



RIVER BARROW ACTIVITY CENTRE
PEOPLES PARK
CARLOW TOWN
Co. CARLOW

2021

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Declaration

	Job Details					
Job Title:	ENVIRONMENTAL IMPACT ASSESSMENT SCREENING					
Job Number:	21271					
Issue Date:	24 th SEPTEMBER 2021					
Revision:	0					
	Client Details					
Client:	CARLOW COUNTY COUNCIL	•				
Site Address:	PEOPLES PARK, CARLOW TO	OWN, CO.CARLOW				
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1.0 INTRODUCTION

1.1 PROJECT BRIEF

Carlow County Council are seeking approval for the proposed development of a Water Activity & Community Centre with all associated works from An Bord Pleanala. The development at two sites (Site A and Site B) at People's Park, Carlow, Co. Carlow would consist of the following;

- Construction of a 1.5 storey café building with mono-pitch roof and outdoor terrace facing south. The building will comprise of a seating area, kitchen, storage, toilets and plant.
- 2 stories facility building with mono-pitch roof containing changing rooms and ancillary facilities, storage room, drying room, showers, plant room, universally accessible facilities and two social enterprise units on ground floor with community space, training room and associated storage on first floor;
- Canopy spanning between facilities building and café, part covering outdoor seating area;
- New public access from activity centre to bachelors walk comprising steps and seating area;
- Single storey boat storage building with part flat, part raked roof to contain three separate storage zones with rental space and associated plant room;
- Alterations to existing vehicular access from barrow street with turnaround/loading and unloading area;
- Associated car and bicycle parking split between two sites; A and B;
- Public lighting to all pedestrian areas and associated car parking;
- Hard landscaped central space with boat washdown area and associated surface water UV treatment system;
- Site drainage works including connection to existing public foul and storm systems;
- Removal of public toilet and storage containers adjacent the site and removal of existing trees on site to facilitate the works:
- Site boundary and all associated site works.

This EIA Screening assessment document has been prepared by PES Ltd on behalf of and for the exclusive use of the Carlow County Council with respect to an application for approval to An Bord Pleanala.

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This EIA Screening has been prepared with reference to Schedules 5 and 7 of the Planning and Development Regulations 2001, as amended, and the following documents:

- The Irish Planning and Development Regulations 2001 to 2018 as amended (Environmental Impact Assessment) Regulations 2018 (S.I. No. 296 of 2018).
- Directive 2014/52/EU of the European Parliament and of the Council (2014) On the Assessment of the Effects of Certain Public and Private Projects on the Environment. Luxembourg: Office for Official Publications of the European Communities.
- Environmental Protection Agency (2017). Draft Guidelines on the Information to be Contained in Environmental Impact Assessment Reports. Dublin 14, EPA Publications.
- European Commission (2001). Guidance on EIA Screening. Luxembourg: Office for Official Publications of the European Communities.

1.2 DESCRIPTION OF THE DEVELOPMENT

1.2.1 Site Location

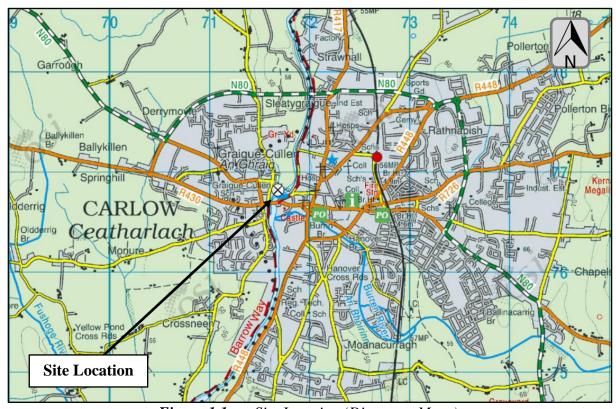


Figure 1.1: Site Location (Discovery Maps)

The site is located in the townland of Graigue, Co. Carlow. The existing site is located within Carlow Town Park approximately 400m from Carlow Town centre, on the west bank of the River Barrow. The site is surrounded by a mixture of commercial properties, residential properties and amenity gardens. The River Barrow flows south along the south-eastern

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boundary of the site. Site area for the Water Activity and Community Centre (Site A) is 0.3651 hectares and site area for the car park (Site B) to the north-west is 0.095 hectares.

Site A (Water Activity and Community Centre) is located at Irish Grid Reference (271675 E, 176830 N) or Irish Transverse Mercator (671619 E, 676860 N) whereas Site B (Car Park) is located at Irish Grid Reference (271649 E, 176909 N) or Irish Transverse Mercator (671593 E, 676938 N). The region where the sites are positioned is predominantly urban, on the western end of Carlow Town with commercial premises and residential properties located nearby.

Currently the sites are in a mixed state, comprising of buildings, hard-core surfaces, bare ground and greenfield.

- Site A is located on the southern end of Peoples Park, a large recreational area which consists of a playground and large spaces of recreational grassland.
- Site B is located approximately 65 metres to the north-west of Site A. This site consists primarily of greenfield.

Access to the sites is via Maryborough Street (L4003) which runs from north to south along the western end of Peoples Park.

1.2.2 Description of the Development

The proposed project seeks to construct a Water Activity and Community Centre at Peoples Park, Graigue, Carlow, Co. Carlow. The proposed development will consist of the following;

- Construction of a 1.5 storey café building with mono-pitch roof and outdoor terrace facing south. The building will comprise of a seating area, kitchen, storage, toilets and plant.
- 2 stories facility building with mono-pitch roof containing changing rooms and ancillary facilities, storage room, drying room, showers, plant room, universally accessible facilities and two social enterprise units on ground floor with community space, training room and associated storage on first floor;
- Canopy spanning between facilities building and café, part covering outdoor seating area;
- New public access from activity centre to bachelors walk comprising steps and seating area;
- Single storey boat storage building with part flat, part raked roof to contain three separate storage zones with rental space and associated plant room;
- Alterations to existing vehicular access from barrow street with turnaround/loading and unloading area;
- Associated car and bicycle parking split between two sites; A and B;
- Public lighting to all pedestrian areas and associated car parking;
- Hard landscaped central space with boat washdown area and associated surface water UV treatment system;

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- Site drainage works including connection to existing public foul and storm systems;
- Removal of public toilet and storage containers adjacent the site and removal of existing trees on site to facilitate the works;
- Site boundary and all associated site works.

During the construction phase, site clearance works would be undertaken, this would involve the removal of trees and amenity grassland within the site boundary. A landscape plan has been prepared by Studio Town Land that will include native and non-invasive ornamental species. No works will take place within a riparian habitat of the River Barrow.

The existing OPW flood defence wall will be altered to allow for pedestrian steps to access Bachelors Walk while maintaining the flood defence height.

During excavation works, excavated soil would be temporarily stored onsite before been removed to a licenced facility if a re-use in reinstatement works where not possible. Approximately 2037m³ of material will be removed from the site. This material will be inspected by the construction contractor to determine if can be reused at the site during construction works or removed to a licenced waste facility. See IGSL Ltd site assessment for soil test results (Document Ref: IGSL_23016). Following site clearance works, construction of the water activity and community centre and all associated works would commence.

The expected construction timeframe would be approximately eighteen months.

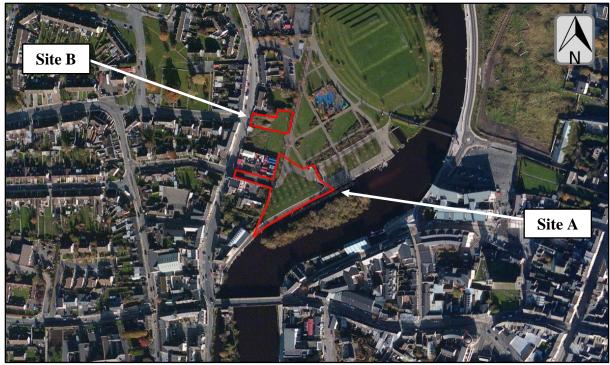


Figure 1.2: Proposed Development Sites (A and B) at People's Park

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The Café and ancillary areas will have a floor space of 109m^2 , boat rental/storage will be 310m^2 , the ground floor of the facilities building will be 229m^2 and the first floor of the facilities building will be 157m^2 . This gives a total floor area of 805m^2 for the various developments at Site A. The total area of the proposed car park at Site B is 0.095 hectares.

Waste water will connect with the municipal sewer. Stormwater, comprised of rainwater runoff from the roofs and hard surfaces will be directed to a new onsite drainage system with a hydrocarbon interceptor before connecting to the existing drainage network within Carlow Town Park.

Water from boat washing facilities will pass through a silt chamber with a gravity flow with a UV light for biological control before connecting to the surface water drainage system at Carlow Town Park. This will be installed by Molloy Environmental Systems. No chemicals will be used at the boat washing facility.

Additional ancillary car parking with 14 spaces will be located approximately 65m to the north west of the main building with a total area of approximately 0.096Ha (Site B). The proposed finish for the carpark at Site B is a porous asphalt. The access road surface water runoff will connect to the existing drainage network within the vicinity of the carpark.

Existing gate access at Barrow Street will be moved outwards to allow for a greater turning radius for turning boat trailers. A new timber sheeted metal gate will also be installed at the site entrance along with a keypad.

A bicycle area and car parking area will be located adjacent to the turning area on the south-west section of the site. Further bicycle parking will be located on the eastern end of the site.

There are no proposed alterations to the pontoon or the guarding along Bachelors Walk.

The proposed heating system will be air to water heat pump.

The proposed operational phase of the proposed development will provide a base for current activities already taking place within Carlow Town such as the park run, cycling, rowing, canoeing, kayaking, dragon boats and similar water-based activities. The main building will be in operational use after dark in the winter months for training facilities, community meetings and recreational use.

Activities on the River Barrow will be initially confined to the existing water-based sports and recreational use already in place by the clubs within Carlow Town such as Carlow Rowing Club, Carlow Triathlon Club, Cliff Reid Boat Trips, Carlow Scout Group and Graham Wall Kayaking. The proposed development will act as a base to existing events on the River Barrow such as Carlow Rowing Regatta, The Dragon Run, Carlow Triathlon and Barrow Dragon Boat Regatta. No water-based activities will take place during the night.

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2.0 PES LTD - COMPETENCY & EXPERIENCE

PES is a leading environmental consulting firm based in Carlow, Ireland. PES was formed in 2005 by environmental consultant Mr. Mike Fraher who has over two decades of experience working in the environmental consultancy industry, both in Ireland and in the United Kingdom.

The PES team are competent and experienced in preparing environmental planning documents. PES has completed environmental works in a wide range of industries including construction, waste management, industrial and intensive agriculture.

This Environmental Impact Assessment Report Screening has been prepared by experienced environmental consultants within PES Ltd.

Mr Mike Fraher has over 25 years of consultancy experience and has a B.Sc. Degree in Environmental Sciences from the University of Glamorgan, Cardiff in Wales and a Diploma in Food Sciences from Cork Institute of Technology.

Mr. Martin O'Looney has over seven years' consultancy experience and has a B.Sc. Degree in Environmental Science and Technology from Sligo Institute of Technology.

Dr. Ross Donnelly-Swift has a BSc (Hons) Biology from Maynooth University NUI, a MSc Environmental Science from Trinity College Dublin and a PhD Biosystems Engineering from University College Dublin.

Mr. Nial Ryan has over five years' consultancy experience and has a BSc. in Applied Physics from Dublin City University, an MSc. in Medical Device Regulatory Affairs, a Certificate in Introduction to AutoCAD, and a Certificate in Environmental, Health & Safety Management all from Institute of Technology Carlow.

Mr Tom Madden has over three years' consultancy experience and has a BSc Degree in Environmental Science from the University of Limerick.

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3.0 LEGISLATIVE CONTEXT & MANDATORY EIAR REVIEW

3.1 RELEVANT LEGISLATION

The requirements for Environmental Impact Assessment (EIA) are derived from Council Directive 85/337/EEC (as amended by Directives 97/11/EC, 2003/35/EC, and 2009/31/EC) and as codified and replaced by Directive 2011/92/EU of the European Parliament and the Council on the assessment of the effects of certain public and private projects on the environment (amended in turn by Directive 2014/52/EU).

This EIA Screening is drafted based on the requirements of EU Directive 2014/52/EU.Under the Directive, 2014/52/EU of the European Parliament and of the Council of 16th April 2014 "The assessment of the effects of certain public and private projects on the environment" Annex I and Annex II class activities are described.

EIA Directives were transposed into Irish law under the Planning and Development Regulations 2001, as amended.

This EIA Screening has been prepared with reference to Schedule 5 and 7 of the Planning and Development Regulations.

The first step in screening is to determine whether a project is listed in either Part 1 or Part 2 of Schedule 5, which describes the thresholds of Part 1 projects, which require a mandatory Environmental Impact Assessment Report (EIAR), or Part 2 projects which may have the potential to pose a risk to the environment, and require screening to determine if an EIAR is required.

Schedule 7 is to be used in the case of screening determination (i.e. information to be provided by the developer on projects listed in Part 2). Schedule 7A details the criteria for determining whether a sub-threshold development would, or would not be likely to have significant effects on the environment.

3.2 SCHEDULE 5 OF THE IRISH STATUTORY INSTRUMENT (S.I. No. 296 OF 2018).

Schedule 5, of the Planning and Development Regulations 2001 refers to development for the purposes of Part 10 (Environmental Impact Assessment Report) of the planning regulations.

An EIAR is required to accompany a planning application for development of a class set out in Schedule 5 of the Planning and Development Regulations 2001 which exceeds a limit, quantity or threshold set for that class of development. An EIAR will also be required by the planning authority in respect of sub-threshold development where the authority considers that the development would be likely to have significant effects on the environment (article 103).

The proposed development would not fall under any of the classes of development listed in Schedule 5, Part 1 of the Planning and Development Regulations. Therefore, it is considered that a mandatory EIA is not applicable to this project.

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3.3 SCHEDULE 7 OF THE IRISH STATUTORY INSTRUMENT (S.I. No. 296 OF 2018)

The Annex III EIA screening criteria of Directive 2014/52/EU are transposed into Irish law as Schedule 7, (parts 1 to 3) of the Irish Planning and Development Regulations 2001.

Schedule 7, sets out the Irish Member States criteria used for determining the likelihood of significant impacts from a development on the environment.

Part 1: Characteristics of the Proposed Development

The characteristics of proposed development, in particular;

- (a) the size and design of the whole of the proposed development,
- (b) cumulation with other existing development and/or development the subject of a consent for proposed development for the purposes of section 172(1A)(b) of the Act and/or development the subject of any development consent for the purposes of the Environmental Impact Assessment Directive by or under any other enactment,
- (c) the nature of any associated demolition works,
- (d) the use of natural resources, in particular land, soil, water and biodiversity,
- (e) the production of waste,
- (f) pollution and nuisances,
- (g) the risk of major accidents, and/or disasters which are relevant to the project concerned, including those caused by climate change, in accordance with scientific knowledge, and
- (h) the risks to human health (for example, due to water contamination or air pollution).

Part 2: Location of the Proposed Development

The environmental sensitivity of geographical areas likely to be affected by the proposed development, with particular regard to;

- (a) the existing and approved land use,
- (b) the relative abundance, availability, quality and regenerative capacity of natural resources (including soil, land, water and biodiversity) in the area and its underground,
- (c) the absorption capacity of the natural environment, paying particular attention to the following areas:
 - (i) wetlands, riparian areas, river mouths;
 - (ii) coastal zones and the marine environment;
 - (iii)mountain and forest areas;
 - (iv)nature reserves and parks;
 - (v) areas classified or protected under legislation, including Natura 2000 areas designated pursuant to the Habitats Directive and the Birds Directive and;
 - (vi)areas in which there has already been a failure to meet the environmental quality standards laid down in legislation of the European Union and relevant to the project, or in which it is considered that there is such a failure;
 - (vii) densely populated areas;
 - (viii) landscapes and sites of historical, cultural or archaeological significance.

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Part 3: Characteristics of the Potential Impacts

The likely significant effects on the environment of proposed development in relation to criteria set out under paragraphs 1 and 2, with regard to the impact of the project on the factors specified in paragraph (b)(i)(I) to (V) of the definition of 'environmental impact assessment report' in section 171A of the Act, taking into account;

- a) the magnitude and spatial extent of the impact (for example geographical area and size of the population likely to be affected);
- b) the nature of the impact;
- c) the transboundary nature of the impact;
- d) the intensity and complexity of the impact;
- e) the probability of the impact;
- f) the expected onset, duration, frequency and reversibility of the impact;
- g) the cumulation of the impact with the impact of other existing and/or development the subject of a consent for proposed development for the purposes of section 172(1A)(b) of the Act and/or development the subject of any development consent for the purposes of the Environmental Impact Assessment Directive by or under any other enactment, and:
- h) the possibility of effectively reducing the impact.

The flow chart below describes the EIA Screening process. This infographic is commonly referred to in EIA Screening reports and is taken from the Environmental Protection Agency's 2017 "Draft Guidelines on the Information to be Contained in Environmental Impact Assessment Reports" (Figure 1).

Schedule 7A, sets out the Irish Member States criteria used for determining the likelihood of significant impacts from a sub-threshold development on the environment.

- 1. A description of the proposed development, including in particular;
 - (a) a description of the physical characteristics of the whole proposed development and, where relevant, of demolition works, and
 - (b) a description of the location of the proposed development, with particular regard to the environmental sensitivity of geographical areas likely to be affected.
- 2. A description of the aspects of the environment likely to be significantly affected by the proposed development.
- 3. A description of any likely significant effects, to the extent of the information available on such effects, of the proposed development on the environment resulting from;
 - (a) the expected residues and emissions and the production of waste, where relevant, and
 - (b) the use of natural resources, in particular soil, land, water and biodiversity.
- 4. The compilation of the information at paragraphs 1 to 3 shall take into account, where relevant, the criteria set out in Schedule 7.

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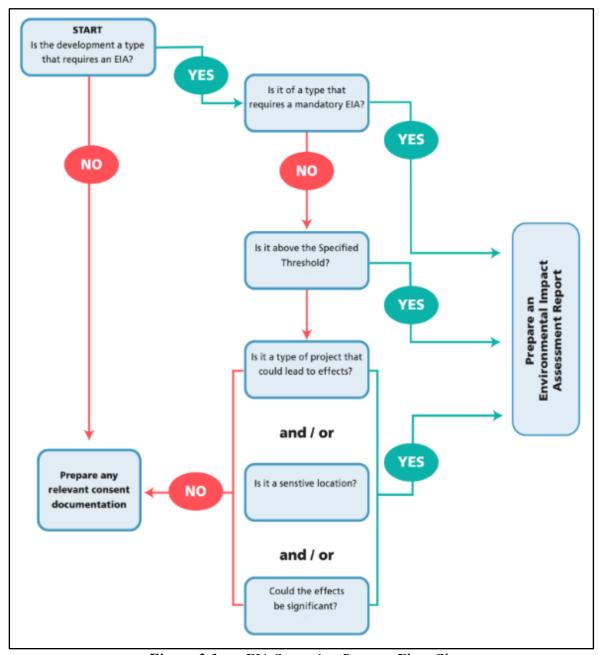


Figure 3.1: EIA Screening Process Flow Chart

The overall purpose of this Screening Report is to identify and detail the findings of desktop and available field studies using the precautionary principle undertaken to analyse the impacts, if any, of the proposed development on the receiving environment and, based on the results, decide whether or not an EIAR is required.

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3.4 Proposed Development and Planning Thresholds

The proposed development would not fall under any of the classes of development listed in Schedule 5, Part 1 of the Planning and Development Regulations. Therefore, it is considered that a mandatory EIA is not applicable to this project.

The proposed development will lead to the creation of a new Water Activity and Community Centre.

This type of development does not fall under any of the classes of development listed in Schedule 5, Part 2, and Class 12: Tourism and Leisure, of the Planning and Development Regulations

The proposed development may be classified within the following activities:

Schedule 5, Part 2, Class 10(b). Infrastructure project

- (ii) Construction of a car-park providing more than 400 spaces, other than a car-park provided as part of, and incidental to the primary purpose of, a development.
- (iv) Urban development which would involve an area greater than 2 hectares in the case of a business district, 10 hectares in the case of other parts of a built-up area and 20 hectares elsewhere
 (In this paragraph, "business district" means a district within a city or town in which the predominant land use is retail or commercial use.)

However, the proposed development would be sub-threshold for these activities.

The proposed project is located adjacent to a Natura 2000 protected site and has the potential to impact upon surface water and residential amenity. Therefore, this EIA screening assessment has been carried out under Schedule 5, Part 2, Class 15: "Any project listed in this Part which does not exceed a quantity, area or other limit specified in this Part in respect of the relevant class of development but which would be likely to have significant effects on the environment, having regard to the criteria set out in Schedule7."

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4.0 PART I – CHARACTERISTICS OF THE PROPOSED DEVELOPMENT

This section assesses the potential impacts of the development due to the scale and characteristics of the activities proposed to be carried out.

4.1 SIZE AND DESIGN OF THE PROJECT

The existing site area for Site A is 0.3651 hectares and site area for Site B is 0.095 hectares.

The development falls below the thresholds for the requirement of EIA.

This would be considered a small to moderate sized recreational facility and it is not considered that the individual scale of the facility would present a significant environmental risk.

The majority of the development would occur on previously developed ground within the boundary of a recreational park area.

The design would conform to the standard engineering principals for such developments and design standards for amenity / commercial facilities and car parks.

The potential for the development design to impact upon environmental receptors has been discussed further within this report, however, it is not considered that the proposed project design poses a specific risk to the environment.

Therefore, it is not considered that the scale of the development would necessitate an assessment through an Environmental Impact Assessment Report.

4.2 CUMULATION WITH OTHER DEVELOPMENTS

4.2.1 Cumulation with Construction Projects

There are no known construction projects, proposed construction projects, or combination of construction projects in the area which would have a significant in-combination effect with the proposed development.

However, the risk of in-combination construction impacts may occur should other construction projects occur concurrently with the proposed project within Graiguecullen townland or within the River Barrow Catchment.

The risk of potential in-combination construction impacts would be minimised through the implementation of appropriate controls and mitigation during the construction phase of the project. A Construction Environmental Management Plan (Ref: PES_CEMP_21034) has been prepared for the proposed development. The CEMP is a "live" document and would be reviewed and updated as necessary throughout the construction phase.

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4.2.2 Existing Activities in the Area

The proposed development is located within an urban landscape with medium to high population density. A number of commercial premises are located in the vicinity of the proposed site as shown in Figure 4.1 below. The data points are classified by the *Nomenclature generale des Activites economiques dans les Communautes europeennes* (NACE) code.

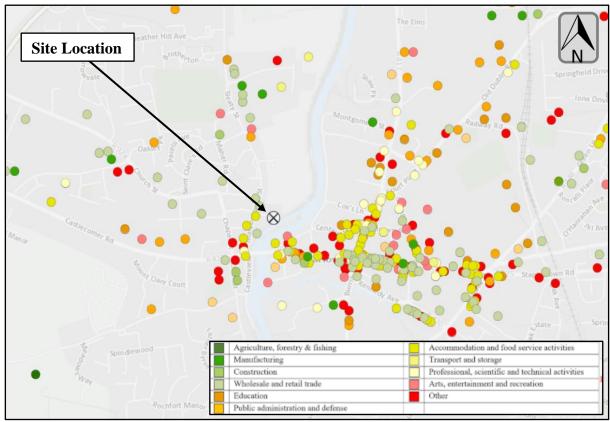


Figure 4.1: Commercial activities per NACE code

There are seven facilities licensed by the EPA within 15 km of the development site. These facilities are described in more detail below.

Table 4.1: EPA Licenced facilities within 15 km radius of site

Site	Distance / Orientation	Activity
IPC (P0222-01) Irish Sugar Limited (Carlow)	1.31km North-East	7.6 The manufacture of sugar, not included in paragraph 7.8.
IEL (P0400-03) Clogrennane Lime Limited (Carlow)	5.51km South-West	10.3 Production of lime in kilns with a production capacity exceeding 50 tonnes per day.
IEL (W0025-04) Powerstown Landfill Site	8.02km South-West	1.5 Landfills, within the meaning of section 5, receiving more than 10 tonnes of waste per day or with a total capacity exceeding 25,000 tonnes, other than landfills of inert waste.

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Site	Distance / Orientation	Activity
IEL (P1009-01) Waddock Composting Facility Designated Activity Company	9.32km North-East	11.4 (b)(i) Recovery, or a mix of recovery and disposal, of non-hazardous waste with a capacity exceeding 75 tonnes per day involving one or more of the following activities - biological treatment;
IEL (P0849-01) Michael O'Shea	9.82km North-West	 6.2 The rearing of pigs in an installation where the capacity exceeds – (a) 750 places for sows, or (b) 2,000 places for production pigs which are each over 30kg.
IEL (W0284-01) O'Toole Composting Limited	11.88km South-East	11.4 (b)(i) Recovery, or a mix of recovery and disposal, of non-hazardous waste with a capacity exceeding 75 tonnes per day involving one or more of the following activities - biological treatment;
IPC (P0531-01) Dineen Refractories Limited	13.83km North-East	13.4.2 The manufacture of coarse ceramics including refractory bricks, stoneware pipes, facing and floor bricks and roof tiles

4.2.3 Operational Cumulative Effects

As discussed further within this report, the operations at this proposed development are of a small scale and are unlikely to contribute significantly to environmental impacts within the vicinity.

The proposed activity centre would be located within Carlow Town Centre and would be anticipated to have in-combination effects with other businesses and residences in terms of air quality, noise, odour, wastewater infrastructure and potential surface water quality impacts. However, as the activity would be small in scale, it is not considered that potential incombination effects would be significant.

The proposed development would be expected to have a positive in-combination impact on the local economy and community by providing employment during the construction phase, with long-term jobs during the operational phase.

The proposed development would be a positive addition to the local community, allowing people to enjoy recreational activities such as kayaking on the River Barrow in a safe and secure environment.

Therefore, it is not considered that cumulative environmental effects from the proposed development would require further investigation within an EIAR.

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4.3 USE OF NATURAL RESOURCES

Natural resources are considered to be the physical resources in the environment, which may be either of human or natural origin. These include land, soil, water and biodiversity.

The construction process would include the use of various raw materials and should not require excessive levels of any one natural resource. Resources required for the proposed development include existing soils, concrete, stone and fill material which would be sourced from local suppliers and quarries. There would be expected to be no uncommon use of natural resources for construction.

The operational phase of the proposed development would cause no significant increase in the use of natural resources due to the small scale of the development and the nature of the activities which will be carried out at the site.

It is not considered that the use of natural resources by the proposed development would require further investigation within an EIAR.

4.4 GENERATION OF WASTES AND BY-PRODUCTS

The management of waste is regulated under the Waste Management Acts, 1996–2003, and associated regulations.

The principal wastes which would be generated during the construction phase of the project would be excess soil, stone and aggregate from the excavation for the foundations of the proposed development. The majority of this material would be reused in landscaping of the site. Excess material would be disposed of to an appropriately licenced waste facility via a suitably permitted waste contractor. Other potential construction wastes may include general waste from workers, waste concrete etc. These wastes would be appropriately segregated and recycled or disposed.

Wastes generated at the site during the operational phase would consist of small volumes of general and recyclable wastes which would be recycled or disposed of appropriately.

Wastewater generated by sanitary facilities will flow to the municipal sewer.

As waste volumes are anticipated to be very small at the site, it is not considered that this would require an EIAR for further investigation of potential impacts.

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4.5 POLLUTION AND NUISANCE

4.5.1 Pollution

4.5.1.1 Air Pollution

Air quality in the region would be expected to be principally influenced by urban commercial activities, residential or commercial heating systems and traffic.

The proposed development site is located in the Air Zone C (Other Cities and Large Towns) and has a current Air Quality Index status of "2-Good". Particulate Matter (PM10 and PM2.5) is measured at Carlow Town Air Monitoring Site approximately 412m north east of the proposed development and has a Current Index: 1 (Good).

The main potential sources of air pollutants from the construction of the proposed development would be combustion by-products from the operation of machinery and dust generated from excavations.

Air emissions from construction machinery would be expected to be minor in a regional context. The potential for construction dust emissions are discussed under nuisances in this report.

There would be anticipated to be no significant emissions to air during the operational phase of the development. The proposed heating system will be air to water heat pump.

This would not be anticipated to require an EIAR for further assessment.

4.5.1.2 Water Pollution

There are no natural existing water features within the site boundary. The River Barrow (EPA Code: 14B01 – Order 5) flows in a southerly direction, adjacent to the sites south-eastern boundary. The site is located in the Barrow Catchment (Barrow SC 150).

Other watercourses in the area include the River Burren (EPA Code: 14B05 – Order 4) which is located 236 metres to the south of the site. This river is a tributary of the River Barrow. These are shown in figure 5.5 below.

The proposed development site lies within the Athy-Bagnelstown Gravels GWB [IE_SE_G_160], a regionally important gravel aquifer (Rg). The site is located in an area where the groundwater vulnerability is classified as high (H).

There would be no significant volumes of fuels, oils or other chemicals stored for construction. Any chemical storage would be appropriately bunded in accordance with the CEMP.

The principal risks to water quality would be due to entrained soil suspended solids and uncured concrete entering surface during construction works. Surface waters at the site flows to existing municipal drains or percolate through the soil to groundwater. The CEMP includes measures for the control of these materials and there would be no significant risk to water quality during such works.

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During the operational phase of the centre, wastewater would be directed to the existing municipal drains. Stormwater, comprised of rainwater run-off from the roofs and hard surfaces will be directed to a new onsite drainage system with a hydrocarbon interceptor before connecting to the existing storm drainage network within Carlow Town Park.

Water from boat washing facilities will pass through a silt chamber with a gravity flow and UV light for biological control before connecting to the surface water drainage system at Carlow Town Park. The use of cleaning chemicals for boat washing would not be permitted in the interests of water quality protection.

Therefore, the risks of water pollution during construction or the operational phase would not be anticipated to require an EIAR for further assessment.

4.5.2 Nuisances

Nuisances can be defined as activities or emissions which are of a nature which can reasonably be expected to cause annoyance. As nuisances are defined on the basis of annoyance and infringement upon amenity, sensitive receptors are typically residences, service or amenity areas.

Typical nuisances which may occur during construction activities would include noise and dust.

Nuisances which may occur during the operational phase of the water activity centre and cafe would include noise and odour.

The nearest currently occupied residential properties are located to the south-west of the site. The closest residential dwelling is 32.6m west of the site boundary, adjacent to Maryborough Street.

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4.5.2.1 *Noise Nuisance*

The site is seeking planning permission for the construction of a Water Activity and Community Centre at Carlow Town Park. The completed development will consist of a boat storage area, kitchen, canteen, outdoor terraced seating, function rooms, gym, showers and changing rooms over two floors.

Once the development is complete, it is not anticipated that there will be a noticeable change in operational noise from the site. There are no proposed operational activities beyond what are already taking place.

The boat storage area will be able to accommodate approximately 50 boats, the vast majority of these being rowing boats and kayaks. Kitchens, canteens and terraced areas such as outdoor cafes are commonplace throughout the town and it is not anticipated that these new facilities on the site will have a detrimental impact on local noise levels. New function rooms will be primarily used for community meetings and lectures. The facility may be open at dusk or after dark during winter months to facilitate indoor training or meetings. Noise levels from such events are typically low and as they will take place indoors, the impact on the local noise levels will be negligible.

Operational noise from the development is anticipated to be low in the context of general town noise levels and would not be expected to impact on local noise sensitive receptors.

This assessment has therefore analysed the potential impacts of the noise generated during the construction phase of the proposed development on local sensitive receptors.

Relevant Noise Legislation & Guidance

Planning and Development Act 2000 (S.I. No. 30 of 2000), as amended

Local authorities are responsible for the planning and environmental regulation of any proposed developments. The current planning and environmental regulatory framework require these developments to comply with the Planning and Development Act (2000) and related regulations.

The local authorities and An Bord Pleanala attach conditions relating to environmental management of these developments to planning permissions granted. Local authorities consider the land use and planning issues associated with the proposed developments in their County Development Plans.

The EPA Act (Noise) Regulations 1994 (S.I. No. 179 of 1994)

The relevant part of the Environmental Protection Agency Act 1992 dealing with noise is Part VI, Sections 106 to 108. These Sections deal with the control of noise, the power of local authorities to prevent or limit noise and the issue of noise as a nuisance.

The 1994 Regulations came into effect in July 1994 and outline the procedures for dealing with noise nuisance. The Regulations allow affected individuals, local authorities or the EPA to take action against an activity causing a noise nuisance.

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These Regulations replaced the procedures for noise complaints contained in the Local Government (Planning & Development) Act 1963. Companies must show that reasonable care was taken to prevent or limit the noise from their activities. If the courts decide that a company is responsible for causing a noise nuisance, they can order the company to take measures to reduce, prevent or limit it.

Methodology (BS 5228)

There is currently no statutory guidance relating to the maximum permissible noise level for a project's construction phase. Current guidance on permissible noise levels is therefore considered somewhat limited. In the absence of any statutory guidance or other specific limits prescribed by local authorities, an appropriate best practice measure has been adopted as the standard for this project.

Best practice guidelines are taken from the British Standard BS 5228 – 1: 2009 (+A1 2014): 'Code of Practice For Noise And Vibration Control On Construction And Open Sites – Noise'. BS 5228 sets out an approach for setting appropriate construction noise limits for residential dwellings, but it does not provide guidance for commercial or office buildings.

The BS 5228 'ABC Method' calls for the designation of a noise sensitive location into a specific category (A, B or C) based on existing ambient noise levels in the absence of construction noise. This then sets a threshold noise value that, if exceeded, indicates a significant noise impact is associated with the construction activities as summarised in Table 4.2 below.

Table 4.2: Threshold of Potential Significant Effect At Dwellings (BS 5228)

Assessment category and	Threshold	Threshold value, in decibels (LAeq, T)		
threshold value period	Category A ^(a)	Category B ^(b)	Category C ^(c)	
Night-time (23.00-07.00)	45	50	55	
Evenings and weekends ^(d)	55	60	65	
Daytime (07.00–19.00) and Saturdays (07.00–13.00)	65	70	75	

NOTE 1: A potential significant effect is indicated if the LAeq, T noise level arising from the site exceeds the threshold level for the category appropriate to the ambient noise level. NOTE 2: If the ambient noise level exceeds the Category C threshold values given in the table (i.e. the ambient noise level is higher than the above values), then a potential significant effect is indicated if the total LAeq, T noise level for the period increases by more than 3 dB

due to site noise.

NOTE 3: Applied to residential receptors only.

- a) Category A: threshold values to use when ambient noise levels (when rounded to the nearest 5 dB) are less than these values.
- b) Category B: threshold values to use when ambient noise levels (when rounded to the nearest 5 dB) are the same as category A values.
- c) Category C: threshold values to use when ambient noise levels (when rounded to the nearest 5 dB) are higher than category A values.
- d) 19.00–23.00 weekdays, 13.00–23.00 Saturdays and 07.00–23.00 Sundays.

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Table 4.3 presents the significance criteria used in the assessment of predicted daytime construction noise level.

 Table 4.3:
 Construction Noise Level Significance Criteria

Significance	Level Above Threshold Value dB(A)	Definition
Negligible	≤ 0 to 2.9	The effect is not of concern
Adverse effect of minor significance	3.0 to 4.9	The effect is undesirable but of limited concern
Adverse effect of moderate significance	5.0 to 10.0	The effect gives rise to some concern but is likely to be tolerable depending on scale and duration
Adverse effect of major significance	>10	The effect gives rise to serious concern and it should be considered unacceptable

Equipment Used

The equipment used for the noise monitoring was a Cirrus CR:171B Sound Level Meter, a MK:224 Microphone and a CR:515 Acoustic Calibrator. Both the CR:171B and MK:224 were calibrated externally on 29th of July 2021.

The CR:515 was calibrated externally on the 30th of July 2021. The CR:831B confirms to IEC 61672-3:2016.

A calibration check of 94 dB(A) at 1kHz was carried out on the instrument before and after measurement. The calibrator is a Class 1 grade, which conforms to IEC 60942:2003.

The difference between the initial calibration value, any subsequent calibration check, and a final calibration checks on completion of measurements did not exceed 0.5 dB, and the instrument calibration was found to be satisfactory.

Measurement periods were appropriate to establish a typical noise level reading at each location in order to establish a dB(A) LAeq reading.

Ambient Noise Monitoring Locations

Ambient noise monitoring was carried out in general accordance with the EPA, 2016 'Guidance Note for Noise: Licence Applications, Surveys and Assessments in Relation to Scheduled Activities (NG4)'.

The baseline environmental noise levels at NM1 - NM5 locations were determined by instrumented monitoring of existing noise levels. This was determined by taking broadband noise measurements at these four noise monitoring locations.

It is considered that noise levels measured at each of the NM locations would be representative of typical noise levels at the nearest residential property or noise sensitive receptors.

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These locations are outlined in Table 4.4 below.

Table 4.4: Noise Monitoring Locations

Ref.	Grid Ref		Logotion Tyme	Location
Kei.	X	Y	Location Type	Location
NM1	271623	176843		Approximately 52m west of the site central point, in the vicinity of NSL5.
NM2	271597	176741	Noise	Approximately 124m southwest of the site central point, in the vicinity of NSL1.
NM3	271619	176988	Monitoring Location	Approximately 161m north of the site central point, in the vicinity of NSL2.
NM4	271705	176747		Approximately 95m south of the site central point, in the vicinity of NSL4.
NM5	271836	176811		Approximately 163m east of the site central point, in the vicinity of NSL5.

Grid Ref Source: https://irish.gridreferencefinder.com/

All measurements were taken at:

- 1.25 metres height above local ground level
- >3.5 metres away from reflective surfaces

These monitoring points are mapped in Figures 4.2 and 4.3.

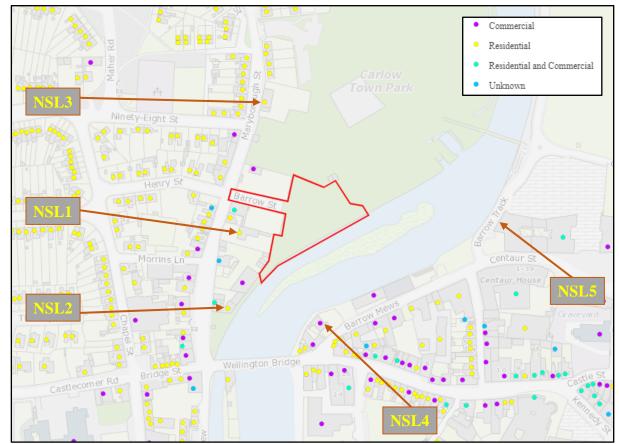


Figure 4.2: Address Point Map (MyPlan.ie) with Noise Sensitive Locations

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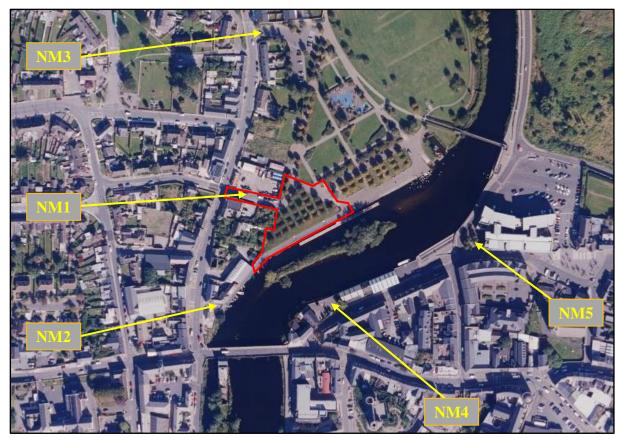


Figure 4.3: Noise Monitoring Locations Map

Ambient Noise Monitoring Results

The table below show the ambient noise monitoring results taken at the five noise monitoring locations (NM's) outlined above.

For this assessment, daytime (07:00am - 19:00pm) monitoring was carried out on Monday 20^{th} September 2021 between 12:29pm - 16:48pm.

Evening (19:00pm - 23:00pm) monitoring was carried out on Monday 20th September 2021 between 19:00pm - 20:37pm.

Night-time (23:00pm - 07:00am) monitoring was carried out on Monday 20^{th} September 2021 between 23:00pm-01:59am.

Table 4.5: Ambient Noise Monitoring Results

Ref.	LAeq 1 dB	LAeq 2 dB	LAeq 3 dB	Average dB	Rounded to nearest 5 dB
		Da	ytime		
NM1	58.0	58.0	58.0	58.0	60
NM2	56.8	56.5	57.4	56.9	55
NM3	64.5	63.9	63.5	64.0	65
NM4	56.6	56.0	56.3	56.3	55
NM5	54.9	55.8	59.4	57.2	55
	Average 60				

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Ref.	LAeq 1 dB	LAeq 2 dB	LAeq 3 dB	Average dB	Rounded to nearest 5 dB
		Ev	ening		
NM1	63.6	-	-	63.6	65
NM2	58.3	-	-	58.3	60
NM3	60.7	-	-	60.7	60
NM4	59.1	-	-	59.1	60
NM5	57.7	-	-	57.7	60
	•			Average	60
		Nigl	nt-time		
NM1	39.3	39.6	-	39.5	40
NM2	53.3	52.1	-	52.7	55
NM3	45.9	37.0	-	43.4	45
NM4	46.9	43.4	-	45.5	45
NM5	45.2	42.6	-	44.1	45
	Average 45				

Construction Source Noise

The expected construction timeframe would be approximately eighteen months. As part of these construction works, noise will likely be generated during phases when activities requiring heavy plant machine is required, such as site excavation and I-beam framework installation.

Delivery of materials would likely occur during Phases 2-3, while on-site machinery movement is expected during Phases 1-3.

Table 4.6 below contains a breakdown of the likely construction phases.

Table 4.6: Construction Phases

Ref.	Title	Description of Works
Phase 1	Site Setup	 Stripping of topsoil for the structure footprint; Stockpiling and removal of excavated topsoil; Cut and fill activities.
Phase 2	Foundation and Framing	 The pouring of reinforced concrete footings; The import and rolling of hardcore floor material; The import and screeding of sand material to level and raise internal floor height; The import, screeding and planning/finishing of internal concrete flooring.
Phase 3	Walls and Roofing	 Installation of main structure steel I-beam framework; Installation of pre-cast concrete walls; Installation of steel purlins, girts and bracing framework; Installation of insulated wall & roof cladded sheets and windows.
Phase 4	• Finishing and Commissioning	Installation of internal lighting and electrical system.

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Depending upon the ground conditions encountered during construction and the contractor appointed, the methodology for the construction programme may vary. A review of standard noise values for various construction plant and equipment from the British Standard 5228-1:2009(+A1:2014) has therefore been undertaken.

The construction plant and machinery will change as the project develops, with plant and equipment only operating within any particular section of the site for a relatively short period of time.

Table 4.7 contains typical noise levels from various construction plant that would be used during the construction phase. These standard noise emission data, recalculated from 10m to 1m, will be used for the purposes of the worst-case noise assessment of the proposed works.

Table 4.7: Noise Levels from Construction Phase (Ref: BS5228:2009)

Phase	Plant/Equipment Sound Pressure LAeq at 1m		Combined Sound Pressure LAeq at 1m
	C2.5: Tracked Excavator 16T	96 dB	
Phase 1	C2.28: Wheeled Loader	96 dB	99.3 dB
	C2.8: Wheeled Backhoe Loader	88 dB	
	C2.37: Roller	99 dB	
	C4.3: Dumper	96 dB	
Phase 2	C4.14: Wheeled Backhoe Loader	87 dB	101.9 dB
	C4:18: Cement Mixer Truck	95 dB	
	C4.43: Wheeled Mobile Crane	90 dB	
Phases 3	C4.54: Telescopic Handler	99 dB	101.8 dB
	C4.59: Diesel Scissors Lift	98 dB	
Phase 4	C4.54: Telescopic Handler	99 dB	101.5 dB
Filase 4	C4.59: Diesel Scissors Lift	98 dB	101.3 ub

Combined = 10. Log
$$\sum_{i=1}^{n} 10^{Lp/10}$$

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Noise Discussion

Table 4.5 shows that, when rounded to the neaerest 5 dB, the average daytime ambient noise levels taken at NM locations in the vicinity of the exisitng park ranges between 55 - 60 dB, with an overall average of 60 dB.

Therefore, the site would be designated as Category A as defined in Table 4.2 and a *threshold* of 65 dB would apply to the construction phase of the development.

Using the Phase 2 construction noise level of 101.9 dB outlined in Table 4.7 and the reduction of noise as a result of distance, it is possible to calculate the potential noise impact at the closest NSL's during the construction phase.

Table 4.8 below shows that when this calculated potential noise impact at the closest NSL's is compared to the 65 dB threshold that the construction noise level significance criteria was determined to be 'negligible' at the five NSL's, as per the definitions outlined in Table 4.3.

 Table 4.8:
 Predicted Construction Noise Impact

Ref	Construction Source	Dist	Adiv	LAeq at NSL	ABC Limit	Difference	Significance
NSL1	101.9 dB	64 m	36.2 dB	65.8 dB	65 dB	0.8 dB	Negligible
NSL2	101.9 dB	116 m	41.3 dB	60.7 dB	65 dB	-4.3 dB	Negligible
NSL3	101.9 dB	105 m	40.4 dB	61.5 dB	65 dB	-3.5 dB	Negligible
NSL4	101.9 dB	104 m	40.4 dB	61.5 dB	65 dB	-3.5 dB	Negligible
NSL5	101.9 dB	171 m	44.7 dB	57.3 dB	65 dB	-7.7 dB	Negligible

Note: distances are from a single site central point to the closest sensitive locations.

$$A_{div} = 20. \text{Log} \left(\frac{\text{dist}}{\text{do}}\right)$$
 when $d_0 = 1 \text{m}$

LAeq at $NSL = Construction Source - <math>A_{div}$

Difference = Level at NSL - ABC Limit

While construction activities have been recommended to take place during daytime hours, for the sake of completeness, the appropriate noise limits for evening and night time periods have been included below.

The evening ambient noise levels taken at NM locations in the vicinity of the exisitng park ranges between 60 - 65 dB, with an overall average of 60 dB. Therefore, the site would be designated as Category B as defined in Table 4.4 and a *threshold* of 60 dB.

The average night-time ambient noise levels taken at NM locations in the vicinity of the exisitng park ranges between 40 - 55 dB, with an overall average of 45 dB. Therefore, the site would be designated as Category A as defined in Table 4.4 and a *threshold* of 45 dB.

It is not considered that further assessment of potential noise nuisance would be required through an EIAR.

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4.5.2.2 <u>Dust Nuisance</u>

Dust may arise from loose excavated soils and imported aggregate material. The potential for dust emissions during the project would be expected to be minimised due to the small scale of the proposed development. Therefore, the quantities of materials available to generate dust would be small.

The Water and Activity Centre (Site A) and the car park (Site B) developments have the potential to generate dust during their construction phase. The majority of dust would be generated during site excavation works where topsoil would be cleared. The introduction of class 804 and other gravels, sands and silts on to the site for the creation of hardcore surfaces will also increase the potential for dust to become a nuisance issue. The potential for construction dust dispersion depends on the local meteorological conditions such as rainfall, wind speed and wind direction.

The impact that dust from the both the Water Activity & Community Centre site and the site for the secondary car park may have on the surrounding area was assessed with the use of table 4.9 below.

Closest residential dwellings within the vicinity of the sites were identified and these will be the most likely receptors of any impacts from dust dispersal as a result of construction activities at the proposed sites.

Table 4.9: Assessing the Criteria for the Impact of Dust from Construction with Standard

Mitigation in place. (National Road Authority)

	Source	Potential Distance for Significant Effects from the Source (meters)			
Scale	Description	Soiling	PM ₁₀ *	Vegetation	
Major	Large construction sites, with high use of haul roads	100m	25m	25m	
Moderate	Moderate sized construction sites, with moderate use of haul roads	50m	15m	15m	
Minor	Minor construction sites, with limited use of haul roads	25m	10m	10m	

^{*} Significance based on the 2005 standard, which allows 35 daily exceedances/year of 50 µg/m

The proposed development for the Water Activity & Community Centre is of moderate scale. Therefore, only residences within 50m of the site boundaries were included in the assessment. Residential properties beyond the 50m radius will not be significantly affected by dust as the bulk of any airborne particles will have dispersed once it reaches said properties. The main potential for dust creation at this site will come from excavation works, handling of gravels/sands and the transportation of the above materials to and from the site.

There are no residences within 50m of the site to the north, south and east of its boundaries. There are two residential dwellings to the west of the site boundary. The distance of these houses from the western site boundary is 32.6m and 48.3m respectively. These residential dwellings may be impacted by soiling from dust as a result of the construction works at the Water & Activity Centre. However as these houses are situated due west of the site, this lessens

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the likelihood that they will be impacted by dust soiling as the prevailing winds in the area predominantly blow from the south-west to the north-east.

The likelihood of these residences being impacted could be lessened further by the short duration that excavation works will take in the vicinity of the properties, storing any sand, silt or gravel stockpiles towards the eastern section of the site, use of a road sweeper and dust suppression techniques such as water misting during dry weather periods.

There are no residential properties within 15m of the site boundaries, therefore it is not predicted that PM_{10} particulates will be an issue during the construction phase of this project. Vegetation within 10m of the site boundaries lies predominantly to the north of the site, where a public park is situated.

The vegetation found here is mainly in the form of cultivated grassland used for public amenity. This type of habitat has limited biodiversity value. Impacts on the vegetation in this area as a result of construction activities at the site are predicted to be low as a result of the short duration of excavation works. Dust dispersal from the site on to this area could be mitigated against further by implementing typical dust control methods such as using water bowsers, sprays or vapour mists in very dry weather and covering any stockpiles of sand, gravel or silt on site.

The proposed development site for the secondary car park is situated c.65m north-west of the proposed site for the Water Activity & Community Centre. This site scale is minor therefore residences within 25m of the site boundaries will be at risk of potential soiling as a result of dust from the site.

There are two residential properties within 20m of the site boundaries of the secondary car park. These properties are located 15.6m north and 20m west respectively. There are no residential properties within 20m to the east or south of the site. The residential property to the west of the site would have a low likelihood of being impacted by dust soiling as a result of the prevailing wind carrying any airborne dust particles in the opposite direction. The house directly north of the proposed development site of the secondary car park may be impacted by dust from construction works at the site. These impacts are likely to be low as this site has an estimated completion time of 1-2 days.

Once the hardcore porous surface has been installed, the likelihood of dust impacting the property to the north would be very low. To mitigate further against any impacts occurring dust suppression techniques such as water misting or spraying will be used to prevent further dust dispersal to the residential buildings north and west of the site.

As there are no residential properties within 10m of the site boundaries there will be no impacts from PM_{10} particulates. Vegetation within 10m of the site boundaries is predominantly cultivated grass in the nearby public park. Due to the short duration of works (1-2 days) at this site, it is not predicted that dust impact on vegetation in the vicinity of the site will become an issue.

Construction dust control is a common part of construction management practices. The effect of construction activities on air quality, in particular construction dust, would not be significant due to the limited construction timeframes and following the implementation of standard working practices and the standard mitigation measures which are highlighted below.

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The construction works contractor will implement the following dust control measures for the duration of the proposed development:

- Cognisance would be taken of the guidelines published by the Institute of Air Quality Management (IAQM), "Assessment of dust from demolition and construction 2014";
- Material handling systems and site stockpiling of materials would be designed and laid out to minimise exposure to wind;
- Prolonged storage of materials onsite would be avoided;
- When transporting materials to and from the site, vehicles would be fitted with covers where possible to prevent material loss;
- Public roads outside the site would be regularly inspected for cleanliness and cleaned as necessary. A road sweeper would be used if required;
- While the natural recolonization of exposed areas of soil during reinstatement activities
 is preferred, re-seeding would be undertaken where required to promote the rapid
 stabilisation of soils;
- Regular visual inspections would be undertaken around the proposed site boundary to monitor the effectiveness of dust control measures.

Should additional dust control measures be required, for instance during particularly dry weather, dust suppression measures would be undertaken, including the following:

- Water misting plant, such as bowsers and sprays would be used as required and where necessary;
- Where practicable, stockpiles of excavated soils and exposed surfaces would be dampened down via misting plant.

If the above standard recommendation measures are followed during the construction period of this site then it is not anticipated that there will be any adverse impact on local air quality as a result of dust dispersal.

Impacts associated with dust during construction would not be likely to be significant and would not be considered to require and EIAR.

4.5.2.3 Other Nuisances

Odours emanating from the proposed development are not anticipated to cause a nuisance due to the small scale of the site and the nature of the activities which will be carried out once the proposed development is in its operational phase.

All wastewaters will flow to existing municipal sewers. All wastes would be appropriately stored and removed regularly, as would be the case for other businesses in the area.

It is anticipated that, due to the design and scale of the proposed development that there would be no significant odour impact at odour sensitive locations as a result of the proposed development.

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4.6 RISKS OF MAJOR ACCIDENTS AND RISKS TO HUMAN HEALTH

As noted in the EIA Directive 2014/52/EU, precautionary actions need to be put in place for certain projects which, "due to their vulnerability to major accidents and/or natural disasters (such as flooding, sea level rise or earthquakes) are likely to have significant adverse effects on the environment".

The scale of construction occurring at any one time would be small, with limited quantities of materials present. Typical construction methods and practices as described within the CEMP would be anticipated to adequately mitigate against accidents or risks to human health.

During the operational phase, the site will be used as a café and for providing storage of boats and kayaks, holding meetings, trainings and social recreational events such as kayaking and other forms of boating. It is not considered that there would be a significant risk of environmental impacts due to accidents.

The facility does not fall within the Seveso III Regulations or European Communities (Control of Major Accident Hazards involving Dangerous Substances) Regulations 2015, as no dangerous substances would be used at the site.

There would not be anticipated to be significant volumes of chemicals or fuels stored at the site for the operation of a café, boat store and meeting area.

It is not considered that the site is at a significant risk of natural disasters.

A Flood Risk Assessment (FRA) issued on the 22nd September 2021 by DRA Consulting Engineers (Document Ref: K194). This report notes the proposed development site is located in an area susceptible to flooding however the proposed structures are set at a level which provides protection from flooding up to the 0.1% AEP. The site is within a flood risk zone however the site benefits from a certified OPW flood defence scheme. For a flood event to occur at Site A (activity centre) then the OPW flood defences would need to be breached. For a flood event at Site B (carpark) an overbank breach of the River Barrow would need to occur. Any flood waters at Site B (carpark) would discharge to ground through the permeable surface or will be captured within the stormwater drainage system. The report recommends all wastewater and surface water drains / sewers servicing the proposed development should be fitted with non-return valves to mitigate flood waters from rising up drains during extreme flood events. The pluvial flood risk to the proposed development at Site A (activity centre) and Site B (carpark) is considered to be low and no further mitigation measures are proposed.

Risks to human health would not be expected to be high as a result of the activities following the completion of the proposed development provided that standard provisions such as providing buoyancy aids for water based activities and having personnel who are trained in first aid and water rescue are present at the site whenever such water based recreational activities are occurring.

Therefore, risks associated with major accidents or human health would not be considered to require and EIAR for further assessment.

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5.0 PART II – LOCATION OF THE PROPOSED DEVELOPMENT

This section assesses the potential impacts of the development due to the sensitivities of the proposed location.

5.1 EXISTING AND APPROVED LAND USE

Site A is located in land zoned as Local Authority Zone: Amenity & Open Space. Site B is located in an area zoned as Residential: Established. Other types of local authority zones in the vicinity of the site include Town Centre and Retail Warehousing.

The CORINE 2018 data series shows that the land within the immediate vicinity of the proposed development is Continuous Urban Fabric (1.1.1). Areas of Agricultural Land are located beyond areas of Urban Fabric.

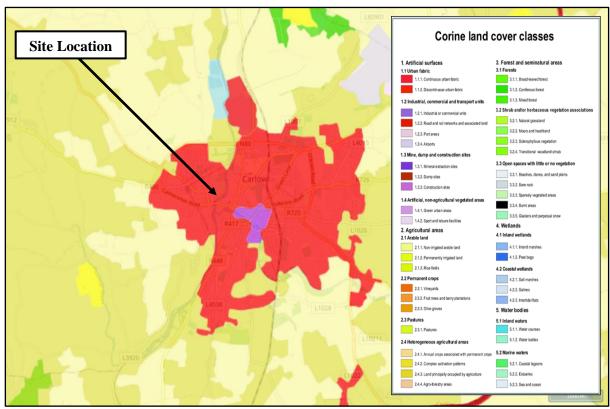


Figure 5.1: CORINE 2018, land use map of the region.

The land in the immediate vicinity of the site and surrounding area is mainly used as recreational grassland, amenity areas and built up areas which included residential and commercial properties.

There would be no significant impact to the continued use of these lands as a result of the proposed development.

Therefore, it is not considered that an EIAR would be required in order to further assess potential impacts on land use.

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5.2 NATURAL RESOURCES

This section assesses the relative abundance, availability, quality and regenerative capacity of natural resources (including soil, land, water and biodiversity) in the area and its underground.

The proposed development would result in a very slight increase in use of natural resources in the area.

5.2.1 Soil & Bedrock

Topsoil and overburden excavated from the site would be stored within the site boundary. This topsoil would be used in landscaping around the site once the proposed construction works were completed.

There would be expected to be no significant impact to bedrock. Any excavations that will take place would be shallow in nature and will not impact on the bedrock in the vicinity of the site. Aggregate fill material and precast concrete structures would be sourced from local quarries in the area.

Where excess soil or stone is generated, this would be disposed of to an appropriately licenced waste facility.

Therefore, it is considered that there is no significant risk to soils and bedrock as a result of the proposed project and further assessment in an EIAR would not be required.

5.2.2 Water

Water would be provided from the municipal mains supply.

Small quantities of water may be used during the construction phase of the proposed development. This

Water usage would increase marginally as a result of the proposed development. Water use at the proposed development would be related to sanitary facilities, kitchen use and the wash down of boats and kayaks.

It is considered that there is no significant risk to water resources as a result of the proposed project and further assessment in an EIAR would not be required.

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5.3 ABSORPTION CAPACITY OF THE NATURAL ENVIRONMENT

5.3.1 Surfacewater Environment

The River Barrow (EPA Code: 14B01 – Order 5), is located within the Barrow catchment (Catchment ID: 14). This large watercourse flows in a southerly direction adjacent to the sites south-eastern boundary.

This river has an overall length of 192km, making it the second longest river in Ireland. It rises in the Slieve Bloom Mountains in County Laois and it flows through five more counties (Kildare, Kilkenny, Carlow, Wexford, and Waterford) before it flows into Waterford Harbour and then on to the Atlantic Ocean.

Tributaries of the Barrow include the Douglas (Laois), Fushoge (Laois), Burren (Carlow), Moneen (Kildare), Madlin (Kilkenny) and the Aughnavad (Wexford).

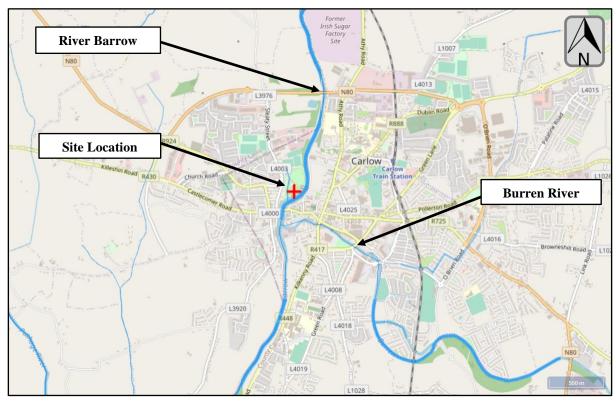


Figure 5.2: Surface Water Features

The River Barrow has been classified as being at risk of not achieving good status under the Water Framework Directive.

The Environmental Protection Agency (EPA) undertake surface water monitoring along the Barrow.

The results for the nearest monitoring stations (as per Table 5.1) with available monitoring results for the period 2000 - 2018 are summarised in Figure 5.3 below for indicative purposes.

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Table 5.1: Active Monitoring Stations of the Barrow River

STATION NO.	STATION LOCATION	EASTING	Northing	APPROX. LOCATION RELATIVE TO PROPOSED SITE
RS14B012200	New Br 1km u/s Carlow Br	272007	177778	1km Upstream
RS14B012450	Footbridge, Dolmen Hotel	270653	174173	2.9km Downstream
RS14B012600	Milford Br	269975	170430	6.65km Downstream

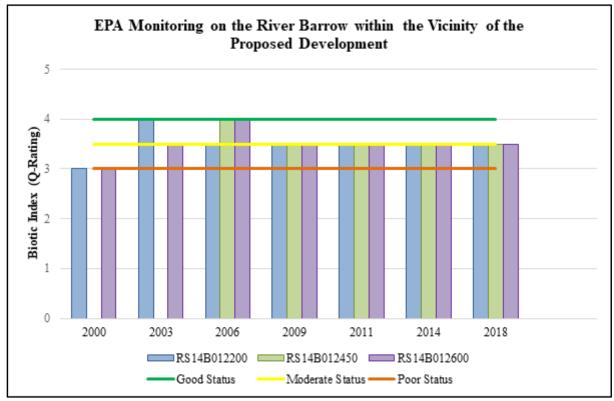


Figure 5.3: EPA Ecological Monitoring of the Barrow River from 2000 – 2018

As can be seen in Figure 5.3 above, the Barrow River is mainly achieving a water quality status of between Q4 (good) and Q3-4 (moderate) at the monitoring locations (Table 5.1), with the status of all stations declining to Q3-4 (moderate) from 2009.

EPA comments on the most recent monitoring results for the Barrow River are as follows;

"The Barrow was sampled across 2017 and 2018 due to the outbreak of crayfish plague, with several additional surveys in 2019. Of the 12 stations sampled along the Barrow in 2017, stations 0200, 0780, 1300, 1500, 2900 were in Good ecological condition, while the two uppermost stations maintained High ecological quality (0050 & 0100). A decline to unsatisfactory Moderate quality occurred at Station 1000 (Pass Bridge) and the lowermost station at Graiguenamanagh (3500). In 2018, station 0300 (Twomile Br) improved to High ecological quality, while station 1900 (Tankardstown Br) declined to unsatisfactory Poor quality. The latter site had an overabundance of Potamopyrgus snails and too much instream algae. Station 0700 (Kilnahown Br) retained Good ecological quality and stations 0500, 2200, 2455, 2600 and 2680 all remained at unsatisfactory Moderate ecological quality. In July 2019,

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despite increases in the diversity of sensitive taxa, pollution tolerant groups still dominated and filamentous algae was excessive at Ford S. of Trascan (0900) which remained moderate. Ballyteigelea Bridge (3300) also remained Moderate, while Tankerstown (1900) improved slightly to Moderate ecological status."

There would be no significant volumes of fuels, oils or other chemicals stored for construction. Any chemical storage would be appropriately bunded in accordance with the CEMP.

The principal risks to water quality would be due to entrained soil suspended solids and uncured concrete entering surface during construction works. Surface waters at the site flows to existing municipal drains or percolate through the soil to groundwater. The CEMP includes measures for the control of these materials and there would be no significant risk to water quality during such works.

During the operational phase of the centre, wastewater would be directed to the existing municipal drains. Stormwater, comprised of rainwater run-off from the roofs and hard surfaces will be directed to a new onsite drainage system with a hydrocarbon interceptor before connecting to the existing storm drainage network within Carlow Town Park. Storm water runoff from the site would be restricted to greenfield rates through a SUDs designed attenuation system.

Water from boat washing facilities will pass through a silt chamber with a gravity flow and UV light for biological control before connecting to the surface water drainage system at Carlow Town Park. The use of cleaning chemicals for boat washing would not be permitted in the interests of water quality protection.

Therefore, there would not be anticipated to be a significant impact on the absorption capacity for surface-waters during the construction or operational phases and would not be considered to require an EIAR for further assessment.

5.3.2 Groundwater Vulnerability and Protection Areas

Assessing the risk of contamination to groundwater is complex. It is assessed by the aquifer category, the proximity to down-gradient targets such as a wells or ecosystems and the preventive measures taken. These measures will be dependent on the land-use practices and potential for pollution.

The proposed development site lies within the Athy-Bagnelstown Gravels GWB [IE_SE_G_160]. The groundwater body has been classified as "good status" under the Water framework Directive in 2013-2018 and is "at risk" of failing to achieve good status.

The proposed development site and region is underlain by the Ballyadams Formation. This formation could be described as Crinoidal wackestone/packstone limestone. There are a number of bedrock outcroppings in the regions, however no are within the site boundary. There are two karst formations to the north-west of the site, but none within the site boundaries.

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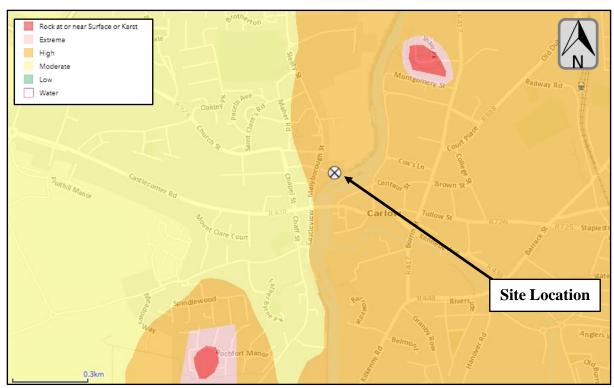


Figure 5.4: Groundwater Vulnerability

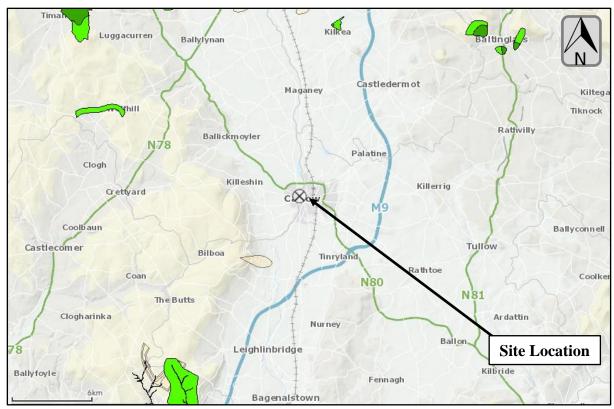


Figure 5.5: Groundwater Source Protection Areas

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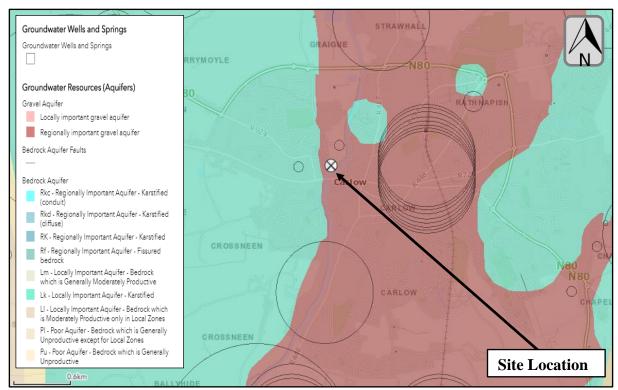


Figure 5.6: Groundwater Wells and Aquifers

The Ballyadams Formation is classified as a Regionally Important Gravel Aquifer - A sand/gravel aquifer is classed as regionally important if it can supply regionally important abstractions (e.g. large public water supplies with 'excellent' yields >400 m3/d). It is highly permeable, more than 10 m thick or has a saturated thickness of at least 5 m, and should extend over at least 5 km2, and usually over 10 km2.

The GSI classifies the vulnerability of the site as high.

There are no groundwater source protection areas within the vicinity of the site. The closest groundwater source protection area to the site is the Ballinabranna GWS which is located approximately 5.24km to the south-west. The GSI has no records for groundwater abstractions within the vicinity of the site, however, this is not a complete register.

There would be no significant volumes of fuels, oils or other chemicals stored during the construction or operational phases of the project. Potential impacts during the construction phase would be prevented through the implementation of the CEMP. It is not anticipated that there would be a significant risk to groundwater.

It is not considered that the proposed development would require further assessment within an EIAR in terms of groundwater resource vulnerability.

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5.3.3 Bio-Diversity and Designated Sites

The location of the site in relation to Natura 2000 sites is shown in the map in Figure 5.7 below. No Special Protection Area (SPA) sites and two Special Area of Conservation (SAC) sites occur within 15km of the proposed development site and are shown in table 5.2 below. There are no Natural Heritage Areas or Wetlands of International Importance (RAMSAR sites) within 3.0 km of the proposed site.

Table 5.2: Special Areas of Conservation and Special Protection Area within 15km of Proposed Site

SITE NAME	DESIGNATION	SITE CODE	DISTANCE FROM PROPOSED SITE
River Barrow and River Nore	SAC	002162	Site is located within this SAC
Slaney River Valley	SAC	000781	10.70km East

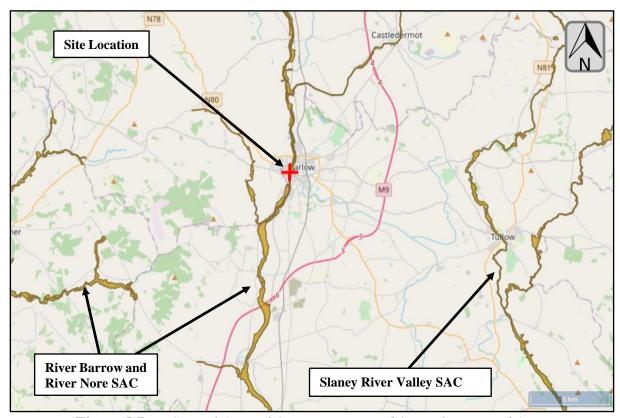


Figure 5.7: Special Area of Conservations and Special Protected Area

A Natura Impact Statement (NIS) (Document Ref: PES_NIS_21034) has been prepared for this proposed development by Panther Environmental Solutions (PES).

The report concluded that, subject to recommended mitigation measures, there would be no potential for significant impacts on European sites as a result of the proposed development and mitigation measures to be employed. This conclusion refers to the development by itself or in combination with other developments.

It is considered that further assessment would not be required in an Environmental Impact Assessment Report (EIAR).

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5.3.4 Landscapes & Visual Impact

The potential visual impact assessment of the proposed development has been addressed in the document titled "Application for Approval in Accordance with Section 177AE of Planning and Development Act 2000 (as Amended) for River Barrow Activity Centre 2021".



Figure 5.8: Current view of site from Bridge Street



Figure 5.9: Proposed view of RBAC from Bridge Street

The following are excerpts from this discussion of the project design:

The proposed design of the RBAC has been informed by detailed analysis of the area and its wider context, including an understanding of the significance of the River Barrow adjacent; particularly in relation to flood prevention.

The design concept, forms and materials have been developed through extensive consultation with CCC, the relevant clubs and stakeholders and users of the facility, but also with due regard to the wider visual context.

The proposed RBAC is a standalone form visible from Bridge Street and is of a scale, from and character to signify its function and importance as a Centre building, whilst also respecting the scale and character of the surrounding streetscapes. The proposal is dual facing, addressing the river, with a much improved visual access from Henry Street and pedestrian access from Northern car park proposed.

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Existing river walkways and access points are maintained and enhanced, safeguarding views and river access.

Materials used are informed by older boathouses and the craftsmanship associated with rowing generally which has a rich heritage in the area. The building forms and facades provide animated facades on each orientation, including external covered space.

The landscape proposal includes native species, pollinator-friendly wildflower mix tree planting, small and multi-stemmed trees and native hedges, with steps and outdoor areas to enhance people's connection with the river.

The proposed development would be anticipated to have no significant negative impact on the visual amenity of the area.

It is considered that additional investigation within an EIAR of visual and landscape impacts from the development would not be required.

5.3.5 Archaeological and Cultural Heritage

An archaeological desk-study was completed by Kilkenny Archaeology in support of the application, titled "Archaeological Assessment: River Barrow Activity Centre, Carlow Town Park (Graigue td.), Carlow, 19.7.2021". The following is a summary of this report.

The assessment comprised a desk-based study and site visit and photographic survey of the application area and its environs. The desk study reviewed primary and secondary documentary sources (see report bibliography), the archaeological and historical background to the proposed development area and describes the archaeological monuments that are present in the site's environs.

The site visit and photographic survey of the proposed development area was conducted by Cóilín Ó Drisceoil, the report author, on the 15th June 2021. Nothing of archaeological interest was noted in the site inspection.

The development site is located partially within the area of archaeological notification, as defined in section 12 (3) of the National Monuments (Amendment) Act, 1994 (Recorded Monument), for RMP CW007-018 Historic Town.

The concentration of previously recorded archaeology within the environs of the development area and the industrial heritage within and close to the proposed development area indicates that the proposed development has the potential to impact on archaeological materials, features, structures, deposits or objects.

In accordance with the National Monuments Act, the Framework and Principles for the Protection of the Archaeological Heritage and the objectives relating to archaeology in the Carlow County Development plan it is thus recommended that the following archaeological mitigation measures are undertaken:

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- 1. An archaeologist shall undertake licensed archaeological monitoring of all sub-surface works associated with the development including the breaking and removal of any surfaces, levelling of ground, site investigations. The archaeologist shall consult with and forward their Method Statement in advance of commencement to the National Monuments Service. In the event of potential archaeological materials being located in the course of the monitoring all works in the specifically affected area shall cease and the developer shall facilitate the archaeologist in fully assessing and recording such features, including if necessary the archaeological excavation of such features and/or redesign to allow for preservation in situ. In the event of archaeological materials occurring on site, the archaeologist retained by the developer shall immediately contact the National Monuments Service, Department of Housing, Local Government and Heritage. The National Monuments Service shall determine the further archaeological resolution of the site. The site contractor will be aware of this requirement and the monitoring archaeologist will be provided with a programme of works. No sub surface work shall be undertaken in the absence of the archaeologist without his/her consent. Following the completion of works a written report and a digital report containing the results of the archaeological monitoring shall be forwarded on completion to the Planning Authority and National Monuments Service, Department Housing, Local Government and Heritage.
- 2. Consideration shall be given to providing as part of the new River Barrow Activity Centre information signage on the former use of the area by the Barrow Navigation Company, which can be considered an important aspect of Carlow's industrial heritage and social history.

Further assessment within an EIAR is not considered to be required.

5.3.6 Traffic & Transportation

This section will address the aspects of the project having regard to traffic and transportation, including the potential for traffic generation. The likelihood of impact would be discussed in the context of the existing urban traffic environment.

Construction sites invariably involve a certain amount of HGV movements. These movements are primarily associated with the importation of supply materials, machinery and other plant equipment on to the site.

Traffic impacts may arise via the following:

- Delivery of construction plant and equipment to the site;
- Delivery of raw materials to the site;
- Vehicle movements from staff, sub-contractors and site visitors travelling to and from the site;
- Vehicle movements associated with waste removal at the site.

Access to the site is from Barrow Lane which connects to Maryborough Street. The R430 is approximately 160m to the south of the Barrow Street intersection with Maryborough Street. The N80 national road is 1.5km via Castlecomer Road and 1.3km via Chapel Street, adjacent the Millrace bridge. The N80 connects with the M9 motorway approximately 9km to the southeast.

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Construction works have the potential to impact upon traffic volumes in the area, which may subsequently impact upon the generation of noise and dust emissions.



Figure 5.10: Local Road Network

The majority of the HGV movements would take place during the initial construction phase as machinery would have to be brought to the site along with other supplies and site infrastructure such as temporary fencing or screening. In-fill such as gravel, sands and cement will also be brought on to the site. Once this phase of construction has been completed, the majority of traffic to the site will be from staff, sub-contractors and visitors.

This is a moderate sized development in a large urban area. The surrounding road network is well laid out and capable of carrying large volumes of traffic. Site related traffic would be insignificant in comparison to current road traffic volumes in the area. Therefore it is anticipated that there would be no traffic impacts associated with the proposed development.

The following practices and procedures will be implemented on site in order to ensure that there are no negative impacts on the local traffic and transportation network as a direct result of the proposed development.

Access to the site will be via Barrow Lane. There are no proposed alterations to the entrance to the site therefore the local road network is anticipated to be sufficient to accommodate site related traffic. The construction works contractor would ensure the following:

- Deliveries to the site would be via suitably contained vehicles, with sheeting and covers where required;
- Deliveries to the site would be scheduled during the construction hours of 8:00am to 7:00pm Monday to Friday, and 8:00am to 2:00pm on Saturdays;

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- Deliveries and removals would be coordinated and scheduled to the site to avoid congestion on Maryborough Street and Barrow Street.
- Where possible, large volumes of traffic or traffic movements associated with the site would be timed to occur outside peak hours on the local road network to reduce the potential for traffic congestion.
- The contractor shall provide for the safe passage of pedestrian and vehicular traffic and measures to keep the impact of the works on local roads, and local communities to a minimum
- Local roads would be inspected and cleaned as necessary to ensure that access roads are kept clear of mud and debris,
- Advise haulage contractors on the appropriate routes to and from the site and to adhere to good traffic management principles;
- Delivery of materials to the site would be timed to ensure efficiency and to reduce traffic on the local road network.

Cognisance should also be taken of recommended traffic mitigation measures within the following guidance documents:

- NRA (2008) Environmental Impact Assessment of National Road Schemes
 The guidelines are primarily provide advise with regard to EIAR on road schemes. The
 guidance also provide consolidated legislation, general guidance on mitigation and
 sources of further relevant information.
- EPA (2006) Environmental Management in the Extractive Industry Open sites (construction sites, quarrying and in-fill activities) by their nature, generate similar traffic impacts. Construction materials transported from quarries to construction sites have the potential to cause environmental impacts due to traffic at the source and destination.

This guidance document provides general recommendations for the management of traffic and transport of materials.

The urban area of Carlow Town has a well laid out and developed road network. The main arterial roads in the area handle large volumes of traffic throughout the week. This is a moderate sized development in a large urban area. Site related traffic would be miniscule in comparison to current road traffic volumes in the area, therefore it is anticipated that there would be no traffic impacts associated with the proposed development.

It is not considered that further assessment within an EIAR is required for potential traffic impacts.

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6.0 PART III – CHARACTERISATION OF THE POTENTIAL IMPACTS

6.1.1 Magnitude and Spatial Extent of the Impact (For example geographical area and size of the population likely to be affected)

The proposed project involves the construction and operation of a café and activity centre. It is considered that the potential magnitude of impacts associated with this development would be relatively minor.

The sites (Site A and Site B) are positioned within an urban area, including residential estates, located approximately 400m north-west of Carlow Town Centre. Therefore, the development and population density of the area is high.

The total area of Site A is 0.3651 hectares and Site B is 0.095 hectares. Therefore, the spatial extent of the development is relatively small.

Environmental effects from the proposed development would generally be localised to the area of activities within the urban landscape. Potential impacts to air quality, surface waters and groundwaters would apply to a regional extent. However, potential impacts would be anticipated to be minor or effectively mitigated against through proposed measures.

6.1.2 Nature of the Impact

During the construction phase, potential environmental impacts would be common for construction projects and include:

- Potential noise impacts to sensitive receptors,
- Potential nuisance airborne dust,
- Potential contamination of surface waters with soil, concrete etc.

While such environmental risk can occur from all construction activities, it is considered that these risks would be appropriately mitigated by proposed practices and the location of the proposed site, as discussed within this report.

Potential environmental impacts would also exist as a result of the operational phase. Typical potential environmental impacts associated with such facilities include:

- Potential visual & amenity impacts,
- Noise nuisance (faulty equipment or excessive patron noise during inappropriate hours),
- Odour (improper waste management),
- Air quality (space heating)
- Surface water quality & ecology (uncontrolled rain-water discharges),
- Traffic.

While such environmental risk occurs from various types of facilities, it is considered that these risks would be appropriately mitigated by the small scale of the project, proposed project design and mitigation /controls and the proposed activities that will be carried out at the site.

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6.1.3 Transboundary Nature of the Impact

The proposed development is located a significant distance from international boundaries, and it is unlikely that emissions would have any significant transboundary impacts.

6.1.4 Intensity and Complexity of the Impact

The sites as a whole would be small in scale both in terms of area, waste generation and resource use. Therefore, the potential intensity of impacts would be minor.

Potential impacts from the proposed developments would not be complex and would be amenable to mitigation. The design of the development employs common construction principals and construction methods would be standard. The proposed activities at the site, once construction is completed would primarily be in relation to water recreation, boat storage, meetings and other social activities.

6.1.5 Probability of the Impact

As discussed, the construction phase has the potential to cause noise, dust, surface-water and ecological impacts. A range of mitigation measures have been formalised in a Construction Environmental Management Plan (Document Ref: PES_CEMP_21034) compiled by PES. It is considered that significant impacts would be unlikely due to the small scale of the development and the mitigation measures proposed.

The nature of the proposed use of the site in this urban setting would be fitting to the urban location. It would lead to the creation of a purpose made water activity centre in an area which is already in use for recreation (Peoples Park).

During he operational phase of the development, potential impacts relate to noise, odour and surface water quality. It is considered that the proposed design, intended use and good operational practices would ensure that significant impacts are unlikely.

6.1.6 Expected Onset, Duration, Frequency and Reversibility of the Impact

The construction of the proposed development would begin as soon as possible, pending approval. The expected construction timeframe would be approximately eighteen months. Potential impacts during the construction of the proposed developments are likely to be temporary.

The completed development would constitute a long term and permanent change in the land use and visual amenity of the area. The project, if successful, would result in a modern water activity and community centre which would be an positive addition to Carlow Town and the Leinster region as a whole.

Potential environmental impacts associated with the operation of the project, such as potential noise and odour nuisance, are likely to be temporary, rare and resolvable through appropriate management and mitigation.

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6.1.7 Cumulation of the Impact with the Impact of other Existing and / or Approved Projects

There are no known construction projects, proposed construction projects, or combination of construction projects in the area which would have a significant in-combination effect with the proposed development.

However, the risk of in-combination construction impacts may occur should other construction projects occur concurrently with the proposed project within Graiguecullen townland or within the River Barrow Catchment.

The proposed activity centre would be located within Carlow Town Centre and would be anticipated to have in-combination effects with other businesses and residences in terms of air quality, noise, odour, wastewater infrastructure and potential surface water quality impacts. However, as the activity would be small in scale, it is not considered that potential incombination effects would be significant.

The proposed development would be expected to have a positive in-combination impact on the local economy and community by providing employment during the construction phase, with long-term jobs during the operational phase.

6.1.8 Possibility of Effectively Reducing the Impact

There is a high likelihood of reducing potential impacts from site activities through the implementation of standard construction practices for the protection of surface waters and the minimisation of potential dust and noise.

Potential impacts which may occur as part of the operation of the activity centre would be expected to be effectively mitigated by the location of the site, the small scale of the operation and the implementation of good management practices.

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7.0 CONCLUSION

An EIA Screening exercise was carried out to assess the proposed development in terms of environmental risks and location sensitivity. This exercise has been informed by a desk study of the site based on the best available information.

The project, if successful, would result in the development of a state of the art, modern water activity and community centre.

The proposed development is below the mandatory threshold required for an EIAR.

The potential for the proposed development to cause significant adverse environmental impacts by itself, or in combination with other developments, during the operational phases of the project are anticipated to be minimal.

The proposed design and management of the site is considered to be as standard and would pose no significant risk to the environment. It is considered that the development, as proposed, would not significantly impact upon the sensitivities of the existing environment.

Where a potential for significant environmental impacts is present (i.e. construction phase impacts, ecology, visual amenity and archaeology and cultural heritage) it is considered that these have been addressed adequately in stand alone reports and appropriate mitigation measures have been proposed.

It is considered that potential risks are discrete, and may be assessed individually should further information be required to clarify potential environmental impacts.

Therefore, it is considered that an Environmental Impact Assessment Report would not be required to be completed for this project.