

An Roinn Tithíochta, Pleanála agus Rialtais Áitiúil Department of Housing, Planning and Local Government For Office Use

Ref. No.\_\_\_\_\_

Application date:\_\_\_\_\_

Date of receipt.

Date Validated:

#### APPLICATION FOR A LEASE/LICENCE/CONSENT UNDER THE FORESHORE ACT 1933 (AS AMENDED)

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#### **Applicant Name and Address:**

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#### Applicant's Legal Advisor:

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# Part 1: Proposal Details (Attach additional documents as required)

1	1 Description of proposed works/activity.		
	The overall proposed Arklow Wastewater Treatment Plant Project (proposed development) will comprise a new Wastewater Treatment Plant (WwTP), associated infrastructure including the interceptor sewer network and marine outfalls as well as an upgrade to the existing coastal revetment. There are currently no wastewater treatment facilities in Arklow town. As a result, untreated wastewater is being discharged directly into the Avoca River. To rectify this problem and to facilitate future development in the town, which is currently constrained by the lack of adequate wastewater treatment, the proposed development is being advanced by Irish Water.		
The overall proposed development will comprise the following elements:			
	<ul> <li>A new wastewater treatment plant (WwTP) of 36,000 population equivalent (PE) and associated infrastructure for the WwTP including an inlet pumping station, a storm water storage tank, treatment, sludge thickening and dewatering facilities, a pump sump and tank to discharge excess stormwater flows as well as site administration facilities and associated landscaping (all located at the Old Wallboard site at Ferrybank);</li> <li>Interceptor sewers along River Walk, North Quay, South Quay and under the Avoca River (including associated manholes and vent stacks) that will tie in with the existing wastewater collection network and bring the untreated wastewater to the WwTP;</li> <li>A stormwater overflow (SWO) and stormwater storage tank to the west of River Walk on a vacant site referred to as 'the Alps';</li> <li>A SWO to discharge excess stormwater flows to the Irish Sea;</li> <li>A long sea outfall pipe (approximately 955m in length) to discharge the treated effluent to the Irish Sea;</li> <li>An upgrade to the existing revetment on the coastal side of the Old Wallboard site at Ferrybank; and</li> <li>All associated and ancillary development works comprising or relating to permanent and temporary construction and excavation, abandonment of short sections of existing sewers (and infilling with concrete), site boundaries and landscape reinstatement works as well as all ancillary connections to electricity, telecommunications and water supply networks and site drainage.</li> </ul>		
	The proposed development is likely to be procured by means of a Design and Build type contract, with the contractor responsible for the detailed design and construction.		
	The proposed development will be located in the townlands of Arklow, Tinahask Lower and Ferrybank in Co. Wicklow.		
	Elements of the overall proposed development will be undertaken within the foreshore and require appropriate consents under the Foreshore Acts, as amended.		
	The following elements of the scheme will take place within the foreshore:		
	<ul> <li>Use of existing outfall at the Alps site, for the discharge of excess stormwater flows from the proposed Alps Storm Water Overflow (SWO) to the Avoca River;</li> </ul>		

	<ul> <li>Underpinning works at Arklow Bridge (a protected structure: RPS A26);</li> <li>Land reclamation and pipelaying works in the Avoca River to construct the interceptor sewer and sheet pile walls (that would support the proposed Arklow Flood Relief Scheme);</li> <li>Tuppelling works for the interceptor sewer under the Avoca River from the several several</li></ul>
	<ul> <li>Turnening works for the interceptor sewer under the Avoca River nom the South to the North Quays;</li> <li>The laying of a long sea outfall from the WwTP into the Irish Sea;</li> </ul>
	The construction works for the proposed development will also require temporary working areas to accommodate the required infrastructure within the foreshore.
	The construction of the Storm Water Overflow (SWO) at the WwTP site and the upgrading of the existing revetment at the WwTP site will be undertaken within the intertidal area.
	Ancillary works in connection with the removal or abandonment of existing outfall pipes to the Avoca River may also require works within the foreshore.
	Please see the enclosed EIAR and AA documentation for a more detailed description of the proposed development.
	The proposed revetment upgrade and SWO at the WwTP will not be within the foreshore but are located within the current tidal zone.
	Further information on the proposed development is included in Chapters 4 and 5 of the accompanying EIAR (Volume 2, Book 1 of 3 in <b>Appendix G</b> herein). Relevant drawings showing the location and layout of the proposed development, as well as details of the works to be undertaken within the foreshore and intertidal areas are provided in <b>Appendix C</b> .
1.2	Describe the nature and scale of any structure to be erected on the foreshore. Is the structure proposed to be temporary or permanent?
	A detailed description of the overall proposed development is provided in Chapter 4 of the accompanying EIAR (Volume 2, Book 1 of 3, in Appendix G herein), with details of the proposed construction strategy provided in Chapter 5 of the EIAR.
	A description of the key aspects of the works within the foreshore and intertidal area, including any structures to be erected, is provided below. Further detail is provided in the EIAR ( <b>Appendix G</b> ) and the drawings accompanying this application ( <b>Appendix C</b> )
	<ol> <li>Use of the existing outfall at the Alps site, for the discharge of excess stormwater flows from the proposed Alps Storm Water Overflow (SWO) to the Avoca River</li> </ol>
	The existing SWO, located in the north-east corner of the Alps, will be upgraded and associated site works undertaken to link with the existing network and provide stormwater storage at this location.
	As part of these works, the proposed overflow pipework from the new SWO will be connected (via a new c. 900 mm diameter pipeline) to the existing 1200 mm diameter sewer, (manhole MHA4) and existing box culvert which discharges to the Avoca River. No permanent works will be undertaken within the foreshore, but a temporary works area is required for the construction phase.

Further, during operation of the proposed development, during significant rainfall events, where storm flows exceed the tank storage capacity, excess flows will spill via the SWO to the Avoca River (entering the river channel via the existing culvert). These spills will be screened through a static upward flow screen to ensure particles of more than 6 mm in diameter are retained within the stormwater storage tank. The stormwater level within the tank and the number of overflow spills to the river will be monitored via a control kiosk within the Alps site. The design ensures that the SWO will limit spills to the river to no more than seven times per bathing season in accordance with the requirements of the Wastewater Discharge (Authorisation) Regulations 2007, as amended, and the relevant guidance.
Further details in respect of these works are provided in Section 4.3.2 and Section 5.6.2 of the EIAR ( <b>Appendix G</b> ) and in the drawings ( <b>Appendix C</b> ).
2) Land reclamation and pipelaying works in the Avoca River to construct the interceptor sewer and sheet pile walls (that would support the proposed Arklow Flood Relief Scheme)
The interceptor sewers will be laid on the south side of the Avoca River, from River Walk, along South Quay. Immediately upstream of Arklow Bridge (protected structure: RPS A26), on River Walk, the proposed interceptor sewer will enter the Avoca River (i.e. will be within the river channel) and will pass under the most southerly arch of Arklow Bridge. It should be noted that significant land constraints and the presence of a range of existing utilities, services and infrastructure at the southern end of Arklow Bridge mean that the interceptor sewer cannot be accommodated on the landside portion of this area. The pipeline will be approximately 2m below river bed in this area and will be protected with mass concrete and the riverbed will be reinstated to its current condition upon completion of construction.
A small area of land (approximately 40 m <sup>2</sup> ) on River Walk (i.e. upstream of Arklow Bridge around MHS9) will be reclaimed from the river channel to accommodate the proposed manhole and sewer. At this location, the quay wall will be moved further north, by approximately 4 m, into the river channel.
The sewer will exit the river channel approximately 15 m downstream of Arklow Bridge and connect to MHS10. An area of approximately 1,650 m <sup>2</sup> on South Quay (downstream from MHS10) will be reclaimed from the river channel. At this location, the quay wall will be moved further north, by approximately 6 m, into the river channel over a distance of approximately 275 m.
Sheet piling will be installed outside the area of reclaimed land and the sewer will be laid within the section of reclaimed land. This permanent sheet piling will be capable of accommodating the flood defence walls proposed as part of the proposed Arklow Flood Relief Scheme (see Section 2.6.7 of the EIAR for further detail on the Arklow Flood Relief Scheme). The sheet pile walls will be capped to match the existing road level of South Quay whilst the reclaimed land will be brought up to ground level (approximately 1.25 m AOD) with suitable material, topsoil and seeded. A cross-section of the sewer in this area is provided below:



The underpinning and lowering of the floor of the bridge is likely to entail the following activities:
<ul> <li>Grouting each of the piers and the abutments of Arklow Bridge and the river bed to a depth of up to 2m below the piers and abutments, including drilling of holes to accommodate the grouting from the bridge deck, in order to stabilise the bridge and its formation during the underpinning works (see detail provided in Section 5.6.3.5 of the EIAR and Figure 1 below);</li> </ul>
<ul> <li>Construction of a temporary causeway from the river bank to provide access to each of the piers and abutments; Creation of a bund around each pier or group of piers to allow works to be carried out in a dry environment;</li> </ul>
<ul> <li>Removal of existing formation in a phased manner from the underside of each pier and abutment to a depth of approximately 1.6m below existing bed level and replacement with concrete (see detail provided in Section 5.6.3.5 of the EIAR and Figure 2 below); OR</li> </ul>
<ul> <li>Construction of mini-piles around each pier to support the pier foundation (see detail provided in Section 5.6.3.5 of the EIAR and Figure 3 below); OR</li> </ul>
<ul> <li>Construction of piles through the piers and abutments from the bridge deck to support the bridge during the underpinning works (see detail provided in Section 5.6.3.5 of the EIAR and Figure 4 below);</li> </ul>
<ul> <li>Demolition of the existing concrete scour protection slabs and lowering of the floor of the bridge by approximately 1m on average (It should be noted that the floor of the second arch will be lowered by approximately 1.2m); and</li> </ul>
<ul> <li>Construction of a new concrete scour protection slab between approximately 10m upstream to approximately 15m downstream of the bridge and beneath the arches of the bridge and the placement of riprap along the upstream and downstream edges of the concrete slab.</li> </ul>
The figures below illustrate the three options being considered:





#### Tunnelling works for the interceptor sewer under the Avoca River from the South to the North Quays

At South Green, the proposed interceptor sewer will cross under the Avoca River. The river crossing will be approximately 1500 mm diameter pipeline tunnelled c. 4 m beneath the river bed for approximately 120 m between the South Quay-Harbour Road junction (on the southern side of the river) and Mill Road (on the northern side of the river). A tunnel shaft will be provided to the north and south of the river channel (TSS3 and TSN6 respectively).

Given current knowledge, it is believed that the existing sheet pile quay walls on the northern and southern sides of the river channel are approximately 12m long and supported by a series of tie back anchors that extend into the landside and possibly connect to either anchor blocks or a historical quay wall (Refer to Figure 5 below). Construction of the river crossing will therefore require cutting through the toe of the existing sheet pile quay walls. It is considered that a rectangular sheet pile cofferdam would be the most likely solution for tunnel shafts in these areas given the existing infrastructure constraints. Section 5.6.3.6 of the EIAR provides more detail on the likely construction methodology.



Figure 5: Indicative layout of existing infrastructure at river crossing

A SWO will be provided in the easternmost tunnel shaft on South Quay (TSS3). This SWO will provide emergency relief for excess storm flows in the sewered catchment and during extended power outages at the proposed WwTP. Hydraulic modelling has been undertaken and the results of spill frequency analysis indicates that the proposed SWO will spill on average less than once per bathing season, which is well below the permitted 7 spills per bathing season that is documented in the guidance and the Wastewater Discharge Authorisation Regulations, 2007, as amended. An approximately 1200 mm diameter pipeline will be installed from the tunnel shaft through the existing river sheet pile wall. The SWO will have a flap valve to prevent water ingress. All spills through the SWO will be screened to ensure that all particles greater than 10 mm are retained by the screen.

As well as the permanent works within the river channel, temporary works areas will also be required within the foreshore to accommodate the construction of the sewers, as indicated on the drawings accompanying this application (**Appendix C**).

#### 5) Construction works for the Storm Water Overflow (SWO) and the upgraded revetment at the WwTP site

A storm water overflow (SWO) will be constructed within the inter-tidal area (but not within the foreshore) at the wastewater treatment plant site (Old Wallboard site at Ferrybank). This SWO will provide emergency relief for excess storm flows in the sewered catchment during extreme rainfall events and during extended power outages at the WwTP. All storm flows through this SWO will be screened. Pumps will lift the excess storm flows (exceeding the capacity of the WwTP and the stormwater holding tanks) to a chamber which will allow discharge under gravity, discharging through the toe of the upgraded revetment to the Irish Sea, above the foreshore, but within the inter-tidal area.

As per the other proposed SWO's, the design has ensured that the SWO will spill no more than 7 times per bathing season in accordance with the guidance and the Wastewater Discharge Authorisation Regulations, 2007, as amended.

The SWO will likely comprise concrete material. It will have an internal diameter of approximately 2000mm. A precast culvert concrete structure will be installed through the revetment to accommodate the SWO pipeline. Flows through the SWO will discharge below Mean Low Water Spring levels. The SWO pipeline will be fitted with a non-return value. A temporary sheetpile cofferdam will be constructed within the area of the existing revetment to facilitate the excavation and construction of the SWO.

Further details are provided in Section 4.3.4.4 and Section 5.6.3.2 of the EIAR (**Appendix G**) and in the drawings accompanying this application (**Appendix C**).

The existing rock armour revetment adjoining the site (eastern boundary) will also be upgraded as part of the proposed development. These works will also be undertaken within the inter-tidal area (but not within the foreshore). The existing rock armour will be removed and subsequently replaced over a distance of approximately 360 m along the coastal side of the WwTP site boundary, as illustrated on the relevant drawings in **Appendix C.** The existing rock armour will be removed from crest to toe using excavators.

The alignment of the revetment will follow the existing shoreline on its northern and southern ends. The curve of the central part of the existing revetment will be slightly softened to provide additional space between the proposed Inlet Works building and the revetment.

There is an existing cable (owned by GE Energy) that runs under the existing revetment. The proposed development will encroach within the existing 50 m cable buffer zone for this cable, however, as agreed with GE, a 10 m buffer zone around the cable would be adhered to and thus the proposed development would not extend within this zone.

The revetment would consist of a double layer of rock armour of approximately 6 – 10 tonnes (T) on an underlayer of approximately 0.3 to 1 T. The thickness of the armour layer and underlayer will be approximately 2.9 m and approximately 1.3 m respectively.

The revetment will be finished at approximately 7.5 mOD (i.e. approximately 1 to 3 m above the level of the existing revetment crest) with a crest width of approximately 9 – 10 m. Construction of the upgraded revetment will be carried out from toe to crest by using suitable excavators located on the WwTP site. A schematic summary of the construction of the revetment is provided in Figure 6. Existing Building Existing New Existing Building New Existing Building Figure 6: Envisaged procedure for the removal and subsequent replacement of the rock revetment Fill material will be placed to form the foundation and new slope profile of the revetment. Once the foundation and slope profile has been formed, the geotextile layers will be spread along the slope and both layers of the rock armour will be laid on top of this. The armour layers and underlayer will be approximately 2.9m and 1.3m respectively and the toe of the revetment be buried underneath the level of the existing beach. The total width of the upgraded revetment at its base will be approximately 50 m (including the toe of the revetment that is to be buried under the seabed), however this will be subject to local minor variations due to changes in ground and seabed levels. Fill material will form the foundation of the revetment and a geotextile layer will be placed between the underlayer and the fill material to provide an adequate interface. Further details are provided in Section 4.3.6 and Section 5.6.6 of the EIAR (Appendix G) and the drawings accompanying this application (Appendix **C**). 6) Construction works to construct the long sea outfall in the Irish Sea A long sea outfall is proposed to discharge treated effluent from the WwTP to the Irish Sea. The long sea outfall (located to the south of the WwTP site) will be approximately 955m in length (i.e. approximately 900m from shoreline) and will likely comprise high density polyethene (HDPE). It will

have an internal diameter of approximately 630mm.

The specimen design provides for up to approximately 6 elastomeric variable orifice check valves as part of a subsurface diffuser located at the end of the long sea outfall. The riser valves would be vertical, therefore aiding the dispersion of treated effluent in the water column. Each diffuser will be equipped with a non-return flex valve and marker buoys would be provided to mark the location of the end of the outfalls therefore ensuring that boats are aware of their presence.
Flow through the long sea outfall will be via gravity and sufficient capacity will be provided to allow for high velocity pumped flush, therefore avoiding any blockages in the outfall during continuous periods of low rainfall.
An investigation of the impact of discharges from the proposed treated effluent outfall and SWO at the WwTP on coastal water quality has been undertaken (see Chapter 15 and Appendix 15.2 of the EIAR – <b>Appendix G</b> herein). An assessment of impacts on coastal processes was also undertaken (see Chapter 15 and Appendix 15.5 of the EIAR). This assessment has concluded that there will be no significant effect on coastal water quality or on coastal processes, as a result of the construction or operation of the long sea outfall. The EPA will consent the required Waste Water Discharge Authorisation for the proposed scheme and will stipulate the discharge standards required for the treated effluent. An application for this consent will be submitted to the EPA.
A 100m wide pipe corridor (i.e. 50m either side of the long sea outfall) is included in the consent application, to allow flexibility for construction activities required within this corridor.
There are several methods by which the long sea outfall can be constructed and the contractor's methodology will ultimately depend on their available plant and equipment as well as their previous experience with laying marine outfalls. The contractor is responsible for determining which method is most appropriate.
The likely methods to construct the long sea outfall are presented below, based on current practice and site constraints/characteristics. These are:
<ul> <li>Horizontal directional drilling method;</li> <li>Flood and float method; and</li> <li>Bottom-pull method.</li> </ul>
Construction of the outfall will include works from both the land and sea. It is expected that several vessels may be required during the construction of the outfall and that diving support is likely to be required at times.
Once the long sea outfall has been laid, the diffuser would be assembled at the seaward end of the outfall. The diffuser arrangement would include up to 6 diffusers of approximately 0.16m diameter at an approximate spacing of 10m intervals.
The diffuser would be prefabricated on land and placed on the seabed by barge as one complete unit. The exact procedure and depths of backfill required would depend on the equipment available from the contractor along with programme and cost considerations, however it is anticipated that this would be undertaken from the barges.

In response to a submission by the Development Applications Unit of the Department of Arts, Heritage and the Gaeltacht (NPWS) on the planning application, operational conditions with regard to vessel operations during construction were considered.

It is understood that a maximum wave height of 0.5m is a typical operational condition for dredging operations in coastal waters. Met Eireann provides 7-day wave height forecasts for coastal and offshore waters. Wave heights are forecast in the following height bands:

Wave height forecast band	Wave height	Characteristics
	0 metres	Calm (glassy)
	0 to 0.1 metres	Calm (rippled)
0-1.25m	0.1 to 0.5 metres	Smooth (wavelets)
	0.5 to 1.25 metres	Slight
1.25 to 2.5 metres	1.25 to 2.5 metres	Moderate
2.5 to 4 metres	2.5 to 4 metres	Rough
4 to 6 metres	4 to 6 metres	Very rough
6 to 9 metres	6 to 9 metres	High
9 to 14 metres	9 to 14 metres	Very high
Over 14 metres	Over 14 metres	Phenomenal

As a result, Irish Water proposes that a limit, applicable throughout the year, whereby construction activity would be suspended during periods when wave heights are forecast by Met Eireann to exceed 1.25m, with construction activity permitted to resume 48 hours after forecast wave height has fallen below 1.25m.

To ensure against potential long term effect from scour on the seabed, suitable protection of the pipeline is required. A concrete mattress layer up to approximately 300mm thickness is proposed and would be finished at existing bed level so as to avoid any scour problems once operational.

Further details are provided in Section 4.3.5 and Section 5.6.5.1 of the EIAR (**Appendix G**) and the drawings accompanying this application (**Appendix C**).

## 7) Ancillary works in connection with the removal or abandonment of existing outfall pipes to the Avoca River

Along South Quay, connections will be required between the existing wastewater network and the proposed interceptor sewer network (via the spur pipelines as described in Section 4.2.3 of the EIAR). The existing manholes on the wastewater network will be used as connection points insofar as possible however, a number of new manholes (i.e. MHS2A, MHS3A and MHS4A) and associated spur pipelines will be constructed using open cut techniques to link the existing sewers to the proposed interceptor sewer. If invert levels dictate, some of the additional manholes will be backdrop manholes (i.e. there may be a significant difference in the invert level of the existing and proposed sewers). A similar methodology will be adopted along North Quay. However, where connections are required between the existing wastewater network and the proposed interceptor sewer in between tunnel shafts (e.g. MHN2A and MHN3), the contractor will typically construct additional manholes directly over the proposed interceptor sewer, rather than off-line. These connection manholes will be installed sequentially using open cut techniques.

The existing wastewater network pipes that are redundant will typically be pumped with concrete to form a plug at either end of the line.

None of these works are envisaged to be within the foreshore.

## **1.3** Indicative timing of the works/activity: (i) Start date (ii) Duration (iii) Any other information relevant to timing.

An indicative outline programme for the overall development was included with the EIAR in Appendix 5.2 (**Appendix G**). Works are likely to commence following the issuing of all relevant statutory consents. The construction of the proposed development is estimated at between 3.5 and 4 years, based on the reasonable worst case assessed herein. The programme is divided into two main elements:

- Construction of the interceptor sewer pipe network; and
- Works associated with the WwTP and surrounding site.

Section 5.3 of the EIAR (**Appendix G**) provides further detail on the indicative duration and phasing of the works. Drawings indicating the phasing and sequencing are also included in Volume 3 of the EIAR (**Appendix G**).

	Use	
	Industrial	
	Commercial	
	Within Fishery Harbour Centre	
	Sea Fisheries	
	Local Authority	
	Community/Co Op scheme	
	Other(specify)	X
	Vallboard site in Ferrybank, where the wastewater treatment Vallboard site in Ferrybank, where the wastewater will brior to discharge through a long sea outfall. Excess st lischarged during extreme storm events, through a nu- overflows (SWOs) to the Avoca River and Irish Sea. An evetment alongside the proposed wastewater treatment andertaken. All works are being done by Irish Water. For the accompanying EIAR ( <b>Appendix G</b> herein).	t plant at the Old be appropriately treate ormwater will also be mber of storm water upgrade to the coastal nt plant site will also be further details are provid
T V a	The works provide infrastructure for the collection, treat vastewater from Arklow town. Use will therefore be re-	atment and discharge of stricted to IW and its
F	light the proposed works restrict public use/enj Provide details.	oyment of the foresho
T t f	There will likely be restrictions on access to certain par he construction of the proposed development, but the During operation, the works will not restrict public acce oreshore, save that detailed below.	ts of the foreshore durin se will be temporary. ess/enjoyment of the
I v c F t	t was deemed that the height of the existing revetment was not adequate to provide the required protection to lear that the revetment was not in good condition, has previous storm events. It was therefore considered need he height of the revetment, in the vicinity of the WwT	nt at the WwTP boundar the WwTP and it was al ving been damaged by cessary to rebuild and ra P site.
I	nitially, the provision of a walkway along the crest of to onsidered as an opportunity to provide community ga levelopment. During the design development however valkway was omitted for health and safety consideration	the revetment was in as part of the propose , the provision of this ons. This decision was

	As outlined in the EIAR (Section 4.4), Irish Water recognises the importance of ensuring that the development and operation of its assets is undertaken with minimum impact and indeed to the benefit of the local community. A number of community gain initiatives are included as part of the proposed development, the relevant ones in this context being outlined below:				
	<ul> <li>At the WwTP, the site boundary has been pulled back from the existing road line, by 5m, to further accommodate pedestrian traffic along Mill Road and to provide passive provision for additional public realm in this area.</li> <li>As described in Section 4.3.4.3 of the EIAR, a landscaped area with additional native planting will be provided to the north-west of the WwTP site. Upon commissioning, this landscaped area will be handed over to the Wicklow County Council as a continuation and contribution to the public realm of the area.</li> <li>Facilities will be provided within the signature WwTP building for use by echapted</li> </ul>				
	SCHOOLS.				
1.7	Has the applicant held or does the applicant hold any previous Foreshore Licences, Leases or applications over the area sought or over any other area including pending applications? (Give details including Department's file reference number(s)).				
	A licence was granted by the Department of Housing, Planning and Local Government to Irish Water (Ref FS006614) to undertake marine site investigations associated with the proposed development.				
1.8 Status of planning permission application: Pending/ <del>granted/no</del>					
	Consent Authority: An Bord Pleanála Reference Number: PL27.302556				
	(Please provide copies of consents granted)				
1.9	Are any other consents required for this proposal? Please detail.				
	Consent type: Wastewater Discharge Authorisation Consent Authority: Environmental Protection Agency Reference Number: Not applicable (application in preparation) Status of application: Application in preparation and to be submitted in parallel with Foreshore Consent application				
	A summary of other relevant consents, authorisations and/or licences which may be required for the proposed development is given below:				
	<ul> <li>Derogation licence from the National Parks and Wildlife Service (in accordance with the Habitats Directive and under the European Communities Birds and Natural Habitats) Regulations 2011, as amended) to undertake construction works that may disturb individual bats and their breeding and resting places (in place – Derogation Licence No. DER/BAT2018-73 attached in Appendix E);</li> </ul>				
	<ul> <li>Licence for archaeological excavation from the National Monuments Service (Under Section 26 of the National Monuments Act 1930 to 2014) for any intrusive works that would require archaeological excavation and/or monitoring;</li> </ul>				

	<ul> <li>Licence for a dive survey from the National Monuments Service (under Section 3(5) of the National Monuments Act 1987) for any underwater archaeological activities;</li> <li>Section 50 Consent from the Office of Public Works (in accordance with the</li> </ul>					
	<ul> <li>Arterial Drainage Acts 1945 and 1995 and The European Communities (Assessment and Management of Flood Risks) Regulations 2010 and 2015) to undertake any works to Arklow Bridge that may impact on flood risk;</li> <li>Trade Effluent Licence from Wicklow County Council (in accordance with</li> </ul>					
	Section 4 of the Local Government (Water Pollution) Acts 1977 to 2007) to discharge to a surface waterbody such as the Avoca River and/or Irish Sea during the construction of the proposed development;					
	<ul> <li>Relevant incences under the Roads Acts 1995 to 2010 from witchow County Council to undertake temporary road closures and diversions during the construction period;</li> <li>Relevant waste permits from the EPA (in accordance with the Waste)</li> </ul>					
	<ul> <li>Management Acts 1996 to 2011) to ensure compliance during the removal, transfer and disposal of waste; and</li> <li>Certificate of Planning Compliance from Wicklow County Council (in accordance)</li> </ul>					
	with Part VII of the Planning and Development Act 2000, as amended) to certify that supervision and construction has been undertaken in compliance with relevant building and planning legislative obligations. The Certificate of Planning Compliance (Certificate of Compliance on Completion) is required to be validated by Wicklow County Council under Part IIIC of the Building Control Regulations 1997, as amended.					
	(Please provide copies of consents granted)					
	See <b>Appendix E</b> . As this is a Design and Build type contract, the Contractor will be responsible for obtaining much of the required consents for the proposed development.					
1.10	Employment Implications (if any)					
	Construction of the proposed development will generate employment opportunities as there will be a range of personnel employed directly to support the construction activities. As outlined in Section 5.8.1 (and Table 5.1) of the EIAR ( <b>Appendix G</b> ), it is anticipated that there will be up to approximately 150 construction employees on site during the peak construction period.					
	When completed and fully operational, the proposed development is likely to directly employ approximately 3 - 5 personnel, some of whom would work in shifts as the facility will be operational 24 hours per day. There will also be some indirect employment opportunities.					
1.11	Capital cost of proposed works (€ - Euro)					
	The 2018 budget estimate (pre-tender stage) capital cost of the overall Arklow WwTP project, is in the region of $\in$ 95 million (incl. VAT).					

#### 1.12 Do the proposed works involve the draw down of European Union or State funding? If "Yes" give details, including any time restrictions, etc. applying No

## **Part 2: Proposed Site. (Attach additional documents as required)**

2.1	County: Wicklow
2.2	<b>Location name and nearest townland name:</b> The proposed works (subject of the SID planning application) including works on the foreshore, will take place within the townlands of Arklow, Tinahask Lower and Ferrybank, in Arklow, Co. Wicklow.

2.3

#### Geographic co-ordinates of the area under application in degrees minutes and seconds WGS84 for offshore developments and where the area can also be identified on the Ordnance Survey map and /or is connected to the seashore/mainland, specify Ordnance Survey map no and Irish National Grid co-ordinates

Foreshore Licence Area A Ordnance Survey Map No: 4428-11

Doint	WGS84		ING	
POIN	Latitude	Longitude	Easting	Northing
1	52°47′ 56.85″	6°9′ 30.29″	324260.216	173565.004
2	52°47′ 56.83″	6°9′ 30.16″	324262.515	173564.289
3	52°47′ 56.73″	6°9′ 30.21″	324261.606	173561.368
4	52°47′ 56.75″	6°9′ 30.34″	324259.177	173561.662

Foreshore Lease Area A Ordnance Survey Map No: 4428-11, 4428-12

Deint	WGS84		ING	
POIL	Latitude	Longitude	Easting	Northing
5	52°47′ 54.16″	6°9′ 8.18″	324676.526	173492.286
6	52°47′ 54.24″	6°9′ 8.04″	324679.080	173494.822
7	52°47′ 54.14″	6°9′ 7.86″	324682.570	173491.944
8	52°47′ 54.30″	6°9′ 7.57″	324687.815	173497.053
9	52°47′ 53.49″	6°9′ 6.24″	324713.434	173472.683
10	52°47′ 49.68″	6°9′ 1.04″	324813.722	173357.312
11	52°47′ 46.94″	6°8′ 55.73″	324915.400	173275.234
12	52°47′ 49.05″	6°9′ 0.39″	324826.403	173338.171
13	52°47′ 53.31″	6°9′ 6.55″	324707.609	173466.941

#### Foreshore Licence Area B Ordnance Survey Map No: 4428-17

Doint	WGS84		IN	IG
POILI	Latitude	Longitude	Easting	Northing
14	52°47′ 39.90″	6 <sup>°</sup> 8′ 47.32″	325078.667	173061.821
15	52°47′ 47.24″	6 <sup>°</sup> 8′ 43.27″	325152.691	173135.985
16	52°47′ 42.00″	6 <sup>°</sup> 8′ 42.89″	325159.933	173128.645
17	52°47′ 39.67″	6°8′ 46.90″	325086.607	173054.829

#### Foreshore Licence Area C

Doint	WGS84 ING		IG	
POILI	Latitude	Longitude	Easting	Northing
18	52°47′ 43.65″	6 <sup>°</sup> 8′ 28.76″	325423.361	173186.667
19	52°47′ 49.89″	6°7′ 43.31″	326269.876	173401.432
20	52°47′ 46.76″	6°7′ 41.98″	326297.225	173305.249
21	52°47′ 39.21″	6 <sup>°</sup> 8′ 27.61″	325448.435	173050.052

2.4	Please indicate the size of the Foreshore area (Ha <sup>2</sup> ) or (M2) or (KM2) Foreshore Licence Area A = $7.893 \text{ m}^2$ Foreshore Lease Area A = $2091.378 \text{ m}^2$ Foreshore Licence Area B = $1089.611 \text{ m}^2$ Foreshore Licence Area C = $89018.873 \text{ m}^2$ Total Foreshore Area Required: $92207.76 \text{ m}^2$
2.5	If offshore please indicate distance from shore (Km):
	The proposed treated effluent outfall is located north of the northern Arklow Harbour pier and extends ca. 930 m in length from the site boundary into the Irish sea, crossing under the upgraded coastal revetment. Please see details in the EIAR ( <b>Appendix G</b> ) and accompanying documentation (including scheme drawings) for further details. Scheme drawings are included in Volume 3 of the EIAR ( <b>Appendix G</b> ), with relevant drawings included in <b>Appendix C</b> herein and with details of the design development and construction strategy included in Chapters 4 and 5 of Volume 2 of the EIAR.
2.6	Is any of the foreshore in the proposed site in private ownership? If yes please provide documentary evidence of same (e.g. folio)
2.7	Any other site details considered relevant:
	See EIAR accompanying the application ( <b>Appendix G</b> ), the Natura Impact Statement ( <b>Appendix H</b> ) and the relevant drawings ( <b>Appendix C</b> ) for any further details of relevance with regard to the site.

# Part 3. Maps and Drawings, Please refer to Guidance on map and drawing requirements.

3.1	Site location map attached? Please include reference no(s).
	<ul> <li>Ordnance Survey Map (Drawing No. L-F-1002-01) – Foreshore licence Map</li> <li>Ordnance Survey Map (Drawing No. L-F-1002-03) – Foreshore Lease Map</li> </ul>
	These maps are included in Appendix A.1.

3 2	Foreshore Lease / Licence man attached? Please include reference no(s)
	<ul> <li>Drawing No. L-F-1003-01 – Foreshore Licence Map (Sheet 1 of 4)</li> <li>Drawing No. L-F-1003-02 – Foreshore Lease Map (Sheet 2 of 4)</li> <li>Drawing No. L-F-1003-03 – Foreshore Licence Map (Sheet 3 of 4)</li> <li>Drawing No. L-F-1003-04 - Foreshore Licence Map (Sheet 4 of 4)</li> </ul>
	These maps are included in <b>Appendix A.2.</b>
3.3	Drawings of structures to be used and or layout (if required) attached? Please detail and include reference no(s).
	A schedule of drawings is provided under 3.5 below, with all relevant drawings provided in <b>Appendix C</b> herein.
3.4	Admiralty Chart attached?
	Yes - Map No. L-F-1001-01, attached in <b>Appendix B.</b>
3.5	Other maps/drawings attached? – please detail and include reference numbers
	Relevant scheme drawings are attached in Appendix C, as follows:
	<ul> <li>L-F-1002-02 - Foreshore Consent Application Site Location Map</li> <li>C-IS-003 - Overall Site Location Map</li> <li>C-IS-004 - Scheme Layout Plan Sheet 1 of 2</li> <li>C-IS-005 - Scheme Layout Plan Sheet 2 of 2</li> <li>C-1S-700 - Location Key Plan</li> <li>C-IS-701 - Layout Plan &amp; Longitudinal Section (1 of 16)</li> <li>C-IS-702 - Layout Plan &amp; Longitudinal Section (2 of 16)</li> <li>C-IS-703 - Layout Plan &amp; Longitudinal Section (3 of 16)</li> <li>C-IS-704 - Layout Plan &amp; Longitudinal Section (4 of 16)</li> <li>C-IS-705 - Layout Plan &amp; Longitudinal Section (6 of 16)</li> <li>C-IS-706 - Layout Plan &amp; Longitudinal Section (6 of 16)</li> <li>C-IS-707 - Layout Plan &amp; Longitudinal Section (7 of 16)</li> <li>C-IS-708 - Layout Plan &amp; Longitudinal Section (9 of 16)</li> <li>C-IS-709 - Layout Plan &amp; Longitudinal Section (10 of 16)</li> <li>C-IS-709 - Layout Plan &amp; Longitudinal Section (10 of 16)</li> <li>C-IS-710 - Layout Plan &amp; Longitudinal Section (10 of 16)</li> <li>C-IS-711 - Layout Plan &amp; Longitudinal Section (11 of 16)</li> <li>C-IS-712 - Layout Plan &amp; Longitudinal Section (11 of 16)</li> <li>C-IS-713 - Layout Plan &amp; Longitudinal Section (11 of 16)</li> <li>C-IS-714 - Layout Plan &amp; Longitudinal Section (12 of 16)</li> <li>C-IS-715 - Layout Plan &amp; Longitudinal Section (13 of 16)</li> <li>C-IS-716 - Layout Plan &amp; Longitudinal Section (16 of 16)</li> <li>C-IS-730 - Avoca River Sections Layout Plan (Sheet 1 of 4)</li> <li>C-IS-731 - Avoca River Sections Section A-A &amp; B-B (Sheet 2 of 4)</li> <li>C-IS-732 - Avoca River Sections Section C-C &amp; D-D (Sheet 3 of 4)</li> <li>C-IS-733 - Avoca River Sections Section C-C &amp; D-D (Sheet 4 of 4)</li> <li>C-IS-750 - Arklow Bridge Works Plan</li> <li>C-IS-751 - Arklow Bridge Works Proposed Layout - Plan, Elevation &amp; Sections</li> <li>C-IS-752 - Arklow Bridge Works Proposed Layout - Plan, Elevation &amp; Sections</li> </ul>

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Part 4: Pre- application consultations	Part 4:	Pre- appli	cation con	sultations
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4.1	Describe briefly any consultations undertaken with the following bodies:
	National Parks & Wildlife Service (NPWS) of the Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs
	<ul> <li>National Monuments Service (NMS) of the Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs</li> <li>Inland Fisheries Ireland</li> <li>Sea Fisheries Protection Authority</li> <li>Marine Institute</li> <li>Marine Survey Office</li> </ul>
	Please also provide copies of correspondence.
	A summary of the extensive consultation with a range of stakeholders undertaken as part of the proposed Arklow WwTP development is provided in the EIAR (Section 1.5) accompanying this application ( <b>Appendix G</b> ). An informal EIA scoping exercise was undertaken and an EIA Scoping Report was prepared and circulated to relevant stakeholders in October 2017. The Scoping Report described the key elements of the proposed development and outlined the level of detail and information to be included in the EIAR.
	The Scoping Report was published on the project website (https://www.water.ie/projects-plans/arklow-wwtp/public-participation/Arklow- EIA-Scoping-Report-ISSUE_18.10.2017.pdf) as part of the third-round of non- statutory consultation during 11 October 2017 – 15 November 2017 and circulated to relevant stakeholders for their consideration, including Arklow Harbour Authority/Harbour Commissioners, NMS and IFI. Submissions were received in response to the Scoping Report from a number of stakeholders. Points raised and associated action taken by the EIA team is provided in Appendix 1.2 of the EIAR ( <b>Appendix G</b> herein).
	Meetings were held with both NMS and IFI. Two meetings were held with NMS on 16 January and 19 June 2018. Personnel from NMS, Underwater Archaeology Unit, Built Heritage, Architectural Policy and Strategic Infrastructure attended these meetings. A meeting with regional representatives of IFI was also held on 16 March 2018.
	With regard to the foreshore consent application, emails were sent to the following bodies on 07 February 2019:
	<ul> <li>Marine Survey Office</li> <li>Sea Fisheries Protection Authority</li> <li>Marine Institute</li> </ul>
	The correspondence sent (copies provided in <b>Appendix D</b> ) included drawings of the overall proposed scheme, the elements of the scheme requiring foreshore consent and a description of the works to be undertaken within the foreshore and intertidal area. A response was received from the Marine Survey Office (MSO) by email on 27 February 2019, acknowledging receipt of correspondence and stating that the MSO will input directly to the foreshore licensing committee (see copy of correspondence included in Appendix D herein). The MSO also advised that the Marine Notice section may also need to be contacted in relation to the issue of notices to mariners regarding the works.

4.2	Describe briefly any consultations undertaken with other relevant authorities (e.g. Local Authority, Port/Harbour authority etc) or State Agencies.
	A summary of the extensive consultation with a range of stakeholders undertaken as part of the proposed Arklow WwTP development is provided in the EIAR (Section 1.5) accompanying this application ( <b>Appendix G</b> ).
	A schedule of pre-application consultations is also attached in <b>Appendix D</b> herein.
	Correspondence was also sent to the Arklow Harbour Authority (Paul Ivory, Senior Marine Officer) on 07 February last, with a response received on 08 February (see <b>Appendix D</b> herein). The response referenced the dredge spoil ground which lies north and east of Arklow Harbour and queried this in relation to the outfall location. We are aware of this dredge disposal site and confirm that the outfall location is outside this disposal area.
4.3	Describe any consultations undertaken to date with other foreshore users.
	A summary of the extensive consultation with a range of stakeholders undertaken as part of the proposed Arklow WwTP development is provided in the EIAR (Section 1.5) accompanying this application ( <b>Appendix G</b> ).
	Consultation has been undertaken with regard to the overall scheme with Arklow Marine Services Ltd whose premises is adjacent to the proposed Wastewater Treatment Plant site. No issues with regard to foreshore works have been raised by this party.
	IW has also consulted with GE with regard to its existing subsea power cable which connects the offshore wind farm to shore and which runs under the existing revetment. The proposed development will encroach within the existing 50 m cable buffer zone for this cable, however, as agreed with GE, a 10 m buffer zone around the cable will be adhered to and thus the proposed development will not extend within this 10 m zone. The specimen design is on this basis.

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4.4	Describe any likely interactions with activities of the public or other foreshore users during the construction and operational phases of the works/activities (e.g. fishing, aquaculture, sailing, and surfing swimming, walking). Describe any measures proposed to minimise inconvenience to other users.
	There is the potential for disruption to foreshore users during the construction works, at various stages, due to the works ongoing on the foreshore. In particular, during construction of the long sea outfall, if open trench techniques are used, there will be vessels in the working area, required to excavate the trench, lay the pipeline and provide the required scour protection. Likewise, there may be disruption to foreshore users at points along the Avoca River, where works to the foreshore are required, particularly around Arklow Bridge, the Alps SWO and the area of land reclamation/sewer laying downstream of the bridge.
	A detailed description of the construction methodology is provided in Chapter 5 of the EIAR (Volume 2, Book 1 of 3 – <b>Appendix G</b> herein). This describes the proposed phasing of works, the required working areas, traffic management and other aspects of the construction phase. An outline CEMP (Appendix 5.1 of the EIAR) also details the minimum requirements for the contractor with regard to the management of the construction phase. There is a suite of measures outlined in the EIAR, in the outline CEMP and in the NIS ( <b>Appendix H</b> herein) to minimise the effects of the construction on the surrounding environment, including foreshore users.
	During operation, there are unlikely to be any significant interactions with activities of the public or other foreshore users. The long sea outfall will be below seabed level, with scour protection finishing at bed level. The scour protection shall be monitored to ensure its performance and avoid any potential risk derived from the potential future exposure of the pipe.
	Scour protection will be monitored by Irish Water as part of the overall long outfall maintenance. Outfall monitoring would include visual inspection either by divers or robotics and would be performed at least every 5 years and after significant storm events as part of the overall operational management regime.
	The inspection crew would check the pipeline for scour protection damage, slide, anchor, or other damage. Scour protection shall be reinstated and/ or repaired if any damage is observed.
	As outlined above, appropriate aids to navigation will be provided to mark the location of the end of the outfall and the diffusers.
4.5	Have adjacent land owners, whose properties may be affected by these works been consulted? Please provide details/permissions as appropriate.
	Yes. All landowners who may be affected have been consulted. A CPO application has been made to An Bord Pleanala in parallel with the Strategic Infrastructure Development (SID) consent application. This CPO application includes all permanent acquisition of lands, permanent wayleaves, permanent rights of way, temporary rights and temporary construction rights required for the overall development.

#### Part 5: Environmental Considerations

(your consultations with National Parks and Wildlife Service and National Monuments Service may inform your answers. Attach additional reports as required and mark under the R column)

www.epa.ie/downloads/advice/ea/guidelines/

www.environ.ie/en/DevelopmentHousing/PlanningDevelopment/EnvironmentalAss essment/

http://www.npws.ie/protectedsites/appropriateassessment/

http://webgis.npws.ie/npwsviewer/

	Environmental legislative requirements	Yes	No	R
5.1	Is an Environmental Impact Statement required for this proposal? An EIAR is included in <b>Appendix G.</b>	X		x
5.2	Is a Natura Impact Statement required for this proposal?	X		X
5.3	Is the area within or adjacent to a NHA, pNHA, SAC, SPA, or National Park? Specify site names and code(s).	X		x
	The proposed development does not lie within or adjoining any European sites. Figure 11.4 in Volume 3 of the EIAR ( <b>Appendix G</b> ) identifies European sites located along the Wicklow and Wexford coasts within 15 km of the proposed development and more distant hydrologically linked European sites. The NIS is included in <b>Appendix H</b> .			
	As detailed in Chapter 11 of the EIAR ( <b>Appendix G</b> ) upstream of Arklow, the Aughrim River and the Avoca River flow through steeply sloping wooded valleys and join at Woodenbridge. The valley sides, with both coniferous and deciduous woodlands, are included with the Avoca River Valley pNHA (Site Code 001748). Parts of the river corridor are included in the pNHA area. See Figure 11.5 in Volume 3 of the EIAR.			
	The proposed development does encroach on parts of Arklow Town Marsh pNHA (Site Code 001931) along the south and north banks of the Avoca River upstream of Arklow Bridge. See Figure 11.6 in Volume 3 of the EIAR.			

	Arklow Town Marsh pNHA includes the Avoca River channel upstream of Arklow Bridge, and the wetland habitats that extend northwards from the bank of the river. Any potential impacts on European and National sites are assessed in the NIS ( <b>Appendix H</b> ) and in Chapter 11 of the EIAR ( <b>Appendix G</b> )			
5.4	Describe any other projects or plans for the area, anticipated or developed, that in combination with this proposal, may have a significant effect on a Natura 2000 site: Please list with planning reference numbers (where available). As detailed in the NIS (Appendix H), the proposed Arklow Flood Relief Scheme is being developed currently with the OPW and hydrological investigations are in progress to inform the final design. This is the only project that has been identified as having a potential to give rise to in combination effects and these have been assessed in the NIS.	×		×
	Environmental Considerations	Yes	No	R
5.5	<ul> <li>Will the proposal have any potential environmental impacts? If yes, please describe</li> <li>Please see EIAR (Appendix G) and NIS (Appendix H) accompanying this application which appraise the potential environmental impacts and the potential impacts on Natura 2000 sites.</li> </ul>	x		x
5.6	Are you proposing any measures to mitigate the potential environmental impacts? If yes, please describe The EIAR ( <b>Appendix G</b> ), NIS ( <b>Appendix H</b> ) and the outline Construction and Environmental Management Plan (CEMP)	x		X

5.7	Are there public health/safety implications arising from the proposed works? (e.g. effluent disposal, removal of derelict or dangerous structures etc.) If yes, please describe	x	x
	The consideration, design and construction strategy for the overall scheme has had regard to public health/safety considerations throughout, as detailed in Chapter 3 - Alternatives, Chapter 4 – the Proposed Development and Chapter 5 – Construction Strategy of the EIAR ( <b>Appendix G</b> ).		
	Other relevant chapters of the EIAR include Chapter 7 – Traffic and Transportation, Chapter 8 – Air Quality and Climate, Chapter 9 – Odour, Chapter 10 - Noise and Vibration, Chapter 14 Land and Soils, Chapter 15 – Water, Chapter 16, Resource and Waste Management and Chapter 17 Population and human Health. Major Accidents and Natural Disasters are also considered in Chapter 19 of the EIAR.		
	The proposed development provides for appropriate wastewater treatment for the town of Arklow, eliminating, in so far as possible, the existing practice of discharging untreated wastewater to the Avoca River.		
	This should significantly improve the water quality in the Avoca River. The treated effluent from the wastewater treatment plant will be discharged to the Irish Sea through a proposed c. 900 m long outfall, which has been designed to ensure appropriate dispersion and minimal impact on the receiving waters.		
	The proposed 900m outfall and SWO at the WwTP replace approximately 19 existing outfalls and overflows all of which currently discharge untreated into the harbour. There will thus be a significant positive impact on water quality both in the harbour and on the nearby bathing areas, as a result of the proposed development.		
	The likely significant effects of the proposed discharges from the long sea outfall and SWO at the WwTP on coastal water quality were assessed (see Chapter 15 of the EIAR) using various calculations and hydraulic modelling methods. These included:		
	<ul> <li>Initial dilution simulations of the outfall diffuser;</li> <li>Water circulation modelling;</li> <li>Contaminant dispersion modelling.</li> </ul>		
	A jet type model was used to simulate the effluent stream issuing from the diffuser and to estimate the near-field dilutions at the immediate discharge location. Water movements in the wider area were simulated with a 2D- hydrodynamic model driven by tidal forcing. A contaminant simulation model, driven by hydrodynamics was used to evaluate the location-specific impacts of discharges within the mid- and far-field areas. Appendix 15.2 of the EIAR ( <b>Appendix G</b> ) provides further details of the assessment methodology.		

In terms of app none of the loca minimum desig assessment we	licable water quality s al waterbodies are des n parameters for the re those in Table 4.3 o	standards, given that signated `sensitive', the plant used in the of the EIAR.		
Minimum Ww Wastewater T	TP Design Standard reatment Regulatio	ls (Source: Urban ons)		
Parameters	Final Effluent Concentration	Minimum Percentage Reduction on Source Effluent		
BOD5	25mg/l O <sub>2</sub>	70 - 90		
COD	125mg/l O <sub>2</sub>	75		
SS	35 mg/l	90		
guarantee comp Directive and the and significanthe discharged in A The accompany detail with regat construction stread including details The proposed s overflows (SWC the Irish Sea) w sewered catcher prolonged power plant. The spect ensuring that st be less than 7 p standards. The proposed d Discharge Auther which is being p submitted in pa Application.	pliance with the require herefore meet all regu y improve the quality rklow town. ring EIAR ( <b>Appendix</b> rd to the proposed de rategy and the apprais s of all modelling unde cheme does include 3 Os), (2 no. to the Avoor which provide emergen hent during extreme r er outages at the wast imen design has been pills to the Irish Sea of ber bathing season, as evelopment will be su orisation from the EPA prepared at the current trallel with the Foresho	<ul> <li>rements of the UWWT latory requirements of effluent being</li> <li>G) includes all required evelopment, sal of potential impacts, ertaken.</li> <li>no. storm water ca River and 1 no. to ncy relief to the rainfall events or during tewater treatment on the basis of or the Avoca River will s per the guidance and</li> <li>abject to a Wastewater A, an application for the time and will be ore Consent</li> </ul>		
Will the works waste? If "Ye waste and the disposal (incle	s involve the storag s" please give detai e proposed method uding location)	e and/or disposal of ils of the type of of storage and/or	x	
The EIAR ( <b>App</b> the potential im regard to resource	endix G) includes a d apact of the proposed	letailed assessment of development with ement. The following		

	<ul> <li>aspects are particularly relevant to the resource and waste assessment:</li> <li>Design: <ul> <li>Throughout the design development for the proposed development, consideration has been given to the minimisation of waste through retention of material on site and material reuse.</li> </ul> </li> <li>Construction: <ul> <li>During the construction of the proposed development, waste will be generated from site clearance, asbestos</li> </ul> </li> </ul>		
	removal, demolition and excavation. General construction waste is likely to be generated throughout the construction of the proposed development.		
	<ul> <li>Operation:</li> <li>During operation, sludge will be generated from operation of the WwTP. Grit and other materials will also be generated from the preliminary screening of wastewater. Maintenance waste is likely to be generated from repair and maintenance works associated with the proposed development. Office waste will be generated from the Administration building.</li> </ul>		
	The potential for waste to be generated during the demolition, excavation, construction, operation and decommissioning phases of the proposed development is assessed in Chapter 16 of the EIAR ( <b>Appendix G</b> herein). Mitigation measures are identified where necessary to reduce the impact of the waste generated by the proposed development in the construction and operational phases.		
5.9	Any other Environmental Considerations? If yes, please specify.	x	x
	Please see the accompanying EIAR ( <b>Appendix G</b> ) and NIS ( <b>Appendix H</b> ) for full details of environmental aspects and considerations associated with the proposed development. An outline Construction Environmental Management Plan (CEMP) and summary of mitigation monitoring and residual		
	effects is included with the EIAR (Refer to Appendix 5.1 and Chapter 21, respectively, of the EIAR).		
	These documents define the minimum standards required of the contractor as they affect the environment, amenity and safety of local residents, businesses, the general public and the surroundings in the vicinity of the proposed development.		
	The contractor is required to integrate these measures into a detailed CEMP following appointment (prior to the commencement of any construction activities).		

	Effective implementation of the CEMP will ensure that disruption and nuisance are kept to a minimum throughout the construction of the proposed development. The detailed CEMP will be required to have regard to the guidance <sup>1</sup> and industry best practice. The CEMP will be implemented throughout construction and the contractor will be required to review and update the CEMP as construction progresses. In addition to the CEMP, it is anticipated that the contractor will prepare a Construction Management Plan and relevant Works Method Statements in advance of any works commencing on site. Every effort will be made to ensure that any significant environmental effects as described in the EIAR will be avoided, prevented or reduced by adopting the mitigation measures outlined in the EIAR.			
	Built Heritage Considerations	Yes	No	R
5.10	Does the area contain an archaeological site or feature? If yes, please specify. Chapter 12 of the EIAR ( <b>Appendix G</b> ) assesses the potential impacts of the proposed development on archaeological, architectural and cultural heritage. In particular, Arklow Bridge is a protected structure (RPS: A26)	X		x
5.11	Does the area contain or adjoin a listed archaeological site or monument? If yes, please specify. There are a total of eight recorded monuments within the receiving environment of the proposed development. See Appendix 12.3 of the EIAR (Appendix G) for further details. The western section of the interceptor sewer is located within the zone of notification for the historic settlement of Arklow (WI040-029). The site of the ruined castle is located approximately 50 m south of the proposed Alps SWO and stormwater tank. None of the sites are listed as National Monuments or are subject to Preservation Orders. There are 16 protected structures located within the receiving environment of the proposed scheme. The closest is Arklow Bridge (BH1, RPS: A26) as the interceptor sewer will pass beneath the southern-most arch of the bridge, within the river bed. Arklow Bridge is included within the NAH survey as being of regional significance (NIAH Ref: 16322046).	X		×

<sup>&</sup>lt;sup>1</sup> CIRIA (2015) Environmental Good Practice on Site Guide, 4th Edition

	There are no architectural conservation areas (ACAs) located within the receiving environment of the proposed development. There are 27 NIAH structures located within the receiving environment of the proposed WwTP development. Of these 27 sites, 15 are also listed on the Record of Protected Structures. See Chapter 12 of the EIAR ( <b>Appendix G</b> ) for further details.		
5.12	Will the proposal have any potential impacts on the archaeological integrity of the site? If yes please describe Yes, there is the potential for impact on the archaeological integrity of the site, as a result of the proposed development. Full details of the archaeological, architectural and cultural heritage impact assessment, including mitigation and monitoring measures proposed, are included in Chapter 12 of the EIAR ( <b>Appendix G</b> ).	x	x
5.13	Are you proposing any measures to mitigate potential archaeological impacts? If yes, please describe? Full details of the proposed mitigation and monitoring measures are set out in Chapter 12 of the EIAR ( <b>Appendix</b> <b>G</b> ), in Section 12.5.	x	x

# Part 6: Navigational Safety Considerations. (Your consultations with relevant stakeholders may inform your answers. Attach additional documents as required and mark under the R column)

	Navigational Safety Considerations.	Yes	No	R
6.1	Are there public navigational safety implications arising from the proposed works?			
	The long sea outfall will be approximately 955 m in length (approximately 900 m from the shoreline) and will likely comprise high density polyethelene (HDPE). It will have an internal diameter of approximately 630 mm.			
	The long sea outfall can be constructed by a number of methods and the contractor is responsible for determining the appropriate method.			

The likely methods that can be undertaken to construct the long sea outfall are outlined below, based on current practice and site constraints/characteristics. These are:		
<ul> <li>Horizontal directional drilling method;</li> <li>Flood and float method; and</li> <li>Bottom-pull method.</li> </ul>		
Restrictions on access to the works area are likely to be required during the construction phase, particularly if either the flood and float or bottom-pull method are used.		
If either of these methods are used, scour protection will be required to be placed along the length of the outfall, to protect against the potential medium/long term effects of scour. Suitable protection of the pipeline is required. A concrete mattress layer of approximately 300mm thickness is proposed for this purpose. The concrete mattress will finish at existing bed level.		
Once the long sea outfall has been laid, by whichever method (HDD, float and flood or bottom-pull), the diffuser would be assembled on the seaward end of the outfall. The diffuser arrangement would include up to 6 diffusers of approximately 0.16m diameter at a spacing of c. 10m intervals.		
The diffuser would be prefabricated on land and placed on the seabed by barge as one complete unit. The exact procedure and depths of backfill required would depend on the equipment available from the contractor along with programme and cost considerations, however it is anticipated that this would be undertaken from the barges and it will likely require open excavation of the seabed, along the length of the diffusers.		
The specimen design provides for up to approximately 6 elastomeric variable orifice check valves as part of a subsurface diffuser located at the end of the long sea outfall. The riser valves would be vertical, therefore aiding the dispersion of treated effluent in the water column. Each diffuser will be equipped with a non-return flex valve and marker buoys would be provided to mark the location of the end of the outfalls therefore ensuring that boats are aware of their presence.		

6.2	What marine activity is there in the area?		
	Arklow port and harbour have marine activity, which comprises a fishing fleet, an RNLI station, pleasure craft and cargo vessels, in the main. The port has an anchorage depth of 11 – 12.2 m and a cargo pier depth of 3.4 – 4.6 m.		
	Arklow Marine Services (shipbuilding, ship repairs and marine engineering) is located at Ferrybank, close to the proposed WwTP site.		
	Arklow Shipping Ltd also operates from North Quay in Arklow.		
	The RNLI lifeboat station is located on South Quay in Arklow.		
6.3	How will the marine activity be affected by the proposed works?		
	The construction of the proposed development may require a temporary exclusion zone around working areas, to accommodate the safe construction of the works. The operation of the proposed development is unlikely to significantly affect marine activity in the area.		
6.4	What mitigating measures will be put in place?		
	The proposed development is being procured as a design build type contract. The Contractor appointed will be required to demonstrate competency in the type of work required and will also, under the contract, be required to comply with all consent conditions, the EIAR, NIS and the outline CEMP (see <b>Appendix G and H</b> herein). The contractor appointed will be required to liaise with all relevant authorities and bodies to ensure that minimal disruption to marine activity occurs during the construction phase.		
	The long sea outfall (if open trench construction methods are used) will have suitable scour protection, as detailed in the drawings ( <b>Appendix C</b> herein). The scour protection will finish at existing seabed level, so as to minimise potential effects on coastal processes and for marine users.		
	Marker buoys will be provided to mark the location of the diffusers at the end of the outfall therefore ensuring that boats are aware of their presence.		

6.5	How will the proposed works affect Marine Navigation in the future?		
	The long sea outfall will be below seabed level, with scour protection finishing at bed level. The scour protection shall be monitored to ensure its performance and avoid any potential risk derived from the potential future exposure of the pipe.		
	Scour protection will be monitored by Irish Water as part of the overall long outfall maintenance. Outfall monitoring would include visual inspection either by divers or robotics and would be performed at least every 5 years and after significant storm events as part of the overall operational management regime.		
	The inspection crew would check the pipeline for scour protection damage, slide, anchor, or other damage. Scour protection shall be reinstated and/ or repaired if any damage is observed.		
	As outlined above, marker buoys will be provided to mark the location of the end of the outfalls.		

# Part 7: Fishing/Aquaculture considerations (your consultations with IFI, SFPA, DAFM may inform your answers. Attach additional documents as required and mark under the R column)

	Fishing/Aquaculture considerations	Yes	No	R
7.1	Is the proposal located in proximity to any of the following: • aquaculture operation • designated Shellfish Growing Waters • fish spawning ground • other sensitive fisheries location			
	Please Illustrate on appropriate chart including distance in Km.			
	The applicant is not aware of any such activity or designation in the vicinity of the proposed works. No responses to consultations have indicated any constraints in this regard. See also the answer under Section 7.2 herein.			

7.2	Are there other potential impacts of the proposal on fishing/aquaculture in the area? If yes, please describe.		
	Irish Mussel Seed Company Ltd. applied for a marine-based shellfish aquaculture licence for an area near Kilmichael Point, to the south of Arklow. This licence was granted by DAFM in 2018. Given the distance of this licence area from the proposed development, there are no significant potential effects envisaged.		
	No other aquaculture licences are in place in the immediate vicinity which could be impacted by the proposed development.		
	Impacts on any recreational fishing in the area are likely only during the construction stage.		
7.3	Are there any measures proposed to mitigate potential impacts on fisheries or aquaculture? If yes, please describe.		
	The proposed development is being procured as a design build type contract. The Contractor appointed will be required to demonstrate competency in the type of work required and will also, under the contract, be required to comply with all consent conditions, the EIAR, NIS and the outline CEMP (see <b>Appendix G and H</b> herein). The contractor appointed will be required to liaise with all relevant authorities and bodies to ensure that minimal disruption to fishing activity occurs during the construction phase. No significant effects on fishing activity are envisaged during the operational phase. No significant effects on aquaculture are envisaged during either the construction or operational phase. The nearest marine based aquaculture licence is south of Arklow near Kilmichael Point.		
	No significant effects on aquaculture are envisaged during either the construction or operational phase. The nearest marine based aquaculture licence is south of Arklow near Kilmichael Point.		

#### Part 8 – Additional information

8.1	Please detail any additional relevant information.

#### **Declaration and Consent:**

The details provided here are correct to the best of my knowledge.

I understand that no works will be commenced, by me or my agents on the proposed site, without the prior written consent of the Minister.

By submitting this application form, I agree that the details provided (with personal contact details redacted) are to be published on the Department of Housing website and also that the full information provided including contact details are to be processed and retained by the Department of Housing, Planning and Local Government and shared with all appropriate Prescribed Bodies (as part of the Prescribed Bodies Consultation process) in furtherance of consideration for a foreshore Consent under the Foreshore Act 1933 (and Foreshore Amendment Act 2011).

I give consent to the Minister and his servants to copy this application and to make (a redacted) copy available for inspection and copying by the public. This consent relates to this application, to any further information, or submission provided by me or on my behalf and to the publication of the licence document.

#### Signature of Applicant (or his or her Agent):

Cladge Donoral.

Name of above Signatory (block letters): CLODAGH O'DONOVAN

**Position Held:** ASSOCIATE DIRECTOR (OVE ARUP & PARTNERS IRELAND LTD.)

Date: \_\_\_\_

#### Return completed applications to:

Marine Environment and Foreshore Section Department of Housing, Planning and Local Government Newtown Road Wexford Y35 AP90

Enquiries to: <u>Foreshore@housing.gov.ie</u> (Other contact details to be included in Guidance materials) Email a copy of application documents: Foreshore@housing.gov.ie

#### **Enclosures Checklist**

#### One hard copy of every document is required unless otherwise stated. Electronic versions of documentation must also be provided in searchable PDF format (no single file to be greater than 30mb) so that the Department can make them available on its website.

Item No.	Description	No. of copies Required	Check
1	Application Form. With original signature	4	$\checkmark$
2	Mapping (see guidelines document) (i) Site Location map (ii)Foreshore Lease/licence map	4 4	~~
3	British Admiralty Chart (largest available scale)	1	$\checkmark$
4	Drawings of the structures to be used and/or layout	4	$\checkmark$
5	Pre-application correspondence with stakeholders.	1	$\checkmark$
6	Other statutory permissions: (i) Planning permission (ii) Effluent Discharge Licence (iii) Other consent (Please specify) – BAT DEROGATION LICENCE	1 1 1	N/A N/A √
7	<b>Company documentation (1):</b> Certified copy of the Company's Memorandum and Articles of Association	1	$\checkmark$
8	<b>Company documentation (2)</b> Certificate of Incorporation of a Limited Liability, or Company/Rule Book/Constitution for a Club or Co- Operative Society as appropriate	1	V
9	Environmental Impact Statement (EIS). (i) Hard copy (ii) CDs	5 25	$\checkmark$
10	Natura Impact Statement (NIS) (i) Hard copy (ii) CDs	5 4	$\checkmark$
11	Property-related owner permissions/wayleaves (i) Folio – (or other evidence of private ownership) (ii) Wayleave/consent from other property owners (iii) Other (Please specify) All lands required for the proposed works are subject to a CPO application to An Bord Pleanala (ABP reference 302649-18)	2 1 1	N/A N/A N/A
12	Other – Please specify	1	N/A

#### **APPENDIX A**

#### MAPPING

## **APPENDIX A.1**

#### SITE LOCATION MAP

## **APPENDIX A.2**

## FORESHORE LEASE/LICENCE MAPS

## **APPENDIX B**

## **ADMIRALTY CHART**

## **APPENDIX C**

#### DRAWINGS

## **APPENDIX D**

## **PRE-APPLICATION CONSULTATIONS**

## **APPENDIX E**

## **OTHER STATUTORY CONSENTS**

## **APPENDIX E.1**

## **BAT DEROGATION LICENCE**

## **APPENDIX F**

## **COMPANY DOCUMENTATION**

## **APPENDIX F.1**

#### MEMORANDUM AND ARTICLES OF ASSOCIATION

## **APPENDIX F.2**

## **CERTIFICATE OF INCORPORATION**

#### **APPENDIX G**

#### ENVIRONMENTAL IMPACT ASSESSMENT REPORT

**APPENDIX H** 

#### NATURA IMPACT STATEMENT