

Belmont Avenue

Traffic Calming Initiative

Dublin City Council

2nd March 2021

Quality information

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1. Introduction – Area Description

Belmont Avenue is a two-way road between Donnybrook Road and Sandford Road. It is approximately 500m long. It forms part of the Belmont Avenue / Mount Eden Road & Environs Architectural Conservation Area. The road is comprised mainly of residential properties and also serves as the access route for a number of cul-de-sacs, a local school (St. Mary's National School) and the St. Mary's Lawn Tennis Club.

Belmont Avenue is subjected to substantial traffic issues, particularly during peak hours, primarily due to the lack of adequate width for two-way traffic and parking to coexist. The width of the existing carriageway throughout the street varies between 5.5 and 8.5 meters. Parking spaces (of approximately 2.1 meters in width) are located on the southern side of the street, resulting in a remaining carriageway width of approximately 4.2 meters for lengthy periods. This is significantly narrower than the carriageway width of 4.8 meters proposed in the Design Manual for Urban Roads and Streets (DMURS) - 4.4.1 - Carriageway Widths, which allows for two-way traffic.

During peak hours, the area is invariably gridlocked, as a consequence of the volume of cars attempting to progress up and down its length. Motorists, frustrated by the lengthy delays, become stressed, aggressive and engage in dangerous manoeuvres. Vehicles often illegally mount and drive along the footpath, endangering pedestrians, cyclists and other motorists. There have been a number of near misses reported involving school children exposed to unsafe driving manoeuvres. Cars utilising the on-street parking have been damaged on a multitude of occasions.

The existing footway width varies between 1.0 and 1.7 meters on each side of the carriageway (and as narrow as 0.6 meters behind lighting columns). Both footpaths are substantially below the minimum footway width of 1.8 meters, as specified in DMURS - 4.3.1 - Footways, Verges and Strips. Consequently, pedestrians using the street are unable to walk two abreast.

A traffic survey was undertaken on 4th March 2020 (prior to the introduction of COVID-19 pandemic restrictions) aiming to collect information on traffic speeds and volume along Belmont Avenue. The key results are summarised in Table 1 below.

Table 1: Belmont Avenue traffic counts

Direction of Travel	AM Peak (7-10am)	PM Peak (4-7pm)	Total
Westbound (Donnybrook Road -> Sandford Road)	778	299	2479
Eastbound (Sandford Road -> Donnybrook Road)	112	745	2547

2. Traffic Congestion Solutions

There is not one clear traffic solution to solve the traffic congestion issue on Belmont Avenue. Options that have been considered at this initial stage are listed below:

1. Speed Limit Reduction

The existing speed limit for Belmont Avenue is 50km/h, which is considerably high for a residential and school area. A 30km/h speed limit is soon to be implemented in the wider area. **This measure will not have a significant impact, if introduced on its own, however it could compliment one of the other options listed below.**

2. Removal of Parking Bays to Create Horizontal Deflection:

Removal of spaces to create pockets in which westbound vehicles can pull in and allow oncoming traffic to pass by. Parking loss is expected to be minimal – summary provided in Table 2. Proposed design can be found in Drawing No. 60615775-ACM-BTA-SK-0105-06.

Table 2: On-Street Parking summary

Existing Parking Spaces	Proposed Parking Spaces
57	54

Spaces are calculated by dividing the length of each individual parking bay by the recommended space length for parallel parking (6.0m), as specified in DMURS - 4.4.9 - On-Street Parking and Loading. Existing parking bay measurements are based on available mapping and aerial photography data and will need to be confirmed against a topographical survey.

This measure will not have a significant impact, if introduced on its own, however it could be one element of the final design alongside other options listed below.

3. Removal of Parking in its Entirety

Alternatively, removal of all or most of the on-street parking would greatly increase the carriageway width made available to traffic along Belmont Avenue, lessening motorist conflict. With a minimum of 5.5 meters made available for the carriageway, the remaining of the existing width can be allocated to widening the footpath on both sides, making it safer for the more vulnerable road users.

However, this may be met with opposition by residents, who do not have private driveways and currently use the existing parking bays. Additional information on existing on-street parking spaces and private driveways on Belmont Avenue can be found in Drawing No. 60615775-ACM-BTA-SK-0101-04 and Table 3.

Table 3: Existing residential parking information for Belmont Avenue

On-Street Parking Spaces	Properties with Private Driveways	Properties without Private Driveways	Residential Parking Permits
57	34	47	67

4. One-Way System

This would allow for the carriageway and footway widths to fall within the necessary minimums, as set out in DMURS. On-street parking will be retained on the southern side of the street. **However, only with-flow cyclists can be accommodated, as the available width does not allow for a contra-flow cycling facility.** The traffic volumes to and from Sandford Road are practically identical and reversed for the AM and PM peak (Table 1), which suggests that even with the one-way system, Belmont Avenue will still be busy either during the morning or evening peak. The introduction of effective physical traffic calming, such as road humps, is very important in this scenario. Proposed design can be found in Drawing No. 60615775-ACM-BTA-SK-0107-10.

5. Filtered Permeability Scheme

This measure is synonymous with the implementation of a cul-de-sac. The feasibility of vehicle turning heads on either side of the filters (usually bollards and / or planters) is key for selecting the location of the road closure. **Two options were identified for the filter location, either at junction with Sandford Road or with Mount Eden Road.** The latter is considered less preferable, as it would have a negative effect on school drop-off and would also encourage turning manoeuvres close to St. Mary's National School entrance. Proposed design showing a road closure at junction with Sandford Road can be found in Drawing No. 60615775-ACM-BTA-SK-0111.

Emergency vehicles and cyclists will have access through these filters. However, Belmont Avenue will still accommodate two-way traffic and pockets for motorists to give way to each other still need to be considered.

6. Restricted Access

Introduction of a no-entry system at the Sandford Road junction, to reduce traffic volumes and prevent motorists using the road as a "rat run". Belmont Avenue will continue to be a two-way road and all cyclist movements will be facilitated. The traffic survey (Table 1) suggests that a significant number of vehicles will still be moving towards Sandford Road in the morning peak and will be opposed by eastbound residential traffic. **Undoubtedly, unless effective traffic calming and horizontal deflection are carefully considered, the existing issues will persist.** Proposed design can be found in Drawing No. 60615775-ACM-BTA-SK-0112-0115.

Belmont Avenue works in a network with other streets in the Donnybrook and Ranelagh area, most notably Marlborough Road, where congestions issues are also observed. Although Marlborough Road is an arterial route designed to accommodate heavier traffic flow, the impact on this road from any interventions implemented on Belmont Avenue, will have to be carefully considered.

3. Supplementary Sketches

The following high-level sketches are presented in this section:

- Drawing No. 60615775-ACM-BTA-SK-0101-04 – EXISTING ARRANGEMENT
- Drawing No. 60615775-ACM-BTA-SK-0105-06 – REMOVAL OF PARKING BAYS TO CREATE HORIZONTAL DEFLECTION
- Drawing No. 60615775-ACM-BTA-SK-0107-10 – ONE-WAY SYSTEM
- Drawing No. 60615775-ACM-BTA-SK-0111 – FILTERED PERMEABILITY
- Drawing No. 60615775-ACM-BTA-SK-0112-15 – RESTRICTED ACCESS

Existing Arrangement



0101 **A EXISTING ARRANGEMENT** Scale: 1:200 @ A1



Companies & Intellectual
Property Offices
Dublin City Council



NTA
National Tax Authority
Revenue Commissioners

DUBLIN CITY COUNCIL

Environment, Culture & Heritage
Communications, Planning & Development
Construction, Cultural, Ethnic Affairs, Health
Communications & Transportation Dept.

NOTES

A. O. O'Riordan Survey Ireland,
Licence Number 2011/123 (ICOM)
Dublin City Council

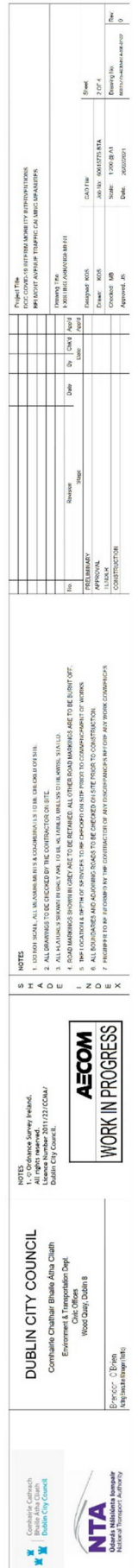
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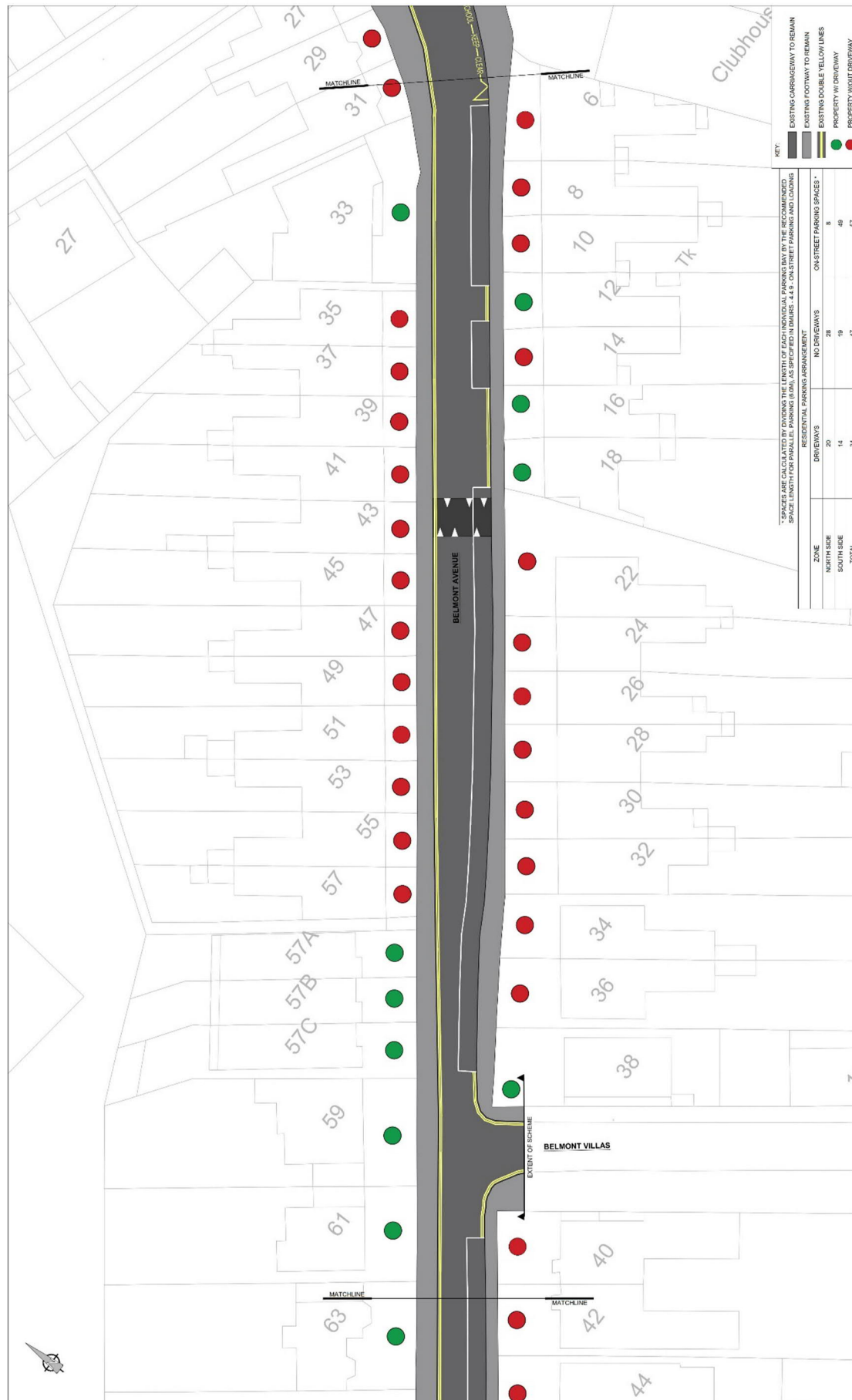
WORK IN PROGRESS

Eric O'Riordan
Work Study, Dublin 15

BRISQ: O'Brien
Kyl (acknowledged)

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A EXISTING ARRANGEMENT
Scale: 1:200 @ A1

NOTES

1. EXISTING ROAD, ALL IN CONFORMANCE WITH THE DUBLIN CITY COUNCIL (DCC) ROAD DESIGN SPECIFICATION (RDS).
2. ALL DRAWINGS TO BE CHECKED BY THE CONTRACTOR OR SITE.
3. ALL WORK TO BE COMPLETED WITHIN THE SPECIFIED TIME FRAME.
4. ROAD MATERIALS TO BE USED TO BE APPROVED BY THE DCC.
5. THE LOCATION OF ANY NEW OR EXISTING UTILITIES TO BE CHECKED ON SITE PRIOR TO CONSTRUCTION.
6. ALL ROADWORKS AND ADJACENT ROADS TO BE CHECKED ON SITE PRIOR TO CONSTRUCTION.
7. THE CONTRACTOR TO BE RESPONSIBLE FOR THE PROTECTION OF ANY EXISTING UTILITIES PRIOR TO ANY WORK COMMENCING.

DUBLIN CITY COUNCIL
Councillor: Cathal Doyle
Environment & Transportation Dept.
Civic Offices
Wood Quay, Dublin 8

Prepared by: AECOM
Project No: 1721/2019
Date: 20/05/2019

CONTRACTOR
DUBLIN CITY COUNCIL
1721/2019

CLIENT
DUBLIN CITY COUNCIL
1721/2019

DATE
20/05/2019

SCALE
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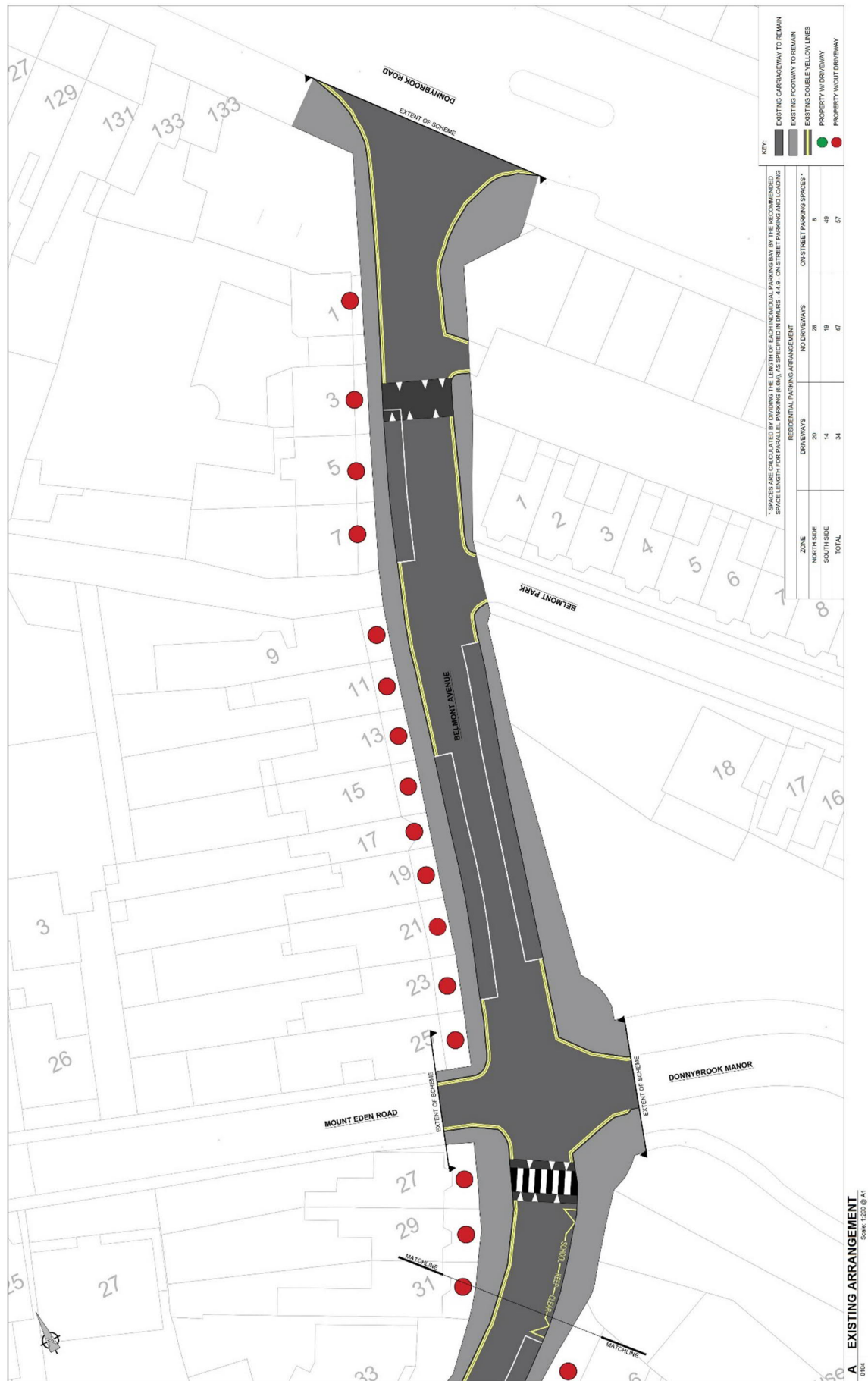
PROJECT NO.
1721/2019

PROJECT NAME
BELMONT AVENUE

PROJECT LOCATION
DUBLIN CITY COUNCIL

PROJECT DESCRIPTION
EXISTING ARRANGEMENT

PROJECT STATUS
IN PROGRESS

[illegible]

Removal of Parking Bays to Create Horizontal Deflection

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0106 **A GENERAL ARRANGEMENT** Scale: 1:200 @ A1

scale: 1:200 @ A1

NOTES
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WORK IN PROGRESS

DUBLIN CITY COUNCIL
Comhairle Chathair Bhaile Átha Cliath
Environment & Transportation Dept.
Cúirte Míneast

Brendon O'Brien
Acting General Manager (North)

NOTES

1. DO NOT SOCIAL. ALL WORKS MUST BE COMPLETED WITHIN THE GIVEN TIME.
2. ALL DRAWINGS TO BE CHECKED BY THE CONTRACTOR FOR ANY ERROR.
3. ALL MATERIALS SHOWN IN THE PLAN ARE TO BE OBTAINED FROM THE SUPPLIER.
4. ROAD MARKINGS SHOWN IN THE PLAN ARE TO BE MAINTAINED. ALL OTHER DRAWINGS SHALL BE THE PROPERTY OF THE CONTRACTOR.
5. THE CONTRACTOR IS RESPONSIBLE FOR THE SAFETY OF THE WORKERS AND THE PUBLIC.
6. ALL ROADWORKS AND ADJOINING ROADS TO BE CHECKED FOR ANY DAMAGE TO THE ROAD.
7. PROGRESS TO BE REPORTED BY THE CONTRACTOR TO THE SUPERVISOR AT THE END OF EACH DAY.

Project Title: **REMOVAL OF PARKING BAYS TO CREATE HORIZONTAL DEFLECTION**

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name_K05	300 Hz 60615775 RTA
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approved_ZS	Date: 26/02/2021

Stage	Date	Appr'd
PRELIMINARY		
APPROVAL		
DESIGN		
CONSTRUCTION		

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RESEARCH OF WORKS
CONSTRUCTION
AND ALL WORK CONTRACTS

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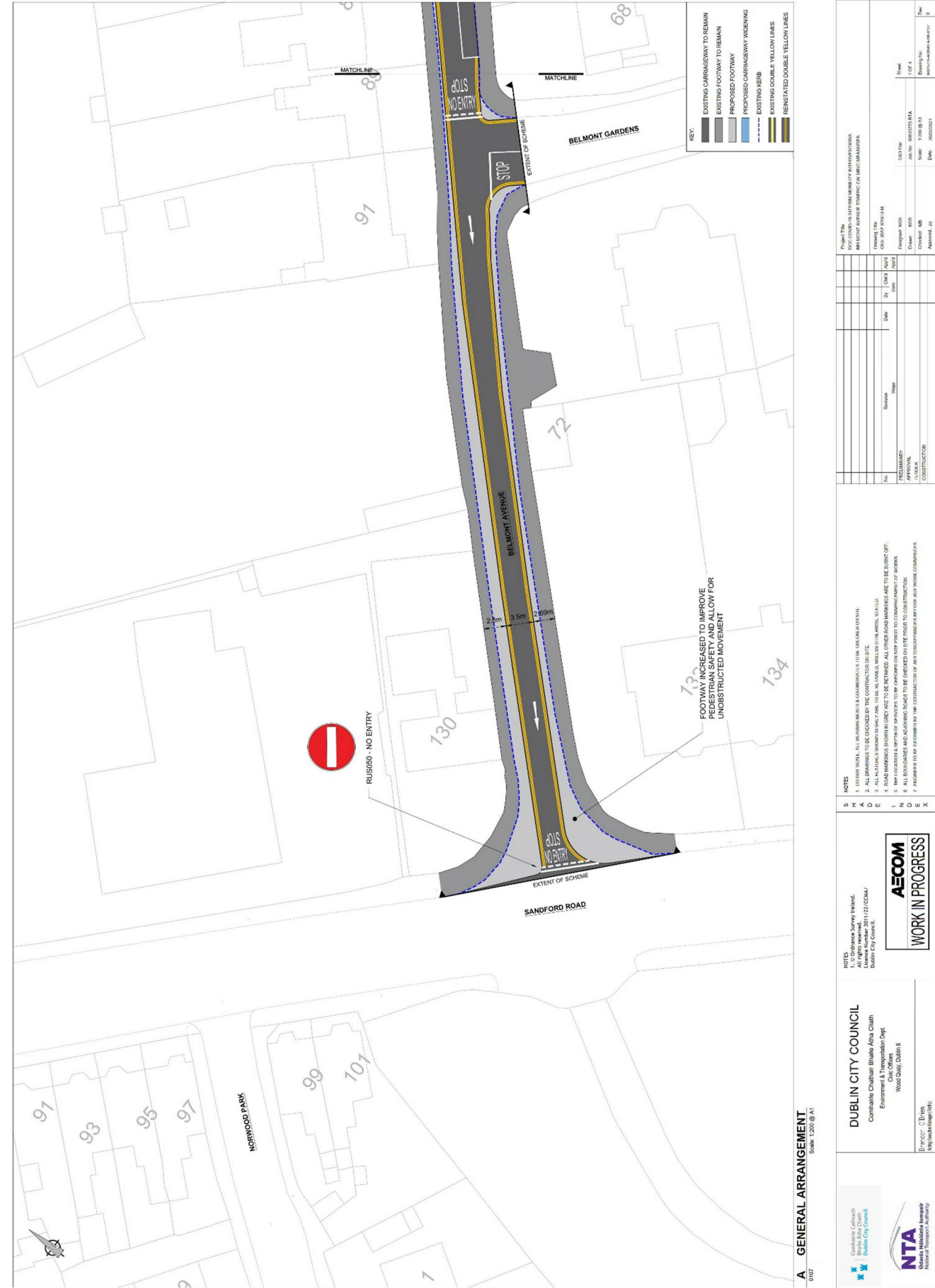
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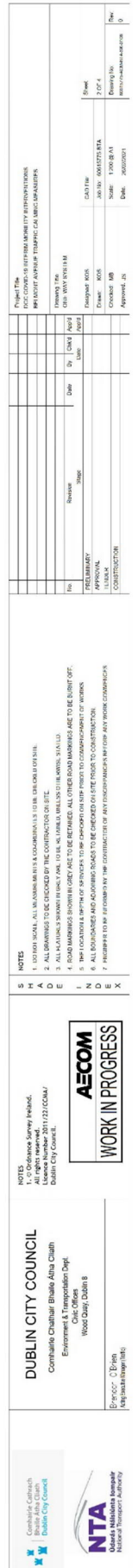
Brendon C.B.
Acting Executive Manager

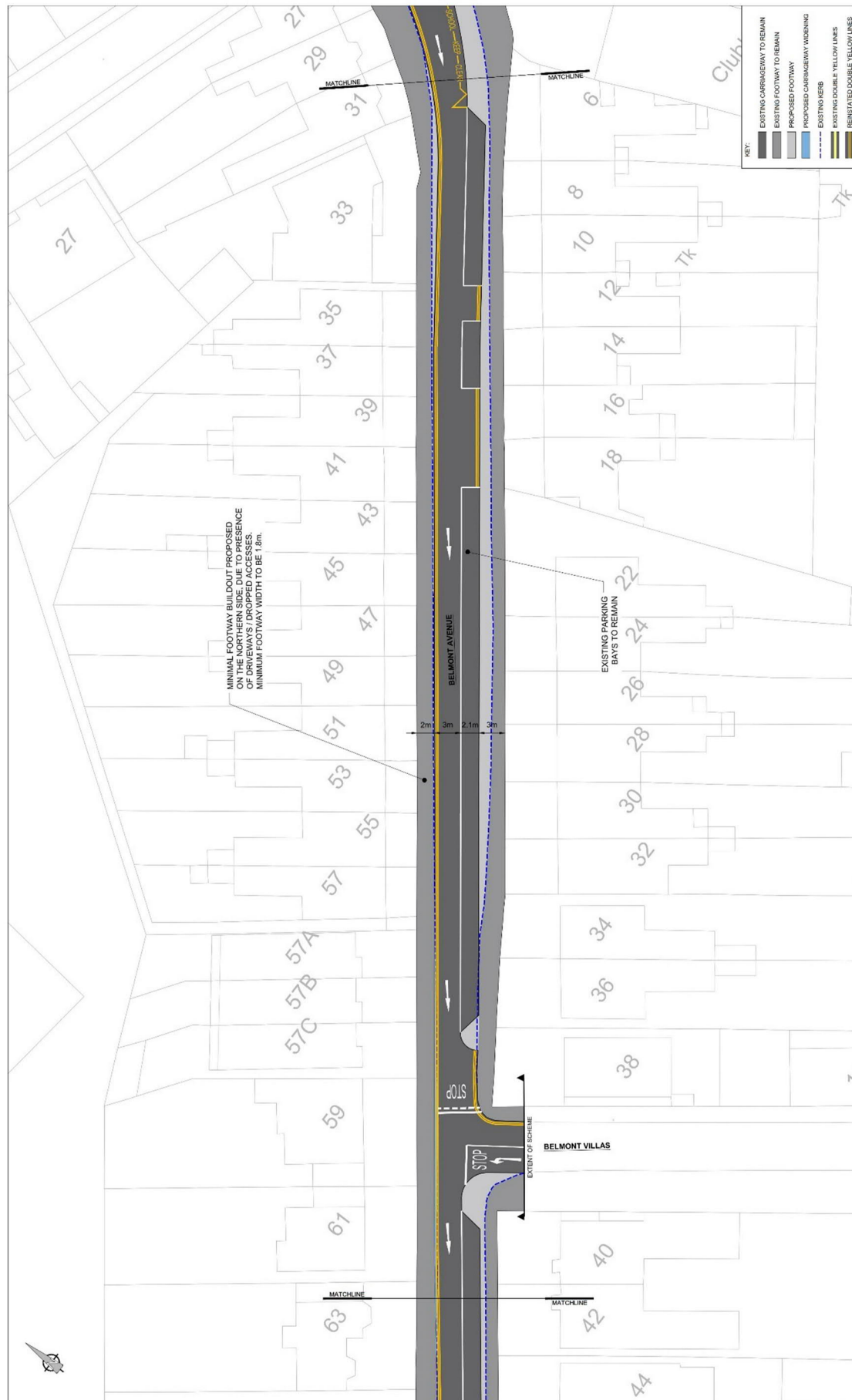
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One-Way System

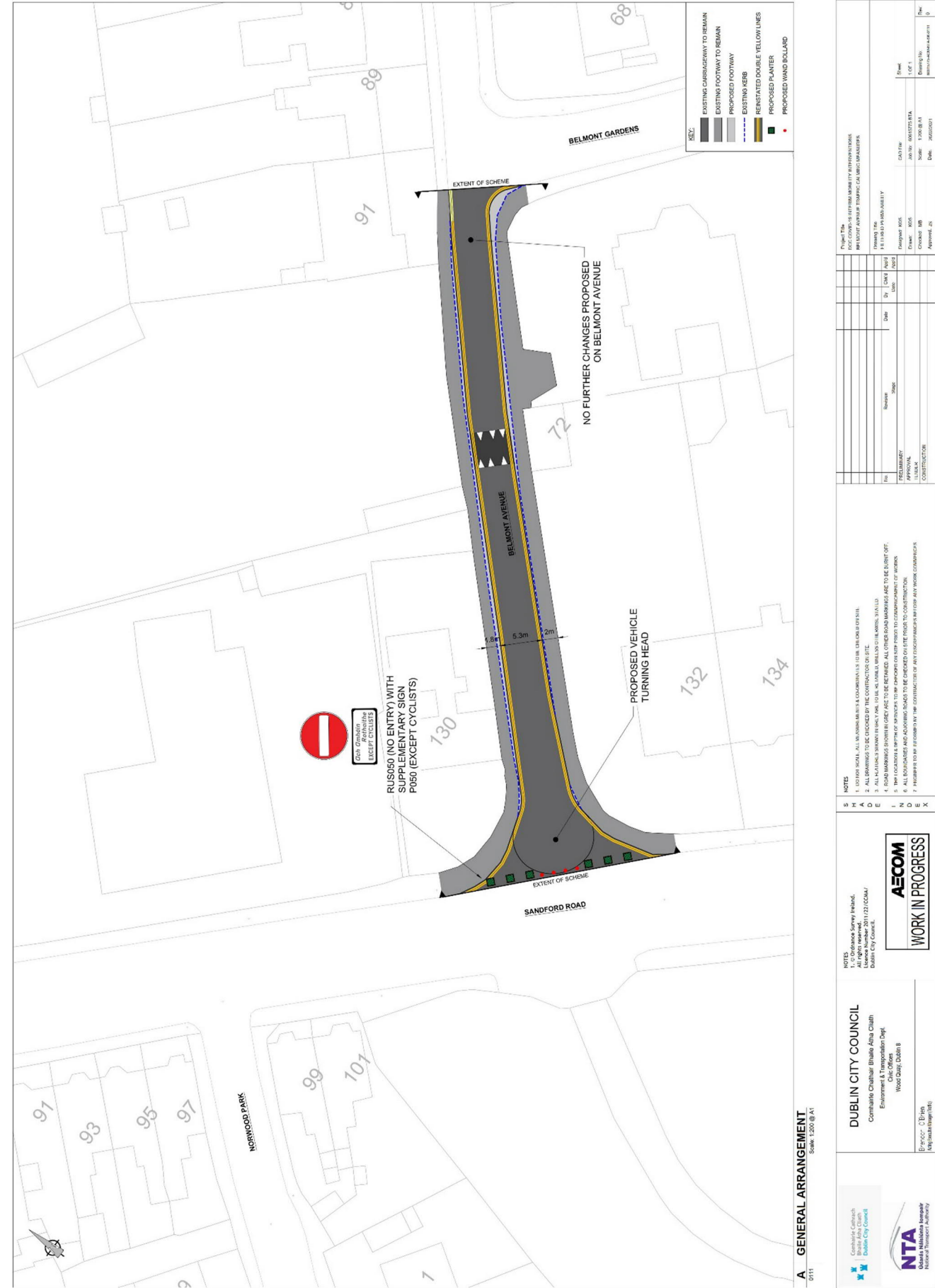




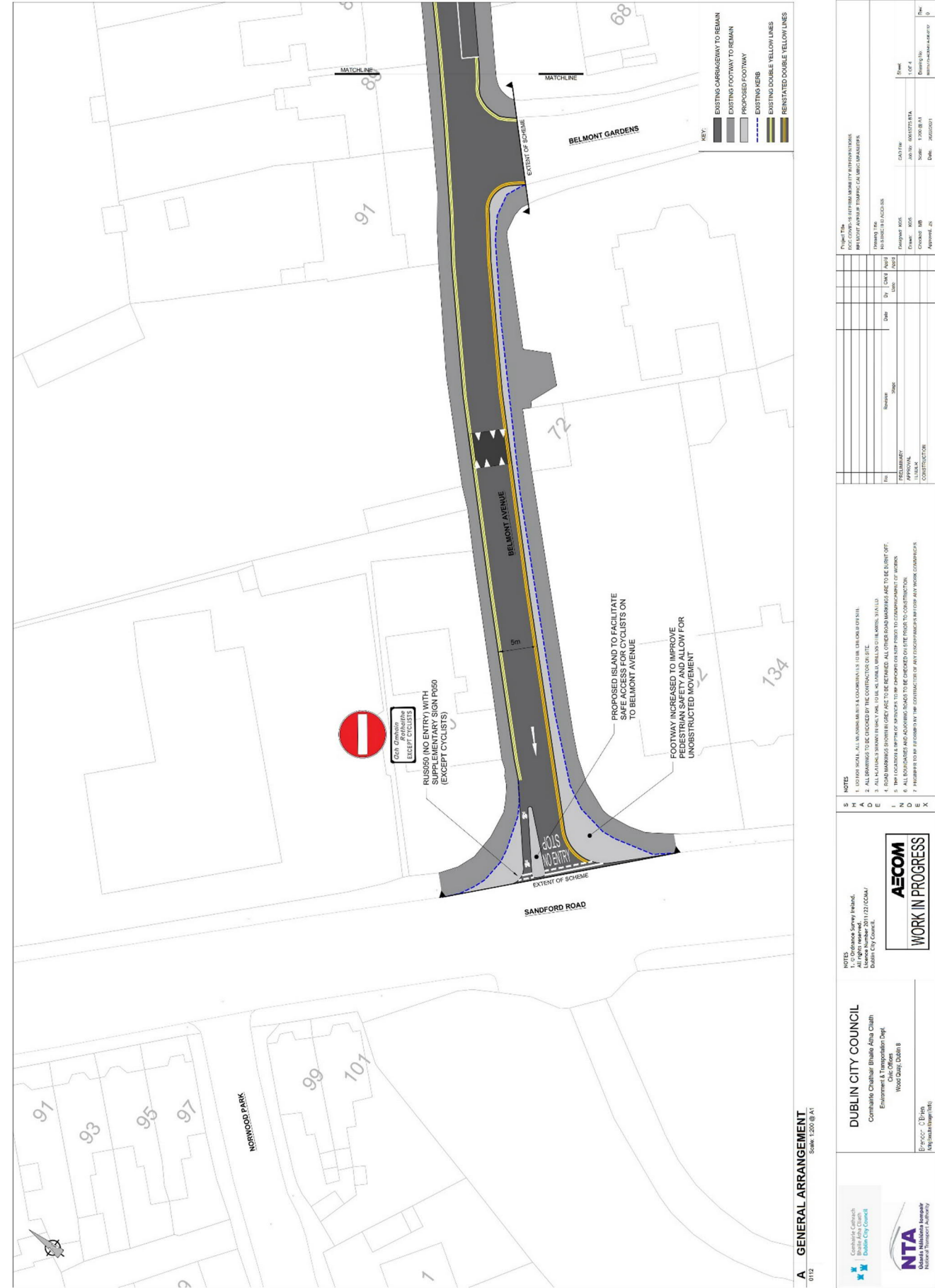
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Filtered Permeability



Restricted Access





A GENERAL ARRANGEMENT
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NOTES

1. EXISTING ROAD, ALL IN ACCORDANCE WITH THE ROAD TRAFFIC ACT 1988 (AS AMENDED) AND THE ROAD TRAFFIC ACT 2006 (AS AMENDED).

2. ALL DRAWINGS TO BE CHECKED BY THE CONTRACTOR OR SITE.

3. ALL WORK TO BE DONE IN ACCORDANCE WITH THE ROAD TRAFFIC ACT 1988 (AS AMENDED) AND THE ROAD TRAFFIC ACT 2006 (AS AMENDED).

4. ROAD MATERIALS AND WORKMANSHIP ARE TO BE IN ACCORDANCE WITH THE ROAD TRAFFIC ACT 1988 (AS AMENDED) AND THE ROAD TRAFFIC ACT 2006 (AS AMENDED).

5. THE LOCATION OF ANY WORK TO BE DONE ON THE ROAD TRAFFIC ACT 1988 (AS AMENDED) AND THE ROAD TRAFFIC ACT 2006 (AS AMENDED) IS TO BE SUBMITTED TO THE DUBLIN CITY COUNCIL FOR APPROVAL.

6. ALL ROADWORKS AND ADJACENT ROADS TO BE CHECKED ON SITE PRIOR TO CONSTRUCTION.

7. THE CONTRACTOR TO BE RESPONSIBLE FOR THE PROTECTION OF ANY ADJACENT PROPERTY PRIOR TO ANY WORK COMMENCING.

REVISIONS

No.	Revised	Date	By	Check	Appr.
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PROJECT DATA

Project No. 0115
Project Name: BELMONT AVENUE IMPROVEMENTS
Client: DUBLIN CITY COUNCIL
Contract No. 123456789
Contract Value: €1,234,567
Contract Start Date: 01/01/2023
Contract End Date: 31/12/2024
Contract Manager: J. Smith
Contract Engineer: M. Jones
Contract Designer: A. Brown
Contract Checker: K. White
Contract Approver: L. Black
Contract Status: IN PROGRESS

LOGO

NTA
National Transport Authority

DUBLIN CITY COUNCIL
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