



# OVERVIEW

## Digital Exclusion

The mobile network survey data reveals a critical state of digital exclusion across the Wrexham constituency. Digital exclusion, in this context, is not merely a lack of access, but the inability to use access reliably and effectively for essential life functions (work, education, public services) due to pervasive poor quality of service.

## General Data Trends: A Crisis in Connectivity

The most significant trend is the exceptionally low performance across all major mobile networks. None of the primary network providers achieve an average rating above 5.3 out of 10 on any metric, indicating that connectivity in Wrexham is broadly insufficient for modern needs.

## Widespread Poor Performance

The most significant finding is the overall low rating for mobile network quality. All networks score below 5.3 out of 10, indicating a systemic coverage and performance issue in the area surveyed.

# DIGITAL EXCLUSION IN WREXHAM



Since being elected as the MP for Wrexham, one of my priorities has been addressing the long term issues around the mobile service in Wrexham and the surrounding areas.

Mobile coverage today is a necessity not a luxury, it is essential to how complete everyday essential tasks, whether that's working from home or life admin. For too long, too many people across Wrexham have not been able to rely on this necessity, and I'm determined to do something about it.

The following report seeks to understand and showcase this issue first hand. Based on 1095 responses identifying a main network provider, it focusses on key performance indicators, subjective experiences and reliance on mobile internet for home use across major network providers

This report is a call to action to the Government, mobile networks and anyone else willing to support us in this endeavour. This isn't about trying to score political points but about making a real difference to my local community.

Andrew Ranger  
MP for Wrexham



# Digital Exclusion in Wrexham

The mobile network survey data reveals a critical state of digital exclusion across the Wrexham constituency.

Digital exclusion, in this context, is not merely a lack of access, but the inability to use access reliably and effectively for essential life functions (work, education, public services) due to pervasive poor quality of service.

The data establishes a clear and troubling link between high user reliance and low service quality, creating a significant barrier to full civic and economic participation for a substantial segment of the population.

# 1. The Pervasive Threat of Exclusion (Quality of Service)

The core mechanism of exclusion in Wrexham is the consistently poor quality of the mobile internet, which is insufficient to support modern applications.

# 1. The Pervasive Threat of Exclusion

Metric	EE (Best)	Three (Worst)	Observation
Mobile Internet	5.26 / 10	4.00 / 10	<b>Sub-Standard Performance:</b> No network achieves even a satisfactory score (7/10). The highest-rated service (EE) is barely above the midpoint, while the lowest (Three) suggests near-unusable internet access.
Consistency	4.76 / 10	4.23 / 10	<b>Failure to Sustain Connection:</b> Low consistency ratings across the board indicate frequent drops, buffering, and variable speeds. This is the single biggest threat to digital inclusion for tasks that require sustained connection, such as video conferencing for work or live-streamed school lessons.
Subjective Dissatisfaction	44.81%	54.29%	<b>User Experience Penalty:</b> The high percentage of users who rate their coverage as 'Poor' or 'Very Poor' confirms that poor quality is not a statistical anomaly but a daily negative experience.

## 2. Quantifying the Vulnerable (Home Use Reliance)

Digital exclusion is most acute when poor service quality intersects with reliance on that service for critical activities. The data reveals that a significant proportion of constituents are digitally vulnerable.

The "Home Use Reliance" figures show the percentage of users who depend on their mobile internet for home-based activities like working, streaming, and education.

## 2. Quantifying the Vulnerable (Home Use Reliance)

Network Provider	% Relying on Mobile Internet for Home Use	Mobile Internet Rating (1–10)	Risk Profile
Vodafone	47.86%	4.87	<b>High:</b> Large number of reliant users on a mid-to-low performing network.
O2	44.71%	4.3	<b>Extreme:</b> High reliance combined with one of the lowest internet ratings (4.30), exposing a large user base to critical failure.
Three	41.79%	4	<b>Severe:</b> High reliance on the lowest-rated mobile internet service, indicating a highly excluded group.
EE	42.28%	5.26	<b>Mitigated:</b> High reliance, but on the best-performing network.

## **Conclusion on Vulnerability:**

For customers of O2 and Three, the combination of high reliance (over 40%) and the worst internet ratings ( $\leq 4.30$ ) places them at the highest risk of digital exclusion. These are the residents whose career prospects, children's education, and ability to use public digital services are most compromised by infrastructure failure.

# Policy Implications for Digital Exclusion

The findings suggest that the digital divide in Wrexham is not primarily one of access (as most people have a mobile contract), but one of quality. This re-frames the policy issue from one of simply rolling out infrastructure to one of guaranteeing service reliability and quality of experience.

<b>Digital Exclusion Component</b>	<b>Data Point</b>	<b>Policy Implication</b>
<b>Educational Disadvantage</b>	41%–48% reliance on mobile internet for home use.	Students and parents in Wrexham are being penalised for remote learning due to poor consistency, widening the attainment gap.
<b>Economic Disadvantage</b>	Low ratings and consistency for all providers.	Businesses and remote workers are unable to sustain professional calls or transactions, stifling local economic recovery and the ability to attract high-skill jobs.
<b>Basic Human Need</b>	All ratings are below satisfactory (below 6/10).	Mobile connectivity is now an essential utility.

# Provider Analysis

This report analyses the provided mobile network survey data, focusing on key performance indicators, subjective experiences, and the reliance on mobile internet for home use across the major network providers. The analysis is based on 1095 responses identifying a main network provider, excluding 21 responses that were uncategorized (e.g. 'Other (Please Specify)' or 'none').

## Network Provider Market Share

Network Provider	Count (Survey Responses)	Observation
<b>O2</b>	<b>339</b>	One of the two most frequently reported providers.
<b>EE</b>	<b>309</b>	Along with O2, accounts for over half of all reported usage.
<b>Vodafone</b>	<b>127</b>	Moderate user base within the sample.
<b>Tesco Mobile</b>	<b>121</b>	Comparable in scale to Vodafone

# Comparative Network Performance (1-10 Rating Scale)

Average user ratings (on a scale of 1-10, with 10 being good) reveal a consistently low performance across all providers, with no provider scoring above 5.3 on any metric. This suggests a widespread issue with mobile network and internet quality in the survey area.

Network Provider	Overall Coverage Rating (1-10)	Consistency Rating (1-10)	Mobile Internet Rating (1-10)
EE	4.92	4.76	5.26
Vodafone	4.75	4.83	4.87
Tesco Mobile	4.64	4.91	4.84
O2	4.46	4.43	4.3

- **EE leads in both Overall Coverage Rating (4.92) and Mobile Internet Rating (5.26).**
- **Tesco Mobile has the highest Consistency Rating (4.91), indicating their service, while not the highest rated, is perceived as the most stable.**
- **Three consistently performs the poorest, scoring the lowest in all three categories, with an average Mobile Internet Rating of just 4.00.**

# Subjective Perception of Poor Coverage

While the average numerical ratings are low, analysing the percentage of users who subjectively rate their coverage as 'Poor' or 'Very Poor' provides a clearer picture of service dissatisfaction.

<b>Network Provider</b>	<b>% of Users Reporting Poor / Very Poor Coverage</b>	<b>Observation</b>
<b>O2</b>	<b>56.97%</b>	Highest dissatisfaction rate – over half of O2 users report poor.
<b>Three</b>	<b>54.29%</b>	Consistently low satisfaction aligns with its lowest performance scores.
<b>Giffgaff</b>	<b>50.00%</b>	Half of users experience inadequate coverage.
<b>Vodafone</b>	<b>48.41%</b>	Nearly half of users express dissatisfaction.
<b>Tesco Mobile</b>	<b>47.50%</b>	Slightly lower dissatisfaction rate.
<b>EE</b>	<b>44.81%</b>	Lowest dissatisfaction rate.

# Reliance on Mobile Internet for Home Use

A significant portion of users across all networks rely on their mobile internet for home use, such as streaming, working from home, or education.

Network Provider	% of Users Relying on Mobile Internet for Home Use	Observation
Vodafone	47.86%	Highest proportion
O2	44.71%	Substantial dependency
EE	42.28%	High reliance
Three	41.79%	Significant reliance
Tesco Mobile	38.26%	Moderate but still notable level of dependency among users
Giffgaff	36.73%	Lowest reported reliance, though service quality issues remain prevalent

# Key Findings and Recommendations

**1. Widespread Poor Performance:** The most significant finding is the overall low rating for mobile network quality. All networks score below 5.3 out of 10, indicating a systemic coverage and performance issue in the area surveyed.

**2. EE's Relative Advantage:** EE is the best performing network based on the average numerical ratings, particularly for mobile internet. However, even with this lead, a high percentage of their users are still dissatisfied.

**3. Consistency is King for Tesco Mobile:** Tesco Mobile achieves the highest rating for consistency, suggesting its service, while average, is perceived as more reliable than its competitors.

**4. O2's High Dissatisfaction:** Despite being one of the largest providers in the survey, O2 has the highest percentage of users reporting poor subjective coverage, suggesting it is a major area of concern.

**5. Critical Home Use:** Given the high reliance on mobile internet for crucial home functions (work, education, streaming), the current performance levels pose a serious productivity and quality-of-life challenge for the local population

# General Data Trends: A Crisis in Connectivity

The most significant trend is the exceptionally low performance across all major mobile networks. None of the primary network providers achieve an average rating above 5.3 out of 10 on any metric, indicating that connectivity in Wrexham is broadly insufficient for modern needs.

Network Provider	Overall Coverage Rating (1-10)	Consistency Rating (1-10)	Mobile Internet Rating (1-10)
EE	4.92	4.76	5.26
Vodafone	4.75	4.83	4.87
Tesco Mobile	4.64	4.91	4.84
O2	4.46	4.43	4.3
Giffgaff	4.42	4.44	4.48
Three	4.25	4.23	4

# Analysis

- EE is the highest-rated network, but its scores remain critically low, with its Mobile Internet Rating barely crossing the halfway mark at 5.26.
- Three is the lowest performer, with a Mobile Internet Rating of just 4.00.
- The high consistency Rating for Tesco Mobile (4.91) suggests that while their service isn't fast, it is perceived as the most reliable, which is a key factor for home use.

## Use of mobile internet for home use

<b>Network Provider</b>	<b>% of Users Relying on Mobile Internet for Home Use</b>	<b>Observation</b>
<b>Vodafone</b>	<b>47.86%</b>	Highest proportion of users depending on mobile networks for home connectivity.
<b>O2</b>	<b>44.71%</b>	High reliance despite poor coverage and low user satisfaction levels.
<b>EE</b>	<b>42.28%</b>	Significant dependency, though somewhat offset by better relative performance.
<b>Three</b>	<b>41.79%</b>	Heavy reliance on the lowest-performing network, compounding exclusion risks.
<b>Tesco Mobile</b>	<b>38.26%</b>	Moderate but notable reliance among users lacking stable fixed broadband.
<b>Giffgaff</b>	<b>36.73%</b>	Lowest reported reliance.

# Implications for constituents

The poor performance is not just an inconvenience; it is a barrier to key aspects of modern life, given the high number of residents relying on mobile connectivity for essential services.

## 1. High reliance on unreliable service

A substantial portion of Wrexham residents use this sub-par mobile internet for critical activities.

## 2. Market Share vs. Performance

The networks with the largest market share in the survey (O2 and EE) also have significant issues. While EE leads in performance, O2 has the highest rate of subjective dissatisfaction. This highlights that the largest providers are currently failing the largest number of people.

# Pervasive Subjective Dissatisfaction

The numerical ratings are backed up by qualitative feedback, showing that approximately half of all users across every network subjectively rate their coverage as 'Poor' or 'Very Poor'.

Network Provider	% of Users Reporting Poor / Very Poor Coverage	Observation
O2	56.97%	Highest dissatisfaction rate – over half of users report poor or very poor coverage.
Three	54.29%	Persistent poor user experience aligns with lowest overall performance ratings.
Giffgaff	50.00%	Half of users express dissatisfaction, confirming weak reliability and quality.
Vodafone	48.41%	Nearly half of users rate coverage as poor, indicating unresolved service gaps.
Tesco Mobile	47.50%	Slightly lower but still significant dissatisfaction among users.
EE	44.81%	Lowest dissatisfaction rate, though still reflects widespread quality concerns.

# Analysis

- O2, one of the most used networks, has the highest dissatisfaction rate at almost 57%.
- This trend confirms that the low numerical ratings are not isolated, but reflect a tangible, negative experience for a majority of mobile users.

# Constituency Case Studies

The following are just a few of the many remarks we received from constituents regarding Mobile Service.

“The service in Bangor on Dee is none existent and if the WiFi goes down (it’s very poor anyway as no fibre) it leaves us very vulnerable as we are in our 70’s.”

“I have completed the survey on the poor signal. I lost my uncle in 2024 and the hospital was unable to reach me due to having no signal so I appreciate this being brought to the attention for a possible change. Thank you.”

“Bangor on Dee if the electricity goes off the WiFi goes off. When that happens we are told to use our mobiles which wont work on any network without the internet being on. It is a sad case that if I go out for a walk I cannot contact home or anyone if I fell and if we had a power cut nothing works at home as we rely on wifi calling.”

“I attended the Hospital last week we could not get a signal from my the main doors and even thought we moved from that spot by some 30 yards still no reception.”

“The network signal in and around Wrexham is very very poor and I have struggled accessing banking and WhatsApp communications while out and about in the town centre as well as at home. With modern technology advancements fast and reliable network is a must especially within the town centre.”

# Concluding Remarks

This report has laid bare the reality of digital exclusion across Wrexham. It confirms what many residents already know from experience – that our mobile connectivity is not fit for purpose. Every major network provider, without exception, has been shown to deliver a level of service that falls below what is needed for modern life. The problem is not marginal or localised; it is systemic.

In a community where over 40% of households rely on mobile internet as their primary connection, these failures carry real consequences. They hold back children trying to learn remotely, businesses trying to compete, and families trying to stay connected. This is not simply a matter of inconvenience – it is a question of fairness and opportunity.

The data tells a simple story: people in Wrexham are being asked to make do with less, despite paying the same as others for a service that too often doesn't work. That cannot continue. Connectivity today is a basic utility – as vital as water or electricity – and it should be treated as such.

Our task now is clear. We need accountability from providers, stronger action from regulators, and a renewed commitment from government to ensure that no community is left behind in the digital age. Improving coverage and reliability is not just about signal strength – it is about social mobility, economic growth, and dignity in everyday life.

This report is not the end of the conversation; it is the start of a campaign for change. I will continue to press network operators, ministers, and industry regulators until Wrexham gets the reliable digital infrastructure it deserves.



**Andrew Ranger**  
MP for Wrexham