

P/2021/0967 - Response to Natural Resources Wales (NRW) representation dated 17th Jan'22

P/2021/0967 - REMOVAL OF CONDITION 18 OF PLANNING PERMISSION P/2018/0666

In accordance with their standing advice to LPAs, our understanding is that NRW have raised concerns regarding foul drainage, associated with the potential to increase the amount of phosphate within a river SAC catchment, in this case being the River Dee and Bala Lake SAC.

In line with this representation, the LPA have expressed that the development is **likely to increase** foul water flows to the WWTW (Five Fords) and therefore result in an increase in phosphate discharges into the SAC and, as such, would not be able to support the application at the present time.

It is on this matter that we respond on behalf of the applicant, our conclusion reached being that **there will not be an increase** in foul water flows to the WWTW as a result of the approved development on the Plas Coch campus. In fact, the final outcome is to the contrary to the Council's position, in that resultant development has the **potential to reduce** foul water flows.

Hence, in accordance with NRW's own standing advice to LPAs, it must be concluded that the proposal satisfies the following and so facilitate the LPA to progress the determination of the planning application:

The following developments can be screened out as not likely to have a significant effect on a river SAC in relation to phosphorus inputs, as there is unlikely to be a source of additional phosphorus or pathway for impacts:

- *any development that does not increase the volume of foul wastewater*

Justification

Our approach is to apply the same principles as those applied by Edwards Homes in their application (P/2021/0912) for discharge of condition no.18 of PP P/2018/0671, this requiring submission of a scheme for the comprehensive and integrated drainage of the site indicating provision for foul water, surface water and land drainage. In summary our approach is as follows:

- Comparison of the baseline position (at the time of determination of the original planning application) on foul water flow / water usage against the proposed position (with the PP implemented) on foul water / water usage applicable to the site
- With the benefit of a foul appliances survey across the Plas Coch campus and applying pre-pandemic student numbers across the campus we are able to generate a daily total water usage for the campus – this gives us our **baseline**.

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- We have assessed the permission (P/2018/0666) and its constituent parts, have assessed current and projected student numbers and applied the principles of more efficient systems being installed across the campus (toilets, was basins, showers etc..) – this gives us our **proposed**.
- We present a no net increase, future position actually represents a reduction in water usage at the site.

When presented with the baseline : proposed position on water usage for application P/2021/0912, NRW responded as follows:

Thank you for the additional information included in your email. Provided that you are in agreement, we confirm that the information submitted is sufficient to demonstrate that the development is unlikely to increase the amount of phosphorous entering the River Dee and Bala Lake SAC catchment. We are therefore satisfied that the proposal is not likely to have a significant effect on the River Dee an Bala Lake SAC.

Our expectation is that, further to submission of this response statement, NRW's response will mirror the above.

Foul water appliances survey – Plas Coch campus

The building surveying team at Cassidy + Ashton have undertaken a foul appliances survey across the entire Plas Coch campus. The following text is to be read in conjunction with the survey information, submitted separately. This breaks down into the following:

Buildings to be demolished

- 32 no. WC's **(A)** (1 with a long flush, 20 with a medium flush and 11 with a small flush)
- 58 no. taps/basins **(B)** (none with infrared sensors, 7 no. lever handle mixer taps, 21 no. percussion type taps and 30 no. turn type taps)
- 2 no. shower units **(C)**
- 8 no. ceramic bowl urinals **(D)** (none with infrared sensors)
- 4 no. ceramic slab urinals **(E)** (none with infrared sensors)

Applying the following industry recognised water usage rates:

- Conventional WC's – use 9 litres **(F)** or more per flush
- Conventional wash hand basin taps have a flow rate of approx. 10 litres **(G)** per minute
- Conventional urinals, installed before 1994 (there are 4 ceramic slab urinals in the Engineering Block which is to be demolished), use between 7 and 22 litres per flush (equates to average of 15 litres **(H)** per flush)

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- Many standard showers will operate around the 0.2 litres per second which equates to 12 litres **(I)** per minute. With an average shower time of five minutes, that quickly stacks up to 60 litres of water per user. There are two shower units being removed from the Human Performance Lab (Alive Hub)

Theoretically, if all appliances were in use at the same time, the buildings would generate:

1,1072 litres of water $(A \times F) + (B \times G) + (C \times I) + (D \times H) + (E \times H)$.

This gives us a **baseline** figure, based on the position at the time of determination of the 0666 planning permission.

New build elements

- 48 no. WC's **(J)** (all 48 WC's with a water-saving low flush)
- 32 no. taps/basins **(K)** (all 32 taps with water-saving infrared sensors)
- 9 no. ceramic bowl urinals **(L)** (all 9 urinals with water-saving infrared sensors)

Applying the following industry recognised water usage rates:

- Low-flush water-saving WC's - use 6 litres **(M)** per flush
- The 1999 Water Regulations require that the flow rate of a tap does not exceed 3.6 litres **(N)** per minute where basins have no plug
- Modern taps with infrared sensors will reduce the water usage and also enable the users to wash their hands hygienically
- Modern conventional urinals use approx. 11 **(O)** litres per flush.
- New Ultra Low Water Urinals utilize only 1 pint or 0.57 litres of water or less per flush. These systems combine the fixture with either a manual / infrared sensor-operated flush.

Theoretically, if all appliances were in use at the same time, the buildings would generate:

502.20 litres of water $(J \times M) + (K \times N) + (L \times O)$.

This gives us a **proposed** figure, based on the new elements of the 0666 planning permission being implemented.

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The remainder

The remainder of the buildings on site will either remain unchanged or be refurbished. In light of this, it is fair to declare that the resultant water usage would represent no net increase. In fact, the resultant situation would in fact be a decrease in resultant water usage, as existing appliances are replaced with new more efficient installations through a phased programme of works across the campus.

In summary, the proposed position (subject to the implementation of the 0666 planning permission) at the Plas Coch campus represents more than a 50% reduction in the volume of waste water generated.

Wrexham Glyndwr University's numbers on Plas Coch Campus

The following represents a summary of numbers of students enrolled, plus staff, relevant to the Plas Coch Campus. Taking the 2018/19 academic year as the baseline date (relating to the period when the 0666 planning application was determined) and working towards a projected timeframe of the completion of development phases on the campus, on the back of the 0666 planning permission.

		-----PROJECTED-----		
	18/19	22/23	23/24	24/25
Students Total	3308	3400	3400	3400
Staff Total	300	300	300	300
On site total	2886*	2220**	2220**	2220**

The above figures are a combination of full time and part time students & staff.

The uplift in 20/21 and 21/22 is most likely a reflection of repeat year students through the Covid period.

**A factor of 80% is applied to the 2018/19 figure, representing a realistic figure for actual people attending on site. A number of courses are remote learning and some staff are not based on campus.*

Academic years 2019/20, 2020/21 and 2021/22 are not referenced in the table, in light of the global pandemic and associated lockdowns. Such an exceptional circumstance does not reflect a typical position in time, hence any associated figures would not be representative.

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***A factor of 60% is applied to the projected figures 2022/23, 23/24 & 24/25, as the university applies the principles of the newly adopted Active Learning Framework (ALF). This combines making the best use of the on-campus learning spaces with student-focused online learning content that can be accessed anytime, anywhere.*

ALF embodies ways of teaching and learning that create and support a sense of belonging for students. It was created by staff across the university and there are a series of ALF champions who guide and encourage their colleagues.

It's important to note, too, that while ALF has proved invaluable during the pandemic, this was part of a wider change at Glyndwr which they were already working towards. It's flexible, accessible and inclusive - and like everything Glyndwr does, it puts the student experience right at its heart.

Conclusions

When comparing the baseline figure (at the time the planning application was determined) against the proposed position (subject to the implementation of the 0666 planning permission) at the Plas Coch campus, the position represents more than a 50% reduction in the volume of waste water generated.

In tandem with this, occupancy across the Plas Coch campus will be reduced over the forthcoming years, this being directly applicable to the timeframe for the implementation of all elements of the 0666 planning permission.

Hence, in accordance with NRW's own standing advice to LPAs, it must be concluded that, as the development has been screened out to confirm that it does not increase the volume of foul wastewater and hence is not likely to have a significant effect on a river SAC in relation to phosphorus inputs, as there is unlikely to be a source of additional phosphorus or pathway for impacts proposal, NRW's position is one of no objection and so facilitates the LPA to progress the determination of the planning application.