The background is a vibrant red color. It features several abstract geometric shapes: a large white circle with a blue border in the upper right; a smaller white circle with a blue border in the top right corner; a green semi-circle in the top left; a blue semi-circle with a white border in the bottom left; a large green semi-circle in the bottom right; and a white semi-circle with a blue border in the bottom right. The text is centered on the left side of the page.

Appendix F1
Structural Survey Report -
Tallaght to City Centre



Structural Assessment Audit Report

CBC 9: Tallaght to City Centre
BCIDA-ACM-STR_ZZ-0009_XX_00-PR-SS-0001

Client – National Transport Authority
Stage – Stage 2

Project reference: BusConnects Package A
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23th July 2020

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1. Introduction

1.1 Scheme Description

1.1.1 The BusConnects Core Bus Corridor (CBC) project is the National Transport Authority's (NTA) programme to greatly improve bus services across the Dublin region.

1.1.2 It aims to overhaul the current bus system in Dublin through a 10-year programme of integrated actions to deliver a more efficient, reliable and better bus system for more people. Amongst others, this will be achieved by:

- Building a new network of dedicated bus corridors, including bus gates, to make journeys faster and more reliable
- Provision of a new network of cycle lanes/tracks
- Provision of new bus stops and shelters with better signage and passenger information
- Provision of bus-based Park and Ride sites in key locations

1.1.3 The Tallaght to City Centre CBC Scheme commences on Belgard Square West at the junction with Cookstown Way. A bus interchange will be located in this area and will be a focus for all of the bus routes in the Tallaght area, providing seamless interchange between bus services, Luas and the Town Centre.

1.1.4 From there, the CBC is routed along Belgard Square West and Belgard Square North as far as the junction with Belgard Square East.

1.1.5 The Scheme's road networks fall under the jurisdiction of the Dublin City and South Dublin County Councils.

1.2 Purpose of the Report

1.2.1 AECOM were commissioned as Engineering Designer (ED) by the National Transport Authority (NTA) to carry out the structural assessment and inventory of structures, as required under Section 3.18 of the Scheme's 'Tender & Schedule for the Conditions of Engagement for Consultancy Services'. Section 3.18 considers the following ED commitments:

- The ED shall compile an inventory of all structures (buildings including boundary walls/fences, bridges, culverts, retaining walls, manholes, and any other relevant structures) on the route of the Scheme and those crossing the Scheme. The ED shall determine any structural design requirements for the Scheme and shall design all structures required for the Scheme in accordance with the relevant standards and in accordance with good industry practice.

1.2.2 This report therefore contains a desktop inventory of existing structures along the proposed route, considering likely impacts of the permanent and temporary works, including those adjacent to the scheme extents.

1.2.3 This later report will also consider the Scheme's impact on drainage assets, including manholes and utility chambers, assessing whether the impact is:

- An elevation change (a change of cover level)
- A Structural change (a change in the associated road loading, e.g. pedestrian footway to bus lane)
- A relocation of the manhole/inspection chamber

1.3 Inventory Collection

1.3.1 The initial approach taken to the identification of structural infrastructure along the route, was to use topographical survey data to identify key features. Table 1, below, provides a general list of structure types/feature picked up from the topographical survey.

Structure Type	Feature
Building Structures	<ul style="list-style-type: none"> Property boundaries Basement boundaries Culverts and headwalls
Walls/Fences	<ul style="list-style-type: none"> General walls and fences Retaining walls Fences on stub walls
Safety Barriers	<ul style="list-style-type: none"> Concrete and steel safety barriers
Existing Bridges	<ul style="list-style-type: none"> Bridge deck extents and accompanying retaining structures
Gantry Structures	<ul style="list-style-type: none"> Gantry columns and gantry extents
Manholes	<ul style="list-style-type: none"> Utility chambers Manholes

Table 1 - General list of structure types

1.3.2 The respective features, along with possible conflicts have been identified on a Structural Assessment Plan (Sheets 1 to 44, with document reference BCD-0000-STR_ZZ-09_XX_0000-DR-CR-0001), with associated CAD blocks or linetype, to aid in their display. Please see Figure 1, below, showing the various structures contained within a sample drawing legend.

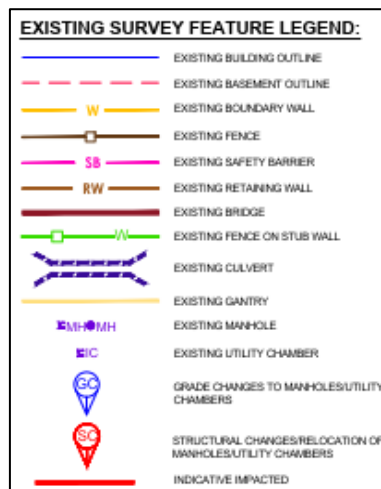


Figure 1 – Sample drawing legend

1.3.3 A virtual walk through, using Google Earth, has since been used to verify the accuracy of the topographical survey and identify any errors, or omissions.

1.3.4 The following section provides further detail on the various Structure Types / Features and their associated impact.

2. Building Structures

2.1 Property Boundaries

2.1.1 The Tallaght to City Centre route has a limited impact on existing property boundaries.

2.1.2 Possible conflicts occur at two locations, identified on the Structural Assessment Plan:

- Sheet 8 – Kilnamanagh Tymon Primary Care Centre on Greenhills Road
 - Access ramp to be realigned
- Sheet 18 – Building in Greenhills Industrial Estate along Greenhills Road
 - Existing building structure may require demolition

2.2 Basement Boundaries

2.2.1 Basement boundaries, identified from planning records, are present in only two locations, as listed below. There is no anticipated impact at these locations.

- Sheet 02 & 03 – Block A/B Tallaght Town Centre/ Tallaght Central Car Park
- Sheet 02 & 03 – Mixed use development Tallaght Town Centre (West)

2.2.2 The potential impact on the basements on the scheme need to be verified when the design has been further progressed.

2.3 Culverts and Headwalls

2.3.1 The River Tymon culvert traverses Greenhills Road, as shown on Sheet 07 of the Structural Assessment Plan.

2.3.2 A second culvert is believed to be in the vicinity of Calmount Road (Sheet 14) however its exact location has not been confirmed. The potential impacts on the culverts running under the scheme needs to be further developed.

3. Walls/Fences

3.1 General Wall and Fences

3.1.1 A review of the topographical survey and Google Earth have identified many types of boundary structures, notably boundary walls, fences, acoustic fences and fences on stub walls.

3.1.2 The below list includes the number of general walls and fences likely required to be removed and replaced.

- Sheet 1 & 2 – Fence and wall to be removed, the Square Tallaght Shopping Centre car park, Belgard Square West
- Sheet 3 – Removal of fence and wall to be reviewed, Tallaght Hospital, Belgard Square North
- Sheet 3 – Wall to be removed and relocated, vacant site, Belgard Square North
- Sheet 7 – Wall and fencing to be removed, St Mary's National School, Greenhills Road
- Sheet 7 – Wall and fencing to be relocated, West Park Fitness, Greenhills Road
- Sheet 7 – Culvert walls to be relocated, ITT, Greenhills Road
- Sheet 7 & 8 – Impact on wall to be reviewed, inbound side of carriageway, Greenhills Road
- Sheet 8 – Fencing/Hoarding to be relocated, Astro Park Tallaght, Greenhills Road
- Sheet 8 & 9 – Fence to be relocated, back entrance to industrial buildings, inbound side of carriageway, Greenhills Road
- Sheet 9 – Fencing to be removed and relocated, green area adjacent Broomhill Business Park, Greenhills Road

- Sheet 11 – Wall to be relocated, Kilnarnagh Family Recreation Centre, Greenhills Road
- Sheet 12 & 13 – Fencing to be removed and relocated, Tymon Park, Greenhills Road
- Sheet 14 – Wall and fencing to be relocated, Western Parkway Business Centre, Calmount Road
- Sheet 14 – Fencing to be removed and relocated, M50 Business Park, Ballymount Avenue
- Sheet 14 – Fencing to be removed and relocated, Calmount Business Park, Calmount Road
- Sheet 15 – Wall and fencing to be removed, Calmount Business Park, Greenhills Road
- Sheet 17 – Wall to be removed and relocated, Ballymount Business Centre, Greenhills Road
- Sheet 18 – Wall and fencing to be removed and relocated, Greenhills Industrial Estate, Greenhills Road
- Sheet 18 – Wall and fencing to be removed and relocated, Mulcahy Keane Industrial Estate, Greenhills Road
- Sheet 18 – Walls to be removed and relocated, residential properties on outbound side of carriageway, Greenhills Road
- Sheet 18 – Wall to be removed, car park between St Peter's Road and Cromwellsfort Road
- Sheets 18, 19 & 20 – Walls to be removed and relocated, residential properties on inbound side of carriageway, Walkinstown Road
- Sheets 21 – Walls to be partially removed, residential properties on inbound side of carriageway, Walkinstown Road
- Sheets 21 & 22 – Walls to be removed and relocated, residential properties on outbound side of carriageway, Walkinstown Road
- Sheet 22 – Walls to be removed and relocated, residential properties on outbound side of carriageway, Drimnagh Road
- Sheet 25 – Wall to be removed and relocated, Ardscoil Éanna, Crumlin Road
- Sheet 27 – Wall to be removed and relocated, HSE Dental Clinic, Crumlin Road

3.2 Retaining Walls

3.2.1 The retaining wall impacted by the proposed works is listed below:

- Sheet 24 – Low concrete retaining wall/kerb along back of footway to be removed and relocated

3.3 Safety Barriers

3.3.1 Safety barriers across the scheme include both single and double-sided steel safety barriers. These safety barriers are located at pedestrian crossings, at junctions, and the carriageway edge with appropriate setbacks.

3.3.2 Where required to widen or reconfigure the current roadway assignment the safety barrier requirement will have to be revisited to assess the requirements of the proposed configuration.

4. Existing Bridges

4.1.1 Only one existing bridge is found on the Tallaght to City Centre CBC. This bridge will be impacted by the proposed changes along the route.

- Sheet 12 – Overbridge crossing the M50 and affected M50 sign gantry

4.1.2 A review of structural as-built records/ follow up surveys may be required to understand and mitigate the impact on the structures and associated substructures.

5. Manholes

5.1.1 Manholes and utility chambers are located throughout the scheme. The impact on the manholes and utility chambers has been identified, assessing whether the impact is:

- Grade change (a change in the existing level)
- Structural change (a change in the loading, e.g. pedestrian footway to bus lane)

- Required relocation of the manhole/inspection chamber

