Design & Access Statement

WELSH WATER

LAND AT ST NICHOLAS WASTEWATER TREATMENT WORKS

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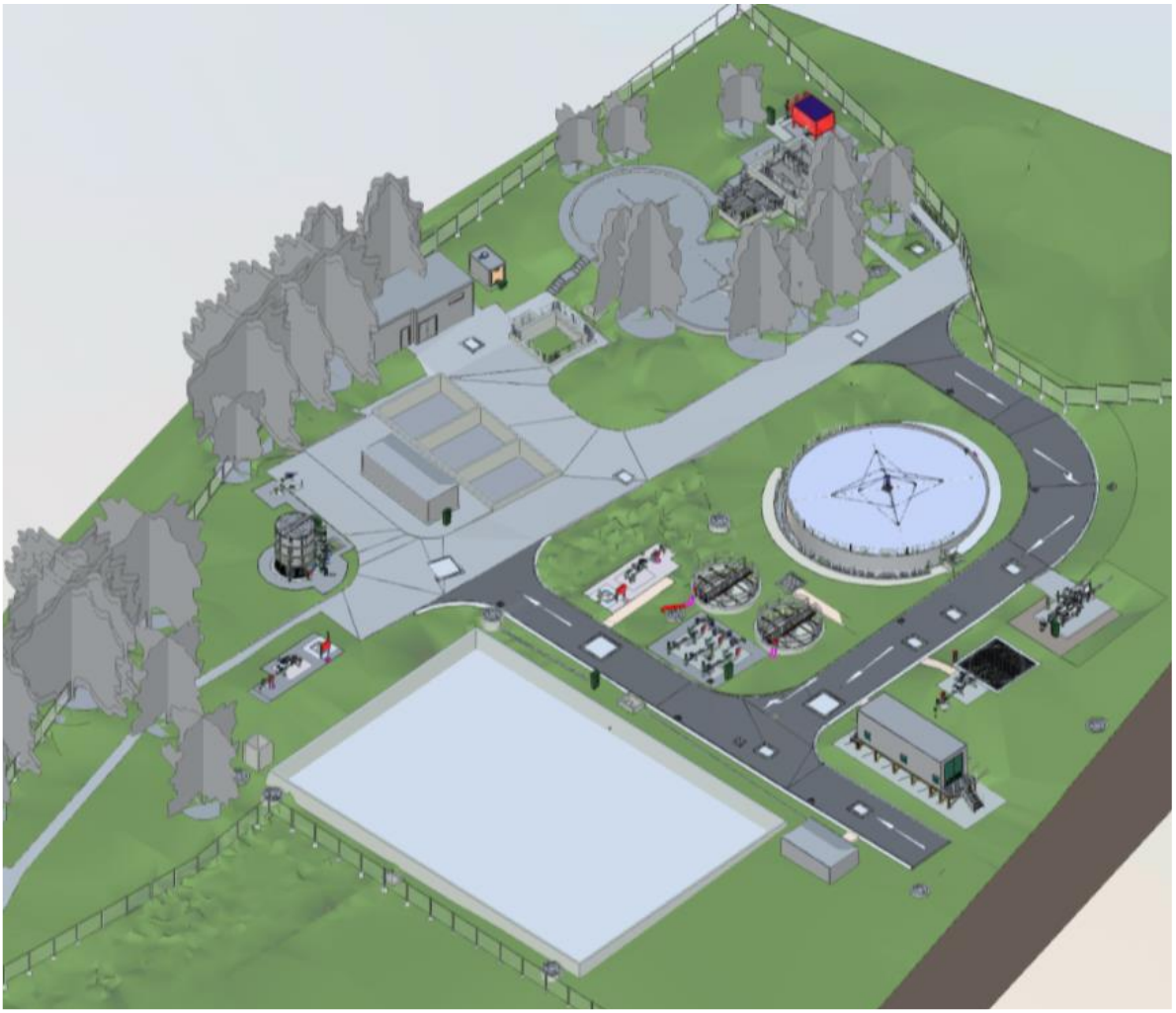

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Planning Statement

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1 Introduction

1.1 Proposed Development

1.1.1 Dŵr Cymru Welsh Water (DCWW) is applying to the Vale of Glamorgan Council (VoGC), under the Town and Country Planning Act 1990 for permission to undertake an expansion and improvement to the existing Wastewater Treatment Works (WwTW) on land at St Nicholas.

1.1.2 A detailed description of the Proposed Development is provided in Section 3.3 of this Design and Access Statement (DAS) in relation to the following works, as set-out within the planning application:

'Expansion of existing Wastewater Treatment Works, to include the construction of Inlet Works, Trickling Filter, Buried Humus Tanks, Sludge Holding Tank, Motor Control Centre Kiosk, Reed Bed, Reed Bed Blower Kiosk, Alkalinity Dosing Kiosk, Trickling Filter Distribution Chamber, De-sludge Pumps and Slabs, Landscaping, Internal Access Road, Lighting, along with a Temporary Contractor's Compound and Construction Access'.

1.1.3 Section 42 of the Planning and Compulsory Purchase Act 2004 substituted a new Section (62) into the Town and Country Planning Act 1990 requiring a DAS to be prepared to accompany certain types of development to explain the design principles and concepts that have informed the development and how access issues have been dealt with. These provisions were supplemented by amendments to the Development Management Procedures published by the Welsh Government in February 2016. The procedural changes require a DAS to be produced for the Proposed Development, classed as a 'major' development.

1.1.4 This DAS therefore accompanies the planning application given this proposal is deemed as 'major' owing to the site area and provides details of the design principles that have influenced the Proposed Development and the access issues associated with the development site. References made within this Statement to Drawing Numbers relate to those plans and elevations submitted in support of the planning application.

1.2 The Applicant

1.2.1 DCWW is a regulated business with statutory responsibilities for the provision of water and sewerage services to 1.3 million people operating across Wales and including parts of the Wirral, Cheshire, Gloucestershire and Herefordshire. DCWW is owned by Glas Cymru, a single purpose company with no shareholders run solely for the benefit of its customer.

1.1.5 DCWW is currently implementing its Asset Management Plan for AMP7 (2020-2025), which is the mechanism by which the regulator NRW is overseeing. An extension and upgrade of the existing works is therefore proposed to meet the current and future population growth in the area.

1.1.6 The proposed scheme is being delivered as part of this Plan and is required in order to improve the treatment process and plant resilience at the existing WwTW site. The proposals will affect the process plant, with new external structures and associated works that are the subject of this planning application and the purpose of the DAS.

1.3 The Site

1.3.1 The Proposed Development site is located at the existing St Nicholas WwTW which is situated approximately 1km south of the village of St Nicholas, at National Grid Reference (NGR) ST 08786 73303. The application site boundary is shown in the accompanying Site Location Plan (Ref: B10181-0AG964-ZZ-ZZ-DR-TA-PN0235 Rev P02) and covers an approximate area of 1.8 hectares (ha) in total. Due to the length of the temporary construction access road crossing several parcels of land and not adjoining the site, VoG has advised in its Pre-Application Response (11 October 2023) that this is not permitted development under a Town and Country Planning (General Permitted Development) Order

1995 (as amended) (the GPDO) and should form part of the application. Whilst also temporary in nature and adjoining the development site, it has been considered expedient for the determination of the application to include this parcel of land within the application boundary.

1.3.2 The permanent works associated with the Proposed Development are located partly on existing operational land within DCWWs land ownership boundary, with the large area of proposed development, including the temporary construction access road and contractor's compound located outside of this.

1.4 Project Description

1.4.1 The Proposed Development comprises a number of new structures and associated works to accommodate the expansion of the existing WwTW site. Those elements the subject of this planning application are listed below.

1.4.2 The proposed upgrade works will be located within and directly adjacent to the existing works site, enclosed by new security fencing. In addition, a temporary construction compound (hereafter referred to as the 'temporary compound)' will be constructed adjacent to the southern boundary of the Proposed Development site. Access to the site will be via a temporary construction access road from Duffryn Lane to the east of the site outside the security fence for the operational site. This will have its own security fence along the entire length of the access road, to prevent public access. The proposed permanent works consist of:

- Inlet works and screen
- A below ground lift pumping station
- 2.no buried small return pumping stations
- Trickling filter
- 2 humus tanks
- Sludge holding tank
- Motor control centre kiosk
- Reed bed
- Reed bed blower kiosk
- Alkalinity dosing kiosk
- Trickling Filter Distribution Chamber
- De-sludge pumps and slab
- Internal access road
- Security fencing
- Mitigation planting and ecological mitigation measures

1.5 Purpose and Structure of the Statement

1.5.1 The purpose of this Design and Access Statement is to describe the Proposed Development for which planning permission is sought and to outline how the proposals respond to and comply with, relevant national and local planning policy to be weighed by the VoGC, as the Local Planning Authority (LPA).

1.4.1 The structure of the Design and Access Statement is as follows:

- **Chapter 2** sets out the local and national planning policy context of relevance to the proposal.
- **Chapter 3** sets out the design objectives for the scheme and describes in detail the component parts of the Proposed Development**.**
- **Chapter 4** describes the accessibility principles associated with the proposals in line with the planning policy framework applicable to the proposals.
- **Chapter 5** reaches conclusions on the overall compliance of the development proposals with planning policy.

2 Planning Policy Context

2.1.1 This Chapter serves as an introduction to the planning policy framework applicable to the Proposed Development. Its primary objective is to provide a concise overview of the essential policies crucial for evaluating the application. The assessment concentrates on the alignment of the Proposed Development with planning policies at both the national and local levels from a design perspective.

2.1.2 At a national level, Planning Policy Wales (PPW) 11 Edition (Welsh Government, February 2021) provides relevant planning guidance informed by the Well Being Future Generations Act, together with the National Development Framework: Future Wales – The National Plan 2040 (February 2021), as well as supporting Technical Advice Notes (TANs). The content of national guidance must be taken into account by local planning authorities when deciding planning applications.

2.2 National Planning Policy

National Development Framework: Future Wales – The National Plan 2040

2.2.1 The National Development Framework (NDF): Future Wales represents the Welsh Government's primary national development framework, strategically addressing key national priorities through the planning system for the next two decades. These priorities encompass sustaining and enhancing a robust economy, achieving decarbonisation and climate resilience, fostering strong ecosystems, and enhancing the health and well-being of our communities.

2.2.2 This Framework operates as a spatial strategy, avoiding involvement in decisions better suited for regional or local authorities. Instead, it offers strategic guidance for planning at all scales and outlines policies and significant concerns to be pursued at the regional level. A primary goal of this document is to tackle issues that the Welsh Government deems high priority, with a particular emphasis on making positive contributions towards the national placemaking objectives for Wales.

Planning Policy Wales

2.1.1 Planning Policy Wales (PPW) 11 Edition emphasises that meeting the objectives of good design should be the aim of all those involved in the development process and applied to all development proposals. These objectives can be categorised into 5 key objectives of good design, shown as follows:

- Environment sustainability.
- Movement.
- Character.
- Community Safety.
- Access.

2.1.2 These and their associated explanations are presented in the following diagram:

Source: PPW, Edition 11 (February 2021) – Objectives of Good Design

2.2.3 PPW 11 Edition states clearly that the design principles and concepts that have been applied to development proposals should be reflected in the content of any DAS and are material considerations in the determination process.

2.2.4 PPW 11 Edition also considers that the visual appearance of the proposed development, its scale and relationship to its surroundings, and context are material planning considerations. Whilst noting that local planning authorities (LPAs) should reject poor building and contextual designs, guidance makes clear that LPAs should not attempt to impose a particular architectural taste or style arbitrarily and should avoid inhibiting opportunities for innovative design solutions.

2.2.5 In preparing a DAS, applicants are advised that an integrated and inclusive approach to sustainable design should be followed, proportionate to the scale and type of the development proposal.

Technical Advice Note 12: Design (March 2016)

2.2.6 Alongside PPW, Technical Advice Note 12 'Design', Welsh Government (2016) is the principal source of design guidance for Wales in providing a broad framework with which to steer design standards and principles at the local level. It fully advocates those aspects of good design identified in PPW and presents a series of guidelines to deliver these elements.

2.2.7 The document pertains to the realm of Design. It offers guidance and details on various interconnected aspects, encompassing the definition of design for planning purposes, considerations of design in planning determinations, and design policy and advice for local planning authorities. Good design and placemaking sentiments lie at the heart of the document and advises that the successful delivery of development requires a holistic approach sought to achieve sustainable development.

2.3 Local Planning Policy

Vale of Glamorgan Local Development Plan

2.3.1 Section 38(6) of the Planning and Compulsory Purchase Act 2004 requires that an application for planning permission should be determined in accordance with the Development Plan, unless material considerations indicate otherwise.

2.3.2 The Development Plan material to the proposed Development is provided by the VoGC Local Development Plan (Adopted 2017). Other material planning policy considerations include VoGC's Supplementary Planning Guidance (SPG).

2.3.3 In providing the planning framework for the Proposed Development, the Adopted LDP contains a number of policies of relevance. These are referred to in full within the accompanying Planning Statement and not repeated here. However, those of relevance to the design and access aspects of the Proposed Development are referred to below:

Policy SP1 - Delivering the Strategy

'The strategy will seek to improve the living and working environment, promote enjoyment of the countryside and coast and manage important environmental assets. This will be achieved by:

1. *Providing a range and choice of housing to meet the needs of all sectors of the community.*
2. *Promoting a range of employment sites intended to meet the needs of the Vale of Glamorgan and the wider capital region.*
3. *Reinforcing the role of Barry, service centre settlements and primary settlements as providers of cultural, commercial and community services.*
4. *Promoting sustainable transport.*
5. *Delivering key infrastructure linked to the impacts of development.*
6. *Protecting and enhancing the built, natural and coastal environment.*
7. *Promoting opportunities for sustainable tourism and recreation.*
8. *Favouring development that promotes healthy living'*.

Policy SP10 – Built and Natural Environment

'Development proposals must preserve and where appropriate enhance the rich and diverse built and natural environment and heritage of the Vale of Glamorgan including:

1. The architectural and / or historic qualities of buildings or conservation areas, including locally listed buildings.

2. Historic landscapes, parks and gardens.

3. Special landscape areas.

4. The Glamorgan Heritage Coast

5. Sites designated for their local, national and European nature conservation importance.

6. Important archaeological and geological features.

Policy MD2 - Design of New Development

'In order to create high quality, healthy, sustainable and locally distinct places development proposals should:

1. *Be of a high standard of design that positively contributes to the context and character of the surrounding natural and built environment and protects existing features of townscape or landscape interest.*
2. *Respond appropriately to the local context and character of neighbouring buildings and uses in terms of use, type, form, scale, mix, and density.*
3. *Where appropriate, provide new or enhanced areas of public realm particularly in key locations such as town centres, major routes and junctions.*
4. *Promote the creation of healthy and active environments and reduce the opportunity for crime and anti-social behaviour. In the case of retail centres, developments should provide active street frontages to create attractive and safe urban environments.*
5. *Provide a safe and accessible environment for all users, giving priority to pedestrians, cyclists and public transport users.*
6. *Have no unacceptable impact on highway safety nor cause or exacerbate existing traffic congestion to an unacceptable degree.*
7. *Where appropriate, conserve and enhance the quality of, and access to, existing open spaces and community facilities.*
8. *Safeguard existing public and residential amenity, particularly with regard to privacy, overlooking, security, noise and disturbance.*
9. *Provide public open space, private amenity space and car parking in accordance with the council's standards.*
10. *Incorporate sensitive landscaping, including the retention and enhancement where appropriate of existing landscape features and biodiversity interests.*
11. *Provide adequate facilities and space for the collection, composting and recycling of waste materials and explore opportunities to incorporate re-used or recyclable materials or products into new buildings or structures.*
12. *Mitigate the causes of climate change by minimising carbon and other greenhouse gas emissions associated with their design, construction, use and eventual demolition, and include features that provide effective adaptation to, and resilience against, the current and predicted future effects of climate change'*.

Policy MD8 - Historic Environment

'Development proposals must protect the qualities of the built and historic environment of the Vale of Glamorgan, specifically: 1. Within conservation areas, development proposals must preserve or enhance the character or appearance of the area; 2. For listed and locally listed buildings, development proposals must preserve or enhance the building, its setting and any features of significance it possesses; 3. Within designated landscapes, historic parks and gardens, and battlefields, development proposals must respect the special historic character and quality of these areas, their settings or historic views or vistas; 4. For sites of archaeological interest, development proposals must preserve or enhance archaeological remains and where appropriate their settings'.

Policy MG17 - Special Landscape Areas

'The following areas are designated as special landscape areas:

1. *Castle Upon Alun.*
2. *Upper & Lower Thaw Valley.*
3. *Ely Valley & ridge slopes.*
4. *Nant Llancarfan.*
5. *Dyffryn basin & ridge slopes.*
6. *Cwrt-yr-Ala basin.*

Within the special landscape areas identified above, development proposals will be permitted where it is demonstrated they would cause no unacceptable harm to the important landscape character of the area'.

2.3.4 The application site is not located within any statutorily designated areas or sites, although lies within the Dyffryn Basin and Ridge Slopes Special Landscape Area (SLA). The extension of the Proposed Development within this area to the east is considered further within this DAS and demonstrates that the development proposals for the scheme as a whole are acceptable in policy terms and in compliance with the Adopted Local Development Plan. The assessment is set out in the proceeding Chapters of this statement.

3 Design Objectives of the Proposal

Design Principles

3.1.1 The development proposals have been finalised in response to site surveys and the various assessments undertaken, along with DCWWs best practice guidance for the development of wastewater treatment works, which has provided a design solution that minimises any potentially negative effects.

3.1.2 This has led to a Proposed Development which has minimised landscape and visual impacts and has responded to the nature conservation interests and other environmental qualities, including the potential impact of the development proposals within the wider SLA designation. The proposal before the Authority reflects the place making sentiments set by the provisions of local and national planning policy.

Design Evolution

3.1.3 The design evolution process for the proposed improvement works at St Nicholas WwTW has had regard throughout to the importance of site context and surrounding character as well as the operational requirements of the Proposed Development in meeting DCWWs operational needs.

3.1.4 The starting point for the design of the proposed scheme has been a desire to create an engineering solution that not only has regard to its location and surroundings but has a natural 'fit' within its rural setting in terms of its scale and appearance, recognising that a facility of this nature has an otherwise largely functional form and use.

3.1.5 The layout and appearance of the Proposed Development has been strongly influenced by site context, inclusive of the existing treatment works on site, as well as being characterised by a low-lying landscape comprising of enclosed fields and the proximity of the River Waycock to the south of the site. At the same time, the scale and siting of the existing St Nicholas WwTW largely defines its immediate environment, forming its own prominent feature within the area.

3.1.6 The setting and topography of the site is located in a topographical low point at approximately 60m Above Ordnance Datum (AOD), with the land rising to the north-east and north-west. The topography falls slightly to the south to where the River Waycock is located. The site benefits from some screening due to the existing topography and by vegetation from most surrounding roads and properties. The nearest residential property is approximately 130m distant to the existing operational plant.

3.1.7 From the initial designs for the scheme, the submitted proposals have incorporated a number of revisions following further site assessment work. The current proposals have responded to a number of detailed site issues, resulting in revisions to the scheme layout, access and landscaping.

3.1.8 As a result of these design iterations, the scheme proposals have achieved a sustainable, modern and efficient wastewater treatment facility, informed by the findings of the various site studies undertaken, including ecology, hydrology and landscaping, thereby providing a scheme solution that is considered appropriate and acceptable within this area.

Design Proposal

3.1.9 The development proposals for the St Nicholas WwTW site comprise a number of key components, described below and shown on the submitted Site Layout Plan General Arrangement (Drawing Number B10181-OAG964- ZZ-ZZ-DR-TA-PN0295 Rev P01) accompanying the planning application.

3.1.10 The spatial arrangement of the scheme elements are illustrated below:

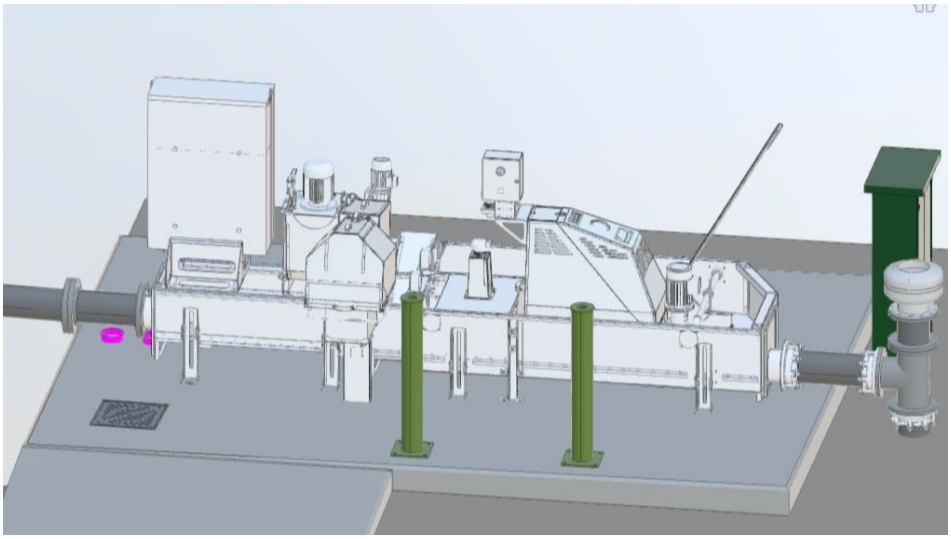
3.1.11 The upgrade works will be located directly adjacent to the existing site area, with security fencing located around both areas. Operational access to the site will continue to be maintained via the existing Brook Lane, with construction access via the temporary construction road from Duffryn Lane to the east of the site. The proposed works are shown on the accompanying suite of application drawings.

Scheme Elements

The new plant will consist of the following components.

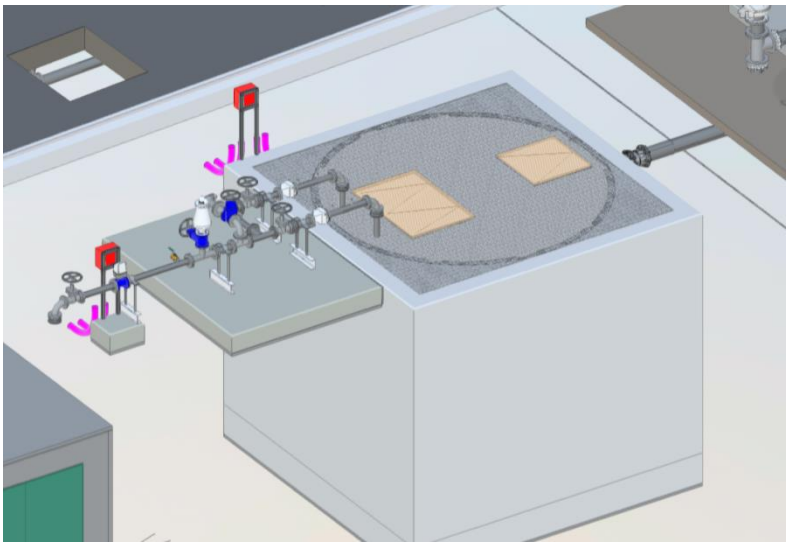
Above Ground Inlet Works and Screen

3.1.12 The flow will enter the stainless steel Haige screen where any solids over 6mm in size will be removed from flow and deposited in a collection bin for removal off site. The proposed equipment for this structure is shown below:



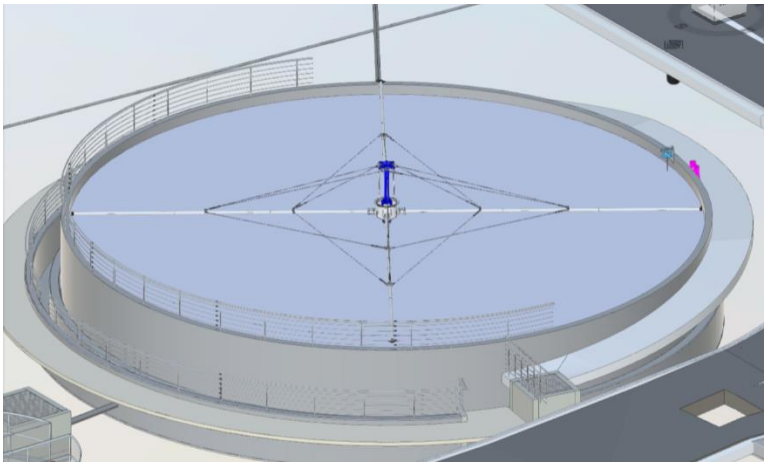
Below Ground Lift Pumping Station

The Pumping Station (PS) will lift flows from the catchment to the existing PST on site. The PS has capacity for 2 hours FFT storage. The proposal is portrayed below:



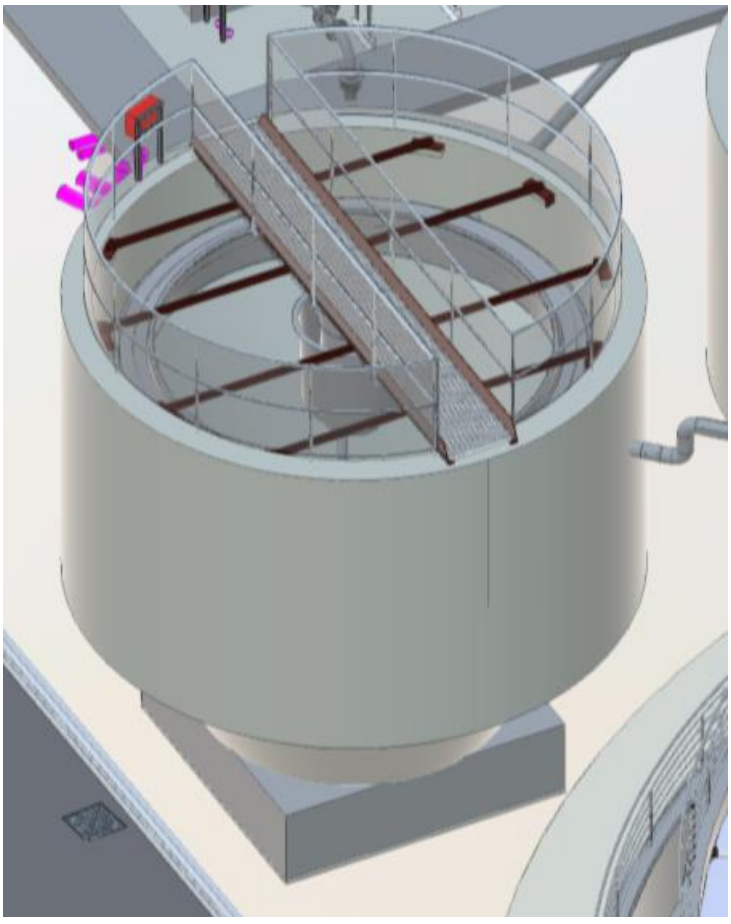
Partially Buried Trickling Filter

3.1.13 Flows are spread across the Trickling Filter via hydraulicly driven rotating arms. The Filter is made from precast concrete panels and the rotating arms are metal. The Filter is shown below:



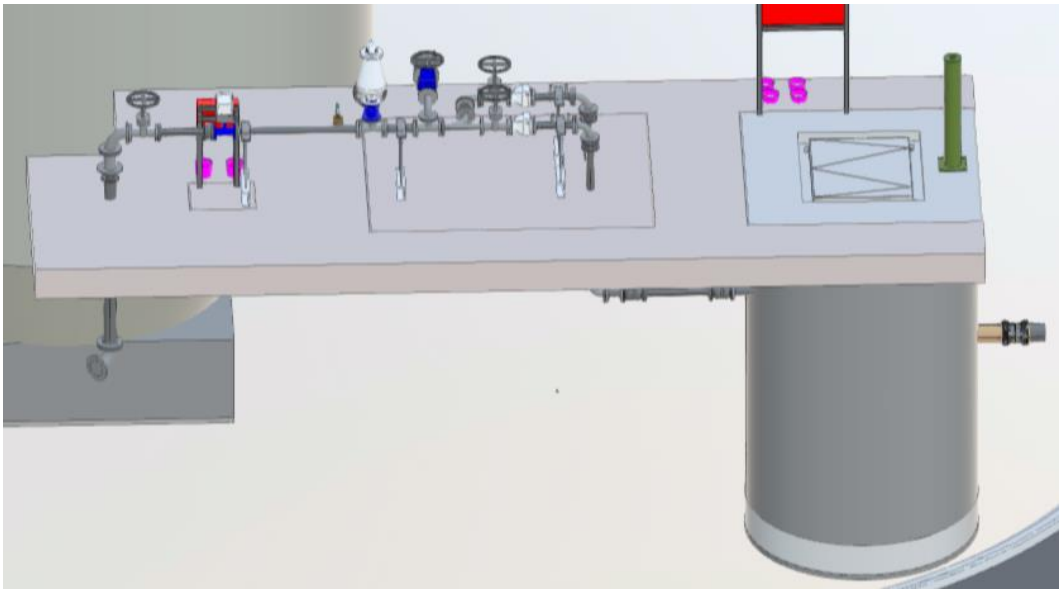
Partially Buried Humus Tanks

3.1.14 The two settlement tanks will be provided within the proposed site confines, with a mass concrete surround. Steel access and railing will be provided along the top at ground level, as depicted below:



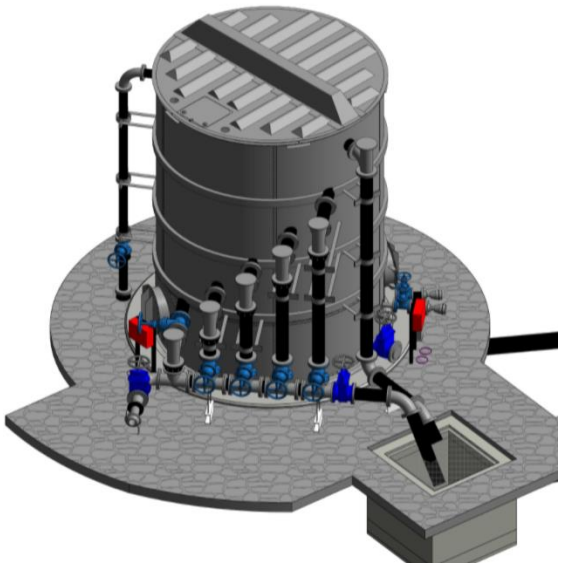
Pumping Stations

3.1.15 A 1.5m diameter, 3m deep PS package unit PS's which will return flows to the head of the works/lift PS as shown below:



Sludge Holding Tank

3.1.16 The Sludge Holding Tank (SHT) will comprise of a green colored, glass fused steel tank to store sludge prior to removal off site by tanker. The SHT is shown below:



Motor Control Centre Kiosk

3.1.17 The Motor Control Centre Kiosk (MCC) will comprise of a green GRP kiosk on metal support legs. The purpose of the MCC is to house control panels for the works. The MCC kiosk is shown below:

Reed Bed

3.1.18 The Reed Bed will consist of two sections to aid maintenance and will be aerated to improve treatment.

3.1.19 All of the proposed equipment is located in the proposed site boundary. No demolition or modifications to the plant on the existing WwTW are required, beyond provision of connections to the new equipment.

3.1.20 The maximum height of the Proposed Scheme above ground level is 4.85m, this is in relation to the sludge holding tank. The motor control centre kiosk will be a maximum of approximately 4m above ground level. The remaining plant will be approximately at ground level or nearing 2m in height.

3.1.21 Flows are to be screened and lifted in the new plant and sent to the existing primary settlement tank at the existing St Nicholas WwTW. Flows will then split between the existing trickling filters and the new filter. Flows will then go through the new plant and discharge to the existing outfall. The flow at the outfall will increase from 2.3 l/s to 3.6 l/s, with the maximum remaining at 16 l/s for storm waters. The quality of the water discharged will improve, new consent proposed for the future growth is 15mg/l:23mg/l:3mg/l (BOD:SS:Ammonia).

3.1.22 During the operational phase, vehicular access would continue to be gained from the A48 via Brook Lane, the access to the new area will be provided from the existing WwTW. No increase in operational traffic, including due to removal of sludge, is anticipated due to the works.

3.1.23 The Proposed Scheme would not involve the use of any hazardous substances in notifiable quantities. The Proposed Scheme will have secure drainage system which will be channeled into the WwTW in order to prevent any spillages of potentially contaminative material being allowed to migrate offsite.

Security Fencing/Lighting

3.1.24 The existing site perimeter fence is to be extended to include the extension area to the east of the Proposed Development site.

3.1.25 No additional lighting is anticipated to be required beyond task lighting provided on the kiosks, which will be switchable and only used as and when maintenance activities are being carried out. This comprises the motor control centre kiosk, final effluent monitoring cabinet and three return pumping stations. Security systems and CCTV will also be installed.

Site Access

3.1.26 The existing site access from the A48 off Brook Lane will continue to be utilised avoiding any works to the public highway, although a temporary construction access will be required to serve the construction site, as the existing site access is of insufficient width along its entire length to accommodate construction traffic. This forms part of the full planning application submission.

Temporary Construction Compound

3.1.27 A temporary construction compound located in the field adjacent to the south of the existing WwTW will provide construction staff welfare facilities including office space, toilet, washing facilities and contractor's car parking.

Design Approach

3.1.28 The structure of this section reflects the contributory elements to good design as set-out in TAN 12 as well as aiming to achieve placemaking sentiments set by PPW. Given the nature of the Proposed Development there is a limit on the extent to which the scheme design is able to fully respond to all aspects of the guidance provided, as set-out below, although each one has been considered in-turn:

- Character.
- Community Safety.
- Environmental Sustainability.
- Access.
- Movement.

3.1.29 The following sub-sections address each of the design elements in turn:

Character

3.1.30 As aforementioned, the development proposals have been finalised in response to site surveys and the various assessments undertaken, along with DCWWs best practice guidance for the development of wastewater treatment works, which has provided a design solution that minimises any potentially negative effects. The design development has had regard throughout to the importance of site context and surrounding character as well as the operational requirements of the Proposed Development.

Amount

3.1.31 The total site area measures approximately 1.8ha in size, of which 0.43ha is for temporary construction works. The extended l plant area is located in the field to the east of the existing works site comprising an area of approximately 0.45 ha. Much of the site extension will remain undeveloped, with landscaping/ecological mitigation being provided in the form of 14 No. trees (including prunus spinosa, Quercus palustris, acer campestre, Crataegus laevigata) to be planted around the perimeter of the site, together with a native hedge mix on the southern border of the site. Further compensation is provided through native planting in the areas to the northeast and south east of the development site. Bird and bat boxes will also be provided along with onsite hibernaculum/habitat piles.

3.1.32 The Proposed Development is not considered to be detrimental to the immediate locality or surrounding landscape due to these chosen design parameters, having regard to the extent of land given over to environmental enhancements and the temporary nature of much of the work.

Layout

3.1.33 The layout of the scheme proposals within the site boundary have made efficient use of the existing land available, including the routing of the internal site access roads to serve proposed structures. Siting and layout are essential considerations in any development, affecting whether the proposals can be successfully integrated into their surroundings. The internal layout of the site has been influenced by the operational requirements of DCWW and the need to address a range of environmental issues associated with the proposal, primarily in relation to visual impacts.

3.1.34 Whilst the location of each of the proposed elements of the scheme has been based on detailed assessment and design considerations, it is acknowledged that an allowance may need to be made for the final siting of the scheme elements (within a range of 20m) in the event of unforeseen ground conditions or other constraints identified during construction.

3.1.35 The layout of the Proposed Development is identified on the Site Layout General Arrangement Plan (Drawing Number B10181-OAG964- ZZ-ZZ-DR-TA-PN0295 Rev P01) submitted in support of the planning application. This shows that most of the main development structures are located to the east of the existing operational site of the WwTW. The siting of the proposed equipment and structures help the development 'fit' naturally within its rural setting in keeping in character with the existing WwTW, recognising that a facility of this nature has an otherwise largely functional form and use.

Scale

3.1.36 The proposed operational structures comprise a number of carefully sited buildings, tanks and kiosks concentrated to the east of the site. Beyond this, the scale of the main structure, namely the proposed Tricking Filter is required to meet the site's operational requirements but is also in keeping with the scale of existing building structures within the WwTW site.

3.1.37 The proposed dimensions of the Trickling Filter are determined by the necessary capacity to meet projected population needs, along with forecast industrial and commercial flow and loads to the WwTW.

3.1.38 The dimensions of each of the proposed structural elements are in keeping with the existing structures on-site, in terms of scale and massing as indicated in *Table 3.1* below.

Table 3-1 - Key Dimensions of Proposed Development Structures

Proposed Structure	Dimensions
Inlet works and Screenings Handling Unit	1.23m (L) x 4.32m (W) x 1.92m (H)
Proposed Ø4000mm Lift Pumping Station Duty/Standby	4m (L) x 4m (W) x 1.65m (H)
Proposed MCC & Kiosk	9.10m (L) x 3m (W) x 4.2m (H)
Proposed Reed Bed Blower & LCP Kiosk	5.4m (L) x 3.4m (W) x 2.25cm (H)
Proposed Aerated Reed Bed	34.11m (L) x 24.11m (W) x 1m (H)
Proposed Liquor Return Pumping Station Duty/Standby	1.5m (L) x 1.5m (W) x 1.6m (H)

Proposed Structure	Dimensions
Proposed 20m³ Sludge Holding Tank	3m (L) x 3m (W) x 4.85m (H)
Proposed Recirculation Pumping Station Duty/Standby	1.5m (L) x 1.5m (W) x 1.55m (H)
Proposed Alkalinity Dosing Kiosk Duty/Standby	8.0m (L) x 3.20m (W) x 2.90 (H)
Proposed HST Desludge Pumps (D/A/S)	5.50m (L) x 4.25(W) x 1.3 (H)
Proposed Humus Settlement Tanks	5.60m (L) x 5.6(W) x 1.9 (H)
Proposed Ø15.5m Trickling Biofilter	15.50m (L) x 15.5(W) x 1.5 (H)
Proposed Washwater Booster Set	2.7m (L) x 1.7m (D) x 2.16m (H)
Proposed Biofilter Distribution Chamber	2.6m (L) x 2.75m (W) x 0.9m (H)
Proposed PST Desludge Pump	3.30m (L) x 1.5m (D) x 1.5m (H)

3.1.39 The site sits within the designated SLA and the landscape proposals in part are required to comply with the designation. Whilst it is accepted that the proposal will be visible from wider viewpoints and is considered to have a localised impact on the character of the countryside as well as the designated SLA. The existing vegetation and proposed planting would serve to strengthen existing landscape characteristics, limit visibility of the Proposed Development, and integrate the proposals with the surrounding landscape and views.

3.1.40 Furthermore, the scale of the Proposed Development has been limited to that which is functionally necessary for the operation of the WwTW. For those elements within the operational area of the site, these will form additional features, viewed against the backdrop of the existing site facilities and will have minimal impact on the surrounding area. Similarly, the scale of development to the east of the operational site is to be viewed, not only within the context of existing structures on site, but within the wider landscape, which will be effectively screened with landscape planting.

Appearance

3.1.41 The design of the component parts of the WwTW has developed through an understanding of the site context, waste management technologies, coupled with DCWW's experience of designing similar facilities elsewhere.

3.1.42 The design principles adopted have therefore followed this approach, providing a purpose-built solution appropriate to this location. The appearance of the proposed structural elements consists of simple functional forms that respond, on the one hand to DCWW's operational requirements, yet through the applied external finishes and the use of sensitive colours that have allowed the buildings and associated structures to blend in with their surroundings, thus reducing their overall impact had on the surrounding countryside and SLA.

3.1.43 The proposed building structures will be constructed of materials in-keeping with the existing structures on site, whilst being sensitive to the local environment and in particular the designated SLA.

3.1.44 The material specifications for the main structural elements therefore use a similar palette of materials, namely a mix of steel cladding, reinforced plastic and concrete. The colour finishes predominantly replicate those used on existing structures within the site, namely Holly Green (14C39/BS4800).

3.1.45 Other design details, namely the external lighting and CCTV have been designed and sited as sensitively as possible to avoid visual intrusion and light spillage. The lighting will be task lighting mounted on the proposed structures and will be manually operated.

Landscaping

3.1.46 The site currently benefits from being screened due to the existing topography and by vegetation planting from surrounding roads and properties. The accompanying Planting Strategy Plan shows those trees marked for removal form a parallel line of scattered trees (mainly hazel and hawthorn), that are the remains of two hedgerows. The trees are being removed to accommodate the proposed development. Surveys have confirmed that these trees have no potential for bat roosts and there has been no evidence of dormouse using this treeline (nor elsewhere within the existing or proposed site).

3.1.47 The proposed landscaping planting strategy provides 14 No. trees (including prunus spinosa, Quercus palustris, acer campestre, Crataegus laevigata) to be planted around the perimeter of the site, together with a native hedge mix on the southern border of the site. Further compensation is provided through native planting in the areas to the northeast and southeast of the development site.

Community Safety

3.1.48 Issues surrounding Community Safety are not applicable in terms of 'secured by design' criteria as there is no public access to the WwTW site.

Environmental Sustainability

3.1.49 The design principles adopted for the scheme have been underpinned by good practice in environmental sustainability. The arrangement of permanent structures on-site has provided an effective and efficient layout occupying an area of some 0.45ha, within a wider application site area of 1.08 hectares (inclusive of the proposed temporary construction access road). Landscaping proposals as highlighted above, incorporating native species will resulting a biodiversity benefit and will assist in reducing the ongoing management responsibility for the newly planted landscape areas.

3.1.50 The proposed biodiversity enhancement includes the provision of bird and bat boxes, along with onsite hibernaculum/habitat piles. The submitted Construction Management Plan will ensure that the River Waycock and SINC, Tinkinswood area of restored ancient woodland, mature trees and hedgerows outside the application boundary will not be impacted by the works, which will include practical pollution prevention control measures, root protection zones and sensitive site clearance.

3.1.51 The proposed landscaping and ecological mitigation play a key role in securing the environmental sustainability of the scheme. These measures will not only enhance the aesthetic appearance of the site but also contribute significantly to the preservation and restoration of natural ecosystems. By incorporating these sustainability principles, the scheme has sought to promote a balanced coexistence between the development needs of the site and its environmental qualities.

4 Access

Traffic and Transport

4.1.1 As stated in the earlier paragraphs, the operational traffic will access the St Nicholas WwTW via the existing site access from the A48, off Brook Lane. This access will provide the only access and egress point for the existing site operators. No further works or upgrades are required to this existing access.

4.1.2 However, owing to the narrow nature of the existing access route, a temporary construction access road will be constructed for use by contractor's vehicles for the duration of the construction period. It will be 815m in length and approximately 4m wide, with passing bays approximately 8m wide to allow construction traffic to pass each other. The temporary construction access road will extend from Duffryn Lane in the east and cross agricultural fields in an approximate west, north-west and south-west orientation where it would adjoin the proposed Scheme.

4.1.3 The temporary construction access road will utilise existing field gateways (4no.). The temporary construction access road will cover an area of 0.33 ha and will be composed of a compacted type 1 granular aggregate on top of a protective geotextile fabric.

Traffic Management

4.1.4 On completion, the Proposed Development will not result in additional operational employees or site deliveries, therefore, there will be no expected increase in the number of cars or vans accessing the site on an operational basis.

4.1.5 Details of the construction traffic and management are set out in the accompanying Construction Traffic Management Plan (CTMP). There are no traffic management measures needed, particularly at the junction of the temporary access road with the public highway owing to the nature of the proposals and adequate visibility splays being achieved.

Movement

Public Rights of Way / Public Access

4.1.6 As aforementioned, the operational site is not open to the members of the public. However, new internal footpaths and vehicular routes within the operational site are provided to allow ease of movement for DCWWs members of staff and ensure accessibility.

4.1.7 Whilst the site is not open to members of the public, the nearest Public Right of Ways (PRoW) are Footpath S11/7/1, S11/7/2 and S11/8/2 located approximately 400m east of the WwTW site, the latter route forms part of the millennium heritage trail. Footpaths S11/7/1 and S11/7/2 are crossed by the temporary construction access road approximately 400m east of the existing WwTW. Gates will be installed at these points where the temporary construction access road crosses the pathways. The section of the ground marked as "Boggy Area" on the accompanying access drawings will have a granular drainage blanket placed underneath it. Since these construction activities are temporary, and measures are already established to ensure the PRoWs remain accessible, there is no need for additional consultations or applications based on these circumstances. Further details are included within the accompanying CTMP on the measures in place. It is anticipated that should planning permission be forthcoming from the LPA, an advisory note will be attached to the planning permission advising the developer / applicant that no obstructions should be in place of the PRoW.

5 Conclusions

5.1.1 This Design and Access Statement supports a full planning application on behalf of DCWW for permission to undertake an expansion and improvement to the existing WwTW on land at St Nicholas.

5.1.2 This Statement has covered the pertinent design and access aspects of this development, offering a comprehensive explanation of how the proposals align with both national and planning design policies.

5.1.3 Regarding design principles, the proposal complies with policy requirements at a local and national level by providing a site layout that meets DCWWs operational requirements and is appropriate to its setting and local character. This layout aligns and has had regard to the prevailing WwTWs land uses and provides betterment to the area by providing additional sewerage capacity in meeting the needs of future generations. Additionally, the proposals include landscaping and biodiversity enhancement, to integrate the development within the surrounding landscape context.

5.1.4 The spatial arrangement of uses within the site is deemed the most efficient utilisation of the space, integrating the development, in terms its scale and appearance within the site through the design principles adopted. It is therefore considered that the proposals will provide a high-quality development to complement the existing facilities at St Nicholas WwTW.

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