

## Corporate Focus – SWAN and Cyber Resilience

---



### *Paper for information*

#### 1. Purpose

- 1.1 This paper provides this quarter's corporate focus, covering our ICT Infrastructure upgrade and management activity, including the delivery of the Scottish Wide Area Network (SWAN) projects and Cyber Resilience.

#### 2. Recommendation

- 2.1 The Board to note the content of this report.

#### 3. Contribution to National Park Partnership Plan and/or Our 5-year Plan

- 3.1 SWAN and Cyber Resilience are part of the Enablers of our 5-year Plan, reflecting continuous improvement and the development of resilient systems, processes and services.

#### 4. Background

- 4.1. Many of our ICT systems haven't had strategic investment for some time. As cyber security risks increase, and support for current systems (e.g. Windows 7) end, we have been investing to ensure there is resilience to our delivery.
- 4.2. Over the past 18 months we have been developing and delivering an ICT strategy to upgrade and modernise our systems. The strategy includes four main elements:
  - SWAN (covered in this paper)
  - Local Area Network (LAN) replacement
  - Outdated and unsupported software
  - Mobile devices
- 4.3. Our recent work not only reinforces resilience, it also provides a basis for new opportunities. For example, membership of SWAN brings the opportunity to participate in shared services with other public bodies. Moving to Windows 10 allows us to consider cloud-based services in the future, which we plan to start to explore in 2020 and could allow for more collaborative and efficient working.

#### 5. SWAN

- 5.1. In February 2010 the McClelland Review found that the Scottish public sector was lagging behind in its use of ICT and recommended an overarching national ICT strategy. In response, the Scottish Government published 'Scotland's Digital Future: Delivery of Public Services' in 2012 – with SWAN being one of the first major

# National Park Authority Board Meeting

Agenda Item 11

## Corporate Focus – SWAN and Cyber Resilience

---

initiatives to be launched by Scottish Ministers in support of this new national digital public services strategy.

- 5.2. SWAN is essentially a single shared network and common ICT infrastructure across Scotland's entire public sector. The resulting network offers better connectivity, better performance and faster speeds as well as delivering value for money. So far more than 6,000 sites have been connected across Scotland. Key member organisations of SWAN include central Government departments, including the Scottish Government, Scottish Qualification Agency, Historic Scotland and the Scottish Environmental Protection Agency, all 22 boards across NHS Scotland as well as 50 per cent of Scottish local authorities.
- 5.3. In December 2018, we decided to join SWAN. In practice this means we will now be using it for all of our network services, replacing our existing commercial providers. SWAN is bringing reduced costs, improved service and the ability to share data across organisations, fostering co-operative working. The main benefits are:
  - **Cost** – joining SWAN achieves a revenue saving of £10k a year
  - **Customer Service** – the SWAN helpdesk is very proactive and comes highly recommended by SEPA; our previous service providers have been disappointing.
  - **Fibre availability** – SWAN has been able to offer us fibre at Balmaha where it has not been available before, a boost for staff based there but will also give the ability to offer Wi-Fi to the public, should we decide to do so in the future.
  - **Security** – the SWAN infrastructure firewalls will give us another layer of security both between sites and between us and the internet
  - **Internet of Things (IoT)** – SWAN offer an IoT network on which we can place sensors to gather data on areas like visitor numbers and Co2 levels in order to help inform our decisions
  - **Value added services** – SWAN offer a number of different services that can be purchased under the Framework such as video conferencing and telecommunications.
  - **Digital Transformation** – ICT will we will be looking at a digital transformation programme over the next few years with cloud-based services being a primary objective. SWAN helps this to be a more manageable process.
  - **Shared Services with other SWAN members** – We have a strong commitment to, and track record of, shared services and we already work closely with many partners who are already on SWAN. We are hoping that by being on SWAN we will be able to work with other SWAN members on shared systems (such as HR or finance systems), shared knowledge and experience.
- 5.4. Our SWAN migration is due to be completed by the 31<sup>st</sup> January 2020 and installation of new fibre connections is currently taking place. To date new fibre connections have been installed at HQ, the Slipway, Balmaha VC and our Callander offices. Installations are due in December at Lochearnhead and the stores. Once all installations are complete, a test and fit programme will be put in place to ensure connectivity to the SWAN network before planning the migration over to SWAN.

# National Park Authority Board Meeting

Agenda Item 11

## Corporate Focus – SWAN and Cyber Resilience

---

- 5.5. One practical benefit of SWAN membership that we are already seeing is with respect to our own Local Area Network (LAN) upgrades. Our existing Local Area Network (LAN) and Wi-Fi system has reached its end of life. Through SWAN we have been able to leverage an existing framework contract, providing us best value for our new network design. Security best practices and resilience will be built into it, including the following key improvements:
- **Management System** – the new LAN will have a management system which allow ICT to see and manage all parts of the LAN from a central console, including Wi-Fi. This will allow Firmware and security patches to be pushed out to all LAN hardware.
  - **Improved Security** - the Firewall up be upgraded to the latest next generation firewall.
  - **Resilient Design** – the core switches and firewalls will be operating in a resilient pair meaning if one device goes down the other takes over in order to ensure continuous service.

5.6. The LAN migration is due to be completed by 20 December 2019.

## 6. Cyber Resilience

- 6.1. Cyber security risks are ongoing, and high profile attacks continue to be reported in the media. While we don't consider ourselves to be a specific target, we must ensure we are resilient to non-specific cyber threats.
- 6.2. We have been working to the Scottish Government Cyber Resilience Strategy for Scotland, against which we have made significant progress:
- Achievement of Cyber Essentials Plus, a security benchmark test designed by the National Cyber Security Centre (NCSC) and carried out by an independent Certification Body
  - Implementation of the National Cyber Security Centre's (NSCS) Active Cyber Defence programme which includes protective DNS, email and web site monitoring.
- 6.3. We have also undertaken the following improvements;
- Cyber Security training for all Staff is now available in our eLearning System and has been added to the Induction Pack
  - Anti-virus solution upgraded to a cloud based platform with Machine Learning to help protect against unknown threats
  - New Mobile Device Management system to allow ICT to force device encryption and to track and remotely wipe mobile devices.

# National Park Authority Board Meeting

Agenda Item 11

## Corporate Focus – SWAN and Cyber Resilience

---

- Outdated and unsupported software such as Office 2010, Windows 7 and Server 2008 are being replaced.
- SWAN will offer improved security within our data connections to the outside world and also within our internal network infrastructure.

6.4. Cyber resilience is a constantly evolving picture, and therefore it requires continuous attention. In the coming months we will be investigating further protections, such as moving to artificial intelligence based tools that protect against threats not covered by traditional anti-virus solutions.

### 7. Conclusion

7.1. We have made good progress in strengthening our cyber resilience, and improving our connectivity between offices, reducing costs and laying the foundation to future opportunities.

**Author:** Gareth Archibald ICT Systems Manager  
**Executive Sponsor:** Pete Wightman, Director of Corporate Services