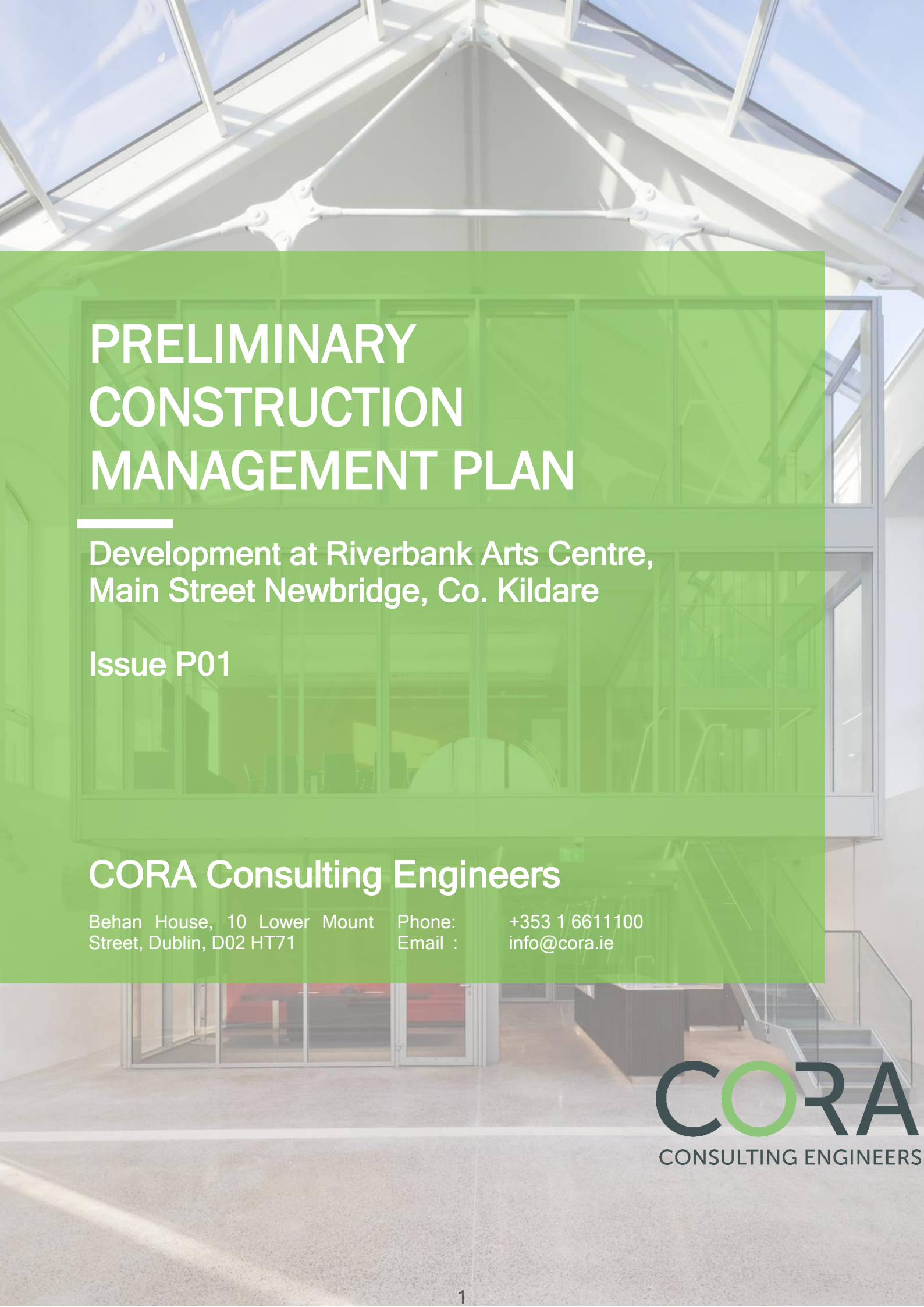

PRELIMINARY CONSTRUCTION MANAGEMENT PLAN

Development at Riverbank Arts Centre, Main Street Newbridge, Co. Kildare

Issue P01

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Introduction

General

This document presents an outline plan to inform the construction of the proposed development and ensure active control, management and monitoring of waste and environmental impacts associated with the proposed development during the Demolition and Construction Phase.

This plan will be developed further by the chosen Works Contractor , agreed with Kildare County Council and implemented throughout the construction phase of the project to ensure:-

- That all site activities are effectively managed to minimise the generation of waste and to maximise the opportunities for on-site reuse and recycling of waste materials.
- To ensure that all waste materials generated by site activities are removed from site by appropriately permitted waste haulage contractors and that all wastes are disposed of at approved waste licensed / permitted facilities in compliance with the Waste Management Acts 1996, 2007 & 2011.
- To manage and control any environmental impacts (noise, vibration, dust, water) that construction work activities may have on neighbouring properties and on the local receiving environment.

Description of Proposed Development

Site Location and Description

The subject site is located in Newbridge, Co. Kildare. The site is located on the corner of Main Street and Liffey Terrace. The site is within the jurisdiction of Kildare County Council. The site is approximately 0.18 ha in area. It is currently occupied by the Riverbanks Arts Centre with near complete hardstanding and roof coverage.

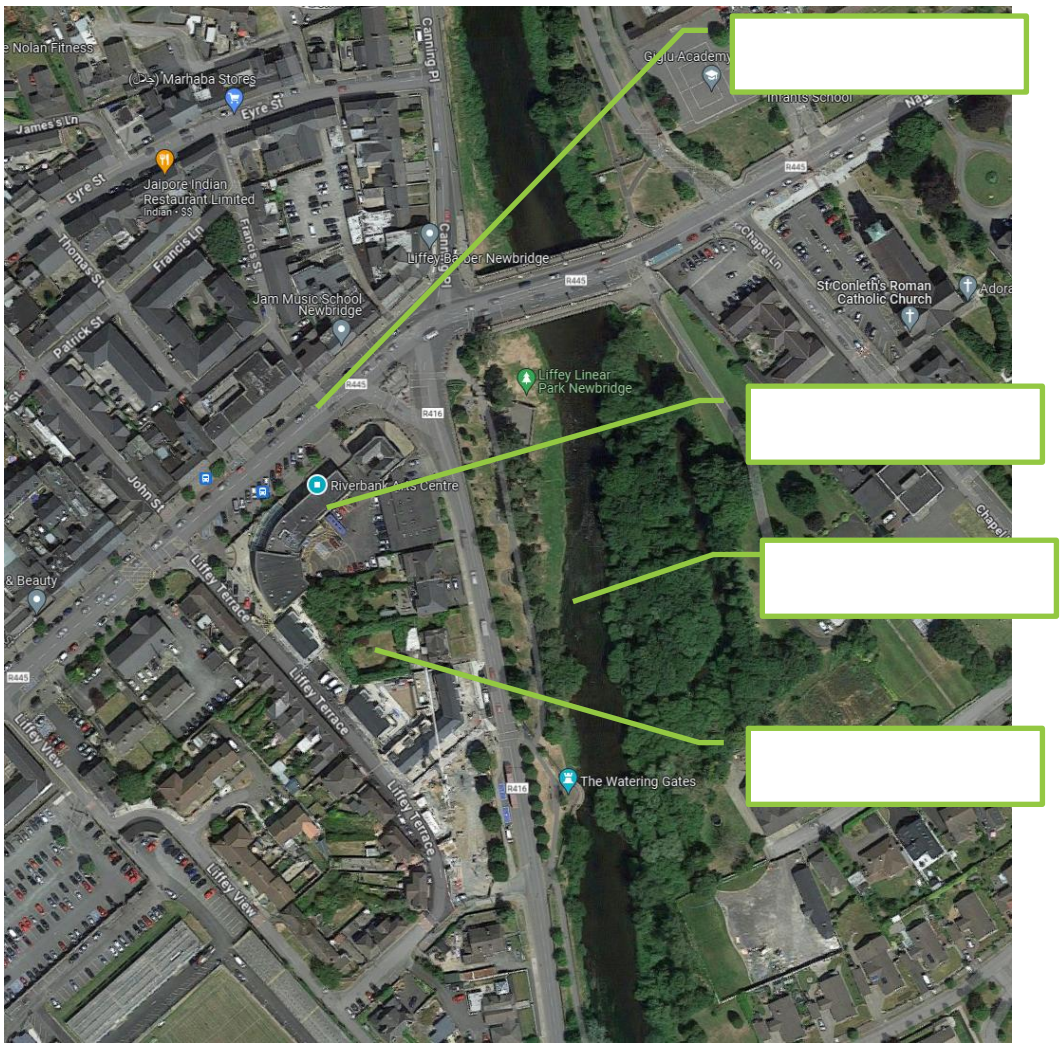

Figure 1 Site Location Google maps

Proposed Works

The proposal comprises the provision of new enhanced cultural facilities at the subject site in the form of a new Art Centre and all associated ancillary elements. The proposal is a component of the proposed new cultural quarter which includes the redevelopment of the adjoining county library.

The proposed development is the subject of a Part 8 proposal by Kildare County Council in partnership with Riverbank Arts Centre. The proposal includes the demolition of the original building and the construction of a new two-storey arts centre structure, along with associated services, landscaping, and public realm elements.

Due to its location, the proposed new arts centre building will form an important landmark building and re-invigorated cultural focus for Kildare, which will contribute to the creation of the overall Cultural Quarter proposals within Newbridge. It will also complement the regeneration of the neighbouring library

Demolition and Construction Management Plan

Scope of Works

The range of works to which this Preliminary Construction & Waste Management Plan will be integrated into during the design phase, construction phase and operation phase of the site over an approximate 24 month period, are summarised as follows:-

- Site set-up
- Part demolition of existing building and site clearance
- Construction of new superstructure
- Site Works including Drainage and Landscaping
- Traffic Management during Construction Phase
- Waste Management during the Construction Phase

It is proposed that this Preliminary Construction & Waste Management Plan will be further developed by the Contractor at the beginning of the construction phase of the works and include a detailed Sequencing and Phasing Schedule and Traffic and Parking Management Plan for the works.

Hoarding and Site Set-up

The site area will be enclosed with hoarding and/or fencing to ensure no unauthorised access during the time of works. Hoarding will be kept clean and maintained for the duration of the project. It is anticipated that the hoarding line will be established on the existing footpath outside the extent of the new building. An application will be made by the main contractor to Kildare County Council to agree the exact placement of the hoarding.

A site office will be established on site to provide adequate welfare facilities for the site operatives, storage of relevant site documents and location for on-site meetings. The location of the site office will be confirmed by Main Contractor at the time of works. An indicative site set up is shown in the figure below and it is proposed to situate the offices at the south of the site.

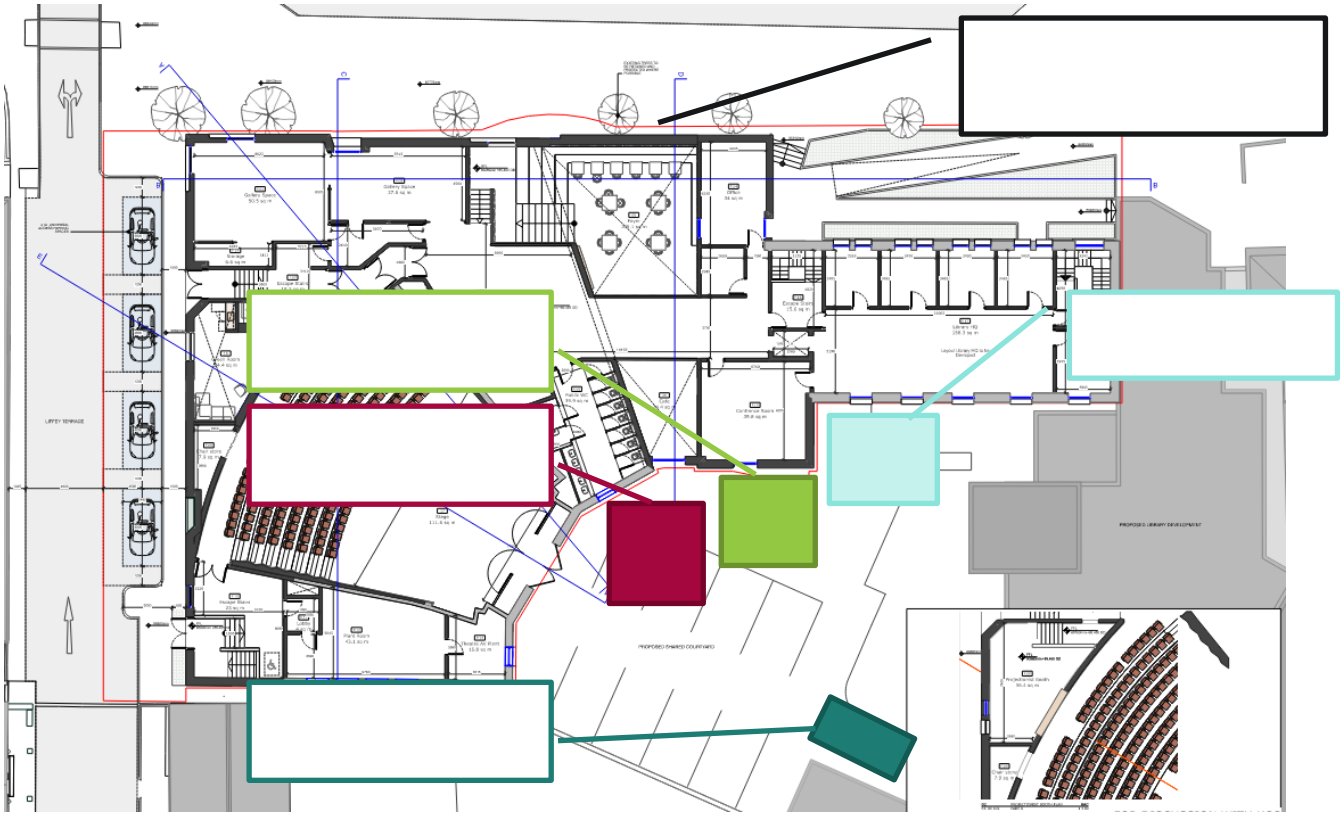

Figure 2 Site Set Up

Suitable areas for the storage of construction material will be determined at the time of works. The storage of materials will not impede access or egress to the works and will be kept separate from boundary walls and temporary hoarding to ensure no excess loading to these elements.

Before the commencement of any site works, the Main Contractor will physically identify all existing services that have been established as part of the desk study. All services within the site must remain clearly visible during the construction phase of the project.

Hoarding & Fencing

Hoarding is proposed to be constructed around the perimeter of the site to fully enclose the area of works. The hoarding will prevent unauthorised access. The final management plan prepared by the Main contractor will identify the line of the hoarding and signboards. Hoarding and signboards will comply with Kildare County Council requirements and the relevant Health and Safety acts.

Site Clearance and Demolition

It is proposed that from the outset of construction activities, a dedicated and secure compound containing bins and/or skips, into which all waste materials generated by construction site activities will be established at the site.

In order to facilitate the construction of the proposed works, a portion of the existing centre will be demolished. It is assumed the existing buildings are of standard construction consisting of concrete footings, block or brick walls and a timber roof. The following is an outline method statement for the demolition of the buildings and wall;

- Conduct an in-depth asbestos survey of the existing building.
- Conduct dilapidation surveys of the neighbouring properties to ascertain existing condition. All surveys will to be distributed to design team for record.
- Confirm location of all services entering and exiting the site.
- Carry out any necessary service diversions and decommissioning works.
- Top-down demolition of buildings, starting with timber roof structure, block/brick walls and concrete foundations.

In order to ensure that construction staff correctly segregate waste materials, it will be the responsibility of the Site Construction Manager to ensure all staff are informed by means of clear signage and verbal instruction and made responsible for ensuring site housekeeping and the proper segregation of construction waste materials.

Access to the Works and Traffic Management

The site is located on the corner of Main Street, Newbridge and Liffey Terrace. Construction access to the site will be from Main Street and Liffey Terrace depending on the works ongoing at the time. Site Office access will be to the rear of the site from Athgarvan Road through the library carpark unless otherwise agreed by the Local Authority.

Due to the restricted footprint of the site, material deliveries may need to be facilitated on the front facing sides of the building. It is proposed to provide access on Liffey Terrace for construction material deliveries and cranage of larger steel elements. The extent of the area required for these deliveries will be agreed with Kildare County Council prior to Work beginning. This will limit the imposition of the works on Main street thoroughfare.

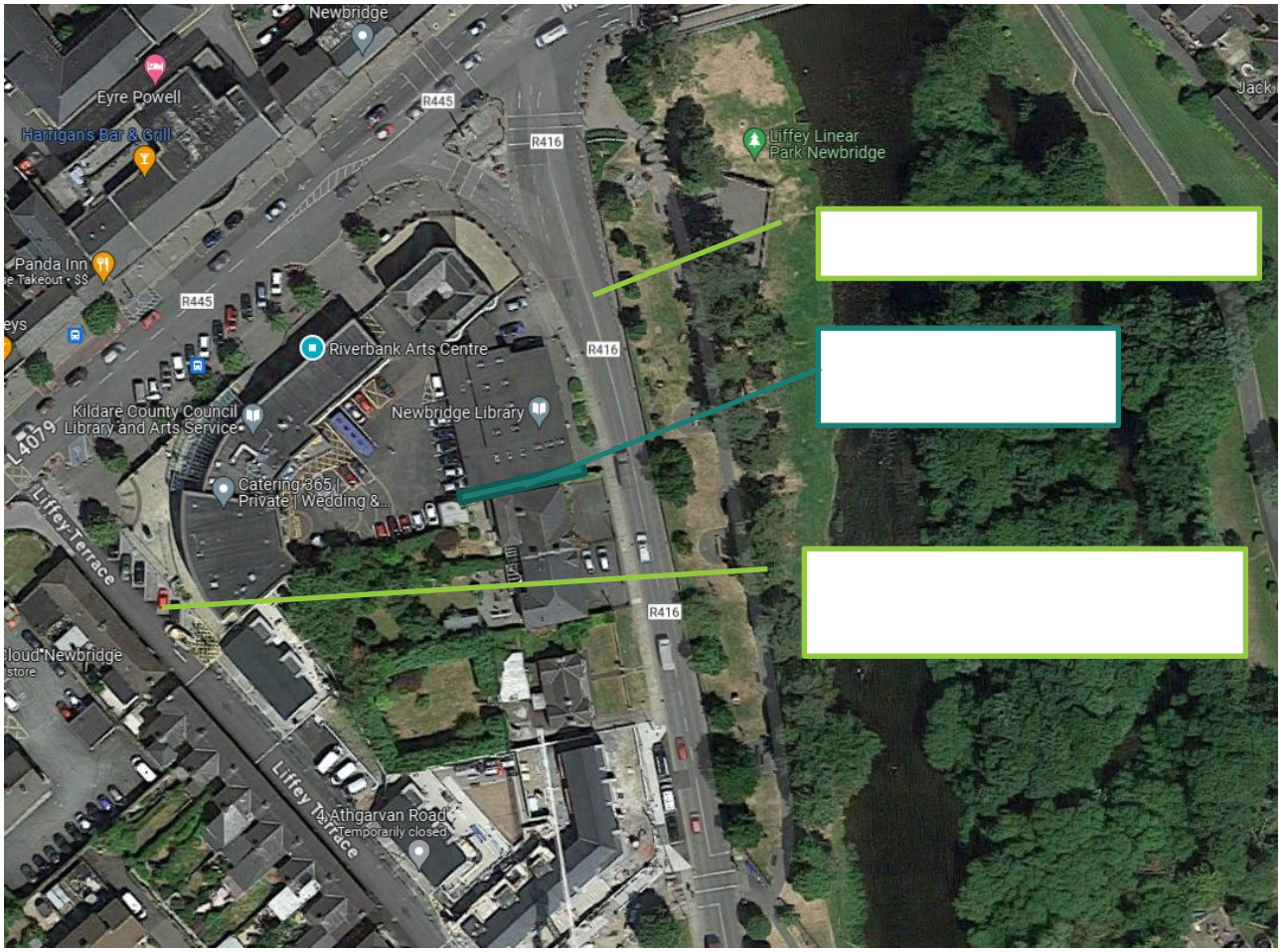

Figure 3 Site Entrance

Site Approach

In relation to Traffic Management and Access, the following is proposed: -

- Deliveries of plant and materials will be directed to approach from the north to avoid travelling through the centre of Newbridge.
- Site Traffic will be directed to exit the M7 motorway at junction 10.
- Site traffic will approach Newbridge from the north along the R445.
- Traffic exiting the site will be directed to the north

The figure below shows the proposed approach and exit road to the site on a regional scale.

Figure 4 Site Approach

The Main contractor will include construction traffic restrictions in the final Construction Management Plan.

Site & Local Area Management

In relation to site personnel and local site surrounds, the following is proposed: -

- There will be no parking of vehicles on surrounding residential roads during the works.
- Pedestrian routes past the site works will be maintained and designated to ensure safe passage around the site.
- The use of public transport by site personnel will be encouraged.

Due regard will be paid to minimising any impacts by construction vehicles on the local area. Should routes become an issue, then the position will be reviewed by the project team and changes made. Particular Emphasis will be placed on;

- The issue of instruction and maps on getting to site to each supplier sub-contractor to avoid 'lost' construction traffic travelling on unapproved routes;
- Ongoing assessment of the most appropriate routes for construction traffic to and from the site;
- Interface with operation of local traffic;

- Use of banksman and/or traffic lights to control exist of construction vehicles; and
- No construction traffic waiting on public roads.

Should larger concrete pours be required, deliveries of concrete to site will be coordinated to avoid idling of concrete trucks on the local approach roads. Waiting areas will be provided within site and 'just in time' deliveries scheduled to avoid long waiting times.

Site Management and Movement

As identified above construction access to the site offices will be through the existing laneway access to Athgarvan Road. Cranage and Deliveries to site is proposed to take place from the eastern Liffey Terrace side of the development.

A detailed Construction Traffic Management Plan shall be submitted to the Local Authority by the Main Contractor. The Construction Traffic Management Plan will identify staging areas, delivery of materials, strategy for large concrete pours, removal of demolition waste, traffic routes etc.

Hours of Operation

Subject to agreement with the local authority, the proposed operating hours for the project are to be as follows: -

07:00hrs – 18:00hrs Monday to Friday
08:00hrs – 14:00hrs Saturdays
Site closed on Sundays / Public Holidays

It should be noted these times are guidelines only and in isolated circumstances, it may be necessary for construction works to occur outside these hours. This will be agreed with the Local Authority at the time of works.

Construction Form and Sequencing

The proposed development is mixed commercial and amenity. There will be a new auditorium, café, amenity spaces and gallery.

It is proposed to use a structural steel frame, load bearing block work and in-situ reinforced concrete floor slabs. The building will be founded on in-situ reinforced concrete strip footings with the ground floor constructed from an in-situ reinforced concrete ground bearing slab The roof will be constructed with a structural steel frame and in-situ concrete reinforced concrete slabs.

The auditorium will be constructed with in-situ reinforced concrete tiers, structural steel frame and structural steel roof trusses.

Stability to the buildings will be provided by lift shafts, stair cores and bracing walls. These will be integrated into the building structure. Facades will be constructed using brickwork and cladding panels and will be constructed simultaneously with an inner leaf of blockwork.

The methodology and program will ultimately be decided by the contractor prior to the commencement of works. As part of this outline plan a preliminary construction sequencing is proposed below;

- Identification of existing services and site set up
- Demolition of the existing building and finishes
- Excavation for foundations.
- Construction of in-situ reinforced concrete footings.
- Construction of solid block rising walls, concrete stair cores and structural concrete columns
- Installation of drainage pop-ups, sub grade and construction of reinforced ground floor slab.
- Installation of structural steel beams at first floor level
- Installation of first floor concrete structural elements.
- Similar sequencing for installation of roof.
- Installation of auditorium roof trusses
- Installation of external envelope and exterior finishes.
- Mechanical and electrical fit out.
- Completion of Finishes
- Commissioning and testing of plant.
- Completion of drainage and landscape works.

As identified above, it is anticipated the construction phase for the proposed development will take approximately 24 months. The main contractor will prepare a construction programme outlining in detail all construction items prior to commencement of the project.

Environmental Management

Potential impacts relating to noise nuisance and disturbance, dust deposition nuisance, surface water and vibrational impacts will be minimised, controlled and monitored to ensure that the site construction activities do not have an adverse or unacceptable impact on local receptors, adjacent property, adjacent users and human health or on the wider receiving environment.

Environmental Aspects & Impacts

The following section describes the environmental aspects and impacts that are relevant to the construction phase of the proposed development and form the basis of the proposed environmental management and monitoring programme.

Definitions of Environmental Aspects and Impacts: -

Environmental Aspect: Element of an activity, products or service that can interact with the existing environment.
Environmental Impact: Any change to the environment, whether adverse or beneficial, wholly or partially resulting from an activity, products or services.
Direct Impacts: Those impacts associated directly with the environmental aspect (e.g. increased noise and dust levels).
Indirect Impacts: Those impacts associated indirectly with the environmental aspect (e.g. 'disposal of waste' and 'fumes emitted during transportation to landfill contributing to the greenhouse effect' impact.
Normal Situations: The project programme is progressing as planned.
Abnormal Situations: The project programme is not progressing as planned because of unforeseen and unpredictable circumstances.
Emergency Situations: An unplanned and unwanted situation or activity has occurred (e.g. fire, explosion, malicious damage).

Noise and Vibration Management

The Dublin Agglomeration Noise Action Plan 2024-2028 address noise pollution for new developments *'To seek to preserve and maintain air and noise quality in the city in accordance with good practice and relevant legislation'.* The proposed demolition and construction works for the proposed development will uphold this policy through the use of;

- Noise Emission limits for site equipment
- Low vibration and noise emitting techniques to be applied
- Control of working hours
- Physical screens installed on site.
- Noise Monitoring
- Vibration Monitoring

The main contractor will prepare a Construction Management Plan, which will be based on this report, prior to commencement of construction. Included in this will be an evaluation of construction activity for noise and vibration generation and the associated mitigation measures to be implemented.

Noise Management

The proposed demolition and construction works for the proposed development will seek to limit/control noise sources through the following;

- Noise emission limits for site equipment
- Low noise emitting techniques and equipment to be used

- Control of working hours
- Physical screens installed on site
- Noise monitoring
- Acoustic enclosures erected around stationary plant and equipment
- Siting of plant away from neighbouring residential properties.
- Regular communication of noise reduction measures through Tool box talks and site introductions.

The above represents best practice measures identified in British Standards BS 5228 (2009): Code of practice for control of noise and vibration on construction and open sites part 1: Noise

Vibration Management

The proposed demolition and construction works for the proposed development will seek to limit/control noise sources through the following;

- Vibration emission limits for site equipment
- Vibration monitors installed on boundary walls
- Low vibration emitting techniques and equipment to be used
- Siting of plant away from neighbouring residential properties.
- Avoidance of 'idling' of plant and equipment when not in use.
- Regular communication of vibration reduction measures through Tool box talks and site introductions.

The above represents best practice measures identified in British Standards BS 5228 (2009): Code of practice for control of noise and vibration on construction and open sites part 2: Vibration

Construction Phase Operating Hours

As identified in section 3.4 above, the proposed operating hours for the project are proposed to be as follows: -

07:00hrs - 18:00hrs Monday to Friday
08:00hrs - 14:00hrs Saturdays
Site closed on Sundays / Public Holidays

Compliance with these strict noise controls will be verified by the programme of construction and demolition phase noise monitoring proposed in this EMP.

Temporary Works/Tree Protection Measures

It is not proposed to undertake any excavations in close proximity of trees and therefore it is not anticipated that there will be a requirement for tree protection measures associated with these excavations.

Demolition of Structures on the Site

The existing Arts centre is to be part demolished. Prior to demolition, condition surveys of boundary walls and neighbouring properties which may be impacted will be conducted.

Excavation for foundations

In order to construct the proposed foundations, topsoil and clays are required to be removed. A Geotechnical Investigation will be undertaken to determine the build-up of soils and stratum on the site. Bedrock is not anticipated to be countered within the proposed zone of excavation of the proposed footings.

Construction of Superstructure of Buildings

It is proposed to construct the building using a mixture of types of constructions: -

- Cast in-situ concrete elements – stair cores and lift shafts
- Structural Steel -frame
- Blockwork – internal walls and walls
- Glazing – facades to buildings.
- Metal Cladding – facades and roof level cladding.

Using these forms of construction – as most of the elements are prefabricated off site – will help reduce the construction time of the project.

Provision for loading and unloading materials

The loading and unloading of materials at the site has the potential to generate elevated levels of noise and dust as a result of vehicle movements (trucks, vans, mobile cranes) throughout the working day at the site. It is proposed that dedicated delivery area shall be clearly identified at the site.

Any material stockpiles shall be located as close as possible to the location where they are to be used so as to minimise associated vehicle activities and therefore minimise the potential for noise and dust nuisance on the site.

Contractors delivering fine aggregate materials in open top delivery trucks to the site shall be instructed to use a suitable cover so as to minimise the potential for wind to generate airborne dusts on transit to the site and to minimise the impacts on local air quality on the greater environment over the transport route from source to delivery point. Drivers delivering materials to the site shall be instructed by site management to turn off idling vehicle engines when the vehicles are on site for extended periods.

Dedicated delivery areas will provide for the orderly management of delivery vehicles and the containment of spilled materials shall they arise, the concentration of specific site activities in a dedicated area away from the closest receptors and the ability to better manage and control potential noise and dust impacts.

Storage of plant, materials and operatives' vehicles

It is proposed that all plant, materials and operatives' vehicles shall be stored in dedicated compound areas within the site in order to minimise the interaction that each element may have on the other. That is, the separation of operative vehicles from aggregate material stockpiles will minimise the potential for vehicle movements to generate dust. All plant shall be stored in a dedicated area following the cessation of site activities at the end of each working day or during periods when the plant is not being utilised. It is recommended that a specific area on site shall be delineated.

Site vehicles and mobile plant (e.g. Generators) have the potential to contaminate soil and groundwater by leaking oil or fuel. The storage of these items of plant in a suitable dedicated area on mobile bunded units and drip trays will serve to minimise the potential for contamination as any leaks, oil spills or stains on the ground will be more readily identifiable and will better ensure that an immediate or more timely response.

The Site Manager shall conduct a daily visual inspection of the site to identify any signs of ground contamination from plant storage areas and that where a spill is identified, the source shall be identified, and the appropriate repair / maintenance be conducted. All daily visual inspections shall be recorded by the site manager or his/her delegate on a "Daily Site Inspection Sheet". All fuels, oils and liquid materials shall be stored in a dedicated bunded area or within a dedicated impermeable storage unit to minimise the potential for soil and groundwater contamination. Storage units containing all fuels oils and liquid material must be locked and secured overnight so as to prevent against pilferage and vandalism.

A policy of "zero tolerance" shall be applied at the site in relation to the dumping of empty or partially empty oil, lubricant, fuel, or any other non-solid material in the vicinity of the site. All empty containers must be stored in a dedicated area designed to prevent the contamination of soil and groundwater as a result of leaking drums or containers prior to the proper disposal off site to a suitably licensed waste disposal facility.

Dust Management Programme

Construction site activities have the potential to generate fugitive emissions of dust levels as a result of vehicle movement on unsealed site surfaces, windblown dusts from aggregate / fine material stockpiles, angle grinding of concrete and stone, crushing activities if required and the movement and deposition of aggregates, soils / clay and other materials at the site.

Proposed Dust Monitoring Programme

Dust deposition levels will be routinely monitored in order to assess the impact that site activities may have on the local ambient air quality and to demonstrate that the environmental control measures in place at the site are effective in minimising the impact of construction site activities on the local receiving environment.

Dust Management and Suppression / Abatement Techniques

It shall be the responsibility of the site manager to ensure that dust emissions generated by site activities are controlled and minimised and as such will implement appropriate dust suppression techniques as appropriate. Appropriate techniques will include water spraying of stockpiles and haul roads and temporarily curtailing specific operations when unfavourable weather conditions are prevailing (e.g. during dry, windy weather when the prevailing winds may cause dust to be blown towards local receptors).

A road sweeper vehicle shall be used to clean soiled roads in the vicinity of the site when required. This will also ensure that the potential for elevated concentrations of particulate matter entering any surface water drain will be minimised.

> The Site Manager shall maintain a complaints log and in the event of a complaint relating to dust nuisance, an investigation shall be initiated.

Responsibilities & Local Liaison

It will be the responsibility of the Project Team and Main Contractor to ensure all works are implemented in a reasonable timely, safe and competent manner.

The Main contractor will prepare a detailed Construction and Demolition Waste plan for submission prior to the undertaking of any works. The Project team shall review and monitor the implementation of this plan over the course of the works.

It is recognized that there will be concerns among the local Community & Traders about the impacts of construction. In addition, to developing this Preliminary Plan and setting out clear and thorough procedures for the management of the project the Contractor will be required to:

- Appoint a Community Liaison Officer as a single point of contact to engage with the community and respond to concerns.
- Ensure specific construction tasks such as large concrete pours and material deliveries are pre-planned and scheduled to minimize disruption where possible.
- Keep local residents informed of progress and the timing of particular construction activities that may impact on them.

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