Water Framework Directive Assessment – St Cuthbert Development, New Outfall structure and supporting Marine License.

Austin Partnership Consulting Engineers have provided a Water Framework Directive (WFD) assessment as part of a Marine License application required by Natural Resources Wales (NRW)

A WFD assessment helps the developer and NRW understand:

- the impact your activity may have on the immediate water body and any linked water bodies
- whether your activity complies with the river basin management plan (RBMP)

The WFD assessment will show if the activity will:

- cause or contribute to deterioration of status
- jeopardise the water body achieving good status

This specific assessment considers the impacts to the Water Framework Directive objectives from the new outfall structure and during the method of construction. There are no specific targeted objective for this part of the catchments other than those points listed above.

The WFD assessment is looked at in 3 stages.

- screening – excludes any activities that do not need to go through the scoping or impact assessment stages
- scoping – identifies the receptors that are potentially at risk from your activity and need impact assessment
- impact assessment – considers the potential impacts of your activity, identifies ways to avoid or minimise impacts, and shows if your activity may cause deterioration or jeopardise the water body achieving good status

Stage 1 - The assessment has not screened out the activities as it does not fall within the definitions set out in GOV.UK guidance

Stage 2 – Scoping Water Framework Directive assessment: Activities in estuarine and coastal waters

This template records the findings of the scoping stage of your Water Framework Directive (WFD) assessment for an activity in an estuary or coastal water. This activity was not screened out as part of the first stage of the assessment

- This is for work that is adjacent to a single water body

The WFD assessment guidance for estuarine and coastal waters was used to help complete the table

Your activity	Description, notes or more information
Applicant name	Mr Simon Lewis - United Welsh Housing Association
Application reference number (where applicable)	*n/a*
Name of activity	New Outfall structure for St Cuthbert's Development
Brief description of activity	New outfall structure to discharge surface water from new minor development. Discharge is clean rainfall run off through an adopted Sustainable drainage scheme compromising of attenuation storage into a new 150mm storm pipe
Location of activity (central point XY coordinates or national grid reference)	The new spill way headwall is situated at the top of Clarence embankment NGR: ST185745 Post code: CF10 5GS
Footprint of activity (ha)	Outfall structure <0.1 hectare
Timings of activity (including start and finish dates)	July – August 2020
Extent of activity (for example size, scale frequency, expected volumes of output or discharge)	This is a small headwall profiled into the existing engineered river bank which comprises largely of earth embankment and blockstone revetment with overgrown brambles. The discharge is clean treated surface water that will only discharge in times of heavy rainfall.

Use or release of chemicals (state which ones)	None

Water body[1]	**Description, notes or more information**
WFD water body name	Taff - conf Rhondda R to Castle Street
Water body ID	GB530905415401 / GB109057027270 (Wales Water Body Objectives updated 2017). Same waterbody has different ID on two datasources.
River basin district name	Severn
Water body type (estuarine or coastal)	Estuarine – Although this is a controlled waterbody in Cardiff bay
Water body total area (ha)	unknown
Overall water body status (2015)	Moderate
Ecological status	Moderate
Chemical status	Fail
Target water body status and deadline	Good by 2027
Hydromorphology status of water body	Heavily modified
Heavily modified water body and for what use	Heavily modified for River engineering works, flood protection
Higher sensitivity habitats present	N/A – But Saltmarsh within 1000 m
Lower sensitivity habitats present	N/A
Phytoplankton status	N/A
History of harmful algae	N/A
WFD protected areas within 2km	N/A – Severn Estuary is a SAC just outside this boundary

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Section 1: Hydromorphology

Consider if hydromorphology is at risk from your activity.

Use the water body summary table to find out the hydromorphology status of the water body, if it is classed as heavily modified and for what use.

Consider if your activity:	Yes	No	Hydromorphology risk issue(s)
Could impact on the hydromorphology (for example morphology or tidal patterns) of a water body at high status	Requires impact assessment	**Impact assessment not required**	N/A
Could significantly impact the hydromorphology of any water body	Requires impact assessment	**Impact assessment not required**	N/A
Is in a water body that is heavily modified for the same use as your activity	Requires impact assessment	**Impact assessment not required**	Engineered embankment. Outfall structure is not part the flood alleviation scheme so a slightly different use. Approval to create outfall structure adjacent to flood block-stone approved by NRW

Section 2: Biology

Habitats

Consider if habitats are at risk from your activity.

Use the water body summary table and Magic maps, or other sources of information if available, to find the location and size of these habitats.

Higher sensitivity habitats [2]	Lower sensitivity habitats [3]
chalk reef	cobbles, gravel and shingle
clam, cockle and oyster beds	intertidal soft sediments like sand and mud
intertidal seagrass	rocky shore
maerl	subtidal boulder fields
mussel beds, including blue and horse mussel	subtidal rocky reef
polychaete reef	subtidal soft sediments like sand and mud
saltmarsh	
subtidal kelp beds	
subtidal seagrass	

[2] *Higher sensitivity habitats have a low resistance to, and recovery rate, from human pressures.*

[3] *Lower sensitivity habitats have a medium to high resistance to, and recovery rate from, human pressures.*

Consider if the footprint[4] of your activity is:	Yes	No	Biology habitats risk issue(s)
0.5km^2 or larger	Yes to one or more – requires impact assessment	**No to all – impact assessment not required**	WFD higher sensitivity habitat (saltmarsh) between 500-1000m form where new head wall is proposed
1% or more of the water body's area			
Within 500m of any higher sensitivity habitat			
1% or more of any lower sensitivity habitat			

Fish

Consider if fish are at risk from your activity, but only if your activity is in an estuary or could affect fish in or entering an estuary.

Consider if your activity:	Yes	No	Biology fish risk issue(s)
Is in an estuary and could affect fish in the estuary, outside the estuary but could delay or prevent fish entering it or could affect fish migrating through the estuary	**Continue with questions**	Go to next section	No in river works or construction methods that involve piling or vibration tools. Work will take place from the highway at the top of the river bank and outfall structure will be dropped in-situ with pre-cast structure.
Could impact on normal fish behaviour like movement, migration or spawning (for example creating a physical barrier, noise, chemical change or a change in depth or flow)	Requires impact assessment	**Impact assessment not required**	N/A
Could cause entrainment or impingement of fish	Requires impact assessment	**Impact assessment not required**	N/A

Record the findings for biology habitats and fish and go to section 3: water quality.

Section 3: Water quality

Consider if water quality is at risk from your activity.

Use the water body summary table to find information on phytoplankton status and harmful algae.

Consider if your activity:	Yes	No	Water quality risk issue(s)
Could affect water clarity, temperature, salinity, oxygen levels, nutrients or microbial patterns continuously for longer than a spring neap tidal cycle (about 14 days)	Requires impact assessment	**Impact assessment not required**	Only clean water discharge after treatment within sustainable drainage scheme. Discharge not continuous and only after heavy rainfall events.
Is in a water body with a phytoplankton status of moderate, poor or bad	Requires impact assessment	**Impact assessment not required**	**N/A**
Is in a water body with a history of harmful algae	Requires impact assessment	**Impact assessment not required**	**N/A**

Consider if water quality is at risk from your activity through the use, release or disturbance of chemicals.

If your activity uses or releases chemicals (for example through sediment disturbance or building works) consider if:	Yes	No	Water quality risk issue(s)
The chemicals are on the Environmental Quality Standards Directive (EQSD) list	Requires impact assessment	**Impact assessment not required**	The new outfall structure will discharge clean surface water only. During the construction phase pollution prevention controls in place to ensure that there is no accidental release of chemicals (e.g. fuel) into the watercourse.

It disturbs sediment with contaminants above Cefas Action Level 1	Requires impact assessment	**Impact assessment not required**	**N/A**

If your activity has a mixing zone (like a discharge pipeline or outfall) consider if:	Yes	No	Water quality risk issue(s)
The chemicals released are on the Environmental Quality Standards Directive (EQSD) list	Requires impact assessment[5]	**Impact assessment not required**	Surface water discharge of residential and roof drainage. Pollution hazard index in CIRIA guidance C753 describes these as low. The Suds scheme for this development as a bio-retention scheme and raingarden to control general sedimentation control and accidental spills within the car parking area.

Section 4: WFD protected areas

Consider if WFD protected areas are at risk from your activity. These include:

- special areas of conservation (SAC)
- special protection areas (SPA)
- shellfish waters
- bathing waters
- nutrient sensitive areas

Use Magic maps to find information on the location of protected areas in your water body (and adjacent water bodies) within 2km of your activity.

Consider if your activity is:	Yes	No	Protected areas risk issue(s)
Within 2km of any WFD protected area[6]	Requires impact assessment	**Impact assessment not required**	Severn Estuary is a SAC just outside this boundary

Section 5: Invasive non-native species (INNS)

Consider if there is a risk your activity could introduce or spread INNS using the Wales INNS portal.

Risks of introducing or spreading INNS include:

- materials or equipment that have come from, had use in or travelled through other water bodies
- activities that help spread existing INNS, either within the immediate water body or other water bodies

Consider if your activity could:	Yes	No	INNS risk issue(s)
Introduce or spread INNS	Requires impact assessment	**Impact assessment not required**	Only INNS identified at this location *Branta canadensis* (Linnaeus, 1758) | Canada Goose. There is no risk of the activity spreading these with immediate or other waterbodies. Plant and machinery used at this site must be control checked, cleaned before and after leaving site (Bio-security), so not to bring in any other INNS

Record the findings for INNS and go to the summary section.

Summary

Summarise the results of scoping here.

Receptor	Potential risk to receptor?	Note the risk issue(s) for impact assessment
Hydromorphology	No	
Biology: habitats	Yes	Only receptor just over 500m away from site (saltmarsh). The activity will not impact upon this site.
Biology: fish	No	
Water quality	No	

Protected areas	No	
Invasive non-native species	No	Managed risk.

Stage 3 – Impact Assessment

The scoping stage indicates that an impact assessment is not required but the following recommendations are given.

- During construction, the works must be non-intrusive the watercourse. The current method of works from the contractors show that this work will not take place within the watercourse. In addition, pollution prevention best practice must be followed to ensure the control of any contaminants (e.g. fuel), so are not accidently discharged into the watercourse.
- The main receptor of interest to the WFD assessment is the presence of high priority habitat in the saltmarsh. There will not be an impact to this area through the construction phase or as a result if the final structure.