Vicar Street Improvement Scheme

at Vicar Street, Co. Kilkenny

By

Kilkenny County Council

OUTLINE CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

Client:

KILKENNY COUNTY COUNCIL

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Issue PL1

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REVISION HISTORY

Client	Kilkenny County Council
Project	Vicar Street Improvement Scheme
Title	Outline Construction Environmental Management Plan

Date	Details of Issue	Issue No.	Origin	Checked	Approved
12/08/2020	*Issue for Part 8 Planning*	*PL1*	*AC*	*KS*	*NO'C*

Abbreviations:
PR - Preliminary
PL - Planning
F - Fire
TI - Tender Issue
TA - Tender Approval
C - Construction
AC - As Constructed

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1.0 Introduction / Project Details

1.0 INTRODUCTION / PROJECT DETAILS

Kilkenny County Council proposes the improvement of Vicar St by changing it from a two-way carriageway to a one-way carriageway in Kilkenny, Co. Kilkenny. The proposed development comprises of the upgrading of the existing pavement surfaces and realignment of existing road gullies. The Development will also include the construction of a new cycle lane and widening of the existing footways.

The site has an overall area of 0.610acres. The site is located on Vicar Street 1.8km in Kilkenny, Co. Kilkenny.

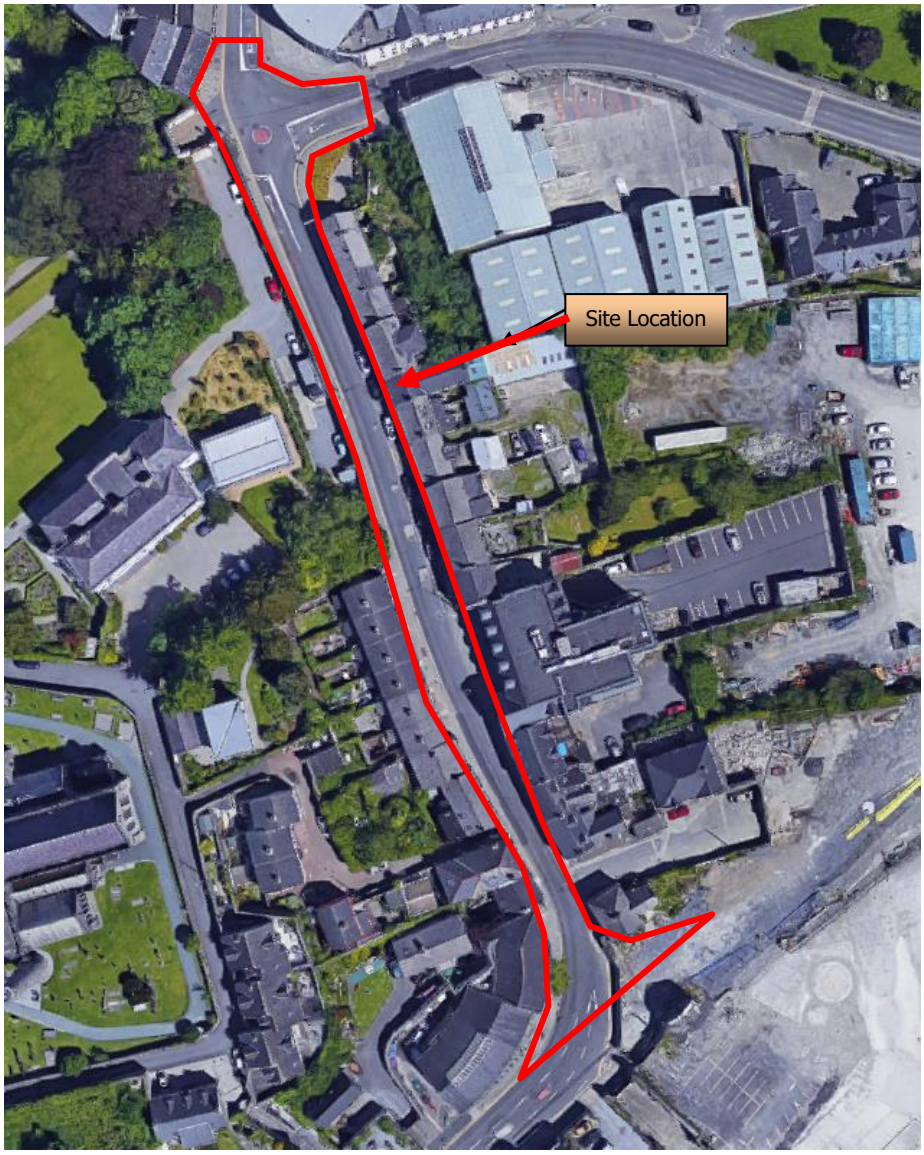

Fig 1.1: Site Location Map

This Outline Construction Environmental Management Plan has been prepared by Kilgallen & Partners Consulting Engineers with the aim of ensuring that the impact of the construction stage generally is minimised and in particular, ensuring that there will not be any adverse impact on the environment during the construction stage. This report outlines the construction & waste management approach to the carriageway and site infrastructure services for the project, and to identify a waste management programme to be considered for planning stage.

The Outline Construction Environmental Management Plan has been prepared for inclusion with the documents to be submitted in support of the Planning Application for the subject development and will thus become a requirement of the Planning Permission to carry out the Development.

2.0 CONSTRUCTION PHASE WASTE

2.0 Construction Phase Waste

Quantities of general construction wastes such as wood, packaging, metals, plastics, bricks, blocks, canteen waste, some hazardous materials (e.g. oils, paints and adhesives), site clearance and residual waste materials will be generated during the construction phase primarily from the construction of the car park. Careful management of these, including segregation at source, will help to ensure maximum recycling, reuse and recovery is achieved, in accordance with current local national waste targets. It is expected however that a certain amount of waste will still need to be disposed of to landfill. While it is difficult at this stage to predict precise tonnages of waste expected by the proposed scheme, estimates of the composition of waste materials generated by a typical Irish Construction site from the EPA National Waste Database Report are presented on Table 3.1 below. A more detailed estimate of the anticipated quantities of these materials will be provided in the contractor's waste management plan following appointment of the contractor and detailed design.

Waste Types	**%**
Soil & Stones	71
Concrete, Bricks, Tiles, Ceramics, Plasterboard	21
Asphalt, Tar and Tar Products	1.5
Metals	1.5
Other Wastes	5
Total	100

Table 3.1: C & D Composition form a typical Irish Construction site (Source EPA 2004)

3.0 ANTICIPATED HAZARDOUS WASTE

3.0 Anticipated Hazardous Waste

Fuels used during construction will be classed as hazardous and this will be stored for site machinery etc., in suitable tanks with the draw-off points bunded so as to minimise exposure to on-site personnel (and the public) and to also minimise potential for environmental impacts. Waste mixtures contain dangerous substances classified as hazardous waste. On-site storage of any hazardous wastes produced will be minimised with off-site removal organised on a regular basis. Hazardous wastes will be recovered wherever possible and failing this, disposed of appropriately in a licensed hazardous waste facility.

4.0 EXCAVATED MATERIALS

4.0 Excavated Materials

There will be minimal excavated materials generated from the removal of the existing road carriageway and footways. The inert material must be removed from site and disposed of in an appropriately licensed tip. Disposal of surplus material arising will be undertaken in accordance with the relevant legislation.

5.0 Construction Methodology

5.0 CONSTRUCTION METHODOLOGY

It is proposed that in advance of commencement of any construction works a site-specific Construction Environmental Management Plan will be prepared in full for agreement with Kilkenny County Council.
The works will include;

- Planing off the existing road surface;
- Realigning the existing road gullies to suit the new alignment of the carriageway;
- Construction of new footways;
- Ancillary civil works.

The Contractor appointed to undertake the construction works will ensure that a suitable Construction Environmental Management Plan is put in place for the duration of the construction works, to include demolition and construction phase waste management programmes. The Contractor will also undertake a Construction Traffic Management Plan that will maintain access to residents and all forms of traffic during the construction phase of the works.

6.0 Control of Noise

6.0 CONTROL OF NOISE

It is anticipated the normal working hours within the site shall be Monday to Friday between 0800 hrs and 1800 hrs and Saturday between 0830 hrs and 1400 hrs, with no working on Sundays or Public Holidays unless under exceptional circumstances. Best practical means to minimise noise shall be employed and shall comply generally with the recommendations in BS5228: Noise Control on Construction and Open Sites.

6.1 Potential Sources and Control

6.1 POTENTIAL SOURCES AND CONTROL

All vehicles and mechanical plant used on the works shall be fitted with effective exhaust silencers and shall be maintained in good and efficient working order for the duration of the works in compliance with BS 5228. Machines in intermittent use shall be shut down in the periods between work or throttled down to a minimum. All compressors shall be "sound reduced" models fitted with properly lined and sealed acoustic covers shall be kept closed whenever the machines are in use and all ancillary pneumatic percussion tools shall be fitted with mufflers or silencers of the type recommended by the manufacturers. Pumps and mechanical static plant shall be enclosed by acoustic shields or screens. Any plant such as generators and pumps which is required to work outside of normal working hours shall be surrounded by an acoustic enclosure which shall restrict the noise level to not less than 5 dB (A) Leq (1 Hr.)

7.0 Control of Vibration

7.0 CONTROL OF VIBRATION

Appropriate compaction plant and methods must be selected so as ensure that no damage is caused to other structures. Records (photographic or otherwise) shall be taken of existing structures and other properties that could be affected by execution of the works prior to the commencement of construction.
Tables 3.1 and 3.2 provide thresholds for vibration levels below which it is not anticipated that structural damage will occur. Methods of working and items of plant shall be selected and operated so that the ground vibrations at structures in the proximity to the Works do not exceed the peak particle velocities for the frequencies given in the Tables 8.1 and 8.2. In this regard, a vibrograph shall be installed and monitored to demonstrate that ground vibrations have not exceeded the stated thresholds. The installation (including the decision on its location), maintenance and date retrieval shall be carried out by an Independent Accredited Laboratory.

Structure Type	Max PPV (mm/sec) – Intermittent Vibration		
	Frequency <10Hz	Frequency 10Hz to 50Hz	Frequency 50Hz to 100Hz
Residential Properties (Occupied)	4	8.5	10
Buildings Constructed for Industrial, Educational and Commercial Use, i.e., Relatively Lightweight Structural Frame Infill Panels and Sheet Cladding	8	12.5	20
Old and Dilapidated Services	10	15	25

Table 8.1: Peak Particle velocities - Intermittent Vibration

Structure Type	Max PPV (mm/sec) – Continuous Vibration		
	Frequency <10Hz	Frequency 10Hz to 50Hz	Frequency 50Hz to 100Hz
Residential Properties (Occupied)	2.0	4.5	5.0
Buildings Constructed for Industrial, Educational and Commercial Use, i.e., Relatively Lightweight Structural Frame Infill Panels and Sheet Cladding	5.0	7.5	13
Elderly and Dilapidated Services	5.0	10	20

Table 8.2: Peak Particle Velocities – Continuous Vibration

8.0 Control of Debris, Dust and Mud

8.0 CONTROL OF DEBRIS, DUST AND MUD

Footways, roadways and other paved areas used by or adjoining construction traffic shall be inspected on a daily basis and swept as necessary to ensure they are free of debris, dust and mud. Problems of dust occur primarily during dry weather. A proactive regime which anticipates dust problems rather than reacting to them is considered essential. The key features of this regime will include the following measures:

- All disturbed areas shall be stabilised as soon as practicable to prevent or minimise wind blown dust;
- Trafficable areas shall be clearly defined by guide posts or other suitable barriers to prevent unnecessary vehicle movement onto other areas and avoid any accidental damage to adjacent areas;
- A water tanker will be employed as required to dampen work areas and exposed soils to prevent the emission of excessive dust from the site;
- Trucks transporting material from the site shall be covered immediately after loading to prevent wind-blown dust emissions and spillages. The covering must be maintained until immediately before unloading the trucks;
- The tailgates of all trucks leaving the premises must be securely fixed prior to loading or immediately after unloading to prevent loss of materials;
- Subcontractors will maintain all construction equipment to ensure exhaust emissions comply with the relevant Air Regulations;

9.0 Protection of Ground and Surface Water

9.0 PROTECTION OF GROUND AND SURFACE WATER

The Contractor is to take measure to ensure that no construction material will contaminate any local groundwater sources.
All existing gully connections will be have to be suitably sealed during the construction works to ensure no construction material will enter the existing surface water and combined networks.

10.0 Hazardous Materials

10.0 HAZARDOUS MATERIALS

Any hazardous materials used during the course of construction process will require careful handling. Oils, paints, adhesives and chemicals will be kept in a separate contained storage area which will be locked when not in use. Lids will be kept on containers in order to avoid spillage or waste by evaporation. Waste oils, paints and chemicals will require careful handling and disposal. This includes the containers and will be stored in containment trays. These wastes will be disposed of by suitably licensed private contractors or facilities as they arise.

11.0 Housekeeping

11.0 HOUSEKEEPING

C&D waste will arise on the Project mainly from:

- removal of existing boundary;
- excavation for car park;
- unavoidable construction waste e.g. packaging, material surpluses;
- damaged materials

Materials shall be ordered so that the quantity delivered, the timing of the delivery and the storage is not conducive to the creation of unnecessary waste.

Materials will be ordered to fit site dimensions to prevent off cuts and build up of scrap waste on site.

In-situ materials such as in-situ cast concrete, blockwork, rendering materials etc. will be ordered only as required and only sufficient mixes will be produced each day to suit daily requirements, thus eliminating daily surplus waste.

Materials will be securely stored on site and handled correctly to reduce damage to a minimum. Materials will remain packaged until they are ready to be used.

Operations will be programmed and deliveries sequenced to ensure only the minimum materials will be required on site at any one time. This will further reduce the risk of damage to materials. The limited supply will also have the effect of encouraging economical use of materials by site personnel.

Individual responsibility will be assigned to sub-contractors for the consignment to site of raw materials and management of their own waste for activities such as concreting, plastering, plumbing, electrical works etc. This will ensure that available resources are not expended wastefully.

Concrete waste, masonry, wood, plastics and other C&D waste materials will be collected in receptacles with mixed C&D waste materials, for subsequent separation and recovery at a remote facility. Packaging will be segregated for recycling. Wherever possible, segregation at

source will be applied to waste materials.

Hazardous wastes will be identified, removed and kept separate from other C&D waste materials in order to avoid further contamination prior to disposal to a licensed facility. Before undertaking any works giving rise to Hazardous Waste, a detailed methodology shall be prepared for dealing with the material.
It is anticipated that waste materials will have to be moved off site.

It is anticipated that the main contractor appointed to construct the Project will have the appropriate authorisations for the collection and movement of waste off-site and disposal to facilities which have the appropriately Licenses, Permits and / or certificates of Registration in line with current legislation. If this is not the case, the main contractor will engage specialist waste service contractors who do possess the requisite authorisations.

12.0 COMMUNICATION WITH ADJACENT LANDOWNERS

12.0 Communication with Adjacent Landowners

The Contractor will make provision for initial and ongoing communication(s) through site management with all adjacent landowners and outline the Construction Environmental Management Plan, to assure adjacent landowners that site will function as an independent controlled environment during construction.