

Proposed Improvement Works at Mallow Town Park,  
Mallow, Co. Cork

Outline Construction and Environmental Management Plan  
(CEMP)

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Environment**

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**Brady Shipman  
Martin**

**Built.  
Environment.**

Client:

Cork County Council

Date:

22 May 2021

DOCUMENT CONTROL SHEET

6615\_RP\_CEMP01\_Outline Construction and Environmental Management Plan  
(CEMP)

Project No. 6615  
Client: Cork County Council  
Project Name: Proposed Improvement Works at Mallow Town Park, Mallow, Co. Cork  
Report Name: Outline Construction and Environmental Management Plan (CEMP)  
Document No. RP\_CEMP01  
Issue No. 01  
Date: 22/05/2021

This document has been issued and amended as follows:

| Issue | Status   | Date        | Prepared | Checked |
|-------|----------|-------------|----------|---------|
| 01    | Planning | 22 May 2021 | DB       | TB      |



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### Outline Construction and Environmental Management Plan (CEMP)

# 1 Introduction

Cork County Council are seeking to apply for approval under Section 177(AE) of the Planning & Development Act 2000 (as amended), to carry out improved works at Mallow Town Park, Mallow, Co. Cork.

This is a sensitive site which a number of statutory and environmental designations, which will need to be protected during the construction stage of the proposed improvement works, including:-

- Sections of the park along the River Blackwater are located within the Blackwater (Munster) Special Area of Conservation (SAC 002170).
- Park is located within the Blackwater Amenity Corridor with the Cork County Plan, Local Area Plan and Mallow Town Plan.
- The proposed works are within the curtilage of a number of Protected Structures, RPS No's 79, 120, 22, 124, 129 and 130 of the Mallow Development Plan 2010-2016 (still in effect), and are within the Architectural Conservation Area 1 for Mallow Town.
- The proposed works are within the Zone of Archaeological Notification of a number of Recorded Monuments, CO033-093----, CO033-094----, CO033-009001-, CO033-009—6-, and CO033-009004, as entered in the Record of Monuments and Places for County Cork.

This Outline Construction & Environmental Management Plan (CEMP) has been prepared by Brady Shipman Martin to accompany the application and sets out the high-level approach to the management of construction activities at Mallow Town Park with particular reference to environmental management requirements for the contractors carrying out works at the site. It is the duty of the contractor to ensure that any work within their scope is carried out in accordance with these requirements. It is anticipated that any appointed contractor(s) will be required to refine and adapt the CEMP prior to the commencement of works.

This document has been prepared to account for activities at Mallow Town Park during the construction phase of the project. It is noted that there are separate projects ongoing adjacent to and in the Park boundary which are subject to separate planning consent and are not covered under this CEMP (such as Irish Water Mallow Sewer Upgrade Scheme (Planning Ref. 195078)).

The proposed site development works shall be carried out in accordance with best practice regarding standard environmental protection (e.g. CIRIA 2010 and 2001, TII Construction Standards and Specifications), where it is currently anticipated that the units will be constructed over the lifetime of the Planning Permission.

The outline CEMP provides details of Cork County Council's works contractors intended construction practice for the improvement works in the park, including hours of working, access, noise/dust management measures and off-site disposal of construction waste. It also incorporates the environmental protection measures to be adopted by works contractors to ensure the construction related activities on the site are executed in a safe and controlled manner in order to minimise disruption and impacts on the environment and amenities in the area.

The objective of this Plan is therefore to identify the potential issues and impacts which are relevant to the project, to address these issues with mitigation measures which protect the natural and built environment.

The primary issues that have been considered within this CEMP are as follows:-

- Regulatory and policy framework
- Description of proposed development
- Construction programme and phasing

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- General site management including protection of built heritage
- Environmental mitigation measures during construction works.
- Public Safety
- Summary and key references

## 2 Regulatory and Policy Framework

Throughout the construction of the proposed improved works at Mallow Town Park, construction and environmental management procedures will be required to ensure that all appropriate legislation, policy and construction best practice are complied with, and any environmental effects of the development is minimised within best practicable means. Consideration will also be given to relevant adjacent developments in the management of future construction activities on site.

Through effective implementation of the CEMP, the works contractor(s) shall demonstrate how construction activities and supporting design will properly integrate the requirements of environmental legislation, policy, good practice, and those of the environmental regulatory authorities and third parties.

### 2.1 Legislation

The appointed works contractor(s) must comply with and implement all relevant Irish and EU safety, health and environmental legislation. The Contractor shall be responsible for ensuring that any developments or changes to regulation and environmental legislation are complied with, even if they are not noted within this outline CEMP.

### 2.2 Policy & Guidance

This outline CEMP refers to various industry standard best practice guidance and policy documents that can be used to address significant environmental risks. In addition, TII's Construction Guidance and CIRIA's 'Environmental good practice on site guide' (C741) and 'Control of water pollution from construction sites' (C532) should also be consulted for practical guidance about managing construction sites to control environmental impacts and how to deliver sustainable construction on site by effectively managing a range of environmental issues. At a minimum, the Contractor shall adhere to this guidance.

The works contractor(s) will be required to designate an Environmental Manager for the project whose duty it will be to identify and monitor all potential environmental impacts. He/she will be required to monitor and maintain registers for noise and dust impacts and shall be responsible for the integrity of the surrounding lands and their protection from potential impacts of the construction operations. His/her responsibilities will include adherence to CIRIA Guide C532 and C741.

The works contractor(s) will be responsible for ensuring that their works conform to the latest relevant guidance and policy.

### 3 Description of the Proposed Development

The proposed works are to be carried out with the existing Town Park to the south of Mallow Town Centre and N72 road. The park covers an area of approximately 23ha. and is 2.4km long, and adjoins and forms part of the Blackwater (Munster) Special Area of Conservation and Mallow Architectural Conservation Area. The park regularly floods in the winter months as part of the Blackwater floodplain.

The proposed improvement works will include the following:-

- enhancement of existing park entrances and construction of new entrances;
- widening of existing in-situ concrete footpaths from 2m to 3m and widened pedestrian bridge crossing of the Caherduggan/Spa Glen stream;
- construction of new footpaths;
- reconfiguration and enhancement of existing grass playing pitches and training area;
- construction of multi-use events area and jogging/walking trail;
- construction of 5no. angling stands on the banks of the River Blackwater;
- redevelopment of existing playground, construction of skate plaza and pump track;
- construction of bike and car parking areas;
- undergrounding of existing overhead 10kV powerlines;
- park fencing; signage; drainage; furniture (seating, bike parking etc.); planting; and,
- all associated site development and landscaping works.

This will entail:

- Installation of temporary fencing for safety and protection of existing site features (trees, walls, existing undisturbed pitches etc.).
- Demolitions (existing playground, former park entrance gate (Bishop Casey gate), sections in low wall to N72 to facilitate new park entrances. Construction of new low walls and grading to maintain flood defence levels provided by the low wall to Park road
- Vegetation clearance – minimal in effect, as scheme has sought to retain existing vegetation. The proposed park entrances along the N72/Park Road have been positioned at the locations where Irish Water have removed trees to install the Mallow Town Sewer Upgrade. 4no. Lombardy Poplar trees will need to be removed at the proposed N20 pedestrian entrance to construct the access path from the river walk to the N20 path. Minor crown lifting of trees close to the proposed angling stands will need to be undertaken. Vegetation clearance will be undertaken outside bird nesting season (i.e. from 1<sup>st</sup> September and before 1<sup>st</sup> March).
- Earthworks (topsoil stripping, subsoil regrading, topsoil relay)
- Drainage (pitch, car park and detention basin/swale, incl. Park Road surface water drainage)
- Excavations for foundations/footpath/car park bases/underground services
- Installation of paving surfaces (widening of existing concrete footpath by 1m, construction of new footpaths, angling stands (4no. recycled plastic structures and 1no. concrete base), signage and park furniture.
- Topsoiling, cultivation, seeding and tree planting.

There will be minimal in-stream works, limited to the installation of new abutments to the widened pedestrian bridge crossing of the Caherduggan/Spa Glen stream, which will be only in late summer (Aug/Sept.) when water levels are low.

## 4 Construction Programme and Phasing

It is estimated that the construction programme for the works associated with the proposed works will last c. 24 months from the date of commencement. This estimation is based on the typical construction programmes for other similar developments that are currently underway.

The project consists of proposals for the park with the commencement date on site subject to receiving the resources to deliver the project. It is envisaged that the project will be phased, subject to available funding tranches, in a number of work packages including:

- Redevelopment of existing playground
- Construction of angling stands
- Main town park works (widened/new paths, entrances, pitches, parking, landscaping)

The works contractor(s) will be required to prepare a detailed construction programme as part of their tender proposal.

### 4.1 Restrictions on Working Hours

The commencement date on site is subject to receiving the resources deliver the project. A full program of works will be available in the site office throughout the project.

The working hours on site will be:-

- 8.00am to 6.00pm Monday – Friday 8.00am to 1.00pm Saturday.
- There will be no work on site on Sundays or Bank Holidays, unless otherwise agreed in writing with Cork County Council.
- No night time works requiring construction lighting will be permitted to minimise disturbance on fauna and in particularly Otter and Bats, which are present in the area.



## 5 General Site Management

### 5.1 Site Establishment and Security

The proposed improvement works at Mallow Town Park will be carried out in discrete phased, work packages facilitating public access to areas of the park not affected by construction works.

Access to the park will be via existing entrances illustrated in Figure 4-1, including:-

- Access points 1-3 at Main Town Park – existing vehicular entrances off the N72 for construction access in Main Town Park. A stoned compound/set down area can be provided close to access point 2.
- Access point 4 N72 junction – existing gate with limited access for path widening and landscape works to area immediately east of Mallow Bridge
- Access point 5 Castlepark – localised construction access for angling stands, widened pedestrian bridge and footpath widening works in Castlepark

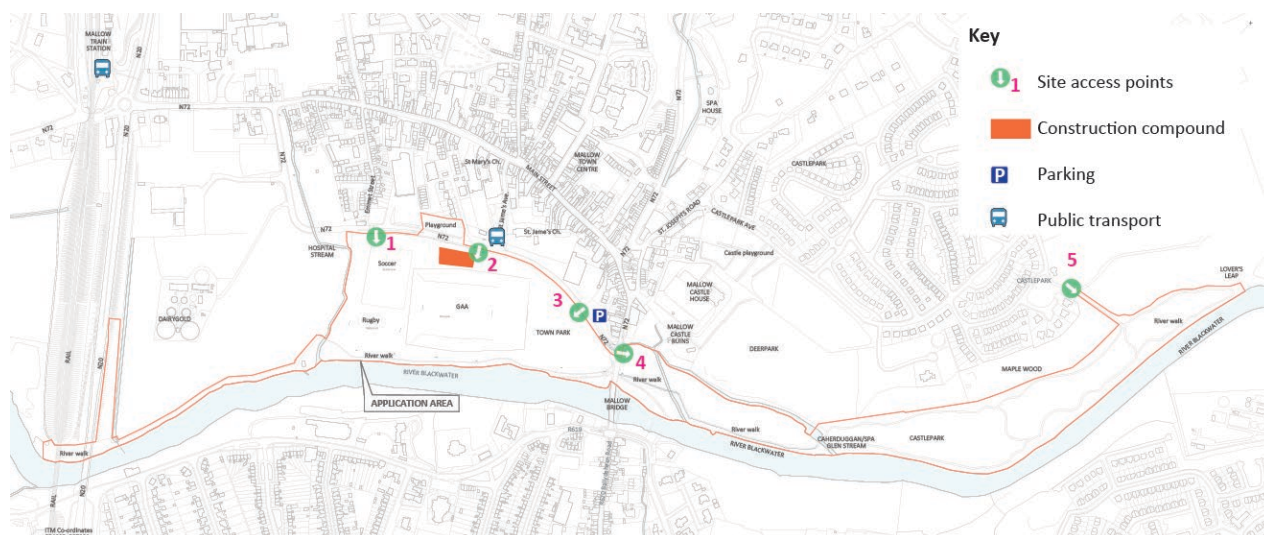


Figure 5-1 Site Access, compound and parking

The works will be carried out on a phased basis outside of winter months when the park is prone to flooding. Public access to the park will be maintained, although sections will need to be temporarily fenced off as required for public safety.

### 5.2 General Construction Phase Mitigation Measures

All individual elements of work shall be covered by full method statements which shall be submitted well in advance of any works proceeding and approved prior to execution.

Construction best practice measures (of relevance in respect of any potential ecological impacts) will be implemented throughout the project, including the preparation and implementation of detailed method statements. The works will incorporate the relevant elements of the guidelines outlined below:

- TII/NRA (2010) Guidelines for the Management of Noxious Weeds and Non- Native Invasive Plant Species on National Roads. National Roads Authority, Dublin.
- Murphy, D. (2004) Requirements for the Protection of Fisheries Habitat during Construction and Development Works at River Sites. Eastern Regional Fisheries Board, Dublin.

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- IFI (2016) Guidelines on protection of fisheries during construction Works in and adjacent to waters (IFI, 2016)
- E. Murnane, A. Heap and A. Swain. (2006) Control of water pollution from linear construction projects. Technical guidance (C648). CIRIA.
- E. Murnane et al., (2006) Control of water pollution from linear construction projects. Site guide (C649). CIRIA.

The works contractor(s) will be required to designate an Environmental Manager for the project whose duty it will be to identify and monitor all potential environmental impacts. They will be required to monitor and maintain registers for noise and dust impacts and shall be responsible for the integrity of the surrounding lands and their protection from potential impacts of the construction operations. Their responsibilities will include adherence to CIRIA Guide 532.

All personnel involved with the project will receive an on-site induction relating to operations and the environmentally sensitive nature of the proximity the River Blackwater and other watercourses to re-emphasise the precautions that are required as well as the mitigation to be implemented.

The site shall be fully secured at all times and a full health and Safety Management Plan shall be put in place in accordance with current HSA Health and Safety (Construction) Regulations. A site traffic management plan will be submitted for approval prior to commencement.

All personnel involved with the project will receive an on-site induction relating to operations and the environmentally sensitive nature of Natura 2000 sites and to re-emphasize the precautions that are required as well as the precautionary measures to be implemented. All staff and subcontractors have the responsibility to:

- Work to agreed plans, methods and procedures to eliminate and minimise environmental impacts,
- Understand the importance of avoiding pollution on-site, including noise and dust, and how to respond in the event of an incident to avoid or limit environmental impact;
- Respond in the event of an incident to avoid or limit environmental impact;
- Report all incidents immediately to their line manager;
- Monitor the workplace for potential environmental risks and alert the immediate line manager if any are observed; and
- Co-operate as required, with site inspections.

### 5.3 Compound Facilities

A temporary construction compound will be constructed close to existing park entrances on Park Road/N72. Site accommodation to be provided will include suitable washing / dry room facilities for construction staff, canteen, sanitary facilities, first aid room, office accommodation etc. Access to the compound will be security controlled and all site visitors will be required to sign in on arrival and sign out on departure.

The compound shall be constructed using a clean permeable stone finish and will be enclosed with security fencing. A permeable hardstand area will be provided for staff parking and these areas will be separate from designated machinery / plant parking.

A material storage zone will also be provided in the compound area. This storage zone will include material recycling areas and facilities.

A series of 'way finding' signage will be provided to route staff / deliveries into the site and to designated compound / construction areas.

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On completion of the works all construction materials, debris, temporary hardstands etc. from the site compound will be removed off site and the site compound area reinstated in full on completion of the works.

#### 5.4 Parking

Construction parking will use existing Town Car Parking areas (agreed in advance with Cork County Council).

Parking is not permitted in the following areas:-

- any other area of the site
- on the public roads
- within local housing areas.

#### 5.5 Site Housekeeping

Good site housekeeping is an important part of good environmental practice and helps to maintain a more efficient and safer site. The site shall be tidy, secure, and have clear access routes that are well signposted. The appearance of a tidy, well-managed site can reduce the likelihood of theft, vandalism, complaints and/or specific hazards that could affect the safe operation of the other businesses in the area.

The works contractor(s) will implement the following steps:

- Adequately plan the site with designated areas of materials and waste storage;
- Segregate different types of waste as it is produced and arrange frequent removal;
- Keep the site tidy and clean;
- Ensure that no wind-blown litter or debris leaves the site, use covered skips to prevent wind-blown litter;
- Keep hoardings/protection fencing tidy and presentable
- Frequently brush-clean wheel washing facilities;
- Keep roads free from mud by using a road sweeper; and,
- Ensure site is secure.
- Measures to protect existing services and utility infrastructure which traverse the park (incl. foul and surface water drainage, flood defence, water and electricity supply).

#### 5.6 Equipment

The following equipment will be maintained in proper working order at the Contractor's compound and/or works locations in quantities as appropriate for the project:-

- Wheel washer facility (including bowser to fill, and another bowser to empty);
- Silt fencing (double layer) such as Hytex Terrastop<sup>1</sup> or equivalent approved;
- Sand bags (marked bags, double-bagged; non calcareous, washed sand only; bags under-filled to allow easy covering with new bags as required) ;
  - Used in lieu of silt fencing where required due to sightlines;
  - In combination with silt fences where embedment must be avoided near sensitive habitats; and

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<sup>1</sup> <https://www.hy-tex.co.uk/product/terrastop-silt-fences/>

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- As a bund around the refuelling and wheel wash.
- One spill kit will be maintained at the site compound, and will contain;
  - Terrestrial oil booms (80mm diameter x 1000mmm; 10 no);
  - Water booms and attachment clips (130mm diameter x 3000mm; 10 no.); and
  - Oil soak-up granules;

## 5.7 Deliveries Traffic Management and Site Access

All site access will be through the construction site entrances outlined above. These will be the only vehicle access point to the site for deliveries and works equipment. The site entrances and stoned compound will be developed at an early stage of the project.

Construction traffic management signage will be posted along the N72/Park Road indication the “Construction Access ahead” from both directions for pedestrians and other road users and will comply with Chapter 8 of the Traffic Signs Manual<sup>2</sup>.

Operating one access point to the construction site minimises the interaction with public pedestrian, cycle and vehicular traffic.

All construction activities will be governed by a Construction Traffic Management Plan (CTMP), the final details of which will be agreed with Cork County Council prior to the commencement of construction activities on site. The principal objective of the CTMP is to ensure that the impacts of all construction activities generated during the construction phase upon the public (off-site), visitors to the subject site (on-site) and internal (on-site) workers environments, are fully considered and proactively managed/programmed thereby ensuring that safety is maintained at all times, disruption is minimised and undertaken within a controlled hazard free/minimised environment.

It is intended to retain and utilise using the excavated materials for green areas insofar as is possible. However, construction traffic will be generated by the disposal of surplus soils from the site as well as from deliveries of construction materials and equipment. It should be pointed out that construction traffic generated during the development works tends to be off-peak hour. Such trips would generally be spread out over the full working day and are unlikely to be higher than the peak hour predicted for the operational stage.

Other traffic management measures will include:

- All plant and construction vehicles leaving the site will be washed to clean off mud and for biosecurity, ensuring the vehicles return to a hard standing inside the site boundary prior to exiting onto the public road.
- A banks man will be used with vehicles when reversing or moving within the site. This will be the responsibility of the appointed individual contractors.
- Deliveries and removal of waste will be managed daily to ensure the minimum amount of materials and waste are on site at any time.
- Construction material will be ordered and delivered on site on an ‘as needed’ basis to prevent over supply to site. Deliveries will be managed upon arrival to the site and systems shall be provided to avoid any queuing of delivery vehicles.

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<sup>2</sup> <https://www.trafficsigns.ie/current-traffic-signs-manual>

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- Materials will be stored in a designated storage area on site suited to the ongoing works. The materials laydown areas will be positioned to minimise any traffic disruption from deliveries or removals from the park area. Adequate turning circles will be provided for within the delivery areas to eliminate the need for construction vehicles turning on public roads.
- Vehicle access is provided along a hard standing to reduce the amount of construction waste and mud attaching to vehicles.
- The works contractor(s) will ensure the maintenance of the public road and footpath, to prevent a build-up of mud or waste being dragged out onto the N72/Castlepark access points. A combination of washing down vehicles and road sweepers will be utilised.
- General waste will be separated into skips on site for removal by licensed waste companies.
- In the course of the construction phase if waste removal is required, the information and volumes will be provided by the works contractor in a “Waste management Plan”. If entry into excavations is required, a detailed method statement and risk assessment must be submitted by the specialist contractor and form AF3 is used to record inspections of excavated banks on the site.
- All permits and waste records will be maintained on site with projected volumes provided in the waste management plan.

## 5.8 Built/Cultural Heritage Protection During Construction

### 5.8.1 Architectural Heritage

Works contractor(s) will be made aware of the significance and sensitivity of architectural heritage of the site and surroundings, and will follow the mitigation measures as set out in JCA Architect’s Architectural Heritage Impact Assessment (AHIA) Report, which accompanies the planning application.

The proposed works are within the curtilage of a number of Protected Structures, RPS No’s 79, 120, 22, 124, 129 and 130 of the Mallow Development Plan 2010-2016 (still in effect), and are within the Architectural Conservation Area 1 for Mallow Town.

Mitigation measures include:-

- The proposed works should not result in the loss of historic fabric in the form of surviving garden or landscape features, with proposed new interventions suitably situated to avoid the loss of historic elements associated with the demesne Mallow Castle House and Mallow Castle.
- All proposed repair works or other interventions which will potentially result in the loss of surviving historic fabric should be specified and supervised by a suitably experienced conservation architect and/or archaeologist as required.
- New surfacing of existing pathways and other routes should not be carried out where existing historic fabric and materials will be lost as a result of the works.
- New fencing, signage and gates should be minimised in order to avoid cumulative visual impacts and visual clutter in the garden areas and wider attendant grounds. New fencing should not interrupt the historic circulation between individual areas of the Castle grounds, and all existing pedestrian access points should be maintained.
- New planting should be cognisant of the historic views to and from Mallow Castle and the associated demesne, and of views from Mallow Bridge across the Town Park. This is particularly relevant with regard to views towards the churches located to the north side of Park Road and with regard to views towards the surviving demesne lands and the deer park associated with Mallow Castle.

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#### 5.8.2 Archaeological Heritage

Works contractor(s) will be made aware of the significance and sensitivity archaeological heritage of the site and will follow the mitigation measures as set out in Daniel Noonan's Archaeological Assessment Report, which accompanies the planning application.

The proposed works are within the Zone of Archaeological Notification of a number of Recorded Monuments, CO033-093----, CO033-094----, CO033-009001-, CO033-009—6-, and CO033-009004, as entered in the Record of Monuments and Places for County Cork.

Mitigation include the following measures<sup>3</sup>.

##### 5.8.2.1 Archaeological Consent

Given that the proposed works will occur in several Zones of Archaeological Notification for monuments in local authority ownership, and they can be regarded as de-facto National Monuments, it is recommended that an application for the Consent of the Minister for Housing, Local Government and Heritage, under Section 14 of the National Monuments Act 1930 to 2004 (As Amended) for works, be prepared after a successful grant of permission for the proposed works by *An Bord Pleanála*. Archaeological monitoring of ground disturbance works is the probable mitigation that will be required by the Minister; working through the agency of the National Monuments Service (NMS).

##### 5.8.2.2 Archaeo-geophysical Survey Results

The linear responses beneath the GAA pitch, and the possible pit-like feature beneath the soccer pitch are of archaeological interest, and ideally they should be avoided, to prevent impact of works such as drainage or soil/ground conditioning to depth. Any detailed construction design on such possible works should look to design-out this area. If this is not possible, it is recommended that a brief programme of test trenching be carried to evaluate the archaeological nature of these features. The results of test trenching will determine the true nature of the anomalies, and allow for any resolution measures, be that preservation in situ or preservation by record through excavation.

##### 5.8.2.3 Archaeological Monitoring of Ground Disturbance Works

It is recommended that, given the proposed works will occur in several Zones of Archaeological Notification, and the scale and expanse of the works area, all ground disturbances should be archaeologically monitored, by a suitably experienced archaeologist. The level of monitoring required, be that fulltime or intermittent, can be determined by the attending experienced archaeologist, in consultation with the NMS and Cork County Council's Archaeologist, once the construction level details of the works are designed.

The monitoring attendance will be provided in accordance with archaeological best practice and taking cognisance of the *Policy and Guidelines on Archaeological Excavation* document (Dept. Arts, Heritage and the Gaeltacht 1999) and the *IAI Code of Conduct for Archaeological Monitoring* (Institute of Archaeologist of Ireland 2006).

Written, photographic and drawn records, as required, will be made of the attendance, to create an archive of the monitoring activity.

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<sup>3</sup> Note that these archaeological mitigation measures are recommendations only and the decision on implementation, amendments, etc. rests ultimately with the *An Bord Pleanála*, in association with the Planning Authority – Cork County Council, and the Development Applications Unit of the Department of Housing, Local Government and Heritage.

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Full cognisance will be taken of the requirements of the National Monuments Service with regard to the monitoring requirements and conditions of the Consent issued under Section 14.

Should archaeological material be encountered during monitoring, works will cease at that location, pending hand investigation to assess its nature and extent; and for notification to the Client, Cork County Council's Archaeologist, the National Monuments Service (NMS), and the National Museum of Ireland (NMI), for instruction.

Drawn, photographic and written records of all features will be created, and reported on as per below.

#### **5.8.2.4 Pathways**

The widening of the existing pathways is ground disturbance and warrants archaeological monitoring. The level of monitoring required, be that fulltime or intermittent, can be determined by the attending experienced archaeologist, in consultation with the NMS and Cork County Council's Archaeologist.

#### **5.8.2.5 Meadow Beneath Blackrock Viaduct**

The site of the proposed grass meadow on the riverbank at the toe of the Blackrock Viaduct and N20 road bridge embankment is regarded as having low potential for the survival of subsurface archaeology. However, given this potential, monitoring is recommended; and can be the attending experienced archaeologist, in consultation with the NMS and Cork County Council's Archaeologist.

#### **5.8.2.6 Angling Stands**

Riverbank disturbance for the angling stands requires archaeological monitoring.

#### **5.8.2.7 Caherduggan Stream Pedestrian Bridge**

Similar to the angling stands, the works proposed for the Caherduggan pedestrian bridge involves ground disturbance to a watercourse, and warrants archaeological monitoring.



## 6 Environmental Mitigation Measures During Construction

### 6.1.1 Key Potential Ecological Impacts

In the absence of mitigation measures, construction of the proposed development could result in:

- Pollution of aquatic habitats and species in the Caherduggan/Spa Glen stream, Hospital stream and Blackwater river;
- Net loss and damage of hedgerows, trees, wet and dry grasslands
- Spread of several invasive plant species known to occur within the proposed development footprint;
- Disturbance and/or injury to Otters;
- Disturbance and/or injury to the nests, eggs, or individuals of several species of breeding birds; and,
- Disturbance and/or injury to roosting bats (if present) in trees identified as having suitability for roosting bats.

### 6.1.2 Planning of Works by Watercourses to Minimise Siltation

Works which are located adjacent to watercourses (angling stands, widened pedestrian bridge, detention basin) shall only be undertaken in dry periods in later summer/early autumn. These works should cease during extended periods of heavy rainfall, as defined and agreed between the works contractor(s) and the local authority.

Vegetation clearance and soil stripping of land shall also be phased to limit the quantum of soils exposed at any time.

Excavations will only remain open for the shortest possible time to reduce groundwater ingress.

### 6.1.3 Seasonal Restrictions for Ecological Features

Species-specific seasonal restrictions on construction activities will also be put in place as outlined in table below:-



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Table 1- Seasonal timings/restrictions on construction activities arising from ecological constraints

| Ecological Feature                                       | Jan  | Feb | Mar   | Apr | May   | Jun | Jul | Aug | Sep   | Oct | Nov   | Dec |                        |
|--|--|-----|---|-----|---|-----|-----|-----|---|-----|---|-----|------------------------|
| Nesting birds in vegetation                              | Clearance of vegetation permitted  |     | Nesting bird season. No clearance of vegetation   |     |   |     |     |     | Clearance of vegetation permitted   |     |   |     |                        |
| Bats: Trees with suitability for roosting bats           | Bat hibernation season   |     | Intrusive works to potentially suitable features may take place, subject to advice of ecologist |     | Bat breeding season<br>No intrusive works to trees or structures unless ecologist advises otherwise |     |     |     |   |     | Intrusive works to potentially suitable features may take place, subject to advice of ecologist |     | Bat hibernation season |
| Vegetation removal and earthworks at sensitive locations | High siltation potential<br>Exposure of bare soils to be avoided, unless ecologist advises acceptable protections are in place |     | Topsoil can be stripped subject to advice of ecologist on mitigation to minimise siltation      |     |   |     |     |     | High siltation potential<br>Exposure of bare soils to be avoided, unless ecologist advises appropriate protections are in place |     |   |     |                        |

## 6.2 Vegetation Protection

Grasslands and other semi-natural areas will not be used for storage or parking.

All site clearance and landscaping works will comply with current legislative requirements and best practice.

All trees/hedgerows to be retained to be protected in accordance with BS 5837:2012, *Trees in relation to design, demolition & construction*. Prior to the commencement of any work, or any materials being brought on site, existing trees to be retained are to be protected with temporary fencing. This shall be maintained in good and effective condition until the work is completed. Allow for stabiliser struts to secure fence for duration of construction. Fully remove when construction is complete/site demobilised.

The protective fencing is to coincide, as far as is practical, with the root protection area (rpa), unless otherwise agreed. All weather notices shall be securely fixed to the fence words such as 'construction exclusion zone - no access'

The following measures are particularly important:

- Materials are never to be stacked within the root spread of the tree;
- No oil, tar, bitumen, cement or other material is to be allowed to contaminate the ground;
- No fires shall be lit beneath or in close proximity to the tree canopy;
- Trees to be retained should not be used as anchorages for equipment or for removing stumps
- Root Protection Area (RPA) Outside tree canopy dripline roots or other trees, or for other purposes;
- No notices, telephone cables or other services should be attached to any part of the tree;
- Cement mixing should not be carried out within the canopy/protected area of the tree;
- Rails clamped securely to posts
- Soil levels are to be maintained as existing within the root spread of the tree. Any alteration to soil levels in an area up to one and a half times the diameter of the tree canopy must be agreed with the ER/Landscape Architect.
- Habitats that are damaged and disturbed will be left to regenerate naturally or will be rehabilitated and landscaped, as appropriate, once construction is complete. Disturbed areas will be seeded or planted using appropriate native grass or species native to the areas where necessary. The proposed landscape plans outline the range of species which will be used. This also notes that plant material must be acclimatised to regional conditions and locally established stock.
- The planting plans and landscaping proposals will ensure that no invasive species are introduced.

Any works within a tree rpa will be monitored by a competent arboricultural consultant/landscape architect, with all necessary measures taken to protect tree roots such as 'no-dig' path construction and hand dig/air spade excavation for services in accordance with BS5837:2012.

## 6.3 Surface water drainage

The following measures will be put in place during the project to ensure protection of surface water bodies. These measures comply with the following documents:-

- Control of Water Pollution from Construction Sites. Guidance for Consultants and Contractors (C532), CIRIA;
- Environmental Good Practice on Site (3<sup>rd</sup> Ed) (C692), CIRIA;
- Control of water pollution from linear construction projects. Technical guidance (C648). CIRIA;
- Control of water pollution from linear construction projects. Site guide (C649). CIRIA;

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- Requirements for the Protection of Fisheries Habitat during Construction and Development Works at River Sites. Eastern Regional Fisheries Board, Dublin.
- Guidelines on protection of fisheries during construction Works in and adjacent to waters (IFI, 2016)

Prior to construction, the following consents will be required from the Office of Public Works, under the Arterial Drainage Act<sup>4</sup>;

- Section 9 consent for works to the Park Road walls/entrances/drainage improvements.
- Section 50 consent to the proposed widening of the existing pedestrian bridge crossing of the Caherduggan/Spa Glen stream.

#### 6.3.1 Earthworks

The site adjoins the River Blackwater and a number of smaller tributary streams (Hospital Stream to the west of the main town park, and Caherduggan/Spa Glen Stream to the east of Mallow Bridge). Surface water run-off during the construction phase will be minimal as the park area will be mostly permeable green areas.

The employment of good construction management practices will minimise the risk of pollution of soil, storm water run-off, seawater or groundwater. The Construction Industry Research and Information Association (CIRIA) in the UK has issued a guidance note on the control and management of water pollution from construction sites, Control of Water Pollution from Construction Sites, guidance for consultants and contractors (Masters-Williams et al 2001).

- Stormwater will be managed carefully during construction. In general, stormwater will be infiltrated to ground via managed gullies/soakaways. Any area used for re-fueling will be paved and bunded or fueling will take place off-site.
- Measures shall be put in place to ensure no run-off from the fill site resulting from rainfall and or construction activities. The most vulnerable element to be protected on the site is the River Blackwater which traverses the site.
- Silt fences shall be constructed with a series of silt traps installed as required to ensure against uncontrolled run-off into the river network. The silt fence shall be as shown in Figure 6-1 below.
- Earthworks/soil excavation will be completed during dry periods and undertaken with excavators and dump trucks.
- Stockpiles will be graded to a <1:4 profile. Topsoil and subsoils will be stored separately. Stockpiles of mineral soils and peat will be <2m and <1m respectively. Stockpiles will be covered with plastic sheeting during wet weather to prevent run-off of silt and will be located on flat ground. Excavated material will be used for backfill where possible. Surplus material will be removed from site.
- Facilities will be put in place to dampen fill material to prevent airborne dust during periods of dry weather. Baseline dust monitoring will be carried out and monitoring will be carried out with trigger levels put in place to either cease operations or employ damping procedures.
- Topsoil and subsoil shall not be stored on sloped areas of the site where washout could migrate and shall not be stored within 15 metres of the river. Topsoil storage areas shall be enclosed with silt fencing.

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<sup>4</sup> <https://www.gov.ie/en/publication/957aa7-consent-requirements-constructionalteration-of-watercourse-infrastru/>

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- Where existing land drains are encountered they shall be re-established so that the pre-existing hydrological regime is maintained.
- Waste separation shall follow standard construction site protocols.
- Full method statements shall be produced as regards handling and final deposition on site of excavated site materials. These method statements shall propose mitigation measures to address potential environmental issues such as dust, noise and potential water run-off.

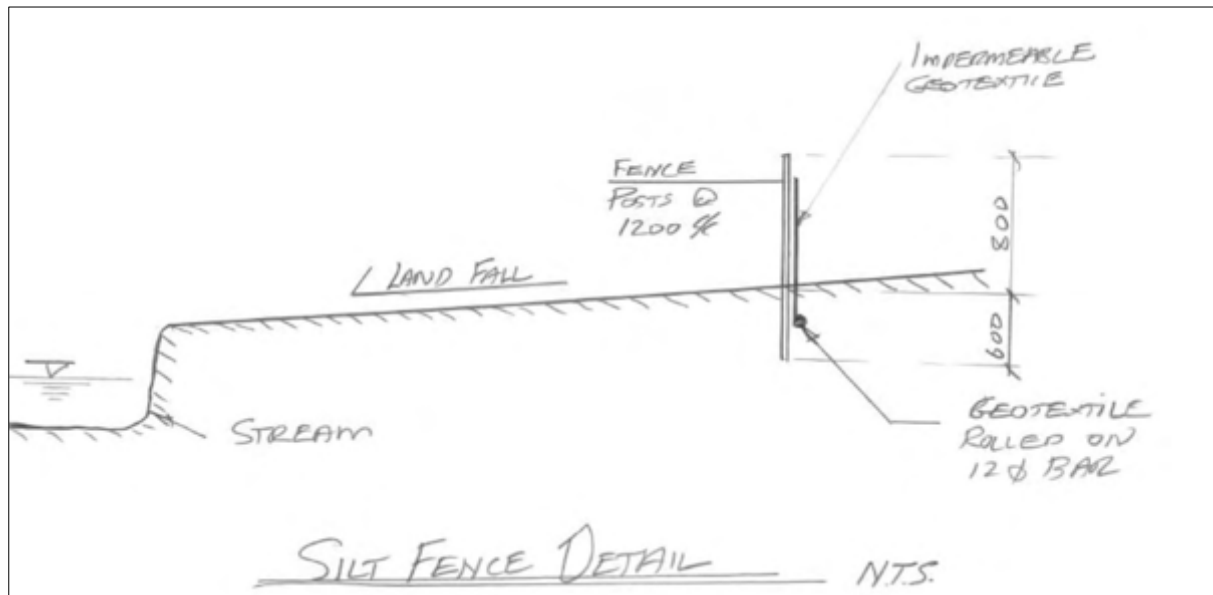


Figure 6-1 Silt fence detail | Source Horgan Lynch

- A wheel washing facility shall be set up at the site entrance which shall consist of the elements set out in the diagram in below.



Figure 6-2 Example of wheel washing facility to be provide by the contractor for the duration of the site work

- Welfare facilities shall be provided in accordance with legal requirements. Sanitary facilities shall have proprietary foul water storage facilities which shall be tankered away on a regular basis. No groundwater contamination will be tolerated.
- Waste material shall be segregated and removed off site to licenced disposal areas
- Temporary stockpiles of soil generated during the works will be kept away from these water bodies and managed to avoid silt laden run-off during the works. Stockpiles will be graded and gently compacted to minimise creep and encourage rainfall run-off without ponding. Temporary stockpiles will be kept below 2m.
- The project programme will ensure that landscaped areas are seeded as soon as possible to minimise potential for sediment run-off and dust blow-off. Any surface water on non-permeable surfaces will be protected, as required, by means of silt traps/fences to ensure that sediment run-off does not enter the streams or river.

## 6.4 Management of hydrocarbons and concrete

Oil, petrol and other fuel containers will be double-skinned and bunded to be able to contain 110% volume to guard against potential accidental spills or leakages entering local watercourses linked to the European sites. Bund specification will conform to the current best practice for oil storage such as Enterprise Ireland's Best Practice Guidelines. Construction materials will be stored in a secure compound to prevent the potential for vandalism and theft of material.

A hydrocarbon spill kit shall be available on site at all times to deal with any hydrocarbon spill or hydraulic fluid leakage. A detailed spillage procedure will be put in place and all will be trained with respect to the relevant procedures to be undertaken in the event of the release of any sediment, hydrocarbons into a watercourse. Spill kits will be maintained on site and relevant staff will be trained in their effective usage.

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All site personnel will be trained and aware of the appropriate action in the event of an emergency, such as the spillage of potentially polluting substances. In the event of spillage of any polluting substance and/or pollution of a watercourse, Environment Protection Agency, Cork County Council, Inland Fisheries Ireland and the NPWS shall be notified.

All vehicles and plant will be regularly inspected for fuel, oil and hydraulic fluid leaks. Suitable equipment to deal with spills will be maintained on site.

Fuels, lubricants and hydraulic fluids for equipment used on the construction site, as well as any solvents and oils, should be carefully handled to avoid spillage, properly secured against unauthorised access or vandalism, and provided with spill containment trays according to codes of practice.

Dedicated fuel storage areas will be introduced on-site or fuelling should take place offsite. The amount of fuels/chemicals stored on site shall be avoided/kept to a minimum. Appropriate signage will be in place. All chemical containers will be labelled and copies of SDS sheets shall be maintained for ease of access and reference.

It will be ensured that all staff are trained and follow vehicle cleaning procedures. Post details of the procedures in the work area for easy reference. Use of cleaning chemicals will be minimised.

Machinery including hand-tools will never be washed in watercourses or drainage ditches.

It will be ensured that all areas where liquids are stored or cleaning is carried out are in a designated impermeable area that is isolated from the surrounding area, e.g. by a roll-over bund, raised kerb, ramps or stepped access.

Concrete pouring will not take place during heavy rain when runoff is likely due to excess water. Shuttering will be designed to accommodate small increases in the volume of material contained within the shuttered area due to rainfall. Pre-cast concrete will be used where possible. Raw or uncured waste concrete should be disposed of by removal offsite.

Wash down and washout of concrete transporting vehicles will not be permitted at the location of construction. Such wash down and washout activities will take place at an appropriate facility offsite or at the location where concrete was sourced.

No storage of materials will be permitted under trees, hedgerows, meadows to be retained – material storage will only be permitted in agreed site compound.

## 6.5 Lighting Control

Potentially lighting associated with the site works could cause disturbance/displacement of Otter. If of sufficient severity and duration, there could be impacts on reproductive success.

Site lighting will typically be provided by tower mounted temporary portable construction floodlights. The floodlights will be cowed and angled downwards to minimise spillage to surrounding properties. The following measures will be applied in relation to site lighting:

- Lighting will be provided with the minimum luminosity sufficient for safety and security purposes. Where practicable, precautions will be taken to avoid shadows cast by the site hoarding on surrounding footpaths, roads and amenity areas;
- Lights will be switched off when not in use; and
- Lighting will be positioned and directed to avoid unnecessary intrusion on adjacent ecological receptors and structures used by protected species. The primary area of concern is the potential

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impact on the riparian woodland and the River Blackwater along the southern boundary of the site. There will be no directional lighting focused towards the watercourses or boundary habitats respectively and cowlings and focusing lights downwards will minimise light spillage.

- Works will primarily take place during hours of daylight to minimise disturbance to any nocturnal mammal species.

## 6.6 Invasive species management

### 6.6.1 Terrestrial Invasive Species

Cork County Council currently have an Invasive Species Management Plan within Mallow, including the Town Park. Small infestations of other invasive species including Himalayan Balsam and Winter Heliotrope are also present in the area.

An updated site specific Invasive Species Management Plan (ISMP) has been prepared by Dixon Brosnan and accompanies this application. There are a number of management options that may be implemented to control and prevent the spread of invasive species. Detail on these measures are outlined in the Invasive Species Management Plan (ISMP). It may not be possible to completely eradicate the invasive species before or during the construction phase.

Those involved in the application of herbicides/pesticides will be competent to do so and will have sufficient experience and knowledge in the area of herbicides/pesticides application.

All staff involved in the application of herbicides/pesticides will have received appropriate training, which may include achieving competency certification in the safe use of herbicides/pesticides through a National Proficiency Tests Council registered assessment centre or achieving an appropriate FETAC award in this area.

A pre-construction survey for invasive species will be carried out. Any invasive species found will be mapped and suitable buffer areas placed around infestations (up to 7m with Japanese Knotweed and 3m with Himalayan Balsam).

The works contractor(s) will place suitable signage to alert site personnel of the presence of invasive species. Works in these areas containing invasive species may not take place until the Invasive Species Management Plan has been implemented, and Cork County Council/their supervising ecologist have advised it is safe to do so. The works will also include biosecurity/site hygiene measures to prevent further spread on and off-site following best practice guidance<sup>56</sup>.

### 6.6.2 Crayfish Plague

No in-stream works are envisaged as part of the works. Signage will be erected at each of the angling stands which will include angler's biosecurity guidelines to prevent the spread of Crayfish Plague as recommended by the National Biodiversity Data Centre<sup>7</sup>.

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<sup>5</sup> <https://www.tii.ie/technical-services/environment/construction/Management-of-Noxious-Weeds-and-Non-Native-Invasive-Plant-Species-on-National-Road-Schemes.pdf>

<sup>6</sup> <https://www.fisheriesireland.ie/Invasive-Species/invasive-species.html>

<sup>7</sup> <https://www.biodiversityireland.ie/projects/invasive-species/crayfish-plague/>



## 6.7 Biodiversity

### 6.7.1 Otters

Construction works will take place during normal daylight working hours which will avoid the largely nocturnal foraging habits of Otter.

During construction mitigation measures will ensure that light is directed away from the riparian woodland and River Blackwater. This will ensure that there is no light spillage and/or lighting disturbance for Otters within this area

### 6.7.2 Birds

To avoid committing an offence by disturbing nesting birds, their eggs or young, vegetation clearance will be restricted to the non-breeding season (i.e. clearance must be carried out from September to February inclusive). Vegetation clearance must be programmed in advance of earthworks, which is scheduled for spring/summer at times likely to have reduced rainfall. For the avoidance of doubt, it should be noted that birds may nest in field margins and low hedging, in addition to trees.

Where clearance is required during the restricted period, a suitably experienced ecologist will advise the works contractor on measures required to avoid disturbing nesting birds, eggs or young (e.g. establishing exclusion areas around probable nesting locations around which clearance may proceed).

Suitable bird nesting boxes (e.g. variety of Schwegler boxes or equivalent approved) will also be provided at locations approved by the project ecologist.

### 6.7.3 Bats

The River Blackwater and Town Park contain bats which are protected species. The works contractor(s) will follow the mitigation measures set out below:

- Prior to the removal of the 4no Lombardy Poplar trees on the N20, a pre-survey climbing survey and emergence survey will be carried out, following BCT survey guidance<sup>8</sup>
- Where pre-construction surveys do not confirm presence of roosting bats and subject to agreement with the NPWS, trees should be control-felled in accordance with the guidance of the NRA/TII guidance on the conservation of bats during construction<sup>9</sup>.
- If surveys do confirm presence of roosting bats, felling protocols (and associated mitigation) would depend on the numbers and species present, and would be subject to licensing from the NPWS. Measures could include licensed endoscopic inspections of potential roost features immediately prior to felling
- Apart from the parking area to the northwest of the park, no lighting is proposed in the park or along the river walk. Construction lighting shall be kept to a minimum, at locations where it is likely

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<sup>8</sup> <https://www.bats.org.uk/resources/guidance-for-professionals/bat-surveys-for-professional-ecologists-good-practice-guidelines-3rd-edition>

<sup>9</sup> [https://www.tii.ie/technical-services/environment/planning/Best Practice Guidelines for the Conservation of Bats in the Planning of National Road Schemes.pdf](https://www.tii.ie/technical-services/environment/planning/Best%20Practice%20Guidelines%20for%20the%20Conservation%20of%20Bats%20in%20the%20Planning%20of%20National%20Road%20Schemes.pdf)



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to disturb bats. Lighting will follow the Bat Conservation Ireland *Lighting Guidelines*<sup>10</sup> and the Bat Conservation Trust '*Bats and artificial lighting in the UK*' 2018 Guidelines<sup>11</sup>, as applicable.

- White light has the greatest impact on bats. Low pressure sodium lights have a minimum impact on bats. LED lighting will be warm white (2,800k) which has little or no UV content and will have the least impact on bats. Lighting in the park has been minimised.
- If/where construction lighting is required, this lighting should be placed at a minimum height using warm white light and lowest lux value permitted for health and safety.
- The lighting shall be directionally focused away from mature trees.
- To reduce light spillage from luminaries in the parking areas, lights that are designed not to emit light at angles greater than 70° from the vertical plane should be used. Other designs to luminaires to help reduce light spillage and to direct light to the intended area only are by using accessories such as hoods, cowls, louvres and shields.
- Landscaping and new planting focuses on the use of indigenous trees and shrubs which support insects which are prey sources for foraging bats, following best practice guidance<sup>12</sup>.
- Grassland management will alter following All-Ireland Pollinator Plan, increasing biodiversity and foraging habitat.
- Suitable bat roosting boxes (e.g. Schwegler or equivalent approved) will also be provided at locations approved by the project ecologist.

## 6.8 Air Quality

Good site management will seek to avoid dust becoming airborne at source and will be done through good design and effective control strategies.

During the project, the siting of temporary soil stockpiles will take note of the location of sensitive receptors, and prevailing wind conditions in order to minimise the potential for significant dust nuisance.

Good site management will include the ability to respond to adverse weather conditions by either restricting operations on-site or quickly implementing effective control measures before the potential for nuisance occurs. Particular care should be taken during periods of high winds. The following measures shall be undertaken to avoid dust nuisance occurring under unfavourable meteorological conditions:-

- Works contractor(s) shall monitor all earthworks to ensure that proposed mitigation measures are implemented and that dust impacts and nuisance are minimised;
- During working hours dust control methods shall be monitored as appropriate depending on the prevailing meteorological conditions;
- The name and contact details of a person to contact regarding air quality and dust issues shall be displayed on the site compound fence boundary. This notice board should also include head/regional office contact details;
- It is recommended that community engagement be undertaken before works commence on site explaining the nature and duration of the works to local residents and businesses;

<sup>10</sup> [https://www.batconservationireland.org/wp-content/uploads/2013/09/BCIrelandGuidelines\\_Lighting.pdf](https://www.batconservationireland.org/wp-content/uploads/2013/09/BCIrelandGuidelines_Lighting.pdf)

<sup>11</sup> <https://www.bats.org.uk/our-work/buildings-planning-and-development/lighting>

<sup>12</sup>

[https://cdn.bats.org.uk/pdf/Our%20Work/Landscape and urban design for bats and biodiversityweb.pdf?mtime=20181101151349&focal=none](https://cdn.bats.org.uk/pdf/Our%20Work/Landscape%20and%20urban%20design%20for%20bats%20and%20biodiversityweb.pdf?mtim e=20181101151349&focal=none)

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- A complaints register will be kept on-site detailing all telephone calls, letters/emails of complaint received in connection with earth-moving and construction activities, together with details of any remedial actions carried out;
- It is the responsibility of the works contractor(s) at all times to demonstrate full compliance with the dust control conditions;
- At all times, the procedures put in place will be strictly monitored and assessed.
- During dry spells, and if deemed necessary, monitoring of dust levels shall be carried out using the Bergerhoff Method i.e. analysis of dust collecting jars left on-site (German Standard VDI 2119, 1972). Results will be compared to the TA Luft guidelines (TA Luft,1972). Should an exceedance of the TA Luft limit occur during, additional mitigation measures, for example more regular spraying of water, shall be implemented.
- The excavating machines will be cleaned on a daily basis to ensure no excess grease and dust is left on the machine.

The dust minimisation measures shall be reviewed at regular intervals during the works to ensure the effectiveness of the procedures in place and to maintain the goal of minimisation of dust through the use of best practice and procedures.

In the event of dust nuisance occurring outside the site boundary, site activities will be reviewed and satisfactory procedures implemented to rectify the problem. Specific dust control measures to be employed are described below.

#### 6.8.1 Site access/tracks

Site Management will take all necessary measures to reduce high dust levels on site. While levels of dust cannot be eliminated, the works contractor/s will implement the process of wetting down the area to keep dust at ground level this will be particularly important in the following times:

- During summer works due to dryer weather wetting down and high levels of housekeeping will minimise rising dust.
- When using abrasive wheels, all cuts with Con saw / grinder will be subject to watersuppression to minimise rising dusts.
- Site personnel will wear dust masks when sweeping out finished areas/dust generating activities.
- The company housekeeping policy will be implemented with all trades to minimise the creation of dusts and waste on site.

The works contractor(s) will have a water bowser available to the site for use to wet down the internal site routes during extended dry spells.

Site access/tracks, particularly unpaved routes, can be a significant source of fugitive dust if control measures are not put in place. The most effective means of suppressing dust emissions for unpaved tracks is to apply speed restrictions.

- A speed restriction of max. 20km/hr will be applied as an effective control measure for dust for on-site vehicles using unpaved haul roads;
- Access points to the park are located at least 20m away from sensitive receptors;
- Bowsers or suitable watering equipment will be available during periods of dry weather throughout the construction period. Watering shall be conducted during sustained dry periods to ensure that unpaved tracks are kept moist. The required application frequency will vary according to soil type, weather conditions and vehicle use; and,

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- Any hard surfaces will be regularly swept to remove mud and aggregate materials from their surface while any unsurfaced tracks will be restricted to essential site traffic only.

#### 6.8.2 Demolition

- On works to N72/Park Road, provide a screen against dust.
- Ensure effective water suppression shall be used during demolition operations. Hand held sprays are more effective than hoses attached to equipment as the water can be directed to where it is needed.
- Use manual or mechanical removal techniques.

#### 6.8.3 Earth moving

Carrying out earth-moving works during periods of high winds and dry weather conditions can be a significant source of dust.

- During dry and windy periods, and when there is a likelihood of dust nuisance, watering shall be undertaken to ensure that the moisture content of soils being moved is high enough to increase the stability of the soil and thus suppress dust; and,
- During periods of very high winds (gales), activities likely to generate significant dust emissions shall be postponed until the gale has subsided.

#### 6.8.4 Storage piles

The location and moisture content of storage stockpiles are important factors which determine their potential for dust emissions.

- Stockpiled materials including soils and engineering fill will be protected from exposure to wind by storing the material in sheltered parts of the site
- Regular watering will take place in dry spells to ensure the moisture content is high enough to increase the stability of the temporary soil stockpiles (and gravel as appropriate), and thus suppress dust.
- In locations adjacent to the N72/close to residential areas, temporary hoarding/mesh screen fencing will be used to help reduce larger particles of dust and reduce visual impact.

#### 6.8.5 Site traffic on public roads

Spillage and blow-off of debris, aggregates and fine material onto public roads will be reduced to a minimum by employing the following measures:

- Vehicles delivering engineering fill and transferring soil shall be enclosed or covered with tarpaulin, where appropriate, to restrict the escape of dust.
- Public roads and footpaths shall be inspected on a daily basis and cleaned as necessary.

### 6.9 Noise and Vibration Management

Construction noise will be controlled in accordance with British Standard 5228: *Noise and Vibration Control on Construction and Open Sites*, which offers detailed guidance on the control of noise and vibration from demolition and construction activities.

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The development site is located in an urban setting in an existing park. Background noise levels are expected to be elevated during daytime hours. The principle sources of noise emissions from the site will be: -

- During the site clearance phase
- During excavation works.
- General construction activity, including deliveries to / from the site, use of power tools etc.
- Screw piling for positioning of angling stands

Best practice noise and vibration control measures will be employed by the works contractor(s). The best practice measures set out in BS 5228 (2009) Parts 1 and 2 will be complied with. This includes guidance on several aspects of construction site environmental measures, including, but not limited to the following:

- The potential for any item of plant to generate noise will be assessed prior to the item being brought onto the site. The least noisy item should be selected.
- If replacing a noisy item of plant is not a viable or practical option, consideration will be given to noise control “at source”. This refers to the modification of an item of plant or the application of improved sound reduction methods in consultation with the supplier. For example, resonance effects in panel work or cover plates can be reduced through stiffening or application of damping compounds; rattling and grinding noises can often be controlled by fixing resilient materials in between the surfaces in contact.
- Mobile plant will be switched off when not in use and will not be left idling.
- All items of plant will be subject to regular maintenance. Such maintenance can prevent unnecessary increases in plant noise and can serve to prolong the effectiveness of noise control measures.

Site construction management will ensure all noise levels in the working area are assessed around the site perimeter and within the site, with the relevant appropriate action to reduce the noise emissions, implemented once the noise levels are known.

Site construction management will be fully aware of the location of the construction works in relation to neighbouring residential areas and amenity park users and will take all appropriate measures to reduce noise emissions from the site. These include but are not exclusive to:

- Working within the stated hours on the planning conditions.
- Shutting down plant when not in use,
- Keeping covers on compressors and other plant closed.
- Provision and use of silencers and sound dampeners on machinery, as appropriate.
- Managing work activities and work sequences to minimise noise exposure.
- Use of well-maintained and certified plant and machinery.

#### 6.10 Waste Management

The proposed development will seek to utilise and redistribute soils on site, in as far as possible.

Any materials identified as waste will be disposed of appropriately through permitted waste contractors to suitably licenced waste facilities. Waste will be generated from the construction of paved structures such as parking areas, entrances, skatepark/playground, pedestrian walkways. These waste types will mostly comprise soils, concrete and asphalt but may also include timber and metal waste from shuttering works.

Installation of drainage pipework, fencing, multi-use grass area, furnishings and other features in the amenity areas will also generate small quantities of waste mainly from off-cuts.

Measures to reduce the impact of waste generated during construction works will include:-

- Maximum segregation of waste materials on-site to improve the recyclability and re-use of waste materials;
- All waste materials generated will be stored in dedicated skips or other suitable containers in a designated area in the site compound;
- Wherever possible any left-over materials shall be reused on-site; and,
- All waste leaving site will be recycled, recovered or reused where possible, with the exception of those waste streams where appropriate facilities are currently not available.

The works contractor(s) will implement a strict waste management plan during construction, to include:-

- Remove rubbish, debris, surplus material and spoil regularly and keep the site and Works clean and tidy. This includes access roads which must be kept clean, free of mud, dust, waste etc.
- Ensure that any excess, non-hazardous material is disposed of at a tip approved by the Local Authority.
- Remove all surplus hazardous materials and their containers regularly for disposal off site in a safe and competent manner as approved by the Local Authority and in accordance with relevant legislation and regulations.
- Retain waste transfer documentation on site. Waste will comply with the Waste Management Act 1996, as amended.
- Under waste legislation Construction and Demolition waste is defined as ‘all waste that arises from construction, renovation and demolition activities’. It includes soil and stone, surplus and damaged products and materials arising at construction works or used temporarily during on-site activities.
- A site specific waste management plan for all waste generated as a result these works and ensure that waste is segregated so that it can be reused, recycled or disposed of in an appropriate way.
- Where construction or demolition wastes cannot be reused or recycled, that waste must be transported to authorised waste facilities using the services of authorised waste collectors.
- Any waste moved off site, including soil and stone, must be:-
  - Collected by authorised waste collectors (as authorised by the National Waste Collection Permit Office, [www.nwcpo.ie](http://www.nwcpo.ie))
  - Taken to authorised waste facilities. A list of authorised sites for Cork County Council is available on [www.corkcoco.ie/en/environment/waste-recycling](http://www.corkcoco.ie/en/environment/waste-recycling) or contact the Environment Section for further information.
  - Records must be maintained on site to prove the waste has been managed correctly.
  - On completion of project it is advisable to retain records for a minimum period of three years.

## 7 Public Safety

### 7.1.1 Introduction

The provisions of Safety, Health and Welfare at Work Act, 2005, S.I. No 291 of the 2013, Safety, Health and Welfare at Work (Construction) Regulations, will apply to works and works contractor (s) will be appointed as Project Supervisor Construction Stage in accordance with Clause 6 of the Regulations.

Other important health and safety legislation and guidance applies to all works, in non-exhaustive list as follows;

- Safety, Health and Welfare at Work (General Application) Regulations, 2016;
- Safety, Health and Welfare at Work (Chemical Agents) Regulations, 2015;
- TII Guidance for the Control and Management of Traffic at Road Works;
- Chapter 8 of the Traffic Signs Manual;
- European Communities (Authorisation, Placing on the Market, Use and Control of Plant Protection Products) Regulations, 2011;
- S.I. No. 155/2012 - European Communities (Sustainable Use of Pesticides) Regulations 2012

### 7.1.2 Maintenance of the public roadways

Cork County Council will appoint a road sweeping contractor during the construction works and will monitor the public roads. The Road sweeper will be deployed as required throughout the project.

### 7.1.3 Construction Site Lighting

The external lighting will be limited to the site compound area, the car park and site storage area to provide lighting for access and egress to and from the site. The lighting provided in the compound and the storage areas will be directed down locally to the required areas and at no stage will site lighting be directed at existing residential dwellings or public access areas.

### 7.1.4 Public Safety General:

The following key points will to be followed in order to address the public safety issues in the local area.

- A full traffic Management plan will be prepared the works contractor(s) to manage traffic on the N72/Park Road throughout the project.
- Site access gate to the site will be attended to by the main contractor's personnel.
- The construction site will be secured at the end of each working day. Warning signs will be erected all around the perimeter of the site.
- A security system will be in place throughout the site compound outside of working hours
- The site will be secured on all sides by secure 2-meter-high boundary protection (Herras fence with mesh or similar)
- A diligent housekeeping policy will be operated to prevent a build-up of waste and construction materials.
- Noisy must be kept to a minimum and the contractors must comply with the Safety, Health & Welfare at Work (General Application) Regulations 2016
- Works generating dust to be kept to a minimum and will be carefully managed.
- The public roads and footpaths will be monitored on an ongoing basis to ensure the waste or debris will not create a hazard on the public road

### Outline Construction and Environmental Management Plan (CEMP)

- Work on public roads will be carried out after careful planning, a traffic management plan, method statement and road opening licence are in place if required
- All traffic management works will be set up and managed by persons trained to CSCS Signing, lighting and guarding at roadworks.
- Vehicles will be banked in the direction of movement when exiting the site into public access areas.
- Site hazards such as excavations and scaffolding will be left in a safe and secure manner. Excavations will be backfilled or fenced off.
- All chemical agents and other harmful substances will be stored in a locked container within the secured site compound.

#### 7.1.5 Excavation Safety

Excavation work is essential for the completion of this project. The following control measures are required to be met on site to ensure the safety of work in excavations on site.

- All excavation work is carried out by the specialist contractor appointed to the project
- Task specific method statements and risk assessments are carried out for each task.
- Soil surveys and ground exploration are carried out prior to commencement of any work on site and the results communicated to the tenderers of the project to ensure the hazards and risk controls are priced into the contractor's fees.
- Site safety management will observe and monitor excavation work on site.
- AF 3 forms will be used where required to record inspection of all excavation works on site.
- A combination of trench boxes and support systems are required to provide safe systems of work for entry into excavations.

#### 7.1.6 General Precautions and Controls

Site management have a responsibility to ensure, as far as is reasonably possible, the safety of visitors and contractors while on the site. To that end the following policies will apply:

- All visitors must be briefed on the hazards relating to the site
- All plant operators will be trained to CSCS standard prior to commencing work
- Cork County Council's nominated Project Supervisor (Construction Stage)(PSCS) will ensure full time supervision of the works on site.
- Access control systems will be established at the site entrances.
- All persons and deliveries entering the site must sign in at security prior to continuing.
- All worker and visitor access to the site office/compound is achievable without accessing the construction site area.
- Cork County Council's nominated main contractor's personnel will accompany visitors or other designated person, while on the site
- Visitors are to be made aware and obey the site safety rules and emergency procedures e.g. the wearing of personal protective equipment, respect for the neighbours to the property, etc.
- All sub-Contractors on site will be inducted and must sign off their method statements before commencing work. Records of training must be on file and up to date.
- All scaffolding will be erected by trained professional scaffold companies.
- All weekly inspections of scaffold, work at height equipment, plant and machinery and excavations are displayed in the site office and updated as required

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#### 7.1.7 Covid-19 Restrictions

Cork County Council have implemented a policy to manage the risk of infection from Covid-19 within construction sites, which at all times follow National Government<sup>13</sup> and HSE<sup>14</sup> advice, restrictions and procedures.

This includes a social distancing policy for all work activities. The full details and risk assessments associated with Covid-19 will be outlined in the developed project Health and Safety plan for the project and within the project risk assessments.

## 8 Summary

This outline Construction Environmental Management Plan (CEMP) sets out the overall management strategy for the proposed improvement works at Mallow Town Park, Co. Cork. This document has been prepared to ensure that the management of construction activity is carried out in a planned, structured and considered manner which minimised the impacts of the works on the local environment and residents and businesses in Mallow.

The overall construction stage health & safety management plan and risk assessments will be prepared in advance of the Construction works commencing. The developed H&S plan will continue to be developed throughout the project as the project progresses and changes so too will the Health & Safety documentation for the project.

The appointed works contractor(s) will be required to prepare a refined CEMP prior to the commencement of works.

Cork County Council and the project team are committed to ensuring that the construction activities to be carried out are proactively managed to minimise environmental impacts and carry out works safely.

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<sup>13</sup> <https://www.gov.ie/en/campaigns/c36c85-covid-19-coronavirus/>

<sup>14</sup> <https://www2.hse.ie/coronavirus/>



## 9 Key References

- All relevant TII Construction Management Guidelines<sup>15</sup>
- TII Specification for Road Works Series 000-1100
- Framework and Principles for the Protection of the Archaeological Heritage. Department of Arts, Heritage, Gaeltacht and the Islands 1999;
- Code of Conduct for Archaeological Assessment. Institute of Archaeologist of Ireland 2006.
- TII Guidelines for the Protection and Preservation of Trees, Hedgerows and Scrub
- TII Guidelines on the Management of Noxious Weeds and Non-Native Species
- TII Guidelines for Treatment of Noise and Vibration and Air Quality
- TII Guide to Landscape Treatments for National Road Schemes in Ireland
- TII Guidelines on Implementation of Landscape Treatments
- Chapter 8, Current Traffic Signs Manual
- Environmental Good Practice on Site, 4<sup>th</sup> ed. (C741 and C762), CIRIA
- Control of water pollution for construction sites. Guidance for consultants and contractors (C532), CIRIA
- Control of Water Pollution from Linear Construction Projects: Site Guide (C649). CIRIA.
- Construction Code of Practice for the sustainable use of soil on Construction Sites, DEFRA (2009).
- BS 5837:2012 Trees in relation to design, demolition and construction
- BS 3998:2010 *Tree work*
- BS 4428:1989 Code of practice for landscape operations
- BS 5228: Noise and Vibration Control on Construction and Open Sites
- Kelleher, C. & Marnell, F. (2006) Bat Mitigation Guidelines for Ireland. Irish Wildlife Manuals, No. 25. National Parks and Wildlife Service, Department of Environment, Heritage and Local Government, Dublin, Ireland
- Bat Conservation Ireland (2010) Bats & Lighting; Guidance Notes for: Planners, engineers, architects and developers.
- Bat Conservation Trust (2018) Bats and artificial lighting in the UK. Guidance Note 08/18. Bats and the Built Environment series
- All Ireland Pollinator Plan

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<sup>15</sup> <https://www.tii.ie/technical-services/environment/construction/>

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