31 May 2021

Report

Development Construction Management Plan (rev 5)

Holy Cross SHD

CWTC Multi Family ICAV acting on behalf of its SUB Fund
DBTR DR1 Fund

securing right **outcomes**

LOCATION	BLOCKS	LEVELS	DISP.	REPORT NO. | REV
HOLY CROSS LANDS, DRUMCONDRA, D3	A1-A4 B1-B3 C1-C2 D1-D4 E1-E4	ALL (ABOVE AND BELOW GROUND)	PSDP	DCMP-DCON-RPT-001-05

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0	Diarmuid Condon	Diarmuid Condon	04 November 2020
1	Diarmuid Condon	Diarmuid Condon	30 March 2021
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5	Diarmuid Condon	Diarmuid Condon	31 May 2021

DCMP-DCON-RPT-001-05

1 Executive summary

The following Development Construction Management Plan document has been produced as part of the overall application for the Holy Cross SHD. This Plan demonstrates how works can be delivered in a logistic, sensible and safe sequence. This methodology will be developed upon by each contractor prior to commencing works on site.

The Development proposal is for the provision of a high-quality Build-to-Rent Scheme consisting of 1614 residential units arranged as studio, one bed, two bed apartments together with three bed units. The indicative construction programme summarises the scale of construction activities that are necessary to undertake a development of this size coupled with the logistical implications of the works and their effect on the adjacent seminary, nursing home, sportsground, residential and family emergency accommodation properties. In line with the overall development strategic programme, and prior to any enabling or main build works, each contractor will be required to develop a detailed programme for each special work element | works package. Chief among the challenges of the development is the introduction of construction activities significant in scale and volume that are or will be bordered by neighbouring properties and Drumcondra and Clonliffe roadway interface.

A construction development of this scale has been planned to be as least disruptive as possible. The project team are seeking to protect the right of all affected stakeholders in continuing their daily lives with limited or undue interruption (as far as reasonably practicable) that may be caused by noise or dust or to be inconvenienced by the construction operations and traffic movements. The project team are seeking to protect the right of all affected stakeholders in continuing their daily lives with limited or undue interruption (as far as reasonably practicable) that may be caused by noise, dust, construction operations or traffic movements. The previous experience of the team in similar projects of this nature (both nationally and internationally) offers a high degree of confidence that the minimization of disruption in the locality will be prioritised.

This Plan outlines a strategy for servicing the construction works with personnel and materials, accommodation and welfare facilities, removal of waste, vertical transportation of materials and personnel, security considerations and programme and logistics challenges for the Holy Cross SHD whilst being mindful of the constraints within and around the development's environs. This document presents:

- A construction programme sequence supported by projected construction methodologies | techniques that will be adopted by the contractor during the construction of various phases that make up the Holy Cross SHD (refer further to Appendix B – Phasing Plan | Programme);
- A summary of foreseeable potential impacts by construction works and alleviating factors; and
- A structure | proforma construction management plan boilerplate for each contractor prior to works commencing on site.

As the ultimate controlling mind for the works, CWTC Multi Family ICAV acting on behalf of its SUB Fund DBTR DR1 Fund ('CWTC') through their project managers will take the lead in ensuring that there are suitable and sufficient systems in place that promote good health and safety coordination, cooperation and communication between all project stakeholders and the appointed contractors.

1.1 Waiver

DCON Safety Consultants is not responsible for any errors or omissions, or for the results obtained from the use of this information by contractors.

1.2 Development project setting

The development will consist of the construction of a Build To Rent residential development set out in 12 no. blocks, ranging in height from 2 to 18 storeys, to accommodate 1614 no. apartments including a retail unit, a café unit, a crèche, and residential tenant amenity spaces. The development will include a single level basement under Blocks B2, B3 & C1, a single level basement under Block D2 and a podium level and single level basement under Block A1 to accommodate car parking spaces, bicycle parking, storage, services and plant areas. To facilitate the proposed development the scheme will involve the demolition of a number of existing structures on the site.

The proposed development sits as part of a wider Site Masterplan for the entire Holy Cross College lands which includes a permitted hotel development and future proposed GAA pitches and clubhouse.

The site contains a number of Protected Structures including The Seminary Building, Holy Cross Chapel, South Link Building, The Assembly Hall and The Ambulatory. The application proposes the renovation and extension of the Seminary Building to accommodate residential units and the renovation of the existing Holy Cross Chapel and Assembly Hall buildings for use as residential tenant amenity. The wider Holy Cross College lands also includes Protected Structures including The Red House and the Archbishop's House (no works are proposed to these Structures).

The residential buildings are arranged around a number of proposed public open spaces and routes throughout the site with extensive landscaping and tree planting proposed. Communal amenity spaces will be located adjacent to residential buildings and at roof level throughout the scheme. To facilitate the proposed development the scheme will involve the removal of some existing trees on the site.

The site is proposed to be accessed by vehicles, cyclists and pedestrians from a widened entrance on Clonliffe Road, at the junction with Jones's Road and through the opening up of an unused access point on Drumcondra Road Lower at the junction with Hollybank Rd. An additional cyclist and pedestrian access is proposed through an existing access point on Holy Cross Avenue. Access from the Clonliffe Road entrance will also facilitate vehicular access to future proposed GAA pitches and clubhouse to the north of the site and to a permitted hotel on Clonliffe Road.

The proposed application includes all site landscaping works, green roofs, boundary treatments, PV panels at roof level, ESB Substations, lighting, servicing and utilities, signage, and associated and ancillary works, including site development works above and below ground.

1.3 Site setting

The Clonliffe College lands are located in Drumcondra which forms part of the 19th century built up area of Dublin city, immediately located outside the Canal Ring. It is a vibrant urban village with a strong mix of retail, services, cafe-restaurants, employment, and education, with excellent transport links to the city centre and beyond. The Clonliffe College lands, subject to the accompanying masterplan, are approximately 12.86 ha in size and are located 1.7 km north of Dublin City Centre.

The lands comprise the Clonliffe College seminary, Holy Cross lands and are bound by Clonliffe Road, Drumcondra Road, the River Tolka, and Belvedere sports pitches and residential development to the east. These lands are a combination of Z12 and Z9 zoned lands. The Z9 lands stretch along the banks of the River Tolka. The lands also include a number of sports pitches, existing large institutional buildings (some of which are protected structures), and a large number of mature trees. The surrounding area is predominately residential in nature, with other land uses such as light industry, and commercial enterprise adjacent, with Tolka Park Stadium to the north of the river, and the sports pitches for Belvedere College to the east. Drumcondra Railway Station is also nearby the site.

2 Introduction

2.1 Glossary of terms

Term	Definition
CWTC	CWTC Multi Family ICAV acting on behalf of its SUB Fund DBTR DR1 Fund
DCMP	Development Construction Management Plan
DCEMP	Development Construction Environmental Management Plan
C&DWMP	Construction Demolition & Waste Management Plan
DCC	Dublin City Council
TII	Transport Infrastructure Ireland
PSDP	Project Supervisor for the Design Process
PSCS	Project Supervisor for the Construction Stage
CLO	Designated Community Liaison Officer
CLP	Community Liaison Plan

2.2 Definitions

- *"Development Construction Management Plan"* is the overall planning, coordination, and control document for the Clonliffe Lands Development from construction commencement to completion. The DCMP is designed to meet the requirements placed upon CWTC to seek to produce a safe, functionally, and financially viable project. This Plan will act as the overarching governance and boilerplate document for all contractor site specific Construction Management Plans.
- *"Projects"* refers to the design and construction of individual Block sites. Several block properties that will be constructed under separate contract appointments. Clonliffe Lands Development is a critically important commercial undertaking, involving considerable expense and significant socio-economic impact;
- *"Site"* means the lands works are to be executed or places provided by CWTC for the purposes of the contract; and

- *"Works area"* relates to specific pieces of ground planned for a specific construction activity. Works area is defined by a red boundary line (refer to Appendix A). Within the boundary, individual blocks will be demarcated establishing individual site areas. Within these site areas, the appointed main contractor is responsible for the safe delivery of works and site security.

3 Aim and objective of Construction Management Plan (DCMP)

3.1 Aim

- The DCMP has been prepared to impart the over-arching vision of CWTC that development works can be delivered safely and without risk. As Client, CWTC seek to ensure that all works are planned & managed in a safe organised manner, undertaken, and coordinated by competent contractors while obtaining the necessary confidences of all project stakeholders. CWTC are wholly committed to establishing and supporting all necessary aims and objectives to meet this vision; and
- CWTC are dedicated to observing a high level of health, safety, & environmental standard and good practice compliance throughout the construction stage of the development. This dedication is shared amongst all project partners and is a prerequisite outcome for all appointed contractors on the development.

3.2 Objective

- The DCMP will be provided to each tendering contractor detailing the specific requirements of each contractor's site-specific Construction Management Plan (CMP). The DCMP sets out the quantum of minimum information needed for each CMP;
- The underlying objective of the DCMP is to inform each contractor of obligatory minimum standards of behaviours demanded to ensure that compliance with planning conditions can be met;
- Construction activities are planned and executed to maximise the effectiveness, efficiency, sustainability & value-for-money of such works as they progress without impeding where possible neighbouring properties, live utility services, roadways etc.; and
- CWTC baseline health and safety requirements are clearly defined and shared with all contractors when preparing their site-specific CMP and in planning the safe delivery of their works.

4 Project particulars

4.1 PSCS appointment

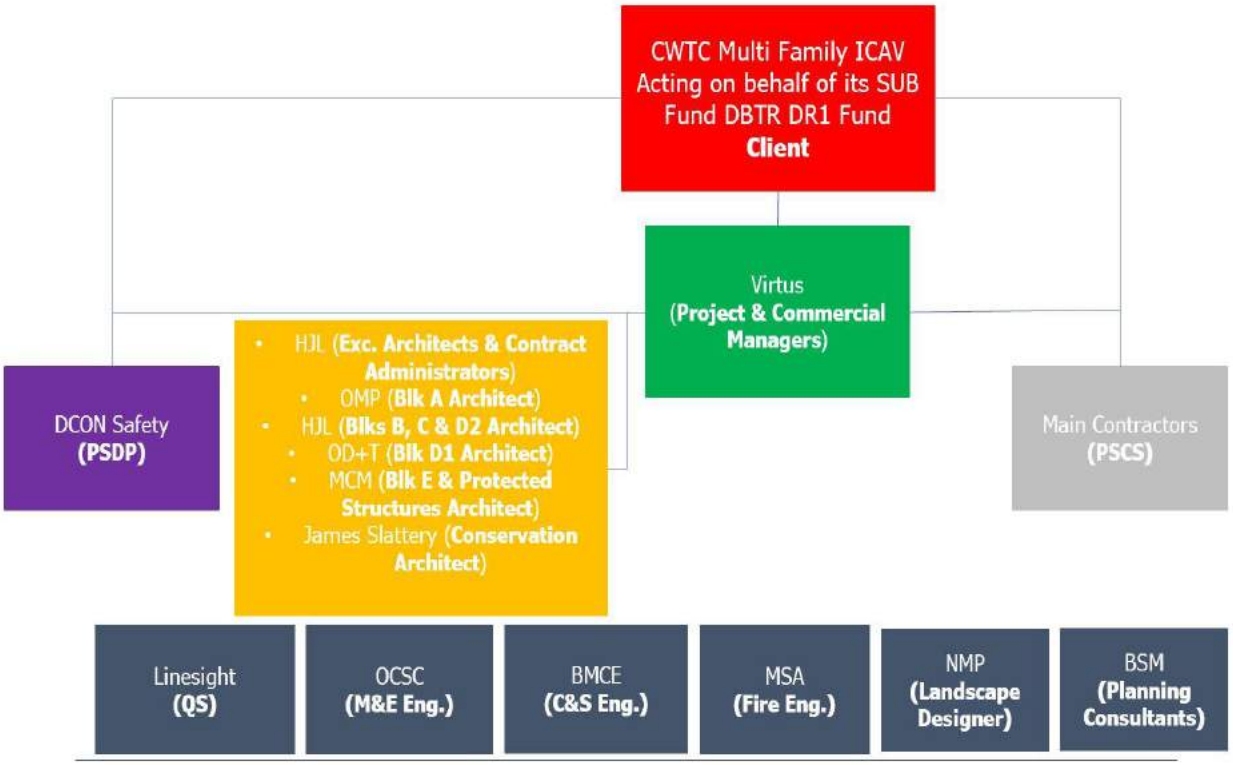
The Client is required under Section 17(1) of the Safety, Health and Welfare at Work Act 2005 to appoint a competent person or persons for the purpose of ensuring so far as is reasonably practicable, that the project –

- is designed and is capable of being constructed to be safe and without risk to health;
- is constructed to be safe and without risk to health;
- can be maintained safely and without risk to health during subsequent use; and
- complies in all respects, as appropriate, with the relevant statutory provisions. The appointments under section 17 of the 2005 Act will generally mirror the requirement to appoint a competent PSCS and the duties in section 17(1) are in addition to the duties in the Construction Regulations 2013.

Each contractor will be appointed as Main Contractor | Project Supervisor for the Construction Stage and will be given possession of a site area which will form their respective site boundary. CWTC will remain tasked with assessing, challenging, interrogating and monitoring each contractor's compliance with current health & safety legislation and planning commitments.

Considering that between 4-5 contractors will be engaged on the development, each contractor will be required to sign a cooperation agreement | licence where collaborative working and works scheduling will be prioritised. This will assist in managing the impact of development works on the wider Dublin 3 community.

5 Project parties



6 Development health & safety requirements

6.1 Client strategic health & safety drivers

CWTC have a controlling influence on how the overall programme of development works will be managed which brings with it certain responsibilities with respect to health and safety. Where a contractor has been given possession of a works or block area, this area will form their respective site. CWTC will seek assurance and evidence to ensure each parties' compliance with regard to planning conditions | current good practice standards | statutory instruments will be in place for the works.

CWTC will seek to ensure that there is good communication and coordination between those operating alongside, adjacent or in other areas of the works through their Community Liaison Plan and oversight and also through management by their Community Liaison Officer. CWTC in planning, procuring and implementing the safe delivery of the development recognise the complexity, vast scale of the development and the inputs necessary to deliver it. Equally it understands the necessity of:

- Continued support from project stakeholders including but not limited to local residents, neighbouring property owners, Church / Dublin Diocese, DCC, GAA, TII, NTA, Irish Water, ESB etc.;
- Committed support from each contractor and their supply chain to comply with their commitments within this DCMP and their site-specific CMP to seek to achieve a 0.00 Accident Frequency Rate on their project;
- Clear definition and allocation | delegation of roles and responsibilities to the parties best able to manage the task;
- Effective explanation of development strategies for the safe planning and execution of works through this DCMP. Regular (monthly) coordination meetings with but not limited to local residents, business owners etc. will be carried out in compliance with the Community Liaison Plan (refer also to Section 9.8);
- Procurement and management of a contractor competent to progress & complete the works on behalf of CWTC willing to proactively engage in a collaborative manner to advance the works to the benefit of every stakeholder.

6.2 Particular risks

Particular Risks	Yes	No
Burial under earth falls	✓	
Engulfment in swampland		✓
Falling from a height	✓	
Work which puts persons at risk from chemical or biological substances constituting a particular danger to the safety and health of such persons or involving a legal requirement for health monitoring ▪ Covid 19 ▪ Asbestos containing material | asbestos containing dust - ACM is noted within proposed Block E work areas. Areas will be communicated to all before work is commissioned and starts Within the main buildings there is a high probability (strongly presumed) airborne friable asbestos fibres are present. To control this hazard, access to buildings where ACM has been identified and confirmed will be restricted and will only be granted to persons who have completed a ½ day Asbestos Awareness course delivered by a competent training provider (e.g., Active Safety Limited). The course includes the training in RPE | 	✓	

Respirator use which must be worn at all times in the main factory building. Only suitably trained and experienced ACM Remediation Contractors will be permitted to access the areas of concern. ▪ Lead coating (TBC post survey review of protected structures) - Abrasion of lead giving rise to lead dust in air, e.g., dry discing, grinding, cutting by power tools during blast removal and or burning of old lead paint. All surfaces that contain lead paint must be treated to remove the lead paint. To remove the paint a specialist subcontractor will be engaged to carry out blasting services. Following the paint being removed the steel will be prepped and paint with primer in line with finish schedule. An independent paint inspector will be engaged to oversee works and provide client with clearance reports when project is complete. Key annotations include but not limited to: ▪ Health surveillance is used to prevent occupationally related disease in workers; ▪ All risks to lead workers must be considered in a written risk assessment before work starts. It must include arrangements to deal with accidents incidents and emergencies such as an uncontrolled release of lead dust or fume etc. ▪ Avoid allowing lead dust becoming airborne for example by using tools with suitable extraction. Employees must report any damaged equipment to their employer. ▪ The work area must be kept clean and ensure lead waste is removed at the end of the day. ▪ Make sure neighbouring workers are not contaminated by any work with lead. ▪ Eating and drinking should only be carried out in designated areas that are free from lead contamination. ▪ Always have a good standard of personal hygiene - employees must wash their hands and face and scrub their nails before eating, drinking or smoking and always wash before going home. ▪ Never bring home lead contaminated clothes or equipment as it could contaminate the car, the home or family members with lead. ▪ Employees must always keep their medical appointments with the occupational doctor and report any ill health issues. The type of PPE used must be based on the written risk assessment but will generally include suitable respiratory protective equipment (RPE), barrier cream, gloves, eye protection, safety footwear and disposable overalls. The worker must be properly trained in the use maintenance and storage of PPE		

Work with ionising radiation requiring the designation of controlled or supervised areas as defined in Article 20 of Directive 80/836/Euratom – Presence of phone masts on existing roofs ▪ Non-ionising radiation (NIR) is the term used to describe the part of the electromagnetic spectrum covering two main regions, namely optical radiation (ultraviolet (UV), visible and infrared) and electromagnetic fields (EMFs) (power frequencies, microwaves and radio frequencies) ▪ At typical telecommunication frequencies, absorption of RF energy leads to heating of body tissue or may lead to unearthed conducting bodies becoming charged. The heating effect is most pronounced, and most hazardous, when the wavelength tends to correspond with the physical dimensions of body structures. Touching large, unearthed conducting structures exposed to EMFs may lead to RF shocks or burns. ▪ On telecommunication masts, the sources of the EMF hazard are transmitting antennae; there is no EMF hazard at receivers. However, a wide variety of antenna types exist so it is difficult to determine whether an antenna is a transmitter or a receiver or both and whether it is transmitting at any particular time. ▪ Levels of absorption of RF energy are dependent on the transmission frequency and the field strength. Field strength is dependent on distance from the source		✓
Work near high voltage power lines ▪ There are medium - high voltage cables located near to and onsite. All work in the vicinity of the overhead power lines will be in accordance with the HSA/ESB Code of Practice for Avoiding Danger from overhead and under-ground lines. All craning and similar high-reach plant used onsite will be planned in advance and operated in accordance with Part 8 of the Code of Practice for Avoiding Danger from Overhead Electricity Lines. Equipment will be orientated so any failure will be directed away from the hazard zone (e.g., crane set up, so boom is orientated facing away from the hazard zone). Any work with the potential to encroach on the exclusion zone, be it advertent (e.g., crane operator slews boom too far) or inadvertent (e.g., excavator operator suffers heart attack and slumps over the controls), will only be conducted with prior consultation with the utility owner (ESB Networks).	✓	
Work exposing persons at work to the risk of drowning (nearby Tolka River, water in excavations)	✓	
Work on wells, underground earthwork and tunnels		✓
Work carried out by divers at work having a system of air supply		✓
Work carried out in a caisson with a compressed air atmosphere		✓
Work involving the use of explosives		✓

Work involving the assembly or dismantling of heavy prefabricated components (temporary work and permanent structural members | infill walls | floors | stairs | glazing units | flues | water tanks | stacks | plant & equipment etc.)	✓	
Any other work, which may involve 'Particular' risk e.g. ▪ Invasive species - Giant hogweed and Japanese knotweed present onsite – management plan required to be prepared ▪ Global Covid 19 – biohazard outbreak ▪ Adjacency of site to public and private amenities; ▪ Limited line of sight for construction vehicle movements accessing | exiting site via Drumcondra Road; ▪ Necessity to retain buildings with protected status via temporary work measures; ▪ Historical antisocial behaviour on site; ▪ Potential for presence of discarded sharps (needles); ▪ Demolition (Block E where permitted) - Demolition works that require careful and considered temporary works – risks include: ☐ Falling materials during demolition activities; ☐ Uncontrolled collapse of structure or parts of structure; ☐ Presence of connected services; ☐ Noise and vibration; ☐ Fire creation. ▪ Temporary work design elements e.g., boundary retention (in selected locations) | secondary and temporary permanent works stability measures e.g., bracing | hoarding | scaffolding | floor propping | hoist propping | traffic management | construction access road | site establishment etc. ▪ Animal waste, decaying litter or pests may be found when entering roof spaces and can cause ill health in roofers (Block E). Breathing in dust from dried bird droppings can cause psittacosis and contact through broken skin with rat urine can lead to Weil's disease (leptospirosis). Droppings should not be removed by using high pressure water. This can cause dust from the droppings to get into the air where it could be breathed in. However, generally wetting down the work area is advised. Containing the work area with plastic sheeting should also be considered. If appropriate, a P3 or FFP3 mask will be used. Overalls will be worn and replaced when they are soiled. Workers who may be susceptible to an infection should not be directly involved in the removal of droppings. High standards of personal hygiene by provision and use of adequate Welfare facilities are essential for controlling these risks; ▪ Site works adjoining | adjacent to occupied residential properties a creating a constant interface risk; ▪ Manual handling – generally; ▪ Working at height – generally and roof work;	✓	

▪ Presence of vermin | birds | adjacency of works to the Tolka River Weil's disease; ▪ Dust creation (silica and other hazardous chemical exposure); ▪ Construction vehicle movements onsite and entering | leaving site (limited line of sight available on to Donore Avenue); ▪ Psittacosis health risk; ▪ Working around the live services; and ▪ Reversing vehicles		

6.3 Contractor requirement - considerate contractor behaviours

It is a condition of working on the development that each contractor develops their delivery methodology around the following headings:

6.3.1 Care about appearance

- Constructors must ensure sites appear professional and well managed;
- Ensuring that the external appearance of sites enhances the image of the industry;
- Being organised, clean and tidy;
- Enhancing the appearance of facilities, stored materials, vehicles and plant; and
- Raising the image of the workforce by their appearance.

6.3.2 Respect the community

- Constructors must have regard to the principles and requirements set out in the CLP (Section 9.8) for ensuring the timely and effective communications with all affected parties, with provision of accurate, relevant and regular information of works proposed and being undertaken;
- Informing, respecting and showing courtesy to those affected by the work;
- Minimising the impact of deliveries, parking and work on the public highway;
- Contributing to and supporting the local community and economy; and
- Working to create a positive and enduring impression and promoting the Considerate Contractors Scheme Code.

6.3.3 Protect the environment

- Constructors must protect and enhance the environment;
- Identifying, managing and promoting environmental issues;
- Seeking sustainable solutions, and minimising waste, the carbon footprint and resources;
- Minimising the impact of vibration, and air, light and noise pollution; and
- Protecting the ecology, the landscape, wildlife, vegetation and water courses.

6.3.4 Secure everyone's safety

- Constructors must attain the highest levels of safety performance to ensure a 0.00 Accident and Incident Frequency Rates;
- Having systems that care for the safety of the public, visitors and the workforce;

- Minimising security risks to neighbours;
- Having initiatives for continuous safety improvement; and
- Embedding attitudes and behaviours that enhance safety performance.

6.3.5 Value their workforce

- Constructors must provide a supportive and caring working environment;
- Providing a workplace where everyone is respected, treated fairly, encouraged and supported;
- Identifying personal development needs and promoting training;
- Caring for the health and wellbeing of the workforce; and
- Providing and maintaining high standards of welfare

6.4 Contractor requirement - safe work cycle

The concept of a safe working cycle is a type of management tool that can be used to solve difficulties in different aspects of the management systems.

6.4.1 Safe working cycle

A safe working cycle is the combination of construction quality and construction safety. It stresses that through the safety policy and objectives, as well as the formulation of a safety management system, the company management can change the traditional enforcement on safety measures into a cooperative and coordinated method of dealing with safety issues. This cycle clearly indicates the responsibilities of different workers. It places particular emphasis on the leadership of the frontline management at construction sites, e.g., project leaders and foremen. The cycle encourages mutual trust between supervisors and workers at the construction sites and facilitates direct communication. The aim of the safe working cycle is to integrate quality and safety aspects of construction so that adequate considerations have been taken for each aspect to achieve a cost-effective construction project.

The safe working cycles are classified into daily, weekly and monthly basis. The period is determined by the importance, and urgency of the construction activities. Daily cycle is comparatively thorough and detailed.

6.4.2 Daily safe working cycle

The daily safe working cycle basically includes eight items. These items are arranged according to the daily schedule of the project and can be shown on a time chart. This means that each person can carry out their responsibilities according to the schedule. Each contractor must set the working hours of each item according to its own conditions and the characteristics of the project.

6.4.2.1 Morning safety meeting (delivered by all subcontractors to their employees)

The morning safety meeting is the first step of the daily safe working cycle. It includes:

- The announcement of important matters (such as project development/special activities, special safety information, etc.); and
- Inspection on personal protective equipment and dressing.

Benefits

- Gives workers time to prepare themselves psychologically for work and pay special attention to the safety rules and the working environment of the work sites; and reminds them that they must check on their outfits and personal protective equipment;
- Promotes team spirit and cooperation; and
- Provides an opportunity to convey safety message and raises workers' vigilance.

Contractor points to note

- The person-in-charge of the morning safety meeting must have a thorough understanding of conditions at the site, be well informed of the safety inspection results and the content of the process safety discussions for the previous day;
- The meeting must not exceed the time limit of 15 to 20 minutes;
- Ensure that the morning safety meetings do not fall into a tedious routine;
- Morning safety meeting on Monday may focus on major safety issues for that specific week. It can be implemented together with the monthly safety meeting;
- Considering the differences in the nature of different projects or corporate cultures, morning safety meeting can be divided into several stages and implemented at various time periods or changed into afternoon meeting in case not all workers can attend. The meeting can be postponed with a 24hrs notice, in order to fit into the working schedule for specific activities; and
- Records of attendance of the subcontractor workers are required to be kept encouraging more workers to participate through process safety discussions and safety committee meetings.

6.4.2.2 Hazard Identification Activity

Hazard Identification Activity is the second step in the Daily Safe Working Cycle. Team leaders or Foremen lead team members to identify the hazards in the day's work and make the workers aware of the degree of risks and measures for precaution. Records of these awareness sessions are to keep.

Benefits

- The participation of front-line workers reduces resistance to the implementation through recognition and acceptance of the safety measures by front-line workers themselves;
- Team spirit can be enhanced (though the discussion at the workplace) as part of practical safety training;
- The safe working circle can be reinforced, and the safety consciousness increased;
- It encourages the participation of individuals so as to make each one singularly and individually responsible;
- It deepens the understanding of the working process;
- It facilitates the contact between the contractor and other subcontractors in order to reduce possible adverse impact on efficiency and prevent accidents that may be induced by lack of communication and misunderstanding;
- To manage the project properly so as to prevent accidents; and
- To enhance discipline (to wear safety equipment and proper clothing).

Contractor points to note

- The content of the Process Safety Discussion for the previous day and the information announced at the morning safety meeting will be helpful in initiating follow-up actions for the Hazard Identification Activity;
- Foremen must be familiar with the procedures for the project, pre-arrange the work, set up guidelines for workers to follow, and try to understand the personalities for each worker;
- Foremen must encourage workers to participate in the Hazard Identification Activity and make them aware of the importance of safe working;
- Frequency of such activities – depending on the complexity of work, one additional Hazard Identification Activity can be held before the start of work in the afternoon. Depending on the arrangement of the work, it can be carried out on the previous day. – In case of any change in the working procedure, one special meeting may become necessary;
- In the Morning Safety Meeting, the safety requirements are only mentioned in broad lines; relevant safety instructions must be explained in detail during the Hazard Identification Activity;
- Foremen must be well prepared on the previous day in order to fulfil their responsibilities for supervision. They must, based on the working guidance of the recorded | minuted Process Safety Discussion from the previous day, lay out the process of the work, provide guidance, make work arrangements, and carry out other duties such as training, inspections, reports as well as discussions;
- Work guidance includes:
  - Objectives of the work, implementation methods, procedures, goals, necessity and importance thereof;
  - Construction area, passage layout, methods and the routes for transporting construction materials;
  - Working hours and sequence;
  - Allocation of responsibilities for workers and personnel arrangements (appropriate assignment);
  - Coordination with other trade people on site;
  - The use of construction materials;
  - Machinery, transporting equipment, tools, protective devices;
  - Highly hazardous situations at work;
  - Reporting channels; and
  - General summary on working process upon completion of the project;
- Making a summary after collecting workers' comments on the following:
  - Safety critical area; and
  - Examples of the previous accidents in the same line of work.
- Workers (including plant operators) must participate in the Hazard Identification Activity; and
- Personnel from the contractor must participate as much as possible.

6.4.2.3 Prior-to-work Inspection

A Prior-to-work Inspection is essential and must take place immediately after the Hazard Identification Activity. Before the start of work and the usage of equipment, all the tools, equipment, machineries and materials must be in safe and proper condition.

Benefits

- Tools and equipment must be in good working condition in order to bring about better efficiency and help reduce accidents;
- To identify problems before the start of work and rectify them and have prevent the problems from getting worse and thereby reduce losses; and
- Compliance with laws and regulations to avoid lawsuits.

Contractor points to note

- Record of the inspection results of materials, equipment and machineries to be kept;
- Carry out all the mandatory and other planned inspections;
- Inspect the conditions of construction sites and the environment daily;
- Make safety inspections on selected key areas, rectify problems discovered and stop work wherever appropriate;
- Report results to the responsible persons after safety inspection. If necessary, the project manager of the contractor and the safety officer must also sign on the inspection reports and monitor the programme of connective actions;
- Regardless of the ownership of materials, equipment and machineries, the principal contractors must ensure that they are used only after proper inspection;
- Inspections must be performed before the tools and equipment are moved to the sites; and
- If the inspection is done in places of high risk, the person must follow the Safety Procedures defined.

6.4.2.4 Guidance & Supervision at Work

Guidance and Supervision at Work is another aspect of safety monitoring. It mainly falls within the responsibilities of contractor project leaders. This includes keeping track of implementation of the safety measures from the Hazard Identification Activity, checking the compliance and addressing problems that may occur during its implementation.

Benefits

- Understanding the project progress and its characteristics facilitates communication with and acceptance by the workers;
- Project leaders can solve problems directly;
- Timely check on the compliance with safety instructions and procedures; and
- Coordinating all kinds of activities.

6.4.2.5 Safety Inspection

The safety inspection carried out by senior management at construction sites serves both as supervision, and assurance for the safe operator of daily work. Senior management can quickly solve any safety problems that may affect the progress of work.

Benefits

- It demonstrates the company's commitments to safety;
- It enables senior management to understand site safety problem and solve them;
- It promotes cooperation among subcontractors to solve problems; and
- It can be used to assess the performance of subcontractors.

Contractor points to note

- Special attention must be paid to these high-risk activities mentioned in previous day's Process Safety Discussion;
- The project manager/general foreman must set an example, communicate with the workers and listen to their opinions while doing the Safety Inspection; and
- The Safety Inspection must not be cancelled without a solid reason. The job can be assigned to some representatives instead when necessary.

6.4.2.6 Process Safety Discussion

Process Safety Discussion provides an opportunity for communication and cooperation in solving problems. Solutions are sought for problems identified during the day before these problems worsen or persist.

Benefits

- Confirm the progress of the day's work and decide on the procedures of next process, including coordination of different activities, with an aim to solving problems quickly and enhancing efficiency; and
- Assign next day's work, with safety directions and measures to subcontractor.

Contractor points to note

- The Discussion must focus on site safety. Time must not be wasted on unrelated issues;
- Subcontractors can put forward topics for review during the meeting;
- The summaries of the Process Safety Discussion must be announced at the Morning Safety Meeting the next morning; and
- Project managers, general foremen and safety officers must make a full preparation of the safety materials for the Discussion.

6.4.2.7 Tidying as you go

This step is designed to ensure that all the equipment, tools, instruments and environment of the workplace are tidied up after a day's work, in preparation for the next day's work. This process consists of more than a general cleaning. All required materials and tools are classified and stowed accordingly before the end of a day's work.

Benefits

- Tidying up materials, equipment and tools help reduce accidents;
- Efficiency is enhanced; and

- After-work tidying up assists to maintain a safe environment when workers return to work the next day.

Contractor points to note

- Workers must understand the benefits of good housekeeping practices. It is more than just discarding trash;
- Person-in-charge of the site must allocate sufficient space for stowing materials/ wastes;
- Since the workplace may pose a threat to safety & Health before tidying up, the tidying up crew must collect, store/discard wastes, especially hazardous materials and those with toxic property according to the safety instructions;
- Proper labels must be affixed on containers for dangerous substance.

6.4.2.8 Final Check after Work

Daily Safe Working Cycle ends with Final Check after Work. The final check is to ensure that no accident will occur at construction sites after work, be it fire, flooding, scaffoldings collapse, theft, or trespassing, in order to prevent loss and affect members of the public.

Benefits

- Prevention of accidents and energy conservation;
- Assessment on workers' performances in housekeeping; and
- Compliance with laws and regulations.

Contractor points to note

- Special check on workplaces and their vicinity to high-risk works is a priority;
- Watch out for people who may enter the construction sites through unlocked gates or external hoarding boards;
- Under harsh weather, double-check the drainage systems to see if they are blocked, if the scaffoldings are stable, and if the materials are stored in the right place. Make sure safeguards are in place against storm and rain; and
- Maintain supervision over those who are working overtime and ensure that they are aware of emergency procedures. Supervisors must be aware of:
  - agreed finishing times and emergency procedures as per the approved notification for emergency works; and or
  - an extension of work times if needed and permitted (refer to the CLP in Section 9.8).

6.4.3 Weekly safe working cycle

Weekly Safe Working Cycle aims at making an interim review of the performance in the past week and deciding for the future. It consists of 3 steps as follows:

1. Inspection & Check;
2. Process Safety Discussion; and
3. Weekly Tidying Up

6.4.3.1 Weekly Safety Inspections and Weekly Check Up

The contractor and sub-contractors must jointly carry out a weekly inspection. They can therefore strengthen their cooperation and work on eliminating the safety problems found during inspection and define their respective responsibilities on-the-spot. This will provide information for the management in their self-appraisal and underline the commitment of the management. The contractor and sub-contractors (competent persons) also need to inspect their own machines, electrical installation and scaffolding on site on a weekly basis to ensure the sound operation of such equipment and facilities.

Benefits

Weekly inspection must:

- Promote communication between the contractor and sub-contractors and clarify each party's responsibilities; and
- Underline the commitment of senior management.

Weekly check-up must:

- Spot problems as early as possible before they get worse; and
- Conform to relevant laws and regulations.

Contractor points to note

- The contractor must ensure all sub-contractors participate; and
- If the project manager is unable to attend, a representative can be appointed. The manager must nevertheless be kept up to date with the inspection results to demonstrate his | her interest.

6.4.3.2 Weekly Process Safety Discussion

The weekly Process Safety Discussion must promote the communication between people at various levels and sub-contractors, summarising the safety performances in the last week and planning for construction work for following week.

Benefits

- To promote communication and help sub-contractors improve their work; and
- To create opportunities for bringing problems to attention and for an early remedy.

Contractor points to note

- The contractor project manager or his | her representative must chair the meeting and all participants are encouraged to express their views at the meeting; and
- The minutes on the Weekly Process Safety Discussions must be distributed as soon as possible so as to take follow-up actions.

6.4.3.3 Weekly Tidying Up

This step is to thoroughly tidy up the site to prepare for work the following week.

Benefits

- To create a safe working environment;

- To reduce accidents caused by at risk conditions;
- To ensure required materials are ready for use;
- To keep the site in good working order and discipline; and
- To improve efficiency.

Contractor points to note

- Avoid over or under work in the tidying up. The objective is to meet the standard set by the client;
- Machinery must be cleaned according to relevant safety instructions;
- The tidying up results must be evaluated as a measure of motivation;
- Ensure no place is left out; and
- Senior management's involvement ensures a more persuasive outcome.

6.4.4 Monthly safe working cycle

Monthly Safe Working Cycle is to review the site performance and progress, to improve the workers' safety awareness through training and reward schemes, and to recognize their commitment and cooperation. Monthly Safe Working Cycle must include the following:

6.4.4.1 Monthly Inspection

Monthly Inspection aims at improving the management of machines, equipment, tools and materials. It must be carried out in line with relevant rules and regulations.

Benefits

- Regular in-depth inspections on machines and equipment serve to identify problems at the early stage; and
- Keeping the machines and equipment in constant serviceable condition will also improve the productivity and quality.

Contractor points to note

- The checking schedule and procedure is worked out in advance;
- Assistance from services companies (as required); and
- Plant | equipment to be checked include pile drivers, cranes, earth-moving equipment, heavy-duty transportation plants, pressure vessels, welding/cutting kits, portable and fixed electrical installations, etc.

6.4.4.2 Monthly Safety Training

Through Monthly Safety Training, workers can reinforce the concept and awareness of safety, sharpen necessary skills, gain relevant knowledge and foster a correct attitude. Examining the causal root of accidents | incidents | near misses, the same or similar events can be avoided.

Benefits

- Through safety training, workers will continue to master the safety skills and knowledge required on the development and foster positive attitude on safety.

- Safety training underlines the importance senior management attaches to workers' safety and health.
- Safety training is a legislative requirement.

Contractor points to note

- The training courses must meet the workers' needs;
- The objective and methods of training must be determined;
- Training programmes must be implemented according to plan;
- The effectiveness of training must be evaluated.
- The improvement actions required must be done after evaluation.
- The training must be of appropriate duration and must not be too long.

6.4.4.3 Monthly Safety Meeting

Monthly Safety Meeting must be held together with the Daily Morning Safety Meetings and include, in addition to the routine issues of morning meetings, the safety promotion activities to improve the workers' sense of safety awareness and to present awards.

Benefits

- Other than benefits of Daily Morning Safety Meeting, the Monthly Safety Meeting can also boost the morale workers.

Contractor points to note

- Safety promotion must be designed to foster the safety culture of the client;
- Safety awards must be fair in commending those individuals, groups with good safety performance;
- Safety promotion must have well-defined topics and objectives; and
- Senior management must enthusiastically support the safety promotional activities.

6.4.4.4 Safety Committee Meeting

Monthly Safety Committee Meetings aim at strengthening communication among concerned persons on site, eliminating any misunderstandings or lack of coordination at work, reviewing the past safety records and planning for the coming month. As a result, the workers' safety awareness can be improved, and accident reduction can be achieved.

Benefits

- The communication among workers of different trades is strengthened, their work better coordinated, and accidents avoided; and
- As members of the Safety Committee come from various trades, safety measures formulated at the meeting must be more practical and acceptable to them.

Contractor points to note

- The contractor project manager must chair the Safety Committee with the site safety officer acting as secretary of the Committee;
- The following issues will be discussed at the meeting:

- weekly and monthly construction progress;
- safety measures on special tasks;
- coordination on different types of work; and
- client instructions.

- Discussion on the progress, special tasks and work cooperation could ensure safety at work;
- Sub-contractors must raise any problems concerning their work and the coordination with other parties before and after work commencement. Risk Assessment Method Statement (RAMS) must be in place after this discussion;
- Before the meeting, the agenda must be studied, and any other relevant issues must be added;
- Each Safety Committee member must fully understand all the issues discussed during the meeting;
- The meeting minutes must be distributed within 48hrs of meeting or as soon as possible, so that every worker will be informed of the meeting and their comments on the meeting can be collected; and
- The meeting must progress with the right pace & must not drag on too long.

7 Design (preconstruction and construction) stages

7.1 Preconstruction stage

7.1.1 Survey needs

Several surveys were undertaken previously which has added the overall development design. These include a CCTV survey, site investigation trial pit & borehole survey, topographical survey, GPR survey, bat survey, and invasive plant survey. Prior to works commencing on any site, further surveys will be carried out. These include but are not limited to:

- Dilapidation survey of existing structures and surrounding roadways;
- Archaeological survey;
- Building services survey; and
- Measured survey.

7.2 Construction stage

7.2.1 Temporary work designs

Each contractor must consider all works which may affect the interface with adjoining property owners and members of the public. The design and management of all temporary works shall be carried out in accordance with the Safety, Health and Welfare at work (Construction) Regulations, 2013 - 20 and relevant Approved Codes of Practice. The contractor must adopt the process and forms as found in Appendix 2 of the HSA Publication '*Approved Code of Practice - The Safety, Health and Welfare at Work (Construction) Regulations, 2013'*. Envisaged temporary work items include:

- Site hoarding and associated footings;
- Site village establishment including site signage;
- Provision of a designed wheel wash at each site exit point;
- Temporary service diversions;

- Temporary traffic management;
- Excavation propping;
- Piling mats;
- Falsework | formwork;
- Crane bases (tower | mobile | self-erecting equipment);
- Working access (vertical movements);
- Excavation material removal and stock piling;
- Temporary welfare services (water, foul and power);
- Construction waste disposal;
- Contaminated | hazardous material removal;
- Gantries;
- Temporary stability of permanent works;
- Conservation monitoring and reporting; and
- Restrictions on construction traffic movements, noise, dust, vibration and working hours.

8 Construction – draft summary

There is a need to ensure that local residents are protected from undue disturbance during construction. This Plan seeks to ensure that contractors are informed of and that they undertake their contract works using best practice and thereby reducing their impact on local Dublin 3 communities. It is estimated that construction (enabling works and main build new works combined) will take approximately 48 months (refer to Appendix B for indicative Development Programme).

The construction programme is dependent on contractor appointment, market and other considerations. The overall delivery programme has been estimated on the basis that the construction of the development will be completed by a number of contractors under separate appointments. The project schedule below is therefore indicative only.

8.1 Sequence of proposed works

- Phase 0 - Enabling Works (fencing, hoarding, tree protection, construction of temporary access roads from Clonliffe and Drumcondra Roads and Block A1 basement creation);
- Phase 1 - Blocks D1 and D2 construction with construction vehicular access of Clonliffe Road;
- Phase 2a - Blocks A1 – A4 construction with construction vehicular access off Drumcondra Road;
- Phase 2b – Demolition of selected Block E areas;
- Phase 2c - East West Road construction;
- Phase 3a - Blocks E1 (Seminary, Library and Church) refurbishment works and Blocks E2 & Block B1 construction with construction vehicular access off Clonliffe Road; and
- Phase 3b – Blocks B2 – B3, Blocks C1 – C2 construction with construction vehicular access off Clonliffe Road.

Each Block site will be set up initially with access and egress points from either the Clonliffe or Drumcondra Road. Access to each site area is described further in Section 9 of this Plan. Construction traffic will be generated for the duration of these works on site, with levels of vehicles movements varying throughout the construction period depending on the construction activities on-going.

The first construction activity on the development will be a series enabling works. Enabling works accounts for the provision of site, tree and invasive species protective means, construction of a temporary segregated onsite vehicular roadway and Block A1 basement excavation and piling. Blocks D1 & D2 will commence simultaneously with Block A1 basement excavation and piling works (refer to full delivery programme in appendices).

The project team are seeking to protect the right of all affected stakeholders in continuing their daily lives with limited or undue interruption as far as reasonably practicable that may be caused by the construction operations. In this regard, CWTC have prepared an indicative strategy to deliver the development. There are several constraints and requirements which have been carefully considered by the project team throughout the design process. It is envisaged that the entire development construction phase would take place over an assessed timeline to ensure safe construction.

8.2 Construction methodology

The following indicative methodology has been drafted on the basis of initial scheme design inputs. Specific methodologies of work will be defined pre-commencement of works developed by each contractor in their site-specific CMP.

8.2.1 Preparatory and site set up works (all Blocks)

- Site cabin delivery and placement;
- Completion of all outstanding required surveys;
- Contractor temporary service installations etc.;
- Construction of appropriate hoarding to neighbouring properties;
- Establishment of tree protection means;
- Installation of CCTV coverage or other agreed security means;
- Set up of required noise | dust | vibration monitoring stations | receptors in predetermined areas closest to sensitive locations as defined by the grant of planning;
- Review of pest control needs i.e., pigeons | rats (specialist contractor);
- New builder's supply main board to be installed in an appropriate determined location agreed between the M&E designer, contractor and temporary works electrician;
- New main board will also feed the following:
  - site security load | requirements; and
  - all storage area requirements.
- Site-wide contractor supply and distribution will be agreed with the ESB.

8.2.2 Substructure construction (Blocks A1, B2 & B3, C1 and D2)

The development will include a single level basement under Blocks B2, B3 & C1, a single level basement under Block D2 and a podium level basement and single level basement under Block A1 to accommodate car parking spaces, bicycle parking, storage, services and plant areas. To

facilitate the proposed development the scheme will involve the demolition of a number of existing structures on the site. Substructure works will commence at Block A1 and then followed by Blocks D2, B2 & B3 and C1. Substructure works i.e., groundworks | formwork | basement creation (up to ground floor podium) | rising concrete elements | attenuation and drainage etc. will be completed in a sequential series allowing the Block A podium slab for both sites to be constructed | poured consecutively. As Block A1 podium continue, Blocks A2 and A3 substructure works is intended to commence. Where possible, an overlap of substructure works between Blocks B2 & B3 and C1 will be sought to maximise supply chain efficiencies for each contractor.

8.2.3 Residential block construction (Blocks A, B, C, D and E2)

- Cores are central to each block footprint. For the upper-level slabs to be completed, the core must be cast to that level. To minimise program impact, zones will be created to each basement or podium slab level to allow it to be cast without the core being complete to that level. The use of a e.g., propriety vertical wall formwork system that is self-climbing to cast the core may be used;
- The core system will be supported by a tower crane for lifting of materials, an Alimak or alterative means to get men and tools to the system, and its own satellite concrete placing boom to place concrete;
- Lobby slabs, header beams and stairs will follow the core walls and will be cast as soon as practical to maintain structural stability of the core walls and provide access to cast the core slabs. When the last vertical wall elements are cast, the jump form will be removed in a strategic sequence and manner for safety reasons and to allow the lift motor rooms to be cast as early as possible to get builders lifts operating.
- Structure trades and works will be supported by tower cranes for lifting of materials, formwork hoists to lift recycled formwork, Alimaks or alterative means to transport operatives and materials to the decks, satellite placing booms to place concrete, propriety perimeter edge screens to provide fall protection to operatives;
- The façade will be erected as soon as practical to commence waterproofing floors so that finishes and fit out can commence. The roof embellishments will commence when the structure is complete. These works will not be able to be completed until all plant has been lifted into the plant rooms and the façade has been installed to this level to complete the water tightness of the fabric;
- When slabs are cast and the formwork is stripped, the services will commence to be installed. These works will commence within the building but will not be completed till the façade to that level is complete. The façade provides edge protection for the men working near the edge and provides weatherproofing for equipment that is water sensitive. The works will be organised in several passes, with what we term "rough in of services" being the first pass which is all services that can be installed before the façade is installed to that level;
- Finishes are normally commenced in earnest when the façade is installed to that floor. The services will be scheduled to be completed enough to allow finishes to commence in our programming. Plant, equipment and materials will be lifted to the floors via several means depending on what stage the building is at. The means will be tower cranes, Alimaks or builders lift. The builders lifts will be used for "clean trades" such as services fit off, carpets, ceiling tiles and fit out, to minimise damage to the lifts. Materials that will be hoisted via the Alimaks or Builders lifts will be unloaded in the loading dock to save congestion to the material handling areas; and

- When the fabric of the tower is complete, and the tower cranes have been removed, the gantries will also be removed. This will allow the external works to be commenced and completed in a timely manner. The works will also include restoring any areas that have been affected by the construction of the project. As some of the external works will be to footpaths and roads to mesh them in with the new building, some footpath and lane closures will be required. These will be coordinated with DCC.

8.2.4 Demolition works - preparatory and contract works

- Dilapidation | structural assessment survey;
- Services survey;
- Contractor temporary service installations i.e., power to be provided by a generator;
- Construction of appropriate hoarding to site areas;
- Set up of required noise | dust | vibration monitoring stations | receptors in predetermined areas closest to sensitive locations;
- Isolation by a competent person of all services to each building | warehouse structures – services include but not limited to:
  - heating pipework;
  - sprinklers;
  - local electrical distribution boards;
  - water;
  - drainage;
  - soil pipes;
  - general arrangement electrical services i.e., lighting, control panels and fire alarm circuits and systems;
  - fire boards; and
  - gas mains | skids.
- Review of pest control needs i.e., pigeons | rats (specialist contractor) with client.

8.2.5 Demolition - asbestos removal work (subject to HSA approval as required)

- licenced asbestos containing material removal in adherence with client agreed works phasing plan; and
- Reoccupation certification will be provided as required for all areas prior to soft strip works being undertaken.

8.2.6 Demolition - soft strip works (subject to safe isolation of energy services)

- Soft strip areas deemed to be safe and not contaminated within the main structure – works included removal of all non-load bearing internal structures, finished and FF&E;
- Soft strip of any assessed contaminated area post ACM | ACD deep clean and clearance certification receipt of all non-load bearing internal structures, finishes and FF&E:
  - Carefully cut interface of demolition works and existing retained structure; and
  - Primary elements of building structures not to be disturbed during soft strip works.

8.2.7 Hard demolition

- Hard demolition of all non-protected structures. Works include the safe removal of all building structural members, external façades and roof finishes. The contractor shall:
  - Install rain screen battens or similar like along proposed structure cut line to existing;
  - Visqueen clear TPS or similar to be installed for weathering as specified by architect (as deconstruction occurs);
  - Install | retrofit of supplementary wall ties holding existing wall in place;
  - Install structural steel member solution retaining existing floor slabs;
  - Strip back roof finish and makeup (tile) facilitating the cut back in line with boundary;
  - Dress | flash edge of roof and make good, including rainwater (make good as in place);
  - Stonework will be removed by hand from the top down, working from scaffolding – knocking inwards to site area;
  - Once down to slab level on each floor, the final section (closest to existing property) will be propped using Peri multi props and support beams - Methodology will be repeated floor by floor:
    - Saw cutting of slab nib along boundary – other sections will be demolished using excavator and attachments. The slab will then be cored on the joints for the purpose of enabling wrapping of chains to lift once cut if not of timber make up;
    - The slab will be cut using a road saw as close to the retained wall as possible with the propping underside taking support of the slab; and
    - Once cutting is complete the slabs will be removed individually using a mobile crane, wrapping 2 no. chains around the slab through the core holes and safely lifting out and down to ground level where they will be broken up using the excavator and removed off site (as general waste).
    - Remove all debris and rubbish from the site area to licensed tips;
- Disposal or re-use of demolition materials will be carried out in accordance with the Development Construction and Demolition Waste Management Plan as prepared by AWN Consulting (refer to Appendix F of the DCEMP document). Records shall be forwarded to the client project manager for information on the quantities disposed;
- Ensure, following the demolition of the buildings (or part thereof), the site shall be left in a tidy and safe condition in agreement with the client project manager;
- Ensure measures shall be taken to ensure that the existing services in the vicinity of each structure are not affected by the demolition works; and
- Seal by means of grouting all drainage within the curtilage of the site not to be removed during demolition of the buildings. Sealing shall only be up to the last manhole within the site.

8.2.7.1 Keys notes re. building structural integrity

- There is a potential for other unaccounted structural, slip, trip and fall hazards throughout the building. Therefore, initial access must only be undertaken with extreme care, with a strict buddy system implemented, in accordance with good practice.

8.2.8 Refurbishment works (Blocks E1 – Seminary, Library and Church)

8.2.8.1 Isolation of power | energy supplies

- Confirmation of isolation by a competent person of all onsite services – services include but not limited to:
  - heating pipework;
  - sprinklers;
  - local electrical distribution boards;
  - substation(s);
  - water;
  - drainage;
  - soil pipes;
  - general arrangement electrical services i.e., lighting, control panels and fire alarm circuits and systems;
  - fire boards; and
  - gas mains | skids.

8.2.8.2 Asbestos removal

- Licenced asbestos containing material removal in adherence with agreed works phasing plan;
- Non-licenced asbestos containing material removal in adherence with agreed works phasing plan; and
- Reoccupation certification will be provided for all areas prior to soft strip works being undertaken.

8.2.8.3 Soft strip works (subject to safe isolation of electrical services within each building | structure)

- Soft strip areas deemed to be safe and not contaminated within each structure – works included removal of all non-load bearing internal structures, finished and FF&E; and
- Soft strip of contaminated areas posts Lead | ACM deep clean and clearance certification receipt of all non-load bearing internal structures, finishes and FF&E:
  - carefully cut interface of demolition works and existing retained structure; and
  - primary elements of building structures not to be disturbed during soft strip works.

8.2.8.4 Refurbishment works

- An external independent scaffold will be erected;
- Appropriate temporary works as required will be installed to stabilise external walls prior to any internal remodelling taking place;
- Construction materials will be loaded out by crane and will follow in accordance with the construction programme;
- Scaffolding will be designed to allow for all alterations to facilitate other trades cleaning or repointing the external façade;
- Replacement windows (as required) will be fixed as the frame progresses to maintain water tightness;

- Internal works will commence behind the frame erection on a rolling programme consisting of:
  - services 1st fix;
  - carpentry 1st fix;
  - services 2nd fix;
  - carpentry 2nd fix;
  - decoration;
  - floor finishes; and
  - install fitted furniture.

9 Construction access

9.1.1 Alternative arrangements for pedestrians | vehicles in case of any roadway closure

Aware of the complexity of logistical challenges faced by such large-scale construction work, CWTC want to prevent traffic congestion due to construction works and negative impacts on the Drumcondra and Clonliffe roadways in the surroundings of the construction area. It will be a condition of works that:

- Maintenance of access to local roadways, footways and Dublin Bus stops is secured. It is not envisaged with the exception of hoarding construction works (where working space is required to erect hoarding safely), temporary traffic management erection, maintenance and removal and utility connection works will impact on the use of bounding roadways and footways; and
- Should a need arise to provide further temporary pedestrian | vehicle access outside the hoarding line, a detailed temporary Traffic Management Plan will be developed in compliance with the requirements of the Department of Transport Chapter 8 Temporary Traffic Measures and Signs for Roadworks manual. This plan will be shared with DCC Roads/Traffic Section for acknowledgement prior to implementation with appropriate forward notice (in compliance with the Community Liaison Plan) shared with all development stakeholders.

All necessary controls will be agreed with DCC Roads | Traffic Section pre commencement of project works.

9.1.2 Construction access principles (generally)

- Protection members of the public from site activities;
- Drumcondra and Clonliffe roadways are kept clear always;
- Construction traffic will be limited to certain routes and times of day, with the aim of keeping disruption to existing traffic and residents to a minimum. To minimise disruption to the local areas, construction traffic volumes will be managed through the following measures:
  - During peak morning and evening hours, ancillary, maintenance and other site vehicular movements will be discouraged;
  - Daily construction programmes will be planned to minimise the number of disruptions to surrounding streets by staggering HGV movements to avoid site queues;
  - Access to neighbouring properties will be maintained through all stages of construction;

- Works surrounding the bus corridors will be agreed with TII and works periods restricted so as not to interfere with QBC operation;
- Only minimum essential site staff parking will be provided. In parallel with this, parking restrictions and management measures on adjacent streets/residential areas will be reviewed and implemented as necessary in agreement with the local residents and DCC to avoid any site parking overspill issues; and
- The contractor will be required to promote travel by sustainable modes of transport.

- Delivery of materials shall under supervision to avoid contact with persons. Deliveries shall be programmed to avoid high trafficked times minimising congestion and conflict with other deliveries;
- Each site construction access strategy must prioritise the:
  - Increase the efficiency of construction works;
  - Decrease the disruption of the local transport system from construction works traffic;
  - Multiple construction access point routes ensure the ability of a contractor to coordinate, schedule and plan works effectively & efficiently so as to control foreseeable key construction logistics impacts;
  - Blocks generally have been designed to be constructed independently to that of its neighbour;
  - Appropriate hoarding | screening | crash barriers of areas where public and vehicle travel interface will be provided and managed; and
  - All the above will be required as part of each contractor's site-specific CMP which needs to be agreed with DCC before commencement of construction in line.

9.2 Logistics | construction site access strategy (refer also to Appendix F)

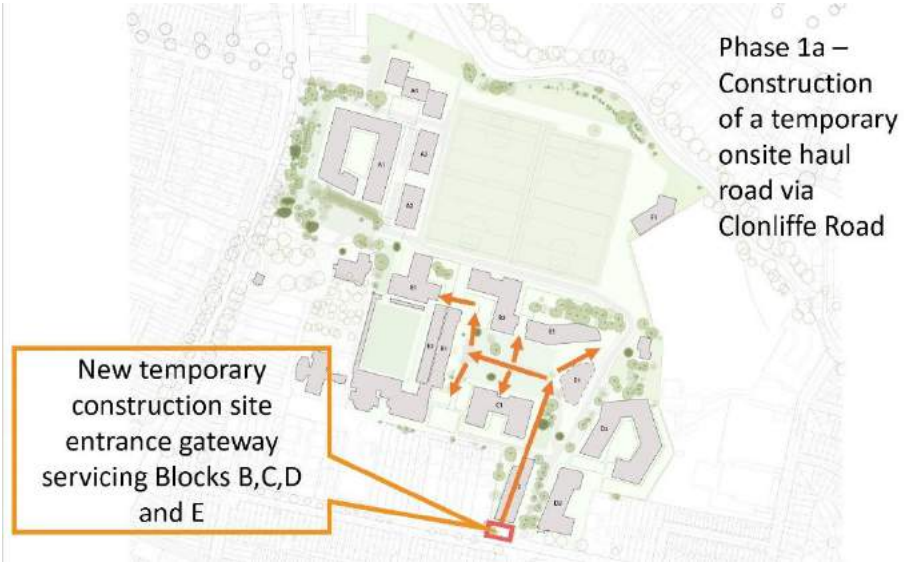
- Construction compounds for each Block will be included within the Block themselves and will move as construction progresses. Each contractor, when appointed, may identify other (or additional) locations within their site area;
- It is anticipated that the majority of construction vehicles accessing the sites will come from the M50 via the Drumcondra Road. Traffic bound for Blocks A1-A4 will enter via the existing Drumcondra site entrance gateway as shown in Section 9.2.1;
- Blocks B, C, D and E site traffic, will travel further down Drumcondra Road and turn left on to Clonliffe Road. Site access for Blocks B, C, D and E will be at the Clonliffe Road and Jones Road junction as shown in Section 9.2.2. This junction may need to be signal modified in agreement with DCC Roads/Traffic Section for the duration of construction to facilitate the creation of this temporary site access entrance; and
- To exit the site and return to the M50, vehicles exiting the Drumcondra (left in and left out only) and Clonliffe Road site entrances will travel towards Annesley Road. From here the majority of vehicles will turn left towards Fairview and Marino and travel towards the M50 or alternatively travel along East Wall Road to the M1 tunnel.

9.2.1 Drumcondra Road site access servicing Blocks A1-A4 (left in and left out only)

Vehicle movements will be managed through the construction stage by each contractor's competent dedicated logistic team on the ground. Regardless of location, each contractor is obliged to ensure that their site can run with maximum safety, efficiency while causing the least disruption to the adjoining residents, commercial property stakeholders etc.

9.2.2 Clonliffe Road site access plan

Construction traffic accessing Blocks B, C, D and E may come from the M50 via Drumcondra Road. Exiting vehicles would use Clonliffe Road to travel to either Jones Road (accessing the city centre) or Fairview | Marino (accessing the M50).



9.2.2.1 Development access strategy plan

9.2.2.2 Abnormal load deliveries

Public safety, driver health & welfare, and delivering on good risk management practices are the cornerstones of transport safety. All identified abnormal loads require public agency engagement e.g. An Garda Síochána, DCC Roads etc. The safety of other road users is paramount, and much thought and effort go into logistics planning and permitting for the movement of these large loads. The contractor when planning such movements must adhere to the notice and engagement requirements of the CLP set out in Section 9.8. All necessary controls will be agreed with DCC Traffic Section pre commencement of project works.

9.2.2.3 Movement of abnormal loads

- Road Traffic (Permits for Specialised Vehicles) Regulations 2009, S.I. No. 147 of 2009, and Road Traffic (Specialised Vehicle Permits) (Amendment) Regulations 2010, S.I. 461 of 2010,

introduce a streamline permit system and list of Designated Routes to be administered by An Garda Síochána for the movement of loads not exceeding 27.40m in length and 4.30 metres in width on the major inter-urban routes;

- Vehicles and loads exceeding the 4.65m national height limit are not covered under this scheme and require a Local Authority Permit instead;
- Abnormal loads must adhere to the maximum weight limits set down by Road Traffic (Construction and Use of Vehicles) Regulations 2003, S.I. 5 of 2003 and the maximum height limit set down in Road Traffic (Construction and Use of Vehicles) (Amendment) Regulations 2008, S.I.366 of 2008;
- A *"Permit for Specialised Vehicles"* form when signed by the Garda Síochána grants permission to move abnormal loads as defined under the above Regulations, on inter-urban routes specified in the Schedule of Designated Roads. Any deviations from the Schedule of Designated Roads in above Regulations require independent authorisation from the Local Authority concerned and/or the Minister for Transport.

9.2.3 Traffic management coordinator

Each contractor is required to appoint a competent Traffic Management Coordinator (TMC) who will be responsible for the design coordination of these access points and all other temporary traffic safety and management matters for the construction stage. The TMC is required to ensure that all traffic management requirements set out in the agreed temporary traffic management plan are adhered to. Specific site contractor traffic management plans must at a minimum include:

- No temporary | drop off parking on approach access public routes. No unloading or blockages of access routes. Such vehicles will be immediately directed to move;
- Each contractor must carry out an auto-track analysis to ensure that adequate turning space is available on their site. The auto-track must demonstrate how construction vehicles will go in and out of the site; and
- Each contractor must seek to eliminate where possible the necessity for reversing of any construction or supply chain vehicle onsite.

9.3 Site set up and management (refer also to Appendix G and H)

Each site must have a well-planned construction compound layout. All temporary facilities and utilities must be designed to:

- increase productivity and safety;
- reduce area(s) needed for temporary construction; and
- maximise utilisation.

9.3.1 Compound notes

- Each appointed contractor will ensure that their compound set up accounts for appropriate spatial provision for waste management segregation, logistical deliveries and day to day contractor car parking; and
- Proposed compounds are indicative - the contractor will be required to propose and confirm their compound layout in their site-specific CMP.

9.3.2 Contractor overflow car park area location

Appropriate overflow contractor carparking can be made available in areas of client landholding. This area(s) may change subject to works phasing and ongoing construction activities.

9.3.3 Site set up

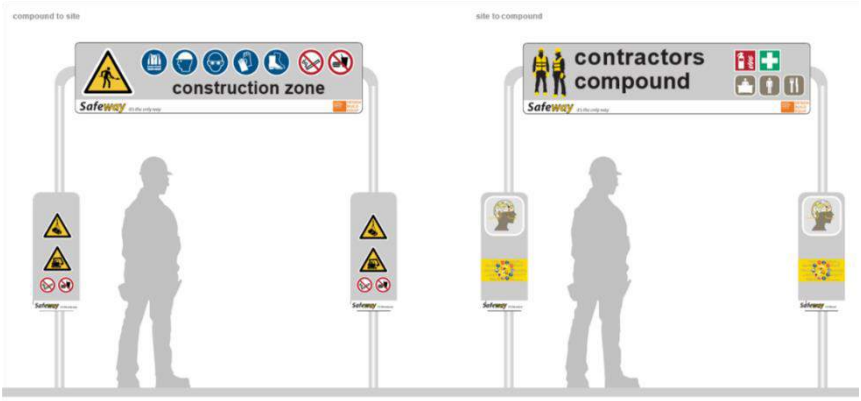
When beginning each new site, the contractor's construction activity experts will use their expertise to think through the issues associated with the running of the project, the staged activities that will occur during the project life cycle are assessed and they use their understanding to establish the compound, walkways, roadways, facilities and welfare items and ensure they are clearly established and marked at the earliest stage to clarify to all visitors that this is an organised, efficient, tidy and safe site.

Key hazards must be identified and where possible "designed" out of the site, for example keeping pedestrians away from site traffic. The site must be easily understood using clear site maps depicting a layout that delivers the safest workplace possible.

The site set up has the compound at its heart, pedestrian and vehicle routes as the arteries and while set up cannot deal with exclusion zones as they will vary on a day-to-day basis, the set up can deliver a safe "skeleton" site and pop-up work zones and exclusion zones are introduced as appropriate to isolate hazardous activity.

9.3.4 Way finding & orientation

On arrival on site a first time visitor, operative or delivery driver must know where they are, where they are going, where they cannot go and where other items are located. The site must be visibly well ordered and well-drawn site plans used to convey the order on site to all visitors in a clear and simple way. It is about quickly understanding the site and clarifying basic behaviour. Where are the safe routes? Where are the key hazards? Where are the welfare items?



9.3.5 Vehicle and pedestrian segregation

Pedestrians and vehicles must be able to circulate safely in the workplace; the construction activity must plan segregation and routes well. The temporary nature of a construction site, it is changing layouts and the frequency with which operatives change and are therefore unfamiliar with their workplace are 3 important factors that add to the risk. The contractor must focus their efforts on planning and delivering a site where drivers and pedestrians are segregated and provided with safe routes to work zones. The objective is that personnel can see at a glance where then can | cannot go.

9.4 Hoarding

The overarching consideration in all elements of the site set-up will be to reasonably endeavour to ensure the works can be undertaken in a safe manner for members of the public and each contractor and their staff. Each contractor will take in charge the established robust hoarding that considers wind and people loads around proposed site perimeters. Hoarding will either be timber or palisade panels and heras panelling ranging in height from 2.40m to 3.00m at various locations. Hoarding may be embellished with artwork and or graphics which would be appropriate for the development. Hoarding will be supplemented in sensitive areas during certain construction activities to alleviate against noise impacts as required. The alignment of the hoarding will remain constant in the round for site works. The hoarding line may be dynamic and subject to amendment to meet the requirements and constraints of each site.

9.4.1 Notes on hoarding

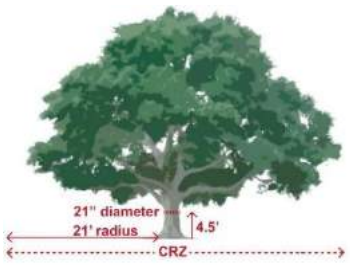
- Hoarding lines must be inspected daily by the contractor;
- Inspection records must be retained on site for regular DCC review;
- Hoarding limits site access to controlled access points;
- Hoarding must protect those outside the site from hazards within;
- Hoarding must protect those inside the site from outside activity;
- Branded hoarding must identify ownership of the site area;
- Hoarding locates must identify the site/work-zone for visitors;
- Hoarding must be used to direct behaviour before arrival on site.

9.5 Tree protection zones

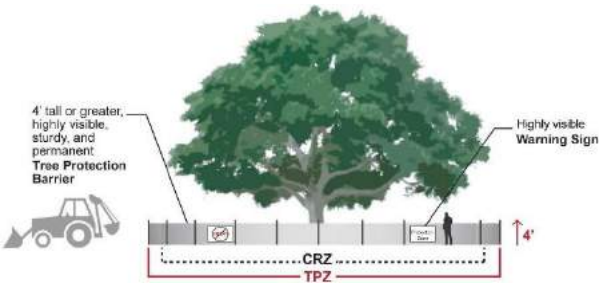
Damage to tree roots and surrounding soils are often permanent and compromise tree health in the short- and long-term. Continual disturbance overtime from pedestrian, vehicle, and construction activities only perpetuate the declining health of the tree and eventually leads to structural failure (dropping of dead limbs or the entire tree falling over), which can damage property and even cause injury to people. Implementing basic Best Management Practices for tree protection early will reduce the likelihood of tree decline and failure due to construction activities.

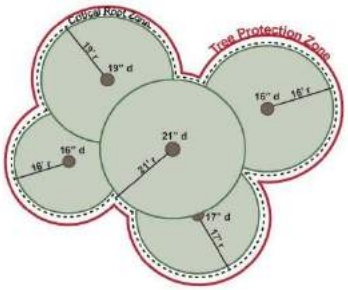
9.5.1 Definitions

- Best Management Practices (BMPs) are general guidelines used in many different disciplines to help define the best currently known or accepted practice for an optimal outcome; and
- Critical Root Zone (CRZ) is the area of soil extending from the tree trunk where roots required for future tree health and survival are located. This area can also be defined as a circle with a *minimum radius* of 1' for every 1" in trunk diameter at 4.5" above ground.



- Tree protection barrier encloses the Tree Protection Zone and is at least 4' tall, highly visible, sturdy, permanent and has warning signs on or near it for the duration of any construction activities.
- Tree Protection Zone (TPZ) is an area where construction activities are prohibited or restricted to prevent injury to preserved trees, especially during pre- construction and construction, and includes the Critical Root Zone and/or beyond.





9.5.2 Best management practices

To promote the health of trees and stands of trees before, during, and after construction activities, follow these basic BMPs:

9.5.2.1 Pre-construction phase

- Prior to pre-construction activities, including tree removal, access roads, construction staging areas, and building layout, erect tree protection barriers to visually indicate TPZs. The enabling works contractor will:
  - Use tree protection barriers that are highly visible, sturdy, and restrict entry into the TPZ;
  - Install or erect signs along the tree protection barrier stating that no one is allowed to disturb this area; and
  - Remove any branches or trees that pose an immediate risk to structures or people prior to any construction activities.

9.5.2.2 Construction phase

- Communicate the intent of the tree protection barriers in tender documentation and at pre-start meetings to ensure that TPZs are not disturbed during construction activities. A contract of compliance may be employed as part of contract award;
- Prohibit these activities in the TPZ:
  - Stockpiling of any type, including construction material, debris, soil, and mulch
  - Altering soils, including grade changes, surface treatment, and compaction due to vehicle, equipment, and foot traffic
  - Trenching for utility installation or repair and irrigation system installation
  - Attaching anything to trunks or use of equipment that causes injury to the tree
- Schedule site visits to ensure the contract is being met by the contractor and that tree health is not being compromised by construction activity. Inspect and monitor trees for any decline or damages; and

- Keep in place all tree protection barriers until the project is completed.

9.5.2.3 Post-construction phase

- The project manager will ensure a final inspection and continue monitoring after construction. Monitoring includes maintaining mulch, managing soil moisture, assessing tree damage, inspecting for insects and pests, and fertilisation if needed.

9.6 Knotweed management | removal

The Management of Japanese knotweed on site shall be overseen by a competent specialist A specific management plan will be prepared and kept for site owners. This Management Plan will be required to be read in conjunction with the Environment Agency Knotweed Code of Practice, Managing Knotweed on Developing Site's, 2013, and Managing Knotweed, Property Care Association, 2014.

9.6.1 Setting priorities

- Areas of Japanese knotweed onsite which require rapid treatment are identified;
- Prevention of further infestation of the plant on the site is a priority; and
- Regular monitoring will be carried out.

9.6.1.1 High Priority

- All Knotweed on site will be treated following Best Practice Guidelines while also following guidance on the Herbicides label;
- All Knotweed infested soil to be stockpiled on a ground membrane and stored on site to await haulage to the e.g., IMS landfill facility in Naul, County Dublin. Loading machine will not be allowed track/wheel over infested soils;
- All Knotweed areas on site had temporary barrier fencing and signage;
- Excavation pits when backfilling will be backfilled in layers of 20cm. Each layer will be compacted sufficiently with plant machine;
- Following Best Practice when building near to or over Knotweed it is envisaged that to cover the hardstanding with a Knotweed Root Barrier;
- Prevention of further spread - All Japanese knotweed areas to be isolated prior to any work being carried out on site. This should include an area of ~ 7.00m laterally from above ground stems to ensure that any underground parts are also isolated.

9.6.1.2 Medium Priority

- Monitoring - A scheme for monitoring will be agreed with the Knotweed Specialist Contractor who will be overseeing the eradication/control of Japanese knotweed on site;
- Management – The management plan will be reviewed on a regular basis and in any case every 6 months from commencement of works to site completion;

9.6.1.3 Low Priority

- Replacement vegetation - All knotweed areas that are left open after construction works have finished will be planted with hardy native shrubs which will help shade out any residual plant pieces that may have been overlooked.

9.7 Site security

Each contractor will be responsible for the security of their site for the duration of their works. Each contractor will be required to at a minimum:

- Maintain site hoarding to each boundary with adequate controlled access and egress points;
- Maintain site security staff always;
- Install access security in the form of turnstiles and gates fitted with anti-swing fixtures;
- Reasonably endeavour to ensure restricted access is maintained to the works;
- Operate a site induction process for all site staff;
- CCTV arrangements or alternative to be provided;
- An appropriate controlled access control system to be installed at security access for site personnel (refer to Section 9.5.1);
- Provision of adequate warning signs to site perimeter and along the streets approaching the site to inform the public of danger & no trespassing onto site;
- Anti-climb measures | protection to be erected around tower cranes etc.;
- Ensure all staff have current Safe Pass and Construction Skills Cards;
- Monitor and record all deliveries to site and all materials | waste taken off site for disposal to appropriate licensed facility; and
- A fire watch system regime will be implemented with appointed competent fire watch supervisors tasked to inspect the site prior to the end of each working day | shift. All staff will be made fully aware of their individual responsibilities about security and will undertake their work in line with current service guidelines. All staff and operatives will be fully inducted into the security, health and safety and logistic requirements on site.

9.7.1 Site security systems

Suitable security measured will be put into place by each contractor including but not limited to Net-watch during the project to cover all elements of the site internally and externally. 24hour security measures will also be put in place when required, particularly at the latter stages of the construction programme where the building equipment and finishing cycles are in place. On possession of the site, each contractor will proceed to ensure the security of the site is achieved by direction of all personnel and deliveries to the site compound. Once established, access into and out of the site compound will be through a turnstile system and or other controlled system.

9.7.2 Temporary car park area

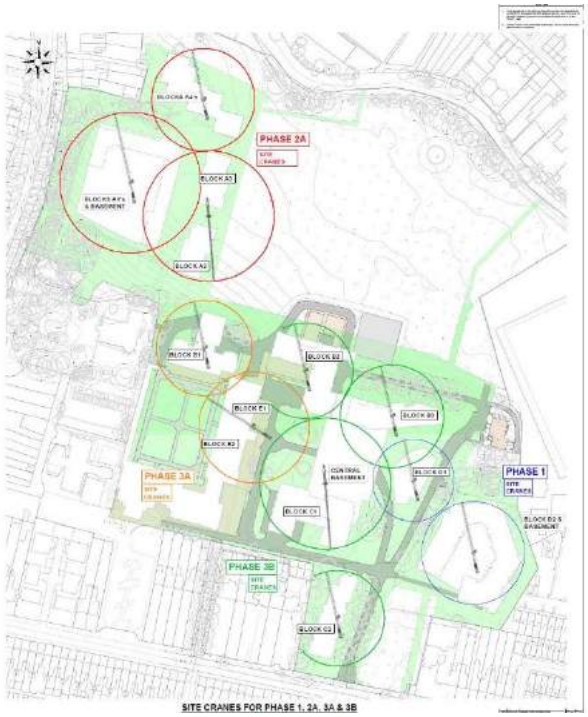
The development site itself provides for an opportunity subject to agreement with the GAA a means to provide appropriate temporary car parking.

9.7.3 Craneage

It is envisaged that each site will require the use of a number of tower cranes, with a mixture of e.g., 30.00m, 55.00m and 75.00m jibs being employed to provide the necessary site lifting coverage.

Cranes will be required for the moving of building materials around each site. The use of cranes will also be required for the erection of the facade and installation of plant on each block | building.

The layout of cranes to achieve maximum coverage for each site will be determined by each contractor; it is estimated that at least 11nr. static cranes will be used on the development.



SITE CRANES FOR PHASE 1, 2A, 3A & 3B

9.7.4 Storage of materials on site

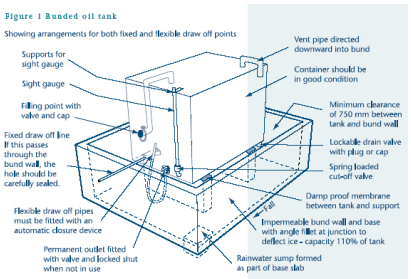
Any materials stored on site must be done so in a safe manner. All construction-related fuel and oil must be contained within specially constructed bunds to ensure that fuel spillages are fully contained. Such bunds shall be roofed to exclude rainwater.

All necessary controls will be agreed with DCC Pollution Section pre commencement of project works.

9.7.4.1 Bund tank needs

Oil is the commonest water pollutant. These guidelines are intended to help reduce pollution caused by inadequate storage of oil in fixed tank installations.

- Location - Safety, security, access and maintenance needs must be considered when storing oil. Tanks must be positioned, or other steps taken, to minimise the risk of damage by impact. Oil must not be stored in significant risk locations (i.e., within 10m metres of a watercourse or 50m of a borehole);
- General requirements - Oil must be stored in a tank of sufficient strength and structural integrity to ensure that it is unlikely to burst or leak in ordinary use. It is recommended that tanks with a design life (with proper maintenance) of 20 years are used;
- Tank specification - Storage tanks must be type tested to a recognised standard and produced to that standard under a quality assurance system complying with BS EN ISO 9001:2000 or BS EN 9002:1994. Steel tanks must comply with BS 799: Part 5 and must be protected against corrosion. Steel tank drain valves must be used to prevent frost damage. There is no British Standard for prefabricated steel tank systems. However, the Oil Firing Technical Association



for the Petroleum Industry (OFTEC) have developed a standard for steel tanks, OFS T200 which does include these;

- Polyethylene tanks and tank systems must comply with OFS T100. Compliance with standards for construction and manufacture does not guarantee compliance with storage regulations;
- Tank installation and marking - It is recommended that tanks are installed by technicians registered with a professional scheme, such as that operated by OFTEC. The tank must be marked with the product type and tank capacity; and
- Tank decommissioning - Before a tank is taken out of use or removed, it must be fully drained. This work must be undertaken by suitably qualified technicians and hot work must never be carried out until the tank has been degassed and the appropriate certificate issued.

9.7.4.2 Secondary containment

Secondary containment must prevent oil escaping to the environment in the event of leakage from the tank or ancillary equipment. All tanks and their ancillary equipment must be situated within an oil-tight secondary containment system such as a bund. The potential escape of oil beyond the bund area by jetting must be considered. The risk of this can be minimised by:

- keeping the primary container as low as possible;
- increasing the height of the bund wall; and
- building the bund as far away from the tank as possible

For steel tanks in open bunds, a minimum distance of 750mm between the tank and the bund wall and 600mm between the tank and the base is recommended to allow access for external inspection.

9.7.5 Removal of materials from site

The removal of materials from each site will primarily be undertaken during enabling works, demolition and basement construction stages of Blocks A1, B2 & B3, C1, D2, E1 and E2. The removal or addition of materials to facilitate e.g., basement construction are typically the most intensive periods for material movement off site. Each of these elements of work will need to be managed effectively to reasonably endeavour to ensure that is no queuing of trucks on the public roadway. All trucks will be expected to have a built-on tarpaulin that will cover the transported material as it is being brought to or hauled off site.

9.7.6 Water supply

Each contractor will require a water source for the duration of the works. Water will be required for:

- Contractor welfare facilities;
- Vehicle wheel wash | automated spray booths (use of recycled water);
- Dust suppression;
- Curing of concrete in warm weather; and
- Cleaning of formwork etc.

Each contractor must apply to Irish Water for a temporary connection for water supply and/or waste water.

9.7.7 Timing of construction travel movements to obviate queuing on public roadways

- Working hours will be determined and conditioned by the Grant of Permission. For the purpose of this Plan, working hours for all Blocks is envisaged to be 07:00 – 19:00 Monday to Friday and 08:00 – 14:00 on Saturday. Works that may be excessive in noise sensitive locations will be risk assessed and scheduled to take place between defined times in consultation with residents where at all possible;
- It is recognised that there may be circumstances where the restriction on hours of work cannot be adhered to e.g., concrete pours, power floating works, tower crane erection, abnormal size deliveries etc. In these circumstances each contractor will be required to provide written agreement with DCC before any works start outside normal hours;
  - Where out of hours works are noise sensitive, such exceptional events will only be permitted to be undertaken when all other alternatives have been considered and exhausted. Any night time operations in particular will comply with good alleviation practices as specified by British Standards or similar; and
  - All such works above will be preceded by written approval from DCC Planning, showing evidence of consultative communications with local residents and businesses.
- Deliveries will be sequenced '*just in time*' to ensure that their arrival and departures time are outside peak interface periods with residents and businesses;
- It may be considered to preload excavation haulage vehicles on Block A and D sites by 19:00 every evening to enable early morning transport on to the M50 to lessen the impact of haulage vehicles on the local roadway network at peak traffic times. This intention will allow logistic space to be freed up onsite for vehicles seeking access to site;
- Deliveries are not permitted to queue on public roadways. They may hold | temporarily wait in designated non-public areas before 07:00 with their engines turned off;
- Operatives may access their site prior to 7:00 but are not permitted to operate construction machinery before 07:00; and
- No significant work will commence onsite before 07:00. On site | holding vehicles must ensure that their engines are turned off before 07:00.

All necessary controls will be agreed with DCC Traffic Section pre commencement of project works.

9.7.8 Dust | dirt

Dust prevention measures shall be included for control of any site airborne particulate pollution. The minimum criteria to be maintained are as per the Development Construction Environmental Management Plan (DCEMP). As a minimum, a dust | dirt management plan must be incorporated in relation to the construction phase of implementing the works (i.e., from site mobilisation/enabling to site demobilisation). The plan shall address BS5228: Noise and Vibration Control on Construction and Open Sites and Best Practical Means | Best Available Technology to minimise air blown dust and particles from being emitted from the site, including but not limited to the requirements set out in the DCEMP:

- Provision of a full-time road sweeper maintaining cleanliness of all public roadways;
- Air tight dust sheeting to all access points in to each work area;
- Covering skips;
- The washing down of site entrance adjacent pavements, haul roads and onsite traffic routes;

- The use of a water spray at the site entrance and near sensitive receptors to suppress dust; and
- Automated spray booths or equivalent provision near to site entrances alleviating dust nuisances.

A site-specific Construction Environmental Management Plan will be prepared by the contractor and submitted to DCC demonstrating specific controls that will be employed.

9.7.9 Construction noise

Noise monitoring sensors will be fitted within and outside the site boundary. Sensors outside the site will measure ambient non-construction background dB levels. These baseline readings will be recorded to assess whether supplementary construction noise emissions contribute to any breaches of permitted limits. Construction site sensors will be fitted on the internal face of the boundary hoarding at sensitive locations to measure compliance with limits set out in *BS 5228 – 1: 2009: Code of Practice for Noise and Vibration Control on Construction and Open Sites: Noise*.

A site-specific Construction Environmental Management Plan will be prepared by the contractor and submitted to DCC demonstrating specific controls that will be employed.

9.7.10 Vibration

A specialist contractor shall be engaged by each contractor to monitor, collate and report on vibration results for the duration of the works. A site-specific Construction Environmental Management Plan will be prepared by the contractor and submitted to DCC demonstrating specific controls that will be employed.

9.7.11 Harmful materials

Harmful materials shall be stored on site for use in connection with the construction works only. These materials shall be stored in a controlled manner. Where on site fuelling facilities are used there shall be a bunded filling area using a double bunded steel tank at a minimum. Removal of any discovered | known hazardous material from a site and its transportation to the appropriate licenced facility shall be carried out in accordance with current legislation, best practice and guidelines.

9.8 Construction and demolition waste management

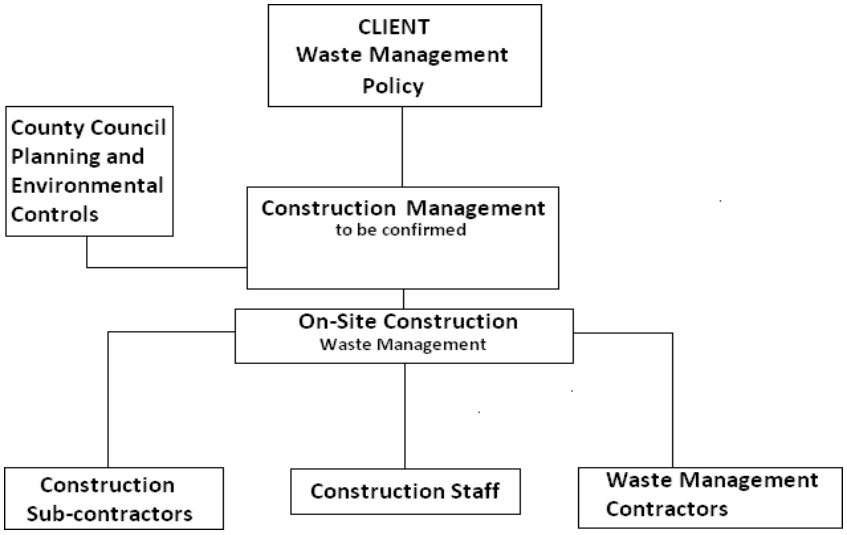
CWTC is committed to ensuring the highest standard of recycling on site in terms of materials arising from the development. Each contractor will be required to comply with the principles of the Development Construction and Demolition Waste Management Plan prepared by AWN Consulting having regard to Circular WPR 07/06 - Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Projects, published by the DECLG, July 2006 submitted to the Planning Authority for written agreement. An Environmental Representative from each contractor will be required to be nominated responsible for all waste management in their own operations. In this way, it is possible to identify where the greatest material wastage occurs with a view to implementing better waste management. A site-specific Construction and Demolition Waste Management Plan will be prepared by the contractor and submitted to DCC demonstrating specific controls that will be employed.

9.8.1 Excavations

Excavations will be required throughout each site to facilitate the formation to basement levels, car park ramp access, modifications to existing services and to facilitate construction of new services. In total, a 100,000m^3 of ground material will be required to be excavated on the

development. Excavated material will be removed to another construction site or to landfill. Stock piling will only occur within the site (red line) in agreement with DCC. It is noted that each contractor will ultimately be responsible for securing agreements for acceptance of surplus materials that are required to be sent to licensed facilities in compliance with the requirements of the DCEMP and their site-specific Construction and Demolition Waste Management Plan.

9.8.2 Waste management structure organogram



9.8.3 Construction & Demolition Waste Management Plan requirements

The C&DWMP must detail the intended practice for the management of waste arising from the construction and demolition processes and in particular the management of hazardous waste and recyclable materials. In particular the Plan shall specifically address but not limited to the following points:

- Overall waste management
  - Analysis of waste arising | material surpluses'
  - Specific Waste Management objectives of the Project including waste minimisation and the potential to reuse, and process materials generated on site in the construction phase;
  - Methods proposed for Prevention, Reuse and Recycling;
  - Waste Handling Procedures;
  - Waste Disposal Procedures, including tracking of waste to final destination;
  - Waste auditing; and
  - Record keeping of receiving site | other gate receipts will be inspected by DCC regularly.
- Waste compound
  - Details of the provision of a dedicated and secure compound, containing bins and skips into which all waste generated by construction site activities will be placed;
  - Responsibility for provision of signage and verbal instruction to ensure proper housekeeping and segregation of construction waste materials; and

- Responsibility for identification of Permitted Waste Contractors who shall be employed to collect and dispose of waste arising from the construction works.

- Waste reuse and recycling management
  - Identification of potential for Reuse of Inert Wastes; and
  - Proposed management measures.
- Hazardous waste
- Identification and management of any Hazardous Wastes likely to arise during the construction process; and
- In the event that hazardous soil, or historically deposited hazardous waste is encountered during the work, the contractor must notify DCC Environmental Enforcement Section and provide a Hazardous/Contaminated Soil Management Plan. Immediate segregation of suspected hazardous | contaminated material is required for necessary inspection | testing. The contractor will be required to provide the following information to DCC:
  - estimated tonnages of waste;
  - description of location where waste was found;
  - proposed destination for authorised disposal/treatment; and
  - information on the authorised waste collector(s).

9.8.4 Predicted impacts of the proposed development (construction phase)

Significant volumes of waste materials will be generated during the construction of the proposed development. However 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. Assuming appropriate facilities are provided, environmental impacts (e.g., litter, contamination of soil or water etc.) arising from waste storage are expected to be minimal. Particular attention must be given to the appropriate management of excavation waste containing contaminated or hazardous materials by the contractor. The use of suitably licenced waste contractors will seek to ensure compliance with relevant legal requirements and appropriate off-site management of waste.

9.8.5 Consultation with relevant bodies

DCC will be consulted throughout the construction phase to ensure that all available waste reduction, reuse and recycling options are being explored and utilised and that compliant Waste Management is being carried out at the site. Specialist companies, wherever required, will be contacted to determine their suitability and each company's record reviewed to ensure relevant current collection permits | licenses are held. Companies will also be contacted to gather information regarding treatment of hazardous materials, if required (although not anticipated for this site), costs of handling and the best methods of transportation for recycling or reuse when hauling off site.

9.8.6 Pest control

Each contractor will be required to adopt an Integrated Pest Management Plan as part of the works. This plan will establish a sustainable approach to managing pests in order to minimise health and environmental risks throughout the construction works and is to be prepared in accordance with the guidelines set out in the '*Rodent Control for Construction Industry'* information leaflet as issued by the Health Service Executive, Environmental Health Service, 2009. Each contractor will be responsible for ascertaining if the proposed lands are currently

infested rodents and other pests. If so, any lands will be required to be disinfested by a pest control specialist, as is reasonably possible given the nature of the site. Throughout the works, each contractor will be responsible for ensuring that a good standard of hygiene is maintained to limit the attraction of rodents and other pests to the site. Measures are to include, but are not limited to the following:

- Waste food, empty food tins, and other waste to be stored in bins with sealed lids;
- Accumulations of construction debris which may provide harbourage for rodents are to be cleared away regularly and in a timely manner; and
- Stocks of building material are to be neatly stored.

Each contractor shall implement measures to prevent infestations during the proposed works. This will include infestation of existing and proposed drains, sewers, ducts and nearby properties. Measures are to include, but are not limited to the following:

- Removal of all existing refuse from site;
- During the laying of new drains, the sewers, open pipe ends, and manholes are to be protected against entry by rodents when work is not in progress – particularly at night time; and
- Surface water pipes discharging into watercourses to be fitted with an antiflood flap valves at outlet points.

A finalised Pest Control Management Plan is required to be submitted by each contractor to CWTC prior to commencement of works.

9.9 Plant and equipment use

Consideration has been given to the types of plant and equipment that are likely to be used during construction works. Typical types of plant and equipment associated with each key construction activity are set out in the table below:

9.9.1 Indicative plant used during construction

Plant and Equipment	Enabling Works	Site Clearance	Earthworks and Sub-structure	Super-structure	Roofing and Cladding	Services and Finishes
Tower cranes			✓	✓	✓	✓
Passenger /goods hoists				✓	✓	✓
Excavator/ Breaker	✓	✓	✓			

Plant and Equipment	Enabling Works	Site Clearance	Earthworks and Sub-structure	Super-structure	Roofing and Cladding	Services and Finishes
Cutters, drills and small tools	✓	✓	✓	✓	✓	✓
Floodlights	✓	✓	✓	✓		
Fork lift truck/ Pallet truck		✓	✓	✓	✓	✓
Hydraulic benders & cutters	✓	✓		✓		✓
Lorries and vans	✓	✓	✓	✓	✓	✓
Mobile crane		✓	✓	✓	✓	
Mobile lorry mounted concrete pump	✓	✓	✓	✓		
Poker vibrator	✓		✓	✓		
Ready mixed concrete lorry	✓	✓	✓	✓		
Concrete splitters/ saws		✓		✓		
Scaffolding and hydraulic access platforms		✓	✓	✓	✓	
Tipper lorries	✓	✓	✓			

Plant and Equipment	Enabling Works	Site Clearance	Earthworks and Sub-structure	Super-structure	Roofing and Cladding	Services and Finishes
Flatbed articulated vehicle	✓	✓	✓	✓	✓	✓
Large rigid lorries	✓	✓	✓	✓	✓	✓
Track mounted piling rigs	✓		✓			
Water pumps		✓	✓			
Raking props		✓				

9.10 Community liaison plan & public relations

CWTC will establish a Designated Community Liaison Officer (CLO) so that particular issues | complaints raised by local residents may be quickly identified and responded to. CLO details will be shared with local residents once appointed.

9.10.1 Community liaison plan

Given the nature of the proposed CWTC development and given that there may be multiple contractors on site at any given stage, there is a need to have an effective management of public relations and complaint handling to ensure good relations and a mutual trust between all key stakeholders during construction. These key stakeholders will be mainly but not be limited to the residents and neighbouring businesses and DCC, but will most likely extend to the wider community as development progresses including but not limited to An Garda Síochána, NTA, TII etc.

The dissemination of accurate and timely information in relation to on-going and proposed works, changes to traffic layouts and other activities, in advance to the key stakeholders will lend itself to a potential to reduce queries, complaints and nuisance during construction. It will be essential to operate a Good Neighbour Policy covering the following areas:

- Designated CLO;
- Early implementation;
- Good client, staff and neighbourhood liaison;
- Reduction of nuisance factors;
- Clear access for neighbouring premises; and
- Clear and concise and accurate information.

The CLO is accountable for the development of the Community Liaison Plan. Accountability includes authorising the document, monitoring its effectiveness and performing a formal document review. Members of the project team, including employees, contractors, subcontractors and consultants, will be accountable for ensuring the requirements of the Community Liaison Plan are implemented within their area of responsibility.

The Community Liaison Plan will be updated taking in to account:

- Changes in the design and construction programme;
- Changes in stakeholder and community needs; and
- Changes in contractor activities and stakeholder and community information requirements.

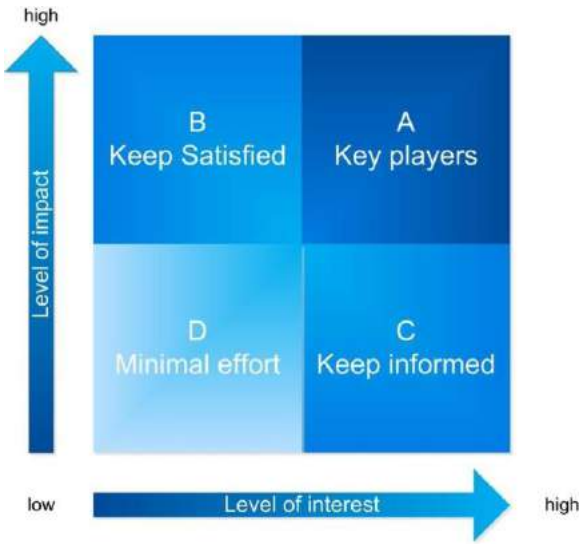
The Community Liaison Plan will include, as sub–plans, separate "Stakeholder and Community Involvement Plans" that are specific to separate projects and contractor activities.

9.10.2 Guiding community liaison principles

The management of community liaison issues for the development positions the community at the centre of the community liaison effort. The approach taken is based on extensive mapping of stakeholder impacts and interests in the works and broader development project. Community liaison activities outlined in this plan sit in the 'inform' and 'consult' part of this spectrum. A critical success factor for the effective management of community liaison issues during each project will be the alignment of the community liaison approach and responses with broader project approach. From the stakeholders' perspective this will create a seamless response to all contacts. It also ensures a coordinated risk management approach.

9.10.3 Stakeholder mapping and analysis

Stakeholder mapping and analysis will be undertaken to identify those who may potentially experience the greatest impacts (both positive and negative) and those with an interest in the development works. Stakeholders will continue to be identified and categorised according to their levels of impact and interest, using an industry standard stakeholder analysis tool below:



The stakeholder analysis tool categorises stakeholders in the following way:

- Category A – Stakeholders with a high level of impact (positive and negative) and interest in the development – local residents | households and businesses (within a 200m radius of the construction zones), DCC, other agencies including utility providers, transport agencies and An Garda Síochána;
- Category B – Stakeholders with a high level of impact (positive and negative) but a lower level of interest in the development – including nearby residents and businesses beyond a 200m radius and within a 500m radius
- Category C – Stakeholders who have considerable interest in the development but a relatively low level of impact; and
- Category D – Stakeholders with comparatively little impact and little interest in the development.

For the purposes of the Community Liaison Plan, key stakeholders to be addressed are Category A and B stakeholders. This strategy subject to re-evaluation through periodic review of the Community Liaison Plan or in response to potential response from a wider area.

9.10.4 Community Liaison Officer (CLO)

In this regard, an overall CLO is to be appointed by CWTC to be principal contact point between both the contractors and the key stakeholders. In the event the CLO is not available a designated person must be available to assume the CLO duties as required. This CLO will have experience in public relations in relation to large multi-contractor construction sites and be independent of any of the contractor.

Following that, each contractor for each site, will reflect in their respective site-specific CMP (which will be included as an appendix to this parent plan) the principles and requirements of this Community Liaison Plan and will appoint their own Community Liaison Official who will in turn be their principal point of contact for the CLO in relation to works planned and to be undertaken on each of their sites.

The CLO functions will include the following but not be limited to:

- Meet regularly with the contractors to ensure a basic awareness of works on-going and upcoming for that week;
- Overall responsibility for co-ordinating communications from each contractor;
- Act as the main conduit of information from and to both the contractors and the key stakeholders, particularly DCC;
- Be the final point of contact in respect of any complaints and issues that arise that need to be escalated and ensure their resolution;
- Attend the Residents Forum and be responsible for the following:
  - Communication of key information about project activities: Notify residents in advance about use of alternative routes (include official detour routes) around construction sites, dates and times when the construction will take place (e.g., night work), types of construction activities ("highly disruptive work"), potential impacts of construction activities (e.g., traffic, loss of telephone service and other utilities), and locations of access and construction staging areas;
  - Preparation and provision of an overall site Progress Report;

- Provision of a report on complaints/issues that may have arisen in the preceding month – this is the first point of escalation of any complaints/issues that may arise that cannot be resolved locally; and
- Evaluate and report on monitoring results for the preceding month.

- Share emergency/out of hours issues that may be of relevance to key stakeholders;
- Establish an effective Complaints Procedure with each contractor including collating an overall log of complaints (if any) and actions from each site.

9.10.5 Issues related to the project works, temporary works and construction activities

The CLO will monitor key issues while working closely with the construction and environment teams to understand and assess issues as they arise throughout the development. Key issues include:

Project works	Temporary works	Construction activities
▪ Traffic changes ▪ Air quality ▪ Waste ▪ Noise and vibration ▪ Soils and groundwater ▪ Car parking, transport and access ▪ Local business impacts ▪ Local resident impact ▪ Human health ▪ Hazards and risks	▪ Traffic changes ▪ Air quality ▪ Waste ▪ Noise and vibration ▪ Soils and groundwater ▪ Car parking, transport and access ▪ Local business impacts ▪ Local resident impact ▪ Human health ▪ Hazards and risks	▪ Team members and subconsultants to flag issues with the CLO ▪ Contractor personnel and subcontractors to behave appropriately at all times ▪ Maintain terms of agreement and protocol

9.10.6 Communication procedure

The objective of communication procedures will be to:

- Maintain effective working relationships and mutual trust between key stakeholders during construction;
- Promote the free flow of timely and appropriate information in all directions between key stakeholders in order to try to anticipate and resolve any potential issues before they arise;
- Evaluate the results of monitoring activities on a periodic basis;
- Oversee a Community Complaints Procedure, ensuring appropriate responses from each contractor are forthcoming;
- Identify and respond to matters raised by local residents or which may arise as a result of the monitoring;
- Construction staff will be encouraged to remove all Personal Protective Equipment (PPE) and use wash down facilities before leaving the site;

- CWTC recognise the importance of the community liaison role in ensuring the smooth running of activities and in relation to residents and public services. Important key issues in ensuring good relations are:
  - Correct points of contact, information and liaison;
  - Responsiveness to contacts and information;
  - Good housekeeping in all aspects of the operations; and
  - Keeping people informed of site operations, through regular meetings, mail drops & newsletters will help create good relationships and co-operative atmosphere.
- Each contractor is required to ensure that all agents, supply chain contractors, suppliers under their control etc. act in a manner to minimise disruption to the surrounding locality;
- Each contractor will be responsible for establishing relationships with relevant parties, and communicating with each as appropriate throughout the pre-construction, construction and operation phases of the development. Each contractor will appoint in writing a Public Relations Officer to support the CWTC Community Liaison Officer. Each Contractor Public Relations Coordinator who will support the Community Liaison Officer to:
  - Ensure all communications are relayed back to DCC for insertion in their webpage as part of the Communications Strategy to ensure DCC are aware ahead of any potential communications from local residents and property owners.
  - Populate and distribute a local development newsletter;
  - Point of immediate contact for neighbours and stakeholders;
  - Monthly briefing with neighbours on progress, monitoring reports (noise | vibration) and any corrective issues;
  - Liaison with DCC and emergency services as appropriate;
  - Liaison with An Garda Síochána, particularly in relation to traffic movements and permits; and
  - Preparation of reports for each site progress meeting on neighbourhood issues.
- Efficient signage, maintenance and cleanliness of services and temporary facilities will be given high priorities within the overall scheme of the liaison strategies for the project. Due to the nature of construction works it is essential to operate Good Neighbour Policies. Key aspects of a Good Neighbour Policy include:
  - Early implementation;
  - Good client, staff and neighbourhood liaison;
  - Reduction of nuisance factors;
  - Clear access for neighbouring premises;
  - Clear and concise information; and
  - Designated liaison officer.

9.10.7 Monitoring and evaluation construction activities

In keeping with the requirements of the Community Liaison Plan, the CLO will establish continuous evaluation, monitoring and reporting systems. The purpose of monitoring and evaluation is to verify and validate the successful delivery of stakeholder and community liaison activities.

The figure below provides an overview of the approach to the monitoring and evaluation process.

It seeks to demonstrate that evaluation is a process, not a product, and is integrated into all stages of programming the community liaison activities (designing, monitoring, and reflecting on success). The information generated can be utilised to adaptively manage the consultation methodology (formative), and to communicate | report, discuss, theorise and redesign.

The monitoring and evaluation process established will capture and report on qualitative and quantitative evaluation measures, for example:

- Frequency and types of consultation and profile of those involved;
- Positive and negative feedback;
- Take-up of consultation and engagement process, to assess suitability of the activities; and
- Quality, accuracy and legibility of communications material presented.

9.10.7.1 Sample indicators for monitoring and evaluation activities

Objective	Target	Strategy	Indicator	Target
Timely response to all stakeholder enquiries and complaints	As per the requirements of planning	Adhere to the requirements of planning	Number (and percentage) of responses provided within time limit	100%
Documentation of responses and actions	As per the requirements of consultation	Adhere to the requirements planning	All responses and actions documented	100%

Quality – information and experience and satisfaction	▪ All interested stakeholders have opportunities to participate in consultation. ▪ All interested stakeholders have opportunities to lodge feedback and complaints. ▪ Stakeholders advised how their feedback would be used	▪ Adherence to CLP ▪ Provision of feedback to stakeholders during liaison activities	▪ High levels of participation across identified stakeholder groups ▪ High levels of stakeholder satisfaction	90%
Appropriateness – for stakeholder, needs, level of interest | impact and expectations	▪ Feedback and complaints were adequately considered and informed construction activities. ▪ Responses addressed issues and concerns raised. ▪ Liaison activities met stakeholder requirements and expectations	▪ Adherence to Community Liaison Plan ▪ Monitoring and analysis of issues and responses in line with planning ▪ Provision of feedback to stakeholders during consultation activities	▪ Alignment of issues and responses ▪ High levels of stakeholder satisfaction with response mechanisms	90%

10 Contractor compliance requirements

10.1 Planning compliances*

*(*Applicable to those design elements where a contractor bears design responsibility i.e., specialist contractors | suppliers)* – Each contractor must in their planning and execution of the works ensure compliance with the obligations set out in the Grant of Planning Permission.

10.2 Statutory compliances

As a minimum, all aspects of works and project facilities must comply with good industry practice, statutory instruments and all necessary consents including but not limited to the following:

- The Safety, Health and Welfare at Work Act 2005;
- The Emergency Measures in the Public Interest (Covid-19) Act, 2020;
- The Safety, Health and Welfare at Work (Commencement) Order 2012;
- The Factories Act 1955;

- The Safety in Industry Act 1980;
- The Safety, Health and Welfare at Work (General Applications) Regulations, 2007-2020;
- The Safety, Health and Welfare of Work (Construction) Regulations, 2013-2020;
- The Construction Products Regulation (CPR), 2013;
- The Safety, Health and Welfare at Work (Chemical Agents) Regulations, 2001-13 and the associated HSA Chemical Agents Code of Practice (2020);
- The Building Control (Amendment) Regulations, 2014-2017;
- Any recommendation | Code of Practice etc. made by the Irish Government, Health and Safety Authority (HSA), ECDE, HSE relating to Coronavirus 19;
- BS 5228: Noise and Vibration Control on Construction and Open Sites: 2009 + A1 2014 (BS 5228-1);
- Law and Good Industry Practice on Disability including those of the National Disability Authority;
- Fire Services Act, 1981;
- Good Industry Practice in respect of Fire;
- Requirements of Utility Providers, and the HSA;
- Relevant Irish Standards ("Irish Standards"), British Standards ("British Standards"), Codes of Practice ("Codes of Practice"), EU Directives ("Directives") or equivalent European Standards ("European Standards");
- Building Research Establishment Digest Recommendations;
- Local Byelaws and Regulations;
- The Building Control Acts 1990 and 2007 including all relevant subordinate legislation made under these Acts (and any amendment or re-enactment of such Acts (the "Building Regulations"));
- Regulations and requirements of all relevant authorities;
- All equipment for use in a potentially explosive atmosphere must be appropriate for the environment and must comply with the EU 'Atex' Directive;
- All BSRIA Publications;
- All HVCA Publications;
- ETCI – National Rules for Electrical installations;
- CIBSE Publications- Guides, Codes, Technical Memoranda, Application Guides, Lighting Guides, etc. ;
- ASHRAE guidance for specific Mechanical Systems and Components (where more comprehensive than CIBSE); and
- Working Time Directive, 2003.

CWTC will only appoint competent contractors to complete works. Contractors are responsible for monitoring works, ensuring consistently high standards of safe planning, temporary works design as necessary, works management and workmanship. The level of interaction and frequency of inspection is based on assessed levels of risk arising from the works. All contractors are reminded of the need to progress all works in accordance with health & safety regulatory requirements.

10.3 Construction stage requirements

10.3.1 Construction stage document requirements

Each contractor must provide prior to commencement of any works on the development the following information to CWTC for written acknowledgment:

- A site-specific CMP that conforms with this requirement of this Plan;
- A Covid 19 management plan demonstrating compliance with the CIF C-19 Safe Operating Procedures;
- The site-specific CMP must be submitted for each site to the Planning Authority and DCC for agreement in writing, prior to commencement. In this regard the SCMP shall include a site-specific site Construction Traffic Management and Community Liaison Plan. Plans shall provide details of intended construction practice for the development are per Notification to Grant Permission Conditions. Specific information requirements may include:
  - location of the site and materials compound(s) including area(s) identified for the storage of construction refuse;
  - location of areas for construction site offices and staff facilities;
  - location of any settlement tank with associated discharge licence;
  - details of site security fencing and hoardings;
  - details of appropriate numbered on-site car parking facilities for site workers during the course of construction;
  - details of the timing and routing of construction traffic to and from the construction site and associated directional signage, to include proposals to facilitate the delivery of abnormal loads to the site;
  - measures to obviate queuing of construction traffic on the adjoining road network;
  - measures to prevent the spillage or deposit of clay, rubble or other debris on the public road network, will be managed through a combination of a full-time road sweeper, wheel wash, automated spray booth provision at each site entrance and good waste management practice employment by the contractor;
  - alternative arrangements to be put in place for pedestrians and vehicles in the case of the closure of any public road or footpath during the course of site development works;
  - provision of parking for existing properties during the construction period;
  - details of appropriate alleviation measures for noise, dust and vibration, and monitoring of such levels;
  - details of containment of all construction-related fuel and oil within specially constructed bunds to ensure that fuel spillages are fully contained. Such bunds shall be roofed to exclude rainwater;
  - off-site disposal of construction | demolition waste and details of how it is proposed to manage excavated soil; and
  - means to ensure that surface water run-off is controlled such that no silt or other pollutants enter local surface water sewers or drains. A record of daily checks that the works are being undertaken in accordance with the SCMP shall be kept for inspection by the Planning Authority.

- CWTC will appoint an individual | business that will be responsible to undertake and record daily checks to ensure works are undertaken in accordance with the DCMP. Records are to be kept for inspection by the Planning Authority;
- Copy of AF2 notification to the Health and Safety Authority for each site;
- Site specific Construction Stage Health and Safety Plan for each site – each contractor as PSCS must produce and submit in soft copy in advance of the works commencing a construction-stage health and safety plan for acknowledgement by CWTC. Each plan will be assessed on an ongoing basis during construction to account for the dynamic evolution of the project and adherence to agreed temporary work measures (demolition, groundworks, service diversions, traffic management etc.) and site rules;
- Site specific contaminated material | hazardous material strategies (as required);
- Approved commencement documentation as required by the Building Control (Amendment) Regulations, 2014 and | or similar statutory or regulatory documentation;
- Site specific Safety Statement;
- Names of personnel including shadow and support staff responsible for discharging the role of PSCS, site safety, health, welfare and first aid personnel;
- Written confirmation from CWTC that each contractor proposed site establishment complies with project requirements. If non-compliances are subsequently identified corrective actions must be remedied at the cost of each contractor;
- Evidence of the required insurances being in place;
- Confirmation (in advance of commencement) to confirm that previous works on site have been assessed to ensure compliance with as-built information;
- Details of each contractor contact details for subsequent payments;
- Proposed samples for approval of the design team and CWTC;
- Permit to work submittals such as method statements, risk assessments and applications for works outside the development site redline boundary; and
- Complete Client Safety File.

10.3.2 Construction stage health and safety plan

The plan document must be project-specific and must incorporate the requirements of the strategies within this Plan. Each contractor must ensure their plan enables the location of its entire compound within its site as per the demised area and other areas outside the red line boundary where e.g., MEP, ICT etc. will be required to operate at defined interface points. Each plan, at a minimum must include at least the following sections:

- Project directory and communications protocols proposed to be used with CWTC in response to the necessary Communication Strategy;
- Site establishment plan including any proposed phasing / staging of site compound areas – identifying the location of, inter alia, the building footprint, site offices, welfare facilities for operatives and staff, materials storage, component assembly area, waste skips or similar, craneage / hoists / scaffolding, generator / pumps etc. The layout of same must be agreed in advance with CWTC with focus on the proposed location of potential noisy / dust creating equipment such as pumps & generators, and potential impacts on the progress or uses of nearby residential properties;
- Contract programme as previously agreed with CWTC;

- Risk Management Strategy – listing of specific site risks, each contractor must present a weighted risk matrix based on their evaluation of risks particularised to its specific works and the site;
- Deliveries Strategy – including swept path analysis (projection of HGV vehicle movements linked to the contract programme for the duration of the works), proposals for just-in-time deliveries, and its proposals to avoid impacts on traffic passing around the perimeter and through the site;
- Storage Strategy – developing the deliveries strategy to minimise storage requirements, but also addressing protecting and securing the components;
- Waste Management Strategy – addressing the requirements to implement, reduce, re-use recycle strategy and identifying the proposed location of skips etc. The strategy must address proposed mechanisms to avoid rodents inhabiting the site;
- Fire & Emergency Plan – planning and execution of the works in a manner which avoids impact on operational continuity of development must particularise these proposals to the works in question and any risks identified in identifying and managing the respective project's risks;
- Storm-water Management Plan – designing and implementing agreed construction site storm-water runoff control, post construction site storm-water management, pollution prevention | good housekeeping etc.;
- Temporary Works Register – this register must be submitted at pre-start by each contractor to the Project Manager and PSDP. The register is to be updated during the construction period in coordination with the Project Manager and PSDP;
- Temporary Connections Plan – for the avoidance of doubt, each contractor shall not be permitted to source temporary connections for utilities or draw power or water from the permanent infrastructure supplies unless otherwise agreed. Arrangements must instead be made for generators and similar temporary installations;
- Temporary Traffic Management Plan and swept path analysis – each contractor must carry out a swept path analysis for the development site using design plans and take account of the expected vehicles that will enter and exit the site during the construction project. Each contractor must demonstrate how vehicles can operate safely within the traffic management proposal of the development site and wider permanent roadways;
- Overhead Lifting Plan – each contractor is obliged to obtain approval from DCC regarding their use of cranes (mobile, self-erecting, tower etc.) if the slewing capacity of these lifting appliances breach or travel over the development redline;
- Community Liaison Plan – responding to the CWTC Good Neighbour Charter and Section 9.8 commitments;
- Noise, Dust & Vibration Alleviation Plan – attention is to be given to the impact on neighbours, immunosuppressed neighbours & members of the public and occupants of adjacent buildings; and
- Any other plan | matter deemed relevant by each contractor to ensure works are safe and without risk.

10.3.3 Client Safety File (refer also to Appendix C)

The Client Safety File is information collated by the PSDP under Regulation 13(a) & (b) of the Safety, Health and Welfare at Work (Construction) Regulations, 2013. The Safety File is a record of information for the end user of the development which focuses on safety and health in relation to the day-to-day usage, maintenance, alteration and demolition of each structure

within the development. The information contained within the file shall alert those responsible for the design of new structures and services of any significant risks to safety and health that shall be addressed during detailed design development. The Safety File document must be held in PDF format while also being capable of handling BIM (Level 2) documentation, Revit, AutoCAD, MS Word, Excel files etc.

To make this task achievable co-operation between and co-ordination of all the relevant parties is of essential, right from the outset of the project. The design & build contractor is responsible under Regulation 21 for the co-ordination of arrangements among contractors to ensure the provision of relevant information, in writing, thus enabling the completion of the safety file. The BCaR information needs list is separate to the Client Safety File. The format and quantum for each Block |Structure will be agreed | provided during pre-contract stage with the preferred contractor. Refer to Appendices for a typical Client Safety Contents List.

10.3.4 Site utilities

Existing services will be identified from the utility bodies, current service drawing records and by use of a full-service sweep of the buildings and surrounds. These will be retained on site for reference. As appropriate, applications will be submitted for power, drainage and water connections through the relevant DCC departments. Each contractor will be required to review and advise on:

- Electricity: - completed application form for temporary supplies and informing the Power Supply Company of the required power on dates and the dates at which the new supply connection is required. An application will be made to the ESB and relevant power networks for the temporary supplies required for the construction works;
- Water: - applications for final water connection and | or metering. An application will be made to Irish Water for a new water supply required for a temporary construction supply. An application will be submitted for the final connection. This will be a water supply up to the site boundary and terminate with an isolator. From the isolator, the mechanical contractor will run a new pipe and enter the plant room where a double valve and mains isolator will be installed. All underground pipework is to be disinfected in accordance with Water Supply (water fittings) Regulations 199 (SI 1999, 1148);
- Waste Water: - reviewing means for disposal of waste water. Connection to the Local Authority sewer for both temporary supply and for permanent supply will be lodged with DCC;
- Telecommunications: - advising each contractor's head office on the number of telephone lines required for broadband, phones, faxes and computers. Each contractor will then apply for the lines and advise on the installation date; and
- Gas Supply: - completing the various form for the new Gas Supply main for the development from the existing site boundary location and connection to the mechanical systems in a timely manner to allow for testing, commissioning and to aid drying out of the building.

Each contractor will work together with their temporary electrics sub-contractor to establish the total power requirements for the site.

11 Construction and environmental management

The Development CEMP has incorporated the alleviation measures and environmental monitoring measures specified in the EIAR. These alleviation and monitoring measures are based on the application of best practice guidance and where relevant regulatory compliance limits. However as outlined in the EIAR, a detailed Environmental Management Plan must be

developed by each contractor which will specify the precise location of various elements of the construction programme where contractors have yet to be appointed and works will not commence from several months. For example, the location of stockpile areas, the location and precise method of surface water control measures in each construction area and the location of monitoring points for noise monitoring which may need to be amended as the various phases of construction progress. The Operation Phase EMP will be prepared and submitted to DCC in advance of completion of each phase of the development.

11.1 Means to ensure surface water runoff is controlled so no slit enters public drains | ponds | water sewers

- The construction contractor will implement the following alleviation measures, via a site-specific CEMP for release of hydrocarbons, polluting chemicals and sediment control:
  - Provision of measures to prevent the release of sediment during the construction work. In respect to works near to the Tolka River, any attenuation pond, drain or sewer, the following measures (individual or combined) will be used:
    - Designed siltation tanks within the boundary of the site;
    - Straw rolls (also called fibre rolls, coir rolls, or wattles);
    - Silt fences; and
    - Gravel bags.

    A site-specific Stormwater Runoff Management Plan will be prepared by the contractor and submitted to DCC demonstrating specific controls that will be employed.

11.2 Fisheries protection measures

The aim of the Fisheries Protection Measures (FPMs) is to ensure the protection of the Tolka River and associated tributaries. These measures were prepared following consultation with Inland Fisheries Ireland (IFI). The Project Ecologist will act as the primary on-site ecological contact for the implementation of the FPMS including;

- Ensure compliance with all recommendations of the FPMS during regular site inspections;
- Request relevant records and documentation from the Site Manager (SM) where necessary;
- Attend routine meetings on FPMS;
- Keep detailed records of any ecological incidents and report these to the PC;
- Keep records of any variations to construction methods or design brief and modify FPMS recommendations in consultation with PC; and
- Produce the staged monitoring reports on flora and fauna.

The Tolka River is the focus of the FPMS. Works have the potential to affect the Tolka River into which it will drain. Development works will require excavation near to the bank of the river, removal of emergent reedbed vegetation and the potential for sediment release to the Tolka River. There will also be localised earthmoving works associated with construction of site works.

11.2.1 Alleviation measures

- Works that may require "instream" work will take place May-September only;
- Passage for fish upstream and downstream will not be impeded;

- Prior to any machinery working on site for any purpose, the working area will be marked out with wooden stakes and where necessary, hazard tape deemed will be erected to identify the working limits;
- Working limits to be checked at the end of every day by the contractor;
- Provision of measures to prevent the release of sediment during the construction work will be installed prior to any site clearance. In respect to works near to the river, these measures may include but not be limited to the use of silt fences, sedimentation mats etc.;
- Provision of exclusion zones and barriers (sediment fences) between earthworks, stockpiles and temporary surfaces to prevent sediment washing into the receiving water environment;
- Temporary construction surface drainage and sediment control measures will be in place before earthworks commence;
- If pouring of cementitious materials is required for the works adjacent to the river, surface water drainage features, or drainage features connected to same, this will be carried out in the dry;
- Pumped concrete will be monitored to ensure no accidental discharge. Mixer washings and excess concrete will not be discharged to surface water. Concrete washout areas will be located remote from any surface water drainage features to avoid accidental discharge to watercourses;
- No storage of hydrocarbons or any polluting chemicals will occur within 50.00m of the surface water network. Fuel storage tanks will be bunded to a capacity at least 110% of the volume of the storage tank (plus an allowance of 30mm for rainwater ingress). Refuelling of plant will not occur within 50.m of the surface waters networks and only in bunded refuelling areas;
- Emergency procedures and spillage kits will be available and construction staff will be familiar with emergency procedures;
- Implementation of measures to minimise waste and ensure correct handling, storage and disposal of waste;
- If any heavily contaminated land is encountered during construction, it will be removed off-site and be disposed of at a licenced waste facility;
- Contaminated groundwater, if encountered on site, could result in contaminated waters being discharged from the construction site. Any such contaminated waters will be treated via the appropriate measures dependent on the nature of the contamination prior to discharge to the surface water network;
- If dewatering is required, water must be treated prior to discharge to the existing sewer or watercourse. This will include treatment via petrol interceptor and treatment for silt removal either via silt trap, settlement tanks or ponds.
- There will be no direct pumping of contaminated water from the works at any time;
- Foul drainage from site offices and compounds, where not directed to the existing wastewater network, will be contained and disposed of off-site in an appropriate manner and in accordance with the relevant statutory regulations, to prevent the pollution of watercourses;
- An Emergency Response Plan detailing the procedures to be undertaken in the event of flooding, a spill of chemical, fuel or other hazardous wastes, a fire, or non-compliance incident etc.; and

- Ensure site staff are trained in the implementation of the Emergency Response Plan and the use of any spill control equipment, as necessary.

To ensure that FPMS actions are achieving the required objective, supervision and monitoring is required. Visual checks of river and outflow will take place on a daily basis during the earthworks stage of the project. A log of observations will be maintained on the relevant site and available for inspection at any time.

12 Traffic management

The level of construction traffic directly associated with the development will vary over the course of the construction programme and the following section presents the projected volume of traffic generated during the peak construction activity only.

12.1 Peak construction period

Excavation and earthworks activities represent the most onerous construction stages in terms of construction traffic for each site. Specific details of construction traffic management plans will be provided in the detailed site-specific CMP prepared by each contractor. The reduced dig excavation and construction of the podium areas will require a large quantity of excavation haulage movements with podium slab concrete and steel deliveries replacing excavation vehicle numbers thereafter.

12.2 Construction traffic generation

As noted above, the peak construction period will occur during the reduced dig excavation and construction of the podium structures. These construction works will generate traffic from the following activities:

- Reduced dig excavation;
- Demolition material;
- Delivery of concrete;
- Delivery of steel;
- Miscellaneous deliveries;
- Staff; and
- Site visitors | unscheduled visitors.

12.2.1 Delivery of concrete

There will be a significant number of concrete movements associated with staff and raw material deliveries to each site.

12.2.2 Delivery of steel

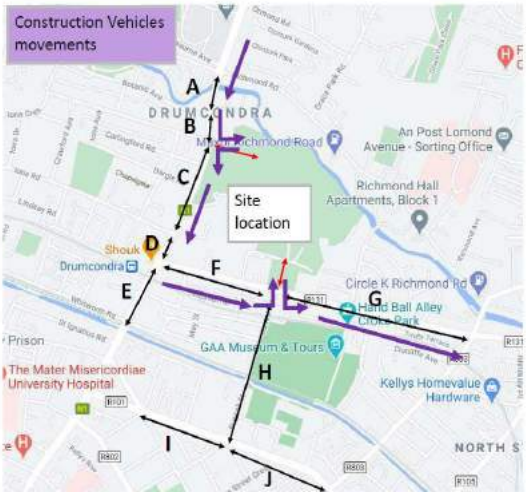
Steel reinforcement is required for the construction of the basement and podium structures. It is anticipated that steel will be delivered directly to individual sites. It is anticipated that sites will generate 2-3 steel trucks a day. For the purposes of this assessment, it is assumed that 1 delivery would occur in both the morning and evening peak hours.

12.2.3 Contractor staff

The site has good accessibility by a range of public transport, with Dublin Bus QBCs and Drumcondra train station located within walking distance. It is therefore envisaged that a proportion of staff will travel to and from the site by public transport and other alternative

modes. It is anticipated that approximately 20% of staff will travel by public transport. Onsite parking is available with on street pay parking in limited supply. It is robustly assumed that 80% of staff will arrive to site by car | van with 40% of this percentage car-pooling or arriving in people carriers. It is estimated that during the peak construction activity, subject to phasing, a maximum of between 650 and 800 staff will be working on the development.

12.3 Total construction traffic generation



Estimated construction vehicles provided by BMCE (Michael Hughes 24 February)

Spoil & Hardcore Stone Truck	13,333
HGV (20 Tonnes)	3,726
Curtain Sided Trailer	3,318
Concrete Truck	6,875
Misc Cars / vans (30/day)	37,500
Misc Ancillary Deliveries (30/day)	22,500
Total	87,253
Overall Const. Programme Duration est. months	36
Overall No. of working days	750
Average Vehicle No. Per Working Day	116

	2020 (base year)		Construction				Construction + Existing traffic			
	Base Scenario		Average		Maximum		Average		Maximum	
Link	LV	HV	Car/van only	HV only	Car/van only	HV only	LV	HV	LV	HV
A	25,800	1,426	50	66	50	250	25,850	1,492	25,850	1,676
B	26,206	1,435	50	66	50	250	26,256	1,501	26,256	1,685
C	25,606	1,427	50	66	50	250	25,656	1,493	25,656	1,677
D	27,113	1,426	50	66	50	250	27,163	1,492	27,163	1,676
E	26,456	1,421	-	-	-	-	26,456	1,421	26,456	1,421
F	9,752	180	50	66	50	250	9,802	246	9,802	430
G	10,605	206	50	66	50	250	10,655	272	10,655	456
H	5,344	108	-	-	-	-	5,344	108	5,344	108
I	13,827	470	-	-	-	-	13,827	470	13,827	470
J	15,101	511	-	-	-	-	15,101	511	15,101	511

All construction vehicles follow the same route (A, B, C, F and G) as entry/exit is left in left out on both accesses

12.3.1 Construction traffic distribution

It is assumed that all construction traffic entering the site will arrive from either the M50 | N1 owing to the turn restrictions on Drumcondra Road and Clonliffe Road, i.e., left-in and left-out. The vast majority of traffic (80%) is also assumed to exit towards the M50 via Fairview | Marino. The remaining 20% is assumed to travel along East Wall Road towards either the toll tunnel or N11.

12.3.2 Construction traffic impacts

12.3.2.1 Impact of works on local property access

Access to all neighbouring properties will be maintained through all stages of construction. Temporary traffic management will be required along Drumcondra Road and Clonliffe Road to facilitate the works. It will be the responsibility of each contractor to phase the works such that access to neighbouring properties is maintained from all directions. Details of the traffic management arrangements will be contained within the site-specific Construction Traffic Management Plan to be submitted to DCC by each contractor.

12.4 Construction traffic alleviations

12.4.1 Construction traffic strategy

Construction traffic will be limited to certain routes and times of day, with the aim of keeping disruption to existing traffic and residents to a minimum. To minimise disruption to the local areas, construction traffic volumes will be managed through the following measures:

- During peak hours, ancillary, maintenance and other site vehicular movements will be discouraged.

- Daily construction programmes will be planned to minimise the number of disruptions to surrounding streets by staggering HGV movements to avoid queuing;
- Access to residential properties will be maintained through all stages of construction;
- Abnormal site deliveries will be coordinated with DCC in consultation with local residents as per CLO requirements;
- Site staff parking will be provided with the potential for an overflow contractor carpark; and
- Each contractor will be required to promote travel by sustainable modes of transport.

12.5 Construction traffic management plan

A site-specific construction phase Traffic Management Plan will be prepared by each contractor. Discussed below are a number of issues, information on which are to be included in each Traffic Management Plan as set out and guided by the Dublin City Council document *'Directions for the Control & Management of Roadworks in Dublin City'*.

12.5.1 Movement of machinery and plant

Each contractor shall determine safe internal haul routes within their site area, including the locations for crossing any public roadways as part of their agreement with DCC prior to construction. Each contractor must provide an appropriate number of competent Banksmen to specifically manage (as necessary) vehicle movements at these locations as they have been found to pose risks arising from proximity of works to Drumcondra and Clonliffe roadway users, pedestrian movements (construction personnel and members of the public). Contractors must not move machinery and plant across public roads in areas other than designated agreed crossing locations.

12.5.2 Loading | unloading locations

Vehicles must be loaded and unloaded within each demised site area (i.e., within the site boundary red line). All deliveries and collections must be overseen and managed for each contractor by a nominated competent person. Each contractor must consider and explain how to manage the impacts on vulnerable persons, cyclists, pedestrians, other road users, and any affected roadway infrastructure.

Appendix A – Site redline boundary

ALL DIMENSIONS TO BE CHECKED ON SITE
NO DIMENSIONS TO BE SCALED FROM THIS DRAWING
DRAWING IS TO BE READ IN CONJUNCTION WITH RELEVANT CONSULTANTS DRAWINGS

A1

N

Room Number Legend

- 1 Bed
- 2 Bed
- 3 Bed
- Studio
- Lobby
- Residents Lounge
- Cafe /Retail

Site Boundary
- Site boundary subject of application

Access Points
- Proposed car park entrance
- Proposed bicycle parking entrance
- Proposed building entrance
- Proposed unit entrance

Basement outline

LANDSCAPE KEY:

- MOBILITY IMPAIRED PARKING
- BIN/WASTE COLLECTION
- ESB STATION
- ESB/CIE STATION
- PL PLATFORM LIFT
- CAR CLUB
- SIGNAGE
- BIKE PARKING
- COLLAPSABLE BOLLARD
- LIGHTING

REV	DATE	DESCRIPTION	CHK	DRN
P2	May 2021	Issued for Planning	BG	BF
P1	Nov 2020	Issued for Pre Application consultation	BG	BF

STATUS CODE DESCRIPTION
ISSUED FOR PLANNING APPROVAL

APPLICANT NAME
CIRTC Multi Family ICAV acting on behalf of its sub-fund DDTR CR1 Fund

PROJECT NAME
Holy Cross College SHD

LOCATION
Holy Cross College, Clonliffe Road, Dublin 3 and Drumcondra Road Lower, Drumcondra, Dublin 9

DRAWING
Proposed Site Plan - Typical Level 02

PROJECT NUMBER	DATE
20054	May'21
SCALE@ A1	DRAWN/CHECKED
1 : 1000	BG/ BF

STATUS CODE	DRAWING NUMBER	REVISION
A1	CLN-HJL-SW-02-DR-A-0011	P2

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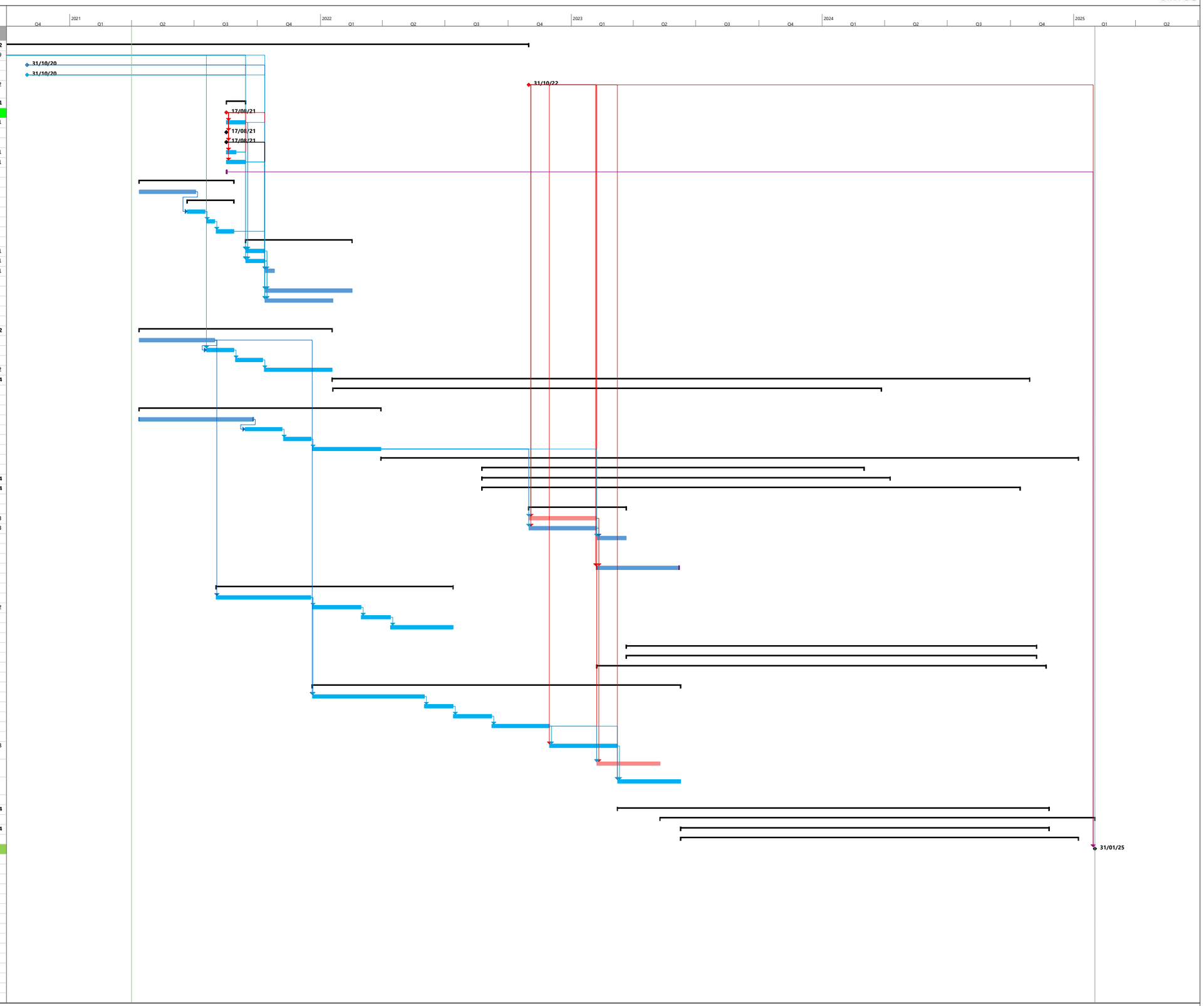
mcculloughmulvinarchitects
NMP
o'mahony pike
BM
OCSC

Appendix B – Construction Phasing Plan and Programme

VIRTUS

ID	Task Name	No of Floors incl GF	No of Units per Core	Duration	Start	Finish
1	CLONLIFFE - PHASING & PROGRAMME					
2	**Land Tranches**			**154.4 wks**	**Mon 23/09/19**	**Mon 31/10/22**
3	Aquire Tranche 1c land - Phase 1b D1, D2			0 days	Mon 23/09/19	Mon 23/09/19
4	Aquire Tranche 2a land - Phase 1a C2			0 days	Sat 31/10/20	Sat 31/10/20
5	Aquire Tranche 2b land - Phase 2, A1, A2, A3 & A4			0 days	Sat 31/10/20	Sat 31/10/20
6	Aquire Tranche 4 land - Phase 3, B1,B2,B3, C1, E1 & E2 & Church			0 days	Mon 31/10/22	Mon 31/10/22
7	**Planning**			**4 wks?**	**Tue 17/08/21**	**Mon 13/09/21**
8	ABP Grant Permission			0 wks	Tue 17/08/21	Tue 17/08/21
9	Pre-Commencement Planning Conditions Compliance			4 wks	Tue 17/08/21	Mon 13/09/21
10	Finance Approval / Cashflow t.b.c			0 wks	Tue 17/08/21	Tue 17/08/21
11	Judicial Review - Standstill Period			0 wks	Tue 17/08/21	Tue 17/08/21
12	Commencement Notice - Enabling Works-14 calendar			10 days	Tue 17/08/21	Mon 30/08/21
13	Commencement Notice - D1 & D2 - 28 calendar days			20 days	Tue 17/08/21	Mon 13/09/21
14				0.2 wks?	Tue 17/08/21	Tue 17/08/21
15	**Enabling Works - c. €5m**			**20 wks**	**Mon 12/04/21**	**Fri 27/08/21**
16	Design & Scope of Works			12 wks	Mon 12/04/21	Fri 02/07/21
17	**Tender Docs, Award and Mobilisation ***			**10 wks**	**Mon 21/06/21**	**Fri 27/08/21**
18	BoQ & Tender Pack			4 wks	Mon 21/06/21	Fri 16/07/21
19	Tender Negotiations			2 wks	Mon 19/07/21	Fri 30/07/21
20	Award and Mobilsation			4 wks	Mon 02/08/21	Fri 27/08/21
21	**Construction Enabling Works**			**20 wks**	**Tue 14/09/21**	**Tue 15/02/22**
22	Fencing / Hoarding / Tree Protection - Phase 1 & 2			4 wks	Tue 14/09/21	Mon 11/10/21
23	Access Roads - Drumcondra & Clonliffe via C2			4 wks	Tue 14/09/21	Mon 11/10/21
24	JKW - A Blocks - Fencing to contaminated area			2 wks	Tue 12/10/21	Mon 25/10/21
25						
26	A1 Basement - Temp Piling, Bulk Excavation, Infrastruc			16 wks	Tue 12/10/21	Tue 15/02/22
27	D2 Basement - Temp Piling, Bulk Excavation, Infrastruc			12 wks	Tue 12/10/21	Tue 18/01/22
28						
29						
30	**Phase 1 - D1 & D2**			**38 wks**	**Mon 12/04/21**	**Mon 17/01/22**
31	Detailed Design			16 wks	Mon 12/04/21	Fri 30/07/21
32	BoQ & Tender Pack			6 wks	Mon 19/07/21	Fri 27/08/21
33	Tender Period			6 wks	Mon 30/08/21	Fri 08/10/21
34	Tender Negotiation, Award and Mobilsation			12 wks	Mon 11/10/21	Mon 17/01/22
35	**Construction D1 - c. 151 Units (€28m)**	**18**		**130 wks**	**Tue 18/01/22**	**Mon 28/10/24**
43	**Construction D2 - incl basement c. 245 Units (€45m)**	**'4 - 8**		**103 wks**	**Wed 19/01/22**	**Tue 26/03/24**
55						
56	**Phase 2a - A1, A2, A3 & A4**			**48 wks**	**Mon 12/04/21**	**Tue 29/03/22**
57	Detailed Design			24 wks	Mon 12/04/21	Fri 24/09/21
58	BoQ & Tender Pack			8 wks	Mon 13/09/21	Fri 05/11/21
59	Tender Period			6 wks	Mon 08/11/21	Fri 17/12/21
60	Tender Negotiation, Award and Mobilsation			12 wks	Mon 20/12/21	Tue 29/03/22
61	**Construction A1 - incl basement c. 305 Units (€56m)**	**'4 - 8**		**128 wks**	**Wed 30/03/22**	**Tue 07/01/25**
74	**Construction A2 - c. 73 Units (€13m)**	**7**		**72 wks**	**Wed 24/08/22**	**Fri 01/03/24**
83	**Construction A3 - c. 87 Units (€16m)**	**8**		**76 wks**	**Wed 24/08/22**	**Mon 08/04/24**
92	**Construction A4 - c. 104 Units (€19m)**	**13**		**100 wks**	**Wed 24/08/22**	**Mon 14/10/24**
102						
103	**Phase 2b - Demolition**			**18 wks**	**Mon 31/10/22**	**Tue 21/03/23**
104	Demolition of East Wing for new B2 block			12 wks	Mon 31/10/22	Mon 06/02/23
105	Demolition of West Wing for new B1 block			12 wks	Mon 31/10/22	Mon 06/02/23
106	Demolition of Rear of E1 block			6 wks	Tue 07/02/23	Tue 21/03/23
107						
108						
109	**Phase 2c - East West Road**			**16 wks**	**Mon 06/02/23**	**Tue 06/06/23**
110						
111	**Phase 3a - B1, E1, E2, E3, E4 Church & Library**			**46 wks**	**Mon 02/08/21**	**Tue 12/07/22**
112	Detailed Design			20 wks	Mon 02/08/21	Fri 17/12/21
113	BoQ & Tender Pack			8 wks	Mon 20/12/21	Mon 28/02/22
114	Tender Period			6 wks	Tue 01/03/22	Tue 12/04/22
115	Tender Negotiation, Award and Mobilsation			12 wks	Wed 13/04/22	Tue 12/07/22
116						
117	**Construction E1 - c. 56 Units, E3 & E4 (€10m)**	**4**		**76 wks**	**Wed 22/03/23**	**Thu 07/11/24**
124	**Construction E2 - c. 48 Units (€9m)**	**4**		**76 wks**	**Wed 22/03/23**	**Thu 07/11/24**
133	**Construction B1 - c. 92 Units (€17m)**	**'6-8**		**84 wks**	**Tue 07/02/23**	**Thu 21/11/24**
143						
144	**Phase 3b - B2, B3, C1 & C2 ****|			**68 wks**	**Mon 20/12/21**	**Thu 08/06/23**
145	Detailed Design			20 wks	Mon 20/12/21	Tue 31/05/22
146	BoQ & Tender Pack			6 wks	Wed 01/06/22	Tue 12/07/22
147	Tender Period			6 wks	Wed 13/07/22	Tue 06/09/22
148	Tender Negotiation, Award and Mobilsation			12 wks	Wed 07/09/22	Tue 29/11/22
149						
150	Central Basement Pile, Excavate, Fdns, Floor, Walls & Core to GF @ C1			12 wks	Wed 30/11/22	Wed 08/03/23
151	Central Basement Pile, Excavate, Fdns, Floor, Walls & Core to GF @ B2			12 wks	Tue 07/02/23	Tue 09/05/23
152	Central Basement Pile, Excavate, Fdns, Floor, Walls & Core to GF @ B3			12 wks	Thu 09/03/23	Thu 08/06/23
153						
154	**Construction C1 - c. 146 Units (€26m)**	**6**		**80 wks**	**Thu 09/03/23**	**Mon 25/11/24**
163	**Construction B2 - c. 137 Units (€24m)**	**6**		**80 wks**	**Wed 10/05/23**	**Fri 31/01/25**
172	**Construction B3 - c. 80 Units (€15m)**	**6**		**68 wks**	**Fri 09/06/23**	**Mon 25/11/24**
181	**Construction C2 - c. 96 Units (€17m) Subject to Access ?**			**72 wks**	**Fri 09/06/23**	**Tue 07/01/25**
190	**CONSTRUCTION COMPLETION**			**0 wks?**	**Fri 31/01/25**	**Fri 31/01/25**
191						
192	** incorporates Central Basement Works					
193						
194	**ISSUES TO BE RESOLVED / CONSIDERED**					
195	Multiple tenders and construtrion running concurrenth					
196	Irish Water Works ?					
197	ESB Incoming Power Supply ?					
198	GAA - Works / Services to Hotel ?					
199	GAA - Works / Services to Red House - Keep Live ?					
200	GAA - Works / Services to Clubrooms & Pitches ?					
201	GAA - JKW to be treated insitu					
202	Archbishops - JKW to be part removed/part treated ir					
203	Access to C1 site when C2 begins ?					
204	Out to tender before Grant of Permission					
205	Bricklayer resources / Precast with Brick Slips ?					



NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL ENGINEERS & ARCHITECT'S DRAWINGS.FIGURED DIMENSIONS ONLY (NOT SCALING) TO BE USED. WHERE A CONFLICT OF INFORMATION EXISTS OR IF IN ANY DOUBT - ASK'.
2. CONSULTANTS TO BE INFORMED IMMEDIATELY OF ANY DISCREPANCIES BEFORE WORK PROCEEDS.

PHASE 2A

PHASE 2B

PHASE 2C

PHASE 3A

PHASE 3B

PHASE 1

PHASE	DESCRIPTION
1	BLOCKS D1 & D2
2A	BLOCKS A1, A2, A3 & A4
2B	DEMOLITION OF EXISTING SEMINARY (NORTH AND EAST WINGS)
2C	NEW EAST WEST ROAD & ASSOCIATED UNDERGROUND SERVICES
3A	BLOCKS B1, E1, E2, CHURCH & LIBRARY
3B	BLOCKS B2, B3, C1 & C2

PHASING PLAN

SCALE @ A0: 1:500
SCALE @ A2: 1:1000

NOTE:
PHASING BOUNDARY LINES ARE APPROXIMATE

ISSUE	DATE	DESCRIPTION	DRN. / ORIG.	P.E. / P.D.
INF4	07.04.21	ISSUED FOR INFORMATION	SM / SM	MH / OK
PL2	31.03.21	ISSUED FOR DCC APPROVAL	SM / SM	MH / OK
INF3	22.03.21	ISSUED FOR INFORMATION	SM / SM	MH / OK
INF2	18.03.21	ISSUED FOR INFORMATION	SM / SM	MH / OK
PL1	20.11.20	ISSUED FOR PRE-PLANNING APP.	SM / SM	MH / OK
INF1	21.10.20	ISSUED FOR PRESENTATION	SM / SM	MH / OK

DRAWING STAGE: **PLANNING**

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CLIENT: **CWTC Multi Family ICAV**

PROJECT TITLE: **CLONLIFFE ROAD, DRUMCONDRA**
BM PROJECT No.: **19.253**
MODEL REFERENCE: -
MODEL REV.: -
SUITABILITY: -
DRAWING TITLE: **PHASING PLAN**
DRAWING No.: **CLA-BMD-00-ZZ-DR-C-3007**
ISSUE: **INF4**

Appendix C – Indicative Client Safety File Contents List

Client Safety File Information List

Client Safety File Information Needs List

DCON Safety Consultants Project Number: 0198

Project Name: Clonliffe Lands, Development Project

Ref	Folders and Subfolders	Folder Ref Nrs	Documents included	Subcontractor	PI Insurance	Specialist Insurance	Uploaded	Comments	BCaR Checked	Complete and on file
Ref	**Folders & Sub-folders**	**Folder and Subfolder Ref Nrs**	**Documents included**	**Subcontractor**	**PI Insurance**	**Specialist Insurance**	**Uploaded Y|N**	**Comments Y|N|N/A**	**BCaR Checked Y|N**	**Complete and on file Y|N**
0.0	Contents & Health & Safety	0.1	Contents							
		0.2	Project Directory (Design Team)							
		0.3	Project Directory (Subcontractors)							
		0.4	Architect Practical Completion Certificate							
		0.5	Safety File Handover Letter							
		0.6	Certificate of Compliance on Completion (PSCS | Main Contractor)							
		0.7	Certificate of Compliance on Completion Architect (Architect)							
		0.8	Certificate of Compliance on Completion Assigned Certifier							
		0.9	Certificate of Compliance on Completion Structural Engineer							
		0.10	Certificate of Compliance on Completion M&E Consultant							
		0.11	Ancillary certificates (subcontractors | supply chain contractors)							
1.0	Excavation	1.1	Site inspection documents							
		1.2	Waste Permits							
2.0	Foundations	2.1	Site foundation inspection report							
		2.2	Reinforcement rebar certificates							
		2.3	Concrete mix details							
		2.4	Ancillary certificate (PSCS | Main Contractor)							
		2.5	Cube test results							
		2.6	Reinforcement mesh Declaration of Performances (*DOP's*)							
		2.7	Certificate for crushed stone							
3.0	Substructure including floor screeds	3.1	Inspection reports from design team							
		3.2	Test certificates for stone & sand							
		3.3	Hollocore slabs including ancillary cert							
		3.4	Block certificates							
		3.5	Mortar mix details							
		3.6	Concrete lintels							
		3.7	Radon barrier DOP							
		3.8	Radon sump DOP							
		3.9	Radon barrier ancillary certificate							
		3.10	Underfloor insulation information							
		3.11	Concrete mix details							
		3.12	Pressure test of drainage pipes reports							
		3.13	Drainage DOP's							
		3.14	Watermain DOP's							
		3.15	Cube test results							
		3.16	Watermain test results (CCTV | pressure | jointing information etc)							
4.0	Rising walls to roof	4.1	Inpsection sheets from design team							
		4.2	Block & brick certificates							
		4.3	Cavity insulation information							
		4.4	Precast concrete design and product information (walls | slabs) and selected perimeter walls							
		4.5	Concrete & steel lintels (DOP's & certificates)							
		4.6	Cavity barriers information							
		4.7	Cavity closers information							
		4.8	Mortar mix details							
		4.9	Wall ties & DPC details							
		4.10	Airtightness membrane & tape information							
		4.11	Window cills details and information							
		4.12	Structural steel & beam information (including coating details and certificate)							
		4.13	Masonry and render finish information							
		4.14	Coating reports							
5.0	Roof structure	5.1	Inspection reports from design team							
		5.2	Roof material | system specification & guarantee (e.g. Sika)							
		5.3	Material DOP's							
		5.4	Ancillary certificate (roof structure)							
		5.5	Aluminium flashing informatio							
		5.6	Cavity Barrier (ceilng | roof void areas etc.)							
		5.7	Roof maintenance strategy							
6.0	External windows & doors	6.1	Inspection reports from design team							
		6.2	O&M manuals including certificates, DOP's, drawings, warranties etc							
		6.3	Ancillary certificate							
		6.4	Roof light information							
		6.5	Steel door ifnformation							
		6.6	Electrical window information							
		6.7	External windows & doors ironmongery information **(specific product manual pages only)**							
		6.8	Fire cert windows?							
7.0	Drainage	7.1	Inspection report from design team							
		7.2	Test certificates for stone & sand							
		7.3	Pressure test of drainage pipes report							
		7.4	Drainage DOP's							
		7.5	Ancillary certificate (PSCS | Main Contractor)							
		7.6	Drainage CCTV survey report							
8.0	Service ducting	8.1	Inspection report from design team							
		8.2	ESB duct information (as installed | residual (in place) etc)							
		8.3	Eircom duct information (as installed | residual (in place) etc)							

Client Safety File Information List

		8.4	Gas ducts (as installed | residual (in place) etc)							
		8.5	Generator to switch room duct(s) (as installed | residual (in place) etc)							
		8.6	Ducting across service yard gate (as installed)							
		8.7	Ducting to gate (as installed)							
		8.8	Ancillary certificate (PSCS | Contractor)							
9.0	Internal Floor screed	9.1	Inspection reports from design team							
		9.2	All floors DOP's							
		9.3	Screed certificate (PSCS | Contractor)							
		9.4	Ancillary certificate							
		9.5	Cube test results							
10.0	Internal partition walls	10.1	Inspection reports from design team							
		10.2	Stud partition DOP's specification, BBA certificate (if applicable) & associated fire rating information | certificates							
		10.3	Ancillary certificate							
		10.4	Fire rated partitions opinion of compliance (Fire Consultant)							
		10.5	Fire rated partitions opinion of compliance (PSCS | Main Contractor)							
11.0	Internal wall finishes	11.1	Inspection reports from design team							
		11.2	Vinyl for wet rooms & bedrooms							
		11.3	Finish to block walls, DOP's & product and safety data sheets							
		11.4	Wet coat finish to block walls, DOP's& product and safety data sheets etc							
		11.5	Ancillary certficates							
		11.6	Decorations DOP's (paint, tile, wallpaper, vinyl, any feature walls etc.)							
12.0	Mechanical	12.1	Inspection reports from design team							
		12.2	O&M Manuals including commissioning reports, ancillary certificates, as built drawings (in PDF and DWG) **(specific product manual pages only)**							
		12.3	M&E Consultant opinion of compliance							
		12.4	Gas certification (PSCS | Main Contractor)							
13.0	Electrical	13.1	Inspection reports from design team							
		13.2	O&M Manuals including commissioning reports, ancillary certificates, as built drawings (in PDF and DWG) **(specific product manual pages only)**							
		13.3	M&E Consultants opinion of compliance							
		13.4	Emergency lighting and fire dectection and alarm systems (#3217 and #3218 4-part certificates)							
		13.5	RECI/ECTI certification							
14.0	Ceiling finishes	14.1	Inspection reports from design team							
		14.2	Fire Ceiling - Material DOP's							
		14.3	MF Ceiling - Material DOP's							
		14.4	Grid ceiling - Material DOP's							
		14.5	Gypsm report							
		14.6	Access hatch details and product information							
		14.7	Ancillary certificates							
		14.8	Fire rated ceilings opinion of compliance							
		14.9	Rooflight information							
		14.10	Access ladder information							
15.0	Internal Doors & Screens	15.1	Inspection reports from design team							
		15.2	O&M Manuals, DOP's, fire certificates							
		15.3	Ancillary certificates							
		15.4	Ironmongery product information **(specific product manual pages only)**							
		15.5	Commissioning							
		15.6	Signage (ironmongery and wayfinding)							
16.0	Internal floor finishes	16.1	Inspection reports from design team							
		16.2	Ancillary certificates							
		16.3	Screeds & fillers							
		16.4	Underlays							
		16.5	Floor finishes							
17.0	Sanitary ware	17.1	Inspection reports from design team							
		17.2	DOP's and specification and product information **(specific product manual pages only)**							
18.0	Fire stopping	18.1	Inspection reports from design team							
		18.2	Fire consultant inspection report							
		18.3	Fire damper inspection report							
		18.4	Material DOP's							
		18.5	Fire certificate							
		18.6	Ancillary certificate							
		18.7	Opinion of compliance (Supply chain contractor)							
19.0	Air tightness	19.1	Air tightness test report							
		19.2	Inspection report from Design Team							
20.0	Paths, Paving & Grounds	20.1	Inspection sheets from design team							
		20.2	Concrete test results							
		20.3	Paving DOP's & data sheets							
		20.4	Tarmacadam DOP & data sheet							
		20.5	Ancillary certificates							
21.0	External railing, gates & Landscaping	21.1	Inspection sheets from design team							
		21.2	CE Certs, Mill certs, drawings & letter of compliance & commissioning							
		21.3	Steel certs							
		21.4	Fixings							
		21.5	Ancillary certs							
		21.6	Signage							
		21.7	External Lighting							
		21.8	Bike Racks							
		21.9	Landscaping							
		21.10	Aco drains							
		21.11	Fire Hydrants							
22.0	Fall arrest	22.1	Inspection sheet from design team							
		22.2	O&M Manuals, certs, warranties							
		22.3	Ancillary certificate							
23.0	As Built Drawings **(validated by Design Team)**	23.1	Underground services (PSCS - Main Contractor) (PDF and DWG)							
		23.2	Architects As Built drawings (Revit, PDF and DWG)							
		23.3	Structural As Built drawings (Revit, PDF and DWG)							
		23.4	M&E As Built (PDF and DWG)							
		23.5	Fire Consultant As Built drawings (Revit, PDF and DWG)							

Client Safety File Information List

24.0	IPS Panels & Toilet Cubicles	24.1	Design team inspection reports							
		24.2	O&M Manuals & drawings **(specific product manual pages only)**							
		24.3	Ancillary certificates							
25.0	Fire Dampers	25.1	Inspection reports from design team							
		25.2	DOP's							
		25.3	Fire stopping DOP's							
		25.4	Electrical elements, details, schematics etc.							
26.0	Fitted Furniture	26.1	Inspection reports from design team							
		26.2	DOP's							
		26.3	Ancillary certificate							

Appendix D – Daily Site Hoarding Inspection Template

Daily Contractor Safety Inspection Checklist

Main Contractor | PSCS:

Site:

Name of competent assessor:

Date: Time:

Today's key items of inspection	*Satisfactory/ Unsatisfactory*	*Follow-up Actions and Close Out Time*
Access | egress | public roadways:		
Site hoardings (daily inspection item)	Y / N	
Site entrance(s) (daily inspection item)	Y / N	
Gangways	Y / N	
Ladders	Y / N	
Passageways	Y / N	
Working at height:		
Scaffolding | working platforms	Y / N	
Floor edge / openings	Y / N	
Lift shafts / openings	Y / N	
Earthwork:		
Excavations	Y / N	
Trenches	Y / N	
Slopes	Y / N	
Lifting Applauses and Lifting Gear:		
Cranes	Y / N	
Winches	Y / N	
Pulley blocks	Y / N	
Passenger Hoists	Y / N	
Material or skip hoists	Y / N	
Suspended Working Platforms	Y / N	
Chains, ropes, hooks, slings	Y / N	
Electricity:		
Switches	Y / N	
Wiring	Y / N	
Fixed installations	Y / N	
Portable lighting	Y / N	
Portable tools	Y / N	
Welding Machinery	Y / N	
Fire prevention:		
Fire-fighting appliances	Y / N	
Dangerous goods stock	Y / N	
Gas welding cylinders	Y / N	

Daily Contractor Safety Inspection Checklist

Today's key items of inspection	*Satisfactory/ Unsatisfactory*	*Follow-up Actions and Close Out Time*
Health:		
Dust control on and outside site (daily inspection item)	Y / N	
Noise control (daily inspection item)	Y / N	
Protection from dangerous substrates	Y / N	
First-Aid equipment	Y / N	
Washing facilities	Y / N	
Toilets	Y / N	
Machinery:		
Woodworking machines	Y / N	
Hoist way	Y / N	
Abrasive wheels	Y / N	
Power tools	Y / N	
General:		
Cleanliness of public roadways outside site boundary (daily inspection item)	Y / N	
Housekeeping onsite	Y / N	
Safety Net and Fans	Y / N	
Stacking of materials	Y / N	
Passageways	Y / N	
Lighting	Y / N	
Ventilation	Y / N	
Provision of Personal Protective Equipment:		
Helmets	Y / N	
Eye protection (appropriately graded for task)	Y / N	
Ear Protections	Y / N	
Respirators	Y / N	
Hi visibility clothing	Y / N	
Safety Gloves (appropriately graded for task)	Y / N	
Safety boots	Y / N	
Other (please specify):		
	Y / N	

Name of assessor: _____

Signature of assessor: _____

Date of Inspection: _____

Appendix E – Overview of Safe Working Cycle

An Overview of the Safe Working Cycle

- Priority Items
- Important Items
- Planned Items

Daily Items	Weekly, monthly or intermittent items
	Weekly
Morning meeting	Weekly process safety discussion
Hazard Identification	Weekly site tidyingup
Prior-to-work Inspection equipment and electrical installation, etc.	Weekly inspection onmechanical equipment and electrical installation, etc.
Inspection by Safety supervisor	Weekly inspection
Guidance & supervision at work	
Inspection by Project manager/site agent	**Monthly**
	Safety Committee Meeting
Lunch break	Monthly inspection on mechanical equipment and electrical installation, etc.
Guidance and supervision at work	Safety training
Inspection by Project manager/site agent (When needed)	Safety meeting
Daily process safety discussion	
Tidying up afterwork	**On needed-basis**
Final check	Safety induction training courses for new staff
	Approval for new mechanical equipment
	Pre-commencement meeting with Subcontractors in advance
	Special meetings including safety meeting
	Various safety trainings

Appendix F – Development Traffic Management Plans

NOTES

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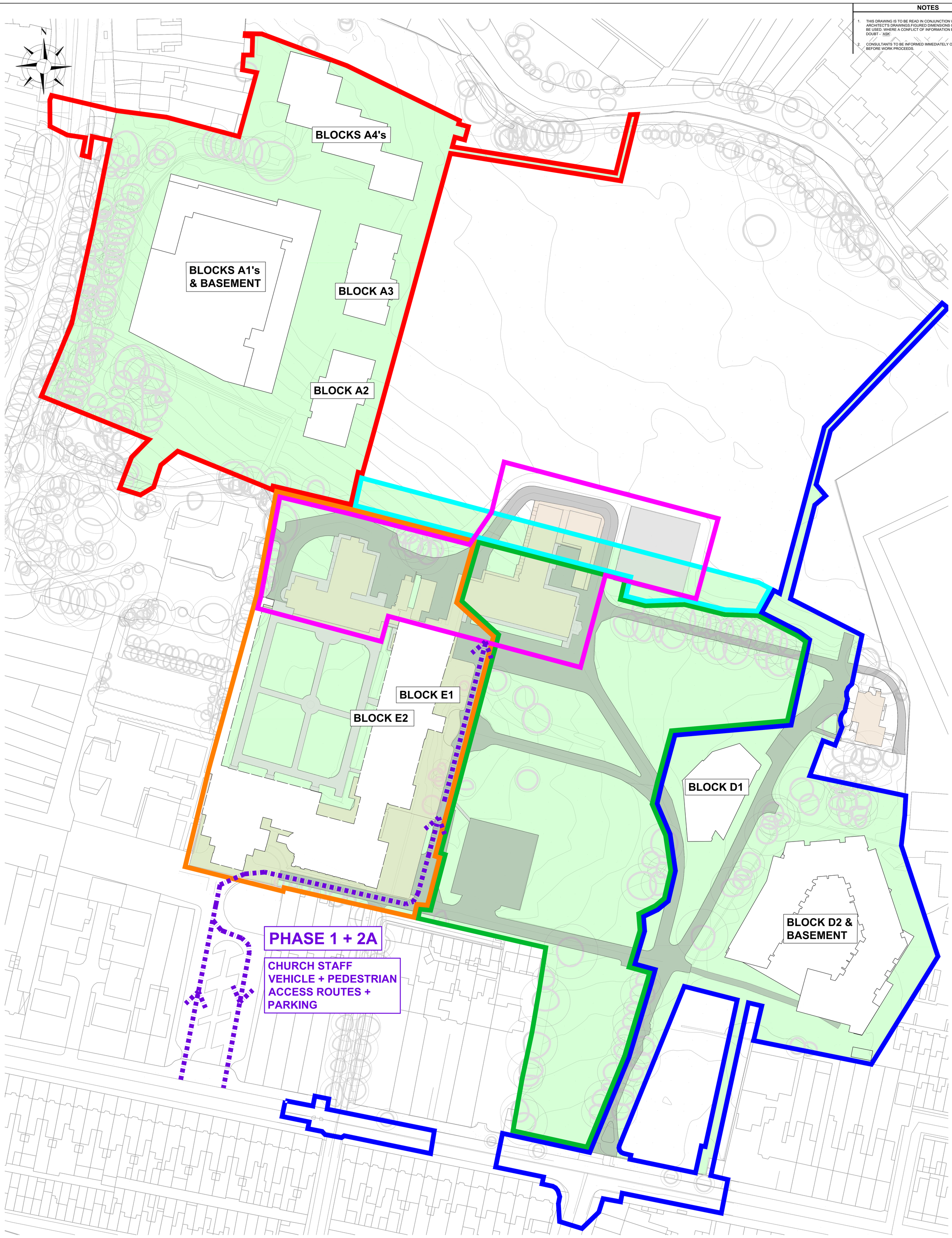

CHURCH STAFF VEHICLE, PEDESTRIAN ACCESS ROUTES & PARKING - PHASE 1 + 2A

SCALE @ A0: 1:500
SCALE @ A2: 1:1000

ISSUE	DATE	DESCRIPTION	DRN / ORIG	P.E / P.D.
INF2	07.04.21	ISSUED FOR INFORMATION	SM / SM	MH / OK
PL1	20.11.20	ISSUED FOR PRE-PLANNING APP.	SM / SM	MH / OK
INF1	21.10.20	ISSUED FOR PRESENTATION	SM / SM	MH / OK

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ACEI
International Federation of Consulting Engineers

CLIENT: **CWTC Multi Family ICAV**

PROJECT TITLE: **CLONLIFFE ROAD, DRUMCONDRA**

BM PROJECT No.: **19.253**

MODEL REFERENCE: -

MODEL REV.: -

SUITABILITY: -

DRAWING TITLE: **CHURCH STAFF VEHICLE, PEDESTRIAN ACCESS ROUTES & PARKING - PHASE 1 + 2A**

DRAWING No.: **CLA-BMD-00-ZZ-DR-C-3002**

ISSUE: **INF2**

NOTES

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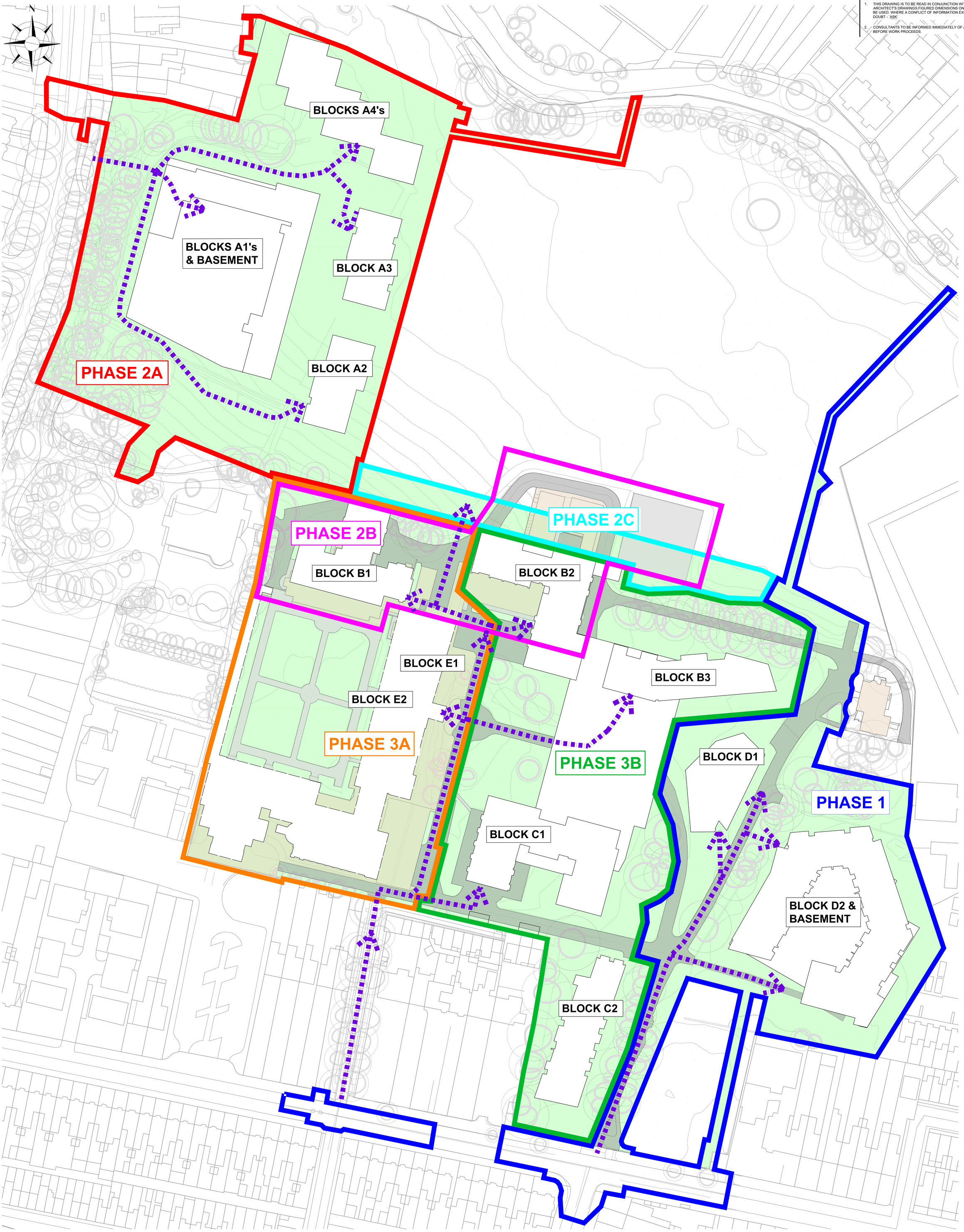

CONSTRUCTION STAFF ACCESS PEDESTRIAN ROUTES FOR PHASE 1, 2A, 2B, 2C, 3A & 3B

SCALE @ A0: 1:500
SCALE @ A2: 1:1000

ISSUE	DATE	DESCRIPTION	DRN. / ORIG.	P.E. / P.D.
INF2	07.04.21	ISSUED FOR INFORMATION	SM / SM	MH / CK
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BM PROJECT No.: **19.253**

MODEL REFERENCE: -

MODEL REV.: -

SUITABILITY: -

DRAWING TITLE: **CONSTRUCTION STAFF ACCESS PEDESTRIAN ROUTES FOR PHASE 1, 2A, 2B, 2C, 3A & 3B**

DRAWING No.: **CLA-BMD-00-ZZ-DR-C-3003**

ISSUE: **INF2**

NOTES

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N

TEMPORARY CONSTRUCTION ACCESS ROAD - FORMED DURING ENABLING WORKS

PHASE 1

CONSTRUCTION VEHICLE ACCESS TEMPORARY ROAD - PHASE 1

SCALE @ A0: 1:500
SCALE @ A2: 1:1000

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INF2	07.04.21	ISSUED FOR INFORMATION	SM / MH
PL1	20.11.20	ISSUED FOR PRE-PLANNING APP.	SM / OK
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CLIENT: **CWTC Multi Family ICAV**

PROJECT TITLE: **CLONLIFFE ROAD, DRUMCONDRA**

BM PROJECT No.: **19.253**

MODEL REFERENCE: -

MODEL REV.: -

SUITABILITY: -

DRAWING TITLE: **CONSTRUCTION VEHICLE ACCESS TEMPORARY ROAD PHASE 1**

DRAWING No.: **CLA-BMD-00-ZZ-DR-C-3000**

ISSUE: **INF2**

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2. CONSULTANTS TO BE INFORMED IMMEDIATELY OF ANY DISCREPANCIES BEFORE WORK PROCEEDS.

N

BLOCKS A4's

BLOCKS A1's & BASEMENT

BLOCK A3

PHASE 2A

BLOCK A2

PHASE 2B

PHASE 2C

BLOCK B1

BLOCK B2

BLOCK E1

BLOCK B3

BLOCK E2

PHASE 3A

BLOCK D1

BLOCK C1

PHASE 3B

PHASE 1

BLOCK D2 & BASEMENT

CONSTRUCTION VEHICLE ACCESS TEMPORARY ROAD & INTERNAL ROUTES FOR PHASE 1, 2A, 2B, 2C, 3A & 3B

SCALE @ A0: 1:500
SCALE @ A2: 1:1000

ISSUE	DATE	DESCRIPTION	DRN. / ORIG.	P.E. / P.D.
INF2	07.04.21	ISSUED FOR INFORMATION	SM / SM	MH / OK
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CLIENT
CWTC Multi Family ICAV

PROJECT TITLE	BM PROJECT No.
CLONLIFFE ROAD, DRUMCONDRA	19.253

MODEL REFERENCE	MODEL REV.	SUITABILITY
-	-	-

DRAWING TITLE
CONSTRUCTION VEHICLE ACCESS TEMPORARY ROAD & INTERNAL ROUTES FOR PHASE 1, 2A, 2B, 2C, 3A & 3B

DRAWING No.	ISSUE
CLA-BMD-00-ZZ-DR-C-3001	INF2

Appendix G – Indicative Site Compound Locations

NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL ENGINEERS & ARCHITECT'S DRAWINGS.FIGURED DIMENSIONS ONLY (NOT SCALING) TO BE USED. WHERE A CONFLICT OF INFORMATION EXISTS OR IF IN ANY DOUBT - ASK.
2. CONSULTANTS TO BE INFORMED IMMEDIATELY OF ANY DISCREPANCIES BEFORE WORK PROCEEDS.

PHASE 2A
SITE COMPOUND

PHASE 2B
SITE COMPOUND

PHASE 3A
SITE COMPOUND

PHASE 2C
SITE COMPOUND

PHASE 3B
SITE COMPOUND

PHASE 1
SITE COMPOUND

RED HOUSE *

PHASE 1
SITE COMPOUND

SITE COMPOUNDS FOR PHASE 1, 2A, 2B, 2C, 3A & 3B

SCALE @ A0: 1:500
SCALE @ A2: 1:1000

* - SUBJECT TO GAA AGREEMENT

ISSUE	DATE	DESCRIPTION	DRN / ORIG	P.E / P.D.
INF3	07.04.21	ISSUED FOR INFORMATION	SM / SM	MH / OK
PL1	20.11.20	ISSUED FOR PRE-PLANNING APP.	SM / SM	MH / OK
INF2	28.10.20	REVISED AS REQUIRED	SM / SM	MH / OK
INF1	21.10.20	ISSUED FOR PRESENTATION	SM / SM	MH / OK

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CLIENT: **CWTC Multi Family ICAV**

PROJECT TITLE	BM PROJECT No.
CLONLIFFE ROAD, DRUMCONDRA	19.253

MODEL REFERENCE	MODEL REV.	SUITABILITY
-	-	-

DRAWING TITLE: **SITE COMPOUNDS FOR PHASE 1, 2A, 2B, 2C, 3A & 3B**

DRAWING No.	ISSUE
CLA-BMD-00-ZZ-DR-C-3004	INF3

Appendix H – Servicing of Site Compounds

NOTES

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CONNECTION TO EXISTING 675Ø IW SEWER

Ex.C

PHASE 2A
SITE COMPOUNDS WELFARE CONNECTION

PHASE 2B
SITE COMPOUNDS WELFARE CONNECTION

PHASE 3A
SITE COMPOUNDS WELFARE CONNECTION

PHASE 2C
SITE COMPOUNDS WELFARE CONNECTION

PHASE 3B
SITE COMPOUND WELFARE CONNECTION

PHASE 1
SITE COMPOUND WELFARE CONNECTION

Ex.C

CONNECTION TO EXISTING FOUL MANHOLE INSIDE SITE BOUNDARY

SITE COMPOUNDS CONNECTION TO EXISTING FOUL DRAINAGE - PHASE 1, 2A, 2B, 2C, 3A & 3B

SCALE @ A0: 1:500
SCALE @ A2: 1:1000

* - CONNECTIONS TO EX. FOUL DRAINAGE

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INF3	07.04.21	ISSUED FOR INFORMATION	SM / SM	MH / OK
PL1	20.11.20	ISSUED FOR PRE-PLANNING APP.	SM / SM	MH / OK
INF2	28.10.20	REVISED AS REQUIRED	SM / SM	MH / OK
INF1	21.10.20	ISSUED FOR PRESENTATION	SM / SM	MH / OK

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PROJECT TITLE: **CLONLIFFE ROAD, DRUMCONDRA**
BM PROJECT No.: **19.253**
MODEL REFERENCE: -
MODEL REV.: -
SUITABILITY: -

DRAWING TITLE: **SITE COMPOUNDS CONNECTION TO EXISTING FOUL DRAINAGE - PHASE 1, 2A, 2B, 2C, 3A & 3B**

DRAWING No.: **CLA-BMD-00-ZZ-DR-C-3006**
ISSUE: **INF3**