



Y dyfrgi (Lutra lutra)

# 2050 PENNAL 2050

## Cylchlythyr 8



### FAINT O LAW MAE COED YN EI AMSUGNO?

OS ewch i lawr i'r goedwig heddiw....fe welwch lawer iawn o weithgarwch a gynhyrchwyd gan brosiect Pennal 2050. Er enghraifft, cynhaliodd ecolegydd Sorcha (isod , canol) Ecoleg Canolbarth Cymru arolwg dyfrgwn cyn i'r cynllun Slo-Flo ddechrau a rhoddwyd amodau ar y gwaith fel nad oedd unrhyw ddyfrgwn neu ystafelloedd cysgu yn cael eu tarfu'n andwyol. A threfnodd y Bartneriaeth arolwg drôn (gweler y llun) o'r ardal goedwigaeth gyda chefnogaeth Dion o Barc Cenedlaethol Eryri.

Mae Matt (a welir isod, ar y dde, gyda Rhys Parry, canolfan, cadeirydd Partneriaeth Pennal) yn anelu at ddatblygu model canopi coed a hydrolegol cyfunol - gyda chefnogaeth ymgynghoriaeth Ymchwil Coedwigoedd - a fydd yn caniatáu modelu gwahanol senarios o fesurau lliniaru llifogydd naturiol yn gywir, cyfundrefnau plannu a rheoli ac amrywiadau mewn amodau hinsoddol. Bydd y model hwn, ar ôl ei ddilysu ar gyfer dalgylch Pennal, yn gallu cael ei ehangu ar gyfer mwy o gwmpas gofodol ar draws coedwigoedd Cyfoeth Naturiol Cymru ledled Cymru. Bydd yn defnyddio LoRaWAN - Rhwydwaith Ardal Eang Hir - a gynlluniwyd i gysylltu dyfeisiau bach fel synwryddion amgylcheddol â'r Rhyngwyd fel bod data amser real ar gael yn hawdd (gyda chymorth cydweithwr TG Max isod).Gwahoddwyd Ysgol Pennal hefyd i fod yn rhan o'r prosiect newydd hwn a'i dechnoleg i wella medrau gwyddoniaeth a thechnoleg disgyblion.



Max, ymchwilydd IT Prifysgol Bangor, gyda blwch rhwydwaith.



Arolygu o'r awyr gyda drôn



[www.croesopennal.cymru](http://www.croesopennal.cymru)  
[pennalpartners@aol.com](mailto:pennalpartners@aol.com)



The otter(Lutra lutra)

# 2050 PENNAL 2050

## Newsletter 8



### HOW MUCH RAIN DO TREES SOAK UP?

IF you go down to the woods today....you will find a great deal of activity generated by the Pennal 2050 project. For instance, ecologist Sorcha (below , centre) of Mid Wales Ecology carried out an otter survey before the Slo-Flo scheme began and conditions were put on the works so that any otters or dormice were not adversely disturbed. And the Partnership organised a drone survey (see pic) of the forestry area with the support of Dion of Snowdonia National Park.

Bangor University Phd researcher Matt (seen below, right, with Rhys Parry, centre, chair of Partneriaeth Pennal) is aiming to develop a combined tree canopy and hydrological model – with the support of Forest Research consultancy - which will allow for accurate modelling of differing scenarios of natural flood mitigation measures, planting and management regimes and variations in climatic conditions. This model, once validated for the Pennal catchment, will be able to be expanded for greater spatial scope across Natural Resources Wales forests throughout Wales. It will use LoRaWAN - a Long-Range Wide Area Network - designed to connect small devices such as environmental sensors to the Internet so that real time data is easily accessible (see Matt’s IT colleague Max below). Pennal School has also been invited to be involved in this new project and its technology to improve pupils science and technology skills.



Bangor Uni IT researcher Max with a network box.



Aerial surveying with a drone



[www.visitpennal.wales](http://www.visitpennal.wales)  
[pennalpartners@aol.com](mailto:pennalpartners@aol.com)