

ASTUDIAETH ACHOS

CYNLLUN RHEOLI CARBON

PLAS MAESINCLA, CAERNARFON

Cefndir

Mae Plas Maesincla yng Nghaernarfon yn gartref preswyl sy'n gofalu am bobl hŷn fregus trwy ddarparu gofal dementia. Dros y 10 mlynedd diwethaf, mae'r cartref wedi llwyddo i leihau ei ôl-troed carbon yn sylweddol a pharhau i ddarparu gwasanaeth o'r radd flaenaf ar gyfer y preswylwyr.

Mae defnydd nwy Plas Maesincla 57% yn llai na'r meincnod cenedlaethol nodweddiadol – sef faint y byddem yn disgwyl i gartref preswyl o'r maint hwn ei ddefnyddio – a 52% yn llai na'r meincnod cenedlaethol arfer da, sef faint y byddem yn disgwyl i gartref preswyl effeithlon dros ben ei ddefnyddio.

Yn ogystal, mae defnydd trydan y cartref 16% yn llai na'r meincnod cenedlaethol nodweddiadol.

Ers 2005, mae eu defnydd nwy wedi gostwng yn sylweddol o 28%.

Mae'r arbedion yn ganlyniad i gyfuniad o waith i uwchraddio'r safle dros y blynyddoedd diwethaf ac ymarfer da ar ran staff, sy'n sicrhau nad yw ynni'n cael ei wastraffu.

Gweithredu



boeleri newydd a'r paneli solar hefyd wedi bod yn gymorth mawr i ni leihau ein ôl-troed carbon.

"Oherwydd ein bod ni'n gartref preswyl, mae gennym ni ganllawiau arbennig o ran gwresogi, sy'n golygu bod rhaid i ni gadw'r gwres ymlaen trwy'r dydd a thrwy'r nos. Mae yna bobl mewn oed yma, ac maent yn teimlo'r oerni. Mae angen i ni wneud yn saff bod y cartref yn lle cyfforddus i bawb.



PROSIECT

Uwchraddio rheolyddion gwres;

Ynysu pibellau gwres;

Uwchraddio goleuadau i rai mwy effeithlon;
Boeleri newydd;

Paneli solar PV (10kW)

COSTAU CYFALAF

£93,383

ARBEDION ARIANNOL

£143,100 dros fywyd y prosiect

ARBEDION CARBON

670 tonnell CO₂ dros fywyd y prosiect

CYFNOD AD-DALU

12 mlynedd

Ers 2010/11, mae'r prosiect i uwchraddio Plas Maesincla wedi cynnwys gosod rheolyddion gwres newydd, ynysu pibellau gwres, uwchraddio goleuadau a gosod boeleri newydd. Yn ogystal, mae'r cartref nawr yn cynhyrchu ei drydan ei hun wedi i baneli solar gael eu gosod ar do'r adeilad yn 2014. Bydd hyn oll yn eu galluogi i arbed £143,100 mewn costau ynni ynghyd â 670 tonnell o CO₂.

Esboniodd Marian Hughes, rheolwr Plas Maesincla, bod uwchraddio'r adeilad wedi cyfrannu'n sylweddol at effeithlonrwydd y safle: "Dwi'n meddwl bod yna fuddsoddi wedi cael ei wneud mewn llyfnydd da yma – er enghraifft, mae cael boeleri newydd wedi bod yn help mawr i ni gadw ein costau ynni i lawr gan eu bod yn fwy effeithlon. Mae'r

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“Mewn adeilad fel hwn, maen nhw’n gwneud gwahaniaeth. Gan fod rhan o’r adeilad yn hen dros ben a rhan arall yn eithaf newydd, mae sicrhau bod y gwres yn gyson trwy’r adeilad yn beth pwysig iawn er mwyn gofalu am ein preswylwyr, ac mae’r systemau newydd yn ein galluogi i wneud hynny.”

Ond yn ogystal â’r systemau newydd, dywedodd Marian bod staff yn ymdrechu i leihau eu defnydd ynni ble bynnag y bo’n bosib. “Mae staff yn trio eu gorau i fod yn rhagweithiol,” meddai. “Gan fod gennym bobl fregus iawn yn byw yma, mae’n rhaid i ni wneud yn siŵr bod y goleuadau ymlaen iddyn nhw, oherwydd mae rhai o’n preswylwyr yn cael trafferth gweld, mae rhai yn simsan ar eu traed, felly mae’n bwysig sicrhau bod yna olau da yma trwy’r adeg.

“Mae diogelwch ein preswylwyr yn hollbwysig, ond fel arall, pan mae ein staff yn mynd i lefydd nad ydynt yn agored i’n preswylwyr, fel y llawr isaf i wneud y golchi, maen nhw’n rhagweithiol ac yn gwneud yn siŵr bod y goleuadau wedi cael eu diffodd os nad ydynt yn cael eu defnyddio. Gyda’r nos, bydd staff yn diffodd unrhyw oleuadau os nad oes yna bobl o gwmpas.”

Mae’r camau y mae staff yn eu cymryd yn eu gwaith tuag at leihau eu defnydd ynni yn gwneud gwahaniaeth sylweddol ac yn llawn cyn bwysiced â’r prosiectau cyfalaf.

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CASE STUDY

CARBON MANAGEMENT PLAN

PLAS MAESINCLA, CAERNARFON

Background

Plas Maesincla in Caernarfon is a residential care home which provides dementia care for vulnerable elderly people. Over the past 10 years, the home has managed to significantly reduce its carbon footprint while continuing to deliver a service of the highest standard for its residents.



Plas Maesincla's gas consumption is 57% lower than the typical national benchmark – which is the amount a residential care home of its size would be expected to use – and 52% less than the national benchmark of good practice, which is the amount an exceptionally efficient care home would be expected to use.

Additionally, the home's use of electricity is 16% lower than the typical national benchmark.

Since 2005, their gas consumption has lowered substantially by 28%.

The savings are the result of a combination of work to upgrade the site in recent years and good practice by staff, who ensure energy is not being wasted.

Implementation



Since 2010/11, the project to upgrade Plas Maesincla has involved installing new heating controls, insulating heating pipes, upgrading the lighting system and installing new boilers. In addition, the home now generates its own electricity as a result of PV solar panels being fitted on the roof in 2014. All of this will enable the home to save £143,100 in energy costs and save 670 tonnes of CO₂.

Marian Hughes, Plas Maesincla's manager, explained that upgrading the building has contributed significantly towards the efficiency of the site: "I think the investment has been carried out within some good areas – for instance, having new boilers has been a big help to keep our energy costs down because they are more efficient. The new boilers and solar panels have also helped us

to lower our carbon footprint.

"Because we're a residential care home, we have specific guidelines when it comes to heating, which means we have to keep the heating on throughout the day and night. We have elderly people living here, and they feel the cold. We need to make sure the home is a comfortable place for everyone.

PROJECT

Upgrading heating controls;
Insulating heating pipes;
Upgrading to more efficient lights;
New boilers;
PV panels (10kW)

CAPITAL COSTS

£93,383

FINANCIAL SAVINGS

£143,100 over the life of the project

CARBON SAVINGS

670 tonnes of CO₂ over the life of the project

REPAYMENT PERIOD

12 years

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“In a building like this one, they make a difference. Because part of the building is very old and another is relatively new, ensuring the heating is consistent throughout the building is very important with regards to caring for our residents, and the new systems enable us to do that.”

But as well as the new systems, Marian added that staff endeavour to reduce their energy use wherever possible. “Staff try their best to be proactive,” she said. “Because we have very vulnerable people living here, we have to make sure that the lights are on for them, as some of our residents have sight problems, some are unsteady on their feet, so it’s important to ensure there is always a good standard of lighting here.

“The safety of our residents is paramount, but otherwise, when our staff go to areas of the building that aren’t open to residents to do the laundry, for instance, they are proactive and will make sure that the lights are switched off when they aren’t in use. At night time, staff will switch off any lights if there’s no one around.”

The steps taken by staff towards reducing their energy usage make a big difference and are as important as the capital projects.

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