



Business Bulletin

Education, Children and Families Committee

10.00am, Tuesday, 2 March 2021

Via MS Teams

Education, Children and Families Committee

Convener:	Members:	Contact:
<p>Councillor Ian Perry</p>  <p>Vice Convener: Councillor Alison Dickie</p> 	<p>Councillor Ian Perry (Convener) Councillor Alison Dickie (Vice-Convener) Councillor Eleanor Bird Councillor Steve Burgess Councillor Mary Campbell Councillor Joan Griffiths Councillor David Key Councillor Callum Laidlaw Councillor Jason Rust Councillor Scott Douglas Councillor Louise Young</p> <p>Added Members for Education Matters</p> <p>Religious Representatives Margaret Therese Laing</p> <p>Mrs Fiona Beveridge</p> <p>Rabbi David Rose</p> <p>Parent Representative Alexander Ramage</p>	<p>Nickey Boyle, Executive Support 0131 469 5725</p> <p>Gillian Kennedy Service and Policy Adviser to the Convener and Vice- Convener Tel: 0131 529 4319</p>

Potential for Schools to be heated using ground source heat pumps and other renewable sources

At December 2020 Education, Children and Families Committee, there was a request for detail on using ground source heat pumps and other renewable sources of energy to heat schools. This was in response to the [‘Energy in Schools Report - Annual Report’](#) presented at the December Committee meeting, which asked Committee to note ‘that in order to meet 2030 net zero carbon targets, significant improvements will be required to the learning estate to improve thermal efficiencies and decarbonise heat sources’.

This response considers heat pumps. There are restrictions on the use of biomass due to air quality concerns that prevent its use in Edinburgh. Other renewable sources of heat (principally hydrogen produced from renewable energy) are not considered commercially viable at this stage and therefore have not been considered in detail. However, this position will continue to be monitored and approaches revised as appropriate. Similarly, there will likely be opportunities to link some buildings, in the existing learning estate, to future low carbon heat networks that may replace the requirement for local heat generation plant. The considerations outlined below remain valid for both local heat pumps and wider heat networks.

With grid electricity continuing to decarbonise, through the introduction of increased generation from renewable technologies, sources of heat that utilise electricity are increasingly seen as offering potential for low carbon heat. This is in contrast to natural gas which is becoming the predominant source of carbon emissions across the Council’s learning estate.

Heat pumps use a working fluid (such as a refrigerant) to extract heat from a low-grade source (for example external air or the ground). Through the compression of the working fluid its temperature can be increased to a level suitable for use in buildings. The amount of available heat generated by a heat pump is typically 2 – 4 times higher than the electricity used to drive the cycle therefore offering an efficiency over more conventional technologies (such as electric panel heaters) that deliver on a ratio close to 1-unit electricity : 1-unit heat.

Air source heat pumps are already installed across the learning estate, having featured in many recent new builds including rising school roll buildings and the new St John’s Primary School. Whilst there are capital considerations (heat pumps are typically more expensive to install than gas fired boilers), the technology is well suited to new builds where the building services can be specified to suit the characteristics of heat pumps. Given the increased capital costs of heat pumps there is a risk that gas boilers are still considered to keep capital project costs within budgets. With 2030 net zero carbon targets, such decision making would leave a legacy that would require reversing via retrofit in the next few years. It is therefore critical that support is given to ensure that new builds have sufficient budget to be designed in line with 2030 ambitions.

For the existing learning estate, the suitability of heat pumps as a retrofit option is limited by the temperature that it can heat water to. The majority of the Council’s learning estate uses ‘wet’ heating systems where water (i.e. radiators) are used to deliver heat. A heat pump’s efficiency is proportional to the temperature that it needs to deliver: the higher the temperature, the lower

the efficiency. Current systems typically heat water up to a maximum of around 50°C whereas the majority of the Council's learning estate is designed to operate at boiler flow temperatures of around 80°C. This means that a direct replacement of a gas boiler for a heat pump is usually not feasible.

To deliver lower carbon heat through the use of heat pumps, consideration therefore needs to be given to how best to adapt buildings to accommodate lower flow temperatures or alternative methods of delivering heat (such as warm air heaters). A key means of adapting buildings for heat pumps is to improve the fabric of the building (i.e. improved air tightness and increased levels of insulation). This reduces the heat loss which has a consequential effect on the amount of primary heat that needs to be delivered to the building. Therefore, improved fabric offers a credible route to wider adoption of heat pumps.

The [Energy in Schools – Annual Report](#) provided summary detail about the Passivhaus Enerphit Standard (a high efficiency retrofit standard) being piloted on two buildings. This work will help inform the best value balance between decarbonisation of heat (such as through heat pumps) and demand reduction through fabric improvements. However, it is important to note that retrofitting fabric improvements to a building can be both complex and expensive and bespoke approaches may be required depending on the building archetype.

A further consideration with the wide-scale adoption of heat pumps is the availability (or cost of securing availability) of capacity within the local electrical distribution networks to support their installation. The power requirements of delivering heat to a building through heat pumps would be far higher than existing building needs and therefore require upgrade to the building's electricity supply. Similarly, the price of electricity is around 5 times higher than gas. Therefore, the adoption of heat pumps may lead to increased running costs.

In summary, the best route for delivery of low carbon heat should be considered on a site by site basis, and should be considered alongside fabric improvements and future plans for local infrastructure.

Edinburgh Outdoor Learning Network - Sport and Outdoor Learning Unit

During January and February, the Edinburgh Outdoor Learning Network organised and delivered a series of webinars for teachers and other practitioners. The Edinburgh Outdoor Learning Network is an informal network of over 40 providers of outdoor learning, convened by the Council's Sports and Outdoor Learning Unit (SOLU).

Each webinar featured four, fifteen-minute presentations by a variety of different Outdoor Learning providers. Topics were diverse; over the three webinars we had presentations on using Gaelic outdoors, discussing climate change with Primary aged pupils, the reintroduction of Beavers to Scotland alongside our own resource; and the Outdoor Learning Map (<https://www.outdoorlearningmap.com/>). SOLU Lead Council Officer: Andrew Bagnall.

The webinars were very well received; some 160 people attended and gave overwhelmingly positive feedback, so much so that we are now planning a second series of webinars for the summer term.

Remote Learning Support – Sport and Outdoor Learning Unit

The Sport and Outdoor Learning Unit (SOLU) has reviewed, updated and distributed its remote learning document for supporting families at home; My Activity Planner.

A task and finish group incorporated resources created by SOLU and provided signposting to external resources. This is a PDF containing sport and physical activity, and outdoor learning ideas.

Activities are hyperlinked for families to access digitally. The Planner covers all stages and includes a section for additional support needs.

SOLU Lead Council Officers: Ryan Harrower, Heather Brownlee and Fraser Robertson.

Resources include the Council's 50 Ways to Experience Outdoors in Edinburgh (https://www.experienceoutdoors.org.uk/images/Download/50-ways-to-experience-outdoors_edinburgh.pdf) and Virtual Active Schools Sessions (https://www.youtube.com/channel/UC_7BkQ1fcgript9SV1GPw9A/videos).



Communities and Families Coronavirus Excursions Toolbox – Sport and Outdoor Learning Unit

This unique resource keeps Council staff updated with the latest position statements and resources linked to wider Council and Scottish Government guidance.

Just prior to Christmas, the Toolbox was aligned to the Scottish Government Protection Levels. This enables staff to plan, adjust and deliver safe offsite provision linked to changing infections rates and the latest protection level. It also allows staff to forward plan more complex excursions including overnight residentials. The Scottish Government released an offsite visits update in early February 2021, including a recommendation of no residential visits. This position is expected to be reviewed again by Scottish Government towards the end of March 2021.

SOLU Lead Council Officer: Andrew Bradshaw.

Sand for Schools Project – Liberton High School

An exciting new facility has just been completed at Liberton High School. The first ever school based permanent beach volleyball facility in Scotland has been constructed in partnership with the high school, Scottish Volleyball and Edinburgh Beach Volleyball Club. With the support from the British Volleyball Federation and UK Sport Aspiration Fund, this facility was able to become a reality, providing a fantastic resource and platform for professional and aspiring athletes, school sports and the surrounding community. The introduction of the facility will further enhance the reputation of the local area and highlight the variety of sport on offer within the South East community.



Robert Ure
Active Schools Co-ordinator

Football Academy Farewell

We're sad to say that Football Development Goalkeeper Coach, and Scotland Women's international, Jenna Fife is no longer able to continue with us for the time-being. Jenna's training commitments with Rangers FC have intensified meaning she is unable to support the talented goalkeepers in our Sports Academy, Progression Academy and P7 Select squads.

Jenna's professionalism, quality of coaching and fantastic example as a role model has made a hugely positive impact on the abilities and confidence of some of our young male and female goalkeepers. Indeed, some of the goalkeepers under Jenna's tutelage have progressed from club level to international level. Her commitment and personality will be sorely missed by all.



Jenna said :

"I have really enjoyed my time working with the City of Edinburgh Council and I am disappointed that I cannot continue. I love helping young footballers improve and achieve their goals and hopefully I have done that over the last few years. I have gained a lot of experience as a coach since starting with the Council and it's been a pleasure coaching kids at all different programmes. I have also worked with lots of great coaches who I've learned a lot from and appreciate all the help I've received over the years".

Jack Beesley
Football Development Officer

Swimming to the Outdoors

I normally work as a Swim Specialist where I work as part of the Swim Team where I deliver swimming lessons to primary pupils 3 days a week. However due to Covid-19 and the closure of swimming pools the swim team have been redeployed into schools across the city. I have been at Balgreen PS since the 10th of August, where I have been delivering outdoor sessions in the woodland attached to the school. I work alongside school staff supported by the Parent Council, so all pupils are able to take part in den building, hammocks, knots, art, nature, mini beasts, fires RSPB Wild Challenge and The John Muir Award. Last term I saw 14 classes that's 355 children over 150 hours or over 550 cups of hot chocolate and nearly 400 marshmallows toasted. Phew what will we get up to this term?



Julia Kerr

Swim Specialist - redeployed to Balgreen Primary School to lead Outdoor Learning.