

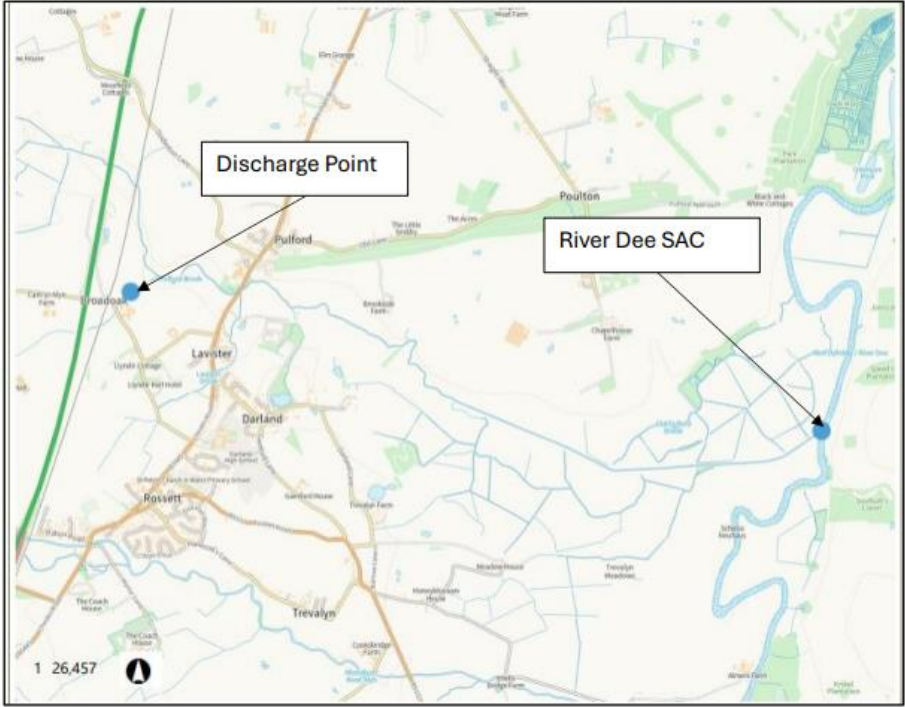
# OGN 200 Form 1A

## Record of a Habitats Regulations Assessment

|                                                                         |            |
|-------------------------------------------------------------------------|------------|
| Plan or project name, brief description or application reference number | PAN-026858 |
| HRA iteration/version                                                   | 1          |

## 1. Plan or Project Details

| Information about the plan or project |                                                                                                                      |                                                                                          |
|---------------------------------------|----------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
| 1                                     | Date application received                                                                                            | 09/09/2024                                                                               |
| 2                                     | Applicant details                                                                                                    | Funky Furniture Hire (Properties) Limited                                                |
| 3                                     | NRW team responsible for carrying out, or requiring to be carried out, the plan or project, and name of lead officer | N/A                                                                                      |
| 4                                     | Activity/ies proposed                                                                                                | Discharge of secondary treated domestic effluent to surface water.                       |
| 5                                     | Relevant legislation or statutory basis                                                                              | Environmental Permitting Regulations 2016                                                |
| 6                                     | Location                                                                                                             | Broad Oak Farm, Llyndir Lane, Burton, Rossett, Wrexham, LL12 0AU.<br>NGR: SJ 36757 58581 |

|    |                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----|----------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    |                                                                      |  <p>The map shows a section of the River Dee in North Wales. A blue dot on the river is labeled 'Discharge Point'. A larger area of the river is outlined in green and labeled 'River Dee SAC'. The map includes various place names such as Poulton, Pufford, Lavister, Darland, Rossert, and Trevalyn. A scale bar indicates 1:26,457.</p> |
| 7  | Plan or project documents, including any application documents       | <p>Internal DMS - <a href="#">PAN-026858</a></p> <p>External Public Register - <a href="#">Public register - Customer Portal</a></p>                                                                                                                                                                                                                                                                                           |
| 8  | Environmental Statement                                              | N/A                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 9  | Pre-application correspondence                                       | <p>NRW ref: AS258989V7R6</p> <p>Our ref: P/2024/0190 (Planning)</p>                                                                                                                                                                                                                                                                                                                                                            |
| 10 | NRW team responsible for preparing this HRA report, and lead officer | <p>Permitting Officer, Water Quality</p> <p>Steve Bickerton</p>                                                                                                                                                                                                                                                                                                                                                                |

|    |                                                                                         |           |
|----|-----------------------------------------------------------------------------------------|-----------|
| 11 | Team or person responsible for approving the plan or project (competent authority role) | As row 10 |
|----|-----------------------------------------------------------------------------------------|-----------|

## 2. Determining the need for a Habitats Regulations Assessment

|                                                                                                                                                                                                                                                 |     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| 2.1 Is there any possibility that the plan or project could negatively affect any European sites?                                                                                                                                               | Yes |
| 2.2 Is the whole of the plan or project directly and only connected with or necessary to the management of one or more European sites, for the purposes of conserving the habitats or species for which the European site(s) is/are designated? | No  |
| 2.3 Is there a possibility that the plan or project could affect any other feature of the European site(s) concerned, or of another European site, in a way that would undermine that feature's conservation objectives?                        | Yes |

## 3. Considering the likelihood of a significant effect (LSE)

### 3.1 Renewal of a project authorisation on the same or more restrictive terms as an extant authorisation

|                                                                                                                                                                                                                               |    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| Is this a renewal of an extant authorisation which complies with NRW approved criteria for ruling out significant effects of renewals (see Part 2 of <a href="#">OGN200</a> ) without conducting a project-specific LSE test? | No |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|

### 3.2 Likelihood of significant effects (LSE) test

#### 3.2.1 Which European sites might be affected by the plan or project?

|     |                                                                                                                                                                                                           |                                                                                                                            |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| (a) | Based on the plan or project specification or information provided in the application, it is considered that these European sites have features which could be negatively affected by the plan or project | River Dee and Bala Lake/Afon Dyfrdwy a Llyn Tegid SAC - UK0030252                                                          |
| (b) | The potential for the plan or project to negatively affect these European sites was also initially considered, but can be ruled out without further consideration                                         | Dee Estuary / Aber Dyfrdwy (Wales) - UK0030131<br>The Dee Estuary (Wales) - UK11082<br>The Dee Estuary (Wales) - UK9013011 |

|  |  |  |
|--|--|--|
|  |  |  |
|--|--|--|

### 3.2.2 Screening for likelihood of significant effect

**TABLE 3.2.2 Screening assessment**

**European site name: River Dee and Bala Lake**

Each species/habitat identified has conservation objectives that directly reference water quality of the River Dee and Bala Lake (except for Otters, although poor water quality could reduce natural levels of prey abundance) as found in the Conservation Objective for the watercourse and Appendix 2. Therefore, there is potential for point source discharges of sewage effluent to undermine the conservation objectives.

In 2021 NRW published a report on 'Compliance Assessment of Welsh River SACs against Phosphorous targets' which showed that the River Dee and Bala Lake Special Areas of Conservation (SAC) was failing to meet the targets set out by the Joint Nature Conservation Committee (JNCC) in 2016 to protect SAC's. As a consequence, Planning Advice to Local Authorities in relation to developments in SAC catchment areas was updated and a policy developed for new discharges within these SAC catchments that contain phosphates. This policy states that applications for new discharges resulting in an increased loading of phosphorus are to be refused on the basis that the additional phosphorus loading to the catchment of a SAC river that is already failing its Conservation Objectives in relation to phosphorus, will further undermine those objectives and have an adverse effect on site integrity.

The proposed discharge would enter the designated WFD stretch GB111067057080 – Dee Chester Weir to Ceirog This stretch is currently meeting the SAC targets for all the key determinands (Ammonia, BOD and Phosphorous)

| Attribute      | Target for SAC | Current Level |
|----------------|----------------|---------------|
| Ammonia mg/l   | 0.25           | 0.12          |
| BOD mg/l       | 1.5            | 1.47          |
| Phosphate mg/l | 0.050          | 0.047         |

The risk of this proposal is the increase in phosphate levels causing nutrient enrichment within the River Dee and Bala Lake Special Areas of Conservation (SAC).

| <b>SAC Feature Management Unit 7852</b> | <b>Screen in/out/in-combination</b> |
|-----------------------------------------|-------------------------------------|
| Cottus gobio                            | Screen-in                           |

|                                                                                                                                     |           |
|-------------------------------------------------------------------------------------------------------------------------------------|-----------|
| (Key Species)                                                                                                                       |           |
| Lampetra fluviatilis<br>(Key Species)                                                                                               | Screen-in |
| Lampetra planeri<br>(Key Species)                                                                                                   | Screen-in |
| Lutra lutra<br>(Key Species)                                                                                                        | Screen-in |
| Petromyzon marinus<br>(Sympathic Feature)                                                                                           | Screen-in |
| Salmo salar<br>(Key Species)                                                                                                        | Screen-in |
| Watercourses of plain to montane levels<br>with the Ranunculus fluitantis and<br>Callitriche-Batrachion vegetation<br>(Key Habitat) | Screen-in |
| Standing Water<br>(Key Habitat)                                                                                                     | Screen-in |
| Swamp<br>(Key Habitat)                                                                                                              | Screen-in |

Eutrophication is the gradual increase and enrichment of ecosystems by nutrients such as nitrogen (N) and/or phosphorus (P). The addition of nutrients may lead to changes in nutrient sensitive vegetation; either directly affecting protected habitats and species of flora, or indirectly affecting protected species dependent upon existing habitats. Often the increased level of phosphorus increases the growth rate in certain species that then absorb more oxygen out of the water affecting all species within the special site. The damage to breeding and spawning spots applies to nearly all the SAC features, but also amphibians, fish and other prey that some features rely upon for food. Otters rely on fish populations as their primary food source, and a reduction in prey abundance will have a detrimental effect on their population.

| TABLE 3.2.3 Screening decision of the plan or project 'alone'                                                      |                                                                                                                                                                                                                             |
|--------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (a) If the screening conclusion for <u>all</u> features for all sites in Table 3.2.2 is 'SCREEN OUT'               | The plan or project is not likely to have a significant effect on any European site, and no further consideration under the Habitats Regulations is required in order to determine the approval/application.                |
| (b) If the conclusion for <u>any</u> features in Table 3.2.2 is 'SCREEN IN'                                        | The plan or project is likely to have a significant effect on one or more European sites and therefore an appropriate assessment is required.                                                                               |
| (c) If there are <u>no</u> features in Table 3.2.2 that are 'SCREEN IN' and <u>any</u> features that are 'IN-COMB' | The plan or project is not likely to have a significant effect on any European sites when considered alone, but the possibility of significant effects in combination with other plans and projects needs to be considered. |

## 4. Appropriate assessment of the plan or project when considered alone

### 4.1 Assessment of plan or project as defined

| Table 4.1 Appropriate assessment of the plan or project as defined                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                   |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| European site name: River Dee and Bala Lake                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Can adverse effects on site integrity be ruled out? 'YES' or 'NO' |
| The risk of additional phosphate loading within the discharge would be in contradiction conservation objectives found in the core management plan for the watercourse. The discharge of 6.5m <sup>3</sup> will be from a housing development of 6x2 bed, 1x3 bed, 3x4 bed and 1x5 bed properties. The proposed system replaces an existing unregistered discharge of 1.5m <sup>3</sup> from the main farm house (5 bed property that will remain and form part of the new development) and associated toilet facilities in the outbuildings. The existing treatment is via a septic tank to surface water. | Yes                                                               |

The applicant is proposing to install a MI Nutra-Lite treatment plant which reduces phosphates to 11mg/l. The discharge from the package treatment plant would then pass through the MI Phos-Lite unit which would further reduce phosphate levels to 0.2mg/l. The system treats phosphate using a natural, non-chemical dosing solution.

Modelling was undertaken to compare the existing and proposed system, see modelling report [here](#). The proposed new treatment plant performs much better than the existing treatment plant. The data from this modelling shows that the proposed system has a 0% deterioration in the mean for phosphate within the River Dee during the growing season. For the River Dee none of the SAC targets are affected by the proposed new system as shown below;

| <b>River Dee</b>       | <b>SAC Target</b> | <b>Modelled Impact</b> |
|------------------------|-------------------|------------------------|
| Ammonia mg/l (90%tile) | 0.25              | 0.12                   |
| BOD mg/l (Mean)        | 1.5               | 1.47                   |
| Phosphate ug/l (Mean)  | 50                | 47                     |

Pulford Brook enters the River Dee at a Section that is not failing for phosphate. Consequently when undertaken modelling we have a 3% buffer in deterioration against the target. However the proposal will have no negative impact on the SAC from increased phosphorus and no additional nutrients are discharged. In order to determine if nutrient neutrality has been achieved it is required to calculate the phosphorus loading (volume X concentration) pre and post development. This is summarised in the table below:

| <b>Sewage system</b> | <b>Daily discharge volume (L)</b> | <b>Total phosphorus concentration (mg/l)</b> | <b>Loading of total phosphorus (mg) per day</b> |
|----------------------|-----------------------------------|----------------------------------------------|-------------------------------------------------|
| Septic tank          | 1500                              | 11.6                                         | 17400                                           |
| Marsh System         | 6500                              | 0.2                                          | 1300                                            |
| <b>Net change</b>    | <b>5000</b>                       | <b>-11.4</b>                                 | <b>-16100</b>                                   |

The above table shows that despite the proposed daily volume of treated effluent increasing, the improved effluent quality for phosphorus from the proposed Marsh treatment system brings about a net reduction in total phosphorus discharged (-11.4 mg/l ). When calculating the phosphate nutrient loading the new system clearly performs much better. The net change in phosphate is -16,100 mg per day. Consequently this demonstrates a betterment in the new proposed system.

| <b>SAC Feature Management Unit 7852</b>                                                                                           | <b>Screen in/out/in-combination</b> |
|-----------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|
| Cottus gobio<br>(Key Species)                                                                                                     | Screen-out                          |
| Lampetra fluviatilis<br>(Key Species)                                                                                             | Screen-out                          |
| Lampetra planeri<br>(Key Species)                                                                                                 | Screen-out                          |
| Lutra lutra<br>(Key Species)                                                                                                      | Screen-out                          |
| Petromyzon marinus<br>(Sympathic Feature)                                                                                         | Screen-out                          |
| Salmo salar<br>(Key Species)                                                                                                      | Screen-out                          |
| Watercourses of plain to montane levels<br>with the Ranunculus fluitans and<br>Callitriche-Batrachium vegetation<br>(Key Habitat) | Screen-out                          |
| Standing Water<br>(Key Habitat)                                                                                                   | Screen-out                          |
| Swamp<br>(Key Habitat)                                                                                                            | Screen-out                          |

**Permit conditions** to be applied will ensure the quality of the treated effluent is improved, resulting in a reduced loading of nutrients.

The following limits will be applied in any issued permit:

Maximum daily discharge volume – 6.5 m<sup>3</sup>

**Total Phosphorus – 0.2 mg/l**

BOD – 6 mg/l

Ammonia – 3 mg/l

|                                                                                                                                                                                                                                                                                    |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <p>TSS - 30 mg/l</p> <p><b>There is an impact pathway but significant effects can be ruled out as the discharge of phosphate has been reduced</b></p> <p>As there is no deterioration in phosphorus for the River Dee SAC it cannot act in combination with another discharge.</p> |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|

### 4.3 Concluding the appropriate assessment of the plan or project alone

| Table 4.3 Conclusion of the appropriate assessment alone                                                                                                                                                                        |                                                                                                                                                                |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (a) If Table 4.1, or the right hand column of Table 4.2 if applicable, is 'YES' for all features                                                                                                                                | It has been ascertained that the plan or project, when considered alone, will not adversely affect the integrity of any European sites.                        |
| <del>(b) If there are any 'NO's in the right hand column of Table 4.2</del>                                                                                                                                                     | <del>It has not been ascertained that the plan or project, when considered alone, will not adversely affect the integrity of one or more European sites.</del> |
| (c) Are there any residual effects of the plan or project (net of mitigation measures) which, though not adverse on their own, could be significant when considered in combination with the effects of other plans or projects? | No                                                                                                                                                             |

## 6. Conclusion

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| <del>HRA is not required because there is no conceivable impact on any European sites.<br/>(As documented in section 2.1)</del>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |   |
| <del>HRA is not required because the whole of the plan or project is directly connected with or necessary to the management of one or more European sites, for the purposes of conserving the habitats or species for which the site(s) is/are designated, and the plan or project is not likely to have a significant effect on any other European sites.<br/>(As documented in section 2.2 and 2.3)</del>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |   |
| <del>This project is a renewal of a current permission which complies with NRW agreed criteria for ruling out likely significant effects of a renewal without conducting a project-specific LSE test. Therefore, it is considered not likely to have a significant effect on any European sites, either alone or in combination with other plans or projects.<br/>(As documented in section 3.1 of this form)</del>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |   |
| <del>The plan or project has been screened for likelihood of significant effects and is considered not likely to have a significant effect on any European sites. (As documented in section 3.2 of this form, and section 5 if applicable)</del>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |   |
| In light of the conclusions of an appropriate assessment it has been established that the plan or project will not adversely affect the integrity of any European sites, taking into account any conditions or restrictions as applicable, either alone or in combination with other plans or projects.<br>(As documented in section 4 of this form, and section 5 if applicable)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | X |
| <del>In light of the conclusions of the appropriate assessment, it has <u>not</u> been ascertained that the plan or project will not adversely affect the integrity of any European sites, as documented in section 4 of this form, and section 5 if applicable. Approval for the plan or project <u>cannot</u> be given unless either:</del> <ul style="list-style-type: none"> <li><del>• the plan or project specification, and/or the terms under which it might be approved, are modified so as to remove the risk of adverse effects, and a revised HRA is prepared, or</del></li> <li><del>• the plan or project (not being an SSSI consent*) satisfies the requirements for a derogation and a Derogation Notice is prepared and submitted for consideration by the appropriate authority, normally Welsh Ministers</del></li> </ul> <del>(*SSSI consents cannot be given as derogations)</del> |   |
| Name: Steve Bickerton<br><br>Position: Permitting Officer, Water Quality<br><br>Date: 30/12/2024                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |   |
| Was this HRA conclusion an escalated decision? YES or NO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |   |

**7. Consultation with the ANCB and how sections 2, 3, 4 and 5 of this HRA report (as applicable) take into account that advice.**

| <b>Relevant section of the HRA report</b> | <b>Correspondence and/or meetings with the ANCB</b>                                | <b>Description of how the comments from the ANCB have been taken into account</b> |
|-------------------------------------------|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| <b>2</b>                                  |                                                                                    |                                                                                   |
| <b>3</b>                                  |                                                                                    |                                                                                   |
| <b>4</b>                                  | Email from SEO <a href="#">PAN-026858</a><br><a href="#">OGN200 Form3 response</a> | No response Form 3 given, proceed following OGN 200 guidance                      |
| <b>5</b>                                  |                                                                                    |                                                                                   |

## 9. Appendix: supporting information