Model Farm: 2019/00871/OUT

Objection from Friends of the Earth Barry&Vale group

re. **Drainage, flooding and foul sewage issues**

- the main sewer to Cog Moors frequently discharges into Barry Dock (175 times in 2020) also from CSOs at Rhoose Point (26) and Barry Town (40)
- Cog Moors sewage works is overloaded, it 'spills' untreated sewage frequently, not just under exceptional weather conditions but 70-90 times a year.

therefore the Env Statement should record the problems and supply assessments of
a) the environmental impacts from current and additional discharges and b) alternative on-site treatment or use of cess pits

Welsh Water have made their statistics public and disclose the performance of Cog Moors on request.
https://www.dwrcymru.com/en/our-services/wastewater/combined-storm-overflows/valleys-and-south-east-wales; Cog Moors STW - cais Rhyddid Gwybodaeth i Corff Adnoddau Naturiol Cymru - WhatDoTheyKnow

Annual Spill Performance Data Cog Moors WwTW					
	2017	2018	2019	2020	2021 YTD
Spill Number	59	90	77	74	34
Duration of Spills (h)	363.75	1113.25	844.5	845	483.5
Data Completeness (%)	93.55	99.94	98.03	98.17	99.77

CogMoors Overflows in 2020 Bathing Season (April-Sept)

	start	Duration hours	Spill litres/s	Total spill M-litres	Rain times	Rain depth	Comments
18/9 Jun	12:30	22:15	750	61	*no data*	*no data*	
28-Jun	12:15	10:45	..	1.2	..	..	
29-Jun	00:00	08:15	..	0.9	..	..	
08-Jul	03:30	03:15	550	4.7	18:00*-6:00	16.2mm	
27-Jul	12:45	01:00	500	1.8	04:00-16:00	17.0mm	follows 8.6mm 24-5 July
19-Aug	11:30	02:00	600	4.3	06:00-11:00	14.8mm	follows 4mm on 17th Aug.
25-Aug	05:45	06:30	850	20	01:00-06:00	26.2mm	follows quite dry week
27-Aug	19:30	24:15:00	950	83	11:00-15:00	32.6mm	} extended rainstorm with
28-Aug					21:00*-4:00	26.6mm	} second rainfall after 6 hours
30-Sep	16:15	01:30	550	3	08:00-15:00	21.8mm	follows 2.6mm on 26th Sept

* rain started previous day

The ES has to consider the problems locally of adding foul sewage to the overloaded system that's by far non-compliant with the UWWT Regs. Receptors affected by additional sewage from this development would include Barry Bathing waters, Barry Dock water sports, Severn marine protected area. It should report on any moves to bring the sewerage system into compliance.

Duty-of-Care over foul sewage waste The developers cannot rely on the word of DCWW that they can accommodate the foul sewage generated on site, in view of the factual records on discharges of untreated sewage. They have a duty-of-care when they hand over their waste to a contractor, which they cannot fulfil via DCWW

unless they have plans to expand capacity of the main sewer and the STW or otherwise bring them into compliance within the development time frame

Compliance with the Water Framework Directive – the requirement to restore the Severn's good water quality status would be contradicted by the increased sewage overflows caused by the development.

Bathing Water policy and regulations require attainment of 'excellent' microbiological condition in waters used for bathing and immersion sports at times and places where there is significant number of users. The last official survey of usage by Environment Agency Wales about 2008 is quite out-of-date; the ES should report current usage.

The EIA Regs(Wales) 2017 require the issue to be addressed under the Schedule 4 s.5:

5. A description of the likely significant effects of the development on the environment resulting from, inter alia—

(a) the construction and **existence of the development**, including, where relevant, demolition works;

(b) the use of natural resources in particular land, soil, water and biodiversity, considering as far as possible the sustainable availability of these resources;

(c) the emission of pollutants, noise, vibration, light, heat and radiation, the **creation of nuisances and the disposal and recovery of waste**,

(d) the **risks to human health**, cultural heritage or the environment (for example due to accidents or disasters);

(e) the **cumulation of effects** with other existing and/or approved projects, **taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected** or the use of natural resources;

(f) the impact of the project on climate (for example the nature and magnitude of greenhouse gas emissions) and the vulnerability of the project to climate change.

Dwr Cymru Welsh Water's assurances cannot be taken at face value. Their previous response to the VoG shows a lack of candour. As scandalous levels of discharge of untreated sewage have come out publicly in recent months, the VoG Planning officers can no longer rely on DCWW statements, but require the ES to report data.

Here is DCWW's statement followed by points on the lack of candour:

Cog Moors Treatment Works - I can advise we have made considerable investment at our asset and within the wider catchment over the past 15 years. This investment has included significant upgrades to the sewer network, pumping station, Combined Sewer Overflow and introduction of UV disinfection at the WwTW. We have also jointly invested in a sustainable drainage project with Cardiff City Council and NRW, Greener Grangetown, to sustainably reduce the amount of surface water entering our network. In instances where the treatment capacity at Cog Moors WwTW is exceeded during periods of heavy rainfall, the excess flows are initially passed to storage tanks and returned to treatment once the incoming flow drops. When all storage is utilised, storm water is passed to a UV treatment plant (during the bathing season) before being discharged to the Bristol Channel via a long sea outfall located at the southern limit of Severn Estuary marine conservation area. The WwTW and CSO operate within the conditions permitted by Natural Resources Wales (NRW) and the majority of flow from the catchment (treated and storm effluent) is discharged offshore in a highly dispersive environment, ensuring least impact on the coastline and Severn Estuary marine conservation area.

DCWW claim investment in UV treatment, yet that was as an urgent measure in the 2000s to comply with Bathing Water standards, as the shortage in capacity could not be made up quickly. It's never been made up since.

They turn off the UV Sept to March so the many users of the sea are subject to high bacterial and viral levels.
the plan was licensed to meet the 3-spills per bathing season limit, but it exceeds this by 2-3 times. Since immersion sports are now enjoyed year-round, the limit should be 3 spills per year.
they claim the 'Greener Grangetown' investment, but not how little surface water this kept out of the sewers (the area served is ~1-2% of the total urban area with combined sewers) and that such SuDS programmes are hardly progressing in the Cog Moors catchment
they don't admit the works discharge untreated sewage about 80 times a year. (Table above)
they don't admit that even the limit on untreated foul sewage spilling over the 3 weirs is met sometimes, when they accommodate the flow by discharging directly via Barry Storm overflow into Barry Dock
This means they meet the limit on the system's hydraulic capacity only by diverting flows into CSOs. At these times they are treating only 40% of the flow reaching Cog Moors.
they ein effect admit the untreated flows would impact the *Severn Estuary marine conservation area*, when discharged close to it on the incoming tide.

The VoG's S.19 report on the 23 Dec 2020 storm showed that was not 'extreme', but only a 1-in-20yr storm. However, the main sewer stopped accepting run-off and flooded about 1km length of streets in lower Penarth/Cosmeston, implying the hydraulic capacity was exceeded.

DCWW say they plan for a more severe 1-in-30 yr storm, but don't explain their failure in the 1-in-20yr storm of 23 Dec. Moreover, their planning is for storms of the past decade or two, rather than the next decades of more intense storms. The Minister has said that the 1-in-50 year storm now occurs every few years, so Welsh Water's forward planning does not meet the 1 in 30yr storm either in principle or in practice.

Flooding from storm-time run-off

Attenuation ponds built in new developments to the VoG's current standards do not cope with peak rain-storms. The new car-parking at Llandough hospital built recently with holding tanks appears to have worsened the flooding of the East Brook; the officers haven't replied how much of the 47mm rainfall would the system have held back Attenuation ponds were seen to overflow on 23 Dec 2020, as did that at the Culverhouse Cross HTV development.

As attenuation capacity will be too little, the Env Statemen has to include a flood consequences assessment to assess

a) the size of floods expected, including allowance for climate change
b) the consequences for receiving watercourses.

Surface water drainage in the Rhoose Point/eastern Rhoose area is beset with problems, so it cannot be presumed that any discharge via attenuation tanks to an adjacent water course will be permitted, The ES should therefore include an assessment of a new surface water discharge to the sea and whether it is feasible and/or necessary.

Cannot be left to 'Reserved Matters'

Welsh Guidance and case-law does not allow these Issues to be left to Conditions for approval as "Reserved Matters". They go to the viability of the development. Sewage and drainage are omitted from the list of possible reserved matters in Reg. 2 of the *Development Management Procedure (Wales) Order 2012*.

We are aware that the LPA is allowed one month from receipt of the application to decide if the "reserved matters" requested should be included in the outline application (article 3(2) of the DMPWO). However, there is no such limit on requiring extra information in the Env. Statement for EIA development.

The nearby Rhoose development has now learned they may need to fund a sewage pumping station costing ~£1 million. Run-off from land is trapped by the railway embankment and undermining it. Rainstorm water has been flooding the Rhoose Point ponds.
The Vale has to build in climate resilience into all developments under Welsh and VoG policies.
The VoG as drainage authority needs to coordinate plans so they meet not only existing problems but also the increasingly severe rainstorms under climate change.
When developments fail to sort out wayleaves in advance, it can mean as in a recent case that sewage is carted away for many months, with the smell causing a “nuisance” to the community.