



Derry City & Strabane  
District Council

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DERRY CITY & STRABANE DISTRICT COUNCIL

# LOCAL DEVELOPMENT PLAN (LDP) 2032



## DRAFT PLAN STRATEGY

Evidence Base Paper EVB 19: Utilities Development, December 2019

Updated March 2022

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## DERRY CITY AND STRABANE DISTRICT COUNCIL

### LOCAL DEVELOPMENT PLAN (LDP) 2032



### EVIDENCE BASE PAPER EVB 19

#### Utilities Development

This Document is one in a series which comprises the evidence base that informs the preparation of the Derry City and Strabane District Local Development Plan (LDP 2032) Plan Strategy.

It builds upon the suite of thematic Topic Papers prepared and published alongside the LDP Preferred Options Paper (POP), which established the May 2017 baseline position and identified the key issues that needed to be addressed by the LDP.

This Utilities Evidence Base paper updates the baseline POP position and sets out the evidence base that has informed the strategy, designations and policies within the draft LDP Plan Strategy. Evidence has been informed by feedback from public consultation, discussions with Elected Members, input from statutory consultees, stakeholder groups, from other Departments within the Council, liaison with adjoining Councils and through the iterative Sustainability Appraisal process.

The Evidence Base is published as a 'supporting document' in accordance with Regulation 15(a) of the Planning (LDP) Regulations (NI) 2015.

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## **1.0 Introduction to Paper**

- 1.1 The information presented in this paper has assisted the Council in developing an informed and innovative approach to setting clearly defined aims and objectives for the management of Utilities Development. It has taken account of the Council's overall objectives for the District as well as local circumstances in relation to Utilities.
- 1.2 This paper sets out the Council's strategy for Utilities Development. It also sets out the main evidence base and legislation / policy framework which has influenced our strategy and in turn the operational policies set out in the LDP Draft Plan Strategy.
- 1.3 This paper will cover Utilities developments and provides an assessment of how existing planning policies take account of the Regional Development Strategy (RDS), Strategic Planning Policy Statement (SPPS), Sustainability Appraisal themes and DCSDC objectives through the proposed LDP objectives.
- 1.4 This Utilities Evidence Base covers those planning policies associated with Utilities developments that are not covered by permitted development rights. The Council has thought to ensure that the draft Plan Strategy Utility policies are compatible with and will deliver the Councils vision and objectives for the District.
- 1.5 This paper will cover a broad range of essential infrastructure, which will facilitate and support the wider development of the District during the plan period. This will include utilities provisions such as water, sewerage facilities, drainage, energy facilities, natural gas and telecommunications. The adequacy, or absence, of these features will also be an important constraint/opportunity affecting the various land uses.



## 2.0 Legislative and Policy Context

- 2.1 Article 5 of the Planning Act (Northern Ireland) 2011 states that the creation of planning policy as part of the Plan Strategy must be done with the objective of furthering sustainable development and in doing so, must take account of policies and guidance issued in the Regional Development Strategy (RDS) 2035 and Strategic Planning Policy Statement (SPPS).

### **Programme for Government (2016-21)**

- 2.2 The draft Programme for Government (PfG) adopts an outcomes-based approach, supported by a number of indicators that highlight the Executive's desired direction of change. A key outcome of the PfG is the connection of people and opportunities through infrastructure. This involves improving the physical mobility of people and the provision of essential energy, water and telecommunications services to ensure that communities can access social, economic and cultural opportunities. The Executive aims to contribute towards delivery of this objective through a range of growth areas, including increased availability of access to high quality telecommunications. An important indicator of this outcome is to 'improve internet connectivity' with fast efficient broadband recognised as a significant factor in business access to compete successfully in external markets and in promoting NI as an attractive inward investment location.

### **NI Executive Economic Strategy 2012**

- 2.3 The NI Executive Economic Strategy recognises the need to build on our status as one of the first regions to deliver extensive 'next generation' broadband services to underpin economic growth. The strategy highlights the need to ensure key infrastructure is in place such as energy, transport, water, property and telecommunications, which are necessary to absorb increasing levels of economic activity.

### **Strategic Energy Framework (SEF) for Northern Ireland 2010**

- 2.4 The strategic aim underpinning the SEF is for a more secure and sustainable energy system, driven by a competitively priced and robust supply market, increased energy from renewable resources, and improved efficiency. Four key energy goals in support of the aim are set out within the framework. The goal of 'Building Competitive Markets' is followed by that of 'Ensuring Security of Supply', which recognises the risks confronting European gas and electricity markets. It highlights the benefits of a diverse energy mix in terms of security of supply and identifies the need for NI to provide new investment that contributes to the greater security of energy supply, through a range of fossil fuels and low carbon technologies.

### **Regional Planning Policy**

- 2.5 The regional policy context is provided by the Regional Development Strategy (RDS) 2035 which presents regional guidance (RG) under three sustainable development themes - economy, society and environment. This section sets out the policy objectives in relation to telecommunications, energy supply, waste management, drainage, water supply and sewerage. The relevant policies of the Strategic Planning Policy Statement (SPPS) and Planning Policy Statements (PPSs) for each of the above areas are identified under the relevant headings.

### **Regional Development Strategy (RDS) 2035**

- 2.6 The RDS set out clear policy aims and objectives regarding public utilities when allocating housing growth and emphasises the importance of the relationship between the location of housing, jobs, facilities and services and infrastructure. Any proposed housing development will be dependent on the availability of all necessary infrastructure, including the availability of sustainable water resources and sewerage capacity.
- 2.7 The RDS sets out 8 main aims for the region which includes strengthening Derry as the principal city of the North West, improving connectivity to enhance the movement of energy and information between people and taking steps to take action to reduce our carbon footprint and facilitate adaptation to climate change. Management and delivery of our public services and utilities will be key to delivering aspects of these aims.
- 2.8 The RDS 2035 envisages that next generation broadband services will be available to provide support for 85% of businesses.
- 2.9 Spatial Framework Guidance (SFG) 14 of the RDS 2035 also recognises that rural areas can be disadvantaged by their remote location in terms of access to the essential services. Further innovations and advancement upon the existing rural telecommunication infrastructure will work to lessen this disadvantage.
- 2.10 The key policy aims of the RDS 2035 regarding telecommunications are:
- Invest in infrastructure for higher broadband speeds;
  - Improve telecom services in smaller rural areas to minimise the urban/rural divide;
  - Increase the usage of broadband; and
  - Capitalise on direct international connectivity.

## Energy Supply

- 2.11 Policy RG5 of the RDS 2035 seeks to deliver a sustainable, reliable and secure energy supply to all sectors across the region. The development of new generation or distribution infrastructure will seek to avoid adverse environmental effects, particularly on or near protected sites. Development of Northern Ireland's renewable energy sources is vital to increase its energy security, help combat climate change and achieve the renewable energy targets. The Strategic Energy Framework had set a target of 40% electricity consumption from renewable sources and a 10% renewable heat target by 2020, in line with mandatory EU renewable targets. This is likely to mean an increase in the number of wind farms both on and off shore and the need to diversify renewables to include electricity from other sources such as tidal stream and bio-energy sources. A renewable heat strategy is likely to require new renewable heat infrastructure to support it.
- 2.12 To facilitate the provision of additional renewable power generation it will be necessary to strengthen the electricity grid in many parts of Northern Ireland. Grid upgrading will also be needed to ensure that proposed tidal stream and off-shore wind developments are planned for properly. This will involve a significant programme of investment in grid strengthening in the north and west of the region.
- 2.13 SFG 6 seeks to develop a strong north west and identifies the need to improve the energy infrastructure across the region to ensure that the North West, in particular, has access to reliable sustainable energy supplies to support economic growth and connectivity and to maximise the North West's significant renewable energy resource.

The key policy aims of the RDS regarding energy supply are:

- Increase the contribution that renewable energy can make to the overall energy mix. There will be a significant increase in all types of renewable electricity installations and renewable heat installations;
- Strengthen the grid. With an increasing number of renewable electricity installations as well as increasing numbers of renewable heat installations there will be a need to strengthen the grid;

- Provide new gas infrastructure, including the provision of gas to new areas of Northern Ireland which would enhance the diversity of energy supply;
- Work with neighbours. This will ensure a secure energy supply from competitive regional electricity and gas markets in the EU's Internal Market;
- Develop “Smart Grid” Initiatives. This will improve the responsiveness of the electricity grid to facilitate new forms of renewable generation, to improve reliability, productivity, and energy efficiency and empower customers to make a more informed choice in relation to their energy usage, and
- To manage waste sustainably, RG10 promotes the use of the “proximity principle” which emphasizes the need to treat or dispose of waste as close as possible to the point of generation in an effort to minimize the negative effects of waste transportation.

### **Water Supply and Sewerage**

- 2.14 Policy RG12 of the RDS 2035 promotes a more sustainable approach to the provision of water and sewerage services management. Increased population, change in household formation and climate change continue to put pressure on our water resources and drainage systems which may lead to discrepancies in water demand and availability as well as potential impacting on water quality. Planning for the provision of water and sewage infrastructure and treatment facilities is both a practical and environmental necessity for regional development.
- 2.15 The Housing Evaluation Framework (HEF), a tool used to assist judgements on the allocation of housing growth, includes a “resource test” which states that studies should be carried out to assess and detail physical infrastructure such as water, waste and sewage, including spare capacity. This is to ensure that the infrastructure is adequate to support the provision of future housing.
- 2.16 The key policy aims of the RDS 2035 regarding water and sewerage are:
- **Integrate water and land-use planning.** Land-use planning should be informed by current water and sewerage infrastructure and future investment programmes. This will involve close co-operation between planning authorities and the water industry in the preparation of local development plans and long-term water strategies.
  - **Manage future water demand.** Reducing water consumption by reducing waste can lead to a lower carbon footprint as less water will need to be abstracted, treated and pumped. There will also be significant economic benefits through reduced energy and chemical costs. To help manage future water demand in new developments, consideration should be given to including measures such as grey water recycling and rainwater harvesting.



- **Encourage sustainable surface water management.** Greater use of Sustainable Drainage Systems (SuDS) should be encouraged, particularly as part of significant development proposals. SuDS provide a water quality benefit and if designed appropriately can help control flows into rivers and drains thereby reduce the risk of flooding. All new urban storm water drainage systems should incorporate measures to manage the flow of waters which exceed design standards (exceedance flows) in order to help protect vulnerable areas.

2.17 A presumption in favour of treatment facilities will apply where a need for such development is identified through the Waste Management Strategy and the relevant Waste Management Plan. In the case of Waste Water Treatment Works (WWTW's) needs must be demonstrated to the satisfaction of the Council or relevant authority.

2.18 In all circumstances, particular attention should be given to the potential impacts of existing and approved waste management facilities on neighbouring areas and the need to separate incompatible land uses.

### **Strategic Planning Policy Statement (SPPS)**

2.19 When plan-making and decision-taking, planning authorities must balance and integrate a variety of complex social, economic and environmental matters. The SPPS sets out 5 core principles to assist in sustainable development;

- Improve health and well-being;
- Create and enhance shared space;
- Support sustainable economic growth;
- Support good design and positive place making; and
- Preserve and improve the built and natural environment.

2.20 The overarching purpose of the Plan Strategy is to provide the strategic policy framework for the plan area as a whole and to bring forward a local growth strategy. In preparing, a Plan Strategy Councils will address the range of policy matters set out in the SPPS.

2.21 The SPPS contains objectives in respect of a range of the utilities included in this paper and sets out considerations that Councils may wish to pursue in the preparation of LDP's.

### **Telecommunications**

2.22 The aim of the SPPS in relation to telecommunications and other utilities is to facilitate the development of such infrastructure in an efficient and effective manner whilst keeping the environmental impact to a minimum.

2.23 The Regional Strategic Objectives for telecommunications are to:

- ensure that where appropriate new telecommunications development is accommodated by mast and site sharing;
- ensure that the visual and environmental impact of telecommunications and other utility development is kept to a minimum;

- minimise, as far as practicable, undue interference that may be caused to radio spectrum users (for example mobile phone services, media broadcasting and wireless broadband services) by new telecommunications development; and
- encourage appropriate provision for telecommunications systems in the design of other forms of development.

- 2.24 In plan-making, Derry City and Strabane District Councils should bring forward policies and proposals to set out the detailed criteria for consideration of new telecommunications development in their local area which should address important planning considerations such as: siting, design, and impact upon visual amenity. To inform plan preparation, councils may consult with telecommunications operators, and other relevant stakeholders, in relation to the anticipated extent of the network coverage required over the plan period.
- 2.25 In certain circumstances and, subject to technical limitations on location and siting, Local Development Plans (LDPs) may allocate specific sites for major new telecommunications development.
- 2.26 In particular, planning authorities should take account of the potential effects of new telecommunications development, and any necessary enabling works, on visual amenity and environmentally sensitive features and locations.

### **Energy Supply and Production**

- 2.27 The aim of the SPPS in relation to renewable energy is to facilitate the siting of renewable energy generating facilities in appropriate locations within the built and natural environment in order to achieve Northern Ireland’s renewable energy targets and to realise the benefits of renewable energy without compromising other environmental assets of acknowledged importance.
- 2.28 The regional strategic objectives for renewable energy are to:
- Ensure that the environment, landscape, visual and amenity impacts associated with or arising from renewable energy development are adequately addressed;
  - Ensure adequate protection of the region’s built, natural, and cultural heritage features; and
  - Facilitate the integration of renewable energy technology into the design, siting and layout of new development and promote greater application of the principles of Passive Solar Design.
- 2.29 Derry and Strabane District Council should set out policies and proposals in their LDP that support a diverse range of renewable energy development, including the integration of micro generation and passive solar design. Furthermore, LDPs must take into account the regional strategic objectives, local circumstance and the wider environmental, economic and social benefits of renewable energy development.
- 2.30 Derry City & Strabane District Council is encouraged when formulating policies and proposals for the LDP to take particular care when considering the potential

- impact of all renewable proposals on the landscape. For example, some landscapes may be able to accommodate wind farms or solar farms more easily than others on account of their topography, landform and ability to limit visibility.
- 2.31 A cautious approach for renewable energy development proposals will apply within designated landscapes, which are of significant value, such as the Sperrins Areas of Outstanding Natural Beauty. In such sensitive landscapes, it may be difficult to accommodate renewable energy proposals, including wind turbines, without detriment to the region’s cultural and natural heritage assets.
- 2.32 In relation to power lines, current Government policy is that exposures to power-line Electro Magnet Fields (EMFs) should comply with the 1998 International Commission on Non-Ionizing Radiation Protection (ICNIRP) Guidelines. A voluntary Code of Practice Power Lines: Control of Microshocks and other indirect effects of public exposure to electric fields A voluntary Code of Practice (DECC, July 2013) has been agreed by the Department of Energy and Climate Change, the Department of Health, the Energy Networks Association, the Welsh Government, the Scottish Government, and the Northern Ireland Executive. It sets out what is regarded as compliance with those aspects of the EMF exposure guidelines that relate to indirect effects as far as the electricity system is concerned.
- 2.33 Further Government policies relating to EMFs from overhead power lines, advise that as a precautionary measure they should, where reasonable, have optimum phasing. This is the subject of a companion Code of Practice “Optimum phasing of high voltage double-circuit power lines”. This Code of Practice applies in England, Wales, Scotland, and Northern Ireland.
- 2.34 Any proposal for the development of new power lines should comply with the 1998 International Commission on Non-Ionizing Radiation Protection (ICNIRP). Furthermore, such proposals will be considered having regard to potential impact on amenity and should avoid areas of landscape sensitivity, including Areas of Outstanding Natural Beauty (AONBs).

### **Existing Planning Policy Statements**

- 2.35 The current Planning Policy Statements regarding Utilities developments include:

**PPS 10: Telecommunications** – During plan preparation, telecommunications operators may wish to discuss the likely extent of the network coverage for the plan area. The plan may allocate particular sites for major telecommunications developments, such as tall masts, in order to encourage site sharing.

**PPS 21: Sustainable Development in the Countryside** – Policy CTY 16 states that planning permission will only be granted for development relying on non-mains sewerage, where it can be demonstrated that this will not create or add to pollution.

### Current Area Plans

2.36 **Derry Area Plan 2011 (DAP):** The DAP was adopted in 2000 and has 3 proposals/policies under Chapter 13 Public Utilities:

- *Policy PU 1 Development near Sewage Treatment Works* – The Department will control development in the vicinity of Drumahoe sewage treatment works;
- *Policy PU 2 Areas at risk from flooding; and*
- *Policy PU 3 Telecommunications Development*

2.37 **Strabane Area Plan (SAP) 2001:** was adopted in 1991. The SAP stated that mains water supply is available throughout the District and is mainly supplied by extraction from the River Derg. Water is also extracted from Lough Bradan (near Drumquin, Omagh) and Caugh Hill (near Dungiven, Limavady) which are not located in the District, whilst storage is provided at a large number of service reservoirs.

2.38 A new sewage treatment works completed in Strabane when the Strabane Area Plan was launched was deemed of a sufficient capacity to meet the needs in the town throughout the Plan period. The situations in Castlederg, Newtownstewart and Sion Mills were also similar. New and extended provision was required in some villages and hamlets and it was recommended that development should be phased in line with the provision of sewerage infrastructure.

2.39 The Strabane Area Plan stated that surface water run-off from within zoned lands can be accommodated by existing watercourse systems, subject to the approval of points of discharge. In some cases, the downstream improvement of works would be required prior to significant development.

### Inclusive Strategic Growth Plan – Our Community Plan

2.40 The District's Community Plan launched in November 2017, with higher level strategic policies, as well as incorporating existing strategies/proposals for the District. Relevant themes in the Community Plan are 'Enterprise and Economy', 'Physical & Environmental Regeneration' and 'Infrastructure'.

2.41 The LDP provides a unique opportunity for the Council to shape the District for local communities and will enable them to adopt a joined up approach, incorporating linkages to other functions such as regeneration, local economic development and community planning. The Local Government Act introduces a statutory link between the Community Plan (CP) and the LDP, in that the preparation of the LDP must 'take account of' the CP – which provides the higher-level strategic aspirations for economic development in the District. It is intended that the LDP will be the spatial reflection of the CP and that the two should work in tandem towards the same vision for the Council area and our communities and set the long term social, economic and environmental objectives for the District.

### **3.0 Background and Statistical Data on Utilities Development in the District**

#### **Utility Provision in Derry City and Strabane District**

##### **Water Supply**

- 3.1 The responsibility for the provision of water supply facilities in the Plan Area lies with the Government-owned company known as Northern Ireland Water (NIW). The duty to promote the conservation of the water resources in Northern Ireland and the cleanliness of water in waterways and underground strata falls to Government Department, Northern Ireland Environment Agency (NIEA). NIEA undertakes this duty by preparing water quality management plans, controlling effluent discharges, monitoring water quality and taking action to combat or minimise the effects of pollution.
- 3.2 Water supplies to Derry area come from two water treatment works at Carmoney, near Eglinton and at Caugh Hill, near Dungiven. Water supplies for Strabane are provided by water treatment works at Derg, Lough Braden, Glenhordial, Loughmacrory and Caugh Hill.

##### **Implications for LDP 2032**

- 3.3 There are no significant proposals to be shown in the Plan. The lack of water supply is not considered likely to be a constraint in the Plan, to development in any of the settlements. In accordance with the SPPS, developer contributions to upgrade the existing infrastructure in order to facilitate development may be required. This additional cost will assist in the long-term sustainability of the infrastructure, and the water resource.

##### **Sewerage Facilities**

- 3.4 Sewerage facilities in the plan area are the responsibility of NI Water. Urban Wastewater Directive 91/271/EEC aims to protect the environment from any adverse effects due to discharge of such waters by setting down minimum standards for a discharge of treated effluent from WWTWs. It requires that all significant discharge of sewage be treated whether the discharge is to inland surface waters, ground water, estuaries or coastal waters.
- 3.5 Development near WWTW can occasionally cause nuisance, usually the practice to avoid land in close proximity to works. NIW has developed an odour policy based on encroachment and odour assessment which replaces the old cordon sanitaire procedures. An odour assessment will need to be carried out if there is a development near WWTW at developer's expense. In areas where WWTWs are not available, the LDP will promote investigation of the use of wetland or biological systems for the treatment of sewage instead of, or in addition to, septic tanks. It will also promote the use of SUDs to assist surface water drainage.
- 3.6 NI water is responsible for drainage and storm drains. Rivers Agency is the statutory body for protection, there are no specific drainage proposals to be shown in the LDP.



- 3.7 It is important to consider the impact that new developments, particularly housing will have on the existing sewage infrastructure in the District. The availability of sewerage infrastructure is a key consideration in determining the amount / location for development in the various settlements, in the Plan. The LDP will take into account the potential impact that any new development will have upon the existing sewage treatment system of the area. Existing infrastructure will be assessed in accordance with new development proposals. Developments should account of the carrying capacity of existing infrastructure within design proposals.
- 3.8 It is important to consider the impact that housing need / supply will have on the existing sewage infrastructure in the District. The RDS 2035 Housing Growth Indicator (HGI, revised 2019) proposes that the Derry City and Strabane District will need approximately 4,100 new houses by 2030. If this figure is extrapolated on a pro-rata basis to the end of the plan period in 2032 the figure would be approximately 4,600, though the LDP anticipates approximately 9,000 houses. However, it should be taken into account that there is a significant level of committed residential development – that may already be factored into the NIW calculations.
- 3.9 **(2022 update):** The Housing Monitor will continue to be updated throughout the LDP-preparation process; the latest HM reports can be found on the Council's LDP webpage, at: <https://www.derrystrabane.com/Subsites/LDP/Local-Development-Plan>

The Housing Monitor in 2017 (see Tables 1 & 2), which concluded that there was a remaining potential of 19,050 of units from extant and partially implemented planning approvals.

*Table 1 Derry District – Housing Completions and Remaining Potential*

	Units completed as monitored between 1999 & 2018	% of all Derry District Urban completions 1999 -2018	Remaining Potential Units	% of all Derry District Remaining Potential
Derry City	13,254	81.1%	10,552	93.7%
Local Town	290	1.8%	188	1.67%
Villages	2,486	15.3%	408	3.62%
Small Settlements	298	1.8%	105	0.94%
<b>Total Urban</b>	<b>16,328</b>	<b>100%</b>	<b>11,253</b>	<b>100%</b>

Table 2 Strabane District – Housing Completions and Remaining Potential

	Units completed as monitored between 1999 & 2018	% of all Strabane District Urban completions 1999 -2018	Remaining Potential Units	% of all Strabane District Remaining Potential
Strabane District Town	2,212	48.2%	498	15.8%
Local Towns	1154	25.2%	859	27.26%
Villages	1,055	23%	1500	47.6%
Small Settlements	165	4.1%	294	9.33%
Total Urban	4,586	100%	3151	100%

- 3.10 Development adjacent to WWTWs can occasionally be subject to odour / noise impacts., Guidelines with respect to development adjacent to WWTWs have been agreed between The Council and Northern Ireland Water. NIW has developed a policy on Development Encroachment / Odour Assessment that will replace the old cordon sanitaire procedures now referred to as 'Development Consultations Zones'. Where a developer proposes to construct a new development in proximity to a wastewater treatment works, a specific Development Encroachment / Odour Assessment will be undertaken at the developer's expense if an assessment has not previously been completed. The Odour Assessment Procedure may recommend the need for the developer to procure an Odour Dispersion Model and Report to Northern Ireland Water specification and requirements. This Odour Dispersion Model and Report will determine the 'Area of Development Restraint' and what, if any, mitigation measures it may be possible for the developer to provide.
- 3.11 The LDP has taken into consideration the potential impact that any new development will have upon the capacity of the existing sewage treatment system of the area. The extent and limitations of the existing system has the potential to affect the amount and location of new development in certain locations across the District.
- 3.12 It should be noted that inadequacies in existing sewerage provision does not necessarily prevent development. The problem may be resolved through private sector finance. Public sector finance for upgrading works will come from NIW and is identified in the Capital Works Programme. However, the Capital Works Programme is relatively short-term and will be subject to ongoing review over the Plan period. Where settlements are at or reaching capacity now, the developer may be permitted to either provide finance for appropriate sewerage facilities or wait until the settlement is accommodated in a new Capital Works Programme. The upgrading of existing infrastructure will allow for the facilitation of new sustainable development within the area, especially in small settlements where there are only modest levels of houses.

- 3.13 For each of our settlements, NI Water has supplied a new informative that will convey both the present capacity condition of each of its Wastewater Treatment Works and also provide an estimation of how this condition may change depending on a range of potential growth scenarios. Whilst the format of this informative is still in draft form, the working example is based on two sets of indicators; one relating to current capacity and the associated impact on availability of new sewerage connections; the second is an estimated projection of treatment capacity were prescribed growth factor is applied to the existing drainage catchment flows. The indicators are a combination of Red, Amber, Green (RAG) traffic lights for current capacity and tick box symbols for future capacity. The distinct formats were adopted to help emphasize the certainty of the current status compared with the more speculative conclusion looking forward. The respective keys as shown in Appendix 1 explain the relevant implications. The information that is provided in Appendix 1 at this stage will be limited to those Settlements served by public treatment facility serving population equivalents of greater than 50.
- 3.14 The Construction Employers Federation has stated that Capacity problems at sewerage treatment plants may stop new housing developments being built in many parts of Northern Ireland. A recent government study has found that up to £750m may be required to tackle the capacity issue. There are currently capacity issues at 70 treatment works, with NI water advising no new homes should be connected to the waste water network in affected areas. The situation therefore means that developers may have to fund their own private sewage treatment works if they want projects to proceed. These costs are therefore likely to be added to property prices. **NI Water emphasises the importance of potential developers contacting them at an early stage to establish the available capacity, any network issues and potential solutions / costs.**
- 2022 Update** - A summary of the current situation with the sewerage infrastructure – both WWTWs and the network, is included at Appendix 1 with an update for March 2022 added at Appendix 1a. As of 2022, DfI / NI Water is continuing to upgrade its network & WWTWs through its PC21 and its Drainage Area Plans. They are also working with the Council and key parties in preparing a 'Living With Water Programme' Strategic Drainage Infrastructure Plan for the Derry city area - to assess / identify, prioritise and finance the necessary upgrades.
- 3.15 The provision of new WWTWs in some locations will have the effect of making land in their immediate vicinity unsuitable for most forms of development. However, the anticipated closure of WWTWs in some other locations will allow land to become available for development which was previously within the exclusion zone. Where known, the LDP will take account of these areas within settlements, especially at LPP stage.
- 3.16 Where WWTWs are not available, the LDP will promote the use of wetland or biological systems for the treatment of sewage instead of septic tanks. Beyond settlement limits, the LDP has reviewed/confirmed the regional planning policy in PPS 21, Policy CTY 16 - Development Relying on Non-Mains Sewerage applies.

### **Surface Drainage**

- 3.17 Northern Ireland Water (NIW) is also responsible for the provision and maintenance of facilities for draining and depositing of surface water and runoff from roofs and any paved ground surface within the curtilage of premises. However, the service is only provided if it is within reasonable cost, in accordance with the Water and Sewerage Services (NI) Order 2006.
- 3.18 NIW considers that the provision of storm sewerage to new developments can be a problem area. They feel that if a site cannot be drained to a suitable watercourse because of its topography, or if the area is associated with a floodplain, then these areas should not be zoned for development.
- 3.19 Rivers Agency (Department for Infrastructure-DfI) is the statutory drainage and flood protection authority and will be consulted in relation to Plan proposals that are likely to involve significant runoff that may affect watercourses and floodplains, or alteration of watercourses.
- 3.20 In accordance with government policy. Currently, drainage improvements necessary to permit development are subject to strict 'cost/benefit' criteria and scheme prioritisation. While drainage works to facilitate development may be identified as viable in principle, their implementation is dependent on the availability of resources. This situation may apply to sites proposed for housing in the LDP. This will be updated as part of statutory consultation with Rivers Agency. DfI Rivers does not seek developer contributions for drainage infrastructure upgrades to facilitate development. PPS 15 FLD 3 details the criteria for provision of a drainage assessment. The purpose of a drainage assessment is to demonstrate that any increase in storm water run-off can be safely disposed of without increasing flood risk to the proposed development or elsewhere, which is basically the approach outlined in paragraph 4.16
- 3.21 For those sites where necessary infrastructure improvements are not viable, Rivers Agency will not normally consent to additional run-off beyond existing flow rates. Alternatively, SuDs can, in the right circumstances, offer developers the opportunity to proceed with developments which would otherwise be refused because of the increased flood risk they would pose. SuDs provides options for draining an area and falls into three broad groups that aim to:
- Reduce the quantity of run off from the site (source control techniques);
  - Slow the velocity of run-off to allow settlement filtering and infiltration (permanent conveyance systems); and,
  - Provide passive treatment to collected surface water before discharging into land or to a watercourse (end of pipe systems)
- 3.22 Local streams not only have limited capacity to receive treated sewage, but also have a limited ability to accept increased rates of storm water run-off from areas of new development. In some circumstances, improvement works may be necessary. Such improvement works if viable, are dependent upon other competing priorities within DfI Rivers and this may be a factor in the timing of development in some circumstances. DfI Rivers does not carry out infrastructure upgrades to facilitate development.

- 3.23 Rivers Agency undertakes maintenance for all “designated” watercourses and a 5-metre wide access strip should be retained free from all permanent structures along at least one riverbank. Accordingly, the LDP should not propose development where it would necessitate the loss of access to a watercourse for future maintenance.
- 3.24 There are no significant drainage proposals to be shown in the Plan. NIW and Rivers Agency, will be consulted regarding specific candidate development sites and they will point out any sites that have particular limitations.
- 3.25 The Plan will seek to promote a move to SUDS and, in large developments where there will be significant runoff, this must be taken into account.

### Energy Supply

- 3.26 The main source of energy in Northern Ireland is electricity. The majority of electricity is generated from fossil-fuel burning power stations. In 2013/14, 1,595 GWh of electricity in Northern Ireland was generated from indigenous renewable sources. This was equivalent to 19.5% of total electricity consumption in that period, an increase of almost 6 percentage points on the previous year when 13.7% of total consumption was from renewable sources. Northern Ireland Electricity (NIE) is the main responsible organisation.

**2021 Update:** By 2020, the 40% target was being met, with approx. 42-47% of NI energy from renewables; see <https://www.economy-ni.gov.uk/sites/default/files/publications/economy/Issue-21-Electricity-Consumption-and-Renewable-Generation-Northern-Ireland-October-2020-to-September-2021.pdf>

The new Northern Ireland Energy Strategy ‘Path to Net Zero Energy’ (December 2021) includes a target to meet 70% of electricity consumption from a diverse mix of renewable sources by 2030. See: <https://www.economy-ni.gov.uk/news/lyons-announces-new-energy-strategy-path-net-zero-energy> & <https://www.economy-ni.gov.uk/publications/energy-strategy-path-net-zero-energy-action-plan>

### 3.27 *Locations of Significant Electricity Generation in Northern Ireland*

Figure 7 below illustrates the Transmission System Network for Northern Ireland showing the 3 main power stations located at Ballylumford (Islandmagee, Antrim), Kilroot (Carrickfergus) and Coolkeeragh (Derry) which supply electricity to a wholesale market known as the Single Electricity Market (SEM). Mutual energy Limited also supplies electricity to the pool via the Moyle interconnector, the North-South Interconnector between Tandragee and Louth. There are also two 110kV standby North-South interconnectors: (i) Strabane, Co Tyrone to Letterkenny, Co Donegal; and (ii) Enniskillen, Co Fermanagh to Corraclassy, Co Cavan. A current proposal for a major North-South Interconnector between Co. Monaghan and Co. Tyrone was recently granted Planning permission by DfI and was subject to an unsuccessful legal challenge (October 2021).



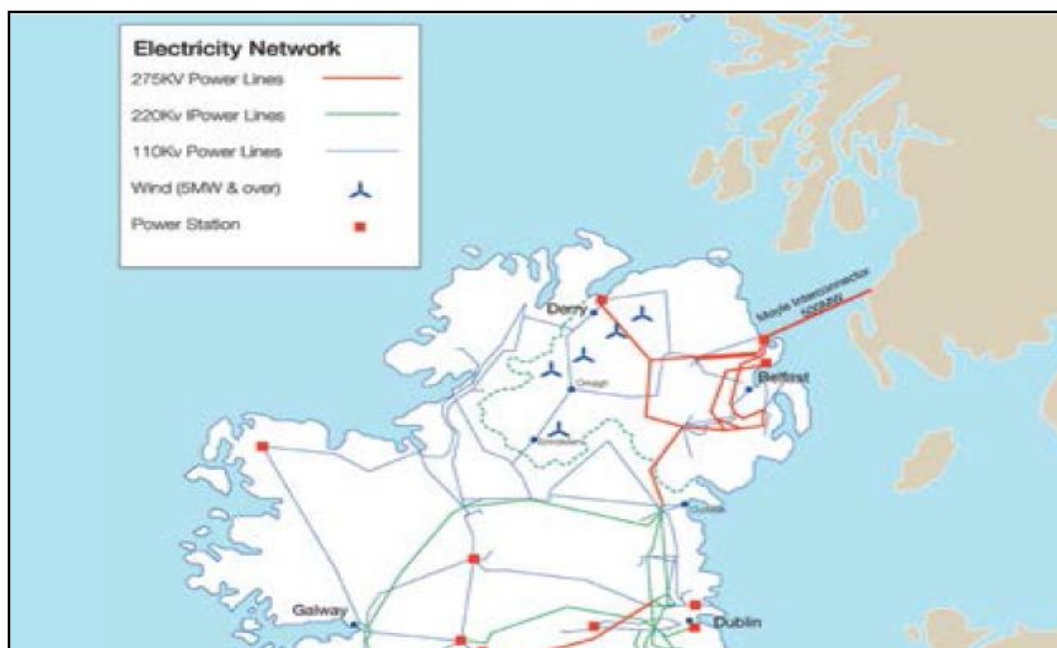


Figure 7 Transmission System Network for Northern Ireland

- 3.28 Development of Northern Ireland’s renewable energy sources is vital to increase its energy security, help combat climate change and achieve the renewable energy targets. The Strategic Energy Framework sets a target of 40% electricity consumption from renewable sources and a 10% renewable heat target by 2020, in line with mandatory EU renewable targets. Policy RG5 of the RDS 2035 seeks to deliver a sustainable, reliable and secure energy supply to all sectors across the region. The development of new generation or distribution infrastructure will seek to avoid adverse environmental effects, particularly on or near protected sites.
- 3.29 SONI, part of the EirGrid Group since 2009, is the electricity system operator for Northern Ireland: They are responsible for the consistent and reliable transmission of electricity on our high-voltage grid, matching supply and demand for power across Northern Ireland, every second of every day. SONI also operates the all-island wholesale electricity market with EirGrid through the Single Electricity Market Operator (SEMO) which has been in operation since November 2007.
- 3.30 SONI have identified potential capacity issues in relation to the Magherafelt to Coolkeeragh Circuit, however there is no major capital works planned for this at this stage. ESB (Electricity Supply Board) are the owners of Coolkeeragh and have recognised that the progress of the North-South Interconnector is of great importance to how Coolkeeragh operates.



- 3.31 SONI is set to invest £0.5bn to design a green energy systems for Northern Ireland. SONI is responsible for the flow of electricity across Northern Ireland, has stated that the five year plan to transform the power system here will enable it to handle 95% renewable energy at any one time. This is a significant increase from the current figure of 65% and is said to be a “world leading level, ensuring maximum value from wind and other sources”.
- 3.32 To achieve this, it is expected that the amount of renewable energy connected to the grid will need to double by 2030. At the moment, approximately 1600MW of renewable energy is connected to the NI power system. SONI has stated that the strategy was a direct response to the climate change and the UK Government’s commitment to zero net carbon emissions by 2050.

## Natural Gas/Gas to the West

- 3.33 The North-West gas pipeline, from Carrickfergus to Derry, serves Coolkeeragh power station in Derry and enabled the development of gas networks along the route.
- 3.34 Firmus Energy was engaged in work to develop the natural gas market outside Greater Belfast along the routes of the North-West gas transmission pipeline (completed November 2004) and the South-North gas transmission pipeline (completed October 2006). This work involves rolling out the gas distribution network in 10 towns and cities including Derry. Firmus has connected around 28,000\* customers in the 10 urban areas.
- 3.35 In January 2013, the Northern Ireland Executive Committee agreed to provide a subvention of up to £32.5m to assist the extension of the Northern Ireland natural gas network to the five largest towns in counties Tyrone, Fermanagh and South Derry which included Strabane. These being; Dungannon including Coalisland, Cookstown including Magherafelt, Enniskillen including Derrylin, Omagh and Strabane. Figure 8 outlines the existing and potential gas routes in Northern Ireland.



*Figure 8 Existing and Proposed Gas pipelines*

- 3.36 The Northern Ireland Authority for Utility Regulation (the Utility Regulator), will be responsible for the grant of the necessary licences, under Article 8 of the Gas (Northern Ireland) Order 1996 (the Gas Order). The Department of Enterprise Trade and Investment (DETI) is responsible for the published criteria against which licence applications will be judged. Two licences are to be granted. A High Pressure licence will relate to all the new transmission assets needed to connect the designated towns to the existing natural gas network.
- 3.37 The Low Pressure licence will relate to all the distribution assets required in the designated towns to provide connections to individual supply points.

- 3.38 Utility Regulator (Uregni) Northern Ireland has a target (NI Executive's Strategic Energy Framework, 2010) that 40% of generation will be from renewable sources by 2020. Progress report from the Department for the Economy in March states that the proportion of energy generation from renewables as reached 35%. **2021 Update:** By 2020, the 40% target was being met, with approx. 42-47% of NI energy from renewables; see <https://www.economy-ni.gov.uk/sites/default/files/publications/economy/Issue-21-Electricity-Consumption-and-Renewable-Generation-Northern-Ireland-October-2020-to-September-2021.pdf>

The new Northern Ireland Energy Strategy 'Path to Net Zero Energy' (December 2021) includes a target to meet 70% of electricity consumption from a diverse mix of renewable sources by 2030. See: <https://www.economy-ni.gov.uk/news/lyons-announces-new-energy-strategy-path-net-zero-energy> & <https://www.economy-ni.gov.uk/publications/energy-strategy-path-net-zero-energy-action-plan>

- 3.39 In February 2015, the Utility Regulator granted Northern Ireland Energy Holdings (Mutual Energy Ltd) and Scotia Gas Networks licence for the High and Low pressure licences respectively. The development will see upwards of £200m invested in a new gas pipeline to the west of Northern Ireland. The pipeline will allow up to 40,000 new customer connections and has the potential to generate an additional £200 million of economic benefits, from energy savings and reduced greenhouse gas emissions. This significant investment will provide choice, strengthen the competitiveness of the Northern Ireland energy market and promote further investment while also bringing the benefits of natural gas to domestic and commercial consumers in the west of Northern Ireland. **Update:** Since 2017, SGN natural gas has been available in Strabane and other online settlements between it and Derry.

### **Telecommunications Infrastructure**

- 3.40 British Telecoms (BT) primarily provides fixed telecommunications within the Plan area and since 2000, significant growth of mobile telecommunications has occurred. A number of providers currently operate third and fourth-generation mobile networks, including, O2, EE, Vodafone and 3. During the LDP period, further growth in telecommunications infrastructure is anticipated, particularly to accommodate the introduction of new digital broadband technology.
- 3.41 Project Kelvin established a direct international link between the North of Ireland and North America, with the Tele-house facility located at the Fort George site, Derry. The €29.5m project is a collaborative initiative between DETI and the Rol's Department of Communications, Energy and Natural Resources (DCENR) and funded under the Interreg IV Programme. The link was completed in March 2010. The direct international link is attractive to global companies, such as leading financial houses, exchange markets, service and media companies, who require fast, low latency bandwidth that avoids traditionally congested routes, such as around the New York and London. This also improved existing links to Europe with high bandwidth. Connectivity supports foreign direct investment and offers a significant competitive edge for the benefit of the Region.



### **Broadband Infrastructure**

- 3.42 The Inclusive Strategic Growth Plan 2017-2032 has a key action for the economy to develop a pilot Rural Community Broadband Scheme to roll out in multiple locations. Project Kelvin has created the fastest, high capacity city-to-city international telecommunications link to the east coast of the USA. It provides world-class telecommunications connectivity and research capability and significantly enhances the region's capacity to create and grow high value 'smart economy' enterprises.
- 3.43 The SuperConnected Derry programme 2012 funded by the Department of Culture, Media and Sport to the value of £2.2million, through the Urban Broadband Fund. The initiative aimed to place Derry at the forefront of digital technology. Businesses in Strabane also benefited from the scheme, offering companies funding towards the upgrade to superfast broadband. Through the scheme small to medium sized businesses across the city have been availing of grants of up to £3,000 to improve their existing broadband capabilities and vouchers are allocated on a first come first served basis. The initiative allowed local businesses access to high-grade broadband and wireless connectivity and targeted companies whose performance may be directly impacted by inadequate broadband services. It was available to any small and medium sized enterprise, business or voluntary sector business within the Derry City Council and Strabane District and covered initial connectivity and installation costs, to the maximum value of £3,000, and a minimum of £100. The £2.2million made available through the fund for Derry - and now also Strabane – is to boost digital capabilities and promote the region as an area worthy of foreign direct investment.
- 3.44 The development of the city's economic infrastructure, including an excellent communications network infrastructure, will be essential in promoting growth and inward investment. The SuperConnected Derry project will support this growth. Digital inclusion is important if Derry is to maximise the potential for economic growth. In 2014 it was reported that Derry is the best city in the UK for high-speed broadband availability, according to the national regulator OFCOM. Derry is the best-performing city for availability at 99.99% in accordance with the OFCOM report dated June 2014, which it can be viewed at the following link: <https://www.ofcom.org.uk/research-and-data/multi-sector-research/availability-of-communication-services/cities-summary-14>
- 3.45 The Northern Ireland Broadband Improvement Project is a scheme to provide for the first time, increase or improve broadband services in certain areas. The project aims to provide basic broadband in areas that have no service and to improve broadband services in certain areas where the choice is poor or broadband speeds are low. Some of these are in rural and remote parts of Northern Ireland. The broadband scheme will lay new fibre optic telephone lines from existing exchanges to new small broadband exchanges in remote areas. This will improve telecommunications infrastructure provided through telephone lines. Basic broadband speed is two megabits per second. Superfast broadband speed is more than 24 megabits per second.



- 3.46 Following procurement, BT was appointed, and work began in February 2014, which finished June 2018. It brought more choice and improved speeds to over 45,000 premises. Broadband improvement work has taken place in the following areas of Derry City and Strabane District:
- Bready;
  - Castleberg;
  - Claudy;
  - Dunamanagh;
  - Eglinton; and
  - Newtownstewart.
- 3.47 Improvement works were planned in other areas of Derry and Tyrone in 2015 and beyond. DFI Telecoms have stated that as of February 2014 - June 2018 a total of 107,364 homes across Northern Ireland have benefitted from the superfast broadband rollout scheme. A total of 3,757 homes within the Derry City & Strabane District have also benefitted. Since the projects launch, the scheme is due to close in December 2019 to make way for the Universal Service Obligation (USO) on March 2020
- 3.48 The USO will give people in the UK the right to request a decent and affordable broadband connection. Under USO, eligible homes and businesses will be able to request a connection, where the cost of providing it is no more than £3,400. Homes and businesses will only be eligible to receive a USO connection if they currently cannot receive an affordable service with download speeds of at least 10 Mbit/s and upload speeds of 1 Mbit/s from any existing networks. If they are not due to receive such a service from a publicly-funded scheme in the year following their request, and the cost of connection is not more than £3,400. More information of USO and eligibility can be found here: <https://www.ofcom.org.uk/consultations-and-statements/category-1/delivering-broadband-universal-service>.
- 3.49 The Northern Ireland Superfast Rollout Project, managed by the Department for the Economy (DfE), is aiming to extend the availability of Superfast Broadband across Northern Ireland. DfE - Telecoms Branch is currently undertaking a consultation exercise to confirm those areas that do not have Next Generation Access (NGA) broadband infrastructure delivering at least 30Mbps, or where there are no plans to provide such infrastructure over the next three years (these are described as “white NGA areas”). The purpose of the consultation is to enable all interested stakeholders - the public, businesses and telecommunications providers to comment on the proposed white NGA areas before further coverage is committed. DfE will then submit its final proposals for the NGA white areas, taking account of the outcome of the consultation, to Broadband Delivery UK's (BDUK) National Competence Centre for clearance.
- 3.50 To support this exercise, Derry City and Strabane District Council had requested stakeholders to submit addresses and post codes of areas that experience minimal or no broadband coverage in the Derry City and Strabane District Council Area. This exercise commenced on 16<sup>th</sup> November 2016 and

has now been completed with 186 responses received by the Council. Analysis of the information highlights residents in the following areas are receiving minimal or no Broadband coverage:

- Artigarvan;
- Plumbridge;
- Castlederg;
- Claudy;
- Newtownstewart;
- Strabane; and
- Ballymagorry.

All information was collated and a full response was returned to DfE Telecoms Branch.

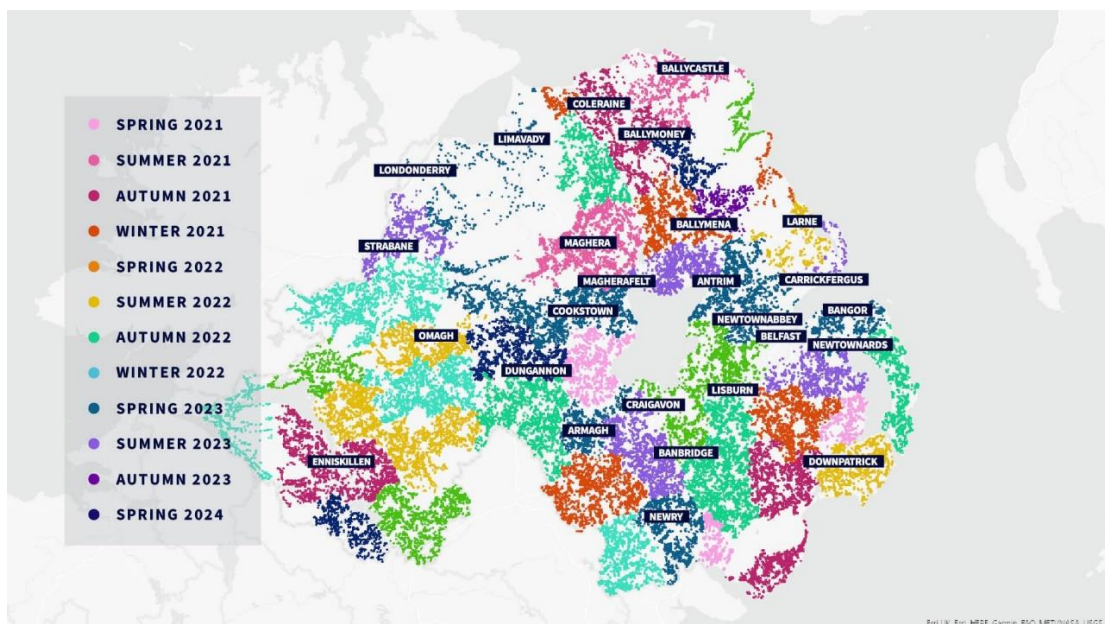
**2021 Update: Significant investment is ongoing across NI to improve rural broadband.**

Project Stratum aims to improve broadband connectivity by extending Next Generation Access (NGA) broadband infrastructure to approximately 79,000 premises across Northern Ireland that cannot yet access NGA broadband services. £150m has been allocated to the project as a result of the Confidence and Supply Agreement, along with additional funding of £15m secured through the Department of Agriculture, Environment and Rural Affairs (DAERA).

Project Stratum investment aims to revolutionise connectivity in rural areas by extending gigabit capable full fibre broadband infrastructure to homes and businesses across Northern Ireland which don't have access to meaningful broadband services. Project Stratum is being rolled out across rural NI from 2021 to 2024, delivered by Fibrus, and bringing full fibre, Hyperfast broadband to rural communities. See the following links for details and the map shows that rural Derry and Strabane District are due for connection in 2022 and 2023.

<https://www.economy-ni.gov.uk/topics/telecoms/project-stratum>

<https://hyperfastni.com/> & <https://www.fibrus.com/news/additional-investment>



## Mobile Phone Coverage

- 3.51 There are four main mobile phone providers in the Derry City and Strabane Council area. There are O2, Vodafone, EE and Three. They all provide the following coverage: voice calls, 3g Data and 4g Data. The level of service and coverage varies depending on the provider, location and whether the service is being accessed from inside or outside a building. The communications regulator of Northern Ireland, OFCOM, provide data through a series of maps outlining a varying degrees of service available in the district area. The maps can be viewed in Appendix 3.
- 3.52 Proposals for telecommunications infrastructure have been dealt with through the Planning Development Management process under the provisions of regional policy but will be superseded by the LDP policies. Furthermore telecommunication operators will benefit from a degree of the permitted development rights under the Planning (General Permitted Development) Order (Northern Ireland) 2015. The LDP will not zone any specific sites for major telecommunications development.

#### 4.0 LDP Preferred Options Paper

- 4.1 Within the Preferred Options Paper (POP) The Council set out its approach to Utilities Development. The Council aims to have a secure and un-interrupted supply of electricity and therefore the transmission and distribution networks will need to be monitored and developed over the LDP period to ensure that the supply can meet the needs of the projected growth.
- 4.2 The Council aims to improve connectivity through telecommunications which both meets the needs of business and private households whilst reducing the need to travel. The Councils preferred option in terms of telecommunications is to retain and strengthen the current PPS 10.

Telecomm-unications	PPS 10	Retain Existing - substantially unchanged		
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- 4.3 Following publication of the POP, two relevant responses were received in regards to utilities and telecoms:

**Mid Ulster Council** – consider AONB as an important shared landscape that is particularly vulnerable to potential adverse impacts and therefore development of high structures (telecoms and wind energy) proposals and are important considerations in this area.

The LDP strategy is to provide utilities and infrastructure to the district and to protect sensitive areas including AONBs and SCAs.

**DFI** – If Environment Objectives referencing telecoms should be an Economic Objective.

Telecoms covers both objectives, provides connectivity for the entire District in a way that does not adversely affect the environment.

**Utilities Paper – Member Workshops (2018).**

- 4.4 A Public Utilities paper was presented during the 2018 series of Member Workshops; comments were considered and included in the POP and this Draft PS. Individual Members raised a number of key issues at a Member discussion meeting in January 2019, which included the following issues:
- 4.5 Telecommunications – to be taken forward as per the POP. Concerns were expressed about the visual impacts of electricity lines, especially in relation to wind energy and in visually sensitive areas.  
The LDP will aim to provide protection to sensitive landscape areas such as AONBs and SCAs in the District. – see LDP PS chapter 25 on Renewable Energy.

## 5.0 Key Considerations

- 5.1 Utilities include water supply, wastewater sewerage, and surface water sewerage, energy infrastructure including electricity and gas, as well as telecommunications infrastructure such as fixed lines, mobile connectivity and broadband. In line with the SPPS, the Council will facilitate sustainable delivery of telecommunications, power systems and water infrastructure, using Sustainable Drainage Systems where feasible.
- 5.2 Utilities developments have the potential to be visually prominent and intrusive in their siting across the District, in both urban and rural settings. New energy infrastructure must be planned, sited and constructed safely and sympathetically to the surrounding area to avoid natural and historic assets and adverse visual and negative amenity effects particularly in our sensitive landscapes.
- 5.3 The provision of water supply and wastewater treatment within the District is the responsibility of NI Water. Whilst there is generally very good infrastructure in the District, they have identified a number of our settlements as having little or no remaining sewerage ‘headroom capacity’ as shown in Appendix 1. In certain locations the network capacity is also problematic, in terms of capacity and quality. Therefore, early discussion is necessary between developers and NIW to find the up-to-date situation in a settlement / locality; this poses challenges for planning for development in relation to waste water management, but this information will be important at LPP stage as specific zonings are considered.

**2021 Update:** It is an implicit requirement that all development should meet the ‘normal Planning & environmental requirements’, including drainage (as well as access, neighbourly amenity, etc. as indicated in GDPOL 1).

NI Water is implementing the programme of sewerage upgrades in line with its PC21 and its Drainage Area Plans. The Council is also continuing to work with DfI Water & Drainage Division / Living-With-Water Team and NI Water to progress the preparation of the Strategic Drainage Infrastructure Plan (SDIP) for Derry-Londonderry (at March 2022). The SDIP will develop medium and long-term sustainable solutions for the drainage / flooding challenges of the city & environs. Current and short-term (i.e. next few years) developments in the District’s settlements are being accommodated through a) the existing infrastructure or b) being permitted under the auspices of the current ‘committed’ lands already being accounted-for in the respective capacity calculations, or c) where interim arrangements can be put in place (to the agreement of NI Water & DfI / NIEA / Env. Health).

- 5.4 Telecommunications are essential to facilitate modern businesses and quality-of-life, being particularly important in increasing the connectivity of rural areas. Connectivity provides an opportunity to reduce rural remoteness and allows for increased competitiveness, home working and increases connectivity with people and information.



- 5.5 The Plan Strategy policy direction will require particularly careful consideration to be given to utility proposals in the Sperrin Area of Outstanding Natural Beauty, Areas of High Landscape Importance and in prominent views from roadside locations.
- 5.6 The regulation of Telecommunications is carried out By Ofcom through the Electronic Communications Code ('the Code'). The Code regulates the relationship between electronic communications network operators (known as 'Code operators') and site providers. It provides the legal framework for the rollout and maintenance of the physical networks of apparatus that support the provision of electronic communications services throughout the United Kingdom. In relation to Northern Ireland, telecommunications is a reserved matter under paragraph 29 of Schedule 3 to the Northern Ireland Act 1998.
- 5.7 The Executive recognises the need for a modern efficient telecommunication infrastructure. The draft Telecommunications Action Plan (2011-2015) aimed to ensure that a comprehensive range of next generation telecommunications services and data rich applications are made as widely available as possible across the region. The most common way of delivering both voice and broadband is via copper lines, often suspended overhead using wooden poles. However, these are increasingly being delivered using alternative technologies including fibre optics, cable and wireless (including mobile). Installing new ducts and cables in the ground is expensive. Incorporating telecommunications ducts with publicly funded infrastructure projects has been used very successfully in Europe.
- 5.8 A full policy review has been carried out on Planning Policy Statement 10: Telecommunications. PPS 10 has been carried forward with modifications in line with the SPPS with additional protections to be afforded to the Districts Natural Environment, Special Countryside Areas and the Sperrin AONB.
- 5.9 The LDP policies will aim to balance the provision of utilities and connectivity for the District in order to promote economic growth and protection of the natural environment from any adverse effects particularly in AONBs, SCAs and designated areas.
- 5.10 The LDP policies must not unduly inhibit utility providers' ability to produce and provide services for those within the District. The LDP recognises the North West's significant renewable energy resource and encourage the use of sustainable energy both as a means of generating money for the local economy, attracting investment in enterprise and providing sustainable and affordable lighting and heating for the population. Energy Efficiency is primarily covered in Chapter 7: Development Principles, as well as being part of Lifetime Homes under the Housing policies (Chapter 17).



- 5.11 The Plan will also have regard to high structures, power lines and telecommunications infrastructure especially in LDP designations including the Sperrin Area of Outstanding Natural Beauty (AONB), Area of High Landscape Importance (AHLI), Special Countryside Area (SCA), consistent with that of the other Sperrins Councils.

## 6.0 Draft Plan Strategy Stage

- 6.1 Policies have been developed in line with regional policy, the Strategic Growth Plan and specific consultee and Member feedback. Feedback from consultees has been taken account of in the proposed policies. Some PU infrastructure is done outside of the Council's Planning control, but the LDP policies are similar to those from the Planning Strategy for NI, updated and expanded to reflect the SPPS. The above amendments reflect Members' concerns / input. Additional protection is provided to protect people and the environment, thus allowing for sustainable development.
- 6.2 The Council's LDP strategy for Utilities development, in accordance with the SPPS and RDS, aim to facilitate sustainable development, through efficient use of infrastructure, to enable economic and social development including connecting across the District, minimising harm to the environment or sensitive locations. The LDP will provide policy guidance to assist and inform investment in power, gas, water and sewerage infrastructure. It will also seek to improve connectivity through telecommunications, which meets the needs of businesses and private households, both rural and urban, whilst reducing the need to travel.
- 6.3 The Council conducted meetings with Planning Committee Members throughout the dPS phase. At the Member LDP Discussion meeting, there was a constructive discussion on the main aspects of utilities, namely Energy Infrastructure, Water Infrastructure and Telecommunications / Connectivity. The following changes were suggested:
1. utilities needs clarification on Permitted Development rights and what is covered by LDP policies
    - LDP Response: This has been clarified in LDP Plan Strategy para. 20.6 – Utilities chapter.
  2. Consider a policy on future-proofing of new developments and prevent repeated digging-up of infrastructure.
    - LDP Response: with the addition of UT 4 - Future-Proofing of Developments for Utility Services, including Broadband and clarification on PD rights has been added.
  3. Consider the wording 'unacceptable adverse impact', 'loss of residential amenity' (UT1), 'unacceptable adverse effect' (UT2) and 'significantly detract' (UT3) and 'unacceptable loss of amenity' in the policies.
    - LDP Response: With most developments, but particularly with large necessary infrastructure, there will nearly always be some 'adverse impact' or 'loss of amenity' so it is best to insert the word 'unacceptable' – which therefore is not such a 'high bar' to prevent nearly all development, but it allows the Planning officers and Members to apply their judgement on what level of 'impact' is acceptable.
- 6.4 An analysis of all the existing PPSs reveals that it is normal to insert a qualifying word rather than an (in the most sensitive locations only) absolute standard. This is a general point, for consideration against all policies in the LDP, to be

applied consistently. Further legal opinion is required before finalising such wording across the LDP.

4. Insert in the policy a 'Presumption in favour of undergrounding' of power lines, etc. - if feasible. [Check costs / feasibility.] – complete
- LDP response: Considered in Policy UT 1 and accompanying Justification & Amplification, but following consultation with NIE Networks, it is clear that this approach would not be feasible / unduly expensive and cause unreasonable delays if applied generally. Undergrounding will however be required in particularly sensitive areas and localised sections. There is concern and evidence of visual impact of overhead lines and equipment, particularly due to visual clutter – see sample photos at appendix 3.

- 6.5 The following policies have been developed in line with the Council's LDP Strategy for Utilities development, regional policies and consultation feedback received from key consultees throughout the plan production.

#### **UT 1 Electricity & Gas Infrastructure**

- 6.6 Carried forward from SPPS, recognising permitted development rights, with additional protection and considerations for public safety, amenity, existing infrastructure, locally prominent and sensitive areas such as AONB, SCAs, AHLIs and Built Heritage. Though there is not a general 'default position' for the undergrounding of all electricity wires, etc. (as was initially requested by Members, undergrounding will need to be seriously considered in certain sections / locations.
- 6.7 There will be additional costs involved in such installations, as stated by NIE networks through consultations, and in some cases, the Council may have to accept that it is not feasible; however, the proposal and alternatives / mitigation will have to be seriously considered. It is recognised that there could well be opposition from electricity companies and would-be developers, but there is real benefits potential for the amenity and appearance of the District.
- 6.8 In regards to the RDS aim of strengthening the grid, SONI was consulted and requested that SONI be updated and to be ensured that the electricity transmission grid's importance in supporting society and economy not be understated.
- 6.9 SONI have stated that it values the inclusion of policies and objectives to protect strategically important utilities infrastructure. In particular the electricity transmission grid and to improve electricity connectivity into and through the borough and between all adjacent boroughs to ensure the Plan can be delivered in a sustainable and timely manner and that capacity is available at local, regional and national scale to meet future needs.
- 6.10 All inclusion which support the safe, secure and reliable supply of electricity are needed for SONI to successfully implement its strategy for grid development, which is imperative to meeting targets for electricity generation, climate change, and security of energy supplies.

- 6.11 DfE has stated that it is important that energy efficiency (see Renewables and General Principles chapters) is included in the LDP, to deliver significant energy savings, help reduce fuel poverty, reduce carbon footprint, increase employment, apprenticeship opportunities and provide a level of assurance for energy services.
- 6.12 The Utility Regulator (UREG) welcomes support for natural gas network. NI target of 40% of generation to be from renewable sources by 2020. Most recent update from DfE shows level has reached 35%.

### **UT 2 Water Infrastructure**

- 6.13 Carried forward from SPPS and permitted development rights, protection from loss of amenity and public safety. Due regard must be shown to the existing infrastructure and ‘headroom capacity’ of existing settlement WwTW. The Council will also seek the promotion of SUDs solutions.

### **UT 3 Telecommunications & Connectivity, including Broadband**

- 6.14 The Council aims to improve connectivity throughout the City & District whilst also protecting the existing natural or man-made environment. The Council will require development proposals to be sympathetic to sensitive areas and should avoid AONBs/ SCAs, AHLIs & Built Heritage if possible. If development proposals are deemed a necessity in these areas then the proposals should be sited and designed in order to reduce the adverse effects as much as possible on the surrounding area.
- 6.15 After consultation with DfE telecoms stated that the government intervenes in broadband in order to encourage private investment that would not otherwise take place. This is likely to be where the commercial case is weak. Not surprisingly, this is usually in our rural areas. The geographical areas to benefit from public interventions in broadband are determined through Open Market Reviews (OMRs). These are a snapshot in time of the industry’s plans over a 3 year period. New developments permitted afterward the OMRs are complete are not covered by subsequent infrastructure projects.
- 6.16 In order to ensure that access to broadband services does not remain a perpetual issue, it is vital that, where possible, telecoms requirements are considered as early as possible in the design and planning stage of any new builds. DfE telecoms have also stated that there has been £150m additional broadband funding under the Confidence & Supply deal. While protection of the environment is clearly understood, the need for masts and telecoms equipment in order to provide or improve services must also be recognised where environmental concerns do not exist.

### **UT 4 Future-Proofing of Developments for Utility Services and Broadband**

- 6.17 UT 4 aims to ensure that new developments plan and install a Utility Services Plan so as to ensure that new technologies can be readily installed in the future, without repeated excavations of footpaths, etc.
- 6.18 It is considered that these policies meet the strategic direction of the relevant documents on Utilities, as well as meeting the needs of this District.



## 7.0 Sustainability Appraisal

- 7.1 Throughout their formulation, the policies contained within the Utilities Chapter have been subject to an ongoing internal sustainability appraisal (SA). This is in addition to the wider external SA, conducted by Shared Environmental Service as part of the wider suite of impact assessments/appraisals required under the Planning Act (Northern Ireland) 2011. The internal appraisal was carried out with the fourteen objectives of the external appraisal in mind (refer to the SA Report for more information).
- 7.2 The sustainability appraisal aims to ensure that the Council's approach towards the policy is the most sustainable of all reasonable options available i.e. having considered any reasonable alternatives. In the case of the Utilities policies, it was considered that there were not any reasonable alternatives as any other options would be likely to be not in accordance with the RDS 2035, the SPPS or relevant PPS and as such could potentially be considered to be neither 'reasonable' or 'sound'. The results of the Sustainability Appraisal for each of the policies or groups of policies (as applicable) are outlined below:
- 7.3 Through the facilitation of utilities which indirectly benefit health and wellbeing and help to reduce inequalities, the option delivers a minor positive impact on the objectives to improve health and well-being and to strengthen society. A positive influence is also recorded for the delivery of good quality, sustainable housing, but the overall effect is not considered strong enough to raise an impact. The appraisal recognises that the availability of reliable energy and/or water connections are key considerations for new economic development and the option indirectly makes the district a more attractive place to invest in, leading to a minor positive impact on sustainable economic growth. It strongly supports the objective for material assets, by delivering infrastructure networks that are fit for purpose.

The option has a negligible impact on many of the environmental sustainability objectives, although some slight positive and negative influences are noted for physical resources, air quality, climate change and natural resources. The protective elements of the policy deliver minor positive impacts maintaining and enhancing landscape character and protecting, conserving and enhancing the historic environment and cultural heritage. Minor positive effects are also identified for water resources, as the policy is a key mechanism for reduce pressure on drainage and waste water systems from new and existing development. This policy is considered to be a sustainable policy.

- 7.4 A draft Habitats Regulations Assessment (HRA) has also been undertaken and published for consultation with the Draft Plan Strategy. It similarly determines possible adverse effects on the integrity of European sites (Special Areas of Conservation and Special Protection Areas) as a result of the policies within the LDP. This assessment also includes Ramsar sites under the provisions of the Ramsar Convention.

## **8.0 Equality Impact Assessment**

- 8.1 Not considered to have an adverse impacts on S75 groups.

## **9.0 Rural Needs Impact Assessment**

- 9.1 The Rural Needs Act 2016, requires District Councils and other Public Authorities to have due regard to rural needs when developing, adopting, implementing or revising policies, strategies and plans, and when designing and delivering public services.
- 9.2 To 'have due regard' means that a public authority must consciously consider the needs of people in rural areas. How much 'due regard' depends on the circumstances and, in particular, on the relevance of rural needs to the decision or function in question. The greater the relevance and potential impact for people in rural areas, the greater the regard required by the duty.
- 9.3 There are potential differential impacts of electricity lines, broadband, etc., in rural and urban areas. The policies aim to protect sensitive landscapes from adverse effects and overhead lines. Within rural areas, undergrounding lines and services is considered less feasible than in urban areas. The policy states that this will only be required if it is considered feasible.

## Appendix 1: Current Planning Status of WwTW in the District

Main Towns, Small Towns, Villages & Small Settlements Served by Wastewater Treatment Works - Version 3 - May 2019

Settlement Name	Wastewater Treatment Works	Current Planning Status	Estimation of Capacity based on Growth Factor			Map	Comment
			3%	7%	10%		
Derry	Culmore	Green	✓	✓	×	1	Culmore WwTW provides wastewater treatment to the following settlements: Ardmore, Culmore, Lettershendoney, Newbuildings, Maydown, Strathfoyle. In addition, wastewater network capacity issues are emerging due to sewer network modelling activities being undertaken in Derry City. As a result of this new connections are being declined in parts of the catchment
Strabane	Strabane	Green	✓	✓	✓	2	Wastewater network capacity issues are emerging due to sewer network modelling activities being undertaken in Strabane.
Castlederg	Castlederg	Green	✓	✓	⊙	3	
Claudy	Claudy	Green	✓	✓	✓	4	Claudy WwTWs provides wastewater treatment to Straidarren settlement.
Newtownstewart	Newtownstewart	Green	✓	✓	✓	5	
Ardstraw	Ardstraw	Red	×	×	×	6	
Ballymagorry	Ballymagorry	Green	✓	✓	✓	7	Ballymagorry WwTWs provides wastewater to Artigarvan, Ballymagorry & Pollockstown. In addition, wastewater network capacity issues are emerging due to sewer network modelling activities being undertaken in Artigarvan & Ballymagorry. As a result of this new connections are being declined in parts of the catchment.
Clady	Clady (Tyrone)	Green	✓	⊙	×	8	
Cranagh	Legcloghfin Road Cranagh	Orange	⊙	⊙	⊙	9	
Donemana	Donemana	Red	×	×	×	10	
Eglinton	Donnybrewer	Green	✓	✓	✓	11	Donnybrewer provides wastewater Treatment to the following settlements: Campsey and Eglinton. In addition, wastewater network capacity issues are emerging due to sewer network modelling activities being undertaken. As a result of this new connections are being declined in parts of the catchment.
Spamount	Spamount	Green	✓	✓	✓	12	Spamount WwTWs provides wastewater treatment to Erganagh settlement.
Sion Mills	Sion Mills	Green	✓	✓	✓	13	Sion Mills WwTWs provides wastewater treatment to Glebe settlement.
Glenmornan	Glenmornan	Green	✓	✓	✓	14	

Killen	Killen		⊙	⊙	⊙	15	In addition, wastewater network capacity issues are emerging due to sewer network modelling activities being undertaken. As a result of this new connections are being declined in parts of the catchment.
Killeter	Killeter North		⊙	⊙	⊙	16	
Magheramason	Magheramason		✓	✓	✓	17	In addition, wastewater network capacity issues are emerging due to sewer network modelling activities being undertaken. As a result of this new connections are being declined in parts of the catchment.
Park	Park		✓	✓	✓	18	
Plumbridge	Plumbridge		⊙	⊙	⊙	19	
Victoria Bridge	Victoria Bridge		⊙	⊙	⊙	20	
Aghabrack	NA						The settlement catchment is not served by a WwTW.
Aghyran	NA						The settlement catchment is not served by a WwTW.
Ballyrory	Gortscreagan		⊙	⊙	⊙	21	
Bready	Cullion		⊙	⊙	⊙	22	
Cloghcor	NA						The settlement catchment is not served by a WwTW.
Craigbane	NA						The settlement catchment is not served by a WwTW.
Donagheady	Donagheady		✓	✓	✓	23	
Douglas Bridge	Douglas Bridge		×	×	×	24	
Drumlegagh	Drumlegagh Church Road		×	×	×	25	
Garvetagh	Garvetagh		⊙	⊙	⊙	26	
Gosheden	Gosheden		⊙	⊙	⊙	27	
Killaloo	Killaloo		⊙	⊙	⊙	28	
Nixons Corner	Nixons Corner		✓	✓	✓	29	Nixons Corner WwTWs provides wastewater treatment to Killea settlement.
Tamnaherin	Tamnaherin		✓	⊙	⊙	30	
Tullintrain							The settlement catchment is not served by a WwTW

Key to Current Planning Status		Key to Local Development Planning	
	New connections permitted - Capacity Available	✓	Works has 'Reasonable Capacity'
	Restriction on new connections - Capacity Limited	⊙	Works is 'At or reaching Capacity'
	New connections refused - No Capacity	×	Works has 'Insufficient Capacity'

**Disclaimer:**

The wastewater system capacity information provided by Council area in this document is subject to change.

NI Water should be contacted directly on water and wastewater capacity issues by Councils . Developers should always use the pre-development enquiry (PDE) process.

## Appendix 1a: Current Planning Status of WwTW & Network in the District – as at March 2022

Derry City Strabane District Council  
Settlements Served by Wastewater Treatment Works  
Version - March 2022










Settlement	Wastewater Treatment Works	WwTW Data			WwTW Network / Catchment	Comment
		WwTW Current Planning Status	Estimation of Capacity based on Growth Factor			
			3%	7%	10%	
Derry City	Culmore					Culmore catchment includes Derry City, Ardmore, Culmore, Drumahoe, Lettershendoney, Maydown, Muff village, Newbuildings and Strathfoyle. <span style="color: red;">See Network Issue Notes 1, 2 &amp; 5 below.</span>
Strabane	Strabane					<span style="color: red;">See Network Issue Notes 1, 3 &amp; 5 below</span>
Castledearg	Castledearg					<span style="color: red;">See Network Issue Notes 1 &amp; 5 below.</span>
Newtownstewart	Newtownstewart					<span style="color: red;">See Network Issue Note 1.</span>
Sion Mills	Sion Mills					Sion Mills catchment includes Glebe and Sion Mills. <span style="color: red;">See Network Issue Note 1 below.</span>
Ardstraw	Ardstraw				*	<span style="color: red;">See Network Issue Note 6 below.</span>
Artigarvan	Ballymagorry					Ballymagorry catchment includes Artigarvan and Ballymagorry. <span style="color: red;">See Network Issue Note 1.</span>
Ballymagorry	Ballymagorry					Ballymagorry catchment includes Artigarvan and Ballymagorry. <span style="color: red;">See Network Issue Note 1.</span>
Clady	Clady (Tyrone)				*	
Claudy	Claudy				*	Claudy catchment includes Claudy & Straidarran.
Culmore	Culmore					Culmore catchment includes Derry City, Ardmore, Culmore, Drumahoe, Lettershendoney, Maydown, Muff village, Newbuildings and Strathfoyle. <span style="color: red;">See Network Issue Notes 1, 2 &amp; 5 below.</span>
Donemana	Donemana					<span style="color: red;">See Network Issue Notes 1, 4 &amp; 5 below.</span>
Eglington	Donnybrewer					Donnybrewer catchment includes Campsey and Eglington. <span style="color: red;">See Network Issue Note 1.</span>
Erganagh	Spamount				*	Spamount catchment includes Erganagh & Spamount.
Glebe	Sion Mills					Sion Mills catchment includes Glebe and Sion Mills. <span style="color: red;">See Network Issue Note 1 below.</span>
Killen	Killen				*	<span style="color: red;">See Network Issue Note 6 below.</span>
Killeter	Killeter North				*	<span style="color: red;">See Network Issue Note 6 below.</span>
Lettershendoney	Culmore					Culmore catchment includes Derry City, Ardmore, Culmore, Drumahoe, Lettershendoney, Maydown, Muff village, Newbuildings and Strathfoyle. <span style="color: red;">See Network Issue Notes 1, 2 &amp; 5 below.</span>
Magheramason	Magheramason					<span style="color: red;">See Network Issue Note 1.</span>
Newbuildings	Culmore					Culmore catchment includes Derry City, Ardmore, Culmore, Drumahoe, Lettershendoney, Maydown, Muff village, Newbuildings and Strathfoyle. <span style="color: red;">See Network Issue Notes 1, 2 &amp; 5 below.</span>



Settlement	Wastewater Treatment Works	WwTW Data			WwTW Network / Catchment	Comment
		WwTW Current Planning Status	Estimation of Capacity based on Growth Factor			
			3%	7%	10%	
Newbuildings	Culmore	Green	Yellow	Red	Yellow	Culmore catchment includes Derry City, Ardmore, Culmore, Drumahoe, Lettershendoney, Maydown, Muff village, Newbuildings and Strathfoyle. <i>See Network Issue Notes 1, 2 &amp; 5 below.</i>
Park	Park	Green	Green	Green	*	
Plumbridge	Plumbridge	Green	Green	Yellow	*	<i>See Network Issue Note 6 below.</i>
Spamount	Spamount	Green	Green	Green	*	Spamount catchment includes Erganagh & Spamount.
Strathfoyle	Culmore	Green	Yellow	Red	Yellow	Culmore catchment includes Derry City, Ardmore, Culmore, Drumahoe, Lettershendoney, Maydown, Muff village, Newbuildings and Strathfoyle. <i>See Network Issue Notes 1, 2 &amp; 5 below.</i>
Victoria Bridge	Victoria Bridge	Green	Green	Green	*	<i>See Network Issue Note 6 below.</i>
Ardmore	Culmore	Green	Yellow	Red	Yellow	Culmore catchment includes Derry City, Ardmore, Culmore, Drumahoe, Lettershendoney, Maydown, Muff village, Newbuildings and Strathfoyle. <i>See Network Issue Notes 1, 2 &amp; 5 below.</i>
Ballyrory	Gortscreagan	Green	Green	Green	*	Gortscreagan catchment includes Ballyrory. <i>See Network Issue Note 6 below.</i>
Bready	Bready	Green	Yellow	Red	*	<i>See Network Issue Note 6 below.</i>
Campsey	Donnybrewer	Green	Green	Green	Yellow	Donnybrewer catchment includes Campsey and Eglinton. <i>See Network Issue Note 1.</i>
Cranagh	Legcloghfin Road Cranagh	Green	Green	Green	*	<i>See Network Issue Note 6 below.</i>
Donagheady	Donagheady	Green	Green	Green	*	<i>See Network Issue Note 6 below.</i>
Douglas Bridge	Douglas Bridge	Red	Red	Red	*	<i>See Network Issue Note 6 below.</i>
Drumahoe	Culmore	Green	Yellow	Red	Yellow	Culmore catchment includes Derry City, Ardmore, Culmore, Drumahoe, Lettershendoney, Maydown, Muff village, Newbuildings and Strathfoyle. <i>See Network Issue Notes 1, 2 &amp; 5 below.</i>
Drumlegagh	Drumlegagh Church Road	Green	Green	Green	*	<i>See Network Issue Note 6 below.</i>
Garvetagh	Garvetagh	Green	Green	Green	*	<i>See Network Issue Note 6 below.</i>
Glenmornan	Glenmornan	Green	Green	Green	*	<i>See Network Issue Note 6 below.</i>
Goshaden	Gosheden	Green	Green	Green	*	<i>See Network Issue Note 6 below.</i>
Killaloo	Killaloo	Green	Green	Green	*	<i>See Network Issue Note 6 below.</i>
Killea	Nixons Corner	Green	Green	Green	*	Nixons Corner catchment includes Killea & Nixons Corner. <i>See Network Issue Note 6 below.</i>

Settlement	Wastewater Treatment Works	WwTW Data			WwTW Network / Catchment	Comment
		WwTW Current Planning Status	Estimation of Capacity based on Growth Factor			
			3%	7%	10%	
Maydown	Culmore					Culmore catchment includes Derry City, Ardmore, Culmore, Drumahoe, Lettershendoney, Maydown, Muff village, Newbuildings and Strathfoyle. <a href="#">See Network Issue Notes 1, 2 &amp; 5 below.</a>
Nixons Corner	Nixons Corner				*	Nixons Corner catchment includes Killea & Nixons Corner. <a href="#">See Network Issue Note 6 below.</a>
Straidarran	Claudy				*	Claudy catchment includes Claudy & Straidarran.
Tamnaherin	Tamnaherin				*	<a href="#">See Network Issue Note 6 below.</a>
Moneycanon	Moneycanon				*	<a href="#">See Network Issue Note 6 below.</a>
Camus Park, Sion Mills	Camus				*	<a href="#">See Network Issue Note 6 below.</a>
Drumenny	Drumenny				*	<a href="#">See Network Issue Note 6 below.</a>
Kildoag	Legaghory				*	<a href="#">See Network Issue Note 6 below.</a>
Letterbin, Baronscourt	Letterbin				*	<a href="#">See Network Issue Note 6 below.</a>
Mulderg Cottages, Claudy	Mulderg				*	<a href="#">See Network Issue Note 6 below.</a>
Aghabrack	N/A	N/A	N/A	N/A	N/A	No public sewerage network available.
Aghyaran	N/A	N/A	N/A	N/A	N/A	No public sewerage network available.
Altishane	N/A	N/A	N/A	N/A	N/A	Part of settlement Altishane served by a small WWTW, remainder of catchment has no public sewerage network available.
Carnanreagh	N/A	N/A	N/A	N/A	N/A	No public sewerage network available.
Cloghcor	N/A	N/A	N/A	N/A	N/A	No public sewerage network available.
Craigbane	N/A	N/A	N/A	N/A	N/A	No public sewerage network available.
Crew Bridge	Crew Bridge	N/A	N/A	N/A	N/A	Part of settlement Crew Bridge served by a small WWTW, remainder of catchment has no public sewerage network available.
Dregish - Envagh	N/A	N/A	N/A	N/A	N/A	No public sewerage network available.
Greenville	Greenville	N/A	N/A	N/A	N/A	Part of settlement Greenville served by a small WWTW, remainder of catchment has no public sewerage network available.
Holyhill, Strabane	Keenaghan	N/A	N/A	N/A	N/A	Part of settlement Holyhill served by a small WWTW, remainder of catchment has no public sewerage network available.
Kilclean Road, Castlederg	N/A	N/A	N/A	N/A	N/A	No public sewerage network available.
Loughan, Donemana	Loughan Road	N/A	N/A	N/A	N/A	Part of settlement Loughan served by a small WWTW, remainder of catchment has no public sewerage network available.
Milttown Burndennet	Burndennet	N/A	N/A	N/A	N/A	Part of settlement Burndennet served by a small WWTW, remainder of catchment has no public sewerage network available.
Pullyerman, Aghyaran	N/A	N/A	N/A	N/A	N/A	No public sewerage network available.
Taboe Glebe	N/A	N/A	N/A	N/A	N/A	No public sewerage network available.
Towncastle, Strabane	N/A	N/A	N/A	N/A	N/A	No public sewerage network available.
Tullintrain	N/A	N/A	N/A	N/A	N/A	No public sewerage network available.

Key to Current WWTW and Network Planning Status		Key to WWTW Status based on Local Development Plan Growth Factors	
	Development permitted - Capacity Available		Works has 'Reasonable Capacity'
	Restriction on new Development - Capacity Limited		Works is 'At or reaching Capacity'
	New Development refused - No Capacity		Works has 'Insufficient Capacity'
	Drainage Area Plan Model does not exist for this small settlement. Status based on high level network screening tool, Operator experience and current performance data.		

**Network Issue Notes**

**Note 1:** NI Water's sewerage network capacity mapping tool and sewer network modelling activities have identified capacity issues in parts of the Ardmore, Artigarvan, Ballymagorry, Campsey, Castlederg, Culmore, Derry City, Donemans, Drumahoe, Eglington, Lettershendoney, Newtownstewart, Magheramason, Maydown, Newbuildings, Sion Mills, Strabane and Strathfoyle wastewater networks. As a result, negative planning responses may be provided by NI Water in parts of these catchments. NI Water can consider the provision of positive planning responses where developers can demonstrate (including calculations):

1. Like for like development
2. Extant previously approved development (where NI Water has given a positive response)
3. Where the development will offer a reduced loading on the sewer network, which may include storm separation and/or attenuation (may be subject to Article 154)

**Note 2:** Culmore Drainage Area Plan (DAP) is planned for delivery in the first half of PC21 and the outputs are then used to inform solution planned for delivery during PC21 (subject to prioritisation and funding availability) or for future business planning (i.e. for PC27). Please see the General Notes section explaining the Definition of a Drainage Area Plan.

**Note 3:** Strabane Drainage Area Plan (DAP) is planned for delivery in the second half of PC21 and the outputs are then used to inform solution planned for delivery during PC21 (subject to prioritisation and funding availability) or for future business planning (i.e. for PC27). Please see the General Notes section explaining the Definition of a Drainage Area Plan.

**Note 4:** Donemans Drainage Area Plan (DAP) is planned for delivery in the second half of PC21 and the outputs are then used to inform solution planned for delivery during PC21 (subject to prioritisation and funding availability) or for future business planning (i.e. for PC27). Please see the General Notes section explaining the Definition of a Drainage Area Plan.

**Note 5:** NI Water has identified parts of the network where Unsatisfactory Intermittent Discharges (UIDs) have occurred. This means the sewer network cannot convey the flows to the WwTW and that there are spills from parts of the network into the receiving environment through combined sewer overflows (CSOs). The CSOs act as safety valves to stop the sewage backing in the sewers during rainfall events and causing the internal flooding of houses. When CSOs are operating more frequently than they should they are classified as unsatisfactory intermittent discharges (UIDS). As a result, negative planning responses may be provided by NI Water in parts of the respective catchments.

**Note 6:** Status based on analysis of existing Area Plan settlement boundary. Should settlement boundary change as a result of Local Development Plan (currently under development), headroom capacity status will be re-assessed and could be subject to change.

**Note 7:** NI Water WwTW upgrades Scheduled for PC21 Delivery. Upgrades of the Lough Macrory, Monea & Tamlight Wastewater Treatment Works are currently programmed to be completed within the PC21 Price Control period, subject to the all statutory approvals being in place, land acquisition (where appropriate), and the availability of funding.

**General Notes:**

QA/QC checks: NI Water corporate wastewater data sets compared to Ww Headroom Capacity spreadsheet 211117-AIR21 PE Figures.

The information provided in this document will be updated on an annual basis and is subject to change. Changes may occur as the result of with network modelling activities, planned WwTW and network upgrades or compliance issue arisal.

**Definition of a Drainage Area Plan**

A Drainage Area Plan is comprised of two stages: Stage 1: A Drainage Areas Study followed by Stage 2: Needs and Options.

The Drainage Area Study (DAS) generally takes approximately 2/3 years to complete (dependent on size of study area) and involves the building of a calibrated and validated sewer network model.

In order to build a model, information is required on sewer pipework geometry, size and condition. This requires extensive CCTV survey work and flow monitoring surveys throughout the sewer catchment.

Once built, calibrated and validated, the sewer network model can be used for developing a Drainage Area Plan via the Needs and Options stage. This involves assessing a range of sewer upgrade options and running scenarios for different design rainfall events. The models are used to simulate a 25-year design horizon by building in allowances for growth, urban creep and climate change. Model outputs are reviewed by NI Water's environmental regulator, NIEA who set the discharge consent standards with which NI Water must comply with via a capital works network upgrade solutions.

The verified DAS sewer model serves three purposes:

1. Corroborating existing and predicted out of sewer spills from CSOs (combined sewer overflows) as well as an identifying where surcharge conditions exists i.e. pipes operating above normal design parameters
2. Assessing the effectiveness of solution options for informing capital works e.g. the identification of a solution to alleviate an unsatisfactory intermittent discharge or UID (a non-compliant combined storm overflow (CSO)).
3. Assessing the capacity of a sewer network for serving new development and their connection to the public sewerage system.

## Appendix 2 Mobile Phone & 3G/4G coverage

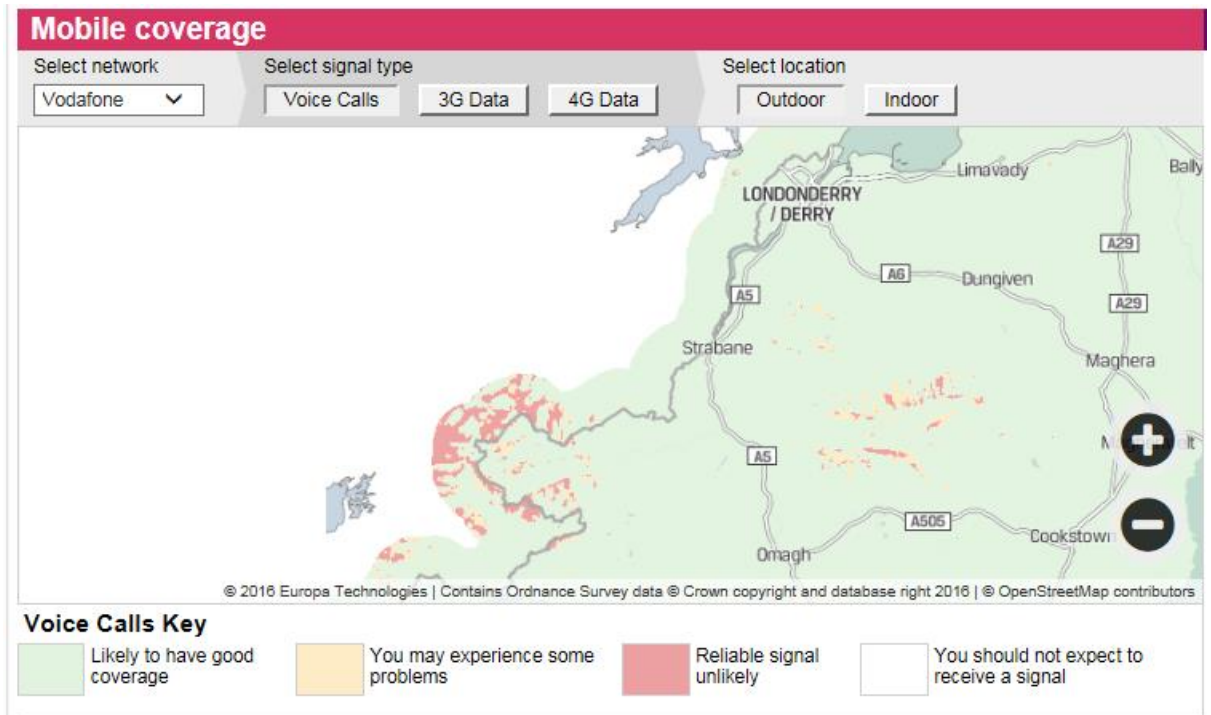


Image 1: Coverage for Vodafone voice calls when outside

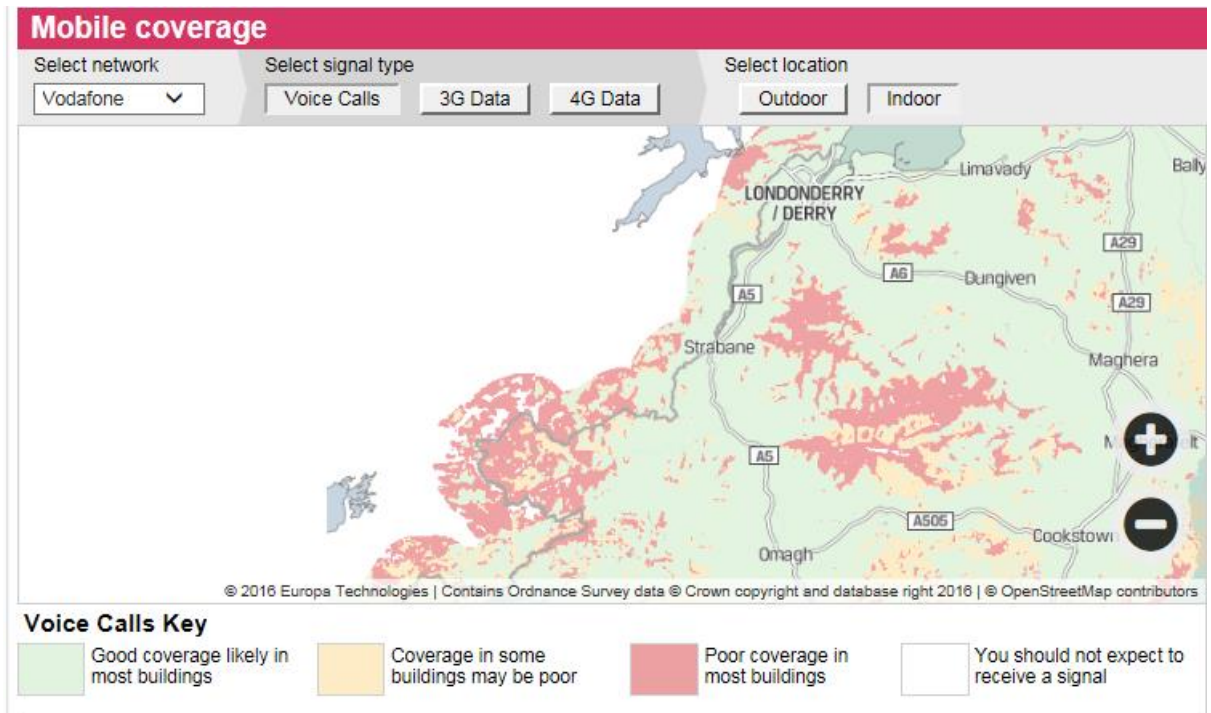


Image 2: Coverage for Vodafone voice calls when inside



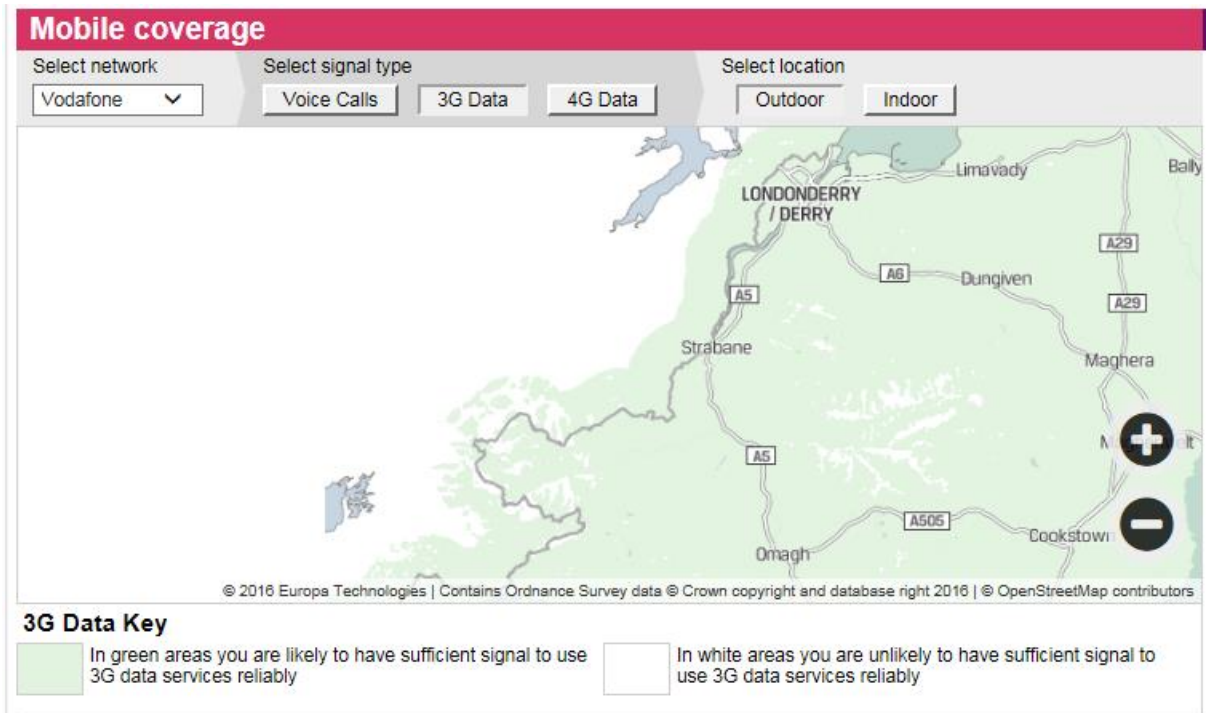


Image 3: Vodafone 3g coverage when outdoor

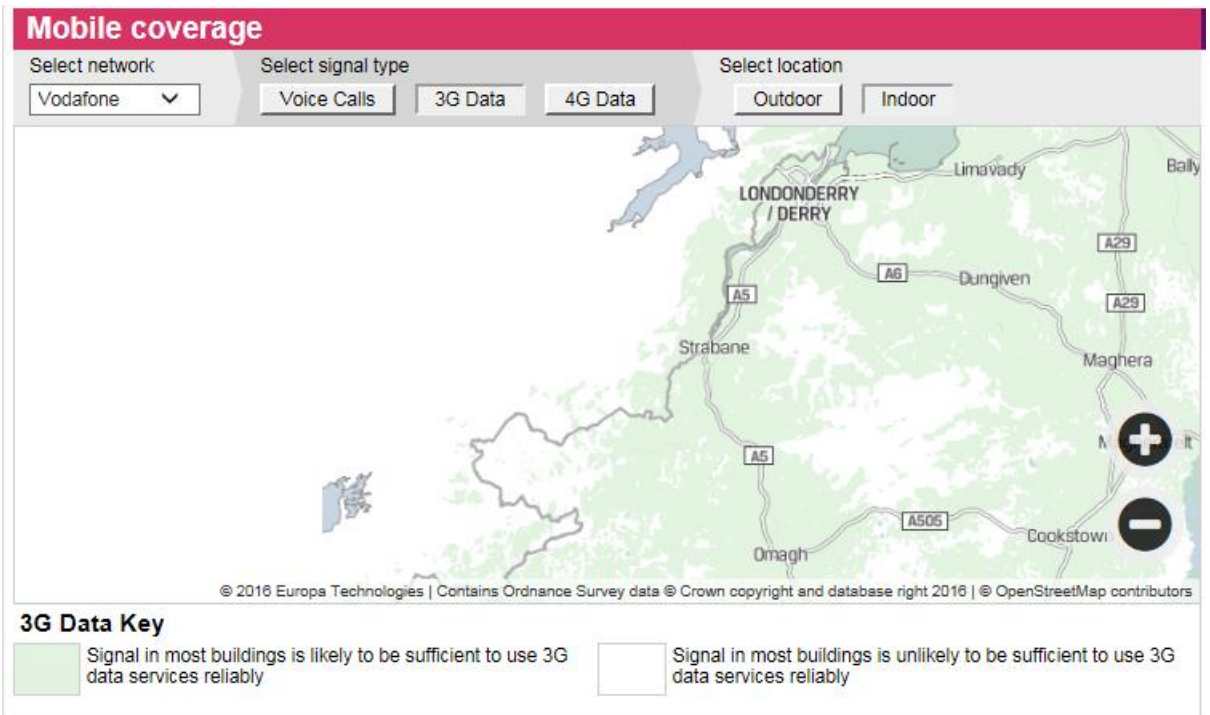


Image 4: Vodafone 3g coverage when indoor



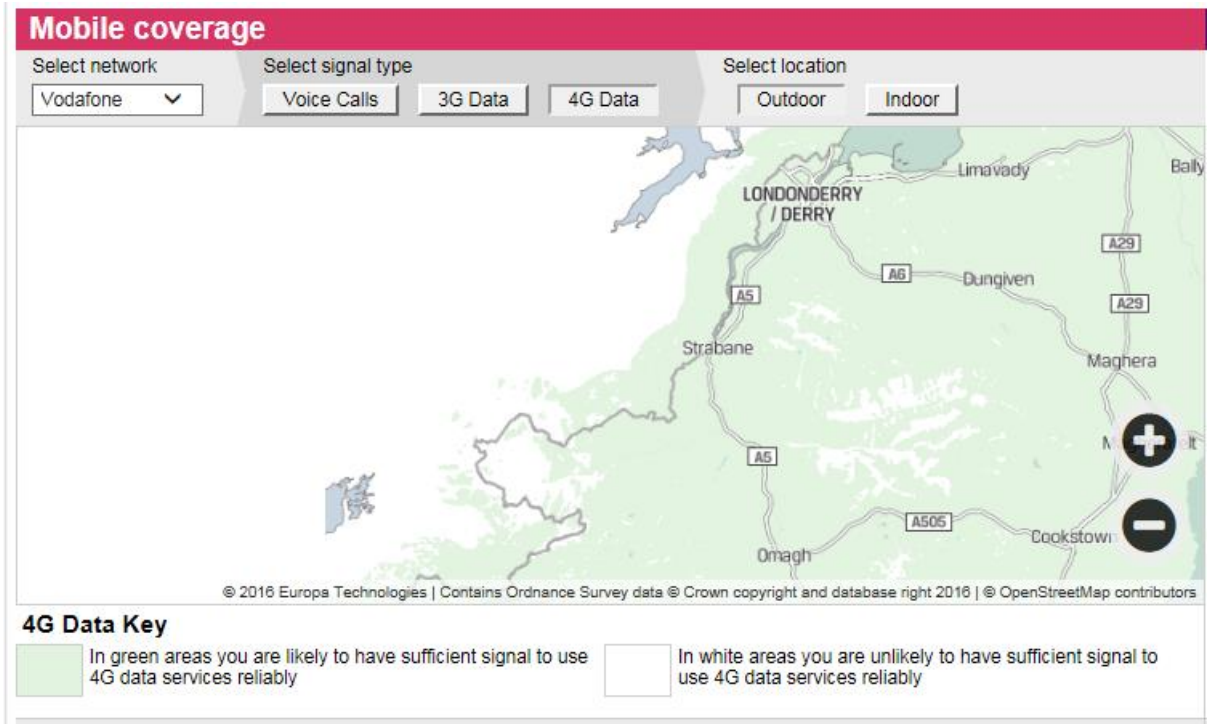


Image 5: Vodafone 4g coverage when outdoor

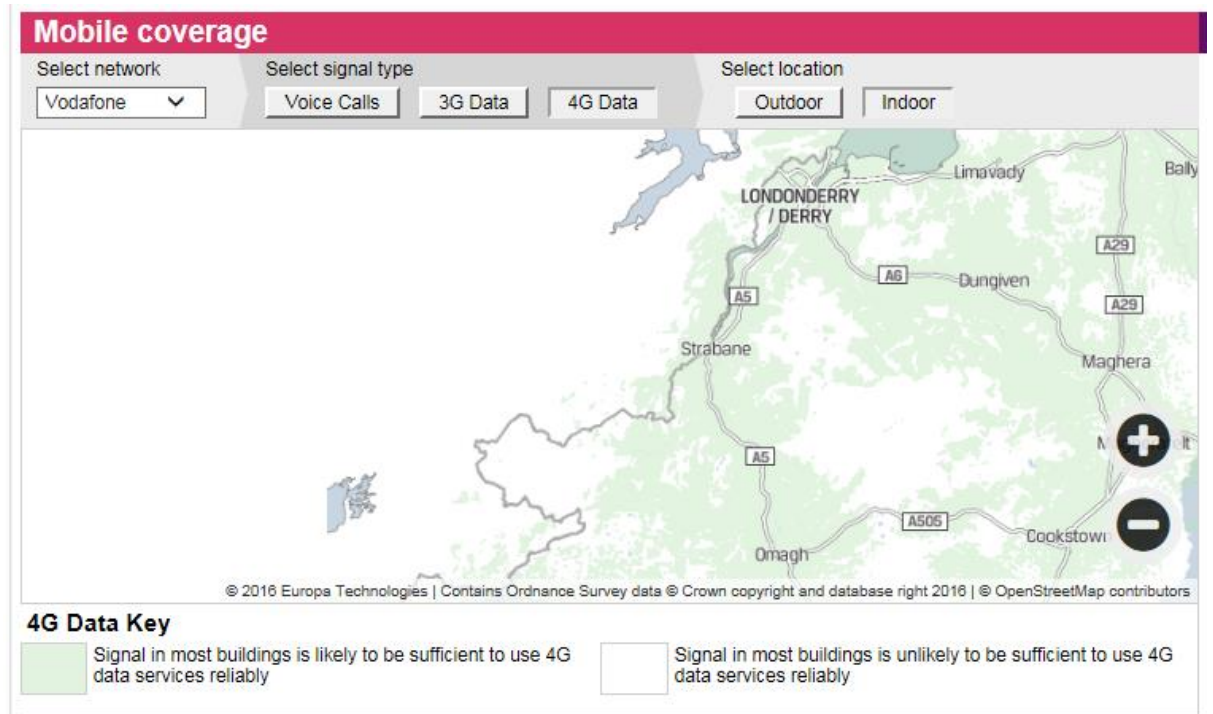


Image 6: Vodafone 4g coverage when indoor

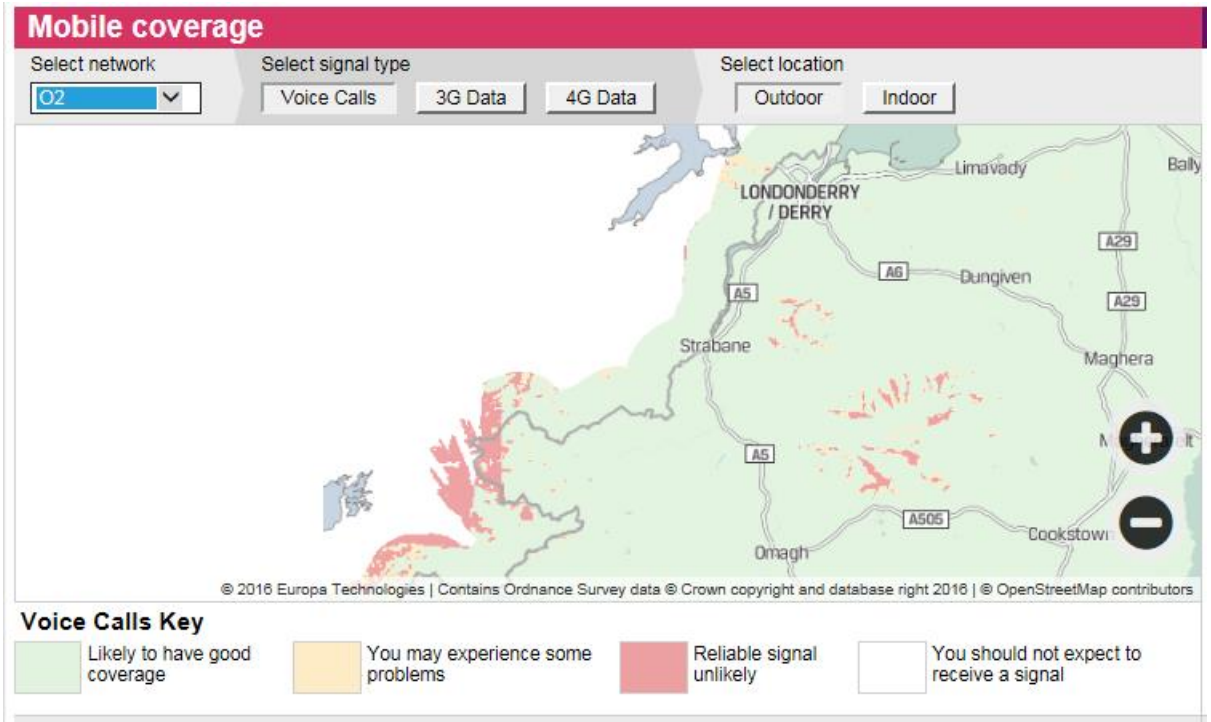


Image 7 Coverage for O2 voice calls when outside

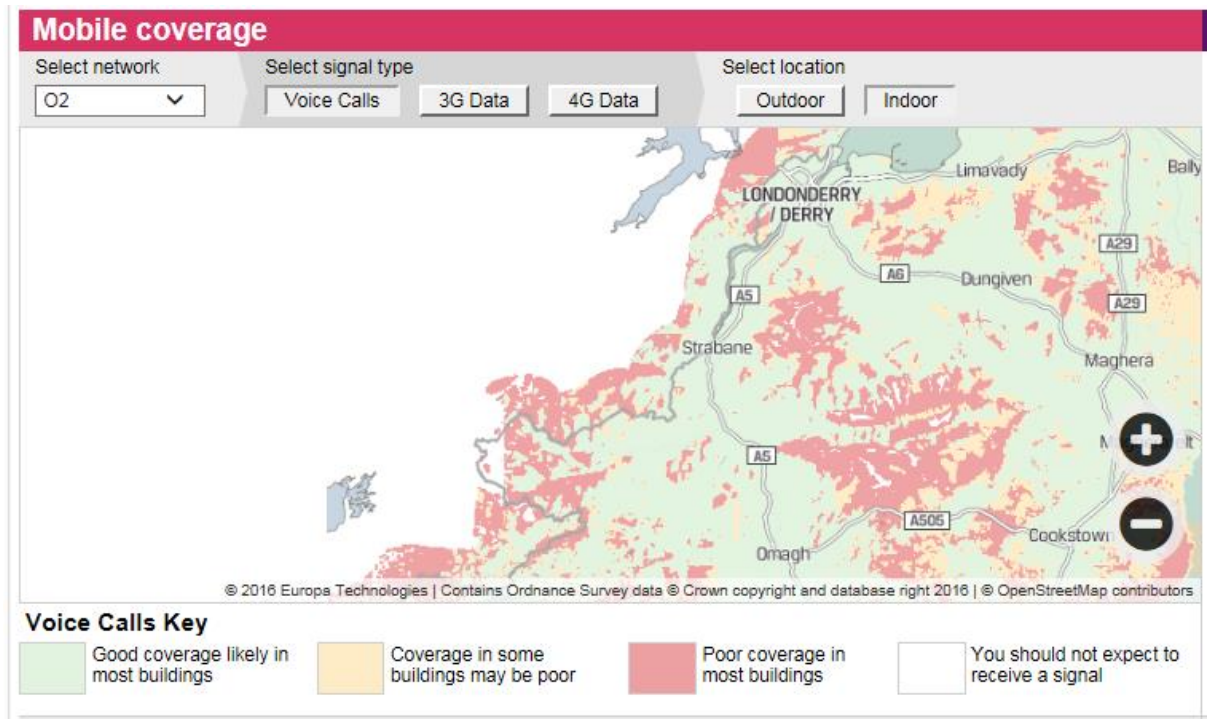


Image 8: Coverage for O2 voice calls when indoor

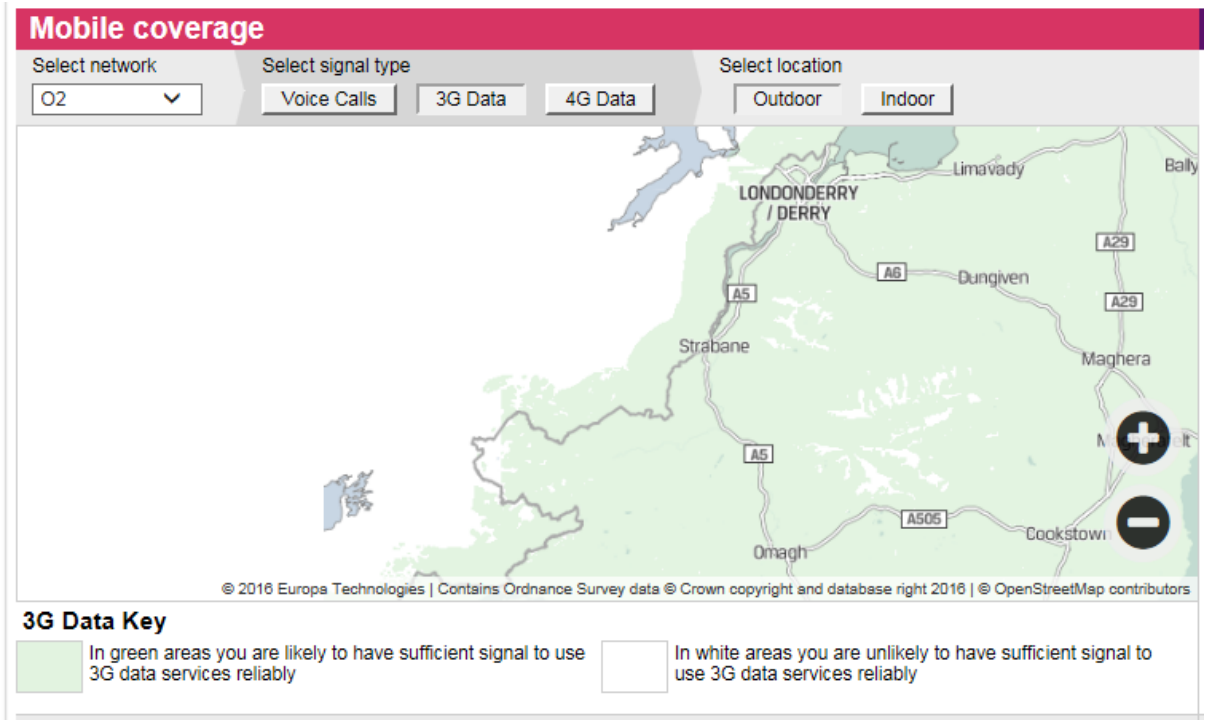


Image 9: O2 3g coverage when outdoor

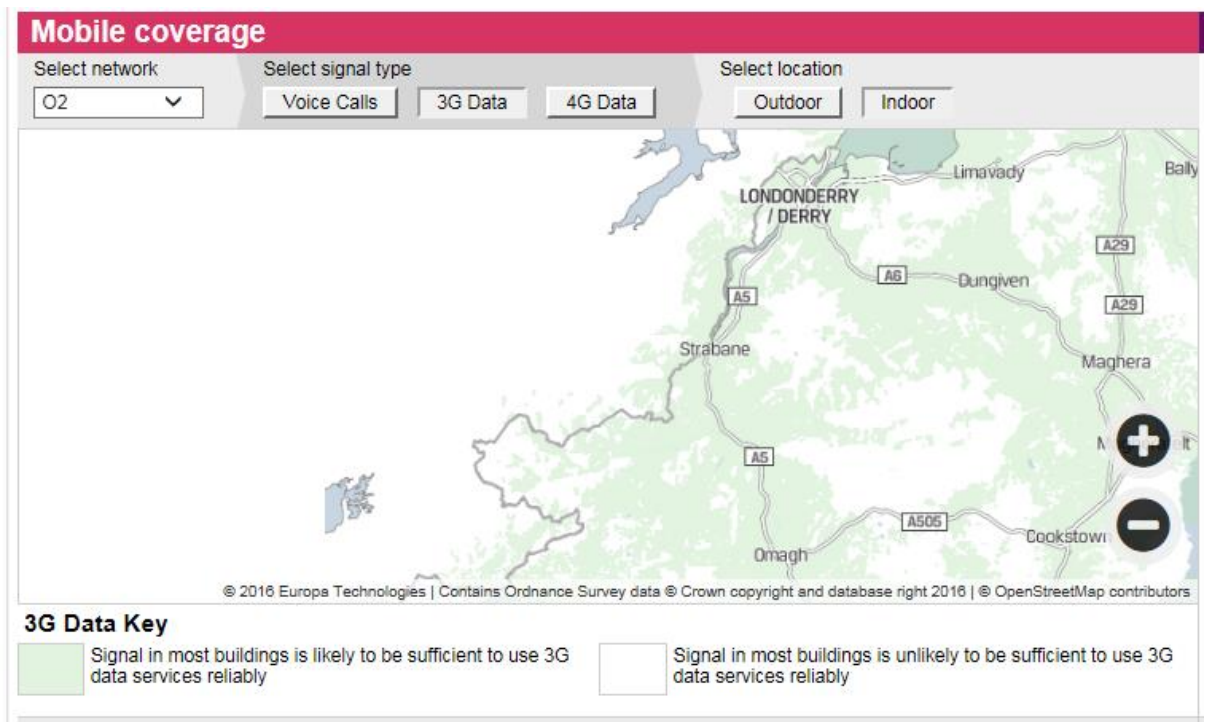


Image 10: O2 3g coverage when indoor

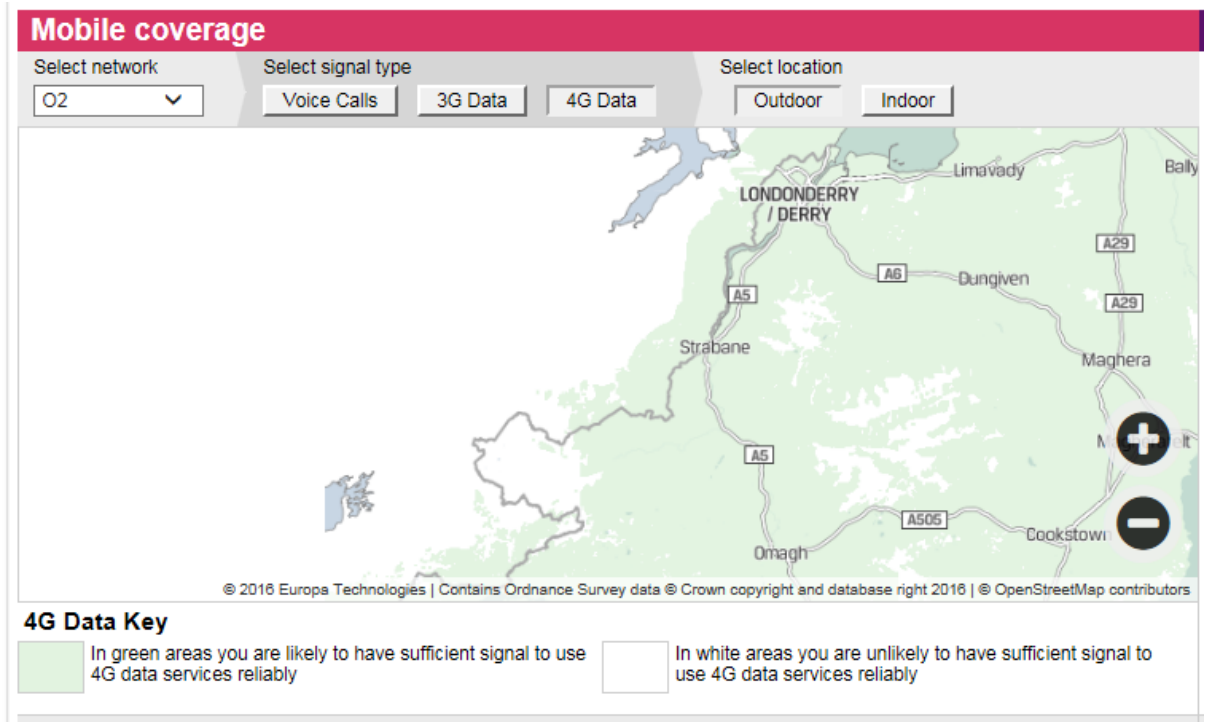


Image 11: O2 4g coverage when outdoor

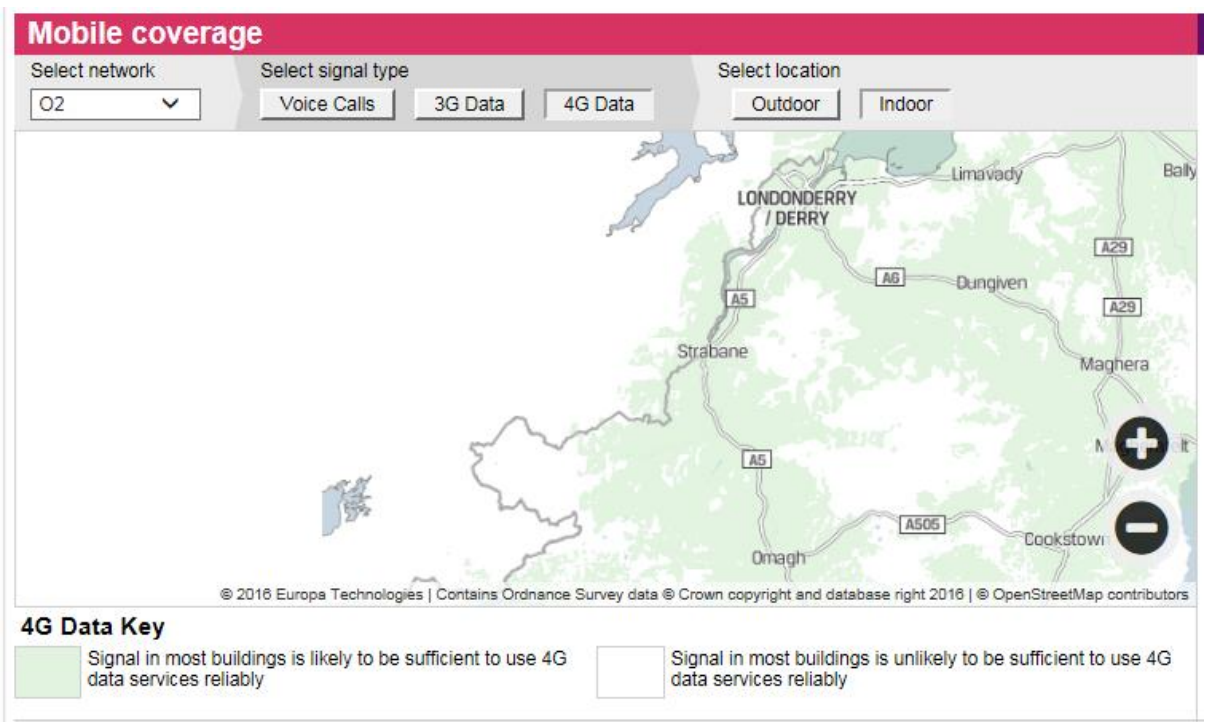


Image 12: O2 4g coverage when indoor



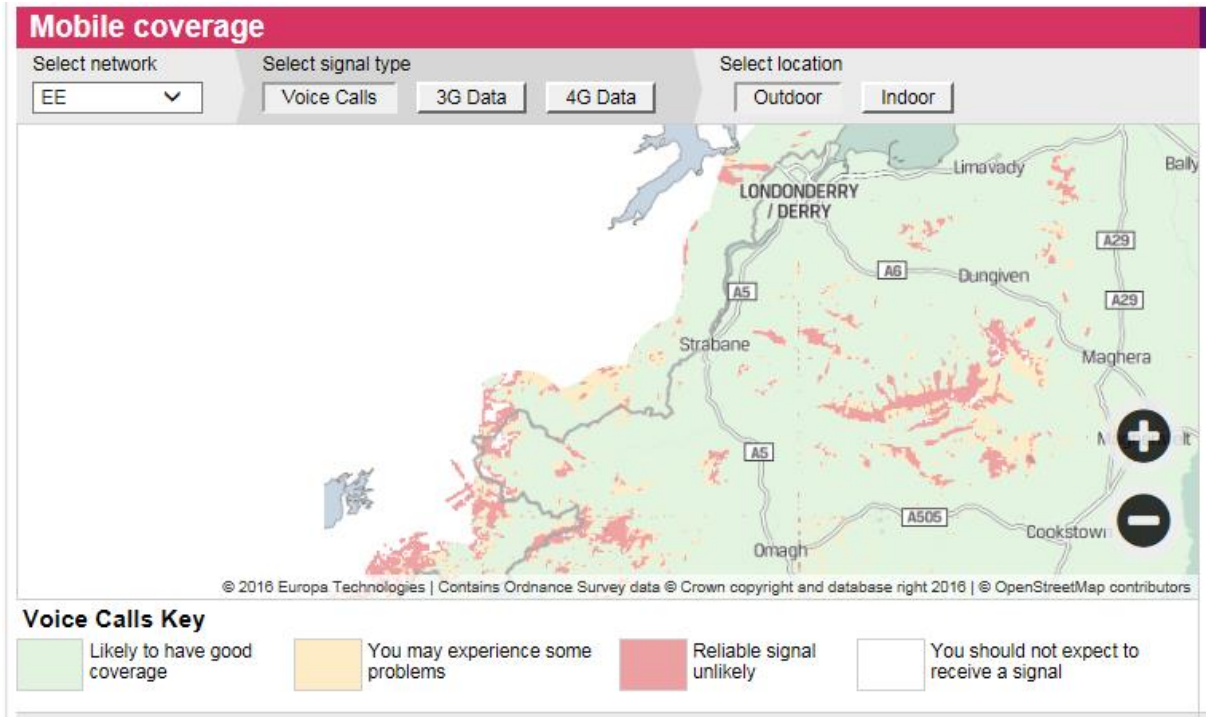


Image 13: Coverage for EE voice calls when outdoor

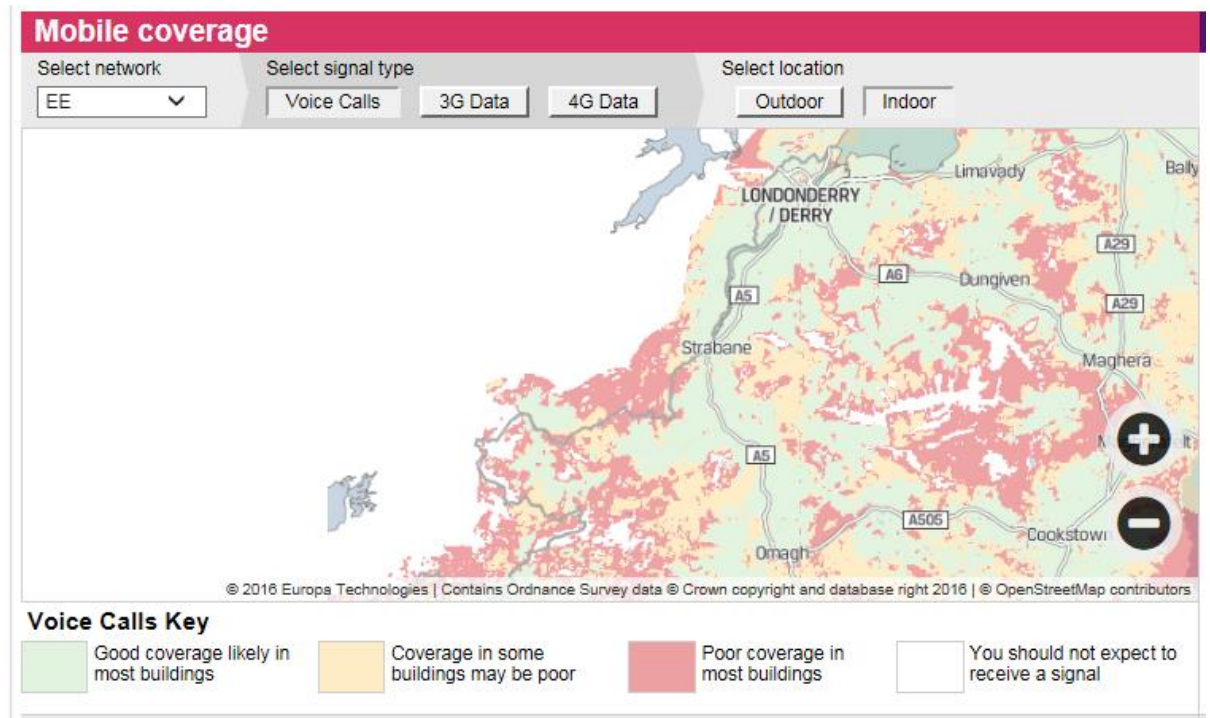


Image 14: Coverage for EE voice calls when indoor



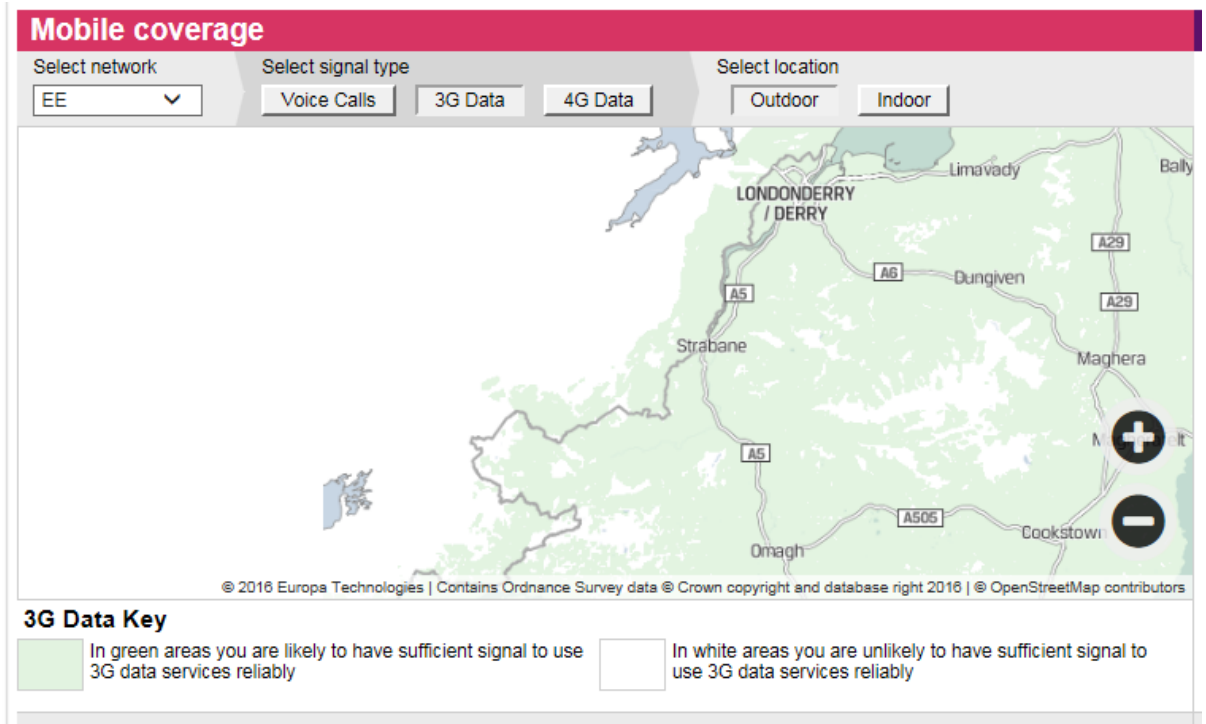


Image 15: EE 3g coverage when outdoor

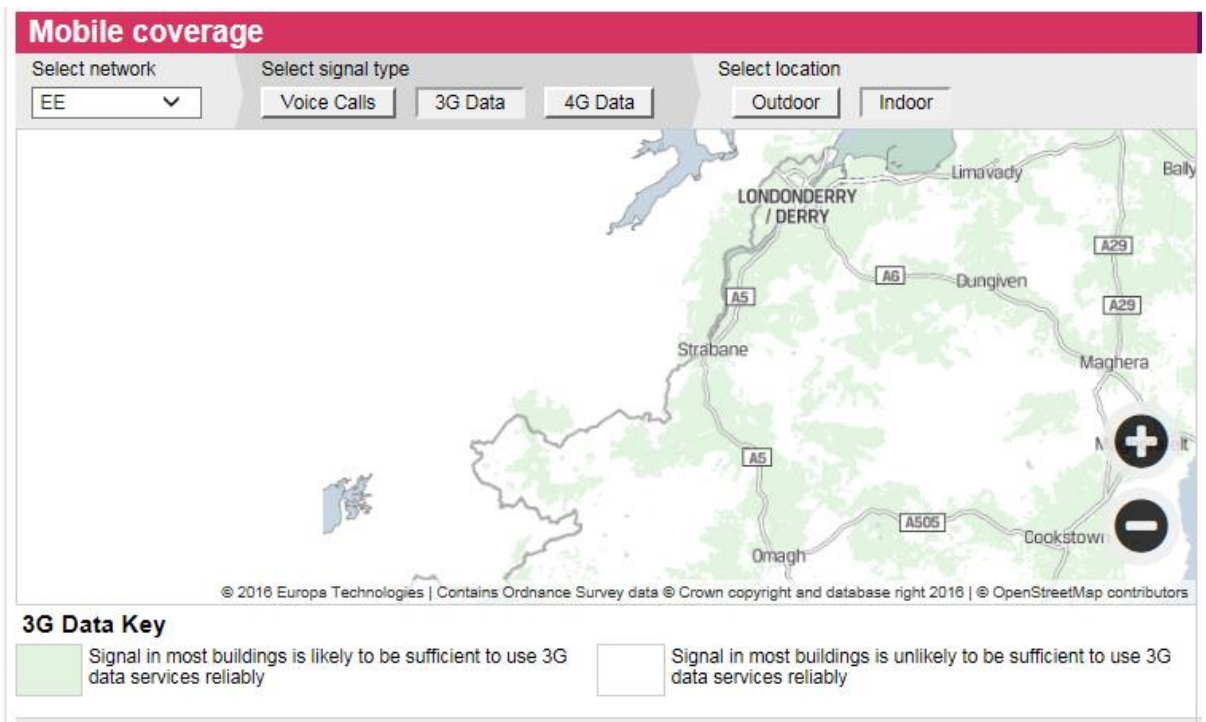


Image 16: EE 3g coverage when indoor

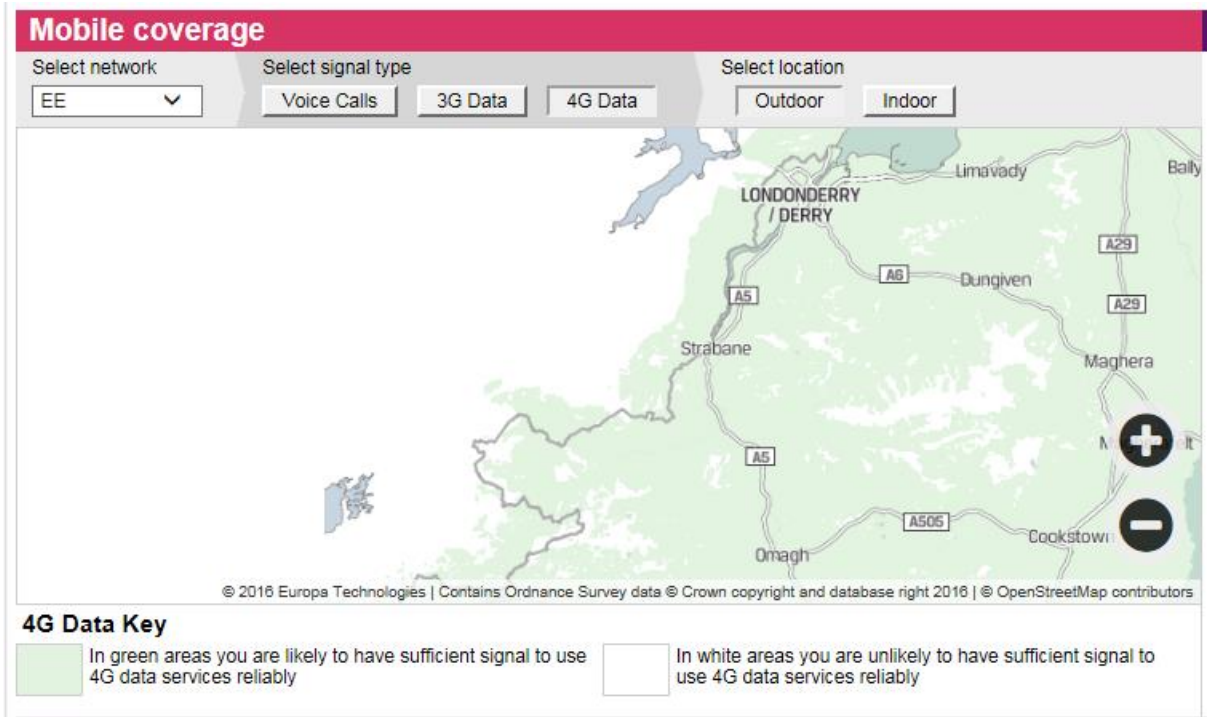


Image 17: EE 4g coverage when outdoor

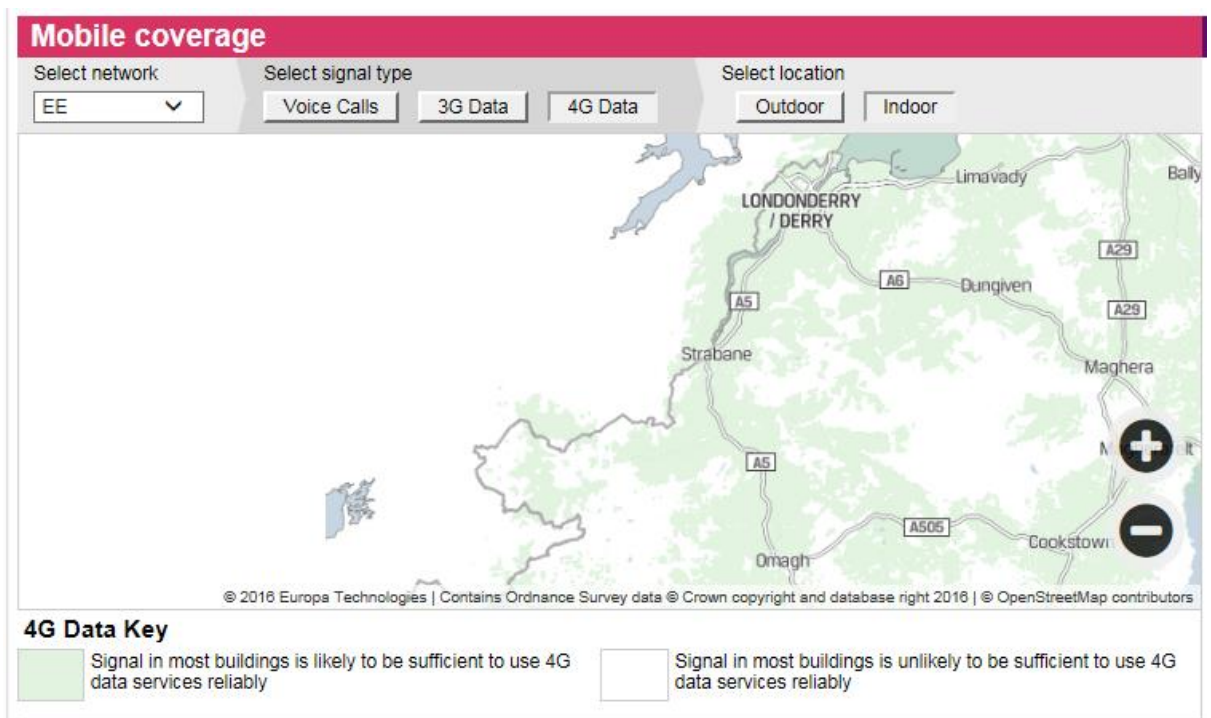


Image 18: EE 4g coverage when indoor

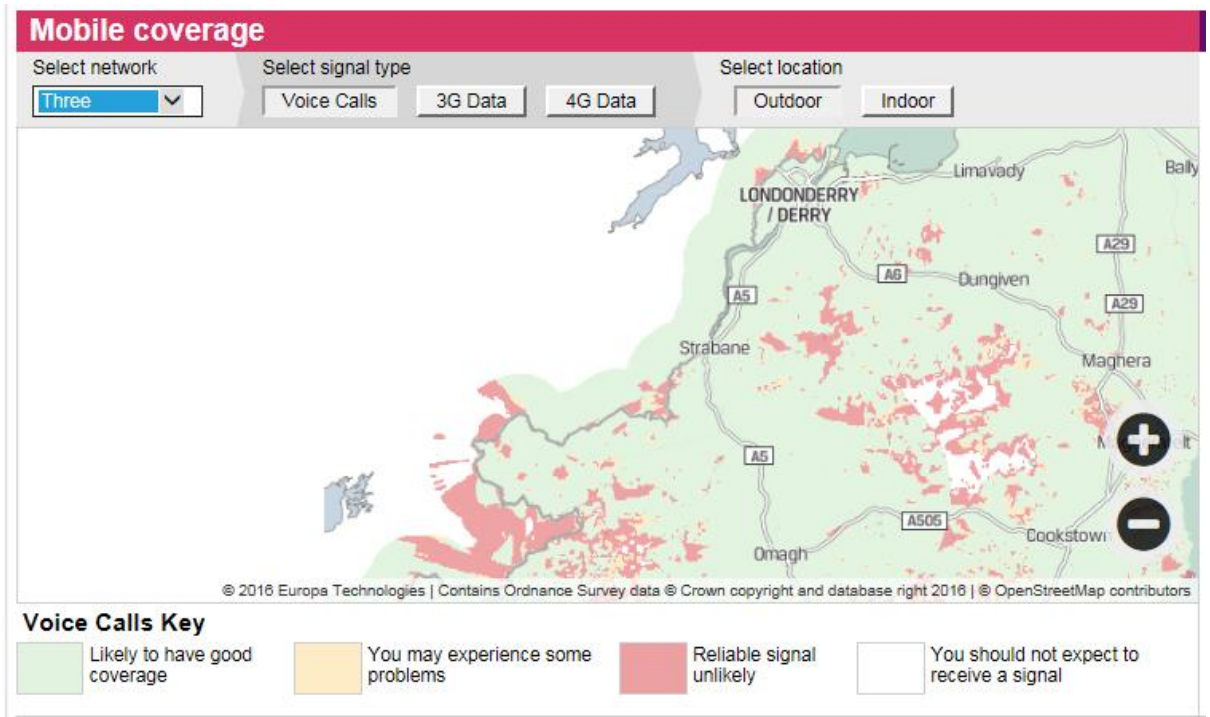


Image 19: Coverage for Three voice calls when outdoor

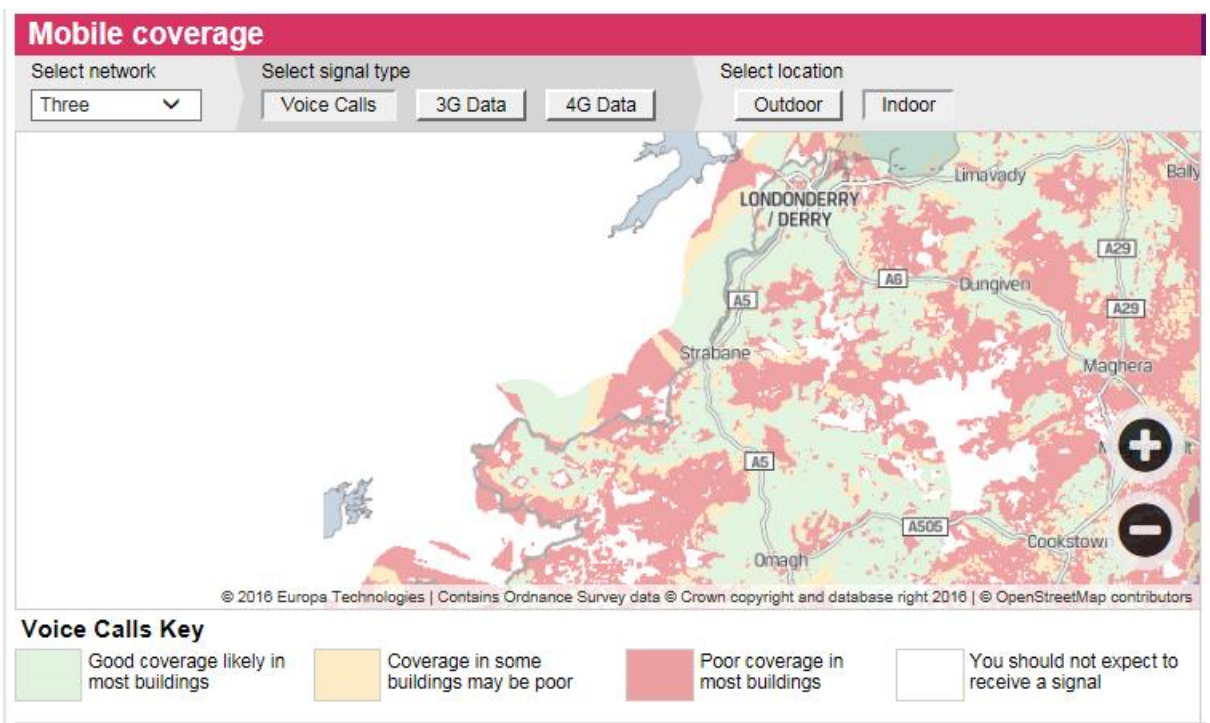


Image 20: Coverage for Three voice calls when indoor



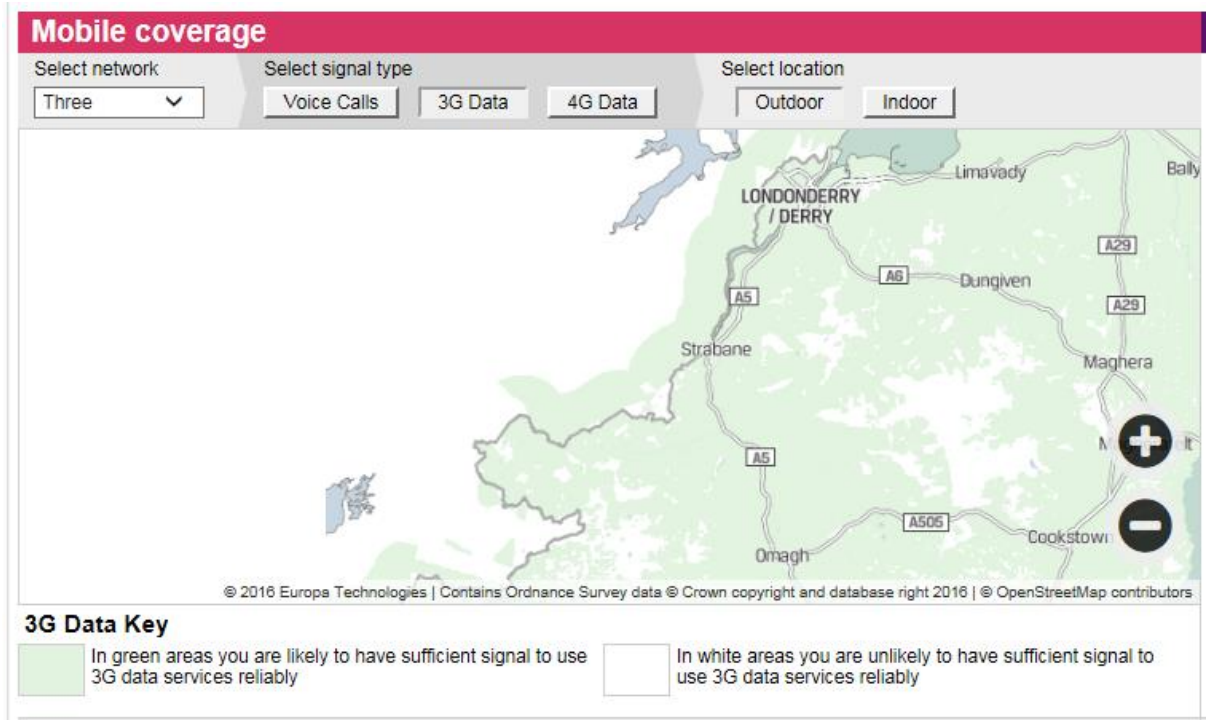


Image 21: Three 3g coverage when outdoor

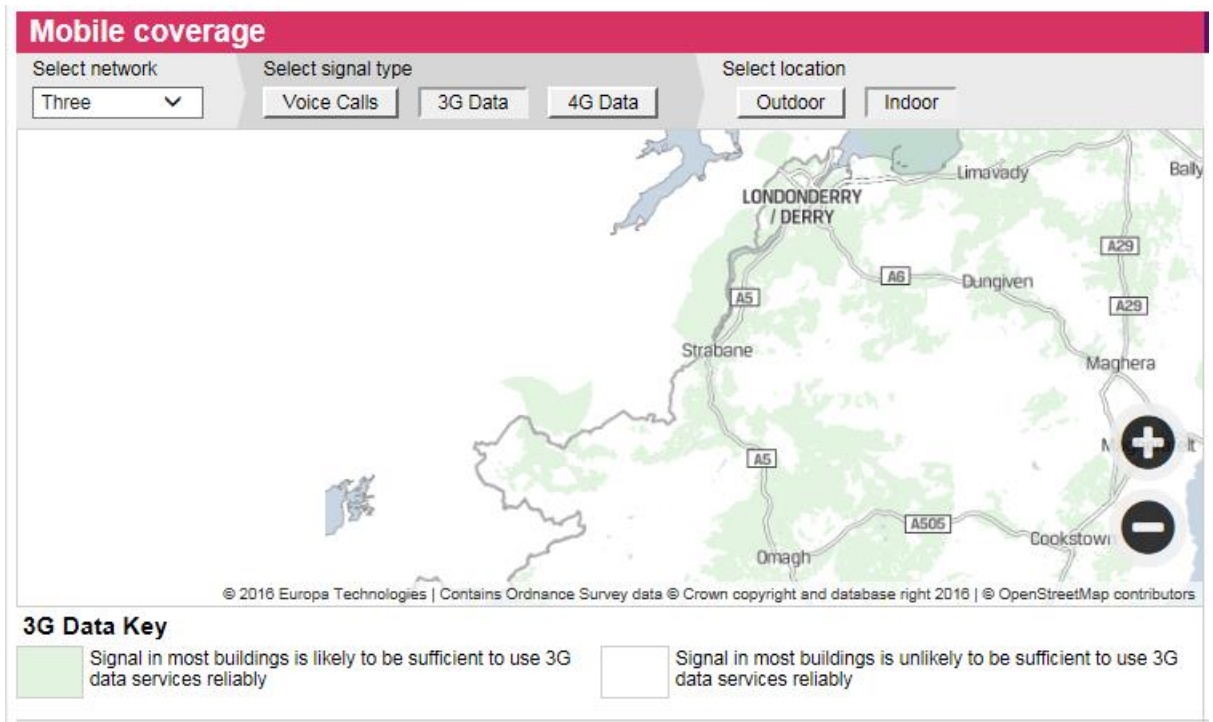


Image 22: Three 3g coverage when indoor

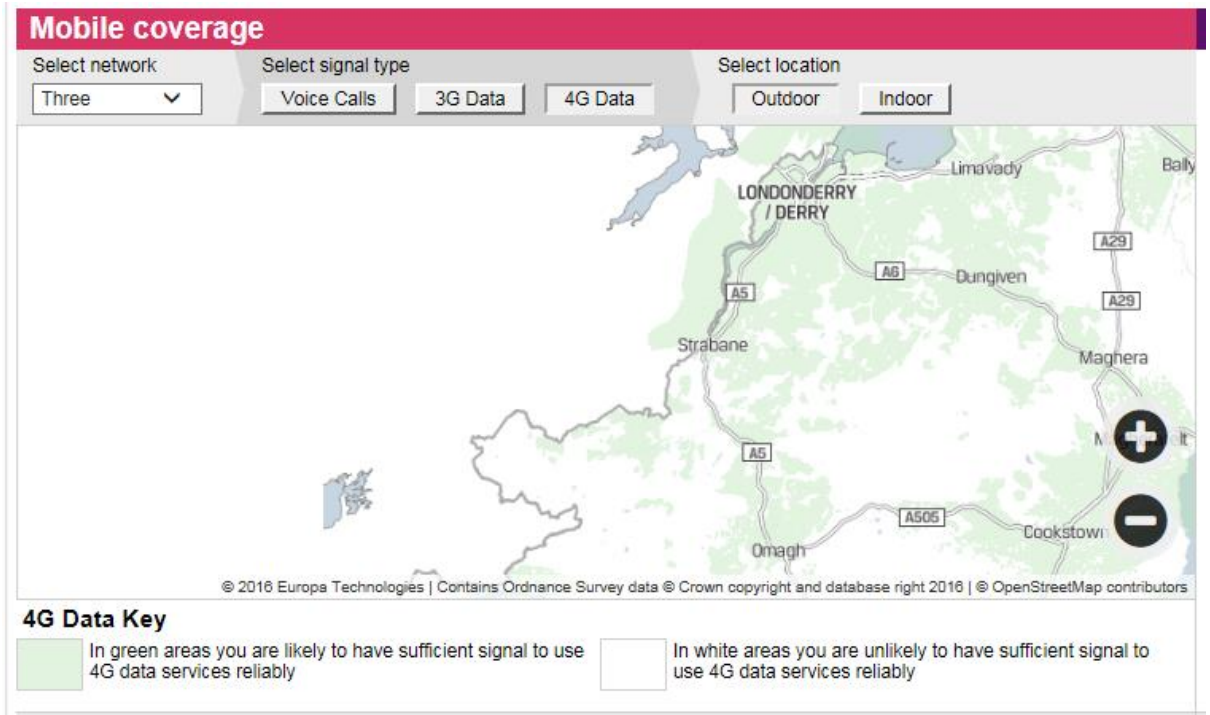


Image 23: Three 4g coverage when outdoor

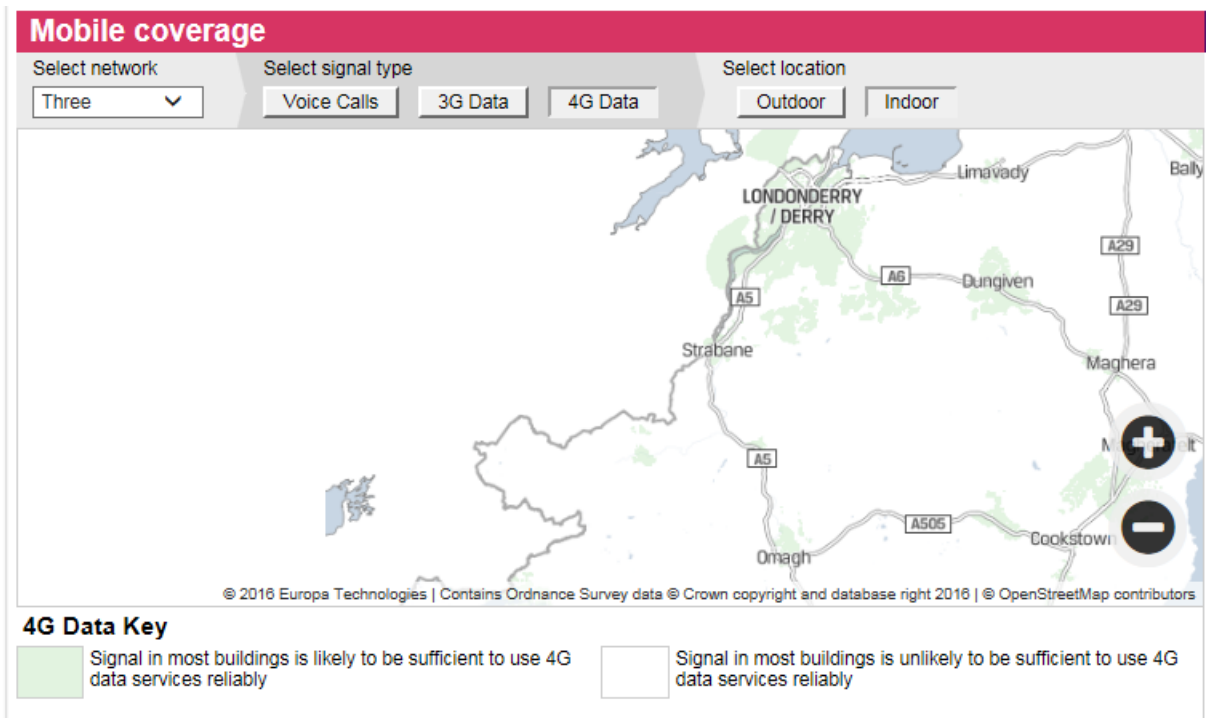


Image 24: Three 4g coverage when indoor



### Appendix 3 Examples of Visual Impact of Overhead Lines, etc. in District







