

OUTLINE CONSTRUCTION & ENVIRONMENTAL MANAGEMENT PLAN

BOYNE GREENWAY - NORTH BANK - DROGHEDA

Louth County Council **Project No. L340/1** *November 2022*



Multidisciplinary Consulting Engineers

BOYNE GREENWAY - NORTH BANK - DROGHEDA

Outline Construction & Environmental Management Plan



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LOUTH COUNTY COUNCIL

O'CONNOR SUTTON CRONIN & ASSOCIATES MULTIDISCIPLINARY CONSULTING ENGINEERS PROJECT NO. L340/1

7th November 2022

Index

Page

1.	INTRODUCTION	1
2.	PROJECT DESCRIPTION & SITE LOCATION	3
3.	CONSTRUCTION PROGRAMME & PHASING	6
4.	SITE ESTABLISHMENT	7
5 .	CONSTRUCTION TRAFFIC	9
6.	SEGREGATION OF WASTE STREAMS	.12
7.	ENVIRONMENTAL MANAGEMENT	.15
8.	HOURS OF WORKING	.18
9.	CONSTRUCTION PHASE MITIGATION MEASURES	.19

O'Connor Sutton Cronin & Associate Multidisciplinary Consulting Engineers Boyne Greenway - North Bank - Drogheda Outline Construction & Environmental Management Plan

1. INTRODUCTION

OCSC was commissioned by Louth County Council to prepare an Outline Construction Environmental Management Plan (CEMP) in respect of the construction of a new path and upgrades to an existing footpath in Drogheda, Co. Louth to create the Boyne Greenway – North Bank. This document serves to inform the planning process in respect of the proposed development. It is intended that this Outline CEMP will be an interim assessment and it is not intended to be a final version to cover the eventual construction of any permitted development. A detailed CEMP will be prepared in future by the appointed Contractor. At that time the document will be updated continuously to take account of any necessary changes on foot of the planning process and throughout any phased construction period.

The CEMP will be agreed upon with the Local Authority before the commencement of any construction works, will ultimately include details on the following:

- Any identified mitigation measures identified in NIS given the site location relative to designated European sites.
- Daily and weekly working hours;
- Agreed haul routes for incoming materials;
- Licensed hauliers to be used;
- Disposal sites;
- Travel arrangements for construction personnel;
- Parking arrangements in Trinity Street Carpark for construction personnel to prevent overspill parking on the local road network;
- Contractors Compound within Trinity Street Carpark;
- Temporary construction entrances to be provided;
- · Wheel wash facilities if required;
- Road cleaning and sweeping measures to be put in place if required;
- Temporary construction signage to be put in place and maintained;





- Method Statement on refuelling of machinery and storage of fuel within the Contractor's Compound;
- Any proposed traffic management measures such as temporary traffic lights and signage on any public roads.

BOYNE GREENWAY - NORTH BANK

The proposed works are comprised of the construction stages of the Boyne Greenway – North Bank - in Drogheda, County Louth, an Outdoor Recreation and Infrastructure Scheme (ORIS) Project 2022. Works to be undertaken include provision of a path with a total length of c. 1.6km long. Of this c. 650 m is a completely new path which will run through mainly scrub habitat. The remainder of the development consists of widening an existing 950m pathway from 2m to 3m. The proposed works go from Boyne Hall estate connecting to an existing footpath perpendicular to the Lower Mell street, running through the footpath up to the Horse lane, connecting back to Lower Mell street.





2. PROJECT DESCRIPTION & SITE LOCATION

The proposed works are comprised of the construction stages of the Boyne Greenway – North Bank in Drogheda, County Louth, an Outdoor Recreation and Infrastructure Scheme (ORIS) Project 2022. Works to be undertaken include provision of a path with a total length of c. 1.6km long. Of this c. 650m is a completely new path which will run through mainly scrub habitat. The remainder of the proposed works consists of the enhancement of an existing 950m pathway including widening of the existing tarmacadam path from 2m to 3m with a bitmac surface, resurfacing of poor-quality surfaces, and provision of lighting. The proposed works go from Boyne Hall estate connecting to an existing footpath perpendicular to the Lower Mell street, running through the footpath up to the Horse lane, connecting back to Lower Mell street.

There are sections of the existing footpath which have become deteriorated. These sections are isolated, and they will be milled out and replaced. Benches, bins and bicycle racks will be installed at several locations along the path. In addition, these areas will be resurfaced.

Detail for the existing path upgrade and the new path have been provided in the drawings. They will comprise of 50mm flexible surfacing to CC-SPW-01100 followed by 150mm granular subbase material type B CC-SPW-00800 underlain by acceptable material to Appendix 6/1.

There are weeds and grass encroaching onto the existing path which will be removed / trimmed / scuffed back. There will be access control gates installed. Areas of fencing has also become damaged and will be replaced or removed. For longevity joins in the surfacing will be overbanded. Road signs and markings will be put in place. There will be public lighting installed along the path also.





The existing path is located immediately within the boundary River Boyne and River Blackwater Special Area of Conservation (SAC) for c. 550m of the overall 950m at a distance of 2m from the River Boyne itself at its closest point. The proposed greenway is 1.2 km from the River Boyne and River Blackwater Special Protection Area (SPA) and 2.75 km away from the Boyne Estuary SPA.

The indicative site location can be seen in Figure 2.1.







Figure 2.1: Site Location





3. CONSTRUCTION PROGRAMME & PHASING

Phasing

Given the limited size and scale of the proposed development, it is expected that it will be developed over 2 Phases. Phase 1 will relate to the existing path upgrade which is anticipated to be completed over a 3 month timeframe. Phase 2 will relate to the construction of the new path with an anticipated duration of 6 months.

Programme

It is expected that the construction phase of the development will have a duration of approximately 9-12 months over 2 Phases.

Nevertheless, at the detailed design stage the project engineer for the Boyne Greenway - North Bank, as well as the LCC traffic department will be consulted to finalise the construction programme and to prevent any conflicts between construction sites, if applicable.



4. SITE ESTABLISHMENT

Contractors Compound

A contractors Compound will be set up within the Trinity Street Carpark.

Site Access

The site access it is proposed to provide a site entrance through Horse Lane for construction traffic to use during the construction stage and additional operational access from Toberboice Lane, as well as Horse Lane.

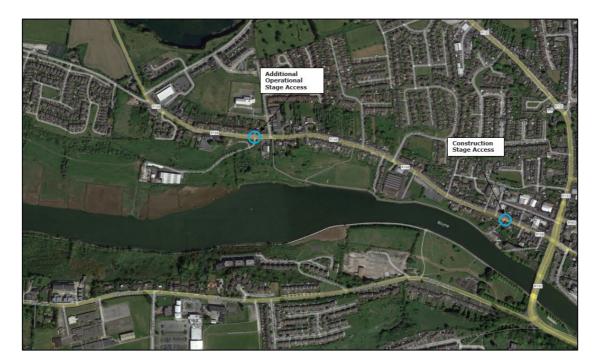


Figure 4.1: Construction Stage Access and Additional Operational Access

Fencing

As part of the works the existing fencing along the existing path will be repaired. Controlled access points will also be provided. Fencing will be maintained to a high standard.

Temporary hoarding will be provided as necessary within the site as safety restrictions to prevent public access. The locations of this temporary hoarding will vary as work progresses across the site.



Archaeology

Appropriate arrangements will be made with a licensed archaeologist to monitor soil stripping and other development works as may be conditioned in any planning permission for the proposed development. Refer to the archaeological report submitted under a separate cover.

Works on the Public Road

Access to the site will be from the proposed site entrance via Horse Lane.

All works on the public road, where relevant, will be subject to agreed Road Opening Licences with Lough County Council and all works will be carried out per LCC and HSA guidelines for working on public roads.



5. CONSTRUCTION TRAFFIC

Site Access

As noted earlier, the site will be accessed via the proposed site entrance on Horse Lane. All construction traffic will enter and leave the site through this access.

Construction Traffic Routing

It is proposed that all construction traffic will use two possible routes. To north, from Horse Lane via George's Street and North Road to the N51 interchange, via N51 until de M1 interchange and continue along the M1 to a suitable disposal site. To south, from from Horse Lane via George's Street (Bridge of Peace Drogheda) and Donore Road to the M1 interchange and continue along the M1. Similarly, all deliveries will approach the site via the proposed routes. This will remove construction traffic from the residential areas in proximity to the site.



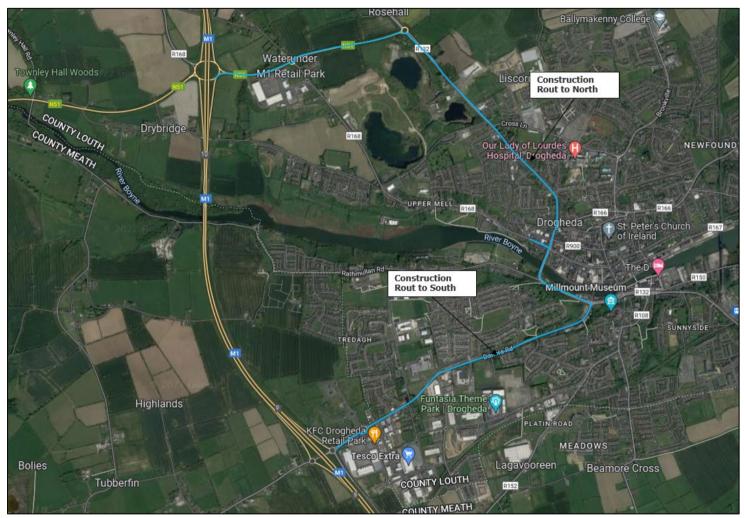


Figure 5.1: Construction Haul Route



The exact location of disposal sites, if required, will be established once a contractor has been appointed. However, the route outlined in Figure 5 will be the preferred access and egress route for the site. Details of all routes will be agreed upon with the Transportation Department of LCC before the commencement of work. The impact on locals will be negligible.

Site Parking

A limited amount of on-site parking within the Trinity Street Carpark will be provided for construction workers and visitors. The Contractors Compound will also be located within Trinity Street Carpark and will be maintained for the duration of the construction period.

Staff Welfare

Appropriate welfare facilities will be provided on-site for construction staff and will include, inter alia:

- Canteen facilities;
- Toilet Facilities;
- Office accommodation;
- Tool storage areas.

Construction Traffic Mitigation Measures

Measures will be put in place to keep public roads free of muck and debris. This will include providing a wheel wash on-site and undertaking regular road sweeping by a mechanical sweeper.



6. SEGREGATION OF WASTE STREAMS

Waste Storage & Segregation

Waste materials generated will be segregated on-site. This will allow for the maximum possible degree of recycling. Where on-site segregation of certain waste types is not practical, off-site segregation will be carried out. Skips and receptacles will be provided to facilitate segregation at the source.

All waste receptacles leaving the site will be covered or enclosed. The onsite waste storage area will be secured within the overall site which will be hoarded off from the public and unauthorised access.

The appointed waste contractor will collect and transfer the waste as receptacles are filled. Any soil removed off-site will be carried by contractors licensed under the Waste Management Acts 1996 - 2008, the Waste Management (Collection Permit) Regulations 2007 and Amendments and the Waste Management (Facility Permit & Registration) Regulations 2007 and Amendments.

A location has been identified for the temporary storage of soil, if required. This area is located away from the River Boyne.

Non-Recyclable Waste:

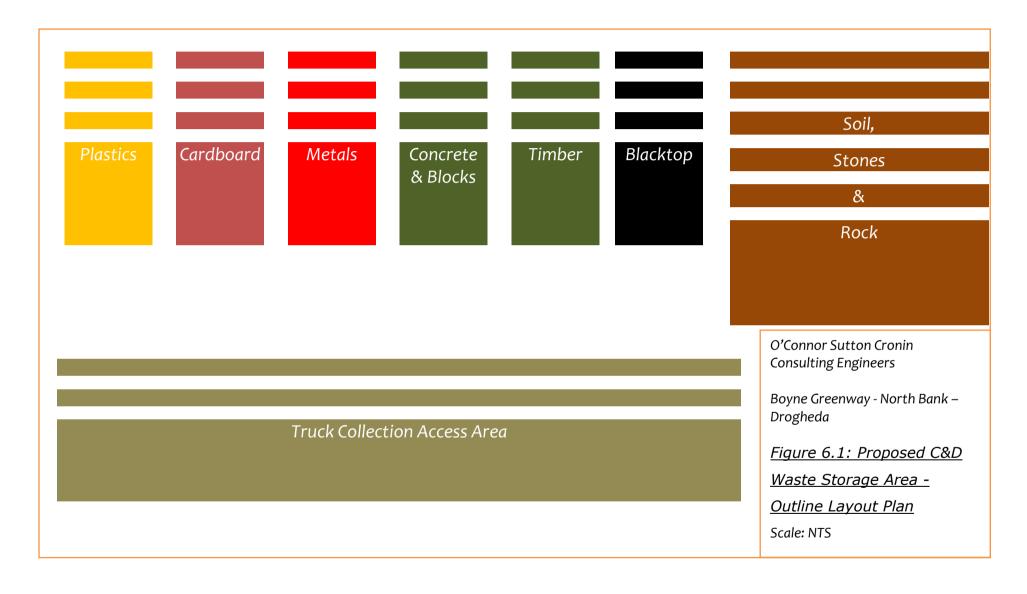
C&D waste which is not suitable for reuse or recovery will be placed in separate skips or other receptacles. This will include polystyrene, some cardboard and plastic which are deemed unsuitable for recycling.

Before removal from the site, the non-recyclable waste skip/receptacle will be examined by a member of the waste team to determine if recyclable materials have been misplaced. If this is the case, efforts will be made to determine the cause of the waste not being segregated correctly and recyclable waste will be removed and placed into the appropriate receptacle.



An outline Layout Plan for a site-based waste segregation compound is shown in Figure 6 over.









7. ENVIRONMENTAL MANAGEMENT

Pollution Prevention

Only sediment-free run-off is to leave the site.

The Site Manager will be responsible for the pollution prevention programme and will ensure that at least daily checks are carried out to ensure compliance. A record of these checks will be maintained.

The site compound will include a dedicated bund for the storage of dangerous substances including fuels, oils etc. Refuelling of vehicles/machinery will only be carried out within the bunded area. The site compound will display emergency contact details for Inland Fisheries Ireland, the National Parks and Wildlife Service, Louth County Council and the Environmental Protection Agency in the event of a pollution incident or environmental emergency. Adequate spill kits will be available in the event of a spill of oil or other hazardous substance.

Training

All site personnel will be trained in the importance of good environmental practices including reporting to the site manager when pollution, or the potential for pollution, is suspected.





Noise Control

Measures will be implemented to minimise the impact of noise emissions. A number of mitigation measures are also proposed which include:

- With regard to potential mitigation measures during construction activities, the standard planning condition typically issued by BS5228 includes guidance on several aspects of construction site mitigation measures, including, but not limited to:
 - selection of quiet plant;
 - control of noise sources;
 - o screening;
 - hours of work;
 - o liaison with the public, and;
 - monitoring
- Noise control measures that will be considered include the selection of quiet plants, enclosures, and screens around noise sources, limiting the hours of work and carrying out noise/vibration monitoring as required.

Dust Control

The main activities that may give rise to dust emissions during construction include the following:

- Materials handling and storage; and
- Movement of vehicles and mobile plants.

The following mitigation measures will be implemented on-site during the construction phase, as required:

- Site roads shall be regularly cleaned and maintained as appropriate;
- Hard surface roads shall be swept to remove mud and aggregate materials from their surface;
- Any un-surfaced roads shall be restricted to essential site traffic only;
- Any road that has the potential to give rise to fugitive dust may be regularly watered, as appropriate, during extended dry and/or windy conditions;





- On-site speed limits will be stipulated to prevent the unnecessary generation of fugitive dust emissions;
- Material handling systems and site stockpiling of materials shall be designed and laid out to minimise exposure to the wind;
- A complaints register will be maintained on-site and any complaints relating to dust emissions will be immediately dealt with;
- In periods of dry weather when dust emissions would be greatest, a road sweeper, which would also dampen the road, will be employed in order to prevent the generation of dust;
- Water misting or sprays shall be used as required if particularly dusty activities are necessary during dry or windy periods; and
- If appropriate, dust monitoring will be carried out during the construction phase of the scheme. If the level of dust is found to exceed 350mg/m²day in the vicinity of the site, further mitigation measures will be incorporated into the construction of the proposed scheme.





8. HOURS OF WORKING

General

Construction operations will be carried out in accordance with any granted planning conditions. It is expected that normal working hours will be from 07:00 - 19:00 Monday to Friday and from 08:00 - 14:00 on Saturdays.

It may be necessary for some specific construction activities to take place outside of these times and in those cases, a specific derogation will be sought from the Planning Authority, Louth County Council.

Deliveries to the site will be arranged to arrive within normal working hours as set out above.

There may, again, be specific deliveries which need to arrive outside of these hours e.g. in respect of wide loads. In all such cases, the applicant will again liaise and agree to any necessary derogations with the Planning Authority.





9. CONSTRUCTION PHASE MITIGATION MEASURES

MITIGATION

The main mitigation measures for this site include:

- Implementation of a site-specific Construction Environmental Management Plan.
- 2. Physical mitigation installed to protect water quality in the greater area.
- 3. On-site management to protect water courses.
- 4. Avoid interfering with the hydrology of site.

Construction Environmental Management Plan

The Contractor CEMP will cover:

- Detail the establishment of a site compound for the storage of plant, machinery, fuel and materials during the construction phase of the project. A Contractors compound has been identified within the Trinity Stret Carpark.
- Ensure all plant and machinery are refuelled at the Contractors compound at the start of each working day.
- Ensure all plant and machinery are being regularly checked for leaks.
- Ensure no hydrocarbons will be stored at the project site other than within the compound and that they are within a bunded storage area.
- Ensure a spill kit is available at the project site for accidental leaks.
- Detail measures to ensure that construction or demolition debris do not enter the river during works on the Greenway.
- Detail measures to mitigate silt mobilisation and subsequent potential for runoff.
- Detail the roles and responsibilities of construction and associated staff regarding the protection of the receiving environment.





- Ensure that the removal and disposal of wastewater from temporary welfare facilities in the construction compounds and throughout the site is carried out by a fully permitted waste collector holding valid Waste Collection Permits as issued under the Waste Management (Collection Permit) Regulations, 2007.
- Adopt a 'leave no trace' with education and awareness programmes to be implemented ensuring that littering does not develop into a significant issue.

Reference should be made to the following guidance documents:

- IFI, (2010) 'Biosecurity Protocol for Field Survey Work'
- IFI, (2016) 'Guidelines of protection of Fisheries during construction works in and adjacent to waters'
- NRA, (2010) 'The Management of Noxious Weeds and Non-Native Invasive Plant Species on National Roads'
- CIRIA (2006) 'Control of Water Pollution from Linear Construction
 Projects- Site Guide (C649)'
- CIRIA (2005) 'Environmental Good Practice Site Guide (C650)'

Construction Phase – Direct Impacts

While no evidence of otters was identified during the site walkover, there is a section of scrub with some trees and a hedgerow near the site which could provide a suitable otter resting place. The proposed greenway extension would be a barrier between this and the main river corridor. In addition, otters while commuting may stray from the riparian edge and be present on the site. Otters will often cross roads some distance from watercourses. In the event that otters are identified in a pre-construction survey, then mammal-resistant fencing should be incorporated on either side of all watercourses at which otter presence is known and should stretch to at least 25m and preferably to 50m or more either side of the crossing. Note, evidence of otters were not identified during the site visit in October 2022. Riparian habitats also can often be improved by additional planting along the affected watercourses.





Pre-construction otter surveys should be undertaken prior to the commencement of any works in order to identify any changes in otter activity, holt locations, etc. This will ensure that the prescribed mitigation measures in the NIS remain adequate to address possible impacts on otters. It is also important to ensure that no new holts have been created in the intervening period.

The pre-construction survey should be conducted no more than 10-12 months in advance of construction. This will ensure that there will be sufficient time to comply with all licensing requirements and that the necessary actions can be undertaken to protect otter populations prior to the commencement of construction.

The survey should be supplemented by a further inspection of the development area immediately prior to site clearance.

Where more than 36 months has elapsed between the time of a statutory approval and the initiation of the construction phase, an appropriate level of resurvey will be required - because the baseline data may have altered during the intervening period. This will allow adjustments to be made to the mitigation strategy specified in the NIS, where appropriate.

Construction/Rehabilitation Phase – Indirect Impacts

Erosion causes many and varied problems for salmonids by clogging spawning and nursery habitats with silt. Erosion also affects channel depth and width which in turn militates against the proper river channel form of pool-glide-riffle sequence. It is essential that the form of rivers is natural in a changing climate with natural solutions in the form of soft engineering to the fore. A stable riparian zone is essential to stop erosion and provide a vegetated riverbank for control of water temperature. Riparian zone vegetation also regulates erosion, pH, and colour which are essential to the wellbeing of juvenile salmonids.





Ecological Supervision

Prior to commencement of works, a suitably qualified ecologist should be appointed to act as an ecological clerk of works (ECoW). The ECoW should:

- Review the final contractor CEMP and supply input in respect of environmental and ecological matters including a review of the agreed point of discharge from all dewatering activities (should they be required).
- Provide advice on all relevant mitigation measures set out in the outline CEMP, contractor CEMP, and the NIS.
- Carry out regular inspection and monitoring of the construction work, particularly in relation to ensuring the implementation of the proposed silt fencing to ensure no impacts on the conservation objectives of any Natura 2000 site.
- Have the authority to halt works in the event of any noncompliance or failure of the mitigation measures detailed in the NIS.

Invasive Species

In line with good practice, methods for the prevention of spread of Invasive Alien Species should ensure that the following guidelines are implemented:

- Kelly, J., Maguire, C.M. and Cosgrove, P.J., Muir, R.A. (2015).
 Best Practice Management Guidelines Japanese knotweed
 Fallopia japonica. Prepared for NIEA and NPWS as part of Invasive Species Ireland.
- IFI, (2010) 'Biosecurity Protocol for Field Survey Work'
- NRA Guidelines on the Management of Noxious Weeds and Non-Native Invasive Plant Species on National Roads (2010). In addition, good construction site hygiene should be employed to prevent the introduction and spread of problematic invasive alien plant species (e.g. Himalayan Balsam, Japanese Knotweed, etc.).
- All plant and equipment employed on the construction site (e.g. excavator, footwear, etc.) must be thoroughly cleaned down prior to arrival on site to prevent the spread of invasive plant species.
 This is to be undertaken offsite. Cleaning on site could result in





the introduction of invasive species that could be attached to the equipment / machines onto the site and could then establish themselves and spread on the site and to other areas. Of particular concern in relation to cleaning on / near the site is that contaminated run-off from the cleaning could carry invasive species into the adjacent watercourse. This will be avoided by off-site cleaning. This process will be detailed in the contractor's method statement.

- Any soil and topsoil required on the site will be sourced from a stock that has been screened for the presence of any invasive species and where it is confirmed that none are present.
- All fill and material sourced or relocated within the site should be screened at source for the presence of invasive species by the ECoW to prevent the spread of these species along the road corridor. This is in line with the guidance for the control of nonnative invasive species set out in the NRA publication 'Guidelines on the Management of Noxious Weeds and Non-native Invasive Plant Species on National Roads' (NRA, 2010) to be employed by the contractor.

Silt Management

The first step to prevent silt from entering protected habitats is to minimise the generation of silt laden runoff through planning of construction activities by working during clement weather and minimising the storage of sediment producing material. Where silt laden runoff is generated, it should be prevented from entering sensitive habitats. Specifically, the following actions should be taken:

• The minimum area necessary for an active work area will be identified, and there must be no access to works vehicles outside the fenced off areas. All works are to be located within the confines of these fences. No works should take place outside the fences to prevent damage to areas outside the necessary development footprint.





- Excavation, where required in places, should be undertaken during clement weather to minimise runoff.
- Where possible, minimise areas stripped of vegetation using a phased approach during construction.
- Avoid stockpiles of excavated material to control silt runoff. An area has been identified outside of the protected area for stockpiling, if required.
- Backfilling shall, wherever practicable, be undertaken immediately after the specified operations preceding it have been completed.
- Silt fencing should be erected along the boundaries of the watercourse during the construction works. This will mitigate any sediment run-off resulting from excavations, debris removal from the embankments, and construction entering the adjacent body of water. A double layer of geotextile membrane is recommended for use.

Fuel and Oil Control

Ensure all plant and machinery are refuelled at the Contractors compound at the start of each working day.

Only designated, trained, and competent operatives should be authorised to refuel plant. Measures such as bunded storage, drip trays and fuel absorbent mats must be used during all refuelling operations.

Site drainage

- No direct discharges to water are to be made.
- Natural vegetation on verges of the proposed development must be preserved when possible, acting as a filter to any sediment laden runoff.
- Stockpiles of excavated materials should be small and must be surrounded with silt fencing to prevent any pathway to any sensitive receptors downstream. An area has been identified outside of the protected area for stockpiling, if required.





- Silt fencing installed adjacent to the greenway under construction must remain in place until the works in that area have been completed.
- Whilst no significant silt laden run off is anticipated in this project, the site should be regularly monitored by construction staff for signs of run-off such as silt in surrounding vegetation. Measures will be put in place to prevent this and may include the provision of an additional layer of silt fence. A silt fence may be constructed by attaching a double layer sheet of geotextile membrane to a stock fence and burying the bottom of the membrane into the ground, thus allowing water to pass through but not the heavier fraction of the sediment.
- During the operational phase of the greenway drainage runoff will be addressed via French drains.

Lighting

No temporary artificial lighting is expected to be required during Construction as works will be limited to daytime hours. In the event that it is required, in order to minimise the impact to potential bats in the area, directional lighting (i.e. lighting which is focused on work areas and not nearby countryside) shall be used.

The installation of public lighting is needed for public safety. In general, artificial light creates a barrier for commuting bats. Any permanent lighting structures being installed should be slightly angled so the areas with potential for bat presence, remain shaded and outside of direct lighting. Installation of shorter lamp posts would also be beneficial for permanent lighting as it keeps light focused on the target area i.e. the path, with less indirect lighting to the surrounding area. A preliminary lighting plan has been prepared.





Noise Control

Where possible loud equipment should be substituted with a quieter alternative. If this is not feasible then existing equipment can be retrofitted with damping materials, mufflers or enclosures.

Dust Control

- Water bowsers should be used to dampen down areas during time of dry weather.
- Stockpiles should be kept to a minimum.
- Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate additional control measures are in place.
- Avoid dry sweeping of large areas.
- Use water-assisted dust sweeper(s) on access and local roads, to remove, as necessary, any material tracked out of the site. This may require the sweeper being continuously in use.
- Surfacing equipment (e.g. planer) only to be operated with any manufacturers dust abatement measures in place.



