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PARTNERSHIP
CHARTERED ENGINEERS

**Universal Access and Landscaping Works at The Mansion House
for Dublin City Council**

CONSTRUCTION MANAGEMENT PLAN

**June 2023
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Job No. 20006



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1. INTRODUCTION

The following outline Construction Management Plan has been produced as part of the overall planning application for the works to be carried out to The Mansion House.

This document presents an outline construction management plan, supported by possible construction methodologies and techniques that may be adopted during the construction of the proposed development. This outline plan seeks to demonstrate how such works can be delivered in a logical, sensible, and safe sequence with the incorporation of specific measures to mitigate the potential impact on people, property, and the environment.

Nothing stated in this document shall supersede or be taken to replace the terms of the contract, the detail design description issued with the contract tender or the conditions of planning.

This methodology will be required to be interrogated by the main contractor prior to commencing works on site. It is noted that this document should be viewed as an outline plan with the construction management plan to be developed by the main contractor in consultation with statutory undertakers/ authorities and affected stakeholders prior to works commencing on site.

1.1 Project Description

The proposed works comprise in summary:

- Provide Universal Access via new Landscaping and Structure, adding a ramped approach. This involves the redesign of the landscaping of the existing Lord Mayor's Garden and of the shared access route to the Round Room, Oak Room, and Mansion House.

The overall layout of the site is shown in Figure 1 below.

1.2 Key Interfaces

The site sits on Dawson Street. This street is now one-way northwards for vehicular traffic and contains a LUAS line running in both directions.

The site to the north towards Trinity College is The Royal Irish Academy, followed by St. Ann's House and St. Ann's Church. Molesworth Place and School House Lane East also meet along the site border to the eastern side of the northern face.

To the north the site adjoins Joshua Lane, on the other side of which are office blocks, a jeweller's and a restaurant business before St. Stephen's Green opens.

To the east, the site sits against a multistorey car-park.

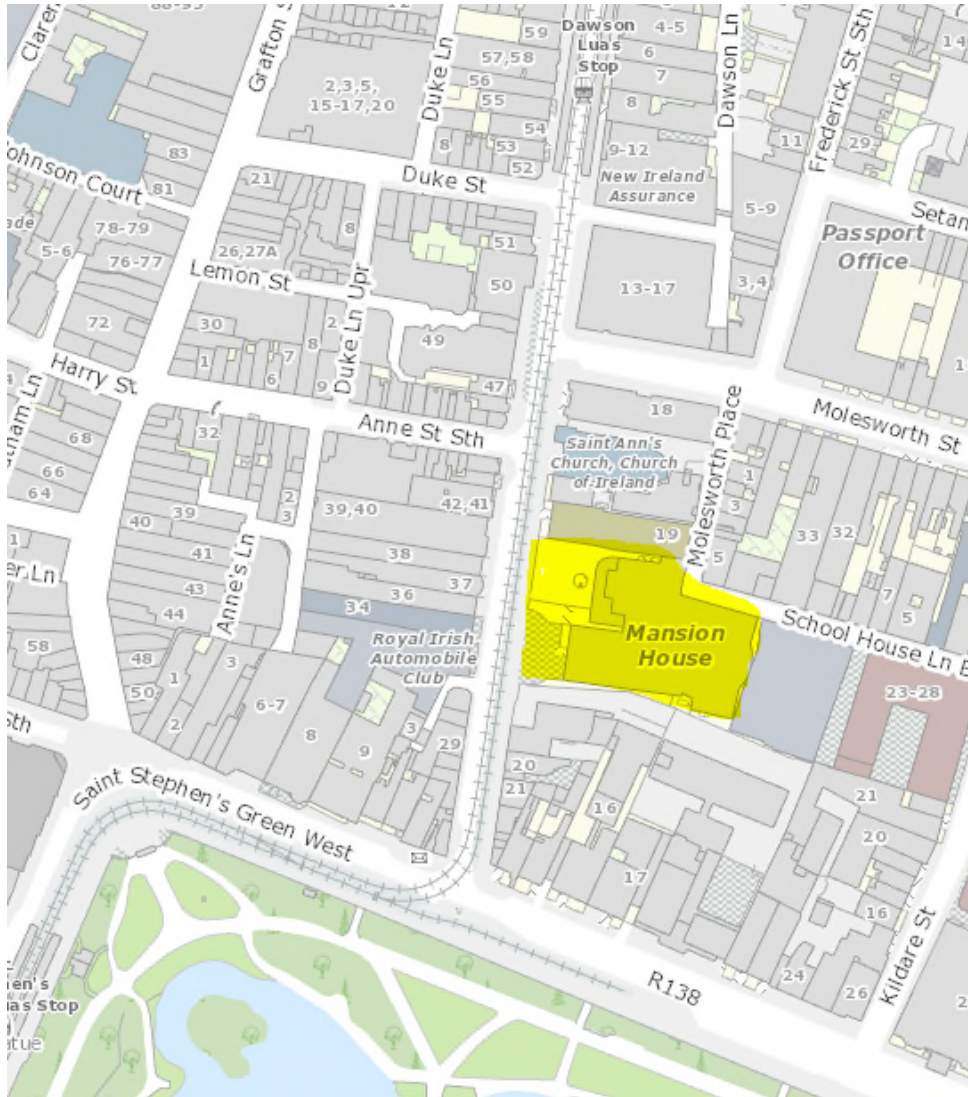


Figure 1. Site Location

1.3 Existing Buildings

The site consists of several buildings constructed over a period of many years. Currently Fire Restaurant occupies the buildings to the north of the site.

1.4 Project Participants

Role	
Client	Dublin City Council
Project Manager	T.B.A
Architect	Blackwood Architects
Civil & Structural Engineers	David Kelly Partnership
Contractor	T.B.A
Mechanical & Electrical Engineers	FLN Consulting Engineers
Quantity Surveyor	Andrew P. Nugent & Associates
PSDP	Safetydot.com
Fire Consultant	FLN Consulting Engineers

Table 1. List of Project Participants

2. CONSTRUCTION SEQUENCING AND PROGRAMMING

The potential sequencing for the project indicates construction work commencing on site in early 2024.

A detailed programme will be developed in advance of the works commencing, with each phase addressed and necessary dependencies highlighted.

The development is expected to take in the region of 8-12 months to complete.

It is anticipated that only the entrance to the Round Room will be affected by the works and will be closed when necessary. This will require careful phasing by the contractor to ensure the safe and smooth operation of those parts of the building that remain open.

2.1 The Works

2.1.1 Site Establishment

The site establishment works, to be carried out by the appointed contractor, will include erecting perimeter hoardings, if necessary, around the site, constructing the site compound and storage areas, establishing where site access and egress points will be, enacting the traffic management plan, providing site security, and assessing where mobile craneage can be based. These items are discussed further in Section 3 below.

2.1.2 Service Diversions

Where works require any temporary diversion of local services or utilities within the site perimeter, this will be undertaken strictly with prior agreement of the relevant service providers and authorities. Similarly, where service diversions are required as part of the overall scheme, these will also be undertaken strictly with prior agreement of the relevant service providers and authorities.

2.1.3 Structural Works

The works will include re-forming the current access to the Round Room, Fire Restaurant, and the Mansion House. It will require the dismantling of most of the roof and floor structures of this infilled area. A narrow lightwell beside the Mansion House will be incorporated into the new space by removing the outer wall of the well.

The new basement floor, stair and lift pit will require a slight reduction in basement ground level and the local deepening of the existing foundations of the north wall of the Mansion House and south wall of Fire Restaurant.

The new lift within the Mansion House is located to minimise impact on historic fabric. Local deepening of the walls adjacent to the lift will be required to allow formation of the lift pit.

The strategy for structural demolition must ensure deconstruction is undertaken in a carefully pre-planned sequence, using methodologies that ensure that buildings under demolition and any adjoining buildings are not affected in any way, weakened or de-

stabilised during the works. All demolition works will be carried out with due consideration toward mitigating noise and vibration pollution to minimise disturbance to the surrounding area. Dust suppression systems, such as misters, will be used during the demolition operations, keeping air pollution to a minimum.

To comply fully with works specification, planning conditions, environmental and safety requirements and adhering to demolition best practice, the works should be undertaken by adopting a methodology that combines the following operations:

- **Demolition by Hand or Using Hand-Held Tools:**

This method will be adopted in all sensitive locations. These works can be undertaken from existing roofs, crash decks or from mobile elevated work platforms.

- **Saw Cutting and Lifting:**

Again, these methods will be adopted in sensitive locations. These works can be undertaken from existing roofs, crash decks or from mobile elevated work platforms.

- **Excavators and Breakers:**

There is not expected to be any requirement for these. There is a risk of contaminated material being present on site. All disposal of any identified contaminated materials will be done in accordance with the Council Decision of 19th December 2002 establishing criteria and procedures for the acceptance of waste at landfills pursuant to Article 16 of Annex II to Directive 1999/31/EC (2003/33/EC) and the “List of Waste & Determining If Waste Is Hazardous or Non-Hazardous, Valid from 1st June 2015” published by the EPA.

The contractor will be responsible for the design and installation of all temporary works, temporary access and for assessing the ability of existing historic structure to support construction activities in the temporary case.

3. SITE MANAGEMENT

Discussed below are several areas which the main contractor will be required to address during the works.

3.1 Health and Safety

The primary aim of planning for safety on this site is ensuring the safety of people involved in and affected by the development. This includes pedestrians, road users, neighbours, site staff and visitors to site.

The following are examples of some site-specific issues that will have to be addressed during the construction of the proposed development:

- Managing demolition/roof stripping works and disposal of demolished materials.

- Managing and controlling occupancy levels in those parts of the Mansion House and Fire Restaurant that remain open during the works.
- Identifying, storing, and handling of hazardous and contaminated materials.
- Protecting existing roadways and buildings against damage.
- Identifying, diverting, maintaining, and connecting to existing live services.
- Managing vehicular and pedestrian traffic on the surrounding roadways for the duration of the construction works.
- Ensuring adequate temporary works are designed and installed in the existing buildings as required for the duration of the construction phase of the project.

All contractors must progress their works with reasonable skill, care, and diligence and, always, proactively manage the works in a manner most likely to ensure the safety, health, and welfare of those carrying out construction works, pedestrians, road users and other interacting stakeholders.

All contractors are further required to ensure that, as a minimum, all aspects of their works and project facilities comply with legislation, good industry practice and all necessary consents.

Health and Safety requirements will be further expanded and developed within the main contractor's Construction Management Plan and Construction Stage Health and Safety Plan required to be prepared by the Project Supervisor Construction Stage (PSCS), prior to the commencement of works on site.

Full dilapidation surveys will be completed during the preconstruction phase of the project. These will be used to develop the site-specific method statements and risk assessments for each element of the works.

3.2 Hours of Working

Hours of construction are expected to be between the hours of 07:00 and 19:00, Monday to Friday, and 07:00 to 14:00 on Saturdays.

Due to the specific nature of some construction activities, or to mitigate disruption to the local environment, there may be a requirement for working outside these hours. Should this be required, it will be by agreement with Dublin City Council (DCC).

3.3 Public Relations

The site is in the vicinity of St. Ann's Church, the Royal Irish Academy, as well as several nearby residences and local businesses. The main contractor will be required to ensure that all agents, subcontractors, and suppliers act in a manner to minimise disruption to the surrounding locality. The main contractor will register the site with the Considerate Constructors Scheme and be expected to abide by the Code of

Considerate Practice, designed to encourage best practice beyond statutory requirements. Keeping people informed of site operations will help create and maintain good relationships, fostering a co-operative atmosphere. A liaison manager will be appointed by the main contractor, whose responsibility would include:

- Regular briefings with local neighbour and business representatives on progress and issues.
- Liaison with DCC and emergency services as appropriate.
- Liaison with A Garda Síochána, particularly in relation to traffic movements and permits.
- Preparation of reports for the site meetings on neighbourhood issues.

3.4 Hoarding

The main contractor, on taking possession of the site, will erect a suitably robust hoarding around the relevant portion of the site. This will provide separation of the construction works from the adjacent roadways and buildings. The plan alignment of the hoarding may not remain constant for the entire works and is likely to change to meet the requirements and constraints of construction sequence.

Any hoarding will typically take the form of standard plywood hoarding to a height of 3.0m. Controlled access points to the site, in the form of gates or doors, will be kept locked any time that these areas are not monitored (e.g. outside working hours).

3.5 Site Security

The main contractor will be responsible for the security of the site for the duration of the works.

All reasonable precautions will be taken to prevent unauthorised access to the site, the works and adjoining property. Adequate safeguards will be put in place to protect the site, the works, products/materials, plant, and any existing buildings affected by the construction works from damage, theft, and trespass.

The proposed main entrance to the site will be from Dawson Street.

As part of their site security responsibilities, the main contractor will be required to:

- Install and maintain adequate site hoarding to the site boundary, if necessary, with adequate controlled access and egress points.
- Always maintain site security.
- Install access security, if necessary, in the form of turnstiles and gates for staff.
- Ensure restricted access is maintained to the works.
- Monitor and record all deliveries to site and materials/waste taken off site.

All staff will be made fully aware of their individual responsibilities regarding safety and security and will undertake their work in accordance with such guidelines. All staff and operatives will be fully inducted into the security, health and safety and logistic requirements on site.

3.6 Site Compound and Material Storage

The contractor will require a site compound for material and waste storage as well as offices and welfare facilities.

The contractor is to ensure that a suitable hoarding strategy is used if necessary to minimise any visual impact on the area arising from the compound area.

The main contractor is responsible for obtaining all necessary permissions from relevant statutory bodies, including local authorities, for the disposal of water off site. Standing water should be cleared as soon as is practicable or treated with an approved product at least once a week.

The main contractor is to also ensure that there is no hazardous build-up of water and is to provide for temporary disposal of rainwater from the site during the works. Any water that is potentially contaminated is to be treated on site by way of sediment/filtration tanks and comply with a waste disposal licence obtained by the contractor from the Local Authority.

The main contractor is to devise a strategy to ensure there is no excessive loading to the existing buildings caused by material storage or otherwise.

3.7 Quality Control

A site-specific Quality Management Plan, including site specific inspection and test plans, will be developed to ensure the project is managed in line with the stakeholder's requirements. This plan will form part of the contractor's project execution plan for the project.

We would advise the main contractor has a clear understanding of client expectations and the role to be undertaken. The main contractor should provide the optimal organisation structure ensuring that the best team with strong leadership skills are allocated to the project.

3.8 Dust

This Construction Management Plan will be updated prior to commencement of works on site to include a dust minimisation plan for the demolition and construction phase of the project having regard to the Air Quality Monitoring and Noise Control Unit's Good Practice Guide for Construction and Demolition, available on www.dublincity.ie.

Account will be taken of key neighbours and of the Mansion House and Fire Restaurant that remain open during the works. The main contractor shall put in place a regime for monitoring dust levels in the vicinity of the site during works using the Bergerhoff

Method (German Standard VDI 2119, 1972). The minimum criteria to be maintained shall be the limit specified by the Environmental Protection Agency (EPA) for licenced facilities in Ireland which is 350mg/m²/day as a 30-day average. The main contractor shall monitor dust during construction to ensure the limits are not breached throughout the project.

The level of monitoring and adoptions of mitigation measures will vary throughout the construction works depending on the type of activities being undertaken and the prevailing weather conditions at the time. For instance, additional monitoring and mitigation such as damping down of demolished materials on site would be undertaken if the prevailing weather conditions are dry and windy.

3.9 Noise

This Construction Management Plan will be updated prior to commencement of works on site to include a noise minimisation plan for the demolition and construction phase of the project having regard to the Air Quality Monitoring and Noise Control Unit's Good Practice Guide for Construction and Demolition, available on www.dublincity.ie.

The main contractor is required to monitor the baseline noise levels at the site prior to commencement of the project, with a noise monitoring regime being developed for the duration of the construction works on site as part of a Noise and Vibration Management Plan (NVMP). The main contractor shall implement measures to minimise noise levels during construction. Account will be taken of key neighbours. Specifically, noise levels shall be kept below those levels specified in Table 2, or further limits if imposed by the Local Authority. The limits for residential developments in the vicinity of the development site are identified in Table 2.

Period over which criterion applies		Noise impact criterion (LAeq, 1hr)
Monday to Friday	Day: 7.00am to 7.00pm	70 dB
	Evening: 7.00pm to 10.00pm	60 dB*
	Night: 10.00pm to 7.00am	The higher of 45 dB or the ambient level*
Saturday:	Day: 7.00am to 2.00pm	65dB
Sundays and Bank Holidays	Day: 8.00am to 2.00pm	60bdB*

Table 2

Note: *Construction activity at these times, other than that required for emergency works, will require the explicit permission of the relevant Local Authority.

Specific noise levels relevant for the internal areas of the site will also be monitored.

3.10 Vibration

A specialist sub-contractor shall be engaged by the main contractor to monitor, collate, and report on vibration results for the duration of critical work activities, as part of the Noise and Vibration Management Plan (NVMP Particular account will be taken of key neighbours, and of the Mansion House and Fire Restaurant that remain open during the works. Vibration monitoring stations should continually log vibration levels using the Peak Particle Velocity parameter (PPV, mm/s) in the X, Y and Z directions in accordance with BS ISO 4866:2010: Mechanical vibration and shock – Vibration of fixed structures – Guidelines for the measurement of vibrations and evaluation of their effects on structures.

Vibration monitors, of both aural and visual type, with real time outputs are to be located at agreed points.

Traffic light system to be in place consisting of:

- Green – vibrations below all threshold limits – OK to proceed.
- Amber – Vibrations exceed first threshold limit – Stop and check.
- Red – Vibrations exceed second threshold – Stop and action.

Table 3 sets out the vibration criteria to be adopted at nearby soundly constructed buildings to avoid cosmetic damage.

Allowable vibration (in terms of peak particle velocity) at the closest part of sensitive property to the source of vibration		
Less than 10 Hz	10 to 50 Hz	50 to 100 Hz (and above)
15 mm/s	20 mm/s	50 mm/s

Table 3: Allowable vibration during construction phase for soundly constructed buildings

Table 4 sets out the vibration criteria for buildings that are considered more sensitive due to their construction type or condition. These lower vibration limits are taken from the German Standard DIN 4150-3 (199-02) Structural Vibration-Effects of vibration on structure.

Allowable vibration (in terms of peak particle velocity) at the closest part of sensitive property to the source of vibration		
Less than 10 Hz	10 to 50 Hz	50 to 100 Hz (and above)
3 mm/s	3 to 8 mm/s	8 to 10 mm/s

Table 4: Allowable vibration during construction phase for sensitive buildings

Specific vibrations levels relevant for the internal areas of the site will also be monitored.

3.11 Fire Management During Construction

The main contractor will implement a fire management plan during the works. This will include a hot works permitting system. There shall be no on-site storage of flammable material & tidiness audits will be carried out to ensure that potentially flammable material is not allowed to gather on-site. There will be a network of fire extinguisher points across the site & operatives will have been trained in their use. The sensitivity of the existing fabric of the Mansion House is noted and the plan will take specific account of this.

3.12 Road and Footpath Maintenance

In addition to the dirt control measures listed above, the following measures will be taken to ensure that the site and surroundings are kept clear, tidy, and well maintained:

- A regular programme of site tidying will be established to ensure a safe and orderly site.
- Food waste will be strictly controlled on all parts of the site.
- Scaffolding will have debris netting attached to prevent materials and equipment being scattered by the wind.
- In the event of any fugitive solid waste escaping the site, it will be collected immediately and removed to storage on site, and subsequently disposed of in the appropriate manner.
- If the existing roads or footpaths around the site are damaged because of the construction, the contractor will carry out repairs to same.

3.13 Environmental Impact Assessment Report (EIAR)

In addition to the various measures noted above, it is recommended that an Environmental Impact Assessment Report (EIAR) be carried out. The contractor shall implement the measures resulting from this.

4. CONSTRUCTION TRAFFIC MANAGEMENT

4.1 Construction Traffic Routing

The proposed works are within the site boundary of the Mansion House. The site is adjacent to Dawson St which carries a LUAS line therefore the developed Construction Traffic Management Plan will take account of TII's Code of Engineering Practice for works on, near, or adjacent the Luas light rail system'. No work to the public footpath is intended, nor any works for which a TII works access permit is required.

4.1.1 Construction Activities

It is anticipated that construction vehicles will access the site from Dawson Street, Molesworth Lane, and Schoolhouse Lane. An auto-track exercise shall be carried out for 4 no. vehicles. Pinch points to be further considered include:

- Some road signs and lighting poles will need to be carefully avoided by the driver(s).

An appropriate Traffic Management Plan will be developed by the main contractor in consultation with DCC to ensure safe access and egress procedures are always implemented during the works, and to also ensure that disruptions to traffic in the area are minimised.

Two delivery points to the site are envisaged. Most site deliveries will be via School House Lane with the option of some deliveries via the forecourt of the Mansion House off Dawson St. Both delivery points will be strictly controlled and time windows for both will be agreed in advance of commencement of the works with Dublin City Council.

4.1.2 Staff

The number of construction staff is not expected to be high, possibly 20-25.

The site has no capacity to facilitate staff parking and driving to the site should not be encouraged. The car parking on the surrounding streets and in the nearby city centre areas are generally subject to high charges, therefore there will be only a very limited number of staff that will drive to the wider area. Most of these movements will occur before 7:00, hence not impacting on the peak traffic conditions.

4.1.3 Minimising Construction Vehicle Movements

Construction vehicle movements will be minimised by:

- Use of ‘just-in-time’ approach for removal of materials from site and delivery of materials to site.
- Ensuring vehicle intensive operations occur outside of peak traffic periods.
- Providing adequate storage space on site, or alternatively offsite.
- Use of prefabricated elements (where possible).
- Developing a strategy to minimise construction material quantities as much as possible.
- Promoting use of public transport and offering staff incentives for using them, e.g. Travel to Work Scheme benefits.

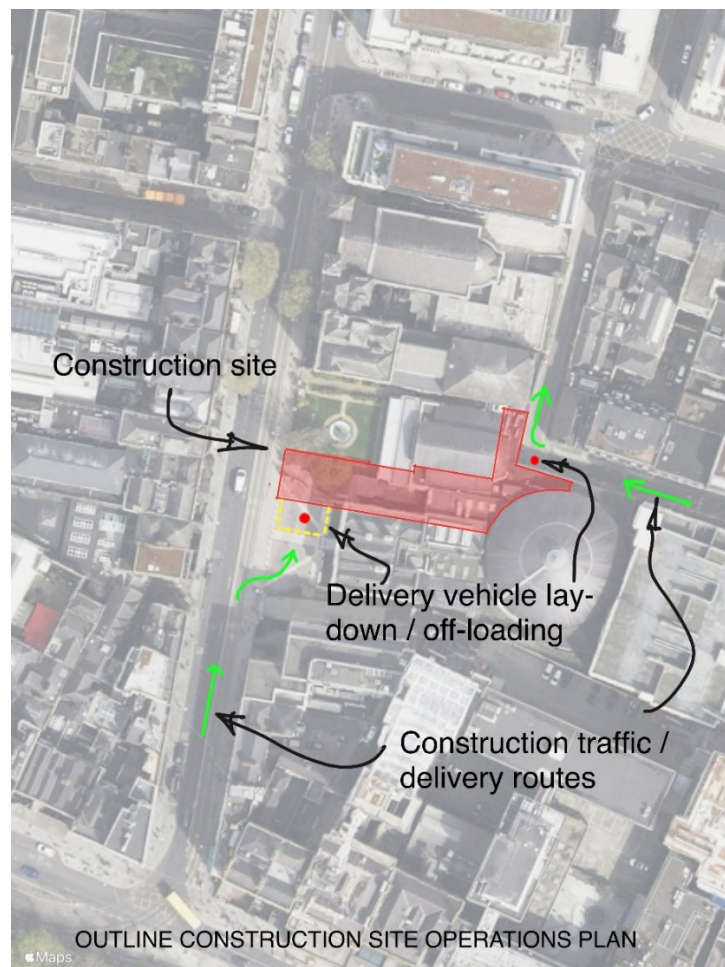
4.1.4 Construction Phase - Mobility Management Measures

The contractor will be encouraged as part of the contract to introduce a Mobility Management Plan for its workforce to encourage access to the site by another means other than by private car. The following section identifies some of the measures the contractor will provide as part of the Mobility Management Plan. The Mobility Management Plan will form part of the Construction Management Plan and will be agreed with DCC prior to works beginning on site.

There is good connectivity between the site and public transport links which serve the area. This includes a vast number of bus services, as well as the Luas Green and Red Lines, the DART, and a Dublin Bikes Station all of which are within walking distance from the site.

Where driving to site is required, car sharing among the construction staff should be encouraged, especially from areas where construction staff may be clustered. Such a measure offers an opportunity to reduce the proportion of construction staff driving to the wider site area and will minimise the potential traffic impact on the road network surrounding this facility.

Regarding public transport, the contractor will issue an information leaflet to all staff as part of their induction on site highlighting the location of the various public transport services in the vicinity of the construction site.



5. CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT

This project is committed to ensuring on-site segregation and on and off-site reuse/recycling/recovery in terms of waste materials arising from the project. The appointed contractor shall have regard to pollution prevention measures to be implemented during the construction phase of the proposed works. These will be outlined in the detailed Construction and Demolition Waste Management Plan prepared by the main contractor. This plan will outline the proposals and methodology to achieve compliance with the current waste management and associated planning and EPA legislation.

The appointed contractor shall be vigilant in ensuring that no activities will give rise to pollution of surface water pathways onsite with suspended solids or other polluting substances.