

Corwen Central News



Once again the time of year when autumnal shades are being added to the landscape has been reached.

from the stock pile at Bonwm Farm. To top it all the Westminster Government has



Autumn colours return to the Horseshoe Pass Photo : PR



Shaggy Inkcap (*Coprinus comatus*) raises its head amongst the gravels (typical habitat) around Corwen

Photo: PR

Green leaves have moved to gold whilst bracken has taken on solid darker hues. The last month has been relatively mild whilst being undercut by some rain and low clouds over the mountains. Despite all this the Corwen work gang has been busy adding new bricks to the station building, completing the steps from the car park, preparing the signal box to take the cladding and receiving the first load of ballast

announced that £15 million from the “levelling up “ fund has been awarded to the area lead by Wrexham and Denbighshire to include at least £200,000 for the Corwen Station Canopy.

Levelling Up

In the Budget presented to the Westminster Parliament by the Chancellor of the Exchequer, the Rt.Hon. Rishi Sunak M.P on October 27th the

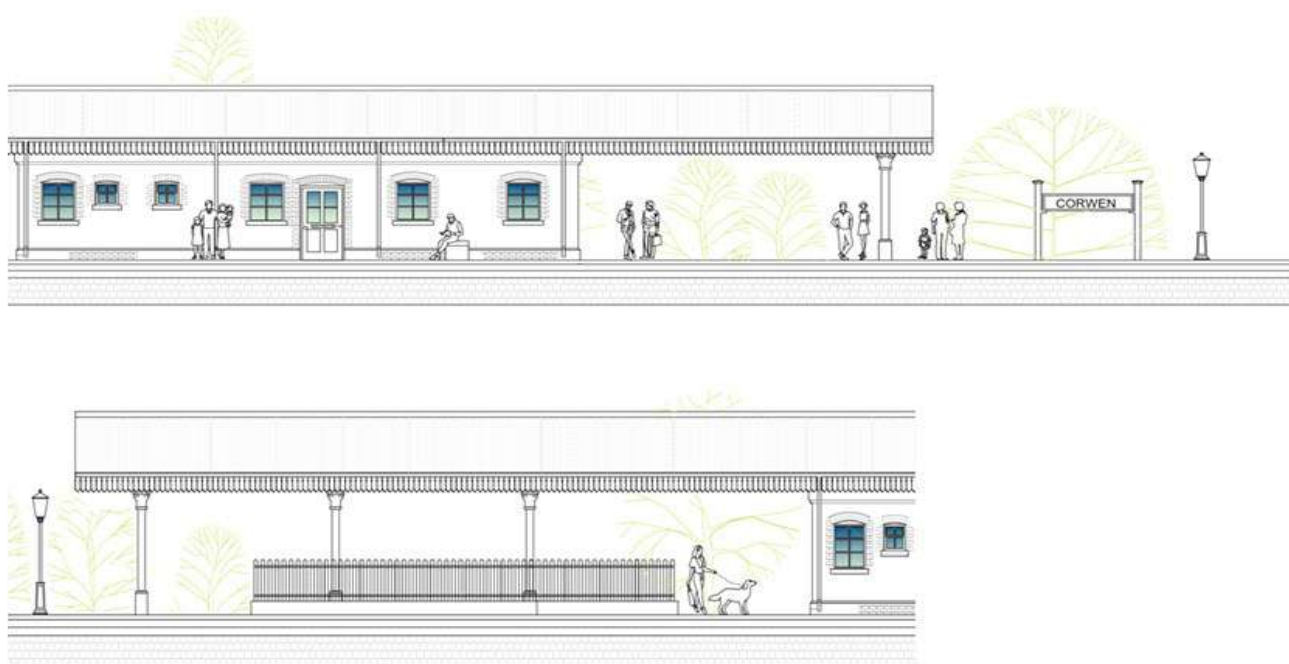
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£15million bid to the Levelling Up Fund was declared successful!

This bid was sponsored by Simon Baynes MP, the member for Clwyd South, and is a cross-county project, developed by Wrexham County Borough Council and Denbighshire County Council. Three inter-connected projects will help to ‘level-up’ the current deficiency of visitor infrastructure across heritage sites arising from a lack of any significant investment from either the UK or Welsh Governments to date.

The second project is mainly focused in Denbighshire and supports cross-border visitor connectivity in the Dee Valley at the Horseshoe Falls, The Four Great Highways and Plas Newydd in Llangollen; Wenffrwd to Llangollen Active Travel Corridor including the old Railway Line and Chirk.

The third project will focus on the Corwen area, creating a new and improved Western Gateway to the Dee Valley and World Heritage Site. This project will improve visitor connectivity and infrastructure, Corwen town centre assets and the



Corwen Station Building and Canopy - South elevation - looking from the east (Top diagram) through to the west.(Bottom diagram)

The three projects include, firstly, the implementation of the Trevor Basin Technical Masterplan which will ensure the World Heritage Site realises its full potential on a national and international level to attract visitors and promote economic growth in neighbouring communities.

area between the railway station and car park, **including a new platform canopy**. It will also enhance the visitor experience with onward linkage to Llangollen and Cynwyd, effectively creating a new, improved and complementary visitor entry point to the World Heritage Site.

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On hearing the news Simon Baynes MP said:



Pictured (L-R) Phil Rogers, Richard Dixon-Gough, Simon Baynes MP and Peter Neve *Photo: GJ*

“The three projects – the Trevor Basin masterplan, the investment in Llangollen and Chirk and the proposals for the Corwen area – greatly benefit from being already well developed and therefore eminently capable of being executed by 2024. The projects are of considerable environmental



Canopy looking west *Illustration Neil Evans*

importance and closely inter-connected, not least due to the Llangollen Canal and Heritage Railway which run along the Dee valley, which will

therefore multiply the benefits arising from investment by the Levelling Up Fund.

The reaction of the Trust Board has been one of “surprise” and “delight” in the knowledge that at last the vision of the “Founding fathers” can be realised with the opening, complete with canopy of the station at Corwen, ready to play its part in the Western Gateway to the Dee Valley.

Ballasting the Station loop



Ballast train pushes towards the buffer stops at Corwen *Photo GJ*

On Monday 25th October the first ballast train arrived in Corwen Station to start the work of grading and levelling the track, an important and necessary precursor to join welding and final tamping. Approx 100 tones of stone was delivered to the site when it was dropped from the side doors of the ballast wagons and pushed into position by the use of Shark ballast plough.

This delivery will be the first of a number of trips accounting for at least 500 tons or more of stone. A good turn out by the work gang meant things went fairly smoothly and many eager shovels coaxed the stone into the correct place. 100 tons of

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ballast doesn't go very far when there is at least 300 metres of station loop and sidings to be dealt with! The first ballast train was booked to Corwen on the day the first national lock down began in March 2020.

Other opportunities had to be foregone due to the demise of the Plc and the need to carry out essential engineering works on other parts of the railway.

The train was propelled from Bonwm Farm by the 08 shunter driven by Paul Reynolds and Mike Williams and guarded by Harold Percival. The ballasting work was supervised by Peter Jump.

Stepping out

As reported in the last edition of CCNL new access steps have been built near the site of the signal box and were awaiting posts and rails for a safe climb.



The East End steps now with posts and rails added Photo: PR

These have now been added and painted and make for a neat practical job – a nice example of recycling of materials from one use to another!!

Boxing it again

The corner posts for the outside of the signal box have now been installed and painted Western Region brown.



Cladding support battens in place

Photo: PR

Vertical battens have now been fitted to the front of the signal box ready to receive the lapped board cladding, which will be completed very shortly.

Station building

The brickwork of the station building has moved on quite rapidly since the last report and the east



First pieces of cladding going on the front of the signal box

Photo: RS

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facing wall is nearly level with the underside of the steel frame.



East wall height approaches the cross beam Photo: PR

Similar progress is to be noted on the north facing wall where doors that will open onto the platform. (The general style of the building can be seen in the illustration on Page 2.

Funding and Lucky Numbers

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80

Lucky Numbers

This month's winning number is 69

This month's winner of Lucky Numbers is **Fred Bendall**, a member of the Railway Trust who has supported the Corwen Project for many years, with

Number 69. Many congratulations go to Fred on his win.

This month the Project's Treasurer, Paul Bailey writes : “We have almost sold out of our Llangollen Railway 2022 Calendar but the good news is that a further 100 have been ordered so if anyone still wants one they will be available. They are £6 each plus £1.65 p&p. We also have Xmas Cards, packs of 10 with envelopes £5 plus £2 p&p. Stocks are almost exhausted but we still have 15 packs left. Also available for those Xmas stocking fillers are our Corwen Station merchandise. Mugs £5, Blank greeting cards with envelopes 5 for £5, Coasters, pack of 4 £10, Postcards 20p each. We can put a gift pack together - 1x mug, 1 set of 4 Coasters, 1 pack of Greeting cards and 5 postcards for £20.

These are available by contacting me or by visiting Corwen Station on Thursday’s and Saturday’s or from Corwen Project Manager Richard Dixon-Gough or Corwen Station Master Wayne Ronneback.”

For donations to the Corwen Project especially the Canopy Appeal - Please make cheques payable to CCRD (Corwen Central Railway Development) and forward to the Llangollen Railway Trust, The Station, Abbey Road, Llangollen, LL20 8NS

If you want more details /payment options. on any of the appeals or merchandise then please contact Paul Bailey on 01490 450271 or email “paulbaileywincham@yahoo.co.uk”

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End Piece

Last month's piece on the wind farm at Hoyle Bank, prompted one correspondent to point out another pioneering electricity generating project which predated the “*whirrlies*” by about 45 years, namely the Dinorwig Pumped Storage System, now known as “*The Electric Mountain*”.

The scheme was built at a time when responsibility for electricity generation in England



Part of the power station as seen on the exterior of Elidir Fawr. Photo : Dennis Egan

and Wales was in the hands of the government's Central Electricity Generating Board (CEGB); with the purpose of providing peak capacity, very rapid response, energy storage and frequency control. Dinorwig's very rapid response capability significantly reduced the need to hold spinning reserve on part loaded thermal plant. When the plant was conceived the CEGB used low efficiency old coal and oil fired capacity to meet peaks in demand. More efficient 500 MW thermal sets were introduced in the 1960s, initially for baseload operation only. Dinorwig could store cheap energy produced at night by low marginal

cost plant and then generate during times of peak demand, so displacing low efficiency plant during peak demand periods.

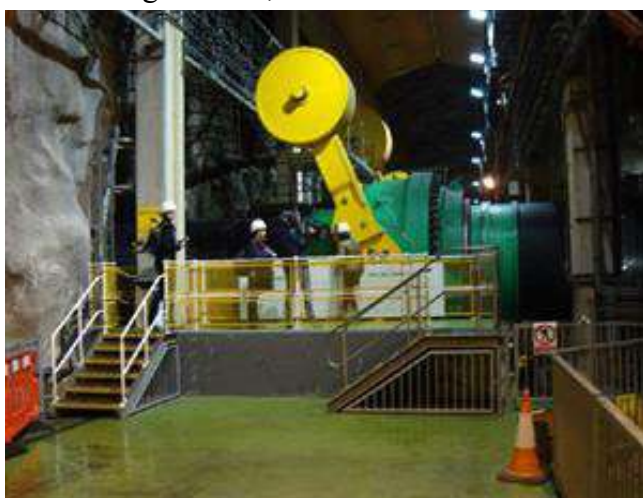
Dinorwig is operated not only to help meet peak loads but also as a short term operating reserve (STOR), providing a fast response to short-term rapid changes in power demand or sudden loss of power stations. In a common scenario (known as TV pickup), the end of a popular national television programme or advertising breaks in commercial television programmes results in millions of consumers switching on electric kettles in the space of a few minutes, leading to overall demand increases of up to 2800 MW. In anticipation of this surge, an appropriate number of units at Dinorwig (or other services competing for National Grid Reserve Service duty) may be brought on line as the closing credits start to roll. The monitoring of popular television channels is an important factor in electricity grid control centres.

The scheme was constructed in the abandoned Dinorwig slate quarry. To preserve the natural beauty of Snowdonia National Park, the power station itself is located deep inside the mountain Elidir Fawr, inside tunnels and caverns. The project – begun in 1974 and taking ten years to complete at a cost of £425 million – was the largest civil engineering contract ever awarded by the UK government at the time. The work was undertaken by an Alfred McAlpine / Brand / Zschokke consortium. Twelve million tonnes of rock had to be moved from inside the mountain, creating tunnels wide enough for two lorries to pass comfortably and an enormous cavern 51 metres (167ft) tall, 180 metres (590 ft) long, and 23 metres (70ft) wide known as "the concert hall".

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The power station comprises 16 kilometres (9.9 miles) of tunnels, one million tons of concrete, 200,000 tons of cement and 4,500 tons of steel. The scheme paid for itself within two years.

Water is stored at 636 metres (2,087 ft) above sea level in Marchlyn Mawr reservoir. When power needs to be generated, water from the reservoir is



Control valves which allow the water to flow

Photo : Electric Mountain

sent down through the turbines into Llyn Peris, which is at approximately 100 metres (330 ft). Water is pumped back from Llyn Peris to



Francis turbine runner- the bit that generates the power

Photo : US Bureau of Reclamation

Marchlyn Mawr during off-peak times. Although it uses more energy to pump the water up than is generated on the way down, pumping is generally done when electricity is cheaper and generation when it is more expensive.

The power station comprises six 300 MW GEC generator/motors coupled to Francis-type reversible turbines. The generators are vertical-shaft, salient-pole, air-cooled units each having 12 electromagnetic poles weighing 10 tonnes each, producing a terminal voltage of 18kV; synchronous speed is 500rpm. From standstill, a single 450-tonne generator can synchronise and achieve full load in approximately 75seconds. With all six units synchronised and spinning-in-air (water is dispelled by compressed air and the unit draws a small amount of power to spin the shaft at full speed), 0 MW to 1800 MW load can be achieved in approximately 16 seconds. Once running, at full flow, the station can provide power for up to six hours before running out of water.

The energy storage capacity of the station is approximately 9.1GWh. At peak output water flows through the generators at 390 cubic metres (100,000 gallons) per second (about the volume of a 25 metre; 28 yard swimming pool every second).

Excess water overflows to Llyn Padarn and is lost from the reservoir system. Both Llyn Peris and Llyn Padarn were ancestral homes to the Arctic char, a rare fish in the United Kingdom.

The power station was also promoted as a tourist attraction, with visitors able to take a minibus trip from "Electric Mountain" - the name of its nearby visitor centre - to see the workings inside the power station; 132,000 people visited the attraction in 2015. However, the centre is now closed with no prospect of reopening.