Application for Approval in Accordance with Section 177AE of Planning and Development Act 2000 (as Amended) for

Tullow Town Park Regeneration

Prepared by

PLACE & Urbanism Ltd

For

Carlow County Council

CARLOW COUNTY COUNCIL

PLACE + Urbanism

Contents

1. Introduction and Background

The proposed development consists of the upgrade and redesign of Tullow Town Park, commissioned by Carlow County Council. The scheme is guided by the County Development Plan, national Tourism policy and the Carlow Tourism Strategy. The proposed public realm upgrade works covered by this proposed development are central to this strategy.

This project was tendered in February 2023 and PLACE & Urbanism Ltd (PLACE+U) in association with Cathal O'Meara Landscape Architects (COMLA) were commissioned in June 2023. Planning design for this project is ongoing, with this report forming part of the Approval Application by Carlow County Council to An Bord Pleanála. Approval is sought for this development in accordance with the procedure outlined in Article 249 of the Planning and Development Regulations 2000 (as amended) and Section 177AE of the Planning and Development Act 2000 (as amended).

The proposed scheme represents an opportunity to revitalise this underused riverside town park and to ensure that it provides suitable and accessible facilities for all. The proposed public spaces will create safe places for people to sit and enjoy as well as pass through, with the potential for them to be used for events/activities. By simply occupying the space and promoting a vibrant culture adjacent to the water, it is envisaged that any potential for anti-social behaviour can be eliminated, and park users can feel safe and secure.

Figure 1: Tullow Town Park – Existing Photos (PLACE+Urbanism 2023)

2. Existing Park.

The existing Town Park was partially developed in 2009 originating from a wider plan for the expansion of Tullow Town to the west that never came to fruition. The funding available for the development at the time was limited and the works consisted of a small playground, some landscaping, a walkway, and paved areas for future development. During the past 12 years, there were some minor improvements, including fencing to the playground, some outdoor exercise equipment and some off-the-shelf skateboard pieces. There are many issues with the current offering and as a result, the park has very low footfall. The park is located to the west of the River Slaney with the town centre on the other side. It is accessed from the Town centre via a footbridge and from the west through Tesco Carpark. Some of the key issues identified with the existing park include:

- The park is disconnected from the Town and hidden. It is not regarded as a destination for any age group and there is a lack of facilities.
- The heavy growth along the riverbank hides the park from the town centre. From the park, the overgrowth is so extensive that the view of the River Slaney is completely covered. The overgrowth is a security issue, causes disconnection and removes the opportunity for the Town/Park to connect to the river. To the locals and the visitor alike, there is a perception that there is no public green space in the Town Centre
- The children's play area is extremely poor and contains only 5 pieces of equipment, 2 swing sets, 2 slides and a very small climbing frame. This is wholly unsuitable for a modern Children's playground that is designed to aid in climbing, mobility, balance, core strength, adventure and imagination. It is also noted that there are no universally accessible pieces of equipment in the playground.
- There were four off-the-shelf skateboard pieces placed in the rear of the park. These pieces are not used by local skateboarders as they consider them too dangerous. The slopes are too extreme, and the take-off/landing zones are too narrow.
- There are no games areas for football, basketball, tennis, pump tracks etc for the teenagers. Apart from club facilities, there are no publicly provided amenities in the Town Centre.
- Seating provided is in a large open paved area, elevated and overlooking an adjacent field. It is not a particularly pleasant seating Environment, considering that there is a very attractive River in the Park with no seating. This layout does not create a destination for people to visit and sit.
- There are no facilities, toilets, or covered areas to shelter or sit. There are no picnic or barbeque areas.
- There is no access provided to the river for swimming or fishing.
- The entrance to the park is not in public ownership which causes a further disconnect.

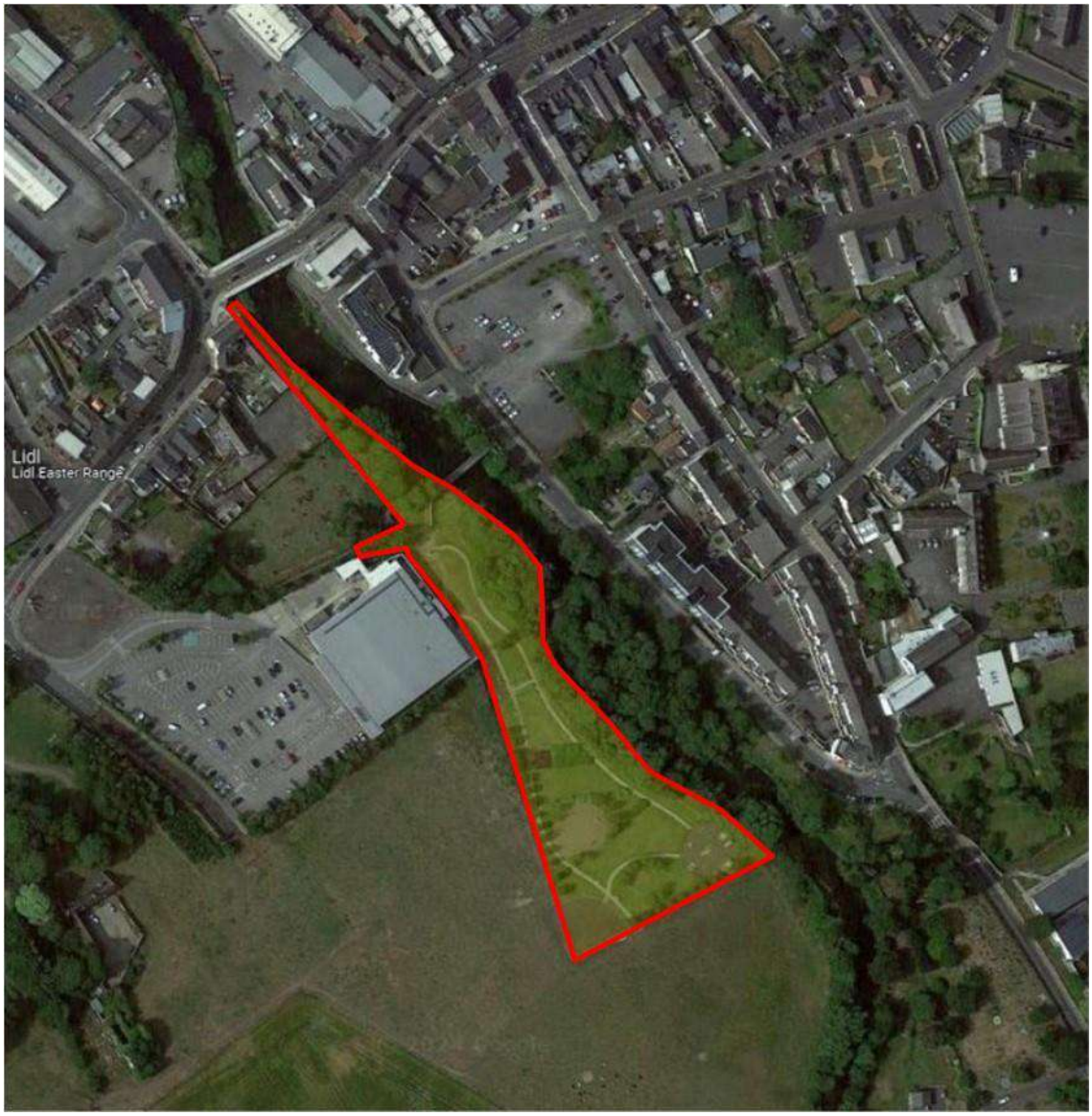


Figure 2: Tullow Town Park – Aerial View (Google Maps 2024)

3. Key Project Challenges

Some of the key issues and challenges that are relevant to Tullow Town Park in terms of the design and delivery of the parkland features, elements and activity zones are outlined below. In the first instance, consideration must be given to the sensitive environmental challenges given the park's proximity to the River Slaney Valley SAC (0781).

Flooding / SAC

The site is located within the OPW 1/100 and 1/1000-year flood zone mapping. A site-specific Flood Risk Assessment report has been prepared and is presented in Appendix D. In addition, the site is partially located within the Slaney River Valley SAC which is protected under the EU Habitats directive.

Flooding of the river Slaney, as identified on OPW CFRAM Flood Risk mapping, results in areas of high and medium flood risk within the Tullow Town Park area. The potential impacts of flooding are reflected and incorporated into the redesign of the park, where practicable and necessary.

4. Opportunities and Objectives

The redesign and regeneration of Tullow Town Park provides a number of opportunities to ensure that the finished park will deliver on the objectives set out in the Tullow Town LAP and Carlow County Council's requirements for the project, as follows:

- **Holistic approach** – Development of a high-quality, sustainable design, which unlocks the amenity and visitor potential of the park and enhances its environment, public realm and the quality of its facilities for the local community and wider visitor attraction.
- **Quality** – maintaining, improving, and providing high-quality public realm, while having regard to all competing factors and ensuring that proposals are future-proofed against excessive maintenance burden.
- **Infrastructure, servicing, and utilities** – developing an integrated and comprehensive proposal around an array of servicing requirements, existing utility infrastructure, access rights etc.
- **Events and activities** - Design and delivery of parkland features, elements and activity zones for formal and informal events and activities, for both the immediate community and also to the wider visitors and especially in the better weather of the summer months.
- **Safety and anti-social issues** – development of proposals that consider the safety of users and visitors to the park and which seek to deter anti-social behaviour.
- **Site constraints** - to be assessed and analysed and to significantly inform the design process.
- **Furniture and Lighting strategy** - Lighting design proposals for all elements of the project and furniture will need to be carefully considered in the redesign proposals.
- **Funding** - The park could be redeveloped in phases and attract funding from a variety of sources including Town and Village scheme, Development Levies, LEADER and the Department of Children.

Additional Benefits of the Project

Although the traditional town centre in Market Square is performing well, other areas of Tullow for example the Abbey Street area, have several high-profile vacant units. On Bridge Street alone three large properties were former pubs that have been vacant for between 5 to 20 years. One of the units is located on the bridge and is the first building that presents in Tullow as you approach from Carlow and Wexford sides. There is currently an opportunity to reimagine these properties into town centre living spaces under Government schemes like 'Buy and Renew.'

To ensure the success of these schemes moving forward, high-density town centre units can be examined to reinvigorate vacant/derelict town centre spaces, but these units must be supported by quality open urban spaces. The Tullow Town Park area is directly connected to Abbey Street along the western banks of the river Slaney. The development of this area would be of immeasurable benefit to the Town in terms of the provision of much-needed housing, increased footfall, reduced dereliction and revitalising of the Bridge Street area. This opportunity is identified in Section 6.9 of the Local Area Plan with a photo montage demonstrating the potential of this problematic site. The key linkage and extension of Tullow Town Park are again referred to as the achievement of this objective.

The removal of a selection of the growth between the park and the Relief Road and overall vegetation management will create a direct vision from the town centre and east bank of the river Slaney to the park. This work will be implemented in accordance with the recommendation of an ecologist and landscape architect. Implementation of this measure will also increase and enhance security.

The provision of an additional footbridge to the South of the Park is a long term objective of Carlow County Council. Though not specifically forming part of this current redevelopment proposal, the future provision of a pedestrian bridge would create a loop effect and the river Slaney will be at the centre of the Park, with the green space to the West and the Relief Road (Town) to the West. This will help realise the Local Area Plan's aspiration to open up the waterfront and make it accessible.

Research - Parks/Playgrounds/Public Recreation Space

There has been considerable research conducted into the economic and social benefits of social recreational spaces. The 'Outdoor Recreation Plan for Public Lands and Waters in Ireland 2017 – 2021' discusses the *'compelling case for providing countryside recreation'* and cites several benefits including:

- The economic value
- Rural Development
- Employment
- Tourism
- Health and Wellbeing
- Conservation
- Education

The Dublin City Park Strategy 2019 – 2022 takes a more in-depth view of the value of the City Park to its citizens and the wider City. Under Section 2.3 Value of City Parks, it highlights the importance of recreation and health. It states that *'the value of parks as recreational spaces is widely recognised. Recreation is either passive or active and suitable for all age groups and abilities. Parks also provide*

space to relax away from busy city living. Research supports the importance of green spaces on better mental health. The World Health Organisation, in its European Health Plan, states actions under healthy places, and healthy communities, that highlight the importance of recreation and contact with nature for mental well-being.' The strategy reports the value of Parks in terms of identity, social interaction and community, environmental benefits, biodiversity and tourism. International examples are cited where public open space is provided in the world's busiest cities due to the social and economic importance of Parks.

The *'benefits of visiting green space'* space were also researched in a recent study by the Economic and Social Research Institute (ERSI). In a study carried out pre Covid, the ERSI found that visits to green spaces are associated with positive outcomes for general health, cardiovascular health as well as mental health and well-being. The health impacts are greatest at low-level visits, meaning those who visit once a month can also experience the benefits. It also found the more visitor facilities are available, the higher the potential for visits to green spaces. Benefits arise from the psychological restorative experience, physical activity, and social interaction. The research provides recommendations for park design and recognises in many instances that the size may not be increased, but designers should examine factors and layouts that drive the highest usage, increase visitor numbers, and achieve a greater public health dividend.

Local Examples of Playground/Park Provision

There are several examples of recent park/playground developments in the vicinity of Tullow and in surrounding Counties. New bespoke skateboard parks have been provided in Carlow Town and Kilkenny City. Stradbally in County Laois, Paulstown in County Kilkenny and Castledermot in Co. Kildare have all recently developed playgrounds for the Community. These playgrounds are of modern standard and provide the range of skills and movement opportunities needed to stimulate activity. The combined population of these two villages is less than that of Tullow but the importance of providing these facilities has been recognised.

The recent development of the skateboard park in Carlow Town has been a particularly welcome development for the County. Carlow Sports Partnership and Carlow Regional Youth Services have benefitted from the provision of the facility in the area of youth development. This development work has happened across age ranges but has helped to engage teenage youths with high participation in particular among female teenagers.

5. Description of Proposed Development

The primary aim of the proposed development is to revitalise and regenerate Tullow Town Park, and to create a waterside community park for both local residents and visitors to the area. The specific details of the proposed development are set out below.

Development Description.

The proposed development to upgrade and enhance of the existing Tullow Town Park facilities/features, ancillary infrastructure and associated site development works, all at a site of approximately 1.13 ha in extent at Tullow Town Park located west side of the River Slaney, Tullowbeg (Townland), Tullow, Co. Carlow.

The proposed upgrade and enhancement of Tullow Town Park facilities/features development consists of:

- Construction of demarcated and enhanced network of cycle and pedestrian paths of asphalt surfacing and locally sourced grey stone aggregates, leading to a sequence of outdoor spaces laid out along the length of the park;
- Construction of partially sheltered concrete surfaced outdoor event/classroom space with feature designed shelter/canopy, centrally located feature concrete surfaced skate park, 2 no. feature hardwood decking viewing platforms/steps to the River Slaney, a kickabout soft landscaped lawn area which also facilitates land drain/swale and flood area, and a sport fenced enclosed multi-use games court to include football and basketball goals;
- Removal of trees of poor condition, where views into the park can be increased, and for facilitating the structural upgrade and enhancement works proposed; and
- Retention of existing trees described as riverbank due to the binding nature of the tree roots and the adjacent River Slaney riverbank.

The public realm upgrade and enhancement works also provide for upgrading of existing footpaths, demarcated natural stone aggregates feature paved areas, raised seating areas, raised planting areas, seats and benches, timber top 'picnic' table and seating facilities, a variety of soft landscaping features (grass lawn, native meadow, ornamental grasses and perennials), and all associated infrastructure/services and site development works above and below ground level, including sustainable urban drainage services (grasscrete, tree pit, land drain/swale and rain garden solutions, public lighting and closed-circuit television (CCTV) infrastructure.

Pedestrian and cyclist access to the proposed development will be maintained via the existing walkway access from Abbey Street (the N81 National Road) to the north, the existing walkway bridge over the River Slaney from Tullow Street to the east, and the existing walkway from Abbey Street (the N81 National Road) to the west adjacent to the Tesco Tullow Supermarket.

A Natura Impact Statement has been prepared in respect of the proposed development and accompanies the application to An Bord Pleanála for approval.

6. Design Team

The public realm design proposals for Tullow Town Park has been developed by a multidisciplinary Design Team at PLACE & Urbanism and additional consultants, consisting of the following:

- Architectural, Urban Design and Conservation input from Ailtirí Architects
- Engineering input from Martin Peters Associates
- Environmental Planning input from The Planning Partnership
- Ecological and Environmental input from Panther Environmental Solutions Ltd.
- Landscape design input from Cathal O'Meara Landscape Architects
- Flood Impact Assessment provided by Ash Ecology and Environmental
- Public Lighting Design provided by EnerJ Building Services Engineers.

The development of the design has been guided by relevant directorates within Carlow County Council, and in particular by Sudhir Srinivasan, Executive Architect who has been central to the development of the design.

7. Design Statement

Site Location

Tullow Town Park is located behind Tesco, in the centre of the town. Located on the East side of the park is the River Slaney, which floods occasionally. There is a pedestrian link which crosses the river on the Northern side, close to the Tullow Library. The park can also be accessed through the Tesco car park, and Abbey St. close to the existing bus stop in this area. There is no means of accessing the park on the Southern end, meaning that users have to enter and leave on the same side of the park, following the looped walking trail, or doubling back on their route. The park is in close proximity to both a primary and secondary school, located on the other side of the river, to the South East of the site. Tullow has an extensive network of green spaces, in particular recreational spaces such as playing fields, however the Town Park is the primary general amenity area or park located centrally in the town.

Situated within the existing park are a skate park, playground area and walking routes, with bridge access on the Northern side of the park, green open space, and a hard playing surface on the Southern side of the site. The site generally slopes down towards the river on the Eastern side of the park, rendering one of the walking paths un-usable during flood events.

Design Concepts

Abutting the River Slaney Tullow town park avails off a beautiful natural site, entered via a pedestrian bridge the park's mature trees and inherent riverside planting give the feel of entering an Island site. Unfortunately, this also means that the site is susceptible to flooding.

Presently the park's lower path and skatepark lie close to the river and within the flood zone, but in times of high flood the River extends into much of the site's open green core.

Fortunately, the park has a second main route, this path joins the entrance bridge to the back entrance of the Town's main Supermarket and then runs along the length of the park linking to the Playground, Seating Nodes, Outdoor Gym and a flat asphalt Ball games area. These are all at a higher level out of the main flood zone but are underutilized therefore the park redesign will address this by reorganizing the amenities to include a basketball court, outdoor classroom / meeting area and upscaling the Skate Park within a higher, flood free location.

The conceptual design of the proposals to revitalise Tullow Town Park is illustrated in Fig. 3. The design concept aims to promote access to the park with an extra entrance on the Southern side (future works), with a sequence of outdoor rooms / spaces laid out along the length of the park.

This layout relocates the existing amenities to different areas, making the spaces more usable, both in times when the park can be fully used, and also when the park is under flood. Seating spaces are incorporated throughout the design, being used as both a seating area and a flood defence in some instances. Activation along the riverside is also key in the proposed conceptual design, with places to access the waterside, and areas to view up and down along the River Slaney. The skate park was initially re-located to the Northern end of the park, before being moved to a centralised location following consultation with the Elected Members, to ensure more passive surveillance from its surroundings.

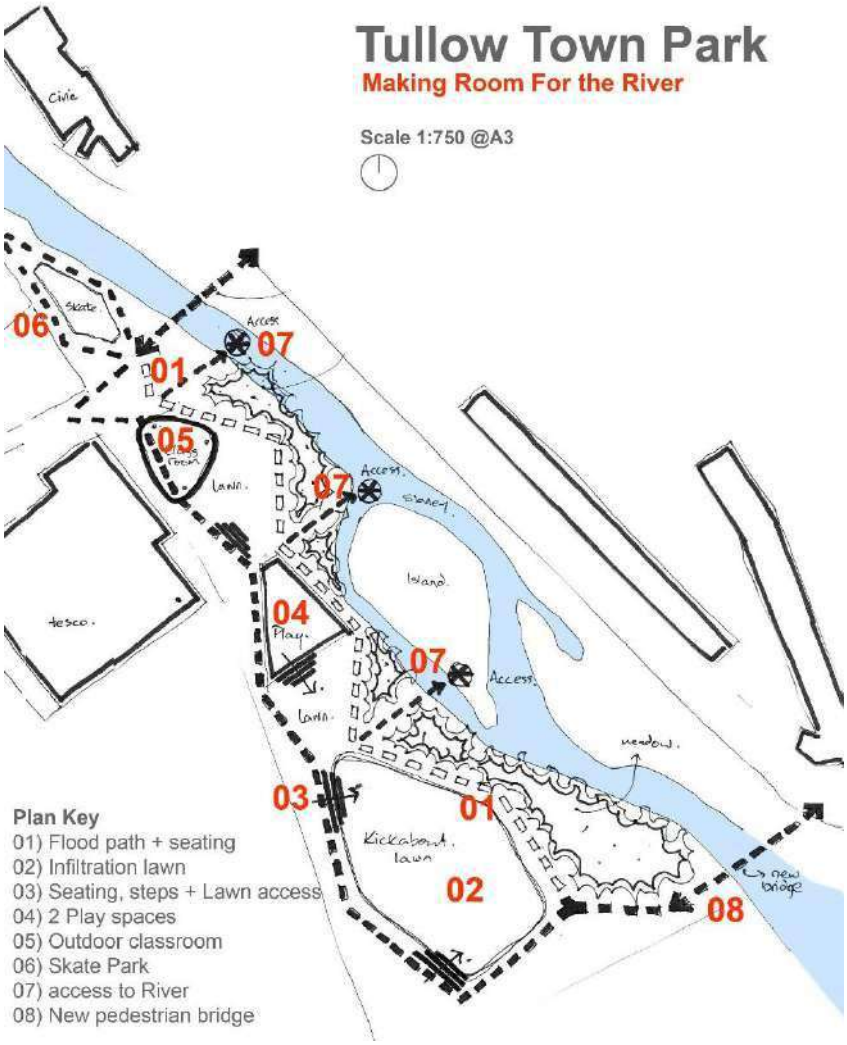


Figure 3: Tullow Town Park – Conceptual Design (COMLA 2023)

Illustrated in Fig 4 is the outline of the 1 in 100 year flood event. The skatepark and covered classroom spaces are raised in order to keep them above flood levels, and usable at all times. The pedestrian pathway follows the line of the flood, raised above it, and maintaining its usability throughout the year. The park will still be in a flood area, but will remain usable throughout the year, with the use of raised areas, and steps/ seating to control the flood water.

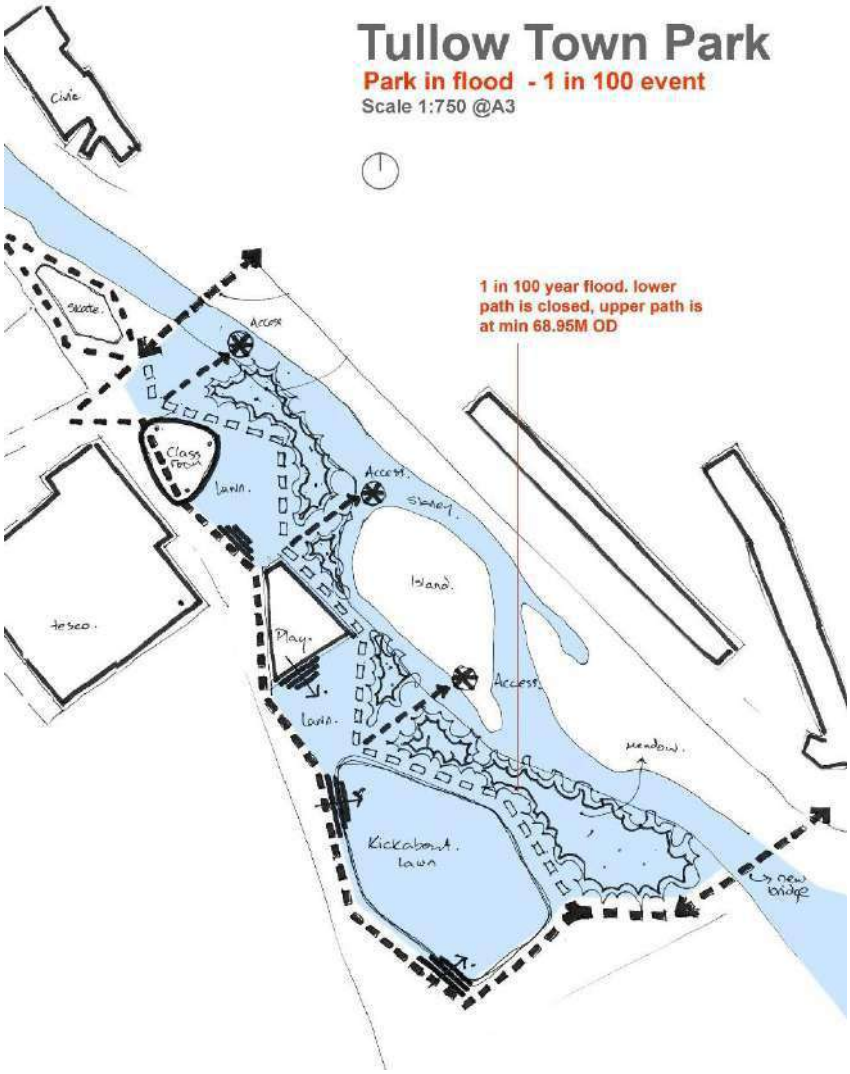


Figure 4: Tullow Town Park – 1/100 Year Flood Event (COMLA 2023)

Landscape Strategy

The landscape design seeks to create a high quality park with all amenity facilities sited to avoid flooding and allow year round use. The sites Riverside extent will be opened up by lifting the canopy of existing trees and removing bramble and smaller invasive trees allowing views and access to the river while in times of flood a designed catchment basin will help retain water and let it slowly infiltrate back into the ground.

The Park will include:

- A skatepark with facilities for wheeled sports including skateboarding, roller skates and scooters.
- A full size Basketball court with multi use games line markings/goal posts and secure fencing.
- A gathering area with covered seating featuring a bespoke steel shelter, seating will be arranged to frame an open space where performances or presentations can be held.
- River access points, 1 designed to allow safe entry to the water and 1 allowing views to the Rivers central Island ecology.
- Seating and Picnic nodes at entrances and within the parks body.
- Sustainable urban drainage components to capture water run-off from the new hard surfaced amenity areas and to help contain flood water from the river.
- Planting ornamental and parkland trees at focus areas to help bolster the sites mature trees and provide ecological longevity.
- Provide ornamental planting to boost the sites biodiversity using several planting mixes chosen for specific locations.

Accessibility

The sites main entrance will remain unchanged with the existing bridge creating a unique focal entrance into the park. An open node will be created where the bridge ends to allow space for people to congregate before passing through or deciding where to go.

This node links us to the park's main paths and also to two existing subsidiary entrance parks, one of these links to Abbey Street along the Tesco's boundary and the other to Bridge Street along the River. Both subsidiary paths will be retained and will remain unchanged by the new works.

The two paths within the park project area will run in similar positions to the existing paths but will be rerouted to provide for new facilities and future links.

An upper path will link to the back entrance to Tesco where a small plaza will be formed around the base of the existing ramp, the path runs from here along the higher site boundary linking to the new gathering area, skatepark and basketball court. The entire extent of the path has been designed to remain out of the flood zone and will allow unimpeded access for wheelchairs and those who are mobility impaired. At its southernmost point the path terminates at the parks boundary but has been designed to link with future developments. Before the termination point a loop path branches off from the upper path running along the southern boundary and linking to the lower path and another future link allowing for access across the river if and when a new bridge can be constructed.

The lower path meanders along the site's riverside linking to the lower reaches of the gathering area and the skate park and houses two smaller offshoot paths which allow access and views to the river. The lower path allows users to wander among the riverside trees and get closer to the native planting on the riverbank; it also creates a loop around the park, but it will not be accessible in times of flood.

Social Spaces and Play Amenities

The park's main social gathering space has been designed to cater for use by school or community groups, a long concrete bench will envelope the space allowing seating which partially encircles a flat central space which could be used as a small events space or classroom. A bespoke steel shelter will adorn the area and provide cover to the central row of seating. When not in use by groups it is foreseen that people will gather here informally to chat or play while seeking shelter from the Irish weather.

The skatepark site will be enclosed by a linear concrete seating wall, this will break at points to provide access to both paths. The park will be designed with a hard surface suited to skateboards and scooters and will house an array of jumps, bumps and benches to suit various levels and ages of skaters. The hard core of the skate park will be broken up with small areas of soft planting and will have a large boundary planter between the park and the river.

A full size basketball court has been sited to the south of the site; this will form part of the back boundary with adjacent future development land. The court will be enclosed within heavy duty sports fencing and will have two self-closing lockable gates, the court will be suitable for multi-sport use having markings and goal posts for multiple use.

The front boundary of the court will be softened by a large planter which will retain surface water runoff from the court and slow infiltration into the larger park. The planter will be punctuated with semi-mature trees to subdue the line of the hard fencing. The front entrance to the court will house seating and some picnic tables, creating social nodes at both ends of the park.

Further to the formal court/pitch area a large open area for kickarounds has been maintained within the park. Lying between the basketball court and the river a designed embankment frames a large open grass lawn. The lawn provides ample space for informal kickabouts in dry weather while in times of high rain and flood the embankment edge will create a basin to hold water back from the rest of the site and protect the higher areas from flooding.

Planting and Ecology

The riverside setting and mature trees are fundamental to the park's character but presently the bank is overgrown with bramble and the unpruned trees are blocking both access and light reaching the river.

A detailed tree survey and report has been carried out allowing decisions to be made on which trees can be removed to allow access to the river. This will see the removal of small scrubby specimens being removed with all healthy mature trees kept and pruned where required. Pruning and lifting the crown of larger trees will allow light to penetrate the river bank environment and encourage the

growth of native aquatic and marginal species. These works will also open up access and site lines to the river so users will feel safer entering the river knowing that they can be seen in case of an accident.

The area between the riverside and the lower path will be allowed to grow as meadow, seeding from the local environment, and will be maintained at a height between 200 and 700mm. This regenerative meadow will frame most of the park providing a soft, low maintenance, high biodiversity boundary and create contrast with the park's mown lawns and hard surfaces.

Two mixes of Ornamental planting are proposed at specific locations to introduce some diversity to the landscape and to create specific, individual spaces.

The first mix will be suited to sunny planting beds and will form soft, colourful nodes at the park's entrances. Using a spectrum of hardy, low maintenance perennials and architectural grasses these will be planted in large mixed species blocks creating drama and texture. The planting choice will provide year round interest with lively pops of seasonal colour and retained winter structure.

The second mix will be of a similar character but chosen for use within the park's SUDS planting beds, meaning the mix must be able to grow in light free draining soil but also suited to water logged, wet conditions.

As some trees will be removed from the site to allow for the new works it is crucial that new trees are planted to bolster the park’s diversity and ensure ecological endurance.

Trees have been chosen for specific sites within the park based on the existing conditions and the areas requirements. These trees include Populus Nigra (Black Poplar), and Salix Babylonica (weeping willow) chosen as mature feature trees for the Riverside environment, Aesculus hippocastanum (Horse Chestnut) and Quercus Robur (English Oak) used as parkland trees to create focal points, and ornamental trees Prunus Mackii 'Amber Beauty' (Manchurian Cherry) and Liquidambar styraciflua (Sweet Gum) adding colour and flower to the main entrance node. Populus tremula (European Aspen) and Betula pendula (Silver birch) have been chosen as boundary trees to reinforce and soften the site's western boundary and line the lower entrance path at the site of a potential future bridge.

Engineering Design and Drainage

There are currently no formal storm water drainage facilities on the site. The current hard surfaces within the park drain via overland flow to the surrounding green areas.

There are existing wastewater sewers, combined sewers and combined sewer overflow (CSO) that traverse the site. These sewers serve the existing Uisce Eireann pumping station that bounds the west of the site. The pumping station overflows via an existing overflow pipe which discharges to the river Slaney south of the existing footbridge.

As part of the new park development, it is proposed to implement a Storm water management system that incorporates sustainable urban drainage system (SuDS) features which aligns with the policies and objectives outlined in the Carlow County Development Plan 2022-2028.

All hard standing areas including the proposed ball court, the proposed skatepark and proposed outdoor classroom and associated canopy will be drained via SuDS features such as rain gardens and grasscrete surfaces.

As the site is a riverside site and ground water is known to be high from previous site investigation works on behalf of Uisce Eireann, the use of soakaways for final disposal of storm water is not considered possible as such, and a final overflow discharge to the river Slaney is recommended. This is to be achieved by repurposing the sewers which are to be decommissioned by Uisce Eireann as part of the pumping station upgrade works.

Sustainable urban Drainage Systems (SuDS) are an integral part of the proposed development at Tullow Town Park. SuDS are designed to manage surface water runoff, mitigate flood risk, and improve water quality by mimicking natural drainage processes. The implementation of SuDS is in line with the objectives outlined in the Carlow County Development Plan 2022-2028 and the proposed SuDS measures for the park:

- Rain Gardens
- Grasscrete Surfaces
- Overflow Connections.

The proposed stormwater management and SuDS systems are in line with Carlow County Development Plan Policies and have adequate capacity for the development and therefore are deemed suitable for development of the site. For more detailed information refer Appendix G Technical Note: TN01E – Storm Water Management.

Public Lighting

A new scheme of Public Lighting has been designed for Tullow Town Park, to replace the mix of existing fittings. The new scheme is based on the provision of low-level 850mm high bollards throughout to minimise impact of blue light and glare on local fauna - no Blue light source generated greater than 550 Nanometres. Refer to Appendix H for Tullow Town Park Lighting Design calculations prepared by EnerJ Building Services Engineers.

8. Planning and Development

The likely consequences for proper planning and sustainable development on the site and wider Tullow Town area are addressed in this section. Three key documents are referenced in respect of the proposed development:

- Carlow County Development Plan 2021 – 2028
- Tullow Local Area Plan 2017 - 2023
- Tullow Town Centre First Plan 2023

This section has regard to site designations, planning history of the site and general provisions of the Planning and Development Acts. A detailed analysis of the Objectives of the above three plans is set out in Section 10.

Site Zoning and Designations

As per the Tullow Local Area Plan 2017 - 2023 – the site is zoned as Amenity and Open Space. The objective of this designation is *'To protect and provide for recreation, open space and amenity provision. The areas included in this zoning objective cover both private and public open space and are dispersed throughout the town. The aims of this land use-zoning objective include; to protect, improve and provide for recreation, open space and amenity provision; to protect, improve and maintain public open space; to preserve private open space and to provide recreational and community facilities'.*

Protected structures, ACA and ZAP

There are no Protected Structures located on the site of Tullow Town Park, though there are a number in the town centre vicinity:

- CW82 – Slaney River Bridge, Tullowphelim and Tullowbeg - Four-arch road bridge over river, c. 1855, with triangular cut waters.
- CW84 – Water Baillif's Hut, Tullowphelim - A square-plan watch hut of coursed-rubble granite with open windows and door and steps to the roof. The hut dates from circa 1835 and is an unusual structure.
- CW514 – The Bridge House, Tullow - A three-bay, two-storey house of circa 1820 with a half-hipped roof, painted and rendered walls with raised coigns and a round-headed doorcase which has a simple architrave and a scroll keystone.

The site is not located within a Zone of Archaeological Potential (ZAP) and here are no National Monuments located on the site, though the following are located in the adjoining cemetery to the North west:

- CW008-045011 Cross – High Cross
- CW008-045001 – Religious House – Augustinian Friars
- CW008-045015 – Cross.

The proposed redesign of Tullow Town Park will not have any impact on Protected Structures or National Monuments in the vicinity.

Planning History

There has been no substantial development on the site in recent years. The predominant land use is parkland, with the site forming Tullow Town park, which includes a playground, skatepark, walkways and green areas.

Adjoining developments of note include 06357 and 22164. Application 06357 was for construction of the adjoining Tesco food store, with link road, mini-roundabout, café, advertising signage and landscaping. This development also included the upgrading of green space between the proposed food store and the River Slaney and upgrading of the pedestrian footpath between the cemetery and the food store, boundary treatment, service yard, retaining walls, electricity sub-station, ancillary services and all associated site development works. The development was constructed, commencing in 2007 and now forms part of the site context.

Application 22164 on lands to the South East of the above Tesco food store consisted of (1) the decommissioning of: an existing siphon crossing underneath the River Slaney; Abbeywells Pumping Station (Abbeywells PS); a CSO overflow to the River Slaney near to Abbeywells PS; a CSO overflow to River Slaney near Millstreet junction from existing overflow chamber; an existing pumping main from Abbeywells PS to discharge manhole on N81; and an existing septic tank (2) the partial decommissioning of an existing combined sewer network on the eastern and western sides of the River Slaney (3) the construction of: a new combined sewer network to connect eastern and western agglomerations to the proposed pumping station; a new gravity sewer crossing under the River Slaney to transfer flows from eastern agglomeration; a new Formula A network pumping station to pass flows to Tullow Wastewater Treatment Plant (Tullow WwTP); a new pumping main to transfer flows from the proposed pumping station to Tullow WwTP; a new storm storage chamber to contribute to a total of 450m3 of storage in the proposed pumping station site; a new overflow sewer from proposed pumping station to River Slaney; a new pumping station site to locate wet well, storm chamber, ESB Substation, emergency generator and other ancillary equipment; new storm pumps to facilitate storm overflow discharge to River Slaney; new lifting gantries (2no.) within the proposed pumping station site to facilitate the removal of the two sets of pumps; a site access route and associated gates; 2 no. car parking spaces; hard and soft landscaping and boundary treatment works, and all associated site development works and services on a site of 1.12ha

9. Planning and Development Policies.

At a local level, the following plans are of particular relevance in guiding the nature and extent of the development proposals.

- Carlow County Development Plan 2021 – 2028
- Tullow Local Area Plan 2017 - 2023
- Tullow Town Centre First Plan 2023

Carlow County Development Plan 2021 – 2028

Tourism and Recreation

The proposed regeneration of Tullow Town Park is well positioned to elevate both the tourist potential of the River Slaney and the adjacent recreational activities which result at a local level for users of the Park through careful integration of the Park in this sensitive environment. The Park also facilitates an opportunity to develop open gathering spaces for seasonal or periodic public events centred around the River Slaney.

The CCDP recognises that the availability of recreational amenities, sporting facilities and open spaces are integral components of a good quality of life and good public health in an urban area and that public open spaces, sports and recreational facilities are in accessible locations to ensure everyone can achieve a good quality of life.

In the context of relevant objectives and policies in the CCDP in support of encouraging appropriate recreation and open spaces, the below are highlighted as being of particular relevance and which the proposed Tullow Town Park enacts:

DT O2 Examine the potential of Tullow as a designated Ireland's Ancient East 'Destination Town', and to engage with Fáilte Ireland in developing and promoting future tourism initiatives in the town, including enhancement of public space, the development of a way finding project and welcome signage, in order to capitalise on the potential benefit for the area.

R P1 Promote the value of the County's outdoor recreational and amenity resources as key assets for the local economy and for the health and well-being of communities and continue to support the expansion of existing amenities.

R P2 Co-operate with relevant agencies and bodies, local development organisations, community groups, and other key stakeholders, in the development of recreational facilities throughout the County.

R P4 Develop, in conjunction with local communities, short walking routes, such as looped walks, heritage trails and Slí Na Sláinte routes.

R P8 Support and promote public access to the County's high amenity, scenic and recreational lands, including upland areas, waterways, and other natural amenities, which does not endanger the conservation of such natural amenities.

R O1 Support the implementation of County Carlow's Outdoor Recreation Strategy 2020-2023 and the Healthy Carlow County Plan 2018-2021, and any updated versions of these documents, as a means of promoting the development of outdoor recreational facilities and infrastructure in the County and increasing access to and participation in recreation and physical activity.

Community Development

'To promote, develop and maintain sustainable communities in the County, through the provision of a range of facilities and services to meet the diverse and expanding needs of all residents, thereby supporting community participation and social inclusion, and improving the quality of life for everyone.' CCDP Section 8.0

The provision of recreational amenities and public open space are key to addressing social exclusion and marginalisation. In the context of relevant objectives and policies in the CCDP in support of encouraging sustainable communities and social inclusion, the below are highlighted as being of particular relevance and which the proposed Tullow Town Park enacts:

SI P1 Promote social inclusion and tackle disadvantage through equality of access to facilities and services for all residents of the County, so as to assist in the removal of barriers to full participation in society.

OP P2 To work with developers, communities and relevant stakeholders to achieve accessible and age-friendly facilities and amenities in communities across the County.

PD P1 Seek to ensure that all buildings, public and open spaces, and recreational and amenity areas, are accessible for people with disabilities, having regard to Part M of the Building Regulations, and 'Building for Everyone: A Universal Design Approach' (National Disability Authority).

PD O2 Ensure that all footpaths and public areas are accessible and safe for people with disabilities and/or reduced mobility.

Natural and Built Heritage

'To protect, conserve, manage and enhance the natural and built heritage features of the County, to ensure the survival of their intrinsic value for future generations and to ensure they contribute to the future sustainable development of the County' CCDP Section 10.

The value of the River Slaney as a natural heritage asset and its role as an intrinsic part in the contemporary character and the historical development of Tullow is important.

In the context of relevant objectives and policies in the CCDP in support of encouraging the protection of the natural heritage, the below are highlighted as being of particular relevance and which the proposed regeneration of Tullow Town Park enacts:

NH P1 Protect, manage and enhance the natural heritage, biodiversity, landscape and environment of County Carlow in recognition of its importance as a non-renewable resource, a unique identifier, and as a natural resource asset.

NH P2 Ensure, as far as is practicable, that development does not adversely impact on wildlife habitats and species, and that biodiversity is conserved for the benefit of future generations in the interests of sustainability. This will include moving towards no net loss of biodiversity from plans adopted by and projects granted permission/authorised by the Council.

NH P4 Promote increased understanding and awareness of the natural heritage and biodiversity of the county.

NH P5 Recognise that nature conservation is not just confined to designated sites and acknowledge the need to protect non-designated biodiversity, habitats and species not otherwise protected by legislation.

NH P7 Promote development for recreation and educational purposes that does not conflict with maintaining the favourable conservation status of designated natural heritage sites, including the achievement of their conservation objectives.

NS P1 Support the conservation and enhancement of Natura 2000 Sites, and to protect the Natura 2000 network from any plans and projects that are likely to have a significant effect on the coherence or integrity of a Natura 2000 Site, in accordance with relevant EU Environmental Directives and applicable National Legislation, Policies, Plans and Guidelines.

NS P2 Screening for Appropriate Assessment and if required Appropriate Assessment is undertaken for all plans to be adopted and projects to be granted permission/authorised by the Council. Where likely significant effects have been identified in respect of any plan or project not directly connected with or necessary to the management of a Natura 2000 site, either individually or in combination with other plans or projects, ensure appropriate assessment, in accordance with Article 6(3) of the Habitats Directive. The Council shall only agree to the plan or project after having ascertained that it will not adversely affect the integrity of the site concerned, unless the plan or project is subject to the provisions of Article 6(4) of the Habitats Directive.

NS P4 Maintain or restore the favourable conservation status of County's Natura 2000 sites qualifying interest habitats and species.

ND P6 Ensure that the management of the Council's open spaces and parks is pollinator-friendly and provides more opportunities for biodiversity, supporting the objectives of the National Pollinator Plan 2021-2025.

WT P1 Protect and manage existing woodlands, trees and hedgerow which are of amenity or biodiversity value and/or contribute to landscape character and ensure that proper provision is made for their consideration, protection and management when undertaking, approving or authorising development.

IW P1 Protect the biodiversity of rivers, streams and other watercourses, to maintain them in an open state, to discourage culverting or realignment, and where possible, uncover

existing culverts and restore the watercourses to acceptable ecological standards and for the passage of fish.

IW P3 Control the encroachment of development on watercourses and riparian zones and provide for protection measures to watercourses and their banks, including but not limited to: the prevention of pollution of the watercourse, the protection of the river bank from erosion, the retention and/or provision of wildlife corridors and the protection from light spill in sensitive locations, including during construction of permitted development.

IW P5 Maintain a biodiversity protection (buffer) zone of not less than 10 metres from the top bank of all watercourses in the County, with the full extent of the protection zone to be determined on a case by case basis by the Planning Authority, based on site specific characteristics and sensitivities and consultation with Inland Fisheries Ireland.

IW P6 Ensure that lighting proposals along water courses, rivers, streams and canal corridors, are not in conflict with bat species, and to ensure that expert advice is sought on such lighting proposals in order to mitigate the impacts of lighting on bats and other species.

IW P12 Promote the natural, historical and amenity value of the County's watercourses, including public access where feasible and appropriate, in partnership with the National Parks and Wildlife Services, Waterways Ireland, Inland Fisheries Ireland, and other relevant stakeholders, while maintaining the watercourses free from inappropriate development.

S P1 Prevent the spread of invasive alien species in the County, and to require landowners and developers to adhere to best practice guidance in relation to the containment and control of invasive alien species.

IS P3 Prohibit invasive alien plant species from inclusion in landscape design proposals and to require the use of native local plant species.

Carlow County Vision and Strategic Goals

The proposed development aligns with the overall vision for development in terms of promoting cohesive communities and promoting high quality environment and amenities. Within this vision, the proposed works at Tullow Town Park also align with the following strategic goals:

1. To build on the tourism opportunities of County Carlow in a balanced and sustainable manner
2. Facilitate the provision of and improvements to social and recreational infrastructure and provide access to new and existing community facilities throughout the County for all its residents.
3. To provide for universal access, accessibility and ease of movement along roads and footpaths as a priority
4. To protect, conserve and enhance the built and natural heritage and the landscape of County Carlow for future generations; and reinforce the distinctive character of County Carlow through ensuring that sites and species of biodiversity importance are identified, conserved and managed appropriately and by promoting awareness and enjoyment of the heritage of the County.

5. To promote high quality architectural design in all new buildings in urban and rural areas of County Carlow - commercial, residential and public buildings with energy efficiency designed into all new buildings.
6. Minimise the level of flood risk to people, business, infrastructure and the environment, through the identification and management of existing, and particularly potential future, flood risks. Flood risk will be incorporated in an integrated, proactive and transparent manner in line with evolving best practice into decision making processes for future development and use of land in the County.

Tullow Local Area Plan 2017 – 2023

The Tullow Local Area Plan (LAP) 2017 – 2023 states that *'Tullow is an important service centre in northeast Carlow and has a significant role in accommodating future population growth and economic development of the area.*' The plan sets out policies and objectives to facilitate the planned, integrated economic and sustainable development of the town by balancing the needs of the community and preserving or enhancing the natural and built environment. The strategic objectives of the plan are: -

SO 1 To create vibrant integrated communities in a more consolidated urban form.

SO 2 To create a thriving town that contributes to the town's natural and built heritage amenities and provides a vibrant and vital mixed-use environment.

SO 3 To facilitate the creation of a sustainable vibrant economy which maximises the unique attributes of the town.

The LAP seeks to provide adequate infrastructural facilities, high quality housing and community facilities, develop the public realm and amenities to improve the quality of life of employees and residents and address, where feasible, any infrastructural deficiencies that may be hindering economic development and aim to ensure that sustainable infrastructure facilitates economic development. The plan also has objectives *'to ensure that suitable social infrastructure and other support facilities are available in the neighbourhood.'* It is also stated policy to *'promote sustainable neighbourhoods which cater for the needs of persons of all stages in their lifecycle i.e., children, people of working age, elderly, people with disabilities.'*

In the discussion around land use the plan has a policy to *'investigate the feasibility of developing water-related activities, subject to the requirements of the Habitats Directive.'* There is also an objective to *'provide small scale leisure/recreation facilities in the town centre, such for example, a tennis court, basketball court, skate park.'* The landscape of the Town and its connection back to the river Slaney is seen as a key priority and the importance of linking *'the waterfront area and the retail core for the enjoyment of both visitors and residents alike'* to attract footfall is a clear necessity.

Urban areas are critically important, and Tullow's development as a community-centred town is vital to achieving sustainable growth. The need *'to support and nurture intergenerational and cross-cultural relationships through the development of community initiatives such as community gardens /parks/allotments'* is vital. High standards in the design and finishes of community facilities should be demanded and be sited in suitable locations, close to existing facilities/services and public transport routes. Community participation in the improvement of existing community and recreational facilities will increase local support and ensure long-term success and sustainability.

Tullow Town Centre First Plan 2023

The Tullow Town Centre First Plan 2023 (TTCFP) sets out the following clear vision for Tullow:

'The Vision for Tullow is to create an attractive, prosperous, vibrant and connected Town Centre where people will want to be, to live, to work, to socialise and to visit. Through an understanding of Tullow's urban structure and functions, key interventions have been identified that seek to deliver long term economic, social and environmental benefits with the aim of improving the quality of life and opportunity within the town.'

In terms of existing strengths of Tullow, the TTCFP notes that the River Slaney *'provides Tullow with a key piece of blue infrastructure which offers the potential for significant amenity and recreation improvements for residents and visitors.'* The TTCFP proposes to create a comprehensive river walk, riverfront amenity areas and a water activity area, located to the North of the Town, in addition to upgrading the Town Park.

The Riverfront Amenity Areas project sets out to *'to re-activate public open spaces and to upgrade amenity areas. This project will provide for an upgrade to the public realm, delivering more vibrant spaces that will enhance the overall quality of the townscape'.* Tullow Town Park forms a key part of the broader potential river walk and it can provide readily accessible riverfront amenity spaces, helping to deliver on the TTCFP project outcomes as follows:

- Re-activation and upgrade of riverfront public spaces that are under-utilised at present.
- Increased social interaction outcomes by facilitating an attractive place for people to meet, dwell and spend time.
- Embracing the natural and visual quality of the River Slaney.
- Developing a long term management and maintenance plan for civic areas in order to preserve their quality and use.

The TTCFP sets out the following ambition for the Town Park:

This project seeks to further enhance the quality and attractiveness of Town Park for the benefit of the local community and to promote its use by people of all ages. This project will further enhance the quality of the urban environment in Tullow and contribute to making the Town Centre a more attractive place to live, visit and spend time in. In addition, measures to treat the riverside vegetation will strengthen the relationship between pedestrians and the river which is an important natural resource for Tullow.'

A number of key features are identified in relation to enhancement of the Town Park, and these have been considered in the redesign proposals:

- Provision of an enhanced amenity and recreation resource for the local community in Tullow
- Management of the riverbank areas along the southern section of the River Slaney
- Opening up of the River Slaney on Tullow Street
- Enhancing the visual quality and user experience of the urban environment

The TTCFP notes that the required physical changes in the Town Park may include *environmental works to treat the overgrown riverbank vegetation'* and *'upgraded planting, paving, play equipment and seating solutions throughout the park'*. All of these factors have been considered and implemented in the redesign proposals for Tullow Town Park.

10. Environmental issues: The likely significant effects upon a European Site

The likely significant effects of the proposed development upon the European site designation is assessed in the accompanying Natura Impact Statement (NIS); please see the scientific examination of evidence and data outlined in *Appendix E Natura Impact Statement, Tullow Town Park, 2024* prepared by Panther Environmental Solutions Ltd.

This includes survey work results, baselines studies and further an analysis and assessment of the effects of the proposed development on the Slaney River Valley SAC (0781). The report concludes that due to the recommended control measures and standard practice during the construction phase, it is considered that there would be no significant risks to the conservation objectives of the habitats and species for which the River Slaney SAC has been designated.

It is considered that there would be no significant risk of negative impact, either alone or in combination with other plans or projects, to the integrity of the Natura 2000 network.

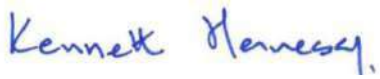
It is not anticipated that the proposed development, subject to recommended mitigation measures, by itself or in combination with other developments, would impact negatively upon the Natura 2000 network during the site preparation or operational phases of the project.

An *Ecological Impact Assessment & Bat Survey* was completed by Panther environmental Services – refer Appendix F - which concludes that with full and proper implementation of fauna protection, water quality and invasive species measures during the construction and operation phase and lighting during operational and construction phase, the proposed development will have a low impact on local fauna populations both protected and general species.

11. Conclusion

The proposed redesign and regeneration of Tullow Town Park complies with the relevant policies and objectives set out in the Carlow County Development Plan, Tullow Local Area Plan and the Tullow Town Centre First Plan, and accordingly demonstrates that the development is consistent with the proper planning and sustainable development of the area. It has been demonstrated that the development will not have a negative impact on the Natura 2000 network. The proposed stormwater management and SuDS systems are in line with Carlow County Development Plan Policies and have adequate capacity to facilitate the proposed development.

The redesign and regeneration of this key piece of green infrastructure in the heart of Tullow Town will re-activate and upgrade important riverfront public spaces that are under-utilised at present. The proposed re-design will deliver long term economic, social and environmental benefits with the aim of improving the quality of life and opportunity within Tullow Town for residents and visitors alike.



Kenneth Hennessy FRIAI

PLACE & Urbanism Ltd.

12. Appendices

Appendix A: Drawings (PLACE + U, EnerJ and RDA)

Appendix B: Newspaper Notice 02.04.2024.

Appendix C: Site Notice

Appendix D: Site Specific Flood Risk Assessment, Tullow Town Park 2024 (Ash Ecology and Environmental)

Appendix E: Natura Impact Statement, Tullow Town Park 2024 (Panther Environmental Solutions Ltd.)

Appendix F: Ecological Impact Assessment, Tullow Town Park 2024 (Panther Environmental Solutions Ltd.)

Appendix G: Storm Water Management, Technical Note: TN01E PLACE & Urbanism Ltd.

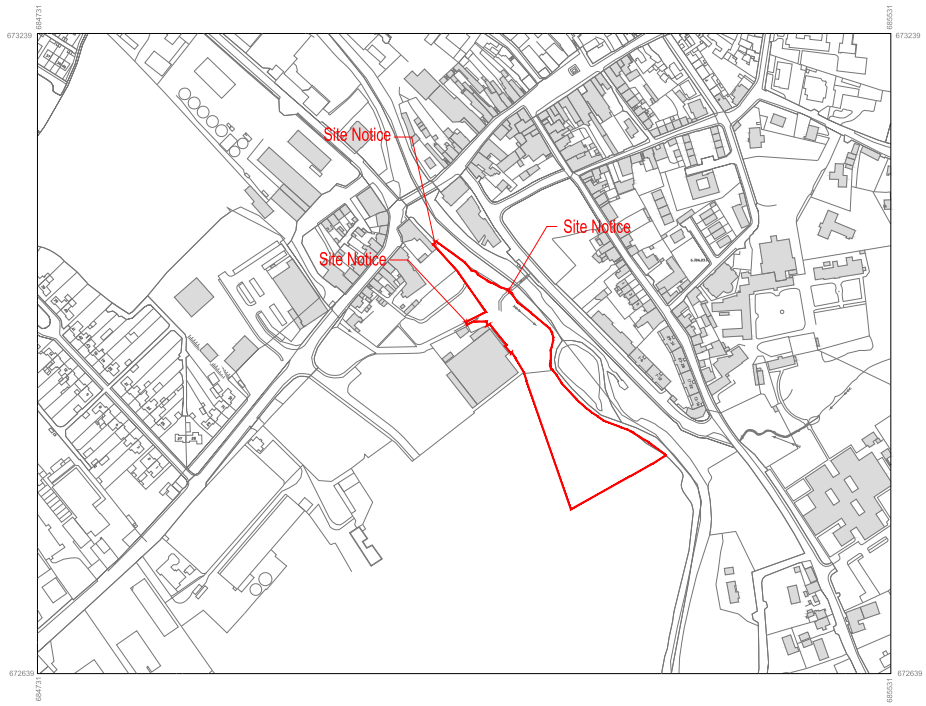
Appendix H: Tullow Town Park Lighting Design, EnerJ Building Services Engineers.

Appendix J: Notices Issued to Prescribed Bodies (copies)

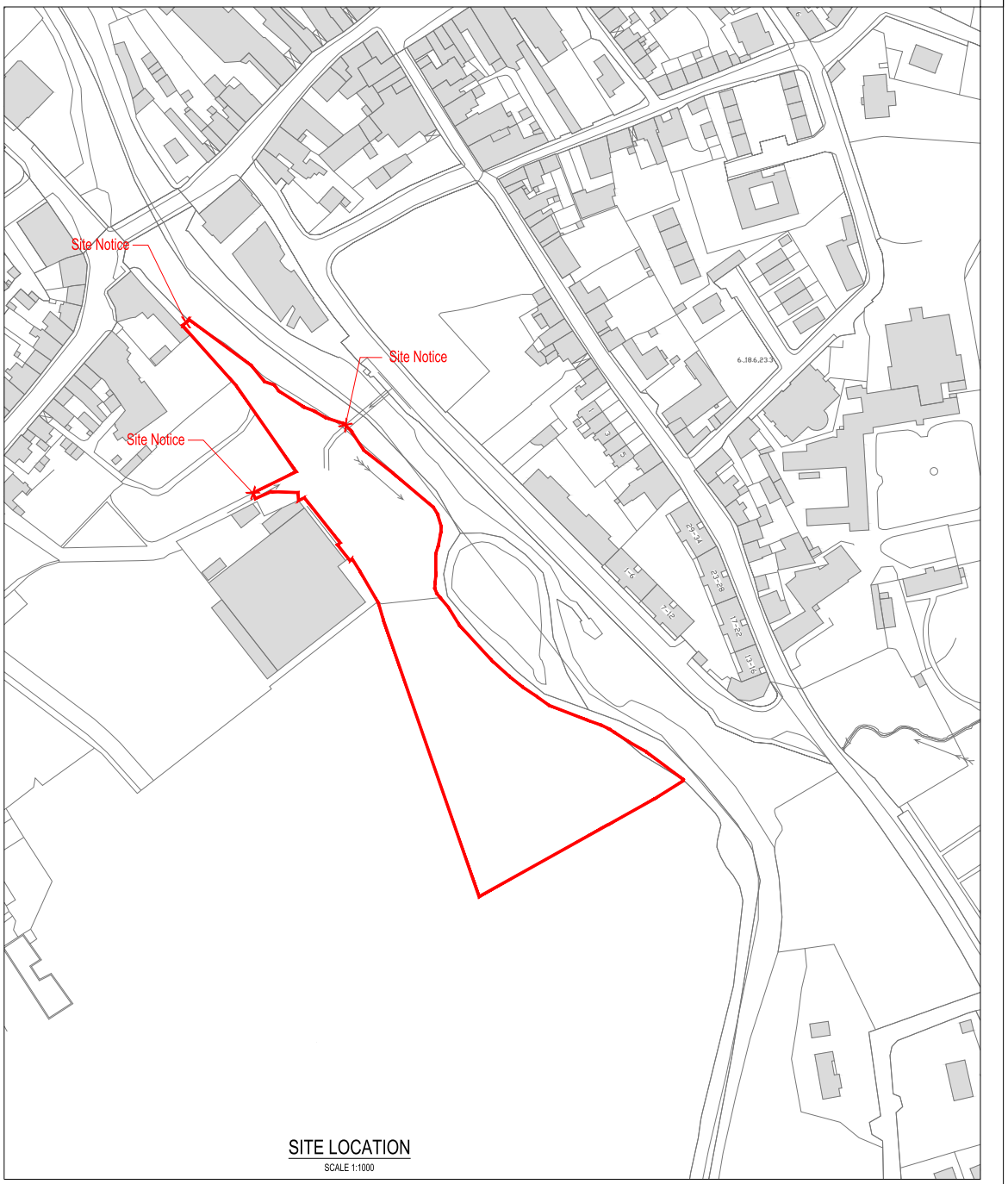
Appendix A - Drawings

Map Co-Ordinates- ITW X=685166592 Y= 672979190

A1



OS MAP
SCALE 1:2500



SITE LOCATION
SCALE 1:1000

GENERAL LEGEND:-

SITE BOUNDARY

0.000 DENOTES EXISTING LEVELS

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REVISION REGISTER

REV	DATE	DESCRIPTION	DRAWN	CHECKED	APPROVED
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-	--/--/----	-	-	-	-
-	--/--/----	-	-	-	-

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fax: 052 6186590
email: info@place-u.ie
Anglesea House, Anglesea Street, Clonmel, Co. Tipperary.

SCALE: 1/1000. 1/2500

STATUS: PLANNING

CLIENT: CARLOW COUNTY COUNCIL

PROJECT: TULLOW TOWN PARK

TULLOW, Co. CARLOW

DRAWING TITLE: OS MAP & SITE LOCATION

PROJECT	ORIGIN		DISCIPLINE	DRAWING	REVISION
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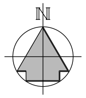

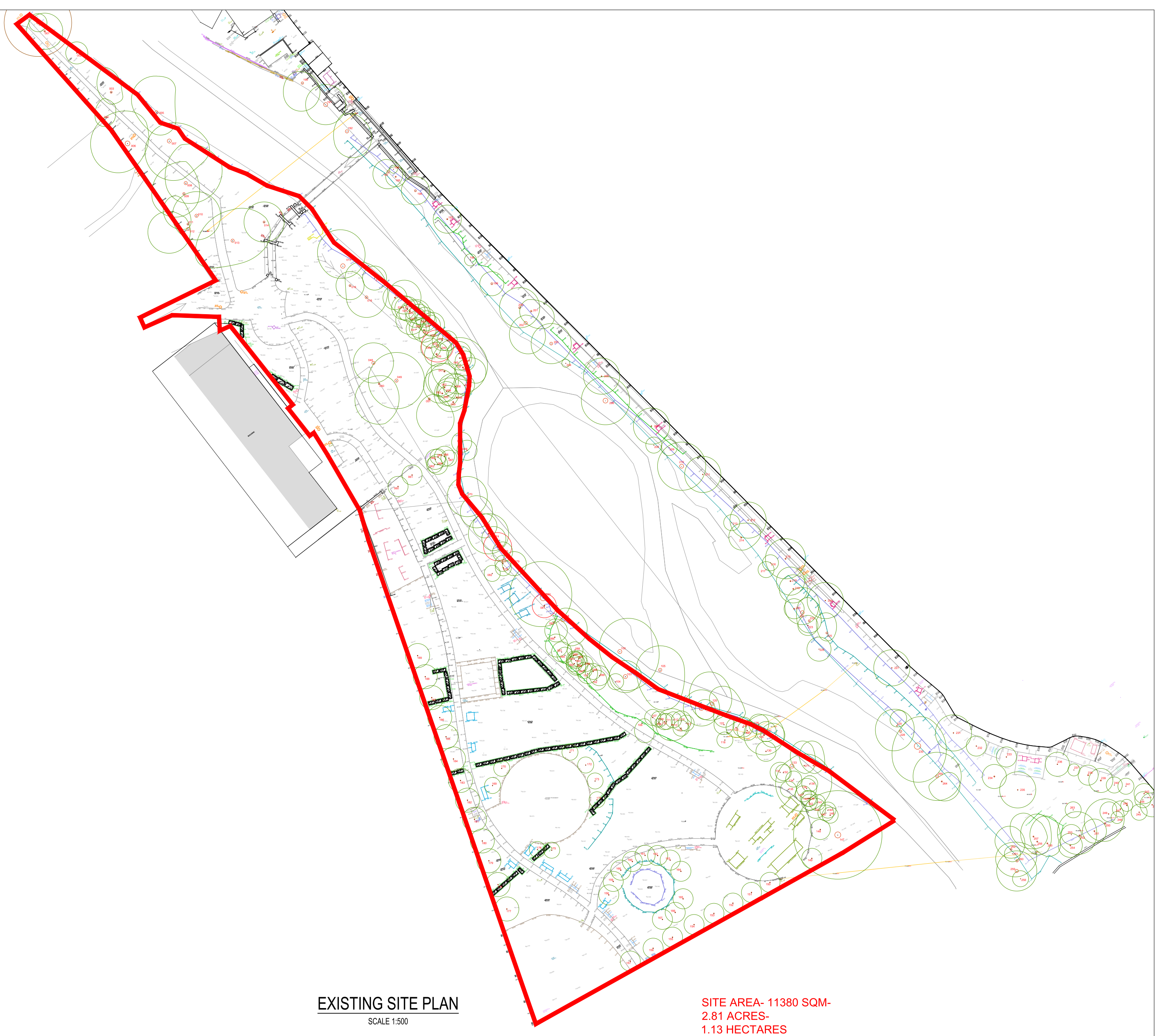

EXISTING SITE PLAN

SCALE 1:500

SITE AREA- 11380 SQM-
2.81 ACRES-
1.13 HECTARES

GENERAL LEGEND:-

SITE BOUNDARY

0.000 DENOTES EXISTING LEVELS

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REVISION REGISTER

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fax: 052 6180690
email: info@place-u.ie
Anglesea House, Anglesea Street
Clonmel, Co. Tipperary

SCALE: AS NOTED

STATUS: PLANNING

CLIENT: CARLOW COUNTY COUNCIL

PROJECT: TULLOW TOWN PARK
TULLOW, Co. CARLOW

DRAWING TITLE: EXISTING SITE PLAN

PROJECT:	ORIGIN:	LEVEL:	DISC.:	CATEGORY:	NUMBER:	REVISION:
0011	P+U	TTP	E	P	002.0	R01

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A1

EXISTING TREE SURVEY PLAN

SCALE 1:500

GENERAL LEGEND:-

SITE BOUNDARY

0.000 DENOTES EXISTING LEVELS

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email: info@place-u.ie
Anglesea House, Anglesea Street
Clonmel, Co. Tipperary.

SCALE: AS NOTED

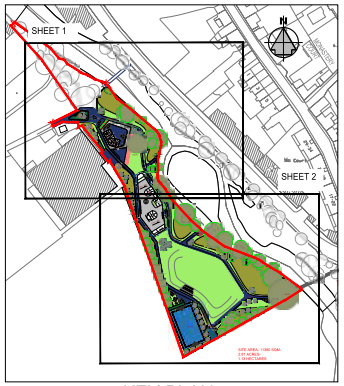
STATUS: PLANNING

CLIENT: CARLOW COUNTY COUNCIL

PROJECT: TULLOW TOWN PARK
TULLOW, Co. CARLOW

DRAWING TITLE: EXISTING TREE SURVEY . PLAN

PROJECT	ORIG.		ORIG.	CATEGORY	DRAWING	REVISION
0011	P+U	TTP	E	P	003.0	R01



KEY PLAN

SCALE 1:2000

LANDSCAPE KEY

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- Existing trees to be removed, according with BS:3998
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- T2 *Salix Babylonica*, 30-35cmg, 6M high, 2M clear stem, Rootballed
- T3 *Populus Nigra*, 20-25cmg, 5M high, 2M clear stem, Rootballed
- T4 *Prunus Mackii 'Amber Beauty'*, Multi stem, 3.0M high, 3-5 breaks, rootballed.
- T5 *Betula nigra* 'Heritage', Multi stem, 3.0M high, 3-5breaks, rootballed.
- T6 *Quercus robur*, 18-20cmg, 4.5M high, 2M clear stem, Rootballed
- T7 *Betula pendula*, 14-16cmg, 2.5M high, 1.0m clear stem, rootballed.
- T8 *Populus tremula*, 16-18cmg, 3.5M high, 2M clear stem, Rootballed
- T9 *Liquidambar styraciflua*, Multi stem, 4M high, 3-5 breaks, Rootballed
- *Corylus avellana* 'Contorta' hedge, 1000-1200mm high planted @ 300mm centers in staggered rows. Plants supplied bare root 2+2
- Locally sourced stone boulders, 650 - 1200mm long, 600mm max height above ground.
- Low maintenance grass lawn- on 150mm BS certified topsoil
- Meadow - Native existing grasses and plants allowed to grow and maintained at a height between 200mm x 700mm, bramble, willow and self seading sapplings to be removed.
- Ornamental Planting Mix 01- Mixed ornamental grasses and perennials - 450mm Bs certified Topsoil
- SUDS Planting Mix 02: Mixed ornamental grasses and perennials - 450mm Bs certified Topsoil
- Hardwood decking, Bangkirai timber with grip safe, boards to be 145 x 28mm with safegrip finish by Abbeywoods or equal and approved.
- Paving 1: Paving block, concrete with natural stone aggregates, 600mm x 400mm x 60mm, Shelbourne in 70%Silver/30% Black granite finish by Kilsarran or equal and approved, stretcher bond.
- Paving 2: Paving block, concrete with natural stone aggregates, 100mm x 100mm x 80mm, Newgrange in Black granite finish by Kilsarran or equal and approved, stretcher bond.
- Asphalt surfacing with high chip content, locally sourced grey stone aggregates, to street to engineers details.
- Insitu concrete footpath with surface finish to engineers details.
- Precast concrete slab with formed voids, 600x400x100mm, stack bond pattern, all build up layers to engineers spec. Kilsarran turfstone or equal & approved.

SITE NOTICE

SITE NOTICE

SITE NOTICE

Existing bridge to be retained & protected.

Existing path to be made good and graded to meet new works.

450mm high x 450mm wide concrete wall with 2no timber top seats. Wall drops from 450mm high to flush with ground level, all planting at ground level to allow for levels at existing tree base to remain unchanged

Proposed SUDS layout- Refer to DR-TTP_E_P_010.0 for further details on storm drainage and SUDS

2no Timber top picnic set with steel frame Streetlife 'Rough & Ready' picnic set by Streetlife or EQA.

1M high raised concrete planters, walls 150mm wide.

2 no Timber top steel frame benches, 2400 x 450 x 450mm, rough&ready bench no6 & 3x rough&ready cube bench 600 x 600 x450mm, by Streetlife or EQA.

Steel shelter,with pressed steel sheeting, and poly-carbonate sheeting. See drawing TTP_E_P_006- Proposed Canopy Details.

Concrete seating steps, 300mm high

4m x 2m hardwood decked steps with grip safe surface, timber steel SUS structure by engineers detail. Step number and dimensions TBC.

450mm high x 450mm wide concrete seating edge.

Extent of island trees not surveyed as they could not be accessed

Insitu concrete embankment steps, 4 steps @ each riser 150mm.

Insitu concrete embankment steps, 6 steps @ each riser 150mm.

4m x 3m hardwood decked platform, timber steel structure to enginners detail. Platform to have 1.2M high timber / steel guard rail.

Proposed pumping station layout

Insitu concrete embankment steps, 5 steps @ each riser 150mm.

2no Timber top picnic set with steel frame Streetlife 'Rough & Ready' picnic set by Streetlife or EQA.

3x rough&ready cube bench 600 x 600 x450mm, by Streetlife or EQA.

Retention tree pit to take run-off from basketball court surface.

Basketball court with 3.0-4.0m high heavy duty sports fencing (at highest behind hoops) with 2 no 3m high matching gates, surfacing, markings and 2 hoops.

450mm high x 450mm wide concrete retaining wall / planters

Multi use goal posts including football and basketball goals, 'Kick shot' by Irish Fencing Services or EQA.

Future link

2 no Timber top steel frame benches, 2400 x 450 x 450mm, rough&ready bench no6 & 3x rough&ready cube bench 600 x 600 x450mm, by Streetlife or EQA.

MONASTERY COURT

Mill Court

SITE AREA- 11380 SQM-
2.81 ACRES-
1.13 HECTARES

PROPOSED SITE LAYOUT - OVERALL

SCALE 1:500

STANDARD INSTRUCTIONS

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REVISION REGISTER

REV	DATE	DESCRIPTION	DRAWN	CHECKED	APPROVED
R01	26/03/2024	PLANNING	GD	KH	KH
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-	--/--/----	-	-	-	-
-	--/--/----	-	-	-	-

PLACE + Urbanism
tel: 052 6128966
fax: 052 6180690
email: info@place-u.ie
Anglesea House, Anglesea Street, Clonmel, Co. Tipperary

CLIENT: CARLOW COUNTY COUNCIL

PROJECT: TULLOW TOWN PARK
TULLOW, Co. CARLOW

DRAWING TITLE: PROPOSED SITE LAYOUT. OVERALL

SCALE: AS NOTED

STATUS: PLANNING

PROJECT	ORIGIN		CATEGORY	NUMBER	REVISION
0011	P+U	TTP	L	P	004.0	R01


A1
LANDSCAPE KEY
Existing trees to be retained and protected in accordance with BS:3998, tree to be accessed by qualified arboriculturalist and any required pruning or safety work carried out.
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T4 Prunus Mackii 'Amber Beauty', Multi stem, 3.0M high, 3-5 breaks, rootballed.
T5 Betula nigra 'Heritage', Multi stem, 3.0M high, 3-5breaks, rootballed.
T6 Quercus robur, 18-20cmg, 4.5M high, 2M clear stem, Rootballed
T7 Betula pendula, 14-16cmg, 2.5M high, 1.0m clear stem, rootballed.
T8 Populus tremula, 16-18cmg, 3.5M high, 2M clear stem, Rootballed
T9 Liquidambar styraciflua, Multi stem, 4M high, 3-5 breaks, Rootballed
Corylus avellana 'Contorta' hedge, 1000-1200mm high planted @ 300mm centers in staggered rows. Plants supplied bare root 2+2
Locally sourced stone boulders, 650 - 1200mm long, 600mm max height above ground.
Low maintenance grass lawn- on 150mm BS certified topsoil
Meadow - Native existing grasses and plants allowed to grow and maintained at a height between 200mm x 700mm, bramble, willow and self seeding sapplings to be removed.
Ornamental Planting Mix 01- Mixed ornamental grasses and perennials - 450mm Bs certified Topsoil
SUDS Planting Mix 02: Mixed ornamental grasses and perennials - 450mm Bs certified Topsoil
Hardwood decking, Bangkirai timber with grip safe, boards to be 145 x 28mm with safegrip finish by Abbeywoods or equal and approved.
Paving 1: Paving block, concrete with natural stone aggregates, 600mm x 400mm x 60mm, Shelbourne in 70%Silver/30% Black granite finish by Kilsarran or equal and approved, stretcher bond.
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Asphalt surfacing with high chip content, locally sourced grey stone aggregates, to street to engineers details.
Insitu concrete footpath with surface finish to engineers details.
Precast concrete slab with formed voids, 600x400x100mm, stack bond pattern, all build up layers to engineers spec. Kilsarran turfstone or equal & approved.
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Existing path to be made good and graded to meet new works.
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Concrete seating steps, 300mm high
4m x 2m hardwood decked steps with grip safe surface, timber steel sub structure to engineers detail. Step number and dimensions TBC.
450mm high x 450mm wide concrete seating edge.
Extent of island trees not surveyed as they could not be accessed
+68.41
+68.45
+68.63
+69.00
+69.70
+69.30
+70.50
+69.80
+69.80
+69.35
+69.10
+68.87
+69.80
+69.50
+69.80
+68.00
+69.85
+68.50
+68.60
+68.35
FALL 1:60
T3
T4
T7
T8
T9
C
B
N
1
3
5
1 - 6

PROPOSED SITE PLAN - SHEET 1 OF 2

SCALE 1:250

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-	--/--/----	-	-	-	-
-	--/--/----	-	-	-	-

PLACE + Urbanism
tel: 052 6128966
fax: 052 6180690
email: info@place-u.ie
Anglesea House, Anglesea Street
Clonmel, Co. Tipperary

SCALE: AS NOTED
STATUS: PLANNING

CLIENT: CARLOW COUNTY COUNCIL
PROJECT: TULLOW TOWN PARK
TULLOW, Co. CARLOW
DRAWING TITLE: PROPOSED SITE LAYOUT
SHEET 1 OF 2

PROJECT:	ORIGIN:	LEVEL:	DISC.:	CATEGORY:	NUMBER:	REVISION:
0011	P+U	TTP	L	P	004.1	R01

LANDSCAPE KEY

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PROPOSED SITE PLAN - SHEET 2 OF 2

SCALE 1:250

STANDARD INSTRUCTIONS

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email: info@place-u.ie
Anglesea House, Anglesea Street
Clonmel, Co. Tipperary

SCALE: AS NOTED

STATUS: PLANNING

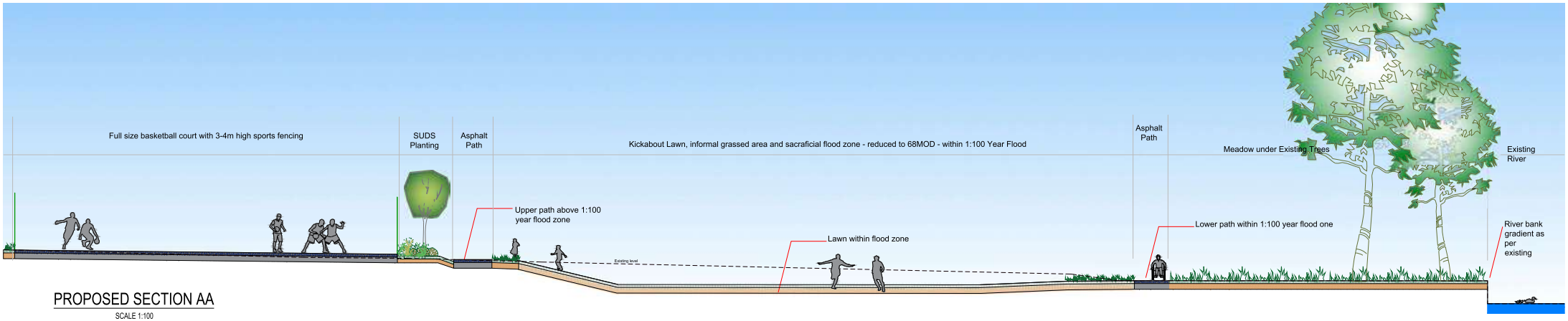
CLIENT: CARLOW COUNTY COUNCIL

PROJECT: TULLOW TOWN PARK
TULLOW, Co. CARLOW

DRAWING TITLE: PROPOSED SITE LAYOUT. SHEET 2 OF 2

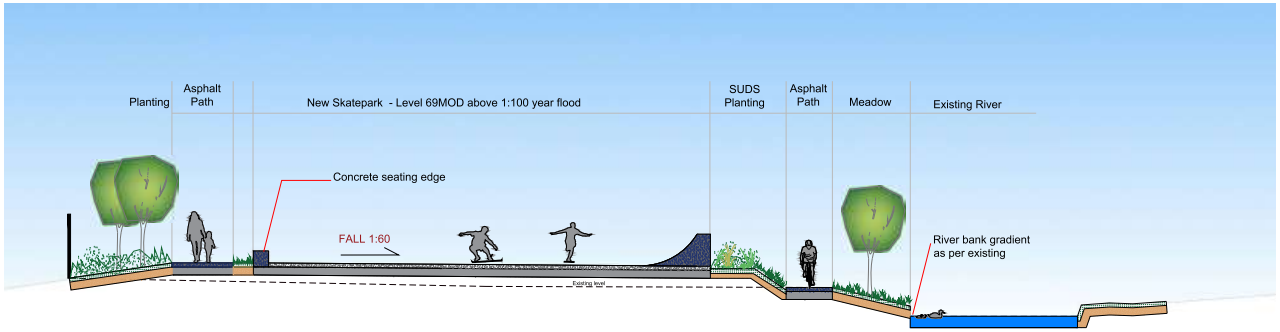
PROJECT	ORIGIN		CATEGORY	NUMBER	REVISION
0011	P+U	TTP	L	P	004.2	R01

A1



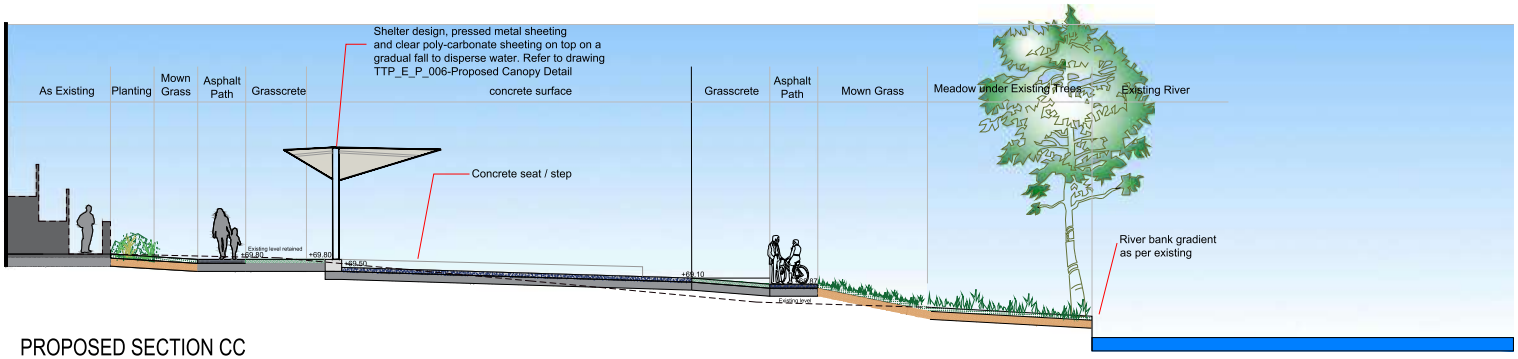
PROPOSED SECTION AA

SCALE 1:100



PROPOSED SECTION BB

SCALE 1:100



PROPOSED SECTION CC

SCALE 1:100

PROPOSED KEY PLAN

SCALE 1:2000

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Clonmel, Co. Tipperary

CLIENT: CARLOW COUNTY COUNCIL

PROJECT: TULLOW TOWN PARK
TULLOW, Co. CARLOW

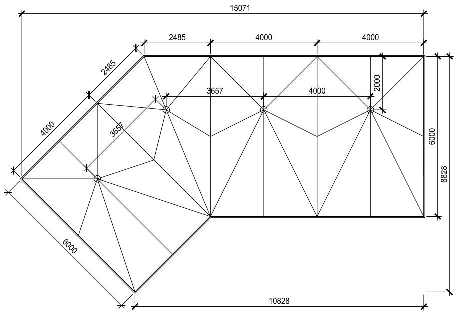
DRAWING TITLE: PROPOSED SITE SECTIONS

SCALE: AS NOTED

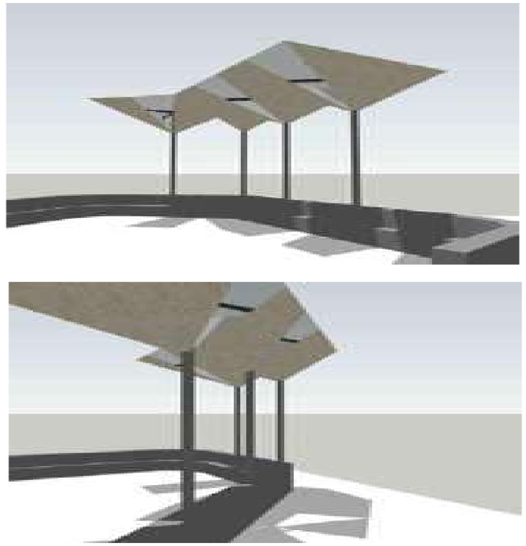
STATUS: PLANNING

PROJECT	ORIGIN	DISC	VOL	LEVEL	NUMBER	REVISION
0011	P+U	TTP	E	P	005.0	R01

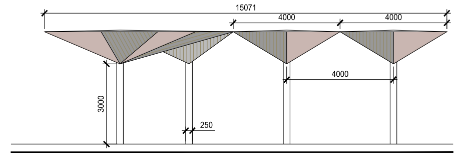
PROPOSED CANOPY PLAN
SCALE 1:200



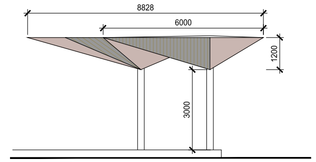
PROPOSED CANOPY PLAN
SCALE 1:100



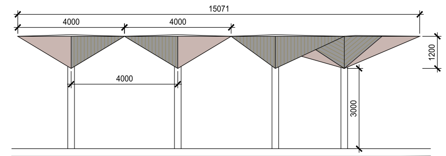
PROPOSED 3D VIEWS



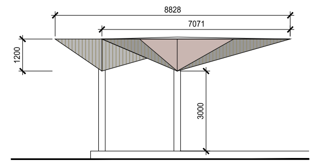
PROPOSED NORTH ELEVATION
SCALE 1:100



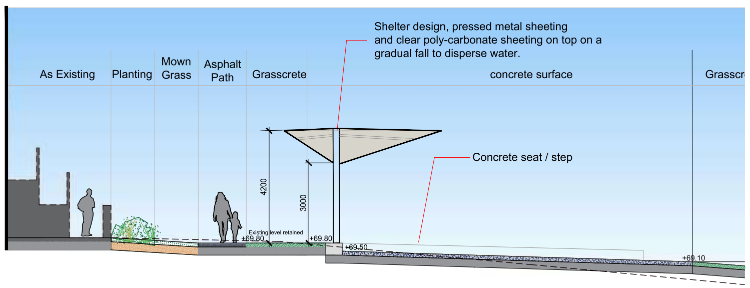
PROPOSED WEST ELEVATION
SCALE 1:100



PROPOSED SOUTH ELEVATION
SCALE 1:100



PROPOSED EAST ELEVATION
SCALE 1:100



PROPOSED SECTION CC
SCALE 1:100

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GENERAL NOTES

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REVISION REGISTER

REV	DATE	DESCRIPTION	DRAWN	CHECKED	APPROVED
R01	26/03/24	PLANNING	GD	KH	KH
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-	--/--/----	- - -	-	-	-

PLACE + Urbanism
tel: 052 6128966
fax: 052 6180690
email: info@place-u.ie
Anglesea House, Anglesea Street
Clonmel, Co. Tipperary

SCALE: **AS NOTED**

STATUS: **PLANNING**

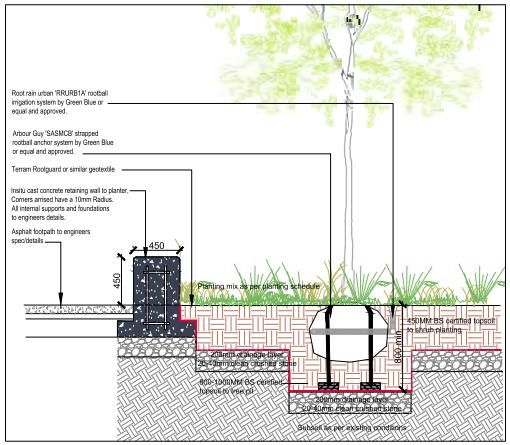
CLIENT: **CARLOW COUNTY COUNCIL**

PROJECT: **TULLOW TOWN PARK TULLOW, Co. CARLOW**

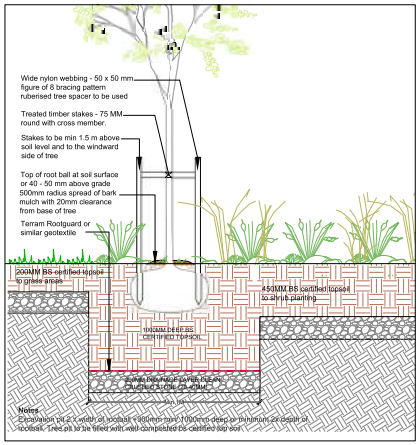
DRAWING TITLE: **PROPOSED CANOPY DESIGN**

PROJECT:	ORIGIN:	LEVEL:	DISC.:	CATEGORY:	NUMBER:	REVISION:
0011	P+U	TTP	E	P	006.0	R01

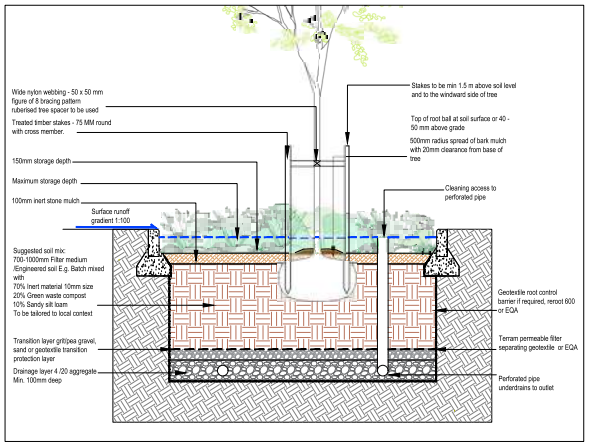
A1



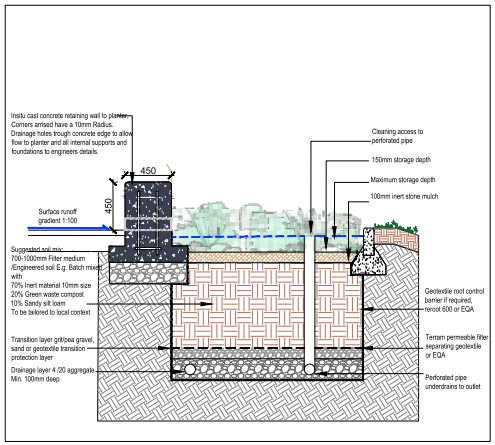
Detail 03. Entrance Planter with concrete seating edge. Scale 1:25@A1



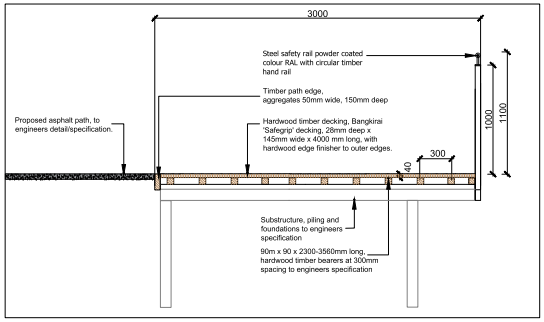
Detail 04. Tree planting in Soft Landscape. Scale 1:25@A1



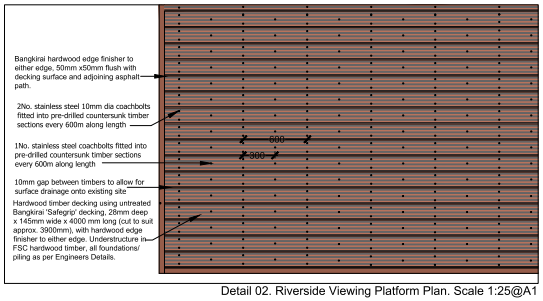
Detail 05. Tree planting in retention planting pit. Scale 1:25@A1



Detail 06. SUDS pit. Scale 1:25@A1



Detail 01. Riverside Viewing Platform. Scale 1:25@A1



Detail 02. Riverside Viewing Platform Plan. Scale 1:25@A1

STANDARD INSTRUCTIONS

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Anglesea House, Anglesea Street, Clonmel, Co. Tipperary

CLIENT: CARLOW COUNTY COUNCIL

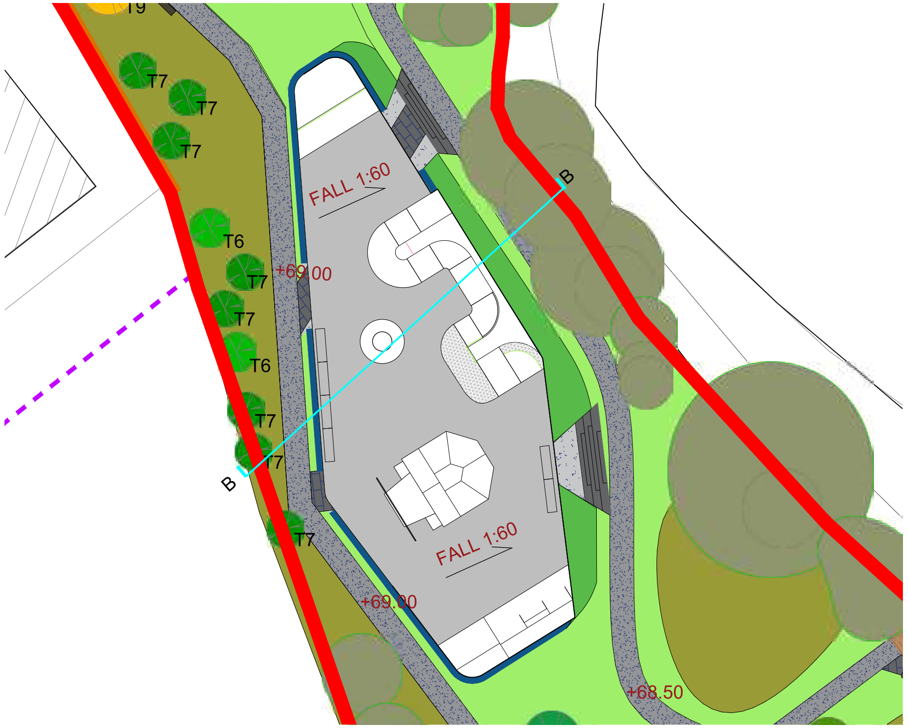
PROJECT: TULLOW TOWN PARK
TULLOW, Co. CARLOW

DRAWING TITLE: PROPOSED DETAILS

SCALE: AS NOTED

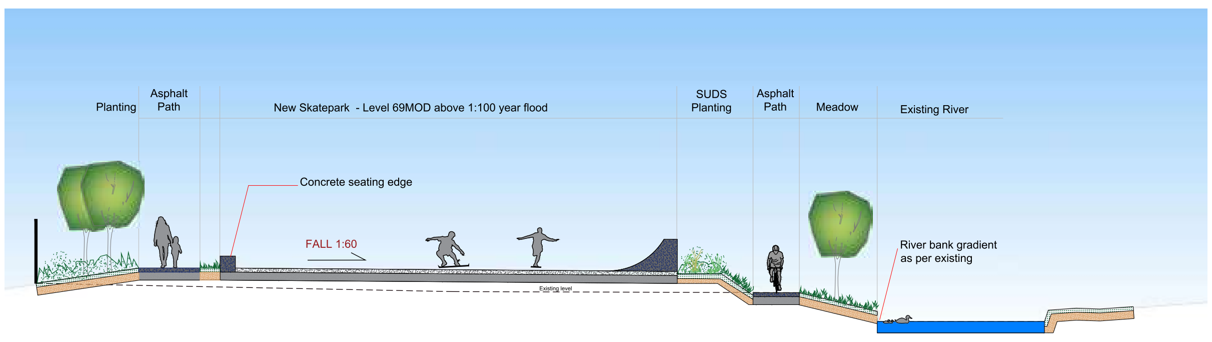
STATUS: PLANNING

PROJECT	ORIGIN	ZONE	LEVEL	CATEGORY	NUMBER	REVISION
0011	P+U	TTP	E	P	007.0	R01



PROPOSED SKATEPARK PLAN

SCALE 1:200

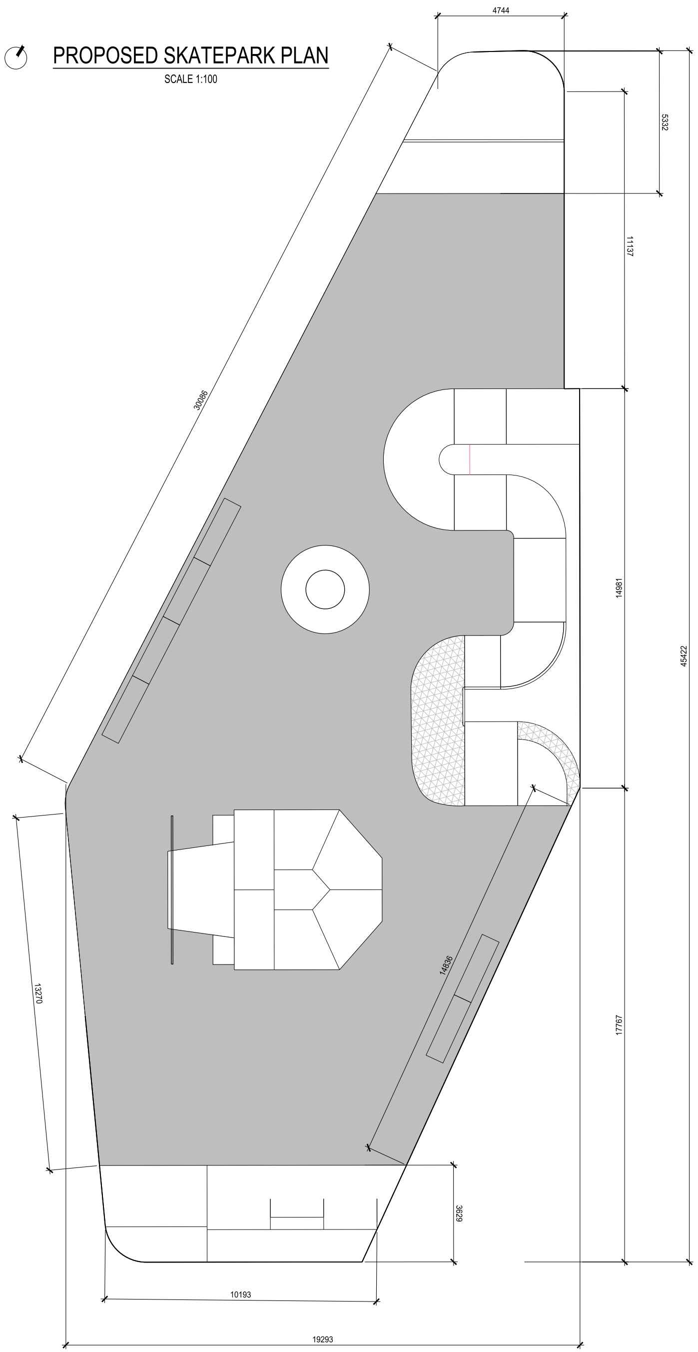


PROPOSED SECTION BB

SCALE 1:100

PROPOSED SKATEPARK PLAN

SCALE 1:100



A1

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SCALE: **AS NOTED**

STATUS: **PLANNING**

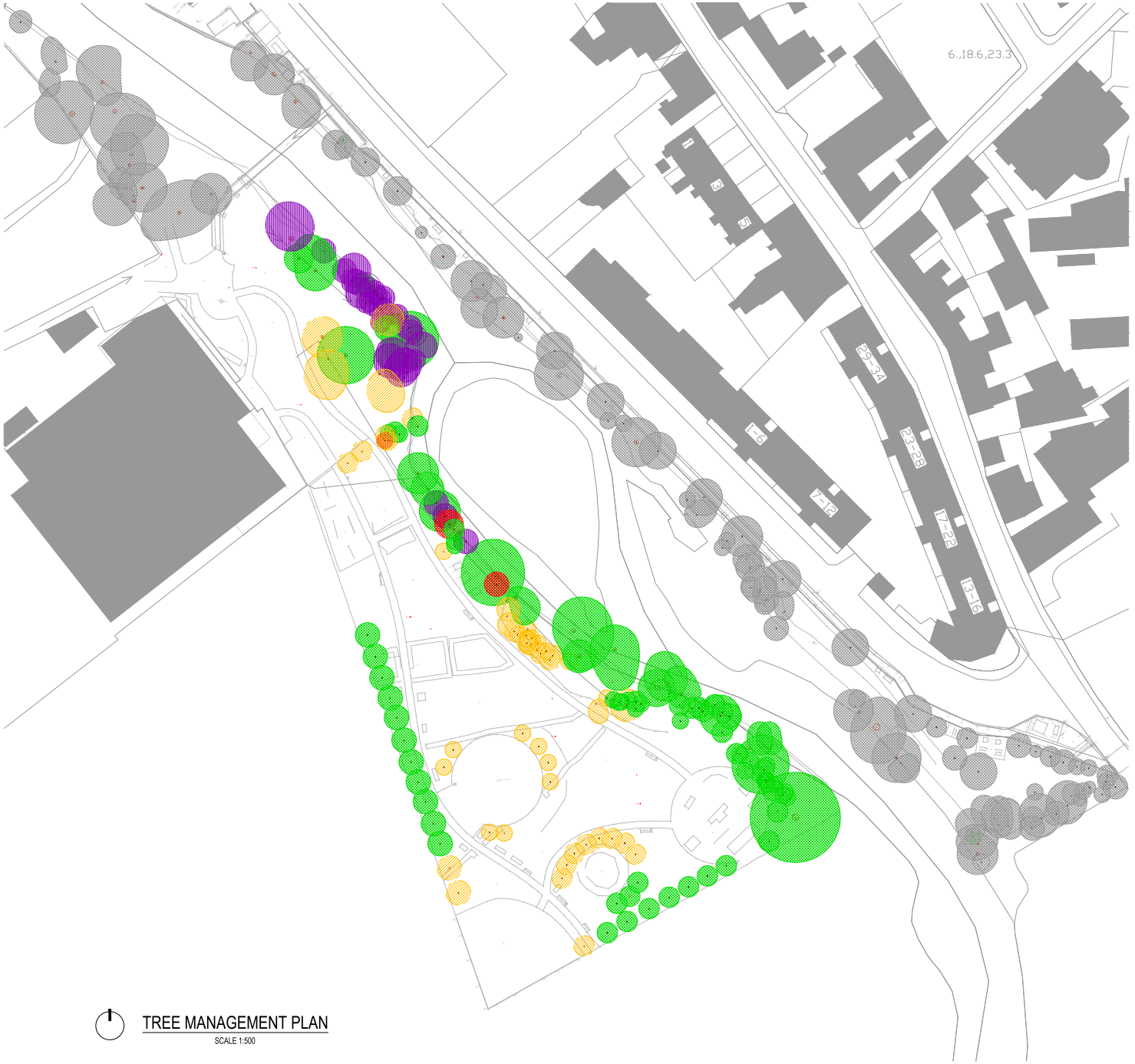
CLIENT: **CARLOW COUNTY COUNCIL**

PROJECT: **TULLOW TOWN PARK TULLOW, Co. CARLOW**

DRAWING TITLE: **PROPOSED SKATEPARK DETAIL LAYOUT**

PROJECT:	ORIGIN:	LEVEL:	DISC:	CATEGORY:	NUMBER:	REVISION:
0011	P+U	TTP	A	P	008.0	R01

A1



Key:
Category system (BS5837:2012 Trees in relation to construction)
The category system is intended to provide a rapid reference as to the particular tree(s) suitability for retention and can be defined as follows.

CATEGORY A TREES
Trees of a high quality and value to be retained, these are particularly good examples of their species which also provide landscape value.

TREES SUGGESTED FOR REMOVAL DUE TO INTERFERENCE WITH DEVELOPMENT CONSTRUCTION

SYCAMORE TREES TO BE REMOVED
Trees of low ecological value to be removed to allow better views to the riverbank and allow light to encourage diverse marginal growth.

CATEGORY U TREES
Trees of such condition that any existing value would be lost within 10 years and should be removed if marked as dangerous.

TREES OUTSIDE WORK BOUNDARY
To be retained

TEMPORARY TREE PROTECTION FENCE

Design approach with respect to existing trees onsite.

On 24 November 2023 a tree survey of the existing Tullow Town Park Site was undertaken by RDA Surveys. This survey included a total of 271 trees. The condition of the trees onsite ranges from Poor – Good, with the majority in the Good category. A large variety of trees are present with many native or near native trees present. The height range of the recorded trees is from 3 to 17 meters.

The design approach and brief for the park aims to open up the park to more users with a desire to increase the passive security within the park. As such the design approach seek to remove those trees indicated as of poor condition for structural reasons and also to remove some trees where views into the park and hence passive surveillance can be increased.

This design approach includes three categories of trees for removal. These are indicated with the following colours:

Red - Bad condition trees (removal) **Total 3Nr trees**

Purple - Sycamore trees removal will increase the passive supervision within the park. **Total 29Nr trees**

Yellow - Remove trees due to new park layout. **Total 49 Trees**

In order to open the park for visibility the Sycamore trees have been favoured for removal within the park. These invasive non-native trees are numerous and research shows that they support a more constrained habitat than the native trees. Removing the sycamore adjacent to the proposed pergola and gathering area will increase the passive supervision potential of this area.

In addition to those trees identified above for removal a further classification of trees has been selected for removal. These trees are principally native but are generally of a smaller size, in general in the height range of 4-8meters tall. Removal of these trees will also allow more views into the park. Much of these trees have been planted in recent years. In the south these trees conflict with the proposed design and their removal is therefore proposed.

Where trees have been described as riverbank in the accompanying tree report these trees are not proposed for removal due to the binding nature of the tree roots and the adjacent riverbank

General Notes:

- All works to be carried out in accordance with BS 3998:2010 Tree Work Recommendations by professional Tree Surgeons.
- Pruning to Ivy shall only occur where the tree is at risk of windthrow
- Any tree/hedge work especially cutting should be undertaken outside bird nesting season.
- All arising from the clearance works should be removed off site and disposed at an appropriate green waste facility or recycled for use on the project (woodchip mulch).
- Trees in confined spaces, or near to other trees or shrubs which are to be retained, should be carefully taken down in sections by a team using ropes, a crane or a hydraulic platform.
- After felling, the stumps should be cut off nearly as close to ground level as practicable.
- Where proposed path will be laid stumps to be grinded so that their tops will be at least 300mm below the final ground level.
- Stumps in the planting areas to be left in situ and untreated. New grow from the stump to be removed as it appears. New growth on a stump may be treated with a suitable translocated herbicide.
- THE FOLLOWING MEASURES ARE PARTICULARLY IMPORTANT:

A) Materials are never to be stacked within the root spread of the tree;
B) No oil, tar, bitumen, cement or other materials is to be allowed to contaminate the ground around each tree;
C) No fires shall be lit beneath or in close proximity to the tree canopy;
D) Trees to be retained should not be used as anchorages for equipment or for removing stumps, roots or other purposes;
E) No notices, telephone cables or other services shall be attached to any part of the tree;
F) Cement mixing should not be carried out within the canopy or in close proximity to the protected area of the tree;
G) Soil levels are to be maintained as existing within the root spread of the tree. Any alteration to the soil level must be agreed with the landscape architect.

TREE MANAGEMENT PLAN

SCALE 1:500

REVISION REGISTER

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R01	26/03/24	PLANNING	GD	KH	KH
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CLIENT: CARLOW COUNTY COUNCIL
PROJECT: TULLOW TOWN PARK, TULLOW, Co. CARLOW
DRAWING TITLE: TREE MANAGEMENT PLAN
SCALE: AS NOTED
STATUS: PLANNING

PROJECT	ORIGIN	DISC	ZONE	EXTENSION	NUMBER	REVISION
0011	P+U	TTP	E	P	009.0	R01

A1

PROPOSED STORM DRAINAGE & SUDS LAYOUT

SCALE 1:500

GENERAL LEGEND:-

	DENOTES PROPOSED SITE BOUNDARY
0.000	DENOTES EXISTING LEVELS
+00.000m	DENOTES PROPOSED LEVELS

DRAWING LEGEND:-

	DENOTES PROPOSED RAIN GARDEN
	DENOTES PROPOSED CONCRETE FOOTPATH
	DENOTES PROPOSED TARMAC SURFACE TO BASKETBALL COURT
	DENOTES PROPOSED CONCRETE SURFACING TO SKATE PARK
	DENOTES GRASSCRETE OR SIMILAR APPROVED
OF 1	DENOTES PROPOSED IRISH WATER OUTFALL STORM DRAIN & MANHOLE
S1.1	DENOTES PROPOSED STORM DRAIN & MANHOLE
ACO	DENOTES PROPOSED ACO DRAIN
	DENOTES PROPOSED LAND DRAIN
OF	DENOTES PROPOSED OVERFLOW DRAIN WITH CONNECTION TO DRAINAGE SYSTEM
MH3	DENOTES PROPOSED IRISH WATER COMBINED SEWER
	DENOTES PROPOSED IRISH WATER RISING MAIN
	DENOTES EXISTING COMBINED SEWER TO BE RETAINED FOR PARK DRAINAGE

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CLIENT: CARLOW COUNTY COUNCIL

PROJECT: TULLOW TOWN PARK
TULLOW, Co. CARLOW

DRAWING TITLE: PROPOSED STORM DRAINAGE & SUDS LAYOUT

SCALE: AS NOTED

STATUS: PLANNING

PROJECT	ORIGIN	DISCIPLINE	TYPE	NUMBER	REVISION
0011	P+U	TTP	E	P	010	R01

TULLOW PARK - WALKWAY LIGHTING SCHEDULE		
TYPE	SPECIFICATION	COUNT
■	PHILLIPS LIGHTING OPTISPACE BCB500 LED56-4S/740 S DGR 37.2W, 4900 LUMEN OUTPUT,E. IP66 RATED & IK10 IMPACT PROTECTION. L98 & 100,000 HRS LIFETIME, 3000K COLOR TEMPERATURE & 173 LM/W EFFICACY . NO BLUE LIGHT SOURCE GENERATED GREATER THAN 550 NANOMETERS. (SUITABLE FOR WILDLIFE HABITATS) BOLLARD HEIGHT 848mm	61

LIGHTING CALCULATION RESULTS	
E_{AV}	16.11
E_{MIN}	7.93
E_{MAX}	29.73
E_{MIN}/E_{MAX}	0.27
E_{MIN}/E_{AV}	0.49

1 PROPOSED SITE WALKWAY LIGHTING LAYOUT
1:500 @ A1

TYPICAL BOLLARD TYPE LIGHT FITTING

PHILIPS OPTISPACE BCB500 725 A LED16/-NO LAMP LED 16/860/- MF 0.76

LIGHTING LEGEND

LIGHTING BOLLARD (61 No. FITTINGS)	■
15 LUX CONTOUR BOUNDARY	15 LUX
10 LUX CONTOUR BOUNDARY	10 LUX
5 LUX CONTOUR BOUNDARY	5 LUX
3 LUX CONTOUR BOUNDARY	3 LUX

SCHEDULE / NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE ELECTRICAL SPECIFICATION.
2. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE STATED.
3. DO NOT SCALE. THIS DRAWING IS REPRESENTATIVE ONLY.
4. THE ELECTRICAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS BY SITE MEASUREMENTS AND REFER ALL DISCREPANCIES TO THE ENGINEER FOR FURTHER ACTION.
5. THE ELECTRICAL CONTRACTOR MUST VISIT AND SURVEY THE SITE PRIOR TO SUBMITTING THEIR TENDER.
6. ALL CABLING TO BE ARMOURED XLPE/SWA COPPER CABLE IN DUCTING. ALL WIRING TO BE CARRIED OUT IN ACCORDANCE WITH THE NATIONAL RULES FOR ELECTRICAL INSTALLATIONS ET101
7. THE CONTRACTOR SHALL INCLUDE FOR THE SUPPLY AND INSTALLATION OF ALL LIGHTING COLUMNS AND FITTINGS C/W CONTROL GEAR. ALL COLUMNS TO BE EARTHED.
8. THE CONTRACTOR SHALL ENSURE ALL PRECAUTIONS ARE TAKEN AROUND OVERHEAD ESB LINES AS PER ESB CODE OF PRACTICE FOR SAFETY.
9. THE ELECTRICAL CONTRACTOR SHALL PROVIDE FOR ALL ASSOCIATED SCAFFOLDING, PLATFORMS, LADDERS, TOOLS, TACKLE, HOISTS AND MACHINERY ETC., THAT IS REQUIRED FOR THE PROPER AND SAFE EXECUTION OF THE WORKS. CONTRACTOR MUST INCLUDE FOR ALL CONTAINMENT, WIRING ETC AS REQUIRED TO EXECUTE THE PROPOSED WORKS AS INDICATED ON ASSOCIATED DRAWINGS.
10. CO-ORDINATION OF THE ELECTRICAL SERVICES WITH OTHER SERVICES TO BE AGREED ON SITE PRIOR TO INSTALLATION. ADDITIONAL COSTS DUE TO LACK OF CO-ORDINATION WILL NOT BE ENTERTAINED. MAIN BUILDING CONTRACTOR IS LEAD COORDINATOR.
11. THE MAIN CONTRACTOR SHALL INCLUDE FOR SURVEYING THE EXISTING SITE FOR EXISTING SERVICES PRIOR TO UNDERTAKING ANY SITE WORKS. IT IS HIGHLY RECOMMENDED A SITE SURVEY BE UNDERTAKEN BY THE ELECTRICAL CONTRACTOR PRIOR TO COMMENCING WORKS ON SITE AND SUBMITTING THEIR TENDER PRICE.
12. ALL SUB CONTRACTORS TO LIAISE WITH MAIN BUILDING CONTRACTOR REGARDING CIVIL WORKS FOR SERVICES DUCTING REQUIREMENTS.
13. THE CONTRACTOR SHALL ALLOW FOR ALL SETTING OUT AND INSTALLATION AROUND OBSTRUCTIONS.
14. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR MARKING ALL ASSOCIATED BUILDERS WORKS FOR THE MAIN CONTRACTOR. MAIN BUILDING CONTRACTOR IS RESPONSIBLE FOR ALL BUILDERS WORKS AND MAKING GOOD ALL SURFACES ASSOCIATED WITH EXTERNAL LIGHTING INSTALLATION.
15. ALL EXTERNAL LIGHTING TO BE PHOTOCELL AND TIMECLOCK CONTROLLED
16. LIGHTING LEVELS SHOULD BE IN ACCORDANCE WITH WITH BS 5489-1-2013 CODE OF PRACTICE FOR THE DESIGN OF ROAD LIGHTING, BS EN 13201-2:2015 ROAD LIGHTING & CIBSE LIGHTING GUIDE 6 EXTERIOR ENVIRONMENT
17. THE ELECTRICAL CONTRACTOR WILL HAVE TO PRODUCE A SAMPLE OF ALL LIGHT FITTINGS FOR CLIENT APPROVAL.
18. EXACT LOCATIONS OF LIGHT FITTINGS TO BE AGREED WITH ENGINEER ON SITE.
19. ALL ELECTRICAL SERVICES TO BE SERVED FROM EXISTING MICRO PILLARS LOCATED AT HARPURS LANE. . ALL POWER TO LIGHTING CIRCUITS MUST BE FED VIA A DEDICATED LIGHTING MINI-PILLAR. ELECTRICAL CONTRACTOR TO INCLUDE FOR ALL MODIFICATION TO THE EXISTING MINI PILLARS.
20. THE ELECTRICAL CONTRACTOR SHALL INCLUDE FOR ALL CONTROL WIRING AS REQUIRED AND MUST PROVIDE EVIDENCE OF CORRECT COMMISSIONING OF SAME AS PER MANUFACTURERS GUIDELINES
21. THE CONTRACTOR SHALL INCLUDE FOR THE LABELLING OF ALL ELECTRICAL SERVICES & PROVIDE ADEQUATE TRAINING FOR THE END USERS OF THE LIGHTING SYSTEM.
22. DIMENSIONS OF ALL BOUNDARIES AND ADJOINING ROADS TO BE CHECKED ON SITE PRIOR TO COMMENCMENT OF WORKS
23. ALL LIGHT FITTINGS MUST BE APPROVED TRIPLE E REGISTERED ON THE SEAI TRIPLE E REGISTER FOR PRODUCTS APPROVED AS BEING ENERGY EFFICIENT AND BEST IN CLASS.
24. THE ELECTRICAL CONTRACTOR MUST PROVIDE CE MARK AND DECLARATION OF PERFORMANCE (DoP) CERTIFICATION FOR ALL INSTALLED AND SPECIFIED FITTINGS AS PER CURRENT BUILDING REGULATIONS.
25. SHOULD ANY DISCREPANCIES BE APPARENT IN THIS DRAWING, THE ENGINEER SHOULD BE MADE AWARE OF THIS FOR FURTHER ACTION.
26. ALL CONSTRUCTION WORKS, INCLUDING THE FORMATION OF CONCRETE BASES, TO BE CARRIED OUT IN FULL ACCORDANCE WITH ESB NETWORKS STANDARDS FOR ELECTRICAL SERVICES (HOUSING SCHEMES), JANUARY 2014.
27. ESB NETWORKS WILL SPECIFY THE LOCATION OF EACH MINI-PILLAR ON THE SITE LAYOUT PLAN AND PROVIDE MINI-PILLARS, AND MINI-PILLAR EARTHING MATERIALS.
28. ESB NETWORKS APPROVED PRE-FABRICATED AND PRE-CAST MINI-PILLAR VAULTS TO BE OBTAINED FROM APPROVED SUPPLIERS AS LISTED ON THE ESB NETWORKS WEB SITE.
29. MINI-PILLAR VAULTS ARE TO BE BEDDED SECURELY. SERVICE DUCTS ARE TO BE TERMINATED ABOVE THE MAINS LV DUCTING. THE MAINS LV DUCTS ARE TO BE TERMINATED INTO VAULTS USING 22º BENDS. AS AGREED BEFORE HAND, WITH ESB NETWORKS.
30. SPECIFIC DUCTING REQUIREMENTS AT MINI-PILLAR VAULTS FOR MAINS CABLE DUCTS:
31. INSTALL AN ESB NETWORKS APPROVED 125mm, 22.5° BEND ON EACH MAINS CABLE DUCT ON ENTRY OF DUCT TO A MINI-PILLAR VAULT.
32. INSTALL EACH BEND AT AN UPWARD ANGLE TO ASSIST WITH CABLE PULLING. EACH BEND SHOULD BE CUT FLUSH WITH INTERNAL WALL OF VAULT.
33. INSTALL MAINS CABLE DUCTS THROUGH THE SIDE FACES OF THE MINI-PILLAR VAULT ONLY.
34. SPECIFIC DUCTING REQUIREMENTS AT MINI-PILLAR VAULTS FOR SERVICE CABLE DUCTS:
35. INSTALL SERVICE CABLE DUCTS AT SAME LEVEL (600mm) OR BELOW LEVEL OF MAINS CABLE DUCTS.
36. INSTALL SERVICE CABLE DUCTS THROUGH THE SIDE FACES OF THE MINI-PILLAR VAULT IN THE CLOSEST KNOCK OUT / OPENINGS TO THE MINI-PILLAR.
37. TO ENSURE PUBLIC SAFETY AND FOR SAFE OPERATION OF THE ELECTRICAL NETWORK IT IS A REQUIREMENT THAT AN EARTH IS INSTALLED AT EACH MINI-PILLAR LOCATION TO ENSURE SAFE OPERATION OF THE ELECTRICAL SUPPLY SYSTEM. ESB NETWORKS WILL PROVIDE ALL NECESSARY EARTHING MATERIALS. THE ELECTRICAL CONTRACTOR IS REQUIRED TO:
38. FOLLOWING EARTH INSTALLATION BY ESB NETWORKS, COVER THE EARTH CONDUCTOR WITH A LAYER OF FINE TOPSOIL / CLAY AND THE TRENCH, AND THEN REINSTATE THE TRENCH.
39. PROVIDE ESB NETWORKS WITH PHOTOGRAPHIC EVIDENCE THAT THE MINI-PILLAR EARTHS HAVE BEEN INSTALLED AS PER ESB NETWORKS SPECIFICATION.
40. THERE SHOULD BE A SEPARATION OF AT LEAST 2m BETWEEN ESB NETWORKS' MINI-PILLAR AND THE PUBLIC LIGHTING SYSTEM MICRO-PILLAR, PUBLIC LIGHTING COLUMN OR ANY OTHER PRIVATE MICRO PILLAR.
41. ENSURE THAT MINI-PILLAR 'GROUND LEVEL' MARKINGS ARE PROPERLY ALIGNED WITH THE FINISHED GROUND LEVEL SURFACE AND VISIBLE FOR INSPECTION. ENSURE THAT ALL MINI-PILLARS AND PLASTIC VAULTS ARE ADEQUATELY SECURED AGAINST MOVEMENT IN ANY DIRECTION INCLUDING TIPPING BACKWARDS INTO HOUSEHOLDERS' PROPERTIES, USING 15N CONCRETE SURROUND

REV	DESCRIPTION	DRN	ENG	APP	DATE
A	ISSUED FOR INFORMATION	JH	JH	JH	25.03.24

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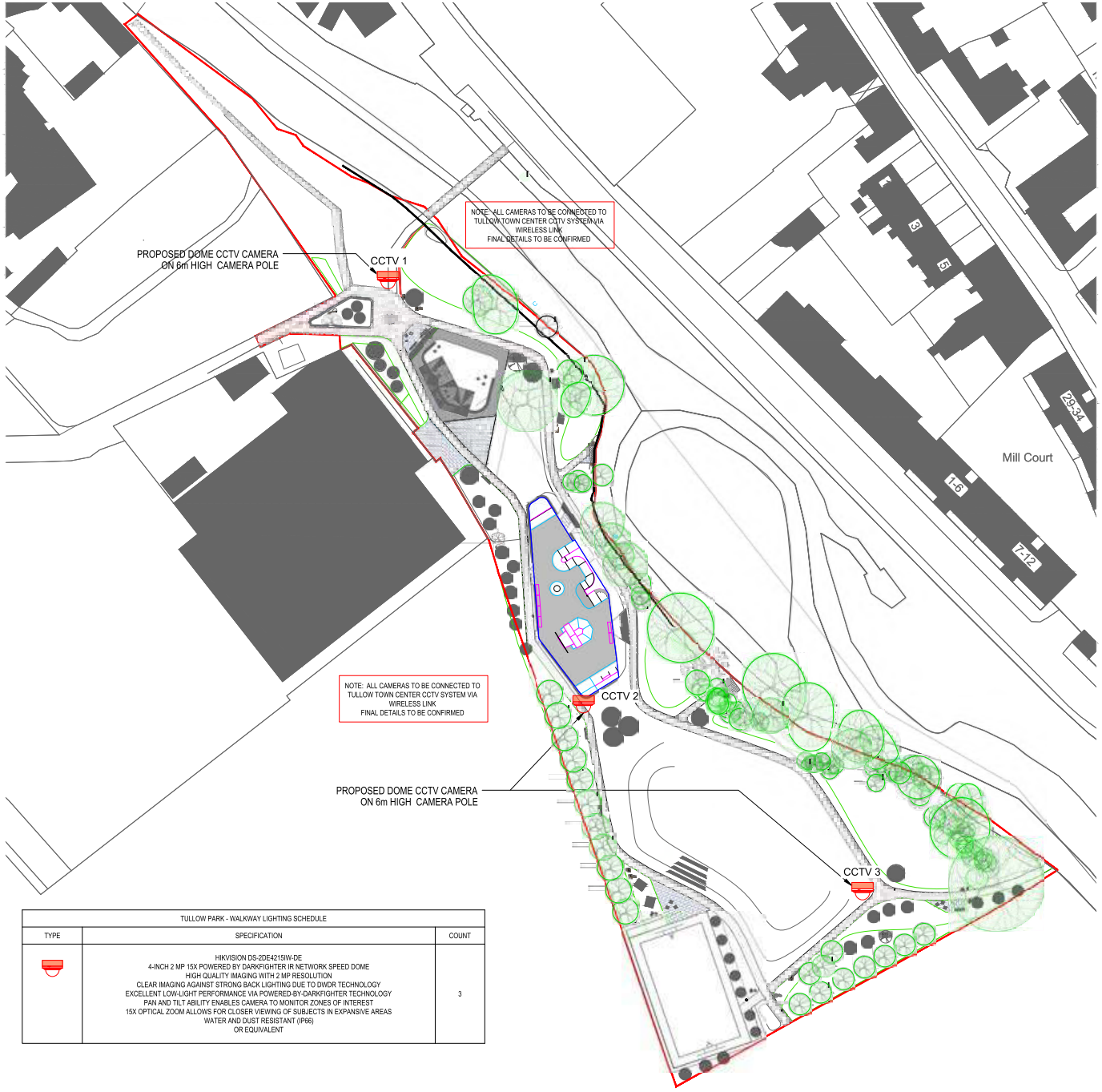
PROJECT
TULLOW TOWN PARK
TULLOW CO. CARLOW

CLIENT
CARLOW COUNTY COUNCIL

DRAWING TITLE
TULLOW TOWN PARK
PROPOSED WALKWAY LIGHTING LAYOUT

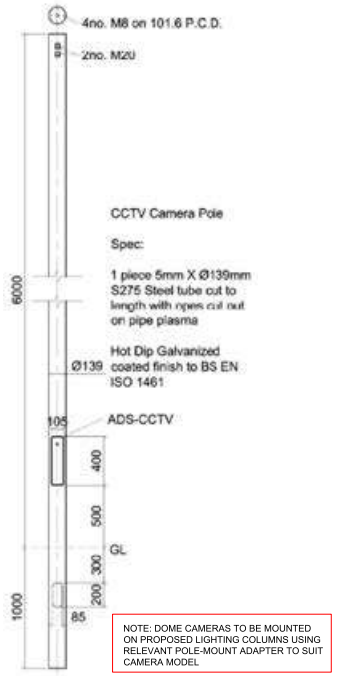
SCALE	SHEET SIZE	PROJECT No.	DRAWING No.	REV.
1:500	A1	24-014	E-100	A



TULLOW PARK - WALKWAY LIGHTING SCHEDULE		
TYPE	SPECIFICATION	COUNT
	HIKVISION DS-2DE4215IW-DE 4-INCH 2 MP 15X POWERED BY DARKFIGHTER IR NETWORK SPEED DOME HIGH QUALITY IMAGING WITH 2 MP RESOLUTION CLEAR IMAGING AGAINST STRONG BACK LIGHTING DUE TO DWDR TECHNOLOGY EXCELLENT LOW-LIGHT PERFORMANCE VIA POWERED-BY-DARKFIGHTER TECHNOLOGY PAN AND TILT ABILITY ENABLES CAMERA TO MONITOR ZONES OF INTEREST 15X OPTICAL ZOOM ALLOWS FOR CLOSER VIEWING OF SUBJECTS IN EXPANSIVE AREAS WATER AND DUST RESISTANT (IP66) OR EQUIVALENT	3

1 PROPOSED SITE WALKWAY CCTV LAYOUT
1:500 @ A1

TYPICAL OUTDOOR CCTV MOUNTING POLE



NOTE: DOME CAMERAS TO BE MOUNTED ON PROPOSED LIGHTING COLUMNS USING RELEVANT POLE-MOUNT ADAPTER TO SUIT CAMERA MODEL

SCHEDULE / NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE ELECTRICAL SPECIFICATION.
2. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE STATED.
3. DO NOT SCALE. THIS DRAWING IS REPRESENTATIVE ONLY.
4. THE ELECTRICAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS BY SITE MEASUREMENTS AND REFER ALL DISCREPANCIES TO THE ENGINEER FOR FURTHER ACTION.
5. THE ELECTRICAL CONTRACTOR IS TO:
6. SUPPLY, INSTALL & COMMISSION A CCTV SYSTEM
   CCTV NETWORK TO BE INSTALLED C/W 3 NO. CCTV CAMERAS POWERED VIA POE.
   A MONITORING STATION SHALL BE PROVIDED IN A LOCATION YET TO BE DETERMINED.
7. CO-ORDINATION OF THE ELECTRICAL SERVICES WITH OTHER SERVICES TO BE AGREED ON SITE PRIOR TO INSTALLATION. ADDITIONAL COSTS DUE TO LACK OF CO-ORDINATION WILL NOT BE ENTERTAINED. THE ELECTRICAL CONTRACTOR IS TO CO-ORDINATE WITH MECHANICAL & BUILDING CONTRACTORS.
8. THE CONTRACTOR SHALL ALLOW FOR ALL SETTING OUT AND INSTALLATION AROUND OBSTRUCTIONS.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MARKING OUT BUILDERS WORKS, OPES ETC.
10. THE CONTRACTOR SHALL INCLUDE FOR ALL NECESSARY ACCESSORIES WITH FITTING ALL BASES
11. THE CONTRACTOR SHALL INCLUDE FOR THE COMMISSIONING & CERTIFICATION OF THE ABOVE LISTED SYSTEMS.
12. SHOULD ANY DISCREPANCIES BE APPARENT ON THIS DRAWING, THE ENGINEER SHOULD BE MADE AWARE OF THIS FOR FURTHER ACTION.
13. CONTAINMENT AND CABLE SUPPORT TO BE COMPLIANT WITH I.S. 3218:2013 & E.N. 50085 CABLE TRUNKING SYSTEMS AND CABLE DUCTING SYSTEMS FOR ELECTRICAL INSTALLATIONS. CABLE MANAGEMENT TO COMPLY WITH E.N. 50086 SPECIFICATION FOR CONDUIT SYSTEMS. CABLE SUPPORTS MUST BE NON COMBUSTIBLE AND SHOULD WITHSTAND A SIMILAR TEMPERATURE AND DURATION TO THAT OF THE CABLE, WHILE MAINTAINING ADEQUATE SUPPORT.
14. ALL CONTAINMENT CORNERS, WHETHER INTERNAL, EXTERNAL, RIGHT HAND ETC. MUST BE MADE USING MANUFACTURED PRODUCTS, AS SUPPLIED BY THE MANUFACTURER OF THE TRUNKING SECTIONS.

CCTV LEGEND

360° DOME CCTV CAMERA

TYPICAL OUTDOOR CCTV CAMERA

HIKVISION
DS-2DE4215IW-DE

REV	DESCRIPTION	DRN	ENG	APP	DATE
A	ISSUED FOR INFORMATION	JH	JH	JH	25.03.24

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PROJECT
TULLOW TOWN PARK
TULLOW CO. CARLOW

CLIENT
CARLOW COUNTY COUNCIL

DRAWING TITLE
TULLOW TOWN PARK
PROPOSED WALKWAY CCTV LAYOUT

SCALE	SHEET SIZE	PROJECT No.	DRAWING No.	REV.
1:500	A1	24-014	E-200	A

TULLOW SKATE PARK - TREE SURVEY

TREE TAG REF:	TREE CENTRE EASTING	TREE CENTRE NORTHING	TREE TYPE	TREE DIMENSIONS: EVEN /UNEVEN	TREE SPREAD: TOTAL SPREAD (m)	TRUNK WIDTH (m)	HEIGHT FROM GROUND (m)	Tree Condition (Visual)	Ground Condition	Condition Issue (Visual)	Critical Root zone from Tree Centre (m)
0	685108.12	673042.729	ELDER - Sambucus Nigra	Even	4.5	0.7	3.1	Good	River Bank		8.4
1	685109.809	673040.594	White Willow - Salix Alba	Even	9	0.4	9	Good	Good		4.8
2	685117.782	673035.205	Alder - Glutinesa	Even	5.5	0.2	7	Good	River Bank		2.4
3	685126.343	673025.443	Sycamore - Acer Pseudoplatanus	Uneven	9	0.5	10	Good	Good		6
4	685124.416	673018.897	Sycamore - Acer Pseudoplatanus	Uneven	7	0.25	8	Good	Good		3
5	685137.612	673020.417	Sycamore - Acer Pseudoplatanus	Uneven	14	0.8	13	Good	Good		9.6
6	685130.405	673012.706	Sycamore - Acer Pseudoplatanus	Uneven	14	1.2	13	Good	Good		14.4
7	685140.793	673013.304	Common Walnut	Uneven	15	1	14	Good	Good		12
8	685144.884	673002.847	Sycamore - Acer Pseudoplatanus	Uneven	15	0.8	14	Good	Good		9.6
9	685144.427	673000.21	Sycamore - Acer Pseudoplatanus	Uneven	12	0.6	12	Good	Good		7.2
10	685147.557	672994.729	Sycamore - Acer Pseudoplatanus	Even	12	0.8	12	Good	Good		9.6
11	685145.432	672992.643	Sycamore - Acer Pseudoplatanus	Uneven	8	0.5	10	Good	Good		6
12	685145.485	672991.433	Sycamore - Acer Pseudoplatanus	Uneven	10	0.8	10	Good	Good		9.6
13	685156.542	672988.536	Common Walnut	Uneven	20	0.8	10	Good	Good		9.6
14	685164.367	672993.171	Sitka Spruce -Picea Sitchensis	Even	10	0.5	10	Good	Good		6
15	685183.959	672982.244	Sycamore - Acer Pseudoplatanus	Uneven	12	1.1	17	Good	Good		13.2
16	685185.744	672977.368	Sycamore - Acer Pseudoplatanus	Even	7	0.5	8	Good	Good		6
17	685191.842	672979.241	Sycamore - Acer Pseudoplatanus	Uneven	6	0.1	6	Good	Good		1.2
18	685189.836	672974.46	Ash	Uneven	14	0.7	12	Good	Good		8.4
19	685196.921	672974.372	Sycamore - Acer Pseudoplatanus	Even	6	0.3	8	Good	Good		3.6
20	685199.06	672971.86	Sycamore - Acer Pseudoplatanus	Even	6	0.2	8	Good	Good		2.4
21	685199.86	672971.682	Sycamore - Acer Pseudoplatanus	Uneven	6	0.1	6	Good	Good		1.2
22	685200.628	672971.046	Crack Willow	Uneven	8	0.3	10	Good	Good		3.6
23	685199.939	672972.704	Sycamore - Acer Pseudoplatanus	Uneven	8	0.3	8	Good	Good		3.6
24	685200.003	672971.555	Sycamore - Acer Pseudoplatanus	Uneven	8	0.3	8	Good	Good		3.6
25	685201.888	672971.132	Sycamore - Acer Pseudoplatanus	Even	5	0.1	8	Good	Good		1.2
26	685202.888	672970.258	Sycamore - Acer Pseudoplatanus	Even	5	0.1	8	Good	Good		1.2
27	685202.097	672969.467	Sycamore - Acer Pseudoplatanus	Even	5	0.1	8	Good	Good		1.2
28	685204.331	672969.494	Sycamore - Acer Pseudoplatanus	Even	5	0.1	8	Good	Good		1.2
29	685204.657	672968.617	Sycamore - Acer Pseudoplatanus	Even	5	0.1	8	Good	Good		1.2
30	685205.732	672967.525	Sycamore - Acer Pseudoplatanus	Even	5	0.1	8	Good	Good		1.2
31	685202.184	672966.548	Sycamore - Acer Pseudoplatanus	Even	5	0.1	8	Good	Good		1.2
32	685202.969	672966.897	Sycamore - Acer Pseudoplatanus	Even	5	0.1	8	Good	Good		1.2
33	685204.147	672966.314	Sycamore - Acer Pseudoplatanus	Even	6	0.4	10	Good	Good		4.8
34	685206.235	672967.687	Sycamore - Acer Pseudoplatanus	Even	6	0.2	10	Good	Good		2.4
35	685205.849	672965.014	Sycamore - Acer Pseudoplatanus	Even	6	0.2	10	Good	Good		2.4
36	685205.801	672961.83	Sycamore - Acer Pseudoplatanus	Even	5	0.1	8	Good	Good		1.2
37	685207.474	672962.37	Crack Willow	Even	8	0.7	10	Poor	Good	Severe breakage 4m from ground, crown hanging dangerously.	8.4
38	685208.692	672963.718	Sycamore - Acer Pseudoplatanus	Even	5	0.1	8	Good	Good		1.2
39	685207.26	672960.333	Alder - Glutinesa	Even	6	0.4	10	Good	Good		4.8
40	685208.54	672961.676	Sycamore - Acer Pseudoplatanus	Even	5	0.1	8	Good	Good		1.2
41	685209.899	672963.68	Sycamore - Acer Pseudoplatanus	Even	5	0.1	8	Good	Good		1.2
42	685212.809	672960.49	Sycamore - Acer Pseudoplatanus	Even	6	0.2	10	Good	Good		2.4
43	685213.007	672959.373	Sycamore - Acer Pseudoplatanus	Even	6	0.2	10	Good	Good		2.4
44	685214.374	672958.633	Sycamore - Acer Pseudoplatanus	Even	5	0.1	8	Good	Good		1.2
45	685212.934	672957.458	Crack Willow	Even	14	0.8	14	Good	Good		9.6
46	685213.814	672957.048	Sycamore - Acer Pseudoplatanus	Uneven	8	0.3	11	Good	Good		3.6
47	685209.212	672956.073	Ash	Uneven	8	0.4	8	Good	Good		4.8
48	685191.558	672958.146	Sycamore - Acer Pseudoplatanus	Even	10	0.8	9	Good	Good		9.6
49	685197.278	672953.753	Crack Willow	Even	14	0.8	12	Good	Good		9.6
50	685192.96	672952.967	Crack Willow	Uneven	12	0.4	8	Good	Good		4.8
51	685205.434	672949.183	Crack Willow	Uneven	10	0.5	7	Good	Good		6
52	685209.246	672952.053	Sycamore - Acer Pseudoplatanus	Uneven	8	0.3	8	Good	Good		3.6
53	685208.678	672950.565	Sycamore - Acer Pseudoplatanus	Uneven	8	0.3	8	Good	Good		3.6
54	685209.696	672951.033	Sycamore - Acer Pseudoplatanus	Even	5	0.1	8	Good	Good		1.2
55	685210.162	672950.054	Sycamore - Acer Pseudoplatanus	Even	5	0.1	8	Good	Good		1.2
56	685211.942	672952.341	Sycamore - Acer Pseudoplatanus	Even	6	0.2	10	Good	Good		2.4
57	685214.218	672952.606	Sycamore - Acer Pseudoplatanus	Even	5	0.1	8	Good	Good		1.2
58	685212.26	672949.576	Sycamore - Acer Pseudoplatanus	Uneven	8	0.3	8	Good	Good		3.6
59	685211.396	672948.413	Sycamore - Acer Pseudoplatanus	Uneven	8	0.3	8	Good	Good		3.6
60	685197.678	672927.451	Oak - Quercus Robur	Even	5	0.2	8	Good	Good		2.4
61	685201.17	672930.293	Oak - Quercus Robur	Even	5	0.2	8	Good	Good		2.4
62	685206.739	672932.871	Hawthorn	Even	4	0.1	4	Good	Good		1.2
63	685206.976	672934.189	Ash	Even	5	0.1	8	Good	Good		1.2
64	685207.538	672932.944	Ash	Even	5	0.1	8	Good	Good		1.2
65	685207.626	672934.822	Silver Birch	Even	4	0.2	4	Good	Good		2.4
66	685209.232	672934.952	Ash	Even	5	0.1	8	Good	Good		1.2
67	685210.33	672934.486	Silver Birch	Even	4	0.2	4	Good	Good		2.4
68	685213.503	672938.417	Ash	Even	5	0.1	8	Good	Good		1.2
69	685214.832	672936.442	Ash	Even	5	0.1	8	Good	Good		1.2
70	685214.897	672924.934	Ash	Even	10	0.5	10	Good	River Bank		6
71	685217.186	672921.142	Sycamore - Acer Pseudoplatanus	Even	8	0.5	10	Good	River Bank		6
72	685219.291	672917.653	Sycamore - Acer Pseudoplatanus	Even	6	0.2	9	Good	River Bank		2.4
73	685220.176	672915.677	Ash	Uneven	10	0.3	10	Good	Good		3.6
74	685221.502	672914.483	Sycamore - Acer Pseudoplatanus	Even	6	0.3	8	Good	Good		3.6
75	685222.442	672912.471	Whych Elm	Even	7	0.3	8	Poor	Good	Dutch Elm Disease Present	3.6
76	685223.686	672911.164	Alder - Glutinesa	Even	5	0.2	8	Good	Good		2.4
77	685223.762	672908.313	Whych Elm	Even	4	0.2	6	Good	Good		2.4
78	685223.867	672907.224	Whych Elm	Even	4	0.2	6	Good	Good		2.4
79	685226.585	672908.252	Sycamore - Acer Pseudoplatanus	Even	6	0.3	8	Good	Good		3.6
80	685233.772	672899.778	Lime Tree - Talia	Uneven	16	1.4	13	Good	River Bank		16.8
81	685234.057	672897.799	Hazel - Corylus Avellana	Even	6	0.3	8	Poor	Good	Dead	3.6
82	685221.107	672905.835	Hawthorn	Even	4	0.1	4	Good	Good		1.2
84	685238.689	672894.304	Ash	Uneven	10	1	12	Good	River Bank		12
85	685236.514	672893.74	Crack Willow	Uneven	5	0.2	5	Good	Good		2.4
86	685236.667	672889.977	Crack Willow	Uneven	5	0.2	5	Good	Good		2.4
87	685238.366	672886.323	Ash	Even	5	0.1	8	Good	Good		1.2
88	685241.698	672886.842	Hawthorn	Even	4	0.1	4	Good	Good		1.2
89	685241.3	672885.36	Crack Willow	Uneven	6	0.1	6	Good	Good		1.2
90	685239.206	672885.504	Hawthorn	Even	4	0.1	4	Good	Good		1.2
91	685241.529	672884.572	Hawthorn	Even	4	0.1	4	Good	Good		1.2
92	685241.512	672883.391	Silver Birch	Even	4	0.2	4	Good	Good		2.4
93	685241.861	672884.203	Hawthorn	Even	4	0.1	4	Good	Good		1.2
94	685242.423	672883.261	Ash	Even	5	0.1	8	Good	Good		1.2
95	685242.644	672884.644	Silver Birch	Even	4	0.2	4	Good	Good		2.4
96	685244.197	672883.333	Alder - Glutinesa	Even	4	0.1	6	Good	Good		1.2
97	685243.938	672881.731	Silver Birch	Even	4	0.2	4	Good	Good		2.4

TULLOW SKATE PARK - TREE SURVEY

TREE TAG REF:	TREE CENTRE EASTING	TREE CENTRE NORTHING	TREE TYPE	TREE DIMENSIONS: EVEN /UNEVEN	TREE SPREAD: TOTAL SPREAD (m)	TRUNK WIDTH (m)	HEIGHT FROM GROUND (m)	Tree Condition (Visual)	Ground Condition	Condition Issue (Visual)	Critical Root zone from Tree Centre (m)
98	685246.217	672881.471	Silver Birch	Even	4	0.2	4	Good	Good		2.4
99	685247.769	672880.42	Ash	Even	5	0.1	8	Good	Good		1.2
100	685252.839	672886.398	Crack Willow	Uneven	17	1	13	Good	River Bank		12
101	685244.823	672880.956	Ash	Even	5	0.1	8	Good	Good		1.2
102	685247.093	672879.32	Ash	Even	5	0.1	8	Good	Good		1.2
103	685254.222	672880.187	Hazel - Corylus Avellana	Even	8	1	6	Good	Good		12
104	685251.805	672878.909	Alder - Glutinesa	Even	4	0.1	6	Good	Good		1.2
105	685262.887	672881.838	Crack Willow	Uneven	16	0.8	10	Good	River Bank		9.6
106	685258.331	672868.598	Crack Willow	Uneven	6	0.1	6	Good	Good		1.2
107	685261.017	672870.024	Silver Birch	Even	4	0.2	4	Good	Good		2.4
108	685262.534	672869.568	Alder - Glutinesa	Even	4	0.1	6	Good	Good		1.2
109	685262.582	672868.78	Holly - Ilex Aquifolium	Even	1	0.1	3	Good	Good		1.2
110	685263.915	672868.961	Silver Birch	Even	4	0.2	4	Good	Good		2.4
111	685264.487	672869.037	Hawthorn	Even	4	0.1	4	Good	Good		1.2
112	685266.177	672869.431	Alder - Glutinesa	Even	4	0.1	6	Good	Good		1.2
113	685265.825	672868.212	Silver Birch	Even	8	0.3	13	Good	Good		3.6
114	685268.126	672869.152	Ash	Even	5	0.1	8	Good	Good		1.2
115	685268.048	672867.357	Silver Birch	Even	4	0.2	4	Good	Good		2.4
116	685273.145	672872.392	Sycamore - Acer Pseudoplatanus	Even	9	1.2	11	Good	River Bank		14.4
117	685269.333	672868.618	Hawthorn	Even	4	0.1	4	Good	Good		1.2
118	685278.964	672864.421	Silver Birch	Even	4	0.15	6	Good	Good		1.8
119	685274.081	672871.989	Hawthorn	Even	5	0.2	8	Good	Good		2.4
120	685275.806	672873.409	Alder - Glutinesa	Uneven	12	0.9	10	Good	River Bank		10.8
121	685279.128	672870.793	Alder - Glutinesa	Uneven	10	0.7	11	Good	River Bank		8.4
122	685278.745	672868.259	Ash	Even	5	0.1	8	Good	Good		1.2
123	685281.755	672867.53	Alder - Glutinesa	Even	5	0.2	8	Good	Good		2.4
124	685283.471	672867.633	Alder - Glutinesa	Even	5	0.2	8	Good	Good		2.4
125	685284.502	672866.773	Alder - Glutinesa	Even	5	0.2	8	Good	Good		2.4
126	685287.381	672868.363	Ash	Even	5	0.1	8	Good	Good		1.2
127	685289.228	672866.531	Alder - Glutinesa	Even	5	0.2	8	Good	Good		2.4
128	685288.702	672865.698	Alder - Glutinesa	Even	10	0.4	9	Good	Good		4.8
129	685290.893	672865.59	Sycamore - Acer Pseudoplatanus	Even	6	0.2	8	Good	Good		2.4
130	685289.189	672861.612	Alder - Glutinesa	Even	5	0.2	8	Good	Good		2.4
131	685292.704	672856.396	Ash	Even	5	0.1	8	Good	Good		1.2
132	685293.489	672856.324	Hawthorn	Even	4	0.1	4	Good	Good		1.2
133	685295.647	672857.931	Crack Willow	Uneven	14	1	9	Good	River Bank		12
134	685296.084	672854.709	Hawthorn	Even	4	0.1	4	Good	Good		1.2
135	685294.758	672852.174	Alder - Glutinesa	Even	4	0.1	6	Good	Good		1.2
136	685299.312	672852.378	Ash	Even	5	0.1	8	Good	Good		1.2
137	685298.46	672851.045	Silver Birch	Even	4	0.2	4	Good	Good		2.4
138	685300.073	672853.534	Alder - Glutinesa	Even	4	0.1	6	Good	Good		1.2
139	685299.988	672849.889	Silver Birch	Even	4	0.2	4	Good	Good		2.4
140	685299.68	672849.909	Silver Birch	Even	4	0.2	4	Good	Good		2.4
141	685301.963	672848.892	Alder - Glutinesa	Even	4	0.1	6	Good	Good		1.2
142	685299.965	672848.979	Alder - Glutinesa	Even	4	0.1	6	Good	Good		1.2
143	685301.555	672847.457	Ash	Even	5	0.1	8	Good	Good		1.2
144	685304.586	672847.001	Alder - Glutinesa	Even	4	0.1	6	Good	Good		1.2
145	685304.081	672846.283	Hawthorn	Even	4	0.1	4	Good	Good		1.2
146	685305.149	672845.734	Silver Birch	Even	4	0.2	4	Good	Good		2.4
147	685307.041	672840.824	Crack Willow	Even	22	1.4	12	Good	River Bank		16.8
148	685302.693	672842.175	Oak - Quercus Robur	Even	5	0.2	8	Good	Good		2.4
149	685300.589	672835.001	Oak - Quercus Robur	Even	5	0.2	8	Good	Good		2.4
150	685290.174	672829.03	Oak - Quercus Robur	Even	5	0.2	8	Good	Good		2.4
151	685285.577	672826.53	Oak - Quercus Robur	Even	5	0.2	8	Good	Good		2.4
152	685280.961	672823.872	Oak - Quercus Robur	Even	5	0.2	8	Good	Good		2.4
153	685276.232	672821.327	Oak - Quercus Robur	Even	5	0.2	8	Good	Good		2.4
154	685271.298	672818.542	Oak - Quercus Robur	Even	5	0.2	8	Good	Good		2.4
155	685265.937	672815.407	Oak - Quercus Robur	Even	5	0.2	8	Good	Good		2.4
156	685261.115	672812.664	Oak - Quercus Robur	Even	5	0.2	8	Good	Good		2.4
157	685255.442	672809.461	Oak - Quercus Robur	Even	5	0.2	8	Good	Good		2.4
158	685250.091	672825.927	Prunus Avium Plena	Even	5	0.2	8	Good	Good		2.4
159	685251.192	672829.269	Prunus Avium Plena	Even	5	0.2	8	Good	Good		2.4
160	685255.958	672834.224	Prunus Avium Plena	Even	5	0.2	8	Good	Good		2.4
161	685259.115	672835.758	Prunus Avium Plena	Even	5	0.2	8	Good	Good		2.4
162	685262.248	672835.707	Prunus Avium Plena	Even	5	0.2	8	Good	Good		2.4
163	685265.356	672834.568	Prunus Avium Plena	Even	5	0.2	8	Good	Good		2.4
164	685268.029	672831.788	Prunus Avium Plena	Even	5	0.2	8	Good	Good		2.4
165	685268.571	672824.953	Prunus Avium Plena	Even	5	0.2	8	Good	Good		2.4
166	685266.61	672821.563	Prunus Avium Plena	Even	5	0.2	8	Good	Good		2.4
167	685263.431	672819.837	Prunus Avium Plena	Even	5	0.2	8	Good	Good		2.4
168	685253.08	672832.072	Prunus Avium Plena	Even	5	0.2	8	Good	Good		2.4
169	685221.182	672853.115	Silver Birch	Even	4	0.15	6	Good	Good		1.8
170	685223.465	672857.386	Silver Birch	Even	4	0.15	6	Good	Good		1.8
171	685240.436	672861.372	Silver Birch	Even	4	0.15	6	Good	Good		1.8
172	685244.349	672858.205	Silver Birch	Even	4	0.15	6	Good	Good		1.8
173	685246.678	672854.235	Silver Birch	Even	4	0.15	6	Good	Good		1.8
174	685247.17	672849.565	Silver Birch	Even	4	0.15	6	Good	Good		1.8
175	685235.903	672837.025	Silver Birch	Even	4	0.15	6	Good	Good		1.8
176	685232.338	672837.201	Silver Birch	Even	4	0.15	6	Good	Good		1.8
177	685224.744	672822.418	Small Leaf - Talia Cordata - Lime	Even	6	0.2	7	Good	Good		2.4
178	685222.549	672828.48	Small Leaf - Talia Cordata - Lime	Even	6	0.2	7	Good	Good		2.4
179	685220.269	672834.404	Small Leaf - Talia Cordata - Lime	Even	6	0.2	7	Good	Good		2.4
180	685218.634	672839.329	Small Leaf - Talia Cordata - Lime	Even	6	0.2	7	Good	Good		2.4
181	685216.691	672844.696	Small Leaf - Talia Cordata - Lime	Even	6	0.2	7	Good	Good		2.4
182	685214.947	672849.47	Small Leaf - Talia Cordata - Lime	Even	6	0.2	7	Good	Good		2.4
183	685213.209	672854.364	Small Leaf - Talia Cordata - Lime	Even	6	0.2	7	Good	Good		2.4
184	685211.466	672859.714	Small Leaf - Talia Cordata - Lime	Even	6	0.2	7	Good	Good		2.4
185	685209.615	672865.235	Small Leaf - Talia Cordata - Lime	Even	6	0.2	7	Good	Good		2.4
186	685208.059	672870.006	Small Leaf - Talia Cordata - Lime	Even	6	0.2	7	Good	Good		2.4
187	685206.059	672874.96	Small Leaf - Talia Cordata - Lime	Even	6	0.2	7	Good	Good		2.4
188	685204.451	672880.164	Small Leaf - Talia Cordata - Lime	Even	6	0.2	7	Good	Good		2.4
189	685202.547	672885.402	Small Leaf - Talia Cordata - Lime	Even	6	0.2	7	Good	Good		2.4
190	685173.894	673027.714	Sycamore - Acer Pseudoplatanus	Uneven	10	0.6	12	Good	Riverbank		7.2
191	685179.679	673022.353	Sycamore - Acer Pseudoplatanus	Uneven	10	0.5	12	Good	Riverbank		6
192	685184.97	673015.702	Sycamore - Acer Pseudoplatanus	Uneven	12	0.8	12	Good	Riverbank		9.6
193	685195.242	673005.627	Sycamore - Acer Pseudoplatanus	Uneven	8	0.6	9	Good	Riverbank		7.2
194	685196.539	673006.306	Sycamore - Acer Pseudoplatanus	Even	2	0.1	4	Good	Riverbank		1.2
195	685197.099	673004.425	Alder - Glutinesa	Even	5	0.3	8	Good	Riverbank		3.6
196	685201.997	673000.952	Sycamore - Acer Pseudoplatanus	Even	7	0.5	9	Good	Riverbank		6
197	685209.92	672993.889	Prunus Serrulata	Even	7	0.3	6	Good	Riverbank		3.6
198	685215.701	672983.769	Whych Elm	Even	3	0.1	3	Good	Riverbank		1.2

TULLOW SKATE PARK - TREE SURVEY

TREE TAG REF:	TREE CENTRE EASTING	TREE CENTRE NORTHING	TREE TYPE	TREE DIMENSIONS: EVEN /UNEVEN	TREE SPREAD: TOTAL SPREAD (m)	TRUNK WIDTH (m)	HEIGHT FROM GROUND (m)	Tree Condition (Visual)	Ground Condition	Condition Issue (Visual)	Critical Root zone from Tree Centre (m)
199	685221.006	672977.842	Whych Elm	Even	6	0.5	6	Poor	Riverbank	Dutch Elm Disease Present	6
200	685227.917	672971.864	Ash	Even	10	0.5	10	Good	Riverbank		6
201	685230.808	672971.019	Sycamore - Acer Pseudoplatanus	Uneven	9	0.4	10	Good	Good		4.8
202	685229.42	672968.069	Crack Willow	Uneven	10	0.8	10	Poor	Good	Badly Damaged - Falling Down	9.6
203	685235.772	672962.948	Ash	Even	10	0.7	9	Good	Riverbank		8.4
204	685239.392	672958.057	Sycamore - Acer Pseudoplatanus	Even	2	0.1	3	Good	Riverbank		1.2
205	685248.293	672954.863	Prunus Serrulata	Even	9	0.2	5	Good	Riverbank		2.4
206	685249.264	672948.771	Ash	Even	12	1.2	11	Good	Riverbank		14.4
207	685260.713	672942.442	Prunus Serrulata	Even	9	0.2	5	Good	Riverbank		2.4
208	685261.293	672937.723	Alder - Glutinesa	Even	4	0.1	6	Good	Riverbank		1.2
209	685265.104	672937.115	Alder - Glutinesa	Even	4	0.1	6	Good	Riverbank		1.2
210	685268.21	672932.479	Ash	Even	12	1	10	Good	Riverbank		12
211	685273.459	672930.432	Prunus Serrulata	Even	9	0.2	5	Good	Riverbank		2.4
212	685284.736	672919.086	Prunus Serrulata	Even	9	0.2	5	Good	Riverbank		2.4
213	685280.661	672918.453	Ash	Even	4	0.1	5	Good	Riverbank		1.2
214	685283.022	672914.725	Grey willow	Uneven	8	0.3	7	Good	Riverbank		3.6
215	685294.052	672909.471	Prunus Serrulata	Even	10	0.3	6	Good	Riverbank		3.6
216	685290.3	672908.47	Balsam Fir	Even	4	0.1	4	Good	Riverbank		1.2
217	685289.21	672906.774	Alder - Glutinesa	Even	4	0.1	4	Good	Riverbank		1.2
218	685295.279	672903.916	European Larch	Even	7	0.3	10	Good	Riverbank		3.6
219	685295.988	672901.983	European Silver Fir	Even	7	0.3	8	Good	Riverbank		3.6
220	685296.184	672897.045	Hawthorn	Even	5	0.3	7	Good	Riverbank		3.6
221	685298.235	672896.102	Ash	Uneven	9	0.9	11	Good	Riverbank		10.8
222	685299.958	672894.044	Ash	Uneven	9	0.5	8	Good	Riverbank		6
223	685299.614	672892.898	Hawthorn	Even	5	0.1	5	Good	Riverbank		1.2
224	685303.934	672899.084	Prunus Serrulata	Even	9	0.2	5	Good	Riverbank		2.4
225	685304.335	672891.025	Sycamore - Acer Pseudoplatanus	Uneven	7	0.5	10	Good	Good		6
226	685302.373	672887.011	Crack Willow	Even	6	0.1	5	Good	Riverbank		1.2
227	685320.481	672882.35	Prunus Serrulata	Even	9	0.2	5	Good	Riverbank		2.4
228	685322.669	672866.563	Ash	Uneven	8	0.6	9	Good	Good		7.2
229	685321.77	672867.959	Crack Willow	Uneven	5	0.2	4	Good	Good		2.4
230	685326.865	672862.911	Ash	Even	15	1.5	15	Good	Riverbank		18
231	685335.813	672866.182	Prunus Serrulata	Even	9	0.2	5	Good	Riverbank		2.4
232	685341.506	672862.919	Ash	Even	5	0.2	5	Good	Good		2.4
233	685348.978	672860.21	WhiteBeam - Sorlons Aria	Even	5	0.2	5	Good	Good		2.4
234	685345.977	672855.35	Beech - Fagus Sylvatica	Even	6	0.3	6	Good	Good		3.6
235	685351.793	672852.022	Prunus Serrulata	Even	9	0.2	5	Good	Riverbank		2.4
236	685361.656	672858.393	Silver Birch	Even	6	0.2	6	Good	Good		2.4
237	685365.769	672856.98	Hawthorn	Even	3	0.1	4	Good	Good		1.2
238	685369.307	672855.688	WhiteBeam - Sorlons Aria	Even	5	0.3	6	Good	Good		3.6
239	685372.462	672854.357	Norway maple - Acer	Even	6	0.3	7	Good	Good		3.6
240	685375.812	672853.237	Sycamore - Acer Pseudoplatanus	Even	4	0.1	5	Good	Good		1.2
241	685378.699	672852.927	Sycamore - Acer Pseudoplatanus	Even	4	0.1	5	Good	Good		1.2
242	685383.223	672851.081	Ash	Even	5	0.2	5	Good	Good		2.4
243	685385.228	672848.317	Silver Birch	Even	6	0.2	10	Good	Good		2.4
244	685382.911	672849.564	ELDER - Sambucus Nigra	Even	4	0.1	4	Good	Good		1.2
245	685381.997	672846.465	Mountain Ash - Sorbus	Even	4	0.2	6	Good	Good		2.4
246	685378.904	672848.168	Mountain Ash - Sorbus	Even	3	0.2	5	Good	Good		2.4
247	685377.333	672847.282	Portuguese Laurel - Primus	Even	4	0.2	4	Good	Good		2.4
248	685376.487	672845.16	Hawthorn	Even	3	0.1	6	Good	Good		1.2
249	685374.394	672846.051	WhiteBeam - Sorlons Aria	Uneven	6	0.2	7	Good	Good		2.4
250	685373.539	672843.692	Norway maple - Acer	Uneven	10	0.4	11	Good	Good		4.8
251	685370.87	672841.772	Hornbeam -Carpinus	Even	6	0.3	8	Good	Good		3.6
252	685367.192	672840.651	Norway maple - Acer	Uneven	10	0.4	11	Good	Good		4.8
253	685365.132	672840.917	Sycamore - Acer Pseudoplatanus	Even	4	0.1	5	Good	Good		1.2
254	685364.865	672838.237	Hornbeam -Carpinus	Even	6	0.3	8	Good	Good		3.6
255	685359.171	672838.725	Silver Birch	Uneven	10	0.3	10	Good	Good		3.6
256	685356.649	672839.178	Silver Birch	Uneven	10	0.3	10	Good	Good		3.6
257	685355.708	672840.422	Silver Birch	Uneven	10	0.3	10	Good	Good		3.6
258	685352.498	672829.936	Alder - Glutinesa	Even	4	0.1	7	Good	Riverbank		1.2
259	685351.551	672831.866	Sycamore - Acer Pseudoplatanus	Even	10	0.8	10	Good	Good		9.6
260	685351.633	672834.399	Crack Willow	Uneven	10	0.6	11	Good	Riverbank		7.2
261	685350.479	672836.146	Hawthorn	Even	4	0.1	6	Good	Riverbank		1.2
262	685350.126	672837.231	Crack Willow	Uneven	8	0.5	11	Good	Good		6
263	685365.581	672847.063	Mountain Ash - Sorbus	Even	4	0.1	5	Good	Good		1.2
264	685332.907	672854.114	Alder - Glutinesa	Uneven	6	0.3	8	Good	Riverbank		3.6
265	685331.76	672855.373	Sycamore - Acer Pseudoplatanus	Even	12	0.7	13	Good	Good		8.4
270	685300.969	672858.053	Sycamore - Acer Pseudoplatanus	Uneven	8	0.2	8	Good	Good		2.4
271	685298.682	672858.052	Sycamore - Acer Pseudoplatanus	Uneven	8	0.2	8	Good	Good		2.4

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- 3D Laser Scanning
- Point Cloud Processing
- Topographic Surveys
- Measured Building Surveys
- Utility Surveys (GPR)
- Setting Out
- Land Registry Mapping

LEGEND

Code	Description	Code	Description	Code	Description	Code	Description	Code	Description
AJ	inspection drainage cover	VL	Vegetation Line	GAS PIPE	Gas Pipe	RT	Road Text	STEP	Step
AGGS	Aggregate Stone	EP	Electricity Pole	LP	Lamp Post	SV	Sluice Valve	FE	Fence
BOW	Back of Wall	ER	Earth Rod	GAS TANK	Gas Tank	RP	Ramp Line	STONE	Stone Aggrigate
FP	Footpath	GRASS	GRASS	MHR	Manhole Round	RS	Road Sign	STONE PAV	Stone Pavement
BBOX	BBox	GE	Gate String	GT	Grating	SAMP	Samp Connection	SWING	Swing
BENCH	Bench Seat	EV	EV Charger	GYM	Gym	TAR	Tarmac	TABLE	Table
BIN	Bin	FL	Flood Light	HE	Hedge	SKET	Sket Platform	TDRW	TD Retaining Wall
CONC	Concrete	ICU	Inspection Cover Unknown	MP	Monument Plinth	SN	Sign General	WLS	White Lines Solid
BLDG	Building	ICU IC	Inspection Cover	PR	Wall Gate Pillar	SLPT	Bottom of Slope	TGT	Target for Scan
CONT	Control	KBB	Bot of Kerb line	HY	Hydrant	SLPB	Bottom of Slope	TL	Traffic Light
DUCT	Ductile	KBT	Top of Kerb line	ICE IC	ICE IC ESB	SURC	Surface	WL	Water Level
EB	Esb Box	FBB	Flower Bed Box	INSECT	Shelter	TDBLDG	2D Building	200MM	200MM Wall
TOW	Top of Wall	HR	Hand Rail	IL	Invert Level	SP	Steps Line	300MM	300MM Wall
EBOX	EBox	GY	Gully	S	Spotheight	WM	Water Metter	500MM	500MM Wall
WALL	Wall	FB	Foot Bridge	LJ	Life Jacket	SOFT	Soft Carpet	660MM	660MM Wall

Code	Description
500MM	500MM Pipe

Key Site Plan
Sheet-1

Surveyed by : GH/CK		Date:	14-11-2023
Drawn by : MA		Date:	16-11-2023
Checked by : GH		Date:	24-11-2023

Revisions

No.	Date	Description
A	19-12-23	Tree locations and details added

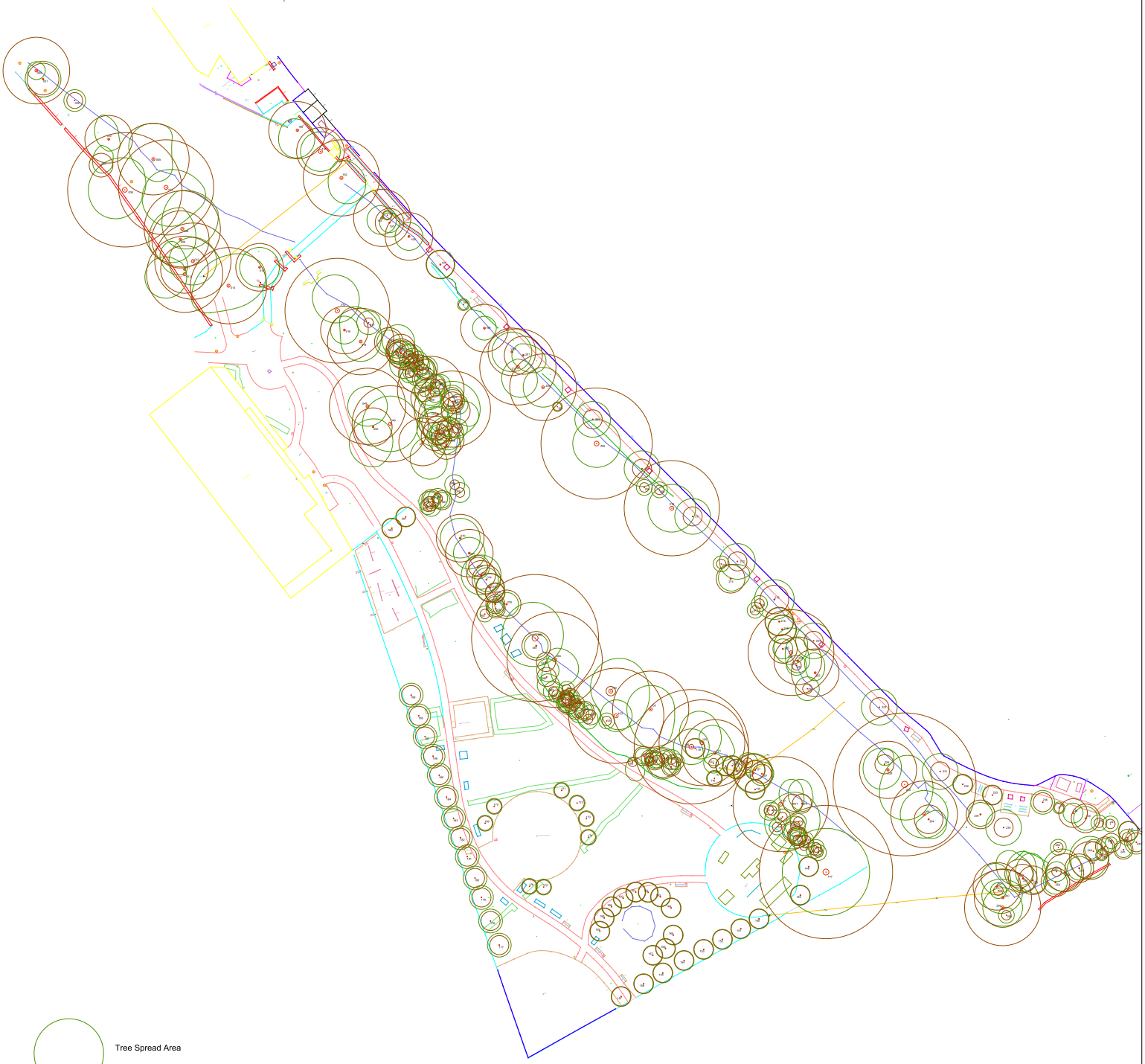
Client : Carlow County Council

Project : Tullow Town Park, Tullow, Co. Carlow

Date : 24/11/2023 | Scale : 1:500 - A1

Description : Tree Layout

Drawing Number : RDA_2023_TSP_002_Rev A



Tree Spread Area

Critical Root Zone

rda surveys|geomatics

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- 3D Laser Scanning
- Point Cloud Processing
- Topographic Surveys
- Measured Building Surveys
- Utility Surveys (GPR)
- Setting Out
- Land Registry Mapping

LEGEND

Key Site Plan
Sheet 1

Surveyed by : DH/CK Date: 14-11-2023
Drawn by : MA Date: 16-11-2023
Checked by : GR Date: 24-11-2023

Revisions

No	Date	Description
A	15-12-23	Tree backbone and details added

Client : Carlow County Council

Project : Tullow Town Park, Tullow, Co. Carlow

Date : 24/11/2023

Scale : 1:500 - A1

Description : Tree Spread and Root zone

Drawing Number : RDA_2023_TSP_003_Rev A

Appendix B – Newspaper Notice

Planning Notices

... a copy at the offices of the Planning Authority during public opening hours. A submission or observation in relation to the planning application may be made in writing to the Planning Authority on payment of the prescribed fee, €20, within the period of five weeks beginning on the date of receipt by the authority of the application, and such submissions or observations will be considered by the Planning Authority in making a decision on the application. The planning authority may grant permission subject to or without conditions, or may refuse to grant permission.

Planning Notices

... COUNTY ... Further ... n/Revised Plans ... the applicants: ... Developments ... ion of the land to ... application ... bey Street, ... Carlow. The ... umber of the ... on the register ... Significant ... rmation/revised ... ition to the ... will be ... the Planning ... nd will be ... inspection or ... a fee not ... the reasonable ... ing a copy, at ... of the authority during office hours, and a submission or observation in relation to the further information/revised plans may be made in writing to the Planning Authority on payment of the prescribed fee of €20.00 not later than 2 weeks after the receipt of the newspaper notice and site notice by the Planning Authority. Signed: Woodlawn Developments Ltd c/o Michael Fitzpatrick Architects MRIAI, Main Street, Butlersbridge, Co. Cavan Tel: 049 4365800

Laois County Council: We, Patrick Bennett and Danielle Healy, are applying for planning permission for a new single storey dwelling house, septic tank and percolation area, new entrance and all associated site works at Clonlad, Castletown, Co. Laois. The planning application may be inspected, or purchased at a fee not exceeding the reasonable cost of making a copy, at the offices of the planning authority during its public opening hours. A submission or observation in relation to the application may be made in writing to the planning authority on payment of the prescribed fee within a period of 5 weeks beginning on the date of receipt by the authority of the application, and such submissions or observations will be considered by the planning authority in making a decision on the application. The planning authority may grant permission subject to or without conditions or may refuse to grant permission.

Kildare County Council: We Alex Sirbu & Tatiana Balan of 19 College farm Glen, College Farm, Newbridge, Co. Kildare intend to apply for planning permission for new shed to rear of existing dwelling with home gym and study and all ancillary works. The planning application may be inspected or purchased at a fee not exceeding the reasonable cost of making a copy, at the offices of Kildare County Council, Áras Chill Dara, Devoy Park, Naas, Co. Kildare, during its public opening hours. A submission or observation in relation to the application may be made in writing to the Planning Authority on payment of the prescribed fee, €20, within the period of 5 weeks beginning on the date of receipt by the authority of the application, and such submissions or observations will be considered by the Planning Authority in making a decision on the application. The Planning Authority may grant permission subject to or without conditions, or may refuse to grant permission.

Planning Notices

Carlow County Council: I, Breege Pender, am applying to the above mentioned for retention permission for the following areas as part of a 2 storey existing dwelling (granted under PL99-584); additional basement area with internal access, conversion of attic area, alterations to footprint of original dwelling house, alterations to external façade, construction of a detached dormer style studio (originally in ruins), a detached garage unit with a loft area, 1 no. additional site entrance and all associated site works at Ouragh Road, Tullow, Co. Carlow. The planning application may be inspected or purchased at a fee not exceeding the reasonable cost of making a copy, at the office of the planning authority during its public opening hours. A submission or observation in relation to the application may be made in writing to the planning authority on payment of the prescribed fee, €20, within the period of 5 weeks beginning on the date of receipt by the authority of the application, and such submission or observations will be considered by the planning authority in making a decision on the application. The planning authority may grant permission subject to or without conditions, or may refuse to grant permission. Signed: PDS & Associates, www.pds.ie

CARLOW COUNTY COUNCIL: Clarification of further information

We, Newburn Logistics Limited have applied to Carlow County Council for Planning Permission under Planning Reference PL23/60154, submitted 31/07/2023, for an industrial storage unit with all associated site works, constructed to rear of existing industrial unit at Bagenalstown Industrial Park, Muine Bheag, Co. Carlow R21 EV26. The clarification of further information includes a Natura Impact Statement (NIS). Clarification of Further Information I including the NIS have been furnished to the Planning Authority in respect of this proposed development, and are available for inspection or purchase at a fee not exceeding the reasonable cost of making a copy, at the offices of the Planning Authority, Athy Road, Carlow during its public opening hours. A submission or observation in relation to the clarification of further information / NIS may be made in writing to the Planning Authority on payment of the prescribed fee, within five weeks, from receipt of new notices by the planning Authority (this fee is not applicable to persons who made original observations or submissions).

Peter Bolger Consulting, Newton House, Bachelors Walk, Bagenalstown, Co Carlow. Tel: 059 9158005

Laois County Council: We, Mountmellick Credit Union Limited intend to apply for planning permission for development at Clonaslee Credit Union, Chapel Street, Clonaslee, Co. Laois. The development consists of alterations to the front elevation to that of previously granted planning reference 23/244. The planning application may be inspected, or purchased at a fee not exceeding the reasonable cost of making a copy, at the offices of the planning authority during its public opening hours. A submission or observation in relation to the application may be made in writing to the planning authority on payment of the prescribed fee, within the period of 5 weeks beginning on the date of receipt by the authority of the application. Application prepared by ADCA Engineering Consultants, Lisnard House, Timahoe Road, Portlaoise, Co. Laois. Tel: 0578682244

Kildare County Council: John McDonald intends to apply for permission for development at Nothstoward House, Pauseencurrstown, Athy, Co. Kildare. The development consists of Permission for the Construction of a Produce store and ancillary works (i.e. minor landscaping, SUDS stormwater drainage area, concrete yards areas) - all for agricultural purposes only in a new farmyard utilising the existing access road and existing farm entrance. The planning application may be inspected or purchased at a fee not exceeding the reasonable cost of making a copy, at the offices of the planning authority during its public opening hours, and a submission or observation in relation to the application may be made in writing to the Planning Authority on payment of the prescribed fee (€20.00) within the period of 5 weeks beginning on the date of receipt by the Planning Authority of the application.

Signed: Christopher Kinghan Agricultural Planning and Design (Agent)065 164 8179

Kildare County Council: I, Richard Doyle intend to apply for Planning Permission for retention of,

A. Attic conversion with 2 No'velux'rooflights to front elevation,

B. All associated site works at No18 Oaktree Green,Curraberry Hill,Kildare Town,Co Kildare. The planning application may be inspected or purchased at a fee not exceeding the reasonable cost of making a copy at the offices of Kildare Co Council, Planning Department during its public opening hours. A submission or observation in relation to the application may be made in writing to the Planning Authority on payment of a prescribed fee, €20, within the period of 5 weeks beginning on the date of receipt by the authority of the application and such submissions or observations will be considered by the Planning Authority in making a decision on the application. The Planning Authority may grant permission subject to or without conditions, or may refuse to grant permission.

PUBLIC NOTICES

COMHAIRLE CONTAE CHEATHARLACH
CARLOW COUNTY COUNCIL

NOTICE PURSUANT TO SECTION 177AE OF THE PLANNING AND DEVELOPMENT ACT 2000 (as amended) AND THE PLANNING AND DEVELOPMENT REGULATIONS 2001 (as amended).

APPLICATION TO AN BORD PLEANÁLA FOR APPROVAL: TULLOW TOWN PARK REGENERATION, TULLOW TOWN PARK LOCATED WEST SIDE OF THE RIVER SLANEY, TULLOWBEG (TOWNLAND), TULLOW, CO. CARLOW

Notice is hereby given that Carlow County Council intends to seek the approval of An Bord Pleanála under Section 177AE of the Planning and Development Act 2000 (as amended) for the proposed development to upgrade and enhance of the existing Tullow Town Park facilities/features, ancillary infrastructure and associated site development works, all at a site of approximately 1.13 ha in extent at Tullow Town Park located west side of the River Slaney, Tullowbeg (Townland), Tullow, Co. Carlow.

The proposed upgrade and enhancement of Tullow Town Park facilities/features development consists of:

- Construction of demarcated and enhanced network of cycle and pedestrian paths of asphalt surfacing and locally sourced grey stone aggregates, leading to a sequence of outdoor spaces laid out along the length of the park;
- Construction of partially sheltered concrete surfaced outdoor event/classroom space with feature designed shelter/canopy, centrally located feature concrete surfaced skate park, 2 no. feature hardwood decking viewing platforms/steps to the River Slaney, a kickabout soft landscaped lawn area which also facilitates land drain/swale and flood area, and a sport fenced enclosed multi-use games court to include football and basketball goals;
- Removal of trees of poor condition, where views into the park can be increased, and for facilitating the structural upgrade and enhancement works proposed; and
- Retention of existing trees described as riverbank due to the binding nature of the tree roots and the adjacent River Slaney riverbank.

The public realm upgrade and enhancement works also provide for upgrading of existing footpaths, demarcated natural stone aggregates feature paved areas, raised seating areas, raised planting areas, seats and benches, timber top 'picnic' table and seating facilities, a variety of soft landscaping features (grass lawn, native meadow, ornamental grasses and perennials), and all associated infrastructure/services and site development works above and below ground level, including sustainable urban drainage services (grasscrete, tree pit, land drain/swale and rain garden solutions, public lighting and closed-circuit television (CCTV) infrastructure.

Pedestrian and cyclist access to the proposed development will be maintained via the existing walkway access from Abbey Street (the N81 National Road) to the north, the existing walkway bridge over the River Slaney from Tullow Street to the east, and the existing walkway from Abbey Street (the N81 National Road) to the west adjacent to the Tesco Tullow Supermarket.

A Natura Impact Statement has been prepared in respect of the proposed development and accompanies the application to An Bord Pleanála for approval.

An Bord Pleanála may give approval to the application for development with or without conditions or may refuse the application for development.

A copy of the Natura Impact Statement and the Plans and Particulars of the proposed development will be available for inspection on the Council's website at https://consult.carlow.ie, and can be inspected free of charge or purchase at a fee not exceeding the reasonable cost of making a copy, at the following locations from Wednesday, 3rd April 2024 up to and including Friday, 17th May 2024:

- The offices of Carlow County Council, County Hall, Athy Road, Carlow, Co. Carlow, R93 E7R7, during its public opening hours of 9:15 am and 4:30 pm Monday to Friday (excluding public Holidays);
- The offices of Carlow County Council, Housing Department, Civic Offices, Tullow, Co. Carlow, R93 WP86, during its public opening hours of 9:15 am and 4:30 pm Monday to Friday (excluding public Holidays); and
- The offices of of An Bord Pleanála, 64 Marlborough Street, Dublin 1, D01 V902, between the hours of 9:15 am and 5:30 pm Monday to Friday (excluding public Holidays). Note: due to COVID-19, it is recommended that persons contact the Office to arrange viewing of the application in advance (Phone: (01) 858 8100 or Lo-call 1890 275 175).

Submissions or observations may be made in writing to An Bord Pleanála, 64 Marlborough Street, Dublin 1, D01 V902, from Wednesday, 3rd April 2024, and must be received no later than 5:30 pm on Friday, 17th May 2024, relating to:

i. the implications of the proposed development for proper planning and sustainable development in the area concerned;

ii. the likely effects on the environment of the proposed development; and

iii. the likely significant effects of the proposed development on a European Site,

if carried out.

A person may question the validity of a decision by An Bord Pleanála by way of an application for judicial review, under Order 84 of the rules of the Superior Courts (S.I. No.15 of 1986) in accordance with Section 50 of the Planning and Development Act 2000 (as amended).

Practical information in respect of the judicial review process can be accessed on the Board's website www.pleanala.ie or on the Citizens Information's website www.citizensinformation.ie

Michael Brennan, Director of Services, Housing, Community, Recreation and Amenity

Carlow County Council, County Hall, Athy Road, Carlow, Co. Carlow, R93 E7R7
www.carlow.ie

Appendix C – Site Notice

NOTICE PURSUANT TO SECTION 177AE OF THE PLANNING AND DEVELOPMENT ACT 2000 (as amended) AND THE PLANNING AND DEVELOPMENT REGULATIONS 2001 (as amended).

APPLICATION TO AN BORD PLEANÁLA FOR APPROVAL: TULLOW TOWN PARK REGENERATION, TULLOW TOWN PARK LOCATED WEST SIDE OF THE RIVER SLANEY, TULLOWBEG (TOWNLAND), TULLOW, CO. CARLOW.

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Signed: ..... Wednesday, 3rd April 2024
Michael Brennan
Director of Services, Housing, Community, Recreation and Amenity
Carlow County Council, County Hall, Athy Road, Carlow, Co. Carlow, R93 E7R7

Appendix D – Site Specific Flood Risk Assessment (Ash Ecology)

Site Specific Flood Risk Assessment

Tullow Town Park
Tullow,
Co. Carlow

March 2024

ASH Ecology & Environmental

Aisling Walsh M.Sc MCIEEM Trading as Ash Ecology & Environmental Ltd.
Tel: 089 4991181 / Company Reg: 630819 /
Office: Monine Kilfinane, Co. Limerick
Full membership of the CIEEM

CIEEM REGISTERED PRACTICE 2023-2024

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Appendix A – AMAX Rainfall Data

1.0 Introduction

1.1 Background

This flood risk assessment was undertaken by Ash Ecology & Environmental Ltd (AEE) on behalf of Carlow County Council as part of a Part 8 planning application for redevelopment works at Town Park, Tullow Co. Carlow, shown in Figure 1.

Figure 1 Site Location.

1.2 Competency of Assessor

This report has been prepared by Aisling Walsh whose qualifications include MSc in Biodiversity and Conservation (TCD), B.Sc. (Hons) Zoology (NUIG) and B.Sc. in Applied Aquatic Science (GMIT) with relevant modules in Hydrology. Aisling is the Managing Director of Ash Ecology & Environmental Ltd and has over 17 years of experience providing environmental consultancy and environmental assessment services. She is a full member of the Chartered Institute of Ecological and Environmental Management (CIEEM). She has also provided input and reviewed Ecological and Environmental assessments for several EIS and EIAR including the hydrology and water quality assessment chapters of same. AEE is a registered practice of the CIEEM.

1.3 Site Description

The site is an existing open amenity space adjacent to a shopping centre. The eastern boundary of the site adjoins the riverbank. Figure 2 shows the aerial site view to include adjacent buildings.

Figure 2 Aerial Site view showing adjacent buildings.

1.4 Scope & Approach of Report

This study will focus on providing a risk assessment of flooding at the subject site. The scope of the study is specific to the proposed works only and the immediate surroundings.

The Planning System & Flood Risk Management – 'Guidelines for Planning Authorities' (The FRM Guidelines), recommends a 3-stage approach to assessing flood risk. This entails: *Stage 1 -Flood risk identification*, *Stage 2 -Initial flood risk assessment*, and *Stage 3 -Detailed flood assessment*. This assessment comprises Stages 1 & 2: flood risk identification and initial assessment using published modelling data.

1.5 Relevant hydrological and geological characteristics

Surface water

The relevant watercourse to the subject site is the River Slaney, see Figure 3. This major watercourse sources 26 kilometres northeast of the subject site in the townland of Imael North, near Camarahill mountain east of Baltinglass, Co. Wicklow. It flows south through Tullow, Bunclody, and Enniscorthy, where it subsequently discharges into Wexford harbour. The relevant catchment applicable to the site is 249.256km^2 with a median annual flood (Qmed) of 40.69m^3/s, see Figure 4.

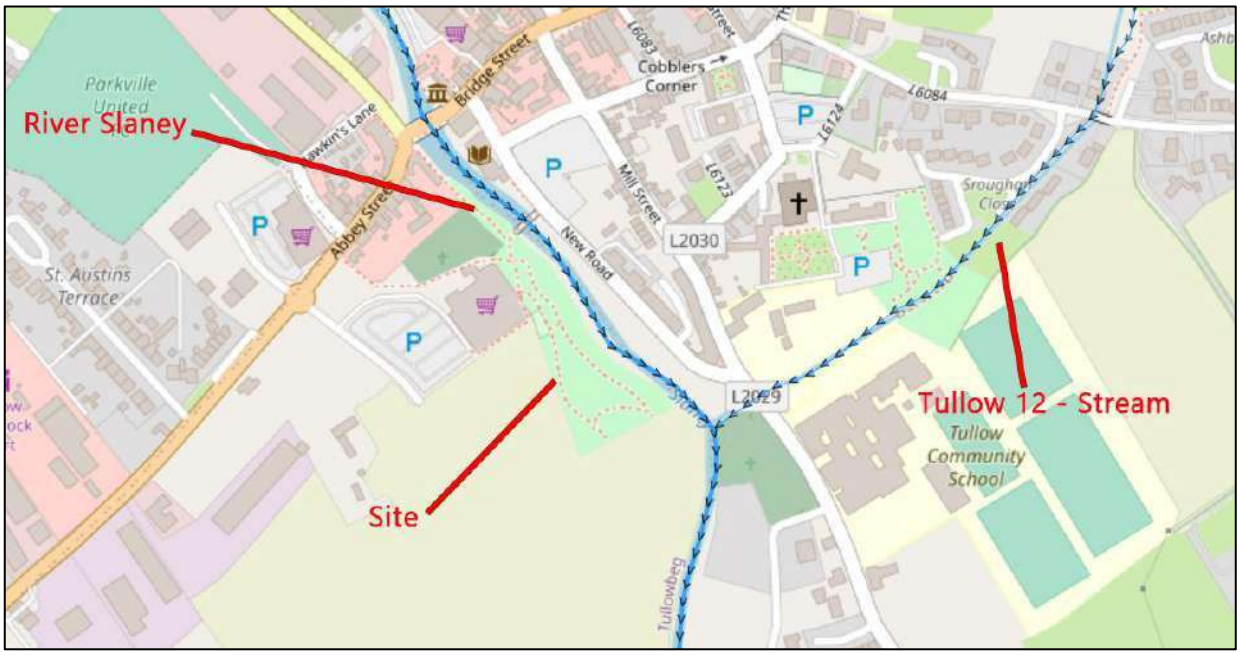


Figure 3 Surface water features

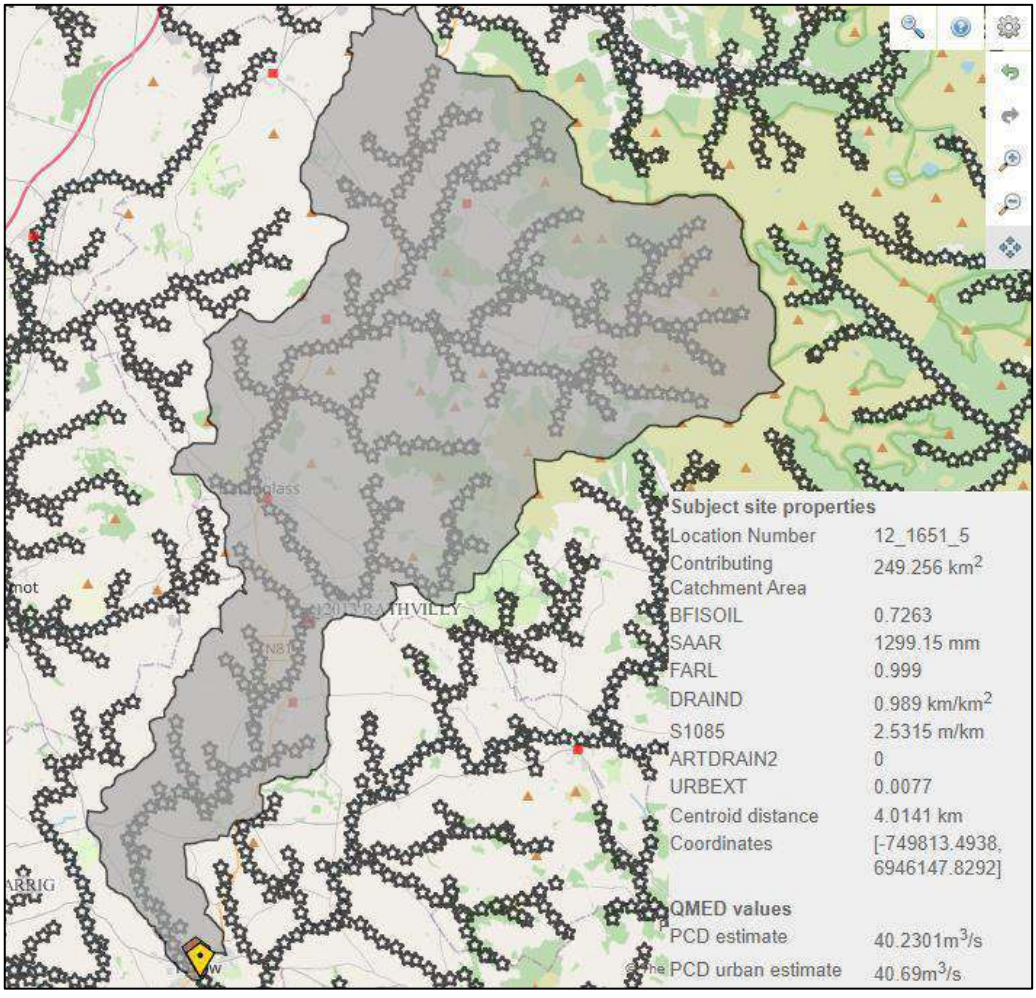


Figure 4 Catchment taken from the subject site

Groundwater

Geological survey data suggests there are no relevant groundwater features or karstic landforms within the site vicinity. The site lies on a locally important aquifer with groundwater vulnerability recorded as high, see Figure 5.

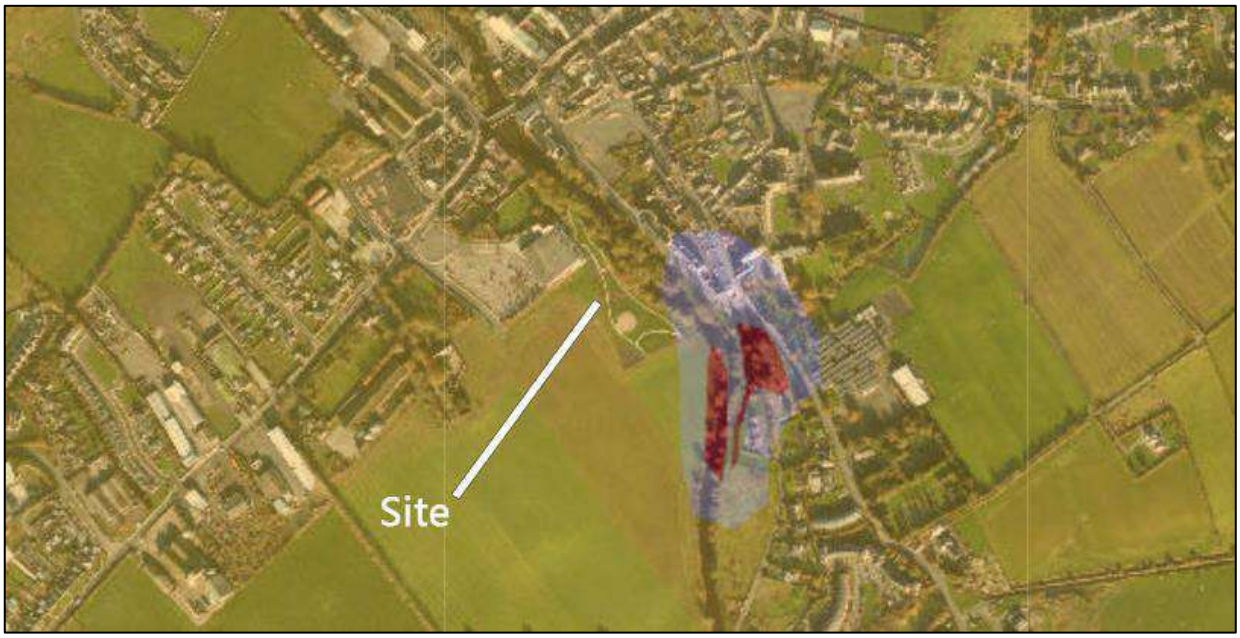


Figure 5 Groundwater vulnerability

Groundwater recharge at the site is listed as 200mm/year with a net recharge coefficient of 85%, see Figure 6.

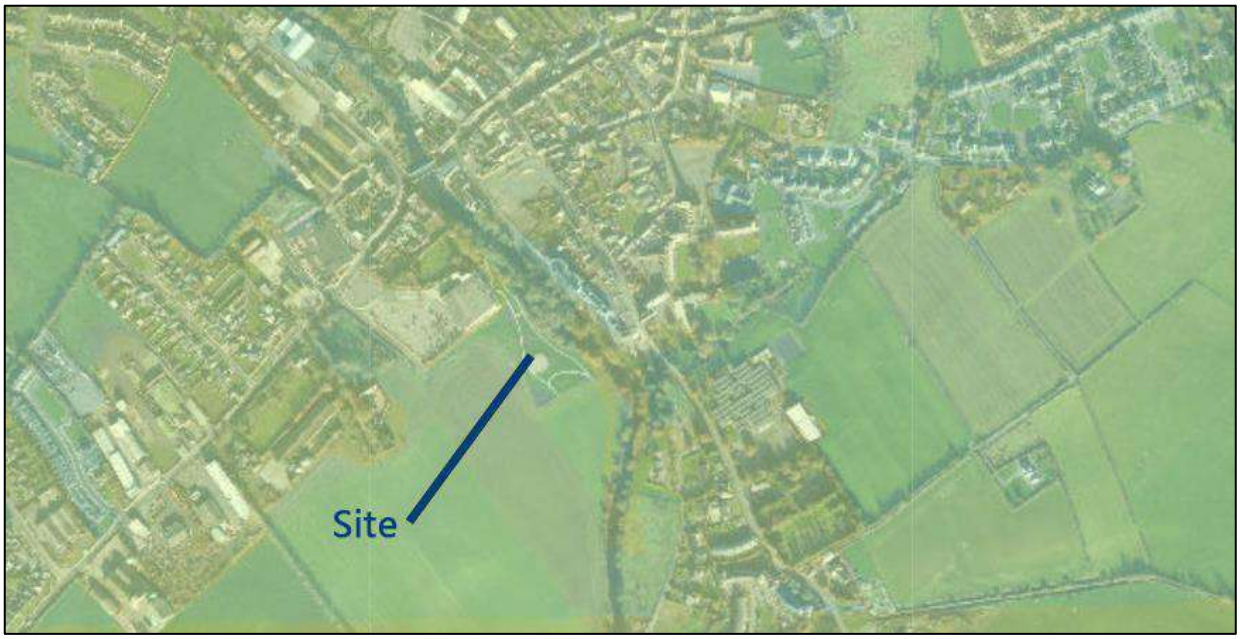


Figure 6 Groundwater recharge

Bedrock Geology

The site is underlain by Tullow Type 2 Equigranular Granite-Pale (fine to coarse-grained granite), see Figure 7.

Figure 7 Bedrock map

Soil

Soil type is given as shallow well drained mineral (Mainly basic), see Figure 8. A quaternary sediments map indicates some alluvium soils near the riverbank that does not extend across the site, see Figure 9.

Figure 8 Teagasc soil map

Figure 9 Quaternary sediments

2.0 Relevant Guidelines for Planning & Flood Risk Assessment

2.1 Core objectives of the FRM Guidelines for Planning Authorities

The FRM guidelines detail 'mechanisms for the incorporation of flood risk identification, assessment and management into the planning process'. They detail the integration of flood risk assessment into county development plans along with planned developments. Therefore, the guidelines ensure a systematic and consistent approach to FRA.

Notably, the core objectives within the FRA guidelines state:

- Avoid inappropriate development in areas at risk of flooding.
- Avoid new developments increasing flood risk elsewhere.
- Ensure effective management of residual risks for development permitted in floodplains.
- Avoid unnecessary restriction of national, regional, or local economic and social growth.
- Improve the understanding of flood risk among relevant stakeholders.
- Ensure the requirements of EU and national law in relation to the natural environment and nature conservation are complied with for flood risk management.

The key principles set out within The FRM Guidelines are to:

- Avoid the risk, where possible

- Substitute less vulnerable uses, where avoidance is not possible.
- Mitigate and manage the risk, where avoidance and substitution are not possible.

2.2 The approach to site flood risk

"The Planning System and Flood Risk Management Guidelines for Planning Authorities" (November 2009) classifies public amenity space as "*water compatible*" development (Table 3.1 of the Guidelines). Table 3.2 of the Guidelines indicates that "*water compatible*" development does not require a justification test for Zone C, see Figure 10 below. Moreover, Table 7.1 of the Carlow County Development Plan 2022-2028 confirms that a JT is not needed, whilst land use must be appropriate and should be retained.

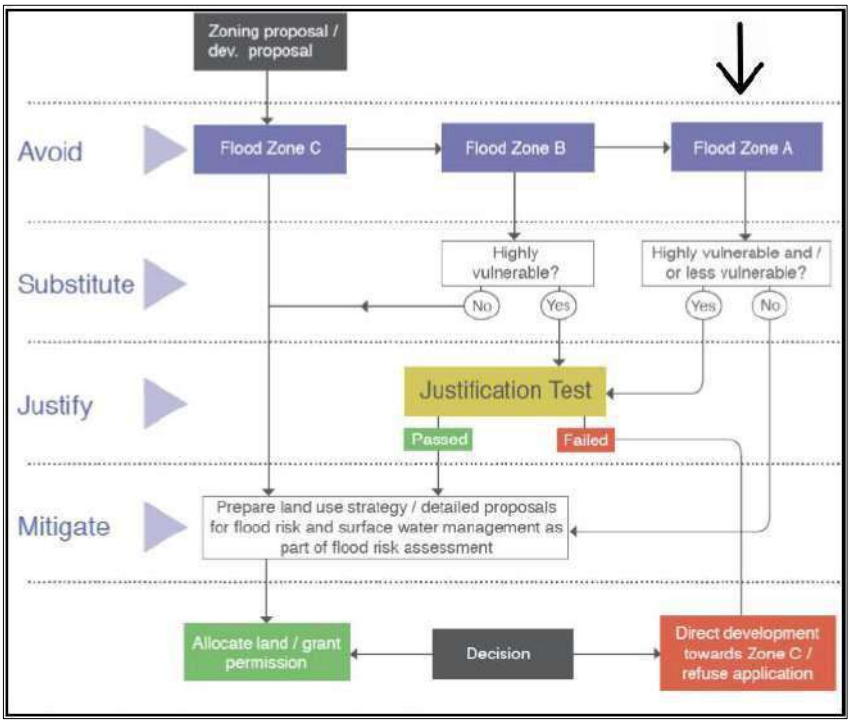


Figure 10 Approach to flood risk in the planning process

2.3 Stages of Flood Risk Assessment

The Flood Risk Management Guidelines recommend a staged approach to flood risk assessment that covers both the likelihood of flooding and the potential consequences. The stages of appraisal and assessment are:

Stage 1 Flood risk identification – to identify whether there may be any flooding or surface water management issues related to either the area of regional planning guidelines, development plans and Local area Plans or a proposed development site that may warrant further investigation at the appropriate lower-level plan or planning application levels.

Stage 2 Initial flood risk assessment – to confirm sources of flooding that may affect a plan area or proposed development site, to appraise the adequacy of existing information and to scope the extent of the risk of flooding which may involve preparing indicative flood zone maps. Where hydraulic models exist the potential impact of a development on flooding elsewhere and of the scope of possible mitigation measures can be assessed. In addition, the requirements of the detailed assessment should be scoped; and

Stage 3 Detailed flood risk assessment – to assess flood risk issues in sufficient detail and to provide a quantitative appraisal of potential flood risk to a proposed or existing development or land to be zoned, of its potential impact on flood risk elsewhere and of the effectiveness of any proposed mitigation measures.

2.4 Defining Flood Risk

Flood risk is a combination of the likelihood of a flood event occurring and the potential consequences arising from that flood event and is then normally expressed in terms of the following relationship:

Flood risk = Likelihood of flooding x Consequences of flooding.

To fully assess flood risk an understanding of where the water comes from (i.e., the source), how and where it flows (i.e., the pathways) and the people and assets affected by it (i.e., the receptors) is required. Figure 11 shows the source pathway-receptor model reproduced from the FRM guidelines.

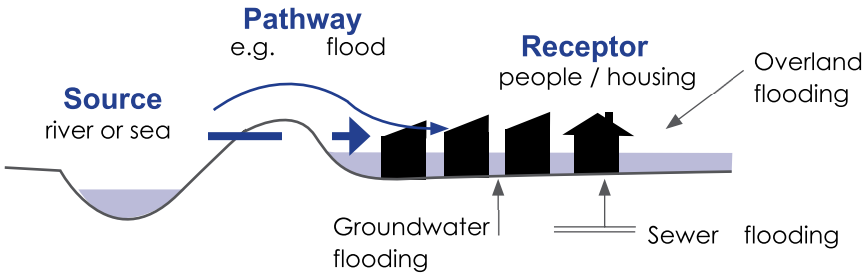


Figure 11 Source-Pathway-Receptor Model

The principal sources of flooding are rainfall or higher than normal sea levels. The principal pathways are rivers, drains, sewers, overland flow and river and coastal floodplains. The receptors can include people, their property, and the environment. All three elements as well as the vulnerability and exposure of receptors must be examined to determine the potential consequences.

2.5 Sources of Flooding

The general sources of flooding which are to be considered for the study are:

Fluvial - Rivers, Streams, Drainage ditches

Fluvial flooding occurs when rivers and streams break their banks and water flows out onto the adjacent low-lying areas (the natural floodplains). This can arise where the runoff from heavy rain exceeds the natural capacity of the river channel and can be exacerbated where a channel is blocked or constrained or, in estuarine areas, where high tide levels impede the flow of the river out into the sea. Different rivers will respond differently to rainfall events, depending on a range of factors such as the size and slope of the catchment, the permeability of the soil and underlying rock, the degree of urbanisation of the catchment and the degree to which flood waters can be stored and slowly released into lakes and along the river's floodplains. A storm of a given rainfall depth and duration may cause flooding in one river, but not in another, and some catchments may be more prone than others to prolonged rainfall or a series of rain events. River flooding can occur rapidly in short, steep rivers or after some time, and some distance from where the rain fell, in larger or more gently flowing rivers. Changes in rainfall patterns, such as might be caused by climate change, will have different impacts on flood magnitudes and frequency in different catchments.

There have been several fluvial flood events in recent years in Ireland; most notably in November 2009 and December 2015/January 2016.

Coastal - Coastal Zones (harbours, quays, coastline areas, estuaries)

Coastal flooding occurs when sea levels along the coast or in estuaries exceed neighbouring land levels, or overcome coastal defences where these exist, or when waves overtop over the coast. Wind speed and direction and low-pressure systems can force water into estuaries and harbours, cause surge effects, and create extreme wave conditions, such as those seen in the storm events in the Winter of 2013/2014.

Groundwater -Turloughs / Seasonal lakes, Springs / Karst Features, Groundwater Table

Groundwater flooding occurs when the level of water stored in the ground rises as a result of prolonged rainfall, to meet the ground surface and flows out over it, i.e., when the capacity of this underground reservoir is exceeded. Groundwater flooding tends to be very local and results from the interaction of site-specific factors such as local geology and tidal variations. While water level may rise slowly, groundwater flooding can last for extended periods of time. Hence, such flooding may often result in significant damage to property and disruption. In Ireland, groundwater flooding is most related to turloughs in the karstic limestone areas prevalent in the west of Ireland. Extensive groundwater flooding occurred around South Galway and areas of Mayo, Roscommon, and neighbouring counties in 1995, November 2009 and December 2015/January 2016 due to extended periods of heavy rain.

Pluvial - Ponding of overland flow from intense rainfall

Pluvial flooding occurs when the amount of rainfall exceeds the capacity of urban storm water drainage systems or the ground to absorb it. This excess water flows overland, ponding in natural or man-made hollows and low-lying areas or behind obstructions. This occurs as a rapid response to intense rainfall before the flood waters eventually enter a piped or natural drainage system. This type of flooding is driven by short, intense rainstorms, such as that which occurred over the Dublin area in October 2011.

Infrastructure – e.g., Stormwater Drainage

The above causes of flooding are all natural; caused by either extreme sea levels or heavy or intense rainfall. Floods can also be caused by the failure or exceedance of capacity of built or man-made infrastructure, such as bridge collapses, from blocked or under-sized drainage systems or other piped networks, or the failure or overtopping of reservoirs or other water-retaining embankments (such as raised canals).

2.6 Flood Zones

Flood zones are geographical areas within which the likelihood of flooding is in a particular range and are split into three categories in the Guidelines:

Flood Zone A- Flood Zone A is where the probability of flooding from rivers and the sea is highest (greater than 1% or 1 in 100 for river flooding or 0.5% or 1 in 200 for coastal flooding).

Flood Zone B- Flood Zone B is where the probability of flooding from rivers and the sea is moderate (between 0.1% or 1 in 1000 and 1% or 1 in 100 for river flooding and between 0.1% or 1 in 1000 and 0.5% or 1 in 200 for coastal flooding).

Flood Zone C- Flood Zone C is where the probability of flooding from rivers and the sea is low (less than 0.1% or 1 in 1000 for both river and coastal flooding. Flood Zone C covers all plan areas which are not in zones A or B.

It is important to note that when determining flood zones, the presence of flood protection structures should be ignored. This is because areas protected by flood defences still carry a residual risk from overtopping or breach of defences and the fact that there is no guarantee that the defences will be maintained in perpetuity.

2.7 FRM guidelines -Sequential Approach & Justification Test

The FRM Guidelines outline the sequential approach that is to be applied to all levels of the planning process. This approach should also be used in the design and layout of a development and the broad philosophy is shown in Figure 12 below. In general, development in areas with a high risk of flooding should be avoided as per the

sequential approach. However, this is not always possible as many town and city centres are within flood zones and are targeted for development.

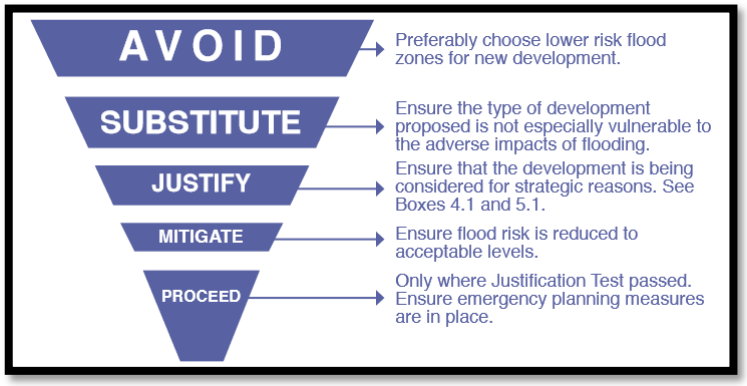


Figure 12 Sequential Approach

The Justification Test has been designed to rigorously assess the appropriateness, or otherwise, of developments that are being considered in areas of moderate or high flood risk. The test comprises the following two processes. The first is the Plan-making Justification Test and is used at the plan preparation and adoption stage where it is intended to zone or otherwise designate land which is at moderate or high risk of flooding. The second is the Development Management Justification Test and is used at the planning application stage where it is intended to develop land at moderate or high risk of flooding for uses or development vulnerable to flooding that would generally be inappropriate for that land. Developments are classified under their ascertained vulnerability, shown in Table 1.

Table 1 Classification of Development Vulnerability

Vulnerability class	Land uses and types of development which include*:
Highly vulnerable development (including essential infrastructure)	Garda, ambulance and fire stations and command centres required to be operational during flooding; Hospitals; Emergency access and egress points; Schools; Dwelling houses, student halls of residence and hostels; Residential institutions such as residential care homes, children's homes and social services homes; Caravans and mobile home parks; Dwelling houses designed, constructed or adapted for the elderly or, other people with impaired mobility; and Essential infrastructure, such as primary transport and utilities distribution, including electricity generating power stations and sub-stations, water and sewage treatment, and potential significant sources of pollution (SEVESO sites, IPPC sites, etc.) in the event of flooding.
Less vulnerable development	Buildings used for: retail, leisure, warehousing, commercial, industrial and non-residential institutions; Land and buildings used for holiday or short-let caravans and camping, subject to specific warning and evacuation plans; Land and buildings used for agriculture and forestry; Waste treatment (except landfill and hazardous waste); Mineral working and processing; and Local transport infrastructure.
Water-compatible development	Flood control infrastructure; Docks, marinas and wharves; Navigation facilities; Ship building, repairing and dismantling, dockside fish processing and refrigeration and compatible activities requiring a waterside location; Water-based recreation and tourism (excluding sleeping accommodation); Lifeguard and coastguard stations; Amenity open space, outdoor sports and recreation and essential facilities such as changing rooms; and Essential ancillary sleeping or residential accommodation for staff required by uses in this category (subject to a specific warning and evacuation plan).
*Uses not listed here should be considered on their own merits	

Table 2 below shows the Matrix of Vulnerability versus Flood Zone to illustrate appropriate development and that required to meet the justification test.

Table 2 Matrix of Vulnerability versus Flood Zone

Land Uses	Flood Zone A	Flood Zone B	Flood Zone C
HVD – Highly Vulnerable Development	Inappropriate (if proposed then Justification Test & detailed FRA required)	Inappropriate (if proposed then Justification Test & detailed FRA required)	Appropriate (screen for flood risk)
LVD – Less Vulnerable Development	Inappropriate (if proposed then Justification Test & detailed FRA required)	Inappropriate due to climate change (if proposed then Justification Test & detailed FRA required)	Appropriate (screen for flood risk)
WCD – Water-Compatible Development	Appropriate (detailed FRA may be required)	Appropriate (detailed FRA may be required)	Appropriate (screen for flood risk)

2.8 Key outputs required for Site-Specific Flood Risk Assessment

A site-specific flood risk assessment should generally include:

- Plans showing the site and development proposal and its relationship with watercourses and structures which may influence local hydraulics.
- Surveys of site levels and cross-sections relating relevant development levels to sources of flooding and likely flood water levels.
- Potential sources of flooding, Flood alleviation measures, potential impact of flooding on the site; reduce risk (layout and form), surface water management proposals, mitigation, residual risk, and management of risk

2.9 Vulnerability of proposed development

This development is classified as water compatible development within an area of flood risk; therefore, the justification test does not apply. This report will focus on identifying the flood risk at the site, confirmation of the level of flood risk using existing modelled data, and appraisal of the impact of the development on water displacement, loss of flood storage, and surrounding developments.

3.0 Flood Risk Identification – STAGE 1

The Stage 1 flood risk assessment involves appraisal of existing literature to determine risk of flooding from all sources which may require further stage 2 investigation.

3.1 Supporting Literature & Data

Several sources were consulted in identify potential flood risks both on the site and surrounding areas. Table 3 below gives an overview and appraisal of the information sources utilised.

Table 3 Overview of consulted information

	Source	Area of Coverage	Quality of information	Utility for study	Identified Risk	Risk to site Y/N
Primary Sources (including modelled data)	OPW PFRA	Regional	High	N/A	No	No
	OPW CFRAM	Regional	High	High	Yes	Yes
	NIFM	Regional	Moderate	Moderate	No	No
	CDP 2022-2028 SFRA	Local	High	High	No	No
	LAP 2017-2023	Local	High	High	Yes	Yes
Secondary Sources	OPW Historic Records	National	Variable	Moderate	Yes	Yes
	SAR maps	Regional	Moderate	Moderate	Yes	No
	Historic OSI Maps	National	Moderate	Low	No	No
	EPA data	National	Moderate	Moderate	No	No
	SAR maps	National	Moderate	Moderate	No	No
	Topographic Survey	Local	High	High	Yes	Yes
	Drainage Records	Regional	Moderate	Moderate	No	No
	Geological Maps	National	Moderate	Low	No	No
	Planning records	Local	High	High	No	No
	Soil Maps	National	Moderate	Moderate	No	No

3.2 Existing Identification of Flood Risk

3.2.1 OPW PFRA

The OPW Preliminary Flood Risk Assessment (PFRA) flood maps were produced across the whole of Ireland and indicate areas that may be prone to flooding. It is important to note at this stage of the FRA that they should not be used as the sole basis for preparing flood zone maps. They are appropriate for a Stage 1 Flood Risk Identification to identify areas where further assessment would be required if development is being considered within or adjacent to the flood extents shown. The objective of the PFRA maps were to identify areas where the risks associated with flooding might be significant

(referred to as Areas for Further Assessment or 'AFAs'). The PFRA map for the site location suggests exceedance events in the river will inundate the site, see Figure 13.

Figure 13 PFRA flood map layer

3.2.2 CFRAM

The OPW CFRAM studies were undertaken to provide more detailed assessment of the AFAs. These studies give a more accurate assessment of the extent and degree of flood risk, and, where the risk is significant, to develop where possible measures to manage and reduce the risk. The CFRAM OPW Flood Risk Assessment Maps are considered as the overarching reference for flood risk planning in Ireland. The site location lies within the Tullow AFA under the South-West CFRAM study. CFRAM flood maps place the site within an area of flood risk for both current and mid-range future scenarios, see Figures 14 and 15.

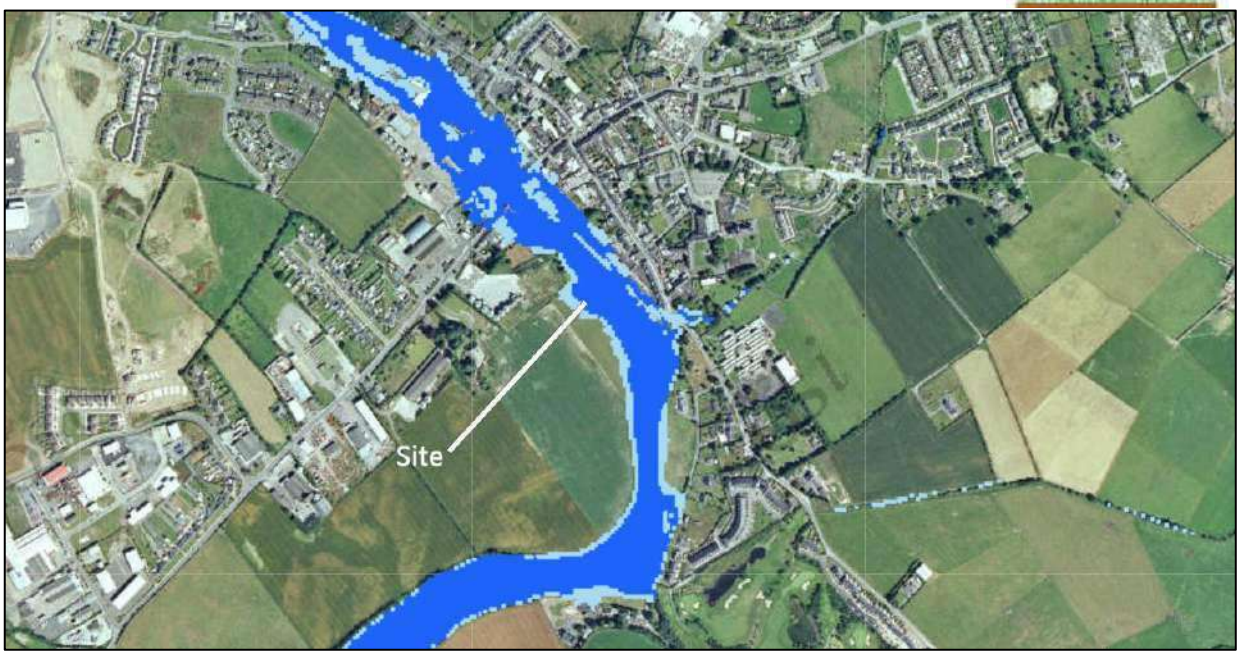


Figure 14 CFRAM flood extent (current)

Figure 15 CFRAM flood extent (mid-range future)

3.2.3 National indicative fluvial flood maps (NIFM)

Data for catchments larger than 5km^2 have been produced in areas where flood maps were not produced under the National CFRAM Programme. The NIFM Modelled River Centrelines dataset identifies river reaches that have been modelled. Flooding from other reaches of the river is possible but has not been mapped, so areas that are not shown as being within a flood extent may be at risk of flooding from unmodeled rivers (as well as from other sources). Instead of information for actual floods that have

occurred, this data shows the modelled extent of land that could be flooded by rivers (fluvial flooding) during a theoretical or 'design' flood event with an estimated probability of occurrence. The purpose of the Flood Maps is not to designate individual properties or point locations at risk of flooding, or to replace a detailed site-specific flood risk assessment. There are no relevant watercourses modelled within NIFM dataset for this area.

3.2.4 Tullow Local Area Plan 2017-2023 data

The flood map included in the Tullow Local Area Plan 2017-2023 SFRA is analogous to CFRAM data and places the subject site within flood zone A/B, see Figure 16.

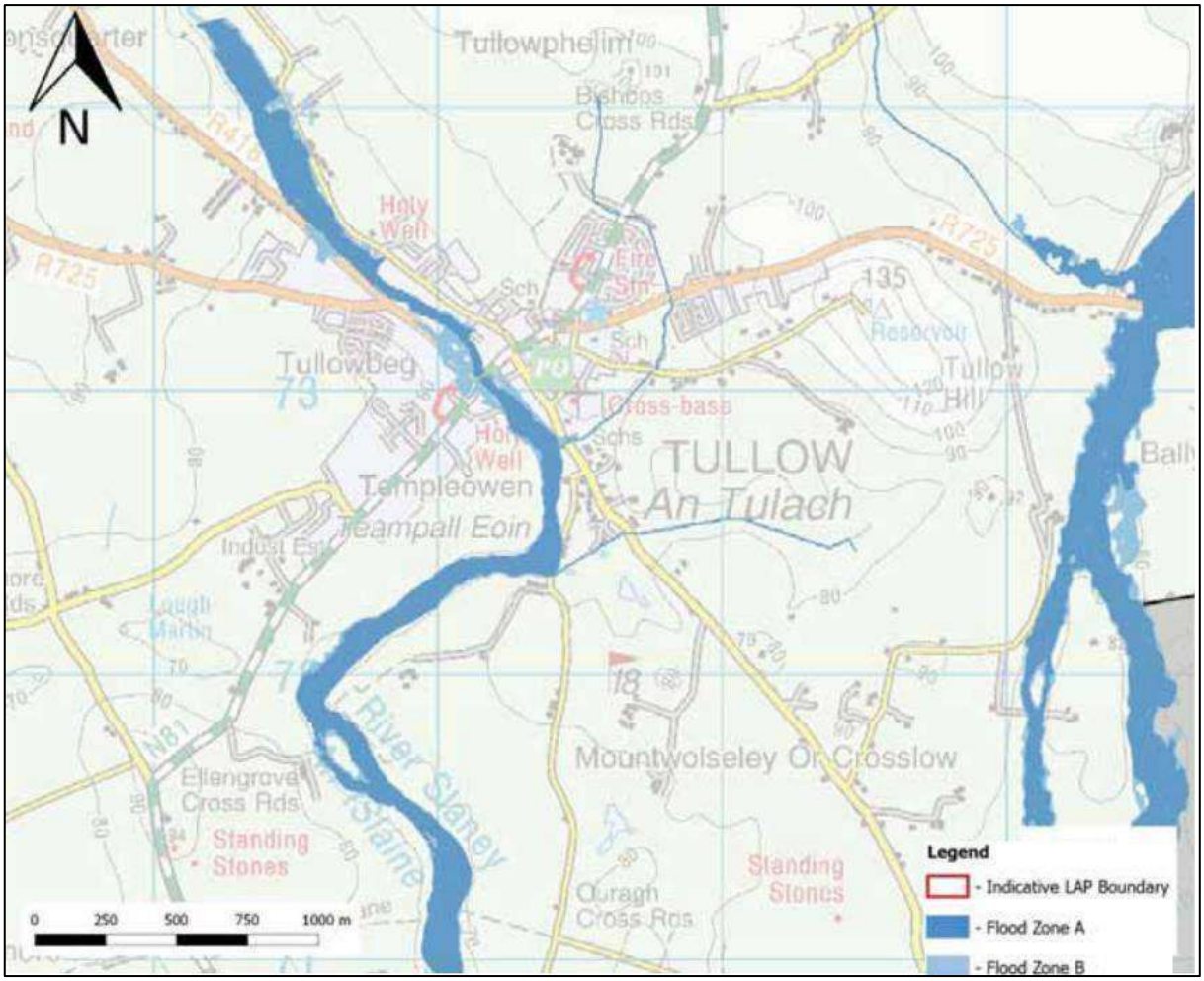


Figure 16 Tullow LAP-SFRA flood map

3.2.5 Arterial drainage data

The site lies outside the influence of an arterial drainage scheme (ADS) channel.

3.2.6 Topographical Assessment

The site lies on relatively flat terrain and is not significantly elevated from the river, see Figure 17 showing a hillshade map using 1-metre resolution contours.

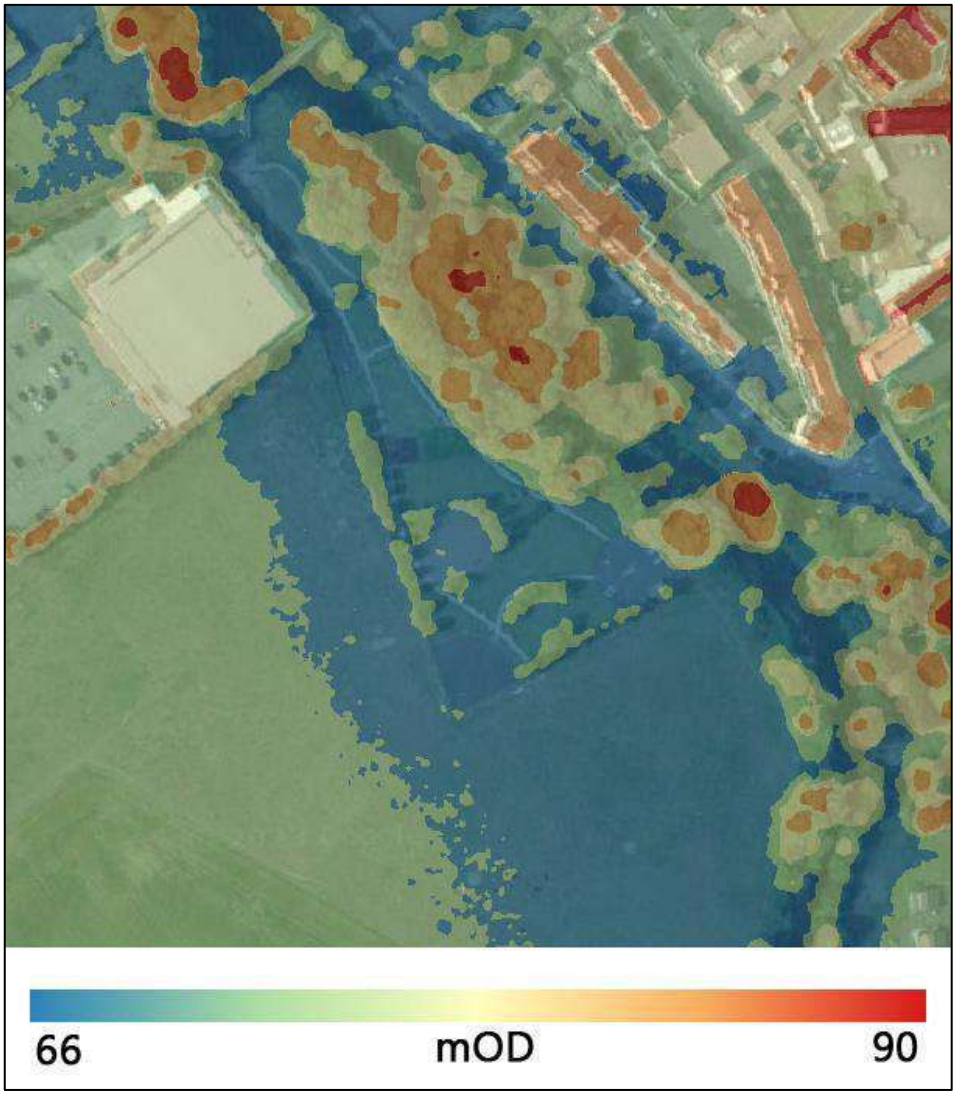


Figure 17 Hillshade map

3.2.7 Planning Records

A search on planning records was undertaken to retrieve relevant information for neighbouring developments. According to one record, planning permission for sewerage and water scheme works on adjacent lands was recently granted under planning number 22235.

3.2.8 Site visit

A site visit was conducted on 1st Feb 2023. There was a visible gradient on the site away from the river, although there were some pockets of lower ground which were not

elevated from the riverbank. The ground was firm underfoot and no traces of surface flows or ponding was observed. Plate 1 shows the River Slaney looking towards the site on the right hand side.

Plate 1 River Slaney at the site boundary

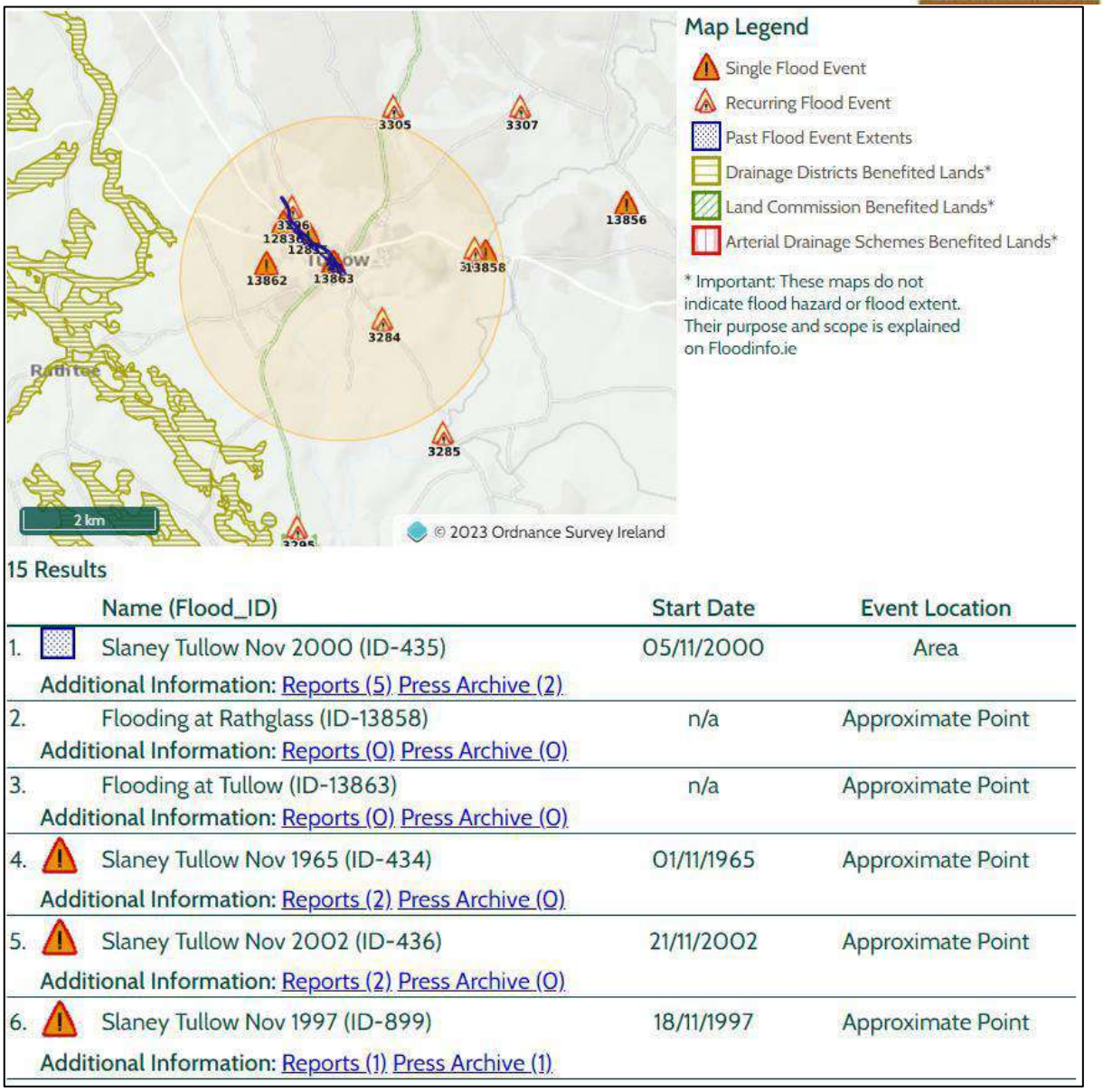
3.2.9 Flood relief measures

The Tullow Flood Relief Scheme was initiated in 2003 (pre-feasibility study) and was constructed from 2011 to 2012. The Scheme, comprising of flood defence walls and embankments along the Slaney River and an upgrade of the drainage along Thomas Traynor Road with pumps and sumps, provides protection to the 100-Year Standard of Protection for 42 properties against flooding from the River Slaney.

3.2.10 Flood History at Tullow

OPW

Historical flood data from the OPW shows a series of flood events at Tullow. These include 18th November1965 which was the worst in living memory, followed by a further large flood event in November 2000. Several other events have been recorded during 1997 and 2002, see OPW flood summary for a 2.5km radius of the site in Figure 18. Plate 2 shows a record of the 1965 event, whilst Plate depicts surcharged flows in the Slaney during October 2004.



15 Results

	Name (Flood_ID)	Start Date	Event Location
1.	Slaney Tullow Nov 2000 (ID-435)	05/11/2000	Area
	Additional Information: Reports (5) Press Archive (2)		
2.	Flooding at Rathglass (ID-13858)	n/a	Approximate Point
	Additional Information: Reports (0) Press Archive (0)		
3.	Flooding at Tullow (ID-13863)	n/a	Approximate Point
	Additional Information: Reports (0) Press Archive (0)		
4.	Slaney Tullow Nov 1965 (ID-434)	01/11/1965	Approximate Point
	Additional Information: Reports (2) Press Archive (0)		
5.	Slaney Tullow Nov 2002 (ID-436)	21/11/2002	Approximate Point
	Additional Information: Reports (2) Press Archive (0)		
6.	Slaney Tullow Nov 1997 (ID-899)	18/11/1997	Approximate Point
	Additional Information: Reports (1) Press Archive (1)		

Figure 18 OPW historical flooding map (2.5km radius)

Plate 2 Flood event at Tullow on 18th November1965

Plate 3 River Slaney near the site in October 2004

Historical Newspaper reports

Newspaper reports of a flash flood event in the town centre during August 2022 were retrieved. After weeks of severe dry conditions, sudden downpours of rain caused localised flooding as gullies and drains became clogged with debris. The engineers report noted flash flooding on the Thomas Traynor Road, Tullow, caused by blocked gullies. There was no indication that the subject site was affected, see Plate 4 below.

Plate 4 Flash flooding in Tullow on 15th August 2022

Update: Flood event on 24th October 2023

A major flood event occurred on 24th October 2023, following a day of heavy rainfall. The River Slaney flooded with substantial inundation at the subject site, see Plate 5.

Plate 5 Subject site during October 2023 flood event

Synthetic Aperture Radar (SAR) data

The Seasonal Flood Maps from Synthetic Aperture Radar (SAR) show observed peak flood extents from Autumn 2015 to Summer 2021. The maps were created using images from the Copernicus Programme Sentinel-1 satellites' Synthetic Aperture Radar (SAR). SAR systems transmit radar pulses to satellites, which record the return signal. Water and other flat surfaces produce a low signal. SAR imagery can be classified into non-flooded and flooded pixels based on this low signal. They are based solely on remote sensing information and does not distinguish between groundwater and surface water floods. Figure 19 shows the collated maps from 2015 to 2021, with some surface water to the south of the site, but this remains far outside the site boundary.

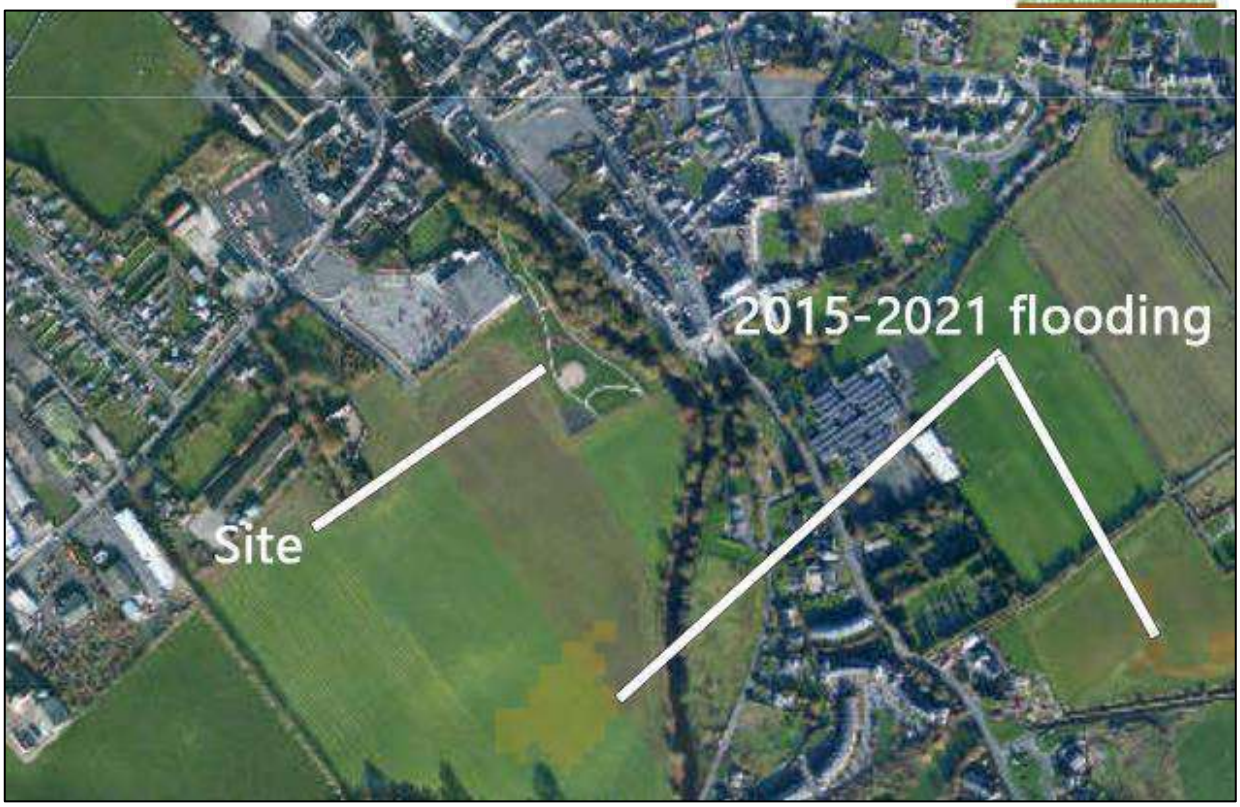


Figure 19 SAR flood map

3.3 Source Pathway-Receptor Model

In accordance with the FRM guidelines, the sources of flooding for the site and its surroundings have been identified and tabulated into a Source-Receptor-Pathway analysis table, show below in Table 4.

Table 4 Source-Receptor-Pathway Analysis Table

Source	Pathway	Receptor	Likelihood	Consequence	Risk
Tidal	-	-	-	-	-
Fluvial	Surcharged River Slaney	Subject Site	Possible	Infrastructural damage, risk to occupants	Moderate to High
Pluvial	Overland flows, ponding at localised depressions	Subject Site	Remote	-	Remote
Groundwater	Rising Groundwater levels	Subject Site	Remote	-	Remote
Infrastructure	Drain blockage	Subject Site	Remote	-	Remote

3.4 Conclusion

This review of flood risk data has identified a fluvial flood risk to the site from the River Slaney. CFRAM maps suggest that much of the site lies within flood zone A and B. A Stage 2 assessment will confirm flood levels at the site and appraise the impact of the development on neighbouring developments.

4.0 Initial Flood Risk Assessment – STAGE 2

The STAGE 1 Flood Risk Assessment concluded that there is a possible risk to the site from fluvial flooding, therefore a Stage 2 Assessment was deemed necessary.

This Stage 2 (initial flood risk assessment) aims to:

- Confirm the food levels and extent at the site
- Appraise the impact of the proposed works on surface water displacement and neighbouring developments.

4.1 Initial assessment

4.1.1 CFRAM modelling

Hydraulic modelling was completed for the river reach adjacent to the subject site under the Southeast CFRAM Study Model HA-12 Model 2 (Tullow/Tullowphelim). Estimated flows using the FSU methodology were adjusted to observed data at the Rathvilly gauging station (12013). The model Hydraulic Estimation Points (HEPs) and model extent are shown in Figure 20.

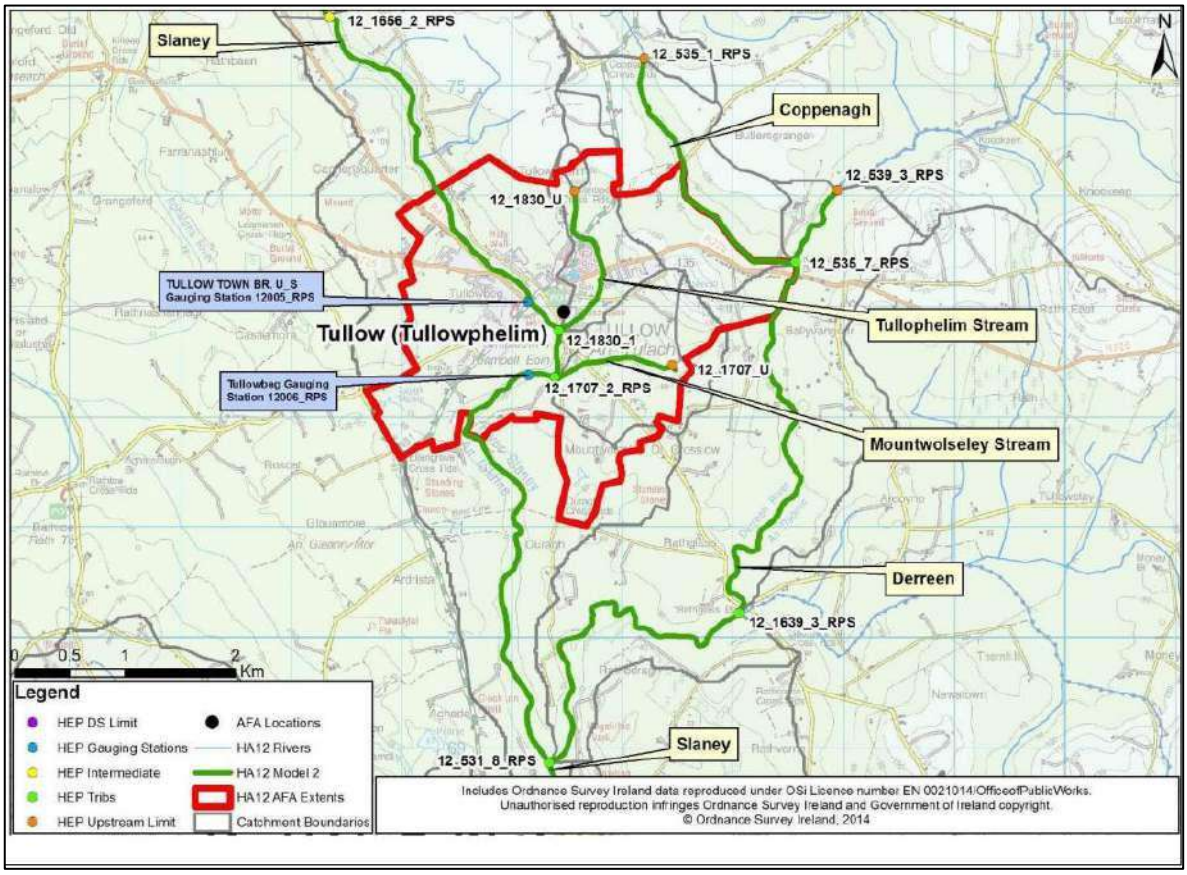


Figure 20 Model extent for Tullow

4.1.2 Model certainty and influence of climate change

The HA-12 Model 2 was appraised for its sensitivity for current and future scenarios across several factors including simulated and observed flows, urbanisation, and sediment. Overall, the model is graded as medium to low uncertainty, see Table 5. Specifically for climate change, it is graded as medium, whilst acknowledging that there remains a high risk of uncertainty for lower AEP events. Therefore, the current 0.1%AEP scenario may be taken as the mid-range future 1%AEP scenario to account for a 20% increase in flows due to climate change.

Table 5 Sensitivity analysis for HA12-2 from CFRAM study

Model No.	Model Name	Uncertainty / Sensitivity – Present Day Scenario				Uncertainty / Sensitivity – Future Scenarios				Notes
		Observed Flow Data[1]	Simulated Flow Data[2]	Catchment Data[3]	Ungauged Flow Estimates[4]	Forestation[5]	Urbanisation[6]	Climate Change[7]	Sediment[8]	
HA12 2	Tullow	Medium / Low	Medium/Low	Low	Medium/Low	Low	Low	Medium	Medium	NAM output for Stn 12013 in keeping with gauged data. The Station is B rated so confidence in flow values is only up to Qmed. NAM increases statistical certainty due to augmented AMAX series – this station is used as a pivotal site for ungauged estimates. Ungauged Qmed estimates decrease moving downstream on Slaney, a function of PCD SAAR decreasing in a southerly direction. This was manually rectified. Medium/Low sensitivity to sediment - Downstream of relatively steep high energy watercourse network which can act as a pathway. Arable land upstream of AFA.

1 Observed flow data marked n.a. where there is no gauged data within the modelled catchment to inform the flood flow estimation for the model. Low to high reflects uncertainty in the gauged data at Qmed if available.

2 Simulated data refers to data output from rainfall runoff models. This has not been possible on totally ungauged catchments.

3 Catchment data refers to delineated catchment extents or catchment descriptors. Low to high reflects uncertainty in physical catchment descriptors or catchment delineation. May have been subject to change since FSU due to urbanisation, afforestation, arterial drainage scheme

4 Ungauged flow estimates based on FSU WP 2.3 methodology. Dependent on 1.2 & 3 above. Where high quality gauge data is available along modelled reach upon which adjustment can be performed then uncertainty is considered low. Where no gauge data is available within catchment then certainty is considered medium to high. Uncertainty greater in smaller, urbanised catchments where ungauged estimation methodologies are considered to be more sensitive.

5 See Section 7.2 Considered to be low risk of uncertainty to hydrological analysis in HA11, 12 and 13 with the exception of Baltinglass and Bunclody

6 See Section 7.3 Considered generally to be a medium to high risk of uncertainty to hydrological analysis in urban areas where potential significant, dense urbanisation is possible which would make up a significant proportion of the catchment. High risk where small catchments largely contained within the AFA extents and potentialy subject to high risk of urbanisation.

7 See Section 7.1 Considered a high risk of uncertainty to hydrological analysis in all cases due to the large range of projections and higher inherent uncertainty associated with the +20% MRFS for lower AEP events (Murphy et al., 2011)

8 Sedimentation of channels causing capacity issues or localised impacts on channel structures are to be considered in options development phase of CFRAM Study where relevant. Degree of uncertainty indicated here is based on qualitative assessment of accelerated soil erosion risk due to land use pressures and pathways to watercourses. Considered under future scenarios only as present day sediment conditions are reflected by recently captured channel survey data.

4.1.2 Relevant CFRAM nodes

Figure 21 shows the nearest node to the site is 01TULL00300. This gives a flood level of 68.56mOD for the 1%AEP return and 68.94mOD for the 0.1%AEP return.

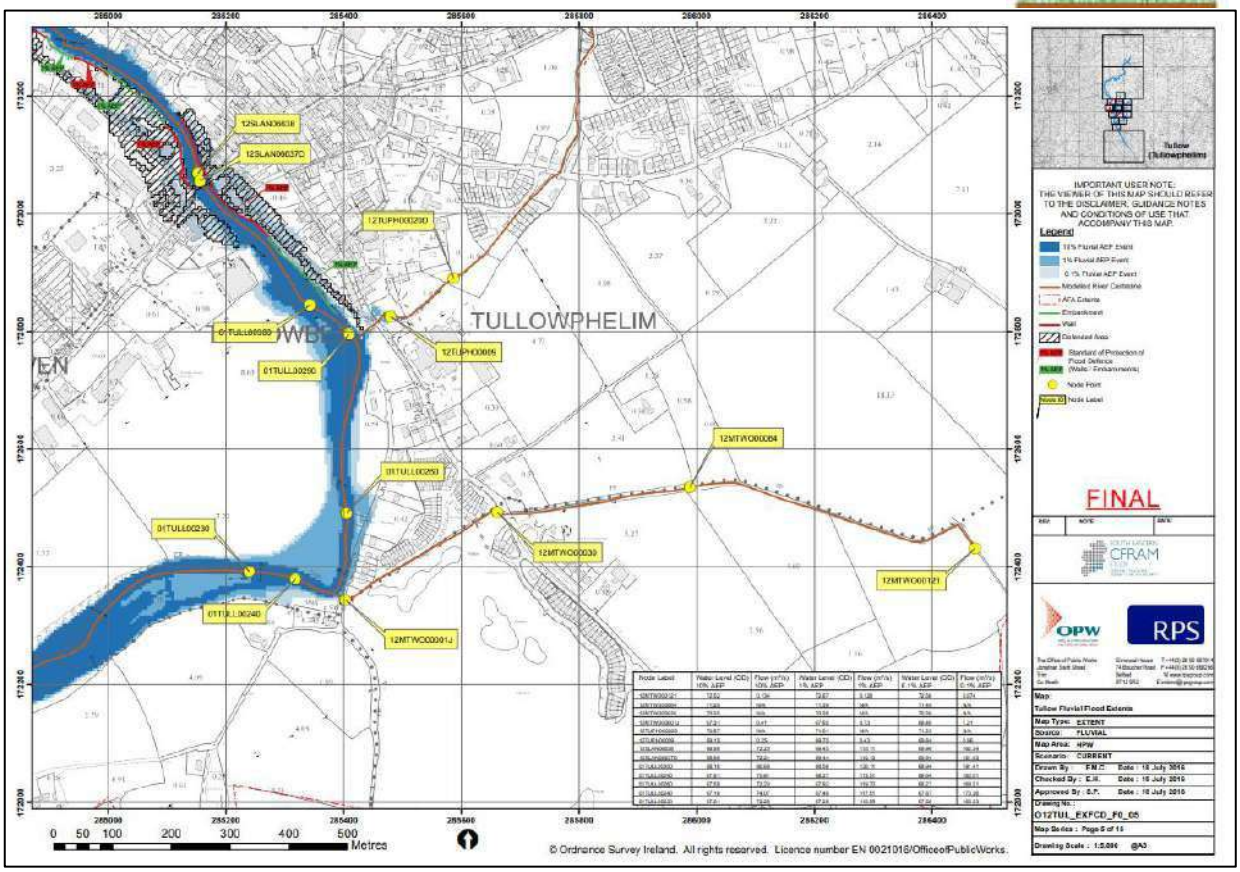


Figure 21 CFRAM node levels

4.1.3 Mapping to the October 2023 flood event.

Rainfall preceding the flood event

The Extreme Value Type I (EV1) distribution was used to analyse the annual maximum daily rainfall data for a 35-year period. First, the data was ranked in descending order, and the plotting position (P) for each data point was calculated using the Weibull formula: $P = m / (n + 1)$, where m is the rank and n is the number of years in the dataset.

Next, the reduced variate (y) for each plotting position was calculated using the Gumbel reduced variate equation: $y = -ln(-ln(1 - P))$. A linear regression analysis was then performed between the annual maximum rainfall values (dependent variable) and the reduced variates (independent variable) to estimate the parameters of the Gumbel distribution, namely the location parameter (μ) and the scale parameter (σ). The linear regression yielded the following results:

Location parameter (μ): 29.8 mm
Scale parameter (σ): 14.8 mm

Using these parameters, the rainfall amounts for the 1/100, 1/200, and 1/1000 year events were calculated using the Gumbel distribution formula: $x = \mu - \sigma \times \ln(-\ln(1 - 1/T))$, where T is the return period. The results are as follows:

1/100-year event: 83.4 mm
1/200-year event: 92.5 mm
1/1000-year event: 111.0 mm

Finally, the return period for the event of interest (*18.1 mm on 23/10/2023*) was calculated using the Gumbel distribution formula: $T = 1 / (1 - \exp(-\exp(-(x - \mu) / \sigma)))$. For the given rainfall amount of 18.1 mm on Oct 23rd/2023, the return period was found to be approximately 1.9 years.

Flood levels

The water level at station 12005 on 24th October 2023 is shown as reaching 69.083mOD, see Figure 22. The equivalent node at the bridge is 12SLAN06638 upstream of the subject site. The 10% return for this location is 68.98mOD which correlates to the recorded levels on 24th October 2023.

Figure 22 Flood level data for station 12005 on 24th October 2024

The observed flood level of 69.083mOD is notably higher than the predicted 10% Annual Exceedance Probability (AEP) flood level of 68.98 metres. This discrepancy highlights the importance of considering the inherent uncertainties in flood modelling and the potential for actual flood events to exceed the predicted levels.

In this case, the observed flood level being approximately 0.103 metres higher than the predicted 10% AEP flood level suggests that the flood event was more severe than anticipated based on the modelling results. This underscores the need for a cautious approach when interpreting and applying flood model outputs from the CFRAM study.

4.2 Flood risk to the subject site

4.2.1 Flood levels and inundation mapping

Inundation maps were prepared using high resolution (25cm) Lidar data and levels for the nearest CFRAM node 01TULL00300, cross referenced to the site topographical survey. Figure 23 (a) shows the extent for the 1%AEP return and (b) shows the 0.1%AEP return. Flooding appears concentrated to an area outside of the site to the south, with pockets of inundation within the site boundary. This is in congruence with the site visit, where these areas of lower ground were identified that were not elevated from the riverbank.

In terms of flood depths, the areas highlighted within the site below would experience low flood depths (~10-15cm) for the 1%AEP return and average depths of up to 44cm for the 0.1%AEP return. The highest flood depths would be near the riverbank footpath, where the 0.1%AEP event could reach 89cm at the northern portion of the flood envelope.

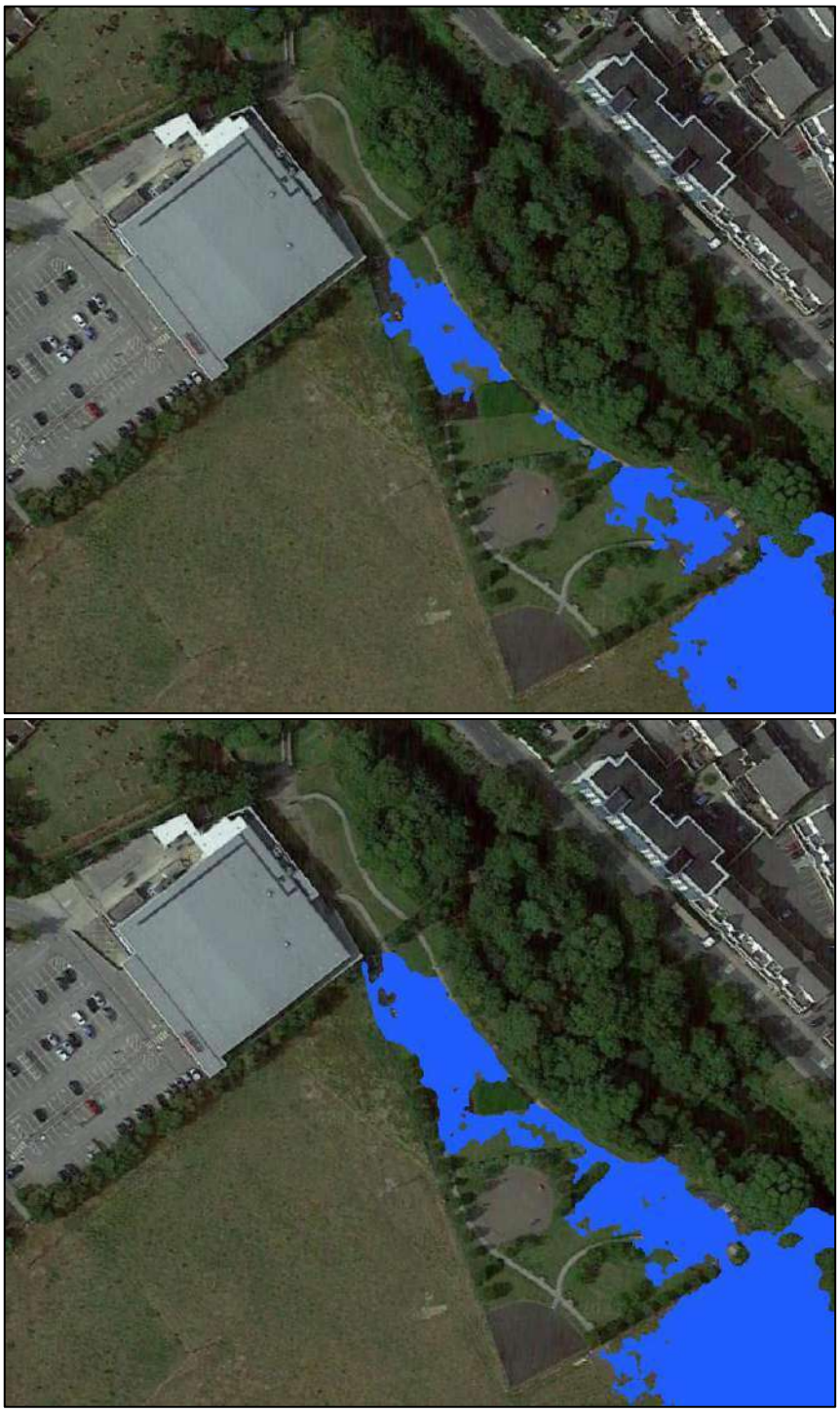


Figure 23 (a) Flood extent 1%AEP; **(b)** Flood extent 0.1%AEP

4.2.2 Flood risk to the development

The site topography is relatively flat with a slight gradient to the east. Ground levels range from approx. 68.5 to 70.25mOD. This places much of the site above the 0.1%AEP flood extent. The site layout is shown in Figure 24.

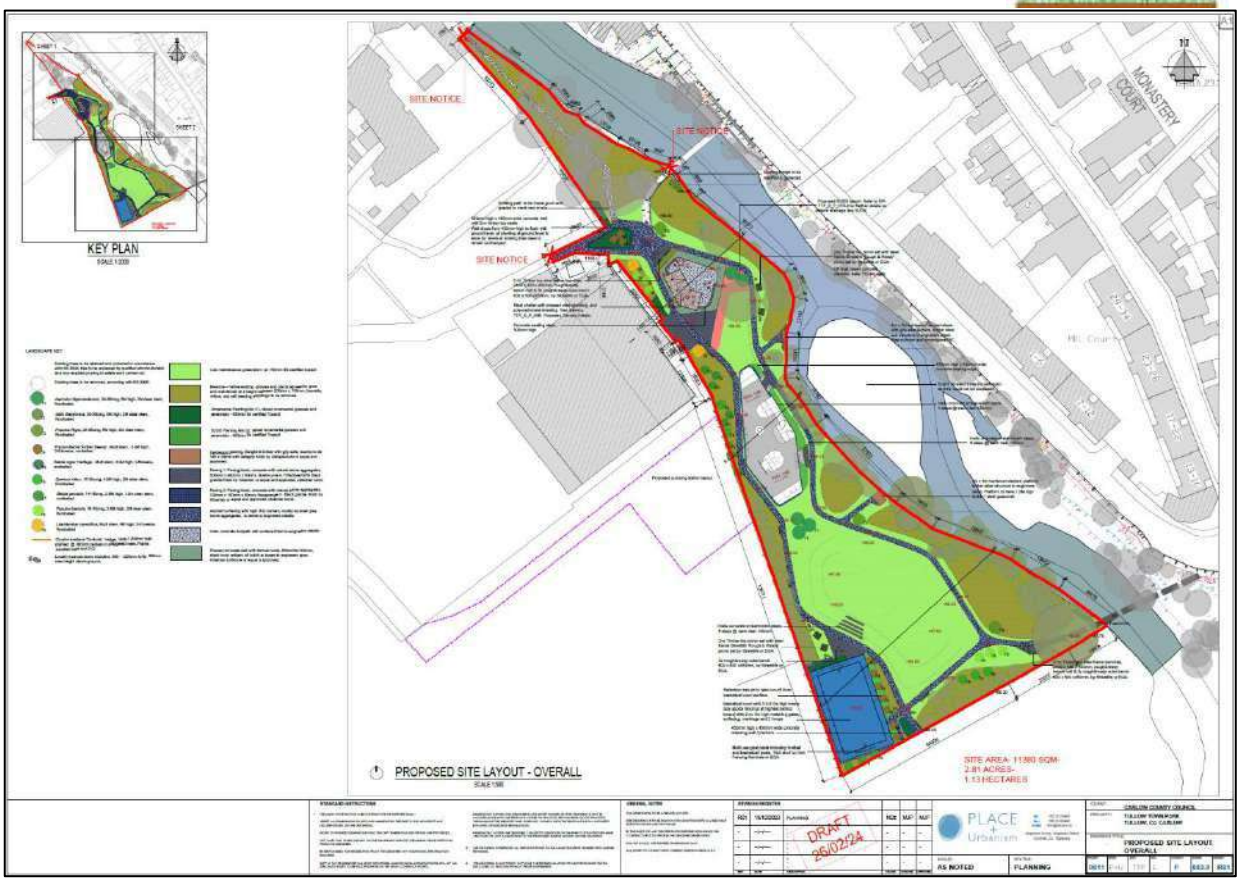


Figure 24 Site layout

The site section shows the integration of sacrificial/flood plain lands and elevated landscaping above the 1/1000-year flood event, see Figure 25. Notably, all playing areas with occupancy (court, skate park) remain above the 1/1000 year predicted flood level.

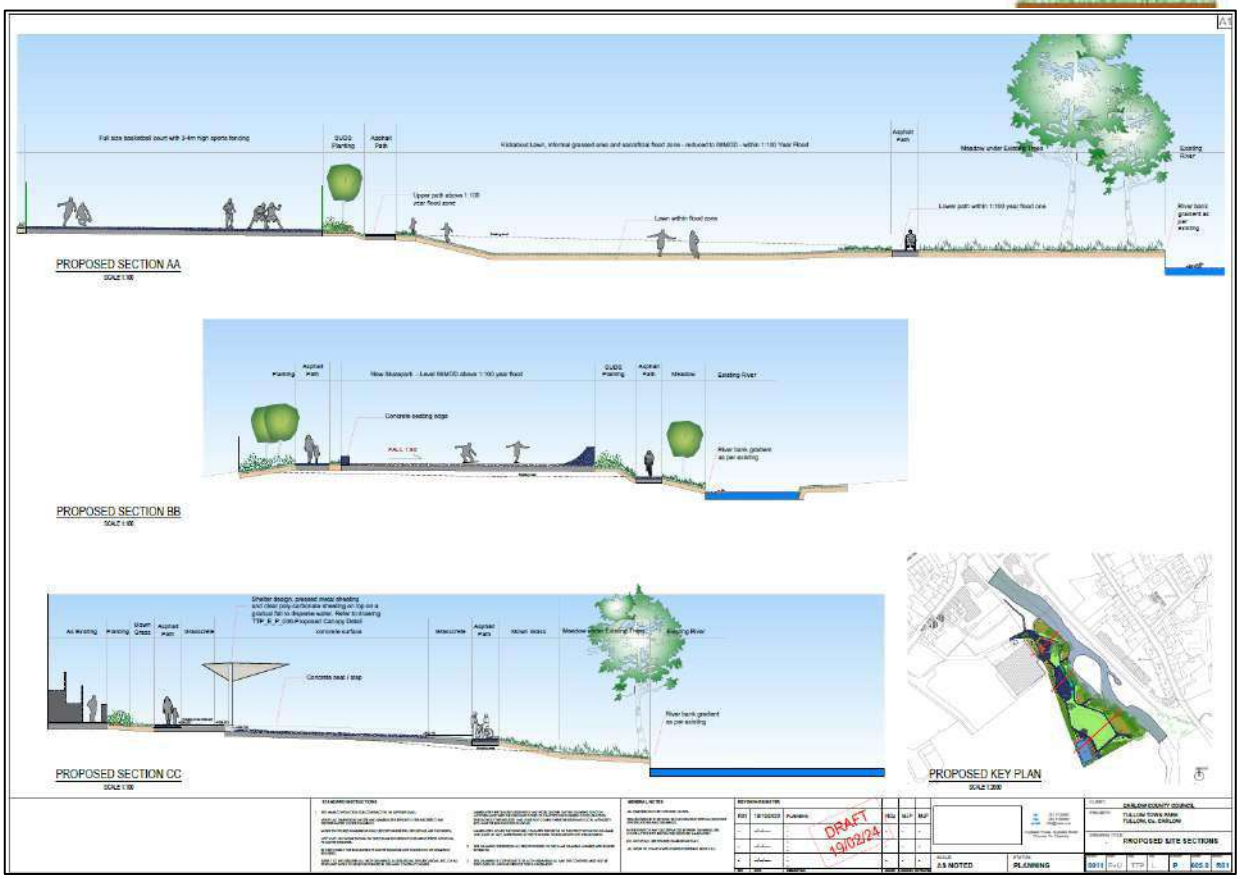


Figure 25 Site sections

4.2.3 Occupancy of the site

The development as proposed does not bring a significant number of people into a flood zone. Playing areas are elevated above the 1/1000 predicted flood. Given the open ground amenity space and ample number of access/egress routes, the predicted flood levels at the site do not pose a threat to the safety of occupants.

4.2.4 Flood plain & flood protection management facility access

The development as proposed does not restrict access to a watercourse or impede a floodplain or flood management facility.

4.2.5 Exacerbation of flood risk elsewhere

The development lies within an existing area zoned for amenity space with large areas of free-draining ground. The scale of this development is unlikely to have any impact on the predicted fluvial flood levels or extent. Flowpaths generated by GIS software show minor surface flows and do not suggest that the proposed works would displace flood waters or restrict water flows across the site, see Figure 26. Compensatory flood storage is not deemed necessary.

Figure 26 Flowpaths showing minor surface flows towards the river

4.2.6 Access & Egress

Access and egress to the site are unlikely to be impeded for the predicted flood levels (1% and 0.1%AEP) with site levels suggesting maximum flood depths of 89cm at the site (confined to the riverbank footpath area); with average depths of 44cm. If the site is inundated by surcharged river flows, the primary escape route is towards the main entrance, which rises to higher ground and is outside the fluvial flood envelope, see Plate 6. The highest occupancy areas remain outside the 1/1000 year predicted flood.

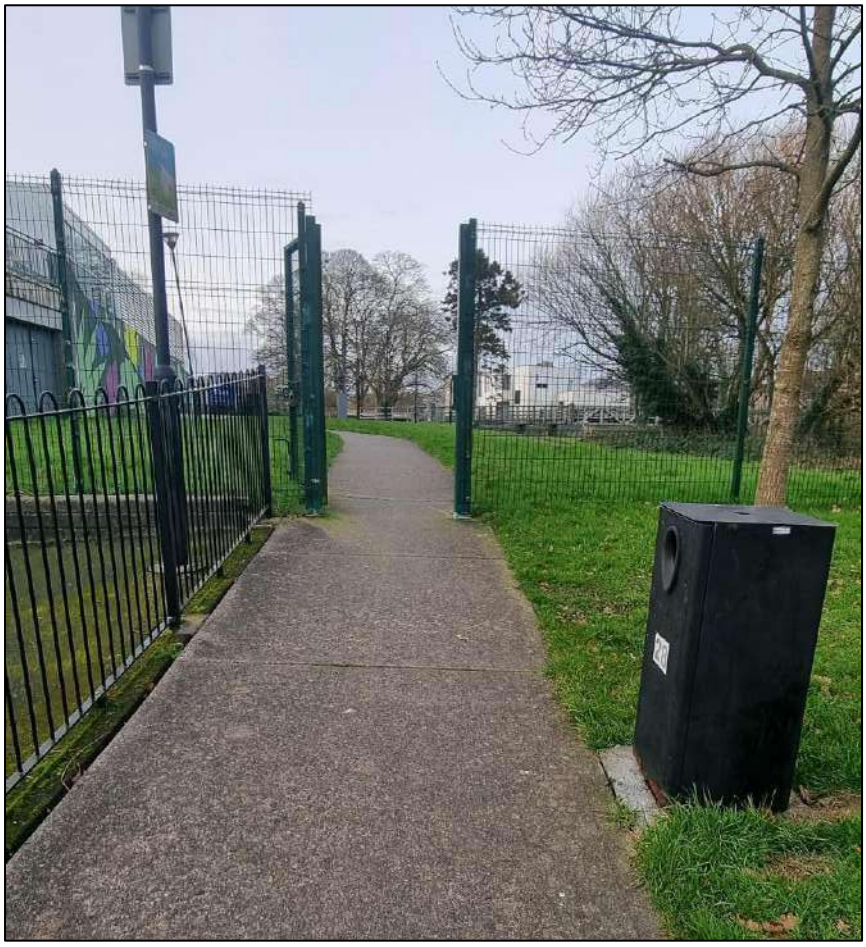


Plate 6 Primary access and egress route to higher ground

4.3 Sustainable Drainage Systems (SuDS)

Sustainable Drainage Systems (SuDS) are an integral part of the proposed development at Town Park, Tullow, Co. Carlow. SuDS are designed to manage surface water runoff, mitigate flood risk, and improve water quality by mimicking natural drainage processes. The implementation of SuDS is in line with the objectives outlined in the Carlow County Development Plan 2022-2028.

The proposed SuDS measures for the development, as per the architect's drawing include:

Rain Gardens: The development incorporates several rain gardens strategically placed throughout the site. Rain gardens are landscaped depressions that collect, filter, and infiltrate stormwater runoff from impervious surfaces such as roofs and paved areas. They promote groundwater recharge and improve water quality by removing pollutants through natural processes.

Permeable Paving (Grasscrete): The drawing specifies the use of Grasscrete or similar approved permeable paving in certain areas of the site. Permeable paving allows

stormwater to infiltrate through the surface, reducing runoff and promoting groundwater recharge. It helps to attenuate peak flows and improves water quality by trapping sediments and pollutants.

Overflow Connections: The rain gardens are designed with overflow connections to the drainage system. These connections ensure that excess water during heavy rainfall events is safely conveyed to the downstream drainage network, preventing localised flooding.

Retention of Existing Drainage: The existing Irish Water combined sewer will be retained for park drainage, as indicated in the drawing. This approach maximises the use of existing infrastructure and ensures efficient drainage of the site.

The implementation of SuDS measures in the proposed development aligns with the policies and objectives outlined in the Carlow County Development Plan 2022-2028. Specifically, the plan emphasises the importance of incorporating SuDS in new developments to manage surface water sustainably and mitigate flood risk (Ref: Chapter 6 - Infrastructure and Environmental Management, Section 6.5 Surface Water and Sustainable Drainage Systems). By incorporating SuDS, the proposed development demonstrates a commitment to sustainable water management practices and contributes to the overall flood resilience of the area. The combination of rain gardens, permeable paving, and efficient drainage connections ensures that surface water runoff is effectively managed, reducing the risk of flooding both on-site and in the surrounding areas.

4.4 Conclusions & Recommendations

The purpose of this flood risk assessment was to examine the flood risk at the site of amenity/ open space development works (deemed water-compatible), at Town Park, Tullow, Co. Carlow. The assessment comprised Stage 1 - Flood risk identification and Stage 2 - Initial flood risk assessment.

Summary of findings

The subject site lies within the Southeast CFRAM Study. CFRAM flood maps place the site within flood zone A/B, indicating a fluvial flood risk from the River Slaney. Groundwater, pluvial, or sewer flooding are not relevant mechanisms at the site. Historical flood records note several flood events in Tullow, with flood relief works completed during 2011/12. The proposed development is considered 'water compatible' and does not require a justification test.

Hydraulic modelling was previously completed at the subject site under CFRAM model HA12-2 (Tullow/Tullowphelim). Flood levels were taken from the nearest applicable CFRAM node, with flood depths predicted to reach 68.56mOD for the 1%AEP return and

68.94mOD for the 0.1%AEP return. The sensitivity of the model to climate change was classified as medium. The future 1/100-year flood (+20% flows) may be taken as the current 1/1000-year event.

Flood inundation maps show that most floodwaters are concentrated in areas at the northern and south-eastern portions of the site. Flood depths remain low and confined within pockets of lower ground. As a result, access and egress to the site are unhindered, and there is ample higher ground that remains outside the flood envelope.

The development has been designed to minimise its impact on the existing flood plain and surrounding areas. The proposed works do not alter existing surface flows or remove areas of flood storage, ensuring that neighbouring developments are not adversely affected. Furthermore, the development is not situated within an area that restricts access to a watercourse or impedes a floodplain or flood management facility, maintaining the functionality of the existing flood management infrastructure. Lastly, the proposed development is for amenity/open space and is deemed water-compatible.

During a major flood event on 24th October 2023, the River Slaney overtopped its banks, causing substantial inundation at the subject site. The observed flood level of 69.083mOD upstream of the site was notably higher than the predicted 10% Annual Exceedance Probability (AEP) flood level of 68.98mOD at that location. This discrepancy highlights the inherent uncertainties in flood modelling and the potential for actual flood events to exceed predicted levels. However, the site profile exceeds the maximum predicted flood level (1/1000) for all relevant playing areas (skate park, ball court etc).

The development incorporates Sustainable Drainage Systems (SuDS) measures, including rain gardens, permeable paving (Grasscrete), overflow connections, and retention of existing drainage. These measures align with the policies and objectives outlined in the Carlow County Development Plan 2022-2028, demonstrating a commitment to sustainable water management practices, and contributing to the overall flood resilience of the area.

In conclusion, the proposed development at Town Park, Tullow, Co. Carlow, has been subject to a comprehensive flood risk assessment. The assessment has identified the potential flood risks, evaluated the impact of the proposed works, and appraised the overall site profile against the maximum predicted flood level. The development is deemed appropriate regarding flood risk and satisfies the relevant objectives and principles set out in the OPW Flood Risk Management guidelines and Carlow County Development Plan.

5.0 References

GSI. *Groundwater Maps*. www.gsi.ie. Accessed: March 2024

Flood Studies Update (FSU). *Web Portal*. Accessed: March 2024

OPW. 2009. *The planning system and flood risk management*.

OPW. Floodinfo.ie. *Floodmaps*. Accessed: March 2024

Myplan.ie Floodmap layer. Accessed: March 2024

Carlow County Council. *County Development Plan 2022-2028 SFRA*

Tullow Local Area Plan. *SFRA 2017-2023*

Appendix A

AMAX data for EV1 calculations

Year	Date	AMAX Daily Rainfall (mm)
1985	13-Aug	25.5
1986	26-Jun	45.0
1987	19-Oct	25.2
1988	21-Aug	21.7
1989	10-Aug	30.0
1990	14-Oct	20.7
1991	31-Jul	24.2
1992	21-Aug	21.7
1993	11-Jun	32.6
1994	18-Oct	59.6
1995	02-Jun	29.0
1996	05-Aug	26.3
1997	31-Jul	27.6
1998	20-Oct	27.7
1999	30-Sep	33.3
2000	06-Nov	42.8
2001	22-Oct	34.6
2002	14-Aug	75.6
2003	02-Oct	36.3
2004	27-Oct	59.6
2005	18-Sep	27.2
2006	25-Aug	45.0
2007	06-Aug	23.4
2008	30-Jul	28.6
2009	29-Nov	54.7
2010	06-Aug	25.3
2011	23-Oct	34.6
2012	14-Aug	75.6
2013	21-Mar	44.6
2014	08-Feb	31.8
2015	15-Nov	54.7
2016	30-Apr	31.2
2017	22-Aug	24.4
2018	14-Mar	27.8
2019	18-Aug	23.5
2020	08-Feb	31.8
2021	27-Oct	44.4
2022	15-Aug	75.6
2023	14-Sep	29.9

Appendix E – Natura Impact Statement (Panther Environmental Services)

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NATURA IMPACT STATEMENT

TULLOW TOWN PARK,
TULLOWBEG,
TULLOW,
CO. CARLOW

2024

DATE:	27th March 2024	**AUTHOR:**	Ross Donnelly-Swift, PhD & Paula Farrell, BSc.
REPORT NO:	PE_NIS_10045	**REVIEWED:**	Mike Fraher, BSc.

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EXECUTIVE SUMMARY

Panther Ecology Ltd. was commissioned by Carlow County Council, to prepare a Natura Impact Statement (NIS) as part of an application for the proposed upgrade and enhancement of the existing Tullow Town Park facilities/features, ancillary infrastructure and associated site development works at Tullow Town Park located west side of the River Slaney, Tullowbeg (Townland), Tullow, Co. Carlow.

This report identified the presence of European sites within the potential zone of influence of the proposed development. The proposed development is partly located within the boundary of the Slaney River Valley SAC (Site Code: 000781).

The potential for impacts to European sites as a result of the proposed development such as potential surface water quality impacts, introduction of invasive species, habitat destruction and impacts from noise and dust were considered and the level of risk posed assessed.

During Stage 1 Screening for Appropriate Assessment, it was considered that there may be potential for an indirect impact upon the qualifying interests / special conservation interests of the Slaney River Valley SAC due to potential deterioration in water quality during the construction phase and spread of the Third Schedule Invasive Species Indian Balsam (*Impatiens glandulifera*) recorded within the red line boundary. Therefore, a Natura Impact Statement was prepared.

Due to the recommended control measures and standard practice during the construction phase, it is considered that there would be no significant risks to the conservation objectives of the habitats and species for which the aforementioned designated sites have been designated.

It is considered that there would be no significant risk of negative impact, either alone or in combination with other plans or projects, to the integrity of the Natura 2000 network.

1.0 INTRODUCTION

Panther Ecology Ltd. was commissioned by Calow County Council, to prepare a Natura Impact Statement (NIS) as part of an application for the proposed upgrade and enhance to the existing Tullow Town Park facilities/features, ancillary infrastructure and associated site development works at Tullow Town Park located west side of the River Slaney, Tullowbeg (Townland), Tullow, Co. Carlow.

The principal aim of this study is to assess whether significant effects to European sites (the Natura 2000 network) are likely to occur as a result of this project in accordance with Article 6(3) of the Habitats Directive and the Planning and Development (Amendment) Act, 2001, as amended.

A study was undertaken by Dr Ross Donnelly-Swift (BSc (Hons) Biology, MSc Environmental Science, PhD Biosystems Engineering) and Ms Paula Farrell who has a BSc in Wildlife Biology from Munster Technological University (formerly IT Tralee) and has experience in elasmobranch, amphibian, bird, invertebrate and floral surveys of Panther Ecology Limited. This comprised of a review of the proposed development, a site visit on the 22nd February 2023 to examine the ecological context of the proposed development, a desk study of the information on European sites within the potential zone of influence of the site and an analysis of the information in the context of the guidance to determine if a Natura Impact Statement is required.

The Appropriate Assessment and Natura Impact Statement shall be undertaken in accordance with the guidance outlined in "*Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities*" (DoEHLG, 2010) and "*Assessment of Plans and Projects Significantly Affecting Natura 2000 Sites*" (EC, Nov 2001) and "*Managing Natura 2000 sites: The provisions of Article 6 of the 'Habitats' Directive*" (EC, 2018).

- DoEHLG (2010) "*Appropriate Assessment of Plans & Projects in Ireland*"
- Environment DG, European Commission (2002) "*Assessment of plans and projects significantly affecting Natura 2000 sites - Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC*" Oxford Brookes University, 2001
- Department of the Environment Heritage and Local Government (DoEHLG) Circular Letter SEA 1/08 and NPWS 1/08.
- Department of the Environment Heritage and Local Government (DoEHLG) Circular letter NPWS 1/10 and PSSP 2/10.
- OPR Practice Note PN01 (2021) "*Appropriate Assessment Screening for Development Management*"

2.0 LEGISLATIVE CONTEXT

The EU Habitats Directive (92/43/EEC) on the conservation of natural habitats and of wild fauna and flora, as amended by council directive 97/62/EC, 2006/105/EC, and Regulation EC1882/2003 of September 2003, as transposed into Irish law by the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. 477/11), provides the framework for legal protection for habitats and species of European importance. The Natura 2000 network provides an ecological infrastructure for the protection of sites that are of particular importance for rare, endangered or vulnerable habitats and species within the EU. The Natura 2000 network in Ireland is made up of European Sites which include:

- Special Areas of Conservation (SACs)
- Special Protection Areas (SPAs)

Article 6(3) of the Habitats Directive establishes the requirement for appropriate assessment when planning new developments that might affect a Natura 2000 site. Article 6(3) of the Habitats Directive states;

"*Any plan or project not directly connected with, or necessary to the management of the site, but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives. In the light of the conclusions of the assessment of the implications for the site, and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.*"

Stage 1: Screening for Appropriate Assessment
This stage involves an initial screening assessment of the potential impacts of the project, either alone or in combination with other projects, upon a Natura 2000 site. If it can be concluded that there would be no significant impacts upon Natura 2000 sites, the assessment stops at this stage. If not, or if further assessment is required, the assessment proceeds to Stage 2.

Stage 2: Appropriate Assessment / Natura Impact Statement (NIS)
This stage assesses the impact of the project, alone or in combination with other projects or plans, on the integrity of the Natura 2000 site, with respect to the site's conservation objectives, the site's ecological structure and function and its overall integrity. The output of this stage is an NIS, which also includes any mitigation measures required to avoid, reduce or offset negative impacts of the project. If this stage determines that adverse effects on the Natura 2000 site cannot be excluded, then the plan or project should proceed to Stage 3 or be abandoned.

3.0 METHODOLOGY

Stage 1 - Screening

Screening is the first stage in the Appropriate Assessment process and is carried out to determine whether a Stage 2 Appropriate Assessment and a Natura Impact Statement (NIS) is required. Screening addresses and records the reasoning and conclusions in relation to the first two tests of Article 6(3);

1. Whether a plan or project is directly connected to or necessary for the management of the European (Natura 2000) site; and

2. Whether a plan or project, alone or in combination with other plans or projects, is likely to have significant effects on a European (Natura 2000) site, in view of its conservation objectives.

Screening should be undertaken without the inclusion of mitigation measures. If the effects are deemed to be significant, potentially significant, or uncertain, or if the screening process becomes overly complicated, then the process must proceed to Stage 2 AA and a NIS.

The findings and conclusions of the screening process should be documented, with the necessary supporting evidence and objective criteria. This is of particular importance in the cases where the Appropriate Assessment process ends at the screening stage because the conclusion is that no significant effects are likely.

Following Stage 1 Screening, it was considered that there may be potential for impacts upon the qualifying interests of a European site, therefore, the assessment progressed to Stage 2.

Stage 2 – Natura Impact Assessment

The scope of this assessment follows the appropriate assessment statement methodology as defined within the European Commission guidance document "*Assessment of plans and projects significantly affecting Natura 2000 sites"* (2002), Section 3, Part 2. Guidance from the Department of the Environment, Heritage and Local Government "*Appropriate Assessment of Plans and Projects in Ireland*" (2010) and "*Managing Natura 2000 sites: The provisions of Article 6 of the 'Habitats' Directive*" (2018) have also been used in the preparation of this report. In accordance with this guidance, the following methodology has been used to produce this Natura Impact Statement:

Step 1**:** Information Required
Identifying the conservation objectives of the Natura 2000 site and the aspects of the project, alone or in combination with other projects or plans, which have the potential to affect those conservation objectives.

This process involves gathering information for the Natura 2000 site, including the conservation objectives of the site, factors contributing to conservation value, aspects sensitive to change and the existing baseline condition of the site. The principal source of information used for Natura 2000 sites, their qualifying interests and conservation objectives is the National Parks and Wildlife Service (NPWS). Information is also required for the project including the size and scale of the project, the relationship (distance, connectivity etc.) of the project to the

Natura 2000 site and the characteristics of existing, proposed or other projects which have the potential to affect the Natura 2000 site.

Step 2: Impact Prediction
This process predicts and identifies the likely impacts of the project on the Natura 2000 site. Potential impacts are identified as; direct and indirect; short or long-term duration; construction, operational or decommissioning; and isolated, interactive and cumulative effects.

Step 3: Conservation Objectives
Once the potential impacts of the project have been predicted and identified, it will be necessary to assess whether these impacts will adversely impact upon the integrity of the Natura 2000 site, as defined by the site's conservation objectives and status of the site. Where it cannot be demonstrated that there will be no adverse impacts upon the Natura 2000 site, mitigation measures must be proposed for the project.

Step 4: Mitigation Measures
Upon the identification of potential impacts, the project will have on the Natura 2000 site (alone or in combination with other projects or plans), mitigation measures will be proposed to eliminate, reduce or offset these negative impacts. Mitigation measures should be considered with preference to the hierarchy of preferred options outlined in the guidance document "*Assessment of plans and projects significantly affecting Natura 2000 sites"*.

3.1 METHODOLOGY GUIDELINES

This Appropriate Assessment has been carried with reference to the following guidelines:

- *Appropriate Assessment of Plans and Projects in Ireland. Guidelines for Planning Authorities*. DoEHLG, 2010.
- Circular NPWS 1/10 & PSSP 2/10 Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities
- *Managing Natura 2000 sites – The Provisions of Article 6 of The Habitats Directive 92/43/EEC.* European Commission, 2000.
- Circular L8/08 Water Services Investment and Rural Water Programmes – Protection of Natural Heritage and National Monuments 2 September 2008
- *Assessment of Plans and Projects Significantly Affecting Natura 2000 sites. Methodological Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC.* European Commission, 2021.
- Commission Notice "Managing Natura 200 sites The provisions of Article 6 of the Habitats Directive 92/43/EEC. European Commission, 21.11.2018
- CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine version 1.2. Chartered Institute of Ecology and Environmental Management, Winchester.
- Appropriate Assessment Screening for Development Management OPR Practice Note PN01 March 2021

3.2 DESKTOP RESEARCH

- Desktop research was carried out to gather information on the ecology of the site and surrounding areas. The locations of the Natura 2000 sites within the potential Zone of Influence (ZoI) of the proposed development at Tullow Town Park, Tullowbeg, Tullow, Co. Carlow were identified from National Parks and Wildlife Service (NPWS) online map viewer. Other Natura sites beyond 15km were also reviewed and considered for the potential for the project to have a negative effect.

- Water quality data from the EPA was reviewed for the assessment of biological and environmental data collected on waterbodies in Ireland as per the Water Framework Directive (WFD) Monitoring Programme of River Ecology Monitoring Results (2021).

- Information on the characteristics of the Natura 2000 sites within the potential zone of influence was reviewed from the conservation objectives documents, site synopses and Standard Natura 2000 data forms available on the NPWS website.

3.3 SITE SURVEY

A site characterisation assessment was undertaken on the 22nd February 2023 to examine the ecological context of the development site, by systematically walking the site, adjacent land and boundaries and determining the habitats present. The habitat survey was undertaken in accordance with the standard methodology outlined in Fossitt's "*A Guide to Habitats in Ireland*", a hierarchical classification scheme based upon the characteristics of vegetation present. The Fossitt system also indicates when there are potential links with Annex I habitats of the E.U. Habitats Directive (92/43/EEC). Cognisance was also taken of the Heritage Council guidelines, "*Best Practice Guidance for Habitat Survey and Mapping*", (Smith *et al.,* 2011).

Bird species and signs of fauna activity were also noted. Particular attention was given to the possible presence of habitats and/or species, which are legally protected under Irish and European legislation and to assessing any potential ecological connectivity with Natura 2000 sites or supplementary or steppingstone habitats of relevance to Natura 200 sites.

4.0 DESCRIPTION OF PROPOSED DEVELOPMENT & EXISTING SITE

4.1 DESCRIPTION OF PROPOSED DEVELOPMENT

The proposed development is to upgrade and enhance the existing Tullow Town Park facilities/features, ancillary infrastructure and associated site development works, all at a site of approximately 1.13 ha in extent at Tullow Town Park located west side of the River Slaney, Tullowbeg (Townland), Tullow, Co. Carlow (see figure 4.1).

The proposed upgrade and enhancement of Tullow Town Park facilities/features development consists of:

- Construction of demarcated and enhanced network of cycle and pedestrian paths of asphalt surfacing and locally sourced grey stone aggregates, leading to a sequence of outdoor spaces laid out along the length of the park;

- Construction of partially sheltered concrete surfaced outdoor event/classroom space with feature designed shelter/canopy, centrally located feature concrete surfaced skate park, 2 no. feature hardwood decking viewing platforms/steps to the River Slaney, a kickabout soft landscaped lawn area which also facilitates land drain/swale and flood area, and a sport fenced enclosed multi-use games court to include football and basketball goals;

- Removal of trees of poor condition, where views into the park can be increased, and for facilitating the structural upgrade and enhancement works proposed; and

- Retention of existing trees described as riverbank due to the binding nature of the tree roots and the adjacent River Slaney riverbank.

The public realm upgrade and enhancement works also provide for upgrading of existing footpaths, demarcated natural stone aggregates feature paved areas, raised seating areas, raised planting areas, seats and benches, timber top ‘picnic’ table and seating facilities, a variety of soft landscaping features (grass lawn, native meadow, ornamental grasses and perennials), and all associated infrastructure/services and site development works above and below ground level, including sustainable urban drainage services (grasscrete, tree pit, land drain/swale and rain garden solutions, public lighting and closed-circuit television (CCTV) infrastructure.

Pedestrian and cyclist access to the proposed development will be maintained via the existing walkway access from Abbey Street (the N81 National Road) to the north, the existing walkway bridge over the River Slaney from Tullow Street to the east, and the existing walkway from Abbey Street (the N81 National Road) to the west adjacent to the Tesco Tullow Supermarket.

The proposed development will not require drinking water, foul water or heating as part of the proposed development.

During the operational phase, surface water comprised of rainwater run-off from roofs and hardstanding areas will be directed to the new proposed drainage network. This will include new aco drain pipes and new manholes. This will then connect to a new combined sewer drainage network (granted under Planning Reference: 22235). The surface water discharged from the proposed development will be comprised of clean water and will ultimately discharge to the River Slaney via an existing outflow pipe to the north-east. SuDS features will be

incorporated within the design such as rain gardens, permeable paving and overflow connections to the proposed drainage network. The drainage network is design to allow surface water to infiltrate to ground.

A landscape plan has been prepared by Place + Urbanism and incorporates the use of native and non-native non-invasive species within its design. This includes low maintenance laws, meadows, tree planting and planting as part of SuDS. Tree species include: *Aesculus hippocastanum, Salix babylonica, Populus nigra, Prunus makii* 'Amber Beauty'*, Betula nigra* 'Heritage'*, Quercus ribur, Betula pendula, Populus tremula, Liquidambar styraciflua and Corylus avellana* 'Contorta'. Other features include a retention tree pit for surface water run-off, raised planter beds, seating, fencing and walls. In addition, the landscape plan aims to retain much of the existing trees onsite and as much boundary vegetation adjacent to the River Slaney as possible. The proposed meadow will be comprised of native existing grasses and plants and will be allowed to grow to a height of 700mm providing a buffer zone along the River Slaney. Some existing trees of poor quality will be removed as per the Arboricultural Report.

The closest watercourse is the River Slaney running along the eastern boundary of the proposed development. No works will take place within this watercourse or any other watercourse. No works will take place on the Island within the centre of the River Slaney. The following works will be undertaken to the edge of the River Slaney: The installation of the hardwood decked platform, a new pathway for future access and hardwood desked steps.

A Lighting Plan has been prepared by EnerJ Building Services Engineering. The Lighting Plan will incorporate one type of LED luminaire comprising a total number of 64 throughout and with a height of 1m, taking into account the sensitivity of the site.

The proposed development is partly located within the Slaney River Valley SAC (Site Code: 000781). See **Error! Reference source not found.** below.

Construction works would be confined to the proposed development footprint and would not necessitate any works within a watercourse or drainage ditch. During excavation works, soils would be temporarily stored onsite. Any excess soils / stones would be used for landscaping and reinstatement works where possible or exported offsite via a licenced contractor. The expected construction timeframe is approximately 24 weeks.

The following project elements of the proposed development have been examined for relevance to possible effects on the Natura 2000 sites;

- Earthworks & Excavation
- Sediment & Hydrocarbon Runoff
- Stormwater & Waste Water
- Disturbance to Protected Species
- Impact on Protected Habitats
- Dust and Noise
- Invasive Species

Figure 4.1: Location of Proposed Development at Tullow Town Park, Tullowbeg, Tullow, Co. Carlow

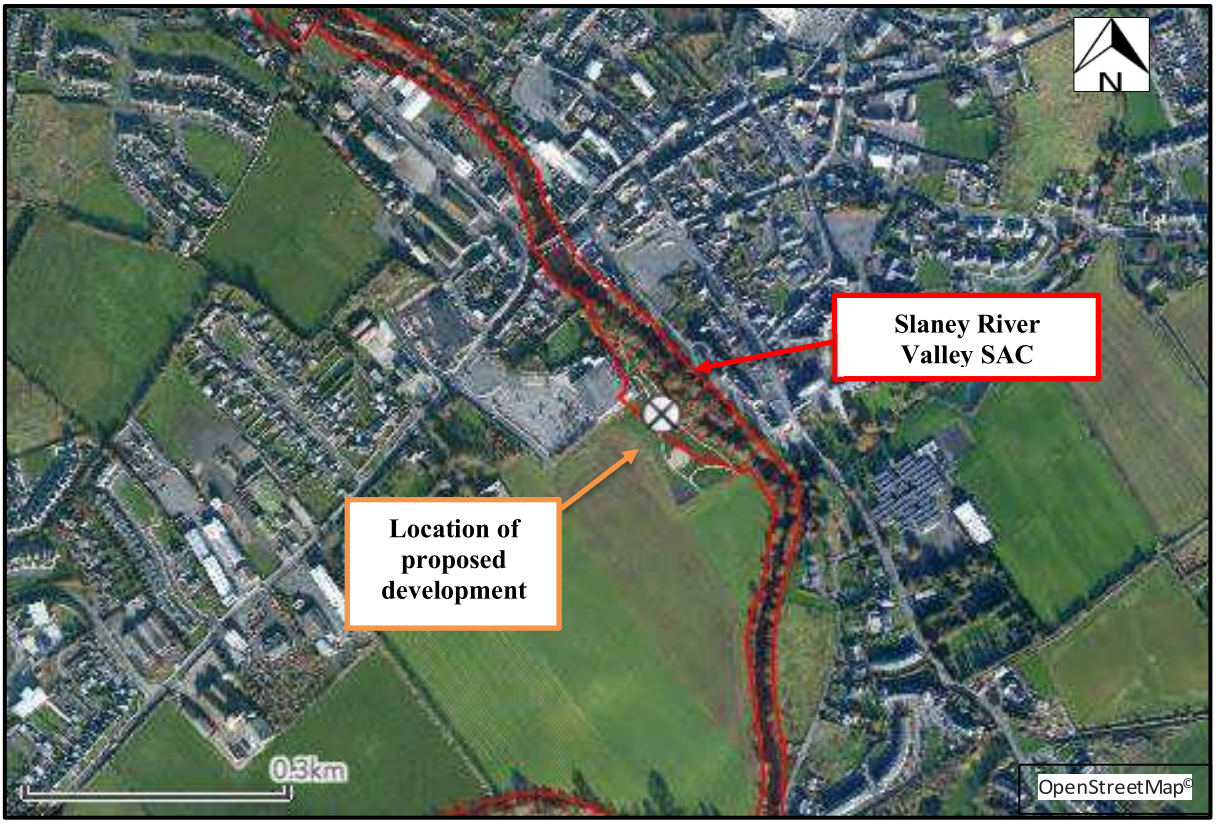

Figure 4.2: Location of Proposed Development and Natura 2000 Site

4.2 EXISTING ENVIRONMENT

The proposed development site is currently comprised of amenity grassland, buildings and artificial surfaces and ornamental tree/shrub planting. The surrounding environment is urban with commercial and residential premises within the vicinity. A site assessment were undertaken on the 22nd February 2023 .

The majority of the proposed site consists of amenity grassland (GA2) habitat. This habitat has been managed (mowed) and is species poor. It is dominated by short vegetation including Bent Grass (*Agrostis* spp.), Fescues (*Festuca* spp.), Creeping Buttercup (*Ranunculus repens*), Dock (*Rumex* spp.), Clover (*Trifolium* spp.), Speedwell (*Veronica* spp.), Moss (Bryophyta), Cleavers (*Galium aparine*), Sowthistle (*Sonchus* spp.), Dandelion (*Taraxacum* spp.) and Nettle (*Urtrica dioica*).

Buildings and artificial surfaces (BL3) form the central zones and west boundary of the proposed development and include paths, hardcore surfaces and walls. Species observed are Dandelion (*Taraxacum* spp.), Ragwort (*Jacobaea vulgaris*), Clover (*Trifolium* spp.), Annual Meadow Grass (*Poa annua*), Dock (*Rumex* spp.), Willowherb (*Epilobium* spp.), Red Dead-nettle (*Lamium purpureum*) and Moss (Bryophyta spp.).

To the north-east of the development is Riparian woodland (WN5) dominated by Willow (*Salix* spp.), Sycamore (*Acer pseudoplatanus*) and Ash (*Fraxinus excelsior*) with an understory of Bramble (*Rubus fructicosus*), Reed Canary-Grass (*Phalaris arundinaceae*), Ivy (*Hedera helix*), Cleavers (*Galium aparine*), Nettle (*Urtrica dioica*), Creeping Buttercup (*Ranunculus repens*), Indian Balsam (*Impatiens glandulifera*), Lesser Celandine (*Ficaria verna*), Alder (*Alnus* spp.), Cow Parsley (*Anthriscus sylvestris*)., Three-cornered Garlic (*Allium triquetrum*), Ground Elder (*Aegopodium podagraria*), Water Figwort (*Scrophularia umbrosa) and* Hart's-tongue Fern (*Asplenium scolopendrium*). The north-east of this habitat within the gated boundary of the current Tullow Town Park is intensely managed indicative of short grasses and vegetation right to the top of the riparian bank with the absence of scrub.

Further south of this riparian woodland but west of the river back is an area of Treeline (WL2) habitat dominated by Birch (*Betula* spp.), and Oak (*Quercus* spp.) and Plum (*Prunus* spp.) with an understory of Blackthorn (*Prunus spinosa*) and Bramble (*Rubus fructicosus*) This area is not as intensively managed with evidence of scrub undergrowth. A small section of Dry meadows and grassy verges (GS2) is found to the south-east along the treeline habitat. It includes an area of longer tussocky grasses such as Cock's-foot (*Dactylis glomerata*), False-oat Grass (*Arrhenatherum elatius*) and Creeping Buttercup (*Ranunculus repens*).

A Scattered trees and parkland habitat (WD5) is found throughout the site consisting of Lime (*Tilia* spp.) and Birch (*Betula* spp.). Ornamental/non-native shrub (WS3) habitat is found in the centre of the proposed development and throughout consisting of ornamental plants such as Periwinkle (*Vinca* spp.), Red-osier Dogwood (*Cornus sericea*), Yellow-twig Dogwood (*Cornus sericea 'Flamiramea'*).

Habitats of note outside the boundary include the River Slaney, a Depositing/lowland river (FW2) with a high flow in parts which is located to the east of the proposed development. Species such as Water Crowfoot (*Ranunculus aquatilis*) and Indian Balsam (*Impatiens glandulifera*) were recorded growing in the river.

An Island within the River Slaney is classified as a Riparian woodland (WN5) to the east of the development. It was dominated by Willow (*Salix* spp.), Sycamore (*Acer pseudoplatanus*), Alder (*Alnus* spp.) and Horse Chestnut (*Aesculus hippocastanum*) with an understory of Elder (*Sambucus* spp.), Ivy (*Hedera helix*), Snowberry (*Symphoricarpos* spp.), Ground Elder (*Aegopodium podagraria*), Violet (*Viola* spp.), Lesser Celandine (*Ficaria verna*), Indian Balsam (*Impatiens glandulifera*), Snowdrops (*Galanthus* spp.), Dock (*Rumex* spp.), Three-cornered Garlic (*Allium triquetrum*), Mustard (*Sinapsis* spp.), Meadowsweet (*Filipendula umlaria*), Cherry Laurel (*Prunus laurocerasus*), Water Dropwort (*Oenanthe* spp.), St. Johns-wort (*Hypericum* spp.), Holly (*Ilex* spp.) and Bramble (*Rubus fructicosus*). Past flooding in the area was evident with dead vegetation on the tree trunks.

To the east across the River Slaney along the New Road (L2036) entrance is Amenity grassland (GA2) habitat consisting of short vegetation including Grasses (*Poa* spp.), Creeping Buttercup (*Ranunculus repens*), Ornamental non-native shrub (WS3) habitat consisting of Snowberry (*Symphoricarpos* spp.) and Honeysuckle (*Lonicera* spp.) and a Riparian woodland (WN5) consisting of Willow (*Salix* spp.), Sycamore (*Acer pseudoplatanus*) and Spruce (*Picea* spp.).

Two third Schedule invasive flora were noted during the site assessment: Indian Balsam (*Impatiens glandulifera*) and Three-cornered Garlic (*Allium triquetrum*) found along the banks of the River Slaney adjacent to the proposed development within the red line boundary and on the island within the river east of the development. Butterfly-bush (*Buddleja davidii*) was observed to the north of the proposed development outside the boundary by the footbridge, while Snowberry and Cherry Laurel were noted on the Island.

No plant species of conservation significance were noted at the Tullow Town Park. The identified habitats at the proposed development site, as per the Fossitt habitat classification scheme, are summarised in Table 4.1 below. See Appendix B for Photo Log of the site.

Table 4.1: Summary of Habitats Identified at the Proposed Development Site

HABITAT CLASSIFICATION HIERARCHY		
LEVEL 1	**LEVEL 2**	**LEVEL 3**
F – Freshwater	**FW** – Watercourses	**FW2 –** Depositing lowland river
G – Grassland and marsh	**GS –** Semi-natural grassland	**GS2 –** Dry meadows and grassy verges
	GA – Improved grassland	**GA2 –** Amenity grassland (Improved)
W – Woodland and scrub	**WN** – Semi-natural woodland	**WN5 –** Riparian woodland
	WS – Scrub / transitional woodland	**WS3 –** Ornamental/non-native shrub
	WL – Linear woodland /	**WL2** – Treelines

	scrub	
	WD – Highly modified/non-native woodland	**WD5** – Scattered trees and parkland
B – Cultivated and built land	**BL** – Built land	**BL3** – Buildings and artificial surfaces

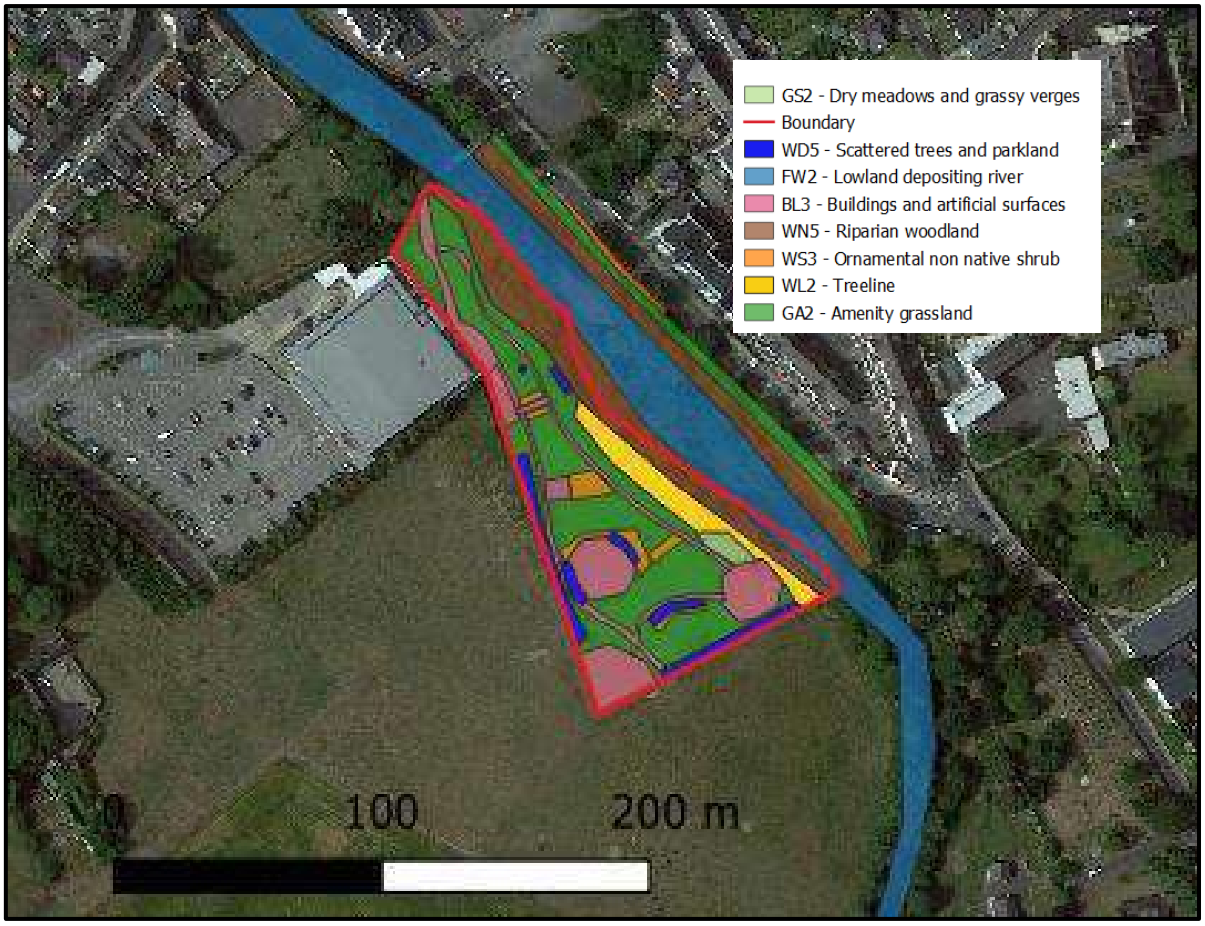

Figure 4.3 Habitat Map (Google Satellite, 2023 ©)

Given the watercourse and the urban use of the surrounding area, it would be expected that waterfowl and hedgerow bird species would be present in the area Bird species noted during the site walkover included Goldfinch (*Carduelis carduelis*), Wren (*Troglodytes troglodytes*), Rook (*Corvus frugilegus*), Blackbird (*Turdus merula*), Mallard (*Anas platyrhynchos*), Grey Wagtail (*Motacilla cinerea*), Chaffinch (*Fringilla coelebs*), Treecreeper (*Certhia familaris*), Dunnock (*Prunella modularis*), Goldcrest (*Regulus regulus*), Collard Dove (*Streptopelia decaocto*), Song Thrush (*Turdus philomeles*), Blue Tit (*Cyanistes caeruleus*), Woodpigeon (*Columba palumbus*), Starling *(Sturnus vulgaris*) and there was evidence of Swan *(Cygnus* spp.). Three birds are amber listed, Mallard, Goldcrest and Starling while one species is red listed, Grey Wagtail. None of the bird species recorded are listed under Annex I of the E.U. Birds Directive (Gilbert et al, 2021

There was evidence of Otter (spraints) at the riverbank to the north-east of the development within the red line boundary and on the island within the River Slaney. Small fish were also observed within the River Slaney adjacent to the development. The existing boundary vegetation adjacent to the River Slaney would provide limited suitable habitat for Otter. Limitations of the survey along the River Slaney were confined to terrestrial survey methods due to the depth of the watercourse. Binoculars were used to assess the river banks for signs of otter and protected fauna from afar. Otter have two basic requirements; prey and suitable safe refuges to rest. Otter typically maintain couches above ground in reed beds or dense scrub and holts underground. Scrub habitat was recorded during the site assessment along the banks of the River Slaney. No reed dominated habitats were observed. Otter holts could be located along the banks of the River Slaney upstream or downstream however, an in-depth Otter survey was not completed as part of this assessment. As there are to be no in-stream works, it is not considered that the proposed development would have any direct impact on this species if present. Further impacts are discussed in section 6.

The River Slaney could offer suitable habitat for freshwater species such as Lamprey, Crayfish, Pearl Mussel etc however, an in-depth freshwater survey was no undertaken as part of this assessment. No works will take place within the River Slaney however, indirect impacts could occur due to a deterioration in water quality during the construction phase.

No other fauna or evidence of fauna were noted within the site boundary. Other mammals, typical of that found throughout the rest of Ireland, which would be expected to be found in the general area include Bat species, Rabbit (*Oryctolagus cuniculus*), Brown Rat (*Rattus norvegicus*), Pine Marten (*Martes martes*), Fox (*Vulpes vulpes*), Badger (*Meles meles*) Stoat (*Mustela erminea hibernica*), American Mink (*Mustela vison*), Irish Hare (*Lepus timidus hibernicus*), Hedgehog (*Erinus europaeus*), Red Squirrel (*Sciurus vulgaris*), Grey Squirrel (*Sciurus carolinensis*), Wood Mouse (*Apodemus sylvaticus*) and Deer.

In addition to the site walkover, flora and fauna records were reviewed on the National Biodiversity Data Centre (NBDC) website for the proposed development site and vicinity. No protected plant species under the Flora (Protection) Order, 2022 (S.I. No. 235 of 2022) were recorded within the 10km square (Tetrad – S87) in which the proposed development site is located. Three invasive plant species listed in the Third Schedule of the European Communities Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011) were recorded within the 10km square (Tetrad – S87): Giant Hogweed (*Heracleum mantegazzianum*), Indian Balsam (*Impatiens glandulifera*) and Japanese Knotweed (*Fallopia japonica*).

Protected fauna species of note recorded within the NBDC 10km square ((Tetrad – S87) include the protected species, Common Frog (*Rana temporaria*), Freshwater White-clawed Crayfish (*Austropotamobius pallipes*), Daubenton's Bat (*Myotis daubentonii*), Badger (*Meles meles*), European Otter (*Lutra lutra*), Lesser Noctule (*Nyctalus leisleri*), Natterer's Bat (*Myotis nattereri*), Pine Marten (*Martes martes*), Pipistrelle (*Pipistrellus pipistrellus sensu lato*), Red Deer (*Cervus elaphus*), Soprano Pipistrelle (*Pipistrellus pygmaeus*) and European Hedgehog (*Erinaceus europaeus*). High impact invasive species listed in the Third Schedule of the European Communities Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011) include American Mink (*Mustela vison*), Grey Squirrel (*Sciurus carolinensis*), Fallow Deer (*Dama dama*), Sika Deer (*Cervus nippon*) and the Brown Rat (*Rattus norvegicus*).

Bird species of note include Barn Owl (*Tyto alba*), Swallow (*Hirundo rustica*), Black-headed Gull (*Larus ridibundus*), Coot (*Fulica atra*), Kestrel (*Falco tinnunculus*), Kingfisher (*Alcedo*

atthis), Linnet (*Carduelis cannabina*), Pheasant (*Phasianus colchicus*), Snipe (*Gallinago gallinago*), Starling (*Sturnus vulgaris*), Swift (*Apus apus*), Wood Pigeon (*Columba palumbus*),Eurasian Teal (*Anas crecca*) Tree Sparrow (*Passer montanus*), Golden Plover (*Pluvialis apricaria*), Great Black-backed Gull (*Larus marinus*), Great Cormorant (*Phalacrocorax carbo*), House Martin (*Delichon urbicum*), House Sparrow (*Passer domesticus*), Lesser Black-backed Gull (*Larus fuscus*), Little Grebe (*Tachybaptus ruficollis*), Mallard (*Anas platyrhynchos*), Mew Gull (*Larus canus*), Mute Swan (*Cygnus olor*), Northern Lapwing (*Vanellus vanellus*), Rock Pigeon (*Columba livia*), Sand Martin (*Riparia riparia*), Sky Lark (*Alauda arvensis*), Spotted Flycatcher (*Muscicapa striata*), Pigeon (*Columba oenas*) and the Yellowhammer (*Emberiza citrinella*).

4.3 WATER ENVIRONMENT

The proposed development is located within the Slaney sub-catchment (Slaney_SC_020), which is part of the Slaney and Wexford Harbour Catchment (ID_12). The closest watercourse to the proposed development site is the Slaney adjacent to the eastern site boundary. The Slaney (EPA Code: 12S02 - Order 5) flows directly passed the proposed development. Other watercourses within the area include the Tullow (EPA Code: 12T22 - Order 1) located approximately 42m south-east of the development which joins the River Slaney 36m (hydrologically) south of the proposed development and the Tullowbeg (EPA Code: 14T21 – Order 1) located approximately 40m south of the development which joins the River Slaney 436m downstream from the proposed development. See Figure 4.3 for map of watercourses surrounding the proposed development. See Figure 4. for location of watercourses within the vicinity of the proposed development.

The River Slaney is designated as part of the Slaney River Valley Special Area of Conservation (SAC) (Site Code: 000781). The Conservation Objectives document for the Slaney River Valley SAC shows that water quality objectives have been set. The site is of high importance for the conservation of fish species, notably Atlantic Salmon (*Salmo salar*) with Q4 (good status) values set as objectives in freshwater. Sea Lamprey (*Petromyzon marinus*), River Lamprey (*Lampetra fluviatilis*) and Brook Lamprey (*L. planeri*) all require clean gravels for spawning. Twaite Shad (*Alosa fallax*) needs stable gravel substrate with very little fine material, free of filamentous algal and plant root growth. Otter (*Lutra lutra*) is well distributed throughout this SAC and water quality would impact on prey stocks.

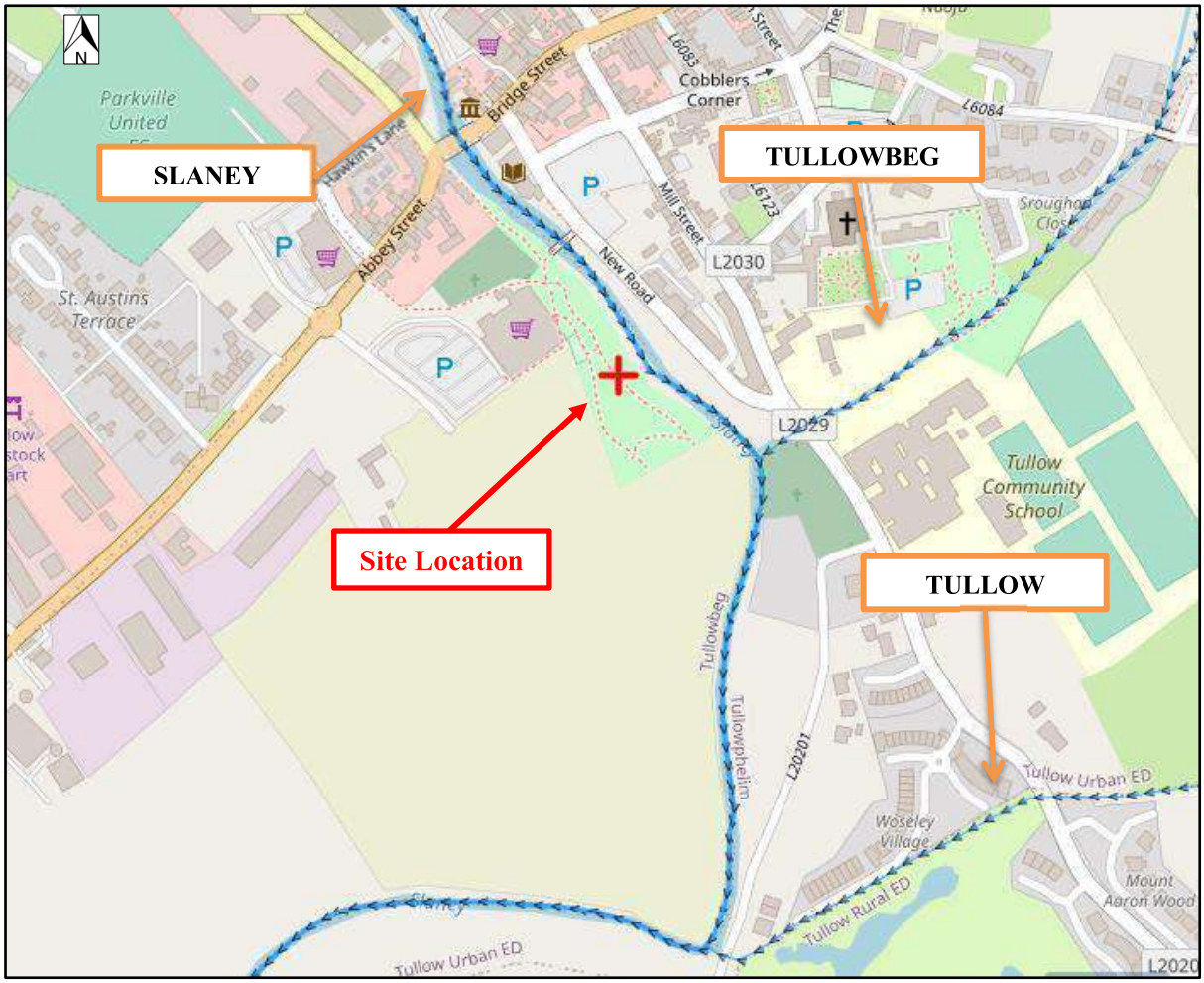

Figure 4.4: Watercourses within proximity to the proposed development

The Environmental Protection Agency (EPA) undertake surface water monitoring along the River Slaney. The results for the nearest monitoring stations (as per Table 4.2 with available monitoring results for the period 2001 – 2022 are summarised in Figure 4.4 below for indicative purposes.

Table 4.2: Operational Monitoring Stations of the River Slaney

STATION NO.	STATION LOCATION	EASTING	NORTHING	APPROX. DISTANCE FROM SITE
RS12S021200	Slaney – Moatabower Br	283212	177739	6km Upstream
RS12S021400	Ford 3km d/s Tullow Br	285068	171200	2.5km Downstream
RS12S021600	Kilcarry Br	289285	162491	10km Downstream

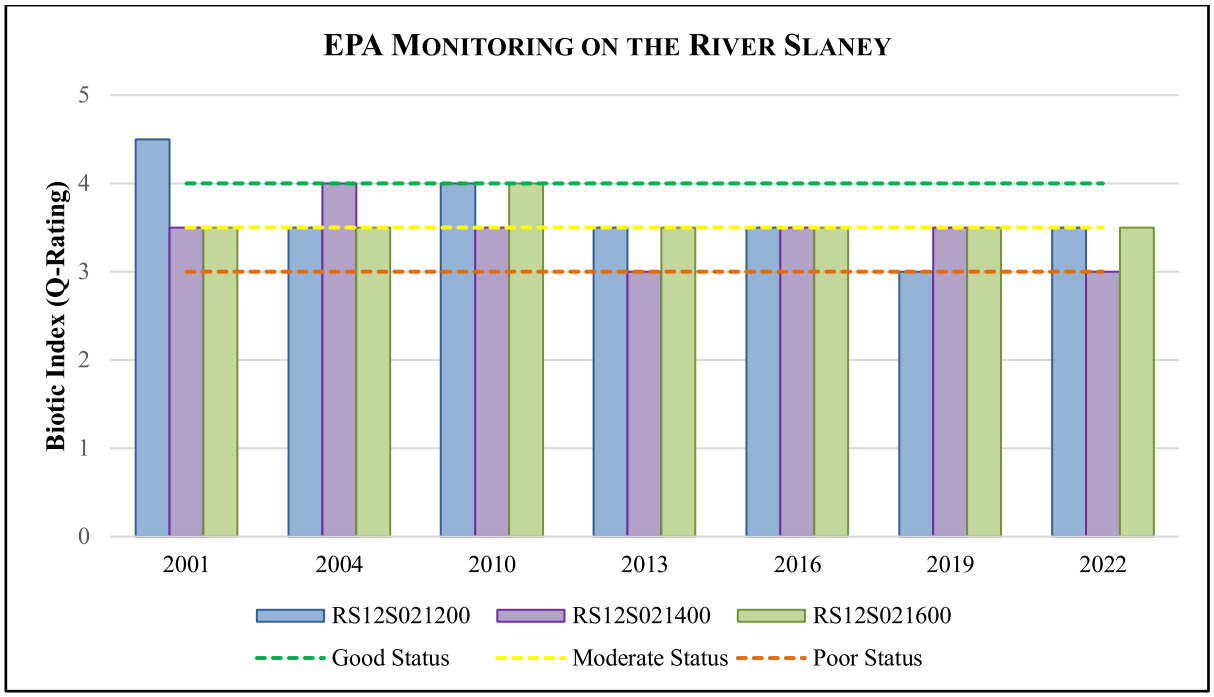

Figure 4.5: EPA Ecological Monitoring of the River Slaney

As can be seen in Figure 4.5 above, the Slaney River is mainly achieving a water quality status of between Q3 (moderate) and Q4 (good) at the monitoring location (Table 4.2).

EPA comments on the monitoring results for the Slaney River are as follows; "*In 2021, the invertebrate fauna at Station 0200 & 0400 indicated high ecological conditions. At Station 0200, the absence of the long-lived stonefly, Perla, is a cause for concern*."

A Flood Risk Assessment (FRA) was completed by Ash Ecology & Environmental Ltd (AEE(in March 2024. The report states that the proposed development is located within flood zone A, B and C. All proposed playing areas within the park remain above the 1/1000 year predicted flood level. The report concludes that "*the proposed development at Town Park, Tullow, Co. Carlow, has been subject to a comprehensive flood risk assessment. The assessment has identified the potential flood risks, evaluated the impact of the proposed works, and appraised the overall site profile against the maximum predicted flood level. The development is deemed appropriate regarding flood risk and satisfies the relevant objectives and principles set out in the OPW Flood Risk Management guidelines and Carlow County Development Plan.*

5.0 EUROPEAN SITES (NATURA 2000 SITES) WITHIN ZONE OF INFLUENCE

There is no standard radius that can be used to select which European sites are to be analysed. This can only be determined by looking at the zone of influence of the project at hand.

In assessing the zone of influence of this project upon European sites, the following factors must be considered:

- Potential impacts arising from the project
- The location and nature of European sites
- Pathways between the development and European sites

One Special Protection Area (SPA) site occurs within the potential zone of influence of the proposed development. Three Special Area of Conservation (SAC) sites occur within the potential zone of influence of the proposed development site and are shown in the following table:

Table 5.1: Special Areas of Conservation and Special Protection Area potentially within the zone of influence

SITE NAME	DESIGNATION	SITE CODE	DISTANCE TO PROPOSED SITE
Slaney River Valley	SAC	000781	Within SAC
Holdenstown Bog	SAC	001757	12.1km NE
River Barrow and River Nore	SAC	002162	14.9km W
Wexford Harbour and Slobs	SPA	004076	36km SE

Maps detailing European sites within the potential Zone of Influence (ZoI) of the proposed site are included in Appendix A below.

For this assessment, the site considered to be within the zone of influence of the proposed development was the Slaney River Valley (Site Code: 000781), due to the hydrological connectivity and location.

The proposed site is located 12.1km from the Holdenstown Bog SAC (Site Code: 001757) and has no direct hydrological connection with the site. The proposed site does not contain habitats associated with transition mires and quaking bogs [7140] for which the site was designated. Therefore, due to the lack of a direct hydrological connection and lack of the associated habitat present the Holdenstown Bog SAC has been screened out.

The proposed site is located within 14.9km from the River Barrow and River Nore SAC (Site Code: 002162) with no direct hydrological connection. The proposed development is located within the Slaney and Wexford Catchment (Catchment ID: 12), the River Barrow and River Nore SAC (Barrow 14) is located within the Barrow Catchment (Catchment ID: 14). Due to the large distance, location within a separate catchment and absence of a source-pathway-receptor relationship, the River Barrow and River Nore SAC has been screened out.

The Wexford Harbour and Slobs SPA (Site Code: 004076) is located approximately 36km from the proposed development. However, the hydrological distance is over 36kms, given the nature of the works and the dilution effect of the River Slaney it is unlikely that the proposed project would have a negative effect on this site. Therefore, this SPA has been screened out.

5.1 SLANEY RIVER VALLEY SAC SITE CODE (000781)

This site comprises almost the entire Slaney system, from the headwater streams in the Wicklow Mountains to the extensive estuarine area of Wexford Harbour. The main river tributaries included are the Bann, Glasha, Clody, Derry, Derreen, Douglas and Carrigower Rivers. The tidal influence extends upriver as far as Enniscorthy. In the upper and central regions, the geology consists of granite. Above Kilcarry Bridge, the Slaney has cut a gorge into the granite plain. The Derry and Bann Rivers are bounded by a narrow line of uplands which corresponds to schist outcrops. South of Kildavin the Slaney flows through an area of Ordovician slates and grits. The river is often fringed by woodland and/or swamp vegetation. Other habitats which occur alongside the river include wet grassland, scrub and, in higher areas, heath and bog. Improved grassland and arable land is included alongside the river for water quality reasons. Salt marshes are a feature of the lower estuarine area of the site. The site is a Special Area of Conservation (SAC) selected for the following habitats and/or species listed on Annex I / II of the E.U. Habitats Directive (* = priority; numbers in brackets are Natura 2000 codes):

TABLE 5.2: ANNEX I HABITATS	
CODE	**DESCRIPTION**
1130	Estuaries
1140	Tidal Mudflats and Sandflats
1330	Atlantic Salt Meadows (*Glauco-Puccinellietalia maritimae*)
1410	Mediterranean Salt Meadows (*Juncetalia maritimi*)
3260	Floating River Vegetation
91A0	Old Oak Woodlands
91E0	Alluvial Forests*

* *denotes a priority habitat*

TABLE 5.3: ANNEX II SPECIES		
CODE	**COMMON NAME**	**SCIENTIFIC NAME**
1029	Freshwater Pearl Mussel	*Margaritifera margaritifera*
1095	Sea Lamprey	*Petromyzon marinus*
1096	Brook Lamprey	*Lampetra planeri*
1099	River Lamprey	*Lampetra fluviatilis*
1103	Twaite Shad	*Alosa fallax*
1106	Atlantic Salmon	*Salmo salar*
1355	Otter	*Lutra lutra*
1365	Common (Harbour) Sea	*Phoca vitulina*

The conservation objectives for the SAC site are to maintain or restore the favourable conservation condition of the qualifying interests. An excerpt from the Natura 2000 Data Form for the Slaney River Valley SAC is included below, while further details are available within

the site's site synopsis (NPWS, 2015). This site comprises the freshwater stretches of the River Slaney as far as the Wicklow Mountains; a number of tributaries, the larger of which include the Bann, Boro, Glasha, Clody, Derry, Derreen, Douglas and Carrigower Rivers; the estuary at Ferrycarrig; and Wexford Harbour. The site flows through the Counties of Wicklow, Wexford and Carlow. Towns along the site but not within it include Baltinglass, Hacketstown, Tinahely, Tullow, Bunclody, Camolin, Enniscorthy and Wexford. The river is up to 100m wide in places and is tidal at the southern end from Edermine Bridge below Enniscorthy. In the upper and central regions almost as far as the confluence with the Derry River the geology consists of granite. Above Kilcarry Bridge, the Slaney has cut a gorge into the granite plain. The Derry and Bann Rivers are bounded by a narrow line of uplands which corresponds to schist outcrops. Where these tributaries cut through this belt of hard rocks, they have carved deep gorges, more than two miles long at Tinahely and Shillelagh. South of Kildavin the Slaney flows through an area of Ordovician slates and grits. The site supports populations of several species listed on Annex II of the E.U. Habitats Directive, including Sea Lamprey, River Lamprey and Brook Lamprey, Otter, Salmon, small numbers of Freshwater Pearl Mussel, and in the tidal stretches, Twaite Shad. A survey of the Derreen River in 1995 estimated the population of Freshwater Pearl Mussel at about 3,000 individuals. This is a significant population, especially in the context of eastern Ireland. The Slaney is primarily a spring salmon fishery and is regarded as one of the top rivers in Ireland for early spring fishing. The upper Slaney and tributary headwaters are very important for spawning. The site supports regionally significant numbers of Common Seal. This Annex II species occurs year-round in Wexford Harbour where several sandbanks are used for breeding, moulting and resting activity. At least 27 Common Seal regularly occur within the site.

The high pressures/threats to this SAC are forest and plantation management & use, invasive non-native species, Cultivation (includes increase of agricultural area), fertilisation and groundwater pollution by discharge to ground such as disposal of contaminated water to soakaways.

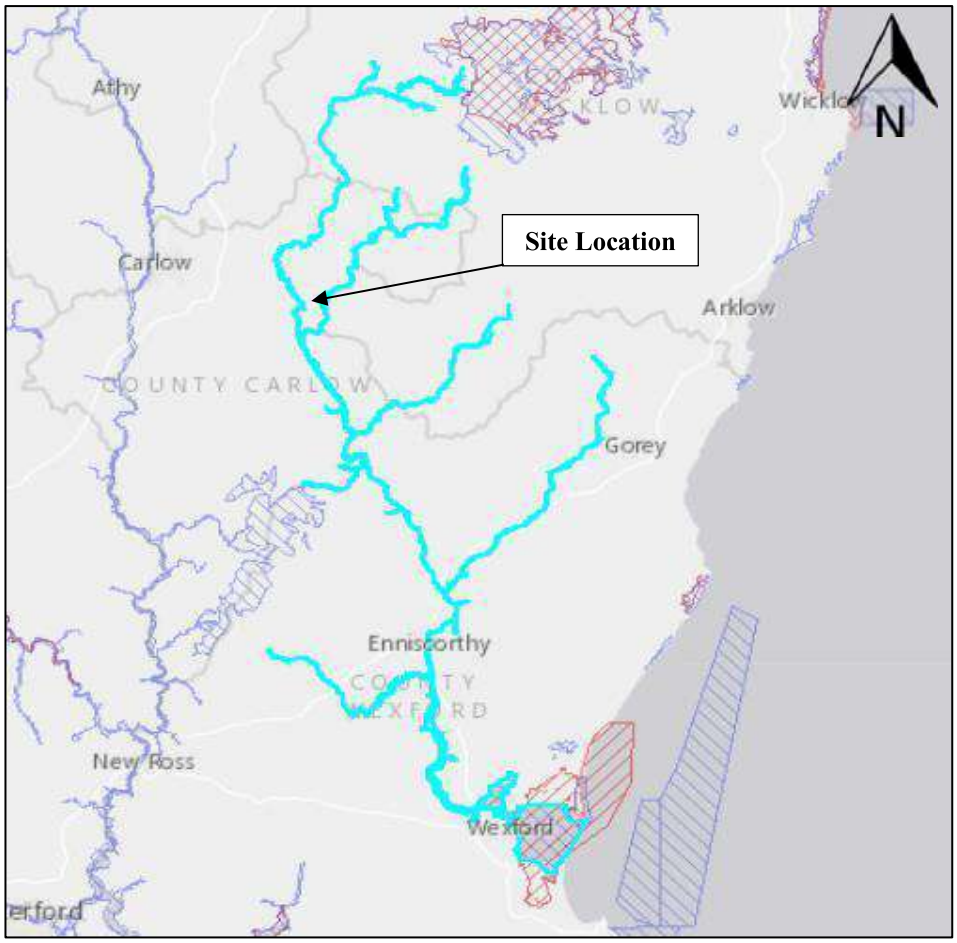

Figure 5.1: Slaney River Valley SAC

Slaney River Valley SAC Conservation Objectives

The Habitats Directive requires the Appropriate Assessment process to assess the potential impacts of the development "in view of the site's conservation objectives". Site specific conservation objectives (SSCOs) for the qualifying interests of the Slaney River Valley SAC are provided in the table below, where available from the NPWS document "Conservation Objectives: Slaney River Valley SAC 000781" (NPWS, 2011).

TABLE 5.4 SLANEY RIVER VALLEY SAC CONSERVATION OBJECTIVES			
ATTRIBUTE	**MEASURE**	**TARGET**	**SELECTED NOTES**
[1130] Estuaries			
Habitat area	Hectares	The permanent habitat area is stable or increasing, subject to natural processes	Habitat area was estimated as 1,905ha using OSI data and the defined Transitional Water Body area under the Water Framework Directive.
Community distribution	Hectares	The following community types should be maintained in, or restored to, a natural condition: Mixed sediment community complex; Estuarine muds dominated by polychaetes and crustaceans community complex; and Sand dominated by polychaetes community complex	
[1140] Tidal Mudflats and Sandflats			
Habitat area	Hectares	The permanent habitat area is stable or increasing, subject to natural processes.	Habitat area was estimated as 1,027ha using OSI data.
Community distribution	Hectares	The following community types should be maintained in a natural condition: Estuarine muds dominated by polychaetes and crustaceans community complex; and Sand dominated by polychaetes community complex	
[1330] Atlantic Salt Meadows			
None Specified	-	-	-
[1410] Mediterranean salt meadows			
None Specified	-	-	-
[3260] Floating River Vegetation			
Habitat distribution	Occurrence	No decline, subject to natural processes	The full distribution of this habitat and its sub-types in this site is currently unknown. The basis of the selection of the SAC for the habitat is the presence of an excellent example of the vegetation assemblage
Habitat area	Kilometres	Area stable at 12.6km or increasing, subject to natural processes	
Hydrological regime: river flow	Metres per second	Maintain appropriate hydrological regimes	

TABLE 5.4 SLANEY RIVER VALLEY SAC CONSERVATION OBJECTIVES			
ATTRIBUTE	**MEASURE**	**TARGET**	**SELECTED NOTES**
Hydrological regime: tidal influence	Daily water level fluctuations - metres	Maintain natural tidal regime	associated with tidal reaches of large rivers between Enniscorthy and Polladerg townland. Due to regular disturbance (through variations in flow), river macrophytes rarely reach a climax condition but frequently occur as transient communities. A natural (relatively unmodified) flow regime is required for both plant communities and channel geomorphology to be in favourable condition, exhibiting typical dynamics for the river type.
Substratum composition: particle size range	Millimetres	For the tidal sub-type, the substratum of the channel must be dominated by particles of sand to gravel, with silt at the river margins	
Water quality: nutrients	Milligrams per litre	The concentration of nutrients in the water column must be sufficiently low to prevent changes in species composition or habitat condition	
Vegetation composition: typical species	Occurrence	Typical species of the relevant habitat sub-type reach favourable status	
Floodplain connectivity: area	Hectares	The area of active floodplain at and upstream of the habitat must be maintained	
[91A0] Old Oak Woodlands			
Habitat area	Hectares	Area stable or increasing, subject to natural processes, at least 146.17ha for sub-sites surveyed.	The sizes of at least some of the existing woodlands need to be increased in order to reduce habitat fragmentation and benefit those species requiring 'deep' woodland conditions. Oak regenerates poorly. In suitable sites ash can regenerate in large numbers although few seedlings reach pole size. Dead wood is a valuable resource and an integral part of a healthy, functioning woodland ecosystem.
Habitat distribution	Occurrence	No decline.	
Woodland size	Hectares	Area stable or increasing. Where topographically possible, "large" woods at least 25ha in size and "small" woods at least 3ha in size	
Woodland structure: cover and height	Percentage and metres	Diverse structure with a relatively closed canopy containing mature trees; subcanopy layer with semi- mature trees and shrubs; and well-developed herb layer	
Woodland structure: community diversity and extent	Hectares	Maintain diversity and extent of community types	
Woodland structure: natural regeneration	Seedling: sapling: pole ratio	Seedlings, saplings and pole age-classes occur in adequate proportions to ensure survival of woodland canopy	

TABLE 5.4 SLANEY RIVER VALLEY SAC CONSERVATION OBJECTIVES			
ATTRIBUTE	**MEASURE**	**TARGET**	**SELECTED NOTES**
Woodland structure: dead wood	m^3 per hectare; number per hectare	At least 30m^3/ha of fallen timber greater than 10cm diameter; 30 snags/ha; both categories should include stems greater than 40cm diameter	Mature and veteran trees are important habitats for bryophytes, lichens, saproxylic organisms and some bird species. Their retention is important to ensure continuity of habitats/niches and propagule sources. Includes ancient or long-established woodlands, archaeological and geological features as well as red-data and other rare or localised species. The following are the most common invasive species in this woodland type: Beech (*Fagus sylvatica*), Rhododendron (*Rhododendron ponticum*), Cherry laurel (*Prunus laurocerasus*)
Woodland structure: veteran trees	Number per hectare	No decline	
Woodland structure: indicators of local distinctiveness	Occurrence	No decline	
Vegetation composition: native tree cover	Percentage	No decline. Native tree cover not less than 95%	
Vegetation composition: typical species	Occurrence	A variety of typical native species present, depending on woodland type, including oak (*Quercus petraea*) and birch (*Betula pubescens*)	
Vegetation composition: negative indicator species	Occurrence	Negative indicator species, particularly non-native invasive species, absent or under control	
[91E0] Alluvial Forests			
Habitat area	Hectares	Area stable or increasing, subject to natural processes, at least 18.7ha for sites surveyed	The sizes of at least some of the existing woodlands need to be increased in order to reduce habitat fragmentation and benefit those species requiring ‘deep’ woodland conditions. Alder and oak regenerate poorly. Ash often regenerates in large numbers although few seedlings reach pole size.
Habitat distribution	Occurrence	No decline.	
Woodland size	Hectares	Area stable or increasing. Where topographically possible, "large" woods at least 25ha in size and “small” woods at least 3ha in size	
Woodland structure: cover and height	Percentage and metres	Diverse structure with a relatively closed canopy containing mature trees; subcanopy layer with semi- mature trees and shrubs; and well-developed herb layer	

TABLE 5.4 SLANEY RIVER VALLEY SAC CONSERVATION OBJECTIVES			
ATTRIBUTE	**MEASURE**	**TARGET**	**SELECTED NOTES**
Woodland structure: community diversity and extent	Hectares	Maintain diversity and extent of community types	Periodic flooding is essential to maintain alluvial woodlands along river floodplains. Dead wood is a valuable resource and an integral part of a healthy, functioning woodland ecosystem. Mature and veteran trees are important habitats for bryophytes, lichens, saproxylic organisms and some bird species. Their retention is important to ensure continuity of habitats/niches and propagule sources. Includes ancient or long-established woodlands, archaeological and geological features as well as red-data and other rare or localised species. The following are the most common invasive species in this woodland type: Sycamore (*Acer pseudoplatanus*) and Himalayan balsam (*Impatiens glandulifera*)
Woodland structure: natural regeneration	Seedling: sapling: pole ratio	Seedlings, saplings and pole age-classes occur in adequate proportions to ensure survival of woodland canopy	
Hydrological regime: Flooding depth/height of water table	Metres	Appropriate hydrological regime necessary for maintenance of alluvial vegetation	
Woodland structure: dead wood	m^3 per hectare; number per hectare	At least 30m^3/ha of fallen timber greater than 10cm diameter; 30 snags/ha; both categories should include stems greater than 40cm diameter (greater than 20cm diameter in the case of alder)	
Woodland structure: veteran trees	Number per hectare	No decline	
Woodland structure: indicators of local distinctiveness	Occurrence	No decline	
Vegetation composition: native tree cover	Percentage	No decline. Native tree cover not less than 95%	
Vegetation composition: typical species	Occurrence	A variety of typical native species present, depending on woodland type, including alder (*Alnus glutinosa*), willows (*Salix* spp) and, locally, oak (*Quercus robur*) and ash (*Fraxinus excelsior*)	
Vegetation composition: negative indicator species	Occurrence	Negative indicator species, particularly non-native invasive species, absent or under control	
[1029] Freshwater Pearl Mussel			

TABLE 5.4 SLANEY RIVER VALLEY SAC CONSERVATION OBJECTIVES			
ATTRIBUTE	**MEASURE**	**TARGET**	**SELECTED NOTES**
The status of the FPM as a qualifying Annex II species for the Slaney River Valley SAC is currently under review			
[1095] Sea Lamprey			
Distribution: extent of anadromy	% of river accessible	Greater than 75% of main stem length of rivers accessible from estuary	Artificial barriers can block or cause difficulties to lampreys' upstream migration, thereby limiting species to lower stretches and restricting access to spawning areas. In this site, some barrier modification is required (e.g. Clohamon weir) to permit sea lamprey passage. Juveniles burrow in areas of fine sediment in still water.
Population structure of juveniles	No. of age/size groups	At least three age/size groups present	
Juvenile density in fine sediment	Juveniles/m²	Juvenile density at least 1/m²	
Extent and distribution of spawning habitat	m² and occurrence	No decline in extent and distribution of spawning beds. Improved dispersal of spawning beds into areas upstream of barriers	
Availability of juvenile habitat	Number of positive sites in 3rd order channels (and greater), downstream of spawning areas	More than 50% of sample sites positive	
[1096] Brook Lamprey			
Distribution: extent of anadromy	% of river accessible	Access to all water courses down to first order streams	Artificial barriers can block lampreys' upstream migration, thereby limiting species to lower stretches and restricting access to spawning areas. Barrier modification required to facilitate passage of adult fish within channels.
Population structure of juveniles	No. of age/size groups	At least three age/size groups of brook/river lamprey present	
Juvenile density in fine sediment	Juveniles/m²	Mean catchment juvenile density of brook/river lamprey at least 2/m²	

TABLE 5.4 SLANEY RIVER VALLEY SAC CONSERVATION OBJECTIVES			
ATTRIBUTE	**MEASURE**	**TARGET**	**SELECTED NOTES**
Extent and distribution of spawning habitat	m² and occurrence	No decline in extent and distribution of spawning beds	Juveniles burrow in areas of fine sediment in still water.
Availability of juvenile habitat	Number of positive sites in 2nd order channels (and greater), downstream of spawning areas	More than 50% of sample sites positive	
[1099] River Lamprey			
Distribution: extent of anadromy	% of river accessible	Greater than 75% of main stem and major tributaries down to second order accessible from estuary	Artificial barriers can block lampreys' upstream migration, thereby limiting species to lower stretches and restricting access to spawning areas. Barrier modification required to facilitate passage of adult fish within channels. Juveniles burrow in areas of fine sediment in still water
Population structure of juveniles	No. of age/size groups	At least three age/size groups of river/brook lamprey present	
Juvenile density in fine sediment	Juveniles/m²	Mean catchment juvenile density of brook/river lamprey at least 2/m²	
Extent and distribution of spawning habitat	m² and occurrence	No decline in extent and distribution of spawning beds	
Availability of juvenile habitat	Number of positive sites in 2nd order channels (and greater), downstream of spawning areas	More than 50% of sample sites positive	
[1103] Twaite Shad			
Distribution: extent of anadromy	% of river accessible	Greater than 75% of main stem length of rivers accessible from estuary	In some catchments, artificial barriers block twaite shads' upstream migration,

TABLE 5.4 SLANEY RIVER VALLEY SAC CONSERVATION OBJECTIVES			
ATTRIBUTE	**MEASURE**	**TARGET**	**SELECTED NOTES**
Population structure-age classes	Number of age classes	More than one age class present	thereby limiting species to lower stretches and restricting access to spawning areas. Barrier modification required to facilitate passage of adult fish within channels. Regular breeding has not been confirmed in the River Slaney in recent years.
Extent and distribution of spawning habitat	m² and occurrence	No decline in extent and distribution of spawning habitats	
Water quality-oxygen levels	Milligrams per litre	No lower than 5mg/l	
Spawning habitat quality: Filamentous algae; macrophytes; sediment	[1106] Atlantic Salmon	Maintain stable gravel substrate with very little fine material, free of filamentous algal (macroalgae) growth and macrophyte (rooted higher plants) growth	
Distribution: extent of anadromy	% of river accessible	100% of river channels down to second order accessible from estuary	
Adult spawning fish	Number	Conservation Limit (CL) for each system consistently exceeded	
Salmon fry abundance	Number of fry/5 minutes electrofishing	Maintain or exceed 0+ fry mean catchment-wide abundance threshold value. Currently set at 17 salmon fry/5 min sampling	
Out-migrating smolt abundance	Number	No significant decline	
Number and distribution of redds	Number and occurrence	No decline in number and distribution of spawning redds due to anthropogenic causes	
Water quality	EPA Q value	At least Q4 at all sites sampled by EPA	
[1106] Atlantic Salmon			
Distribution: extent of anadromy	% of river accessible	100% of river channels down to second order accessible from estuary	Artificial barriers can block salmons' upstream migration, thereby limiting

TABLE 5.4 SLANEY RIVER VALLEY SAC CONSERVATION OBJECTIVES			
ATTRIBUTE	**MEASURE**	**TARGET**	**SELECTED NOTES**
Adult spawning fish	Number	Conservation Limit (CL) for each system consistently exceeded	species to lower stretches and restricting access to spawning areas. Smolt abundance can be negatively affected by a number of impacts such as estuarine pollution, hydroelectric schemes, predation and sea lice (*Lepeophtheirus salmonis*) Salmon spawn in clean gravels.
Salmon fry abundance	Number of fry/5 minutes electrofishing	Maintain or exceed 0+ fry mean catchment-wide abundance threshold value. Currently set at 17 salmon fry/5 min sampling	
Out-migrating smolt abundance	Number	No significant decline	
Number and distribution of redds	Number and occurrence	No decline in number and distribution of spawning redds due to anthropogenic causes	
Water quality	EPA Q value	At least Q4 at all sites sampled by EPA	
[1355] Otter			
Distribution	% positive survey sites	No significant decline	Otters need lying up areas throughout their territory where they are secure from disturbance. Broad diet that varies locally and seasonally, but dominated by fish, in particular salmonids, eels and sticklebacks in freshwater. Otters will regularly commute across stretches of open water up to 500m e.g. between the mainland and an island; between two islands; across an estuary. It is important that such commuting routes are not obstructed
Extent of terrestrial habitat	Hectares	No significant decline. Area mapped and calculated as 64.7ha above high water mark (HWM); 453.4ha along river banks/ around ponds	
Extent of marine habitat	Hectares	No significant decline. Area mapped and calculated as 534.7ha	
Extent of freshwater (river) habitat	Kilometres	No significant decline. Length mapped and calculated as 264.1km	
Extent of freshwater (lake/lagoon) habitat	Hectares	No significant decline. Area mapped and calculated as 0.4ha	
Couching sites and holts	Number	No significant decline	
Fish biomass available	Kilograms	No significant decline	
Barriers to connectivity	Number	No significant increase	
[1365] Common (Harbour) Seal			

TABLE 5.4 SLANEY RIVER VALLEY SAC CONSERVATION OBJECTIVES			
ATTRIBUTE	**MEASURE**	**TARGET**	**SELECTED NOTES**
Access to suitable habitat	No. of artificial barriers	Species range within the site should not be restricted by artificial barriers to site use.	Attribute and target based on background knowledge of Irish populations.
Breeding behaviour	Breeding sites	The breeding sites should be maintained in a natural condition.	
Moulting behaviour	Moult haul-out sites	The moult haul-out sites should be maintained in a natural condition	
Resting behaviour	Resting haul-out sites	The resting haul-out sites should be maintained in a natural condition.	
Disturbance	Level of impact	Human activities should occur at levels that do not adversely affect the harbour seal population at the site.	

Slaney River Valley SAC Conservation Status

According to the Habitat's Directive, favourable conservation status of a habitat is achieved when:

- Its natural range and areas it covers within that range are stable or increasing, and
- The specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and
- The conservation status of its typical species is favourable as defined below.

According to the Habitat's Directive, favourable conservation status of a species is achieved when:

- Population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and
- The natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and
- There is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

Table 5.5: The conservation statuses for the qualifying interests for the Slaney River Valley SAC are outlined below.

Code	Qualifying Interest	Conservation Status*
1130	Estuaries	Inadequate
1140	Tidal Mudflats and Sandflats	Inadequate
1330	Atlantic Salt Meadows	Inadequate
1410	Mediterranean Salt Meadows	Inadequate
3260	Floating River Vegetation	Inadequate
91A0	Old Oak Woodlands	Bad
91E0	Alluvial Forests	Bad
1029	Freshwater Pearl Mussel	Bad
1095	Sea Lamprey	Bad
1096	Brook Lamprey	Favourable
1099	River Lamprey	Unknown
1103	Twaite Shad	Bad
1106	Atlantic Salmon (*Salmo salar*)	Inadequate
1355	Otter (*Lutra lutra*)	Favourable
1365	Common (Harbour) Seal	Favourable

**Sourced from the Status of EU Protected Habitats and Species in Ireland (NPWS, 2019a and 2019b)*
***Sourced from NPWS (2017)*

6.0 ASSESSMENT OF LIKELY SIGNIFICANT EFFECTS: STAGE 1 SCREENING

6.1 DISTURBANCE TO PROTECTED HABITATS AND SPECIES

Tullow Town Park is partly located within the Slaney River Valley SAC along the eastern boundary of the proposed development. The proposed development is an existing Town Park within Tullow and without effective design, controls and mitigation there would be a significant risk of effects upon the protected site through loss or destruction of habitat, fragmentation of habitat or direct reduction in species density or diversity.

A riparian woodland exists within the site boundary to the north-east and is dominated by Willow (*Salix* spp.), Sycamore (*Acer pseudoplatanus*) and Ash (*Fraxinus excelsior*) with evidence of Indian Balsam (*Impatiens glandulifera*) and Three-cornered Garlic (*Allium triquetrum*) found during the site assessment. The tree species found here have been displaced or planted with some native and non-native and are not those species typically associated with Old Oak Woodlands [91A0] or Alluvial Forests [91E0]. However, the loss of this habitat could impact upon protected species. The closest Old Oak Woodlands habitat is approximately 7km (8.5km hydrologically downstream) south of the proposed development site. The closest Alluvial Forest is located approximately 5.6km (7.3km hydrologically) downstream, south of the proposed site. Indian Balsam and Three-cornered Garlic can impact on protected woodlands such as Alluvial Forests [91E0].

The Landscape Plan will include a mix of native and non-native non-invasive species within its design with additional tree planting proposed as well as wildflower meadows, rain gardens and raised planters. An area of tall vegetation will be maintained along adjacent the River Slaney which will provide protection and foraging opportunities for birds and mammals. Much of the existing vegetation and trees will be retained as per the Landscape Plan. Some vegetation will be removed along the banks of the River Slaney where both Third Schedule species are located. This report include mitigation measures for the treatment of these species to prevent further spread.

The closest mapped watercourse to the proposed site is the River Slaney adjacent the eastern boundary of the site. The River Slaney is part of the Slaney River Valley SAC. The proposed development site is located approximately 45km (hydrologically) from the tidal stretches of the River Slaney, thus qualifying interests associated with saltwater and tidal conditions would not be present.

Twaite Shad is mainly restricted to lower stretches of the River Slaney due to artificial barriers such as Clohamon weir along the Slaney main channel. Artificial barriers also restrict Lamprey Sp. migration upstream with surveying of the Slaney catchment found that juvenile lamprey were found both upstream and downstream of the Rivers Douglas and Slaney confluence in both the River Slaney main channel and its tributaries (Derreen and Derry) (King and Linnane, 2004). A fish survey by Inland Fisheries Ireland of the River Slaney in 2014 found salmon abundant (Kelly et al, 2015) in the River Slaney catchment.

Lamprey surveys within the Slaney River Valley SAC in 2003 (King and Linnane, 2004) note that juvenile brook / river lamprey were recorded in 33 out of 34 sites surveyed in the main Slaney channel and were recorded in 9 out of 12 sites surveyed in the River Derry (located approximately 16km downstream from the development site). Sea Lamprey were evident in the Slaney Main channel. The SAC Conservation Objectives report notes that upstream

migration may be inhibited by Clohamon weir, located approximately 25km downstream of the development site. Lamprey sp. have been recorded approximately 5km (hydrologically) downstream of the proposed site on the River Slaney (King and Linnane, 2004). The 2004 report noted the presence of river and brook lamprey throughout the Slaney River. It is therefore possible that these lamprey species are present within the vicinity of the proposed development.

There are no NBDC records for pearl mussel within the vicinity of the proposed development. Low numbers of adult pearl mussels have also been found in the Derry River downstream of Clonegal and in the River Slaney main channel downstream of the Derry River confluence (Moorkens, 2000). There is no historical evidence that the stretch of the River Slaney adjacent to the Tullow Town Park proposed development contains freshwater pearl mussel, and it is unlikely to be found at the location of the proposed town park. As no instream works are proposed, it is not considered that the proposed development would have direct impacts upon the qualifying interests or distribution of this species. However, a deterioration in water quality and increased sedimentation during the construction phase can cause a significant impact on this species.

There are also potential impacts to migratory species, in particular Salmon [1106], with regard to indirect impacts during the construction phase. There are no NBDC record for Salmon within the vicinity of the proposed development. Atlantic Salmon have been recorded within the River Derry downstream of the proposed development site. No construction works will take place within the River Slaney however, a deterioration in water quality and release of suspended solids could impact upon this species.

Evidence of otter (faeces) were recorded during the site walkover within the site boundary along the eastern River Bank. Given that the proposed development site is located adjacent the River Slaney, it is probable otter is in the surrounding area of the proposed site. There are records of Otter within 48m upstream of the proposed site on the River Slaney recorded as part of the Mammals of Ireland 2016-2025 (Kirwan, 2018). The proposed development site is comprised of managed amenity grassland, ornamental shrubs, buildings and artificial surfaces which can be considered as modified, species poor and of lower value to foraging otters. However, the Riparian woodland habitat would be considered of ecological importance for otter by providing cover and protection from disturbance. It is an opportunistic predator and will prey on small animals such as frogs, crayfish and a variety of fish including Salmon (NPWS, 2019c). An indirect impact could occur during the construction phase due to a deterioration in water quality and release of suspended.

The use of artificial lighting during the construction phases has the potential to negatively impact upon nocturnal species such as otter. Illumination can impact upon foraging areas. During the construction phase, works are not anticipated to be conducted outside of normal working hours, which would considerably reduce the potential impacts upon otter. The potential disturbance on protected habitats due to dust and upon protected species due to noise during the construction phase would not be considered significant, given the transient nature of construction works and the main construction hours of work being outside the active time for nocturnal species. The potential disturbance on protected species due to noise during the operational phase would not be considered significant as there would be no high noise generating equipment. Fauna within the area would be accustomed to noise commonly audible within the surrounding area such as vehicular, human, residential and agricultural activities.

Given the presence of third schedule invasive species, and close proximity of construction works along the River Slaney, it is therefore considered that the proposed development has the potential to result in risks to the protected habitats and species of the Slaney River Valley SAC due to habitat fragmentation or loss, disturbance or reduction in species density or diversity. Therefore, construction mitigation measures would be required.

6.2 INVASIVE SPECIES

Under Regulation 49(2) of the European Communities (Birds and Natural Habitats) Regulations 2011, save in accordance with a licence granted under paragraph (7), any person who plants, disperses, allows or causes to disperse, spreads or otherwise causes to grow in any place specified in relation to any plant which is included in Part 1 of the Third Schedule shall be guilty of an offence.

Materials containing invasive species are considered "controlled waste" and, as such, there are legal restrictions on their handling and disposal. Under Regulation 49(7) of the European Communities (Birds and Natural Habitats) Regulations 2011, it is a legal requirement to obtain a license to move "vector materials" listed in the Third Schedule, Part 3.

Table 6.1: National Biodiversity Data Centre records of high impact invasive species within a 10km square (S87) of the proposed development.

INVASIVE FLORA SPECIES	
Giant Hogweed (*Heracleum mantegazzianum*)	
Indian Balsam (*Impatiens glandulifera*)	Japanese Knotweed (*Fallopia japonica*).

The spread of invasive plant and animal species can negatively impact on the conservation objectives of certain Annex I habitats and species designated within SACs.

The risk of invasive species being introduced onto the site during the construction phase of the project is considered to be low, with no import of materials with the potential to contain invasive flora species planned. Materials excavated during construction works would be deposited within proximity to the site. There would be no export of excavated materials from the proposed development.

Indian Balsam (*Impatiens glandulifera*) and Three-cornered Garlic (*Allium triquetrum*) were recorded along the north-eastern banks of the River Slaney adjacent to the proposed development. Invasive species are a threat to riparian habitats. As Indian Balsam and Three-cornered Garlic are present within the River Slaney SAC, it is therefore considered that there would be a risk of the spread of invasive species to protected habitats downstream. Therefore, mitigation measures should be implemented to prevent the spread.

6.3 POTENTIAL IMPACTS ON WATER QUALITY

The proposed development is located within the Slaney sub-catchment (Slaney_SC_020), which is part of the Slaney and Wexford Harbour Catchment (ID_12). The closest mapped

watercourse to the proposed development site is the River Slaney which flows along the eastern boundary.

During the operational phase, surface water comprised of clean rain-water run-off would be directed to the new proposed drainage network. Surface water will ultimately discharge into the River Slaney via an existing outflow pipe and via a new proposed combined sewer granted under Planning Ref: 22235. The proposed drainage network will include SuDS features which is designed to manage surface water run-off and improve water quality. Rain gardens and permeable paving will allow surface water to filter to ground while overflow connections capture excess surface water during periods of heavy rainfall. Given the capacity of the proposed drainage network and nature of the proposed development during the operational phase, it is not considered that the proposed development would have a significant impact on the River Slaney SAC due to a deterioration in water quality during the operational phase.

It is not considered that the proposed development would cause a deterioration in water quality due to flooding as the playing areas will remain above the 1/1000 year predicted flood level. SuDS features such as rain gardens, permeable paving, overflow connections to the proposed drainage network allows for surface water to filter through the surface, reducing run-off and promoting groundwater recharge. A Flood Risk Assessment (FRA) was completed by Ash Ecology & Environmental Ltd (AEE(in March 2024). The report concludes that "*the proposed development at Town Park, Tullow, Co. Carlow, has been subject to a comprehensive flood risk assessment. The assessment has identified the potential flood risks, evaluated the impact of the proposed works, and appraised the overall site profile against the maximum predicted flood level. The development is deemed appropriate regarding flood risk and satisfies the relevant objectives and principles set out in the OPW Flood Risk Management guidelines and Carlow County Development Plan. The development has been designed to minimise its impact on the existing flood plain and surrounding areas*".

During the construction phase of the project, a deterioration in water quality can arise through the release of suspended solids during excavation works, the release of or leachate from uncured concrete and the release of hydrocarbons (fuels and oils). Suspended solids could become entrained in surface water run-off and could affect aquatic qualifying interests / special conservation interests through deposition. A deterioration in water quality has the potential to have a significant impact upon the qualifying interests of the Slaney River Valley SAC, particularly qualifying interests which have conservation objectives relating to water quality, such as protected species of fish and Lamprey.

It is therefore considered that control measures would need to be implemented during the construction phase to ensure there is no significant impact upon the Slaney River Valley SAC.

6.4 SCREENING CONCLUSION

In order for an effect to occur, there must be a pathway between the source and the receptor (the SAC). Where a pathway does not exist, an impact cannot occur.

The proposed development is located adjacent to the Slaney River which is part of the Slaney River Valley SAC (Site Code: 00781). As detailed above, it is considered that the proposed

development would result in risks to the protected habitats and species of the Slaney River Valley SAC due to habitat fragmentation or loss, disturbance, reduction in species density or species diversity.

During construction works, the proposed development has the potential to impact upon the qualifying interests / special conservation interests of Slaney River Valley SAC due to a potential deterioration in water quality and likely presence of invasive species.

Therefore, a Natura Impact Statement is required.

7.0 ASSESSMENT OF LIKELY EFFECTS: STAGE2 APPROPRIATE ASSESSMENT

Describe the significant effects, if any, on the relevant European site which have occurred, which are occurring or which can reasonably be expected to occur as a result of the project or plan (alone or in combination).

The proposed development has the potential to impact upon the qualifying interests of the Slaney River Valley SAC due to a potential habitat fragmentation or loss, disturbance, reduction in species density or species diversity, deterioration in water quality and spread of invasive species during the construction phase.

The design and operational controls of the project are essential to ensure that there is no disturbance or impedance of migration for protected fish species or mammals such as otter.

During construction works, there is a potential for indirect impacts upon otter, salmon and other species if construction works are to take place within close proximity of the River Slaney.

There is potential for water quality deterioration through the release of suspended solids during excavation works. Suspended solids could become entrained in surface water run-off and could affect aquatic qualifying interests through deposition. Nutrients can be bound in suspended solids, therefore, a significant increase in suspended solids can result in excessive eutrophication, leading to the deoxygenation of waters and subsequent asphyxia of aquatic species. An increase in sediments has the potential to impact upon fish species by damaging gravel beds required for spawning, smothering fish eggs and in extreme cases, by interfering with the gills of fish. An increase in suspended solids also has the potential to reduce water clarity, which can impact the light penetration of water and may also affect certain behaviours of aquatic fauna such as foraging success.

Runoff entering a watercourse has the potential to cause an impact on water quality and lead to eutrophication. A potential source of chemical contamination would be from the release of hydrocarbons (oils, fuels) from construction plant, equipment. Hydrocarbons can affect water quality, potentially resulting in toxic conditions for aquatic flora and fauna. Oil films on the water surface can disrupt oxygen diffusion from the atmosphere, resulting in de-oxygen of waters.

Another potential source of contamination would be the release of uncured concrete. In the event of uncured concrete entering a waterbody, the pH would be altered locally, potentially leading to the death of aquatic flora and fauna and an alteration to the waterbody substrate.

The spread of invasive species has the potential to migrate and colonise downstream areas, altering the species diversity of protected habitats. Indian Balsam and Three-cornered Garlic have the potential to impact on habitats associated with the Slaney River Valley SAC.

The table below briefly outlines the occurrence of the qualifying interests of the Slaney River Valley SAC in relation to the development site, taking cognisance of the NPWS "*Conservation Objectives: Slaney River Valley SAC 000781*", and of Volumes 1, 2 and 3 of the 2013 NPWS Reports, "The *Status of EU Protected Habitats and Species in Ireland*".

The following table also outlines which of the qualifying interests may be impacted upon by a potential deterioration in water quality and impact of invasive species from the proposed development.

TABLE 7.1 SLANEY RIVER VALLEY SAC		
QUALIFYING INTEREST	**OCCURRENCE / ASSESSMENT**	**POTENTIAL IMPACT**
[1130] Estuaries	The development is located outside the current known distribution, current range and favourable reference range of these qualifying interests (NPWS, 2019b). The nearest examples of these qualifying interests are located at a considerable distance (approximately 46km) downstream of the development site (NPWS, 2011). Given the considerable distance and nature of the proposed development, it is not anticipated that the proposed development would have the potential to negatively impact upon these qualifying interests due to a potential deterioration in water quality.	No
[1140] Tidal Mudflats and Sandflats		
[1330] Atlantic Salt Meadows (*Glauco-Puccinellietalia maritimae*)		
[1410] Mediterranean salt meadows (*Juncetalia maritimi*)		
[3260] Floating River Vegetation	The development is located within the current known distribution, current range and favourable reference range of this qualifying interest (NPWS, 2019b). This habitat is noted in the SAC site synopsis as being present along much of the freshwater stretches of the site. Floating river vegetation was not recorded during the site walkover survey. Areas dominated with Crowfoot are typically of low diversity and low conservation value. While Common Water-crowfoot ((*Ranunculus aquatilis*) was recorded within the Slaney adjacent to the proposed development it was not dominant within the watercourse. It is likely that this habitat is upstream or downstream of the proposed site given the current distribution map. The main issues for river habitats are hydrological and morphological change, eutrophication and pollution. Therefore, precautionary protective measures would need to be undertaken during construction.	Yes
[91A0] Old Oak Woodlands	The development is located within the current known distribution and favourable reference range of this qualifying interest (NPWS, 2019b). According to the SAC Conservation Objectives report, the nearest area of old oak woodland from the proposed development site is approximately 7km (8.5km hydrologically downstream) from the site. However, unsurveyed areas maybe present within the SAC. Old oak woodlands are a terrestrial habitat, therefore a potential deterioration in water quality would not be anticipated to have a significant adverse impact upon this qualifying interest. Invasive species are a threat to this habitat. Precautionary measures should be taken to prevent the spread of invasive species such as Indian balsam (*Impatiens glandulifera*) and Three-cornered garlic (*Allium triquetrum*).	Yes
[91E0] Alluvial Forests*	The development is located outside the current known distribution but within the current range and favourable reference range of this qualifying interest (NPWS, 2019b). According to the SAC	Yes

TABLE 7.1 SLANEY RIVER VALLEY SAC		
QUALIFYING INTEREST	**OCCURRENCE / ASSESSMENT**	**POTENTIAL IMPACT**
	Conservation Objectives report, the nearest area of alluvial forests from the proposed development site is approximately 5.6km (7.3km hydrologically downstream) from the site. However, the NPWS report notes that further unsurveyed areas may be present within the SAC. Water quality is listed as a minor threat to this habitat and a potential deterioration in water quality would not be anticipated to have a significant adverse impact upon this qualifying interest. However, the introduction of invasive species is a significant threat to this habitat. Measures should be taken to prevent the spread of invasive species such as Indian balsam (*Impatiens glandulifera*) and Three-cornered garlic (*Allium triquetrum*) found within the proposed development boundary.	
[1029] Freshwater Pearl Mussel (*Margaritifera margaritifera*)	The freshwater pearl mussel is a long-lived, bivalve mollusc found in clean, fast-flowing rivers and occasionally in lakes. It is widespread in Ireland, occurring in more than 160 rivers and a handful of lakes. However, the population has been in decline for a long time, with the current decline attributed to sedimentation and enrichment of its habitat (NPWS, 2019b). The species has an unusual life cycle. Eggs develop into the larval stage (glochidia), which are brooded in the female gills before being released into open water. A small number are inhaled by passing salmonid fish, which act as the mussels' temporary hosts. Once mature enough to exist independently, they fall off their hosts and bury into gravel where they filter feed (Moorkens, 2000). The proposed development is located within the current known distribution, current range and favourable reference range of this qualifying interest (NPWS, 2019c). The SAC Conservation Objectives report notes that the status of the pearl mussel as a qualifying interest for the site is currently under review. There are no NBDC records for pearl mussel within the vicinity of the proposed development. The freshwater pearl mussel is concentrated in the Derreen River catchment within the Slaney catchment (DoEHLG, 2010a). The Derreen River flows into the River Slaney approximately 5.1km downstream of the proposed development. The Second draft Catchment Management Plan for Freshwater Pearl Mussel in the Derreen River (DoEHLG, 2010b) notes that the Derreen River is failing in its habitat quality and population demographic profile. Generally low densities of mussels were found in the Derreen together with an apparent absence of juveniles and small mussels. The catchment fails most of the requirements as specified in the European Communities Environmental Objectives	Yes

TABLE 7.1 SLANEY RIVER VALLEY SAC		
QUALIFYING INTEREST	**OCCURRENCE / ASSESSMENT**	**POTENTIAL IMPACT**
	(Freshwater Pearl Mussel) Regulations 2009. Low numbers of adult pearl mussels have also been found in the Derry River downstream of Clonegal and in the River Slaney main channel downstream of the Derry River confluence (Moorkens, 2000). Freshwater Pearl Mussel are sensitive to sedimentation and nutrient enrichment. Furthermore, as the larval stages relay on salmonid fish hosts, any potential impact on salmonids can have an impact upon the Freshwater Pearl Mussel. While there is currently no evidence to suggest that populations exist within the vicinity of, or immediately downstream of, the development site, there remains a possibility, although slight, that Freshwater Pearl Mussel are present within the area. Pollution of water, pollution with fine sedimentation and nutrient can impact this species. Therefore, precautionary protective measures would need to be undertaken during construction.	
[1095] Sea Lamprey (*Petromyzon marinus*)	Sea lamprey are an anadromous species, with adults living at sea and migrating to freshwater for spawning in late May or June. The fertilised eggs hatch within days, with the larvae burrowing into fine sediment where they filter feed for a number of years. Transformation to young adults occurs in summer and young adults can be found migrating downriver to estuarine waters in autumn – winter. The development site is located outside the current known distribution, current range and the favourable reference range of this qualifying interest (NPWS, 2019c). The SAC Conservation Objectives report notes that upstream migration may be inhibited by artificial barriers, such as Clohamon weir, located approximately 25km (hydrologically) downstream of the development site. Lamprey surveys within the Slaney River Valley SAC in 2003 (King and Linnane, 2004) note that no juvenile sea lamprey were recorded within the Slaney main channel, while only small numbers of juvenile sea lamprey were recorded within the River Derry (confluence located approximately 16.2km downstream from the development site). The survey also noted that a number of sea lamprey redds were observed within the Slaney main channel, in particular along the stretch of river between Bunclody and Enniscorthy, approximately 21.2km downstream of the development site. While unlikely, there remains a possibility that sea lamprey are present within the vicinity downstream of the development site. Sea lamprey may be adversely impacted upon by sedimentation and water pollution. Therefore, there is potential for the development to have an impact upon this	Yes

TABLE 7.1 SLANEY RIVER VALLEY SAC		
QUALIFYING INTEREST	**OCCURRENCE / ASSESSMENT**	**POTENTIAL IMPACT**
	qualifying interest due to a potential deterioration in water quality and release of suspended solids during the construction phase.	
[1096] Brook Lamprey (*Lampetra planeri*)	The brook lamprey is the smallest of the three lampreys native to Ireland and is the only species that is non-parasitic and spends all its life in freshwater. Adults spawn in spring, excavating shallow nests in gravel areas of reduced flow. Adult fish die after spawning. After hatching, larvae drift/swim downstream to areas with a fine silt composition. They burrow into this bed material and live as filter feeders for years before transforming into young adult fish. The young adults overwinter before migrating short distances upstream to gravelled areas where they spawn. The development is located within the current known range and distribution of these qualifying interests of Brook Lamprey (NPWS, 2019c).	Yes
[1099] River Lamprey (*Lampetra fluviatilis*)	River lamprey are an anadromous species, with adults living at sea and migrating to freshwater for spawning in March and April. The adult fish die after spawning. The fertilised eggs hatch within days, with the larvae burrowing into fine sediment where they filter feed for a number of years before transforming into adult fish. The young river lamprey then migrate downriver to estuarine waters. River and brook lamprey are indistinguishable as larvae. The mature adult forms are distinguishable on the basis of body size. Lamprey surveys have necessarily focussed on juvenile lamprey. Consequently, the vast majority of available data relates to "*Lampetra* sp."and cannot be assigned to one species or the other. The development is located within the current known range and distribution of these qualifying interests of Brook Lamprey (NPWS, 2019c). The Slaney River Valley Conservation Objectives report notes that upstream migration may be inhibited by artificial barriers, such as Clohamon weir, located approximately 25km downstream of the development site. Lamprey surveys within the Slaney River Valley SAC in 2003 (King and Linnane, 2004) note that juvenile brook / river lamprey were recorded in 33 out of 34 sites surveyed in the main Slaney channel, and were recorded in 9 out of 12 sites surveyed in the River Derry (confluence located approximately	

TABLE 7.1 SLANEY RIVER VALLEY SAC		
QUALIFYING INTEREST	**OCCURRENCE / ASSESSMENT**	**POTENTIAL IMPACT**
	16.2km downstream from the development site). 9 out of 10 sites surveyed within the Derreen River (5.1km hydrologically downstream) recorded juvenile brook/river lamprey also. It is therefore possible that these lamprey species are present within the vicinity of the proposed development. Brook and River Lamprey may be impacted upon by sedimentation and water pollution as a result of the proposed development. Therefore, precautionary protective measures would need to be undertaken during construction.	
[1103] Twaite Shad (*Alosa fallax*)	Twaite Shad spend most of their life in estuaries and coastal waters but migrate upriver to spawn in late spring. Following spawning, adult Twaite Shad return to estuaries. Limited knowledge indicates that Irish Twaite Shad may live in estuarine waters for at least two full years prior to going to sea. The development is located outside the current known distribution and favourable reference range of this qualifying interest (NPWS, 2019c). The SAC Conservation Objectives report notes that upstream migration may be inhibited by artificial barriers, for example Clohamon weir located approximately 25km downstream of the development site. There are no records on the NBDC for Twaite Shad within the Slaney region. During shad surveys in 2003/2004 (King and Linnane, 2004), no adult or juvenile shad were captured, however, two shad were recorded in the River Slaney near the estuary by commercial netsmen. No Twaite Shad were recorded during surveys undertaken in 2014 by Inland Fisheries Ireland (Kelly *et al.*, 2015) at two sampling locations along the River Derry at Balisland Bridge and Ballyknocker, nor were any Twaite Shad recorded at the sampling location along the River Slaney at Bunclody (approximately 21.2km downstream of the development). Twaite Shad populations are likely in decline due to overfishing in coastal waters. It is therefore not anticipated that the proposed development would have the potential to negatively impact upon this qualifying interest. However, gravel beds for spawning must be free of filamentous algal (macroalgae) growth and macrophyte (rooted higher plants) growth. Pollution from runoff is both a pressure and threat to this species. Therefore, precautionary protective measures would need to be undertaken during construction works.	Yes
[1106] Atlantic Salmon (*Salmo salar*)	Atlantic Salmon use rivers to reproduce and as nursery areas. Eggs are deposited during winter in river gravels. The eggs hatch into alevins in spring, which in turn develop into fry. The fry feed for the summer and autumn, gradually becoming parr. Fry and parr feed primarily upon invertebrates. The Irish	Yes

TABLE 7.1 SLANEY RIVER VALLEY SAC		
QUALIFYING INTEREST	**OCCURRENCE / ASSESSMENT**	**POTENTIAL IMPACT**
	population generally comprises fish that spend two winters in freshwater before going to sea in spring as smolts. Adults spend 1-3 years at sea, feeding upon crustaceans and fish as they migrate to feeding grounds in the North Atlantic. The majority of Irish fish spend one winter at sea before returning to their natal rivers, mainly during the summer, as grilse. The development is located within the current known distribution, current range and favourable reference range of this qualifying interest (NPWS, 2013c). Salmon are present throughout the Slaney catchment, and the River Slaney is designated as a Salmonid Water EC (Quality of Salmonid Waters) Regulations (S.I. no. 293 of 1988). Surveys were undertaken by Inland Fisheries Ireland in 2014 (Kelly *et al.*, 2015) at two sampling locations along the River Derry at Balisland Bridge and Ballyknocker, and at sampling locations along the River Slaney at Bunclody approximately 21.2km downstream of the development. Salmon was recorded as the most common fish species at the Ballyknocker sampling site on the River Derry, and the second most common fish species at the Balisland sampling site. Salmon was recorded at both of the sampling sites on the River Slaney and was the most common fish species recorded at the Bunclody sampling site. It is therefore probable that Atlantic Salmon are present within the vicinity of the proposed development. Salmon, particularly juveniles and spawning beds, are sensitive to sedimentation and water pollution. The conservation status of salmon in the River Slaney and its tributaries is dependent on good water quality status, as this species requires clean water (Q4) for spawning and early life stages. Therefore, there is potential for the proposed development to have an impact upon this qualifying interest due to a potential deterioration in water quality and release of sediments during construction works.	
[1355] Otter (*Lutra lutra*)	Otters have two basic requirements: aquatic prey and safe refuges where they can rest. Otters are opportunistic predators with a broad and varied diet. In freshwater areas, a variety of fish will be taken, while crayfish and frogs can be important locally or seasonally. The development is located within the current known distribution, current range and favourable reference range of Otter (NPWS, 2013c). Otter is widespread in the Slaney River Valley SAC, while	Yes

TABLE 7.1 SLANEY RIVER VALLEY SAC		
QUALIFYING INTEREST	**OCCURRENCE / ASSESSMENT**	**POTENTIAL IMPACT**
	the NBDC records Otter have been recorded within 48m upstream of the proposed site on the River Slaney (Kirwan, 2018). Six otter surveys have been conducted in the Slaney Catchment from 1980/81 to 2010/11 (Reid *et al.,* 2013). Otter incidence varied from 96.5% occurrence during the National Survey in 1980/81 to 42.9% occurrence in 2010. Otter incidence during the Rapid Assessment Surveys varied from 63% in 2006 to 64.8% in 2010. Evidence of otter (spraints) was recorded during the site assessment, therefore it is likely that Otter are foraging within the vicinity of the proposed development. A significant impact on water quality could indirectly impact upon this qualifying interest by causing a reduction in prey populations and availability. Therefore, precautionary protective measures would need to be undertaken during construction.	
[1365] Common (Harbour) Seal (*Phoca vitulina*)	Harbour seals are widely recorded around the Irish coastline. They feed at sea but regularly haul out on to rocky shores/inter-tidal sandbanks to rest, breed, moult and socialise. Given their mobility and the potential for seasonal movements in response to breeding and energetic requirements, prey distribution and abundance, and other natural processes, it is likely that harbour seals move regionally within Irish waters and that some move between Irish waters and adjacent jurisdictions. The development is located outside the current known distribution and favourable reference range of the Harbour Seal (NPWS, 2019c). Both the nearest record on the NBDC and nearest example of this qualifying interest's habitat according to the SAC Conservation report is for Enniscorthy, approximately 45km downstream of the site. Given the considerable distance, it is not anticipated that the development would have direct or indirect negative impacts upon these qualifying interests.	No

Slaney River Valley SAC Conservation Objectives

The relevant site-specific conservation objectives for the qualifying interests which have been identified as being potentially impacted upon by the development are outlined below.

Floating River Vegetation
The concentration of suspended solids in the water column should be sufficiently low to prevent excessive deposition of fine sediments. Concentration of nutrients in the water column should be sufficiently low to prevent changes in species composition or habitat condition.

Freshwater Pearl Mussel (*Margaritifera margaritifera*)
The status of this species as a qualifying species for this site is currently under review and no conservation objectives are available. A potential deterioration in water quality may still impact upon this species.

Alluvial Forests
Invasive species are a threat to this habitat.

Old Oak Woodlands
Invasive species are a threat to this habitat.

Sea Lamprey (Petromyzon marinus)
A potential deterioration in water quality may still impact upon this species.

Brook Lamprey (*Lampetra planeri*) and River Lamprey (*Lampetra fluviatilis*)
None in relation to water quality. However, a potential deterioration in water quality may still impact upon this species.

Twaite Shad (*Alosa fallax fallax*)
Water quality oxygen levels no lower than 5mg/l

Atlantic Salmon (*Salmo salar*)
Water quality (EPA Q value): At least Q4 at all sites sampled by EPA

Otter (*Lutra lutra*)
Fish biomass available: A potential deterioration in water quality may affect fish populations and availability.

8.0 MITIGATION MEASURES

This assessment has determined that the proposed development has the potential to impact upon the Slaney River Valley SAC due to potential habitat fragmentation or loss, disturbance, reduction in species density or species diversity, deterioration in water quality and spread of invasive species during the construction phase.

As discussed in Section 7, it is considered that the proposed development has the potential to impact upon the following qualifying interests of the Slaney River Valley SAC:

- [3260] Floating River Vegetation
- [91E0] Alluvial Forests
- [1029] Freshwater Pearl Mussel
- [1095] Sea Lamprey
- [1096] Brook Lamprey
- [1099] River Lamprey
- [1103] Twaite Shad
- [1106] Atlantic Salmon
- [1355] Otter
- [91A0] Old Oak Woodlands

The following mitigation measures would be employed to ensure that there would be no significant impacts to the listed habitats or species, as listed above, due to a potential deterioration in water quality or spread of invasive species during construction works.

8.1 GENERAL REQUIREMENTS

- Training of construction manager and other relevant personnel on monitoring and mitigation measure requirements;
- Daily visual inspection completed and signed by construction manager, or specified and suitably trained deputy;
- Record of all visual inspections to be kept on file and available for review by relevant authorities;
- Construction works should be planned to minimise machinery access and movement along the bankside, to avoid and minimise disturbance of riparian woodland habitat;
- All construction works will be confined as far as possible to the development footprint;

8.2 BIODIVERSITY PROTECTION PROTOCOL

- No construction works would be conducted outside of normal working hours, to reduce potential noise disturbance to nocturnal species;
- Otter proof fencing to located around the construction site to prevent otter from accessing the site;
- Where possible, vegetation removal works will be scheduled outside of the 1st of March to the 31st of August period, so as not to disturb nesting bird species;
- All construction works will be confined to the development footprint and will not require works within the River Slaney Main Channel;

- The planting of substantial landscape features integrated to the wider network of green corridors such as hedgerows, woodland and scrub along the eastern boundary between the proposed development and the River Slaney;
- Should a protected fauna species such as Bat species, Badger, Otter (*Lutra lutra*) or any other protected species be found during the construction works, an officer of the NPWS would be notified prior to the resumption of construction works;
- Lighting will be sensitive to protected species and will be angled away from trees and the River Slaney during the construction and operational phase;

8.3 WATER QUALITY

Measures that would be employed to ensure that there would be no significant impacts to the listed habitats or species, as listed above, of the Slaney River Valley SAC due to a potential deterioration in water quality:

- The construction works contractor would adhere to standard construction best practice, taking cognisance of the Construction Industry Research and Information Association (CIRIA) guidelines "*Control of Water Pollution from Construction Sites; guidance for consultants and contractors*" 2001 and "*Control of Water Pollution from Construction Sites – Guide to Good Practice*", 2002;
- While construction works will not take place within the immediate vicinity of any watercourses, cognisance should be taken of the 2016 guidelines published Inland Fisheries Ireland, "*Guidelines on Protection of Fisheries During Construction Works in and adjacent to Waters*";
- Only clear vegetation when works are required to prevent leaving exposed ground for long periods of time;
- Re-seeding of exposed areas should be undertaken as soon as possible to stabilise the soil and prevent runoff;
- Regular visual inspections would be undertaken of the site access road to ensure no silt-laden surface water runoff leaves the site, with the potential to either join with any adjacent surface water drainage systems within the vicinity or travel to along the road network to the road network;
- Silt fencing would be placed along any potential area debris or sediment that could enter the River Slaney (See Appendix D for Silt Fencing Specifications). Silt fencing would remain in place and maintained as appropriate until the completion of construction works;
- Where spoil is generated, this would only be stored temporarily. A designated spoil area would be established by the construction works contractor within site footprint. This would be located away from any watercourse such as the River Slaney or drainage ditch;
- Where possible, spoil would be covered or alternatively, graded to avoid ponding or water saturation;

- Excavations and earth-moving activities would be planned outside periods of heavy rainfall, to limit the potential for suspended solids to become entrained within surface water run-off;
- Manhole covers and stormwater gullies will be protected by silt blankets and additional measures such as sandbags to be incorporated on steeper gradients if required
- Should water be encountered during excavation works, water would be pumped to a silt control feature, such as a lagoon/infiltration area used for settlement;
- This lagoon/infiltration area must have adequate capacity and water must be filtered before discharging. Water must not be directly discharged to the River Slaney;
- The lagoon/infiltration area will be located away from any steep sloping ground;
- Pumping operations would be supervised at all times;
- All construction plant machinery and equipment would be maintained in good working order and regularly inspected;
- A designated area for the storage of hydrocarbons would be established by the construction works contractor and inspected on a regular basis;
- Spill kits, adequately stocked with spill clean-up materials such as booms and absorbent pads, would be readily available onsite;
- The construction works contractor would ensure the relevant site personnel are trained in spillage control;
- In the unlikely event of a suspected deterioration in water quality within the River Slaney due to construction works at the development site, works would immediately cease, an investigation into the cause undertaken and the relevant NPWS and Inland Fisheries Ireland personnel informed.
- The use of herbicides/pesticides or chemicals will not be used within 10m of the banks of the River Slaney or within the Island to the east.

In addition to the above measures, the construction works contractor would take cognisance of the following guidelines:

- CIRIA, 2001: *Control of Water Pollution from Construction Sites; guidance for consultants and contractors*;
- CIRIA, 2002: *Control of Water Pollution from Construction Sites – Guide to Good Practice*;
- IFI, 2016: *Guidelines on Protection of Fisheries During Construction Works in and adjacent to Waters*.

8.4 INVASIVE SPECIES

Indian Balsam (*Impatiens glandulifera*) and Three-cornered Garlic (*Allium triquetrum*) were recorded within the red line boundary of the proposed development during the site assessment.

Indian Balsam (*Impatiens glandulifera*) is an invasive plant species that originates from the western Himalayas but has become established in various regions globally, including Ireland,

due to its ornamental appeal (Caffrey et al., 2011). Optimally, Indian Balsam thrives in moist and semi-shaded environments, leading to its prevalence along watercourses, wet woodlands, and damp meadows (Hejda et al., 2009). Each plant can produce up to 800 seeds, which are dispersed widely by the explosive dehiscence of its seed pods. These seeds can also be spread by water, enabling the plant's rapid colonization of riverbanks (Beerling and Perrins, 1993). In terms of ecological impact, dense stands of Indian Balsam can outcompete and displace native vegetation, resulting in a decrease in plant diversity (Hejda et al., 2009). The plant dies back over winter, leaving riverbanks bare and susceptible to erosion, and its presence can also alter habitat structures, thereby affecting associated fauna (Caffrey et al., 2011).

Three-cornered Garlic (*Allium triquetrum*) is a bulbous perennial plant reaching a height of up to 60cm. It is native to the Mediterranean. The leaves are green, soft, fleshy and angled with three leaves typically emerging from the base. They often droop and are alternatively arranged and typically 15-20cm in length and 3-20mm in width. Three-cornered Garlic can create monocultural masses which reduces species diversity and biodiversity as it out competes native plants. It is an aggressive invader and can quickly colonise a large area of land (The Knotweed Killers, 2023).

Measures that would be employed to ensure that there would be no significant impacts to the listed habitats or species, as listed above, of the Slaney River Valley SAC due to the spread of invasive species include the following;

- Given the persistent nature of invasive species, a long-term management plan should be in place. This plan should include regular monitoring and control measures to ensure that any new growth of invasive species is detected and dealt with promptly;
- All relevant construction personnel would be trained in invasive flora species (main species of concern) identification and control measures;
- An invasive species management plan must be put in place for the treatment of Indian Balsam (*Impatiens glandulifera*) and Three-cornered Garlic (*Allium triquetrum*) such as *Best Practice Management Guidelines on Himalayan Balsam* (Kelly, Maguire, and Cosgrove, 2008).
- Indian balsam (*Impatiens glandulifera*) has a very shallow root system with control by hand an easier option over herbicide use. Pulling by hand must be done prior to flower development as seed dispersal will occur if plant is disturbed.
- Uprooted plants can be left to air dry and decompose on a non-permeable membrane. This method is highly suited to dealing with initial outbreaks of the species and in areas with sensitive native species;
- Re-seeding of bare soil would be undertaken as soon as possible, where required, to promote the rapid stabilisation of soils;
- Appropriate weed management plan should be put in place to help establish any landscaped areas.
- Any vegetation cutting would only occur once control of Indian Balsam (*Impatiens glandulifera*) and Three-cornered Garlic (*Allium triquetrum*) has occurred;
- Repeated strimming of Three-cornered Garlic can also be used as it depletes the energy stored within the bulb however, this would need to be regularly repeated for at least one

year. Direct removal of bulbs is best done during the months of March and April when the plant is fully formed;

- The construction works contractor would ensure that all equipment and plant is inspected for the presence of invasive species and thoroughly washed prior to arriving to, and leaving from, the development site;
- The use of herbicides with Glyphosphate can be very effective in the treatment of Three-cornered Garlic and Indian Balsam;
- Cognisance will be taken of the National Roads Authority's Guidelines on "*The Management of Noxious Weeds and Non-Native Invasive Plant Species on National Roads*";
- Herbicide application should only be carried out by suitably qualified contractors or operators with strict reference to the product label, local land use, health and safety considerations and any pertinent regulations. All herbicide treatment must comply with the pesticide regulations S.I. No. 155/2012 - European Communities (Sustainable Use of Pesticides) Regulations 2012 or any amended or current regulations at the time of use.
- Only suitably licenced and trained personnel should use herbicides, following guidelines and instructions on correct use;

8.5 BIOSECURITY MEASURES

- The construction works contractor would ensure that all equipment and plant is inspected for the presence of invasive species and thoroughly washed prior to arriving to, and leaving from, the development site;
- All relevant construction personnel would be trained in invasive flora species (main species of concern) identification and control measures;
- Where sandbags are used, these must not have been used in different watercourse before their use in the River Slaney or they must be disinfected and dried before use along the River Slaney;

8.6 OPERATIONAL MEASURES

- Regular site inspections would be undertaken to ensure that no growth of invasive species has taken place;
- Treatment should be carried out where invasive species persist;
- Follow measures set out within an Invasive Species Management Plan;

9.0 IN-COMBINATION EFFECTS

The following plans and projects were reviewed and considered for in-combination effects with the proposed development:

- Carlow County Development Plan 2015-2021
- Carlow County Development Plan 2022-2028;
- Proposed and permitted developments in the area available on Carlow County Council planning system.

The proposed development is located within the centre of Tullow Town of which is considered a district town according to the Carlow County Council Development Plan 2022-2028. The town of Rathvilly is located approximately 9.3km to the north of the proposed site. The town of Baltinglass is located approximately 15.6km north of the site. The National Road N81 is located approximately 0.99km to the north of the site development providing connectivity to nearby towns and villages. An objective within the Carlow County Council Development Plan 2015-2022 includes, the "day-to-day recreational provision to local communities which will be provided by a series of district or neighbourhood parks". The following plans and projects were reviewed and considered for in-combination effects with the proposed development.

Table 9.1: Recent planning applications close to the proposed site

APPLICATION NO.	DEVELOPMENT TYPE	OUTCOME	APPROXIMATE DISTANCE
15222	For the development of a two-storey extension of 73m2 to the side of an existing two storey dwelling house with attic, consisting of a sitting room on the ground floor, two new bedrooms and a toilet upstairs and associated site works.	Granted – Conditional	0.043m NE
22140	For the development of a c. 0.0102ha site in the carpark of Tesco, Abbey Street, Tullow, Co. Carlow, R93 PN25. The development will consist of (i) permission for "Click and Collect" signage in the existing carpark, (ii) For the construction of a sheltered canopy (c. 50 sq.m) in the existing carpark for the purpose of providing 2 no. dedicated "Click and Collect" spaces and (iii) a pedestrian crossing and all associated site works.	Granted – Conditional	0. 073km E
2076	To demolish part of an existing Public House with Bed & Breakfast accommodation over and to convert it to 8 single occupancy residential units and to construct 2 single occupancy residential units.	Granted – Conditional	0.087km E
15349	For the rection of 6 no. 12mt high flood light poles, 2 no. associated flood lights on each pole, a 4.1m high ball stop netting on top of existing 2.4m high mesh perimeter fence and all associated site works on the existing all weather playing pitch.	Granted – Conditional	0.094km SE

APPLICATION NO.	DEVELOPMENT TYPE	OUTCOME	APPROXIMATE DISTANCE
14262	For the development of a 4 island petrol filling station incorporating a kiosk/shop with gross floor area of 39sq.m forecourt canopy, underground storage tanks, LPG storage tanks, circulation area, advertising signage, modifications to permitted totem pole, access provisions, removable bollards, landscaping, boundary treatment and all associated site works.	Extension of duration – Conditional	0.112km E
18504	Permission is sought to construct a single-storey extension to the side/front of an existing dwelling house, to construct a two-storey extension to the side of the dwelling house and full planning permission is sought to construct a two-storey extension with a single-storey element to the rear of an existing dwelling house, including alterations to accommodation proposed extensions and all associated site works.	Granted – Conditional	0.207km SE
17189	To reconstruct existing partially demolished single storey dwelling (fire damage) while constructing a single storey extension to the front, side and rear, use of existing services and all associated site works.	Granted – Conditional	0.307km E
16242	Permission to change of use of a part of unused office space to extend the floor area of the adjacent veterinary clinic. Proposed works includes the installation of external double doors to front and installation of external double doors to the existing cattery at the side of the building. Planning permission is also sought for the demolition of the existing garage/water tower structure on site.	Granted – Conditional	0.346km W
18245	To construct a two-storey dwelling house which includes a new entrance, setback of front boundary wall, connection to all existing services and all ancillary site works.	Granted – Conditional	0.348km N
2039	Permission for the construction of a rear extension to existing premises to include new storage area, ancillary office accommodation, new toilet facilities, kitchen facilities and seating area and incorporating internal alterations to existing shop layout and alterations to front elevation, electric car charging points and ancillary services associated with same.	Granted – Conditional	0.453km SW

Potential in-combination effects are discussed under the following headings.

8.1 HABITAT LOSS / FRAGMENTATION

As discussed in Section 6.1, the proposed development is located partly within the Slaney River Valley SAC, and the project has the potential to have significant effects upon the protected site through loss or destruction of habitat or fragmentation of habitat, potential deterioration in water quality, spread of invasive species, and impacts upon protected species. With regards ex-situ effects, it is likely that Tullow Town Park would contain some of the species for which the Slaney River Valley SAC has been designated. There is also a potential for an impact on protected habitats if present downstream due to the presence of a third schedule invasive species.

The surrounding land-use to the south of the proposed development site is agricultural/residential/commercial with local amenities and residential dwellings/units located along the N80 in the town of Tullow to the north and along the L2036 (New Road to the east of the development. As shown in Table 9.1 recent developments were identified on the Carlow County Council planning site within the vicinity of the applicants proposed site. They are a mixture of new residential dwellings, extensions to existing buildings, recreational and commercial developments. With future developments likely to be on modified habitats or improved agricultural grassland with low ecological value, it is unlikely that future proposed developments would result in the loss or fragmentation of designated habitats of the River Slaney Valley SAC. Therefore, no in-combination effects on habitat loss / fragmentation are anticipated.

8.2 DISTURBANCE TO SPECIES

The main in-combination effects would be from any agricultural, commercial, vehicular or residential activities within the area. Disturbance to species may arise through noise emissions and human activity.

The development is located within the boundary of the Slaney River Valley SAC. Fauna within the SAC and the general area around the proposed development site would be accustomed to agricultural, vehicular and residential noise.

The landscape plan incorporates the use of native and non-native non-invasive species within its design. Most of the existing vegetation will be retained although some bankside vegetation and trees will be removed as per the Landscape Plan and Arborist Report. Tree removal works should not be undertaken during the bird nesting season (1st of March - 31st of August). Should tree removal works be required during the bird nesting season, the scrub and trees would be inspected for the presence of breeding birds by a qualified ecologist prior to any clearance works taking place. Where nests are identified, the ecologist would determine if a licence from the National Parks and Wildlife Services (NPWS) is required, or if it is possible to establish a suitable buffer zone around the active nest, with removal works rescheduled until chicks have fledged.

In terms of nocturnal species such as Otter within the vicinity, the operational hours would be during the daytime. Therefore, it is not considered that the proposed development would have a significant impact on this species.

In terms of impacts to freshwater species, the proposed development is an area frequently used by members of the public for fishing and water activities during the summer months. It is not considered that the proposed development would increase the existing human use of the site during the operational phase.

Therefore, owing to the rural setting, adjacent agricultural activities, and developments detailed in the Table 9.1 above, and given the small scale and the operational use of the proposed development (public park), it is considered that there would be no significant cumulative noise impacts, or other disturbance effects due to human activity, which would pose a significant risk to designated sites or species.

8.3 DETERIORATION IN WATER QUALITY

Continued implementation of the Water Framework Directive would result in achieving, or maintaining, improvements to water quality in the Slaney & Wexford Harbour Catchment. Developments such as this proposed development works could act in combination with existing environmental pressures on the Slaney & Wexford Harbour Catchment, including agriculture, anthropogenic, domestic and urban wastewater, urban run-off, industry and forestry.

Construction phase mitigation measures will be put in place to protect manhole covers and watercourses during the construction works, these measures will include silt control features that will prevent a significant impact on in water quality. This will limit any adverse effect on the water quality of the Slaney River Valley SAC.

Mitigation measures for the treatment of third schedule invasive species will also prevent further spread throughout the SAC during the construction and operational phases.

10. CONCLUSIONS

It is not anticipated that the proposed development, subject to recommended mitigation measures, by itself or in combination with other developments, would impact negatively upon the Natura 2000 network during the site preparation or operational phases of the project.

The proposed development site is located along at the Slaney River Valley SAC (Site Code: 000781). However, with the proposed design and mitigation measures outlined there would be no potential risk of significant impacts upon the qualifying interests / special conservation interests of the Slaney River Valley SAC due to the proposed mitigation measures to be employed.

It is the conclusion of this Natura Impact Statement 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.

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APPENDIX A

PROTECTED SITES AND PROPOSED DEVELOPMENT

Notes

– Location of Development

- SAC

- SPA

Project Title:

Protected Sites Map

Client Name:

TULLOW TOWN PARK,
TULLOW,
CO. CARLOW

PANTHER ECOLOGY LTD

UNITS 3 & 4
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CAMPUS
GREEN ROAD
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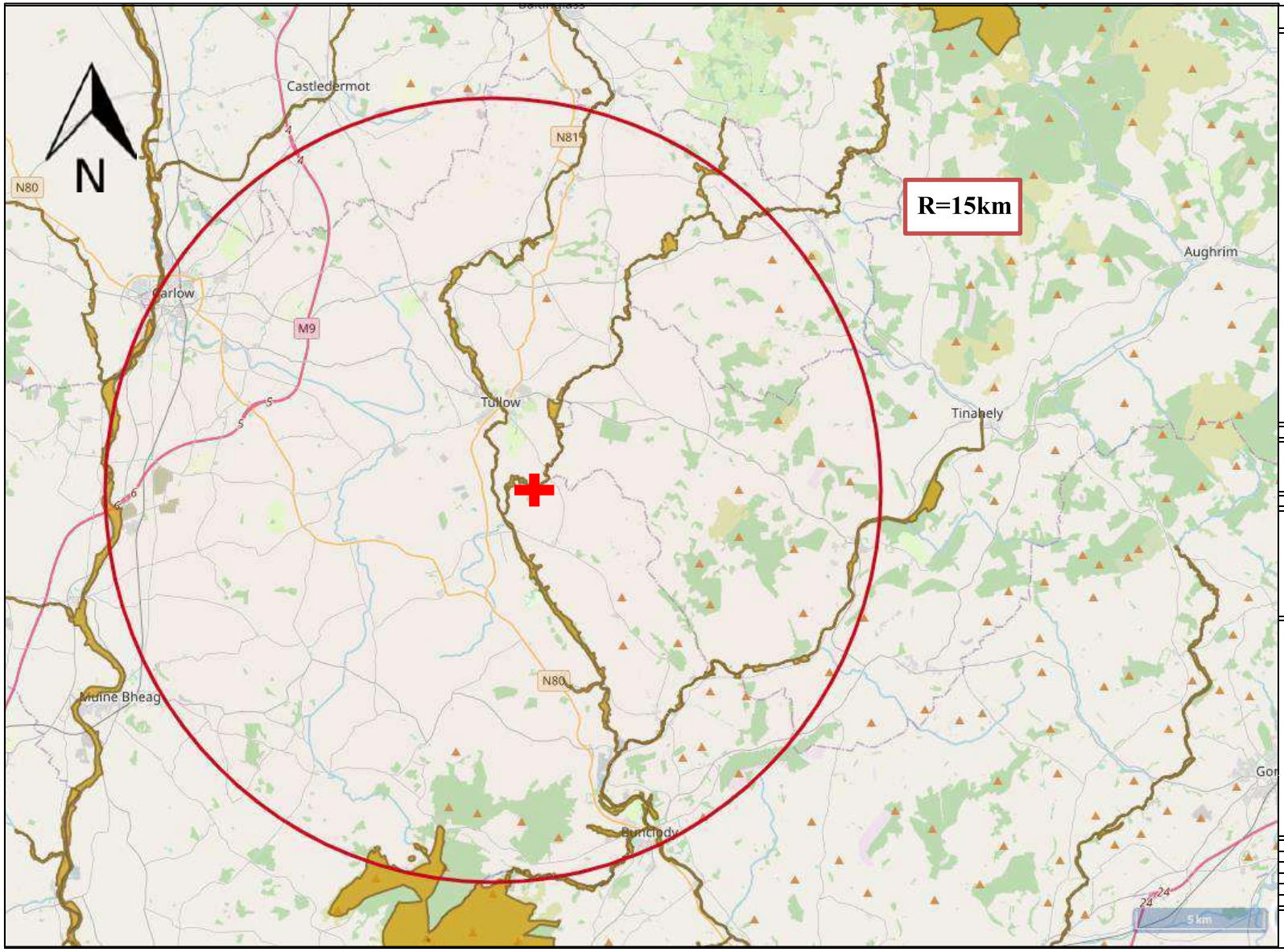
Drawing Status:	Scale:	NTS	A4
Report	Datum:	EPA Maps	
Drawing Number:	Drawn:	PES	
NIS 10045	Checked:	MF	
Revision:	Approved:	-	
	Date:	02/03/2023	



Notes

Location of Development

- SAC

- SPA

Project Title:

Protected Sites Map

Client Name:

TULLOW TOWN PARK,
TULLOW,
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Drawing Status:	Scale:	NTS	A4
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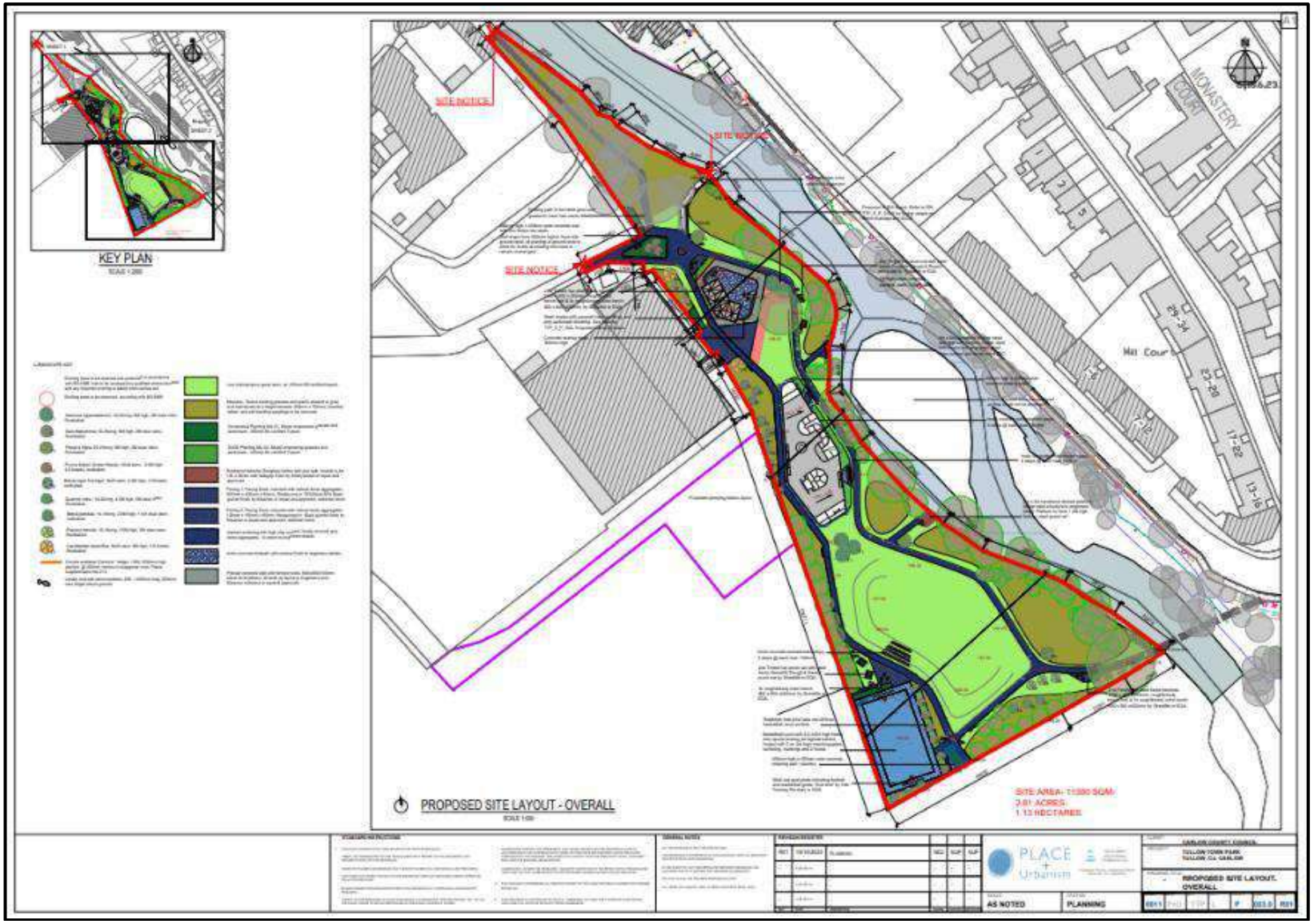
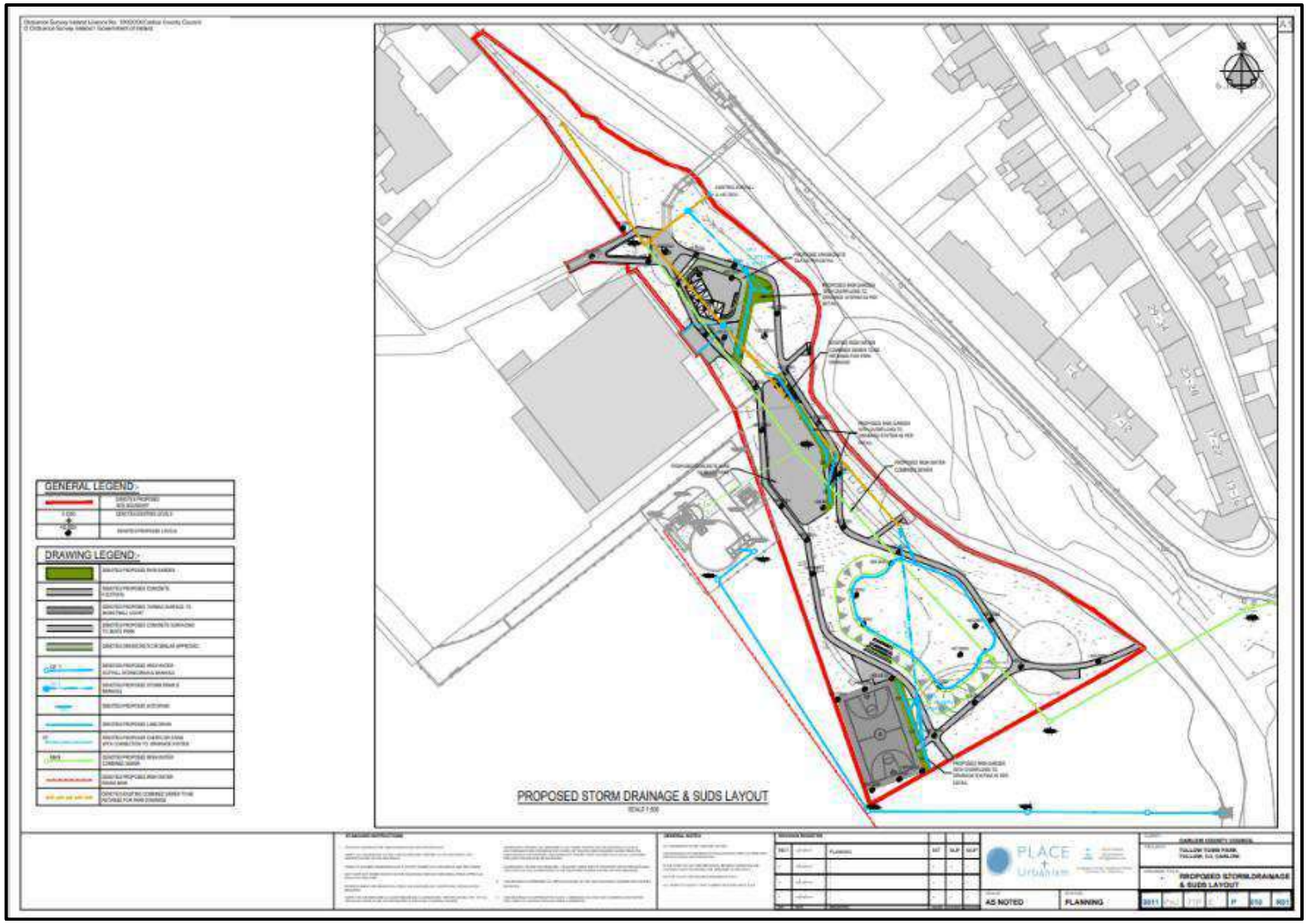
Drawing Number:	Drawn:	PES	
NIS_10045	Checked:	MF	
Revision:	Approved:		
	Date:	02/03/2024	


KEY PLAN
SITE NOTICE
SITE NOTICE
SITE NOTICE
MONASTERY COURT
Mill Court
PROPOSED SITE LAYOUT - OVERALL
SITE AREA- 11390 SQM
2.81 ACRES
1.13 HECTARES
PLACE + Urbanism
TULLOW TOWN PARK
TULLOW, CO. CARLOW
PROPOSED SITE LAYOUT, OVERALL
AS NOTED
PLANNING


GENERAL LEGEND :-
DRAWING LEGEND :-
PROPOSED STORM DRAINAGE & SUDS LAYOUT
PLACE
AS NOTED
FLANNING

APPENDIX B

PHOTO LOG

Plate 1: Existing pedestrian access from bridge to north

Plate 2: Amenity grassland (GA2)

Plate 3: Existing park with WS3 & BL3 habitat

Plate 4: Depositing/lowland River

Notes:

APPENDIX B
PHOTO LOG

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file location:		scale: N/A	A4
drawing status:	REPORT	datum:	N/A
		drawn:	PES
drawing no.	rev	checked:	MF
NIS_10045	A	approved:	-
		date:	22/02/2023

Plate 5: Riparian woodland (WN5)

Plate 6: Dry meadows and grassy verges (GS2)

Plate 7: Indian Balsam and Three-cornered garlic at Site

Plate 8: Evidence of Otter (Spraint)

Notes:

APPENDIX B
PHOTO LOG

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drawing status:	REPORT	datum:	N/A
		drawn:	PES
drawing no.	rev	checked:	MF
NIS_10045	A	approved:	-
		date:	22/02/2023

Appendix F – Ecological Impact Assessment (Panther Environmental Services)

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ECOLOGICAL IMPACT ASSESSMENT

TULLOW TOWN PARK,
TULLOWBEG
TULLOW,
CO. CARLOW

2024

REPORT NO:	PE_EcIA_10045	**AUTHOR:**	Ross Donnelly-Swift, PhD and Paula Farrell. BSc.
DATE:	27th March 2024	**REVIEWED:**	Mike Fraher, BSc.

TABLE OF CONTENTSF

1.0 INTRODUCTION

This Ecological Impact Assessment has been prepared by Panther Ecology Ltd. to accompany an application for planning permission to An Bord Pleanála by the applicant, Carlow County Council for the proposed upgrade and enhancement of the existing Tullow Town Park facilities/features, ancillary infrastructure and associated site development works at Tullow Town Park located west side of the River Slaney, Tullowbeg (Townland), Tullow, Co. Carlow.

An ecological study was undertaken by Dr Ross Donnelly-Swift who has a BSc (Hons) in Biology from Maynooth University NUI, an MSc in Environmental Science from Trinity College Dublin and a PhD in Biosystems Engineering from University College Dublin and Ms Paula Farrell who has a BSc in Wildlife Biology from Munster Technological University (formerly IT Tralee) and has experience in elasmobranch, amphibian, bird, invertebrate and floral surveys. In addition, Ross was a Research Fellow in the Geography Department of Trinity College Dublin and Lecturer on Soil Science, Agroecology and Hydrology at Dundalk Institute of Technology. He has extensive ecological knowledge gained from academic research and field work, from species-specific and protected species surveys for the completion of AA & NIS, EcIA and EIAR ecology chapters for projects both small and large in a range of areas such as industrial, residential and amenity/recreational developments. Ross also gained valuable knowledge and experience working and volunteering in the ecological field on numerous ecological projects.

The completion of this report comprised of a review of the proposed development and site assessments to examine the ecological context of the proposed development, a desk study of the information on protected species, habitats and sites within the vicinity of the development for the potential impacts.

2.0 PLANNING CONTEXT

Following legislation and policies are relevant to the proposed development and biodiversity:

- The Wildlife Act is the primary piece of Irish legislation providing for the protection and conservation of wildlife and provides for the control of specific activities which could adversely affect wildlife, for example the regulation of hunting and wildlife trading. Under the Wildlife Act, all bird species, 22 other fauna species and 86 flora species in Ireland are afforded protected status. The Wildlife Act, 1976 allows for the designation of specific areas of ecological value such as Statutory Nature Reserves and Refuges for Fauna. The Wildlife (Amendment) Act, 2000 provides for greater protection and conservation of wildlife and also provides for the designation and statutory protection of Natural Heritage Areas (NHA). European Communities (Birds and Natural Habitats) Regulations, 2011 (S.I. No. 477 of 2011) and (Amendment) Regulations, 2015 (S.I. No. 355 of 2015), transposing the Habitats Directive 92/43/EEC (as amended) and Birds Directive 2009/147/EC.
- The Flora (Protection) (S.I. No. 235 of 2022). This order provides statutory protection to flora listed in Section 21 of the Wildlife Act, 1976 and Wildlife (Amendment) Act,

2000. Under the Order, it is illegal to wilfully cut, uproot or damage the listed species or interfere in any way with their habitats.

- Water Framework Directive (2000/60/EC). The Water Framework Directive (WFD) aims to improve the water environment (including groundwater, rivers, lakes, estuaries and coastal waters) of E.U. Member States. The aim of the WFD is for Member States to achieve and maintain "good status" in all water bodies.
- Biodiversity Plan 2017-2021. Ireland's third National Biodiversity Plan 2017–2021, identifies actions towards understanding and protecting biodiversity with a vision that, "*biodiversity and ecosystems in Ireland are conserved and restored, delivering benefits essential for all sectors of society and that Ireland contributes to efforts to halt the loss of biodiversity and the degradation of ecosystems in the EU and globally*".
- Following on from the NBAP 2017-2021, an action plan has been development for the County of Carlow "Carlow Town Biodiversity Strategy & Action Plan 2021-2025" which "*provides a strategic plan and specific actions for protecting and enhancing biodiversity in Carlow Town, including tackling invasive non-native species and protecting ecosystem services*.". The plan identifies a number of actions for focus areas within the county which may be extrapolated and used throughout the whole of the county.
- National Biodiversity Data Centre All-Ireland Pollinator Plan 2021-2025. This plan has six objectives (i) Making farmland pollinator friendly, (ii) Making public land pollinator friendly, (iii) Making private land pollinator friendly, (iv) All-Ireland Honeybee Strategy, (v) Conserving rare pollinators (vi) Strategic coordination of the Plan.
- Carlow County Development Plan 2022-2028. Under these development plans must include mandatory objectives for the conservation of natural heritage and for the conservation of European sites.

3.0 METHODOLOGY

This EcIA has been carried with reference to the following guidelines:

- *Appropriate Assessment of Plans and Projects in Ireland. Guidelines for Planning Authorities*. DoEHLG, 2010.
- Ecological Guidance for Local Authorities and Developers (Scott Cawley, 2013)
- *Managing Natura 2000 sites – The Provisions of Article 6 of The Habitats Directive 92/43/EEC.* European Commission, 2000.
- NRA (2010) *Guidelines for Assessment of Ecological Impacts of National Road Schemes* (National Roads Authority)
- *Assessment of Plans and Projects Significantly Affecting Natura 2000 sites. Methodological Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC.* European Commission, 2021.
- Commission Notice "Managing Natura 200 sites The provisions of Article 6 of the Habitats Directive 92/43/EEC. European Commission, 21.11.2018

- CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine version 1.2. Chartered Institute of Ecology and Environmental Management, Winchester.
- *The Management of Noxious Weeds and Non-Native Invasive Plant Species on National Roads* (National Roads Authority (NRA), 2010);
- *Guidelines for the Treatment of Badgers prior to the Construction of National Road Schemes* (NRA, 2006a);
- *Guidelines for the Treatment of Otters prior to the Construction of National Road Schemes* (NRA, 2006b);
- *Guidelines for the Treatment of Bats during the Construction of National Road Schemes* (NRA, 2006c);
- *Bat Mitigation Guidelines for Ireland* (Kelleher and Marnell, 2006);
- *Bats and Lighting– Guidance Notes for Planners, Engineers, Architects and Developers* (Bat Conservation Ireland, 2010);
- *Bats and Lighting in the UK – Bats and the Built Environment Series* (Institute of Lighting Professionals, September 2018)
- *Guidance Notes for the Reduction of Obtrusive Light GN01-21* (Institute of Lighting Professionals, 2021).

3.1 DESKTOP INFORMATION

Every effort has been made to provide an accurate assessment of the situation pertaining to the site. However, an ecological survey can only assess a site at a particular time and is limited by various factors such as the season, timing of the survey, climatic conditions and species behaviour. Ecological surveys are therefore snapshots in time and should not be regarded as a complete study. Direct observations or evidence of protected species is not always recorded during ecological surveys. However, this does not indicate that the species is absent from the site. To ensure any limitations encountered did not significantly impact upon the findings of the ecological assessments, the ecological surveys undertaken also assessed the potential of the habitats to support protected species, and cognisance has been taken of available online baseline data (e.g. flora and fauna records from the NBDC, online review of published NPWS records regarding protected / threatened species, review of published BCI records, previous surveys undertaken by Wildlife Surveys) and a precautionary approach taken.

Desktop research was carried out to gather information on the ecology of the site and surrounding areas. The locations of the Natura 2000 sites, Natural Heritage Areas (NHAs) and protected flora and fauna records for the proposed development at Tullow Town Park, Tullowbeg, Tullow, Co. Carlow.

Water quality data from the EPA was reviewed for the assessment of biological and environmental data collected on waterbodies in Ireland as per the Water Framework Directive (WFD) Monitoring Programme of River Ecology Monitoring Results (2021).

Biological records from the National Biodiversity Data Centre (NBDC) for the site and surrounding area (10km grid square/tetrad) were reviewed and account taken of notable species including any rare, protected, threatened and invasive species.

Information on the characteristics of the Natura 2000 sites within the potential zone of influence was reviewed from the conservation objectives documents, site synopses and Standard Natura 2000 data forms available on the NPWS website.

In addition, a Natura Impact Statement (NIS) has been undertaken for the proposed development (Document Ref: PE_NIS_10045). This NIS took into consideration the locations of the Natura 2000 sites within the zone influence (ZoI) of the proposed development.

3.2 HABITAT SURVEY OF SITE

A site characterisation assessment was undertaken on the 22nd February 2023 to examine the ecological context of the development site, by systematically walking the site, adjacent land and boundaries and determining the habitats present (See Table 3.1 below). The habitat survey was undertaken in accordance with the standard methodology outlined in Fossitt's "*A Guide to Habitats in Ireland*", a hierarchical classification scheme based upon the characteristics of vegetation present. The Fossitt system also indicates when there are potential links with Annex I habitats of the E.U. Habitats Directive (92/43/EEC). Cognisance was also taken of the Heritage Council guidelines, "*Best Practice Guidance for Habitat Survey and Mapping*", (Smith *et al.,* 2011).

Bird species and signs of fauna activity were also noted. Particular attention was given to the possible presence of habitats and/or species, which are legally protected under Irish and European legislation and to assessing any potential ecological connectivity with Natura 2000 sites or supplementary or steppingstone habitats of relevance to Natura 200 sites. While walking the development site, stops were undertaken on a regular basis during which time the area was scanned as far as the terrain or weather conditions allowed. Birds were identified by visual sightings and auditory identification of songs and calls. Birds flying overhead were also included as part of the survey.

3.2.1 Study Area/ Zone of Influence

Following guidance set out by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2018) and the National Roads Authority (2009), a Zone of Influence should be determined, which identifies the area in which the development could potentially impact upon ecological receptors and aquatic environments. The zone of influence takes into consideration the assigned ecological value of the receptors, which ranges from international, national, county to local, and potential pathways for impacts to occur. The zone of influence also takes into consideration any watercourse surrounding the proposed development.

Taking into consideration best practice guidance and the nature of the development, the study area for the assessment ranges from the site boundary for habitats, to buffers of 100m for specific species. However, it should be noted that these buffers were extended where required.

Survey Limitations

Every effort has been made to provide an accurate assessment of the situation pertaining to the site. However, an ecological survey can only assess a site at a particular time and is limited by various factors such as the season, timing of the survey, climatic conditions and species behaviour. Ecological surveys are therefore snapshots in time and should not be regarded as a complete study. Direct observations or evidence of protected species is not always recorded

during ecological surveys. However, this does not indicate that the species is absent from the site.

The optimal habitat survey period runs from April to September, the growing season for the majority of plants (Smith *et al.*, 2011). However, this will also be determined by climate conditions such as sunlight, precipitation, and temperature. Most grass species will grow when the temperature is above 5°C (Whitehead, 1995). Weather conditions were suitable for bat surveys and nocturnal animals. To ensure any limitations encountered did not significantly impact upon the findings of the ecological assessments, the ecological surveys undertaken also assessed the potential of the habitats to support protected species, and cognisance has been taken of available online baseline data and a precautionary approach taken.

Where areas within a site cannot be accessed, this should be noted in the report as a constraint to the survey. The site at Tullow Town Park was fully assessable via Abbey Street (N81) to the north-west and via a footbridge south of Tesco carpark. A second entrance is located via another footbridge east of the proposed development accessed on the New Road (L2036).

3.2.2 Field Surveys Methodology

A site assessment was undertaken on 22nd February 2023 to examine the ecological context of the proposed development, as outlined in Table 3.1 below. Any drainage ditches were also surveyed as part of the site assessment for aquatic flora and fauna.

Table 3.1: Ecological Surveys

SURVEY	STUDY AREA	SURVEY DATES
Habitat Survey	Complete Site & Boundary Buffer	22nd February 2023
Fauna Survey	Complete Site & Boundary Buffer	22nd February 2023
Badger Survey	Complete Site & Boundary Buffer	22nd February 2023
General Bird Survey	Complete Site & Boundary Buffer	22nd February 2023
Bat Survey	Complete Site & Boundary Buffer	22nd February 2023

3.2.3 Fauna & Badger Survey

Fauna surveys were undertaken during bright and dry weather conditions. Direct observation methods were used for the survey of fauna, however, these methods may not be suitable for shy and nocturnal species. Therefore, indirect methods were also employed, focusing on evidence of fauna including tracks, burrows/setts/nests, droppings, food items and hair. The habitats on site were assessed for signs of usage by fauna, and the potential to support protected or red-listed species.

Badgers and their setts are protected under the provisions of the Wildlife Act, 1976, and the Wildlife Amendment Act, 2000. It is an offence to intentionally kill or injure a protected species or to wilfully interfere with or destroy the breeding site or resting place of a protected wild animal. The removal of badgers from affected setts and subsequent destruction of these

setts must be conducted under licence by experienced badger experts or other suitably qualified personnel. Typically, the main setts of a badger, which are the focus of the social groups, are usually larger than other setts, averaging seven entrances each (Smal, 1995). A badger sett is divided into different types with main setts used for breeding and have multiple entrances. With outliers usually have one entrance and lie towards the fringes of their territory (Lowen, 2016).

3.3 BAT SURVEY

Areas within the site with the potential to support bat roosts and / or foraging / commuting routes, and which have the potential to be impacted upon by the proposed development were the main focus of the surveys outlined below.

The aims of the bat survey are to collect robust data following good practice guidelines to allow an assessment of the potential impacts of the proposed project on local bat populations. To facilitate the design of control measures, enhancement, and monitoring strategies for local bat populations recorded. Provide information to enable robust decisions with definitive outcomes that aid in the conservation of local bat populations. Depending on the type of site or habitats contained within the survey can concentrate on areas of suspected or potential bat roots such as buildings (with accessible features) and trees with cracks and crevices as noted below. This survey is done to determine if the building/tree is a bat roost. Transect surveys are carried out by walking the site with a bat detector to determine the level and type of bat activity at a site. Other more detailed surveys are carried out if a bat roost is suspected and if knowledge on the type of roost is required to determine the best conservation methods.

All bat species are listed in Annex IV of the Habitats Directive while the Lesser Horseshoe (*Rhinolophus hipposideros*) is afforded additional protection through its inclusion on Annex II of the EU Habitats Directive. As a result, SACs have been designated for this species throughout its European range, including in Ireland.

It is an offence under Section 23 of the Wildlife Act and under Section 51 of Habitat Regulations, 2011 to kill a bat or to damage or destroy the breeding or resting place of any bat species. Under the Habitat Regulations, 2011 actions that intentionally or unintentionally harm, damage or destroy a bat or its roosting site are considered to be an offence. According to Section 54(2) of the Habitats Regulations 2011, a derogation licence to disturb bats or the breeding or resting places may be granted ‘where there is no satisfactory alternative, and the derogation is not detrimental to the maintenance of the populations of the species to which the Habitats Directive relates at a favourable conservation status in their natural range. The assessment comprised of an external inspection of trees to identify potential roost features (PRFs) and evidence of bat activity. Any cracks or crevices were further inspected visually with the aid of a strong torch to look for bat droppings, urine staining, grease marks (oily secretions from glands present on stonework) and claw marks. The criteria used to categorise the PRFs or suitability of trees as a potential roost are summarised in the table below, based upon the guidelines by Collins (2016) and Hundt (2012).

Examples of such features include;

- Natural holes;
- Cracks/splits in major limbs;
- Loose bark; and,
- Hollows/cavities.

Climbing trees to look for roosts, using appropriate equipment and safety precautions, is a possible approach for small numbers of trees with a high probability of bats, but the results of radiotracking studies of some species suggest that bats may use cracks or crevices that are far from obvious Kelleher & Marnell, (2006).

Furthermore, as a signatory to the EUROBATS Agreement (Agreement on the Conservation of Populations of European Bats, 1994), Ireland is required to protect their habitats and important feeding areas from damage or disturbance. All Irish bat species are listed in Appendix II of the Bern Convention (1979), as species requiring protection.

The IUCN Red List categories and criteria are used as an easily understood system for classifying species by their risk of global extinction (IUCN 2012). Irish bats have most recently been categorised in the updated IUCN red list of terrestrial mammals in Ireland. All bats normally occurring on the island are listed as "Least Concern" (Nelson et al., 2019). The status of the Greater Horseshoe Bat (*Rhinolophus ferrumequinum*) is not yet determined in Ireland as only one record has been confirmed.

Assessment of Bat Roost Potential

A daytime assessment of individual trees and woodland habitats within the proposed development site potentially affected by the proposed development was undertaken on the 22nd February 2023. The assessment comprised of an external inspection of trees to identify potential roost features (PRFs) and evidence of bat activity, using close focusing binoculars. The criteria used to categorise the PRFs or suitability of trees and buildings as a potential roost are summarised in the table below, based upon the guidelines by Collins (2016) and Hundt (2012).

The great majority of roosts are used only seasonally, so there is usually some period when bats are not present. Although there are differences between species, maternity sites are generally occupied between May and September and hibernation sites between October and March, depending on the weather. A hibernation site will have a constant cool temperature and humidity. The majority of bat species do not hibernate in trees with the exception of Leisler's bat (*Nyctalus leisleri*) noted as "probably tree cavities" and Brown long-eared bat (*Plecotus auratus*) "tree holes". The probability of bats roosting in a tree decreases in coniferous plantations with no specimen trees and young trees with simple growth form and little damage (Kelleher & Marnell, 2006). Where bats are found, either individually or in groups in the winter months will have a constant cool temperature and humidity.

Table 3.2: Bat Roost Potential Categories

CATEGORY	DESCRIPTION
High Trees / buildings that are suitable for use by large numbers of bats on a regular basis	Features include holes, cracks or crevices that extend or appear to extend back to cavities suitable for bats. In buildings, examples include eaves, barge boards, gable ends and corners of adjoining beams, ridge and hanging tiles, behind roofing felt or within cavity walls. In trees, examples include hollows and cavities, rot holes, cracks/splits and flaking or raised bark which could provide roosting opportunities. Any ivy cover is sufficiently well-established and matted so as to create potential crevices beneath. Further survey work would be required to determine whether or not bats are present, and if so, the species present. Appropriate

CATEGORY	DESCRIPTION
	mitigation and potential licencing requirements may then be determined.
Moderate Moderate potential is assigned to trees / structures with potential to support bat roosts but supports fewer features than a high potential building / tree and is unlikely to support a roost of high conservation value.	From the ground, building / tree appears to have features (e.g. holes, cavities, cracks or dense ivy cover) that may extend back into a cavity. However, owing to the characteristics of the feature, they are deemed to be sub-optimal for roosting bats. Further survey work would be required to determine whether or not bats are present, and if so, the species present. Appropriate mitigation and potential licencing requirements may then be determined.
Low Low potential is assigned to structures and trees with features that could support individual bats opportunistically.	If no features are visible, but owing to the size, age and/or structure, hidden features, sub-optimal for roosting bats, may occur that only an elevated inspection may reveal. In respect of ivy cover, this is not dense (i.e. providing PRF in itself) but may mask presence of PRF features. Further survey work may be required for buildings only or works may proceed using reasonable precautions (e.g. controlled working methods, under license or supervision of a bat worker).
Negligible	Trees have no potential for bat roost.

3.4 BIRD SURVEY

Bird usage of the development site was assessed on the 22nd February 2023. A walkover (VP) Survey was undertaken to record the birds present at the site. In addition, while walking the development site, stops were undertaken on a regular basis during which time the area was scanned as far as the terrain or weather conditions allowed. Birds were identified by visual sightings and auditory identification of songs and calls. Birds flying overhead were also included as part of the survey. Birds observed while undertaking habitat and specific fauna surveys were also noted. Priority habitat/features such as trees, dense hedgerows or shrubs, reed beds, or small bodies of water are areas that surveying can concentrate on for shy species with low detection. Disturbance to the site should be kept to a minimum while undertaking a bird survey.

4.0 DESCRIPTION OF PROPOSED DEVELOPMENT AND EXISTING SITE

4.1 PROPOSED DEVELOPMENT

The proposed development is to upgrade and enhance the existing Tullow Town Park facilities/features, ancillary infrastructure and associated site development works, all at a site of approximately 1.13 ha in extent at Tullow Town Park located west side of the River Slaney, Tullowbeg (Townland), Tullow, Co. Carlow (see figure 4.1.1).

The proposed upgrade and enhancement of Tullow Town Park facilities/features development consists of:

- Construction of demarcated and enhanced network of cycle and pedestrian paths of asphalt surfacing and locally sourced grey stone aggregates, leading to a sequence of outdoor spaces laid out along the length of the park;

- Construction of partially sheltered concrete surfaced outdoor event/classroom space with feature designed shelter/canopy, centrally located feature concrete surfaced skate park, 2 no. feature hardwood decking viewing platforms/steps to the River Slaney, a kickabout soft landscaped lawn area which also facilitates land drain/swale and flood area, and a sport fenced enclosed multi-use games court to include football and basketball goals;

- Removal of trees of poor condition, where views into the park can be increased, and for facilitating the structural upgrade and enhancement works proposed; and

- Retention of existing trees described as riverbank due to the binding nature of the tree roots and the adjacent River Slaney riverbank.

The public realm upgrade and enhancement works also provide for upgrading of existing footpaths, demarcated natural stone aggregates feature paved areas, raised seating areas, raised planting areas, seats and benches, timber top 'picnic' table and seating facilities, a variety of soft landscaping features (grass lawn, native meadow, ornamental grasses and perennials), and all associated infrastructure/services and site development works above and below ground level, including sustainable urban drainage services (grasscrete, tree pit, land drain/swale and rain garden solutions, public lighting and closed-circuit television (CCTV) infrastructure.

Pedestrian and cyclist access to the proposed development will be maintained via the existing walkway access from Abbey Street (the N81 National Road) to the north, the existing walkway bridge over the River Slaney from Tullow Street to the east, and the existing walkway from Abbey Street (the N81 National Road) to the west adjacent to the Tesco Tullow Supermarket.

The proposed development has been a public park for over 10 years (See figure 4.1.2).

The proposed development will not require drinking water, foul water or heating as part of the proposed development.

During the operational phase, surface water comprised of rainwater run-off from roofs and hardstanding areas will be directed to the new proposed drainage network. This will include new aco drain pipes and new manholes. This will then connect to a new combined sewer drainage network (granted under Planning Reference: 22235). The surface water discharged from the proposed development will be comprised of clean water and will ultimately discharge to the River Slaney via an existing outflow pipe to the north-east. SuDS features will be incorporated within the design such as rain gardens, permeable paving and overflow connections to the proposed drainage network. The drainage network is design to allow surface water to infiltrate to ground.

A landscape plan has been prepared by Place + Urbanism and incorporates the use of native and non-native non-invasive species within its design. This includes low maintenance laws, meadows, tree planting and planting as part of SuDS. Tree species include: *Aesculus hippocastanum, Salix babylonica, Populus nigra, Prunus makii* 'Amber Beauty'*, Betula nigra* 'Heritage'*, Quercus ribur, Betula pendula, Populus tremula, Liquidambar styraciflua and Corylus avellana* 'Contorta'. Other features include a retention tree pit for surface water run-

off, raised planter beds, seating, fencing and walls. In addition, the landscape plan aims to retain much of the existing trees onsite and as much boundary vegetation adjacent to the River Slaney as possible. The proposed meadow will be comprised of native existing grasses and plants and will be allowed to grow to a height of 700mm providing a buffer zone along the River Slaney. Some existing trees of poor quality will be removed as per the Arboricultural Report.

The closest watercourse is the River Slaney running along the eastern boundary of the proposed development. No works will take place within this watercourse or any other watercourse. No works will take place on the Island within the centre of the River Slaney. The following works will be undertaken to the edge of the River Slaney: The installation of the hardwood decked platform, a new pathway for future access and hardwood desked steps.

A Lighting Plan has been prepared by EnerJ Building Services Engineering. The Lighting Plan will incorporate one type of LED luminaire comprising a total number of 64 throughout and with a height of 1m, taking into account the sensitivity of the site.

The proposed development is partly located within the Slaney River Valley SAC (Site Code: 000781). See **Error! Reference source not found.** below.

Construction works would be confined to the proposed development footprint and would not necessitate any works within a watercourse or drainage ditch. During excavation works, soils would be temporarily stored onsite. Any excess soils / stones would be used for landscaping and reinstatement works where possible or exported offsite via a licenced contractor. The expected construction timeframe is approximately 24 weeks.

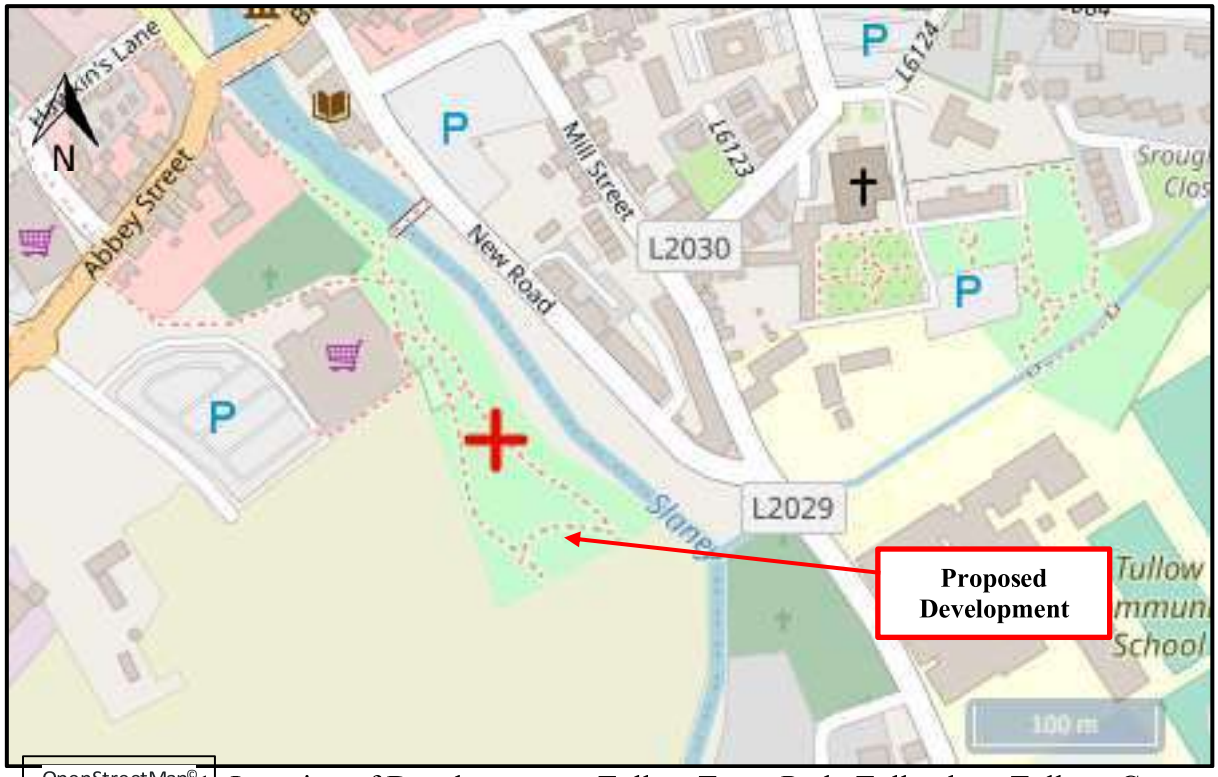

Figure 4.1: Location of Development at Tullow Town Park, Tullowbeg, Tullow, Co. Carlow

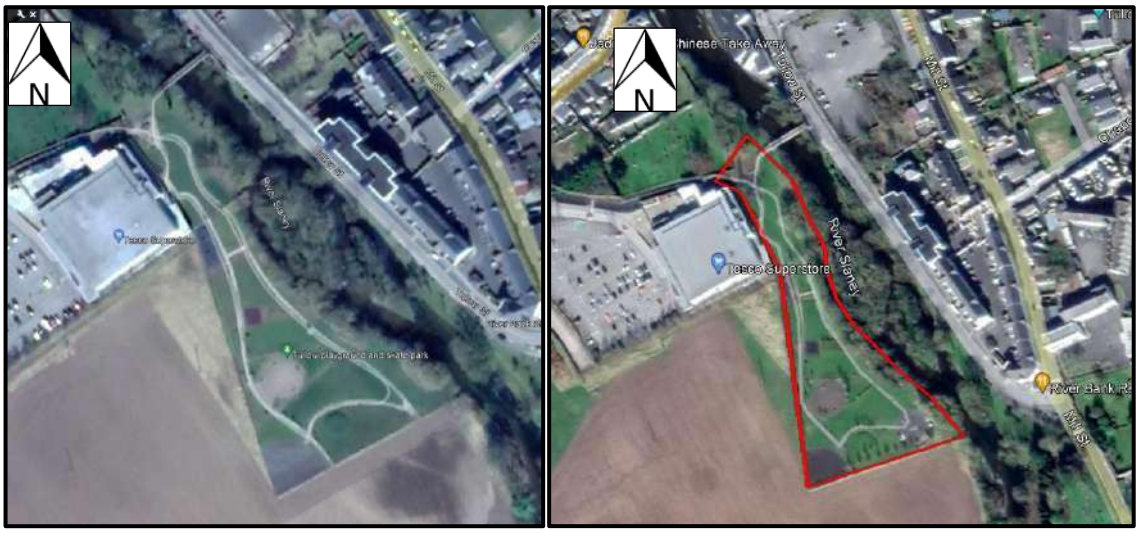

Figure 4.1.2: General site survey area (i) 2013 and (ii) 2022 (Source Google Earth)

4.2 EXISTING ENVIRONMENT

During the site survey eight main habitats were identified during the site assessments as detailed below. Two Third Schedule invasive flora were noted during the site assessment. Indian Balsam (*Impatiens glandulifera*) and Three-cornered Garlic (*Allium triquetrum*) are found along the banks of the River Slaney adjacent to the proposed development within the red line boundary and on the Island within the river east of the development. See Appendix C for additional Photo Log of site during site assessments.

Amenity Grassland (Improved) GA2
This habitat comprises the majority of the site and the main grassland type. The short vegetation indicates it is moderately managed and is species poor. Species include Bent Grass (*Agrostis* spp.), Fescues (*Festuca* spp.), Creeping Buttercup (*Ranunculus repens*), Dock (*Rumex* spp.), Clover (*Trifolium* spp.), Speedwell (*Veronica* spp.), Moss (Bryophyta), Cleavers (*Galium aparine*), Sowthistle (*Sonchus* spp.), Dandelion (*Taraxacum* spp.) and Nettle (*Urtrica dioica*).

Figure 4.2.1 Amenity Grassland GA2

Buildings and artificial surfaces BL3

This habitat forms the central zones and west boundary of the proposed development comprised of pathways, hardcore surfaces and walls. Species include Dandelion (*Taraxacum* spp.), Ragwort (*Jacobaea vulgaris*), Clover (*Trifolium* spp.), Annual Meadow Grass (*Poa annua*), Dock (*Rumex* spp.), Willowherb (*Epilobium* spp.), Red Dead-nettle (*Lamium purpureum*) and Moss (Bryophyta spp.).

Figure 4.2.2 Buildings and artificial surfaces BL3

Riparian woodland (WN5)

This riparian habitat is located along the eastern boundary between the amenity grassland habitat and the River Slaney. It is dominated by Willow (*Salix* spp.), Sycamore (*Acer pseudoplatanus*) and Ash (*Fraxinus excelsior*) with an understory of Bramble (*Rubus fructicosus*), Hawthorn (*Crataegus monogyna*), Reed Canary-Grass (*Phalaris arundinaceae*), Ivy (*Hedera helix*), Cleavers (*Galium aparine*), Nettle (*Urtrica dioica*), Creeping Buttercup (*Ranunculus repens*), Lesser Celandine (*Ficaria verna*), Alder (*Alnus* spp.), Cow Parsley (*Anthriscus sylvestris*)., Three-cornered Garlic (*Allium triquetrum*), Ground Elder (*Aegopodium podagraria*), Water Figwort (*Scrophularia umbrosa),* Hart's-tongue Fern (*Asplenium scolopendrium*) and Indian Balsam (*Impatiens glandulifera*). Many of the species here are not typical of this type of habitat however, they have been displaced and the site is managed. The northern and southern sections of this habitat featured taller grasses and scrub however, the area in the middle close to the gated entrance featured no scrub and the area is evidently managed right to the top of the bank.

Figure 4.2.3 Riparian woodland (WN5)

Treelines (WL2)

A Treeline (WL2) habitat is found to the south-east. It is dominated by Birch (*Betula* spp.), and Oak (*Quercus* spp.) and Elm (*Sambucus* spp.) with an under of Blackthorn (*Prunus spinosa*), Bramble (*Rubus fructicosus*), Red-osier Dogwood (*Cornus sericea*) and Yellow-twig Dogwood (*Cornus sericea 'Flamiramea'*).This area lacks intensely intensive management with evidence of scrub undergrowth present.

Figure 4.2.4 Treelines (WL2)

Dry meadows and grassy verges (GS2)

An area of less intensively managed grassland, Dry meadows and grassy verges (GS2) is found to the south-east along the treeline habitat. It includes an area of longer tussocky grasses such as Cock's-foot (*Dactylis glomerata*), False-oat Grass (*Arrhenatherum elatius*) and Creeping Buttercup (*Ranunculus repens*).

Figure 4.2.5 Dry meadow and grassy verges (GS2)

Ornamental/non-native shrub (WS3)
This habitat is found in the centre of the proposed development and throughout the site consisting of ornamental plants such as Periwinkle (*Vinca* spp.), Red-osier Dogwood (*Cornus sericea*) and Yellow-twig Dogwood (*Cornus sericea 'Flamiramea'*).

Figure 4.2.6 Ornamental/non-native shrub (WS3)

Scattered trees and parkland (WD5)
This habitat consists of Lime (*Tilia* spp), Birch (*Betula* spp.), Cherry (*Prunus* spp.) and Willow (*Salix* spp.) trees scattered throughout the proposed development.

Figure 4.2.7 Scattered trees and parkland (WD5)

4.3 HABITATS OUTSIDE THE PROPOSED DEVELOPMENT

Riparian woodland (WN5)
Directly adjacent to the proposed development is a small Island classified as Riparian woodland (WN5) dominated by Willow (*Salix* spp.), Sycamore (*Acer pseudoplatanus*), Alder (*Alnus* spp.) and Horse Chestnut (*Aesculus hippocastanum*) with an understory of Elder (*Sambucus* spp.), Ivy (*Hedera helix*), Snowberry (*Symphoricarpos* spp.), Ground Elder (*Aegopodium podagraria*), Violet (*Viola* spp.), Lesser Celandine (*Ficaria verna*), Indian Balsam (*Impatiens glandulifera*), Snowdrops (*Galanthus* spp.), Dock (*Rumex* spp.), Three-cornered Garlic (*Allium*

triquetrum), Mustard (*Sinapsis* spp.), Meadowsweet (*Filipendula umlaria*), Cherry Laurel (*Prunus laurocerasus*), Water Dropwort (*Oenanthe* spp.), St. Johns-wort (*Hypericum* spp.), Holly (*Ilex* spp.) and Bramble (*Rubus fructicosus*). This Island divides the River Slaney in two before it re-joins directly where the Island ends. Dead vegetation on the trunks of trees is evident of past flooding events in the area.

Figure 4.2.8 Riparian woodland (WN5) Island in centre of River Slaney

Depositing lowland river (FW2)

The River Slaney is a Depositing/lowland river (FW2) which is located to the eastern boundary of the development directly outside the boundary line. Species such as Water Crowfoot (*Ranunculus aquatilis*) and Indian Balsam (*Impatiens glandulifera*) were recorded growing in the water. During the site assessment, this watercourse had a high flow in part. To the west of the Riparian woodland Island, the water flow is low with evidence of sedimentation.

Figure 4.2.9 Depositing lowland river (FW2)

Amenity Grassland GA2, Riparian woodland (WN5) and Ornamental/non-native shrub (WS3)

Across the River Slaney, east of the development and along the New Road (L2036) entrance is a Riparian Woodland (WN5) with Willow (*Salix* spp.), Sycamore (*Acer pseudoplatanus*) and Spruce (*Picea* spp.), an Ornamental/non-native shrub (WS3) partial boundary consisting of

Snowberry (*Symphoricarpos* spp.) and Honeysuckle (*Lonicera* spp.) and Amenity Grassland (GA2) consisting of short vegetation including Grasses (Poa spp.) and Creeping Buttercup (*Ranunculus repens*).

Figure 4.2.10 Amenity Grassland (GA2), ornamental/non-native shrub (WS3) and Riparian woodland (WN5)

Table 4.1 Main habitats found in and outside the site boundary of the development site

HABITAT CLASSIFICATION HIERARCHY		
LEVEL 1	**LEVEL 2**	**LEVEL 3**
F – Freshwater	**FW** – Watercourses	**FW2 –** Depositing lowland river
G – Grassland and marsh	**GS –** Semi-natural grassland	**GS2 –** Dry meadows and grassy verges
	GA – Improved grassland	**GA2 –** Amenity grassland (Improved)
W – Woodland and scrub	**WN** – Semi-natural woodland	**WN5 –** Riparian woodland
	WS – Scrub / transitional woodland	**WS3 –** Ornamental/non-native shrub
	WL – Linear woodland / scrub	**WL2** – Treelines
	WD – Highly modified/non-native woodland	**WD5 –** Scattered trees and parkland
B – Cultivated and built land	**BL –** Built land	**BL3 –** Buildings and artificial surfaces

Table 4.2 Ecological Value of Identified Habitats at the Proposed Development

HABITAT TYPE	HABITAT RATING	KEY ECOLOGICAL RECEPTOR?
Treelines (WL2)	Local importance, higher value	Yes. Treeline along eastern boundary comprised of native and non-native species with a scrub layer. May provide opportunities for nesting birds. The scrub layer provides foraging of insects for bats. May act as boundary between proposed development and River Slaney providing cover for wildlife and connectivity along the wildlife corridor.
Dry meadows and grassy verges GS2	Local importance, lower value	Yes. Semi-natural habitat mostly comprised of native species. Located along eastern boundary providing ground cover for small animals and a buffer zone between park and river Slaney.
Amenity grassland (Improved) GA2	Local importance, lower value	No. Modified habitat, low ecological value. Species poor habitat.
Scattered trees and parkland WD5	Local importance, moderate value	Yes. Modified habitat, moderate ecological value. Native and non-native species which may provide nesting opportunities for birds and foraging for birds and bats.
Riparian woodland WN5	Local importance, higher value	Yes. Area of native and non-native tree species along a riparian zone. High ecological value. May provide habitat for nesting birds and foraging bats as well as otter. Provides a buffer between river Slaney and proposed development.
Ornamental/non-native shrub WS3	Local importance, lower value	No. Modified habitat, low ecological value. Species poor habitat and non-native species.
Buildings and artificial surfaces BL3	Local importance, lower value	No. Modified habitat, low ecological value. Species poor habitat consisting of tarmac and concrete features.
OUTSIDE BOUNDARY		
Riparian woodland Island WN5	Local importance, higher value	Yes. Area of comprising of native and non-native species. May provide opportunities for nesting birds and foraging/roosting for bats. May also provide opportunities for otter. An area less disturbed by humans.
Depositing lowland river (FW2)	Local importance, higher value	Yes. Likely contain high biodiversity.

HABITAT TYPE	HABITAT RATING	KEY ECOLOGICAL RECEPTOR?
Riparian woodland WN5	Local importance, higher value	Yes. Comprised of native and non-native species providing a buffer along the River Slaney banks. May provide opportunity for nesting birds and foraging bats.
Amenity grassland (Improved) GA2	Local importance, lower value	No. Modified habitat, low ecological value. Species poor habitat and non-native species.
Ornamental/non-native shrub WS3	Local importance, lower value	Yes. Modified habitat of non-native species but providing a buffer zone between the L2036 and River Slaney.

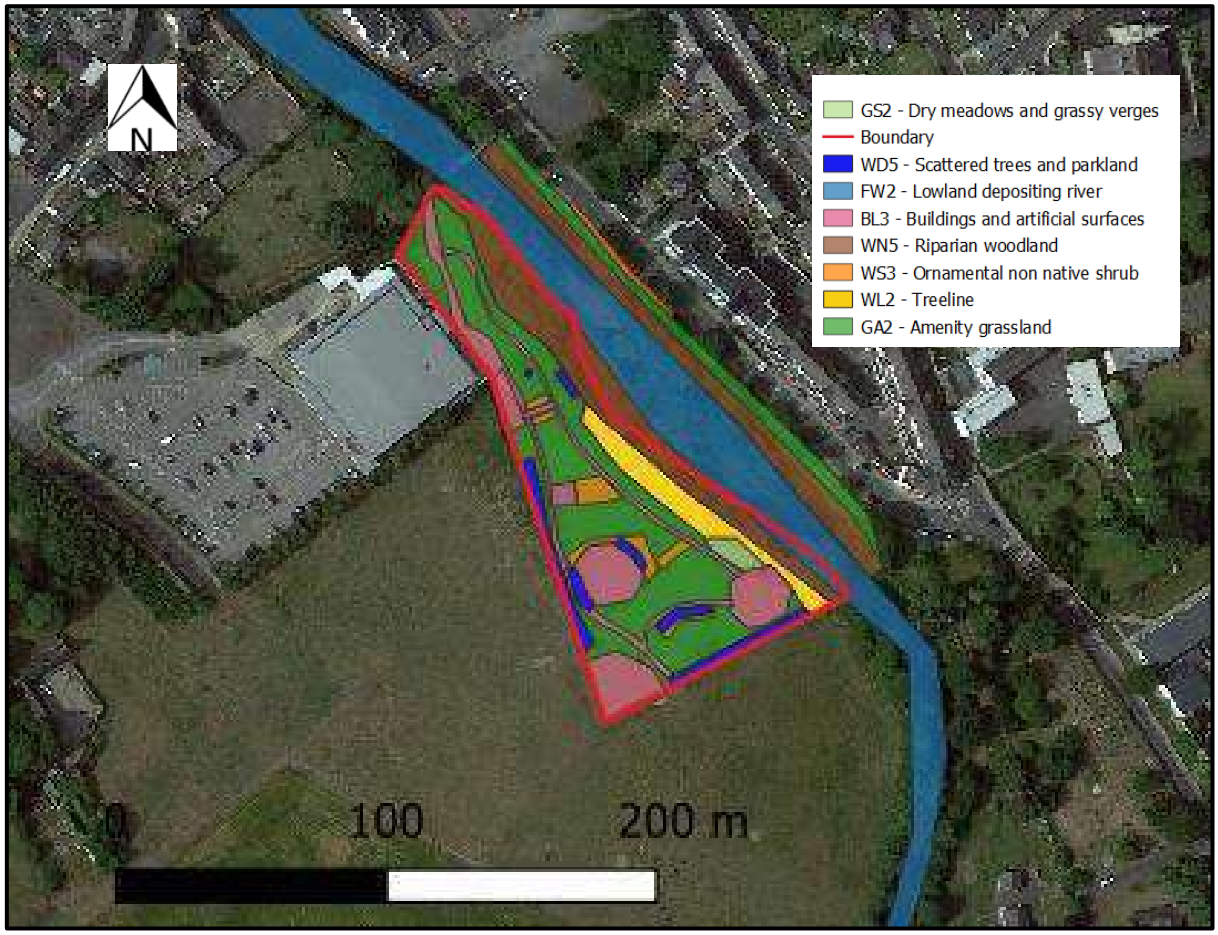

Figure 4.3 Habitat Map (Google Satellite, 2023 ©)

4.4 HYDROLOGICAL CONNECTIVITY

The proposed development is located within the Slaney sub-catchment (Slaney_SC_020), which is part of the Slaney and Wexford Harbour Catchment (ID_12). The closest watercourse to the proposed development site is the River Slaney located approximately 3m east. The Slaney (EPA Code: 12S02 - Order 5) flows directly passed the east side of the proposed development in a south-easterly direction. Other watercourses within the area include the Tullow (EPA Code: 12T22 - Order 1) located approximately 42m south-east of the

development which meets the Slaney approximately 36m (hydrologically) south of the proposed development and the Tullowbeg (EPA Code: 14T21 – Order 1) located approximately 104m south of the development. It joins the Slaney confluence approximately 436m downstream from the proposed development. See Figure 4.4 for map of watercourses surrounding the proposed development. Protected aquatic habitats are summarised in Section 6 below.

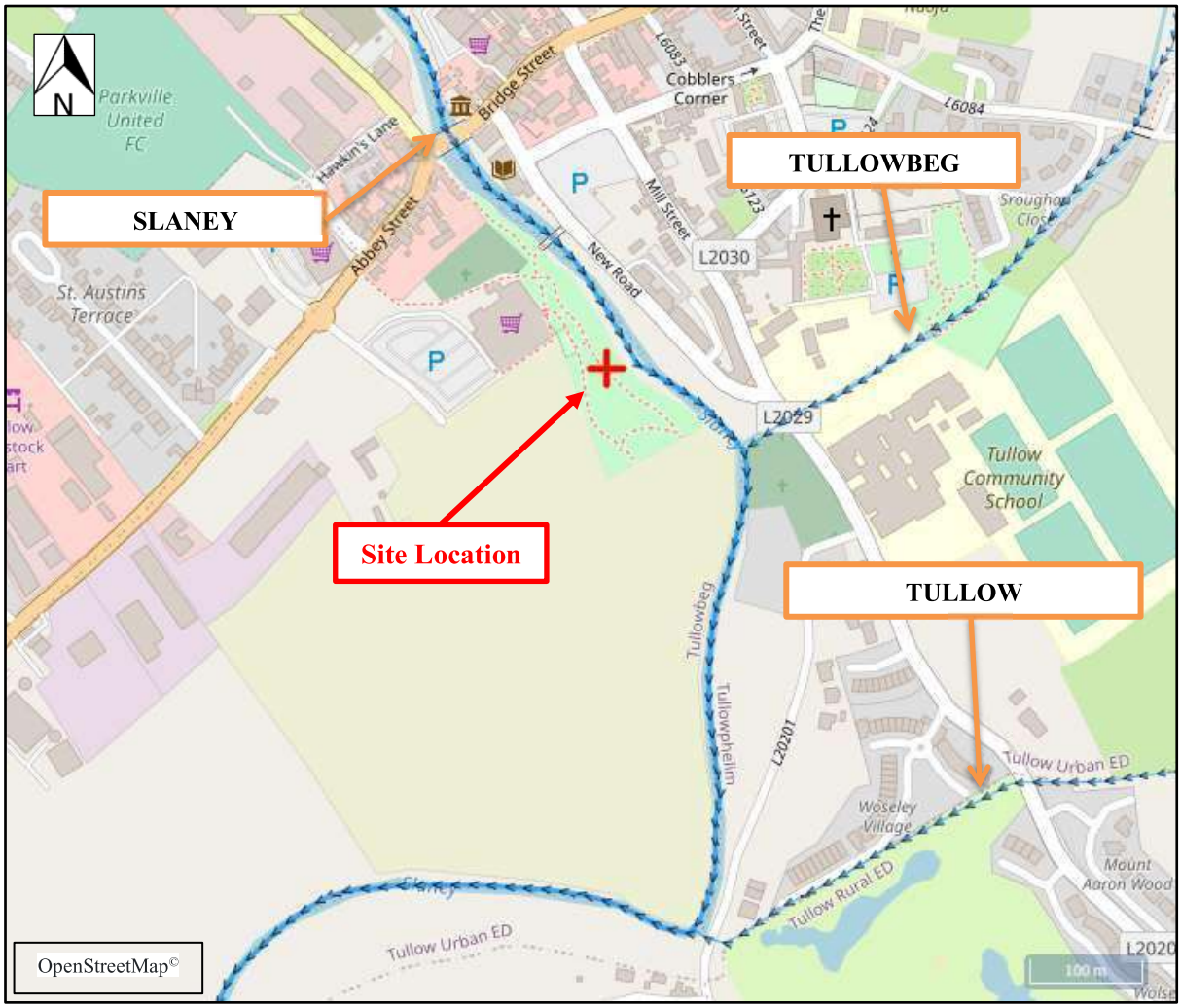

Figure 4.4: Mapped watercourses surrounding the proposed development site

4.5 INVASIVE SPECIES

Under Regulation 49(2) of the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011), save in accordance with a licence granted under paragraph (7), any person who plants, disperses, allows or causes to disperse, spreads or otherwise causes to grow in any place specified in relation to any plant which is included in Part 1 of the Third Schedule shall be guilty of an offence. During the site assessments no invasive plant species listed in the Third Schedule of the European Communities Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011) were recorded.

Three invasive plant species listed in the Third Schedule of the European Communities Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011) were recorded within the 10km square;

Table 4.4.1: NBDC Invasive Flora Records (Tetrad S87)

THIRD SCHEDULE INVASIVE SPECIES TETRAD S87	
Giant Hogweed (*Heracleum mantegazzianum*)	
Indian Balsam (*Impatiens glandulifera*)	Japanese Knotweed (*Fallopia japonica*)

Other invasive plant species were noted during the site assessment listed in Table 4.4.2, some of which do not require a licence and can be controlled using herbicides.

Table 4.4.2: Invasive Flora at Site

INVASIVE SPECIES	HABITAT	DESIGNATION
Butterfly-bush (*Buddleja davidii*)	WN5	Medium Impact
Sycamore (*Acer pseudoplatanus*)	WN5	Medium Impact
Indian Balsam (*Impatiens glandulifera*)	WN5	High Impact
Three-cornered Garlic (*Allium triquetrum*)	WN5	Medium Impact

Butterfly-bush and Sycamore are un-scheduled and generally controlled by herbicide if they become problematic (NRA, 2010).

Indian Balsam and Three-cornered Garlic are high impact Third Schedule Invasive Species. This report and the accompanying Natura Impact Statement (Document Ref: PE_NIS_10045) includes mitigation measures for their treatment. Three-cornered Garlic can be controlled by regular mowing and or complete removal of the bulb. Indian Balsam can be controlled using the correct method to reduce spread (Document Ref: PES_NIS_10045).

5.0 PROTECTED SPECIES

The following species were observed during site assessments and within the wider area from published flora and fauna records.

5.1 BIRDS

Given the urban land use of the surrounding area it would be expected that common grassland, freshwater and hedgerow bird species would be present in the area. Bird species noted during the site assessment are included in the Table 5.1 below.

Table 5.1: Birds Observed at Site During Vantage Point Survey & General Observations

COMMON NAME	SCIENTIFIC NAME	E.U. BIRDS DIRECTIVE	BOCCI* RED LIST	BOCCI* AMBER LIST
Blackbird	*Turdus merula*	-	-	-
Blue Tit	*Parus caeruleus*	-	-	-
Chaffinch	*Fringilla coelebs*	-	-	-
Collard Dove	*Streptopelia decaocto*	-	-	-
Dunnock	*Prunella modularis*	-	-	-
Goldcrest	*Regulus regulus*	-	-	✓
Goldfinch	*Carduelis carduelis*	-	-	-
Grey Wagtail	*Motacilla cinerea*	-	✓	-
Mallard	*Anas platyrhynchos*	-	-	✓
Rook	*Corvus frugilegus*	-	-	-
Song Thrush	*Turdus philomeles*	-	-	
Starling	*Sturnus vulagaris*	-	-	✓
Treecreeper	*Certhia familaris*	-	-	-
Woodpigeon	*Columba palumbus*	-	-	-
Wren	*Troglodytes troglodytes*	-	-	-

**The BoCCI (Birds of Conservation Concern in Ireland) List classifies bird species into one of three lists (Red, Amber or Green) based on their conservation status and conservation priority.*

All bird species were observed and heard within the Riparian woodland and treeline habitats both inside the boundary and directly adjacent to the boundary. Mallard were observed swimming in the River Slaney and evidence of Swan was found also.

Three birds are amber listed; Mallard, Goldcrest and Starling while one species is red listed, Grey Wagtail. None of the bird species recorded are listed under Annex I of the E.U. Birds Directive (Gilbert et al, 2021). Bird records for the previous thirty years were reviewed on the NBDC website for the 10km square in which the proposed development is located. Bird species of note recorded within the S87 tetrad include;

Table 5.2: NBDC Bird Records

NBDC RECORDS FOR TETRAD O04		
SPECIES	**DATASET**	**DESIGNATION**
Balearic Shearwater (*Puffinus mauretanicus*),	Birds of Ireland	Red List
Barn Owl (*Tyto alba*)	Birds of Ireland	Red List
Barn Swallow (*Hirundo rustica*)	Birds of Ireland	Amber List
Black-headed Gull (*Larus ridibundus*)	Birds of Ireland	Red List
Common Coot (*Fulica atra*)	Birds of Ireland	Amber List
Common Kestrel (*Falco tinnunculus*)	Bird Atlas 2007 - 2011	Amber List
Common Kingfisher (*Alcedo atthis*)	Birds of Ireland	Amber List
Common Linnet (*Carduelis cannabina*)	Birds of Ireland	Amber List
Common Snipe (*Gallinago gallinago*)	Birds of Ireland	Amber List

Common Starling (*Sturnus vulgaris*)	Bird Atlas 2007 - 2011	Amber List
Common Swift (*Apus apus*)	Swifts of Ireland	Amber List
Eurasian Teal (*Anas crecca*)	Bird Atlas 2007 - 2011	Amber List
Eurasian Tree Sparrow (*Passer montanus*)	Birds of Ireland	Amber List
Eurasian Woodcock (*Scolopax rusticola*)	Bird Atlas 2007 - 2011	Amber List
European Golden Plover (*Pluvialis apricaria*)	Bird Atlas 2007 - 2011	Red List
Great Black-backed Gull (*Larus marinus*)	Bird Atlas 2007 - 2011	Amber List
Great Cormorant (*Phalacrocorax carbo*)	Birds of Ireland	Amber List
House Martin (*Delichon urbicum*)	Bird Atlas 2007 - 2011	Amber List
House Sparrow (*Passer domesticus*)	Bird Atlas 2007 - 2011	Amber List
Lesser Black-backed Gull (*Larus fuscus*)	Bird Atlas 2007 - 2011	Amber List
Little Grebe (*Tachybaptus ruficollis)*	Birds of Ireland	Amber List
Mallard (*Anas platyrhynchos*)	Birds of Ireland	Annex II and III, Section I Bird Species
Mew Gull (*Larus canus*)	Bird Atlas 2007 - 2011	Amber List
Mute Swan (*Cygnus olor*)	Birds of Ireland	Amber List
Northern Lapwing (*Vanellus vanellus*)	Bird Atlas 2007 - 2011	Red List
Rock Pigeon (Columba livia)	Bird Atlas 2007 - 2011	Annex II, Section II Bird Species
Sky Lark (*Alauda arvensis*)	Birds of Ireland	Amber List
Spotted Flycatcher (*Muscicapa striata*)	Bird Atlas 2007 - 2011	Amber List
Yellowhammer (*Emberiza citrinella*)	Birds of Ireland	Red List

5.2 BADGER & OTHER MAMMALS

Badgers live in underground tunnels systems called setts with 3 to 10 entrances. These tunnels are often built into soil banks. It is not considered that the proposed development would offer suitable habitat for Badger. The banks of the River Slaney directly adjacent to the proposed development would not support habitat required given its width and depth. The riparian woodland is a narrow band of woodland while the ground is mostly flat and only approximately 1m above the surface of the River Slaney. There was no evidence of badger activity or a badger sett within the proposed development site. NBDC has no records of badger activity at the site. The closest record of Badger is approximately 788m south of the proposed development. Any badger foraging activity would likely be outside the red line boundary of the proposed development within hedgerows, treelines and woodlands. Movement would generally be restricted to the east by the New Road and residential/commercial premises and to the north by the N81 Abbey Street.

Evidence of Otter was noted during the site assessment (spraint). Fauna such as Otter are likely to commute along the Slaney River and the riparian zone. The vegetation within the red line boundary would not offer suitable habitat for Otter couches however, Otter holts may be

located within the vicinity, upstream or downstream of the proposed development. Limitations of this survey would subject to terrestrial terrain while binoculars were used to look from afar. An in-depth survey would need to be undertaken to gather evidence of Otter usage at the site. As no in-stream works will be required, it is not anticipated that the proposed development would have a significant impact on this species during the construction phase. During the operational phase, the typical hours would be outside the active hours of Otter. Also, the proposed development is currently in use as a park. Therefore, there would not be any increased disturbance to this species if present. No evidence of any other protected species was recorded.

Figure 5.1 Otter sprain observed within the Riparian woodland habitat

5.3 BATS

Desk Based Review

The proposed development is located outside of the current distribution, current range and favourable reference range of Lesser Horseshoe Bat (*Rhinolophus hipposideros*) [1303],], Whiskered Bat (*Myotis mystacinus*) [1330] and Nathusius' Pipistrelle (*Pipistrellus nathusii*) [1317]. The proposed development is outside the current distribution but within the current range and favourable reference range for the Brown long-eared Bat (*Plecotus auritus*) [1326] but within the current distribution, current range and favourable reference range of Soprano Pipistrelle (*Pipistrellus pygmaeus*) [5009], Natterer's Bat (*Myotis nattereri*) [1322], Daubenton's Bat (*Myotis daubentonii*) [1314], Leisler's Bat (*Nyctalus leisleri*) [1331], Common pipistrelle (*Pipistrellus pipistrellus*) [1309] of the proposed development (NPWS, 2019c).

The NPWS's National Lesser Horseshoe Bat Roost Database was consulted (February 2023) with regards to any roost records for Lesser Horseshoe Bat (*Rhinolophus hipposideros*). The Lesser Horseshoe Bat is mainly confined to the west of Ireland, with the NPWS database indicating that the nearest record for this bat is located approximately 119km to the west of the development site near Limerick City (Grid R6461).

Table 5.3.1 NBDC has records for bats within the 10km square (Tetrad S87) at the proposed development.

NBDC RECORDS FOR BATS	
SPECIES	TETRAD (10KM)
Daubenton's Bat (*Myotis daubentoniid*)	S87

Soprano Pipistrelle (*Pipistrellus pygmaeus*)	S87
Natterer's Bat (*Myotis nattereri*)	S87
Lesser Noctule (*Nyctalus leisleri*)	S87
Pipistrelle sp. (*Pisistrellus pipistrellus sensu lato*)	S87

Table 5.3.2 NBDC has records for bats within the 2km square (Tetrads S87L) at the proposed development.

NBDC RECORDS FOR BATS	
SPECIES	**TETRAD (2KM)**
Soprano Pipistrelle (*Pipistrellus pygmaeus*)	S87L
Daubenton's Bat (*Myotis daubentoniid*)	S87L
Natterer's Bat (*Myotis nattereri*)	S87L
Pipistrelle sp. (*Pisistrellus pipistrellus sensu lato*)	S87L

In addition, Bat Conservation Ireland's habitat suitability index available to view on the NBDC online mapping portal, classifies the landscape, within which the site is located, as having a medium habitat suitability for bats, with a score of 31.33 for the development site and surrounding landscape. The maps are a visualisation of the results of the analyses based on a 'habitat suitability' index. The index ranges from 0 to 100 with 0 being least favourable and 100 most favourable for bats. The maps are constructed using spatial units of the OSI National Grid. The index presented is for all species combined, in addition to the individual species' indices (Lundy et al., 2011).

Table 5.4 Bat habitat suitability index for the proposed development site

BAT HABITAT SUITABILITY INDEX	
SPECIES	**INDEX**
Soprano Pipistrelle (*Pipistrellus pygmaeus*)	32
Brown long-eared Bat (*Plecotus auritus*)	53
Common pipistrelle (*Pipistrellus pipistrellus*)	41
Lesser Horseshoe Bat (*Rhinolophus hipposideros*)	0
Lesser Noctule (*Nyctalus leisleri*)	38
Whiskered Bat (*Myotis mystacinus*)	38
Daubenton's Bat (*Myotis daubentoniid*)	25
Nathusius's Pipistrelle (*Pipistrellus nathusii*)	11
Natterer's Bat (*Myotis nattereri*)	44

Day Time Preliminary Bat Assessment

The proposed development contains a Riparian woodland and treeline along the eastern boundary with some mature trees on the Island within the River Slaney. Some mature trees featured cracks and crevices and may potentially be used by bat species although no evidence was found during the daytime site assessment. To the east of the development across the River Slaney is an old cemetery also. A treeline was observed along the banks of the River Slaney beyond the boundary of the proposed development. Therefore, it is likely that bats are within the area. Bats utilise linear features such as the treeline and narrow woodland along the River Slaney. There is a moderate potential of bats roosting or utilising the habitats within and outside the proposed development.

The Scattered trees and parkland habitat would offer negligible bat roosting potential given their age, size and lack of direct connectivity.

Figure 5.3.1 Habitats with negligible potential for bat roosts. (i) Treeline with negligible bat roost potential but could be used by commuting bats (ii) Scattered trees with negligible bat roost potential but could be used by commuting bats.

Figure 5.3.2 (i) Riparian woodland (WN5) with moderate bat roost potential located east boundaries of the proposed development. Some trees will be removed to facilitate the proposed development and as per the Arboricultural Report.

5.4 INVERTEBRATES

No invertebrates were recorded during the site assessment given the time of year. The hedgerows, treelines and grasslands would provide suitable habitat for invertebrates. The River Slaney could offer habitat for most aquatic invertebrates. The study area does not support the food plants of the protected Marsh Fritillary (*Euphydryas aurinia*). The river Slaney is located outside the proposed development boundary. Therefore, there would not be any protected invertebrates associated within a watercourse or wetland within the boundary. Invertebrates' records for the previous thirty years were reviewed on the NBDC website for the 2km square in which the proposed development is located. The only species of note is the Large Red Bumblebee listed as near threatened. There are no species listed that are protected recorded within the 2km Tetrad S87L.

5.5 AMPHIBIANS AND REPTILES

The majority of the site consists of amenity grassland, Riparian woodland, buildings and artificial surfaces and a high flow watercourse. The Common Frog can be found in areas of tall vegetation for most of the year but returns to water during the breeding season. The Smooth Newt is known to prey on frogspawn. The Smooth Newt and Common Frog could potentially be in the vicinity however, due to the nature of the current site in terms of human and animal disturbance and short vegetation being the dominant characteristic of the development, it is unlikely like that there would be suitable habitat for frogs and newts. No frogs or newts were recorded during the site assessment. No Lizards were noted during the site assessment. The Riparian woodland and Treeline could act as suitable terrestrial habitat and migration corridors for both amphibians and reptiles. NBDC website for the tetrad S87 includes the protected species Common Frog (*Rana temporaria*). One species was recorded within 2km Tetrad S87L, Common Frog (*Rana temporaria*).

5.6 OTHER SPECIES

No evidence of any other fauna was observed during the site assessment. Other fauna not observed but would be typically found throughout the rest of Ireland would be present in the area of the proposed development. These include the protected Pine Marten (*Martes martes*), Irish Hare (*Lepus timidus hibernicus*), Irish Stoat (*Mustela erminea subsp. Hibernica*), Hedgehog (*Erinus europaeus*), Red Fox (*Vulpes vulpes)* and Wood Mouse (*Apodemus sylvaticus*). Fauna records for the previous thirty years were reviewed on the NBDC website for the tetrad S87 include the following species; Red Squirrel (*Sciurus vulgaris*), Badger (Meles meles), Pine Martin (*Martes martes*) and Hedgehog (*Erinaceus europaeus*).

Invasive species within the tetrad S87 are American Mink (*Mustela vison*), Brown Rat *(Rattus norvegicus*), Grey Squirrel (*Sciurus carolinensis*), Rabbit (*Oryctolagus cuniculus*), Sika Deer (*Cervus nippon*) and Fallow Deer (*Dama dama*).

Aquatic Habitat Overview

The closest mapped watercourse is the River Slaney located approximately to the east of the proposed development. The River Slaney is part of the Slaney River Valley SAC (Site Code: 000781) to which the proposed development is located within the boundary of. This SAC contains a number of protected habitats and species for which the SAC was designated.

Therefore, it is considered that the River Slaney directly adjacent to the proposed development could offer suitable habitat for protected species both upstream and downstream. There will be no proposed works within a watercourse however, there will be construction works up to the rivers edge for the installation of landscape features and for the removal of some existing vegetation (refer to section 4.4 for water quality).

Table 5.6: Ecological Value of Species of the Proposed Development

SPECIES	SPECIES RATING	RATIONALE
Bats	Local importance, higher value	Yes. The hedgerows / treelines within and adjacent to the proposed development could be used by bats for both foraging and commuting. The Riparian woodland on the Island and along the banks of the River Slaney could provide a corridor for the movement of bats while the river could provide invertebrates for foraging.
Other	Local importance, low to high value	Yes. Evidence of otter was found within and outside of the development boundary. The site has the potential to support other protected mammal species via the Riparian woodland and treeline corridors. No evidence of badger was found within the site boundary.
Breeding Birds	Local importance, higher value	Yes. All birds, their nests, eggs and young are protected under the Wildlife Act.
Aquatic Fauna	Local importance, low to high value	Yes. Small fish were observed within the River Slaney during the site assessment. No Atlantic Salmon were observed during the site assessment. Atlantic Salmon are found throughout the River Slaney catchment and the River Slaney is designated as a Salmonid Water EC (Quality of Salmonid Waters) Regulations (S.I. no. 293 of 1988).

6.0 PROTECTED SITES

6.1 NATURA 2000 SITES WITHIN ZONE OF INFLUENCE

In assessing the zone of influence of this project upon European sites, the following factors must be considered:

- Potential impacts arising from the project;

- The location and nature of European sites;
- Pathways between the development and European sites.

There is no standard radius that can be used to select which European sites are to be analysed. This can only be determined by looking at the zone of influence of the project at hand.

One Special Protection Area (SPA) site occurs within the potential zone of influence (ZoI) of the proposed development. Three Special Area of Conservation (SAC) sites occur within the potential zone of influence of the proposed development site and are shown in the following table:

Table 6.1: Natura 2000 Sites

SITE NAME	DESIGNATION	SITE CODE	DISTANCE
Slaney River Valley	SAC	000781	Within
Holdenstown Bog	SAC	001757	12.5km N
River Barrow and River Nore	SAC	002162	13.8km W
Wexford Harbour and Slobs	SPA	004076	36km SE

The proposed development is partly located within the Slaney River Valley SAC (Site Code: 000781).

The proposed development is also hydrologically connected to the Wexford Harbour and Slobs SPA however, this is a significant distance downstream. There is no direct hydrological connection between the proposed development and any other Natura 2000 Site. See Appendix A for maps of the protected sites within the potential zone of influence of the proposed development site.

6.2 NATURAL HERITAGE AREAS WITHIN ZONE OF INFLUENCE

No Natural Heritage Areas occur within the potential zone of influence of the proposed development. Five proposed Natural Heritage Areas (pNHA) occur within the potential zone of influence of the proposed development.

Table 6.2: Natural Heritage Areas

SITE NAME	DESIGNATION	SITE CODE	DISTANCE
Ardristan Fen	pNHA	000788	3km SW
Slaney River Valley	pNHA	000781	4.5km S
Baggot's Wood	pNHA	000792	12.1km NE
Oakpark	pNHA	000810	13.2km NW
Cloghristick Wood	pNHA	000806	15km W

There is a direct hydrological connection to one proposed Natural Heritage Area, the Slaney River Valley pNHA (000781) located approximately 6km downstream with potential for impact on a protected site addressed in the accompanying mitigation measures contained in this report.

The closest mapped protected area to the proposed development is Slaney River Valley SAC (Site Code: 000781).

There is no direct hydrological connection between the proposed development and the Ardristan Fen pNHA, Baggot's Wood pNHA, Oakpark pNHA and Cloghristic Wood pNHA. Therefore, the proposed development would not be considered to have an impact on any other protected site.

7.0 ECOLOGICAL IMPACT ASSESSMENT

Developments have the potential to impact upon terrestrial and aquatic biodiversity through destruction and loss of habitat, disturbance due to noise and dust, the potential introduction of invasive species and light pollution. The construction phase is likely to cause temporary disturbances to the resident wildlife, especially nocturnal species such as bats and otter, due to the noise, vibration, and increased human activity. Depending on the timing and duration of construction activities, these disturbances could disrupt the animals' foraging patterns, nesting, or breeding behaviours. The development may also lead to alterations in the landscape and fragmentation of habitats. The project involves some vegetation clearance and an increase in human presence, both of which could disrupt local wildlife.

The construction phase of the development will result in a direct and permanent loss of a portion of the existing habitats such as grassland, some scattered trees, scrub and Riparian woodland.

The existing amenity grassland habitat is considered as having been modified and of low ecological value. The loss of portions of this habitat would not be significant. While some scrub and boundary vegetation within the understory of the Riparian woodland will be removed, the landscape plan has incorporated wildflower meadows along the eastern boundary to allow the vegetation to grow to a height of 700mm. This will create pollinator friendly habitat and provide foraging opportunities for mammals and birds. It will also provide a wildlife corridor for small mammals and a buffer zone for freshwater species such as Otter.

The Riparian woodland and treelines are part managed but are of good ecological value with a mix of native and non-native species including Sycamore (*Acer pseudoplatanus*), which is a medium impact invasive species. The woodland species are predominantly Sycamore (*Acer pseudoplatanus*), Willow (Salix spp.) and Ash (*Fraxinus excelsior*). The Riparian zone including trees and scrub undergrowth along the eastern boundary of the site are of good ecological value that could offer habitat for nesting birds and roosting bats.

The proposed development will require some tree removal to facilitate the proposed development however, this will be kept to a minimum with a majority of the existing trees and vegetation to be retained. Birch and Cherry trees to the south are to be removed while a number of trees within the Riparian woodland habitat and throughout will be removed as per the Arboricultural Report. These trees are considered as being in poor condition or dead. The Riparian Woodland habitat could offer suitable habitat for Otter and Bats. The loss of these trees would be minor given the retention of a majority of the existing trees and the additional planting of native and non-native non-invasive tree species.

The removal of any hedgerows and treelines will not be undertaken during the 1st March to the 31st August, so as not to disturb nesting bird species.

The presence of Indian Balsam and Three-cornered Garlic, third schedule invasive species, on the site's eastern boundary pose a potential threat to local biodiversity. If allowed to spread, this species could outcompete native flora and alter the local ecosystem.

During the operational phase, surface water comprised of clean rain-water run-off would be directed to the new proposed drainage network. Surface water will ultimately discharge into the River Slaney via an existing outflow pipe and via a new proposed combined sewer granted under Planning Ref: 22235. The proposed drainage network will include SuDS features which is designed to manage surface water run-off and improve water quality. Rain gardens and permeable paving will allow surface water to filter to ground while overflow connections capture excess surface water during periods of heavy rainfall. Given the capacity of the proposed drainage network and nature of the proposed development during the operational phase, it is not considered that the proposed development would have a significant impact on the River Slaney SAC due to a deterioration in water quality during the operational phase.

No works will take place within the Island or within the River Slaney. However, construction works will be undertaken up to the Rivers edge for the installation of steps etc. Therefore, there is a potential for a deterioration in water quality and the release of sediments which could have an impact on protected species and habitats within the River Slaney.

Dust emissions may arise during construction activities, in particular during earth-moving works, which may have the potential to impact upon photosynthesis, respiration and transpiration processes of flora due to the blocking of leaf stomata and have the potential to cause nuisance to fauna. Given the transient nature and scale of construction works, the potential impact to flora and fauna would not be considered significant when appropriate measures are taken to protect the environment during the construction phase.

7.1 TERRESTRIAL BIODIVERSITY PROTECTION PROTOCOL

Potential Impacts

The proposed development could impact on the wider ecological environment during the construction phase due to potential disturbance and construction activities. Given the scale of the development which includes the improvement/redevelopment of a current public town park, construction works could have a significant impact on the surrounding environment due to the close proximity to the River Slaney, the presence of Indian Balsam and Three-cornered Garlic, third schedule high impact species and due to the proposed development being located within the River Slaney Valley SAC.

Control/Monitoring Measures

As a matter of standard construction practice, the development will be constructed in accordance with the following methods and guidelines:

- All construction works will be confined as far as possible to the development footprint;

- All construction works and landscaping will not take place within 10m of the riparian zone along the eastern boundary;
- Where possible, vegetation removal works will be scheduled outside of the 1st of March to the 31st of August period, so as not to disturb nesting bird species;
- If works should take place beside any trees that will remain as part of the landscape plan, then a buffer zone would be applied onsite as per Tree Survey requirements (see report by rda surveys);
- Tree protection measures as per BS5837:2012 to include a root protection zone, protection fencing or hoarding, exposed roots and/or soil profiles containing roots of trees to be retained will be kept damp in dry conditions, ground protection mats or cellular confinement system capable of supporting the tree weight and tree protection measures will be overseen and directed on-site by a qualified arborist;
- The construction works contractor would take cognisance of the NRA's document "*Guidelines for the Protection and Preservation of Trees, Hedgerows and Scrub Prior to, During and Post Construction of National Road Schemes*", 2006. In particular, the construction works contractor would take cognisance of the guidelines with regards swales, sewage systems and drainage network and the determination of the root protection area of any existing trees to be retained along the boundary of the proposed development.;
- A Landscape Plan by Place + Urbanism has been prepared as part of the development. Additional tree planting and unmanaged areas are proposed;
- All planting of trees and hedges to be undertaken during bare root season November to April. The balance of tree planting and lawn seeding to be completed within 12 months of the completion of construction work of the development;
- Native species will be incorporated into the landscape plan.

Residual Impacts

Assuming all control measures are put in place, there would be no significant residual impacts to the terrestrial ecology from the proposed development.

7.2 DISTURBANCE TO PROTECTED HABITATS AND SPECIES

The proposed development is with the Slaney River Valley SAC (Site Code: 000781), and as such could any in-situ effects upon a protected site through loss or destruction of habitat, fragmentation of habitat, disturbance of habitat or direct reduction in species density.

7.2.1 Badger & Mammals

No badger setts were recorded during ecological survey or within the zone of influence of the proposed development. The proposed development is unlikely to support suitable habitat for Badger however, badger could be within the wider area. Evidence of Otter (Spraint) was noted during the ecological site assessment.

Potential Impacts

Foraging Badgers could enter into an active construction site. During the construction phase, the release of suspended solids or deterioration in water quality could have an indirect impact on otter.

Control/Monitoring Measures

- Control measures should be put in place in regard to the Guidelines for the Treatment of Badgers Prior to the Construction of National Road Schemes (NRA 2006).
- The building site should be made safe for mammals with hazards such as open holes/excavations covered over or fitted with ramps to allow for escape. Guidelines on what to do for both active and inactive sets must be followed if a badger sett is found during site clearance works:
- A metal fence or hoarding can be installed along the boundary of the site that will limit access to the site for large mammals such as Badger.
- Otter proof fencing to located around the construction site to prevent otter from accessing the site;
- Where possible, no construction works would be conducted outside of normal working hours, to reduce potential noise disturbance to nocturnal species.
- Should a protected fauna species such as Bat species, Badger, Otter (*Lutra lutra*) or any other protected species be found during the construction works, an officer of the NPWS would be notified prior to the resumption of construction works;

Residual Impacts

The proposed development would not limit foraging habitat for badgers if active in the vicinity of the site as the development is within an open amenity parkland area in a town. Therefore, any badgers active to the south of the site will likely not be disturbed during the operation phase of the proposed development. The lighting design will avoid directional lightning to the Slaney River and towards treelines. It should also be noted, the gated entrance to the development will be locked during the night reducing impact any significant impacts to Otter that may be in the area when they are most active.

7.2.2 Bats

Potential Impacts

Artificial lighting during the construction and operational phases has the potential to negatively impact upon bat species, as illumination can impact upon their roosting sites, commuting routes and foraging areas. Cutting down or disturbing potential roosting sites for bats. Occupation of roosts in trees by bats may be very transient and there is potential that mature broadleaved trees in the footprint of the proposed site could be used occasionally as roosting or resting places by individual/small numbers of bats. The potential to impact bats roots is low as the landscape plan proposes to retain much of the existing trees onsite. The proposed development will require the removal of some existing trees. It is likely bats are within the area and utilising trees within the Riparian Woodland habitat to the east. Roosting potential of trees within the Riparian

woodland is considered moderate with their removal during the construction phase to be outside the maternity season for bats (May – September). Lighting can cause avoidance of an area for commuting bats and can prevent or reduce foraging for certain species such as *Myotis.*

Control/Monitoring Measures

- No chemicals will be used within the development zone and will not be used in near treelines and hedgerows or drainage ditches;
- The planting of substantial landscape features integrated to the wider network of green corridors such as hedgerows, woodland and scrub along the eastern boundary between the proposed development and the River Slaney;
- Bats rely on linear habitats such as hedges and treelines to fly through the landscape. There is a treeline/hedgerow stretching along the riparian zone of the River Slaney. The landscape plan includes the preservation of the majority of trees within the site which will provide connectivity with the hedgerows/treelines within the wider landscape.;
- If bat activity has not been determined then felling of moderate roost potential trees should be only undertaken in the period late August to late October/early November.
- Felled trees should be left for 48 hours, to allow for any potential bats to escape.
- Maintaining an unmanaged buffer zone along treelines/hedgerows such as scrub or tall grasses would provide habitat for invertebrates for bats to feed on;
- Where trees of moderate bat roost potential are to be felled, a Bat (Emergence/re-entry) survey will be undertaken;
- See Bat Conservation Ireland Guidelines on hedgerow management for bats. https://www.batconservationireland.org/wp-content/uploads/2022/07/Managing-Hedgerows-for-Bats.pdf

Artificial Lighting during construction phase;

- Construction works in the hours of darkness, when bats are active (April – October), would be kept to a minimum;
- Lighting of hedgerows / treelines will be avoided where possible;
- Should lighting be required during construction works, it will be of a low height (without compromising safe working conditions) to ensure minimal light spill. Where possible and where practicable to do so, timers or motion sensors would be used;
- Directional lighting would be used where possible, by use of louvres or shields fitted to the lighting;
- White light emitting diode (LED) will be used where possible, which is considered to be low impact in comparison to other lighting types

A Lighting Plan has been prepared by EnerJ Building Services Engineering. The Lighting Plan will incorporate one type of LED luminaire comprising a total number of 64 throughout and with a height of 1m, taking into account the sensitivity of the site. The following measures should also be incorporated.

Artificial Lighting during operational phase;

- Lighting would be directed to where it is required only;
- Lighting of hedgerows / treelines would be avoided where possible;
- Buildings, carparks and site entrance lighting would be angled away from hedgerows and treelines;
- The use of specialist bollard or low-level downward directional luminaires to retain darkness above can be considered;
- All lanterns calculated at 0° tilt
- Lighting would be of low height where possible, to minimise light spill;
- Where possible and practicable to do so, timers or motion sensors would be used;
- White LED or amber coloured LED outdoor lighting would be used where possible, which is considered to be low impact in comparison to other lighting types;
- All luminaires should lack UV elements when manufactured. Metal halide, fluorescent sources should not be used;
- Dark buffer zones can be used to separate habitats or features from lighting by forming a dark perimeter around them;
- Light spill into the surrounding riparian habitat to the east is minimal;

Residual Impacts

The redevelopment of the current town park could lead to minor residual effects on local bat populations. If mitigation measures are effective, these effects would be minimal. The addition of trees and unmanaged areas would create for roosting and foraging opportunities.

7.2.3 Birds & Other Fauna

Potential Impacts

The removal or alteration of existing riparian vegetation and trees could result in a temporary or permanent loss of habitat for both aquatic and terrestrial species, including those protected species found within the River Slaney. This could potentially affect birds and other fauna that utilise these habitats for nesting, foraging, or as migration corridors. Additionally, there is a risk of water pollution due to the accidental release of construction materials or sediment runoff, which could degrade water quality and negatively impact aquatic species and indirectly impact terrestrial species that rely on these aquatic habitats. Additionally, some tree removal is proposed as part of the development.

Control/Monitoring Measures

- Where possible, vegetation removal works will be scheduled outside of the 1st of March to the 31st of August period, so as not to disturb nesting bird species;

- Stormwater from the proposed development would comprise of clean rainwater run-off from hard surfaces and would be directed to the town drainage network.
- Tree removal will be kept to a minimum as per the Arboricultural Report and to facilitate the proposed development with the addition of tree planting;
- All construction works will be confined to the development footprint and will not require works within the River Slaney Main Channel;
- No construction works would be conducted outside of normal working hours, to reduce potential noise disturbance to nocturnal species;
- The incorporation of unmanaged areas to provide a buffer along the River Slaney;

Residual Impacts

Assuming all mitigation measures are put in place, there would be no significant residual impacts to any other protected fauna from the proposed development.

7.2.3 Invasive Species

Potential Impacts

During construction works, there is potential for invasive species to be introduced to the site through the movement of materials, such as soil and stone, and the arrival of construction plant and equipment from an area with invasive species. Indian Balsam and Three-cornered Garlic were recorded during the site assessment along the eastern boundary within the proposed development.

Indian Balsam (*Impatiens glandulifera*) is an invasive plant species that originates from the western Himalayas but has become established in various regions globally, including Ireland, due to its ornamental appeal (Caffrey et al., 2011). Optimally, Indian Balsam thrives in moist and semi-shaded environments, leading to its prevalence along watercourses, wet woodlands, and damp meadows (Hejda et al., 2009). Each plant can produce up to 800 seeds, which are dispersed widely by the explosive dehiscence of its seed pods. These seeds can also be spread by water, enabling the plant's rapid colonization of riverbanks (Beerling and Perrins, 1993). In terms of ecological impact, dense stands of Indian Balsam can outcompete and displace native vegetation, resulting in a decrease in plant diversity (Hejda et al., 2009). The plant dies back over winter, leaving riverbanks bare and susceptible to erosion, and its presence can also alter habitat structures, thereby affecting associated fauna (Caffrey et al., 2011).

Three-cornered Garlic (*Allium triquetrum*) is a bulbous perennial plant reaching a height of up to 60cm. It is native to the Mediterranean. The leaves are green, soft, fleshy and angled with three leaves typically emerging from the base. They often droop and are alternatively arranged and typically 15-20cm in length and 3-20mm in width. Three-cornered Garlic can create monocultural masses which reduces species diversity and biodiversity as it out competes native plants. It is an aggressive invader and can quickly colonise a large area of land (The Knotweed Killers, 2023).

In the operational phase of the park, the increased human activity could potentially facilitate further spread of the Indian Balsam and Three-cornered garlic. Furthermore, the alteration of

the landscape could potentially result in conditions that are even more favourable for the growth of these invasive species.

As such, control measures should be followed to ensure no impact to the Slaney River Valley SAC (Document Ref: PE_NIS_10045). Care should also be taken in terms of other invasive species.

Mitigation/Monitoring Measures

The following controls for the prevention / treatment of invasive flora species would be implemented throughout the construction phase of the development:

- Given the persistent nature of invasive species, a long-term management plan should be in place. This plan should include regular monitoring and control measures to ensure that any new growth of invasive species is detected and dealt with promptly;
- All relevant construction personnel would be trained in invasive flora species (main species of concern) identification and control measures;
- An invasive species management plan must be put in place for the treatment of Indian Balsam (*Impatiens glandulifera*) and Three-cornered Garlic (*Allium triquetrum*) such as *Best Practice Management Guidelines on Himalayan Balsam* (Kelly, Maguire, and Cosgrove, 2008).
- Indian balsam (*Impatiens glandulifera*) has a very shallow root system with control by hand an easier option over herbicide use. Pulling by hand must be done prior to flower development as seed dispersal will occur if plant is disturbed.
- Uprooted plants can be left to air dry and decompose on a non-permeable membrane. This method is highly suited to dealing with initial outbreaks of the species and in areas with sensitive native species;
- Re-seeding of bare soil would be undertaken as soon as possible, where required, to promote the rapid stabilisation of soils;
- Appropriate weed management plan should be put in place to help establish any landscaped areas.
- Any vegetation cutting would only occur once control of Indian Balsam (*Impatiens glandulifera*) and Three-cornered Garlic (*Allium triquetrum*) has occurred;
- Repeated strimming of Three-cornered Garlic can also be used as it depletes the energy stored within the bulb however, this would need to be regularly repeated for at least one year. Direct removal of bulbs is best done during the months of March and April when the plant is fully formed;
- The construction works contractor would ensure that all equipment and plant is inspected for the presence of invasive species and thoroughly washed prior to arriving to, and leaving from, the development site;
- The use of herbicides with Glyphosphate can be very effective in the treatment of Three-cornered Garlic and Indian Balsam;
- Cognisance will be taken of the National Roads Authority's Guidelines on "*The Management of Noxious Weeds and Non-Native Invasive Plant Species on National Roads*";

- Herbicide application should only be carried out by suitably qualified contractors or operators with strict reference to the product label, local land use, health and safety considerations and any pertinent regulations. All herbicide treatment must comply with the pesticide regulations S.I. No. 155/2012 - European Communities (Sustainable Use of Pesticides) Regulations 2012 or any amended or current regulations at the time of use.
- Only suitably licenced and trained personnel should use herbicides, following guidelines and instructions on correct use;

Residual Impacts

It is an offence to transport Third Schedule invasive species and an Invasive Species Management Plan would be put in place. After the implementation of all proposed mitigation and monitoring measures, the residual effects from the invasive Indian Balsam and Three-cornered Garlic on the development site are expected to be minor. A robust management strategy should significantly control and reduce the population of these invasive species. However, it is possible that isolated populations may persist. This remaining population could mildly impact local biodiversity by competing with native species for resources. Additionally, there is a risk of reinfestation from outside the site, given that the seeds of Indian Balsam can be dispersed by wind, water, or inadvertent human activity. Despite these potential challenges, effective biosecurity measures and education should limit this risk. Finally, habitats should recover following the removal of invasive species and the reinstatement of native vegetation.

The proposed development will include native species where possible and or non-native non-invasive plant species within the landscape plan. The ecological value of an ornamental plant would be considered with species that are pollinator friendly but do not displace pollination of native species found along the River Slaney.

7.2.4 Aquatic Ecology

Potential Impacts

Construction works have the potential to impact upon flora and fauna due to a deterioration in water quality. Risks to water quality could arise due to the potential release of suspended solids during soil disturbance works, the release of uncured concrete and the release of hydrocarbons (fuels and oils).

Control/Monitoring Measures

The following mitigation measures will be implemented to ensure there is no significant impact upon the aquatic ecology of the area owing to a deterioration in water quality:

- The construction works contractor would adhere to standard construction best practice, taking cognisance of the Construction Industry Research and Information Association (CIRIA) guidelines "*Control of Water Pollution from Construction Sites; guidance for consultants and contractors*" 2001 and "*Control of Water Pollution from Construction Sites – Guide to Good Practice*", 2002;
- While construction works will not take place within the immediate vicinity of any watercourses, cognisance should be taken of the 2016 guidelines published Inland

Fisheries Ireland, "*Guidelines on Protection of Fisheries During Construction Works in and adjacent to Waters*";

- Only clear vegetation when works are required to prevent leaving exposed ground for long periods of time;
- Re-seeding of exposed areas should be undertaken as soon as possible to stabilise the soil and prevent runoff;
- Regular visual inspections would be undertaken of the site access road to ensure no silt-laden surface water runoff leaves the site, with the potential to either join with any adjacent surface water drainage systems within the vicinity or travel to along the road network to the road network;
- Silt fencing would be placed along any potential area debris or sediment that could enter the River Slaney (See Appendix D for Silt Fencing Specifications). Silt fencing would remain in place and maintained as appropriate until the completion of construction works;
- Where spoil is generated, this would only be stored temporarily. A designated spoil area would be established by the construction works contractor within site footprint. This would be located away from any watercourse such as the River Slaney or drainage ditch;
- Where possible, spoil would be covered or alternatively, graded to avoid ponding or water saturation;
- Excavations and earth-moving activities would be planned outside periods of heavy rainfall, to limit the potential for suspended solids to become entrained within surface water run-off;
- Manhole covers and stormwater gullies will be protected by silt blankets and additional measures such as sandbags to be incorporated on steeper gradients if required
- Should water be encountered during excavation works, water would be pumped to a silt control feature, such as a lagoon/infiltration area used for settlement;
- This lagoon/infiltration area must have adequate capacity and water must be filtered before discharging. Water must not be directly discharged to the River Slaney;
- The lagoon/infiltration area will be located away from any steep sloping ground;
- Pumping operations would be supervised at all times;
- All construction plant machinery and equipment would be maintained in good working order and regularly inspected;
- A designated area for the storage of hydrocarbons would be established by the construction works contractor and inspected on a regular basis;
- Spill kits, adequately stocked with spill clean-up materials such as booms and absorbent pads, would be readily available onsite;
- The construction works contractor would ensure the relevant site personnel are trained in spillage control;
- In the unlikely event of a suspected deterioration in water quality within the River Slaney due to construction works at the development site, works would immediately

cease, an investigation into the cause undertaken and the relevant NPWS and Inland Fisheries Ireland personnel informed.

- The use of herbicides/pesticides or chemicals will not be used within 10m of the banks of the River Slaney or within the Island to the east.

Residual Impacts

Assuming all mitigation measures are put in place, there would be no significant residual impacts to the aquatic environment from the proposed development.

8.0 CUMULATIVE IMPACTS

The residual impact of this proposed development is anticipated to be minor at local level. Cumulative effects from a development in general can result from individually insignificant but collectively significant actions taking place over a period of time or concentrated in a location (CIEEM, 2018).

Considering the nature of the development and location within the River Slaney SAC, the main potential cumulative impact upon biodiversity would be disturbance to mammals within the vicinity ie. Badgers and/or nocturnal species and / or loss or fragmentation of natural habitat. The amenity grassland habitat and ornamental/non-native shrub habitat within the site boundary is of lower ecological value.

No works will take place within the River Slaney and construction works will be undertake during daylight hours to as to prevent any impact upon nocturnal species. Given the mitigation measures within this report and short duration of the construction works, it is not anticipated that the proposed development would have a significant impact on protected species within the area.

It is not anticipated that there would be any significant impact upon water quality during the operational phase, given that stormwater from the site would be directed to the new proposed drainage network with SuDS features to minimise surface water run-off and prevent a deterioration in water quality.

The proposed development is not anticipated to result in a significant impact upon habitat loss / fragmentation during either the construction or operational phases, given that the majority of the land is comprised of modified habitats of lower ecological value. Tree removal will be kept to a minimum as per the landscape plan and Arboricultural Report. The landscape plan will incorporate a mix of native and non-native species with the addition of tree planting, meadows and raised planters throughout.

Given the measures to be implemented during the construction phase, it is not considered that the proposed development would have an impact on water quality.

Potential cumulative lighting impacts from external lighting have been addressed in the mitigation measures proposed in Section 7.2.2 and accompanying lighting assessment for this development, therefore cumulative impacts as a result of external lighting should not arise.

IMPACT	DEVELOPMENT PHASE	SIGNIFICANCE	MITIGATION MEASURES	RESIDUAL SIGNIFICANCE	RESIDUAL IMPACT TYPE
Habitat Loss	Construction & Operational	Moderate	• Excavated soils would be segregated into subsoil and topsoil and reused in reinstatement and landscaping works. Where possible, natural recolonization would be allowed to take place; • The landscaping plan for the development takes into consideration the setting and use of native species and preservation of existing mature trees.	Moderate	Minor
Introduction of Invasive Flora Species	Construction	Slight significance	• Construction plant would be inspected and washed prior to arriving onsite; • Regular site inspections for the presence of invasive species would be undertaken; • Should invasive species appear onsite, works would immediately cease until the plant was appropriately treated and disposed of.	Minor	Neutral
	Operational	Moderate Significance	• An Invasive Species Management Plan should be developed and implemented by a trained professional to reduce the spread of invasive species within the Slaney river Valley SAC. • Construction works will follow protocol and control/mitigation measures in terms of reducing the spread of invasive species onsite (See accompanying PE_NIS_10045).	Moderate	Minor
Fauna Disturbance	Construction	Slight significance	• Where possible, no construction works would be conducted outside of normal working hours • All plant machinery and equipment would be maintained in good working order and regularly inspected;	Minor	Neutral

IMPACT	DEVELOPMENT PHASE	SIGNIFICANCE	MITIGATION MEASURES	RESIDUAL SIGNIFICANCE	RESIDUAL IMPACT TYPE
			• Where possible, vehicles would be equipped with mufflers to suppress noise • As a minimum, the construction work contractor would comply with all legislative provisions relating to hedgerow / tree removal; • Should a protected fauna species be found during the construction phase, the NPWS would be notified prior to the resumption of construction works; • Works should not take place beside a Badger Sett if found and guidelines by NRA followed; • Fencing to limit access to the site; • Arborist recommendations on tree protection to be implemented; • Construction works should be limited along the rivers edge to reduce run-off and disturbance; • Lighting would be directed to where it is required only; • Lighting would be angled away from hedgerows and treelines; • Where possible and practicable to do so, timers or motion sensors would be used.		
	Operational	Not significant	None required	Imperceptible	Neutral
Fauna Mortality	Construction	Moderate significance	• As a minimum, the construction work contractor would comply with all legislative provisions relating to hedgerow / tree removal; • Where hedgerow / tree removal works are required during the bird nesting season (1st March to 31st August), the sections / trees for	Minor	Minor

IMPACT	DEVELOPMENT PHASE	SIGNIFICANCE	MITIGATION MEASURES	RESIDUAL SIGNIFICANCE	RESIDUAL IMPACT TYPE
			removal would be inspected by an ecologist for the presence of breeding birds. Where nests are present, a decision would be made as to whether a licence is required from the NPWS, or whether a suitable buffer zone could be established around the active nest with removal works rescheduled until chicks have fledged.		
Bats – Disturbance / Severance of Habitat	Construction	Slight significance	• Landscape plan would take into consideration the connectivity of the site and would take steps to enhance the boundaries with suitable planting of native species and retaining those present onsite; • Measures would be implemented to reduce the potential for light pollution; • Lighting would be directed to where it is required only; • Lighting would be angled away from hedgerows and treelines; • Where possible and practicable to do so, timers or motion sensors would be used; • Construction works in the hours of darkness would be kept to a minimum.	Minor	Neutral
	Operational	Not significant	• Lighting design measures would be implemented to reduce the potential for light pollution; • The use of flood lights with significant light spill within the development are not to be permitted; • Lights would be directed away from sensitive areas i.e. woodland and trees within the development and outside the boundary;	Imperceptible	Neutral

IMPACT	DEVELOPMENT PHASE	SIGNIFICANCE	MITIGATION MEASURES	RESIDUAL SIGNIFICANCE	RESIDUAL IMPACT TYPE
			• Lighting scheme should factor in the correct wavelength (nm) to ensure disturbance to nocturnal fauna is minimised. • The proposed development will be locked at night, during the hours of which bats are most active.		
Surface Water Quality Deterioration	Construction	Moderate significance	• Standard construction control measures for the protection of surface waters would be implemented; • Concrete works would be supervised; • Appropriate storage and handling of fuels and oils; • Provision of spill kits; • Silt fences should be used to minimise sediment run-off into nearby watercourses; • Construction works will not take place within or River Slaney;	Moderate	Neutral
	Operational	Slight significance	• Ensure maintenance of drainage system; • Install a series of public waste bins to reduce litter on-site; • Install public noticeboards to inform the harm of littering and with measure on how to safely swim/fish within the river without causing an impact on species and habitats present within the SAC.	Neutral	Neutral
Designated Sites	Construction	Moderate significance	• Standard construction control measures for the protection of surface waters would be implemented; • Concrete works would be supervised;	Moderate	Neutral

IMPACT	DEVELOPMENT PHASE	SIGNIFICANCE	MITIGATION MEASURES	RESIDUAL SIGNIFICANCE	RESIDUAL IMPACT TYPE
			• Appropriate storage and handling of fuels and oils; • Provision of spill kits; • An Invasive Species Management Plan should be implemented to reduce the spread invasive species within and along the River Slaney Valley SAC.		
	Operational	Not significant	None required	Imperceptible	Neutral

9.0 CONCLUSIONS

It is the conclusion of this report that with full and proper implementation of fauna protection, water quality and invasive species measures during the construction and operation phase and lighting during operational and construction phase, the proposed development will have a low impact on local fauna populations both protected and general species.

The project is recommended to proceed as proposed with addition of the biodiversity enhancement measures as outlined in this report and accompanying plans & reports.

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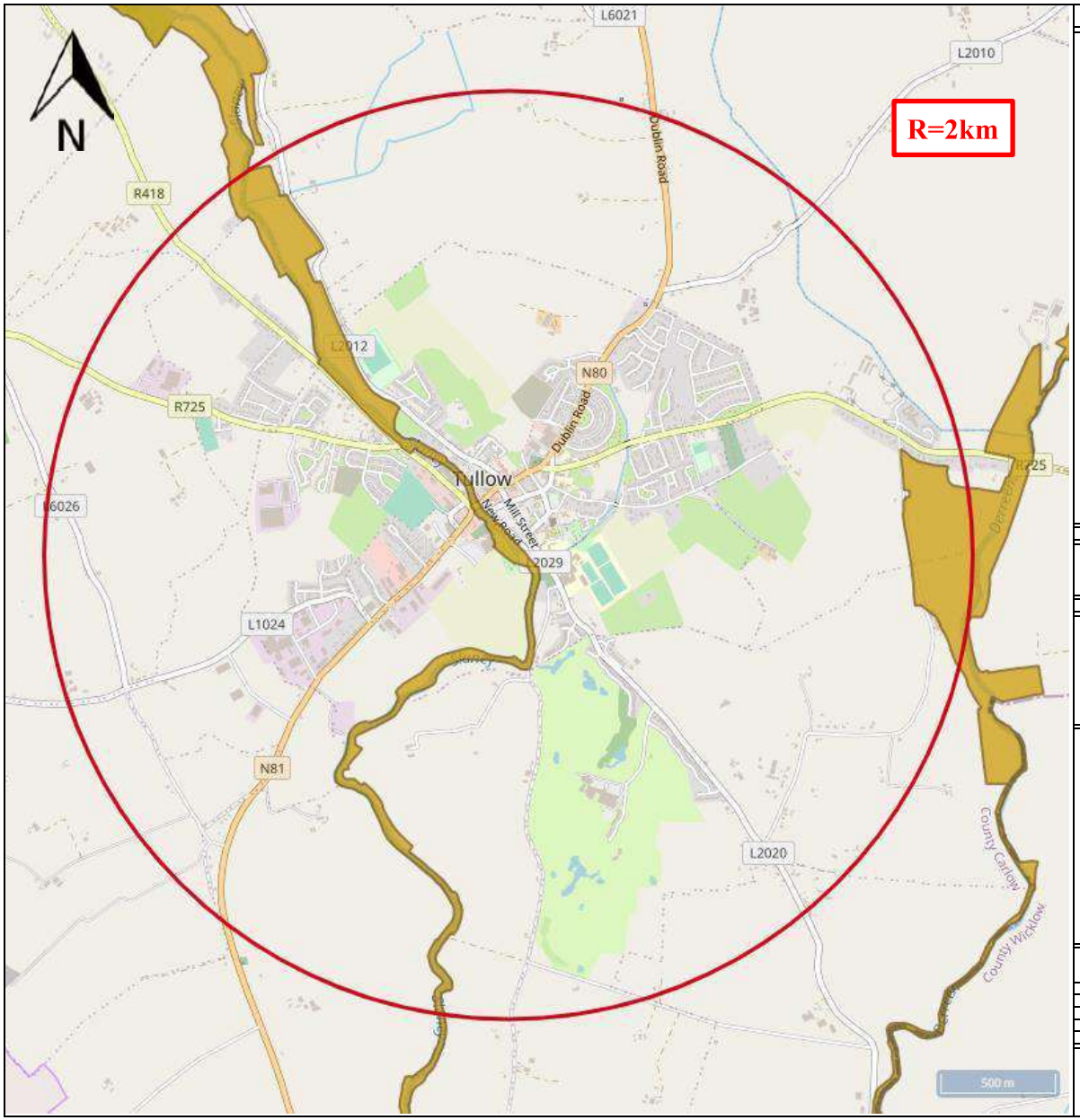
APPENDIX A
PROTECTED SITES



Notes

Site Location –

SPA –

SAC –

NHA –

pNHA –

Project Title:

Protected Sites Map

Client Name:

PANTHER ECOLOGY LTD

UNITS 3 & 4
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CARLOW
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Drawing Status:	Scale:	NTS	A4
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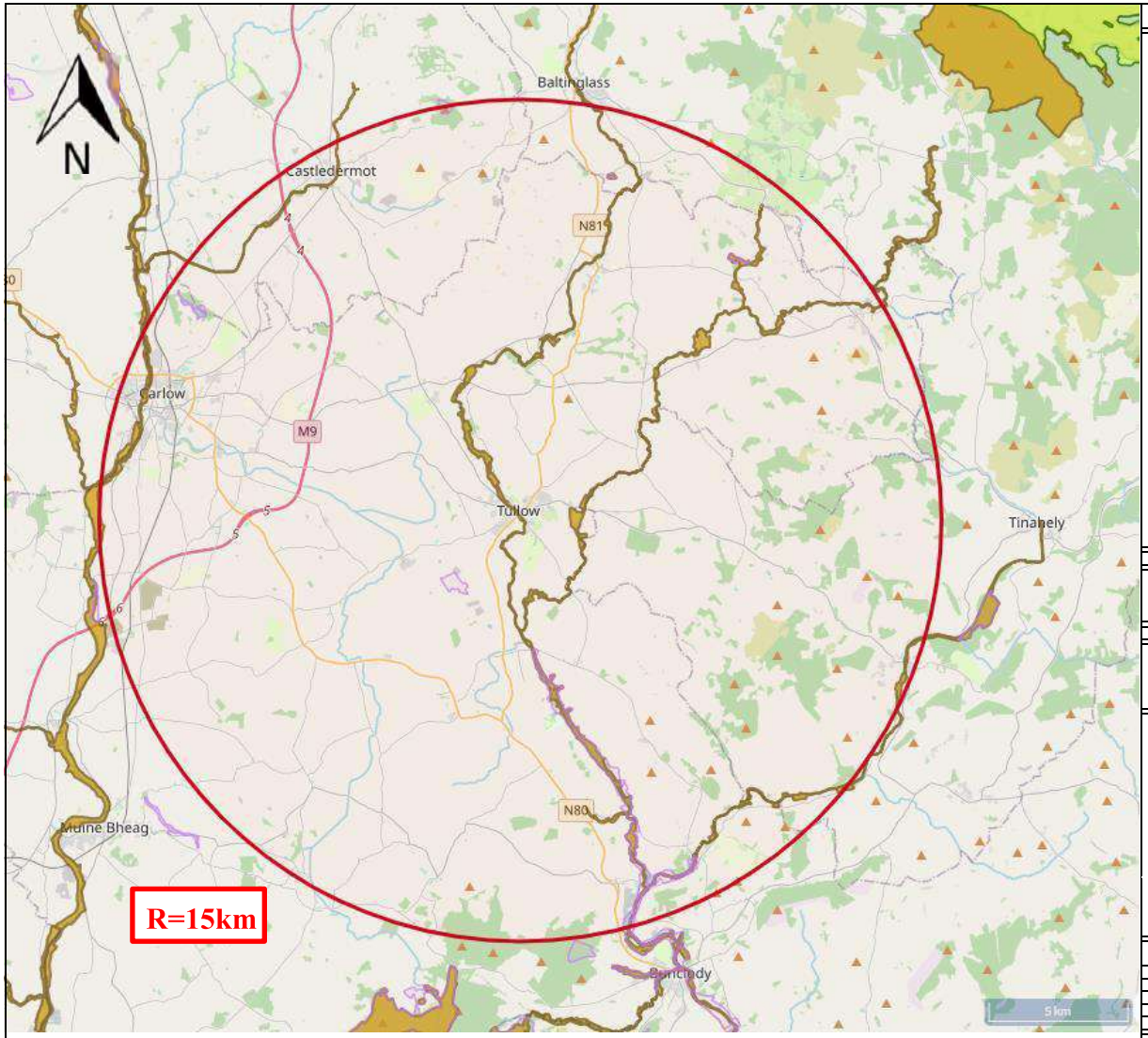
Drawing Number:	Drawn:	PES	
AA_10045	Checked:	MF	
Revision:	Approved:		
	Date:	17/02/2023	



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Site Location –

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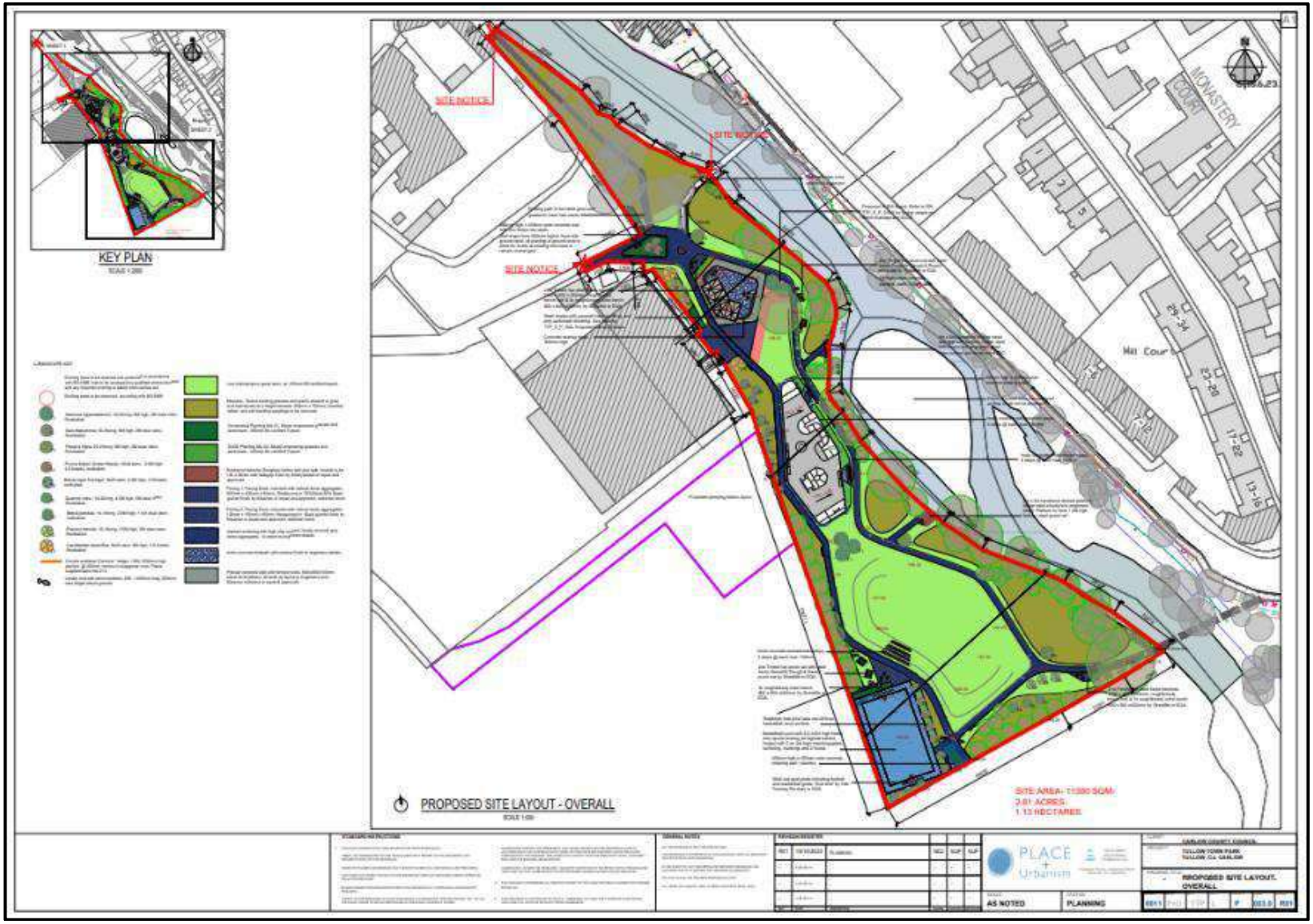
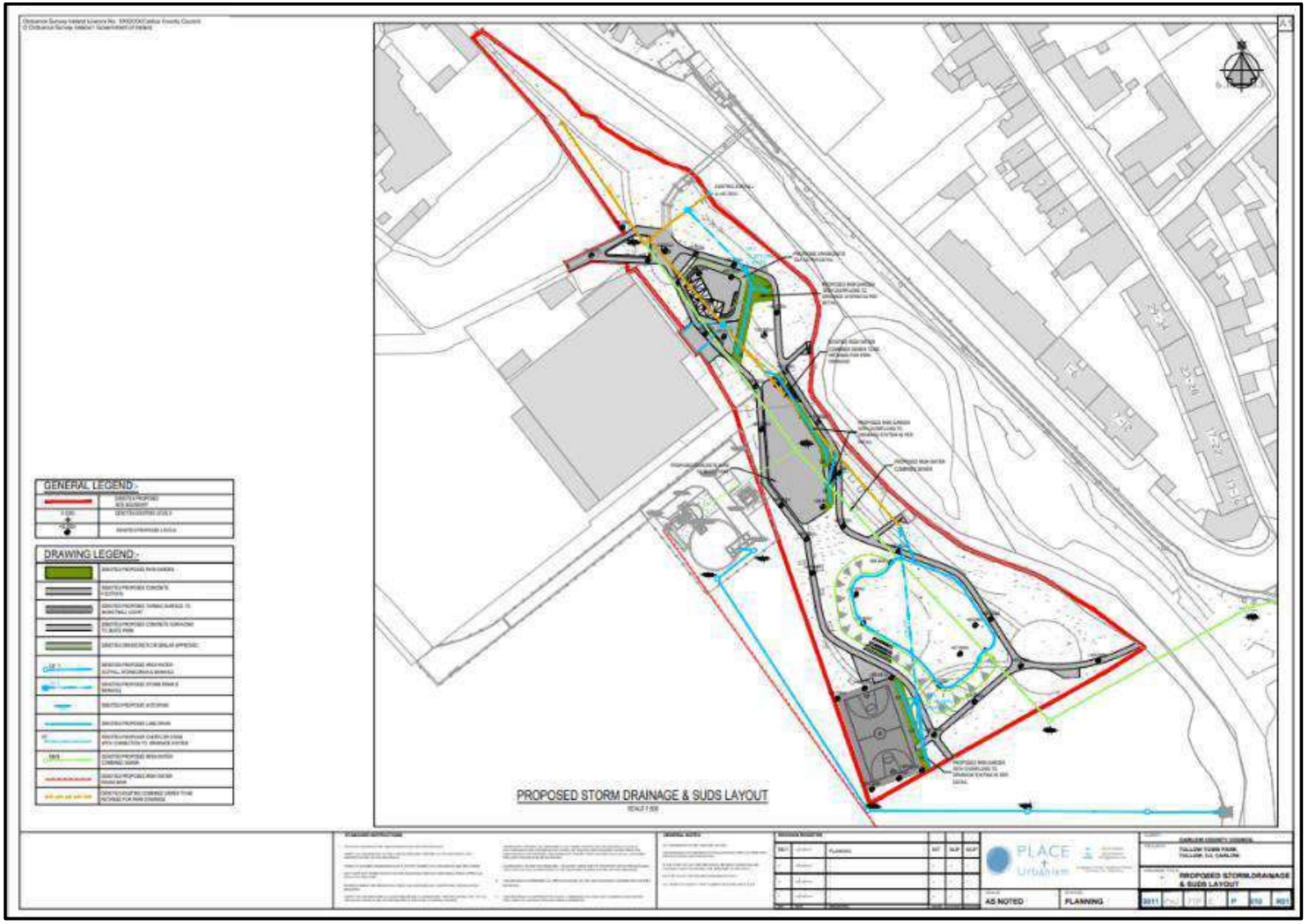
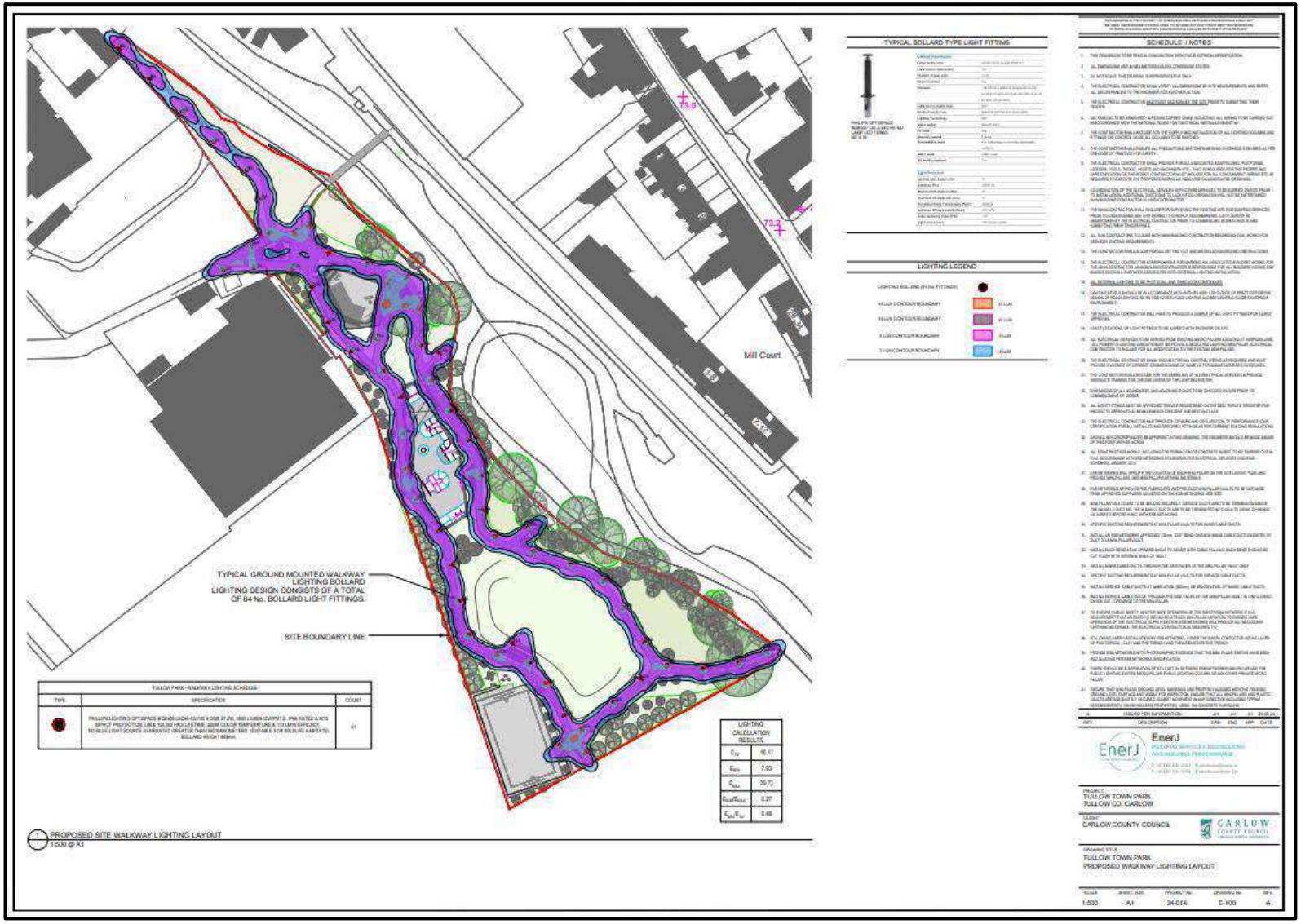
Drawing Status:	Scale:	NTS	A4
Report	Datum:	EPA Maps	
Drawing Number:	Drawn:	PES	
AA_10045	Checked:	MF	
Revision:	Approved:		
	Date:	17/02/2023	

APPENDIX B

SITE LAYOUT &LANDSCAPE PLAN
&
LIGHTING PLAN


KEY PLAN
SITE NOTICE
SITE NOTICE
SITE NOTICE
MONASTERY COURT
Mill Court
PROPOSED SITE LAYOUT - OVERALL
SITE AREA: 11300 SQM
2.81 ACRES
1.13 HECTARES
PLACE + Urbanism
AS NOTED
PLANNING
PROPOSED SITE LAYOUT. OVERALL


GENERAL LEGEND:-
DRAWING LEGEND:-
PROPOSED STORM DRAINAGE & SUDS LAYOUT
PLACE
AS NOTED
PLANNING


TYPICAL BOLLARD TYPE LIGHT FITTING
LIGHTING LEGEND
SCHEDULE / NOTES
Mill Court
TYPICAL GROUND MOUNTED WALKWAY LIGHTING BOLLARD LIGHTING DESIGN CONSISTS OF A TOTAL OF 64 No. BOLLARD LIGHT FITTINGS.
SITE BOUNDARY LINE
TULLOW PARK - WALKWAY LIGHTING SCHEDULE
TYPE
SPECIFICATION
COUNT
LIGHTING CALCULATION RESULTS
PROPOSED SITE WALKWAY LIGHTING LAYOUT
1:500 @ A1
EnerJ
PROJECT
TULLOW TOWN PARK,
TULLOW CO. CARLOW
CLIENT
CARLOW COUNTY COUNCIL
CARLOW COUNTY COUNCIL
DRAWING TITLE
TULLOW TOWN PARK
PROPOSED WALKWAY LIGHTING LAYOUT
1:500
A1
24-014
E-100
A

APPENDIX C
PHOTO LOG

Plate 1: View along north boundary showing entrance to site

Plate 2: River along south boundary

Plate 3: View along west boundary

Plate 4: View along north boundary

Notes:

TULLOW TOWN PARK,
TULLOWBEG,
TULLOWBEG,
CO. CARLOW

APPENDIX C
PHOTO LOG

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GREEN ROAD
CARLOW

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EMAIL: info@pantherwms.com
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file location:		scale: N/A	A4
drawing status:	REPORT	datum: N/A	
		drawn: PES	
drawing no.	rev	checked: MF	
		approved: -	
EcIA_10045	A		
		date: 22/02/2023	

Plate 5: Himalayan Balsam in Riparian woodland

Plate 6: Three-cornered garlic in Riparian woodland

Plate 7: River Slaney (FW2) looking downstream

Plate 8: Evidence of Otter spraint along east boundary of site

Notes:

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TULLOWBEG,
TULLOWBEG,
CO. CARLOW

APPENDIX C
PHOTO LOG

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drawing status: REPORT		datum: N/A	
		drawn: PES	
drawing no.	rev	checked: MF	
EclA_10045	A	approved: -	
		date: 22/02/2023	

Appendix G – Storm Water Management (PLACE & Urbanism Ltd)

PLACE+U Anglesea House, Anglesea Street, Clonmel, Tipperary, E91 N6Y6
T: +00 35352 6128966 E: info@place-u.ie W: www.place-u.ie
Integrated Planning Landscape Architecture Conservation Engineering + Urbanism

Technical Note

Project: Tullow Town Park, Tullow, Co. Carlow

Technical Note: TN01E – Storm Water Management

FAO: P+U

Project Ref: 011P+U Doc Ref: 011TN01E-F01 Date: 28.03.2024

1.0 INTRODUCTION

1.1 General

1.1.1 This Technical Note (TN) which has been prepared by PLACE+U contains information on the proposed stormwater management system for the proposed redevelopment of Tullow Town Park, Tullow, Co. Carlow.

2.0 EXISTING DRAINAGE

2.1 Park Drainage

2.1.1 There are currently no formal storm water drainage facilities on the site. The current hard surfaces within the park drain via overland flow to the surrounding green areas.

2.2 Public Infrastructure

2.2.1 There are existing wastewater sewers, combined sewers and combined sewer overflow (CSO) that traverse the site. These sewers serve the existing Uisce Eireann pumping station that bounds the west of the site. The pumping station overflows via an existing overflow pipe which discharges to the river Slaney south of the existing footbridge as can be seen in **Figure 2.1** below.

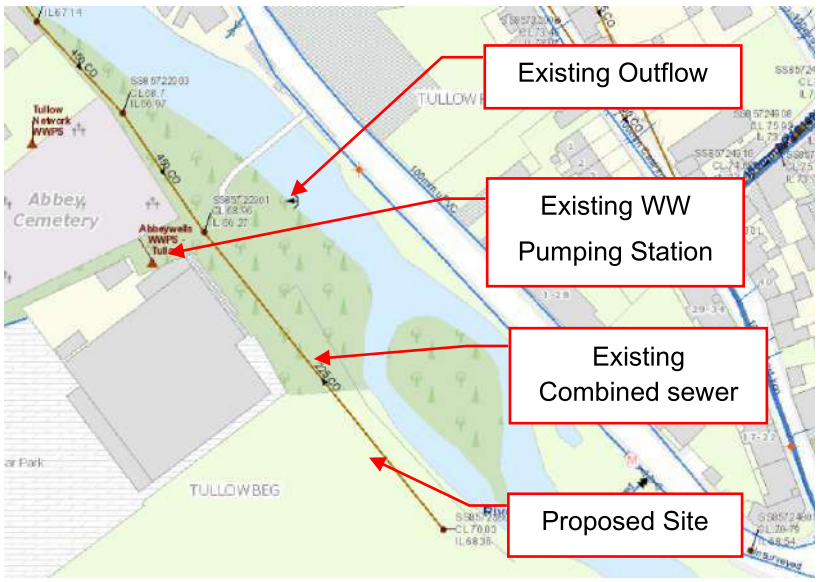


FIGURE 2.1 – EXISTING PUBLIC INFRASTRUCTURE

2.2.2 There is an approved Uisce Eireann project that involves the construction of a new wastewater pumping station and associated pipe connections. As part of this project it is proposed to decommission a number of the existing combined sewers and the existing CSO to the river Slaney.

2.2.3 As part of the works and a new combined sewer overflow will discharge into the river to the south of the site. **Figure 2.2** extracted from Doran Consulting Drawing No. 10036973-DRC-XX-XX-DR-Y-0051_EC0013_Site Layout Plan Sheet 1 of 5 shows the proposed layout of the new pumping station and associated sewers.

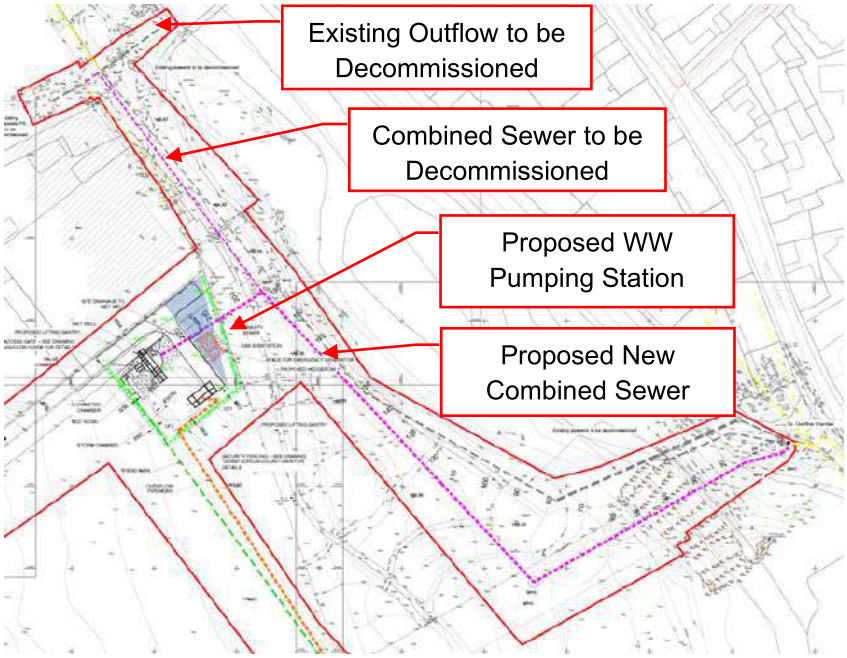


FIGURE 2.2 – PROPOSED UISCE EIREANN PUMPING STATION LAYOUT

3.0 PROPOSED STORM WATER MANAGEMENT & SUDS SYSTEMS

3.1 General

3.1.1 As part of the new park development, it is proposed to implement a Storm water management system that incorporates sustainable urban drainage system (SuDS) features which aligns with the policies and objectives outlined in the Carlow County Development Plan 2022-2028.

3.1.2 All hard standing areas including the proposed ball court, the proposed skatepark and proposed outdoor classroom and associated canopy will be drained via SuDS features such as rain gardens and grasscrete surfaces.

3.1.3 As the site is a riverside site and ground water is known to be high from previous site investigation works on behalf of Uisce Eireann the use of soakaways for final disposal of storm water is not considered possible as such a final overflow discharge to the river Slaney is recommended. This is to be achieved by repurposing the sewers which are to be decommissioned by Uisce Eireann as part of

the pumping station upgrade works.

3.2 Gravity System

3.2.1 The existing 225mm diameter Uisce Eireann combined sewer will be retained for park drainage and repurposed as a storm sewer and will be extended with a new 150mm Ø pipe that will drain the proposed ballcourt, as indicated in **Figure 3.1** below and Drawing No. 011/P+U/TTP/E/P/010 – Proposed Storm Drainage & SuDS layout.

3.2.2 This approach maximises the reuse of existing infrastructure and ensures efficient drainage of the site and minimises disruption to the site and its surrounds including the river Slaney.

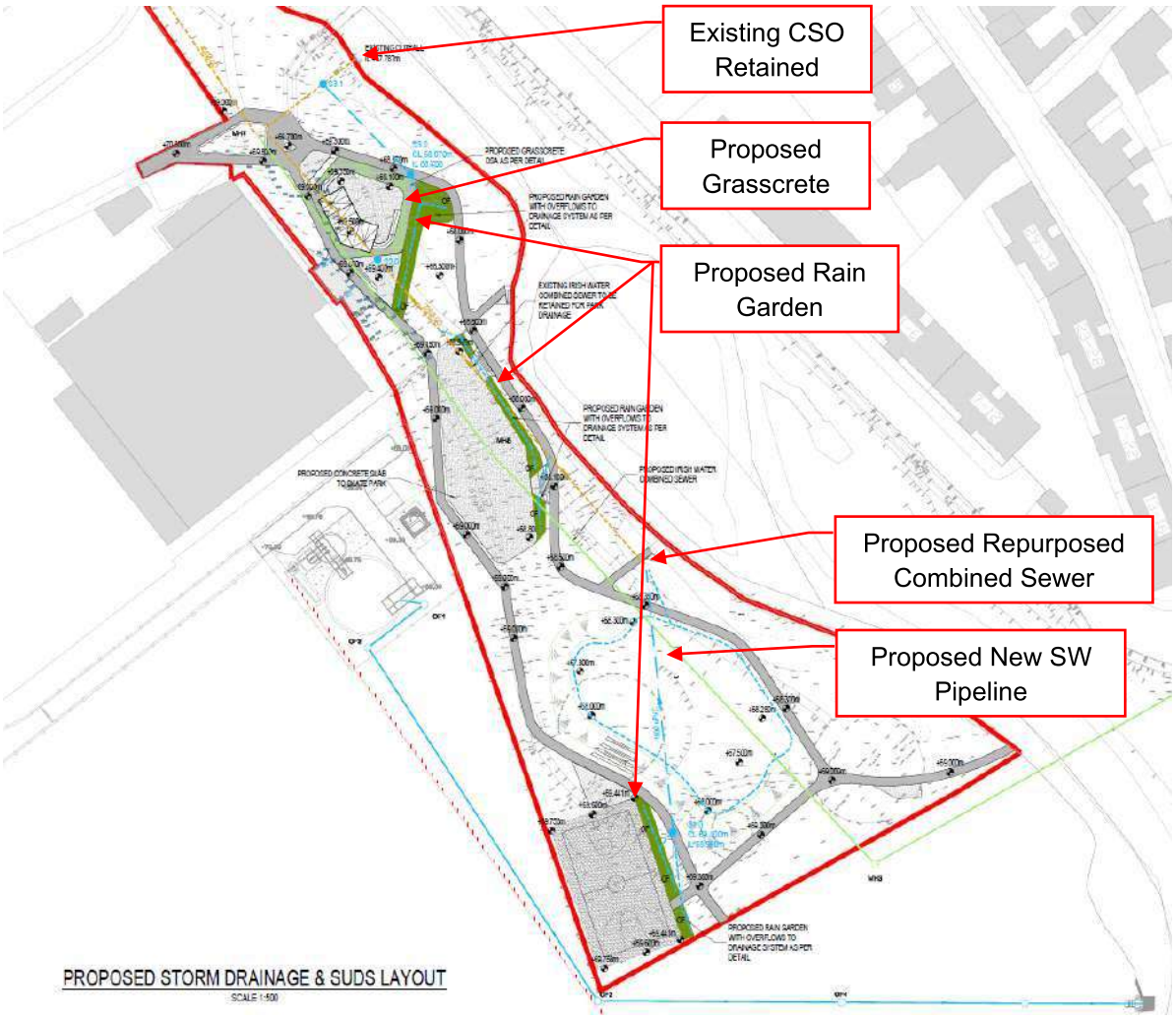


FIGURE 3.1 – PROPOSED STORMWATER & SUDS LAYOUT

3.2.3 The pipes have been designed in accordance with the Colebrook-White formulas and the Modified Rational Method, where:

$Q_p = CiA$

and

Q_p = Peak Flow (l/s)

C = C_v x C_r (C_v = 0.75 & C_r = 1.3)

i = Rainfall intensity (mm/hr)

3.2.4 The existing pipes have been assessed and proposed pipes have been designed based on the following design criteria:

- Five-year return period
- Time of entry of 4 minutes
- Impermeable areas as follows:
  - Ball court – 608m^2
  - Skatepark – 580m^2
  - Outdoor Classroom & Canopy – 227m^2

3.2.5 This produces a design flow within the pipes of 13l/s – 26l/s.

3.2.6 The proposed are 150mm diameter at 1:80 and the existing pipes are 225mm at an assumed gradient of 1:200. These pipes have capacity 25 – 45 l/s which is adequate for the area drained. Self cleansing velocity has been assessed and are above the required 0.7m/s.

3.3 SuDS System

3.3.1 Sustainable urban Drainage Systems (SuDS) are an integral part of the proposed development at Town Park. SuDS are designed to manage surface water runoff, mitigate flood risk, and improve water quality by mimicking natural drainage processes. The implementation of SuDS is in line with the objectives outlined in the Carlow County Development Plan 2022-2028.

3.3.2 The proposed SuDS measures for the development include:

Rain Gardens

3.3.3 The development incorporates 3 No. rain gardens strategically placed at the proposed ball court (608m^2), the proposed skatepark (580m^2) and the proposed outdoor classroom (227m^2). Each rain garden will be connected to the formal drainage system via land drains and overflow pipes.

3.3.4 Rain gardens are landscaped depressions that collect, filter, and infiltrate stormwater runoff from impervious surfaces such as roofs and paved areas. They promote groundwater recharge and improve water quality by removing pollutants through natural processes.

Grasscrete

3.3.5 Grasscrete or similar approved permeable paving is proposed along the perimeter of the outdoor classroom (124m^2). Permeable paving allows stormwater to infiltrate through the surface, reducing runoff and promoting groundwater recharge. It helps to attenuate peak flows and improves water

quality by trapping sediments and pollutants.

Overflow Connections

3.3.6 The rain gardens are designed with overflow connections to the piped drainage system. These connections ensure that excess water during heavy rainfall events is safely conveyed to the drainage network and discharged to the river via the repurposed existing CSO.

4.0 SUMMARY & CONCLUSION

4.1 Summary

4.1.1 This Technical note has been prepared to provide relevant information on the proposed stormwater and SuDS system for the proposed redevelopment of Tullow Town Park and details the following:

- A description of the existing stormwater infrastructure on site.
- A description of the proposed stormwater system and relevant SuDS features proposed to drain the development.

4.1.2 As part of the development of a new Uisce Eireann wastewater pumping station to the east of the site, a number of the existing combined sewers traversing the site and the CSO are proposed to be decommissioned. It is intended that these will be repurposed and integrated into the proposed stormwater management system.

4.1.3 The proposed infrastructure also utilises SuDS features such as Rain Gardens and permeable surfaces (grasscrete) to manage stormwater runoff at source, to mitigate against flood risk and improve water quality by mimicking natural drainage processes. These system will overflow to the existing and proposed pipe network and will discharge excess rain water to the river Slaney.

4.1.4 The proposed formal gravity systems have been designed using the Cole Brook White formulas and the modified rational method and have capacity capable of draining the development.

4.2 Conclusion

4.2.1 The proposed stormwater management and SuDS systems are in line with Carlow County Development Plan Policies and have adequate capacity for the the development and therefore are deemed suitable for development on site.

Prepared By: Robert Boyd

Robert Boyd M Eng (Hons)

Checked By: Martin Peters

Martin Peters MSc Eng, CEng MIEI, MIStructE, MCIHT

Appendix H – Tullow Town Park Lighting Design (EnerJ)

TULLOW TOWN PARK LIGHTING DESIGN

24-014-Tullow Park-Lighting Design (0)

Tullow Town Park

CARLOW COUNTY COUNCIL

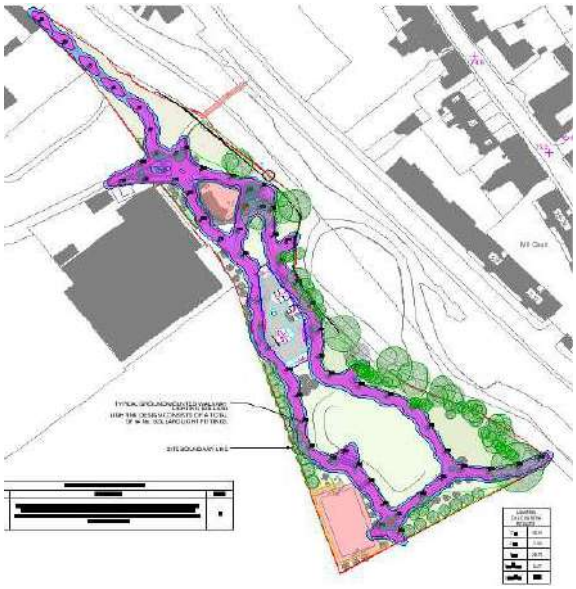
MAR 2024

EnerJ Building Services Engineering
Prepared by : John Hayes
Reviewed by: John Hassett

EnerJ
BUILDING SERVICES ENGINEERING

Project Details:

Project Name : Tullow Park Lighting Design
Project Address : Tullow Town Park, Tullow, Co. Carlow
Project Scope: Design of new LED pathway lighting to accommodate new park pathway layout, including environmental impact criteria



Project Specific Comments/Assumptions:

- Lighting calculation has been produced to achieve Lighting Class as specified by client
- Where column heights have not been provided/specified, these have been assumed to be mixed.
- It has been assumed that luminaires will be mounted post-top on lighting bollards.

Generic Comments/Assumptions (unless otherwise stated above):

- Preliminary Design proposals produced by EnerJ are not to be used for installation purposes. It is the responsibility of the Principle Contractor to ensure all Installation and Maintenance can be done in a safe manner, carried out by competent persons, based on their agreed Risk Assessments and Method Statements.
- The Luminaire Maintenance Factors have been based on 6-year cleaning intervals within an E3/E4 Environmental Zone and it is assumed that lamp/luminaire failures will be replaced on a 'spot replacement'.
- Energy consumptions have been based on the luminaire/s having Constant Light Output (CLO) enabled and the quoted wattage/s are the average over 100,000 hours (without dimming).
- The design calculations produced by EnerJ do not account for the effect obstructions, such as trees will cause.
- All column/luminaire locations are indicative and are subject to review/verification on site.
- EnerJ has not performed any asset condition testing and therefore assumes that any existing lighting columns/wall mounted brackets are structurally capable of supporting the weight & windage of the proposed luminaire/s. This must be verified by the Contractor before installation works commence.

WARNING - All proposed locations are only adversary and will need to be measured and set back from any ESBN low voltage assets 230V, any larger ESBN assets such as 400V or above. We advise you refer to the ESBN guidance docs on set back from ESBN assets before setting out the site or sending anyone to work. This will be down to the installation contractor to set out the column locations on site.

Using new locations indicated on the drawing plotted, all wattages with CLO Active & Dimming Profile 2A 12am to 6am (E3/E4 zone 6 year clean) @ maintenance factor of 0.76, height 848mm

Lighting Design to P3 Class, i.e. 5 lux average on horizontal plane
Uniformity 0.4
No upward lighting, downward lighting only
3000K Colour Temperature
No blue light source greater than 550 nanometers suitable for wildlife habitat

Layout Report

General Data

Dimensions in Metres Angles in Degrees
Grid Origin 685071.3m x 672774.2m
Area 347.4m x 307.6m
Sample Spacing 1.39m x 1.23m

Luminaires

Luminaire A Data

Supplier	
Type	BCB500 T25 A LED16/- NO
Lamp(s)	LED16/830/-
Lamp Flux (klm)	1.20
File Name	BCB500 T25 1 xLED16_830 A.ies
Maintenance Factor	0.76
Imax70,80,90(cd/klm)	214.0, 855.4, 224.8
No. in Project	64

Layout

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
1	A	685105.33	673040.60	1.00	47.87	0.00	0.00	0.00			
2	A	685115.33	673030.80	1.00	47.87	0.00	0.00	0.00			
3	A	685125.72	673020.18	1.00	47.87	0.00	0.00	0.00			
4	A	685135.89	673010.30	1.00	47.87	0.00	0.00	0.00			
5	A	685146.71	673001.12	1.00	47.87	0.00	0.00	0.00			
6	A	685151.51	672991.82	1.00	6.00	0.00	0.00	0.00			
7	A	685153.73	672980.47	1.00	35.00	0.00	0.00	0.00			
8	A	685162.15	672981.00	1.00	267.00	0.00	0.00	0.00			
9	A	685166.71	672982.93	1.00	172.00	0.00	0.00	0.00			
10	A	685173.43	672974.28	1.00	246.00	0.00	0.00	0.00			
11	A	685185.92	672970.82	1.00	254.00	0.00	0.00	0.00			
12	A	685198.65	672966.47	1.00	254.00	0.00	0.00	0.00			
13	A	685202.88	672956.15	1.00	187.00	0.00	0.00	0.00			
14	A	685203.61	672944.32	1.00	187.00	0.00	0.00	0.00			
15	A	685209.24	672941.92	1.00	310.00	0.00	0.00	0.00			
16	A	685206.73	672932.85	1.00	207.00	0.00	0.00	0.00			
17	A	685213.01	672923.08	1.00	207.00	0.00	0.00	0.00			
18	A	685219.29	672913.59	1.00	207.00	0.00	0.00	0.00			
19	A	685223.02	672901.92	1.00	188.00	0.00	0.00	0.00			
20	A	685223.22	672890.74	1.00	178.00	0.00	0.00	0.00			

Layout Continued

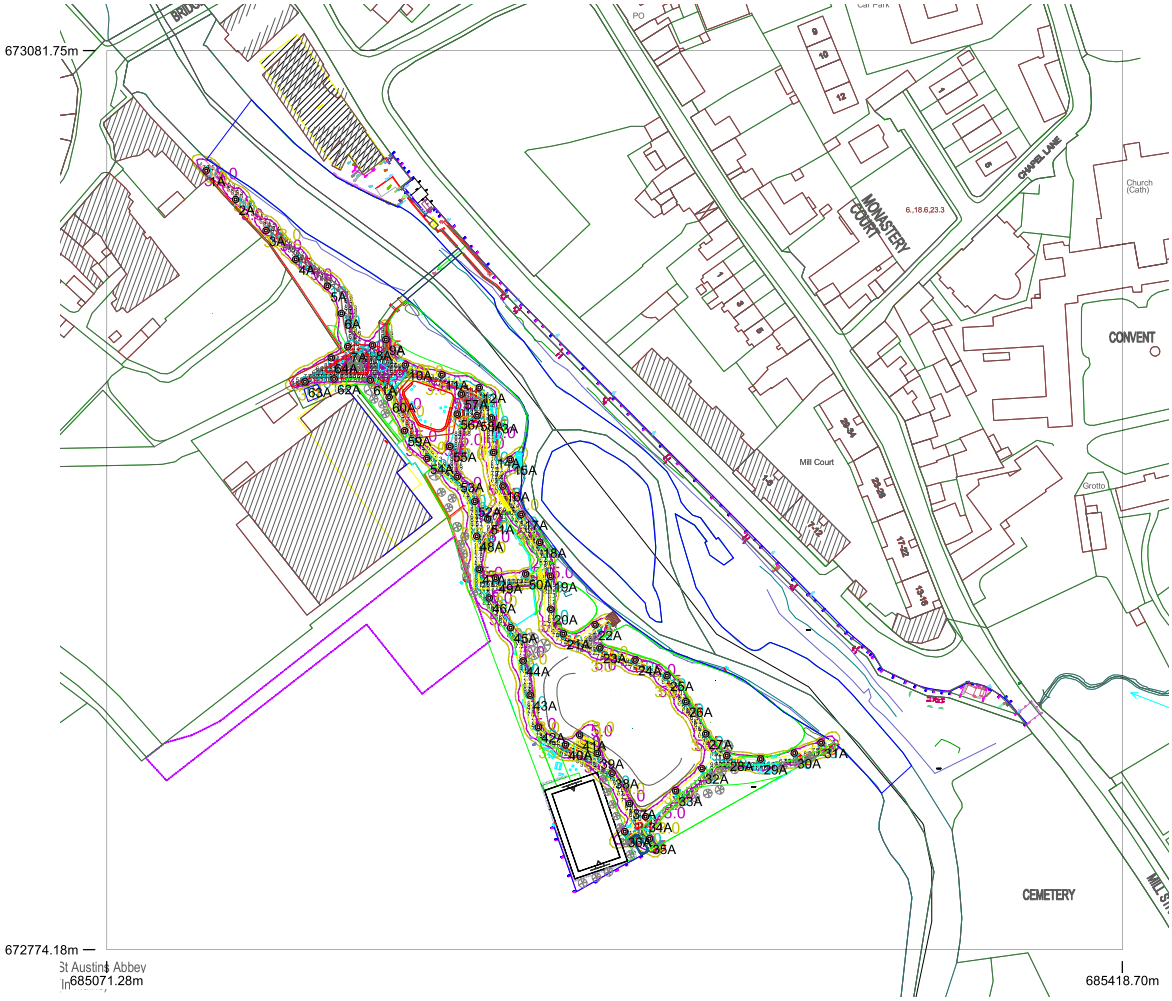
ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
21	A	685227.40	672882.31	1.00	246.00	0.00	0.00	0.00			
22	A	685238.22	672885.39	1.00	302.00	0.00	0.00	0.00			
23	A	685239.88	672877.44	1.00	249.00	0.00	0.00	0.00			
24	A	685251.92	672873.31	1.00	249.00	0.00	0.00	0.00			
25	A	685262.90	672867.96	1.00	231.00	0.00	0.00	0.00			
26	A	685269.35	672859.12	1.00	214.00	0.00	0.00	0.00			
27	A	685276.15	672848.02	1.00	214.00	0.00	0.00	0.00			
28	A	685283.29	672840.60	1.00	258.00	0.00	0.00	0.00			
29	A	685294.96	672839.43	1.00	267.00	0.00	0.00	0.00			
30	A	685306.39	672841.53	1.00	286.00	0.00	0.00	0.00			
31	A	685315.63	672844.98	1.00	302.00	0.00	0.00	0.00			
32	A	685274.78	672836.26	1.00	320.00	0.00	0.00	0.00			
33	A	685265.86	672828.60	1.00	308.00	0.00	0.00	0.00			
34	A	685255.57	672819.77	1.00	312.00	0.00	0.00	0.00			
35	A	685256.82	672812.19	1.00	214.00	0.00	0.00	0.00			
36	A	685248.47	672814.62	1.00	309.00	0.00	0.00	0.00			
37	A	685250.05	672824.27	1.00	214.00	0.00	0.00	0.00			
38	A	685244.10	672834.64	1.00	214.00	0.00	0.00	0.00			
39	A	685239.00	672841.40	1.00	186.00	0.00	0.00	0.00			
40	A	685228.21	672844.29	1.00	245.00	0.00	0.00	0.00			
41	A	685232.99	672847.61	1.00	312.00	0.00	0.00	0.00			
42	A	685218.93	672850.33	1.00	214.00	0.00	0.00	0.00			
43	A	685216.05	672861.31	1.00	185.00	0.00	0.00	0.00			
44	A	685213.70	672873.02	1.00	189.00	0.00	0.00	0.00			
45	A	685209.44	672884.37	1.00	215.00	0.00	0.00	0.00			
46	A	685202.11	672894.55	1.00	215.00	0.00	0.00	0.00			
47	A	685198.66	672904.35	1.00	182.00	0.00	0.00	0.00			
48	A	685197.77	672915.66	1.00	195.00	0.00	0.00	0.00			
49	A	685204.30	672901.27	1.00	278.00	0.00	0.00	0.00			
50	A	685214.51	672902.77	1.00	288.00	0.00	0.00	0.00			
51	A	685201.54	672921.58	1.00	330.00	0.00	0.00	0.00			
52	A	685197.12	672927.54	1.00	195.00	0.00	0.00	0.00			
53	A	685191.08	672935.93	1.00	215.00	0.00	0.00	0.00			
54	A	685180.71	672942.21	1.00	46.00	0.00	0.00	0.00			
55	A	685188.65	672946.42	1.00	344.00	0.00	0.00	0.00			
56	A	685191.12	672957.45	1.00	344.00	0.00	0.00	0.00			

Layout Continued

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
57	A	685192.50	672964.30	1.00	344.00	0.00	0.00	0.00			
58	A	685197.89	672956.92	1.00	106.00	0.00	0.00	0.00			
59	A	685173.13	672951.73	1.00	21.00	0.00	0.00	0.00			
60	A	685167.86	672963.20	1.00	16.00	0.00	0.00	0.00			
61	A	685161.42	672969.12	1.00	83.00	0.00	0.00	0.00			
62	A	685149.06	672969.40	1.00	89.00	0.00	0.00	0.00			
63	A	685139.09	672968.47	1.00	112.00	0.00	0.00	0.00			
64	A	685148.08	672976.62	1.00	298.00	0.00	0.00	0.00			

Horizontal Illuminance (lux)

Grid 1

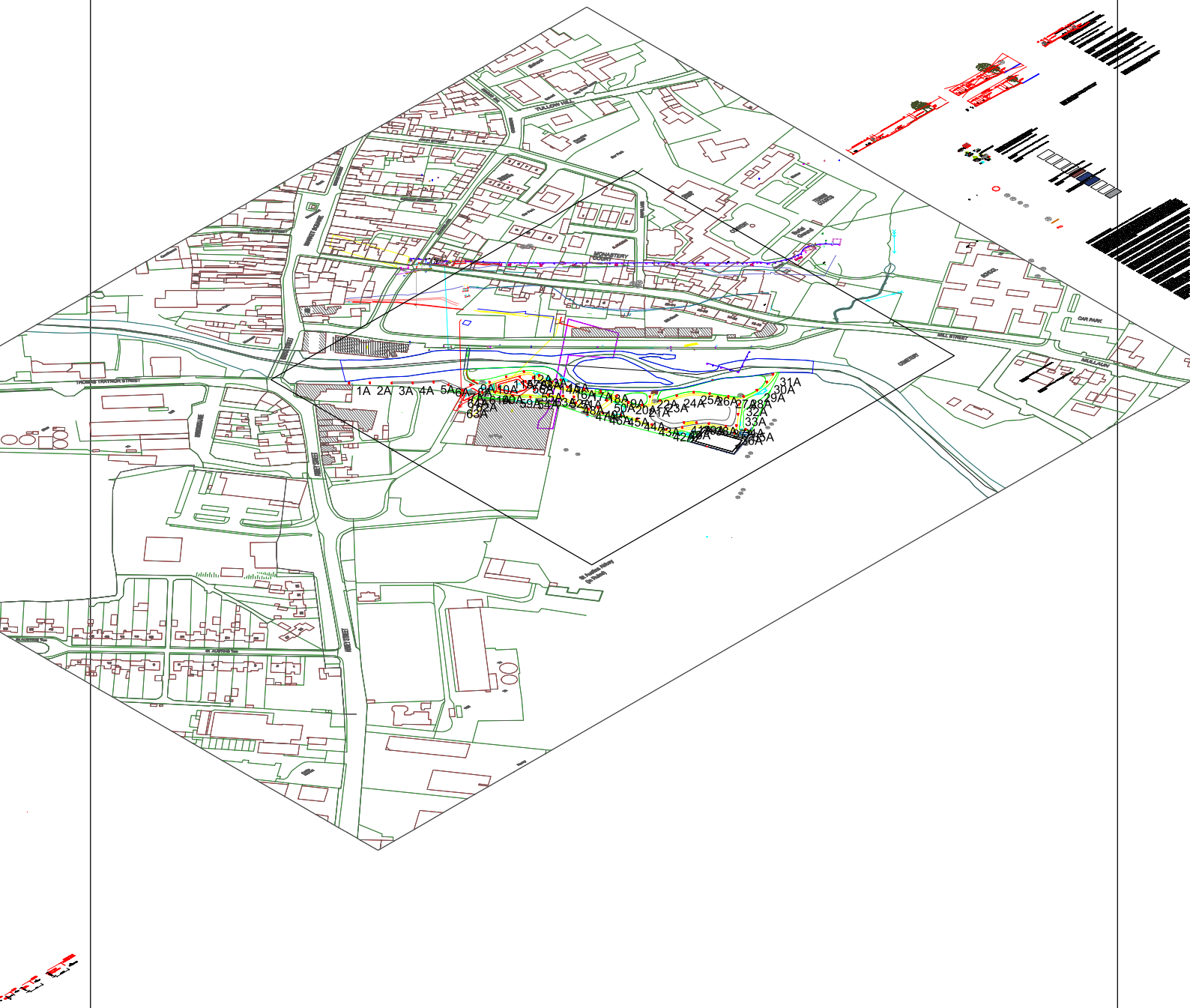


Results

Eav	8.53
Emin	2.44
Emax	22.91
Emin/Emax	0.11
Emin/Eav	0.29

Horizontal Illuminance (lux)

Grid 1



OptiSpace

BCB500 LED56-4S/740 S DGR

OPTISPACE BOLLARD, LED module 5600 lm, 740 neutral white, Power supply unit (On/Off), Safety class I, Symmetrical, Black

OptiSpace is a creative bollard solution which enables you to build a more attractive, citizen-centric inner-city space by avoiding verticalization of the urban landscape. OptiSpace delivers all this and more while delivering an attractive TCO for your investment. Enabled by the different control options you can reduce energy consumption and minimize TCO further and thanks to the excellent and optimized light distribution options you can maximize spacing between the bollards, thereby minimizing the number of light points needed to be installed. To support different design schemes, OptiSpace is also available in different colors: Philips Ultra Dark Grey is the standard color and other colors are available on request.

Product data

General Information	
Lamp family code	LED56 [LED module 5600 lm]
Light source replaceable	Yes
Number of gear units	1 unit
Driver included	Yes
Remarks	* At extreme ambient temperatures the luminaire might automatically dim down to protect components
Light source engine type	LED
Product family code	BCB500 [OPTISPACE BOLLARD]
Lighting Technology	LED
Value ladder	Specification
CE mark	Yes
Warranty period	5 years

Flammability mark	For mounting on normally flammable surfaces
ENEC mark	ENEC mark
EU RoHS compliant	Yes

Light Technical	
Upward light output ratio	0
Luminous Flux	4,900 lm
Standard tilt angle posttop	0°
Standard tilt angle side entry	0°
Correlated Color Temperature (Nom)	4000 K
Luminous Efficacy (rated) (Nom)	173 lm/W
Color rendering index (CRI)	>70
Light source color	740 neutral white

OptiSpace

Optical cover type	Polycarbonate cover and gloss high-reflective optic
Luminaire light beam spread	177°
Optic type outdoor	Symmetrical

Operating and Electrical

Input Voltage	200-220 V
Line Frequency	50 to 60 Hz
Inrush current	22 A
Inrush time	0.29 ms
Power Consumption	37.2 W
Power Factor (Fraction)	0.98
Connection	Flying leads/wires
Cable	Cable 1.5 m without plug
Number of products on MCB of 16 A type B	16

Temperature

Ambient temperature range	-40 to +50 °C

Controls and Dimming

Dimmable	No
Driver/power unit/transformer	Power supply unit (On/Off)
Constant light output	No

Mechanical and Housing

Housing Material	Aluminum die-cast
Reflector material	Aluminum
Optic material	Polymethyl methacrylate
Optical cover material	UV stabilized Polycarbonate cover
Fixation material	Steel
Housing Color	Black
Mounting device	Universal for diameter 42 to 60 mm adjustable
Optical cover shape	Cylinder/cylindrical
Optical cover finish	Clear
Overall length	270 mm
Overall width	270 mm
Overall height	848 mm
Overall diameter	168 mm
Effective projected area	0.172 m²
Dimensions (Height x Width x Depth)	848 x 270 x 270 mm

Approval and Application

Ingress protection code	IP66 [Dust penetration-protected, jet-proof]
Mech. impact protection code	IK10 [20 J vandal-resistant]
Surge Protection (Common/Differential)	Luminaire surge protection level until 6 kV differential mode and 6 kV common mode
Sustainability rating	-
Protection class IEC	Safety class I

Initial Performance (IEC Compliant)

Luminous flux tolerance	+/-10%
Initial chromaticity	(0,3818; 0,3796) SDCM <3
Power consumption tolerance	+/-10%
Init. Color Rendering Index Tolerance	+/-2

Over Time Performance (IEC Compliant)

Driver failure rate at 5000 h	0.5 %
Lumen maintenance at median useful life* 100000 h	L80

Application Conditions

Performance ambient temperature Tq	25 °C

Product Data

Order product name	BCB500 LED56-4S/740 S DGR
Full product name	BCB500 LED56-4S/740 S DGR
Full product code	871869948118600
Order code	912300024101
Material Nr. (12NC)	912300024101
Numerator - Quantity Per Pack	1
EAN/UPC - Product/Case	8718699481186
Numerator - Packs per outer box	1
EAN/UPC - Case	8718699481186

Dimensional drawing

Dimensional drawing

OptiSpace

Dimensional drawing

Appendix J - Notices Issued to Prescribed Bodies

Notices issued to the following bodies by Carlow County Council by email on 02nd April 2024:

Department of Environment, Climate and Communications: planningnotifications@decc.gov.ie

Environmental Protection Agency (E.P.A): eiaplanning@epa.ie

Inland Fisheries Ireland: environmentalplanning@fisheriesireland.ie

Irish Water: planning@water.ie

Waterways Ireland: info@waterwaysireland.org.

National Parks and Wildlife Service (NPWS): nature.conservation@chg.gov.ie

D.O.C.H.G. - National Park & Wildlife Service: nature.conservation@chg.gov.ie

Dept. Communications, Climate Action & Environment: corporatesupport.unit@dccae.gov.ie

Geological Survey: GeologicalMappingInfo@decc.gov.ie

OPW: info@opw.ie

COMHAIRLE CONTAE CHEATHARLACH
CARLOW COUNTY COUNCIL

Oifigí an Chontae,
Bóthar Átha Í,
Ceatharlach, R93E7R7

County Buildings,
Athy Road,
Carlow, R93E7R7

T: 059 9170300
E: See carlow.ie/contact-us
W: carlow.ie

To whom it may concern

Tuesday 02nd April 2024
By Email

Dear Sir or Madam,

RE: NOTICE OF APPLICATION TO AN BORD PLEANÁLA FOR APPROVAL: TULLOW TOWN PARK REGENERATION, TULLOW TOWN PARK LOCATED WEST SIDE OF THE RIVER SLANEY, TULLOWBEG (TOWNLAND), TULLOW, CO. CARLOW

Notice to Prescribed Authorities in terms of Section 177AE(4)(b) of the *Planning and development Act 2000* (as amended).

Notice is hereby given that Carlow County Council[1] intends to seek the approval of An Bord Pleanála under Section 177AE of the Planning and Development Act 2000 (as amended) for the proposed development to upgrade and enhance of the existing Tullow Town Park facilities/features, ancillary infrastructure and associated site development works, all at a site of approximately 1.13 ha in extent at Tullow Town Park located west side of the River Slaney, Tullowbeg (Townland), Tullow, Co. Carlow.

The proposed upgrade and enhancement of Tullow Town Park facilities/features development consists of:

- Construction of demarcated and enhanced network of cycle and pedestrian paths of asphalt surfacing and locally sourced grey stone aggregates, leading to a sequence of outdoor spaces laid out along the length of the park;

- Construction of partially sheltered concrete surfaced outdoor event/classroom space with feature designed shelter/canopy, centrally located feature concrete surfaced skate park, 2 no. feature hardwood decking viewing platforms/steps to the River Slaney, a kickabout soft landscaped lawn area which also facilitates land drain/swale and flood area, and a sport fenced enclosed multi-use games court to include football and basketball goals;

- Removal of trees of poor condition, where views into the park can be increased, and for facilitating the structural upgrade and enhancement works proposed; and

- Retention of existing trees described as riverbank due to the binding nature of the tree roots and the adjacent River Slaney riverbank.

The public realm upgrade and enhancement works also provide for upgrading of existing footpaths, demarcated natural stone aggregates feature paved areas, raised seating areas, raised planting areas, seats and benches, timber top 'picnic' table and seating facilities, a variety of soft landscaping features (grass lawn, native meadow, ornamental grasses and perennials), and all associated infrastructure/services and site development works above and below ground level, including sustainable urban drainage services (grasscrete, tree pit, land drain/swale and rain garden solutions, public lighting and closed-circuit television (CCTV) infrastructure.

[1] Carlow County Council, County Hall, Athy Road, Carlow, Co. Carlow, R93 E7R7

Pedestrian and cyclist access to the proposed development will be maintained via the existing walkway access from Abbey Street (the N81 National Road) to the north, the existing walkway bridge over the River Slaney from Tullow Street to the east, and the existing walkway from Abbey Street (the N81 National Road) to the west adjacent to the Tesco Tullow Supermarket.

A Natura Impact Statement has been prepared in respect of the proposed development and accompanies the application to An Bord Pleanála for approval.

An Bord Pleanála may give approval to the application for development with or without conditions or may refuse the application for development.

A copy of the Natura Impact Statement and the Plans and Particulars of the proposed development will be available for inspection on the Council's website at https://consult.carlow.ie, and can be inspected free of charge or purchase at a fee not exceeding the reasonable cost of making a copy, at the following locations from Wednesday, 3rd April 2024 up to and including Friday, 17th May 2024:

- The offices of Carlow County Council, County Hall, Athy Road, Carlow, Co. Carlow, R93 E7R7, during its public opening hours of 9:15 am and 4:30 pm Monday to Friday (excluding public Holidays);
- The offices of Carlow County Council, Housing Department, Civic Offices, Tullow, Co. Carlow, R93 WP86, during its public opening hours of 9:15 am and 4:30 pm Monday to Friday (excluding public Holidays); and
- The offices of of An Bord Pleanála, 64 Marlborough Street, Dublin 1, D01 V902, between the hours of 9:15 am and 5:30 pm Monday to Friday (excluding public Holidays). **Note:** due to COVID-19, it is recommended that persons contact the Office to arrange viewing of the application in advance (Phone: (01) 858 8100 or Lo-call 1890 275 175).

Submissions or observations may be made in writing to An Bord Pleanála, 64 Marlborough Street, Dublin 1, D01 V902, from Wednesday, 3rd April 2024, and must be received no later than 5:30 pm on Friday, 17th May 2024, relating to:

i. the implications of the proposed development for proper planning and sustainable development in the area concerned;
ii. the likely effects on the environment of the proposed development; and
iii. the likely significant effects of the proposed development on a European Site,

if carried out.

All submissions or observations should be clearly marked "**Proposed Tullow Town Park Regeneration, Tullow Town Park located West Side of the River Slaney, Tullowbeg (Townland), Tullow, Co. Carlow**", and the following is enclosed with this Notice correspondence:

1. A copy of the Statutory Notice as published in *The Nationalist* dated Tuesday, 2nd April 2024;
2. The electronic copy of the full Planning Application Pack is available on the Council's website at https://consult.carlow.ie as will be submitted to An Bord Pleanála on Wednesday, 3rd April 2024, seeking the Boards Approval under Section 177AE of the Planning and Development Act 2000 (as amended) for the proposed development to upgrade and enhancement of the existing Tullow Town Park facilities/features at Tullow Town Park located west side of the River Slaney, Tullowbeg (Townland), Tullow, Co. Carlow.

Yours faithfully

Michael Brennan
Director of Services, Housing, Community, Recreation and Amenity
Carlow County Council, County Hall, Athy Road, Carlow, Co. Carlow, R93 E7R7