

Agenda – Pwyllgor Newid Hinsawdd, yr Amgylchedd a Seilwaith

Lleoliad: I gael rhagor o wybodaeth cysylltwch a:
Hybrid – Ystafell Bwyllgora 4 Tŷ Hywel a Marc Wyn Jones
Fideogynhadledd drwy Zoom Clerc y Pwyllgor
Dyddiad: Dydd Mercher, 11 Mai 2022 0300 200 6565
Amser: 09.30 SeneddHinsawdd@senedd.cymru

Rhag-gyfarfod preifat (09:15–09:30)

Cyfarfod cyhoeddus

1 Cyflwyniad, ymddiheuriadau, dirprwyon a datgan buddiannau

(09.30)

2 Cysylltedd digidol yng Nghymru – sesiwn dystiolaeth 1

(09.30–10.15)

(Tudalennau 1 – 20)

Rhian Connick, Pennaeth Ffederasiwn Cenedlaethol Sefydliadau'r Merched Cymru

Dr Sian Phipps, Aelod dros Gymru – Panel Defnyddwyr Gwasanaethau Cyfathrebu

Hywel William, Cadeirydd – Pwyllgor Cynggori Cymru, Ofcom

Dogfennau atodol:

Briff Ymchwil

Papur – Ffederasiwn Cenedlaethol Sefydliadau'r Merched (Saesneg yn unig)

Papur – Pwyllgor Cynggori Cymru, Ofcom

Egwyl (10.15 – 10.25)



3 Cysylltedd digidol yng Nghymru – sesiwn dystiolaeth 2

(10.25–11.45)

(Tudalennau 21 – 31)

Ben Allwright, Prif Swyddog Gweithredol – Ogi

Constance Dixon, Cyfarwyddwr Partneriaeth Cymru – Openreach

Elinor Williams, Pennaeth Materion Rheoleiddiol, Ofcom Cymru

Dogfennau atodol:

Papur – Ogi (Saesneg yn unig)

Papur – Openreach (Saesneg yn unig)

4 Papurau i'w nodi

(11.45)

4.1 Cysylltedd digidol yng Nghymru

(Tudalennau 32 – 38)

Dogfennau atodol:

Cysylltedd digidol yng Nghymru – papur gan Grŵp BT (Saesneg yn unig)

4.2 Rheoliadau Cyflyrau Ffytoiechydol (Diwygio) (Rhif 2) 2022

(Tudalennau 39 – 42)

Dogfennau atodol:

Llythyr gan y Dirprwy Weinidog Newid Hinsawdd at y Cadeirydd mewn perthynas â Rheoliadau Cyflyrau Ffytoiechydol (Diwygio) (Rhif 2) 2022

(Saesneg yn unig)

Llythyr dilynol gan y Dirprwy Weinidog Newid Hinsawdd at y Cadeirydd mewn perthynas â Rheoliadau Cyflyrau Ffytoiechydol (Diwygio) (Rhif 2) 2022

4.3 Grŵp Rhyngweinidogol ar Sero Net, Ynni a Newid Hinsawdd

(Tudalen 43)

Dogfennau atodol:

Llythyr gan y Gweinidog Newid Hinsawdd at y Cadeirydd mewn perthynas â'r Grŵp Rhyngweinidogol ar Sero Net, Ynni a Newid Hinsawdd.

- 5 Cynnig o dan Reol Sefydlog 17.42(vi) a (ix) i benderfynu gwahardd y cyhoedd o weddill cyfarfod heddiw**

(11.45)

Cyfarfod preifat (11.45–12.30)

- 6 Cysylltedd digidol yng Nghymru – trafod y dystiolaeth a glywyd o dan eitemau 2 a 3**

- 7 Ynni adnewyddadwy yng Nghymru – trafod adroddiad drafft y Pwyllgor**

(Tudalennau 44 – 66)

Dogfennau atodol:

Adroddiad drafft (Saesneg yn unig)

- 8 Fframweithiau Cyffredin Dros Dro ar gyfer Ansawdd Aer, a Chemegion a Phlalladdwyr– trafod adroddiad drafft y Pwyllgor**

Mae cyfyngiadau ar y ddogfen hon

Pwyllgor Newid Hinsawdd, yr Amgylchedd a Seilwaith /
Climate Change, Environment and Infrastructure Committee
Cysylltedd digidol yng Nghymru / Digital connectivity in Wales
DC01

Ymateb gan Ffederasiwn Cenedlaethol Sefydliadau'r Merched-Cymru /
Evidence from National Federation of Women's Institutes-Wales

Submission to the Climate Change, Environment and Infrastructure Committee on digital connectivity in Wales

The National Federation of Women's Institutes (NFWI)-Wales welcomes the opportunity to provide evidence to the Climate Change, Environment and Infrastructure Committee on digital connectivity in Wales.

The WI is the largest voluntary women's organisation in the UK with over 190,000 members in 5,500 WIs across England, Wales, and the Islands. In Wales, we have about 14,000 members belonging to close to 500 WIs.

Since Covid-19 the importance of good digital connectivity has become more and more evident. During the lockdown, we relied on internet access to keep connected with family, friends and our communities. Children and young people were educated via on-line resources and many services, such as banking and mental health support, were accessible remotely.

The reliance on digital connectivity since Covid-19 has highlighted the need to speed up the roll-out of full-fibre broadband and mobile coverage to all parts of Wales, and in particular to rural communities. Access to fast and reliable connectivity is essential for work, business, education, leisure and day to day activities.

During the Covid-19 lockdowns, a number of rural federations highlighted to NFWI-Wales the impact of poor broadband access and mobile phone signals on their members. For example, Pembrokeshire Federation informed us that some of their members were unable to join online events from their homes. We were also informed by a member of an occasion when paramedics at her home were unable to get a phone signal and had to travel up the road.

Poor broadband connectivity and mobile phone signal impacts on a number of the NFWI's campaign areas including supporting mental health, alleviating loneliness and ending violence against women.

In November 2020, NFWI-Wales hosted a panel debate focusing on violence against women in rural communities. Poor broadband access and mobile signal in rural communities was highlighted as a barrier to people's ability to reach out for support.

Access to fast and reliable connectivity will be essential if the Welsh Government is to achieve its ambition of encouraging people to work flexibly and remotely. As another example, the Wales Transport Strategy refers to the use of digital connectivity in accessing timetables and booking services on-line.

In January 2021 NFWI-Wales, the Wales YFC, NFU Cymru, the FUW and the CLA Wales came together to focus on digital connectivity in response to experiences highlighted by our respective members in relation to poor connectivity issues. Since then, we have jointly undertaken 2 surveys to gather the experiences of people in Wales, held a webinar with industry experts and developed an Action Pack for our members outlining the current situation and sources of support to help improve connectivity.

Current situation

According to Ofcom's Connected Nations report 2021:

- around 15,000 homes and businesses in Wales are unable to access 'decent' broadband, which is defined as providing download speeds of 10 Mbit/s and upload speeds of 1 Mbit/s.
- 27% of homes in Wales have access to full-fibre broadband and 94% have access to a superfast broadband service which is defined as providing download speeds of at least 30 Mbit/s (megabits per second).
- around 7,850 premises in Wales cannot access either a decent fixed broadband service or get good 4G coverage indoors.

Digital connectivity survey findings launched in May 2021

A survey was carried out between 25 February and 31 March 2021 to paint a picture of digital connectivity across Wales. In total, 611 responses were received, and the key findings are outlined below.

- Over 50% of respondents from a rural area did not feel that the internet they had access to was fast and reliable.
- Indeed, less than 50% of those who lived in rural areas stated they had standard broadband and only 36% had superfast broadband and 66% stated that they or their household had been impacted by poor broadband. In comparison, 18% of their urban counterparts said they had access to standard broadband and 67% had superfast broadband.
- Whilst 80% of respondents used their mobile phone to access the internet, just 68% of those with a smartphone had access to a 4G or 5G mobile network to access the internet.
- 57% of those from a rural area described the mobile signal in their house as 'unreliable' and 49% of those from a rural area stated that their signal was 'unreliable' outdoors.
- 75% of respondents did not know where to access support to improve their broadband connectivity and only 19% were aware of the UK-wide Gigabit Voucher Scheme.

Impact of poor broadband and mobile phone signals

Respondents to the survey highlighted that the challenges of working from home and for children accessing education were particularly difficult and frustrating during the Covid-19 pandemic due to poor connectivity.

Some of the comments by respondents are provided below:

Fibre is available in some villages I think, but anyone who lives outside those has a very small group of companies willing to provide a service. Fibre and a reliable connection is important for all homes for the sustainability of the Welsh economy.

We are a farm and mobile phones do not work in the house, we have to either go 100 yards up a bank or a mile out on the road for connection.

We have to coordinate online meetings to ensure we're not both using something like Zoom simultaneously; I've had the internet cut out in the middle of presenting to a committee for work; I've been on panels where my internet was too slow for the live streaming software and so have had to drive and use my phone on a hill; our interaction with friends and family has been impacted as we've had to reset the internet over and over again. Every part of our lives has been impacted.

I have no phone signal, which makes working at home difficult. I use WiFi calling but the internet is too unreliable for this to be a success. It makes working from home difficult and I feel I am not progressing due to limitations in what I can do. I cannot take on my usual workload. There is no mobile phone signal and I have to travel 15 minutes one direction or 25 minutes in the other direction before I can make or receive a call. This is then not even 3G to pick up emails.

Digital connectivity survey - mid October to early December 2021

Ahead of the 2021 Royal Welsh Winter Fair, a short survey was launched by NFWI-Wales, the FUW, NFU Cymru, Wales YFC and CLA Wales to explore how people in Wales feel about the level of communication between themselves and their provider, cost-value of service and further look at how proposed changes to online livestock recording systems are going to affect the farming community.

Some of the key findings are included below:

- 57% of respondents rated their broadband as 'poor' or 'moderate'.
- 53% of respondents felt that they had been negatively impacted by poor broadband.
- Over 50% of respondents did not feel that they were being informed about the services and support available to them to improve their broadband connectivity.
- 54% of respondents stated that they did not know where to access information and support to improve their broadband connection.
- 35% of respondents rated the communication they receive from their current internet provider as 'satisfactory', 25% rated it as 'poor', 24% as 'good' and 9% as 'excellent'.
- 54% of farmers/landowners would prefer to administer/manage their business both online and on paper.
- In response to the consultation on proposals to move to an online livestock recording system, just 45% of farmers/landowners stated that they would be content using an exclusively online system with 50% stating that they did not feel their broadband was good enough to enable them to complete livestock records online.

Summary of key issues and action needed

The research findings have highlighted the digital divide between rural and urban areas. Further investment is needed in rural infrastructure to enable rural families, farm businesses and others to capitalise on digital connectivity opportunities and not be left behind.

Broadband and mobile phone signal should be recognised as an essential public service in Wales.

There is a need to address the current barriers to improving broadband and mobile infrastructure and to provide the necessary investment to support the roll-out of infrastructure to all rural areas.

Greater awareness is needed of the sources of support and current schemes available aimed at helping households and businesses to improve their connectivity. To address the low level of awareness identified from the survey findings, NFWI-Wales, in partnership with the Wales YFC, the FUW, FUW and the CLA Wales hosted another webinar on 28 April to raise awareness about the sources of support and funding available.

Improving communication with consumers is vital. Service providers should keep consumers updated on the services they offer and give suitable advice on the broadband packages available for consumers to improve their connectivity.

A concern raised during joint meetings between NFWI-Wales, the FUW, Wales YFC, FUW and CLA Wales has been the impact, during the recent storms, on communities that had been switched from copper to fibre connectivity. Power cuts had resulted in people being left with no phone lines when the 4G and 5G infrastructure went down. In an emergency, people would have had to travel to get a phone signal. The lack of access to emergency services could people at risk such as those requiring urgent medical attention and women in abusive relationships.

Pwyllgor Cynghori Cymru, Ofcom

Cysylltedd Digidol yng Nghymru, Polisiâu Band Eang a Mynediad at Fand Eang

Cyflwyniad

Cafodd Pwyllgor Cynghori Cymru Ofcom (y Pwyllgor Cynghori), ei sefydlu gan Ddeddf Cyfathrebiadau 2003 i gynghori Ofcom am fuddiannau a safbwyntiau pobl Cymru mewn perthynas â materion cyfathrebu. Rydym yn ceisio ymateb i ymgynghoriadau perthnasol Ofcom ac mae'r rheoleiddiwr hefyd yn ymgynghori â ni ar faterion polisi allweddol sy'n ymwneud â Chymru. Er enghraifft, mae'r Pwyllgor Cynghori wedi ymateb i ymgynghoriadau Ofcom ar hyrwyddo cystadleuaeth a buddsoddi mewn rhwydweithiau ffeibr, Strategaeth Rheoli Sbectrwem Ofcom, sy'n nodi sut bydd y sbectrwem radio'n cael ei reoli a'i reoleiddio dros y deng mlynedd nesaf a'r gwasanaethau sy'n cael eu darparu mewn ardaloedd anodd eu cyrraedd.

Rydym yn gorff anweithredol ac mae gennym berthynas 'hyd braich' ag Ofcom. Nid yw Ofcom yn cael ei rwymo'n ffurfiol gan unrhyw gyngor a roddwn. Safbwyntiau'r Pwyllgor Cynghori yw'r safbwyntiau sydd yn y papur hwn yn ac nid ydynt yn cynrychioli barn Bwrdd na staff Ofcom.

Cyd-destun y Farchnad

Ers creu'r Pwyllgor Cynghori mae ei aelodau wedi bod yn poeni'n arw am yr angen i wella cysylltedd digidol ar draws y wlad, yn enwedig mewn ardaloedd sy'n fwy gwledig a phrin eu poblogaeth. Rydym yn cefnogi dyhead Ofcom i sicrhau bod cyfathrebiadau'n gweithio i bawb. Yn ein barn ni mae hyn yn golygu sicrhau bod pob dinesydd ym mhob adeilad yng Nghymru yn cael cysylltedd band eang teilwng. Ond yn ymarferol, mae'r amcan hwn wedi gorfod ystyried economeg y farchnad a'r anawsterau sy'n wynebu darparwyr telathrebu wrth sicrhau elw ar fuddsoddiad, yn enwedig wrth ddarparu cysylltedd i ardaloedd anodd eu cyrraedd.

Mae rheoleiddio'n deg ac yn effeithiol wedi bod yn ganolog i gyflwyno a datblygu darpariaeth band eang yng Nghymru. Yn y blynyddoedd cynnar, rhoddodd Ofcom sylw i'r her o ddadgyfuno gweithgareddau adwerthu a chyfanwerthu BT drwy wahanu'r elfen cyflenwi gwasanaethau oddi wrth yr elfen perchnogaeth dros brif rwydweithiau telathrebu'r DU. BT oedd y darparwr gwasanaethau telathrebu mwyaf o bell ffordd ac felly roedd ganddo bŵer sylweddol yn y farchnad. Roedd ymyriad rheoleiddio gan Ofcom wedi sicrhau creu Openreach. Er bod Openreach yn rhan o BT mae'n gweithredu hyd braich oddi wrtho ac yn galluogi amrywiaeth eang o ddarparwyr i sicrhau mynediad cyfanwerthol at rwydweithiau BT ar delerau sy'n cyfateb i'r rheini sydd ar gael i BT Retail a'i wasanaethau busnes. Mae Ofcom hefyd wedi hyrwyddo a datblygu amodau rheoleiddio ffafriol i alluogi sefydliadau eraill i fuddsoddi yn eu seilwaith ffisegol eu hunain mewn cystadleuaeth â BT. Un enghraifft ddiweddar dda yw twf y darparwr band eang yn Ne Cymru, Ogi, sy'n cyflwyno rhwydweithiau ffeibr newydd mewn nifer o ardaloedd, er enghraifft yn Y Fenni a Hwlfordd¹¹. Mae'r cwmni hefyd wedi cael Consesiwn Cefnffyrdd De Cymru gan Lywodraeth Cymru i adeiladu rhwydwaith ffeibr drwy gael mynediad at bibellau yn Nwyrain De Cymru rhwng trefi a phentrefi, canolfannau data a chyfnewidfeydd ar draws de Cymru gan gynnwys canolfan LINX Cymru yng Nghaerdydd a Chanolfan Data CWL1 Vantage yng Nghasnewydd¹².

¹¹ <https://www.ogi.cymru/>

¹² <https://www.ogi.cymru/amdanom/consesiwn-cyffyrdd-de-cymru/>

Nid yw topograffi Cymru a'i hardaloedd gwledig tenau eu poblogaeth wedi helpu i ddenu buddsoddiad ar gyfer darparu gwasanaethau telathrebu. Fel y nodwyd yn Adroddiad Cysylltu'r Gwledydd 2021 Ofcom ar gyfer Cymru, roedd argaeledd band eang cyflym iawn a gwasanaethau symudol yn is o lawer na chyfartaledd y DU am gyfnod sylweddol ac yn o'r "*prif broblemau i ddefnyddwyr a chynrychiolwyr etholedig yng Nghymru ers sefydlu Ofcom*"¹³. Yn hanesyddol, mae cyflwyno'r genhedlaeth gyntaf o fand eang a band eang cyflym iawn yng Nghymru wedi llusgo'r tu ôl i gyfartaledd y DU. Fodd bynnag, mae ymyriadau gan Lywodraeth Cymru a Llywodraeth y DU, ynghyd â chyllid Ewropeaidd wedi golygu bod darpariaeth band eang yng Nghymru wedi gwella'n raddol. Er enghraifft, roedd adroddiad 2021 yn datgan bod band eang cyflym iawn ar gael i 94% o adeiladau preswyl Cymru, gan ddarparu cyflymder o 30 Mbit yr eiliad o leiaf, sy'n agos at gyfartaledd y DU, a bod y nifer sy'n ei ddefnyddio wedi cynyddu 11% ers y flwyddyn flaenorol. Yn yr un modd, mae gan 27% o adeiladau preswyl Cymru fynediad at gysylltiadau ffeibr llawn, sy'n gallu darparu cyflymder o 1 Gbit yr eiliad neu fwy, dim ond 1% y tu ôl i gyfartaledd y DU yn ôl poblogaeth, gyda'r nifer sy'n eu defnyddio wedi cynyddu 6% ers 2020. Yn ôl Ofcom, mae'r cynnydd mewn darpariaeth yng Nghymru wedi deillio'n bennaf o'r buddsoddiad parhaus yn y gwaith o gyflwyno rhwydweithiau ffeibr gan Openreach ac, yn fwy diweddar, Ogi, yn ogystal â'r cynnydd parhaus gyda cham dau rhaglen Cyflymu Cymru Llywodraeth Cymru¹⁴.

Fodd bynnag, er gwaethaf y datblygiadau hyn, mae'r adroddiad Digital Life and Broadband Connectivity 2022 ar gyfer Cymru, a gyhoeddwyd gan y sefydliad defnyddwyr Which? yn awgrymu bod llawer o waith i'w wneud eto. Mae ei ddadansoddiad o ddata Ofcom yn awgrymu "er bod perfformiad band eang ar draws y DU wedi gwella, mae cyflymder band eang cyfartalog Cymru yn dal yn is o lawer na'r gwledydd eraill. Lloegr sydd a'r cyflymder lawrlwytho band eang sefydlog cyflymaf ar gyfartaledd sef 88.5 megabit yr eiliad. Mae hyn ychydig yn gynt nag yng Ngogledd Iwerddon (82.7 Mb yr eiliad) a'r Alban (73.7 Mb yr eiliad). Fodd bynnag, mae cyflymder cyfartalog band eang yng Nghymru yn arafach o lawer sef dim ond 55.9 Mb yr eiliad¹⁵." Mae Which? yn honni yn ei arolwg blyneddol, er bod y defnydd yn gyfartal a bod yna angen am gysylltiadau band eang da, bod defnyddwyr yng Nghymru yn cael perfformiad is o lawer na'r rheini mewn rhannau eraill o'r DU. Gallai'r gwahaniaeth hwn ym marn defnyddwyr fod oherwydd amrywiaeth o ffactorau fel fforddadwyedd a'r nifer sy'n ei ddefnyddio. Roedd dadansoddiad gan Which? hefyd yn dangos gwahaniaethau amlwg rhwng ardaloedd trefol a gwledig gyda chyflymder llwytho i lawr yng Nghaerdydd ac Abertawe ddwywaith mor gyflym ag mewn ardaloedd gwledig yng nghanolbarth a gogledd Cymru. Os bydd y galw am weithio gartref a mwy o ddefnydd o gysylltedd band eang yn parhau i dyfu, bydd yn rhaid mynd i'r afael â'r materion hyn sy'n ymwneud â chyflymder a dibynadwyedd yng Nghymru.

Mae Which? yn nodi ymrwymiad Llywodraeth y DU i sicrhau cysylltedd Gigabit ar draws y DU erbyn 2030. Fodd bynnag, mae'r sefydliad yn nodi, er y rhagwelir y bydd gan 70% o Gymru fynediad at fand eang Gigabit, bod hyn yn is o lawer na'r rhagolwg o 90% ar gyfer Llundain a Gogledd Iwerddon. Mae Which? yn galw am fwy o eglurder i bobl sy'n byw mewn ardaloedd anodd eu cyrraedd ynghylch pryd y gallant ddisgwyl gweld gwelliannau yn eu cysylltedd. Ar hyn o bryd mae'r sefydliad yn cadeirio'r Grŵp Cynghori ar Ddefnyddio Gigabit (GigaTAG), sydd wedi nodi tri chategori eang o

¹³ Cysylltu'r Gwledydd 2021 Adroddiad Cymru, cyflwyniad,

https://www.ofcom.org.uk/data/assets/pdf_file/0033/229785/cysylltur-gwledydd-2021-cymru.pdf

¹⁴ Tudalen 8, Cysylltu'r Gwledydd 2021 Ofcom Adroddiad Cymru

¹⁵ <https://consumerinsight.which.co.uk/reports/consumers-in-wales-2022#digital-life-and-broadband-connectivity>

rwystrau sy'n atal defnyddwyr rhag mabwysiadu band eang cyfradd gigabit: diffyg ymwybyddiaeth, diffyg dealltwriaeth o'r manteision, a rhwystrau ymarferol fel cyfleoedd cyfyngedig i newid a fforddadwyedd¹⁶.

Darpariaeth band eang 'digonol' a'r Rhwymedigaeth Gwasanaeth Cyffredinol

Mae adroddiad Ofcom yn nodi y bydd cost cyflwyno cysylltiadau ffeibr mewn rhai ardaloedd anoddach eu cyrraedd yng Nghymru yn dal yn afresymol. Ar hyn o bryd, mae oddeutu 15,000 o adeiladau yng Nghymru yn methu cael cyflymder band eang o 10 Mbit yr eiliad, sy'n cael ei ystyried yn safon sylfaenol ar gyfer 'band eang digonol' ac mae'r ardaloedd hyn yn gymwys i gael cysylltiad o dan y cynllun band eang cyffredinol, sy'n cael ei weithredu ar hyn o bryd gan BT ac sy'n cael ei reoleiddio gan Ofcom¹⁷. Fodd bynnag, byddwn yn parhau i fonitro effeithiolrwydd y cynllun hwn, yn enwedig yn achos yr adeiladau hynny na fyddant yn elwa o'r Rhwymedigaeth Gwasanaeth Cyffredinol oherwydd cost lle mae cwsmeriaid yn debygol o gael dyfynbrisiau gosod sy'n uwch na'r trothwy gweithredu sef £3,400¹⁸. Mae Ofcom yn cydnabod y gallai darparu gwasanaeth band eang yn y fath ardaloedd alw am atebion amgen fel, er enghraifft, lloeren Orbit Isel y Ddaear¹⁹ (sy'n goresgyn y broblem draddodiadol o'r oedi a geir gyda systemau lloeren sy'n sefydlog ar y ddaear) a mynediad di-wifr sefydlog. Byddwn hefyd yn parhau i fonitro argaeledd y cynlluniau cymorth ariannol sy'n cael eu darparu gan Lywodraeth Cymru, fel Cynllun Allwedd Band Eang Cymru a'r Gronfa Band Eang Lleol.

Symudol - llais a data

Yn hanesyddol, mae topograffi Cymru wedi bod yn heriol hefyd o ran cyflwyno gwasanaethau symudol, yn ogystal ag o ran argaeledd gwasanaethau teledu a radio. Mae tir mynyddig Cymru yn rhwystr mawr i signalau amledd radio ac yn yr ardaloedd hynny mae angen i weithredwyr osod mwy o orsafoedd sylfaen neu drosglwyddyddion am gost sylweddol uwch, nag mewn ardaloedd lle mae llai o fryniau a dyffrynnoedd. Fodd bynnag, er gwaethaf y ffactorau hyn, mae darpariaeth symudol gwasanaethau llais a data hefyd wedi gwella dros y blynyddoedd diwethaf. Er enghraifft, mae darpariaeth ddaearyddol 4G (sef 72% - 84%, yn dibynnu ar y gweithredwr symudol) bellach ddim ond ychydig yn is na chyfartaledd darpariaeth symudol y DU sef 79% - 86%. Ond mae'r darlun ehangach, gan ystyried y ddarpariaeth dan do a'r rhaniad trefol/gwledig, yn dal i ddangos gwahaniaethau sylweddol yn y ddarpariaeth symudol 4G ar draws y gwledydd. Mae datblygiadau fel y Rhwydwaith Gwledig a Rennir (SRN) yn debygol o wella cryn dipyn ar y ddarpariaeth symudol yng Nghymru yn ystod y blynyddoedd nesaf. Yn ôl adroddiad Cysylltu'r Gwledydd, mae disgwyl i'r Rhwydwaith Gwledig a Rennir wella darpariaeth 4G yng Nghymru a ddarperir gan y gweithredwyr symudol, gan ei chodi o 79% i 88%. Bydd darpariaeth 4G gan o leiaf un gweithredwr yn cynyddu o 97% i 99% gyda'r cynnydd mwyaf yn digwydd yn ardaloedd gwledig Canolbarth, Gorllewin a Gogledd Cymru.

¹⁶ <https://consumerinsight.which.co.uk/reports/consumers-in-wales-2022#digital-life-and-broadband-connectivity>

¹⁷ Mae gan bob cartref a busnes yn y DU hawl cyfreithiol i ofyn am gysylltiad band eang teilwng a fforddiadwy. Mae'r Rhwymedigaeth Gwasanaeth Cyffredinol band eang yn berthnasol i adeiladau nad ydynt yn gallu cael cyflymder llwytho i lawr o 10 Mbit yr eiliad na chyflymder llwytho i fyny o 1 Mit yr eiliad. Mae modd gofyn am gysylltiad wedi'i uwchraddio gan BT ac nid oes yn rhaid i'r ymgeiswyr fod yn gwsmer i BT yn barod.

¹⁸ Tudalen 19, Cysylltu'r Gwledydd 2021 Ofcom Adroddiad Cymru

¹⁹ Er enghraifft gweler <https://www.starlink.com/>

Mae gwasanaethau 5G yn cael eu cyflwyno yn ardaloedd mwy poblog Cymru, yn bennaf yng Nghaerdydd, Casnewydd ac Abertawe. Yn ôl Ofcom, mae rhwng 23% a 34% o adeiladau yn yr ardaloedd hyn yn cael darpariaeth yn yr awyr agored gan o leiaf un gweithredwr. Fodd bynnag, ar hyn o bryd mae'r rhan fwyaf o ddefnyddwyr yng Nghymru yn dal i ddibynnu ar 4G, 3G a 2G am eu gwasanaethau symudol dyddiol.

Diffodd PSTN

Er nad yw'n ymwneud yn uniongyrchol â darparu band eang sefydlog a symudol, mae hefyd yn werth nodi bod yr hen system ffôn copr (sef y Rhwydwaith Ffôn Cyfnewidfa Gyhoeddus, neu PSTN) yn cyrraedd diwedd ei hoes ac mae BT a gweithredwyr llinellau sefydlog eraill wedi cyhoeddi y bydd rhwydweithiau PSTN yn cael eu datgomiynu'n llwyr erbyn diwedd 2025. Bydd technoleg llinell sefydlog yn cael ei disodli gan systemau Protocol Llais dros IP (VOIP), lle bydd galwadau llais yn cael eu gwneud dros gysylltiadau band eang. Mae'r Pwyllgor Cynghori yn rhannu pryderon y Panel Defnyddwyr Gwasanaethau Cyfathrebu, Hyb Panel Defnyddwyr Gwasanaethau Cyfathrebu Cymru a mudiadau gwirfoddol y trydydd sector nad yw diffodd PSTN wedi cael llawer iawn o gyhoeddusrwydd tan nawr. Mae hi'n hanfodol nad yw hyn yn llesteirio ar y gallu i wneud galwadau brys. Yn wahanol i PSTN (lle mae'r llinell gopr yn cludo foltedd o'r gyfnewidfa), mae systemau sy'n seiliedig ar VOIP angen pŵer wrth gefn brys, fel Cyflenwad Pŵer Di-dor (UPS) os bydd toriad pŵer, felly heb bŵer wrth gefn ni fyddai'n bosibl ffonio. Byddai hyn yn arbennig o bwysig mewn argyfwng. Fe y gwelsom ni yn ystod stormydd diweddar y gaeaf, mae hi hefyd yn bosibl nad oes modd ffonio ar ffonau symudol os yw'r orsaf sylfaen rhwydweithiau symudol leol wedi colli pŵer hefyd. Rydym yn arbennig o bryderus y gellid anghofio am grwpiau defnyddwyr agored i niwed megis pobl hŷn, er enghraifft y rheini sy'n dibynnu ar systemau teleofal. Felly, byddwn yn parhau i weithio gydag Ofcom i sicrhau bod defnyddwyr agored i niwed yn cael eu diogelu a bod cyn lleied â phosibl o darfu ac anhwylustod.

Diffodd 2G a 3G

Mae Ofcom yn nodi y bydd rhwydweithiau 2G a 3G, a gafodd eu lansio yn 1990/2000 hefyd ar fin cael eu diffodd yn ystod y blynyddoedd nesaf. Mae'r adroddiad Cysylltu'r Gwledydd yn datgan "Mae diffodd y rhwydweithiau hyn yn effeithio ar nifer o gymwysiaid megis argaeledd galwadau ffôn symudol, sy'n dibynnu ar y naill na'r llall o'r gwasanaethau etifeddol hyn. Yn ogystal â galwadau llais brys, gallai fod effaith ar gymwysiaid eraill fel mesuryddion clyfar a gwasanaethau e-aldadau os na chaiff ei weithredu'n ofalus." Yn yr un modd â diffodd PSTN, dyma faes a allai peri pryder a byddwn yn monitro'n ofalus sut mae'r cwmnïau symudol yn delio â'r broses hon yn ystod y blynyddoedd nesaf.

Band Eang a'r Amgylchedd

Roedd y pandemig wedi dangos pwysigrwydd cysylltedd band eang pan roedd yn rhaid i lawer o bobl weithio gartref yn ystod cyfnodau clo. Un canlyniad cadarnhaol, yn dilyn y cyfnod hwn, yw parodrwydd sefydliadau i wneud gwell defnydd o fideo-gynadledda drwy wasanaethau fel Zoom neu Teams. Yng Nghymru, lle mae aelodau o sefydliadau yn aml yn gweithio ar draws y wlad, mae cynnal cyfarfod ar-lein yn gwneud llawer mwy o synnwyr yn hytrach na theithio i bwynt canolog yng Nghymru megis Llandrindod, er mwyn cymryd rhan mewn cyfarfod. Roedd y gostyngiad mewn traffig yn ystod y pandemig hefyd wedi cael effaith amlwg ar ansawdd yr aer, yn enwedig mewn trefi a dinasoedd, ac wrth symud ymlaen mae'n hanfodol cadw mantais llai o deithio drwy hwyluso cyfarfodydd ar-lein drwy gysylltiadau band eang effeithlon. Mae topograffi Cymru hefyd yn galw am seilwaith trawsyrru ychwanegol, er enghraifft i ddarparu gwasanaethau llais a band eang symudol ac mae hyn yn ei dro yn effeithio ar faint o ynni sy'n cael ei ddefnyddio ac mae angen ystyried yr effaith

amgylcheddol hon hefyd. Gellid defnyddio technoleg ynni adnewyddadwy newydd, fel ynni'r haul, i bweru safleoedd trawsyrydd pell.

Pwyllgor Cyngori Cymru, Ofcom
Mai 2022

Pwyllgor Newid Hinsawdd, yr Amgylchedd a Seilwaith / Climate Change, Environment and Infrastructure Committee

Cysylltedd digidol yng Nghymru / Digital connectivity in Wales

DC02

Ymateb / Evidence from Ogi

Purpose

The purpose of this paper is to provide the Senedd's Climate Change, Environment and Infrastructure Committee an overview of digital connectivity across Wales – with a focus on Ogi's experience in traditionally 'underserved' south Wales communities. It includes:

- [An introduction to Ogi](#)
- [An overview of Wales's ultrafast fibre rollout](#)
- [A summary of the benefits of full fibre](#)
- [Challenges and opportunities](#)

About Ogi

Ogi is a Wales-based full fibre broadband and IT services company. In October 2020, the company (then trading as Spectrum Internet and NetSupport UK) secured cornerstone investment from leading European infrastructure investors, Infracapital, to deliver an initial £200m plan to bring improved connectivity to 150k south Wales homes and businesses.

Today, Ogi is rolling out ultrafast connectivity to 'underserved' communities – building simultaneously in Pembrokeshire, the Vale of Glamorgan and Monmouthshire – expanding to at least three other LAs this year. With an ambitious plan to scale-up quickly - to 500k premises, via a potential £0.5b+ capital investment - by the middle of the decade.

As well as launching its ambitious infrastructure build, since 2020 the company has also: relaunched as 'Ogi' to signify a commitment to Wales; grown from 20 to 120 staff; employed hundreds through the supply-chain; and opened offices in St Clears, Tongwynlais, Cardiff and Newport.

On top of its local roll-out, Ogi is putting in place high-capacity, strategic, long-haul full fibre networks to cater for the wider digital demands of the Welsh economy, including the delivery of an innovative WG concession to install fibre along the South Wales Trunk Road Network – re-purposing public assets for sustainable, wide-ranging socio-economic benefit.

Overview of Wales's ultrafast fibre rollout

Wales has benefited significantly from the Superfast Cymru programme; with around 94% of premises now able to access a fibre to the cabinet connection of at least 30Mbps. However, full fibre ultrafast broadband (known as fibre to the premises) is the next generation technology we need to service the myriad of applications we are increasingly reliant on. It brings fibre optic connectivity capable of growing in capacity with demand, directly to homes and businesses. Ogi's speed packages for home customers range from 150Mbps-900Mbps – or twenty times the Superfast average - and is 10-Gigabit capable at this point, with much more scope for growth.

[Ofcom's 2021 Connected Nations report¹](#), stated that: full-fibre broadband is available to 27% of premises (0.4m) in Wales - an increase of 8% from 2020 – representing the highest year-on-year increase in full fibre coverage to date. This tallies with coverage levels across the UK;

¹ [Ofcom's annual 'Connected Nations' report.](#)

however Northern Ireland is already at 71%² and European countries have achieved coverage levels as high as 88% (Spain) and 94% (Latvia) of premises³.

Whilst it is of course essential to ensure that ‘white area’ premises with extremely limited broadband speeds receive the connections they need, Ogi believes that it is important to also roll-out full fibre across Wales at pace – to ensure Wales in general does not lag behind in the future, and to bring much needed competition – at infrastructure level – to home and business markets.

Benefits of full fibre

Full fibre brings wide-ranging socio-economic benefits, which align with the goals of the Wellbeing of Future Generations (Wales) Act. The [Centre for Economic and Business Research](#)⁴ predicts better connectivity and full fibre broadband could generate a UK-wide gross value-added (GVA) impact of £25bn – boosting productivity by £59bn by 2025.

By bringing improved connectivity to ‘underserved’ areas, full fibre provides a real opportunity for young people to stay in their community. It’s estimated that full fibre will also enable up to 500,000 people to move from urban areas post-Covid, helping to stimulate rural economic growth. Better connectivity also supports WG’s aspiration for 30% of us to work from home too. The knock-on environmental benefit of this is an estimated reduction of 700,000 tonnes of carbon per annum⁵.

Ogi is ambitious about helping to transform Wales’s digital landscape and is keen to play a strategic role as a partner to the public sector. Some areas of challenge / opportunity include:

Policy focus: The Digital Strategy provides an opportunity to ensure that WG’s focus is both on addressing poor coverage ‘white areas’; whilst also accelerating the roll-out of full fibre and to as many communities as possible. This isn’t a contradiction; we need to do both for a more prosperous Wales. Indeed, wider policy challenges cannot be met without improved connectivity that will enable people to live and work closer to home; see high streets to thrive; and Wales achieve its net zero ambitions.

Awareness: A major challenge is building awareness of the importance of updating our digital infrastructure – and inspiring people to harness its potential for smarter living. We would welcome an opportunity to develop a confident narrative about the benefits of a digitally connected Wales.

Partnerships: It is no coincidence that Ogi’s rollouts focus on areas where the public sector is embracing the potential of digital. Pembrokeshire’s Digital Broadband Delivery Programme Team⁶ are vital links between providers, contractors and the communities where investment is being made, while the WG has also led the way with the South Wales Trunk Road Concession. There’s scope to capitalise on other public assets in the future. Companies like Ogi would welcome more opportunities for innovative public/private collaborations of this kind.

Commercial Remit: Ogi’s initial focus is on commercially viable builds; and as such it is well placed to plug crucial ‘gaps’ in publicly funded programmes. However, it’s crucial that the current Open Market Review to identify areas of future intervention respects the commercial plans of private companies, to prevent duplication, and enable the market to play its part too.

Fair competition: There is a lot of work to be done to improve Wales’s digital infrastructure and make it future proof; and altnets and new operators like Ogi have a key role to play in

² [Openreach full fibre rollout hits 75% mark in Northern Ireland](#) [ThinkBroadband – broadband news, Wednesday February 16, 2022]

³ [European fibre rollout closes in on major milestone](#), ING 10 November 2021

⁴ [UK full-fibre broadband could deliver £25bn boost to productivity](#), Computer Weekly, April 2021

⁵ [Ultrafast Full Fibre Broadband: a platform for growth Cebr report for Openreach 2021](#)

⁶ [Digital Pembrokeshire Information Pages](#)

helping to accelerate this process over the coming years. In order to do so, it's vital to ensure a level playing field with the incumbent providers so that we are able to compete, when appropriate, for public procurement projects where they align with our own business aspirations.

Pwyllgor Newid Hinsawdd, yr Amgylchedd a Seilwaith / Climate Change, Environment and Infrastructure Committee

Cysylltedd digidol yng Nghymru / Digital connectivity in Wales

DC04

Ymateb gan / Evidence from Openreach

Evidence to the Climate Change, Environment and Infrastructure Committee which aims to gain an initial snapshot of progress and the associated challenges that are being faced in this policy area with an emphasis on broadband.

1. Openreach welcomes the opportunity to respond to this call for evidence. Openreach has been at the forefront of upgrading Welsh digital infrastructure and deploying full fibre in Wales - both under the Superfast Cymru contract with the Welsh Government and our own commercial investment.
2. Independent research company Think Broadband Broadband Coverage and Speed Test Statistics for Wales (thinkbroadband.com) shows that 52% of Welsh premises can access ultrafast speeds of 100Mbps and above, and 96% of Welsh premises speeds can access superfast speeds of 30Mbps and above. This compares well with the rest of the UK.
3. While investing in full fibre is the right investment for the future, the existing network has performed well and has delivered real value to Welsh consumers and businesses. The superfast network, which is available to almost all Welsh premises, has underpinned the overnight transition to home working and home schooling during the pandemic.
4. While there is more to be done on reducing the barriers to deployment, and further steps the Welsh Government could take to further incentivise investment, it is clear the overarching policy and regulatory framework in which the sector operates is delivering good outcomes for Wales.
5. Recent research by the Centre for Economics and Business Research (Cebr) [Full fibre delivering for the UK](#) highlighted the clear economic benefits of connecting everyone in Wales to full fibre. It estimated this would create a £2 billion boost to the Welsh economy through increased productivity. It also estimated that 50,000 people could move to rural parts of Wales with improved connectivity. Full fibre was also estimated to enable c.34,000 Welsh carers to re-enter the workforce or increase their hours, could enable 12,000 Welsh over-65s to take new flexible working opportunities, and

help over 18,000 working age parents to re-enter the workforce. This increase in workforce participation would help boost Welsh GVA by a further £1.2 billion. Across the UK, reduced commuting owing to increased home working could abate up to 700,000 tonnes of carbon emissions.

Openreach's investment

6. Openreach is continuing to accelerate the pace and scale of our nationwide full fibre deployment. We have set out plans – as part of a £15 billion commercial investment – to deliver full fibre to 25 million homes and businesses by December 2026. Depending on our ability to attract further funding, we want to continue our deployment beyond this point – bringing the benefits of full fibre to even greater numbers of consumers. Delivering this transformative investment will go a significant way to meeting the UK Government's objective of reaching 85% of the country with gigabit capable networks by 2025.
7. We (Openreach) have now passed over 7.2 million homes and businesses, and are currently building at a weekly run rate of over 50,000 premises. We are continuing to accelerate the pace of our deployment to meet our longer-term objectives of passing 4 million premises a year with full fibre. This would be one of the fastest commercial deployments in the world.
8. In May 2021 we announced that we would increase our commercial deployment in harder to reach areas by 3 million premises (the vast majority of which are in what Ofcom classifies as Area 3), building on our previous industry-leading commitment, made in June 2020, to build to 3.2 million premises in harder to reach communities. This means we have publicly committed to building full fibre to at least 6.2 million premises in harder to reach areas as part of our commercial delivery. This balanced build approach means we are not just building full fibre in urban areas, but are helping to level up the UK by delivering full fibre to communities across the country.
9. Our commitment to deliver full fibre to at least 6.2 million premises in harder to reach areas as part of our commercial investment is clearly a positive intervention for rural communities across the UK. Ofcom calculates there are c.9.5 million in Area 3 which means our commercial build will cover a significant percentage of the hardest to reach premises. This is relevant to the wider public interest,

as our commercial investment reduces the number of areas where there is likely to be a market failure and consequently areas which may require public subsidy as part of the Project Gigabit programme. Therefore, our commercial investment will deliver better value for the taxpayer by ensure public funds are targeted towards the areas of most need.

10. Last financial year, 36% of our build was in Area 3, with over 2.3 million Area 3 premises now having access to full fibre. We also uplifted over 300,000 premises in superfast not-spots to full fibre. No other operator is building, or currently plans to build, full fibre at anything like the scale that we have set out under our commercial plans - or has the same track record of delivering in challenging rural locations as we do.
11. Our innovative Community Fibre Partnership programme (which utilises DCMS gigabit vouchers) has also helped deliver FTTP to over 180,000 homes in some of the most isolated communities in the country. We also work with the designated Universal Service Provider (BT Group) to provide fixed line connections to some USO-eligible premises and are delivering the R100 contracts across Scotland and the three Next Generation Broadband Access Wales (NGBAW) contracts across Wales. Our FTTP plans build on our successful partnership with DCMS and Building Digital UK (BDUK) to deliver the previous superfast upgrade, which bought superfast connectivity to over 97% of the country.
12. Our commercial deployment is therefore helping to meet the UK Government's targets, deliver for urban and rural communities across the UK, and support better value for the taxpayer.

Our build in Wales

13. Between 2014-2018 Openreach co-funded the Superfast Cymru Programme, also known as Next Generation Broadband Access Wales, increasing coverage to 95% connecting 733,000 premises (77,505 via FTTP and 655,495 via FTTC). In 2019 we commenced the latest co-funded contract

to connect 26,000 premises to full fibre by March 20/21 which was further increased to 37,000 due for completion in summer 2022.

14. Across Wales, we've built to around 480,000 properties with Full Fibre (59% of which is to premises within Area 3) and more than 120,000 homes and businesses have already ordered a full fibre service from a range of retail service providers using the Openreach network.
15. We've announced and publicly share plans of our commercial roll out locations. Across Wales, more than 250 exchanges have been announced as being included within our full fibre build plans over the next few years.
16. Over the last two years we've contracted with more than 3,500 premises across Wales through our Fibre Community Partnership programme to upgrade to Full fibre and with hundreds more working with us through the journey.
17. Openreach employs over 2,300 people in Wales. In February 2022 we announced 250 additional jobs across Wales this year including more than 200 apprentices. The new recruits will be based across all parts of Wales including Denbighshire, Flintshire, Gwynedd, Powys, Pembrokeshire, Swansea, Cardiff and Newport.
18. Openreach already employs the nation's largest team of telecoms engineers and professionals and has committed to building a more diverse and inclusive team in an industry that's traditionally been very white, male dominated.
19. Openreach's National Learning Centre for Wales in Newport expects to train up to 6,000 new and existing Openreach engineers from across Wales, as well as further afield, during a typical year. The new trainee apprenticeship roles come with a starting salary of £21,845 and recruits can be earning up to £28,353 following 12 months of specialist training to achieve an NVQ level 2, in one of Openreach's world class training centres.

Wider market context

20. Ofcom's regulatory approach has sought to promote competition and investment in gigabit-capable networks as a means of bringing faster, better broadband to people across the UK and in support of the Government's objectives - and the evidence to date shows this approach is clearly working. Ofcom's approach aligns with the goals set out in the 2018 Future Telecoms Infrastructure Review, and the 2019 Statement of Strategic Priorities.
21. In recent years the market has been characterised by growing numbers of alternative network providers (altnets) emerging. These altnets have secured significant amounts of private funding to support their deployment. Many of these altnets are also making use of our passive infrastructure (PIA) (e.g. our underground ducts and overhead poles) to drive down the costs of their deployment. Some altnets are building primarily in urban areas (such as CityFibre and Hyperoptic) where there may already be gigabit capable networks present or being planned, whereas others are focussing efforts in more rural areas.
22. The level and intensity of competition has clearly strengthened in recent years. There are now 99 alternative network providers in the UK, up 28 from last year. We estimate that altnets secured over £4 billion in funding in 2021 alone. Their network coverage has doubled to 5.9 million premises, and the largest six alt nets have now set ambitions to reach 25 million homes by the mid 2020s. They have already connected near 1 million end customers to their networks as well.
23. There are now 143 operators registered to use PIA – enabling them to build networks across the country. We're providing a good quality of service, and have seen order volumes continue to grow, despite the challenges posed by lockdown. We have received over 56,000 kilometres of noticed duct and 440,000 of noticed poles with 4,900 kilometres of duct and 29,000 poles built over last 15 months.
24. This network-based competition is good for consumers – offering a wider choice of network providers and retail options. It is also helping accelerate the deployment of full fibre and to bring

the benefits of full fibre to a wider range of communities than would have otherwise been possible, and has kept broadband costs to the end users amongst the lowest in Europe.

25. In agreement with DCMS, we publish a list of exchanges we intend to build in, which we have updated regularly since 2019. This information can be found [here](#) and includes more than 250 exchanges across Wales that form part of our plans. We publish details of each exchange we plan to build in as part of our major build programmes – which captures the significant majority of all our commercial deployment. We do not publish details about some smaller programmes where it is not logistically feasible for us to do so. For example, these smaller programmes include our delivery of FTTP to new housing developments, in-fill for some newer housing developments (known as retro new sites) and deployments to meet our universal service obligations (USO).

26. Publication of this information – and our wider footprint selection – follows a robust and audited process to ensure that we maximise commercial opportunities while also being fully compliant with competition law and all our other legal obligations. We assess a number of different factors to decide where full fibre deployment offers the best chance of a commercial return, including for example anticipated costs of build and projected take-up of services. We do not target overbuild of competitor networks – indeed where there is limited competitor overlap we may anticipate higher take-up of our services. Equally, where we anticipate lower costs to build, even if there is competitor overlap we may still consider we have good prospects of a commercial return. As above, this aligns with Ofcom and DCMS’s overarching strategy to promote competition and investment in gigabit capable networks to deliver better outcomes for UK consumers and businesses.

Supporting the deployment with UK Government

27. There are a number of areas where we continue to engage with DCMS and other Departments. Addressing different deployment barriers remains critical to support the sector to deliver at both pace and scale.

28. The National Infrastructure Commission (NIC) highlighted the importance of access to multi-dwelling units (MDUs) in their annual report last year. We estimate that up to 1.5 million flats may not be accessible owing to challenges operators face in securing wayleaves. The success of our rural deployment – and Project Gigabit – will both also depend on how easily we and other network builders can negotiate wayleaves with landowners. The scale of the deployment is huge, there are nearly 180,000 poles on private land in Wales .
29. DCMS have proposed some reforms to the Electronic Communications Code, and we're continuing to engage with the Department to demonstrate that further amendments could be made to accelerate deployment and avoid these risks. Stronger reforms would benefit operators in both urban and rural areas. In particular, where we have copper infrastructure in place, we believe we can upgrade this with minimal visual impact or burden on the landowner and that reforms should be delivered to enable us to do so.
30. In July 2019, DCMS confirmed their intent to ensure that all new build properties were delivered with gigabit capable infrastructure. While our commercial efforts have ensured that the significant majority of new builds are now contracted with full fibre, there are too many new builds which remain on copper-based networks. Amendments to building regulations are expected later this year.
31. These changes to building regulations will need to be mirrored by Welsh Government, as the proposed changes will only apply in England. We urge Welsh Government to take this step as a priority.
32. The Department for Transport (DfT) are also considering measures to reduce bureaucracy around streetworks. One measure being considered is to introduce a new flexi-permit which would cover a number of minor and standard works in a limited area for a limited period of time. This would reduce the volume of permits which operators would need to apply for, and enable a more efficient build through reducing the amount of time we have to stop work while waiting for streetwork permits to be granted. It is positive to see DfT consider this measure, and we hope it is introduced as quickly as possible so as to allow operators to benefit from this change.

33. We continue to engage constructively with BDUK on the framework for Project Gigabit, and look forward to seeing the final framework for delivery. We believe that a framework which incentivises scale build in the intervention area would offer value for money while rapidly improving build levels. In the meantime, we're continuing to deliver full fibre across the country – bringing the benefits of world class connectivity to communities in both urban and rural areas.
34. We're also aiming to transition to a green fleet by 2030. We have the second largest commercial fleet in the UK, so this represents a significant challenge and opportunity for the UK. Recent changes to the Government's grant programmes have added additional cost to the transition and appear to run counter to the overarching drive towards net zero.

Eitem 4.1

Pwyllgor Newid Hinsawdd, yr Amgylchedd a Seilwaith /
Climate Change, Environment and Infrastructure Committee
Cysylltedd digidol yng Nghymru / Digital connectivity in Wales
DC05



Ymateb gan / Evidence from BT Group

Written evidence from BT Group: update evidence session on digital connectivity

1) Executive summary

We are pleased to provide the committee with an update on digital connectivity in Wales. This submission provides an update to the evidence we provided to your predecessor committee in 2021. Our submission provides members with:

- an update on full fibre coverage and deliver in Wales and what we are doing to reach the hardest to reach
- the latest on our investment to deliver enhanced 4G and 5G mobile coverage and services in Wales
- an update on our decision to pause the roll-out of Digital Voice services

2) Delivering Full Fibre across Wales as soon as possible and reaching the hardest to reach

BT shares the Welsh and UK Government objectives of ensuring gigabit-capable connectivity is available across Wales as quickly as possible – and that everyone should have access to decent broadband. We are doing this by:

- **Continuing to support, through Openreach, the Superfast Cymru scheme to deliver at least superfast coverage as far as possible** – Between 2014-2018 we co-funded the Superfast Cymru Programme increasing coverage to 95% connecting 733,000 premises (77,505 via Fibre To The Premises and 655,495 via Fibre To The Cabinet). In 2019 we commenced the latest co-funded contract to connect 26,000 premises to full fibre by March 20/21 which was further increased to 37,000 due for completion in summer 2022.
- **As the Broadband Universal Service Provider**, we are doing all we can to maximise the impact of the USO programme through demand aggregation and cost sharing, building new full fibre solutions wherever possible and thus further reducing the number of very hard to reach premises.

The UK Government's plans under Project Gigabit will also be key in extending the full fibre footprint into non-commercial areas in Wales. Effective and efficient utilisation of the £5bn has the potential to extend full fibre deep into the non-commercial 'final 20%' of the UK. We understand that the DCMS expectation is that there will be a value-for-money case to reach up to potentially 99% of UK premises, leaving just the last final 1% of premises – with a possibility that funded full fibre extends beyond this via existing regional and local programmes.

While it is currently unclear quite how many of these 'very hard to reach' premises will remain (or indeed precisely where across the UK they will be located), the suggestion of fewer than 100,000 (based on the likely number of residual USO-premises where the per premise costs are likely to be well in excess of the £3,400 cost threshold) provides a good guide. It represents a realistic limit of where commercial, USO or



publicly funded full fibre projects (at least based on current UK Government cost-benefit analyses) may be able to deliver over the long term.

There are a variety of technology options available for those Welsh premises that cannot access a decent broadband service today. Ofcom has stated that 4G Fixed Wireless Access (FWA) can and does offer the capability to deliver a 'decent' broadband service. Ofcom estimates that there are 55,000 premises in Wales that cannot get decent broadband. Of these 55,000 premises, 40,000 could gain access to decent broadband over a FWA service, providing an additional 2.6 percentage points of decent broadband service coverage in Wales.¹

The remaining 15,000 (1%) of Welsh premises that cannot access 'decent' broadband may be eligible for support under the Broadband USO. Notably, this figure dropped from 18,000 in the previous year because of improvements made in mobile phone coverage across Wales. Since March 2020, these households and businesses have had a legal right to request a decent, affordable broadband connection from BT as the designated Universal Service Provider for the UK (apart from in Kingston-Upon-Hull).

However, whilst there may be longer term solutions for these premises via Project Gigabit and other programmes, there is likely to be very strong demand for improvements over a shorter time period – so consideration of the use of alternative approaches may need to be given to a wider pool of premises than this 'final 100,000'.

We therefore fully support exploration of alternative approaches to delivering improved digital connectivity to these premises. The incremental social and economic benefits that improved connectivity can have for those with poor internet access today are significant – and likely to be well above the benefits accrued from similar improvements in connectivity for those already well-served.² For example, boosting broadband speeds in these areas to 30-100Mbps and enabling take-up of these services at rates seen elsewhere in the UK, whilst not to gigabit-capable levels, offers the potential for these last remaining parts of the UK to benefit to a much greater degree relative to other parts of the country.

Before consideration is given to the role that alternative approaches may be able to play, we believe it is critical that every effort is made – through further local and UK Government progress on 'barrier busting' measures – to reduce full fibre deployment costs and timescales as far as possible, enabling the commercial footprint to extend to more of the country and, where public funding is needed, for this to be spent as efficiently as possible. Independent research commissioned by BT demonstrates the significant impact removing barriers will have on the cost and speed of deployment.³

Whilst the objective must be to extend gigabit-capable connectivity, with full fibre as the gold standard, to as much of the UK as possible, reaching 100% may not be viable given the significant costs involved. The nature of these very hard to reach premises is such that they present a number of challenges to deliver cost effectively using conventional fixed network techniques. These include:

- relatively long distances from the main commercial fibre networks requiring long dig/duct lengths

¹ Ofcom, **Connected Nations (2021)**

² See response to B12 for more detail

³ [Analysys Mason document \(bt.com\)](#)



- deployment in sparsely populated areas where there is limited ability to share the high fixed costs associated with fixed connectivity
- other unusual features that further add to fixed network costs e.g. difficult/expensive route crossings, subsea, river or infrastructure crossings, planning issues/restrictions for masts sites, expensive duct routes through rocky surfaces etc.

For areas where full fibre delivery costs are prohibitive, we believe the following alternative approaches could provide significant uplifts in connectivity for the very hard to reach and justify further detailed consideration:

- Fixed Wireless access via current/extended 4G/5G Mobile infrastructure and spectrum
- FWA via standalone FWA networks using unlicensed or lightly licensed spectrum
- Satellite options, though primarily emerging LEO Sat technology due to the inherent latency issues associated with Geo Sat.

These technologies, through the use of radio links in the final access leg, are most likely to avoid many of the issues that cause fixed network deployment to these premises to be so costly. Avoiding, or at least minimising, the need to build new individual or very lightly shared civil infrastructure in remote areas will be key to reducing the effective per premise costs. Radio systems can both reduce the fixed costs and aggregate costs over larger, more geographically disperse groups, lowering the average cost.

However, it is important to recognise that these alternative approaches come with their own individual trade-offs relative to full fibre - in terms of performance levels, capital investment required, ongoing operational costs and retail pricing, and time to deliver. It will be important that the UK Government considers these fully as it develops its policy approach for the very hard to reach.

Members of the committee should note that these factors in combination mean that:

- UK Government intervention will be required if the ambition of delivering improved digital connectivity to the very hard to reach is to be realised;
- the intervention will likely need to be in a different form to the BDUK gigabit programme e.g. potentially a separate 'final fraction' programme with appropriate service delivery criteria that is capable of drawing on a range of providers/solutions;
- consideration will need to be given to what acceptable service levels and delivery timescales look like, as this will drive what solutions are viable within these parameters;
- a simple extension of the USO model will not be a viable solution, due to the range of solutions needed, the expected mix of different technology suppliers and delivery models and the very significant differential between the costs to deliver and the benefits that flow to the network builders.

3) Delivering and investing in better mobile coverage across Wales

Shared Rural Network brings benefit to rural connectivity in Wales

EE plans to improve 4G coverage in more than 200 rural locations across Wales by June 2024, as part of the Shared Rural Network (SRN) programme. This new investment has been welcomed by stakeholders including NFU Cymru. The SRN programme is aiming to extend 4G coverage to 95% of the UK's geography by 2025.



As part of the process of delivering the SRN programme, we agreed with Ofcom that our licence to use spectrum should be amended to introduce new, legally binding coverage obligations. Under these, EE aimed to increase its geographic 4G coverage of the Welsh landmass to 83% by 2024, and to 88% by 2026. We have surpassed the first requirement, as EE now already covers 85% of the Welsh landmass with 4G as of April 2022.

The fact that we invested ahead of other networks means that we already have infrastructure in place that we can upgrade (through transmitting more and longer-range radio spectrum from each site) to extend and improve the 4G service we provide across Wales. We will therefore be able to meet our SRN commitments and deliver substantial coverage improvements without the need to build many new masts.

EE has already upgraded its 4G network in over 100 locations across Wales since the SRN deal was signed in March 2020. We recently announced plans to extend 4G in over 100 further locations in Wales, bringing the total to 220 in this phase of the programme. All sites have been made available for other operators to share under the SRN scheme.

The rural locations that will get 4G upgrades between now and June 2024 are spread across Wales and include:

- 27 locations in Powys
- 15 locations in Gwynedd
- 13 locations in Carmarthenshire
- 12 locations in Pembrokeshire
- 9 locations in Denbighshire
- 7 locations in Ynys Mon

5G convergence and ambition in Wales

Last summer, BT unveiled new plans to offer high performance 5G solutions across the entire UK by 2028 and to fuse its leading mobile, Wi-Fi and fibre infrastructures to realise the potential of the UK's first fully converged network. This long-term vision means BT is building and bonding next-generation fibre and 5G networks simultaneously. The unique, smart infrastructure provides a platform for revolutionary new services for customers and converged technology opportunities for businesses, supporting the UK's economic recovery and future growth.

To extend mobile coverage BT's mobile network, EE, is driving 4G connectivity deeper into rural areas, adding over 4,500 square miles of new signal by 2025. In parallel EE's 5G network, which was first to launch two years ago, will grow to cover half of the UK population very soon, significantly ahead of the UK Government's 2027 ambition. Utilising the expanded 4G infrastructure, 5G will pass the geographic reach of 4G to become the UK's largest digital network by 2028, providing signal to over 90% of UK landmass. To reach this benchmark new 700MHz 5G spectrum, recently secured in Ofcom's auction, will be deployed across the majority of EE sites, offering stronger indoor and wider rural coverage.

To better understand the potential of 5G to improve the delivery of public sector services in rural Wales, BT has been undertaking a trial with the Welsh Government's 5G Wales Unlocked, an innovation



programme that includes the new immersive 360-degree classroom in Ebbw Vale. This is one of several trials across the UK sponsored by DCMS, demonstrating how ultrafast technology like 5G could transform rural communities, from powering tech innovations in agriculture, to improving rural transport and education and bolstering the tourism industry.

Using a localised 5G network provided by BT as one of the project partners, the classroom uses the high-speed connectivity to project inspiring and educational video content onto all four walls in a 360-degree format, providing an immersive experience.

Lessons can be delivered across a variety of curriculum-related themes, taking children and young people on a journey of the senses as they ‘dive’ into the detail of a plant cell or explore the surface of a planet.

Thanks to the ultrafast 5G connection, live link-ups have also been established, allowing learners to discover the fascinating history of heritage sites such as Raglan Castle, with a live virtual tour from a Cadw custodian located at the site.

The live link-ups can also be used to connect classrooms across the country, meaning pupils can work collaboratively with other learners, and educators can enhance their own lessons in partnership with other schools.

Reforming the Electronics Communications Code

Several other policy and legislative barriers impact the ability of operators to deploy new mobile infrastructure. These include the scope of the Electronic Communication Code (ECC) in enabling operators to establish rights for access to land and to resolve disagreements between landlords and operators over the terms of that access for the deployment of mobile sites.

In November 2021 the UK Government published its response to the ECC consultation outlining its proposals in light of the responses received. The Product Security and Telecommunications Infrastructure (PSTI) Bill in which these changes are to be enacted was laid simultaneously and is currently passing through Parliament.

Overall, BT is supportive of the policy direction and the overall aims that UK Government seeks to achieve through the legislation. In particular, the ability for operators to seek interim rights and backdated rent pending resolution of renewal negotiations and encouraging greater use of Alternative Dispute Resolution procedures (e.g. mediation). This is subject to some drafting amendments to secure those outcomes.

Specific reforms include:

- Remove – through the introduction of interim arrangements for renewal negotiations – some of the incentives for landowners and their agents to delay negotiating new agreements.



- Address problems in agreeing new Code terms for leases where land has previously been occupied under different legislation, the Landlord and Tenant Act 1954 and the Business Tenancies Order (Northern Ireland) 1996.
- Enable terms to be reached more quickly where land is occupied under an expired “old” Code agreement (i.e. pre-2017).
- Ensure that upgrades to equipment e.g. to deploy 5G on an existing 4G site can be made more easily.

4) An update on Digital Voice

We’ve taken the decision to pause all further Digital Voice switch-overs for customers who don’t want to move to the new technology straight away. We’ll restart the programme once we have key products in place to provide our customers with more resilient connectivity when they need it.

Digital Voice is BT’s new home phone service that will mean calls are made over our new broadband network, rather than the old analogue network which is over 40 years old.

Put simply, instead of plugging a home phone into a wall-mounted phone socket that people have done for decades, customers will connect their handset to their broadband router. Doing this will replace old analogue technology that is fast becoming obsolete with a new digital service that will provide crystal-clear calls, prevent the vast majority of scam calls and ultimately will be more efficient on electricity usage making it better for the environment.

It is, in short, a necessary upgrade to customers’ phones in their homes that will bring long term benefits and a service fit for the future.

This pause in the programme will also enable us to drive a greater level of public awareness and understanding of the coming change.

This will include the roll-out of longer-lasting battery back-up units for use in the event of a power cut, home mobile landlines for people without broadband and hybrid home phones (for customers not comfortable using a mobile, but which can connect via the mobile network if the fixed connection becomes unavailable and with an in-built back-up battery). Customers who want the Digital Voice service can still request this upgrade during the pause period.

BT understand customer feedback and realises we underestimated the impact that this technology upgrade could have on areas prone to power cuts or those with poor mobile reception. Where in the event of a power cut, customers would not be able to call anyone to get help.

BT recognises these concerns, as the fibre cables used by Digital Voice can’t conduct electricity. Whilst alternatives are in place, we appreciate that these are not yet as good as they could be for all circumstances. The issues were thrown into sharp relief during the recent storms when some households had to endure long periods without electricity.

Work will have to continue, due to PSTN becoming increasingly difficult to maintain and is becoming less and less reliable. The long-term resilience of landline phones needs the retirement of the PSTN and a shift to digital services.



It also means we can provide crystal clear call quality, better identify, and prevent scam calls and significantly reduce electricity consumption, making it better for the environment. This change is happening in countries across the world.

Lee Waters AS/MS
Y Dirprwy Weinidog Newid Hinsawdd
Deputy Minister for Climate Change



Llywodraeth Cymru
Welsh Government

Llyr Gruffydd MS
Chair,
Climate Change, Environment, and Infrastructure Committee
Senedd Cymru
Senedd@senedd.wales

25 April 2022

Dear Llyr,

I am writing to inform the Committee of the intention to consent to the UK Government making and laying The Phytosanitary Conditions (Amendment) (No. 2) Regulations 2022 by 28 April 2022.

I have received a letter from Victoria Prentis MP, Minister of State for Farming, Fisheries and Food, asking for consent to these Regulations. The Regulations intersect with devolved policy and will apply to Wales. The provisions could be made by Welsh Ministers in exercise of our own powers. The Regulation will extend to England, Scotland and Wales.

The Regulations will be made exercise of the powers conferred by Article 41(3) of Regulation (EU) 2016/2031 of the European Parliament and of the Council on protective measures against pests of plants.

The amendments will tighten import rules relating to the trees *Cedrus Trew* and *Pinus L* and their cut foliage. These trees are known to host the pest *Thaumetopoea pityocampa* (PPM) and the pest has been detected on recent imports of these trees from France. These stricter Regulations mean that trees and cut foliage will only be imported from countries or geographical areas that are pest-free, whereas previously trees could be imported from nurseries if they had been declared pest-free. These stricter requirements will decrease the risk that pests are accidentally introduced.

Welsh Government officials have been working closely with UK Government officials to manage the recent interception of imported trees carrying PPM nests. Officials have also been involved in the development of legislative options and have seen draft versions of the proposed Statutory Instrument (SI).

The SI is subject to the negative procedure and is due to be laid before Parliament on 28 April 2022 with a commencement date of 29 April 2022. This will minimise the risk that this pest is accidentally introduced into GB through import of trees and foliage.

Although the Welsh Government's general principle is that the law relating to devolved matters should be made and amended in Wales, on this occasion, it is considered appropriate for the substance of the amendments to apply to Wales. This is because there

Canolfan Cyswllt Cyntaf / First Point of Contact Centre:
0300 0604400

Bae Caerdydd • Cardiff Bay
Caerdydd • Cardiff
CF99 1SN

Gohebiaeth.Lee.Waters@llyw.cymru
Correspondence.Lee.Waters@gov.wales

Rydym yn croesawu derbyn gohebiaeth yn Gymraeg. Byddwn yn ateb gohebiaeth a dderbynnir yn Gymraeg yn Gymraeg ac ni fydd gohebu yn Gymraeg yn arwain at oedi.

We welcome receiving correspondence in Welsh. Any correspondence received in Welsh will be answered in Welsh and corresponding in Welsh will not lead to a delay in responding.

Tudalen y pecyn 39

is no policy divergence between the Welsh and UK Government in this matter. This ensures a coherent and consistent statute book with the regulations being accessible in a single instrument. In addition, there is an urgent need to introduce this legislation, to protect biosecurity in Wales. I consider that legislating separately for Wales would be neither the most appropriate way to give effect to the necessary changes, especially given the urgent nature of the Regulations, nor a prudent use of Welsh Government resources given other important priorities.

These Regulations do not have implications for the Programme for Government. Preventing the entry of plant pests and diseases supports the majority of well-being goals in the Well-being of Future Generations (Wales) Act (2015) and will have a direct, positive contribution to the “a healthier Wales” and a ‘resilient Wales’ goals, together with associated impacts on the goals of “a prosperous Wales” and “a globally responsible Wales”.

I have written similarly to Huw Irranca-Davies MS, the Chair of the Legislation, Justice and Constitution Committee.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Lee', is positioned above the typed name and title.

Lee Waters AS/MS

Y Dirprwy Weinidog Newid Hinsawdd
Deputy Minister for Climate Change

Lee Waters AS/MS
Y Dirprwy Weinidog Newid Hinsawdd
Deputy Minister for Climate Change



Llywodraeth Cymru
Welsh Government

Llyr Gruffydd AS
Cadeirydd,
Y Pwyllgor Newid Hinsawdd, yr Amgylchedd a
Seilwaith Senedd Cymru
SeneddHinsawdd@senedd.cymru

4 Mai 2022

Annwyl Llyr,

Rwy'n cyfeirio at fy llythyr atoch 25 Ebrill. Rwy'n ysgrifennu atoch er mwyn rhoi gwybod i'r Pwyllgor fy mod wedi rhoi caniatâd i'r Ysgrifennydd Gwladol osod Rheoliadau Amodau Ffytioiechydol (Diwygio) 2022 mewn perthynas â Chymru. Rwyf wedi gosod Datganiad Ysgrifenedig sydd ar gael yn: [ws-ld15105-w.pdf](https://www.senedd.cymru/ws-ld15105-w.pdf) ([senedd.cymru](https://www.senedd.cymru))

Mae'r Rheoliadau'n croestorri â pholisi datganoledig a byddant yn gymwys i Gymru. Gallai Gweinidogion Cymru wneud darpariaethau drwy arfer ein pwerau ein hunain. Mae'r Rheoliadau'n ymestyn i Gymru, Lloegr a'r Alban.

Gwnaed y Rheoliadau drwy arfer pwerau a roddir gan Erthygl 41(3) o Reoliad (EU) 2016/2031 Senedd Ewrop a'r Cyngor ar fesurau diogelu rhag plâu planhigion. Mae'r Offeryn Statudol (OS) yn ddarostyngedig i'r weithdrefn negyddol a chafodd ei osod gerbron y Senedd ar 28 Ebrill 2022 gyda dyddiad cychwyn o 29 Ebrill 2022.

Canolfan Cyswllt Cyntaf / First Point of Contact Centre:
0300 0604400

Bae Caerdydd • Cardiff Bay
Caerdydd • Cardiff
CF99 1SN

Gohebiaeth.Lee.Waters@llyw.cymru
Correspondence.Lee.Waters@gov.Wales

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Tudalen y pecyn 41

Rwyf wedi anfon llythyr tebyg at Huw Irranca-Davies AS, Cadeirydd y Pwyllgor Deddfwriaeth, Cyfiawnder a'r Cyfansoddiad.

Yn gywir

A handwritten signature in black ink, appearing to read 'Lee', is centered on a light gray rectangular background.

Lee Waters AS/MS

Y Dirprwy Weinidog Newid Hinsawdd
Deputy Minister for Climate Change

Julie James AS/MS
Y Gweinidog Newid Hinsawdd
Minister for Climate Change

Eitem 4.3



Llywodraeth Cymru
Welsh Government

Huw Irranca-Davies AS
Cadeirydd
Pwyllgor Deddfwriaeth, Cyfiawnder a'r Cyfansoddiad

Llyr Gruffydd AS
Cadeirydd
Pwyllgor Newid Hinsawdd, yr Amgylchedd a Seilwaith

6 Mai 2022

Annwyl Gadeiryddion,

Rwy'n ysgrifennu yn unol â'r cytundeb cysylltiadau rhyng-sefydliadol i'ch hysbysu y bydd cyfarfod rhithwir o'r Grŵp Rhyngweinidogol ar Sero Net, Ynni a Newid Hinsawdd yn cael ei gynnal ar 11 Mai. Rwy'n ymddiheuro am gysylltu ar fyr rybudd.

Byddaf i'n cynrychioli Llywodraeth Cymru. Bydd y cyfarfod yn trafod y pontio cyfiawn, Llywodraeth y DU strategaeth diogelu ffynonellau ynni sydd, a Mesur Ynni.

Bydd y Grŵp yn cyhoeddi cyd-hysbysiad ar ôl y cyfarfod. Mi fyddaf yn cyhoeddi Datganiad Ysgrifenedig hefyd.

Yn gywir,

Julie James AS/MS
Y Gweinidog Newid Hinsawdd
Minister for Climate Change

Canolfan Cyswllt Cyntaf / First Point of Contact Centre:
0300 0604400

Bae Caerdydd • Cardiff Bay
Caerdydd • Cardiff
CF99 1SN

Gohebiaeth.Julie.James@llyw.cymru
Correspondence.Julie.James@gov.Wales

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Tudalen y pecyn 43

Eitem 7

Yn rhinwedd paragraff(au) vi o Reol Sefydlog 17.42

Mae cyfyngiadau ar y ddogfen hon