF product once SOTAP is launched.

- It is proposed that SML1 will be included in tariff for SOTAP and CPs would need to specify which SML they require initially at the time the line is provisioned.

- It is proposed that expedite provision would be available in line with MPF.

- Openreach proposes to include a facility to manage any Number Porting/Transfer (for managing change of CPs and same CP migrations respectively) from WLR products to SOTAP as a managed service (requested on the SOTAP provision order) where the current CLI is a BT Range Holder number. When SOTAP is provisioned the application of a Porting Prefix to an IP server would be applied.

- Where BT is not the Range Holder of the CLI then Number Porting would need to be managed by the CPs (or their wholesaler/voice provider) using the industry agreed Number Porting processes.

5.4   SOTAP Repair Journey

- It is proposed that the repair journeys would replicate MPF journeys and be available via the B2B and Openreach Portal.

- In order to enhance the repair journey, Openreach proposes that CPs supply Service Layer Data to Openreach on a regular basis, although this would be a voluntary commitment by CPs. Openreach believes that this will enhance fault diagnosis.

- A Line Test Dialogue Service would be available prior to submitting a fault to Openreach. CPs would choose the Repair Product appropriate with the fault location and test result (e.g. Line Test OK/Line Test not OK/Intermittent).

- It is proposed to offer five levels of repair Service Maintenance Level (SML) to mirror those already available on MPF (SML1, SML2, SML Business 2 Plus, SML3 and SML4).

- It is proposed that expedite repair would be available in line with MPF.

- It is proposed that SOTAP would support the repair journeys for LTOK and LTnOK (appointed and non-appointed). Note that a trouble report that is LTOK would not be accepted on a LTnOK journey and vice-versa.

- It is not proposed to develop a fault journey that would give a 3rd party who is trying to contact a specific telephone number and not receiving any response the ability to report a fault against the line they are trying to contact.

5.5   SOTAP Test Options

- It is proposed that on migration of a WLR line with SMPF to SOTAP, where the test infrastructure (EvoTAM) is already connected to the existing WLR and SMPF services, this would continue to be maintained where possible (for testing purposes of the circuit, not the voice element). This would enable Openreach to continue to deliver service in the most efficient way (see strategic option diagram in section 5.2).

- For those lines where an EvoTAM is not available SOTAP would continue to use the PSTN test capability in the shorter term then post December 2025 the route to test SOTAP lines will be unavailable and will need an alternative test capability.

- Future options may include the installation of a dedicated EvoTAM, service layer data sharing with CPs or potentially enhanced engineers' hand-held test capabilities which would be an alternative to automated exchange-based testing.

CPs, Resellers and TPIs are invited to comment on:

5.5.1 The SOTAP repair journeys being proposed

5.5.2 The short term and strategic SOTAP test options, in particular options post 2025 PSTN closure

6. Legal and Regulatory Considerations

- Openreach plans are subject to change due to ongoing dialogue with stakeholders or further Openreach considerations.

- Forward-looking statements and assumptions are reasonably based on current information. Openreach cannot give an assurance that those expectations will prove to be correct.

- Factors that could cause differences between actual outcomes and those implied by the forward-looking statements include, but are not limited to: material adverse changes in economic and financial market conditions in the markets served by Openreach; supplier arrangements; future regulatory actions and conditions in Openreach's operating areas; technological innovations; developments in the convergence of technologies and the anticipated benefits and advantages of new technologies, products and services, including broadband, not being realised.

- The proposal for withdrawing WLR products and introducing a new product represents Openreach's best view at the time of publication. It does not represent a finalised definition or plan for implementation or any commitment to implement, which is dependent on further consultation with stakeholders and assessment of relevant commercial, legal and regulatory considerations, and the ability of Openreach to make a reasonable return on its investment. Any developments carried out by a CP based on the contents of this document are entirely at the CP's own risk.

- The CPs contractual relationship for SOTAP would depend on whether they consume SOTAP direct from Openreach or a third party wholesaler.

- BT has been designated by Ofcom as a universal service provider and has an obligation to provide, upon reasonable requests, end customers with access to basic telephony services i.e. allowing for the making and receiving of national and international calls) at fixed locations in the UK excluding Hull and at affordable prices. Openreach is not expecting this to change unless Ofcom initiates a review of the Universal Service Obligation.

- Should Openreach plans change when restricting new supply in certain geographical locations between now and 2025, further industry engagement would take place prior to any contract changes being notified.

6.1 The proposed contract changes

- The WLR3, LLU and SLU contracts, including ancillary documents, will need to be amended to reflect the necessary steps to withdraw the affected products. The stages will be:

  o January to April 2021 - Agree and introduce a migration schedule, to support the transfer, or cessation of affected products.

  o September 2023 - Withdrawal of new supply.

  o September 2024 - Notification of:
    - Termination of the WLR3 contract.
    - Withdrawal of SLU SMPF and LLU SMPF products.

CPs, Resellers and TPIs are invited to comment on:

6.1.1 The proposed contract changes.

7. Glossary

ATA	Analogue Telephony Adaptor
ATM	Automated Teller Machine
BAU	Business As Usual
B2B	Business to Business
BDUK	Broadband Delivery UK
C2M	Concept to Market; Openreach's product development process
CFPCG	Copper and Fibre Products Commercial Group
CLI	Calling Line Identification
CMF	Customer Management Frame
CPE	Customer Premises Equipment
CP	Communications Provider
CR	Caller Redirect
DDI	Direct Dial Inbound
EMP	Equivalence Management Platform
EPOS	Electronic Point of Sale
EvoTAM	Evolutionary Test Access Matrix
FCS	Federation of Communication Services
GEA-FTTC	Generic Ethernet Access Fibre To The Cabinet
GEA-FTTP	Generic Ethernet Access Fibre To The Premises
HDF	Handover Distribution Frame
IP	Internet Protocol
ISDN	Integrated Services Digital Network
LLU	Local Loop Unbundling
LTOK	Line Test OK
LTnOK	Line Test not OK
MPF	Metallic Path Facility
NICC	Network Interoperability Consultative Committee
NTE	Network Termination Equipment
PSTN	Public Switched Telephone Network
PSTN MLA	Public Switched Telephone Network Multi Line Aux
RCF	Remote Call Forwarding
SIN	Suppliers Information Note
SIP	Session Initiation Protocol
SML	Service Maintenance Level (https://www.openreach.co.uk/orpg/home/products/serviceproducts/serviceharmonisation/serviceharmonisation.do)
SMPF	Shared Metallic Path Facility
SNDDI	Single Number Direct Dial Inbound
SLU SMPF	Sub-Loop Unbundling Shared Metallic Path Facility
SOGEA	Single Order Generic Ethernet Access
SOGFast	Single Order Gfast
SOTAP	Single Order Transitional Access Product
TPI	Third Party Integrator
TDM	Time Division Multiplexing
UK	United Kingdom of Great Britain and Northern Ireland
WLR	Wholesale Line Rental
WLR Product(s)	WLR3 analogue, ISDN 2, ISDN 30, LLU SMPF, SLU SMPF, Narrowband Line Share and Classic products

Annex A: Proposal for Restricting New Supply of WLR Products

- Openreach's proposals to restrict WLR new supply in September 2023 is included alongside this document on the Openreach Portal.

- The spreadsheet colour codes each order journey using the RAG status (Green – allowed, Red – not allowed, Amber – not used).

- Openreach proposal for order journeys not allowed following the restriction of new supply:

    o New line provide and start of stopped lines which include the addition of SMPF and GEA-FTTC
    o Movement between WLR product sets with the exception of WLR multiline to PSTN single line, ISDN2 standard to system (and vice versa) and ISDN30 DASS to ISDN30 ETSI with no increase in the number of channels
    o Additional line plant
    o Reverse migration from any alternative product to WLR
    o Splits and mergers of ISDN lines where there is an increase in the number of lines, which often result in splitting DDI ranges or number configurations
    o Conversions across products including WLR working line take-over of other line types

- Openreach proposal for order journeys allowed following the restriction of new supply:

    o Transfers between WLR CPs
    o Working line takeovers of WLR to WLR
    o Splits and mergers of ISDN lines where there is no increase in line plant
    o Migrations and conversions to other products
    o WLR PSTN Basic to Premium (and vice versa)
    o Transfer of Classic to WLR
    o Downgrading within the same WLR product set (Multi-line to PSTN, ISDN2 system to standard etc.)
    o LLU and SLU SMPF and GEA-FTTC to be added to existing WLR3