**Archwilio** Cymru
**Audit** Wales

24 Cathedral Road / 24 Heol y Gadeirlan
Cardiff / Caerdydd
CF11 9LJ
Tel / Ffôn: 029 2032 0500
Fax / Ffacs: 029 2032 0600
Textphone / Ffôn testun: 029 2032 0660
info@audit.wales / post@archwilio.cymru
www.audit.wales / www.archwilio.cymru

Llyr Gruffydd MS
Chair of the Finance Committee
Senedd

Via email

**Reference:** LF20001/AC/220/caf
**Date issued:** 11 November 2020

Dear Llyr

## Audit Wales Estimate 2021-22 - Clarification

Further to last week's evidence session with the Committee, we promised to provide some additional clarification on one of the items raised.

### Remote access to client systems

As explained to the Committee, we have already successfully arranged remote access to NHS financial systems for our auditors allowing audit work to be completed remotely despite the COVID-19 pandemic. This has been possible because all Welsh NHS bodies use a common finance system and once remote access was obtained this could be used for all NHS bodies.

For Local Government bodies, progress in arranging remote access for auditors to local government finance systems has been mixed; with access obtained for some, but not all, of these bodies.

Securing remote access to local government systems has been more challenging as the different authorities use several different systems and hence each authority will have developed different ways of securing remote access both for its own staff and our auditors. Providing this access securely can be costly and challenging and will be easier for some authorities to achieve than others. We continue to work with all our audited bodies to help achieve this.

### ASCII

The committee asked whether the American Standard Code for Information Interchange (ASCII) could be helpful in setting up remote access for more authorities' finance systems.

ASCII is a standard, established in the 1960s for representing alphabetic and numerical characters inside a computer in digital form. Standards like this are fundamental to the way modern computers operate. Today's systems are more

likely to represent text using later, more elaborate standards such as Unicode. These build on the idea of ASCII but extend it to special characters for languages other than English, more symbols etc. However, ASCII itself is still in use in some situations, especially on "legacy" systems.

Overall, the way raw text or numeric data is represented inside different computers is now well standardised. Interoperation between machines at this basic level is rarely a problem.

Security issues

Remote access involves connecting to the target system across the Internet. The key challenge around setting up remote access arrangements today is to do so in a way which doesn't introduce cyber risk i.e. compromise security.

The essence of secure remote access is to enable access for those who are authorised. Typically, this would be the authority's own staff and partners such as our auditors.

However, a remote access solution must also keep out hackers and criminals who could be anywhere in the world, highly motivated to break in. Cyber criminals are often very technically proficient, ready to take advantage of subtle, newly discovered flaws in systems to gain access.

Setting up secure remote access, therefore, is a significant engineering challenge. National Cyber Security Centre (NCSC) have detailed guidance on how this should be done using purpose-made, "security hardened" products such as virtual private networks (VPNs) from Cisco, Microsoft, F5, Fortinet or Palo Alto, or thin client products such as Citrix. These products are complex, can be costly and require deep technical skills to set up and maintain.

The consequences for organisations which take short cuts with remote access solutions can be severe. Highly disruptive data breaches at Travelex in early 2020, and in some UK Universities throughout 2020 are believed to have started with criminals taking advantage of remote access solutions which were not properly set up or maintained or used an inappropriate technology.

Please do not hesitate to contact us if there is any further clarification we can helpfully provide.

Yours sincerely

**LINDSAY FOYSTER**
**Chair, Wales Audit Office**

**ADRIAN CROMPTON**
**Auditor General for Wales**