Bonneagar Iompair Éireann
Transport Infrastructure Ireland

Templemore N62 / L3220 / Mall Junction

N62TY_076.0

Road Safety
Improvement Scheme

Date: 15/03/2022

Contents

1 Introduction

This report describes the Preliminary Design carried out for the proposed infilling of the Mall River and associated road improvement works in the town of Templemore, County Tipperary. The site location is shown in Figure 1-1, with the scheme running north - south crossing the N62 national road.

The proposed scheme

Tipperary County Council propose to infill a section of the River Mall as part of diversion works. The resulting dry riverbed will create a new space with the proposed use as follows:

(i) Provision of a footpath and grass area over the infilled river from Templemore Town Park pedestrian entrance to a point 100m south in the direction of the N62, behind an existing stone wall / parapet.
(ii) Provision of approximately 100m of new footway adjacent to the Blackcastle Road to the junction of the N62 (at Young's garage), with a footway width by 1.8m which and reduced carriageway width.
(iii) Removal of existing parapet wall to create an AC hardstanding area adjacent to Youngs garage.
(iv) The demolition of approximately 50m of existing stone wall and bridge parapet north of the N62 to allow for the construction of a new proposed footway to match existing from O'Dwyer Bridge.
(v) Provision of improvement works north of O'Dwyer bridge for approximately 40m to include increasing corner radius, installation of aggregate bollards and hard landscaping area.
(vi) Widening of the carriageway crossing O'Dwyer bridge along the N62.
(vii) The demolition of approximately 15m of existing stone wall and bridge parapet south of the N62 to allow for improvement works to include a new footway, increased corner radius and increase sight lines between The Mall Road and the N62.
(viii) Construction of approximately 70m AC pavement over the existing channel south of the N62 and maintenance of the existing stone wall / parapet.
(ix) Proposed vehicular access to the infilled area approximately 50m south of the N62 on The Mall Road and modification to 2 no. existing access to dwellings on the western side of The Mall Road.

Figure 1-1

2 Collision History

No further collision analysis has been carried out further to the production of the Feasibility and Options Report.

3 Safety Objectives

The safety objectives of the scheme are as follows;

- to ensure drivers entering the N62 have adequate visibility when exiting the Blackcastle and Mall roads such that the sightline is not obstructed by the bridge parapet walls.
- to ensure safe crossing place is defined for pedestrians across both sideroads.
- To address issues highlighted in the Stage 1 Road Safety Audit

4 Existing Conditions

4.1 Speed

The posted speed limit at this section of the N62 is 50km/hr. Observed speeds both from the site visit and Road Safety Audit were not observed as excessive.

4.2 Traffic Volumes

The AADT of the route has been identified as 5000 from the 2017 NRpM.

4.3 Horizontal Alignment

The N62 at this location is straight and both side roads have a straight approach to the junction at 90 degrees.

4.4 Vertical Alignment

All three roads forming the junction are well within vertical alignment standards.

4.5 Cross Section Crossfall & Superelevation

4.5.1 Cross Section

The N62, a national secondary road has a cross section comprising:

- Two-way single carriage of approximately 7.0m in width, which narrows at O'Dwyer Bridge to approximately 6.0m. On street parking is present on both sides of the carriageway east of O'Dwyer Bridge.
- Footways are present on both side of the carriageway in the vicinity of the staggered crossroad junction. The footway width is variable between 1.8m-2.0m and narrows crossing the bridge to a width of approximately 1.2m.

Blackcastle Road is a local road with a speed limit of 50km/h, located to the north of the N62 and has a cross section comprising:

- Two-way single carriage of variable width approximately 9.0m.
- A footway of approximately 1.4m in width is present on the western side of the carriageway only.

The Mall Road is a local road with a speed limit of 50km/h, located to the south of the N62 and has a cross section comprising:

- Two-way single carriage of variable width, approximately 8.0m, with on-street parking both sides of the carriageway.

- Footways of varying width are present on both sides of the carriageway. The western footway is in poor condition.

4.5.2 Crossfall

There is 2.5% crossfall on the N62 from the Northern kerb falling south on approach to the junctions.

4.5.3 Superelevation

Not Applicable.

4.6 Junctions & Accesses

R62 Junction discussed in entire report not this section alone.

4.7 Facilities for Vulnerable Road Users

The crossing distance and guidance for pedestrians crossing the side roads is poor, in that there are narrow or non-existent footpaths with limited dropped kerb or tactile in place for pedestrians.

4.8 Visibility & Sightlines

During the site visit on street parking was observed in proximity to the N62 / Blackcastle Road / The Mall Junction, which may obstruct visibility. The existing parapet wall obstructs visibility exiting from Blackcastle Road.

5 Environmental, Archaeological and Other Constraints

5.1 Appropriate Assessment

An AA Screening Report was carried out for the entire Infill project of which the junction improvements were a part.

5.2 Ecological Assessment

An Ecological Assessment was carried out for the entire Infill project of which the junction improvements were a part.

5.3 Archaeological Constraints

An Archaeological assessment was carried out for the entire Infill project of which the junction improvements were a part.

6 Proposed Design

6.1 General

The junction improvements were carried out in accordance with the Design Manual for Urban Roads and Streets.

6.2 Land Acquisition

Not Applicable.

6.3 Horizontal Alignment

The existing horizontal alignment was maintained.

6.4 Vertical Alignment

The existing vertical alignment was maintained.

6.5 Cross Section Crossfall & Superelevation.

6.5.1 Cross Section

The cross section on approach to the junction from the east has 8.4m of carriageway with 2m footpaths on each side. This is excessively wide for an urban area and encourages higher speeds. The footpath width reduces considerably between the junctions.

The proposal is to reduce the carriageway width to 6.5m at the junction and provide a minimum of 2m footpaths into the village.

6.5.2 Crossfall

The existing crossfalls were maintained. Given the existing entrances and kerb lines it is not recommended to alter the falls on the existing road and all improvements will tie in to existing levels.

6.5.3 Superelevation

The existing crossfalls were maintained. Given the existing entrances and kerb lines it is not recommended to alter the falls on the existing road and all improvements will tie in to existing levels.

6.6 Facilities for Vulnerable Road Users

It is proposed to upgrade pedestrian facilities at both junctions including:

- 2m footpaths on all approaches to the junctions
- Narrow the carriageway and reduce corner radii
- Provide tactile paving at uncontrolled crossings
- Provide crossing points on desire lines

6.7 Junctions & Accesses

The proposed junction arrangement at each location is a simple priority junction with stop line.

6.8 Visibility and Sightlines

The junctions have been altered to push the kerbline out into the carriageway and remove parking in the immediate vicinity of the junctions. Existing stone walls have also been removed. These alterations provide for a 49m sight line at a 2.4m x distance in accordance with the Design Manual for Urban Roads and Streets Table 4.2 for bus routes.

Design Speed (km/h)	SSD Standard (metres)
10	8
20	15
30	24
40	36
50	49
60	65

Forward Visibility on Bus Routes

Figure 6-1 Table 4.2 from DMURS

6.9 Drainage

Some gullies will have to be moved to match the new position of the kerbs and will be reconnected to the existing system. All gradients and crossfalls will be retained to ensure existing system remains unchanged.

6.10 Pavement

It is not proposed to make alterations to the existing pavement. Minor repairs will be required where new kerbs are installed and this repair will be established at detail design stage. Concrete footpaths to CC-SCD-01105 are to be installed as per DWG 11007-1000-03. Buff Coloured Tactile paving to DWG 11007-1000-04 is to be provided at uncontrolled pedestrian crossings.

6.11 Safety Barrier Risk Assessment and Provision

A safety barrier risk assessment is not required. Roadside hazards (stone walls) have been removed.

6.12 Traffic Signs and Road Markings

There are only minor alterations proposed to the existing lining and signing.

- Stop lines moved out to align with new kerbs
- Double yellow lines to align with new kerbs.

See DWG 11007-1000-04 for details.

6.13 Accommodation Works

All works are to be carried out within the road bed. Consultation with adjacent property owners will be carried out during the Part 8 process.

6.14 Lighting

There is existing public lighting at this location. Specialist input may be required at detailed design stage to ensure its adequacy.

6.15 Departures from Standard

Not Applicable.

7 Road Safety Audit

A Stage 1 Road Safety Audit was carried out in February 2022. 18 problems were identified by the Audit Team. All recommendations were accepted by the Design Team and are incorporated into the design drawings appended to this report. The final audit report has been uploaded to the RSAAS.

8 Total Scheme Budget

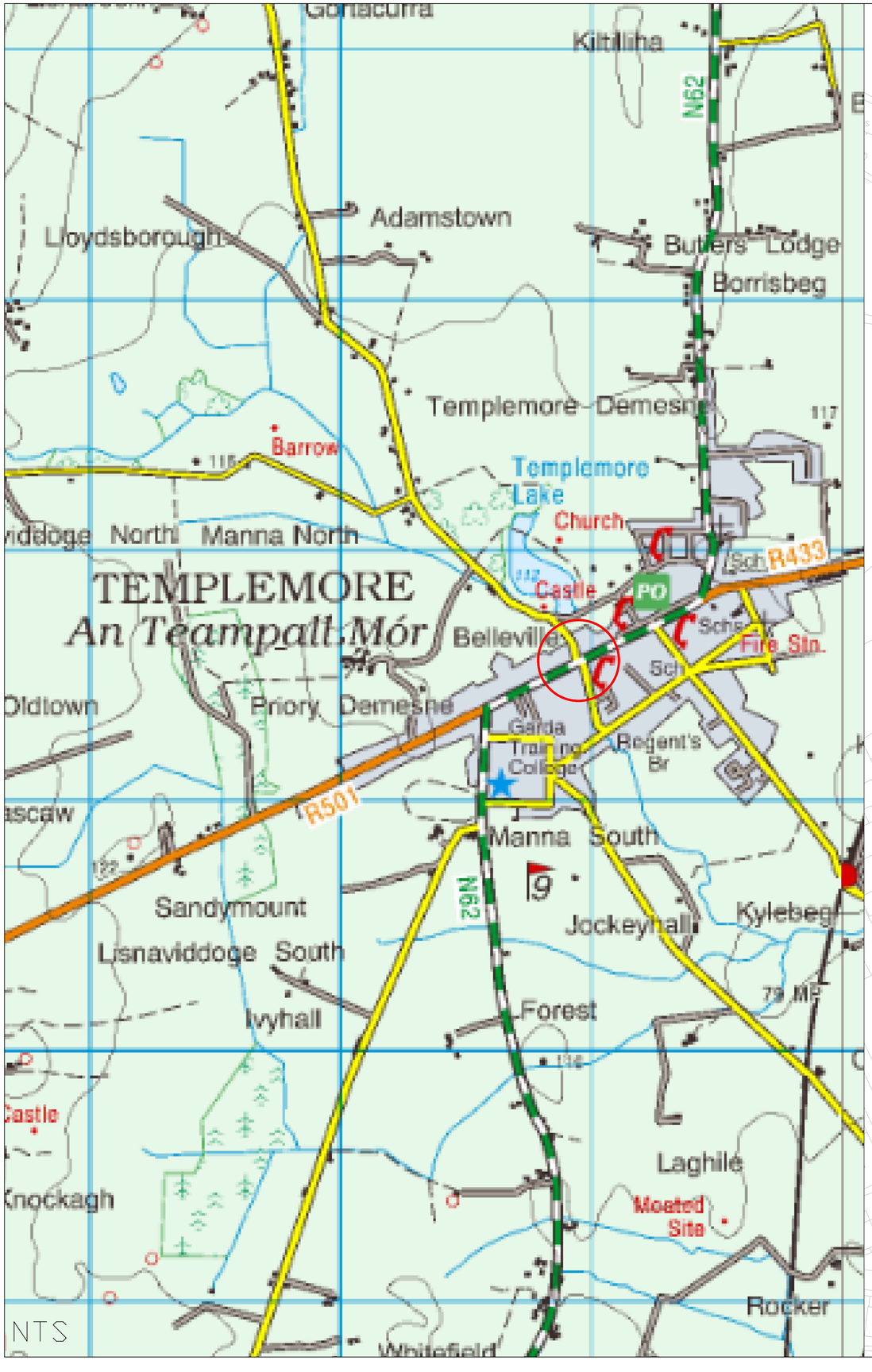
There was no cost estimate for construction included in the Feasibility and Options Report. A cost estimate has been prepared and a breakdown of the estimate is provided in Appendix C of this report.

The current cost estimate is €159,547 including VAT .

9 Project Appraisal Balance Sheet

A project appraisal balance sheet has been prepared for this scheme in accordance with the guidance set out in DN-GEO-03030. The PABS is provided in Appendix D. The overall description of the scheme is slightly positive.

Appendix A – Design Drawings



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5. ALL LEVELS SHOWN RELATE TO ORDNANCE SURVEY DATUM AT MALIN HEAD.

Rev	Date	Description	By	Chkd.
D01	01.01	First Issue	AA	BB

Client: Tipperary County Council

Project: Templemore N62/L3220/ Mall Junction

Title: Project Location and Layout

Scale @ A1: As Shown

Prepared by:	Checked:	Date:
JOF	MR	March 2022

Project Director: Michael McDonnell

Drawing Status: Preliminary Design

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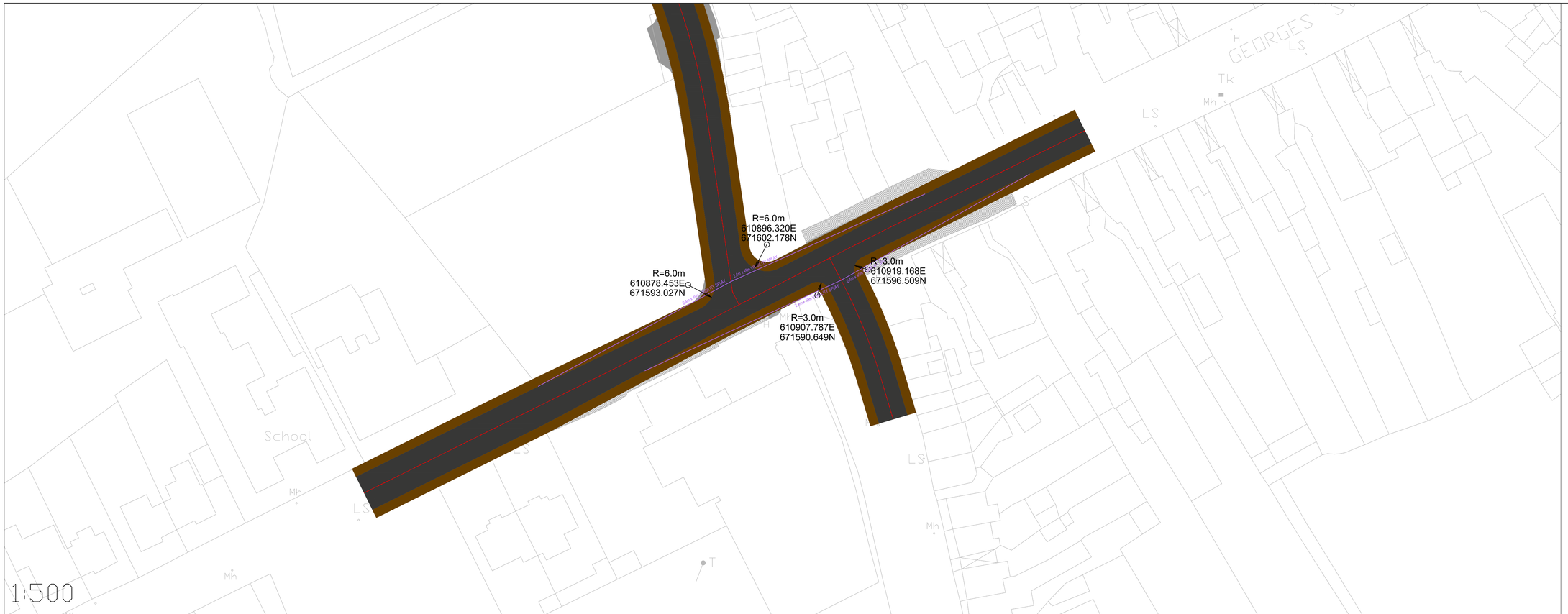
Drawing No.: 11007-1000-01

Revision: REV A



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Rev	Date	Description	By	Chkd.
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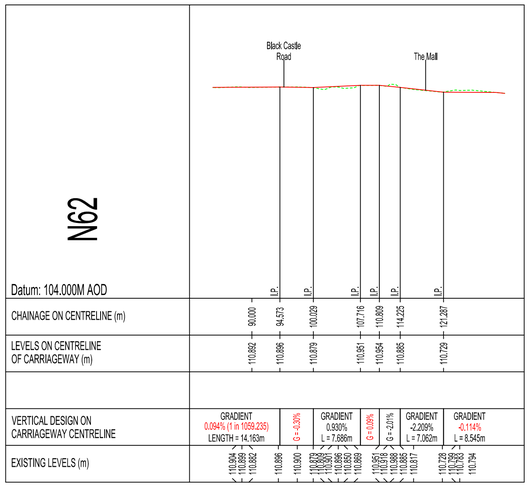

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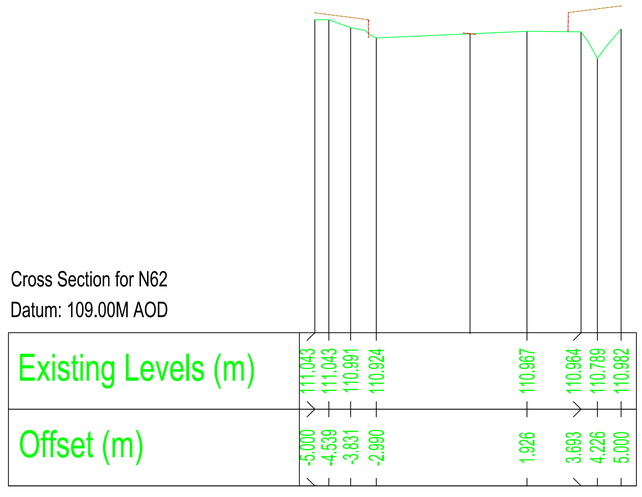

Chainage : 110.000m

1:100

Client: Tipperary County Council

Project: Templemore N62/L3220/ Mall Junction

Title: Geometry

Scale @ A1: As Shown

Prepared by:	Checked:	Date:
JOF	MR	March 2022

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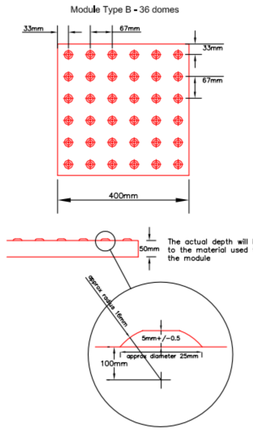
Drawing No.: 11007-1000-02



Buff Coloured Tactile Paving Detail

1:250

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LEGEND:

- Existing Footpath(retained)
- Existing Pavement(retained)
- Footway - Concrete
- Tactile Paving - Buff
- Kerb - Full Height 125mm
- Kerb - Pedestrian 6mm

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Rev	Date	Description	By	Chkd.
D01	01.01	First Issue	AA	BB

Client: Tipperary County Council

Project: Templemore N62/L3220/ Mall Junction

Title: Walls and Ammenity Areas

Scale @ A1: As Shown

Prepared by:	Checked:	Date:
JOF	MR	March 2022

Project Director: Michael McDonnell

Drawing Status: Preliminary Design

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Centre line dashed RRM002B
Continuous Centre line RRM001
Double Yellow lines RRM008
Stop line RRM017

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Rev	Date	Description	By	Chkd.
D01	01.01	First Issue	AA	BB

Client: Tipperary County Council

Project: Templemore N62/L3220/ Mall Junction

Title: Traffic Signs and Road Markings

Scale @ A1: As Shown

Prepared by:	Checked:	Date:
JOF	MR	March 2022

Project Director: Michael McDonnell

Drawing Status: Preliminary Design

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Drawing No.: 11007-1000-04

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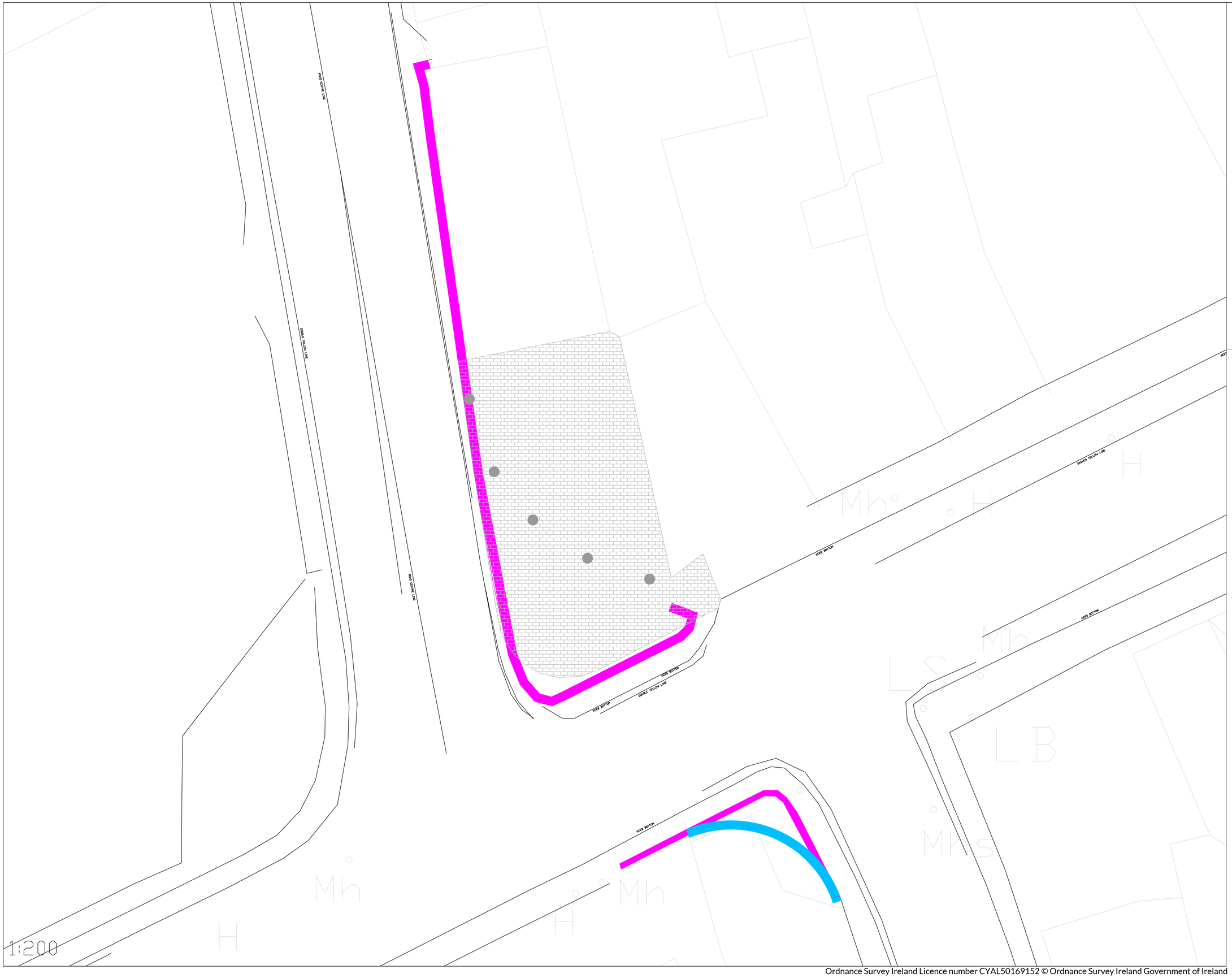

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LEGEND:

- Existing Wall to be removed
- Pavement detail to DWG 11007-2018
- Proposed Stone Wall
- Proposed Exposed Aggregate Bollard See DWG 11007-2019

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D01	01.01	First Issue	AA	BB
Rev	Date	Description	By	Chkd.

Client: Tipperary County Council

Project: Templemore N62/L3220/ Mall Junction

Title: Walls and Ammenity Area

Scale @ A1: As Shown

Prepared by:	Checked:	Date:
JOF	MR	March 2022

Project Director: Michael McDonnell

Drawing Status: Preliminary Design

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Drawing No.: 11007-1000-05

Revision: REV A

Appendix B –Road Safety Audit

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BUILT ON KNOWLEDGE

Comhairle Contae Thiobraid Árann
Tipperary County Council

TIPPERARY COUNTY COUNCIL

TEMPLEMORE INFILL WORKS

STAGE 1 ROAD SAFETY AUDIT

TEMPLEMORE INFILL WORKS

STAGE 1 ROAD SAFETY AUDIT

Document Control Sheet	
Document Reference	11007 TR01 RSA
Report Status	DRAFT
Report Date	January 2022
Current Revision	D01
Client:	Tipperary County Council
Client Address:	Tipperary County Council Civic Offices Emmet Street, Clonmel Co. Tipperary
Project Number	11007

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Fairgreen House, Fairgreen Road, Galway, H91 AXK8, Ireland. Tel: +353 (0)91 565 211	Block 10-4, Blanchardstown Corporate Park, Dublin 15, D15 X98N, Ireland. Tel: +353 (0)1 803 0406	Market Square, Castlebar, Mayo, F23 Y427, Ireland. Tel: +353 (0)94 902 1401

Revision	Description	Author:	Date	Reviewed By:	Date	Authorised by:	Date
D01	Draft	PS	19/01/2022	RM	01/02/2022	LG	02/02/2022

TOBIN Consulting Engineers

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1.0 INTRODUCTION

This report describes the Stage 1 Road Safety Audit carried out for the proposed infilling of the Mall River and associated road improvement works in the town of Templemore, County Tipperary. The site location is shown in Figure 1-1 , with the scheme running north - south crossing the N62 national road.

Figure 1-1 Site Location Map (Dwg. No. 11007-2000)

1.1 EXISTING ENVIRONMENT

The proposed scheme is located along the Mall River in the town of Templemore, Co. Tipperary (refer to Site Layout Map in Figure 1-2*).*

The site commences approximately 210m north of the N62 at the pedestrian access to Templemore Demesne, intersects the N62 at O'Dwyer Bridge, continues south along "The Mall" for approximately 300m and crosses into agricultural farmland at Small's Bridge terminating at a headwall to the Mall River.

The scheme is located in an urban environment within a speed limit of 50km/h.

The N62, a national secondary road has a cross section comprising:

- Two-way single carriage of approximately 7.0m in width, which narrows at O'Dwyer Bridge to approximately 6.0m. On street parking is present on both sides of the carriageway east of O'Dwyer Bridge.
- Footways are present on both side of the carriageway in the vicinity of the staggered crossroad junction. The footway width is variable between 1.8m-2.0m and narrows crossing the bridge to a width of approximately 1.2m.
- Road marking, signage, gullies, and street lighting are present on the N62.

Blackcastle Road is a local road with a speed limit of 50km/h, located to the north of the N62 and has a cross section comprising:

- Two-way single carriage of variable width approximately 9.0m.

- A footway of approximately 1.4m in width is present on the western side of the carriageway only.
- Road marking, signage and street lighting are present on this section of the road.
- Drainage to the western side of the carriageway is by gullies and the eastern side is by over the edge drainage directly into the River Mall.
- The Blackcastle Road intersects the N62 as a staggered crossroad junction with The Mall Road to the south of the N62.

The Mall Road is a local road with a speed limit of 50km/h, located to the south of the N62 and has a cross section comprising:

- Two-way single carriage of variable width, approximately 8.0m, with on-street parking both sides of the carriageway.
- Footways of varying width are present on both sides of the carriageway. The western footway is in poor condition.
- Road marking, signage, gullies, and street lighting are present on this section of the road.
- A number of properties have direct access to the carriageway crossing the footway.

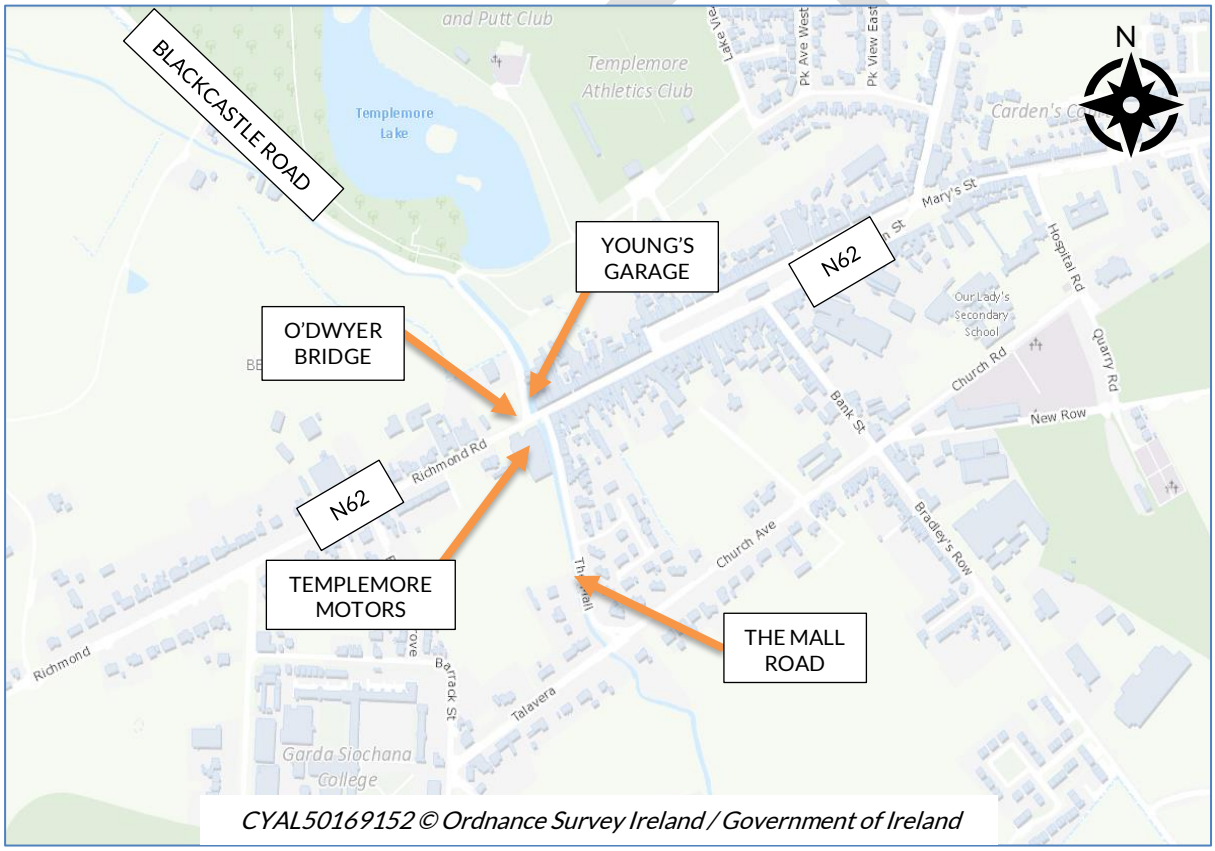

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Figure 1-2 Site Layout Map

1.2 PROPOSED DEVEOPEMENT

Tipperary County Council propose to infill a section of the River Mall as part of diversion works. The resulting dry riverbed will create a new space with the proposed use as follows:

(i) Provision of a footpath and grass area over the infilled river from Templemore Town Park pedestrian entrance to a point 100m south in the direction of the N62, behind an existing stone wall / parapet.

(ii) Provision of approximately 100m of new footway adjacent to the Blackcastle Road to the junction of the N62 (at Young's garage), with a footway width by 1.8m which and reduced carriageway width.
(iii) Removal of existing parapet wall to create an AC hardstanding area adjacent to Youngs garage.
(iv) The demolition of approximately 50m of existing stone wall and bridge parapet north of the N62 to allow for the construction of a new proposed footway to match existing from O'Dwyer Bridge.
(v) Provision of improvement works north of O'Dwyer bridge for approximately 40m to include increasing corner radius, installation of aggregate bollards and hard landscaping area.
(vi) Widening of the carriageway crossing O'Dwyer bridge along the N62.
(vii) The demolition of approximately 15m of existing stone wall and bridge parapet south of the N62 to allow for improvement works to include a new footway, increased corner radius and increase sight lines between The Mall Road and the N62.
(viii) Construction of approximately 70m AC pavement over the existing channel south of the N62 and maintenance of the existing stone wall / parapet.
(ix) Proposed vehicular access to the infilled area approximately 50m south of the N62 on The Mall Road and modification to 2 no. existing access to dwellings on the western side of The Mall Road.

1.3 ROAD COLLISION DATA

1.3.1 Road Safety Authority Database

Road Collision Data available on the Road Safety Authority Database, within the period 2005 to 2016, along the section of proposed scheme identified 1 no. minor (single vehicle) collision recorded in 2013 as shown in Figure 1-3.

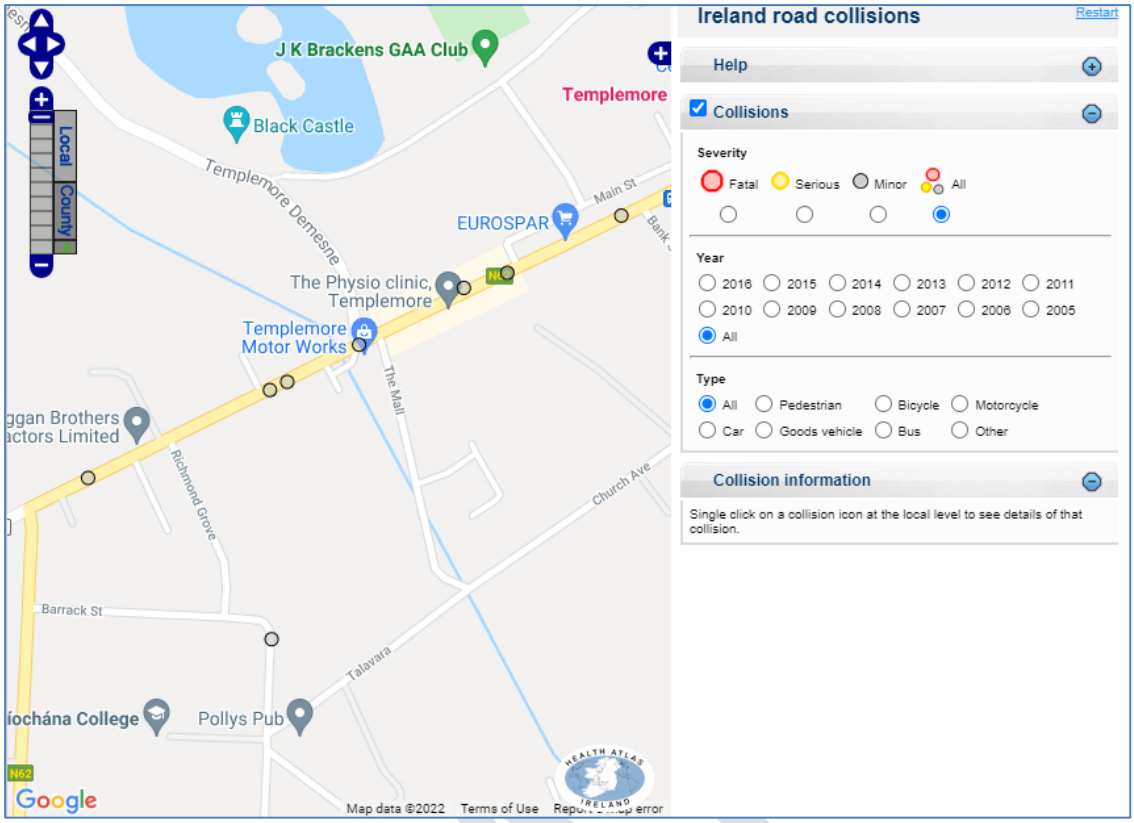


Figure 1-3 Road Collision Data 2005 – 2016 (Source: Road Safety Authority)

Note - the RSA database is not a comprehensive record of collisions and should be reviewed in conjunction with the Local Authority / Gardaí records for the site.

1.3.2 TII HD 15 and HD17 Site

HD15 and HD 17 Sites have been identified on the N62 in proximity to the scheme. Refer to full details in Appendix A.

The HD 15 assessment of the site (TII reference N62TY_076.0) has identified the site as a High Collision site, with a collision rate threshold twice above the average rate. The HD 15 and assessment for the scheme notes the following collisions in addition to those detailed on the Road Safety Authority website:

- 31 collisions including
  - 4 No. Minor Injury collisions
  - 27 No. Material Damage only collisions

The assessment notes the mixed nature of collisions including 2 pedestrian collisions while noting an appearance of a higher incidence of collisions during hours of darkness on the eastern section of the site.

The HD17 assessment of the site identifies 2 main issues with the existing staggered junction including the following;

- Drivers exiting the side road junction without adequate knowledge of oncoming vehicles on the main N62 road, and
- Conflicts between pedestrians and motorised vehicles given lack of existing Vulnerable Road User (VRU) facilities.

1.4 AUDIT DETAILS

The audit took place at the Galway and Dublin offices of TOBIN Consulting Engineers in January 2022. The audit comprised an examination of the documents provided by the Design Team and listed in Appendix A. In addition, a day-time site visit took place on Friday the 21st of January 2022. During the site visit the weather was dry and overcast and the road surface was dry.

The audit team members were as follows:

Audit Team Leader

- Laura Gaffney - MSc. Env. Eng., BEng (Hons) Civil Eng., CEng., MIEI, Project Engineer for Roads & Transportation, TOBIN Consulting Engineers. – TII Reference LG3386505

Audit Team Members

- Ronan Murtagh – B.A. B.A.I, CEng, MIEI. Design Engineer for Roads & Transportation, TOBIN Consulting Engineers. – TII Reference RM3414512

This Stage 1 Audit has been carried out in accordance with the relevant sections of Transport Infrastructure Ireland Publication (Standards) "Road Safety Audit" GE-STY-01024 (December 2017). The team have examined and reported only on the road safety implications of the design submitted and has not examined or verified the compliance of the design to any other criteria. However, to clearly explain a problem or a recommendation, it may be necessary to refer to another Standard or Advice Note, but such reference will not conflict with the requirements of the above Terms of Reference.

The Design Team and Employer (Client) is reminded that the Road Safety Audit Feedback Form, in Appendix D, shall be completed and returned to the Road Safety Audit Team Leader for sign off.

2.0 ITEMS RESULTING FROM THIS ROAD SAFETY AUDIT

2.1 PROBLEM 1

Guiding of Existing Road Markings

At the northern end of the scheme along the Blackcastle Road, the existing edge of carriageway road markings do not guide vehicles in the same alignment as the road centreline. The edge of carriageway road marking follows the existing boundary wall line. This may lead to vehicles being guiding into pedestrians or the culvert wall especially at times of low visibility (i.e. fog).

Figure 2-1 Road Markings and Alignment along the Blackcastle Road at the Town Park Entrance

Figure 2-2 Road Markings at Town Park Entrance Boundary Wall

Recommendation
The Design Team should provide appropriate delineation measures / boundary treatment measures and warning of the hazard.

2.2 PROBLEM 2

Culvert Wall Termination Detail

Drawing 11007-2014-D01 shows that in the creation of the proposed footpath between the entrance to the Town Park along the Blackcastle Road, the existing culvert wall will finish directly in line with oncoming traffic. This could result in vehicles striking pedestrians entering/exiting the park or cause a head on collision between a vehicle and the culvert wall

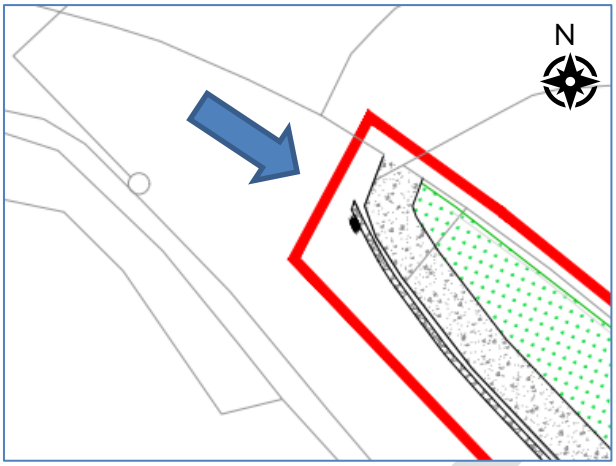


Figure 2-3 Extract Drawing 11007-2014-D01, showing end of wall and intersection with new pedestrian access point to the park

Recommendation

The Design Team should include mitigation measures for end of wall treatment or suitable advance warning.

2.3 PROBLEM 3

Interface between Pedestrian Footway and Road Carriageway

Drawing 11007-2014-D01 shows that in the creation of the proposed footway along the Blackcastle Road, the footway alignment shifts from behind the culvert wall to online into the existing carriageway (i.e. abrupt change in alignment). The development of the footway occurs instantaneously in line of oncoming traffic without any proposed protection. Wall height may pose an issue to the visibility of small children while the sudden inclusion of a kerb without prior warning could present a significant safety hazard to drivers leading to both pedestrian and vehicular collisions.

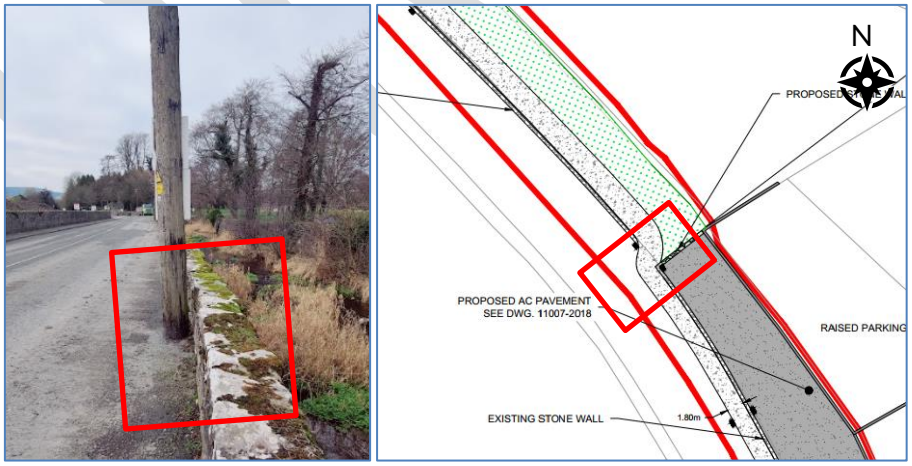


Figure 2-4 Drawing 11007-2014-D01 extract showing interface between road and proposed footway

Recommendation

The Design Team should create a safe means of access to pedestrians to move from behind the wall to the front of the wall, with adequate warning and safety provisions for both motorised and non-motorised users.

2.4 PROBLEM 4

Proposed Footway Widths

Drawing 11007-2014-D01 shows a proposed 1.8m wide footway along the Blackcastle Road. The audit team note that the proposed width is in line with the absolute minimum standard footway widths, potentially creating a passing hazard for pedestrians forcing them onto the existing carriageway creating a conflict point between vehicles and pedestrians, in particular for wheelchair users and those pushing buggies / prams.

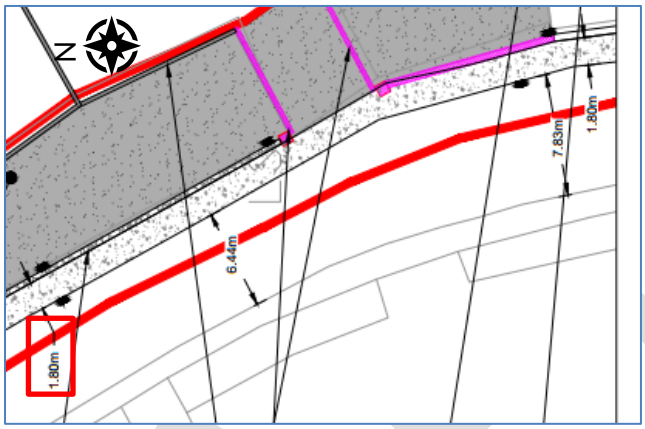


Figure 2-5 Extract of Proposed Footway widths from preliminary design drawings

Recommendation

The Design Team should ensure the footway width is adequate for passing pedestrian movements demands.

2.5 PROBLEM 5

On street Parking

Along Blackcastle Road, parking is currently permitted commencing a distance of approximately 30m north of the junction with the N62 towards the park pedestrian entrance. The auditors note that if the existing parking provision is maintained upon construction of the new footway, it will result in vehicles parked within the carriageway reducing the road width. Resulting in obstructions to two-way passing vehicular movements with unsuitable visibility to allow yielding. This may result in head on collisions and driver frustration resulting in unsafe road behaviour.

Figure 2-6 Currently Parking allowances along the Blackcastle Road just North of the N62 junction

Recommendation

The Design Team should provide appropriate parking signage in coordination with the proposed design.

2.6 PROBLEM 6

On street Parking - Streetscape Parking

A streetscape area is proposed at the junction of the N62 with the Blackcastle Road within the infilled lands. The Audit Team are concerned the wide streetscape area may give rise to vehicles parking on it. This may result in potential conflicts with pedestrian and vehicles and also give rise to junction visibility issues leading to potential collisions at the junction.

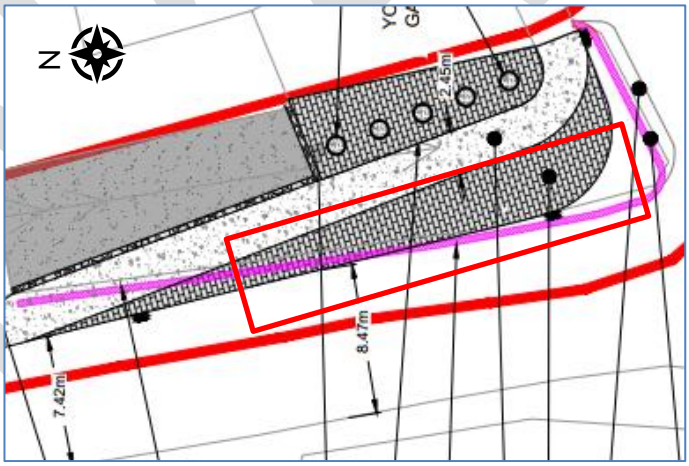


Figure 2-7 Proposed Streetscape Design at the Junction of the N62 and Blackcastle Road

Recommendation

The Design Team should provide appropriate measures to prevent vehicles parking on the paved area within the proposed design.

2.7 PROBLEM 7

Pedestrian Desire Lines

At the streetscape area at the junction of Blackcastle Road and the N62, the roadway at O'Dwyer's Bridge is proposed to be widened and the footway set back behind the existing parapet line. The Audit Team are concerned this will affect the pedestrian desire lines crossing Blackcastle Road. In particular, the existing infrastructure (i.e. drop kerbs) on the left hand side of the junction will guide visually impaired VRUs into the road carriageway, potentially leading pedestrians stranded in the carriageway and collisions between motorised and pedestrians.

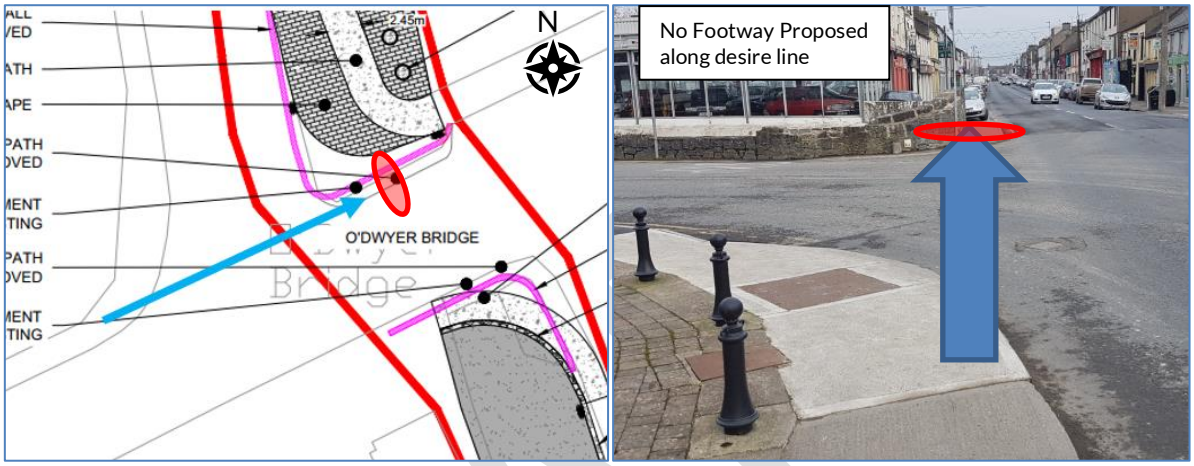


Figure 2-8 Existing Pedestrian Desire Lines across Blackcastle Road

Recommendation

The Design Team should review the pedestrian desire line based on the proposed design and ensure the design ties into the existing road infrastructure. Provisions for visually impaired road users should be provided in the design (i.e. tactile paving at road crossing).

2.8 PROBLEM 8

Width of Proposed Junction – N62 / Blackcastle Road

The proposed design shows work only to the eastern side of the N62 / Blackcastle Road junction. The existing wide corner radius on the west side of the junction, in conjunction with the increased eastern corner radius will potentially give rise to higher vehicle speeds turning at the junction. It will also result in increased pedestrian crossing times, which will increasing the risk of collisions between motorised and non-motorised road users.

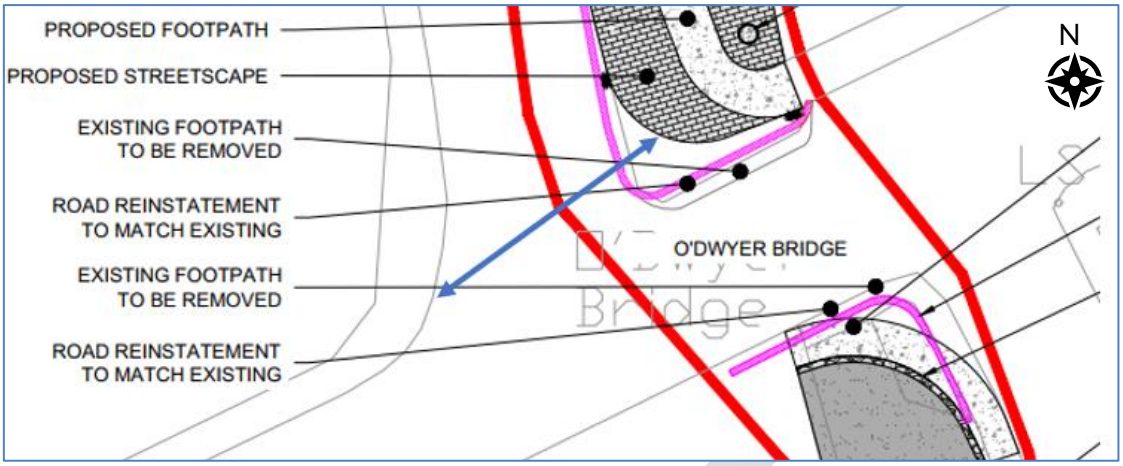


Figure 2-9 Proposed N62 / Blackcastle Road Junction Width

Recommendation

The Design Team should provide junction widths in accordance with guidance from the Design Manual for Urban Roads and Streets in accordance with the urban road speed.

2.9 PROBLEM 9

Junction Warning Signage

The Audit team observed onsite the presence of warning signage on the minor road approaches to the N62 staggered junction. Warning signage is being provided on the major road approaches in both directions at quite a distance away from the junction. Significant distance of warning signage to hazards may result in lack of awareness of drivers, believing the warning signs are no longer valid to the area. This could give rise to head on collisions, turning collisions or rear end collisions at the junction as drivers may.

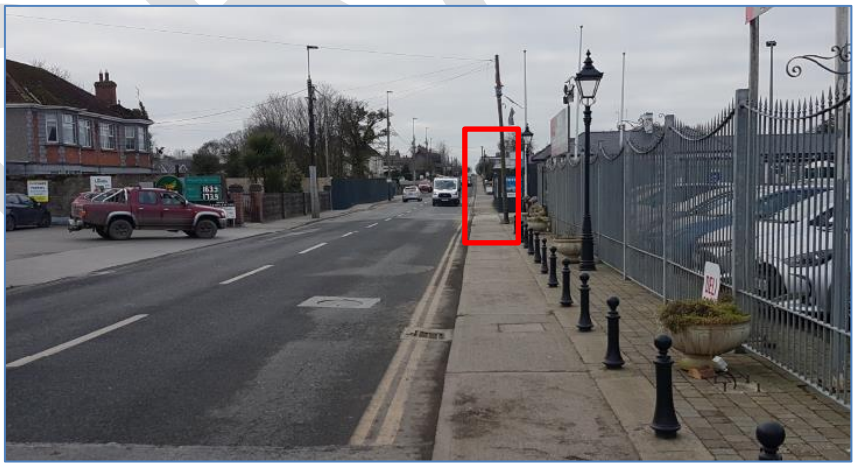


Figure 2-10 Eastbound Approach to the N62 / Blackcastle Road / The Mall Junction

Recommendation

The Design Team should provide staggered junction warning signage on the major road at suitable distances from the hazard.

2.10 PROBLEM 10

Tactile Paving Provision

The Audit team noted that the proposed design does not show provision of tactile paving at the N62 / Blackcastle Road / The Mall Junction. This lack of tactile paving could lead to visually impaired road users crossing at unsafe locations leading to collisions.

Recommendation

The Design Team should provide tactile paving at pedestrian crossing points.

2.11 PROBLEM 11

Faded Line Markings

The Audit team observed onsite that the existing road markings within the scheme, in particular, at the N62 / Blackcastle Road / The Mall junction and on the approaches to the junction are heavily worn. The faded line markings could lead to drivers unable to accurately determine the road layout and result in collisions with other road users.

Figure 2-11 Faded Road Markings at the N62 / Blackcastle Road / The Mall Junction and Blackcastle Road

Recommendation

Road Markings in and around the scheme should be reinstated to improve safety.

2.12 PROBLEM 12

Drainage Issues

The Audit team noted that in the vicinity of the N62 / Blackcastle Road / The Mall junction that areas of potential water ponding were observed onsite. Ponding water could lead to slip hazards for pedestrians or force pedestrians off footways and into the carriageway creating conflict points between motorised and non-motorised road users.

Figure 2-12 Area of Water Ponding on the East of the N62 / Blackcastle Road Junction

Recommendation

The Design Team should provide adequate drainage.

2.13 PROBLEM 13

Parked Cars and Pedestrian Facilities

The Audit Team observed parking to the east of the N62 / Blackcastle Road junction fronting Young's Garage. The proposed footway alignment tying into the existing footway, may overlap with this area, displacing vehicles resulting in vehicles parked in closer proximity to the junction negatively impacting on visibility. Or vehicles parked on the proposed footway impeding pedestrians.

Figure 2-13 Interface of proposed footway and existing footway alignment

Recommendation

The Design Team should ensure adequate visibility is provided at the junction clear of parked vehicles.

2.14 PROBLEM 14

Footway and Pedestrian Restraints

The Audit Team observed along The Mall Road, the existing footway and culvert wall has been significantly damaged with proposed design noting that *"the existing stone wall to be repaired as required to match existing* ". Retention of the existing footway in the current state is a significant trip hazard to pedestrians.

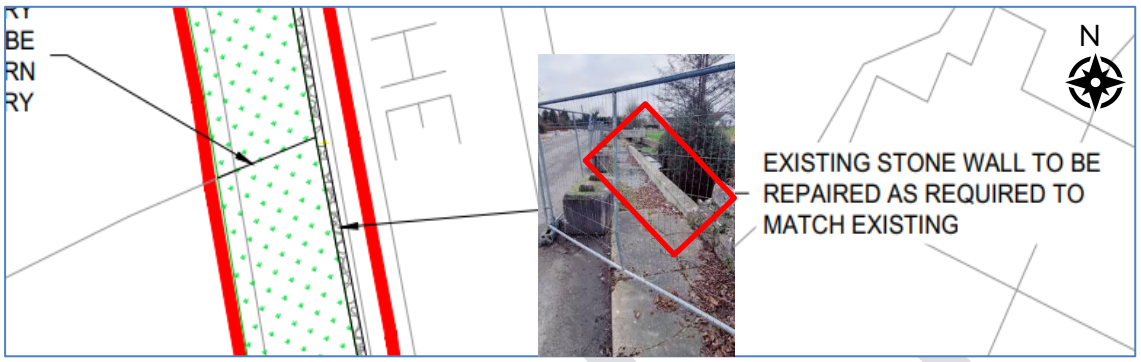


Figure 2-14 Existing Stone Wall and Footpath provision and Proposed Works

Recommendation

The footway at this location should be reinstated in combination with the wall repairs.

2.15 PROBLEM 15

Pavement Widening Works

The proposed works for the scheme include pavement widening works on the N62 at O'Dwyer bridge. It is likely these works will be in the line of vehicle wheel paths. As part of the typical cross section details provided, no information has been shown regarding the pavement widening build up proposed. Insufficient pavement works could result in deterioration at the pavement joint and new pavement section creating a hazard for vehicles at the junction.

Recommendation

The Designer should provide a pavement tie-in and build up to cater for the lifespan and traffic loading on the N62.

2.16 PROBLEM 16

Potential for Inconsistent Road Camber

The proposed works for the scheme include pavement widening works on the N62 at O'Dwyer bridge and new footpath works. There is the potential that to maintain existing tie-in levels, inconsistent camber may be applied on the national road and local side roads causing drivers to be pulled towards the road edge and the potential for vehicular and VRU collisions occurring.

Recommendation

The Designer should provide a pavement tie-in and superelevation along the road consistent with the existing cross falls and in line with the relevant design standards.

2.17 PROBLEM 17

Visibility Splays

The Audit Team has noted that no information on visibility splays has been provide to the Road Safety Audit Team. During the site visit on street parking was observed in proximity to the N62 / Blackcastle Road / The Mall Junction, which may obstruct visibility. This may result in vehicles edging into the carriageway into the path of oncoming vehicles on the mainline (i.e. N62), resulting in side on collision.

Recommendation

The Designer should ensure adequate visibility splays at junctions are provided clear of parked vehicles.

2.18 PROBLEM 18

Staggered Junction Movements

The proposed works for the scheme include pavement widening works on the N62 at O'Dwyers bridge. The Design team note that the additional pavement widening at O'Dwyers bridge may result in vehicles carrying out undertaking manoeuvres on vehicles moving between the two arms of the staggered junction. Absence of line marking to guide vehicles in this instance may result in rear end shunts or head on collisions.

Recommendation

The Designer should provide adequate turning pockets and delineation for vehicles manoeuvring between the Blackcastle Road / N62 and The Mall roads.

3.0 OBSERVATIONS FROM THIS ROAD SAFETY AUDIT

3.1 OBSERVATION 1 - GENERAL

Restricted Footpath Widths Adjacent to Proposed Works

The Road Safety Audit Team noted during the site visit that adjacent to the scheme are areas of restricted footpath widths due to temporary and permanent fixtures.

Figure 3-1 Restricted Footway Width on Blackcastle Road adjacent to scheme

3.2 OBSERVATION 2- GENERAL

Trip Hazards at Drop Kerbs

The Road Safety Audit Team noted during the site visit that adjacent to the scheme drop kerbs which exceed the allowable specification tolerances and deterioration of the road pavement are creating trip hazards for pedestrians.

Figure 3-2 Trip hazards at drop kerb locations

3.3 OBSERVATION 3- GENERAL

Trip Hazards & Pavement Deterioration at Utility Covers

The Road Safety Audit Team observed during the site visit that pavement deterioration was occurring at some utility covers potentially creating an issue for vehicles and trip hazard for pedestrians.

Figure 3-3 Pavement Deterioration at Utility Covers

3.4 OBSERVATION 4- GENERAL

Footway Conditions

The Road Safety Audit Team observed during the site visit, significant pavement deterioration on the River Mall Road creating a significant safety and trip hazards for pedestrians.

Figure 3-4 Examples of Footway Deterioration adjacent to proposed works

3.5 OBSERVATION 5- GENERAL

Parking on Footways

The Audit Team observed along The Mall Road, parking is allowed on both sides of the carriageway. On the footway adjacent to the northbound lane, existing low kerb heights are facilitating vehicles parking and blocking footways which may force VRUs (i.e. wheelchairs and pedestrians with buggies) into the carriageway. Significant footway deterioration was also

observed along this side of the carriageway, which coincides with the position of parked vehicles.

Figure 3-5 Blocked Footways by parked vehicles

3.6 OBSERVATION 6- GENERAL

Pedestrian Crossing Facilities

The Road Safety Audit Team noted during the site visit that there is limited provision for pedestrian crossing facilities on the N62. The closest pedestrian crossing facility is located approximately 300m east of the Blackcastle Road / N62 / The Mall staggered junction.

Figure 3-6 Location of Nearest Pedestrian Crossing to the Staggered Junction

4.0 AUDIT TEAM STATEMENT

We certify that we have examined the drawings and other information listed in Appendix A and visited the site during the day of the 21st of January 2022. We further certify that we are independent from the design team for the scheme. This examination has been carried out with the sole purpose of identifying any features of the design that could be removed or modified to improve the safety of the scheme. The problems that we have identified have been noted in the report, together with suggestions for improvement that in our opinion should be studied for implementation.

AUDIT TEAM LEADER

Name:	Laura Gaffney - MSc. BEng (Hons), CEng., MIEI	Signed:
TII Reference:	LG3386505	Date:
Position:	Project Engineer	
Organisation:	TOBIN Consulting Engineers	
Address:	Fairgreen House, Fairgreen Road, Galway.	

AUDIT TEAM MEMBER

Name:	Ronan Murtagh – B.A. B.A.I, CEng, MIEI.	Signed:
TII Reference:	RM3414512	Date:
Position:	Senior Engineer	
Organisation:	TOBIN Consulting Engineers	
Address:	Block 10-4, Blanchardstown Corporate Park, Dublin 15,	

Appendix A – List of Documents Examined

- Drawings
  - 11007-2000-D01 Proposed Site Location
  - 11007-2001-D01 Key Plan to Existing site layout
  - 11007-2002-D01 Existing Site Layout (Sheet 1 of 3)
  - 11007-2003-D01 Existing Site Layout (Sheet 2 of 3)
  - 11007-2004-D01 Existing Site Layout (Sheet 3 of 3)
  - 11007-2005-D01 Key Plan to Proposed site layout
  - 11007-2006-D01 Proposed site layout (Sheet 1 of 3)
  - 11007-2007-D01 Proposed site layout (Sheet 2 of 3)
  - 11007-2008-D01 Proposed site layout (Sheet 3 of 3)
  - 11007-2009-D01 Proposed Drainage Header Pipe (Sheet 1 of 5)
  - 11007-2010-D01 Proposed Drainage Header Pipe (Sheet 2 of 5)
  - 11007-2011-D01 Proposed Drainage Header Pipe (Sheet 3 of 5)
  - 11007-2012-D01 Proposed Drainage Header Pipe (Sheet 4 of 5)
  - 11007-2013-D01 Proposed Drainage Header Pipe (Sheet 5 of 5)
  - 11007-2014-D01 Proposed Landscape Works (Sheet 1 of 4)
  - 11007-2015-D01 Proposed Landscape Works (Sheet 2 of 4)
  - 11007-2016-D01 Proposed Landscape Works (Sheet 3 of 4)
  - 11007-2017-D01 Proposed Landscape Works (Sheet 4 of 4)
  - 11007-2018-D01 Typical Cross Section Details
  - 11007-2019-D01 Typical Details

- Documents
  - HD 15 Report Round L N62TY_076.0 Main Street Templemore
  - HD 17 RSI Information Templemore Belleville The Mall junction

Assessment of HD15 site N62TY_076.0

Site Details | Collisions | Problem and Solution | Assessment History | Past Assessment History

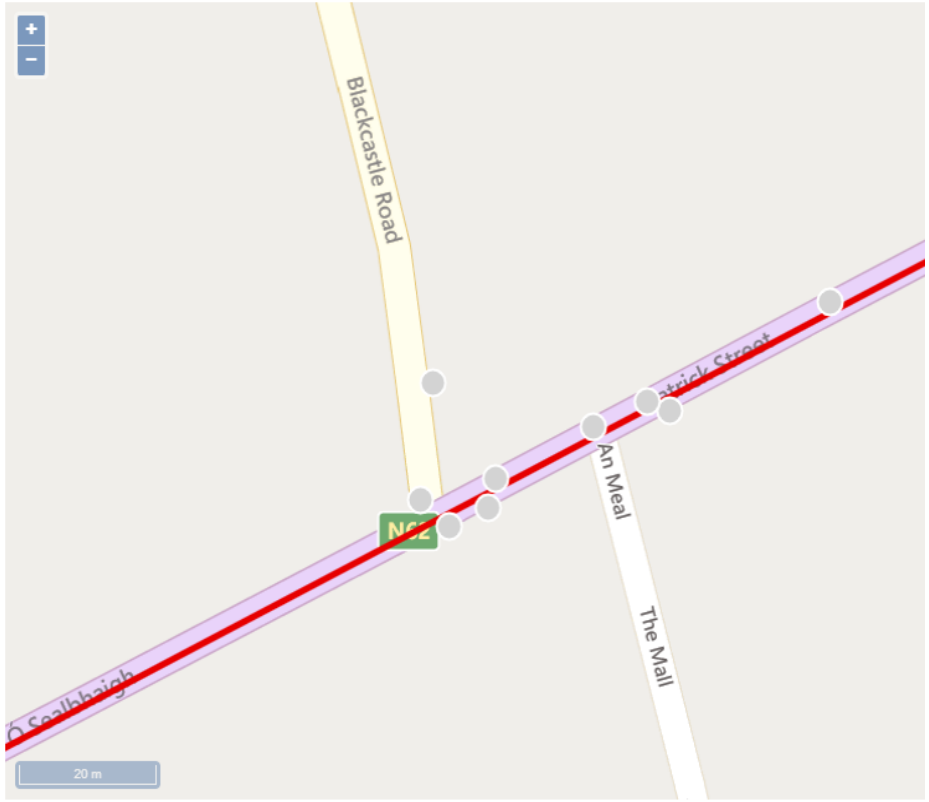
Site Description

Main Street Templemore.
An assessment for this site was created for analysis round K and previous round.

Site ID	N62TY_076.0
Local Authority	North Tipperary, Tipperary
Route No	N62
Chainage	75 to 76
Length (km)	1
Estimated AADT	5031
Injury Collision Rate	72.6
Material Damage Collision Rate	0
Threshold	Twice Above Rate
HCL	Yes

Collision Data

Count of Collisions	31
Fatal Collisions	0
Serious Injury Collisions	0
Minor Injury Collisions	4
Material Damage Only Collisions	27



TOBIN
CONSULTING ENGINEERS

Assessment of HD15 site N62TY_076.0

Site Details | Collisions | Problem and Solution | Assessment History | Past Assessment History

General Collision Pattern

- [ ] Pedestrians
- [ ] Head On
- [ ] Single Vehicle
- [x] Mixed

Collision Pattern Description

The collisions are mixed along the length. There are two pedestrian collisions, one of which occured on a pedestrian crossing. There are some apparent clusters along the length, one, at the junction of Mary Street and at the other at the junction of The Mall /Kiltillane Street. At the junction with the Mall/Kiltillan Street 8 of the material damage collisions happened there in the last 2 years.
There appears to be a higher incidence of collisions that have occured during the hours of darkness on the Eastern section of the site.

Problem Types

- [x] Layout
- [ ] Surface
- [x] Definition
- [x] Sight Distance
- [x] Width
- [ ] Marking
- [ ] Signs

Problem Description

The main pattern appears to involve drivers exiting the junctions. The road layout from the north is wide on approach and may be conducive to inappropriate speeds.

Solution Types

- [x] Engineering
- [ ] Education
- [ ] Enforcement

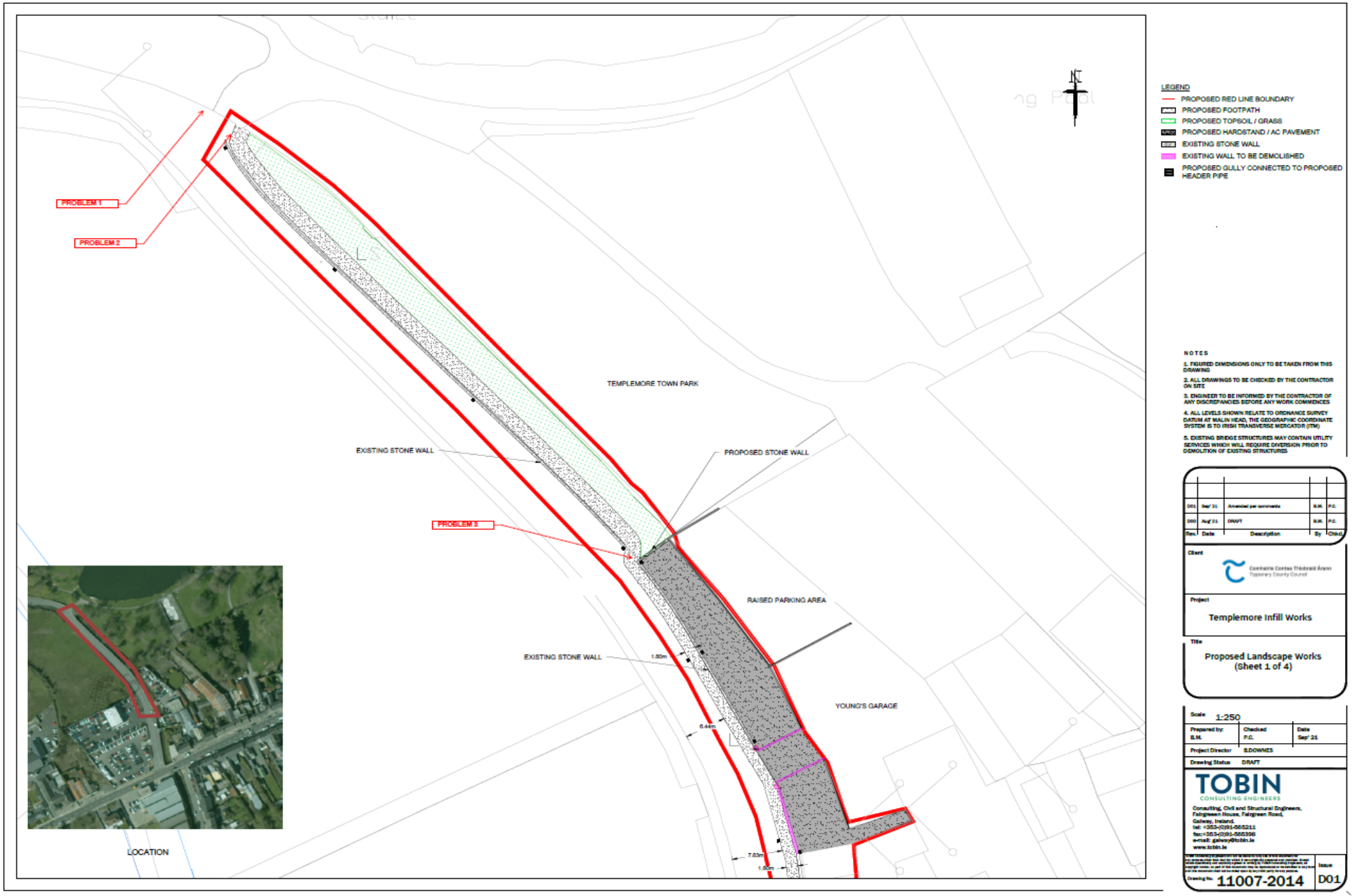
Solution Description

Assess the location to establish if there are any feasible engineering solutions that would reduce the incidence of collisions. Assess lighting to establish if it meets current standard. Review layout along length to bring in line with current guidance.

TAG_ID	MAINLINE	ISSUE	SEVERITY	LIKELIHOOD	RISK	BROAD_SOLUTION	FEASIBILITY_STAGE_SOLUTION	SKETCH	COST
45085	M	Drivers may exit junction without adequate knowledge of oncoming vehicles on the main road.	21	7	Level 3	Minor Alignment - Landtake Required	Provide adequate sight distance to the left by relocating objects obscuring view of oncoming traffic	N	20000
45347	M	Conflict between pedestrians and motorised vehicles	15	7	Level 3	VRU Provision	Review layout of junction and provide for vulnerable road users	N	2000
45580	M	Conflict between pedestrians and motorised vehicles	15	7	Level 3	VRU Provision	Review layout of junction and provide for vulnerable road users	N	2000

Appendix B - RSA Team Approval by TII

Appendix C – Problem Map



LEGEND

- PROPOSED RED LINE BOUNDARY
- PROPOSED FOOTPATH
- PROPOSED TOPSOIL / GRASS
- PROPOSED HARDSTAND / AC PAVEMENT
- EXISTING STONE WALL
- EXISTING WALL TO BE DEMOLISHED
- PROPOSED GULLY CONNECTED TO PROPOSED HEADER PIPE

NOTES

1. FIGURED DIMENSIONS ONLY TO BE TAKEN FROM THIS DRAWING
2. ALL DRAWINGS TO BE CHECKED BY THE CONTRACTOR ON SITE
3. ENGINEER TO BE INFORMED BY THE CONTRACTOR OF ANY DISCREPANCIES BEFORE ANY WORK COMMENCES
4. ALL LEVELS SHOWN RELATE TO ORDNANCE SURVEY DATUM AT MALIN HEAD, THE GEOGRAPHIC COORDINATE SYSTEM IS TO IRISH TRANSVERSE MERCATOR (ITM)
5. EXISTING BRIDGE STRUCTURES MAY CONTAIN UTILITY SERVICES WHICH WILL REQUIRE DIVERSION PRIOR TO DEMOLITION OF EXISTING STRUCTURES

Rev.	Date	Description	By	Chkd
D01	Sep' 21	Amended per comments	B.M.	P.C.
D00	Aug' 21	DRAFT	B.M.	P.C.

Client: Comhairle Contae Thiobraid Árann, Tipperary County Council

Project: Templemore Infill Works

Title: Proposed Landscape Works (Sheet 1 of 4)

Scale: 1-250		
Prepared by: B.M.	Checked: P.C.	Date: Sep' 21
Project Director: B.DOWNES		
Drawing Status: DRAFT		

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Drawing No. 11007-2014 | Issue D01


GENERAL PROBLMS APPLICABLE THROUGHOUT THE SCHEME:
PROBLEM 4
PROBLEM 9
PROBLEM 10
PROBLEM 11
PROBLEM 17
7.03m
1.00m
1.80m
7.42m
8.47m
EXISTING PRIVATE ENTRANCE TO BE RETAINED
PROBLEM 5
EXISTING STONE WALL TO BE REMOVED
PROPOSED FOOTPATH
PROPOSED STREETSCAPE
PROBLEM 6
PROBLEM 7
PROBLEM 8
PROBLEM 15 & 16
PROBLEM 12
PROBLEM 13
PROBLEM 18
YOUNG'S GARAGE
PATRICK STREET
GEORGES
EXISTING STONE WALL TO BE REMOVED
O'DWYER BRIDGE
TEMPLEMORE MOTORS
THE MALL
LOCATION
N
LEGEND
PROPOSED RED LINE BOUNDARY
PROPOSED TOPSOIL / GRASS
PROPOSED HARDSTAND / AC PAVEMENT
PROPOSED FOOTPATH
PROPOSED STONE WALL
EXISTING STONE WALL
PROPOSED STREETSCAPE
EXISTING WALL TO BE DEMOLISHED
PROPOSED GULLY CONNECTED TO PROPOSED HEADER PIPE
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Rev. Date Description By Chkd.
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Tipperary County Council
Project
Templemore Infill Works
Title
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(Sheet 2 of 4)
Scale 1:250
Prepared by: B.M.
Checked P.C.
Date Sep' 21
Project Director B.DOWNES
Drawing Status DRAFT
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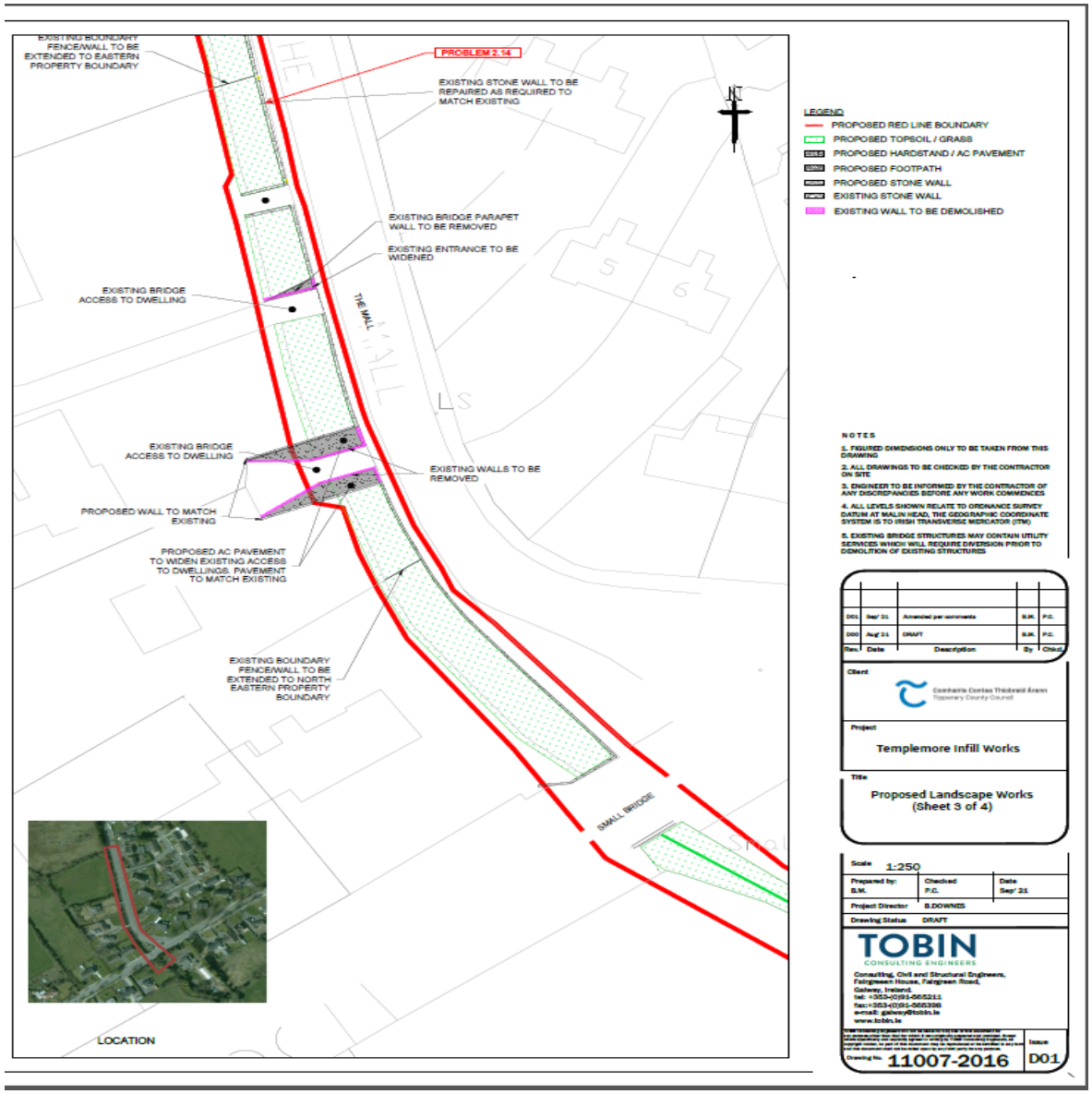
EXISTING BOUNDARY FENCE/WALL TO BE EXTENDED TO EASTERN PROPERTY BOUNDARY
PROBLEM 2.14
EXISTING STONE WALL TO BE REPAIRED AS REQUIRED TO MATCH EXISTING
EXISTING BRIDGE PARAPET WALL TO BE REMOVED
EXISTING ENTRANCE TO BE WIDENED
EXISTING BRIDGE ACCESS TO DWELLING
THE WALL
EXISTING BRIDGE ACCESS TO DWELLING
EXISTING WALLS TO BE REMOVED
PROPOSED WALL TO MATCH EXISTING
PROPOSED AC PAVEMENT TO WIDEN EXISTING ACCESS TO DWELLINGS. PAVEMENT TO MATCH EXISTING
EXISTING BOUNDARY FENCE/WALL TO BE EXTENDED TO NORTH EASTERN PROPERTY BOUNDARY
SMALL BRIDGE
LOCATION
LEGEND
PROPOSED RED LINE BOUNDARY
PROPOSED TOPSOIL / GRASS
PROPOSED HARDSTAND / AC PAVEMENT
PROPOSED FOOTPATH
PROPOSED STONE WALL
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EXISTING WALL TO BE DEMOLISHED
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Drawing No. 11007-2016
Issue D01

Appendix D – Road Safety Audit Feedback Form

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Appendix C – Cost Estimate

TII Level 3 Estimate Summary Template

Insert Scheme Title:	Templemore N62/L3220/Mall Junction
Insert Date of Estimate:	22/03/2022
Insert Current Phase:	3
Insert Consultants Name:	TOBIN Consulting Engineers
Insert Name of Estimator:	John O'Flaherty
Insert Base Date for Rates:	01/01/2022

					Total (€)
1	**Main Construction Contract (MCC) - See Back up Summary Sheet for further breakdown**				
	Series 100	Preliminaries			€19,500
	Series 200	Site Clearance			€5,200
	Series 300	Fencing and Environmental Noise Barriers			€0
	Series 400	Road Restraint Systems (Vehicles and Pedestrian)			€0
	Series 500	Drainage and Service Ducts			€5,872
	Series 600	Earthworks			€7,650
	Series 700	Pavements			€8,320
	Series 1100	Kerbs, Footways and Paved Areas			€29,170
	Series 1200	Traffic Signs and Road Markings			€5,050
	Series 1300	Road Lighting Columns and Brackets			€10,000
	Series 1400	Electrical Work for Road Lighting and Traffic Signs			€5,000
	Series 1500	Motorway Communications			€0
	Series 1600 - 2300	Structures			€8,000
	Series 2500	Special Structures			€0
	Series 2700	Watermains Utilities and Accommodation Works			€0
	-	Landscaping			€0
	-	Utilities Cost Estimates (Statutory Undertakers and Associated Civil Works)			€0
	-	Other Costs			€0
	-	Other Costs			€0
	Total Base Cost for Main Construction Contract (Excluding VAT)				€103,762
	Add Project Specific Risk Contingency		10	%	
	Sub-Total exclusive of VAT				€114,138
	Add VAT at		13.5	%	
	Total MCC Base Cost plus Project Specific Risk Contingency and VAT				€129,547
2	**Land and Property**				
	Base Cost Total from attached summary (to be compiled as per Appendix F Template)				€0
	Add Project Specific Risk Contingency				€0
	Total L&P Base Cost plus Project Specific Risk Contingency				€0
3	**Planning and Design**				
	Base Cost Total from attached summary (to be compiled based on Level 3 breakdown)				13000
	Add Project Specific Risk Contingency				3000
	Total P&D Base Cost plus Project Specific Risk Contingency				€16,000
4	**Archaeology**				
	Base Cost Total from attached summary (to be compiled based on Level 3 breakdown)				1000
	Add Project Specific Risk Contingency				1000
	Total Archaeology Base Cost plus Project Specific Risk Contingency				€2,000
5	**Advance Works and Other Contracts**				
	Base Cost Total from attached summary (to be compiled based on Level 3 breakdown)				0
	Add Project Specific Risk Contingency				0
	Total Advance Works and Other Contracts Base Cost plus Project Specific Risk Contingency				€0
6	**Main Contract Supervision (Employer's Costs)**				
	Base Cost Total from attached summary (to be compiled based on Level 3 breakdown)				10000
	Add Project Specific Risk Contingency				2000
	Total MC Supervision (Employer's Costs) Base Cost plus Project Specific Risk Contingency				€12,000
7	**Residual Network (Provision to be subject to the approval of the TII Regional Manager)**				
	Base Cost Total from attached summary (to be compiled based on Level 3 breakdown)				0
	Add Project Specific Risk Contingency				0
	Total Residual Network Base Cost plus Project Specific Risk Contingency				€0
TOTAL LEVEL 3 ESTIMATE INCLUSIVE OF VAT					€159,547

Mainline Length	N/A	km	Rate per km	#VALUE!

N.B.

Figures above are INCLUSIVE of VAT unless otherwise specified.

Figures above are EXCLUSIVE of provision for Inflation - base date to be stated if different from date of estimate.

Total base costs to include for ALL qualifying costs under each cost heading.

Refer to the TII Cost Management Manual and TII Requirements for Measurement and Pricing (RMP) for information on coverage and format of back-up.

See attached Back up to Summary Sheet for Further Scheme Information.

Templemore Junction

Bill No. 1 - Preliminaries

Item	Description	Unit	Quantity	Rate	Amount
1.1	**PRELIMINARIES**				
	Temporary Accommodation				
1.1.4	Erection of Offices and messes for the Contractor	Item	XXX	XXX	1,000.00
1.1.5	Servicing of Offices and messes for the Contractor	Item	XXX	XXX	1,000.00
1.1.6	Dismantling of Offices and messes for the Contractor	Item	XXX	XXX	500.00
	To Part Summary				2,500.00

Bill No. 1 - Preliminaries

Item	Description	Unit	Quantity	Rate	Amount
	Traffic Safety and Management				
1.1.14	Traffic Safety and Traffic Management	Item	XXX	XXX	10,000.00
	Road Sweeping and Cleaning				
1.1.20	Road sweeping and cleaning in accordance with Clause 126 of the Specification	Item	XXX	XXX	500.00
	To Part Summary				10,500.00

Bill No. 1 - Preliminaries

Item	Description	Unit	Quantity	Rate	Amount
	Facilities for Service Undertakers and other Contractors				
1.1.22	Electricity Supply Board.	Item	XXX	XXX	500.00
1.1.23	Eircom.	Item	XXX	XXX	500.00
1.1.25	Monitoring of Building at structures in accordance with Appendix 1/9	Item	XXX	XXX	500.00
	Project Supervisor for the Construction Stage				

1.1.26	Acceptance of appointment as Project Supervisor for the Construction Stage	Item	XXX	XXX	5,000.00
	As-Constructed Drawings				
1.1.27	As-constructed Drawings	Item	XXX	XXX	0.00
	To Part Summary				6,500.00

Bill No. 1 - Preliminaries

Part 1.1 - Preliminaries

Part Summary

Item	Description	Amount
	Bill 1 Part 1.1 Page 1	2,500.00
	Bill 1 Part 1.1 Page 2	10,500.00
	Bill 1 Part 1.1 Page 3	6,500.00
	Bill 1 To Grand Summary	**19,500.00**

Templemore Junction

Bill No. 2 - Roadworks

Part No. 2.1.1 - Site Clearance

Item	Description	Unit	Quantity	Rate	Amount
2.1.1	**SITE CLEARANCE**				
2.1.1.1	General site clearance	ha.	1.00	1000.00	1,000.00
2.1.1.3	Demolition of existing boundary walls	m	140.00	30.00	4,200.00

					5,200.00
	To Part Summary				

Bill No. 2 - Roadworks

Part No. 2.1.1 - Site Clearance

Item	Description	Unit	Quantity	Rate	Amount
	To Part Summary				-

Bill No. 2 - Roadworks

Part No. 2.1.1 - Site Clearance

Part Summary

Item	Description	Amount
	Bill 2 Part 2.1.1 Page 5	5,200.00
	Bill 2 Part 2.1.1 Page 6	0.00
	Bill 2 Part 2.1.1 To Grand Summary	**5,200.00**

Templemore Junction

Bill No. 2 - Roadworks

Part No. 2.1.2 - Fencing & Environmental Noise Barriers

Item	Description	Unit	Quantity	Rate	Amount
2.1.2	**FENCING & ENVIRONMENTAL NOISE BARRIERS**				
	To Part Summary				0.00

Bill No. 2 - Roadworks

Part No. 2.1.2 - Fencing & Environmental Noise Barriers

Part Summary

Item	Description	Amount
	Bill 2 Part 2.1.2 Page 8	0.00
	Bill 2 Part 2.1.2 To Grand Summary	**0.00**

Templemore Junction

Bill No. 2 - Roadworks

Part No. 2.1.3 - Safety Barriers and Pedestrian Guard Rails

Item	Description	Unit	Quantity	Rate	Amount
2.1.3	**SAFETY BARRIERS AND PEDESTRIAN GUARD RAILS**				
	To Part Summary				-

Templemore Junction

Bill No. 2 - Roadworks

Part No. 2.1.3 - Safety Barriers and Pedestrian Guard Rails

Part Summary

Item	Description	Amount
	Bill 2 Part 2.1.3 Page 10	0.00
	Bill 2 Part 2.1.3 To Grand Summary	**0.00**

Templemore Junction

Bill No. 2 - Roadworks

Part No. 2.1.4 - Earthworks

Item	Description	Unit	Quantity	Rate	Amount
2.1.4	**EARTHWORKS**				
	Excavation				
2.1.4.3	Excavation of unacceptable material Class U1 material in cutting and other excavations as per Series 600 drawings and specification Appendices 6/1 to 6/13	m³	108	4.50	486.00
2.1.4.4	Excavation in Hard material; Extra over excavation for excavation in hard material; cutting and other excavations	m³	108	18.00	1,944.00

	Deposition of Fill				
2.1.4.5	Deposition of Acceptable Material in embankments and other areas of fill as per Series 600 drawings and specification Appendices 6/1 to 6/13	m³	55	3.00	165.00
	Disposal of Material				
2.1.4.8	Disposal of unacceptable material; Class U1	m³	108	7.50	810.00
	Imported Fill				
2.1.4.9	Imported Granular Material Type B, Clause 804, Embankments and other areas of fill	m³	55	35.00	1,925.00
	To Part Summary				5,330.00

Bill No. 2 - Roadworks

Part No. 2.1.4 - Earthworks

Item	Description	Unit	Quantity	Rate	Amount
	To Part Summary				-

Bill No. 2 - Roadworks

Part No. 2.1.4 - Earthworks

Item	Description	Unit	Quantity	Rate	Amount
	Completion of Formation and Sub-Formation				
2.1.4.24	Completion of Formation on acceptable material	m²	542	1.00	542.00
	To Part Summary				542.00

Bill No. 2 - Roadworks

Part No. 2.1.4 - Earthworks

Part Summary

Item	Description	Amount

5,330.00

	Bill 2 Part 2.1.4 Page 13	-
	Bill 2 Part 2.1.4 Page 14	542.00
	Bill 2 Part 2.1.4 To Grand Summary	**5,872.00**

Templemore Junction

Bill No. 2 - Roadworks

Part No. 2.2.1 - Drainage and Sevice Ducts

Item	Description	Unit	Quantity	Rate	Amount
2.2.1	**DRAINAGE AND SERVICE DUCTS**				
	To Part Summary				-

Bill No. 2 - Roadworks

Part No. 2.2.1 - Drainage and Sevice Ducts

Item	Description	Unit	Quantity	Rate	Amount
	Gully connection pipes				
2.2.1.9	150mm diameter carrier pipe from gully to a depth not exceeding 1.5m with bedding and surround to RCD/500/2 Type Z;	m	50	65	3,250.00
	Gullys and Chambers				
2.2.1.10	Gully to RCD/500/14 with 150mm outlet; depth not exceeding 1m; grating to RCD/500/16	no.	6	400	2,400.00
	To Part Summary				5,650.00

Bill No. 2 - Roadworks

Part No. 2.1 - Roadworks General

Item	Description	Unit	Quantity	Rate	Amount
	EIRCOM				
6.1.4	Eircom carriageway inspection chamber No 600 ; in verge CW600; depth exceeding 1.0m but not exceeding 2.0m; heavy duty covers.	no.	1	1000.00	1,000.00
6.1.5	Eircom carriagway inspection chamber No 500; in verge CW500; depth exceeding 1.0m but not exceeding 2.0m; heavy duty covers.	no.	1	1000.00	1,000.00
	To Part Summary				2,000.00

Bill No. 2 - Roadworks General

Part No. 2.2 - Roadworks General

Part Summary

Item	Description	Amount
	Bill 2 Part 2.2.1 Page 15	-
	Bill 2 Part 2.2.1 Page 16	5,650.00
	Bill 2 Part 2.2.1 Page 17	2,000.00
	Bill 2 Part 2.2.1 To Grand Summary	7,650.00

Templemore Junction

Bill No. 2 - Roadworks

Part No. 2.2 - Roadworks

Item	Description	Unit	Quantity	Rate	Amount
2.2.2	**PAVEMENTS**				

	Base Course				
2.2.2.4	AC 32 dense base 40/60 rec, 80mm thick to clause 906 of the Specification (mainline). See Appendix 7/1	m^2	130	20.00	2,600.00
	Binder Course				
2.2.2.6	AC 20 dense bin 40/60 rec, 55mm thick to clause 906 of the Specification (mainline). See Appendix 7/1	m^2	130	15.00	1,950.00
	Surface Course				
2.2.2.8	SMA	m^2	130	15.00	1,950.00
	To Part Summary				6,500.00

Bill No. 2 - Roadworks

Part No. 2.2 - Roadworks

Item	Description	Unit	Quantity	Rate	Amount
2.2.2	**PAVEMENTS**				
	Cold Milling (Planing)				
2.2.2.11	Milling pavement greater than 0mm but less than 100mm to Clause 917 of the Specification.	m^2	260	7.00	1,820.00
	To Part Summary				1,820.00

Bill No. 2 - Roadworks

Part No. 2.2.2 - Pavements

Part Summary

Item	Description	Amount
	Bill 2 Part 2.2.2 Page 19	6,500.00

		1,820.00
	Bill 2 Part 2.2.2 To Grand Summary	**8,320.00**

Templemore Junction

Bill No. 2 - Roadworks General

Part No. 2.2.3 - Kerbs, Footways and Paved Areas

Item	Description	Unit	Quantity	Rate	Amount
2.2.3	**KERBS, FOOTWAYS AND PAVED AREAS**				
	Kerbs, Channels, Edgings and Combined Drainage and Kerb Blocks				
	Kerbs				
2.2.3.1	Concrete kerbing; precast; Type 'A' kerb to RCD/1100/1; straight or curved; exceeding 12m radius;	m	20	25.00	500.00
2.2.3.2	Concrete kerbing; precast; Type 'A' kerb to RCD/1100/1; curved; less than 12m radius;	m	240	25.00	6,000.00
2.2.3.3	Concrete kerbing; precast; Type 'B' kerb to RCD/1100/1; straight or curved; exceeding 12m radius;	m	12	25.00	300.00
2.2.3.4	Concrete Footway, type 1, as per NRA/RCD/1100/5, 100mm thick in situ concrete, 5% air entrained grade C32/40 to Clause 1106, on 100mm Subbase to Cl 804, surfaces sloping at 10 degrees or less to the horizontal (as per Series 700 dwgs and Specification Appendix 11/1).	m^2	542	35.00	18,970.00

	Tactile Paving	m^2	40	85.00	3,400.00
	To Part Summary				29,170.00

Bill No. 2 - Roadworks General

Part No. 2.2.3 - Kerbs, Footways and Paved Areas

Part Summary

Item	Description	Amount
	Bill 2 Part 2.2.3 Page 22	29,170.00
	Bill 2 Part 2.2.3 To Grand Summary	**29,170.00**

Templemore Junction

Bill No. 2 - Roadworks

Part No. 2.3.1 - Traffic Signs and Road Markings

Item	Description	Unit	Quantity	Rate	Amount

2.3.1	**TRAFFIC SIGNS AND ROAD MARKING** **Warning and Regulatory Traffic Signs**				
2.3.1.4	Warning Sign	no.	1	700.00	700.00
	To Part Summary				700.00

Bill No. 2 - Roadworks

Part No. 2.3.1 - Traffic Signs and Road Markings

Item	Description	Unit	Quantity	Rate	Amount
	Road Markings				
2.3.1.5	Road Markings; Continuous Line; reflectorised white; extruded thermoplastic; 100mm wide, to RRM001of TSM; with applied ballotini (side roads)	m	100	2.20	220.00
2.3.1.7	Road Markings; Continuous Line; reflectorised white; thermoplastic screed; 200mm wide 'STOP' line; to RRM017of TSM; with applied ballotini (side roads)	m	20	4.00	80.00
2.3.1.8	Road Markings; continuous line; reflectorised yellow, extruded thermoplastic; 2000mm line with 2000mm gap; 150mm wide; with applied ballotini to RRM008 of the TSM	m	1300	2.50	3,250.00
2.3.1.10	Road Markings; letters and numerals; reflectorised white, thermoplastic screed; 1600mm high; with applied ballotini to M114 of the TSM (SLOW x 2)	no.	8	100.00	800.00
	To Part Summary				4,350.00

Bill No. 2 - Roadworks

Part No. 2.3.1 - Traffic Signs and Road Markings

Item	Description	Unit	Quantity	Rate	Amount
	Reflecting Road Studs				
	To Part Summary				-

Bill No. 2 - Roadworks

Part No. 2.3.1 - Traffic Signs and Road Markings

Part Summary

Item	Description	Amount
	Bill 2 Part 2.3.1 Page 24	700.00
	Bill 2 Part 2.3.1 Page 25	4,350.00
	Bill 2 Part 2.3.1 To Grand Summary	**5,050.00**

Templemore Junction

Bill No. 3 - Structures

Part 3.1 - Bridge Parapet Walls

Item	Description	Unit	Quantity	Rate	Amount
3.1	**Bridge Parapet Walls**				
	Series 2400				
	Blockwork and Stonework				
3.1.4	Blockwork in rising walls to RCD/2400/4, solid concrete blockwok in designation (II) mortar	m^3	10	300.00	3000.00
3.1.5	Stonework for wall to SCD/2400/4	m^3	10	200.00	2000.00

3.1.6	Provide and lay new stone copings to match existing bridge copings	m	10	100.00	1000.00
	To Part Summary				6000.00

Bill No. 3 - Structures

Part 3.1 - Bridge Parapet Walls

Item	Description	Unit	Quantity	Rate	Amount
	Series 1700 - Structural Concrete				
	In-situ Concrete				
3.1.8	In situ concrete for foundations, Class C25/30	m^3	10	200.00	2000.00
3.1.9	In situ blinding concrete to foundations, mix ST1, 50mm deep	m^3	0	80.00	0.00
	To Part Summary				2000.00

Bill No. 3 - Structures

Part 3.1 - Retaining Wall

Part Summary

Item	Description	Amount
	Bill 3 Part 3.1 Page 28	6,000.00
	Bill 3 Part 3.1 Page 29	2,000.00
	Bill 3 Part 3.1 To Grand Summary	**8,000.00**

Templemore Junction

Bill No. 4 - Accommodation Works

Item	Description	Unit	Quantity	Rate	Amount
	Bill 6 To Grand Summary				-

Templemore Junction

GRAND SUMMARY

Description	Bill / Part	Amount
Preliminaries	Bill 1	€19,500.00
Site Clearance	Bill 2 Part 2.1.1	€5,200.00
Fencing	Bill 2 Part 2.1.2	€0.00
Safety Barriers and Pedestrian Guardrails	Bill 2 Part 2.1.3	€0.00
Earthworks	Bill 2 Part 2.1.4	€5,872.00
Drainage and Service Ducts	Bill 2 Part 2.2.1	€7,650.00
Pavements	Bill 2 Part 2.2.2	€8,320.00
Kerbs, Footways and Paved Areas	Bill 2 Part 2.2.3	€29,170.00
Traffic Signs and Road Markings	Bill 2 Part 2.3.1	€5,050.00
Structures - Retaining Walls	Bill 3	€8,000.00
Accommodation Works	Bill 4	€0.00
Works for Statutory or other Bodies	Bill 5	€0.00

Landscaping	Bill 6	€0.00
Adjustment Item		€0.00
Total (excl VAT)		€88,762.00
VAT (13.5%)		€11,982.87
Total (incl VAT)		€100,744.87

Appendix D – PABS

PAG Unit 14 Project Appraisal Balance Sheet - Summary Table for Minor Projects (€0.5m to €5m) as defined by DN-GEO-03030										
Scheme Name:		**Description:**		**Problems Identified:**				**Budget Cost €m**		
Templemore N62/L3220/Mall Junction		Visibility and vulnerable road user provision improvements at two junctions on N62		Poor visibility and vru provision						
Current Typical Carriageway Width:		**Route No:**		**Speed Limit:**	**Proposed Carriageway Standard:**			**0.159547**		
8.4m		N62		50	DMURS					
Appraisal Criteria	**Appraisal Sub-Criteria**	**Objectives *(Guidance available in PAG Unit 3.0)***	**Qualitative Statement:**					**Sub-criteria Performance Description**	**Sub-criteria Score**	**Appraisal Criteria Score**
Environment	**Air Quality**							Not significant or Neutral	4	**Neutral**
	Noise and vibration							Not significant or Neutral	4	
	Landscape & visual quality							Not significant or Neutral	4	
	Biodiversity							Not significant or Neutral	4	
	Cultural, Archaeological, Architectural Heritage							Not significant or Neutral	4	
	Land Use							Not significant or Neutral	4	
	Water resources							Not significant or Neutral	4	
Safety	**Collision reduction**	To reduce collision rate on N62	Provides sightline improvements to DMURS standards	**Current Rate:**	? PIA/mvkm			Major or highly positive	7	**Highly Positive**
				Proposed Rate (see PAG 6.11):	2 Lane Single carriageway > 60kph	0.080 PIA/mvkm				
	Security	To protect vulnerable road users from motorised traffic	Provides dedicated crossing points and standardised footpaths					Moderately positive	6	
Economy	**Transport Efficiency and Effectiveness**			**Current AADT:**				Minor or slightly positive	5	**Slightly Positive**
				Forecast 2030 HG AADT:						
	Wider economic impact							Minor or slightly positive	5	
	Transport Reliability and Quality							Not significant or Neutral	4	
Accessibility and Social Inclusion	**Vulnerable groups**	Improve access for vulnerable groups	Provides dedicated crossing points and standardised footpaths					Major or highly positive	7	**Moderately Positive**
	Deprived geographic areas							Not significant or Neutral	4	
Integration	**Transport integration**							Not significant or Neutral	4	**Neutral**
	Land-use integration							Not significant or Neutral	4	
	Geographical integration							Not significant or Neutral	4	
	Integration with other government policies							Not significant or Neutral	4	
Physical Activity	**Physical Activity**	Encourage walking	Promotes safe walking facilities					Moderately positive	6	**Moderately Positive**
	<u>Overall Description of Scheme:</u>							**Slightly Positive**