

13 Landscape and Visual

13.1 Introduction

This chapter describes the likely significant effects of the proposed development on landscape and visual aspects of the receiving environment.

Chapter 4 provides a full description of the proposed development whilst **Chapter 5** describes the Construction Strategy. This chapter is accompanied by a set of Photomontages of the proposed development which are included in **Appendix 13.1 and in Volume 3**.

The following aspects are particularly relevant to the landscape and visual assessment:

- Design:
 - Form and massing of the WwTP;
 - Façade on all above ground structures; and
 - Cognisance of how design elements impact on Views of the proposed development and any effects on the receiving environment, including landscape character.
- Operation:
 - Views of the proposed development and any effects on the receiving environment, including landscape character.
- Construction:
 - Views of the proposed development and any effects on the receiving environment, including landscape character; and
 - Loss or change of existing structures that contribute to the receiving environment.

13.2 Assessment Methodology

13.2.1 General

The landscape assessment has considered the likely significant effects of the proposed development on the landscape as an environmental resource and the visual assessment has considered the effect of visual change on receptors. Landscape and visual effects have been considered for the construction and operation of the proposed development.

Further, to support the assessment, a series of photomontages, illustrating the physical and visual appearance of the proposed development, has been prepared from a range of publicly accessible locations that are representative of the more open views in the surrounding environment. The photomontage views that have been prepared are included within **Appendix 13.1 and Volume 3**.

13.2.2 Guidance and Legislation

This assessment has been undertaken having regard to general EIA guidance as described in **Section 1.4.3 of Chapter 1** and the Landscape Institute guidelines¹.

13.2.3 Consultation

Consultations relevant to landscape and visual aspects include those relating to site selection and WwTP design as described in **Chapter 3**, and also iterative project design coordination between the design and client teams of the proposed development and the proposed Arklow Flood Relief Scheme.

The proposed development has extensive physical overlap along the south side of the Avoca River with the proposed Arklow Flood Relief Scheme. It was important to ensure that any works carried out as part of the proposed development would be compatible with the likely design of the subsequent proposed Arklow Flood Relief Scheme. The benefits of design coordination include:

- Optimising investment in structural and civil works to suit the proposed development and the proposed Arklow Flood Relief Scheme;
- Minimising future potential environmental effects that might arise from the proposed Arklow Flood Relief Scheme; and
- Minimising further future disruption to the local community.

Design coordination between the proposed development and the proposed Arklow Flood Relief Scheme involved iterative consultation and workshops, between November 2017 and July 2018, and involving the design and client teams for both projects, and also Wicklow County Council as party to both projects.

The specific areas of design coordination included:

- Detailed consideration of the realignment of sections of quay walls required as part of the proposed development to enclose the proposed interceptor sewers, so as to readily accommodate the provision of a parapet along the quay wall in the future as part of the proposed Arklow Flood Relief Scheme;
- The interface of proposed and planned infrastructure with the Arklow Bridge, a protected structure, to ensure the protection and enhancement of the visual integrity and setting of the Arklow Bridge following the implementation of the proposed quay wall realignment and proposed interceptor sewer, and also of the future parapet along the quay wall as part of the proposed Arklow Flood Relief Scheme (Refer to **Chapter 12** for further details on the Arklow Bridge); and,
- Consideration of design objectives and known details of public realm improvements anticipated as part of the completion of the proposed Arklow Flood Relief Scheme.

¹ UK Landscape Institute and IEMA (2013) Guidelines for Landscape and Visual Impact Assessment; 3rd Edition;

The coordination of the design of the proposed development and the proposed Arklow Flood Relief Scheme were presented as part of the wider consultation with the Department of Culture, Heritage and the Gaeltacht during two meetings (on 16 January 2018 and 19 June 2018).

13.2.4 Categorisation of the Baseline Environment

The landscape and visual assessment involved visits to Arklow town, initially in March 2012, and more recently in March, April, May and June of 2018, to review the nature and scale of existing development both on and surrounding the site, to identify landscape features, local character and land uses, to identify key views to and from the proposed development, and to note receptor sensitivity.

This site based assessment was augmented by reviewing aerial photography, publications and reports and information on the proposed development included within the application for consent and in this EIAR.

13.2.5 Impact Assessment Methodology

The landscape and visual impact assessment for the proposed development takes account of the character and nature of the existing site and its surrounds, the location of sensitive landscapes and visual receptors, the sensitivity and significance of the site, and its vulnerability to change.

The classification of significance of effects as set out in Table 13.1 has been derived from guidance from the EPA² and the UK Landscape Institute¹ and from the professional experience of the author in carrying out landscape and visual assessments for over 25 years.

Table 13.1: Categorisation of likely significant effects (derived from the guidance²)

		EXISTING ENVIRONMENT Significance / Sensitivity			
		High	Medium	Low	Negligible
DESCRIPTION OF IMPACTS Character/Magnitude/Duration /Probability/Consequences	High	Profound	Very Significant	Significant / Moderate	Moderate / Slight
	Medium	Very Significant / Significant	Significant / Moderate	Moderate	Slight / Not Significant
	Low	Significant / Moderate	Moderate / Slight	Slight / Not Significant	Not Significant / Imperceptible
	Negligible	Slight / Not Significant	Not Significant	Not Significant / Imperceptible	Imperceptible

The significance of effects, which in nature may be positive, neutral or negative/adverse, are therefore described as follows:

² Environmental Protection Agency (2017) Draft Guidelines on the Information to be contained in Environmental Impact Assessment Reports (Draft August 2017)

- **Imperceptible:** An effect capable of measurement but without significant consequences.
- **Not significant:** An effect which causes noticeable changes in the character of the environment but without significant consequences.
- **Slight:** An effect which causes noticeable changes in the character of the environment without affecting its sensitivities.
- **Moderate:** An effect that alters the character of the environment in a manner that is consistent with existing and emerging baseline trends.
- **Significant:** An effect which, by its character, magnitude, duration or intensity alters a sensitive aspect of the environment.
- **Very Significant:** An effect which, by its character, magnitude, duration or intensity significantly alters the majority of a sensitive aspect of the environment.
- **Profound:** An effect which obliterates sensitive characteristics.

In terms of duration, effects are considered as follows:

- **Momentary:** lasting seconds to minutes.
- **Brief:** lasting up to one day.
- **Temporary:** lasting up to one year.
- **Short-term:** lasting one to seven years.
- **Medium-term:** lasting seven to fifteen years.
- **Long-term:** lasting fifteen to sixty years.
- **Permanent:** lasting over sixty years.

Further aspects of effects including their **magnitude** (*i.e.* extent, frequency, and context); **probability** (*i.e.* likely, indeterminable, ‘worse-case’); and **type** (*i.e.* cumulative, interaction (synergistic), residual, indirect, *etc.*) are also considered in the assessment, where appropriate in accordance with those descriptions outlined in the EPA guidance².

13.3 Baseline Conditions

13.3.1 Site Context and Description

The proposed development extends to terrestrial, riverine and marine lands as illustrated in Figure 13.1 and **Figure 1.1 of Volume 3**. A tree survey has been undertaken for this assessment and is available in **Appendix 13.2** and is described herein.

The site extends along the Avoca River immediately north of the town centre, and includes vacant lands at a site known as The Alps; the River Walk upstream of Arklow Bridge; South Quay and North Quay downstream of Arklow Bridge; the Old Wallboard site at Ferrybank on the seaward side of the North Quay at Arklow Harbour; and the revetment along the shore. The project also includes a long sea outfall extending northeast from the proposed WwTP and storm water overflow (SWO) north of the long sea outfall, both discharging to the Irish Sea.



Figure 13.1: Arklow town with project footprint overlaid (Source: Bing Maps)

Arklow town has its origins on the southern side of the Avoca River, and essentially comprised a single street running parallel to the river with buildings on both sides, and those on the northern side of the street with their backs to the river. The river opened out on the seaward side of the town to extensive mudflats and sand hills at Ferrybank and Tinahask Lower to the north and south respectively.

The town has a long association with the sea, and as a port, and the evolution of the town as a port has strongly shaped its growth. The Arklow Bridge (Protected Structure, RPS A26), is a 19 arch stone bridge spanning 150m that was constructed in the middle of the 18th century, and provided a connection between Arklow Main Street and Ferrybank on the northern side of the river. Over time, the mudflats and sand hills were reclaimed and extended the harbour area on both sides of the river to where the north and south piers are now located.

Today, the original Main Street remains the centre of the town, and the settlement extends for 1 - 1.5km to the south, east and west, with the ground rising gently to the south from the river. North of the river, the Ferrybank area extends for a similar distance, and in more recent times, there has seen significant development and regeneration along the North Quay with the Bridgewater Shopping Centre and the Marina Village apartments.

The Avoca River, the Arklow Bridge and the coastal setting are the key defining natural and built features of the urban and port setting of Arklow town.



Figure 13.2: Aerial view showing Arklow town south of the Avoca River; Arklow Bridge connecting to the Ferrybank and North Quay area; and the wider setting of the southern Wicklow Mountains in the distance

Within the planning boundary, there are a number of distinct landscape character areas, including the following (which are discussed in detail in **Sections 13.3.1.1 - 13.3.1.7**).

- The Alps;
- River Walk;
- Arklow Bridge;
- South Quay;
- North Quay;
- The Old Wallboard site; and
- The Revetment.

13.3.1.1 The Alps SWO and Stormwater Storage

The Alps is an area of vacant land to the west of River Walk behind the properties on Upper Main Street (Refer to Figure 13.3), and adjoins the ruins of Arklow Castle (RMP No. WI040-029002). Part of the lands includes a deep escarpment that runs immediately to behind the buildings on the more elevated terrain of Upper Main Street. The base of the escarpment is typically at the same level as the river bank, beyond which the ground slopes up steeply again to meet the more elevated levels of the town. The escarpment area is heavily vegetated and overgrown with scrub, and includes a number of trees.

A pathway leads up along the sloped ground to a pedestrian bridge over the railway line and connecting to Vale Road. River Walk extends across the mouth of the escarpment and continues further upstream.



Figure 13.3: The Alps escarpment, from elevated and ground level, looking south towards the rear of the buildings on Upper Main Street

13.3.1.2 River Walk

River Walk extends from The Alps along the south bank of the Avoca River to the Arklow Bridge. The Avoca River and part of its riverbanks lies within a proposed Natural Heritage Area (pNHA, Site Code 001931). River Walk comprises riverbank footpaths, the town carpark, and River Walk local access road serving the rear of the properties along Main Street and incorporating on street parking and areas of open space. A number of laneways and paths including New Coomie Lane, Coomie Lane, River Lane and Condren's Lane connect River Walk to the Main Street and to Vale Road.

Upstream of the carpark, River Walk is an attractive riverfront amenity walkway, comprising a grass riverbank with occasional mature trees and shrubs affording open views of the river and the more strongly wooded northern riverbank as illustrated in Figure 13.4. Trees are generally in fair to good physical condition, typically fair structural condition, and provide moderate to good amenity value.



Figure 13.4: River Walk upstream of carpark, looking downstream

Downstream of the carpark, River Walk provides convenient pedestrian connection and local vehicular access. The walkway along the riverbank is formed in concrete, and a low concrete wall separates the walkway from the roadway and on-street parking as illustrated in Figure 13.5.

The walkway affords open views across the river to the mostly wooded edge of the Arklow Marshlands on the northern side of the river. The Arklow Bridge is also prominent from this location, however, the upstream side of the bridge incorporates extensive concrete piers and cappings that support substantial pipework and a concrete parapet that detracts from the appearance of the stone arched bridge. Trees in this area are typically smaller and younger, in fair physical condition, with fair to poor structural condition, and provide moderate amenity value.



Figure 13.5: River Walk upstream of Arklow Bridge, looking upstream

The built side of River Walk downstream of the carpark (Refer to Figure 13.6) includes occasional units that provide active frontage onto the walk, including at the carpark, Condren's Lane and approaching the Arklow Bridge, but the balance comprises rear walls of property boundaries and gates that present a piecemeal and haphazard elevation to the walk.



Figure 13.6: River Walk upstream of Arklow Bridge, looking downstream

13.3.1.3 Arklow Bridge

Arklow Bridge is one of the most impressive and defining built elements of Arklow town. Built in the middle of the 18th century, and comprising nineteen stone arches, it is the longest stone bridge in Ireland spanning approximately 150m (Refer to Figure 13.7).

As detailed in **Chapter 12**, Arklow Bridge is a protected structure (RPS A26; NIAH No. 16322046) and is a defining asset of the built environment of Arklow town as well as being an important piece of architectural and industrial heritage.



Figure 13.7: Arklow Bridge seen from South Quay

Arklow Bridge is best appreciated from the downstream side, as the stonework on the upstream side is substantially obscured with concrete piles and cappings that support extensive pipework and a concrete parapet. The nineteenth arch on the northern end of the bridge however has previously been compromised by the installation of a range of utilities pipework as illustrated in Figure 13.8. The proposed interceptor sewer will pass through the first arch on the southern side of the bridge, and will be appropriately integrated.



Figure 13.8: Downstream view of the first (southern) and nineteenth (northern) arch of the Arklow Bridge

13.3.1.4 South Quay

South Quay is notably different in character to River Walk in that the buildings along South Quay were built to front onto the river, and South Quay also faces the buildings along North Quay as opposed to the wooded riverbank at Arklow Town Marsh that lies opposite River Walk. From Doyle's Lane, there is a notable change in the scale, use and intensity of buildings, where almost all buildings as far downstream as the harbour area are residential and are clearly more contemporary and a later extension of the town centre.

The roadway along South Quay varies considerably to include one-way single carriageway and wider two-way sections. There are minimal footpaths on one side only between Doyle's Lane and South Green (refer to Figure 13.9), beyond which there are frequently no footpaths on either side of the road. Depending on the width of the roadway, parking is generally defined on either one or both sides of the road. Further downstream, there is space for parking but it is not generally defined. South Quay is mostly used for residential access, however, a substantial number of heavy goods vehicles also use South Quay for access to and from the harbour area and the quarry at Arklow Rock to the south.



Figure 13.9: South Quay looking downstream, with residential buildings directly facing the quayside

Starting at the junction with South Green, there is a grass verge along the quayside incorporating a row of mostly young Norway Maple trees interspersed with individual semi-mature Lime, Rowan, Cherry, White Poplar, Sycamore and Hawthorn trees as illustrated in Figure 13.10. Trees are generally in fair physical and structural condition, but are of low arboricultural quality and value. While they currently provide some amenity value, their poor growing environment is likely to limit their future value.



Figure 13.10: South Quay looking east from near junction with South Green

A slipway is located on South Quay directly opposite the Arklow Marina on South Quay as illustrated in Figure 13.11. The John Tyrell Boatyard once stood on South Quay directly behind the slipway where the Anchor Mews development now stands, and boats built at the boatyard made their way across South Quay to be launched from the slipway. An information panel is located on top of the slipway telling the story of the John Tyrell Boatyard. A concrete flood defence wall extends from this location eastwards (i.e. downstream) along South Quay.



Figure 13.11: South Quay slipway opposite the Anchor Mews development

Opposite Harbour Road and Rockview Terrace, the Arklow Seafarers Memorial Garden (Refer to Figure 13.12) is a modest public space on the quayside that includes a simple paved central area with seating benches, and is flanked on either side by an area of grass and a further row of mostly young Norway Maple trees. The central paved area is also defined by a number of decorative Cordyline trees and low shrub planting. An information panel at the garden tells the story of the Arklow Offshore Wind Park incorporating the world's first wind turbines of over 3MW to be installed at sea.



Figure 13.12: Arklow Seafarers Memorial Garden, South Quay

South Quay continues beyond this point to the harbour and harbour walls to the south of the Avoca River, and its built environment is characterised by typically two storey pitched roof industrial type structures associated with the harbour and port activities.

There are also substantial marshalling and storage areas surrounding the harbour, as well as the Arklow RNLI Lifeboat Station. South Quay provides access, both pedestrian and vehicular, to the South Pier and South Beach area and is a popular public walking and amenity area.

South Quay Wall

The quay wall along South Quay varies considerably in its construction, integrity and quality.

From Arklow Bridge to South Green, a concrete enclosure is located above the riverbed level outside the quay wall itself and houses an existing sewer pipe. A series of inspection chambers are also formed in concrete and rise up to the adjoining road level as illustrated in Figure 13.13. A low concrete stub wall lies on top of the quay wall as a kerb or barrier to prevent vehicles accidentally traversing the quay edge. The upper part of the quay wall, between the concrete housing and the stub wall, is variably faced with concrete lining or plastered. In some places, the plaster finish has eroded and revealed the rubble stone of the quay wall and vegetation is growing through the joints.



Figure 13.13: Poor condition and presentation of quay wall downstream of Arklow Bridge

At South Green, where the grass verge commences, and for a length of approximately 75m, the rubble stone quay wall is mostly visible save for local interventions where sewer outflows have been constructed through the wall as illustrated in Figure 13.14. Along this section of the wall, the large stone flags that form the top of the stone wall remain in-situ and form the junction with the grass verge on the quayside.



Figure 13.14: Section of quay wall where rubble stone remains visible and stone flags form top of wall

Further downstream, the quay wall is either faced in concrete or rock armour, or is formed with exposed steel sheet piles and concrete capping.

13.3.1.5 North Quay

The North Quay development site area includes a short section of the northern riverbank immediately upstream of the Arklow Bridge, and most of the North Quay itself from the Arklow Bridge to the junction with Mill Road.

Upstream of the Arklow Bridge, the proposed development encroaches on part of the proposed Natural Heritage Area (pNHA, Site Code 001931), including parts of the Avoca River channel and the adjoining marsh on the northern side of the river.

This area comprises the river bank of the Avoca River as far as a drainage ditch approximately 25m to the north. The area was previously partially cleared and a hardcore working area installed as part of a road upgrade project, and today comprises overgrown amenity grassland and spoil. Vegetation includes a linear cluster of trees and bushes that are in fair condition but are of limited value and potential.

Downstream of the Arklow Bridge, North Quay is notably different in character to both South Quay and River Walk on the southern side of the river channel. The primary difference is a result of the much larger scale and height of individual developments, and also from the combination of contemporary mixed use developments and older and derelict industrial buildings.

The Bridgewater Shopping Centre was opened in 2007, and provides a landmark contemporary waterfront set piece and is a significant regeneration development for Arklow town as illustrated in Figure 13.15. Immediately to the east, there is a recently constructed Aldi retail store with its carpark directly facing onto North Quay, and further east again, the three storey developments of the Arklow Shipping Company and the Marina Village residential development occupy a substantial portion of North Quay.



Figure 13.15: North Quay and Bridgewater Shopping Centre from Arklow Bridge

The North Quay roadway is of modern construction and character, having been upgraded in conjunction with new development projects described above. The road is quite narrow, with a single lane in both directions and no on-street parking. A footpath runs along the inside of the road, but not along the quayside.

The quayside comprises either a simple low concrete stub wall or a galvanised steel crash barrier to protect vehicles from the quay edge. The space between the barrier and the actual quay wall ranges in width from 1.5 to 2.5m and trees are planted within this narrow space (Refer to Figure 13.16). The trees are mostly young Norway Maple with some early mature Hybrid Poplar. Many of the trees are in poor to fair condition – some are dead – and have low vitality as a result of the limited space available for root development.



Figure 13.16: North Quay carriageway, showing narrow roadway and limited space on quayside for tree establishment

North Quay turns inland at the last block of the Marina Village and continues around the Arklow Marina harbour that was developed in place of the 19th century boatyard. The light tower of the Albatross lightship (NIAH No. 16322030) is located as a landmark on the North Quay at the marina entrance, and is clearly visible along North Quay as illustrated in Figure 13.17.



Figure 13.17: Light tower of the Albatross lightship seen from the entrance to Arklow Marina

The Marina Village residential development faces and defines the southern and western sides of the Arklow Marina. The Arklow Marina marks the transition from the mixed use retail, commercial and residential parts of North Quay to the industrial areas that lie to the east of the Arklow Marina. A range of industrial sheds and structures, some derelict and others in use, form the northern and eastern sides of the Arklow Marina (Refer to Figure 13.18).



Figure 13.18: View from Marina Village across Arklow Marina in the foreground and to industrial buildings beyond

North Quay Wall

The quay wall along North Quay, from the Arklow Bridge to the slipway opposite the Arklow Shipping Company, is of similar construction to that of South Quay with rubble stone walling capped with large stone flags. The quay wall is generally in better condition and repair than South Quay. From the slipway to the entrance to the Arklow Marina, the quay wall is concrete faced and a floating boardwalk provides access to boats moored along North Quay. Beyond the entrance to Arklow Marina, the quay wall is formed with steel sheet piling and a concrete capping.

13.3.1.6 The Old Wallboard site at Ferrybank

The eastern end of North Quay at Ferrybank is an extensive and substantially derelict former industrial area of flat ground located between the North Quay of the Avoca River and a rock revetment to the Irish Sea. The ground is low lying, generally at an elevation of approximately 2.5m above Ordnance Datum (OD), with the exception of the revetment that rises to approximately 5.5m OD providing an element of shelter from the sea.

This part of Ferrybank has a long association with industry, with the Arklow Chemical Works originally having been developed on the mudflats at this location back in the middle of the 19th century. The Chemical Works subsequently became Kynoch Limited explosive factory until after the First World War, and most recently operated as Arklow Gypsum Ltd. Arklow Gypsum Ltd closed down over 30 years ago, and the factory has been derelict ever since, and is commonly referred to as the 'Old Wallboard site'.

The eastern end of North Quay is occupied by the Old Wallboard buildings and a range of other industrial sheds and structures of various scales, heights and forms. The ground on the Old Wallboard and adjoining sites comprise hardcore and tarmac marshalling and storage yards, with sparse ground cover and localised areas of naturally colonised scrub and occasional trees. A full description of vegetation on the site is provided in **Chapter 11**. The majority of these buildings and lands are derelict and have fallen into disrepair.

The Old Wallboard building is over 200m long and is located along the eastern side of this piece of land as illustrated in Figure 13.19. A grass strip of between 5 to 10m width runs between the eastern side of the building and the rock armour revetment. The northern part of the building, approximately 40m long and 35m wide, is the tallest part of the building with the ridge and stack rising to over 27m and 43m in height respectively. The remaining southern portion of the building is approximately 9.0m in height to the ridge, and is mostly a three bay structure approximately 40m wide, with the southernmost section reducing to a single bay of around 13m width.

In addition to the Old Wallboard building, there are also a number of other structures of various sizes including industrial sheds, storage silos, miscellaneous smaller ancillary buildings and a range of boundary walls and fencing in land parcels adjoining the Old Wallboard site. This part of Ferrybank is characterised as an expansive yet derelict port-related industrial area. While it has clear historical associations with the town, its derelict industrial appearance and adjacency to the sea increase its sense of remoteness and distance from the town.



Figure 13.19: Old Wallboard facility and other industrial structures at Ferrybank

13.3.1.7 The Revetment

A rock armour revetment extends from the northern pier at the harbour mouth, towards the north-west for approximately 2km to Arklow North Beach. The revetment forms the seaward boundary of the Old Wallboard site, and is typically 3m higher than the adjoining land and at an average gradient of 1 in 2.

From Mill Road northwards, the landward side of the revetment is formed in earth with scrub grass cover and the revetment incorporates a pedestrian walkway along the top that continues as far as Arklow North Beach and provides expansive views of the coastline. The grassed landward side of the revetment is at a gentler gradient of approximately 1 in 4. See Figure 13.19



Figure 13.20: Pedestrian walkway on top of revetment looking south towards the Old Wallboard site

13.3.2 Landscape Planning Designations

13.3.2.1 Overview

The Wicklow County Development Plan 2016 – 2022 (County Development Plan) ‘Core Strategy’ and ‘Settlement Strategy’ identify Arklow town as a ‘Level 3 – Large Growth Town II’ within the hinterland area of Dublin. Level 3 settlements in County Wicklow are prioritised to accommodate a large amount of population growth, to be strong active towns that are economically vibrant with high quality transport links to larger towns/cities.

The County Development Plan Core Strategy, as it applies to Arklow’s Infrastructure Strategy, states:

- Sufficient wastewater treatment capacity is required to cater for the projected population within the plan area;
- Sufficient water supply is required capable of meeting the demands of projected population within the plan area;
- Measures to improve the capacity and efficiency of local roads and connections to national routes in close proximity to the plan area are required.

13.3.2.2 Landscape Planning Policy Objectives

The County Development Plan includes a Landscape Assessment of County Wicklow in Appendix 5. However, the assessment specifically excludes settlements, such as Arklow, which are:

“within Levels 1-6 of the settlement hierarchy of the County Development Plan,...The exclusion of these areas was considered appropriate given the level of existing development within these areas and their designation within the County Development Plan.” (page 8).

The County Development Plan also includes a range of general objectives and policies that apply to the landscape and visual environment of the county as a whole, however, the development plan refers to the Arklow and Environs Local Area Plan 2018-2024 (Arklow LAP) for specific objectives and policies.

The Arklow LAP includes a number of specific landscape and visual references that apply to the context of the proposed development. These are primarily focused on the existing strength of its waterfront location and the positive influence of the Avoca River on the town, as well as on potential enhancements to the landscape/townscape setting that can be derived from these assets.

In Chapter 5 of the Arklow LAP keys Areas, under ‘Enhancing the Public Realm’, the Arklow LAP notes:

“The elements in and around Arklow’s town centre that contribute mostly to the quality of the public realm are the streetscape; landmark buildings and appearance of principal junctions / gateways; building frontages, in particular materials, colours and shop fronts; the relationship of the Main Street to the river; urban open spaces and parks, and the juxtaposition of structures to spaces and; footpaths, lighting, seating and other street ‘furniture’” (page 29).

The Arklow LAP goes on to note that:

“The ‘Waterfront Zone’ (WZ) is made up of two distinct areas north and south of the river that have seen different development pressures and levels of activity over the year, but both sharing the common characteristics of water frontage onto the river and/or the sea and the presence of industrial lands / buildings, a large proportion of which is currently underutilised and vacant....It is important that this area is developed in such a way that maintains the river and coast as an accessible, attractive and environmental amenity area.” (page 32).

The importance of the Avoca River, its associated bridge, quays, navigation features, and riverside areas, which includes the ‘Seafarers Memorial Garden’ on South Quay, and the coastal waterfront to the east of Arklow are also identified as important amenity, heritage, recreational and tourism assets, which can be further improved through future enhancements. In this regard the Arklow LAP also notes that:

“The future development of a Waste Water Treatment Plant (WWTP) for the town will help to improve the river and beach quality and will in time open up the potential for the enhancement of the recreational and tourism uses in the waterfront” (page 33).

The Waterfront Zoning also includes in its description:

“....To facilitate the provision of a new Waste Water Treatment Plant with an appropriate high quality architectural design/appearance.” (page 54).

Chapter 9 of the Arklow LAP notes that Irish Water is in the process of preparing an application for the development of a comprehensive WwTP to eliminate, in so far as possible, the current practice of discharging untreated wastewater directly into the Avoca River and to provide sufficient capacity for the waste water treatment required to serve the population target of Arklow and all associated community, employment and commercial demands. The LAP includes Infrastructure Objective T1 *“To support and facilitate the development of a waste water treatment plant in Arklow, at an optimal location following detailed technical and environmental assessment and public consultation.”*

13.3.2.3 Key Landscape and Visual Objectives

The key landscape and visual objectives from the Arklow LAP includes Town Centre Objectives VP2 and VP9 which promotes better pedestrian linkages along the river, the coast and the main street, and VP10 which seeks to maintain the existing bandstand and Seafarers Memorial Garden and promotes opportunity for new urban spaces (page 30).

Waterfront Objectives require that new development be of a high quality and suitably set back from the water's edge to provide public routes and places along waterfronts (page 34).

Tourism and Recreation Objective TR6 promotes and encourages the recreational use of the coastline, and the river and that proposals respect the natural amenity and character of the area, and listed views and prospects to and from the area (page 44). There is only one listed view and prospect in the wider context of the development area (see below).

Heritage Objective HT2 protects the listed prospect of special amenity (from the R750/coast road towards the sea) from development that would either obstruct the prospect or form an obtrusive or incongruous feature in the prospect. This listed view is east towards the coast from the R750 – however, it is located over 750m north of the site of the proposed WwTP and outside of the visual context of the site (page 51).

Heritage Objectives HT3 and HT5 seek to protect and enhance architectural and archaeological heritage, as well as the coastal character of the settlement, including features of the natural landscape and built structures that contribute to its special interest.

13.3.3 Landscape/Townscape and Visual Significance and Sensitivity

Landscape and visual significance and sensitivity may be highlighted by landscape (or townscape) or visual designation or reference in national, county or local statutory documents or by identification in appropriate publications and reports (e.g. other landscape and visual assessments).

In relation to the proposed development, significant and sensitive landscape (or townscape) aspects of relevance include:

- The Avoca River corridor within the urban settlement, including its banks and adjoining marshland, quay walls, tree plantings, memorial garden and other features;
- Arklow Bridge;
- The adjoining urban structure of the town which encloses and fronts the river corridor; and
- The open character of the coastal waterfront, which includes associated maritime and navigation features.

In relation to the proposed development, significant and sensitive visual aspects of relevance include:

- Views along, to and from the river edge, Arklow Bridge and from the Avoca River itself;
- Views to and from the coastal waterfront;
- Views from surrounding residential areas; and

- Views from surrounding footpaths, amenity areas and features.

13.4 Likely Significant Effects

13.4.1 Do-Nothing Scenario

The site is the setting for a wide range of harbour, river and port-related activities, residential and mixed-use development, retail, employment and commercial uses, town centre facilities and amenities, and quayside amenities and open spaces. These uses are likely to remain and potentially further develop and be enhanced into the future.

In the scenario where the proposed development did not proceed as planned, and given the necessity for a WwTP at Arklow to facilitate future growth, it is likely that the eastern end of the North Quay area may remain substantially unchanged in the short to medium term, and the derelict industrial character will remain.

13.4.2 Assessment of Effects During Construction

The construction stage of the overall proposed development is currently anticipated to be approximately 3.5 to 4 years. Due to the nature of the project however, construction of different elements of the overall project within different parts of the overall project area will be focussed on shorter periods during the overall programme.

13.4.2.1 Interceptor Sewers and Alps SWO and Stormwater Tank

The proposed interceptor sewers will be constructed in a phased manner, with tunnelling shafts being constructed sequentially over a period of approximately 16 months.

Connecting tunnels and pipework installation will also be phased, commencing around 6 months after the tunnelling shafts commence, and finishing approximately 1 month after the last tunnel shaft. Open cut trenching and construction of the Alps SWO and Stormwater Tank will commence later in the programme, starting at around month 20 and continuing for approximately 10 months.

Effects on Landscape/Townscape Character

A contractor compound will be established within an existing industrial yard and facility to the immediate south of South Dock at Arklow Harbour that is considered low sensitivity. The scale and short-term nature of the compound is such that it will have potential for limited visual disruption and to locally slight negative landscape/townscape effects for those within or passing through the South Dock area at Arklow Harbour.

Working areas and construction activities will be localised to different areas of the overall project development site in accordance with construction phasing.

These will include areas within recognised sensitive areas along North Quay and South Quay, Arklow Bridge and River Walk, and have potential to result in locally moderate to significant temporary or short-term effects on landscape/townscape character during construction, especially as a result of the physical disruption that is commonly associated with such construction activity, and also the movement of construction vehicles and the use of site lighting.

North Quay

Upstream of Arklow Bridge and immediately adjacent to the Ferrybank roundabout, a c. 55m long section of the Avoca River comprising spoil and overgrown amenity grassland will be established as a hoarded working area for the construction of tunnelling shaft TSN1, manholes MHN1 and MHN2 and pipework to form a connection with the existing foul and surface water networks within the area. While this area is part of the Arklow Town Marsh pNHA, it has already been substantially disturbed and modified, and is considered to be of moderate landscape/townscape sensitivity.

Construction activity within this area has the potential for locally moderate/slight temporary to short term effects on landscape/townscape character during construction.

Downstream of Arklow Bridge, North Quay caters substantially for residential, retail, commercial and amenity uses and is generally more contemporary in character than the southern side of the Avoca River. Closer to the Arklow Bridge, the actual quay wall comprises substantially its original stone construction and connects to Arklow Bridge (which is a protected structure), whereas further downstream, the quay wall has been concrete faced. North Quay is therefore considered to be of moderate landscape/townscape sensitivity.

Construction activities along North Quay will entail the establishment of a series of hoarded working areas, together with associated localised traffic diversion and management arrangements. The interceptor sewer will be built using a series of six tunnel shafts and tunnelling within and below the roadway of North Quay. Construction will be 'rolling' between these working areas and as such will be localised to shorter sections of the overall quayside at any one time. A number of trees including T81 to T88, and T99 to T101 will be removed to facilitate the establishment of working areas at tunnelling shaft TSN2 and TSN3. These will be replanted post construction.

Construction activity at North Quay has the potential for locally moderate/slight temporary to short term effects on landscape/townscape character during construction.

River Crossing

The river crossing interceptor will be tunnelled underground and below the river bed between Mill Road and South Quay, but will require the establishment of tunnelling shafts on either side of the river channel, and set within secure working areas.

The northern shaft (TSN6 in working area N12) will be located in the context of mostly derelict industrial lands, and is considered low sensitivity, and has potential for temporary to short term slight negative effects on landscape/townscape character during construction.

The southern shaft (TSS3 in working area S18) will be established on the South Quay at the existing Seafarers Memorial Garden, and also in the context of residential settlements, and therefore is considered to be high sensitivity. Construction activities will include dismantling and storage of the elements of the Seafarers Memorial Garden, and has potential for temporary to short term significant/moderate negative effects on landscape/townscape character during construction.

South Quay

South Quay caters substantially for residential and passive amenity uses downstream of Arklow Bridge. River Walk, upstream of Arklow Bridge, also includes retail and commercial uses. Taken together with the scale and character of the built environment, South Quay is considered to be of high landscape/townscape sensitivity.

Construction activities along South Quay will entail the establishment of a series of hoarded working areas, together with associated localised traffic diversion and management arrangements. The sewer will be laid by a combination of tunnelling and open cut trenching methods, and, like the North Quays, will be ‘rolling’ throughout these working areas and will be localised to shorter sections of the overall quayside at any one time. Construction effects are described in two distinct sections as follows:

- Avoca River Crossing to South Green; and
- South Green to Arklow Bridge.

The Avoca River Crossing to South Green section of the sewer is to be constructed on the landside using tunnelling techniques.

A series of four tunnel shafts will be constructed along South Quay; one (TSS3) within the Seafarers Memorial Garden; one (TSS2A) in the carriageway adjoining the Seafarers Memorial Garden; one (TSS2) in the grass verge area outside residential dwellings on South Quay; and the fourth (TSS1) on South Quay near the junction with South Green.

Working areas will generally be on the carriageway and quayside, however, working areas S15A and S15B will be located within the front gardens of four private properties to facilitate residential access during the construction of a tunnel shaft (TSS2). Working area S16 will encroach into three private front gardens.

The establishment of working areas will necessitate temporary traffic restrictions on South Quay immediately downstream of South Green and at the junction with Harbour Road, as well as localised traffic management diversions. Existing quayside trees within the working areas will be removed, these will include T33 to T52, T60 to T72, and the Cordyline trees at the Seafarers Memorial Garden.

The residential context is such that the Avoca River to South Green area is considered to be of high sensitivity, and construction has potential for to result in localised temporary to short term, significant/moderate negative effects on landscape/townscape character during construction.

The South Green to Arklow Bridge section of the sewer will be constructed within the Avoca River using permanent sheet piling (in the river bed) to facilitate open cut trenching at the toe of the existing quay wall. A 10m wide temporary causeway will be established along the southern side of the river so as to facilitate excavation work, haulage and construction. Following installation of the sewer, a new quay wall will be formed along the sheet piling, and back filling will result in land reclamation and quayside widening by up to 6m width. The alignment of the sewer and the construction of a new quay wall outside the existing quay wall has resulted from the coordination between the design team for the proposed development and the design team for the proposed Arklow Flood Relief Scheme. Construction will require a series of connecting working areas, both on land and in river, and localised traffic diversion and management will be required to maintain access.

The residential and river context is such that the South Green to Arklow Bridge area is considered to be of high sensitivity, and although construction will be locally temporary to short term, the likely effects on landscape/townscape during construction are considered to be temporary to short term, significant/moderate negative.

Arklow Bridge

In the immediate vicinity of the Arklow Bridge, the design of the interceptor sewer and quay wall has been developed so as to maintain the alignment of the existing quay wall immediately adjoining the bridge and to minimise potential adverse effects on the appearance and setting of Arklow Bridge. Construction of the sewer at the Arklow Bridge will be below the existing river bed.

Additionally, and arising from coordination of the proposed development with the proposed Arklow Flood Relief Scheme, the first two (most southern) arches of Arklow Bridge will require underpinning. The riverbed under these two arches will also be lowered by approximately 1m to mitigate against any potential flood risk associated with the proposed development. It should be noted that the riverbed under the first arch will accommodate the proposed sewer will be covered to the existing riverbed level. Once the sewer is installed, the riverbed under the first arch will be backfilled and finished to the existing riverbed level using salvaged granite flags from the South Quay wall further downstream. The granite flag finish will be similar to the existing riverbed detail under a number of the existing arches. The difference in riverbed levels at the first and second arch will be formed with a 1 in 2 slope that will be stone faced.

Arklow Bridge is a protected structure and a distinctive part of the urban fabric of Arklow town. It is of high sensitivity, and landscape/townscape effects during construction will be temporary to short term, significant/moderate negative.

River Walk

The River Walk section is approximately 450m long, and will be constructed using open cut and cover construction within the carriageway between Arklow Bridge and River Lane, and within the existing riverside footpath between River Lane and The Alps. Construction will require a series of connecting working areas along the carriageway, pathway and river edge, and localised traffic and pedestrian diversion and management will be required to maintain access. Pedestrian access to River Walk, from River Lane to the Alps, will be restricted for the duration of construction. Construction will require the removal of some of the existing river side trees along this section, including T1 to T11 and T22, T23, and T24. Tree protection in accordance with BS 5837:2012 will be established around T25 and T26, however given the confines of the site at these trees, specific arboricultural advice will be required and may pollarding may be considered.

The mixed-use residential, retail, commercial, town centre and riverine context is such that the area is considered to be of high sensitivity, and although construction will be locally temporary to short term, potential landscape/townscape construction effects are considered to be significant/moderate.

Alps SWO and Stormwater Tank

In the vicinity of the Alps SWO, the construction working area will extend from within the escarpment where the SWO will be located, and as far as the river bank, with pedestrian access restricted as noted above. A temporary pedestrian route will be established during construction to provide access to the upstream section of the river walk from the Vale Road. Existing trees T31 and T32 within the escarpment, together with existing shrub and ground cover, will be removed. On the riverbank, tree protection in accordance with BS 5837:2012 will be established around T29 and T30 to ensure these trees are retained.

This area, and in particular the riverbank walk, is considered to be of high sensitivity, and although construction will be locally temporary to short term, potential landscape/townscape construction effects are considered to be significant/moderate.

Effects on Views

Views will be altered during construction by the presence of construction compounds, movement of construction traffic and personnel, use of site lighting, and also by temporary and permanent changes to the existing environment necessitated by the construction work.

River Walk

Upstream of Arklow Bridge, within the river corridor, sensitive views include views along the river bank, to and from Arklow Bridge and the Avoca River, and views from the surrounding residential areas, footpaths and amenity areas.

The open cut nature of the construction of the sewer, together with the associated continuous hoarding around working areas and movement of construction traffic, will result in physical disruption, tree removal, pedestrian access restrictions and local traffic management between the Alps and Arklow Bridge, with potential for locally temporary to short term significant/moderate negative visual effects during construction.

Arklow Bridge

At Arklow Bridge, where the bridge joins South Quay and the proposed sewer is to be constructed under the first arch, the nature and detail of the construction activities has potential for temporary to short term significant/moderate negative visual effects during construction.

South Quay

Downstream of Arklow Bridge, sensitive views include views along the quays, to and from the Arklow Bridge and the Avoca River, and views from the surrounding residential areas, footpaths and amenity areas.

Along South Quay, construction will involve a combination of open cut construction in the river bed, installation and use of a temporary construction access causeway in the river channel, and construction of a new quay wall between Arklow Bridge and South Green. Construction further downstream will also involve tunnel shafts and tunnelling within the existing South Quay. Potential visual effects will arise from localised and continuous working areas and from the movement of construction traffic, and will be temporary to short term, and significant/moderate during construction.

North Quay

Along North Quay, construction will involve a tunnel shaft and open cut sewer connections in the river bank immediately upstream of Arklow Bridge, and tunnel shafts and tunnelling within the existing North Quay downstream of Arklow Bridge. Potential visual effects will arise from localised working areas and the movement of construction traffic, and will be temporary to short term, and moderate/slight during construction.

13.4.2.2 WwTP, Outfalls and Revetment

At the WwTP site, there will be a period of around 12 months of site clearance, demolition and civil works, followed by the upgrade to the revetment, construction of new buildings, outfalls and ancillary site development works for a further 20 months (approximately). A construction access road will be located along the toe of the existing revetment adjoining the sports facilities between Mill Road and Seaview Avenue.

Effects on Landscape/Townscape Character

The WwTP contractor compound will be established within the WwTP site. The WwTP site is part of an existing wider industrial setting of North Quay and is considered low sensitivity.

The scale and short-term nature of the compound in this context, and in the context of the South Quay and South Dock on the opposite side of the Avoca River, is such that it will not result in any significant effects on landscape/townscape character during construction.

During the first 12 months (approximately), construction activities will include the establishment of secure site hoarding, clearance of the site, demolition of the existing structures and ground based civil works. The most notable change in the character of the site area will result from the gradual demolition of the existing buildings – in particular the stack and the taller portion of the Old Wallboard factory building to the north of the WwTP site which are both quite distinctive from many directions and vantage points within and beyond the town environs.

The main construction works will include building the Inlet Works and Process buildings, ancillary site development works including building the Sludge Tank Enclosure, Administration building and site landscaping, excavation and reconstruction of the existing revetment to a higher level, and construction of the long sea outfall and SWO. The use of site lighting will be apparent from a range of locations around the town and along the coastal revetment, and will change in its configuration to suit construction requirements. The presence and use of terrestrial cranes, excavators and machinery, and specialist marine construction platforms and equipment, will be of particular visual interest. The operation of such equipment will be apparent from the coastal walkway and adjoining open spaces and amenity areas to the north, and from across the river at South Quay, South Dock and South Pier. This will not result in significant effects on landscape/townscape character during construction as such activities are commonplace in coastal, port and industrial settings.

Taken together with the scale and extent of overall development, construction activity, traffic, etc., landscape effects have the potential to be significant and negative at an immediate and more confined local level – particularly from Mill Road, from the more sensitive residential and amenity areas around Arklow Marina (including Marina Village), and to a lesser degree from the coastal walkway to the north and from the South Quay area where the development area is part of a wider quayside, port and coastal setting. It is noted that all of these areas are already significantly influenced by the nature and scale of existing industrial developments at the eastern end of Ferrybank in the North Quay and Mill Road area.

Effects on Views

Within the river corridor, from upstream of the Arklow Marina on North Quay and from upstream on Anchor Mews on South Quay, and from Arklow Bridge, the taller part of the existing Old Wallboard factory building (discounting the existing stack), is only partially and intermittently visible as it is located beyond the buildings and ridgelines of the Marina Village apartment buildings on North Quay. The change in views from these areas during construction will be the gradual removal of the existing Old Wallboard factory building, followed by the presence of cranes on the skyline as the new buildings are constructed.

As the proposed buildings are only around 60% of the height of the tallest ridge of the existing Old Wallboard ridge, it is anticipated that the new buildings will remain below the skyline of the Marina Village apartment buildings. Potential visual effects in this area will therefore be temporary to short term, slight and not significant during construction.

Downstream of Anchor Mews on South Quay (including the area around the Seafarers Memorial Garden, the harbour and South Pier), the existing Old Wallboard building is generally more visible than upstream as it is only partially screened by a number of industrial buildings and other structures located on North Quay. From this downstream area, construction activity including cranes on the skyline will be more apparent than further upstream, and the new buildings will also become visible on the skyline as they are constructed. Potential visual effects will be temporary to short term, moderate to slight during construction.

Visual effects during construction have the potential to be significant and negative at an immediate and more confined local level – particularly from Mill Road and from the more sensitive residential and amenity areas around Arklow Marina (including Marina Village), and to a lesser degree from the coastal walkway to the north where the WwTP site is part of a wider quayside, port and coastal setting. It is noted that all of these areas are already significantly influenced by the nature and scale of existing industrial developments at the eastern end of the North Quay and Mill Road area.

13.4.2.3 Cumulative Effects

A number of other development proposals are currently permitted or proposed in Arklow town as discussed in **Sections 2.6.6 and 2.6.7 of Chapter 2**. The nature and scale of these developments are such that construction of these projects at the same time as the proposed development, would not give rise to significant effects on the landscape and visual resource.

The proposed Arklow Flood Relief Scheme has also been considered during this assessment. It is likely that the proposed Arklow Flood Relief Scheme, if it proceeds, will include localised additions and modifications to quay walls, river embankments and to hard and soft landscaping. Design coordination between the proposed project and the design of the proposed Arklow Flood Relief Scheme to date is such that the detail of the proposed development anticipates the proposed Arklow Flood Relief Scheme, and that the proposed Arklow Flood Relief Scheme works can build on and be facilitated by the proposed development.

Cumulative construction effects of the proposed Arklow Flood Relief Scheme with the proposed development will not give rise to significant effects on the landscape and visual resource.

13.4.3 Assessment of Effects During Operation

During operation, the landscape and visual effects will primarily be associated with the presence of the WwTP at Ferrybank and modifications to parts of the South Quay wall as the interceptor sewers will be underground and the existing environment will be reinstated to its pre-construction condition, or similar.

13.4.3.1 Interceptor Sewers and Alps SWO and Stormwater Tank

The interceptor sewer network will be underground and once construction has completed, the existing environment will be mostly reinstated to its pre-construction condition, or similar.

Effects on Landscape/Townscape Character

The interceptor sewers will be underground and within the quay areas along the Avoca River. Upon completion of construction, all working areas impacted by construction activity will be reinstated to their pre-construction condition, including re-planting of trees removed to facilitate construction work areas and traffic diversion. On this basis, likely effects on landscape/townscape character have the potential to be locally short term moderate and negative leading to neutral as reinstated vegetation establishes during operation.

The area of the South Quay immediately downstream of Arklow Bridge will be altered in that South Quay will be widened by approximately 6m over a length of around 300m. This will present as a new quay wall (in place of the existing quay wall that is piecemeal in appearance and comprising concrete elements in poor condition and poor visual quality) and also as a wider quayside. The widened quayside will be seeded providing a grass verge along this section of South Quay. Effects on landscape/townscape character during operation have the potential to be locally permanent significant/moderate and positive as the quayside is widened providing additional riverside amenity space and the existing piecemeal quay wall is replaced with a new quay wall of consistent appearance and build quality.

In the immediate vicinity of the Alps SWO and stormwater tank, along its frontage onto the riverfront walkway, the new security fencing and marshalling area behind the fence will give rise to localised significant/moderate negative effects on landscape/townscape, as the built facility will be incongruous with the riverside setting.

Effects on Views

The effect on views arising from the interceptor sewers, once operational will be short term and moderate/slight as construction areas are reinstated and the quays and riverbank restored to their pre-construction condition.

Trees removed during construction will be replanted upon completion, and upon establishment, will further reduce the effect on views to negligible and neutral.

The new quay wall and widened quayside immediately downstream of Arklow Bridge will have a positive visual effect during operation in rationalising the piecemeal appearance of the existing quay wall and increasing riverside amenity space on the quay itself.

The security fencing and marshalling area behind the fence at the Alps SWO compound will have locally significant/moderate negative visual effects during operation as the fencing and infrastructure compound would be incongruous with the riverbank setting.

This will reduce over time to moderate/slight and neutral as the adjoining meadow grass areas establish and the presence of the compound becomes more accepted.

Effects on views are discussed further in conjunction with reference to representative photomontages in **Section 13.6.1.2**.

13.4.3.2 WwTP, Outfalls and Revetment

Effects on Landscape/Townscape Character

The WwTP will be a newly constructed industrial/infrastructural element within the Ferrybank area that has a long standing association with industrial facilities and activity. The architectural design and design rationale in **Chapter 4** describes how the WwTP has been designed to be of high architectural quality that is commensurate with and anticipates the emerging Waterfront development at Ferrybank and along North Quay. Lighting within the site area will mostly be low level bollard type lighting with low light spill. Lighting will be integral with the outer cladding of the buildings and will provide indirect and low intensity illumination of the outer surfaces of the building that will render the form of the building visible at night.

Whilst the WwTP buildings will take the place of the long established Old Wallboard building, the extent of change is such that effects on landscape/townscape character during operation have the potential to be perceived as significant and negative at an immediate and more confined local level of the site.

From the wider townscape and coastal areas, the WwTP buildings will be substantially lower than the high portion of the existing Old Wallboard building, and somewhat higher than the lower portion, and will generally have a reduced presence on the skyline when viewed from most directions. In particular, the WwTP buildings will have a negligible presence from Arklow Bridge and the upstream areas of South Quay, and will appear more consistent in height with other adjoining industrial buildings when viewed from the coastal walkway.

From the locality of the harbour area and South Pier, the proposed development will represent a substantial change and will be readily visible, however the character of the area from these locations is already strongly influenced by the nature and scale of existing industrial developments.

Landscape/townscape effects may be perceived initially as significant/moderate and negative, but will reduce over time to become neutral as the change becomes more accepted, and as the wider site area develops further as anticipated in the Arklow LAP.

The upgraded revetment will be around 2m higher than the existing revetment, but will otherwise be consistent in character with the existing and will not result in any significant effect on landscape/townscape character during operation.

The sea outfall pipes will be within the seabed and will not be visible and thus will not result in any significant effect on landscape/townscape character during operation.

Effects on Views

The visual environment, in the immediate locality of the WwTP site will change with the removal of the Old Wallboard building and the introduction of the proposed new buildings. While the proposed development will extend to a similar footprint as the Old Wallboard buildings, it will be substantially lower than the high portion of the existing Old Wallboard building, and somewhat higher than the lower portions. As such, the proposed development will generally be less prominent than the existing, but from certain areas, particularly from the downstream parts of South Quay, from the harbour area and from South Pier, the expanse of the building will be more noticeable. The visual effects have potential to range initially from locally Significant/Moderate to Moderate/Slight and negative during operation, reducing to neutral over time as the change becomes accepted.

From with wider townscape, from Arklow Bridge and further upstream, the visual effects have the potential to be Slight/Not Significant and neutral during operation.

Effects on views are discussed further in conjunction with reference to representative photomontages in **Section 13.6.1.2**.

13.4.3.3 Cumulative Effects

A number of other developments are currently permitted or proposed in Arklow town as discussed in **Sections 2.6.6 and 2.6.7 of Chapter 2**. The nature and scale of these developments are such that development of these projects in combination with the proposed development would not give rise to significant effects on the landscape and visual resource.

In the locality of the proposed WwTP at the Old Wallboard site, Ferrybank, the Arklow LAP anticipates substantial and more intensive mixed use redevelopment along the North Quay and around the Arklow Marina that will transform this area from its current derelict industrial character to a new urban waterfront setting.

Immediately west of the proposed WwTP, there is an existing grant of permission, Reg. Ref. 15857, for the demolition of the existing industrial unit between Mill Road and the Arklow Marina, and for redevelopment to include two five storey mixed use blocks with residential and retail uses.

It is likely that additional mixed use developments will be proposed along North Quay facing the Avoca River; between Arklow Marina and Mill Road; and around the northern parts of Mill Road. Such developments would intensify the built environment of the locality and gradually transform its current derelict and under-utilised industrial appearance to a more intensive and active urban environment. While development as anticipated in the Arklow LAP will result in substantial change in the built environment, however, such change is planned, and each individual development will be subject to separate applications for planning, in EIA if appropriate, and environmental effects will be considered in any grants of permission.

The planned Arklow Flood Relief Scheme (FRS) has also been considered during this assessment. It is likely that the FRS, if it proceeds, will include localised additions and modifications to quay walls, river embankments and to hard and soft landscaping. Design coordination between the proposed project and the design of the FRS project to date is such that the FRS works will build on and be facilitated by the proposed development works. As such, cumulative operational effects of the FRS project in combination with the proposed development will be localised along the quays and riverfront, and are not likely to give rise to significant effects on the landscape and visual resource. The Arklow FRS will be subject to its own EIAR in due course.

13.5 Mitigation Measures and Monitoring

Mitigation measures have been considered from the outset of the design development for the proposed development, both in isolation, but also in conjunction with the planned Arklow Flood Relief Scheme.

13.5.1 Mitigation During Construction

Mitigation during construction in relation to landscape and visual effects include:

- The nature of the construction activities in the townscape environment is such that there will always be disruption. Mitigation during construction relates to phasing of construction activity to different working areas sequentially to minimise the duration of significant effects arising from construction activities at any one location, and/or effective pedestrian and traffic management to minimise inconvenience and ensure access is maintained as appropriate.
- While the establishment of working areas, tunnelling shafts and traffic diversion will require felling of many existing quayside trees, the detailed design has identified opportunities to protect and retain most of the more valuable Willow trees along the riverside walkway upstream of Arklow Bridge that contribute to the setting of the Avoca River and provide a high degree of visual amenity in this locality.
- Where trees are required to be removed along South Quay and North Quay for construction, such trees are of lower value and will be re-planted post construction so as to reinstate the existing visual environment along the quayside.
- All tree protection works will be implemented strictly in accordance with BS5837:2012
- Requirement for detailed construction management plans that set out robust tree protection methodologies in accordance with BS5837: 2012, where trees are to be retained, including in particular the Willow trees upstream of Arklow Bridge, and ensuring that tree protection is implemented and maintained throughout construction.

- Careful dismantling, storage and ultimate reinstatement of the Seafarers Memorial Garden has been identified as important to the locality and contemporary culture of the area, and a detailed method statement will be required from the appointed contractor to ensure the feature is satisfactorily reinstated following construction.
- For the most part, (excluding the land reclamation areas downstream of Arklow Bridge along South Quay), the existing finishes will be reinstated post construction. Where land is reclaimed downstream of Arklow Bridge, the widened quayside will incorporate a simple grass verge between the existing low wall concrete kerb upstand and the new quay wall. This will provide a quayside finish that is consistent with the existing quayside, and will facilitate potential further public realm plans anticipated as part of the proposed Arklow Flood Relief Scheme); and
- Reinstated vegetation is undertaken by a suitably qualified landscape contractor, and their contract will include 2 year aftercare.

13.5.2 Mitigation During Operation

Mitigation during operation in relation to landscape and visual effects will include:

- The design of the proposed development has been coordinated with the separate design development of the planned Arklow Flood Relief Scheme, including coordination of the quay wall design at South Quay – Arklow Bridge and other structural components to avoid duplication and redundancy, and also in anticipation of quayside public realm upgrades on River Walk, South Quay and North Quay likely to occur as part of the planned Arklow Flood Relief Scheme.
- All tree protection works, planting and aftercare will be implemented strictly in accordance with BS5837:2012.
- As set out in **Chapters 3 and 4**, the architectural vision and design details anticipate the WwTP as a high quality architectural set-piece that will take the place of the Old Wallboard facility at Ferrybank. It is to contribute to the regeneration of the area and to catalyse future urban waterfront development as anticipated in the Arklow LAP.
- The specimen building design at the proposed WwTP will be further developed by the Architect. The Architects services will be maintained, to ensure that all build ups and finishes are completed to the correct specification and standard of build quality; and
- The detail and alignment of the interceptor sewer and the land reclamation proposals along South Quay have been developed to protect the setting and integrity of Arklow Bridge. The full extent of the nineteen arches will remain visible from both upstream and downstream, and the southern quay wall detail will be stepped locally to retain the integrity and visibility of the first (i.e. southernmost) arch.

- The proposed structural interventions and reinforcement to the Arklow Bridge will have negligible visual effect above low water level. Nonetheless, the alignment of the interceptor sewer under the southernmost arch, and the riverbed in the adjoining two arches will be reduced. The trench for the sewer will be backfilled and covered to the level of the existing riverbed and finished using salvaged flag stones from the existing south quay wall further downstream. During operation, this will provide a riverbed finish through the southern arch that is consistent with other bridge arches, and will also purposefully reuse the salvaged fabric of the south quay.

13.5.3 Monitoring

13.5.3.1 Monitoring During Construction

A Construction Environmental Management Plan (CEMP) will be required to ensure the mitigation measures set out above are implemented during construction, and that any shortcomings are remedied immediately. The Outline CEMP is included in **Appendix 5.1** and it is likely that the appointed contractor will need liaise with residents and other stakeholders in advance of establishing working areas so as to minimise the effects of working areas on residents and their properties. Additionally, reinstatement of the Seafarers Memorial Gardens will require the provision of a proposed reinstatement layout for agreement with the local community and Local Authority prior to carrying out the works.

13.5.3.2 Monitoring During Operation

Monitoring during operation relates principally to the aftercare of reinstated landscape areas to ensure the proper establishment of soft landscape as proposed. Any plants or trees that fail will be required to be replaced in the next available planting season.

13.6 Residual Effects

13.6.1.1 Overview

Residual landscape/townscape effects will generally relate to the new WwTP element and revetment, the widened South Quay area immediately south of Arklow Bridge, and the Alps SWO and stormwater storage compound as it interfaces with the riverside walkway.

Residual Landscape/Townscape effects within the townscape of Arklow and its wider environs will vary considerably throughout the townscape of Arklow town and its wider environs, and these are described with reference to the series of photomontages for a range representative locations throughout the project development area and its context.

The overall residual landscape/townscape and visual effect is considered to be moderate and neutral, or less.

13.6.1.2 Photomontages

A series of photomontages, illustrating the physical and visual appearance of the proposed development, has been prepared from a range of publicly accessible locations that are representative of the river corridor within the town and of the more open views in the surrounding environment. The Photomontage views show the post construction scenario, and are included within **Appendix 13.1 and Volume 3**.



Figure 13.21: Location of photomontage viewpoints (Refer to **Appendix 13.1 and Volume 3** for further detail)

Views 1 and 2

Views 1 and 2 (Refer to **Figures 13.1.1A to 13.1.2B in Volume 3 and Appendix 13.1**) are along River Walk approaching the Alps SWO and stormwater storage site from either direction. The natural setting and the amenity value of this location render the sensitivity as high.

While the majority of works will be underground at this location, the introduction of a fenced utility compound and the removal of some of the distinctive riverside willow trees will change the character and visual amenity of the riverside walk.

The landscape and visual effect on views from this locality will be localised significant/moderate and negative, reducing over time to moderate/slight neutral as the reinstated trees and meadow grasses become established and the presence of the compound becomes more accepted.

Views 3 and 4

Views 3 to 4 (Refer to **Figures 13.1.3A to 13.1.4B in Volume 3 and Appendix 13.1**) are along River Walk between the town carpark and Condren's Lane, and looking downstream. The town centre location and natural setting of this location render the sensitivity as high.

There is open visibility along the river edge to the Avoca River. The interceptor sewers are to be constructed using open cut trenches along this section, however the existing environment will be reinstated to its pre-construction condition upon completion. These views illustrate limited changes post construction other than the replacement of some riverside trees further downstream and slightly increased visibility of buildings at the Bridgewater Shopping Centre in the distance.

The landscape and visual effect on views from this locality will be slight/not significant and neutral as reinstated trees become established.

View 5

View 5 (refer to **Figures 13.1.5A and 13.1.5B in Volume 3 and Appendix 13.1**) is from River Walk at Condren's Lane looking downstream. The town centre location and riverside setting of this location render the sensitivity as high.

The character of the view is similar to that of View 3 and 4 however there are presently more riverside trees at this location, and the existing Old Wallboard building and chimney are partially visible in the distance. Some of the foreground riverside trees will be removed to facilitate open cut trench construction. Post construction, foreground trees will be replanted and the existing Old Wallboard building and chimney will be gone. Visibility of the proposed WwTP will be negligible as it will appear at a similar height but behind the ridges of the Marina Village development on North Quay. Views downstream towards North Quay will be more open.

The landscape and visual effect on views from this location will be moderate/slight negative, reducing over time to slight/not significant and neutral as reinstated trees become established.

Views 6 to 8

Views 6 to 8 (Refer to **Figures 13.1.6A to 13.1.8B in Volume 3 and Appendix 13.1**) are from South Quay between Arklow Bridge and Fogarty's Terrace. The architectural heritage value of Arklow Bridge and the residential nature of South Quay render the sensitivity as high.

Views from this area are of the Avoca River and the wider North Quay, and of the immediate locality of South Quay. The Old Wallboard building and chimney are readily visible beyond the Marina Village development, and the South Quay comprises a simple concrete upstand that sits on top of the of the old quay wall below the road level. Post construction, the Old Wallboard building and chimney will no longer be on the skyline.

Visibility of the proposed WwTP building will be negligible from Arklow Bridge as the WwTP will appear at a similar height but behind the ridges of the Marina Village development on North Quay, and will increase gradually further downstream as the profile of the Process building starts to come into view in the distance.

Along this section of South Quay, the biggest change will be to the immediate quayside as the quays will be extended in width by c. 6.0m providing a new grass amenity area along the quayside.

The landscape and visual effect on views from this locality will be significant/moderate and positive with the wider quayside incorporating a new grass amenity space.

Views 9 and 10

View 9 and 10 (Refer to **Figures 13.1.9A to 13.1.10B in Volume 3 and Appendix 13.1**) are from South Quay between South Green and Anchor Mews looking down and upstream. The residential nature of the area renders the sensitivity as high.

Quayside trees, when in leaf, tend to focus views along South Quay while permitting views directly across the river to North Quay. Many of the trees along the quayside will be removed to facilitate the establishment of hoarded working areas, however these will be re-planted post construction as part of the reinstatement works. In addition, a number of front gardens of private properties boundaries will be encroached on during construction, and these will be reinstated to their pre-construction condition. The proposed WwTP is not particularly visible in either of these two views, however, where views between the trees and across the river are available, the WwTP would be apparent in a similar manner to that shown in View 11 below.

The landscape and visual effect on views from this locality will be significant/moderate and negative post construction, leading to slight/not significant and neutral as the reinstated trees become established and restore the appearance of the quayside tree screening.

Views 11 to 13

View 11 to 13 (Refer to **Figures 13.1.11A to 13.1.13B in Volume 3 and Appendix 13.1**) are from South Quay at the Seafarers Memorial Garden, at the entrance to Arklow Harbour looking directly across the Avoca River, and from south of the Arklow Harbour. The amenity and substantially residential context renders the sensitivity of this area as high.

From South Quay, there are panoramic views of the mixed use North Quay area and an increasing sense of the derelict industrial area at Ferrybank across the river, the Arklow Harbour and its industrial context, and of the transition from the town to the sea. Post construction, the Old Wallboard building and chimney will be gone, and the WwTP plant buildings will be clearly visible as contemporary industrial structures forming a new backdrop to the remaining industrial structures in the foreground along North Quay. Full details of the architectural quality of the buildings and site landscape strategy are provided in **Chapter 4**.

The landscape and visual effect on the views from these locations may be perceived initially as significant/moderate and negative as the new buildings will represent a substantial change to the appearance of the area, and alter the skyline of the Ferrybank site. Landscape and visual effects will however reduce over time to become neutral as the change becomes more accepted, and also as sites along the North Quay are developed as anticipated in the Arklow LAP and will form a new urban riverfront elevation along North Quay and will gradually screen the WwTP from the river corridor.

View 14

View 14 (Refer to **Figures 13.1.14A and 13.1.14B in Volume 3 and Appendix 13.1**) is from the end of South Pier at the entrance to the town from the Irish Sea. The existing revetment, piers and Old Wallboard facility present a strong built edge to the sea, and the harbour, with parts of the town and hills visible beyond. The coastal, port, amenity and industrial context render the sensitivity of this area as medium.

Post construction, the WwTP including the upgraded revetment will present a modified but strong built edge to the sea. The landscape and visual effect on the view from this location will be moderate/slight and negative as the scale of the new buildings will represent a substantial change to the appearance of the area, and visual connection to the town and hills beyond will be reduced.

View 15

View 15 (Refer to **Figures 13.1.15A and 13.1.15B in Volume 3 and Appendix 13.1**) is from North Quay in the vicinity of the Aldi store. The residential, retail, commercial and riverside context render the sensitivity as high.

The existing mixed use buildings along North Quay substantially limit visibility eastwards to the area of the proposed WwTP facility. The chimney of the existing Old Wallboard facility is intermittently visible over and beyond the ridgelines of the foreground and intermediate buildings. Post construction, the Old Wallboard building will no longer be visible, and the proposed WwTP buildings will be screened from view behind the ridgelines of the foreground and intermediate buildings. A small number of trees along North Quay that will be removed to facilitate the establishment of construction work areas will be replanted.

The landscape and visual effect on the views from along North Quay are slight/not significant and neutral.

Views 16 and 17

Views 16 and 17 (Refer to **Figures 13.1.16A to 13.1.17B in Volume 3 and Appendix 13.1**) are from the eastern environs of Marina Village at the Arklow Marina and from within the Marina Village development boundary. The residential and amenity nature of this area is such that the sensitivity is high.

The external context from these areas is of the existing substantially derelict industrial lands at Ferrybank. Currently, the Old Wallboard building and chimney are clearly visible amongst other industrial units to the east of Marina Village and around the Arklow Marina. Post construction, the proposed WwTP buildings will take the place of the Old Wallboard facility.

It will be partially visible in the context of remaining industrial units, but not alter the industrial character of that context.

The landscape and visual effect on the views from these locations will be slight/not significant and neutral.

Views 18 and 19

Views 18 and 19 (Refer to **Figures 13.1.18A to 13.1.19B in Volume 3 and Appendix 13.1**), are from the existing revetment walkway approaching the WwTP site from the north. The coastal and amenity context render the sensitivity as high.

Views from this coastal location are expansive and include the seascape, landscape and townscape. The Old Wallboard building and chimney are the tallest elements in the view southwards and mark the Ferrybank industrial area at the end of the revetment. The proposed WwTP will take the place of the Old Wallboard facility, but will be lower than it and will appear more consistent in height with the ridges of other adjoining industrial units. It will not be as immediately noticeable as the existing facility but its presence will continue to mark the Ferrybank industrial area at the end of the revetment.

The landscape and visual effect on the views from these locations will be significant/moderate and neutral.

View 20

View 20 (Refer to **Figures 13.1.20A to 13.1.20B in Volume 3 and Appendix 13.1**) is from the R772 Dublin Road approaching Arklow from the north. The sensitivity of the view is medium.

At this location, the existing Old Wallboard building and chimney come into view framed by the road corridor in the distance beyond the rooftops at Ferrybank. Following construction, the proposed WwTP will also be visible but its form and reduced height are such that it will be less noticeable than the existing building.

The landscape and visual effect on the views from this location will be not significant.

13.7 References

EPA (2015) *Advice Notes for preparing Environmental Impact Statements*

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European Commission (2017) *Environmental Impact Assessment of Projects: Guidance on the Preparation of the Environmental Impact Assessment of Projects*

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UK Landscape Institute and IEMA (2013). *Guidelines for Landscape and Visual Impact Assessment; 3rd Edition*

Wicklow County Council (2018) *Arklow and Environs Local Area Plan 2018-2024*

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