

Swansea Bay City Deal

Swansea Bay City Deal Digital Infrastructure Investment FY2024-25

Final Report



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1. Introduction

1.1 Background

The Swansea Bay City Deal (SBCD) has a number of digital elements within its programme to improve the local economic and social circumstances of the region. The programme includes, but is not limited to, full fibre fixed connectivity and associated infrastructure, as well as 4G, 5G, and Internet of Things wireless networks. The key aims of the programme are to enable:

- Better broadband for everyone, leaving nobody behind.
- A smart region ready and able to innovate and adopt emerging technology.
- An inclusive digital landscape that meets everyone's needs.

As part of the City Deal funding, the SBCD programme team is required to report on a number of outcomes. This report is concerned specifically with the levels of investment in digital infrastructure, seen as an essential part of improving the region's social and economic performance.

The initial Programme Business Case contained an overview of the projected Digital Infrastructure Programme Investment within the region over the course of the programme (Table 1).

FY	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	Total
SBCD	£532,070	£8,402,392	£8,402,392	£6,402,392	£902,392	£358,364	£25,000,000
Public Sector	£2,350,000	£2,700,000	£2,700,000	£2,700,000	£2,700,000	£350,000	£13,500,000
Private Sector	-	£6,500,000	£4,500,000	£4,500,000	£1,000,000	-	£16,500,000
Total	£2,882,070	£17,602,392	£15,602,392	£13,602,392	£4,602,392	£708,364	£55,000,000

Table 1: Projected Digital Infrastructure Programme Investment Overview (Source: SBCD Digital Infrastructure Programme Business Case, March 2022)

In FY2024-25, the SBCD Digital Infrastructure Programme restructured funding between the Rural and Connected Places workstreams. As part of this exercise, an economic assessment was undertaken to ascertain its impact on the programme's expected economic impact. As a result, an update was produced to the expected Digital Investment (Table 2).

FY	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	Total
SBCD	£450,000	£390,000	£830,000	£2,780,000	£12,690,000	£7,860,000	£25,000,000
Public Sector	£7,400,000	£3,600,000	£4,330,000	£5,710,000	£20,950,000	£19,980,000	£61,970,000
Private Sector	£23,660,000	£32,500,000	£29,050,000	£30,000,000	£35,470,000	£30,950,000	£181,630,000
Total	£31,210,000	£36,490,000	£34,210,000	£38,490,000	£69,110,000	£58,790,000	£268,600,000

Table 2: Projected Digital Infrastructure Programme Investment Overview (Source: SBCD Digital Infrastructure Programme Economic Appraisal, November 2024)

1.2 About FarrPoint

FarrPoint is an independent technology consultancy that specialises in digital connectivity. We provide independent advice on the commercial and technical considerations of the design of national and regional connectivity strategies, economic assessment, technical planning and modelling, use case development, procurement support, and implementation assurance.

Our team comprise a mix of consulting technologists, economists and data scientists who work together to provide experience, expertise, and complementary resources to clients in the public and private sectors.

Our approach is unlike many other consultancies; what clients get from FarrPoint is pragmatic guidance from a team that understands both the commercial, regulatory and policy considerations, plus how these connectivity and technology solutions can be delivered on the ground to deliver the desired benefits.

As trusted advisers, we build strong relationships with our clients based on empathy, flexibility, and independence. We have a strong track record of delivering Benefits Realisation, Impact Assessments and Programme Evaluations for a range of public and private sector clients.

With decades of experience advising clients on connectivity, telecoms and enterprise IT, we continue to evolve and innovate. We believe that connectivity is the underlying mechanism for bringing social and economic benefits to societies and communities.

1.3 Document Structure

This report is split into two main sections:

- **Approach** – this section sets out the approach (assumptions and data sources) taken to assess the level of public and private sector investment for both fixed and mobile infrastructure. This approach is in line with that used in the previous year as part of the SBCD reporting requirement.
- **FY2024-25 Analysis** – using the outlined approach, this section analyses the Investment between April 2024 and March 2025, split into three distinct high-level sources: SBCD, Public Sector, and Private Sector.

2. Approach

This section outlines the methodology used to assess the level of public and private sector investment in both fixed and mobile infrastructure during FY2024–25. It describes the data sources used and any assumptions required to estimate improvements in digital infrastructure coverage. The approach follows the framework applied in previous reporting cycles to ensure consistency with the SBCD reporting requirements.

2.1 Digital Connectivity Assessment

The first stage of assessing investment in digital infrastructure across the region involves examining changes in coverage since the previous year for both fixed and mobile connectivity. This analysis draws on data from Ofcom’s *Connected Nations* reports, covering each of the region’s four Local Authorities, with additional comparisons to Wales and the UK to provide broader contextual reference.

2.1.1. Fixed Connectivity

Table 3 sets out changes in fixed connectivity, including Superfast (above 30Mbps), Fibre to the Premise (FTTP), and Gigabit (1 Gbps) coverage. For completeness, information is also provided on the number of premises unable to get ‘decent broadband’, defined as premises with a sub-10Mbps download speed.

	Total number of premises	Unable to get 'decent' broadband (<10Mbps)		Superfast		FTTP		Gigabit	
		Coverage	Premises	Coverage	Premises	Coverage	Premises	Coverage	Premises
Swansea									
2020-21	118,819	0.6%	703	97.5%	115,811	30.6%	36,380	30.6%	36,388
2021-22	118,948	0.5%	577	98.1%	116,738	33.8%	40,207	78.2%	93,009
2022-23	119,131	0.5%	573	98.3%	117,123	45.1%	53,787	81.5%	97,102
2023-24	119,652	0.4%	523	98.5%	117,882	71.2%	85,163	87.5%	104,680
2024-25	120,070	0.4%	527	98.7%	118,467	80.7%	96,893	88.8%	106,671
<i>Last year change</i>	+418	-	+4	+0.2%	+585	+9.5%	+11,730	+1.3%	+1,991
Carmarthenshire									
2020-21	93,256	6.5%	6,042	86.6%	80,797	24.2%	22,573	24.2%	22,573
2021-22	93,885	5.2%	4,905	89.0%	83,553	42.5%	39,916	42.5%	39,919
2022-23	94,336	4.4%	4,194	90.6%	85,514	51.0%	48,142	51.0%	48,144
2023-24	94,823	4.2%	4,015	91.0%	86,287	59.3%	56,228	59.3%	56,230
2024-25	95,030	4.0%	3,829	92.0%	87,382	69.2%	65,799	69.2%	65,799
<i>Last year change</i>	+207	-0.2%	-186	+1.0%	+1,095	+9.9%	+9,571	+9.9%	+9,569
Neath Port Talbot									
2020-21	68,958	0.4%	286	97.0%	66,905	4.2%	2,882	29.7%	20,507
2021-22	69,046	0.4%	286	97.4%	67,236	7.8%	5,374	61.9%	42,722

	Total number of premises	Unable to get 'decent' broadband (<10Mbps)		Superfast		FTTP		Gigabit	
		Coverage	Premises	Coverage	Premises	Coverage	Premises	Coverage	Premises
2022-23	69,285	0.4%	245	97.8%	67,746	30.2%	20,939	69.3%	47,989
2023-24	69,452	0.3%	235	98.1%	68,120	51.3%	35,646	77.0%	53,508
2024-25	69,569	0.3%	212	98.2%	68,327	72.9%	50,697	81.3%	56,581
<i>Last year change</i>	+117	-	-23	+0.1%	+207	+21.6%	15,051	+4.3%	+3,073
Pembrokeshire									
2020-21	65,855	6.4%	4,243	88.0%	57,953	6.8%	4,490	6.8%	4,495
2021-22	66,278	4.5%	2,974	90.6%	60,064	15.8%	10,505	15.8%	10,505
2022-23	66,658	3.6%	2,400	92.9%	61,905	31.7%	21,153	31.7%	21,153
2023-24	66,871	3.1%	2,048	93.8%	62,704	56.5%	37,762	56.5%	37,762
2024-25	67,105	2.6%	1,724	94.8%	63,616	64.9%	43,583	64.9%	43,583
<i>Last year change</i>	+234	-0.5%	-324	+1.0%	+912	+8.4%	+5,821	+8.4%	+5,821
SBCD Area Total									
2020-21	346,888	3.3%	11,274	92.7%	321,466	19.1%	66,325	24.2%	83,963
2021-22	348,157	2.5%	8,742	94.1%	327,591	27.6%	96,002	53.5%	186,155
2022-23	349,410	2.1%	7,412	95.1%	332,288	41.2%	144,021	61.4%	214,388
2023-24	350,798	1.9%	6,821	95.5%	334,993	61.2%	214,799	71.9%	252,180
2024-25	351,774	1.8%	6,292	96.0%	337,792	73.1%	256,972	77.5%	272,634
<i>Last year change</i>	+976	-0.1%	-529	+0.5%	+2,799	+11.9%	+42,173	+5.6%	+20,454
Wales									
2020-21	1,535,457	3.4%	51,794	93%	1,434,871	23.1%	354,983	29.4%	450,879
2021-22	1,545,321	2.7%	41,432	95%	1,461,121	34.7%	535,901	47.6%	736,151
2022-23	1,555,294	2.4%	37,062	95.5%	1,485,267	48.9%	760,059	58.8%	914,562
2023-24	1,563,408	2.2%	35,064	95.9%	1,498,613	66.3%	1,036,175	72.0%	1,125,144
2024-25	1,569,380	2.0%	32,020	96.3%	1,511,340	76.2%	1,195,352	79.1%	1,242,114
<i>Last year change</i>	+5,972	-0.2%	-3,044	+0.4%	+12,727	+9.9%	+159,177	+7.1%	+116,970
UK									
2020-21	28,253,406	2.2%	611,035	95.1%	26,858,955	22.5%	6,343,011	38.0%	10,722,676
2021-22	28,559,727	1.7%	482,611	95.8%	27,365,327	36.1%	10,316,598	66.8%	19,074,711
2022-23	31,833,510	1.3%	428,031	96.6%	30,735,679	50.6%	16,096,417	73.6%	23,418,949
2023-24	32,136,752	1.2%	384,542	97.1%	31,193,482	67.4%	21,670,765	81.7%	26,255,693
2024-25	32,369,839	1.1%	340,159	97.5%	31,568,870	77.5%	25,092,339	85.9%	27,814,286
<i>Last year change</i>	+233,087	-0.1%	-44,383	+0.4%	+375,388	+10.1%	+3,421,574	+4.2%	+1,558,593

Table 3: Fixed Connectivity Assessment (Source: Ofcom Connected Nations)

As shown in Table 3, there have been notable improvements in fixed connectivity coverage across the region, broadly consistent with trends observed at both the Wales and UK levels. These changes provide an important reference point for estimating the scale of associated infrastructure investment within the region.

2.1.2. Mobile Connectivity

For mobile connectivity, the comparison focuses on changes in 4G coverage from at least 1 network and from all 4 networks. For mobile connectivity, the comparison focuses on changes in 4G coverage from at least one network, as well as coverage available from all four networks. Alongside the analysis of 4G coverage, this iteration of the study also considers the early stages of 5G rollout within the region. Table 4 therefore presents the observed changes in mobile connectivity, covering both 4G and emerging 5G coverage.

	4G Coverage			5G Coverage	
	At least 1 Network	All 4 networks	4G Notional Not Spots ¹	At least 1 Network (High Confidence)	At least 1 Network (Very High Confidence)
Swansea					
2020-21	98%	85%	2%	-	-
2021-22	98%	85%	2%	45%	25%
2022-23	98%	85%	2%	59%	38%
2023-24	99%	86%	1%	69%	60%
2024-25	99%	87%	1%	79%	68%
<i>Last year change</i>	-	+1%	-	+10%	+8%
Carmarthenshire					
2020-21	93%	62%	7%	-	-
2021-22	95%	65%	5%	6%	4%
2022-23	95%	67%	5%	24%	18%
2023-24	97%	76%	3%	61%	48%
2024-25	98%	79%	2%	63%	50%
<i>Last year change</i>	+%	+3%	-1%	+2%	+2%
Neath Port Talbot					
2020-21	95%	68%	5%	-	-
2021-22	96%	70%	4%	33%	14%
2022-23	98%	73%	2%	51%	30%
2023-24	99%	83%	1%	76%	61%
2024-25	99%	83%	1%	87%	72%
<i>Last year change</i>	-	-	-	+11%	+11%
Pembrokeshire					
2020-21	98%	74%	2%	-	-
2021-22	98%	74%	2%	5%	4%
2022-23	99%	78%	1%	31%	25%
2023-24	99%	84%	1%	72%	61%
2024-25	99%	85%	1%	77%	65%
<i>Last year change</i>	-	+1%	-	+5%	+4%
Wales					
2020-21	90%	60%	10%	-	-

¹ Not Spots are assumed to exist where there is no available 4G signal. This is a result of low-to-no network availability from at least one mobile network provider. The numbers used here are supplied by Ofcom using reporting directly from mobile providers.

	4G Coverage			5G Coverage	
	At least 1 Network	All 4 networks	4G Notional Not Spots ¹	At least 1 Network (High Confidence)	At least 1 Network (Very High Confidence)
2021-22	90%	62%	10%	12%	8%
2022-23	91%	64%	9%	24%	18%
2023-24	95%	75%	5%	52%	42%
2024-25	97%	77%	3%	57%	46%
<i>Last year change</i>	<i>+2%</i>	<i>+2%</i>	<i>-2%</i>	<i>+5%</i>	<i>+4%</i>
UK					
2020-21	92%	69%	8%	-	-
2021-22	92%	70%	8%	17%	11%
2022-23	93%	71%	7%	34%	26%
2023-24	95%	80%	5%	60%	48%
2024-25	96%	81%	4%	65%	54%
<i>Last year change</i>	<i>+1%</i>	<i>+1%</i>	<i>-1%</i>	<i>+5%</i>	<i>+6%</i>

Table 4: Mobile Connectivity Assessment (Source: Ofcom Connected Nations)

2.2 Public Sector Funding

To understand the role of public investment in the region, data has been collected by the Digital Infrastructure Programme Team on the various public sector programmes, including:

- Swansea Bay City Deal (both capital and revenue investment);
- Access Broadband Cymru Voucher Scheme (ABC);
- Gigabit Vouchers;
- Superfast Cymru;
- Welsh Government Local Broadband Fund (LBF);
- Local Authority direct funding for public site FTTP upgrades;
- Mobile Connectivity Programs (e.g. Emergency Services Network (ESN) and Shared Rural Network (SRN));
- Other public sector digital programmes.

To understand the impact of these public sector programmes on connectivity in the SBCD region, the number of premises connected, as well as the total funding spent, will be utilised.

Assumption 1: Vouchers cover the entire cost of connection: for simplicity, it is assumed that there is no additional private sector investment for the cost of connection for voucher premises and that a single voucher connects a single premise with no incremental connections resulting from the use of a voucher. It may be that subsequent voucher programme reporting will change this assessment.²

² Source: [UK Government Evaluation of BDUK Gigabit Vouchers: Initial Impacts and Benefits](#)

CASE STUDY: SHARED RURAL NETWORK – PLANNING TO DELIVERY

The Shared Rural Network (SRN) is a joint initiative between the UK Government and the four major mobile network operators (MNOs) designed to improve mobile coverage in rural communities. By encouraging operators to share infrastructure, such as masts and existing sites, the SRN aims to expand high-quality 4G coverage



while minimising environmental and visual impacts. This shared model reduces duplication, accelerates deployment, and ensures community benefits more quickly from improved connectivity.

Within the Swansea Bay City region, Cornerstone has played a pivotal role in bettering rural connectivity, by supporting the four major UK operators, by managing site acquisition, planning and design. Selecting mast locations is a complex process that balances technical requirements, such as coverage and capacity, with the need to protect sensitive landscapes, biodiversity, and residential amenity. This approach supports the wider regeneration ambitions of the region, where reliable and future-ready digital networks are essential for attracting local businesses and communities.

Local planning authorities are critical partners in this work. Councils assess applications against national and local planning policy as well as Welsh Government guidance. Applications often involved detailed considerations around landscape impact, highways access, and site-specific constraints. Councils engage with communities, issuing statutory notices, consulting residents, and integrating local feedback into decision-making. This helps ensure new infrastructure is not only technically viable but publicly acceptable.

With rural areas in Wales 42% less likely to have good mobile connectivity than parts of England, the SRN is essential for closing the digital divide. By enabling robust 4G and future 5G services, the programme ensures rural and semi-rural residents can access the same opportunities as urban communities, supporting economic growth, service access, and long-term regional prosperity. Find out more [here](#).

2.3 Private Sector Funding

2.3.1 Fixed Connectivity

To estimate private-sector investment in fixed connectivity for the most recent year, gaps in commercially available data require the use of assumptions consistent with previous reports. These account for factors such as network overbuild, rural-urban investment patterns, and operator activity. Where available, data provided directly by private-sector infrastructure providers has also been incorporated. While indicative rather than exact, this approach supports an informed assessment of investment levels and their implications for market development and infrastructure coverage.

Overbuild

Overbuild, in the context of fixed digital connectivity, refers to the deployment of overlapping network infrastructure in areas where existing networks already provide adequate coverage or capacity. It typically involves multiple providers constructing similar or identical infrastructure within the same geographic area. Overbuild can arise from competitive pressures, regulatory incentives, or broader market dynamics as operators seek to expand market share or future-proof networks. From an evaluation perspective, overbuild has mixed implications. While it can stimulate competition, improve service quality, and provide consumers with greater choice, it may also lead to inefficient capital allocation if investment is concentrated in well-served areas rather than addressing gaps in underserved or rural locations. Assessing the scale and location of overbuild is therefore important for understanding the effectiveness and distributional impact of private sector investment in fixed connectivity infrastructure.

In line with the previous year’s assessment approach, in the analysis of SBCD region investment, the overbuild is in addition to premises that have newly received a “Full Fibre” connection, as they may have already been able to connect to another operator. Ofcom’s Planned Network Deployment dataset indicates that by 2025, 78% of the premises across the region may have access to 2 or more operators, with 43% likely to have access to 3 or more (Table 5).³

	Proportion of premises expected to have Gigabit coverage by March 2025	
	With access to 2 or more operators	With access to 3 or more operators
Swansea	91%	51%
Carmarthenshire	64%	33%
Neath Port Talbot	91%	58%
Pembrokeshire	60%	17%
SBCD Region	78%	43%

Table 5: Number of Operators Available to Premises in 2025, by Local Authority (Source: Ofcom)

Assumption 2: For the purpose of the annual impact assessments, investment in overbuild has been estimated using the total number of new ‘Full Fibre’ connections for FY2024-25 within each Local Authority

³ Source: [Connected Nations - Planned Network Deployment](#)

area. This total new 'Full Fibre' figure is multiplied by the proportion of premises within each local authority with access to 2 or more operators (Table 5).

FY2024-25	Total Premises from Connected Nations with New 'Full Fibre' Connection (A)	Additional Overbuild Connections who already had 'Full Fibre' Connection (B)	Total Connections Invested In (A+B)
Swansea	11,730	28,257	39,987
Carmarthenshire	9,571	7,201	16,772
Neath Port Talbot	15,051	13,795	28,846
Pembrokeshire	5,821	6,900	12,721
SBCD Region	42,173	56,153	98,326

Table 6: Analysis of New and Overbuild Full Fibre Connections, by Local Authority (Source: FarrPoint)

It is important to note that, within the annual assessments, the investment associated with an 'overbuild' premise is assumed to be equivalent to the investment required to deliver a new 'Full Fibre' connection. This simplifying assumption supports consistency in estimating overall levels of private sector investment. However, as part of the end-of-programme evaluation, this assumption will be revisited and examined in greater detail. The final evaluation will place greater emphasis on assessing the incremental economic benefits specifically associated with overbuild, including its contribution to employment, productivity, and Gross Value Added (GVA) growth. In practice, the marginal economic impact of overbuild is expected to differ from that of first-time full fibre deployment. Premises that already have access to full fibre connectivity are likely to experience smaller additional gains from further network competition or redundancy compared with premises that previously lacked such infrastructure.

As part of the end-of-programme evaluation, we will therefore reflect more fully on the relative impacts of overbuild and first-time connectivity, ensuring that the estimated economic benefits more accurately capture the differing levels of additional value generated in each case.

Digital Infrastructure Providers

The number of premises connected by the public sector intervention is excluded from the new connections figures (Table 6) as these are included within the public sector analysis.

In 2021, Virgin Media O2 (VMO2) completed a UK-wide upgrade programme to ensure its entire fixed network was capable of delivering broadband with average download speeds of over 1Gbps. This upgrade primarily involved enhancements to its existing hybrid fibre-coaxial (HFC) network using DOCSIS technology, enabling significantly higher speeds across areas already served by Virgin Media's infrastructure.⁴

Following this upgrade, VMO2 announced its intention to further modernise its network by transitioning from the legacy DOCSIS-based HFC architecture to full fibre to the premises (FTTP) by 2028. This programme is largely focused on upgrading premises currently served by the older DOCSIS network, replacing coaxial last-

⁴ Source: [Virgin Media O2 investment gives Welsh customers and businesses a mobile and broadband boost](#)

mile connections with full fibre infrastructure. The objective is to improve network performance, reliability, and scalability, while supporting future demand for higher bandwidth services.

As a result, much of VMO2’s investment in full fibre deployment is expected to occur within areas where the company already has an established customer base and network footprint, with the upgrade programme concentrating on migrating existing premises from the legacy DOCSIS platform to full FTTP connectivity. This reflects a broader strategic shift towards more future-proof fibre infrastructure while leveraging the company’s existing coverage and assets.

For the remaining premises, in addition to the VMO2 premise upgrades, there has been investment and improvements in connectivity from a range of other suppliers across the region. All of these suppliers are contained in the Ofcom Connected Nations dataset, see the *Connected Nations’ Methodology Annex*.⁵ Local Authority supplier engagement established that during FY2024-25, the only suppliers active in deployment in the region were VMO2, Openreach, Netomnia, Ogi and Voneus.

Assumption 3: ‘Altnet’ activity has been calculated through supplier engagement to obtain the number of premises passed by each network. Premises that were not connected by Netomnia, Ogi, Voneus, or upgraded by VMO2 are assumed to have been connected by Openreach. Note: These figures are presented as “commercially delivered connections” as they factor in multiple connections to the same premise due to overbuild, and do not include those delivered by public intervention.

FY2024-25	VMO2	Openreach	Netomnia	Ogi	Voneus	Total Connections
Swansea	9,739	0	30,149	0	0	39,888
Carmarthenshire	2	9,412	5,394	0	1,260	16,068
Neath Port Talbot	11,978	16,397	447	0	0	28,822
Pembrokeshire	0	0	0	9,185	1,833	11,018
SBCD Region	21,719	25,809	35,990	9,185	3,093	95,796

Table 7: Breakdown of Commercially Delivered Connections, by Local Authority (Source: Supplier engagement)

Rural/ Urban Investment

To understand the level of investment required to connect the premises (by any commercial supplier) that have not been connected by a Public Sector Programme, these premises have been split into urban and rural based on Census results⁶, as shown in Table 8. Whilst it is recognised that this may not be an accurate split as a larger number of newly connected premises are likely to be classified as “rural”, this approach will provide an average figure for the required investment.

Assumption 4: Given VMO2’s historic delivery approach, it is assumed that all the premises it is providing with an upgrade to FTTP are within an urban setting. For premises being connected directly by Openreach via FTTP, the analysis accounts for differences in costs of connecting urban and rural premises; the Census’ Urban: Rural split has been applied to the remaining commercially delivered premises.

⁵ Source: [Ofcom Connected Nations 2023 Annex](#)

⁶ Source: ONS D1 – F2 [Census 2021 Results](#)

	Urban: Rural	Population Density (people per Km2)
Swansea	88: 12	632
Carmarthenshire	60: 40	79
Neath Port Talbot	74: 26	322
Pembrokeshire	20: 80	76
Wales	64: 36	150
UK	84: 16	281

Table 8: Urban Rural Split, by Local Authority (Source: Census 2021)

Assumption 5: The cost of an urban fixed connection utilised within the previous annual assessment⁷ is multiplied by the FY2024-25 annual CPI figure to give an average cost of £229. In line with the previous annual assessment, the cost of a rural fixed connection is in line with the average cost of a Superfast Cymru Programme Gigabit connection of £1,183.

As part of the engagement with Ogi and Voneus, the suppliers provided figures for investment in the region. These included the total investment being made in each Local Authority area and the number of premises being passed within the programme.

Assumption 6: Total investment from Ogi was £5.9 million, covering 9,185 premises. Total investment from Voneus was £3.2 million, covering 3,093 premises. The level of investment from Netomnia has not been disclosed; therefore, an estimate has been derived by applying an annual CPI uplift to its FY2023-24 cost per premise, then multiplying by the number of premises covered.

In addition, there was approximately £70,000 of private sector investment from DragonWiFi in Pembrokeshire. However, due to limited publicly available information, the precise number of premises connected through this investment is currently unknown and therefore cannot be fully incorporated into the assessment of deployment outcomes.

FibreNest, Hyperoptic and Glide were also active in the region during FY2024-25; however, we were unable to capture any data from these providers to include in this analysis.

2.3.2. Mobile Connectivity

While fixed connectivity investment over the past five years has largely focused on the rollout of fibre-to-the-premises across the region, mobile network investment has taken a more varied form. This has included the construction of new masts, upgrades to existing infrastructure, and technology enhancements to support both 4G and the ongoing deployment of 5G services. The scale and nature of investment can vary depending on the type of mast, the technologies deployed, and the level of upgrade required.

⁷ This is based on an average cost of VMO2 connection, which is almost entirely an urban provider – 23m premises connected for £4.5 bn (source: [New £4.5bn investment to extend Virgin Media O2's fibre footprint to 80% of the UK](#))

Table 9 outlines how these different forms of mobile infrastructure investment have been categorised and incorporated into the assessment. In doing so, it also reflects the range of typical costs associated with different types of mobile network investment, allowing the analysis to account for variations in expenditure between new site builds, mast upgrades, and technology enhancements. These cost ranges are informed by industry benchmarks, operator guidance, and publicly available evidence on mobile infrastructure deployment, ensuring that the estimates used in the assessment are grounded in established market norms.

Infrastructure type	Description	Average new-build cost per site	Average upgrade cost per site
Macro site – 4G only	Existing 4G macro, adding new band or refreshing radios/antennas; tower and backhaul reused.	~£250k–£400k (new 4G-only greenfield, rural-based)	~£50k–£100k
Macro site – 4G & 5G (NR on existing mast)	Existing macro, adding 5G radios/antennas and minor power/backhaul upgrades.	~£300k–£500k (new 4G+ 5G mast with power & backhaul)	~£75k–£150k
Macro site – 5G-heavy (Massive MIMO, multi-band)	High-capacity macro in suburban/urban area, major radio refresh, may need stronger power and backhaul.	~£400k–£650k (complex new urban macro)	~£150k–£250k
Micro / “mini-macro” mast (<15 m)	Street-level or village-edge monopole under 15m, limited civil works, mostly 4G+5G for coverage infill.	~£150k–£250k	~£40k–£80k
Small cell (outdoor)	Lamppost or building-mounted radio, power and fibre close by, used for dense urban capacity.	~£30k–£70k	~£10k–£25k
Small cell (indoor / enterprise)	In-building a radio node on existing LAN/power, often part of multi-node DAS or small-cell system.	~£20k–£50k	~£5k–£15k

Table 9: Mobile Connectivity Infrastructure Type Breakdown (Source: FarrPoint)

Assumption 7: Table 9 presents estimated average cost ranges associated with both new mobile site construction and upgrades to existing sites. For this assessment, a conservative approach has been adopted, with the lower bound of these cost ranges applied. This assumption helps ensure that overall investment estimates remain cautious and avoid overstating the level of capital expenditure associated with mobile infrastructure deployment and upgrades.

The information on private investment in mobile connectivity focuses primarily on planning applications submitted to, and responses received from, each of the four Local Authorities, as presented in Table 10. These planning records indicate where new mobile infrastructure has been proposed or approved, including the construction of new masts and upgrades to existing sites to support enhanced 4G and 5G services.

For this assessment, this planning data has been used as a key proxy for identifying recent private sector investment activity in mobile connectivity across the region. It should also be noted that during this year's assessment period, no public sector investment in mobile connectivity infrastructure was identified. As such, the investment captured in this analysis reflects private sector activity only.

Infrastructure Type		Swansea	Carmarthenshire	Neath Port Talbot	Pembrokeshire	SBCD Area Total
Macro site – 4G only	New Site	-	-	-	-	-
	Upgrade	-	-	-	-	-
Macro site – 4G & 5G	New Site	2	2	1	-	5
	Upgrade	-	1	1	-	2
Macro site – 5G-heavy	New Site	-	-	-	-	-
	Upgrade	-	-	-	-	-
Micro mast	New Site	-	-	2	-	2
	Upgrade	-	-	-	-	-
Small cell (outdoor)	New Site	8	-	-	-	8
	Upgrade	-	-	-	-	-
Small cell (indoor / enterprise)	New Site	-	-	-	-	-
	Upgrade	-	-	-	-	-
Total:		10	3	4	-	

Table 10: Mobile Connectivity Infrastructure Type Breakdown (Source: Local Authorities)

It is also recognised that there has been activity in the region related to the Shared Rural Network (SRN) programme, which aims to improve mobile coverage in rural areas through a combination of public and private sector investment. However, detailed information on the specific sites delivered, or the scale of associated public and private sector investment in new or upgraded masts under the SRN within the region, has not been made available. As a result, this activity has not been quantified in the investment estimates presented in this assessment.

3. FY2024-25 Analysis

3.1 Swansea Bay City Deal Investment

Using the assumptions and approach set out in Section 2, Table 11 presents the investment from the Swansea Bay City Deal, split by the Local Authority within which it was spent in the FY2024-25.

	Public Sector Partner Contribution	Connected Places - Capital		SBCD Programme General Revenue Spend	Digital Innovation Network (LoRaWAN)	Total
		PSBA FFIB	Dark Fibre East			
Swansea	£175,000.00	£98,628.05	£192,140.67	£210,050.97	£14,784.19	£690,603.88
Carmarthenshire	£175,000.00	£73,799.27	£71,026.47	£202,150.19	-	£521,975.93
Neath Port Talbot	£175,000.00	£125,300.14	-	£218,115.71	£17,200.00	£535,615.85
Pembrokeshire	£175,000.00	£75,344.13	-	£201,808.00	£2,090.00	£454,242.13
SBCD Area Total	£700,000.00	£373,071.59	£263,167.13	£832,124.87	£34,074.19	£2,202,437.79

Note: Totals may not sum due to rounding.

Table 11: Swansea Bay City Deal Investment FY2024-25 (Source: SBCD)

3.2 Fixed Connectivity

3.2.1. Public Investment

Using the assumptions and approach set out in Section 2, Table 12 details the number of premises connected and summarises the level of public investment from the wider Public Sector in the region in FY2024-25.

	Local Authority	Local Broadband Fund		Gigabit Vouchers	ABC Vouchers	Superfast Cymru	Total
		PSBA	Mardon Park				
Number of Premises Connected							
Swansea	11	11	-	64	11	0	97
Carmarthenshire	-	23	-	409	248	25	705
Neath Port Talbot	-	10	36	1	14	0	61
Pembrokeshire	-	2	-	1,638	61	2	1,703
SBCD Area Total	11	46	36	2,112	334	27	2,566
Total Public Sector Investment to Connect these Premises							
Swansea	£22,000.00	£252,977.89	-	£284,883.87	£9,877.00	-	£569,738.76
Carmarthenshire	-	£528,953.77	-	£1,759,350.00	£193,506.00	£29,338.40	£2,511,148.17
Neath Port Talbot	-	£222,072.36	£87,468.64	£4,500.00	£11,358.00	-	£325,399.00
Pembrokeshire	-	£45,995.98	-	£2,637,213.34	£46,964.00	£1,892.80	£2,732,066.12
SBCD Area Total	£22,000.00	£1,050,000.00	£87,468.64	£4,685,947.21	£261,705.00	£31,231.20	£6,138,352.05

Note: Totals may not sum due to rounding.

Table 12: Public Sector Investment in Fixed Connectivity FY2024-25 (Source: SBCD)

CASE STUDY: OPEN ACCESS AGREEMENTS – SWANSEA’S STORY

Swansea has emerged as a digital trailblazer through its work on Open Access Agreements (OAAs). Swansea Council’s Digital Champions played a central role in shaping the national direction, working closely with Freshwave and Virgin Media O2 to accelerate deployment and reduce barriers to digital infrastructure delivery. This collaborative approach laid the foundation for Swansea to implement the city-wide OAA framework, setting a new standard for streamlined processes and cross-department coordination.

Swansea formed a multi-disciplinary “barrier-busting team” spanning highways, street-lighting, legal and finance services. This structure created aligned timelines, rapid decision-making, and clear accountability across teams engaging with this type of agreement for the first time. The OAA enables mobile network operators to access and share council-owned assets, significantly simplifying rollout and encouraging additional operators to participate, enhancing competition and connectivity across the region.

Swansea’s commitment to digital infrastructure is also embedded in its wider regeneration ambitions. With major redevelopment underway, high-performing connectivity is viewed as essential for attracting businesses, investors, and new tenants to the city. The council’s substantial asset base, coupled with investment through the Swansea Bay City Deal, supports collaborative infrastructure planning with industry partners.

The benefits of this strategic approach are already visible. A major small-cell deployment programme has boosted mobile coverage in the busiest parts of the city centre, reducing congestion during events such as the Christmas parade and Wales Airshow. Led by the council’s Digital Champions, the project formed part of the Digital Infrastructure Programme and demonstrated how OAAs can unlock fast, minimally disruptive installation of next-generation networks.



Swansea’s experience highlights how strong governance, cross-sector partnerships, and a forward-thinking digital strategy can accelerate economic growth and build more connected, resilient communities across Wales. Find out more [here](#).

3.2.2. Private Investment

Table 13 provides information on the private sector investment in fixed connectivity improvements in the four Local Authority areas and the overall total within the SBCD area in FY2024-25.

FY2024-25	VMO2	Openreach	Netomnia	Ogi	Voneus	DragonWiFi	Total
Swansea	£2,235,000	-	£8,080,000	-	-	-	£10,315,000
Carmarthenshire	-	£3,965,000	£1,445,000	-	£500,000	-	£5,910,000
Neath Port Talbot	£2,750,000	£6,505,000	£120,000	-	-	-	£9,375,000
Pembrokeshire	-	-	-	£5,872,122	£2,700,000	£70,000	£8,642,122
SBCD Area Total:	£4,985,000	£10,470,000	£9,645,000	£5,872,122	£3,200,000	£70,000	£34,242,122

Note: Figures have been rounded to the nearest £5,000. Totals may not sum due to rounding.

Table 13: Summary of Private Sector Investment in Fixed Connectivity in FY2024-25 (Source: FarrPoint)

3.3 Mobile Connectivity

Table 14 provides information on the public and private sector investment in mobile connectivity improvements in the four Local Authority areas and the overall total for the SBCD area in FY2024-25.

	Public Sector	Private Sector	Total
Swansea	-	£840,000.00	£840,000.00
Carmarthenshire	-	£675,000.00	£675,000.00
Neath Port Talbot	-	£675,000.00	£675,000.00
Pembrokeshire	-	-	-
SBCD Area Total:	-	£2,190,000.00	£2,190,000.00

Note: Figures have been rounded to the nearest £5,000. Totals may not sum due to rounding.

Table 14: Summary of Public and Private Sector Investment in Mobile Infrastructure in FY2024-25 (Source: FarrPoint)

3.4 Summary of Investment

Table 15 summarises the overall SBCD, public and private sector investment in the four Local Authority areas in digital connectivity, as well as in the SBCD area in FY2024-25.

	SBCD	Public Sector	Private Sector	Total
Swansea	£690,603.88	£569,738.76	£11,155,000.00	£12,415,342.64
Carmarthenshire	£521,975.93	£2,511,148.17	£6,585,000.00	£9,618,124.10
Neath Port Talbot	£535,615.85	£325,399.00	£10,060,000.00	£10,911,016.85
Pembrokeshire	£454,242.13	£2,732,066.12	£8,642,122.00	£11,828,430.25
SBCD Area Total:	£2,202,437.79	£6,138,352.05	£36,442,122.00	£44,772,913.84

Note: Totals may not sum due to rounding.

Table 15: Summary of Total Investment in Digital Infrastructure in FY2024-25 (Source: FarrPoint)

Table 16 gives a timeline of total investment in digital connectivity to date in each of the Local Authority areas and the SBCD region.

	FY2021-22	FY2022-23	FY2023-24	FY2024-25	FY2025-26	FY2026-27	Total
Swansea	£6,902,793.17	£7,826,689.02	£19,320,000.00	£12,415,342.64	tbc	tbc	£46,464,824.83
Carmarthenshire	£11,130,844.05	£8,111,338.49	£7,426,913.19	£9,618,124.10	tbc	tbc	£36,287,219.83
Neath Port Talbot	£3,802,613.88	£8,891,822.02	£8,040,327.38	£10,911,016.85	tbc	tbc	£31,645,780.13
Pembrokeshire	£7,574,862.64	£11,645,291.92	£14,309,693.65	£11,828,430.25	tbc	tbc	£45,358,278.46
SBCD Area Total:	£29,411,113.74	£36,475,141.45	£49,095,693.54	£44,772,913.84	tbc	tbc	£159,754,862.57

Note: Totals may not sum due to rounding.

Table 16: Time series of Total Investment in Digital infrastructure in current prices (Source: FarrPoint)

3.5 Comparison with Programme Business Case

Table 17 compares the forecast digital investment figures from the Digital Infrastructure Programme Business Case (March 2022) and the Updated Appraisal (September 2024) with the actual outturn data reported in impact studies to date. It shows that private sector investment in the region is currently exceeding earlier expectations, indicating strong confidence in the area, alongside substantial public sector investment.

FY2021-22 Prices	FY2021-22	FY2022-23	FY2023-24	FY2024-25	FY2025-26	FY2026-27	Total
Actual Digital Infrastructure Programme Investment from FarrPoint Analysis							
SBCD	£846,790.80	£1,208,580.72	£1,369,450.26	£2,202,439.79	tbc	tbc	£5,627,261.57
Public Sector	£6,754,322.94	£3,596,560.73	£2,616,243.28	£6,138,352.05	tbc	tbc	£19,105,479.00
Private Sector	£21,810,000.00	£31,670,000.00	£45,110,000.00	£36,432,122.00	tbc	tbc	£135,022,122.00
Total	£29,411,113.74	£36,475,141.45	£49,095,693.54	£44,772,913.84	tbc	tbc	£159,754,862.57
Projected Digital Infrastructure Programme Investment from SBCD Digital Infrastructure Programme Business Case							
SBCD	£532,070	£8,402,392	£8,402,392	£6,402,392	£902,392	£358,364	£25,000,000
Public Sector	£2,350,000	£2,700,000	£2,700,000	£2,700,000	£2,700,000	£350,000	£13,500,000
Private Sector	-	£6,500,000	£4,500,000	£4,500,000	£1,000,000	-	£16,500,000
Total	£2,882,070	£17,602,392	£15,602,392	£13,602,392	£4,602,392	£708,364	£55,000,000
Projected Digital Infrastructure Programme Investment from Updated SBCD Digital Infrastructure Programme Appraisal							
SBCD	£450,000	£390,000	£830,000	£2,780,000	£12,690,000	£7,860,000	£25,000,000
Public Sector	£7,400,000	£3,600,000	£4,330,000	£5,710,000	£20,950,000	£19,980,000	£61,970,000
Private Sector	£23,660,000	£32,500,000	£29,050,000	£30,000,000	£35,470,000	£30,950,000	£181,630,000
Total	£31,210,000	£36,490,000	£34,210,000	£38,490,000	£69,110,000	£58,790,000	£268,600,000

Note: Totals may not sum due to rounding.

Table 17: Comparison with Actual and Projected Digital Infrastructure Programme Investment Overview in current prices (Source: FarrPoint and SBCD Digital Infrastructure Programme Business Case, SBCD Digital Infrastructure Programme Economic Impact Appraisal)

CASE STUDY: THE FUTURE OF FARMING

In rural Pembrokeshire, dairy farmer Steven James has seen technology reshape agriculture over his 40-year career. Digital tools, including electronic ID tags and wearable animal sensors now provide real-time insights on cow activity, fertility, lameness, and body condition. These innovations support better welfare, reduce waste, and help farmers make data-driven decisions that improve efficiency.

Arwain DGC, a Welsh Government funded initiative promoting responsible antimicrobial use in livestock and the environment to combat antimicrobial resistance, supports this shift by using on-farm data to promote responsible antimicrobial use. By enabling earlier detection of health issues, the initiative reduces the need for antibiotics and strengthens efforts to tackle antimicrobial resistance. However, the benefits of these technologies depend on reliable connectivity. Without stable broadband or mobile coverage, data cannot be transmitted between sensors, platforms and farmers when it matters most.

Connectivity remains one of the greatest challenges for rural Welsh communities. Commercial operators often avoid investing in remote areas where deployment costs are high. With 84% of Wales classified as rural and more than 58,000 people employed in agriculture, dependable digital infrastructure is essential to ensure farming businesses remain productive and competitive.

Part of the Swansea Bay City Deal's £25m digital infrastructure programme, a dedicated rural workstream is committed to delivering high-quality connectivity to places where the cost of connecting homes and businesses would otherwise be too high for commercial investment alone. Supporting initiatives such as UK Government's Project Gigabit is also a key aspect of the digital infrastructure programme's rural workstream. Local digital champions are on board to ensure communities are aware of when applications for voucher schemes are being accepted. In addition to Government initiatives, the programme in partnership with BT is delivering the Better Broadband Infill Project, to build a gigabit-capable network to serve rural communities with broadband speeds of less than 30mbps which are not in existing commercial plans or interventions such as Project Gigabit.

Initiatives such as the Shared Rural Network (SRN) further expand mobile coverage by enabling mast-sharing between network operators, improving service for dispersed farming communities.

For farmers like Steven, fast and reliable broadband is not simply desirable, it is essential for the future of Welsh agriculture. Reliable connectivity underpins smart farming, supports animal health and welfare, and helps rural businesses remain resilient and competitive for the future. Find out more [here](#).



4. Key Findings


Digital connectivity across the Swansea Bay City Deal region continued to strengthen during FY2024-25, with notable progress in both fixed and mobile networks. The continued nationwide rollout of fibre infrastructure has driven significant improvements in fixed connectivity. Gigabit-capable coverage increased to 77.5% of premises across the region, up 5.6% points over the year, while Superfast coverage increased slightly to 96.0%, further reducing the number of premises without access to high-speed connectivity.

Both 4G and 5G mobile connectivity also improved across the region, reflecting ongoing investment by network operators. There were reductions in the number of 4G not-spots across all four local authorities. At the same time, the geographic coverage available from all four mobile networks increased, meaning more communities now benefit from more reliable mobile connectivity regardless of provider.


£44.8m	<p>Investment in digital connectivity in the SBCD region in FY2024-25</p> <p>Digital connectivity investment across the SBCD region reached £44.8 million in FY2024-25. Although slightly lower than the previous year, this still represents strong delivery across the region. The change mainly reflects a slowdown in private fixed-network investment, while improvements continued across both broadband and mobile connectivity services.</p>
£2.2m	<p>Investment by the SBCD region in FY2024-25</p> <p>The SBCD programme invested £2.2 million in FY2024-25, taking total programme spend to over £5.6 million to date. This year's funding supported day-to-day programme delivery and major infrastructure activity, including the Dark Fibre East project and the PSBA Full Fibre Infrastructure Build, helping to lay the groundwork for longer-term economic benefits.</p>
£6.1m	<p>Public Sector digital investment across the SBCD region in FY2024-25</p> <p>Public sector investment totalled £6.1 million in FY2024-25, playing a vital role in extending connectivity to areas the market alone would be less likely to reach. Much of this came through Gigabit Voucher support, helping connect hard-to-reach premises, alongside other national and local programmes that continue to strengthen digital access across the region.</p>
£36.4m	<p>Private Sector digital investment across the SBCD region in FY2024-25</p> <p>Private sector investment reached £36.4 million in FY2024-25, showing continued commercial confidence in the region's digital future. While lower than the previous year, this remains a substantial contribution. Investment was seen in both fixed and mobile networks, supporting better broadband, improved coverage, and the continued rollout of next-generation digital infrastructure across the Swansea Bay City Deal area.</p>

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