

# Information Notice

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**16<sup>th</sup> October 2020**

In August 2020 the Communications Commission (the Commission) became aware of a broadband outage that impacted upon a significant number of the Island's consumers. The outage, which was traced back to a hardware failure in one of the Broadband Network Gateways of Manx Telecom's core network, began on 24<sup>th</sup> August 2020, and Manx Telecom worked over the subsequent days to find and resolve the cause, with service fully restored by 3<sup>rd</sup> September 2020.

Telecoms is of critical importance to all aspects of the Island's society and economy and it is therefore important that there is appropriate scrutiny of significant events of this nature. As such, it is the Commission's responsibility to establish whether a licensee, in providing its telecoms service, has, is, or is likely to breach its regulatory obligations, and if so, it is also the Commission's responsibility to prevent that licensee from doing so.

Consequently, once Manx Telecom had worked to restore the Island's service, the Commission began a formal investigation to ascertain the facts surrounding the broadband outage and determine whether Manx Telecom had breached its regulatory obligations on the run up to, or as a direct result of, the outage. It is not within the remit of the Commission to investigate Manx Telecom's handling of communications or the dissemination of information for this outage.

Specifically, the Commission's investigation focussed on whether Condition 3 of Manx Telecom's Licence, relating to the proper and effective functioning of the network, had been breached.

Particular consideration has been given as to whether all reasonable practicable steps were taken by Manx Telecom to bring the network back online after the outage occurred, as well as whether Manx Telecom has taken all reasonable practicable steps to maintain the network before the outage occurred. The Commission requested detailed information around the circumstances of the outage and all information requests were complied with by Manx Telecom.

Having fully examined the information provided, the Commission finds that Manx Telecom did take all reasonably practicable steps to bring the network back online after the outage occurred.

Typically, when a hardware failure such as this occurs, the equipment identifies there is a fault and raises an alarm. On this occasion, the hardware failure was 'silent', meaning the hardware 'did not

know' it was malfunctioning, and as such, no faults or alarms were raised within Manx Telecom to indicate that there was a fault, what the fault was, or where the fault arose. It therefore took longer for Manx Telecom to identify the source of the outage and subsequently rectify it than it would a typical fault; engineers from Manx Telecom and its equipment provider had to check for, and eliminate all the possible faults that could have occurred, until it had been located.

Had the fault not been 'silent', it is likely that the issue would have been resolved in a shorter period of time. As a result, there is no evidence to indicate that there were any other steps or measures Manx Telecom could have reasonably taken to bring the network back online at that time.

During outages such as this, it would be normal practice that a telecoms provider would divert internet traffic away from the affected hardware, to an area of the network that is unaffected. In doing this, a telecoms provider is able to keep users online until such time as the fault is repaired and traffic can be restored to its original intended route. Essentially, the telecoms provider utilises the redundancy in its network to keep consumers online.

On this occasion, there was a fear that, given the nature of the fault, routing traffic away from the affected hardware risked cascading a fault to the unaffected hardware and therefore had the potential to cause further outages. Therefore, traffic was not re-routed to other equipment until the fault had been identified and engineers could be sure that additional customers would not be affected.

The Commission accepts that this was a rational approach to take at that time given the information that the engineers had to hand, however it does raise the question as to whether there was sufficient redundancy in the network. Taking in to account that the fault that occurred is rare, it is difficult to conclude that Manx Telecom did not take all reasonable practicable steps to maintain the network. However, the Commission is of the view that this would not hold true going forward as this type of fault is now a 'known fault', and would likely constitute a breach of licence conditions should a similar incident arise in future. However, the Commission does acknowledge that it will take time to put in place the appropriate measures to protect against similar incidents in future.

Overall, having fully investigated the matter, the Commission finds that on this occasion Manx Telecom did not breach its regulatory obligations.

In line with the above findings, the Commission feels it is appropriate to recommend that Manx Telecom make further investment into its core network in order to increase its available redundancy and prevent a similar network failure from occurring in future. The Commission has made more specific recommendations to Manx Telecom directly and has been informed that related works are already underway.

The Commission reserves the right to investigate the matter further should new information come to light.