Roinn Cumarsáide, Gníomhaithe
ar son na hAeráide & Comhshaoil
Department of Communications,
Climate Action & Environment

13 March 2019

Ms. Éilis Fallon
Secretariat
Committee of Public Accounts
Leinster House
Dublin 2
D02 A272

Department of Communications, Climate Action & Environment (Vote 29)
Ref: PAC32-I-1324 and PAC-I-1330

Dear Ms Fallon,

I refer to your letters dated 22 and 25 February 2019, relating to discussions on the National Broadband Plan and Metropolitan Area Networks at Public Accounts Committee meetings in February 2019.

I now attach material in respect of the issues raised in the afore-mentioned letters, along with copies of documents requested by way of Appendices attached to this letter.

Should you require any clarification or additional information, please do not hesitate to contact Ms. Catherine McGinty in my Department, by email at Catherine.McGinty@dccae.gov.ie or by phone at (01) 6782423.

Yours sincerely,

Mark Griffin
Secretary General

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PAC32-I-1324 (Letter dated 22 February 2019)

1. A copy of the correspondence between the Department and BT where BT expressed an interest in relation to the extension of the MANs network.

Correspondence from BT to the Department, dated 15 June 2017 (which was released under FOI on 2 November 2018) and the Department's response is attached out at Appendix 1.

2. A note on the decision of the Department not to issue the Analysys Mason report in July 2018 until February 2019

Following completion in March, 2018 of the Analysys Mason report, *"Review of pricing and access arrangements for the MANs"*, the Department commenced an engagement with enet on implementation of all of the recommendations set out in the report. The reply to Parliamentary Question No. 760 on 10 July 2018 noted that the Department's consideration of the findings of the Review was ongoing and that the Department was engaging with enet as the Management Services Entity in relation to the Review's recommendations; the reply also noted the intention to publish the Review.

The engagement with enet continued for longer than expected during the course of 2018, with enet providing updates and clarifications on progress in implementing the recommendations. The process concluded in December 2018.

The Minister received the Analysys Mason report in January 2019, as stated at the Private Members motion on 22 January 2019, and authorised its publication shortly thereafter on 13 February 2019. In light of the findings of the Report, the Minister requested ComReg to:

- establish whether enet complied with its obligation under the Code of Practice to offer managed services on the MANs, in the context of national end-to-end services, at non-discriminatory prices;
- confirm enet's revised intercompany transfer pricing arrangements in place are in compliance with the Code of Practice;
- confirm that the Analysys Mason recommendations are being implemented, and
- based on the findings of its review, make any further recommendations to the Minister.

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3. A note on the decision to extend the Metropolitan Area Networks contract to enet without retendering

Enet was awarded the first Concession Agreement for the management of Phase 1 MANs in July 2004 for an initial term of 15 years, with the Concession Agreement providing for an option to extend for a further 10 years. In July 2009, a second 15 year Concession Agreement was awarded to enet for Phase 2 MANs, which also contained a 10 year extension provision.

In 2016, the Department concluded its internal review of the MANs Programme, the purpose of which was to inform the Department's decision on the future of the MANs and whether to extend the existing agreements at the end of the initial term of the Concession Agreements or retender for a new Concessionaire.

The internal review established that the MANs Programme has proven itself to be an effective and appropriate way of delivering telecommunications infrastructure. The technology solution chosen (fibre) was appropriate, and has made a significant contribution to inducing competition and greater availability of services within the sector. The review stated that removal of the MANs from the regional market would be detrimental to both service providers and customers, and by extension the State. The review also stated that the Concessionaire (Management Services Entity (MSE)) model is the most appropriate vehicle to enable access to the MANs and should be continued in the medium to longer term.

The review exercise also undertook a detailed analysis of the options to:

A. Extend the existing Agreements; or
B. Retender for a new MSE contract.

As part of this analysis, the Department assessed both options and their potential implications, benefits and risks in terms of 6 key considerations - policy, market relevance, legal, State Aid and financial, along with administrative issues, with a view to determining the direction to be pursued.

External financial and on the two options was sought from Norcontel in April 2016. Norcontel's analysis, using three scenarios to check the sensitivity of the outcome, concluded that extending both Concession Agreements to 2030 presented the more beneficial option for the State. The indicative financial projections demonstrated that, under a modest growth scenario, the State stood to benefit by an increased total Concession Fee (investment in MANs increased footprint and revenue share) of some 23%, with an overall net benefit of some 38% by extending the Concession Agreements rather than retendering. Significant additional financial benefits were expected to accrue as a result of successfully agreeing modified commercial terms under an extension scenario.

Having regard to the analysis conducted by the Department and informed by the Norcontel report, the preferred option and recommendation was to extend the current Concession Agreements to provide that they expire on the same date in 2030, viz. a 10 year extension to the MSE I Agreement and 6 year extension to the MSE II Agreement.

Extending the Concession Agreements offered more assurances and certainty to the telecoms market, as to the future availability and viability of the infrastructure during a dynamic time in the wider telecommunications market. It also offered greater guarantees on continued levels of infrastructure investment, in turn ensuring that the MANs remain relevant in the regional telecoms market.

The benefits of granting an extension to the MANs Agreements (which was achievable through the existing contractual provisions and change control mechanism) to make them co-terminus in 2030 included:

- Telecoms operators would have certainty of the availability of the MANs infrastructure for the foreseeable future in drafting their own investment plans in regional Ireland. This was important at a time of dynamic change in the market
- It was crucial to the continued success of the MANs that the MSE was in a position to respond to the developments that were expected over the next 10 years if the MANs were to remain competitive and relevant. Norcontel advised that if both contracts were re-tendered together it should be in 2030 so that there would be no reduction in investment and diversion of focus of the MSE during the critical period of expansion of fibre networks
- On the contrary, there would be limited incentive by the MSE to invest in the absence of an extension to 2030 and this would have a negative, knock-on effect in any retender/sale process as the current and future value of the asset to prospective bidders would be negatively impacted.

Prior to finalising the contract extension, the Department re-negotiated the terms and conditions to further improve the financial terms of the contract for the State. The modified commercial terms are estimated to result in €21.4m improvement in the State's net financial position over the period of the contract to 2030, when compared against the existing terms of the contracts.

The current Agreements cannot be extended beyond March 2030 and a decision will be taken in advance of this date on the State's future role in the MANs.

4. A copy of the Norcontel Report referred to on page 42 of the transcript

The Department, in its letter to the Committee dated 16 January 2019 (Ref PAC32-I-1219), included a link to a redacted version of the Norcontel report which was released under FOI, and is available on the Department's website (at pages 83-127: https://www.dccae.gov.ie/documents/FOI2018141.pdf.)

For convenience, a copy of the redacted report is attached at Appendix 2.

PAC32-I-1330 (Letter dated 25 February 2019)

5. Consent to publish the PWC '*National Broadband Plan – State aid compliance update on the mapping of eir's rural extension plan*'

The Department consents to the publication of the redacted version of the PriceWaterhouseCooper report "*National Broadband Plan- State aid compliance update on the mapping of eir's rural extension*", as previously provided to the Committee.

6. A note on what was included in the mapping project including State and private networks covered

High Speed Broadband Map

The High Speed Broadband Map identifies locations and premises as either being served by the commercial sector or requiring State intervention under the NBP. It is therefore linked to the availability of a high speed broadband product from a commercial operator rather than the existence of infrastructure in the area.

The existence of infrastructure at a location does not automatically mean that high speed broadband is available to premises in the area as it requires an operator being willing to connect the premises to the infrastructure and offer a service. Therefore the mapping process which has led to the publication of the High Speed Broadband Map involves the identification of existing or planned provision of high speed broadband by commercial operators and not the existence of infrastructure which could be used to deploy broadband in the future.

Reuse of Existing Infrastructure and the avoidance of duplication

The re-use of existing infrastructure and therefore the avoidance where possible of duplication, is a key aspect of the NBP Intervention Strategy and the State Aid Guidelines in relation to broadband.

The NBP Bidder is free to enter into infrastructure access agreements with any infrastructure owner (public or private networks) with a view to using its infrastructure as part of the NBP network.

While the selection of what infrastructure to reuse as part of its proposed build is a matter for the Bidder, it is understood that the vast majority of infrastructure that it proposes to use to rollout the NBP network is existing infrastructure. This includes the rental of existing physical infrastructure such as poles and ducts and entering into agreements with other service providers to access backhaul services where available.

Further information on the High Speed Broadband Map and the mapping process

In order to identify the areas where a State Intervention is required, the Department engaged in a mapping process which began in 2013.

This mapping exercise identifies those areas of the country where high speed broadband is not available and not expected to be made available on a commercial basis in the near future. This was developed in consultation with industry to ensure that all potential commercial investment meeting the required criteria is captured. The result of this mapping process is the Department's colour coded high speed broadband map.

In March 2015, the Department sought further information from operators in relation to their plans up to and including 2020.

An updated Map was published in October 2015 which identified approximately 757,000 premises as being in the Amber (Intervention) Area.

In April 2017, the Department published an updated High Speed Broadband Map. This took account of commercial operator plans which had not materialised and new developments since the Map was last published. The net result of this assessment was that there are now approximately 540,000 premises in the updated Amber area.

The High Speed Broadband Map identifies locations and premises as being Amber, Dark Blue or Light Blue and it is updated on a quarterly basis.

- Amber areas are the target areas for the State Intervention of the National Broadband Plan.
- Dark Blue areas are those where commercial operators are delivering or have indicated plans to deliver high speed broadband services.
- Light Blue areas are areas where eir has committed to rollout high speed broadband to 300,000 premises under its commercial rural deployment plan.

Further information on the interactive High Speed Broadband Map is available on the Department's website at the following link.

Finola Rossi,
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National Digital Strategy & Telecommunications Market Contracts
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DO2 X285
Ireland.

CC: Ciarán Ó hÓbáin, Assistant Secretary – Communications
CC: Gerry Fahy – Chairperson of ComReg

15th June 2017

In Confidence

Dear Finola,

RE: MSE contract for the Metropolitan Area Networks (MANS) Phase I and Engagement with consultants performing an independent evaluation of the operation of the MANs

Following Minister Naughten's finalising of his decision to provide that the concession agreements co-terminate in 2030, as expressed in Minister Naughten's response to Dail questions 604 and 607 on May 23rd 2017, I am writing to formally express BT's interest in participating in the bid process for the Managed Service Entity (MSE) for the MANs (Phases 1 and 2) to 2030. BT Ireland is a long established operator within the Irish communications market with the expertise, experience and financial position to be the MSE for the MANs. We therefore request the Department of Communications, Climate Action and Environment to formally register our interest in entering this bid process and request that you provide us with an outline timetable of the details of the process.

In addition, Minister Naughten also stated in his response to the Dail questions 604 and 607 on May 23rd 2017 that consultants are performing an independent evaluation of the operation of the MANs. I am writing to formally express BT's interest in participating in this evaluation in order to provide insight into the market effects of the current MSE commercial

arrangements including pricing of products and services which has been stated is part of this evaluation. BT is a long established operator in the Irish communications market and we are well informed of the value and pricing of the MAN service and could bring such expertise to your review.

Yours sincerely

John O'Dwyer
Head of Regulatory Affairs – BT Ireland
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Roinn Cumarsáide, Gníomhaithe
ar son na hAeráide & Comhshaoil
Department of Communications,
Climate Action & Environment

4 August, 2017

Mr John O' Dwyer
Head of Regulatory Affairs
BT Communications Ireland Ltd
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Dublin 4
D04 V586

Dear John

I refer to your letter of 15th June 2017 concerning the Management Services Entity (MSE) contracts for the operation and management of the Metropolitan Area Networks (MANs) and engagement with the consultants undertaking an independent review of the operation of the MANs.

Following two public procurement processes, enet was first appointed for a 15 year term to manage the 28 Phase I Metropolitan Area Networks (MANs) in July 2004, and was subsequently appointed for a 15 year term to manage the 60 Phase II MANs in July 2009. Each Concession Agreement contains specific provisions providing for an extension of up to a maximum period of 10 years. The Concession Agreements, which were due to expire in March 2020 and July 2024 respectively, have been extended to co-terminate in March 2030.

The independent consultants undertaking the review of the operation of the MANs have, with BTs agreement, been provided with correspondence received by the Department from BT which set out BT's views on the operation of the MANs.

Yours sincerely

Brendan Whelan

Principal Officer

Fáiltítear roimh comhfhreagras i nGaeilge

Department of Communications,
Energy & Natural Resources

Report

On extending/retendering the MSE for the MANs

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V1.1	Completed draft	PSC, LF	
V1.2	Amendments	PSC, LF	
V1.3	Amendments to Section 5.2, 5.3 and Appendix 2 added	PSC, LF	
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V1.5	Amendments added	PSC	
V1.6	Minor amendments/changes	PSC	
V1.7	Amendments added	PSC	
Final			23/06/2016

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1. INTRODUCTION

1.1 GENERAL INTRODUCTION TO REPORT

Following the issue by the Department of Communication, Energy & Natural Resources (DCENR) on 14th March 2016 of a Request for Tenders (RFT) for the provision of consultancy services to review the financial aspects of extending or retendering the Management Service Entity (MSE) for the Metropolitan Area Networks (MANs) and evaluation of the proposals received, DCENR selected and awarded a contract for this assignment to Norcontel.

Norcontel has addressed the scope of work specified in the RFT in accordance with the proposal submitted to and accepted by DCENR.

This Report, following a brief introduction and some background on developments, presents the analysis undertaken in the review and the conclusion arrived at following the examination and consideration of the issues.

This Report is structured as follows:

Section 1: This Introduction;
Section 2: A brief description of the status of FTTB/FTTH developments in Europe;
Section 3: Analysis of the extend/retender options for the MSE;
Section 4: Comments on 'Analysis of the Options of Retendering/Extending the MANs Concession Agreements';
Section 5: Recommendations on Negotiation/Retender Positions;
Section 6: Conclusions and Recommendations

2. FTTB/FTTH DEVELOPMENTS

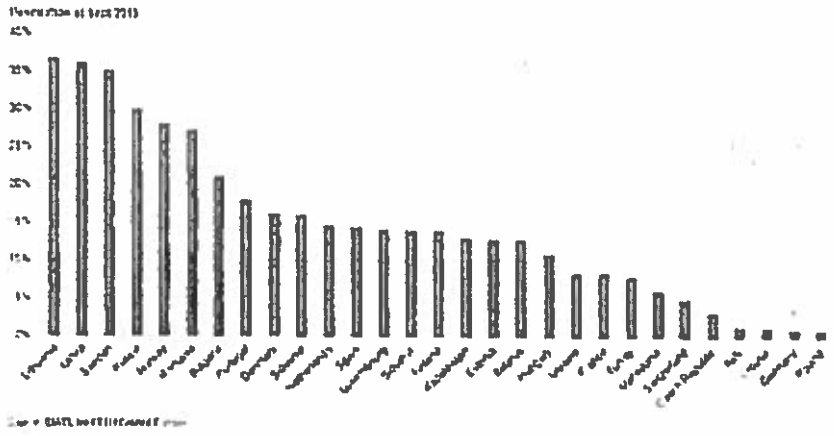
The MANs have been in place and providing services since 2004/2009 delivering services mainly to large businesses, SMEs, public bodies and educational institutions but also supporting wireless service providers to deliver broadband to residential customers. The take up of services was slow initially probably influenced in many cases by the cost of the drop connection and, for many SMEs, by the fact that the available broadband services delivered over the local access copper loop, FTTC/VDSL, was sufficient for their needs at an affordable price. It has not always been the case that adequate broadband services were generally available and it has taken many years for speeds of up to 100Mbps to be offered and made available even in large towns.

Demand for higher speed services continues to grow because consumers have higher expectations. For example, as business customers migrate to cloud based services and require more symmetrical, high bandwidth, high availability and resilient services, and as residential customers demand services such as video, audio, and other services such as the uploading of photos and videos, access to Netflix and Spotify, service providers are obliged to offer high-quality, state-of-the-art, and reliable broadband services in order to retain existing customers and to gain market share. Mobile Network Operators are increasingly looking for 4G backhaul. 5G and the Internet of Things with all the demands this will place on the networks are on the horizon. Network Operators and service providers are now facing the reality that these demands can no longer be met over the copper access network and globally and in Europe, the rollout of fibre networks, particularly the final access portion, is being put in place to respond to the demands.

There has been high growth in the penetration of FTTH/FTTB in some European countries over the past few years where the leading countries have reached penetration rates of over 30% of households/buildings. For example, Lithuania with 36%, Latvia with 36% and Sweden with 35% are leading the way. The FTTH Council reported that the number of FTTH and FTTB subscribers in Europe increased by 19% over the first nine months of 2015 confirming the trend established in 2014. It is forecast that leading countries will be reaching close to 50% household penetration by the end of 2019. Some countries, however, are well behind and are not ranked in the reported figures for end of Sept 2015. These include Austria, Belgium, UK and Ireland. Germany has also been slow to get started and has only in late 2015 passed the 1% threshold to be included in the rankings.

European ranking

> The European Ranking includes countries of more than 200k HH where the part of FTTH/B subs in the total number of HH is at least 1%



Apart from the leading Northern European countries, France and Spain now have made significant progress in moving up the rankings and are still leading countries in terms of new subscribers from year to year.

Incumbent operator Telefónica is deploying FTTH throughout Spain at rollout rates faster than any of its European counterparts, passing 5.1 million new homes in 2014 to reach over 10.2 million homes passed. In 2015, Telefónica reached 13.8 million compared to its competitors Vodafone's 8.4 million and Orange's 6.8 million. For this year 2016, Telefónica will pass around 2.4 million homes at a pace of 200,000 units a month ending 2016 with 16.2 million passed homes. It plans to extend its FTTH network to all municipalities with a population of over 1,000 by 2020.

In France, the incumbent Orange which is deploying a similarly ambitious FTTH rollout plan, has passed 1.1 million new FTTH homes in 2014 to reach a total of 3.6 million homes passed. By 2019, France is expected to become the second largest market for FTTH after Russia, as Orange plans to cover 15 million households by 2020.

The FTTH Council Europe has identified three key characteristics of the countries that have achieved very widespread FTTH network deployments, such as Sweden, Spain and France.

- Firstly, they have put a strong emphasis on FTTH as an objective. Those administrations have a clear target and seek to achieve it;
- Secondly, appropriate incentives have been created to encourage all operators to invest in the technology;
- Finally each country mentioned above has ensured that the cost of deployment is minimised through the sharing of expensive passive infrastructure components and avoided duplication of those passive network elements.

Why is the growth and development in FTTB/FTTH relevant to this review and the prospects for the MANs?

In Ireland, we are well behind in terms of deployment of fibre in the access network. However, that is about to change with rollout programmes announced and in progress by SIRO, eir and others. As stated above, one of the factors identified in countries where there are widespread FTTB/FTTH deployments is the cost of deployment. This can be minimised through the sharing of expensive passive infrastructure components and avoiding duplication of those passive network elements. These components include duct and fibre cable. The MANs were designed and deployed to provide these components but within the context of operation as a carrier's carrier. The MANs will either participate and benefit from the rollout of FTTB/FTTH in the areas where they are deployed or they will be bypassed and in time become redundant.

The rate of progress in other European countries would indicate that once the conditions and environment are in place and the rollout is started, deployment can proceed quickly. With the programmes already started here in Ireland, the next 5 – 7 years will see major FTTB/FTTH deployment reaching a large portion of the population starting with extensive coverage in cities and towns.

3. ANALYSIS OF THE EXTEND/RETENDER OPTIONS FOR THE MSE

3.1 BASIS FOR ANALYSIS OF THE MSE IN THE MARKET

The starting point for this review of the analysis of the available options has been the reports and documentation provided by DCENR. The figures which formed the basis for the tables developed by Norcontel in this report were taken from Excel spreadsheets provided by DCENR as part of the project documentation.

The following are the documents provided and reviewed:

1. Concession Agreement for Phase I MANs, dated 29th June 2004;
2. Concession Agreement for Phase II MANs, dated 8th July 2009.

These Agreements set out the contract conditions and in particular, provided the revenue share percentages that apply and the requirements for reimbursement of reinvestment originally agreed.

3. Copy of State Aid Decision by the European Commission;
4. Review of the Metropolitan Area Networks MANs, dated November 2015.

This Review provides the policy development and objectives in developing the MANs, the current status of the MANs, an account of interviews with service providers that are customers of the MANs to get their feedback, an economic and financial analysis of the MANs, an analysis of the options and a set of recommendations. Appendices provide additional relevant information on the MANs.

5. Analysis of the Options of Retendering/Extending the MANs Concession Agreements, dated February 2016.

This document presents DCENR's analysis of the extend and retender options, lists changes that have been agreed to the terms of the original concession agreements and addresses the extend or retender question under six headings including the financial aspects. The document ends with a conclusion based on the analysis undertaken.

This Report presents a review of that analysis in Chapter 4 below.

Also provided and reviewed in the analysis and in compiling the Report were the following:

6. A copy of the enet Three Year Plan for the years ending December 2016 – 2018;
7. A paper 'Re – Enhancement Expenditure on the MANs' from Enet, dated 23rd August 2010;
8. Excel spreadsheets which provided the historical financial data from enet and projections developed by DCENR used to produce tables in the Analysis document listed above as Item 5.

Norcontel based its analysis in this review on the background information provided in the documents listed, on the financial data provided in the Excel spreadsheets and on other information and clarifications provided by e-mail and directly in meeting with DCENR.

Using this data, Norcontel developed scenarios described in tables in the Report to compare the outcomes from the extend and retender options and to arrive at a preferred option.

3.2 MODEL SOME SCENARIOS FOR MARKET DEVELOPMENT TO 2030

Using the baseline of the existing MSE position, Norcontel has developed some projections for the market to 2030. These projections are based on a number of assumptions and other assertions.

The MANs were originally conceived and implemented to address a market failure: the absence of competition in high speed services and the unavailability of infrastructure to facilitate service providers in developing and delivering services outside of Dublin. This refers particularly to the unavailability of dark fibre networks or duct to deploy high speed services. The State, through the MAN programmes, invested approximately €180M in deploying the MAN infrastructure comprised of duct networks, fibre cables and co-location centres serving mainly business areas, business parks, public buildings and educational institutions in cities and towns. The MSE was appointed following an open competition to manage the MANs on an open access basis on behalf of the State.

The purpose of the investment by the State was not principally to get a direct financial return on the investment although there was a requirement to avoid further commitment of public funds. It is expected in any case that the economic return to the State in facilitating competitive services in the various locations would support the expansion of employment and of new investment in areas served and that these indirect benefits would be a multiple of any direct financial return. The main purpose was to address the market failure and lack of competitive services. However, part of the benefit in effectively managing the infrastructure is that the State can get a financial return in accordance with the Concession Agreement on the investment made. In the context of this study to select the better option of extending the current Concession Agreement or retendering to appoint a replacement MSE, the financial returns to the State are a consideration. These financial returns are comprised of cash payments and enhanced MAN networks.

The development of the MANs has been successful in addressing the market failure and lack of competition that was identified as the prime driver for the project. The networks have been built, are being managed on an open access basis facilitating service providers to offer a range of services, are being used by a range of service providers to deliver services to businesses and residential customers, are generating an operating profit and making a modest cash return to the State. It could be argued that the fact that the infrastructure has not been replicated by other Network Operators is also a measure of its success. However, this may be reflective of the long payback period and the still modest demand from service providers. Also it can be expected that the difficulty in duplicating duct networks in town centres and business areas already served with open access networks and perhaps also served by the incumbent infrastructure would be an added barrier to any Network Operator contemplating a competing infrastructure. This, however, may be about to change as the momentum grows behind FTTB/FTTH. The configuration of these networks may be different from the MAN model and/or they may rely on use of the MAN infrastructure in building the FTTB/FTTH networks.

The model for the MANs was to provide the middle mile infrastructure. There were

alternative backbone networks available and the economics of providing backbone networks and services, particularly between the larger cities and towns, was more attractive for Network Operators although it did take some time before all the MANs had access to backbone networks. This left the access portion or drop connection to the customer to be provided. As originally envisaged, this would be provided by the service provider or by the MSE but funded by the service provider. It would appear that the cost of provision of the access or drop connection proved to be a barrier to a greater take up of services. This is particularly the case with SMEs and residential customers. (Residential customers in general are now very reluctant to pay for connection. This is reflected in the advertised offers from service providers offering bundled services with no connection fees, and 3 or 6-month free or reduced rate propositions as part of an 18 or 24 month contract). Corporate or large enterprises are much more likely to accept the cost of connection and are more concerned about availability, reliability and flexibility of the service being provided. Although access or drop connections for large entities and public buildings were provided as part of some original MAN deployments, the small number of drop connections in many of the MANs, particularly in smaller towns, suggests that the cost of providing the drop connection is still a barrier to a wider take up of services.

This lack of access connection or the cost of provision has been recognised by enet and it has addressed this by deploying FTTB, enet 'fibredirect', in 4 locations: Kilkenny City, Ardee, Claremorris and Loughrea. While the premises served are limited and appear to be those directly adjoining the route of the MAN duct/fibre network, this is a positive development if continued to other locations and if the footprint of the areas served is increased.

In developing some possible scenarios and related models, we will explore the outcome of increased investment in the networks. This will be based on the following assumptions:

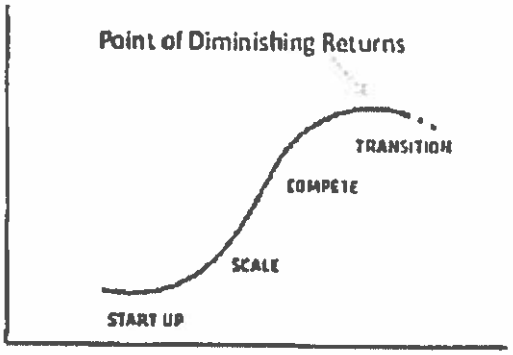
1. The Concession Agreements will be extended to terminate at the same date. As they currently exist, Phase I terminates in 2020 while Phase II ends in 2024. Differing revenue share and investment conditions apply. It would be beneficial from a management and administration viewpoint if not only both agreements would end on the same date but that that similar revenue share/investment conditions applied. This will depend on negotiations with the MSE and it may not be possible to reach agreement but in any case, as a minimum, it is assumed that both agreements end on the same date. In the case of the retender option, having separate tender processes for Phase I and Phase II would not

only be very complicated but is likely to yield a sub-optimal result.

2. In considering the extension option, the extension period considered is the maximum while still allowing both agreements to end on the same date. This means both end in 2030 with a 10 year extension for Phase I and 6 years for Phase II MANs. The provision of duct networks is a long term investment with a long payback period, designed to last in excess of 30 years. The high cost of provision and the extended period in getting a return is one reason why new entrants to the market are reluctant to build their own extensive duct networks unless they have committed customers with a high spend to whom they can provide services. The payback on cable is much shorter and the life of the cable is subject to developments in cable technology and in the delivery of services. Uncertainty about the possibility of or the length of an extension to the Concession Agreement will increase the risk for the MSE, will affect the expected payback and so will influence the level of investment in enhancing the networks. A short extension to the agreement will mean that the horizon for investment is restricted. A full 10/6 year extension is therefore assumed when considering the extension option.

3. In order to remain relevant in the market, the networks will need to be enhanced to meet the demands that are emerging. Up to now, the requirements for broadband services by most SMEs and residential customers could readily be met by providing broadband rates up to 100Mbps. These have been delivered largely by FTTC/VDSL technology with the final link delivered over eir's copper loop. Requirements by corporate customers and other large entities for greater bandwidth or for more diverse and available services were generally met by specifically designed solutions usually provided on fibre networks. The environment is now changing. The limit on what can be delivered over the copper loop has been reached. The emerging services, either 'quad play' in the home or increased use of cloud delivered services for business, require a fibre infrastructure: FTTB and FTTH. Whereas the MSE has provided drop connections on demand to serve business customers, the market is now changing to a mass market. Customers both SME businesses and residential customers that currently have high speed broadband will migrate to a service delivered over FTTB/FTTH over the next few years. The pace at which this will happen will depend on the competition in the market and the willingness of the main stakeholders to invest the necessary resources in deploying FTTB/FTTH networks.

4. The market in Ireland is in the early stages of deployment of FTTB/FTTH. It is expected that it will take 5-7 years to reach 80% of businesses and households. The adoption of the services by customers, business and residential, will follow the usual technology S-curve for adoption of innovation as was the case with the adoption and expectation for DSL broadband. Deployment of fibre in the Irish market is at the beginning of the 'scale' portion of the curve.



5. If the MSE is to remain relevant in this market, then it will have to increase the scale of the investment in the access or drop connections. This may also require some redesign of how the drop connections are deployed.

6. However, the current MSE will have no certainty that, when any extension to the current Concession Agreement ends, that it would be successful in a retender situation. The MSE would therefore want to maximise its revenues in the period of the extension, up to 2030.

Three scenarios are explored as follows:

Scenario 1: This is the optimistic scenario and is characterised by:
- High demand for MAN services;
- Success by the MSE in gaining market share;
- Increased investment for a period by the MSE;
- High growth in revenue.

Scenario 2: This is the modest scenario and is characterised by:
- Modest demand for MAN services;
- Some success in gaining market share;
- Some modest increase in investment for a period by the MSE;
- Some growth in revenue during the market expansion period before decreasing.

Scenario 3: This is the least optimistic scenario and is characterised by:
- Little or no demand for additional MAN services;
- Intense competition from other network providers and migration of existing customers to competitors;
- Decreased investment by the MSE;
- Revenue peaking and decreasing significantly over the concession period.

These scenarios are illustrated for the extend option in the remainder of this section by projections shown in Tables 1, 2 and 3 with commentary, followed by a comparison of the outcomes in Table A.

Scenario 1

In Scenario No 1, we have assumed that the MSE adopts the approach of increased investment in the immediate future so as to be in a position to be competitive in the 'compete' portion of the curve. An increased rate of investment in the next 5 years once the question of the extension to the Concession Agreement is settled is assumed. There is a corresponding increase in revenue as, in this optimistic view, the MSE competes for new business and is successful in securing a portion of the developing market. Investment will tail off as end of concession approached in 2030.

Projected MAN performance based on extending Concession Agreements to 2029

Table 1 illustrates the outcome of a high level of growth in investment by the MSE to avail of the anticipated increased demand for fibre infrastructure from service providers to deliver high speed services to businesses, SMEs and residential customers. It shows an increased level of MAN investment over the period 2017 to 2021, remaining at the increased level for 2 years before decreasing significantly by 2029. As the end of the Concession Agreement approaches, it is anticipated that the MSE will reduce the annual investment in the networks. The increased MAN investment shown is in the provision of drop connections and MAN expansion to cater for an increased demand for services in this period. The increased MAN investment is anticipated to be in parallel with significant investment in the same period in a programme of FTTB at the MAN towns (as enet has already done for 4 towns) which is not shown in the table.

The DCENR costs associated with Phase II remain as per current contract. The clawback provision for 10 years applies from 2020 to 2029 and, together with the DCENR costs, slightly exceed the projected revenue share for the period.

The total revenue is projected to grow significantly over the period to 2025, based on the anticipated take up of businesses and SMEs of broadband services delivered on drop

connections and on FTTB, and on the use of the MANs by other service providers to reach their customers with expanding services using the MAN infrastructure, e.g. Virgin, SIRO in some areas where it is more cost effective than developing their own network infrastructure and possibly eir in some areas where their duct or fibre network is exhausted or insufficient.

It is anticipated that the total revenue and revenue growth will be affected by the following factors as the penetration of FTTB/FTTH reaches a threshold:

- With the increased level of competition arising from other Network Operators rolling out fibre in FTTB/FTTH programmes, the price of the end product will decrease just as the price of broadband delivered over copper (DSL) has dropped;
- As the price of the end product decreases, the price paid by the service providers to the MSE for the fibre infrastructure will also decrease.

The level of net profit is also anticipated to fall as the length of the drop connection increases and the MAN footprint has to be expanded to cater for demand. Initially, the businesses and premises within immediate access of the duct route will be connected with drop connections. These are the least costly to connect and revenue generated by providing services to them can help fund the cost of connecting businesses further away where perhaps duct has to be laid.

Scenario 2

Scenario 2 is based on a more cautious approach and a modest increase in investment by the MSE. It depicts a marginal annual increase in MAN investment for the period 2017 to 2020, maintaining this level for a period before reducing the investment as the end of the concession approaches.

Table 2- Projected performance of the MANs 2016 – 2029, modest investment growth

Table 2 illustrates modest growth in investment by the MSE over the period 2017 to 2022, remaining at the increased level before decreasing significantly as the end of the Concession

Agreement approaches. The DCENR costs associated with Phase II remain as per current contract. The clawback provision for 10 years applies from 2020 to 2029 and together with the DCENR costs exceeds the projected revenue share for the period.

Scenario 3

Scenario 3 is a low growth outlook with strong competition from other infrastructure providers. SIRO has begun a programme to roll out fibre to homes and businesses in 50 towns. These towns in many cases coincide with the towns where MANs have been deployed. In fact, all Phase I MAN towns with the exception of Dungarvan, Manorhamilton and Gweedore are in the list of SIRO towns. The announced plan is to have fibre infrastructure in place in these towns by end 2018 and reach 500,000 homes and businesses at an estimated cost of €450m. The network will also be available on a wholesale basis to other service providers.

In addition, eir has begun a FTTH rollout in some rural areas. Currently, eir delivers broadband in towns over e-fibre/VDSL which can support up to 100Mbps depending on distance from cabinet and condition of copper loop. It is expected that eir will also begin to roll out FTTB/FTTH in towns in response to market demand for services that can't be delivered over copper.

It is likely therefore that in many of the MAN towns, there will be intense competition both for businesses and residential customers. Up to now, the MANs have provided the only fibre infrastructure available to service providers competing with eir to allow them to deliver services. In the near future, the MSE will have to compete with two strong competitors to gain new customers and to retain its existing customers. The table below, Table 3, shows a scenario where the growth in MAN revenue slows and stalls in the face of this competition. It is likely that margins will fall and some existing service providers that currently use the MAN infrastructure may migrate to one of the alternate networks. This will depend on the pricing policy of the MSE and whether it will compete aggressively with the competitors.

Table 3- Projected performance of the MANs 2016 – 2029, least optimistic outlook

Table 3 illustrates maintained investment by the MSE over the early years, a gradual decrease for 5 years before decreasing significantly as the end of the Concession Agreement approaches. The DCENR costs associated with Phase II remain as per current contract. The clawback provision for 10 years applies from 2020 to 2029.

A summary and comparison of the result of the 3 scenarios above are presented in Table A:

3.3 APPLY THE RETENDER OPTION TO THE DEVELOPMENT SCENARIOS

In the previous section, three scenarios were examined based on the stated assumptions about investment levels, revenue growth and market development. These scenarios were applied to the extend option where the current Concession Agreements were extended to 2030.

In this section, the option of retendering to select an MSE for the next period is examined. The three scenario, optimistic, modest and least optimistic, will be applied and the financial impact estimated.

The current Concession Agreements expire in 2020 for Phase I and in 2024 for Phase II. As stated above, there is benefit in having the concession agreements terminating at the same date. This would mean less administration and, in organising a tender competition, would mean that a single tender could be issued for both Phase I and Phase II. Because the revenues generated by Phase I MANs are a multiple of those generated by Phase II, combining into one lot would make it easier to ensure interest by bidders. Otherwise there is a risk that Phase II MANs would again require a guaranteed payment to cover management and costs or that even there would be little or no interest in Phase II.

As things currently stand, to combine the two phases into a single tender would require either extending the Phase I agreement to 2024 to coincide with the end of Phase II or arranging a tender for both from 2020. This would mean negotiating a contract termination with the incumbent enet for the remaining four years of Phase II and paying compensation as laid down in the Concession Agreement.

The period from 2016 to 2025 is seen as one when there will be significant development in the FTTB and FTTH deployment in Ireland. Ireland has been behind other countries in the deployment of fibre in the access network as described in the introduction above. However, that is now set to change with substantial programmes for fibre deployment announced. It is crucial to the continued success of the MANs that the MSE is in a position to respond to the developments that are expected over the next 10 years if the MANs are to remain competitive and relevant. However, if both Concession Agreements are terminated in 2020, this is likely to have a major impact on the level of investment in the networks over the next 4 years. The current MSE would argue that there is insufficient incentive to invest in enhancing the networks from now to 2020 as there is no opportunity to earn a return. The MSE would probably limit any investment for the remaining 4 years to the minimum required to meet its contractual commitments, if these have not already been met. Apart from the likely reduced investment in the period, there is also likely to be a migration of some existing customers to other infrastructure providers as the current MSE would be unable to provide any guarantees about continuity of service at the end of the concession. A possible change of MSE will add to the uncertainty and some customers may prefer an alternative provider. The loss of investment during the 4-year wind down period would put the subsequent MSE at a significant disadvantage in the market compared to the other Network Operators that will have had a 4 year head start in network deployment and in establishing a market share. This disadvantage may never be reversed as the MANs address a specific portion of the market, i.e. businesses in the MAN towns, and cannot easily refocus on other markets to recover any lost opportunity.

For these reasons, the preferred start date for a new concession agreement in a retender scenario, and for the purposes of fairly addressing the impact of adopting such an approach, is 2025 rather than 2020. The tables below showing the estimated investment and revenues are based on extending the Phase I agreement to 2024 to coincide with the expiry of Phase II.

The following assumptions have been applied:

1. The Phase I Concession will be extended to 2024 with existing terms and conditions;
2. The Phase II Concession will continue to expiry in 2024 with the current terms and conditions;
3. The retender option will apply for the period 2025 to 2040;
4. The investment levels and the revenues will begin to diverge from those applied in the extend option from 2020 onwards based on the shortened horizon available to achieve a return on the investment;
5. There will be a reduction in the investment by the MSE as the end of the contract approaches in 2024;
6. Phase I and Phase II will be treated as one lot for the retender and a single set of payment conditions will be applied with the revenue share based on the existing Phase II terms. The clawback will apply to the final 3 years.

Tables 1, 2 & 3 above illustrate the projected performance of the MANs under the extend option for the period 2016 to 2029. In order to be able to make a direct comparison between the returns from the extend and the retender options, the tables below for the retender option must also begin in 2016. An adjustment will be made later to the comparison to account for the years 2030 to 2040 in the extend case.

As in the case of the extend option, three scenarios for the retender option are explored and illustrated in Tables 4, 5 and 6: optimistic, modest and least optimistic.

Scenario 1

The first scenario describes a period starting from 2025 where, following expansion of the fibre networks during the period from 2017 to 2022, the market has now reached saturation with little opportunity for further network expansion, particularly in the urban MAN areas. This scenario is based on an annual growth of 1% in revenue if the MSE can provide some additional and innovative services and investment in the networks governed by the terms of the Concession Agreement: 1% of previous year's revenue.

From 2016 to 2024 the following is expected to occur:

- The investment levels and the revenues will begin to diverge from those applied in the extend option from 2020 onwards based on the shortened horizon available to achieve a return on the investment;
- There will be a significant reduction in the investment by the MSE as the end of the contract approaches in 2024;
- Revenue will peak in 2020 before declining as some customers are lost to competitors.

From 2025 with a new MSE and a new Concession Agreement in place, the following conditions have been applied:

- Marginal growth in revenue: 1% per annum
- New concession terms: Phase I & Phase II combined in 1 lot, revenue share as per current Phase II agreement with a minimum revenue share of €950K per annum;
- The management fee of €1.2m, which is part of the Phase II Concession Agreement, no longer applies;
- MAN investment dictated by terms of Concession Agreement: 10% of previous year's revenue.

This is shown in Table 4 below.

Scenario 2

The second scenario also describes the period 2025 to 2040. This scenario shows an annual gradual decrease in revenue as the prices for services come under pressure from competition and the MANs address a limited portion of the market. The investment in the networks is governed by the terms of the Concession Agreement and gradually decreases in line with annual revenues.

From 2025 the following conditions have been applied:

- Low decline in revenue: reducing by 1% per annum;
- New concession terms: Phase I & Phase II combined in 1 lot, revenue share as per current Phase II agreement with a minimum revenue share of €950K per annum;
- The management fee of €1.2m, which is part of the Phase II Concession Agreement, no longer applies;
- MAN investment dictated by terms of Concession Agreement: 10% of previous year's revenue.

Scenario 3

The third scenario shows an annual decline in revenues as competition causes consolidation in the market and margins fall. The stronger service providers gain market share at the expense of the smaller players and this is reflected in falling revenues for the MANs.

From 2025 the following conditions have been applied:

- **Decline in the revenue year-on-year: declining by 2.5% per annum;**
- **New concession terms: Phase I & Phase II combined in 1 lot, revenue share as per current Phase II agreement with a minimum revenue share of €950K per annum;**
- **The management fee of €1.2m, which is part of the Phase II Concession Agreement, no longer applies;**
- **MAN investment dictated by terms of Concession Agreement: 10% of previous year's revenue.**

Table 6 - Projected performance of the MANs 2016 – 2040, retender option, least optimistic view

The revenue projections shown in Tables 4, 5 and 6 present a reasonable reflection of the competitive environment and the position of the MSE in the market. The MSE is expected to adopt a very cautious approach to MAN investment from 2016 to 2020. This will be followed by a period coming up to the end of the concession in 2024 when all unnecessary investment will be avoided while new entrants to the FTTB/FTTH business will be aggressively rolling out infrastructure and marketing their services.

For all three scenarios, there is expected to be a decline in revenue after 2020 until the end of the concession period in 2024. The following factors will contribute to this decline:

- The MSE will limit any investment for the remaining 4 years to the minimum required to meet its contractual commitments, if these have not already been met;
- The approaching end of the concession period will affect major customers where the MSE will not be able to offer contracts beyond 2024 and this uncertainty will cause customers to migrate to other service providers that can offer better deals, e.g. 5-year terms;
- The emphasis of the MSE will shift to reducing costs, for example, reducing advertising and marketing spending. This will be at a time when competitors will be aggressive in marketing and in offering better deals for multi annual contracts;
- As the revenues decline in the 2020 – 2024 period, the focus of the MSE management will change to other business areas where growth in revenue and better returns are possible, compounding the effect of the other factors.

A summary and comparison of the result of the three scenarios above are presented in Table 8 for the period 2016 to 2040:

3.4 COMPARE THE EXTEND AND RETENDER OUTCOMES AND CHOOSE A PREFERRED OPTION

Table C: Comparison of the extend and retender positions in 2029 for the 3 scenarios

The Total Revenue, Net Profit and MAN Investment figures for the years 2030 to 2040 would be more beneficial in the case of a retender for appointment of an MSE from 2030 than those projected for those years as shown in Tables 4, 5 & 6 (the retender option from 2025). There would a consequential benefit to the State with an increased revenue share and increased MAN investment. These benefits arises because the investment environment in the expected growth period (2017 – 2022) is more favourable from the perspective of the MSE if the retendered period is delayed to 2030 rather than 2025, i.e. the MSE has a longer period to get a return on the investments made. The beneficial effects, higher market share and higher revenues, of increased investment in the growth period carries on through to 2040.

For each of the 3 scenarios, the total revenue, net profit, investment and concession fee is more beneficial in the extend case than in the retender option.

The factors that contribute to the difference between the extend and retender options and the more beneficial position for the extend option are as follows:

- The next 5-7 years are anticipated to be a period of strong growth in FTTB/FTTH networks. This period will present a once-off opportunity to expand the MAN utilisation, increase MAN coverage, gain market share and increase revenue;
- The figures for revenue for the extend option over the period 2017 – 2024 illustrate the estimated outcomes for three scenarios of the MSE participating aggressively in the market and competing with other network operators rolling out FTTB/FTTH networks;
- The anticipated better position, when compared to the retender option, arise from the MSE being in a position to compete and to invest during the growth period in the knowledge that there is an opportunity to gain a return on investment (until 2030);
- The MSE is in a better position to retain existing larger customers by offering longer contracts (5 – 10 year contracts with better commercial terms) and to market similar contracts to potential new large customers;
- The MSE is in a better position to offer guaranteed services to other service providers that are rolling out FTTB/FTTH networks;
- The extend option provides the MSE with the opportunity to benefit substantially from investment made over the period of high market growth by fully engaging in the market possibilities while in the retender option, the focus will be on maximising a return on investments already made before the concession expires;
- The revenue figures also show that the starting market position of a new MSE (for the retender concession period of 2024 – 2040) is significantly lower that for the corresponding extend position in 2024. This loss of market share will never be recovered as the period of market expansion and high revenue growth is expected to come to an end about that time.

The DCENR costs are the same for both options. These are the costs that arise in 2009 – 2024 for the Phase II MANs under the current Concession Agreement. These costs may be reduced in negotiation with enet on extending the current contracts. Any reduction will affect both options to the same extent.

Comparison of net benefit to the State

(Note: In the retender option shown in Table F, it is proposed that the concession start date is 2025 rather than 2020. As outlined above, the period from 2016 to 2025 is seen as one when there will be significant development in the FTTB and FTTH deployment in Ireland. It is crucial to the continued success of the MANs that the MSE is in a position to respond to the developments that are expected over the next 10 years if the MANs are to remain competitive and relevant. However, if both Concession Agreements are terminated in 2020, this is likely to have a major impact on the level of investment in the networks over the next 4 years. The current MSE would argue that there is insufficient incentive to invest in enhancing the networks from now to 2020 as there is no opportunity to earn a return. The MSE would probably limit any investment for the remaining 4 years to the minimum required to meet its contractual commitments, if these have not already been met. Apart from the likely reduced investment in the period, there is also likely to be a migration of some existing customers to other infrastructure providers as the current MSE would be unable to provide any guarantees about continuity of service at the end of the concession. A possible change of MSE will add to the uncertainty and some customers may prefer an alternative provider. The loss of investment during the 4-year wind down period would put the subsequent MSE at a significant disadvantage in the market compared to the other Network Operators that will

have had a 4 year head start in network deployment and in establishing a market share. This disadvantage may never be reversed as the MANs address a specific portion of the market, i.e. businesses in the MAN towns, and cannot easily refocus on other markets to recover any lost opportunity. For these reasons, the preferred start date for a new concession agreement in a retender scenario, and for the purposes of fairly addressing the impact of adopting such an approach, is 2025 rather than 2020].

Summary and conclusion

To summarise and conclude this financial analysis, there are two options available in relation to the Concession Agreements for the MSE: extend the current agreements as allowed for in the contracts or retender when the current agreements expire or are terminated

If the current agreements are extended, then they should be extended to the maximum so that there will be no disruption to the existing successful operation of the MANs, no interruption to the investment in extension of the MANs, no significant reduction in investment as the end of the concession period approaches and no diversion of focus by the MSE during the critical period of expansion of FTTB/FTTH, expected to occur over the next 5 to 7 years. Extending the current agreements to the maximum give the best prospect of these conditions being met.

(If the current agreements are extended to 2025 and not to 2030, then it is likely that the factors listed above, i.e. interruption to the investment in extension of the MANs, significant reduction in investment as the end of the concession period approaches and diversion of focus by the MSE during the critical period of expansion of FTTB/FTTH, will occur from 2020 onwards or even before. This is the time when maximising investment by the MSE to secure market share should be taking place. In addition, by not extending to the maximum possible, the State reduces its leverage over the MSE in negotiating revised terms for the extension period).

If the option to retender is chosen, then the preferred start date for a new concession agreement is 2025 rather than 2020 (as outlined in the Note above).

This Report analyses the two options, extend or retender, using three scenarios: optimistic, modest and least optimistic and projects the financial outcomes for each. These outcomes, showing the net benefit to the State, are presented and compared in Table F.

Table F shows that the net benefit to the State is projected to be significantly better for the extend rather than for the retender option. The conclusion of the financial analysis of the options, using three scenarios to check the sensitivity of the outcome, is that extending the current concession agreements is the more beneficial option for the State.

4. COMMENTS ON 'ANALYSIS OF THE OPTIONS OF RETENDERING/EXTENDING THE MANS CONCESSION AGREEMENTS' DATED FEBRUARY 2016

4.1 INTRODUCTION

In addition to examining the options of extending and retendering and recommending a preferred option, the Terms of Reference also requires a due diligence exercise on the assumptions made by DCENR. The analysis by DCENR is presented in the document 'Analysis of the Options of Retendering/Extending the MANs Concession Agreements', dated February 2016.

Following the introduction and a summary of the status and changes which have been agreed to the Concession Agreements, the document analyses the decision on extend or retender under a number of headings: Policy, Relevance and Market Development, State Aid, Legal, Administrative and Financial.

The main focus of this review of the analysis is on the financial considerations and on the assumptions used in the analysis. However, the following brief comments are made on the other areas.

Policy: Norcontel agrees with the rationale and the conclusion presented.

Relevance and Market Development: Norcontel agrees with the conclusion presented.

State Aid: Norcontel accepts the analysis and conclusion.

Legal: Norcontel accepts the conclusion presented.

Administrative: Norcontel accepts the analysis presented and the conclusion reached.

4.2 THE FINANCIAL ANALYSIS

This section of the document examines the financial aspects, presents some projections, compares the financial outcomes from the extend and retender options and reaches a conclusion based on the analysis.

(Note: All references to tables, e.g. Table 1, in this section of this report refer to the tables in the DCENR analysis document unless specifically stated otherwise)

4.2.1 The Extend Option

Table 2 shows a continuation of the trend in improving total revenue and a slight annual decrease in investment for Phase I up to 2020. The trends are established from the 3-year enet plan for 2016 – 2018. As anticipated, as the end of the Phase I concession approaches, the level of investment will decrease. The figures shown reflect a stable situation where the concession terms are applied. The impact of changes to the situation are not shown, for example, anticipated market changes or the effect of the approaching contract end. While it provides a basis for comparing the current position and projections to the end of the concessions with the original forecasts for revenues, it may be more beneficial to examine the impact of adopting either of the options, extend or retender, and analyse these in detail. This is done in later tables in the document.

In examining the extend option, the document discusses the options available in extending the terms of the existing agreements. The goal is to align the two phases into a single lot and the document lists the benefits in so doing. The various options in terms of length of extensions are explored. The arguments presented are convincing and all further analysis by Norcontel has been done on the basis that the extend option means an extension to the agreements which align their end date and bring both to the latest date allowed, i.e. concluding in FY 2029.

The analysis of the retendering option is based on a new concession period of 2020 to 2040. The analysis in Tables 9 and 10 present the outcomes from 2 retendering positions for the period 2020 to 2040. Norcontel considers that an alternative period from 2025 to 2040 would be preferable for the reasons presented earlier in this report and repeated here:

"The period from now 2016 to 2025 is seen as one when there will be significant development in the FTTB and FTTH deployment in Ireland. Ireland has been behind other countries in the deployment of fibre in the access network as described in the introduction above. However, that is now set to change with substantial programmes for fibre deployment announced. It is crucial to the continued success of the MANs that the MSE is in a position to respond to the developments that are expected over the next 10 years if the MANs are to remain competitive and relevant. However, if both Concession Agreements are terminated in 2020, this is likely to have a major impact on the level of investment in the networks over the next 4 years. The current MSE would argue that there is insufficient incentive to invest in enhancing the networks from now to 2020 as there is no opportunity to earn a return. The MSE would probably limit any investment for the remaining 4 years to the minimum required to meet its contractual commitments, if these have not already been met. Apart from the likely reduced investment in the period, there is also likely to be a migration of some existing customers to other infrastructure providers as the current MSE would be unable to provide any guarantees about continuity of service at the end of the concession. A possible change of MSE will add to the uncertainty and some customers may prefer an alternative provider. The loss of investment during the 4-year wind down period would put the subsequent MSE at a significant disadvantage in the market compared to the other Network Operators that will have had a 4 year head start in network deployment and in establishing a market share. This disadvantage may never be reversed as the MANs address a specific portion of the market, i.e. businesses in the MAN towns, and cannot easily refocus on other markets to recover any lost opportunity. For these reasons, the preferred start date for a new concession agreement is 2025 rather than 2020."

Table 4 presents the projected performance under existing contractual obligations for the period 2021 to 2029. The stated assumptions are:

- Phase II payment terms will continue as they are until 2024 and cease thereafter;
- Revenue share conditions which currently apply will continue to 2029;
- The investment figures increase evenly by [redacted] K per annum from 2021 - 2029;
- The clawback has reverted to the original final 3 years of the concession period.

The document states that Table 4 can be taken as a baseline against which to consider the financial objectives of the negotiations on extending the present term. The assumptions listed on which the calculations are made are reasonable on that basis (although the document presenting the conditions associated with reverting from the current 10-year to the original 3-year has not been provided to Norcontel).

The need for a baseline against which to judge any changes that can be negotiated is agreed. The very steady increase in investment and incremental increase in revenue reflects a very stable outlook for the period in question. In our analysis, Norcontel has taken the view that very significant changes will occur in the market particularly in the period 2017 to 2022 which will continue to have an impact for the following years. In our analysis, different scenarios have been developed to assess the impact this may have on the extend or retender choice. The figures presented in Table 4 and subsequent tables, Tables 5 & 6, which examine the impact of 2 different negotiation positions may be regarded as another scenario which describes developments in the period 2016 – 2029 and which have total revenue, net profit and revenue share figures in Table 5 close to what Norcontel has described as the 'modest' outlook. The MAN investment figures and, as a consequence, the concession fee are considerable higher in the Norcontel case based on the expectation that there will be a competitive and expanding market in the 2017 – 2022 period before maturing from 2024 onwards. (There is a step reduction of 50% in investment between 2020 and 2021 in Table 5 that is not explained). The DCENR costs and the inherent liability figures in the Norcontel tables show the current conditions while in the Tables 5 and 6, the DCENR analysis shows the improved negotiation positions where the €1.2m annual management fee for Phase II has been negotiated out as part of the agreement with enet on an extension to 2029. The clawback provision has been revised to the original 3-year term.

There is a clear and quantifiable benefit to the State in negotiating more favourable terms with enet for agreeing to extend the current agreements. However the actual benefit will depend on what can be achieved in negotiations. The negotiation positions described in Tables 5 and 6 provide a reasonable target for improving the return to the State the extension negotiations.

4.2.2 The Retender Option

The document proceeds to analyse the performance of the MANs under the Retender option. Tables 7 and 8 examine the impact on enet of the concession agreements ending in 2020 for

Phase I and in 2024 for Phase II.

Table 7 lists the impact under 7 headings and provides the enet rationale. The DCENR analysis under each heading provides the Department's assessment.

Enet has provided a detailed spreadsheet quantifying the expected impact for each year from 2016 to 2024.

Norcontel agrees that there will be an impact on revenue and investment if the contracts are not extended. The investment horizon and the opportunity to gain a return if the concessions expire in 2020 and in 2024 in accordance with the current contracts is quite different from one where both are extended to 2030. Norcontel also agrees that the factors listed in Table 7 contribute to the magnitude of the impact. However estimating the extent of the impact is very subjective. The following comments are added:

Customer Strategy: Uncertainty is expected to have some impact especially on major customers. However, customers may rationalise that, while the MSE may change, that DCENR will have made the arrangements for a replacement MSE to ensure continued availability of the MAN infrastructure and services.

Lateral Payback: Accepted that the length of the payback period has a major bearing on the willingness to invest.

Contracts: This is related to previous point. Emphasis will be more on short term returns rather than on long term possibilities.

SIRO: This is related to customer strategy above. SIRO, eir and others will implement their chosen strategy and decide on use of MAN facilities in their own interest.

Management refocus: Agreed that maximising returns for the remaining concession period would be the most likely objective. Management may also consider the possibility of being successful in a retender competition.

Brand: While enet and the MANs may be synonymous in the eyes of the general public to the extent that these matters are of interest, the telecommunications industry, the carriers and service providers that use the infrastructure are likely to have a deeper awareness and understanding of the situation. Any replacement MSE would move quickly to establish its name as the MAN operator in what is a limited carrier and service provider target market.

FTTB: Accepted that major expansion of investment will most likely not occur in final years of concession contract.

In considering these factors, it is accepted that they will have an impact on investment and revenue over the period approaching the end of the concession. Quantifying the impact is a subjective exercise.

The factors listed contribute to the environment in which the MSE operates. However it is likely that other factors like market demand for services, strategy of infrastructure and service providers, competition and aggression by existing and new entrants to the market

will have a much more significant impact on revenue and investment environment. In this case, it may be fruitless to try to estimate the impact of the individual factors with any precision. A more productive approach may be to apply a figure to cover the overall impact and perhaps perform some sensitivity analysis on the outcome.

It may also be argued that, while these factors have an impact on the revenue generated by the MANs as the end of the concession contract approaches, corresponding factors in the follow on concession period can correct the negative impact. For example, the uncertainty that customers may feel as the concession end approaches will be replaced by the certainty when a new concession has been put in place. More importantly on the attitude of management of the replacement MSE, the management will be aware that the concession is for a defined period and the MSE must achieve its return on investment in that period. The MSE may choose then to front load the investment and aggressively pursue the market opportunities early on in the knowledge that later investment deliver a poorer return. So the management refocus listed by enet and the waning of the aggressive growth strategy would be balanced by an intensified growth strategy at the beginning of the new concession period by the newly appointed MSE. Any FTTB investment foregone in the later days of a concession may be at least partially compensated for by an increased investment at the start of the following concession period. In a stable and unconstrained market, the lost revenue at the end of one period would be balanced by the increased revenue at the start of the following period.

In summary, the factors listed in Table 7 will have an impact on revenue but the extent is subjective. They will be balanced, at least to some degree, by compensatory factors at the start of the subsequent period and, in the context of comparing the financial outcomes from the extension and retender options, a similar set of factors will influence the revenue at the end of the retender concession period correcting the balance. It is appropriate therefore to apply a correction in the projections for the concluding years of the concession as DCENR has done but the extent of the impact of these factors may be less than other anticipated changes in the market environment.

The DCENR document goes on to present the projected financial performance in the retender context for the period 2020 – 2040.

Table 9 is based on the listed assumptions on growth rate applied, cost base, return based on current terms, no management fee for Phase II MANs and on the original 3-year clawback provisions.

It is stated later in the document that the basis for the analysis is the current MSE's projections. The growth rate assumed and applied for the period 2025 – 2040 is 5% per annum with the revenue doubling in that period. In our analysis, Norcontel has assumed that by 2025 the market for FTTB/FTTH will have reached maturity and will have stabilised. On that basis, the likelihood of consistent growth of 5% over a 15 year period is considered low. However we accept it as one possible scenario and review the outcome accordingly. The net

(In Table 9, there is a 50% step increase shown in the revenue between 2023 and 2024 which is not explained. If this is the result of some defined factors, then it would be helpful to include an explanation as a footnote to the table).

The revised revenue share, based on the current Phase II terms being applied, is shown in Table 10 and the corresponding overall net benefit ı higher than that for Table 9 at about '

Although not presented in tabular form, the financial benefits to the State are compared in discussion in the document for the extend and retender options as follows:

The OCENR analysis concludes that in retendering OCENR will not achieve the same level of benefits as could be achieved through negotiated extension of the current agreements. Based on the assumptions applied and on analysis presented, Norcontel agrees with the conclusion reached although Norcontel has taken an alternative view on the likely development of the market and the competitive environment especially over the period 2017 – 2025 and beyond.

3. RECOMMENDATIONS ON NEGOTIATION/RETENDER POSITIONS

In choosing to extend the current concession agreements or to retender, DCENR has an opportunity to modify the terms and conditions which apply to the agreements or, in the case of the render option, to set new ones.

5.2 RETENDER OPTION

If a retender option is the preferred choice, DCENR propose the period from 2020 – 2040. Norcontel has proposed that a retender from 2025 to 2040 would be preferable. However, in either case, the concession contract may have revised or new terms. In this event, Phases I and II would be combined in one lot and a single set of terms and conditions applied.

In this case, many of the same arguments which apply for the extension option above would apply here. Unlike the original MSE tender, operating and managing the MANs is now an established business with a track record, a market profile, a market share and sets of accounts. These should assist both the bidders and DCENR is setting the terms unlike the original case where only projections and estimates without any established basis were available.

The terms and conditions agreed with enet reflected the risk conditions in taking on this contract. The demand risks are now more clearly defined and are related to the outlook for the market and competition in the market. Whereas the original terms were designed to encourage investment and to get a revenue share for the State in what was seen as a potentially expanding market, DCENR may also now have to consider how to deal with a market that is expected to reach maturity and possibly begin to decline in the period of a new concession 2020 – 2040.

to avoid any terms that result in a liability that would be payable on expiry even if bidders insist that this is need to encourage continued investment.

On the other hand, there may be reasons to be concerned that the market conditions and general environment, and the terms and conditions of the tender including the constraint to operate exclusively as a carrier's carrier, may result in a very limited number of bidders. This will be viewed as a special niche area with limited appeal in a limited and perhaps declining market at the time when a retender process is being adjudicated.

It is unlikely that existing Network or Infrastructure Providers in the market here in Ireland would be interested in bidding because of the constraints of transparently providing open access and of being a carrier's carrier associated with the MANs. Network Providers with significant market power may be precluded to prevent the perception of favouring dominant players and falling foul of competition rules. There may also be a perception that such providers may not be completely unbiased and transparent in their dealings with all service providers. Smaller players that already have fibre network assets may express an interest, e.g. Magnet Telecom, and would not be perceived as having a dominant position in the market. Aurora Telecom, which a division of Ervia, operates as a carrier's carrier specialising in dark fibre services would already have the necessary structures in place to operate and manage the MANs infrastructure. Similarly ESB Telecoms already offer a range of services similar to those being provided by the current MSE.

It is possible that some private companies, for example utility or property management companies, that have or could assemble the skills required to operate and manage the networks, would see the tender as an opportunity to expand. However, such companies would have to be of a scale to satisfy any financial prequalification conditions which the tender may include.

Property management companies already active in the telecommunications sector are the most likely to show interest. For example, companies that acquire and manage radio mast sites, developed high sites and manage rooftop base station city sites may see an opportunity to expand their scope, particularly in the light of increasing demand for fibre connectivity at mobile base stations (4G and the emerging 5G). There are a number of companies operating in this area in Ireland, some of whom have acquired the high sites and provide services to mobile and fixed Network Operators and others that manage assets on behalf of property owners. They would see merit in combining both the fibre network and tower portfolio into a single bundle which they could offer to Mobile Network Operators.

Another trend which is emerging in the UK is for smaller players in the fibre network scene to enter arrangements with established internet services providers and offer broadband services up to 1Gbps over FTTB/FTTH infrastructure. Under pressure from Ofcom, BT has now committed to roll out FTTB/FTTH to two million premises by 2020. It plans to focus on new housing developments, city and town centres and under-served business parks. Up to now BT has been concentrated on extracting the maximum from its copper access network using fibre to the cabinet (FTTC) and G.fast to deliver high speed broadband services. In April 2016, Virgin Media also announced that they plan to reach one million premises, businesses and homes, by 2020 using FTTB/FTTH. While these large players are announcing their major fibre rollout plans, a smaller player, CityFibre, has acquired a national fibre and duct network which now serves 36 cities. It has declared that its main target is to address 7,000 mobile base

station sites, over 20,000 public sector sites and more than 200,000 business offering wholesale dark fibre services. CityFibre has also formed a relationship with Sky and TalkTalk to run a trial of ultrafast broadband services for residential customers in the City of York. This is similar to what enet has done in conjunction with Ripplecom and Airspeed with enet employing the MANs infrastructure to support services being provided by the service providers to SMEs and residential customers. Others with fibre network infrastructures in Ireland may use this model, tender for the position of MSE and establish a relationship with a service provider that will roll out a FTTB/FTTH infrastructure to reach its customers. Up to now, network providers with fibre networks have focused on serving enterprise customers and, to a lesser extent, SMEs and many have confined their offer of services to Dublin City areas served by the T-50 and other fibre ring structures. However, this may change as the demand for high speed broadband and Internet services becomes a mass market.

In conclusion, in a retender situation, companies like ESB Telecoms and Aurora that already provide carrier services may have an interest in bidding to become the MSE but property and assets management companies in the telecommunications sector, or other service companies like network contractors in conjunction with established Internet service providers, are the more likely interested parties.

5.3 ALTERNATIVE MODELS FOR MANAGING MAN INFRASTRUCTURE

There are limited options when choosing a model for operating and managing an infrastructure of this type in a telecommunications market. A review of the literature suggests some Public Private Partnerships (PPP) have been used in a number of countries in providing and operating public infrastructure.

Under a PPP arrangement, the Government contracts with a private company to design, finance, construct, operate and maintain (or any subset of these activities) an infrastructure asset on behalf of the State or a State body. There have been several examples of PPP projects in Ireland, including motorways and bridges, schools and court houses, which involved design, construction and operation of the assets for a defined concession period. The rationale for these projects is that, when the private sector takes on risks that it can manage more cost effectively, the PPP may be able to save money for the State and deliver higher quality or a more reliable service.

The nature of the risk taking and the compensation payments for bearing and managing the risk varies from project to project. Historically there were two basic models: a basic user fee model and an availability payments model which allocated all demand risk, and consequently all revenue risk, to either the private company or to the State. In the basic user fee model, the private company collects and retains all fees from the customers or users of the services, e.g. toll payments or usage bills, and bears all the risk of uncertain demand for the service. In the availability payments model, the State receives all revenues from the customers or users and makes fixed, recurring payments to the private company operating and managing the service, provided the contracted service and quality standards are met. In this case, payments do not vary with infrastructure use and so the State bears all the demand and revenue risk.

In the U.S., there has been a move away from the basic user fee model after several PPP arrangements ran into financial difficulties. These were mostly road or expressway construction projects where the actual demand was much lower than was projected. The

trend in recent projects have been toward a revenue sharing model. In the revenue sharing model, the revenues are shared in agreed proportions and the private company does not carry either all the demand risk or all the revenue risk. These projects include electricity, natural gas and water services as well as regulated telecommunications projects.

The choice of model will depend on the specifics of a project and the risk preference of the project sponsors and project investors. In a list of 20 U.S. PPP projects reviewed (3 water sector, the rest in transport) which were concluded between April 2012 and April 2015, only one followed the basic user fee model while 11 were availability payments and 8 were revenue sharing.

The revenue sharing model has been developed in innovative ways to make it more attractive to the private companies. After the failure of the road projects, private investors tended to prefer the availability payments model to reduce the risk of revenue shortfall. In order to limit or mitigate the risks that the private investors no longer found acceptable, project owners developed the revenue sharing model range. These developments are based on models used in setting prices in regulated industries like electricity, oil and gas, and telecommunications. These models include the rate of return model, the price cap model and sharing model with limits.

The rate of return model is regularly used to protect consumers by setting a regulated price in a monopoly or near monopoly market. The price is calculated by the sector regulator to allow the private company to recover its costs and earn a return on its rate base which is the value of assets used to provide the regulated service. The State and a private company can agree to adopt a rate of return model by incorporating its features into a PPP contract. (The rate of return model was, for instance, incorporated into the payment terms of the ECAS project). The rate of return can be used to provide the private company an opportunity to earn a return on investment and can be adjusted at agreed intervals to take into account deviations in demand and revenue from the projected baseline.

The price cap model is also used extensively in protecting consumers in the telecommunications industry by limiting price increases. It does this by setting limits on the price of an infrastructure service and not on the rate of return. Price cap regulation is applied to the privatised network utilities in the UK, extensively in the US and throughout the world including Ireland. In the price cap model, the operating company has an incentive to minimise costs as the price is controlled but not the profit. By making productivity improvements, the private company can increase its profit potential. As in the basic user fee model in PPP contracts, the demand risk is entirely carried by the private company. If the demand is less than or exceeds projections, the total revenue will fall or rise proportionately. In PPP contracts, the features of the price cap model may make the arrangement more attractive for the project sponsor and encourages the operator to be more efficient.

The sharing model can make PPP projects attractive to both project sponsors and private companies where either the basic user fee or availability payment arrangements are not. Risks are shared rather than allocated to one party or the other. In the simplest form, the project sponsor or the State and the private company share the revenue in the same proportion for all levels of revenue. Alternatively, as in the case of the MANs project, the proportions vary depending on the levels of revenue achieved. Variations would also include incorporating the rate of return into the payment terms. For example, a contract could be agreed where

the private company retains all the revenue within a certain rate of return range, say 5% to 10%, and the State and the private company share the shortfall below 5% and the excess above 10% on a 50:50 basis.

Another variation could be a PPP contract that provides a minimum guarantee and a maximum cap. In this case, when revenue falls below the minimum rate of return, say 5% as in the case above, the State compensates the operator. If the revenue exceeds the maximum limit, say 10% as in the case above, the State would benefit to the full extent and the operator will receive a constant return of 10%. Between the 5% and 10% limits, the operator retains all the revenue.

These are just some examples of how revenue sharing models can be varied by applying the rate of return factor into the payment terms of a PPP contract. The revenue sharing models provide the financial incentive to increase revenue while fulfilling the project objectives and can protect the State against underestimation of demand. Demand is likely to be the source of most uncertainty affecting the financial viability of an infrastructure project, particularly in the case of a new build or greenfield project where no demand history exists.

In the particular case of the MANs project and its operation and management by the current MSE, it can be viewed as a PPP arrangement albeit limited to the operational phase. The current Concession Agreement implements a revenue sharing model with defined proportions varying with the level of revenue achieved. The question to be addressed is whether there any other financial arrangements or models which would be better suited than the current revenue share model with its attendant conditions.

One alternative, described above as the basic user fee model, is where all the revenue is collected and retained by the private company, in this case the MSE. This model is generally applied where the PPP involves multiple phases: design, financing, construction, operation and management, as for example in toll road projects. This would not be an appropriate model for the MANs project as the State has already made the capital investment in designing, financing and constructing the MANs and what is now at issue is the operational phase only. A pure basic user model would provide no revenue return on investment to the State.

The other basic model is the availability payment model as described above, where all revenue generated goes directly to the State and the MSE receives recurring payments to cover all costs plus a management fee. In this case all the demand risk is carried by the State. (This is similar to what applies for the Luas, which is described as a gross costs, management contract. Revenue risk is borne by the transport authority TII. There is a performance bonus and penalty structure in place based on a number of KPIs.)

This model is best suited where the State agrees to retain all the demand risk, where the infrastructure is completed, where there are no investment requirements by an MSE type entity and where the MSE chooses not to bear any demand risk or share in any potential upside in demand and revenue growth. In this case all revenue risks and investment decisions revert to the State. This model in its pure form is not considered appropriate where part of the normal operation of the service is to invest to connect customers, either by extending the MAN footprint or by installing drop connections. It may become appropriate at some time in the future when, for example, the market for fibre infrastructure has reached saturation, where there are no new customers being connected and what is required is management of

the existing static infrastructure to maintain the services only for existing customers. The revenue generated would have to be at least sufficient to cover the cost of the MSE contract.

A sharing model seems to be the most appropriate of the PPP models described. The current Concession Agreements incorporate a revenue sharing model as described above with some additional conditions including a minimum revenue share and, in the case of Phase II, payments similar to the availability payment model.

Another alternative approach would be for the State to manage the MANs infrastructure directly rather than in a public private arrangement. Perhaps the best known, successful example of an open access fibre network is Stokab, owned by the city of Stockholm, which has been running a dark fibre network since 1994. This has been replicated by many municipalities in Sweden and in other countries. The networks are owned and operated by municipality owned companies. In the case of Stokab, the network is owned by a holding company, Stadhus AB, which has around 30 business-oriented public service companies (infrastructure companies, housing companies, etc.) that is 100% owned by the City of Stockholm. There is no corresponding municipally owned company structure here and certainly none in many of the smaller towns where there are MANs. The only option that may be feasible in Ireland is the transfer of all responsibility for ownership and operation of the MANs to an existing State owned utility company. In this case, all demand and other risks associated with the MANs project would revert totally to the State.

Because of the scale of the MANs enterprise and the uncertainty of the market and environment in which the MANs operate and because of how this may affect their long term future, migrating from the current ownership and operation model to a State utility company, with its attendant costs and overheads, is not considered a sensible option.

In conclusion, there is a limited range of options when choosing a model for operating and managing the MANs infrastructure. This includes the PPP model, where the State selects a private partner following a competitive tender to operate the infrastructure on its behalf in accordance with agreed contract conditions, and the direct operation by a State utility company. Of these options, the current Concession Agreement between the MSE and the State with revenue share terms is an implementation of a PPP arrangement which shares the risks, particularly the demand and revenue risks, and is considered the most appropriate choice for continued management of the MANs. Some variation of the revenue sharing terms would be appropriate for an extended concession period to reflect the environment where the demand and revenue risks are much better defined now than when the original agreement was negotiated and agreed.

6. CONCLUSIONS AND RECOMMENDATIONS

6.1 MAIN CONCLUSIONS

Following a review of the documentation provided, consideration of developments in access networks and in the market for services, and of the role of the MANs since their deployment, and based on the analysis outlined in this Report, the following conclusions have been reached:

1. The MANs have fulfilled the role for which they were conceived and designed: to provide open access infrastructure to support service providers to deliver broadband connectivity and access in the selected towns where the market had failed to provide competitive services;
2. The MANs have been successfully operated and managed by the MSE appointed and following a slow start initially, have now reached a commercially profitable stage and continue to make a financial return to the State as specified in the Concession Agreements;
3. The role and position of the MSE in providing open and transparent access and connectivity is acknowledged and accepted by the service providers that avail of the MAN services and by other major telecommunications infrastructure providers;
4. Up to now, the MANs have provided a unique product set of colocation facilities, duct and fibre network and managed services where the maximum prices were mandated and published. Discontinuation of MAN services now or in the immediate future would be a major disruption of telecommunications services in Ireland;
5. In line with developments in FTTB/FTTH globally and in Europe, the roll out of fibre in the access networks in the form of FTTB/FTTH programmes has started in Ireland and is set to have a major impact over the next 5 – 7 years. These development present an opportunity as well as a threat to the growth and commercial future success of the MANs;
6. As the expiry of the existing concession for the MANs approaches, a decision on the options of extending the current agreements or opting to retender for the appointment of an MSE is now required. Based on the analysis performed where a number of scenarios reflecting different levels of success in the changing market were described and reviewed, the preferred option from a financial perspective is to extend the existing agreements to the maximum permitted. This conclusion is supported by both the Norcontel analysis and that presented by DCENR in its document;
7. Extending the current agreements will require negotiation with the current MSE who has requested an extension. This presents an opportunity to negotiate some changes to the terms of the agreements and to improve the overall return to the State;
8. The model of the MSE for operating and managing the MANs on behalf of the State on a revenue share basis has proved successful to date. This view is shared and endorsed by the service providers during stakeholder engagement with DCENR. No other model presents itself which would better suit the current requirements for managing the MANs.

6.2 RECOMMENDATIONS

The following recommendations are proposed:

1. **The preferred option, based on the analysis, is to extend the current concession agreements. It is recommended that DCENR pursues this in negotiations with the current MSE;**
2. **It is agreed that changing the agreements to terminate on the same date will be beneficial, whichever option is finally implemented. It is recommended that this position is adopted and that in any future concession Phase I and Phase II are combined into a single concession agreement;**
3. **It is recommended that the negotiations include discussions on changes to the terms and conditions with the aim of improving the net benefit to the State as follows:**
    a. **The revenue share terms of Phase II are applied;**
    b. **The DCENR costs are minimised by reducing or eliminating the annual Management Fee which applies to Phase II;**
    c. **The liability to repay percentages of the MAN investment are reduced to a minimum, from the 10-year clawback to the original 3 years, or if possible, eliminated totally;**

Appendix 1: Retender timescale

Retender concession period

In the analysis presented in its document, DCENR has selected the period 2020 – 2040 as the concession period and has compared the financial outcomes of an extension from 2030 – 2040 with the 2020 -2040 period.

Norcontel, on the other hand, has presented an argument that, because of market development and because of competition from other FTTB/FTTH programmes, it would be preferable to have a retender period of 2025 – 2040. In other words, delay the retender start as far as possible.

In the context of choosing between the extend and retender options, which is the principal question in this review, would selecting a concession period from 2020 – 2040 change the outcome?

The question of extend or retender hinges on the financial outcomes and this is presented in the analysis as the net benefit to the State for the different options. The net benefit, based on Norcontel's analysis, is shown in Table F (P.26) in this Report.

The net benefit is expected to be higher if the retender period is 2025 – 2040. To check this, the financial outcomes for the two periods were calculated and the result for the 'modest' scenario is presented in Table G here:

The same result is expected for the other two scenarios.

The choice of start date for the retender would not change the answer to the extend or retender question. In fact, choosing 2020 -2040 would reinforce the argument to extend.

Appendix 2: Alternative payment terms