

Committee: **Executive Committee**

Date of meeting: **13th January 2021**

Report Subject: **Education ICT - Infrastructure Connectivity Project**

Portfolio Holder: **Education and Learning Portfolio – Cllr. Joanne Collins**

Report Submitted by: **Lyn Phillips-Corporate Director of Education**

Directorate Management Team	Corporate Leadership Team	Portfolio Holder / Chair	Audit Committee	Democratic Services Committee	Scrutiny Committee	Executive Committee	Council	Other (please state)
25.11.20	25.11.20	17.12.20			15.12.20	13.01.21		

1. **Purpose of the Report**

1.1 The purpose of the report, is to provide Members of the Executive Committee with the opportunity to consider the progress in relation to the ICT - Infrastructure Connectivity Project (ICP). In addition, the report will provide an overview of the Welsh Government's Hwb EdTech Programme and its alignment with the Blaenau Gwent ICP.

2. **Scope and Background**

2.1 **Blaenau Gwent Infrastructure and Connectivity Project**

In 2017, Education and the Shared Resource Service (SRS) worked in partnership with schools to review the status of and develop a project proposal, to enhance ICT infrastructure and connectivity throughout the school estate, whilst also addressing gaps and consistency issues. The proposal aimed to improve the delivery of teaching and learning, whilst also facilitating delivery in line with the Digital Competency Framework, and effectively contributing to the overall curriculum aspirations for Wales. The proposal also sought to build upon the outcomes realised as a result of the Living in Digital Wales (LiDW) Grant initiated in 2014, which focused on improving standards of connectivity.

2.2 In order to develop an Infrastructure and Connectivity Project (ICP) business case, Education worked closely with SRS and schools via the development of an ICT Strategy Group (comprised of Headteacher, Council, SRS, Education Achievement Service, Welsh Government and other relevant representatives). The business case was based upon a detailed audit of infrastructure and connectivity, along with an appreciation of school-based ICT operation issues. The proposal was developed, consulted upon and taken via the Council's political processes and approved in 2018.

2.3 In addition to the proposal, the SRS schools Service Level Agreement (SLA) was re-developed to account for the changes throughout the school estate, whilst also seeking to secure improved standards in relation to service delivery. All schools signed up for a 3-year period to the newly established SLA arrangements in 2018.

- 2.4 The project was initiated in November 2018, with relevant staff recruited to undertake the physical works; project management processes were agreed and a project group established. Implementation began in March 2019, to allow SRS, British Telecom, third party contractor Stoneleigh, and relevant Council services to undertake preparatory works including: school network equipment audits, identification and management of facilities implications, programming and delivery of the initial pilot phase. The projected project end date was summer 2020.
- 2.5 The capital investment of £560,000 will achieve the following throughout the school estate:
- **Migration to the Schools EDU Network**, improving the network infrastructure within schools throughout BG.
 - **Improved internet connectivity and use** – Prior to project inception, school usage on the connection peaked at just over 50%. Internet usage in schools is expected to increase following these improvements. Should the capacity for schools have remained the same this would create a bottle neck, which despite faster connection, would mean that schools experience slowness.
 - **School connectivity** – Connection between the school and the central infrastructure. Achieving LiDW 2020 aspirations for all schools; i.e. 100MB for primary schools and 1GB for secondary schools, for middle schools on separate sites the primary and secondary requirements will apply.
 - In- school infrastructure to ensure **effective internet access to meet current and future** requirements and aspirations (switches and wireless).
 - **Internal connectivity** - the BG standard is defined as infrastructure and connectivity for every person in the school (student, teacher, adult) to have a maximum **1.5 internet connected devices simultaneously in appropriate areas**.
 - Provision of **secure remote access for teachers, pupils, parents and governors**.
 - **Centralised infrastructure including** school file storage, infrastructure licensing, software deployment servers (SCCM).
 - **Secure e-safety** infrastructure arrangements – to include web filtering, anti-virus protection, and Bring Your Own Device (BYOD).
 - **Centralised SIMS** – SIMS will be hosted centrally ensuring consistency and continuity of access.
- 2.6 The objectives of the ICP include:
- Connectivity will be enhanced across the school estate by improving line speed;
 - Creation of opportunities for consistency in the provision of education and learning via the medium of technology;
 - To address cabling issues, resulting in improved wireless coverage through the installation of additional Wi-Fi access points;
 - Creation of an ICT infrastructure that underpins, supports and facilitates effective school to school working;

- All primary schools will have 100MB connectivity and all secondary schools will have 1GB of connectivity;
- To provide a centralised file storage and backup solution to all schools; and,
- To provide a web filtering solution that supports safeguarding for both staff and pupils in schools.

2.7 **Welsh Government Hwb EdTech Initiative**

During 2019, the Welsh Government launched the Hwb EdTech (HET) initiative, which over a 3-year period, will realise an investment of over £2 million (£900,000 over waves 1 and 2) throughout the school estate. The programme is divided into Waves as follows:

- **Wave 1 – 2019/20**
Broadband Connectivity
Data Network Cabinets
Core Switches
Routers
Associated Cabling
UPS
- **Wave 2 – 2019/20**
In-school Cabling
Edge Switches
Wireless Access Points
Wired Access Points
- **Wave 3 – 2020/21**
Whole-school Meraki Device Management
Caching solutions supporting classroom learning
Servers
- **Wave 4 – 2021/22**
Replace unsupported devices
Acquire additional devices
Charging trolleys

2.8 The status of the ICP placed Blaenau Gwent in a strong position to further enhance infrastructure in line with the first 3 waves of Hwb EdTech funding. This meant that we were able to incorporate the additional work programme into the ICP, and realise efficiencies in terms of both time and resources. Welsh Government stipulate that the waves need to be signed off sequentially. Blaenau Gwent are due to successfully sign off the first 3 waves in January 2021. The Hwb EdTech funding has permitted additional infrastructure priorities to be reviewed and addressed.

2.9 **Figure 1** below outlines the investment priorities for both the Blaenau Gwent ICP and Hwb EdTech Programme:

Blaenau Gwent Project Investment	Hwb EdTech Programme Investment (Waves 1 and 2)
SchoolsEdu Migration	Core Fibre Infrastructure
Obsolete Wi-Fi Replacement	Nearing End of Life Wi-Fi Replacement

ICT Infrastructure Replacement	Switch/Router Replacement
Onsite Cache Server	Main Cabinet Replacement
Licensing Meraki	UPS Battery/Power Surge Protection
PinSafe Remote Access	Associated Cabling/Wired Connections
Internet Connection Upgrades	-
Migration – Schools Standardisation	-
Migration – Issue Management and Mitigation	-

2.10 During the Spring-term 2020, Welsh Government announced funding to address the needs of digitally disadvantaged learners and associated device replacement in schools, including a Hwb In-schools Infrastructure Grant Scheme (HISIG). This aspect of the device-based funding wave was initiated earlier than planned, to address issues resulting from the COVID-19 pandemic. As a result, the funding allocation for Blaenau Gwent was confirmed as £605,254. The criteria for the funding included: device replacement costs, servers, licensing to support re-build and programming of end of life (EOL) devices to meet the needs of digitally excluded learners; along with Mi-Fi units to support home-based connectivity. Education established a delivery plan in partnership with SRS and schools, to reduce and replace the number of end of life devices, whilst also successfully meeting the needs of staff, pupils, and those experiencing digital exclusion throughout the school closure period and beyond.

2.11 **Progress to Date**
Despite the impact of COVID-19 which has resulted in both school access and resourcing issues, along with extensive additional planning and risk assessment requirements; excellent progress has been made in line with delivery of the ICP. As a result, there is only one ICP migration remaining at Pen Y Cwm Special School, which is programmed for delivery in December 2020. The project has faced a series of challenges along the way, including: facilities, technical and resourcing issues, service disruption associated with external factors etc. However, issue management has been strong, and addressed by SRS via detailed action plans, which are effectively monitored in partnership with the Council and schools.

2.12 Waves 1-3 of the HET are programmed for completion by January 31st 2021, with works across the following 6 sites remaining: Rhos y Fedwen, St Joseph's Glanhowy and Ystruth Primary Schools, along with ALC Roseheyworth and Tillery Street Campuses.

2.13 Additional benefits have been realised in line with project delivery, including:

- Full rebuild/reconfiguration of school-based devices.
- Development of a hardware inventory across school estate
- End user device security and management enhancements

In addition to the above, sustainability planning is underway to address the associated long-term strategic priorities throughout the school estate.

Schools and relevant partners have already been consulted upon and agreed key underlying principles. A detailed plan will be developed in January 2021, for implementation from September 2021.

3. **Options for Recommendation**

Option 1: Members considers and accepts the report.

Option 2: Members considers the report and provides comments relating to improvements that can be made.

4. **Evidence of how this topic supports the achievement of the Corporate Plan / Statutory Responsibilities / Blaenau Gwent Well-being Plan**

4.1 Education is a Strategic priority within the Council's Corporate Plan, of which the development and sustainability of school-based ICT provision is an essential component in relation to teaching, learning and pupil outcomes.

4.2 Welsh Government determined their curriculum aspirations within 'A Curriculum for Wales – a Curriculum for Life' (2015). The plan in delivering these aspirations is directly aligned to key recommendations emerging from Professor Donaldson's 'Successful Futures' report, which places the issue of technology at the heart of new curriculum arrangements.

4.3 Welsh Government subsequently developed the Digital Competency Framework (in line with the Donaldson report, and 'A Curriculum for Wales – a Curriculum for Life', 2015). The DCF establishes a framework for the delivery of ICT across the curriculum that will enable the development of a digitally skilled pupil population in the use of technologies, whilst preparing them for future progression routes and career pathways. It is recognised that supporting digital skill building will potentially stimulate the local economy and economic activity. The DCF provides the basis for the strategic approach to the delivery of ICT across the school estate within Blaenau Gwent. Education's ambition in line with DCF and Successful Futures, is to maximise the use of new technologies in delivering the curriculum, in order to increase the digital competency and capabilities of learners.

5.1 ***Impact on Budget***

There are no new or additional budgetary implications for the Council. Both projects are currently on profile, with a favourable variance at present. The capital budgets and grants are as follows, with future allocations aligned to the Hwb EdTech Programme pending confirmation, further information for which is anticipated in 2021:

- ICP £250,000
- HET £900,000 (Waves 1 and 2)
- Welsh Government Hwb EdTech funding to address digital disadvantage and associated device requirements (inclusive of the HISIG) £605,524

5.2 ***Risk*** - The primary risk associated with project delivery is the impact of the COVID-19 pandemic and associated implications. In addition, minimising

disruption is vital to ensure that schools continue to operate effectively to support increased digital requirements, including virtual and distance learning. The latter has the potential to increase the timescales for completion, and minimise the opportunity for error. There is a detailed implementation plan, which encompasses learning to date, along with an in-depth appreciation of facilities and associated requirements. Staff and budgetary contingencies have been built in, and the project delivery timeline extended to address time constraints and accommodate increased work programming.

5.3 **Legal** – There are no direct legal implications associated with this report.

5.4 **Human Resources** – There are no direct human resource implications associated with the report, sufficient staffing and other resources have been secured and contingencies built-in.

6. **Supporting Evidence**

6.1 **Performance Information and Data**

To date the following outcomes have been achieved:

- 1,214 devices and 141 Mi-Fi units have been distributed to digitally disadvantaged learners.
- 2,247 devices have been ordered to replace end of life devices throughout the school estate. Set-up and distribution is programmed throughout the autumn-term 2020 and spring-term 2021 in line with Welsh Government procurement timelines.
- 29 out of 30 school sites have been fully migrated and their connectivity addressed under the ICP
- Infrastructure upgrades have been completed in 24 out of 30 school sites, with the remaining schools programmed for completion over the next 6-8 weeks.
- Device and infrastructure audits have been completed and updated for all schools.

Post project delivery, an impact assessment will be completed, along with a full scale project evaluation.

6.2 **Expected outcome for the public (This section is mandatory)** - The primary outcomes associated with projects are driven by two key education objectives:

- Improved quality of teaching and learning via the development of a fit for purpose ICT infrastructure; and,
- Improved standards of education, pupil attainment and outcomes.

Both of which aim to secure the development of a digitally skilled pupil population in the use of technologies, whilst preparing them for future progression routes and career pathways. It is recognised that supporting digital skill building will potentially stimulate the local economy and economic activity in the future.

- 6.3 **Involvement** - Stakeholder and end user needs and engagement are of paramount importance, and a key focus of both projects. The projects have and continue to be subject to consultation, which has been used to inform development, delivery, progression and learning.
- 6.4 **Thinking for the Long term**
All of the research undertaken during the project development and delivery phase, has and will be used to underpin and inform the development of a Blaenau Gwent Education ICT Strategy. The projects and strategy will form part of a 10-year plan in addressing delivery, infrastructure, connectivity and device-based sustainability throughout the school estate.
- 6.4.1 Shared Resource Service Wales SLA, will be reviewed with schools on a 3-yearly basis – in line with the economic life of the assets. The SLA will ensure that SRS are able to provide the required level of support in managing the infrastructure and connectivity requirements of Blaenau Gwent's schools. This in turn will ensure effective management, maintenance and use of the investment.
- 6.5 **Preventative focus** – The ICP and Hwb EdTech Projects aim to address existing ICT issues and enhance provision, whilst ensuring parity across the school estate.
- 6.6 **Collaboration / partnership working** – Both projects require a collaborative approach in terms development, implementation and monitoring. This is carried out via the ICT Strategy Group, Project Group, Welsh Government and SRS delivery team meetings. The Project Group has wide ranging representation from partner organisations and services throughout the Council.
- 6.7 **Integration** – The Council, SRS and Schools work in an integrated way to ensure effective project implementation, and secure appropriate skills, knowledge etc. to support a strategic approach in the medium to long-term.
- 6.8 **EqIA** – There is no adverse impact upon the protected characteristics.
7. **Monitoring Arrangements** - Both projects are managed in accordance with the Corporate Project Management Framework and the PRINCE 2 methodology. Project monitoring is carried out via the Project Group, ICT Strategy Group, along with regular reporting to Welsh Government. It is assured via the 21st Schools Programme Management arrangements and reported via the Councils political processes.