

# St Nicholas - Expansion of Wastewater Treatment Works

## Flood Consequences Assessment

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JUNE 2023

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## Flood Consequences Assessment

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Date JUNE 2023

## Version Control

Version	Date	Author	Checker	Reviewer	Approver	Changes
01	02/06/2023	AE	HR	LD	SP	

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# Contents

<b>1</b>	<b>Introduction.....</b>	<b>1</b>
<b>2</b>	<b>Background.....</b>	<b>2</b>
<b>3</b>	<b>TAN15 Development and Flood Risk.....</b>	<b>6</b>
<b>4</b>	<b>Potential Sources of Flooding.....</b>	<b>8</b>
<b>5</b>	<b>Conclusions and Recommendations .....</b>	<b>14</b>
	<b>Appendix A – Scheme Design .....</b>	<b>15</b>

# 1 Introduction

## 1.1 Overview

Arcadis Consulting (UK) Limited (“Arcadis”) has been commissioned by Dŵr Cymru Welsh Water (DCWW) (“the Client”) to undertake a Flood Consequences Assessment (FCA) to support the proposed expansion of St Nicholas Wastewater Treatment Works (WwTW), herein referred to as the ‘proposed development site’.

The Welsh Government Development Advice Map (DAM)<sup>1</sup> indicates that the proposed development site lies within Zone B, described as areas known to have flooded in the past. As such, an FCA is required to review the potential risk of flooding to the site, identify any development constraints and, where applicable, advise on potential flood mitigation measures. The FCA has been undertaken in accordance with Planning Policy Wales (PPW) Technical Advice Note 15 – Development and Flood Risk (TAN15)<sup>2</sup>.

## 1.2 Scope of Works

The scope of works for this FCA is as follows:

- Collect flood data and review alongside development proposals.
- Undertake a desk-based assessment of flood risk at the site from all sources.
- Produce a TAN15 compliant FCA report.

## 1.3 Terminology

Flood risk is a product of both the likelihood and consequences of flooding. Throughout this document, flood events are defined according to their likelihood of occurrence. Floods are described according to an ‘annual chance’, meaning the chance of a particular flood occurring in any one year. This is directly linked to the probability of a flood. For example, a flood with an annual chance of 1 in 100 (a 1 in 100 chance of occurring in any one year), has an annual probability of 1%.

## 1.4 Limitations

This report has been compiled from a number of sources which Arcadis believes to be trustworthy. However, Arcadis is unable to guarantee the accuracy of information provided by others. The report is based on information available at the time of writing. Additional information may become available in the future which may have a bearing on the conclusions of this report and for which Arcadis cannot be held responsible.

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<sup>1</sup> Welsh Government, 2022. TAN 15 Development and Flood Risk – Development Advice Map  
<http://data.wales.gov.uk/apps/floodmapping/>

<sup>2</sup> Welsh Assembly Government, 2004. Planning Policy Wales, Technical Advice Note 15: Development and Flood Risk

## 2 Background

### 2.1 Site Location and Description

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 site boundary is shown in Figure 1 and covers an approximate area of 0.8 hectares (ha). Additionally, a temporary construction compound (hereafter referred to as the 'temporary compound') will be constructed adjacent to the southern boundary of the proposed development site and a temporary access track will be constructed to allow for access to the site from Duffryn Lane.

The A48 runs approximately 1km from the northern boundary of the proposed development site and is connected to the site via Brook Lane that is immediately north of the site. The River Waycock flows west to east approximately 100m south of the proposed development site and an unnamed watercourse flows north to south immediately west of the site, to confluence with the River Waycock.

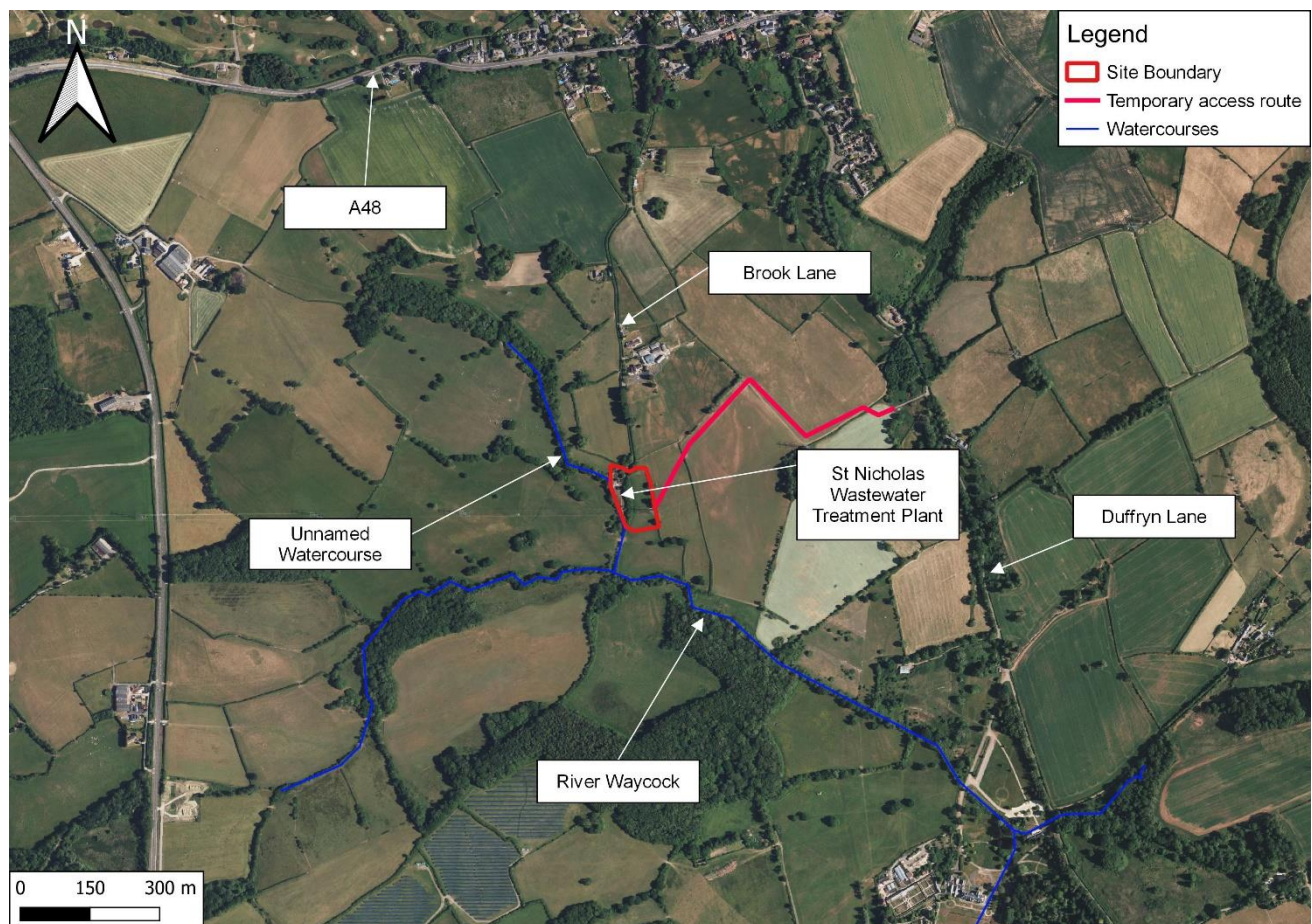


Figure 1: Site Location

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### 2.2 Proposed Development

The development proposals comprise the expansion of the WwTW eastwards into the adjacent agricultural field. New facilities would be constructed at the eastern, western and southern side of the proposed development site. The proposed development facilities include a new treatment works Motor Control Centre (MCC) and kiosk, upgrades to the existing Primary Settlement Tank (PST) and a new aerated reed bed with a



distribution chamber and a blower system. A new concrete road would be laid within the site extension, with the drainage from this road being sent back to the WwTW. Additionally, a new chain link fence would be constructed along the eastern and southern boundary of the proposed development site.

The temporary compound will be created using materials that will be permeable and free draining just south of the proposed development site, providing adequate space for storage of construction materials. The compound will be freely draining, therefore, not increasing the surface water runoff to adjacent land. The location of the temporary compound area can be seen in *Figure 2*.



*Figure 2: Temporary Compound Area*

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A temporary access road, created from compacted fill on a geotextile membrane, is proposed in the east of the proposed development site, providing access to the site from Duffryn Lane..

The temporary access and compound area will be removed when works are complete, after circa 12-15 months.

There are no proposed changes to ground levels across the site or on the land the access road will be constructed on.

Indicative site arrangement plans are shown in Appendix A.

## 2.3 Topography

The topography of the site has been reviewed using available LiDAR data<sup>3</sup> which is limited to 2 meter (m) resolution. An extract of the data is shown in Figure 3 below.

The LiDAR data indicates that ground levels range from 61m to 63m Above Ordnance Datum (AOD) along the western boundary of the site, adjacent to the unnamed watercourse. Ground levels rise towards the north-eastern boundary of the site, with levels reaching approximately 68mAOD.

The prevailing surrounding topography typically rises away from the River Waycock and its floodplain with the site being elevated approximately 2mAOD above the River Waycock. The area of the site where the existing WwTW is situated is typically circa 1mAOD higher than the unnamed watercourse that runs along the sites westerns boundary.

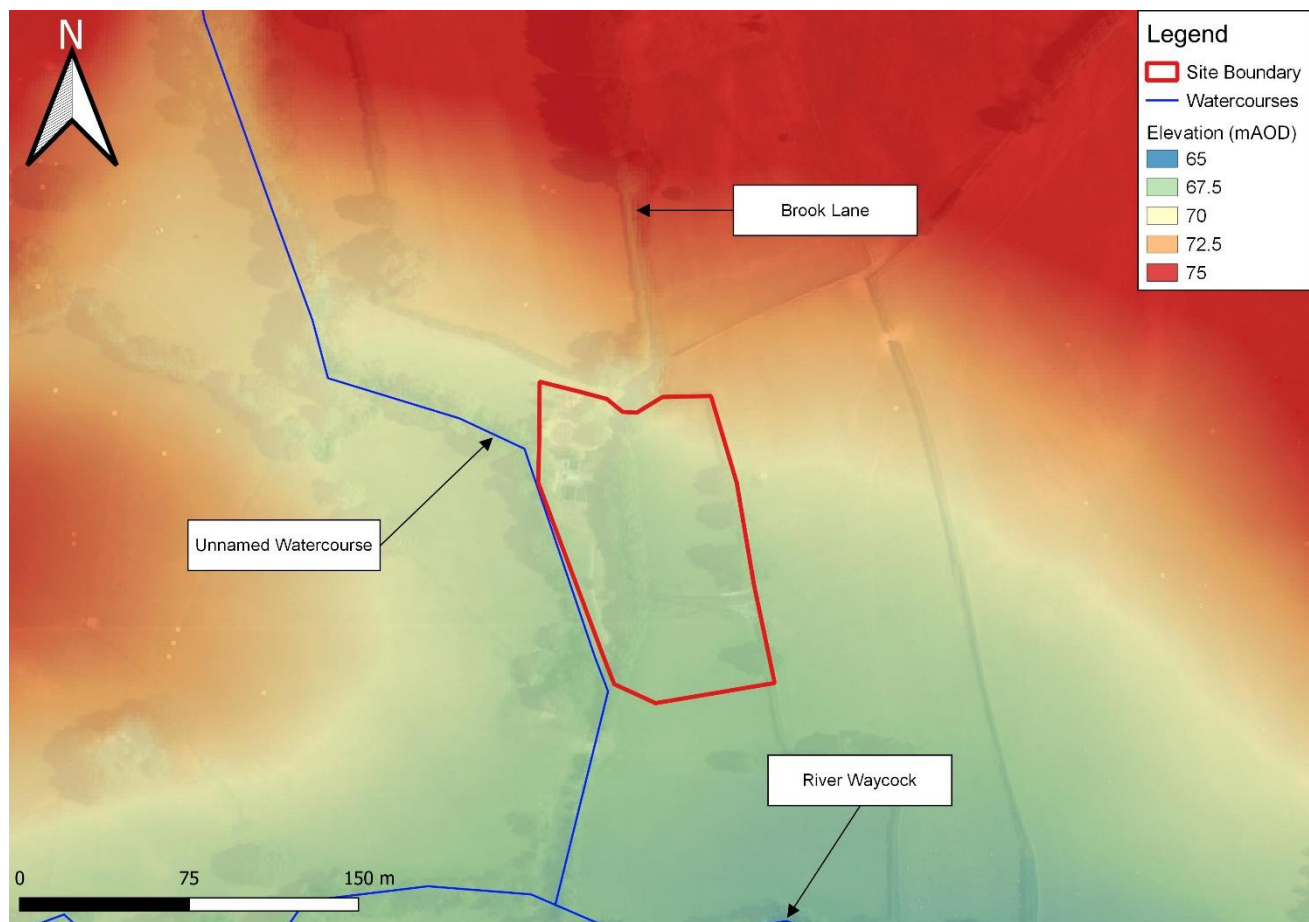


Figure 3: Site surroundings Topography

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## 2.4 Historical Flooding

The NRW Historic Flood Outline, accessed via the Flood Risk Assessment Wales (FRAW) map<sup>4</sup> defines the maximum extent of all recorded individual historical flood event outlines resulting from rivers, the sea and groundwater springs, and shows areas of land that have previously been subject to flooding. There are no

<sup>3</sup> Welsh Government, 2023. LiDAR Composite Dataset <http://lle.gov.wales/Catalogue/Item/LidarCompositeDataset/?lang=en>

<sup>4</sup> Natural Resources Wales. Flood Risk Assessment Wales Map. Accessed online (July 2022) via: <https://naturalresources.wales/flooding/check-your-flood-risk-on-a-map-flood-risk-assessment-wales-map/?lang=en>

historic flood events shown in the vicinity of the proposed development site and no incidents of local historical flooding were reported by NRW in response to the data request submitted to support this FCA.

There were no records of historical flooding in St Nicholas in the Vale of Glamorgan Local Flood Risk Management Strategy<sup>5</sup>, nor the Preliminary Flood Risk Assessment<sup>6</sup>.

## 2.5 Existing Flood Defences

There are no formal flood defences or TAN 15 Defended Zones shown on the FRAW map<sup>5</sup> in the vicinity of the site.

The topographical data (Section 2.3) indicates that the natural high ground located along the banks of the unnamed watercourse running along the western boundary of the site has crest levels ranging from 61mAOD to 63mAOD.

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<sup>5</sup> VoG LFRMS, Available at: [VoGC LFRMS \(valeofglamorgan.gov.uk\)](http://valeofglamorgan.gov.uk)

<sup>6</sup> VoG PFRA, Available at: [PFRA - 08 June 2011 \(valeofglamorgan.gov.uk\)](http://valeofglamorgan.gov.uk)



## 3 TAN15 Development and Flood Risk

### 3.1 General

TAN15 provides guidance to local planning authorities in determining planning applications with regard to flood risk and provides an interpretation of how this guidance applies specifically to a site. It *'provides a framework within which risks arising from both river and coastal flooding and from additional run-off from development in any location can be assessed'*. This *'precautionary framework should be used for both forward planning and development control purposes'*. Its operation is governed by:

- A Development Advice Map (DAM) containing three zones (A, B and C with subdivisions C1 and C2) which should trigger the appropriate planning tests in relation to Sections 6 and 7 and Appendix 1 (TAN15, para 3.2).
- Definitions of vulnerable development and advice on permissible uses in relation to the location of development and the consequences of flooding (TAN15, para 3.2).

The approach is therefore a staged one:

1. Categorisation of site within TAN15 Flood Zones.
2. Application of TAN15 precautionary framework and determination of whether the proposed development is 'justified' in that zone (TAN15 Section 6 Test).
3. Assessment of flooding consequences (TAN15 Section 7 Test and Appendix 1) and production of a Flood Consequences Assessment report.

### 3.2 Categorisation of the Proposed Development Site within TAN15 Flood Zones

An extract of the TAN15 DAM overlain with the proposed development site boundary is shown in Figure 4 below. This mapping indicates that a small proportion of the proposed development is located within Zone A, considered to be at little or no risk of fluvial or coastal/tidal flooding. The southern side of the proposed development site, close to the River Waycock, and the western side of the site, adjacent to the unnamed watercourse, are situated in Zone B i.e., outside of the extreme flood extent (1 in 1000 (0.1%) annual probability flood event) but known to have been flooded in the past, evidenced by sedimentary deposits.

The DAMs are used alongside PPW and TAN15 to direct new development in respect to flood risk. TAN15 states that:

- Zone A - *'Used to indicate that justification test is not applicable and no need to consider flood risk further.'*
- Zone B - *'Used as part of a precautionary approach to indicate where site levels should be checked against the extreme (1 in 1000 (0.1%)) flood level. If site levels are greater than the flood levels used to define adjacent extreme flood outline there is no need to consider flood risk further.'*
- Zone C1 - *'Used to indicate that development can take place subject to application of justification test, including acceptability of consequences.'*
- Zone C2 - *'Used to indicate that only less vulnerable development should be considered subject to application of justification test, including acceptability of consequences. Emergency services and highly vulnerable development should not be considered.'*

The proposed scheme is categorised as 'less vulnerable development' under TAN15 and is therefore considered an appropriate development type for this area.

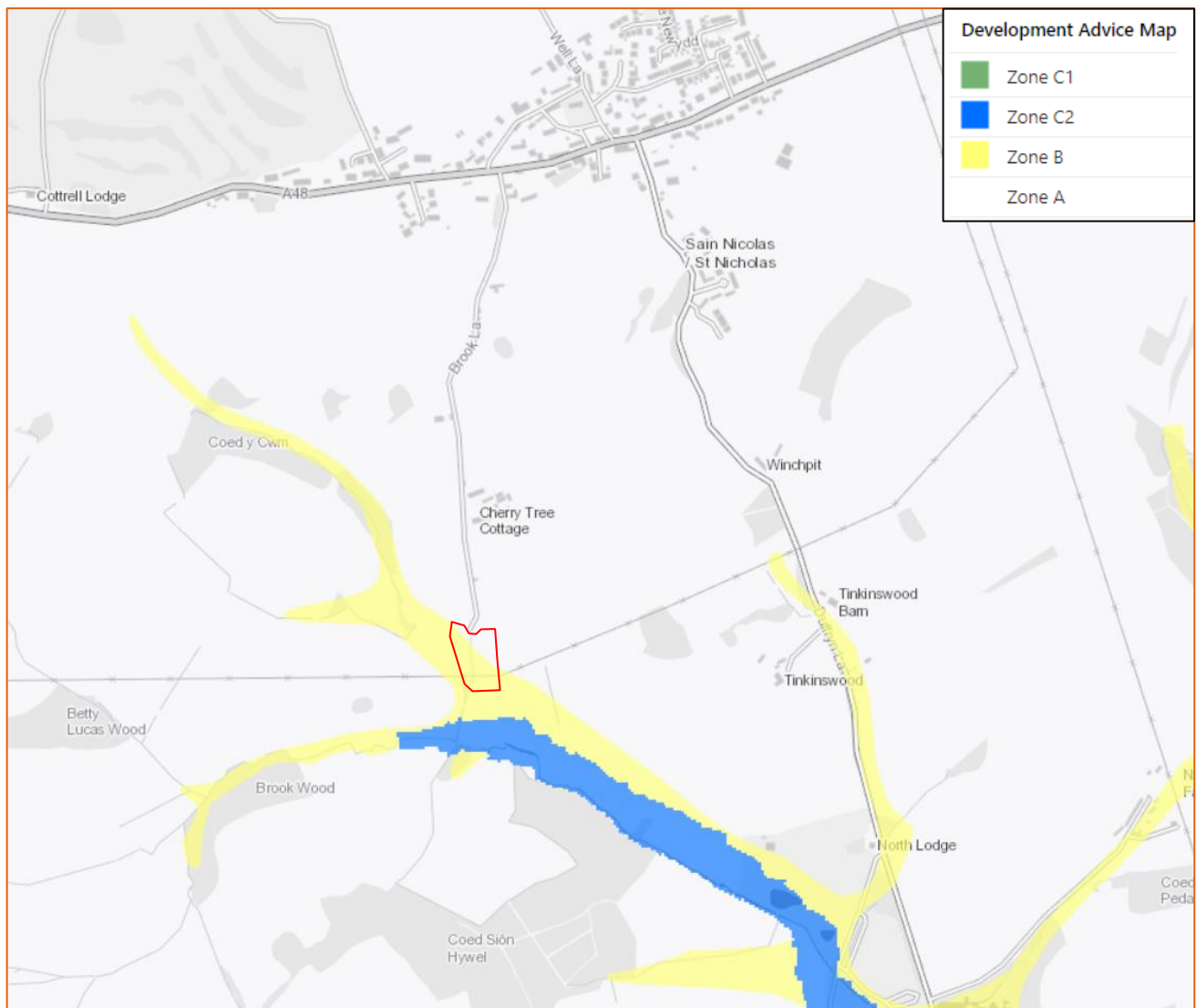


Figure 4: Development Advice Map (Proposed Site Boundary in red)

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The development proposals comprising upgrading the existing WwTW would provide essential infrastructure for water quality improvements. The development proposals would enable the local region to sustain its vital wastewater treatment capacity and accommodate forecasted growth within the catchment, as well provide added value to habitats locally.

### 3.3 Assessment of Flood Consequences

Having established that the development proposals are justified within the flood risk area, the next step is to assess the consequences of flooding. In order to comply with TAN15 guidance, the FCA must demonstrate that the consequences associated with flooding are acceptable and manageable. An assessment of the flood consequences is therefore provided in the following sections.

## 4 Potential Sources of Flooding

### 4.1 Overview

This section considers flood risk from the range of possible sources listed in Table 1.

Table 1: Sources of Flooding

Source of Flooding	Description
Flooding from rivers (fluvial)	Flood water originating from a nearby watercourse when the amount of water exceeds the channel capacity of that watercourse.
Flooding from the sea (tidal)	High tides, storm surges and wave action, often acting in combination, flooding low-lying coastal land.
Flooding from surface water (pluvial)	Flooding caused by intense rainfall exceeding the available infiltration and/or drainage capacity of the ground.
Flooding from groundwater	Flooding caused when groundwater levels rise above ground level following prolonged rainfall.
Flooding from sewers	Flooding originating from surface water, foul or combined drainage systems, typically caused by limited capacity or blockages.
Flooding from reservoirs, canals, and other artificial sources	Failure of infrastructure that retains or transmits water or controls its flow.

### 4.2 Flooding from Rivers

The River Waycock is located approximately 100m south of the proposed development site. Additionally, there is an unnamed watercourse present immediately west of the site, as seen in Figure 1.

The NRW Flood Map for Planning (Rivers)<sup>7</sup> (Figure 5) shows the potential extent of flooding when the potential impact of climate change is included. This map shows that the site is located outside the flood zone 2 and 3 extents with climate change taken into account. At the site the flood extents shown in Figure 5 are not significantly larger than those in the NRW Flood Risk from Rivers Flood Map<sup>8</sup>. Therefore, climate change is unlikely to result in a significant increase in flood risk from rivers over the lifetime of the proposed development.

<sup>7</sup> Flood Map for Planning, Natural Resources Wales, 2022 <https://naturalresources.wales/flooding/flood-map-for-planning-development-advice-map/?lang=en>

<sup>8</sup> NRW Flood Risk from Rivers Map, available at: <https://naturalresources.wales/flooding/flood-map-for-planning-development-advice-map/?lang=en>

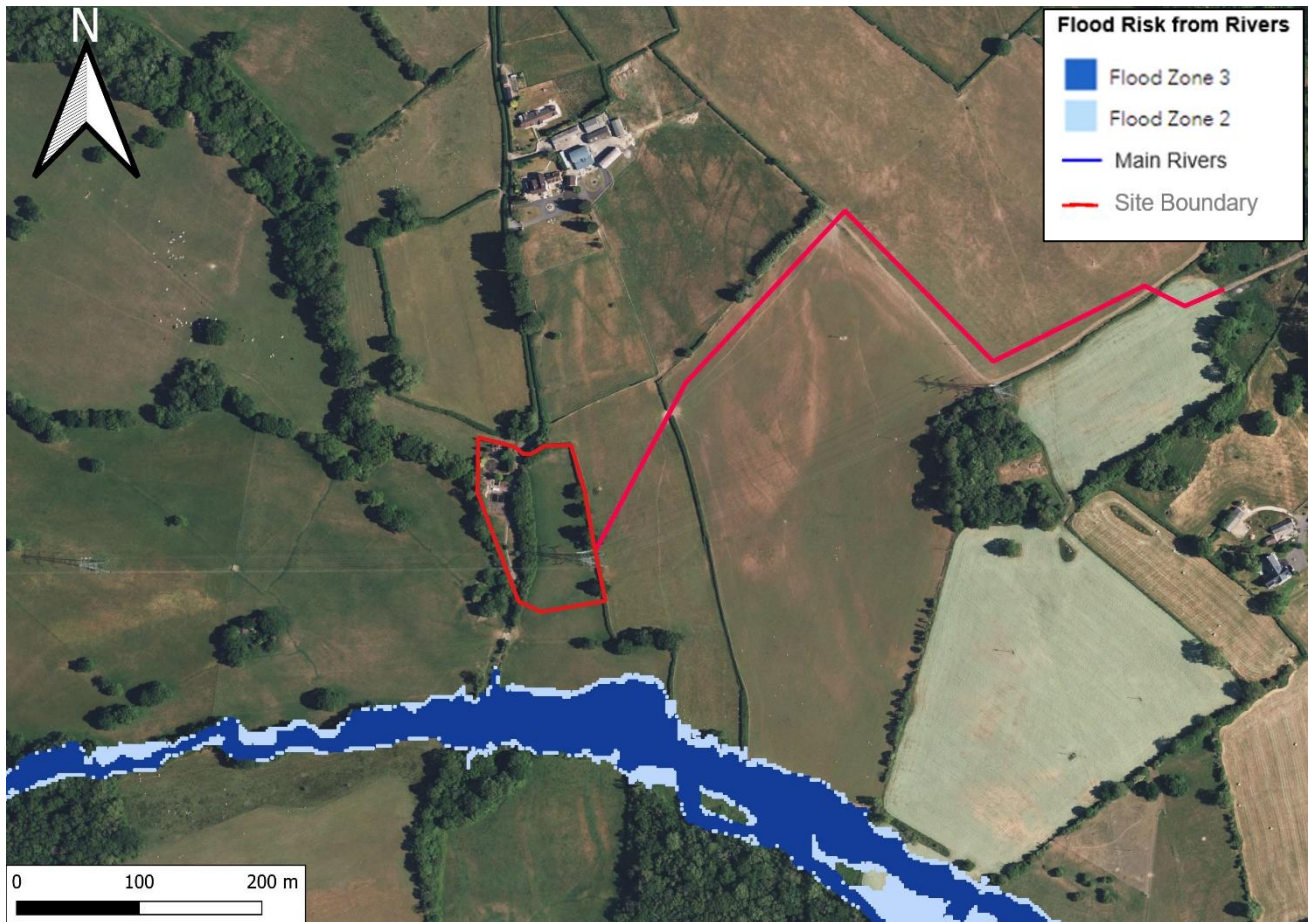


Figure 5: NRW Flood Map for Planning (Rivers) (including effects of climate change over the next century)

Contains Natural Resources Wales information © Natural Resources Wales and/or database right. Contains Map data ©2023 Bing

The flood risk from the unnamed watercourse to the west of the site boundary is not represented in the Flood Map for Planning, nor the NRW Flood Risk from Rivers map. Therefore, the NRW Flood Map for Planning (Surface Water and Small Watercourses), shown in Figure 6, has been used as a proxy to assess the risk from this watercourse.

The map shows that, for the majority of the site, ground levels along the western site boundary are high enough to prevent the site from being flooded from the unnamed watercourse in the 1 in 1000 (0.1%) plus climate change flood event. Additionally, the map shows that the temporary access road is located on land within Flood Zone 1, defined as land having an annual probability of flooding of less than 1 in 1000 (0.1%).

Beyond the site boundary there is a small, localised area adjacent to the western boundary that is located in Flood Zone 2, classified as land having an annual probability of flooding of between 1 in 1000 (0.1%) and 1 in 100 (1%). A small area at the southwestern corner of the site is in Flood Zone 3, defined as land having an annual probability of flooding of between 1 in 100 (1%) and 1 in 30 (3.3%). However, these flooded areas would not impact the proposed development.

**The proposed development is considered to be at a 'low' risk of fluvial flooding.**

## 4.3 Flooding from the Sea

The proposed development site is remote from the coast and the River Waycock is not tidally influenced. The proposed development site is not shown to be at risk of flooding from the sea on the NRW Flood Map for Planning<sup>7</sup>.

**The proposed development site is not at risk of flooding from the sea.**

## 4.4 Flooding from Surface Water

Flooding from surface water is a potential risk during short, intense rainstorm events or longer duration storms, when the capacity of underlying soils and drainage systems is exceeded, and rainfall runs overland to pond in depressions within the landscape.

The NRW Flood Map for Planning - Risk from Surface Water & Small Watercourses map (Figure 6), includes the potential effects of climate change on surface water flood risk. This map shows that the majority of the site is at 'very low' risk of flooding from this source. However, some parts of the site are at a higher risk as detailed below:

- A small surface water flow path located in the middle of the site is within flood zone 2.
- A small part on the easternmost edge of the site is located within flood zone 2.
- A small part on the west side of the site is located within flood zone 2.
- A small part of the southwest side of the site is located within flood zone 3.

The small part of the west side of the site that is located within flood zone 2 is located on top of existing sludge drying beds. The surface water flow path in the middle of the site is located in a ditch. The proposed sample chamber and monitoring cabinet are located within the extents of the surface water flow path. However, the proposed works are only at risk in the extreme (1% to 0.1% AEP) event and it is understood that the proposed works include the raising of the infilling of the ditch leading the realignment of the surface water flow path outside the extents of any existing or proposed infrastructure. The small area to the southwest of the site that is located within flood zone 3 does not contain any existing or proposed infrastructure.

The temporary access route runs through a part of the field located within flood zone 2, additionally, there is a surface water flow path that crosses the small road adjoining the temporary access road and Duffryn Lane, located within flood zone 3.



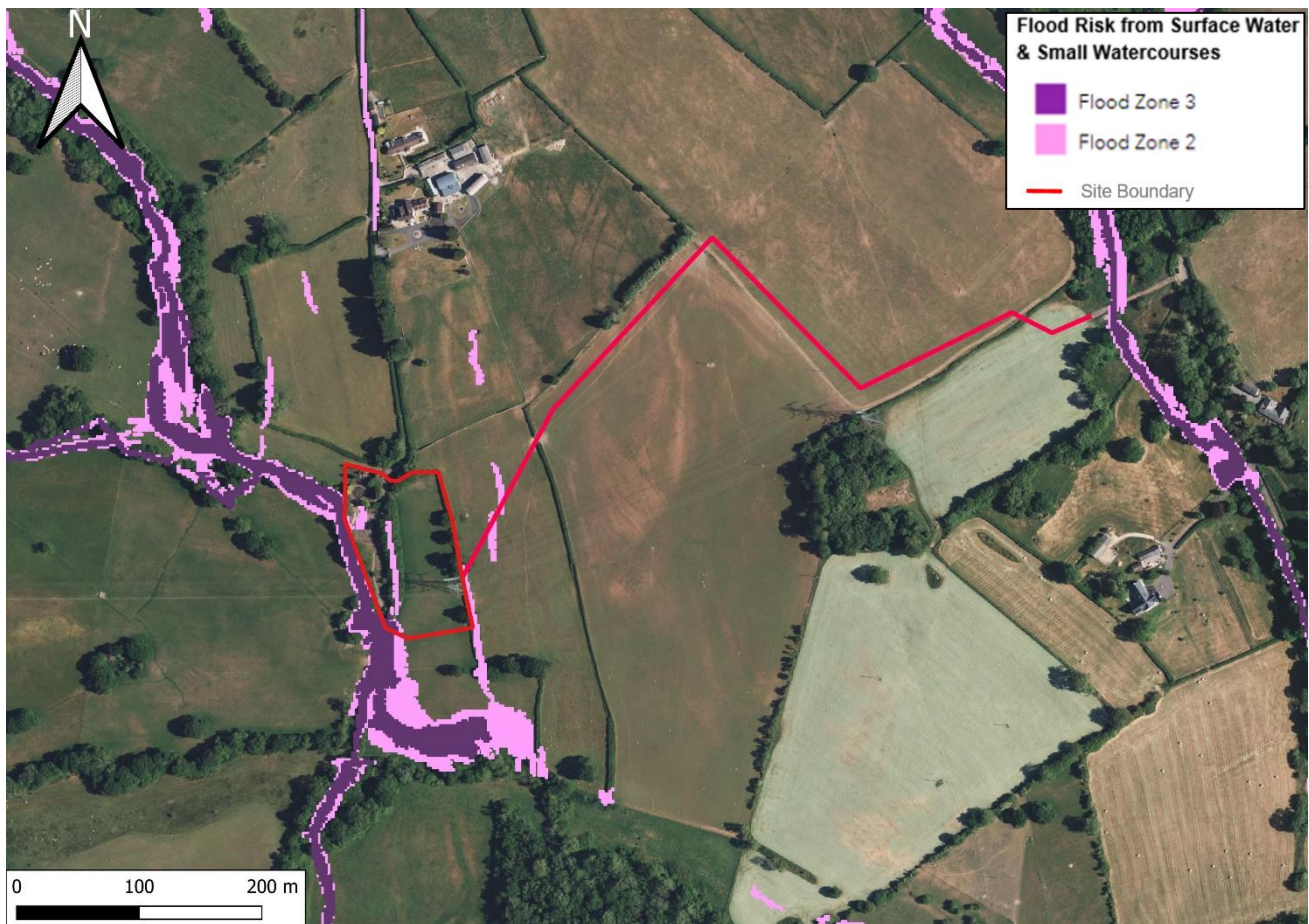


Figure 6: NRW Flood Map for Planning (Surface Water and Small Watercourses)

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The development proposals will increase the impermeable ground coverage on-site which will result in an increase in the rates and volumes of surface water runoff generated from the site. It is understood that surface water drainage from the new development will be captured by the drainage system, including the reed bed, and sent back through the treatment works via the return pumping station. It is understood that further details of the drainage strategy, which is currently under development, will be provided to the SuDS Approving Body (SAB).

**The proposed development site is at 'low' risk of flooding from surface water and a drainage strategy is being developed in order to ensure the proposed development will not increase flood risk to third parties.**

## 4.5 Flooding from Groundwater

Groundwater flooding occurs when groundwater rises to the ground surface. This may happen during winter and/or after prolonged or heavy rainstorms. There are generally two forms of groundwater flooding (i) 'clearwater flooding' associated with the water table rising to the surface in areas of permeable bedrock geology such as chalk; and (ii) 'river-groundwater interaction' where river levels interact with permeable superficial deposits within river valleys, flooding areas far from the river without necessarily overtopping raised riverbanks.

British Geological Survey (BGS) online mapping<sup>9</sup>, indicates that the bedrock geology underlying the site comprises of Mercia formation (Mudstone group), with the south-western half of the site overlain by superficial deposits of Alluvium (Clay, Silt, Sand and Gravel). The DEFRA Magic Map<sup>10</sup> characterises the bedrock geology as 'Principal' aquifer. BGS defines principal aquifers as geology that exhibits high permeability and/or provide a high level of water storage. Principal aquifers may support water abstraction and/or river base flow on a strategic scale. Given the nature of Principal aquifers, groundwater is anticipated to be present within the bedrock underlying the site, with an associated risk of 'clearwater flooding'.

Groundwater flooding is also possible by 'river-groundwater interaction' given the presence of superficial deposits and the proximity to the River Waycock and its tributary. However, groundwater levels would be expected to be in continuity with the river levels in the unnamed watercourse and, as such, are considered unlikely to reach levels that would result in inundation of the majority of the proposed development site.

Groundwater flooding would be unlikely to result in any significant depth of ponded floodwater given that the topography of the site slopes downwards towards the River Waycock.

There were no records of groundwater flooding in St Nicholas in the LFRMS, nor the PFRA.

**Based on available information, the proposed development site is considered to be at low risk of groundwater flooding.**

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<sup>9</sup> British Geological Survey, 2022. Geology of Britain Viewer. <http://mapapps.bgs.ac.uk/geologyofbritain/home.html>

<sup>10</sup> DEFRA, Magic Map. [Magic Map Application \(defra.gov.uk\)](https://magicmap.defra.gov.uk/)

## 4.6 Flooding from Sewers

Flooding from sewers can result from lack of sewer capacity, blockages within the sewer network or failure of infrastructure such as pumps. Any area that benefits from sewerage infrastructure has a potential risk of flooding, but the likelihood and consequences are most likely increased by topographic constraints such as low spots or flow paths that could influence the behaviour of floodwater originating from sewers.

The site is rural, slopes down towards the River Waycock and is not identified as being at risk of or having historically flooded due to sewer overloading within the LFRMS.

The low exposure of the development area to surface water flooding on the NRW Risk of Flooding from Surface Water Map (**Error! Reference source not found.**Figure 6), suggests the site is reasonably well protected from flooding from sewers occurring elsewhere in the local area. Therefore, this form of flooding is not considered to pose an onerous risk to the site in the context of the proposed development.

**Based on available information, the proposed development is considered to be at low risk of flooding from sewers.**

## 4.7 Flooding from Reservoirs, Canals and other Artificial Sources

The NRW Risk of Flooding from Reservoirs map<sup>11</sup> provides a general indication of areas that could be flooded if a large reservoir were to fail and release the water it holds. The Flooding from Reservoirs map indicates that the proposed development site is situated outside the extents of reservoir flooding.

No other artificial features which could pose a risk to the site, such as lakes, ponds and canals, have been identified within the vicinity of the site.

**The risk of flooding to the proposed development from artificial sources is negligible.**

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<sup>11</sup> Flood Risk Assessment Wales Map - Reservoirs, Natural Resources Wales, 2022 <http://data.wales.gov.uk/apps/floodmapping/>

## 5 Conclusions and Recommendations

### 5.1 Conclusions

This FCA has been prepared to inform the proposed Expansion Scheme at the existing St Nicholas WwTW. The following is concluded:

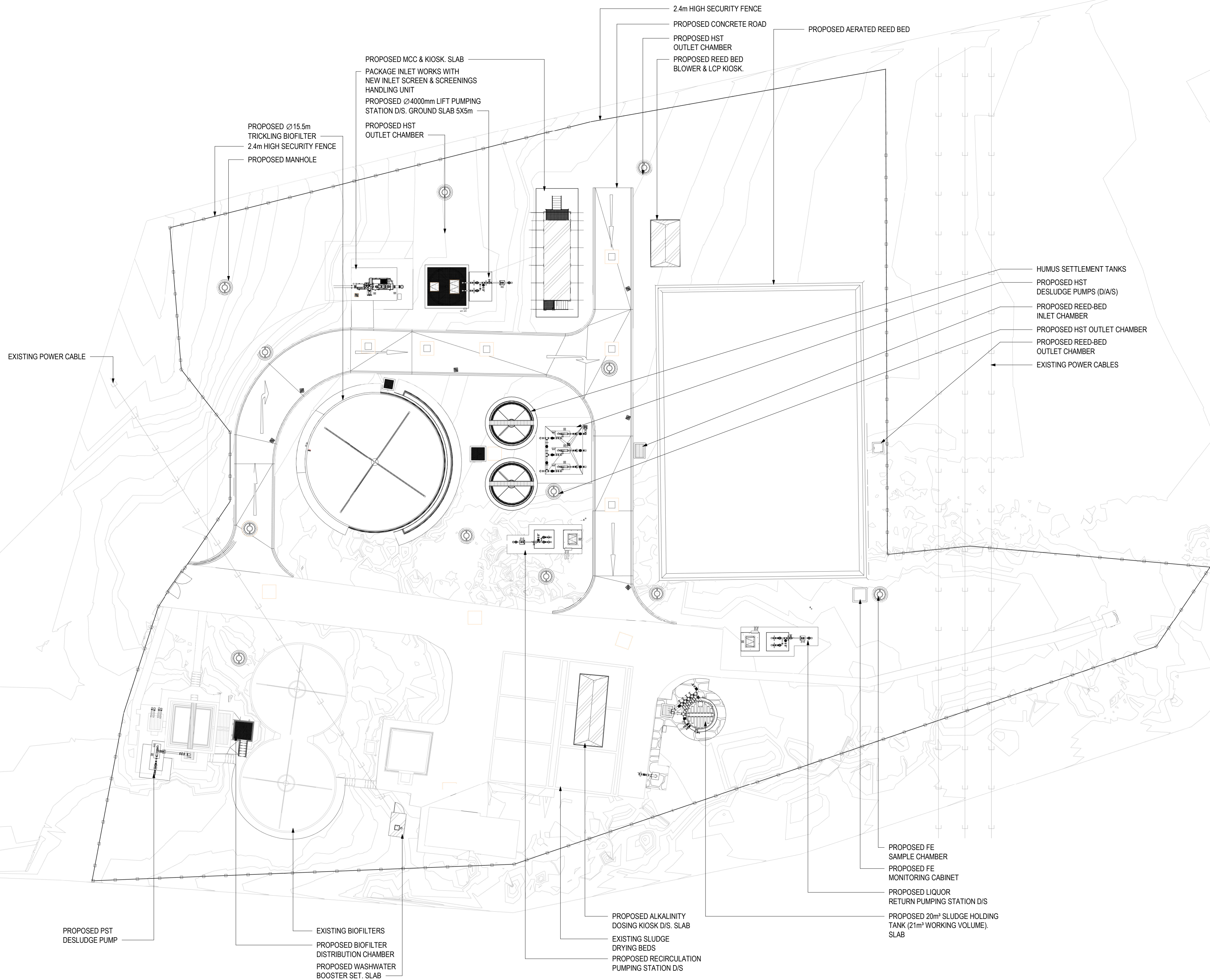
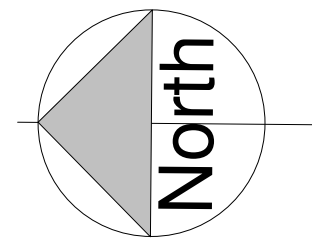
- The TAN15 DAM indicates that the site is located within Flood Zone B (areas known to have flooded in the past).
- Small areas of the site are predicted to be at risk of fluvial flooding, however, the areas affected do not contain any proposed or existing infrastructure.
- Small areas of the site are predicted to be at risk of surface water flooding, however, it is understood that no existing or proposed works will be located within the extents of surface water flooding once the proposed works are completed.
- The temporary access road crosses a small area in a field which has been identified to be at risk of surface water flooding, and the small road adjoining the temporary access road and Duffryn Lane follows a surface water flow path that is predicted to be at risk of flooding.
- The proposed development would result in a small increase in impermeable land cover which could lead to an increase in surface water runoff. However, It is understood that a drainage strategy is currently being developed in consultation with the SAB.
- The proposed development is considered to be at low risk of flooding from all other sources (the sea, groundwater, sewers and artificial sources).
- This FCA has demonstrated that, subject to implementation of the recommendations below, flood risk to the proposed site would be acceptable and the development would not increase third party flood risk.

### 5.2 Recommendations

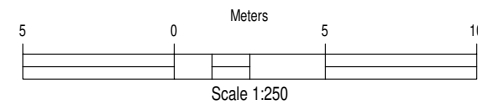
- It is recommended that vulnerable infrastructure / machinery within the kiosk in the west and southwest of the proposed development site is elevated above ground level to provide flood resilience.

## **Appendix A – Scheme Design**






PLAN VIEW



- NOTES:**
- DO NOT SCALE FROM THIS DRAWING USE FIGURED DIMENSIONS ONLY.
  - ALL DIMENSIONS IN MILLIMETRES AND LEVELS IN METRES ABOVE ORDNANCE DATUM (NEWLYN) UNLESS NOTED OTHERWISE.
  - ALL COORDINATES IN RELATION TO OS NATIONAL GRID.
  - ALL EXPOSED CONCRETE TO HAVE A 25x25mm CHAMFER.
  - FORMATION UNSUITABLE MATERIAL ABOVE AND AT FORMATION TO BE REMOVED. FORMATION TO BE PREPARED AND INSPECTED FOR SOFT SPOTS AND SUITABILITY TO ACT AS THE FORMATION TO THE FINAL EFFLUENT PUMPING STATION. SOFT SPOTS AND ANY ORGANIC MATERIAL IS TO BE EXCAVATED AND BACKFILLED WITH AN APPROVED ENGINEERING FILL. ENGINEERING FILL IS TO BE WELL COMPACTED. SMALL SOFT SPOTS ARE TO BE BACKFILLED IN CONCRETE.
  - CONCRETE SPECIFICATION**
    - DESIGN STRENGTH CLASS = C32/40
    - MIN CEMENT CONTENT = 340kg/m³
    - MAX WATER/CEMENT RATIO = 0.50
    - CEMENT TYPE/CONTENT = 18-V, 70% CEMENT/30% PFA OR IIIA (50% CEMENT/50% GGBS)
    - AGGREGATE SIZE = 20mm
    - BLINDING CONCRETE = C16/20
    - BLINDING THICKNESS = 50mm
  - ANY REPLACEMENT WELL DRAINED MATERIAL THAT'S NON-SUSCEPTIBLE TO FROST AND PROTECTED FROM SILT INGRESS NEEDS TO BE A CLEAN GRANULAR MATERIAL WHICH IS SURROUNDED (BASE AND SIDES) BY A GEOTEXTILE TO STOP FINES INGRESS INTO THE GRANULAR MATERIAL. THE GRANULAR MATERIAL NEEDS TO BE STRUCTURAL FILL, 6N OR SUITABLE ALTERNATIVE, IN ACCORDANCE WITH UK SPECIFICATION FOR HIGHWAY WORK. THE GEOTEXTILE SEPARATOR IS TO BE TERRAM T1000 OR SIMILAR.

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION	
IN ADDITION TO THE HAZARDS / RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, NOTE THE FOLLOWING.	
CONSTRUCTION	
11	CONTACT WITH SEWAGE
21	CONFINED SPACE WORKING
31	ASBESTOS - POSSIBLE PRESENCE OF ASBESTOS
41	WORKING ON OR IN CLOSE PROXIMITY TO EXISTING SERVICES AND PLANT
51	FALL FROM HEIGHT
61	PRESSURISED PIPEWORK
71	WORKING ADJACENT TO EXISTING STRUCTURES/SERVICES
81	ECOLOGY - BATS
91	CONTACT WITH CHEMICALS
MAINTENANCE / CLEANING / OPERATION	
1	NO RESIDUAL RISKS IDENTIFIED
DECOMMISSIONING / DEMOLITION	
1	NO RESIDUAL RISKS IDENTIFIED
REFER TO THE DESIGN RISK REGISTER FOR FURTHER DETAILS. IT IS ASSUMED THAT ALL THE WORKS ON THIS DRAWING WILL BE CARRIED OUT BY A COMPETENT CONTRACTOR WHO HAS CARRIED OUT A COMPREHENSIVE RISK ASSESSMENT.	

P01	02.06.2023	KM	ISSUED FOR INFORMATION		DO	SP	02.06.2023
Rev.	Date.	Drawn.	Description.		Chkd.	Appd.	Date.
<div><div><div>Capital Delivery Alliance</div><div>Cynghrair Cyflawni Cyfalaf</div></div><div>Ty Awen, Spooner Close, Coed Kernew, Newport, NP108FZ</div></div>							
Project Name: St. Nicholas WwTW							
Drawing Title: GENERAL ARRANGMENT PLAN							
Suitability: ISSUED FOR INFORMATION						Suitability Code: S2	
Originator: KM		Designer: DO			Date: 02.06.2023		
Internal Project Number: 10048098		Scale: As indicated			Rev. P01		
Drawing Number: B10181-OAG964-ZZ-ZZ-M3-JB-DI0189							



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