

8. Control and Monitoring of Noise, Vibration and Dust on site

8.1 Condition Surveys

It will be necessary to carry out a detailed condition survey of all adjoining lands and properties prior to any works commencing on site, with particular attention paid to the protected structures noted previously in this report. In addition, baseline movement monitoring will be carried out in line with best practice.

8.2 Noise Monitoring

The contractor will deal with the immediate dangers to hearing etc. associated with high noise levels and the impact of same on construction operatives by means of risk assessment and mitigation / precautionary measures and equipment, all in full compliance with the current Health and Safety legislation.

Noise on site shall comply with Safety, Health and Welfare at work (construction) Regulations 2006 to 2013, Safety, Health and Welfare at Work Act 2005, BS 6187:2011 - Code of Practice for full and partial demolition, BS 5228:2009+A1:2014 Parts 1 & 2 - Code of Practice for noise and vibration control on construction and open sites (hereafter referred to as BS 5228), Environmental Protection Agency Act 1992 Sections 106-108, including all Local Authority specific requirements for this specific site.

A survey of baseline noise and vibration will be undertaken to gain an understanding of the typical range of the existing conditions in the surrounding area. Methods of minimising construction noise and vibration will be implemented where possible. The Main Contractor is to implement these recommendations and utilise the most efficient construction methods to reduce the impact on the neighbouring environment.

The nature of construction activities means that a certain level of noise is inevitable, but the appointed Main Contractor must endeavour to minimise this as far as practically possible and reduce the effect and any nuisance to the surrounding environment and neighbours.

Work methods are to be reviewed to ensure minimal noise and vibration are created; methods should include:

- Each item of plant used on site complies with the noise limits quoted in the relevant European Commission Directive 2000/14/EC/ [S.I. No. 632 of 2001].
- All plant and equipment liable to create noise whilst in operation will, as far as reasonably practicable, be located away from sensitive receptors and neighbouring occupied buildings.
- The use of barriers and hoarding to absorb and/or deflect noise away from noise sensitive areas will be employed where required and reasonably practicable.
- All plant, equipment and noise control measures applied to plant and equipment shall be maintained in good and efficient working order and operated such that noise emissions are minimised as far as reasonably practicable. Any plant, equipment or items fitted with noise control equipment found to be defective shall not be operated until repaired.
- Fixed items of construction plant shall be electrically powered in preference to diesel or petrol driven. The Main Contractor shall ensure that vehicles and mechanical plant employed for any activity associated with the construction works will, where reasonably practicable, be fitted with effective exhaust silencers.

- Machines in intermittent use shall be shut down or throttled down to a minimum during periods between works. Static noise emitting equipment operating continuously will be housed within suitable acoustic enclosures, where appropriate.
- Tower cranes will be utilized instead of crawler cranes as these are electrically powered and quieter in operation.
- Noise suppression hammers and shields will be used on rock breaking equipment.
- Working hours will be confined to those stipulated in the grant of planning permission.
- Noise emitting processes such as concrete breaking can be suspended during sensitive hours, to be agreed in consultation with DCC and neighbours.
- Alternative work practices will be investigated where the noise emitted is reduced (for example prefabricating building components off site).
- Site deliveries will be confined to working hours and allocated offloading location will be utilized for all deliveries.
- The Site Manager will also continually review and monitor the noise / dust / vibration levels / risk throughout the duration of the project and if necessary, adjust / add to the control measures to be employed to reduce nuisance.

8.2.1 Measures to Mitigate Noise

Of particular consideration is the noise from construction activities adjacent to the public footpaths and commercial areas (Moore Street, Henry Street and O'Connell Street Upper). Noise mitigation measure will be proposed by the Contractor and may include:

1. The installation of a solid timber hoarding to provide noise insulation.
2. A high-level acoustic wrap applied to the scaffolding to provide some degree of noise barrier.
3. Particularly noisy works can have an acoustic noise control barrier put around them when the works are being carried out.
4. When jack hammers are used a "no racket" jacket will be applied which reduced the noise by up to 10db when 50ft away.



Figure 15 – Typical Noise Mitigation Measures

8.3 Vibration

During the course of the work proposed ground borne vibrations from the proposed works could give rise to adverse effects to the Heritage Structures / Protected Structures / National Monument and these control measures are to be put in place during the works to ensure protection of the structures and finishes.

Details of the control measures, proposed monitoring regime, limits and mitigation measures are specific to each Site and reference should be made to the Outline Construction and Demolition Management Plan specific to each Site and submitted as part of this planning application.

8.3.1 Vibrations Standards

Vibration standards come in two varieties: those dealing with human comfort and those dealing with cosmetic or structural damage to buildings. In both instances, it is appropriate to consider the magnitude of vibration in terms of Peak Particle Velocity (PPV). Guidance relevant to acceptable vibration within buildings is contained in the following documents:

- British Standard BS 7385:1993: Evaluation and Measurement of Vibration in Buildings Part 2: Guide to Damage Levels from Ground borne Vibration (hereinafter referred to as BS7385:1993).
- British Standard BS 5228-2 2009+A1:2014: Code of Practice for Noise and Vibration Control on Construction and Open Sites – Vibration (hereinafter referred to as BS 5228-2 2009+A1:2014)

8.4 Air & Dust Management

A dust management plan will be compiled by the Main Contractor for the development.

The following precautions to minimise nuisance to the public and neighbouring occupiers caused by dust and dirt will be carried out by the contractor.

- Vehicle and wheel washing facilities shall be provided at site exit where practicable. If necessary, vehicles are to be washed down before exiting the site.
- Netting is to be provided to enclose scaffolding to mitigate escape of air borne dust from the existing buildings.
- Shroud piling machinery as shown below when operating near to boundaries.
- Engines and exhaust systems should be maintained so that exhaust emissions do not breach stationary emission limits set for the vehicle / equipment type and mode of operation.
- Dust emission over the site boundary should be minimised using static sprinklers or other watering methods as necessary.
- No burning of materials to be permitted on site.
- Water sprays for dust suppression should be affixed to mechanical excavators/munchers involved in demolition works.
- Demolition waste should be removed from site as quickly as possible to minimise risk of dust generation and any fine material should be covered with a tarpaulin or similar material and tied down.
- Water sprays and cannons should be used where possible during cutting, with protective measures applied to retained finishes local to the cutting.

- Prior to commencement, the Main Contractor should identify the construction operations which are likely to generate dust and to draw up action plans to minimise emissions.
- In areas of poor natural ventilation, dust capture/extraction methods should be employed by the Main Contractor.
- The Main Contractor should allocate suitably qualified and experienced personnel to be responsible for ensuring the generation of dust is minimised and effectively controlled.
- The Main Contractor will be required to appoint a senior member of its site management team to act as the liaison with third parties in respect of complaints regarding dust and or site activities.
- Monitoring of dust deposition should be undertaken at nominated boundary locations to ensure that dust levels comply with the TA Luft limit value of $350\text{mg}/(\text{m}^2/\text{day})$ based on a 30-day average using Bergerhoff gauges (Limits to be agreed with local authority).



Figure 16 – Typical Dust Mitigation Measures

9. Archaeology

Archaeological monitoring will take place where any preparatory ground reduction works are required including site investigation works and opening up works at basement or ground levels. Post-demolition archaeological investigation will be carried out in areas across the site without basements. This is required to establish the nature of below ground structures, foundation remnants and features of archaeological and historical importance and to establish the presence or otherwise of archaeological remains. Further resolution may involve the recording of historic features and full archaeological excavation (i.e., preservation of the archaeology in record form, of all archaeological soils or features encountered). The resolution will occur during this post demolition phase in the area of the find spot in advance of the main construction phase.

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10. Ground Water Control

Details of the proposed ground water control are outlined in the Subterranean Construction Method Statement and Basement Impact Assessment and relevant to each Site and submitted as part of this planning application.

11. Building Control Amendment Regulations

11.1 Quality Assurance during Construction and BC(A)R Compliance

The Main Contractor/Contractors will need to demonstrate how they will be providing quality in construction. They shall comply fully with all requirements of the Amended Building Control regulations to the satisfaction of the Ancillary and Assigned certifiers.

The Main Contractor/Contractors will be responsible for the preparation of benchmark samples of each new element of the works to the satisfaction of the Assigned and Ancillary Certifiers under the Building Control regulations (BCAR). Each benchmark sample will be considered a 'hold point' under the Preliminary Inspection Plan (PIP) and will be required to be offered up to the Certifiers involved ahead of the works starting - with a minimum of two days' notice (in writing).

The Main Contractor/Contractors will be required to keep pre- and post-pour check sheets for submission to the assigned and ancillary certifiers where required.

Written acceptance will be required from the Certifiers after inspection of the benchmark samples before the rest of the works proceed.

Where 'specialist' suppliers are noted by the design team to have design responsibility, they will be required to provide Certificates of Design (Sd), Certificates of Inspection (Si) and Certificates of Completion (Sc). Ahead of appointment of the 'specialist' suppliers / designers - evidence of competency and Professional Indemnity insurance cover will be required for the approval of the Contract Administrator and Waterman Moylan.

This is to be confirmed by the Main Contractor/Contractors once appointed and will include a quality check regime.

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12. Liaison with Third Parties

It is imperative that the Main Contractor/Contractors engages in discussions with local residents, businesses and the general public well in advance of work commencing on site. Formal communication should be provided to immediate neighbours regarding activities or possible disruptions.

The appointed contractor will be required to adopt the practices covered under the 'Considerate Constructors Scheme' for establishing a good neighbour strategy and maintaining good relationships with neighbouring communities. The ideas described within this scheme will be implemented on site where applicable to minimize negative impact on local community and the environment.

Handling of any complaints must be logged and actioned quickly by the Main Contractor/Contractors.



APPENDIX A

Masterplan Programme





DUBLIN CENTRAL MASTERPLAN PROGRAMME REPORT

for Dublin Central GP Ltd

25th May 2021

CERTO

Management Services

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Appendix A - Public Realm Phasing Approach - Demonstrating Availability of the Public Realm when delivering the Dublin Central Masterplan

Glossary of terms used:

Dublin Central	Name given to a proposed mixed-use development situated upon a 2.2ha site, located in Dublin 1
Overall Site	Comprises Sites 1, 2, 3, 4 & 5 in totality
Individual Sites	Individual components of the Overall Site
Advanced Works	Works that will include asbestos removal, demolition, archaeological investigations to Site 2
Enabling Works for MetroLink (MEW)	The MetroLink 'shell' of approximate dimensions 120m x 26m x 25m (length x width x depth)

1.0 INTRODUCTION

The purpose of this report is to set out the overall programme for the delivery of the inter-related sites (the 'Individual Sites') within the Dublin Central site (the 'Overall Site') and the resultant impact upon the duration required for each planning permission being sought.

The Overall Site (c. 2.2 ha) is located within a constrained, historically sensitive urban context with a variety of important stakeholders. Delivery of the project has necessitated careful planning from the outset, to ensure that it is delivered sensitively but also without undue delay.

The Overall Site encompasses almost entirely three urban blocks. The area is bounded generally by O'Connell Street Upper and Henry Place to the east, Henry Street to the south, Moore Street to the west, and O'Rahilly Parade and Parnell Street to the north. Moore Lane extends south from Parnell Street through the centre of the Overall Site, as far as its junction with Henry Place.

The project, by its very nature, necessitates a phased delivery strategy to suit the constraints and complexities tied to the Overall Site. A site-by-site phasing strategy has been adopted as the optimal solution in delivering the works, which, in summary leads to the construction of the Individual Sites on a phased basis in a south to north direction.

The Individual Sites that are covered by this development are as indicated in Figure 1 below:

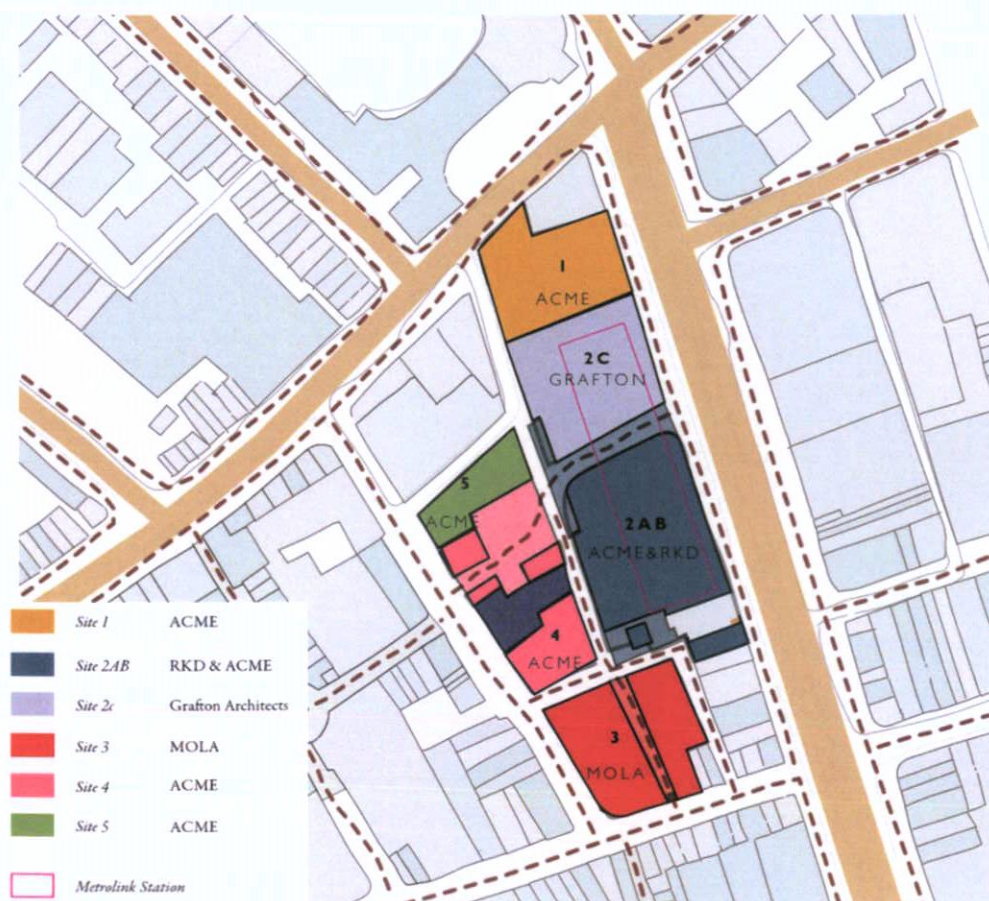


Figure 1: The Dublin Central Masterplan: Individual Sites.

In devising a delivery strategy, five key constraints have been considered¹:

1. Restricted access arising from the surrounding road network and the narrow existing lanes within the Overall Site.
2. Restricted access arising from two major pedestrianised streets flanking the Overall Site.
3. Protected Structures and non-protected structures proposed to be retained.
4. Neighbours including residents and local businesses.
5. The scale and nature of construction works to be undertaken.

The carefully considered strategy is borne out of these key constraints, resulting in a co-dependent construction approach that provides a realistic, sequential and most importantly, deliverable, scheme.

As this report sets out, the challenge will be to deliver the Dublin Central project and related works as quickly as possible being cognisant of the constraints and risks to programme that may arise. For several of the individual sites, above normal construction programmes necessitate above normal planning permission durations being proposed.

The approval periods that are sought are as follows:²

Site 2AB	-	11 years	
Site 2C	-	11 years	
Site 3	-	7 years	} These will be constructed in tandem
Site 4	-	7 years	
Site 5	-	15 years	

This report seeks to provide a rationale as to these requested durations, bearing in mind the following:

- i) Where one commences a development that has been permitted under Section 34 of the Planning & Development Act 2000, as amended, the requirement is that it is completed within the lifetime of that permission.
- ii) Amendments to The Planning & Development Act 2000, while yet to be implemented, restrict the ability to seek an extension of duration of any permission where an EIAR was submitted with the planning application (as is the case with Dublin Central applications).

This report includes the general programme intention for Site 1 for completeness, but as noted elsewhere the date for the application is yet to be determined and hence the detail included within this report for Site 1 is subject to change.

¹ These constraints are discussed further in Section 2.0.

² The proposed programme assumes final grant of planning permission by June 2022 for each Site.

2.0 SITE CONSTRAINTS

A range of constraints are present on the Overall Site that have an impact on the proposed programme for the delivery of the Dublin Central development. The previously identified five key constraints are now discussed in more detail below:

1. Restricted access arising from the surrounding road network and the narrow existing lanes within the Overall Site.

The Overall Site is bounded to the east with O'Connell Street, a busy thoroughfare that accommodates the Luas along its central median. The street has a restricted vehicular traffic and servicing regime, relatively high footfall and is a confluence of Luas, Dublin Bus and leisure transportation (open top buses).

Constraints arising from the existing street network effectively dictate that the bulk of construction traffic must access the Overall Site, from Parnell Street, onto Moore Street, east along O'Rahilly Parade before egressing north up Moore Lane. It is preferable to have a counter-clockwise access route as far as Moore Street is concerned as the vehicles used to take muck away will be empty when using Moore Street, hence this will help to minimise dust on Moore Street.

Figures 2 and 3 below show how traffic is proposed to access and egress the Overall Site.

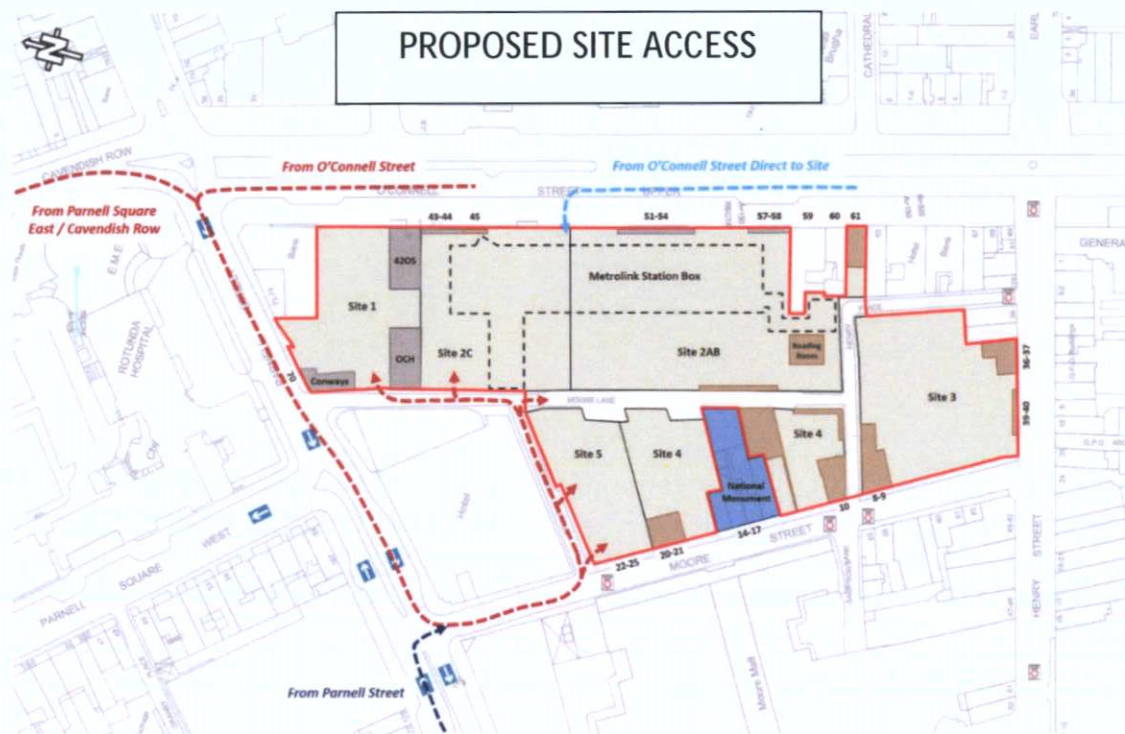


Figure 2 – Proposed site access

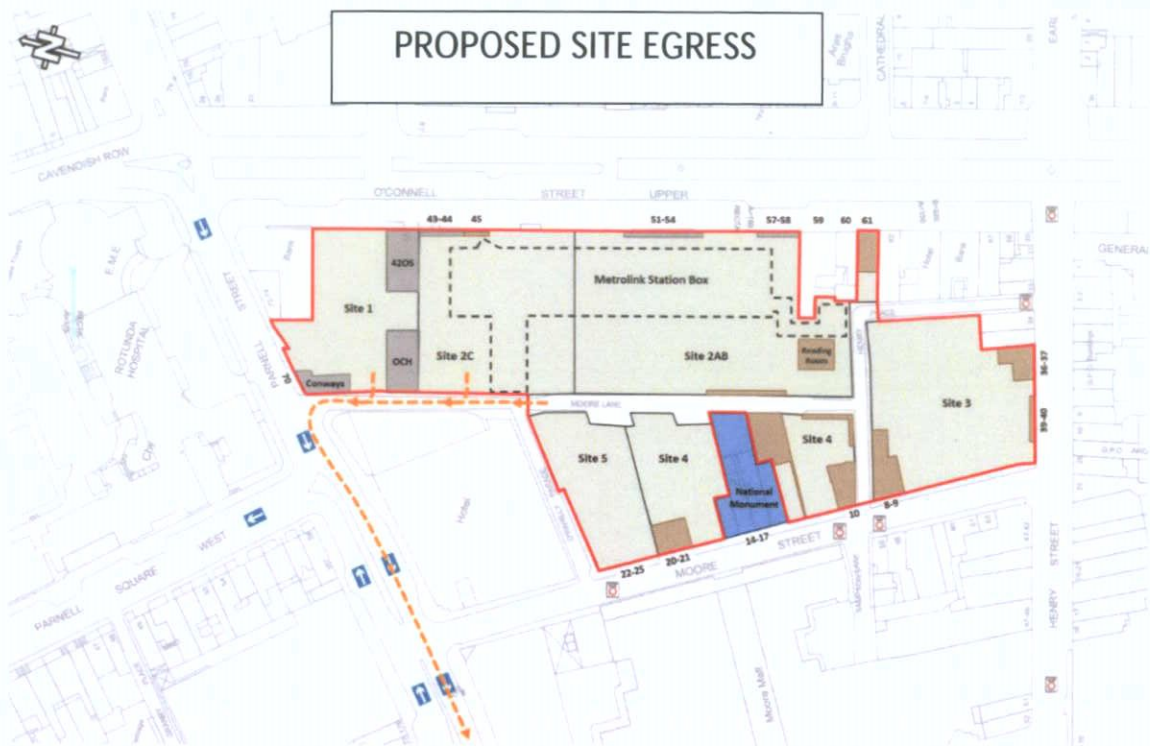


Figure 3 – Proposed site egress

The internal laneways within the Overall Site of Moore Lane, O’Rahilly Parade and Henry Place are narrow in nature and have a number of tight corners that restrict the ability of large vehicles to manoeuvre freely and quickly around the site.

The narrowness of the existing traffic access ways dictates that some temporary junction improvement works will be required to be carried out to facilitate vehicular access – these areas are shown below with green circles in Figure 7.

Once construction activity starts it will be necessary to provide a temporary haul road as shown below on Figure 8 to take heavy traffic away from the National Monument and other retained structures, predominantly in Site 4.

2. Restricted access arising from two major pedestrianised streets flanking the Overall Site.

Henry Street, one of the city's busiest pedestrianised thoroughfares, flanks the Overall Site to the south. Henry Street is pedestrianised after 11:00 am daily (service vehicles only prior to 11:00 am daily).

Moore Street, home to the long-standing street-market flanks the Overall Site to the west and is similarly pedestrianised after 11:00am (service vehicles only prior to 11:00 am daily).

In terms of streets available for vehicular construction access, this leaves only Parnell Street and O'Connell Street as primary options to access the Overall Site.



Figure 4: Henry Street, Dublin 1

3. Protected Structures and non-protected structures proposed to be retained.

Owing to the long and varied history of the Overall Site, there are several structures of heritage significance that must be carefully managed during works. These are shown in Figures 5 and 6 below:

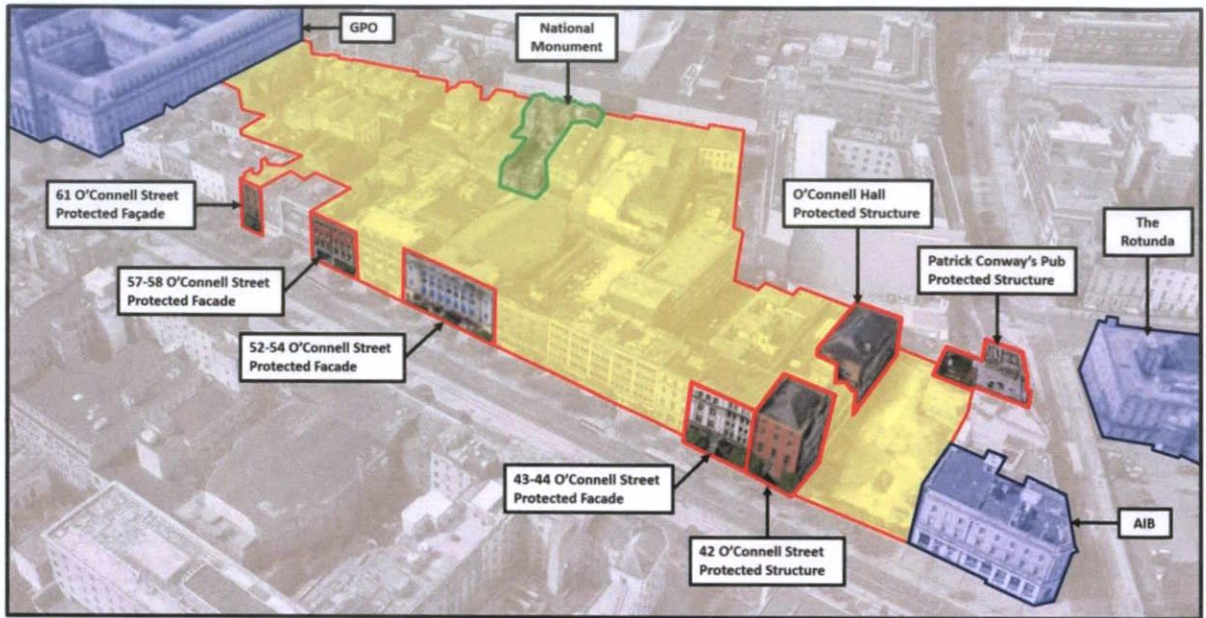


Figure 5- Protected Structures in and around the Overall Site.

Figure 6 below shows in plan form Protected Structures as well as non-protected structures anticipated to be retained, as follows:

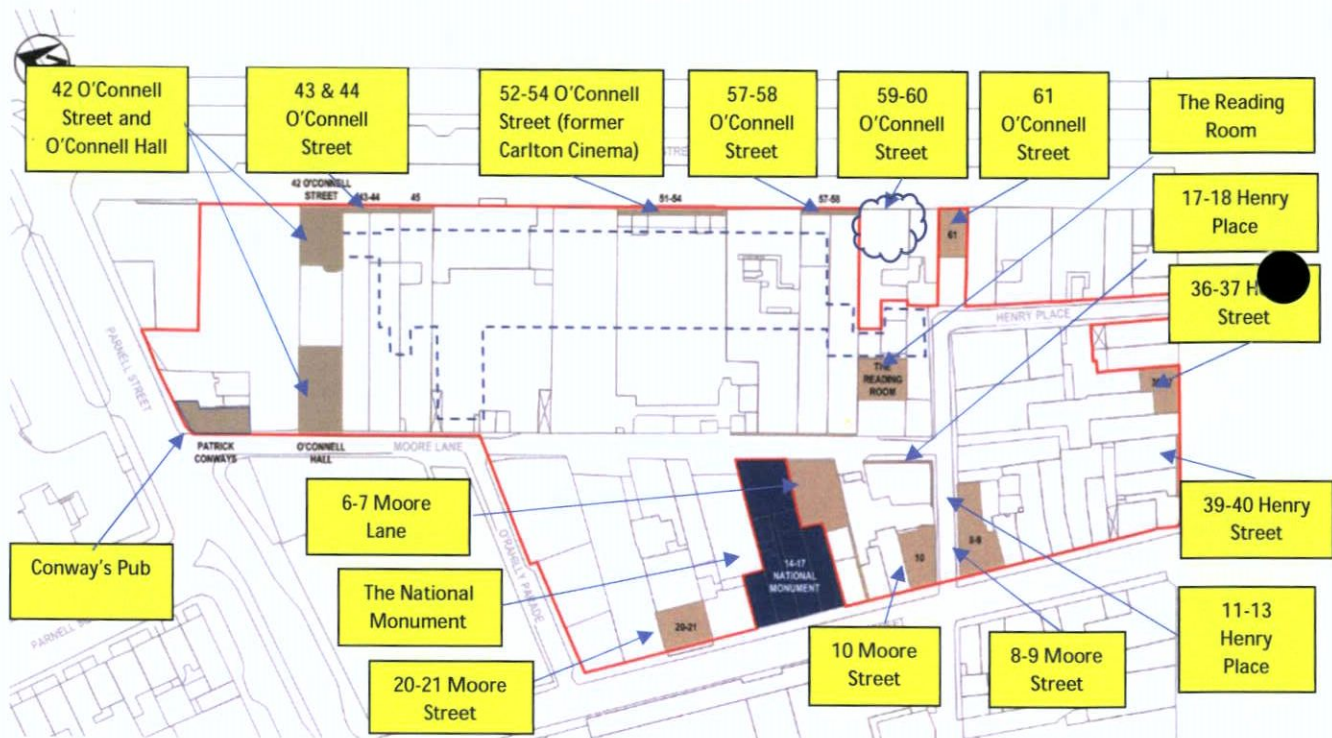


Figure 6 - Protected Structures and non-protected structures proposed to be retained.

Protected structures along O'Connell Street that are within the development lands are as follows:

- i) 42 O'Connell Street & O'Connell Hall (to the rear)
- ii) 52-54 O'Connell Street (former Carlton cinema; façade above ground floor only)
- iii) 43 & 44 O'Connell Street (façades above ground floor only)
- iv) 57-58 O'Connell Street (façades above ground floor only)
- v) 61 O'Connell Street (façades above ground floor only)
- vi) 70 Parnell Street (Conways Pub)

Non-Protected structures to be retained:

- i) 8-9 Moore Street
- ii) 10 Moore Street
- iii) 20-21 Moore Street
- iv) 17-18 Henry Place
- v) 6-7 Moore Lane
- vi) 11-13 Henry Place
- vii) 36-37 Henry Street
- viii) 39-40 Henry Street (upper floor facades only)
- ix) 'The Reading Room' located to the Rear of No. 59 O'Connell Street
- x) Buildings fronting 59/60 O'Connell Street (whilst outside of the Overall Site, they must be considered to ensure impacts are managed).
- xi) 61 O'Connell Street (whilst only the façade is protected, it is currently being assessed as to whether the building will be retained or solely the façade).

Note that works in proximity to the National Monument require Ministerial Consent.

4. Neighbours including residents and local businesses.

In addition to the many shop traders on Moore Street, Moore Street is home of the Moore Street Market. The construction approach needs to take cognisance of the market traders and other retailers to allow for continuity of trading.

An active market and retail environment necessitates that construction vehicles must move off Moore Street / O'Rahilly Parade quickly, to avoid queuing on the street, and should progress to site immediately. Site 5 has been designated as the area to be used to receive the construction traffic before it progresses to a designated workface, compound or materials storage area, see Figure 7 below:

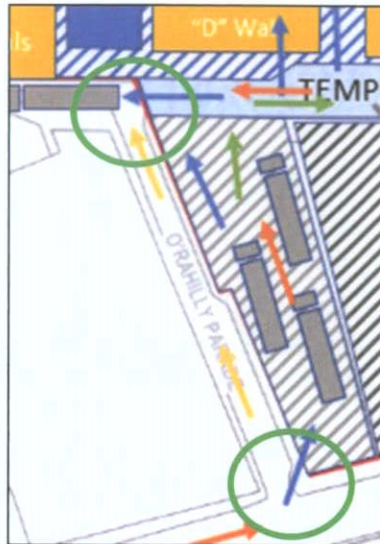


Figure 7 – Area to be used to receive construction traffic

5. The scale and nature of construction works to be undertaken.

The Dublin Central Masterplan anticipates delivering 77,090 sqm GFA in commercial and residential development. In isolation, delivering such a quantum in the context of the constraints noted above already puts significant pressure on any programme for delivery.

The 13No. months of the Advanced Works at Site 2 will consist of asbestos removal, soft strip and demolition, together with temporary works including protection of fabric proposed to be retained. This will be followed by an archaeological assessment in the normal way.

The Enabling Works for MetroLink on Site 2 that follow will require significant excavation followed by the construction of a MetroLink 'shell' of approximate dimensions 120m x 26m x 25m (length x width x depth), to be delivered within Site 2, as part of the Dublin Central GP Ltd.'s scope of works.

Unsurprisingly, the scope of the Enabling Works for MetroLink add considerably to the overall construction programme and carry additional inherent risks to programme. The Enabling Works for MetroLink must be substantially complete in order for the Sites 2AB and 2C Oversight Developments to proceed; approximately 3 and 2 years respectively after the commencement of the Enabling Works for MetroLink (on a risk adjusted basis, this timeline moves out to 6 years and 4 years, respectively).

Construction traffic volumes through the centre of the Overall Site during the above will constrain the pace of progress of Site 3 and Site 4, which will be progressed in tandem with Site 2. This constraint arises as a consequence of the single arterial road running in a north/south direction through the Overall Site (Moore Lane); acting as the sole point of access to each of the Individual Sites, as demonstrated in Figure 8.



Figure 8 – Necessary site area for construction and access / egress points.

With respect to Figure 8, the following should be noted:

- Separate contractors may be required for some/all of the Individual Sites, particularly given the variety of uses and the specialist nature of certain works. Each of these will have their own welfare and logistical needs.
- For Site 2, a considerable volume of excavated material must be disposed of offsite (estimated at 111,900m³), requiring a significant number of vehicular movements along the temporary haul road (Moore Lane).
- For Site 2, specialist construction works will necessitate significant additional space on-site for plant including a specialist compound for bentonite plant, reinforcement cages and dewatering equipment.
- The upshot of the above will lead to congestion on the Overall Site, which will in turn reduce construction efficiencies.

3.0 CONSTRUCTION SEQUENCE

In the context of Sections 1 & 2 above, the optimal construction approach can be shown graphically in Figure 9 as follows:

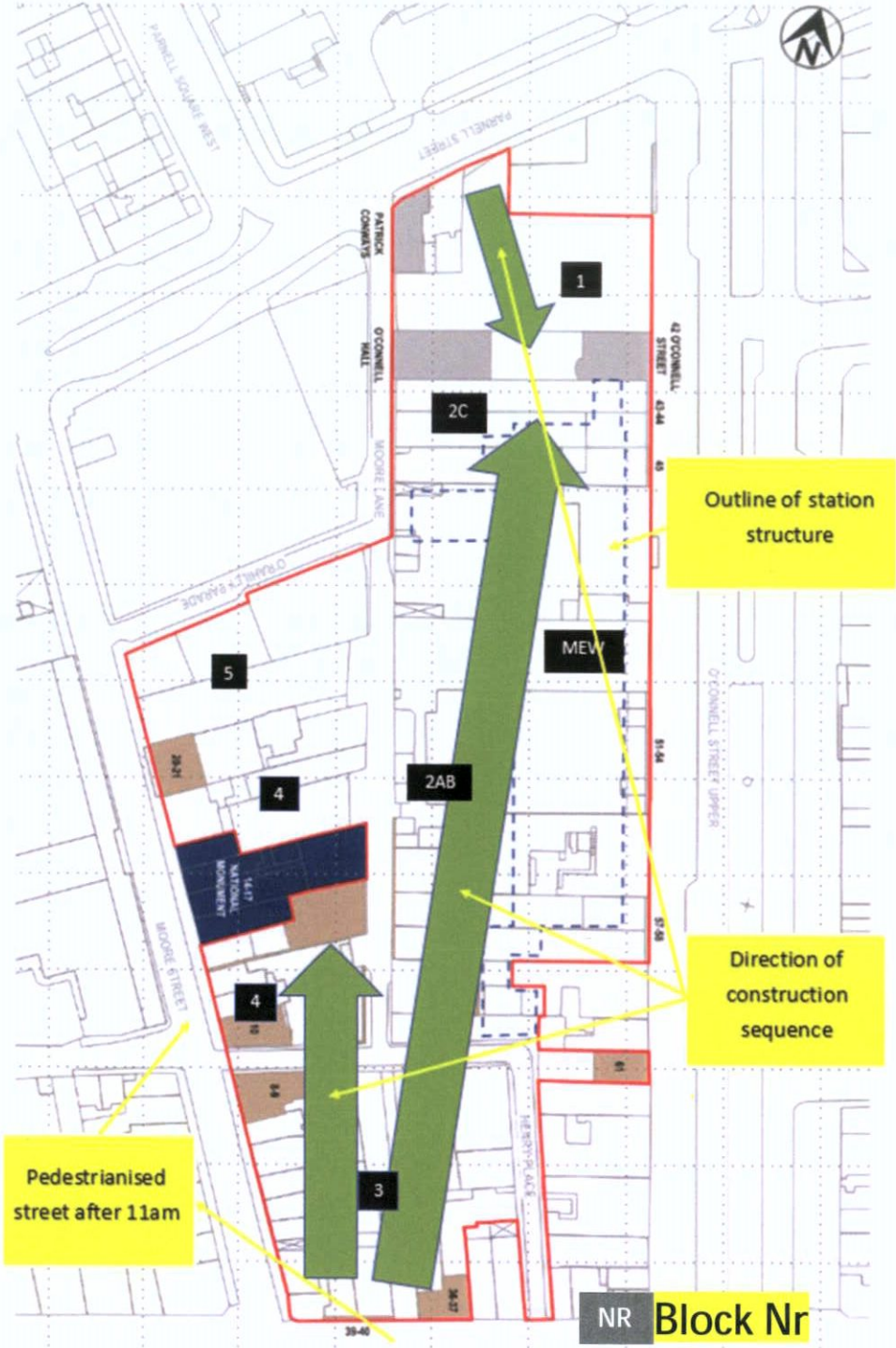


Figure 9 – Direction of construction approach.

This construction sequence proposed above reflects the following conditions:

1. The existing traffic regime whereby no vehicular traffic is allowed onto Moore Street (South of O'Rahilly Parade) or on Henry Street after 11:00 am daily.
2. In light of No. 1 above, Sites 3 and 4 are challenging access-wise and therefore must be developed first, as the direction of construction moves from south to north, with construction traffic utilising Moore Lane.
3. Site 5 should be considered the front and back "door" for all development works and so will be last to be constructed as it is the main arterial connection to the access / egress point on O'Rahilly Parade.
4. Site 2 works require a significant area to accommodate construction plant, materials and site offices.
5. The imperative to protect the National Monument at Nos. 14-17 Moore Street.
6. DCGP acknowledges that the market traders and retailers have had a long-standing contribution to the vibrancy, vitality, and uniqueness to the local area. Consequently, DCGP recognise the need to minimise disruption to the Moore Street Market Traders during the works whilst facilitating the needs of the construction process.

4.0 BASELINE PROGRAMME

The Baseline Programme that DCGP is working to for the project can be summarised in Figure 10:

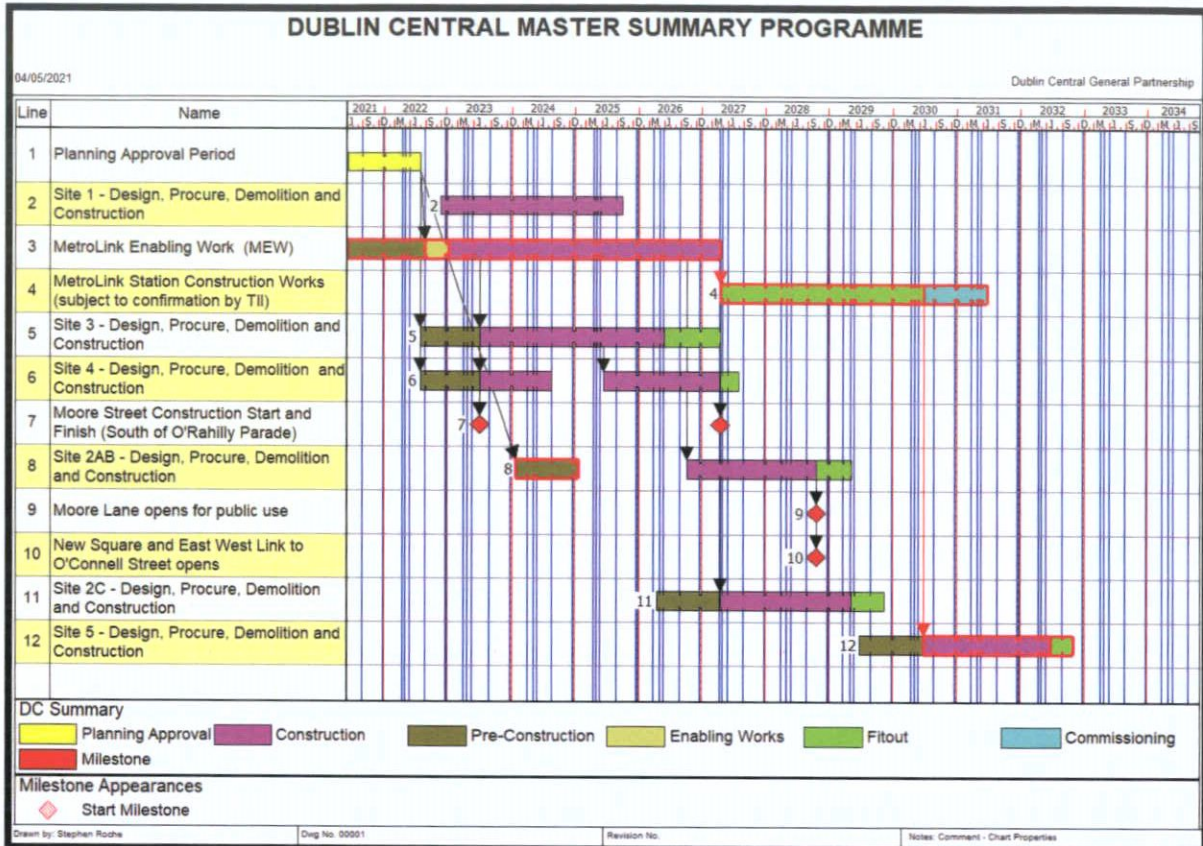


Figure 10 – Master Summary Programme

This programme assumes that Planning Applications will be submitted in three tranches as follows:

1. Sites 3, 4 and 5 as three stand-alone applications, to be submitted concurrently in May 2021.
2. Sites 2AB and Site 2C as two stand-alone applications but submitted together end of August 2021.
3. Site 1 submitted as a stand-alone application on a date yet to be determined.

5.0 KEY RISKS TO PROGRAMME

Key risks that the project is exposed to include:

- Depth of excavation that may discover unexpected issues / challenging ground conditions.
- Significant design variations that may arise from third parties.
- Challenging ground conditions.
- Delayed programme arising from caution in working adjacent to the National Monument and other Protected/retained structures.
- Contaminated ground in excess of what the ground investigation reports suggest exist.
- The high water table and all the risks associated with dewatering to enable construction.
- Archaeological finds and all the risks associated with recording etc.
- Restricted site access and egress points leading to slower progress.
- Site congestion due to significant number of contractors on site; leading to slower programme.
- Ministerial Consent requirement.

The above risk factors have all been given due consideration in determining the proposed planning durations, set out below, on a risk-adjusted basis.

6.0 SITE 2AB PROGRAMME

Proposed duration of planning permission: 11 years.

With reference to the Masterplan Summary Programme (Figure 10) as well as the constraints and risks outlined:

- Site 2AB works cannot commence until the Enabling Works for MetroLink are complete in this part of Site 2 (targeted for Q4-2026)
- Target completion date of May 2029: 7 years from receipt of Planning Approval.
- Risk adjusted duration of 11 years is being sought from the date of the Planning Approval.

7.0 SITE 2C PROGRAMME

Proposed duration of planning permission: 11 years.

With reference to the Masterplan Summary Programme (Figure 10) as well as the constraints and risks outlined:

- Site 2C works cannot commence until the advanced works for MetroLink are complete in this part of Site 2 (targeted for Q2-2027)
- Target completion date of November 2029: 7.5 years from receipt of Planning Approval.
- Risk adjusted duration of 11 years is being sought from the date of the Planning Approval.

8.0 SITE 3 PROGRAMME

Proposed duration of planning permission: 7 years.

With reference to the Masterplan Summary Programme (Figure 10) as well as the constraints and risks outlined:

- Likely to be the first phase of construction on the Overall Site (along with Site 4).
- Structurally independent of the Enabling Works for Metrolink and therefore can be progressed more quickly.
- Can be progressed independently of heavy works in Site 2 (albeit, programme likely to be impacted by scope of Site 2 works).
- Construction to commence in August 2023.
- Target completion date is April 2027 (5 years from Planning Approval)
- Risk adjusted duration of 7 years is being sought from the date of the Planning Approval.

9.0 SITE 4 PROGRAMME

Proposed duration of planning permission: 7 years

With reference to the Masterplan Summary Programme (Figure 10) as well as the constraints and risks outlined:

- Likely to be the first phase of construction on the Overall Site (along with Site 3).
- Ministerial Consent must be sought and granted.
- Structurally independent of the Enabling Works for Metrolink and therefore can be progressed more quickly.
- Construction to commence in August 2023.
- Likely to be constructed by the same contractor as for Site 3
- Target completion date is April 2027 (5 years from Planning Approval).
- Risk adjusted duration of 7 years is being sought from the date of the Planning Approval, in line with Site 3 above.

10.0 SITE 5 PROGRAMME

Proposed duration of planning permission: 15 years

With reference to the Masterplan Summary Programme (Figure 10) as well as the constraints and risks outlined:

- Demolition is required early in the Baseline programme to necessitate site access.
- Construction commencement is dependent on all the other works being substantially completed before this can commence construction.
- Construction to commence in August 2030.
- Target completion date is October 2032 (10.5 years from Planning Approval).
- Risk adjusted duration of 15 years is being sought from the date of the Planning Approval.

11.0 SITE 1 PROGRAMME

This report includes the general programme intention for Site 1 for completeness, but as noted elsewhere the date for the application is yet to be determined and hence the detail included within this report for this site is subject to change.

12.0 PHASING INTENTION FOR THE PUBLIC REALM

This section of the report provides a chronological timeline for the development of the various sites by showing a time-bar progression indicating how the site will be developed and delivered. This demonstrates when each portion of the public realm and streetscape will be completed and available for public use.

The key dates taken from the programme and delivery sequence are indicated in Figure 11 with the red highlighting indicating the key public realm delivery dates in the current indicative programme:

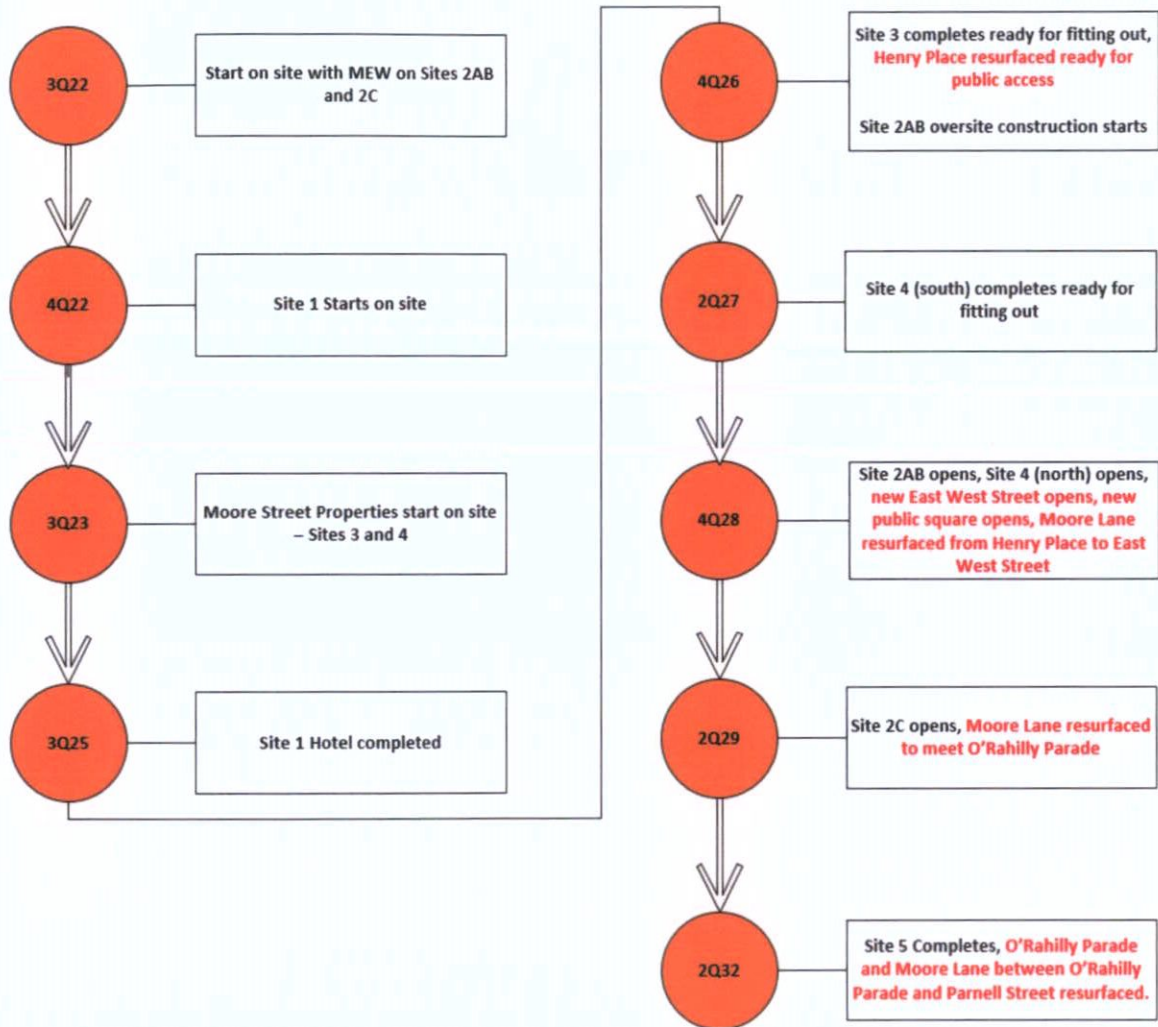


Figure 11

Appendix A gives further details.



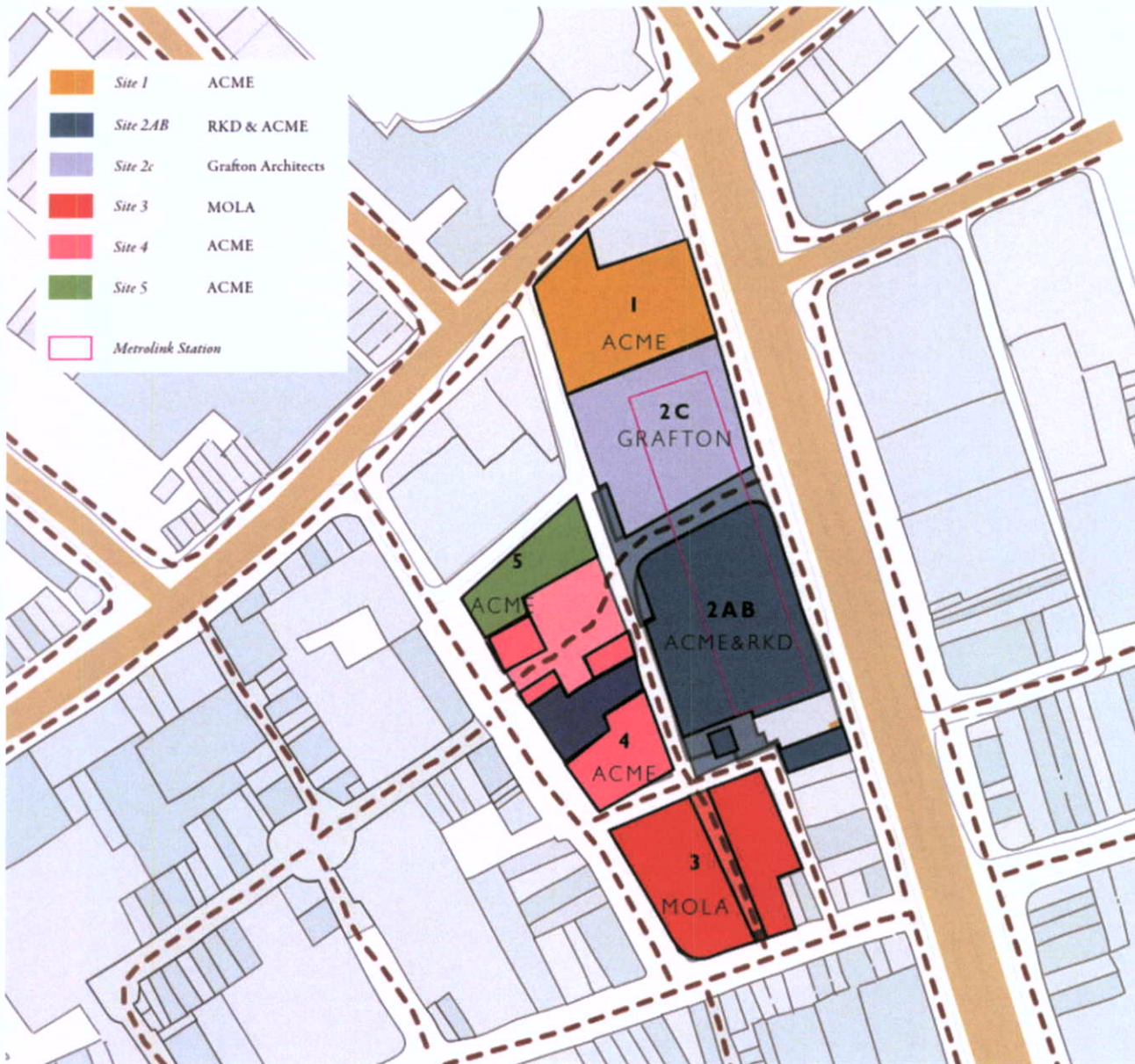
Appendix A - Public Realm Phasing Approach - Demonstrating Availability of the Public Realm when delivering the Dublin Central Masterplan



DUBLIN CENTRAL

Public Realm Phasing Approach -
Demonstrating Availability of the
Public Realm when delivering the
Dublin Central Masterplan
for Dublin Central GP Ltd

- 25TH May 2021



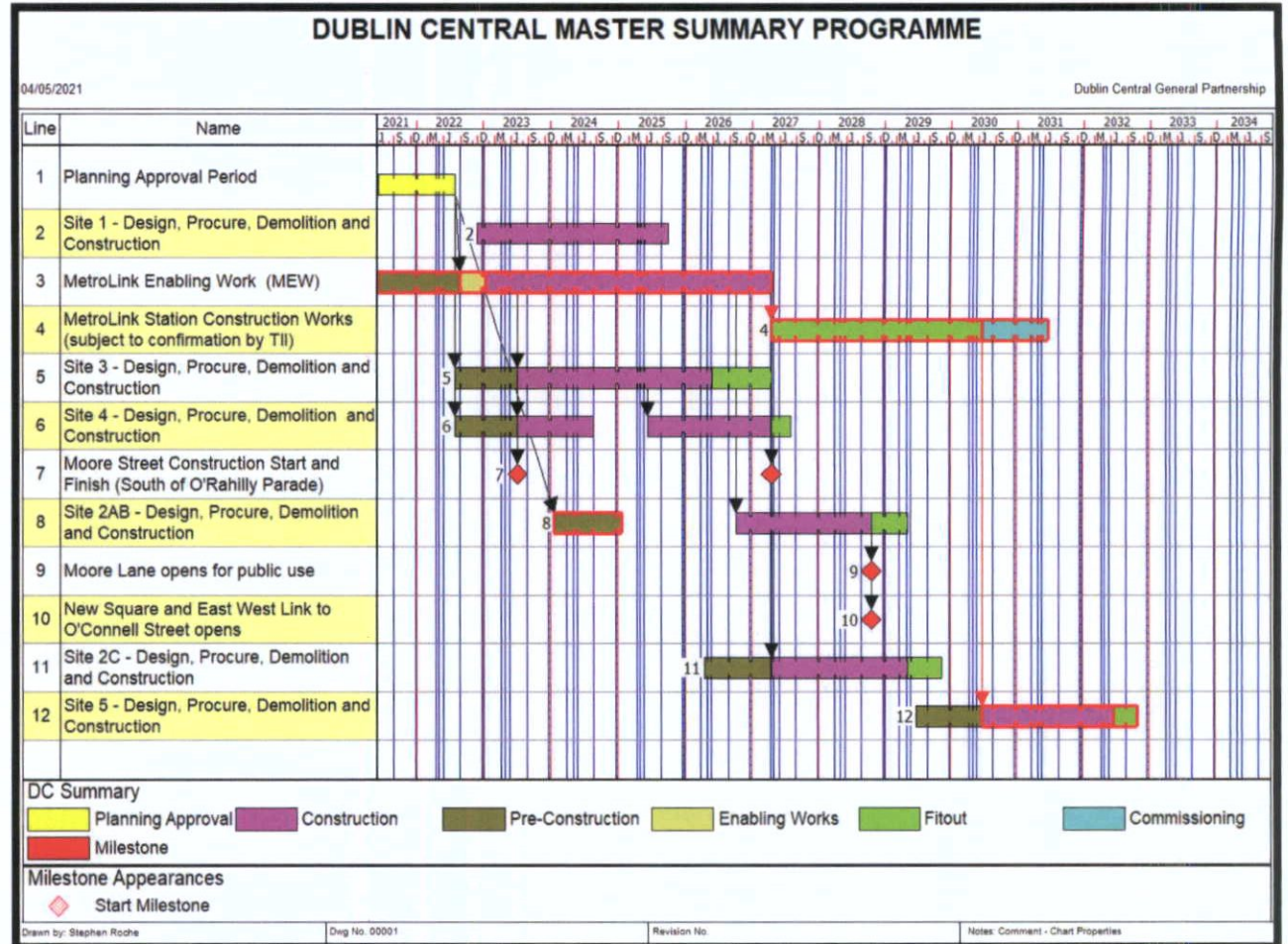
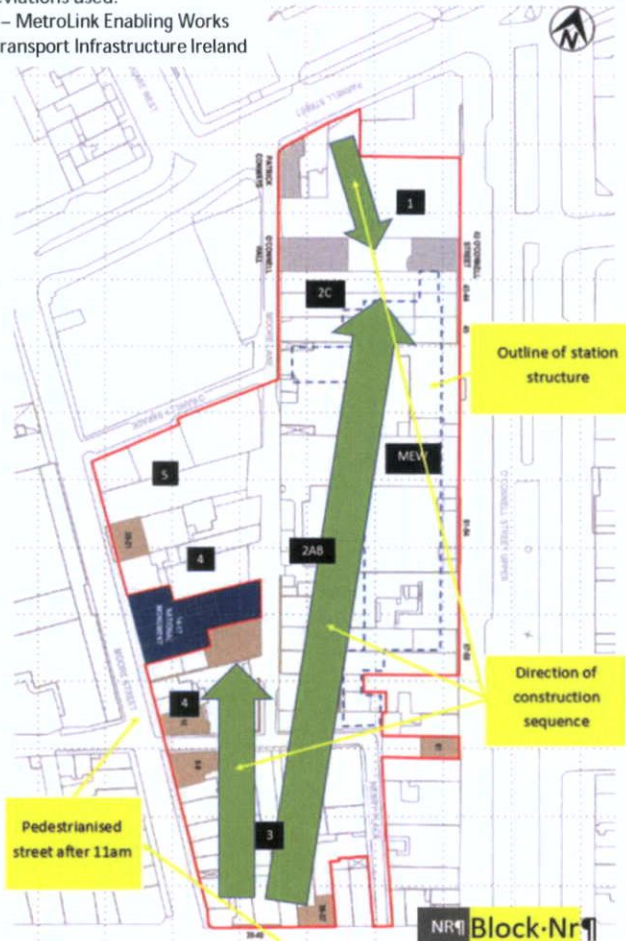
DUBLIN CENTRAL – PHASING TIMESLICE DIAGRAMS

Introduction and purpose of this document

- This document has been prepared to demonstrate the approach and assumptions that have been made when compiling the programme and phasing approach for the delivery of the Dublin Central Masterplan.
- It sets out the information using a timeline bar at the bottom of each page to demonstrate the activity that is scheduled for each site during that period of time.
- Indicative hoarding positions have been shown (blue lines) to show how each of the construction areas will be delineated from each other
- The images demonstrate when areas can be opened to public use at the earliest practical time when working from a southerly to northerly construction direction (see next page).

THE CONSTRUCTION APPROACH AND MASTER PROGRAMME

Abbreviations used:
 MEW – MetroLink Enabling Works
 TII – Transport Infrastructure Ireland



The programme indicated above is an indicative programme showing the general intent at this stage.












TIMESLICE IMAGES APPROACH

The phasing sequence will be demonstrated by using a series of timeslice images that will portray, for the period shown in the time bar at the bottom of the image, what activity will be being carried out on each portion of the site, and more importantly when the various parts of the public realm will become open and free for the public to use.

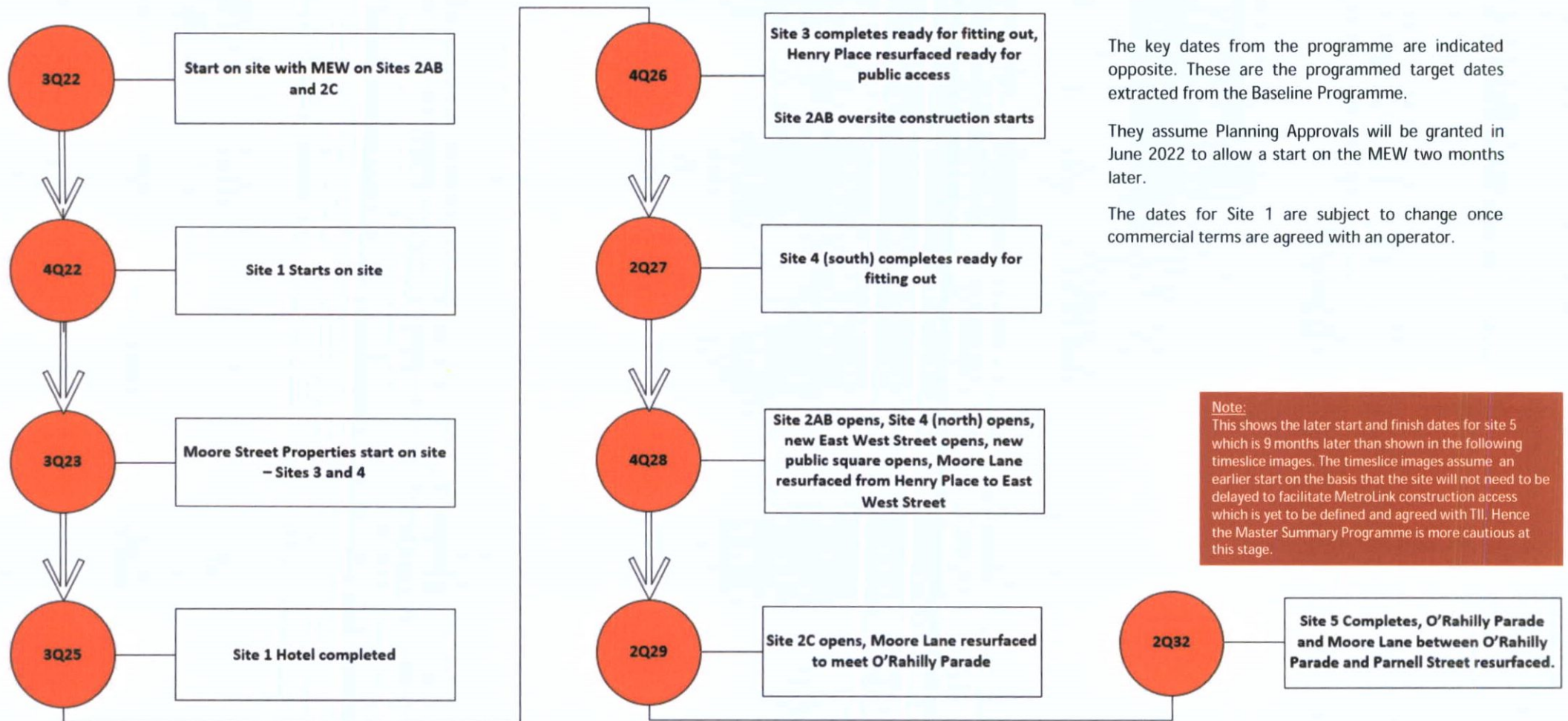
The key to the various colours that have been used in the images that follow is opposite.

Whilst the timeslice diagrams include Site 1 for completeness, the programme for these works is still provisional at this stage and likely to change. Similarly the retention of the façade to Nr 71 O'Connell Street is still being considered and will be addressed in the Site 1 Planning Application in due course.

KEY:

	Area under strip out, asbestos removal, demolition, site preparation, archaeological investigation, structural strengthening works or façade retention.
	National Monument.
	Protected structure.
	Area under construction.
	Area used for site logistics / vehicle management.
	Temporary haul road.
	Buildings being fitted out internally.
	Construction and fitout work complete.
	Zone around the National Monument where any works will be subject to a permit to work regime.
	Outline of the MEW
	Temporary site hoarding

KEY DATES TAKEN FROM THE MASTER SUMMARY PROGRAMME



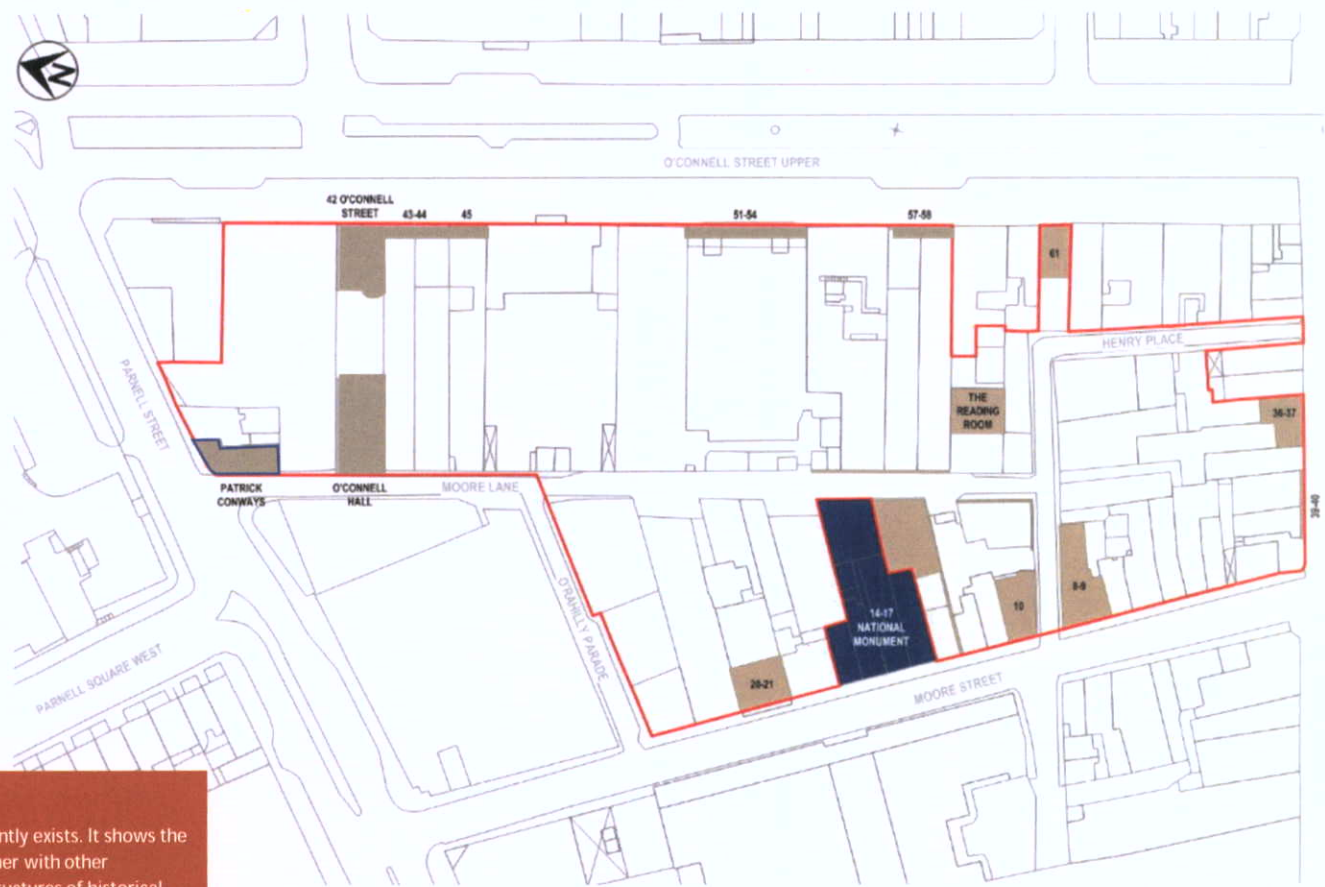
The key dates from the programme are indicated opposite. These are the programmed target dates extracted from the Baseline Programme.

They assume Planning Approvals will be granted in June 2022 to allow a start on the MEW two months later.

The dates for Site 1 are subject to change once commercial terms are agreed with an operator.

DUBLIN CENTRAL – INDICATIVE TIMESLICE SEQUENCE DIAGRAM NUMBER: 0

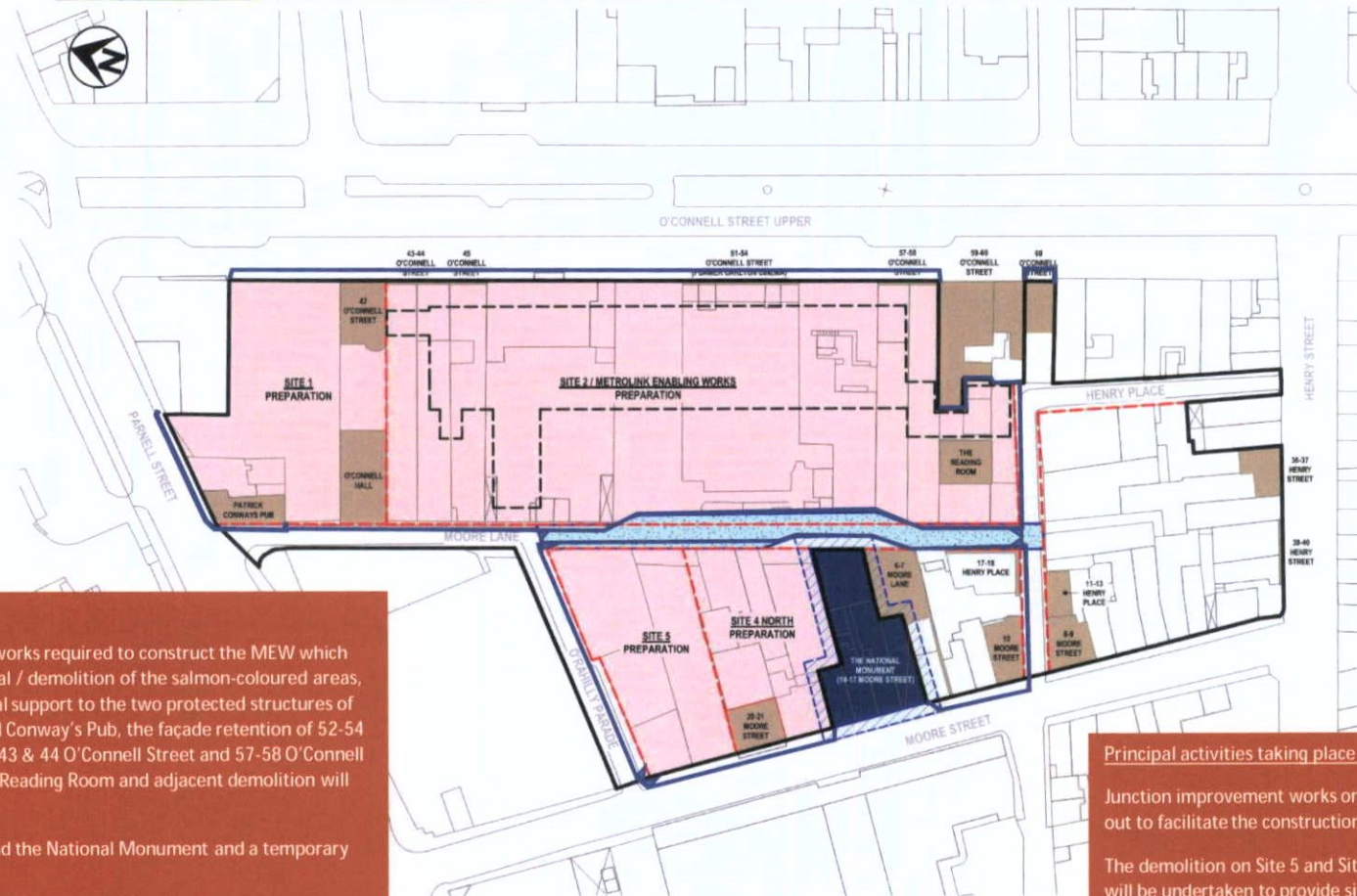
Assumes Planning Approval Granted in June 2022



Principal activities taking place:
This image demonstrates the site as it currently exists. It shows the proximity of the National Monument together with other Protected Structures and Non-Protected structures of historical significance to be retained.

DUBLIN CENTRAL – INDICATIVE TIMESLICE SEQUENCE DIAGRAM NUMBER: 1

2022				2023				2024				2025				2026				2027				2028				2029				2030				2031			
Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				



Principal activities taking place:

This image shows the initial period of the works required to construct the MEW which will involve the soft strip / asbestos removal / demolition of the salmon-coloured areas, the archaeological investigations, structural support to the two protected structures of 42 O'Connell Street and O'Connell Hall and Conway's Pub, the façade retention of 52-54 O'Connell Street (former Carlton cinema), 43 & 44 O'Connell Street and 57-58 O'Connell Street. The necessary underpinning to the Reading Room and adjacent demolition will also commence.

A protected zone will be established around the National Monument and a temporary haul road will be installed.

Site 1 works commence with the structural support of the two protected structures of 42 O'Connell Street and O'Connell Hall.

PRELIMINARY PROJECT PROGRAMME – INDICATIVE ONLY

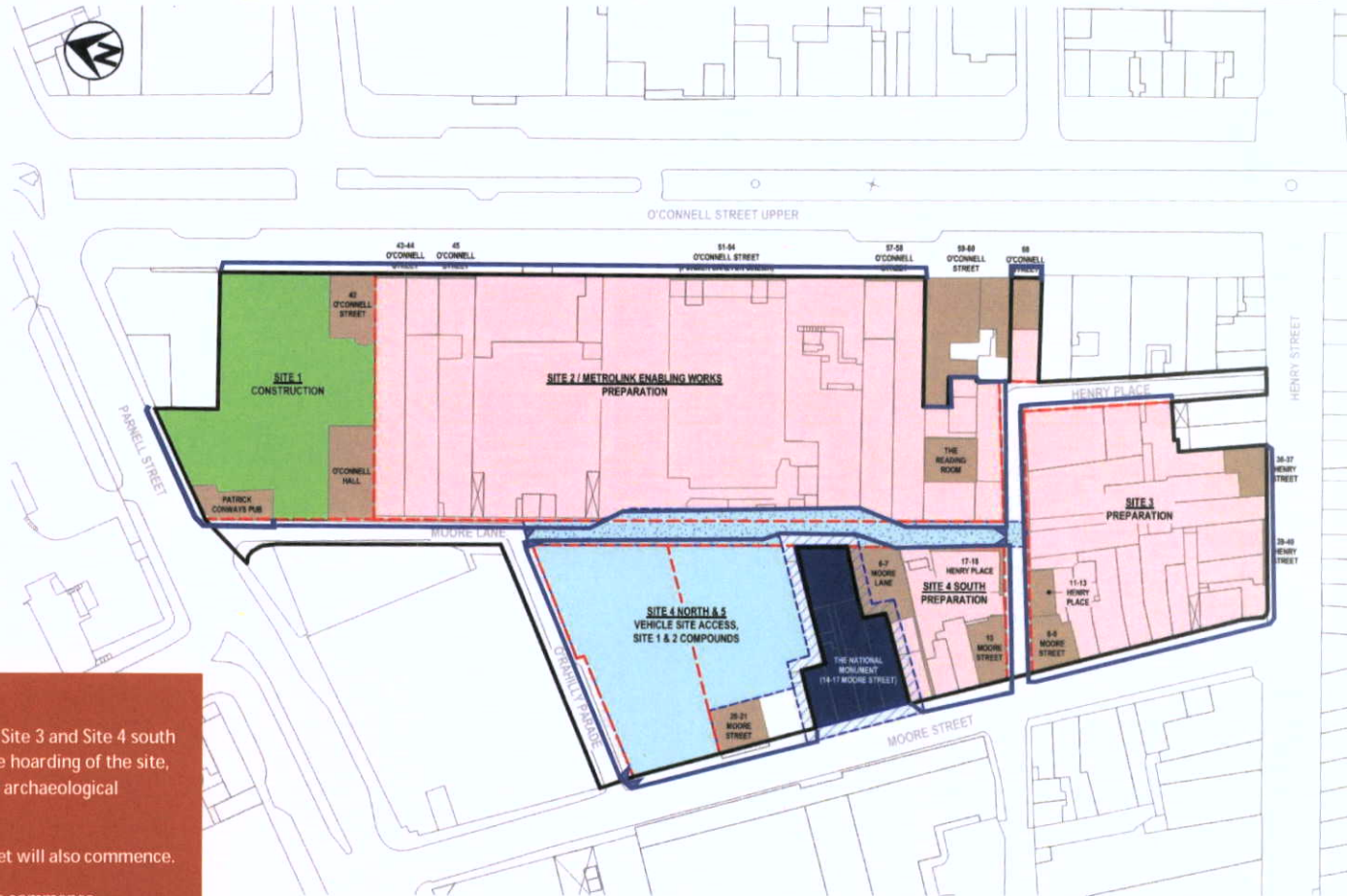
Principal activities taking place (con't):

Junction improvement works on either end of O'Rahilly Parade will be carried out to facilitate the construction vehicle movements.

The demolition on Site 5 and Site 4 to the north of the National Monument will be undertaken to provide site logistics areas, with particular emphasis being on Site 5 which is necessary to manage the traffic entering the site from Moore Street and O'Rahilly Parade.

DUBLIN CENTRAL – INDICATIVE TIMESLICE SEQUENCE DIAGRAM NUMBER: 2

2022				2023				2024				2025				2026				2027				2028				2029				2030				2031							
Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				



Principal activities taking place:

This image shows the work commencing on Site 3 and Site 4 south of the National Monument. This includes the hoarding of the site, soft strip, asbestos removal, demolition and archaeological investigations.

Facade retention works to 39-40 Henry Street will also commence.

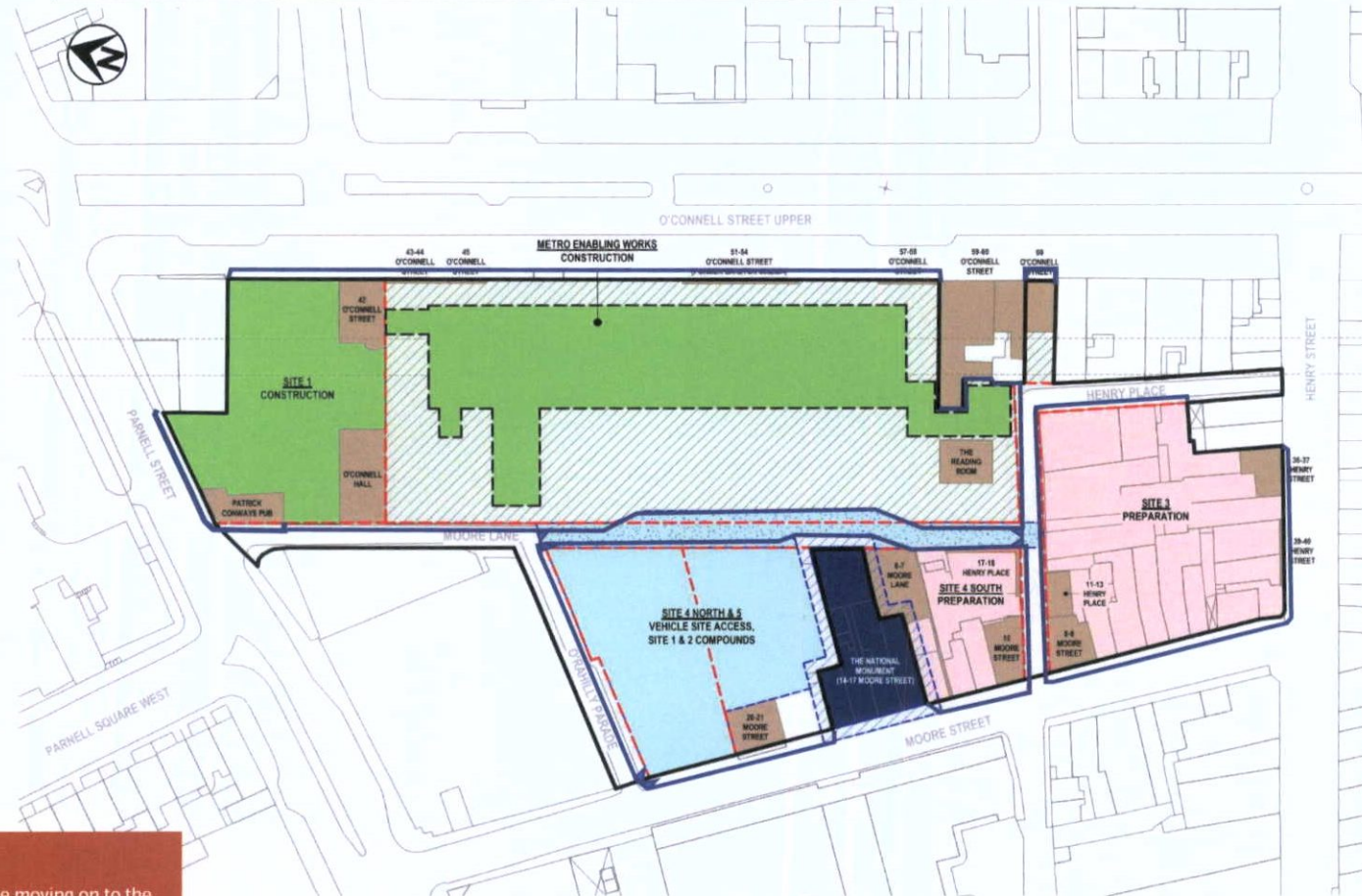
The works to Nr 60 O'Connell Street will also commence.

Works on Site 1 will now move onto the construction phase.

PRELIMINARY PROJECT PROGRAMME – INDICATIVE ONLY

DUBLIN CENTRAL – INDICATIVE TIMESLICE SEQUENCE DIAGRAM NUMBER: 3

2022				2023				2024				2025				2026				2027				2028				2029				2030				2031			
Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				

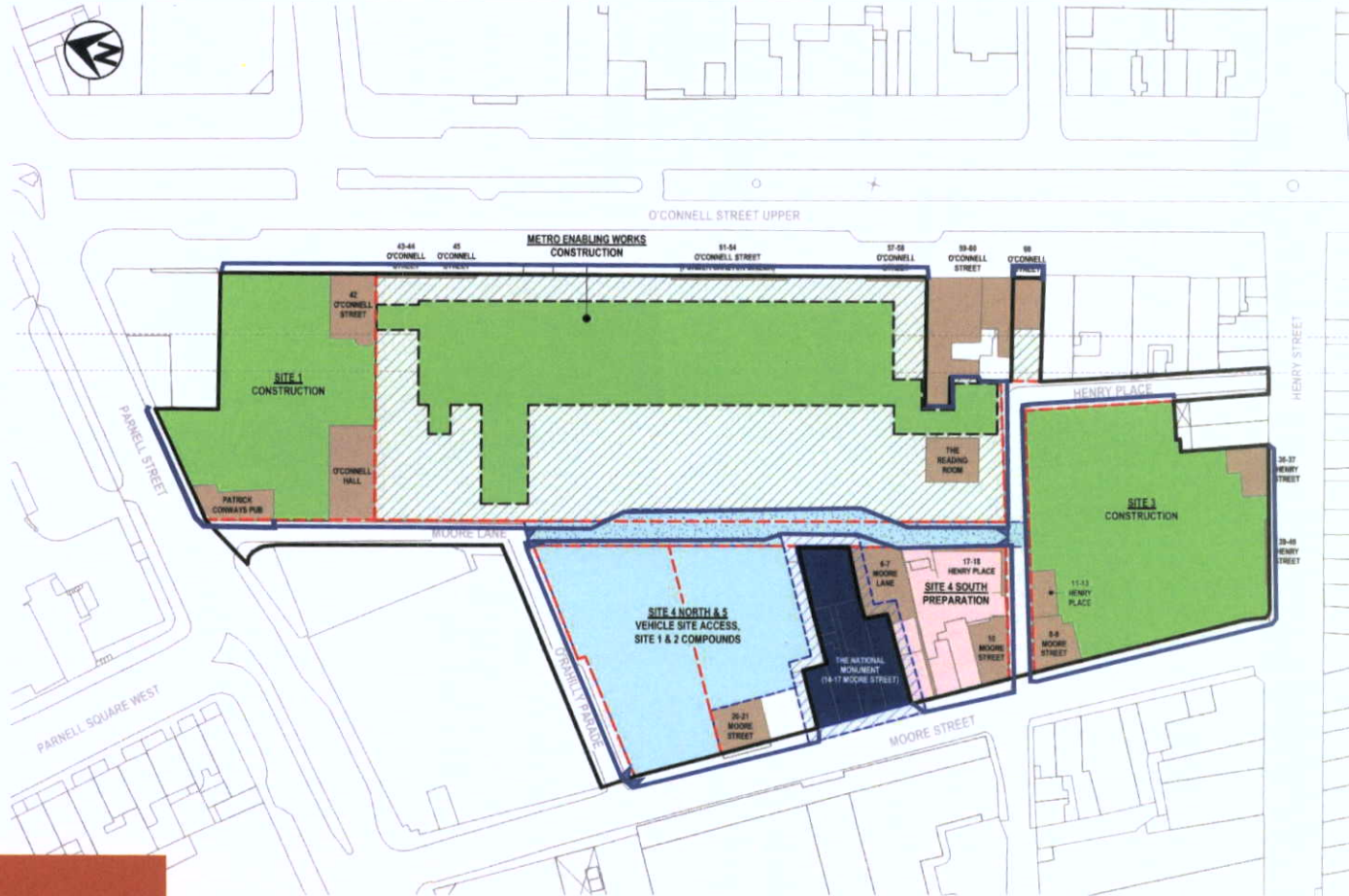


Principal activities taking place:
 This image shows the work on the MEW site moving on to the construction phase, with the diaphragm walling, piling, dewatering, excavation and concrete works being carried out.

PRELIMINARY PROJECT PROGRAMME – INDICATIVE ONLY

DUBLIN CENTRAL – INDICATIVE TIMESLICE SEQUENCE DIAGRAM NUMBER: 4

2022				2023				2024				2025				2026				2027				2028				2029				2030				2031							
Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				



Principal activities taking place:

This image shows the work on Site 3 moving on to the construction phase.

PRELIMINARY PROJECT PROGRAMME – INDICATIVE ONLY

DUBLIN CENTRAL – INDICATIVE TIMESLICE SEQUENCE DIAGRAM NUMBER: 5

2022				2023				2024				2025				2026				2027				2028				2029				2030				2031			
Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				



Principal activities taking place:
 This image shows the work on Site 4 moving on to the construction phase.

PRELIMINARY PROJECT PROGRAMME – INDICATIVE ONLY