

## Elimination of 7 Manned Level Crossings on the Dublin to Cork Line



### Feasibility Study

February 2019

**Document Verification**

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## Contents:

<b>1. Introduction</b>	<b>3</b>
<b>2. Need for the Scheme</b>	<b>6</b>
<b>3. Scheme Delivery</b>	<b>9</b>
<b>4. Options Appraisal</b>	<b>10</b>
<b>5. XC187, Fantstown</b>	<b>12</b>
<b>6. XC201, Thomastown</b>	<b>15</b>
<b>7. XC209, Ballyhay</b>	<b>18</b>
<b>8. XC211, Newtown</b>	<b>21</b>
<b>9. XC212, Ballycoskery</b>	<b>23</b>
<b>10. XC215, Shinanagh</b>	<b>26</b>
<b>11. XC219, Buttevant</b>	<b>29</b>
<b>12. Recommendation</b>	<b>32</b>

**Appendix A – 2011 Scheme Designs**

**Appendix B – 2018 Legal Opinion**

**Appendix C – Archaeological Reports**

**Appendix D – Report on Oral Hearing to Extinguishment of Public Right  
of Way over Level Crossing XC187**

**Appendix E – 2011 Traffic Counts**

**Appendix F – Programme**

## 1. Introduction

There are 7 manned public road level crossings in operation on the Dublin to Cork line between Limerick Junction and Mallow stations. The crossings are located within a 15 mile/24 km section of the line between 122 miles 808 yards and 137 miles 315 yards, which straddles the Cork/Limerick county boundary.

Details of the level crossings are provided in the table below and the locations of the level crossings are indicated on Figures 1.1, 1.2 & 1.3 below.

Level Crossing	Mileage	Crossing Type	Road Type	Local Authority
XC187 - Fantstown	122m 808yds	C – Type	Local	Limerick City & County
XC201 - Thomastown	127m 70yds	C – Type	Local	Limerick City & County
XC209 - Ballyhay	130m 878yds	CD – Type	Local	Cork County Council
XC211 - Newtown	131m 1385yds	CD – Type	Local	Cork County Council
XC212 - Ballycoskery	131m 1759yds	CD – Type*	Local	Cork County Council
XC215 - Shinanagh	134m 260yds	CD – Type*	Local	Cork County Council
XC219 - Buttevant	137m 315yds	CX – Type	Regional	Cork County Council

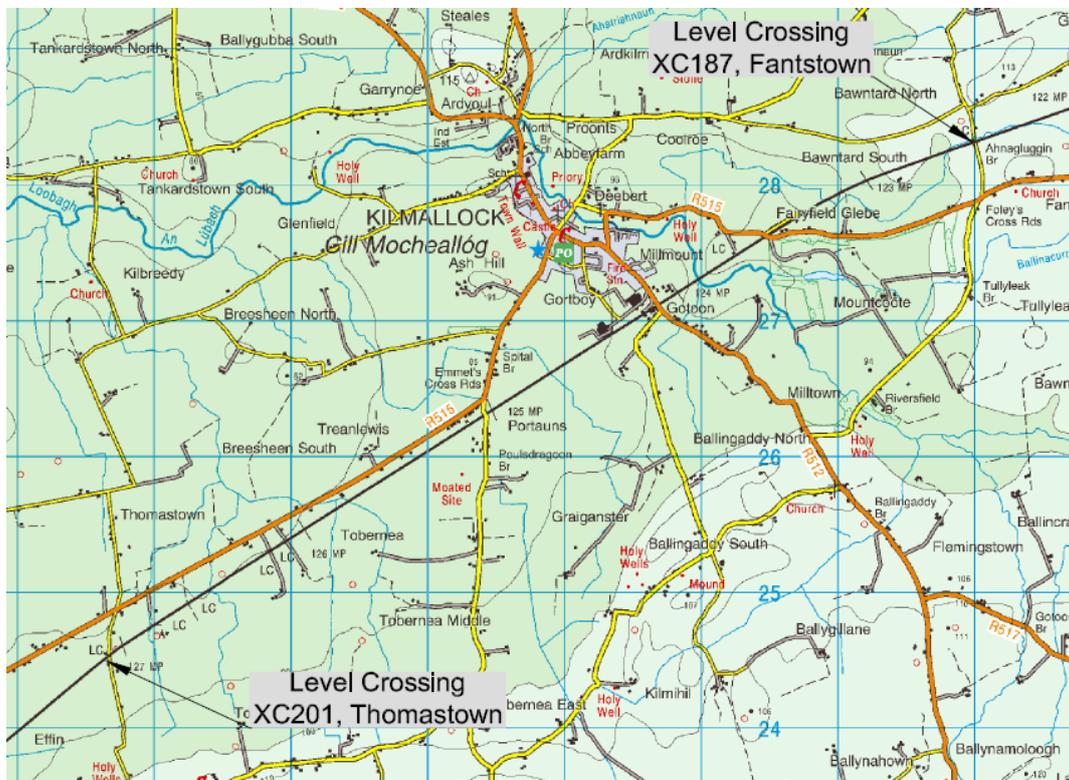
\* Operated on a 24 hour basis as a CX – Type level crossing

**Table 1 – Level Crossing Details**

The Iarnród Éireann designations for Gated Manned Level Crossing are as follows:

- C Type – Gates normally CLOSED to road traffic;
- CX Type – Gates normally OPEN to road traffic;
- CD Type – Gates normally OPEN to road traffic by DAY and normally closed at other times;
- CN Type – Gates normally OPEN to road traffic by NIGHT and normally closed at other times.

The locations of the 7 no. level crossings are indicated on Figures 1.1, 1.2 & 1.3 below.



**Figure 1.1 – Level Crossing Locations (XC187 & XC201)**

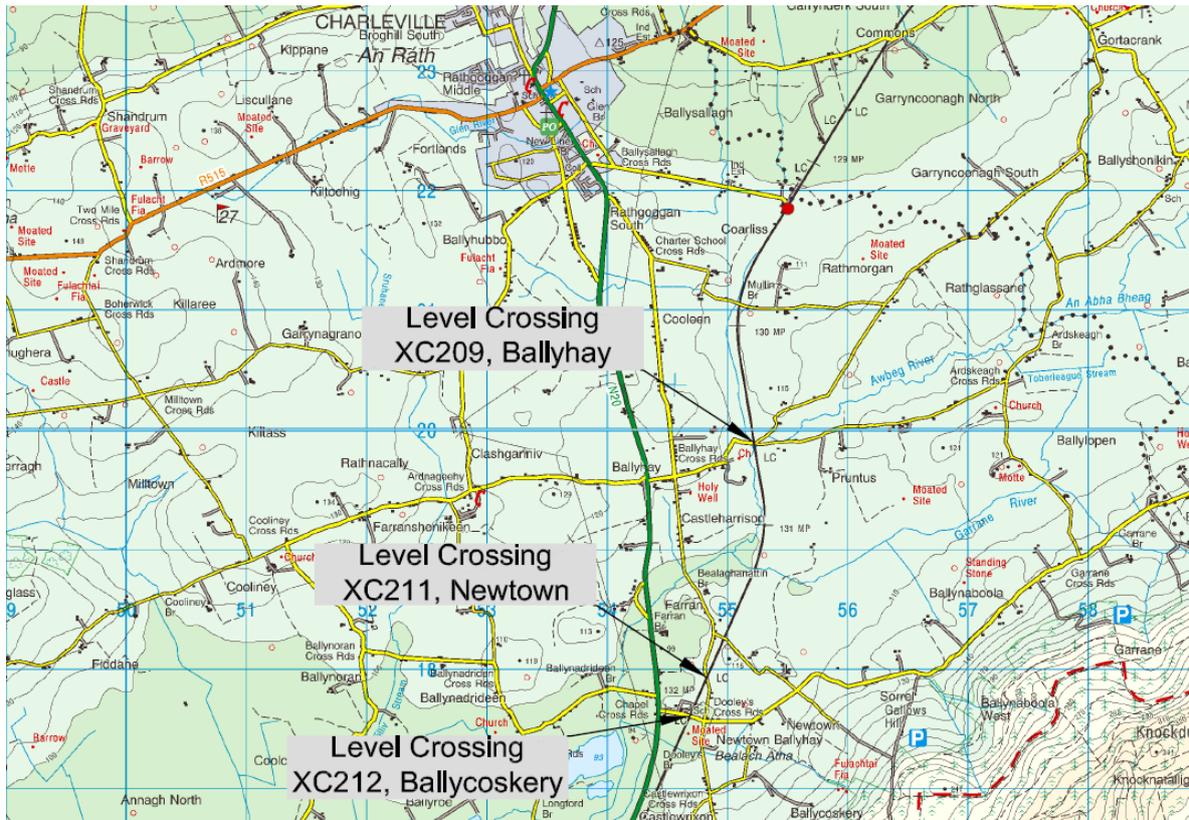


Figure 1.2 – Level Crossing Locations (XC209, XC211 & XC212)

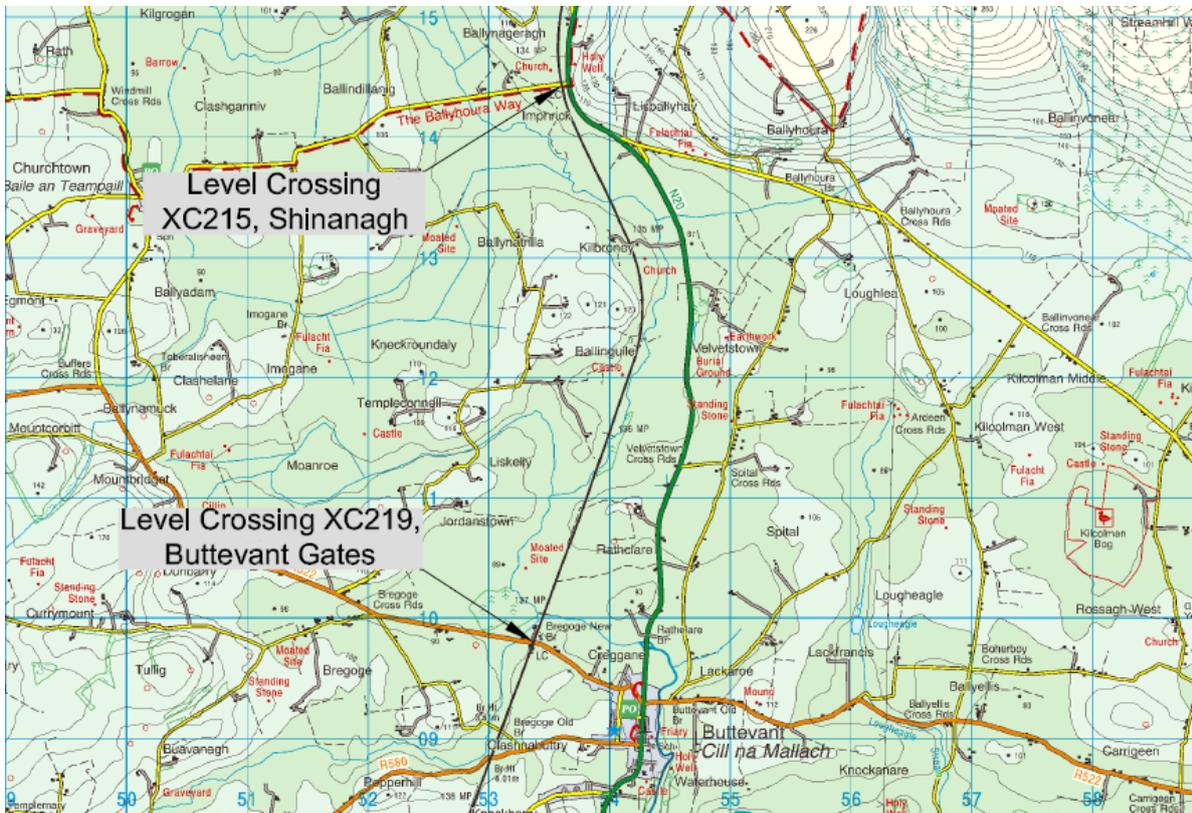


Figure 1.3 – Level Crossing Locations (XC215 & XC219)

The permitted line speed of trains at the level crossing locations varies between 90-100mph and the level crossings are located mid-section between stations, so trains are travelling at their full line speed when they pass through. There are 30 to 35 scheduled trains daily (combined directions) passing over the crossings daily. The majority of these trains are locomotive hauled express services to / from Cork each weighing 440 tonnes and capable of carrying up to 420 passengers. In addition, there can be up to 10 unscheduled train movements, which could be engineering trains, freight trains, or other track recording vehicles.

In March 2018, the board of Iarnród Éireann approved the preparation of a feasibility study into the elimination/de-manning of the 7 remaining manned public road level crossings (XC187, XC201, XC209, XC211, XC212, XC215 and XC219) on the Dublin to Cork line. The objective of the study was to investigate and appraise options for the elimination/de-manning of the level crossings, including property requirements, legal/planning strategy, safety approvals strategy, capital costs, operational costs, programme requirements and risk profile of proposed solutions.

In 2010/2011, concept stage schemes were developed for overbridges to eliminate each of the level crossings. None of the schemes were progressed due to a lack of funding. In 2017, it was estimated that it would cost €12.3m to upgrade all seven crossings to 4 Barrier CCTV Controlled Level Crossings.

The purpose of the feasibility study proposed is to identify the optimum strategy to eliminate/de-man these manned crossings.

## 2. Need for the Scheme

In accordance with the Department of Transport, Tourism and Sports' "Guidelines on a Common Appraisal Framework for Transport Projects and Programmes" the provision of and need for improved transport systems is based on the following criteria:

- Economy
- Safety
- Physical Activity
- Environment
- Accessibility and Social Inclusion
- Integration

These guidelines and requirements are themselves in compliance and in accordance with the Department of Finance's "Guidelines on the Appraisal and Management of Capital Expenditure Proposals in the Public Sector". The development and appraisal of this scheme is being undertaken in accordance with the National Transport Authority (the NTA) 'Project Management Guidelines'.

### 2.1. Economy

The impacts of a transport investment on economic growth and competitiveness are assessed under the Economy criterion. Both the estimated capital costs and the operational/maintenance costs of each option were considered in the assessment.

Initial capital cost estimates were prepared for the concept stage scheme designs prepared in 2010/2011. These estimates included the costs of all infrastructure and accommodation works. Land acquisition costs were taken into consideration for options requiring third party land.

The ongoing operational and maintenance issues were compared between options, to assess their relative cost. The manning of gated level crossings is a drain on scarce resources particularly in the context of the low usage of some of the level crossings. There are currently 28 staff engaged full time as gatekeepers to operate the 7 level crossings. The implementation of the proposed schemes for the level crossings will allow the redeployment of these resources elsewhere on the network to suit the business need.

In addition, the proposed schemes have the potential to increase transport efficiency on both the rail and road networks. The elimination of the level crossings would remove a major constraint to the increase of line speeds and associated reduction in journey times on the rail line while providing reductions in journey times on the road network by removing delays. The improvements in journey times and transport efficiency will have an overall economic benefit.

### 2.2. Safety

At any location where there is an interface between rail and road traffic the potential for a catastrophic accident exists. It is Iarnród Éireann policy to close level crossings where possible and practicable. The removal of the level crossings in conjunction with providing alternative routes for vehicles, pedestrians and cyclists will remove the potential for accidents. The removal of potential accident locations will have economic benefits and most importantly reduce the potential for the loss of life.

Iarnród Éireann uses the Level Crossing Risk Model (LCRM) to assist in the identification and management of risk at level crossings. This is done through the calculation of both individual and collective risk at each level crossing. Risk measurements included in the LCRM are:

- From crossings on running lines with train movements, i.e. active running lines, not closed lines;
- From active crossings, i.e. not those that have been closed;
- From the following types of accident:
  - Collision between a train and a road vehicle;
  - Collision between a train and a pedestrian;

- Collision between a train and an animal where the animal gained access to the line at a level crossing;
- Collision between a train or road vehicle and a crossing keeper;
- To crossing users, crossing keepers, passengers and staff on board trains;
- From causes related to user errors or acts, railway equipment failures, vandalism and railway staff errors.

There are two measures of risk which are computed by the LCRM:

- **Collective Risk** is the totality of risk to all exposed groups from one or more hazardous events. It is measured in units of safety loss per year, referred to as the risk factor. Collective risk is used as the basis for cost-benefit calculations as it is possible to assign a monetary value to safety loss.
- **Individual Risk** is the risk to a typical person exposed to one or more hazardous events. It is measured in units of loss per person per year. Individual Risk is used to assess the tolerability of risk as it is possible to assign levels of individual risk that correspond to other everyday activities or occupations.

The Collective Risk Factor was assessed for each option for elimination/de-manning of the level crossings by comparing the current risk ranking to the resulting risk ranking following the implementation of each option. The LCRM was used to determine the resulting risk ranking for each option.

### 2.3. Physical Activity

This criterion relates to the health benefits derived from using different transport modes. This criterion is not considered relevant for differentiating between options for this project because all options would be expected to have a broadly similar impact on physical activity.

### 2.4. Environment

The impact of the proposed scheme options on the receiving environment were assessed under each of the following sub-criteria:

- Air Quality;
- Noise & Vibration;
- Landscape & Visual Quality;
- Biodiversity;
- Cultural, Archaeological & Architectural Heritage;
- Land Use, Soils & Geology;
- Water Resources.

Archaeological assessments of the 7 level crossing locations were undertaken as part of the development of the concept stage scheme designs and the associated assessment reports include specific mitigation measures to address any potential impacts on Cultural, Archaeological or Architectural Heritage.

A number of the level crossing locations are proximate to the Blackwater River Special Area of Conservation and the potential impact of the scheme options were considered in the assessment under the sub-criterion of Biodiversity. Further assessment of these potential impacts and possible mitigations will be required for the progression of the selected options.

The potential impact of the scheme options on the surrounding landscape was considered in the assessment. Further assessment of these potential impacts and possible mitigations will be required for the progression of the selected options.

The Air Quality, Noise & Vibration and Water Resources sub-criterion are not considered relevant for differentiating between options for this project because all options would be expected to have a broadly similar impact on these sub-criterion. While the sub-criterion of Land Use is included under the Environment criterion it was not considered in the assessment as it is addressed in the Integration criterion.

Although it is anticipated that the construction of some of the proposed scheme options will have an impact on the receiving environment, the selected option will seek to minimise impact upon the existing environment wherever possible through avoidance of sensitive areas. Where this is not feasible, mitigation measures will be put in place.

## **2.5. Accessibility and Social Inclusion**

This criterion relates to the potential benefits that accrue to those suffering from social deprivation, geographic isolation and mobility and sensory deprivation from the proposed project. This criterion is not considered relevant for differentiating between options for this project because all options would be expected to have a broadly similar impact.

## **2.6. Integration**

This criterion relates to the extent to which the project promotes integration of transport networks and is compatible with a range of Government policies, including national spatial and planning policy. The sub-criteria of Transport Integration and Land Use Integration were considered in the assessment, with particular consideration given to the impact of the various options on community severance and the existing road network.

The sub-criteria of Geographical Integration and Other Government Policy Integration are not considered relevant for differentiating between options for this project because all options would be expected to have a broadly similar impact.

### 3. Scheme Delivery

When the concept stage scheme options were being developed in 2010 and 2011, it was proposed to progress the seven level crossing closures as individual schemes. Planning permission was to be sought from the relevant local authority and any lands required for the scheme were to be acquired by agreement from landowners. The schemes for the closures of level crossings XC187, XC211 and XC212, which were progressed to statutory approval stage in 2009 and 2011, were frustrated and eventually failed due to local objections.

As part of the 2018 feasibility study into the elimination/de-manning of the 7 level crossings, legal advice was sought from CIÉ Solicitors on the most appropriate mechanism to deliver the project bearing in mind the land acquisition, extinguishment of public rights of way, planning and environmental considerations. The resulting Senior Counsel legal opinion recommended that the necessary planning permission, land acquisition and extinguishments of rights of way for the proposed solutions would be best achieved through the application to An Bord Pleanála for a Railway Order. Refer to Appendix B for the full legal opinion on the delivery mechanism for the project.

In order to progress the project, it is proposed to engage multi-disciplinary design consultants to initially develop the preferred solutions from concept design to preliminary design. In addition to the preliminary design, multi-disciplinary design consultants will be required to develop the preliminary design to Railway Order Stage, complete the detailed design and prepare tender documentation, provide design support during the construction period and to provide staff to participate in the construction supervision and contract administration.

Due to the significant interface between the construction works and operational railway, it is proposed to use a traditional employer designed contract to deliver the scheme.

A detailed programme was prepared for the project on the basis of this delivery strategy, refer to Table 2 below for a summary of the programme. The detailed programme is included in Appendix F to this report.

Activity	Start
Appoint Consultant	March 2019
Complete Preliminary Design	June 2019
Lodge Railway Order	October 2019
Complete Detailed Design	June 2020 lag after RO
Railway Order Granted	June 2020 (TBC)
Tender Action	July 2020 (TBC)
Appoint Contractor	December 2020 (TBC)
Contractor Construction Works	May 2021 (TBC)

Table 2 – Programme Summary

## 4. Options Appraisal

In April 2018, a workshop was held in Limerick Junction to appraise the various options to eliminate/de-man each of the 7 level crossings. Representatives from New Works, CCE, IMO, SET and CIÉ Group Property attended the workshop and provided input on each of the potential options for the elimination/de-manning of the crossings.

The following scoring system was applied to each of the criteria in the appraisal process:

Significant advantages over other options	5
Some advantages over other options	4
Comparable to other options	3
Some disadvantages over other options	2
Significant disadvantages over other options	1

The Straight Closure option was not assessed for level crossings XC209, XC212, XC215 and XC215 due to the volume of road traffic using these level crossings and length of the existing alternative routes.

The following tables provides a summary of the results of the appraisal for each level crossing.

Appraisal Criteria	Appraisal Sub-Criteria	Weighting (Total 100 marks)	Do Nothing	Straight Closure	Alternative Access /Overbridge	Upgrade to 4 Barrier CCTV
<b>Economy</b>						
Capital Cost	Construction Costs	50	5	5	3	3
Whole Life Cost	Operating & Maintenance Costs	50	1	5	5	4
			3	5	4	4
<b>Safety</b>			3	5	5	4
<b>Physical Activity</b>			-	-	-	-
<b>Environment</b>			3	3	1	3
<b>Accessibility &amp; Social Inclusion</b>			-	-	-	-
<b>Integration</b>			2	1	3	2
<b>TOTAL SCORE</b>			11	14	13	13

Table 3 – XC187 Options Appraisal

Appraisal Criteria	Appraisal Sub-Criteria	Weighting (Total 100 marks)	Do Nothing	Straight Closure	Alternative Access /Overbridge	Upgrade to 4 Barrier CCTV
<b>Economy</b>						
Capital Cost	Construction Costs	50	5	5	4	3
Whole Life Cost	Operating & Maintenance Costs	50	1	5	5	4
			3	5	5	4
<b>Safety</b>			3	5	5	4
<b>Physical Activity</b>			-	-	-	-
<b>Environment</b>			3	3	2	3
<b>Accessibility &amp; Social Inclusion</b>			-	-	-	-
<b>Integration</b>			2	1	4	2
<b>TOTAL SCORE</b>			11	14	16	13

Table 4 – XC201 Options Appraisal

Appraisal Criteria	Appraisal Sub-Criteria	Weighting (Total 100 marks)	Do Nothing	Straight Closure	Alternative Access /Overbridge	Upgrade to 4 Barrier CCTV
<b>Economy</b>						
Capital Cost	Construction Costs	50	5	N/A	2	3
Whole Life Cost	Operating & Maintenance Costs	50	1	N/A	5	4
			3	N/A	4	4
<b>Safety</b>			1	N/A	5	3
<b>Physical Activity</b>			-	-	-	-
<b>Environment</b>			3	N/A	1	3
<b>Accessibility &amp; Social Inclusion</b>			-	-	-	-
<b>Integration</b>			2	N/A	3	3
<b>TOTAL SCORE</b>			9	N/A	13	13

Table 5 – XC209 Options Appraisal

Appraisal Criteria	Appraisal Sub-Criteria	Weighting (Total 100 marks)	Do Nothing	Straight Closure	Alternative Access /Overbridge	Upgrade to 4 Barrier CCTV
<b>Economy</b>						
Capital Cost	Construction Costs	50	4	5	5	3
Whole Life Cost	Operating & Maintenance Costs	50	4	5	5	5
			4	5	5	4
<b>Safety</b>						
<b>Physical Activity</b>						
			-	-	-	-
<b>Environment</b>						
			3	1	2	3
<b>Accessibility &amp; Social Inclusion</b>						
			-	-	-	-
<b>Integration</b>						
			2	1	3	2
<b>TOTAL SCORE</b>						
			11	12	15	13

Table 6 – XC211 Options Appraisal

Appraisal Criteria	Appraisal Sub-Criteria	Weighting (Total 100 marks)	Do Nothing	Straight Closure	Alternative Access /Overbridge	Upgrade to 4 Barrier CCTV
<b>Economy</b>						
Capital Cost	Construction Costs	50	4	N/A	5	3
Whole Life Cost	Operating & Maintenance Costs	50	4	N/A	5	5
			4	N/A	5	4
<b>Safety</b>						
<b>Physical Activity</b>						
			1	N/A	5	2
<b>Environment</b>						
			3	N/A	2	3
<b>Accessibility &amp; Social Inclusion</b>						
			-	-	-	-
<b>Integration</b>						
			2	-	4	2
<b>TOTAL SCORE</b>						
			10	N/A	16	11

Table 7 – XC212 Options Appraisal

Appraisal Criteria	Appraisal Sub-Criteria	Weighting (Total 100 marks)	Do Nothing	Straight Closure	Alternative Access /Overbridge	Upgrade to 4 Barrier CCTV
<b>Economy</b>						
Capital Cost	Construction Costs	50	4	N/A	2	3
Whole Life Cost	Operating & Maintenance Costs	50	4	N/A	5	5
			4	N/A	4	4
<b>Safety</b>						
<b>Physical Activity</b>						
			1	N/A	5	2
<b>Environment</b>						
			3	N/A	2	3
<b>Accessibility &amp; Social Inclusion</b>						
			-	-	-	-
<b>Integration</b>						
			2	-	4	2
<b>TOTAL SCORE</b>						
			10	N/A	15	11

Table 8 – XC215 Options Appraisal

Appraisal Criteria	Appraisal Sub-Criteria	Weighting (Total 100 marks)	Do Nothing	Straight Closure	Alternative Access /Overbridge	Upgrade to 4 Barrier CCTV
<b>Economy</b>						
Capital Cost	Construction Costs	50	5	N/A	3	3
Whole Life Cost	Operating & Maintenance Costs	50	1	N/A	5	5
			3	N/A	4	4
<b>Safety</b>						
<b>Physical Activity</b>						
			1	N/A	5	2
<b>Environment</b>						
			3	N/A	2	3
<b>Accessibility &amp; Social Inclusion</b>						
			-	-	-	-
<b>Integration</b>						
			2	-	4	2
<b>TOTAL SCORE</b>						
			9	N/A	15	11

Table 9 – XC219 Options Appraisal

## 5. XC187, Fantstown

### 5.1. Introduction

Level Crossing XC187, Fantstown is a 'C-Type' manually operated gated level crossing located at 122 miles 808 yards on the Dublin to Cork. The level crossing is located on local road LS 8514, 3km to the east of Kilmallock in the townland of Fantstown in County Limerick.



Image capture: Apr 2009 © 2019 Google

**Figure 3 – Level Crossing XC187**

The level crossing is manned from 07.30hrs until 23.30hrs and the gates are normally closed to road traffic with the gate keeper opening the gates as required for vehicle traffic. The level crossing is unmanned and closed to road traffic from 23.30hrs until 07.30hrs. There are also pedestrian wicket gates at the crossing but the gatekeeper has no function in relation to the use of these gates.

The level crossing is located in a rural area with low density individual housing in the vicinity. There are known archaeological monuments in the vicinity of the level crossing, refer to the Archaeological Assessment Reports in Appendix C. The Average Annual Daily Traffic (AADT) usage of the level crossing was calculated at 15 following a 24 hour traffic count in June 2011. The level crossing has a Collective Risk Factor of  $1.00 \times 10^{-4}$  and is currently ranked 287 of 970 level crossings on the IÉ network in the LCRM.

### 5.2. History

A prior attempt was made to close this level crossing in 2006 when CIÉ requested Limerick County Council to extinguish the public Right of Way across the level crossing using the procedures set out in Section 73 of the Roads Act, 1993.

An Oral Hearing was held on 10 November 2009 and the Inspector recommended the extinguishment of the public right of way and the consequent closure of the crossing but highlighted that improvements needed to be undertaken to the alternative route in the interest of road safety.

These improvements were estimated at €250,000 at the time and Iarnród Éireann gave a commitment to meet this cost contingent upon the extinguishment of the right of way and consequent closure of the crossing.

However, the extinguishment failed to gain the necessary support of the elected members of the Council due to local concerns over the proposal. The making of an Extinguishment Order and the consideration of objections/representations thereto are reserved functions of the Elected Members. The matter was not put to a vote of the elected members and the closure did not progress.

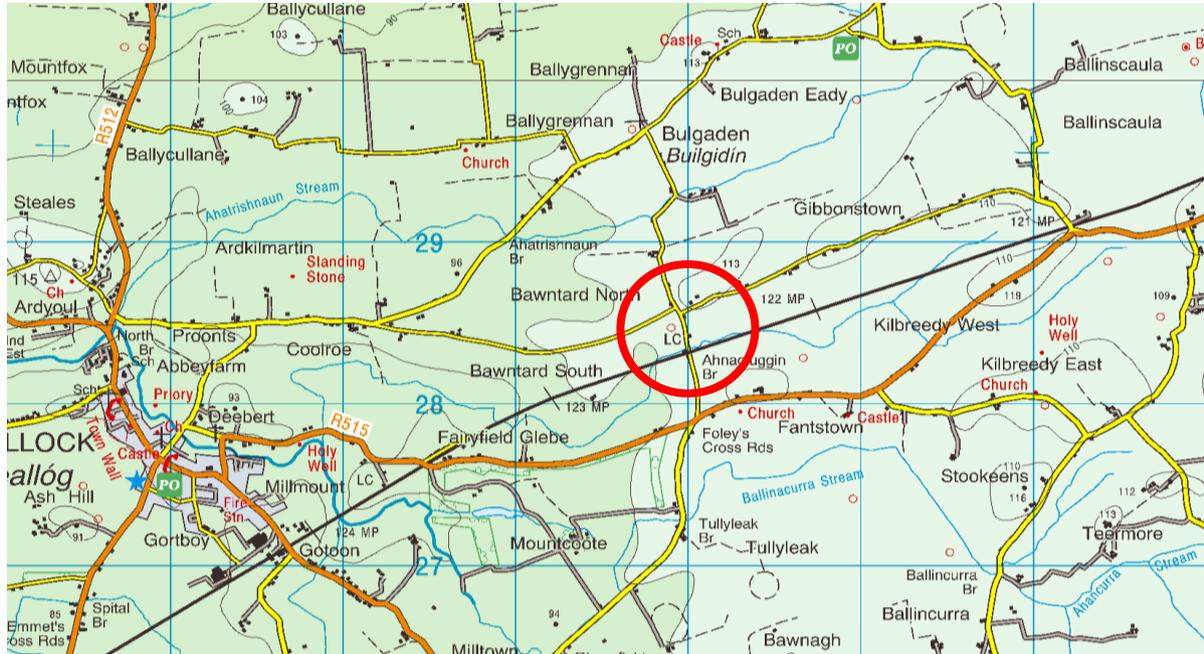


Figure 4 – XC187 Site Location

In 2010, Iarnród Éireann commissioned Roughan & O'Donovan Consulting Engineers to develop concept stage options for the closure of the level crossing XC187. The provision of alternative access via a new overbridge was developed to close XC187, refer to Figure 5 below. The cost of the scheme was estimated at €1.6m at the time.

Neither the extinguishment of the right of way nor the alternative access proposals were progressed due to funding constraints.

### 5.3. Proposed Solution

The preferred solution for the elimination/de-manning of the level crossing XC187, Fantstown is through the extinguishment of the public right of way across the level crossing and the possible upgrade of the existing alternative access route. It is proposed that the necessary planning permission, land acquisition and extinguishments of rights of way for the proposed solution will be provided through the application to An Bord Pleanála for a Railway Order to eliminate/de-man the remaining manned public road level crossings on the Cork Line.

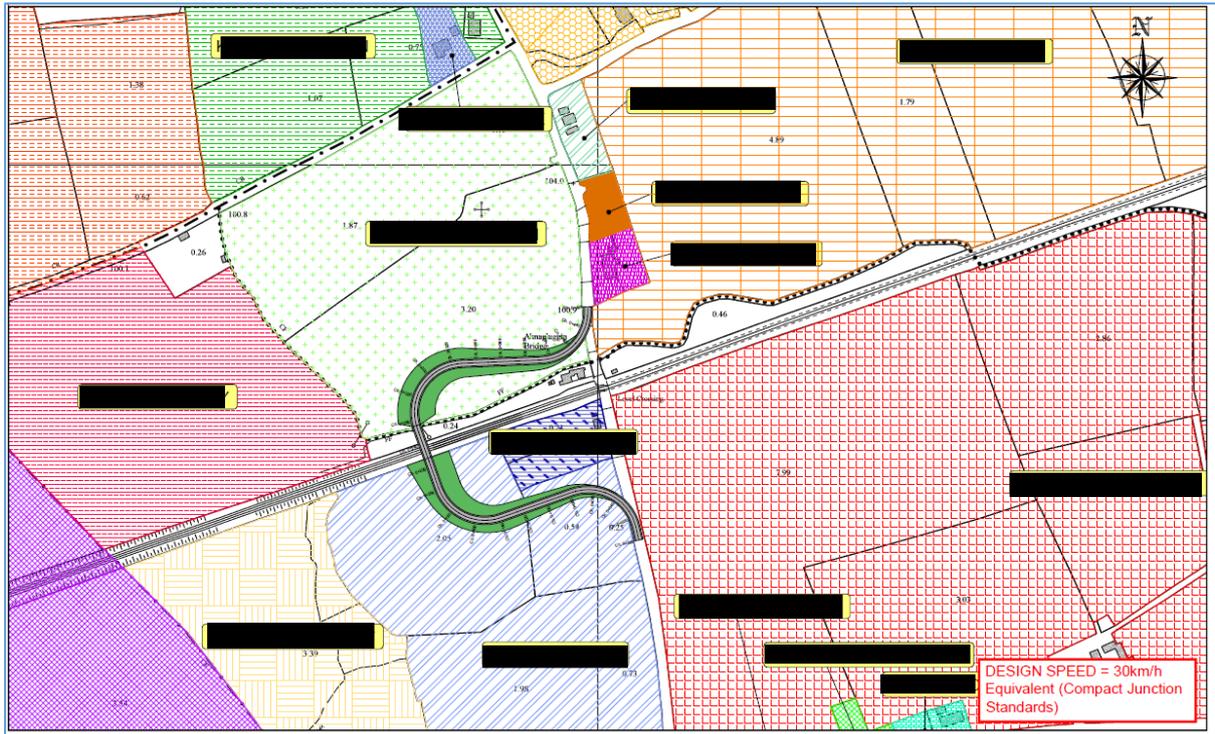


Figure 5 – XC187 Overbridge Option

## 6. XC201, Thomastown

### 6.1. Introduction

Level Crossing XC201, Thomastown is a 'C-Type' manually operated gated level crossing located at 127 miles 70 yards on the Dublin to Cork. The level crossing is located on a local road, 5km to the east of Charleville in the townland of Thomastown in County Limerick.



Image capture: May 2009 © 2019 Google

Figure 6.1 – Level Crossing XC201

The level crossing is manned from 07.30hrs until 23.30hrs and the gates are normally closed to road traffic with the gate keeper opening the gates as required for vehicle traffic. The level crossing is unmanned and closed to road traffic from 23.30hrs until 07.30hrs. There are also pedestrian wicket gates at the crossing but the gatekeeper has no function in relation to the use of these gates.

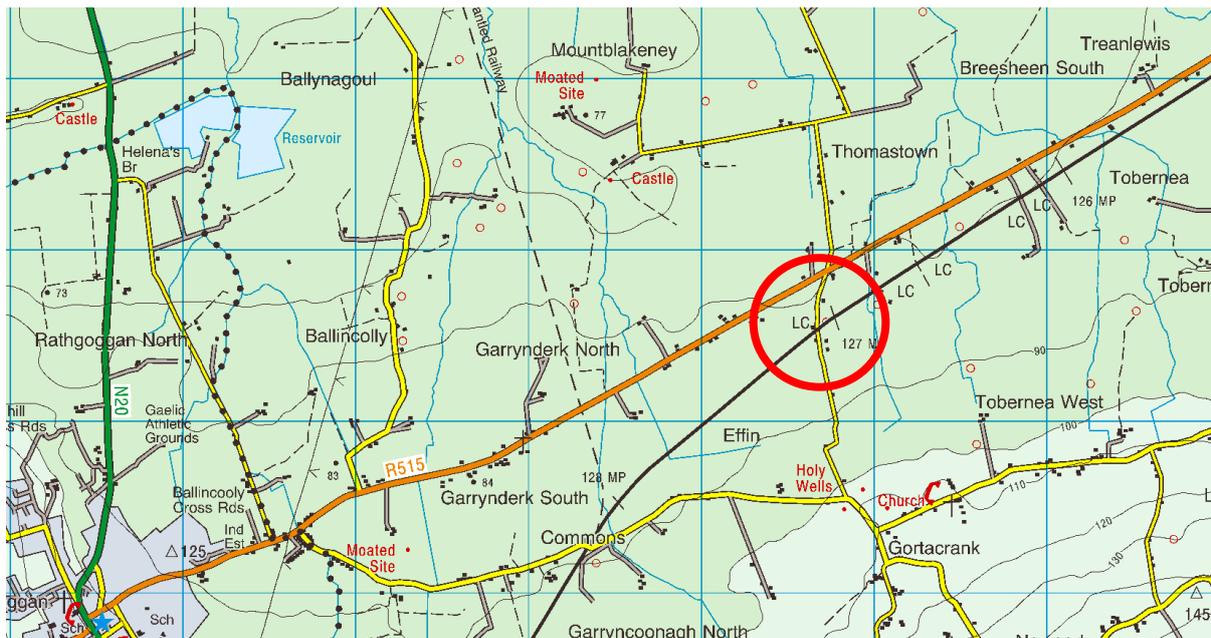


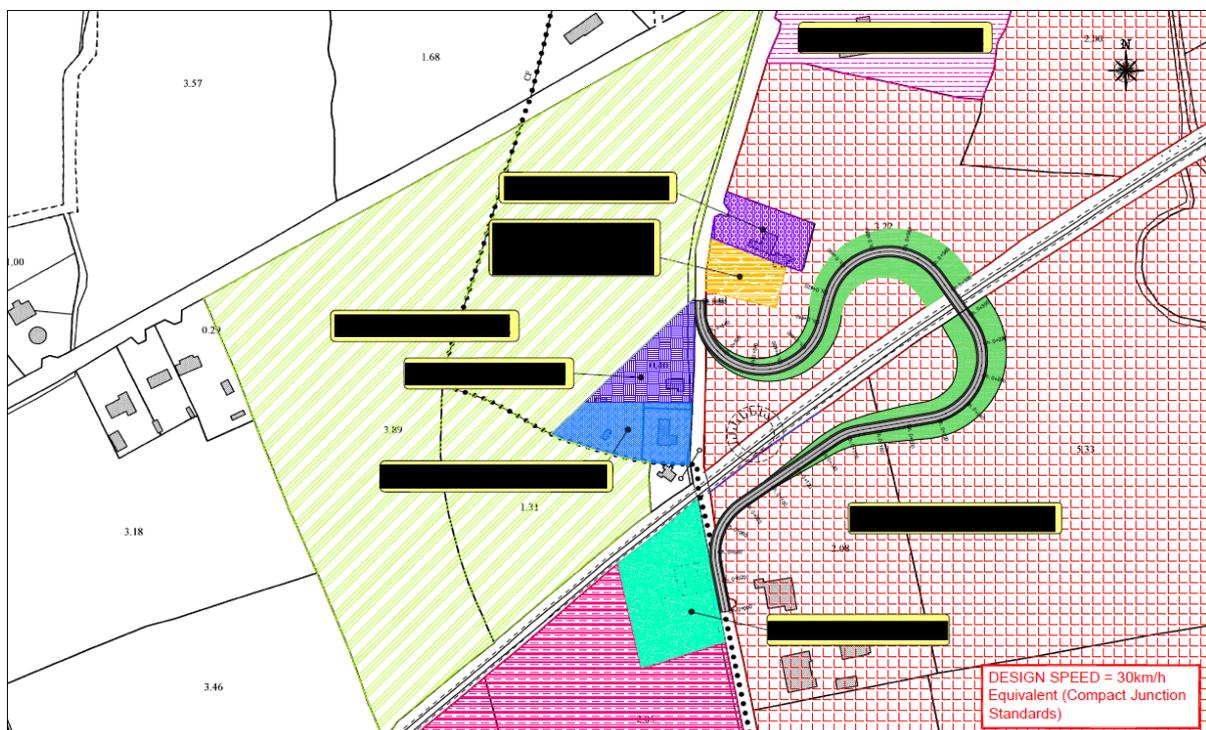
Figure 6.2 – XC201 Site Location

The level crossing is located in a rural area with low density individual housing in the vicinity. There are known archaeological monuments in the vicinity of the level crossing, refer to the Archaeological Assessment Reports in Appendix C.

The Average Annual Daily Traffic (AADT) usage of the level crossing was calculated at 31 following a 24 hour traffic count in June 2011. The level crossing has a Collective Risk Factor of  $1.20 \times 10^{-4}$  and is currently ranked 268 of 970 level crossings on the IÉ network in the LCRM.

## 6.2. History

In 2010, Iarnród Éireann commissioned Roughan & O'Donovan Consulting Engineers to develop concept stage options for the closure of the level crossing XC201. 2 no. options for the provision of alternative access via a new overbridge were developed to close XC201, refer to Figures 5 & 7 below. The cost of the scheme was estimated at between €1.4m and €1.5m at the time, depending on inclusion of an upgrade of the junction on the R515 Regional Road.



**Figure 6.3 – XC201 Overbridge Option 1**

When the concept stage options were being developed, it was proposed to progress the seven level crossing closures as individual schemes. Planning permission was to be sought from the relevant local authority and any lands required for the scheme were to be acquired by agreement from landowners. Initial discussions were held in 2011 with the owner of the bulk of the lands required for the overbridge options, but they were unwilling to dispose of the required lands.

Subsequent to the development of concept designs in 2011, the alternative access proposals were not progressed due to funding constraints.

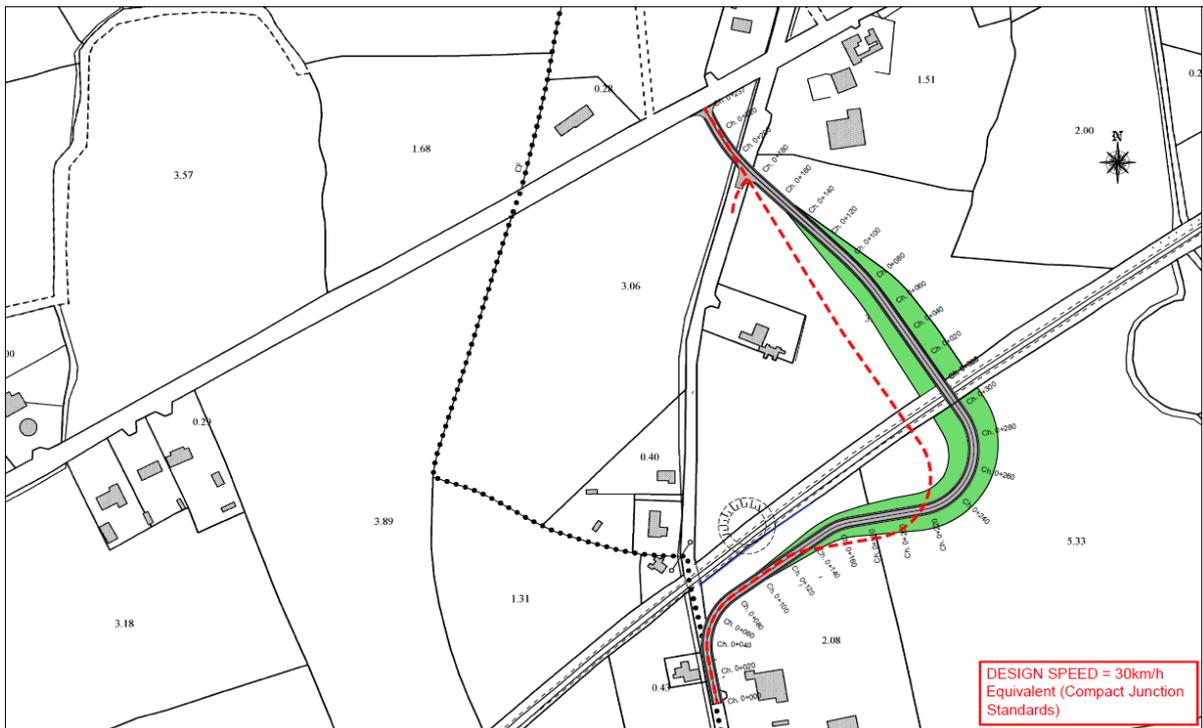


Figure 6.4 – XC201 Overbridge Option 2

### 6.3. Proposed Solution

The preferred solution for the elimination/de-manning of the level crossing XC201, Thomastown is through provision of alternative access across the railway line via a new overbridge. It is proposed that the necessary planning permission, land acquisition and extinguishments of rights of way for the proposed solution will be provided through the application to An Bord Pleanála for a Railway Order to eliminate/de-man the remaining manned public road level crossings on the Cork Line.

## 7. XC209, Ballyhay

### 7.1. Introduction

Level Crossing XC209, Ballyhay is a 'CD-Type' manually operated gated level crossing located at 130 miles 878 yards on the Dublin to Cork. The level crossing is located on a local road in the townland of Ballyhay, County Cork.



Image capture: May 2009 © 2019 Google

**Figure 7.1 – Level Crossing XC209**

The level crossing is manned from 07.30hrs until 23.30hrs and the gates are normally closed to road traffic with the gate keeper opening the gates as required for vehicle traffic. The level crossing is unmanned and closed to road traffic from 23.30hrs until 07.30hrs. There are also pedestrian wicket gates at the crossing but the gatekeeper has no function in relation to the use of these gates.

The level crossing is located in a rural area with low density individual housing in the vicinity. The level crossing is immediately to the north of a railway underbridge (UBC 296) on the Awbeg River, which is a tributary of the Blackwater River Special Area of Conservation (Site No. 002170). There is also a junction on the road and a river bridge (Awbeg River) immediately to the east of the level crossing. There are known archaeological monuments in the vicinity of the level crossing, refer to the Archaeological Assessment Reports in Appendix C.

The Average Annual Daily Traffic (AADT) usage of the level crossing was calculated at 326 following a 24 hour traffic count in June 2011. The level crossing has a Collective Risk Factor of  $9.40 \times 10^{-4}$  and is currently ranked 78 of 970 level crossings on the IÉ network in the LCRM.

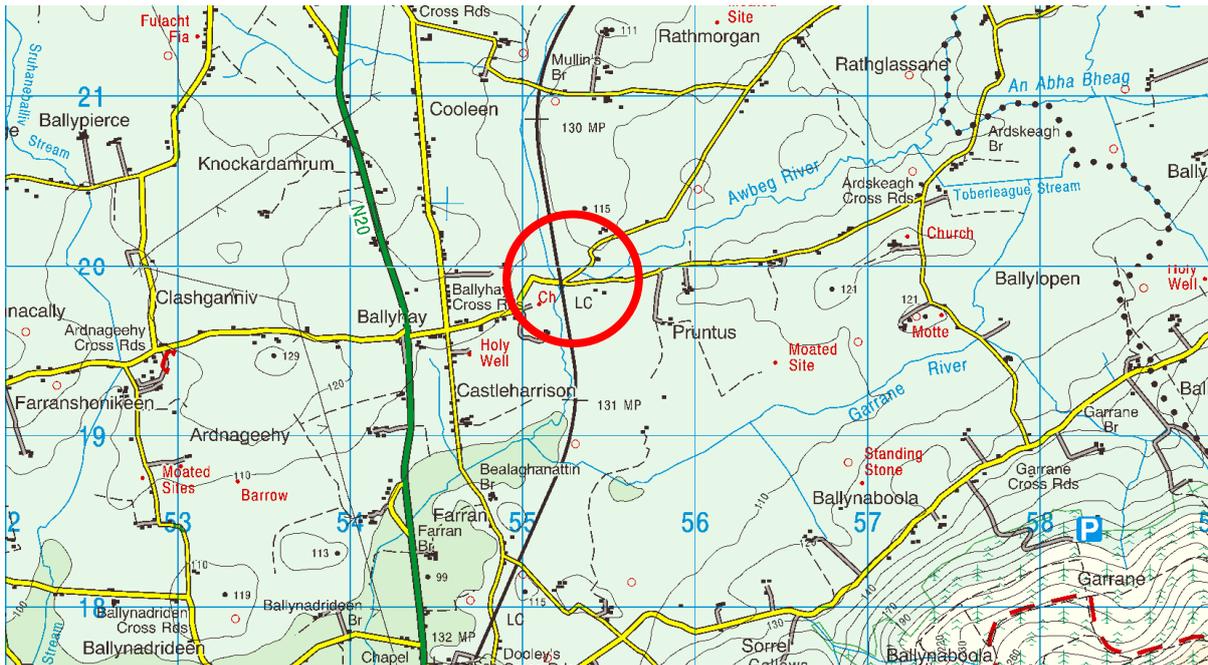


Figure 7.2 – XC209 Site Location

## 7.2. History

In 2010, Iarnród Éireann commissioned Roughan & O'Donovan Consulting Engineers to develop concept stage options for the closure of the level crossing XC209. The provision of alternative access via a new overbridge was developed to close XC209, refer to Figure 7.3 below. The cost of the scheme was estimated at €3.4m at the time.

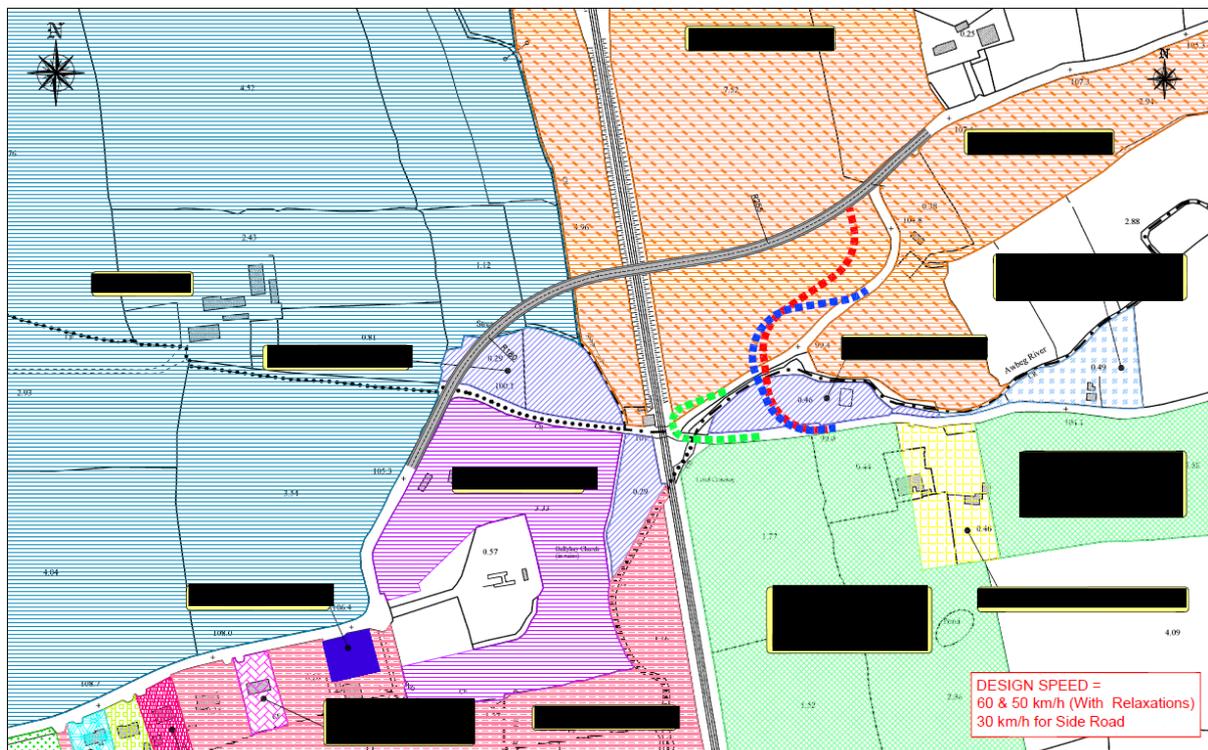


Figure 7.3 – XC209 Overbridge Option

When the concept stage options were being developed, it was proposed to progress the seven level crossing closures as individual schemes. Planning permission was to be sought from the relevant local authority and any lands required for the scheme were to be acquired by agreement from landowners. Initial discussions were held in 2011 with the affected landowners but one landowner was unwilling to consider the disposal of the required lands or even provide access for surveys.

Subsequent to the development of concept designs in 2011, the alternative access proposal was not progressed due to funding constraints.

### **7.3. Proposed Solution**

The preferred solution for the elimination/de-manning of the level crossing XC209, Ballyhay is through the upgrade of the level crossing to a 4-barrier CCTV controlled level crossing. It is proposed that the necessary planning permission, land acquisition and extinguishments of rights of way for the proposed solution will be provided through the application to An Bord Pleanála for a Railway Order to eliminate/de-man the remaining manned public road level crossings on the Cork Line.

## 8. XC211, Newtown

### 8.1. Introduction

Level Crossing XC211, Newtown is a 'CD-Type' manually operated gated level crossing located at 131 miles 1385 yards on the Dublin to Cork. The level crossing is located on a local road, 0.5km to the north of Ballyhea village in the townland of Newtown, County Cork.



Image capture: May 2009 © 2019 Google

Figure 8.1 – Level Crossing XC211

The level crossing is manned from 07.30hrs until 23.30hrs and the gates are normally closed to road traffic with the gate keeper opening the gates as required for vehicle traffic. The level crossing is unmanned and closed to road traffic from 23.30hrs until 07.30hrs. There are also pedestrian wicket gates at the crossing but the gatekeeper has no function in relation to the use of these gates.

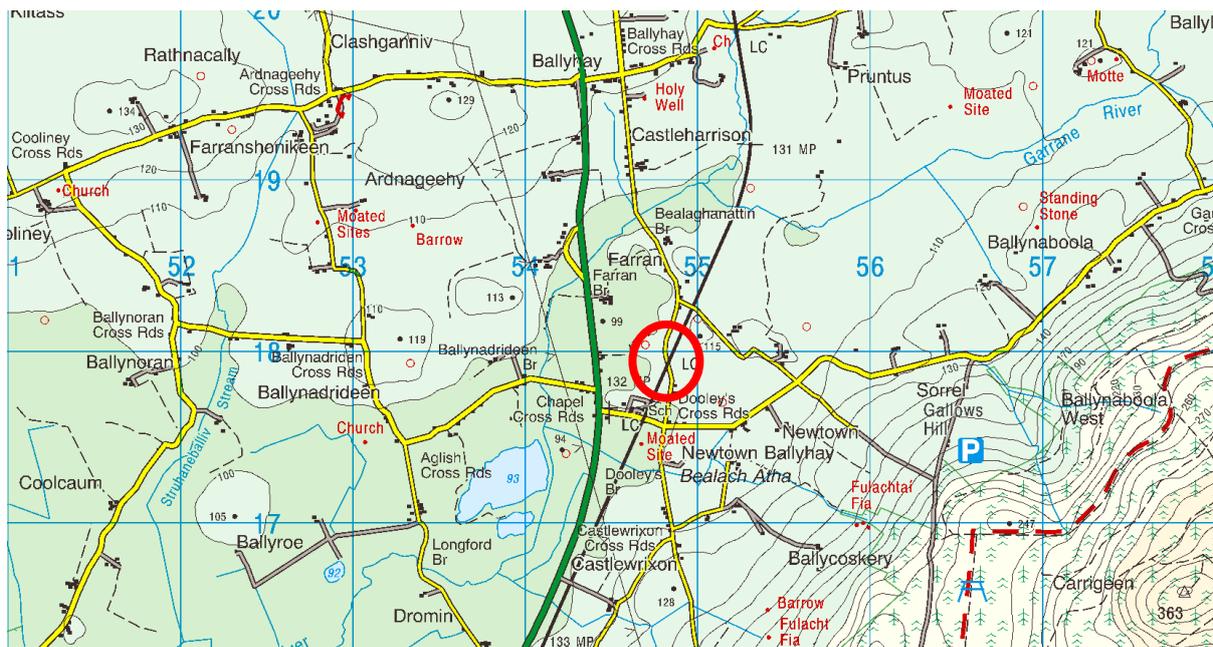


Figure 8.2 – XC211 Site Location

The level crossing is located in a rural area with low density individual housing in the vicinity. The level crossing is proximate to the Awbeg River which is a tributary of the Blackwater River Special Area of Conservation (Site No. 002170). There are known archaeological monuments in the vicinity of the level crossing, refer to the Archaeological Assessment Reports in Appendix C.

The Average Annual Daily Traffic (AADT) usage of the level crossing was calculated at 93 following a 24 hour traffic count in October 2010. The level crossing has a Collective Risk Factor of  $3.50 \times 10^{-4}$  and is currently ranked 158 of 977 level crossings on the IÉ network in the LCRM.

## 8.2. History

In the period from 2005 to 2007, Iarnród Éireann and CIÉ investigated various options for the closure of level crossings XC211 and XC212. Discussions were held with Cork County Council, local resident groups and affected landowners on possible solutions to eliminate the level crossings. Initial scheme options for overbridge and underbridges at XC212 were developed but there was no consensus on a preferred scheme option.

A further attempt was made to close this level crossing in 2011 as part of a joint scheme to close level crossing XC212 when Iarnród Éireann and CIÉ, in conjunction with Cork County Council sought the extinguishment of the public Right of Way across the level crossing and the diversion of traffic over a new overbridge at Level Crossing XC212. There was strong local opposition to the closure and the proposal was withdrawn.

When these schemes were being developed, it was proposed to progress the seven level crossing closures as individual schemes. Planning permission was to be sought from the relevant local authority and any lands required for the scheme were to be acquired by agreement from landowners.

Subsequent to the closure attempt in 2011, the alternative access proposal was not progressed due to funding constraints.

Refer to Section 9.2 below for further details of the 2011 proposal to close level crossing XC211.

## 8.3. Proposed Solution

The preferred solution for the elimination/de-manning of the level crossing XC211, Newtown is through provision of a new link road to the west of the railway corridor to connect the local road at the west side of level crossing XC211 with Beechwood Grove and on to the proposed new overbridge at level crossing XC212. It is proposed that the necessary planning permission, land acquisition and extinguishments of rights of way for the proposed solution will be provided through the application to An Bord Pleanála for a Railway Order to eliminate/de-man the remaining manned public road level crossings on the Cork Line.

## 9. XC212, Ballycoskery

### 9.1. Introduction

Level Crossing XC212, Ballycoskery is a 'CD-Type' manually operated gated level crossing located at 131 miles 1759 yards on the Dublin to Cork. The level crossing is located in Ballyhea village on local road L1533 in the townland of Ballycoskery, County Cork.



Image capture: May 2009 © 2019 Google

Figure 9.1 – Level Crossing XC212

XC212 is designated a 'CD-Type' level crossing but it is operated as a 'CX-Type' level crossing and is manned on a 24 hour basis. Its operation as a 'CX-Type' crossing results in the gates being normally open to road traffic with the gate keeper closing the gates as required for rail traffic. There are also pedestrian wicket gates at the crossing but these are permanently locked.

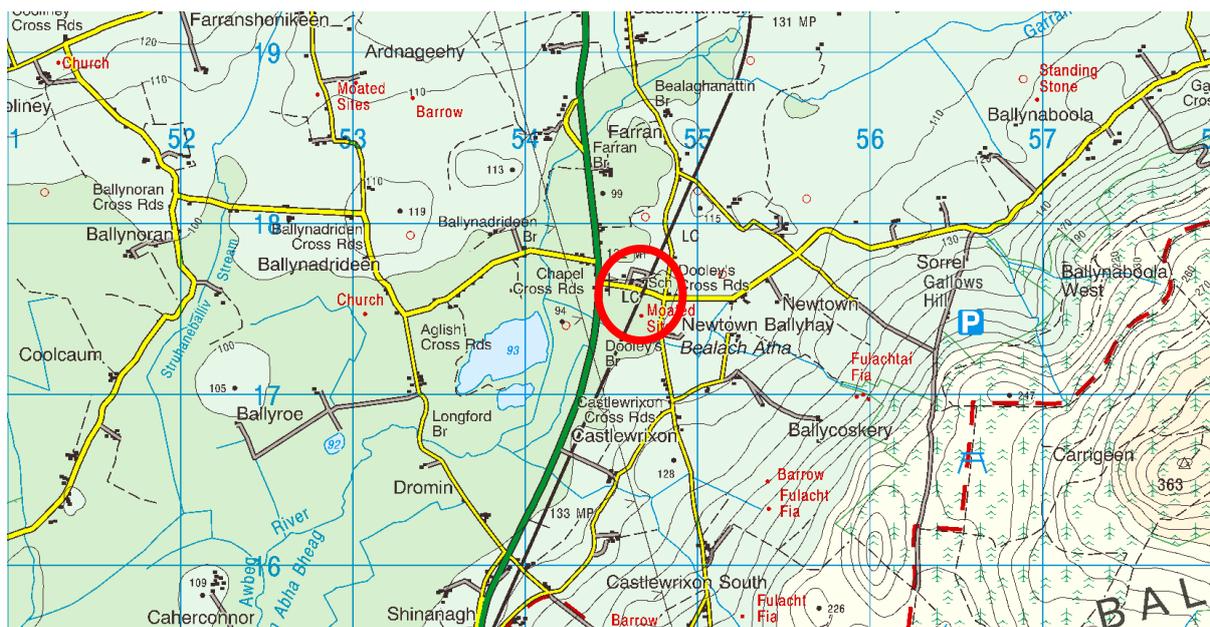


Figure 9.2 – XC212 Site Location

The level crossing is located in the village of Ballyheha. The local Primary School (east side) and the Beechwood housing estate (west side) are directly adjacent to the level crossing. The level crossing is proximate to the Awbeg River which is a tributary of the Blackwater River Special Area of Conservation (Site No. 002170). There are known archaeological monuments in the vicinity of the level crossing, refer to the Archaeological Assessment Reports in Appendix C.

The Average Annual Daily Traffic (AADT) usage of the level crossing was calculated at 1054 following a 24 hour traffic count in October 2010. The level crossing has a Collective Risk Factor of  $2.30 \times 10^{-3}$  and is currently ranked 36 of 977 level crossings on the IE network in the LCRM.

## 9.2. History

In the period from 2005 to 2007, Iarnród Éireann and CIÉ investigated various options for the closure of level crossings XC211 and XC212. Discussions were held with Cork County Council, local resident groups and affected landowners on possible solutions to eliminate the level crossings. Initial scheme options for overbridge and underbridges at XC212 were developed but there was no consensus on a preferred scheme option.

In 2008, following an incident in 2007 relating to access across the level crossing for emergency services, the operating hours of the level crossing gates were extended from 07.30hrs until 23.30hrs to a 24 hour basis.

A further attempt was made to close this level crossing in 2011 as part of a joint scheme to close level crossing XC211 when Iarnród Éireann and CIÉ, in conjunction with Cork County Council sought to construct a new overbridge adjacent to the level crossing thereby providing alternative access across the railway line, refer to Figure 9.3 below. The cost of the scheme, including the provision of a new link road from level crossing XC211 to Beechwood Grove and the various accommodation works, was estimated at €2.75m at the time.

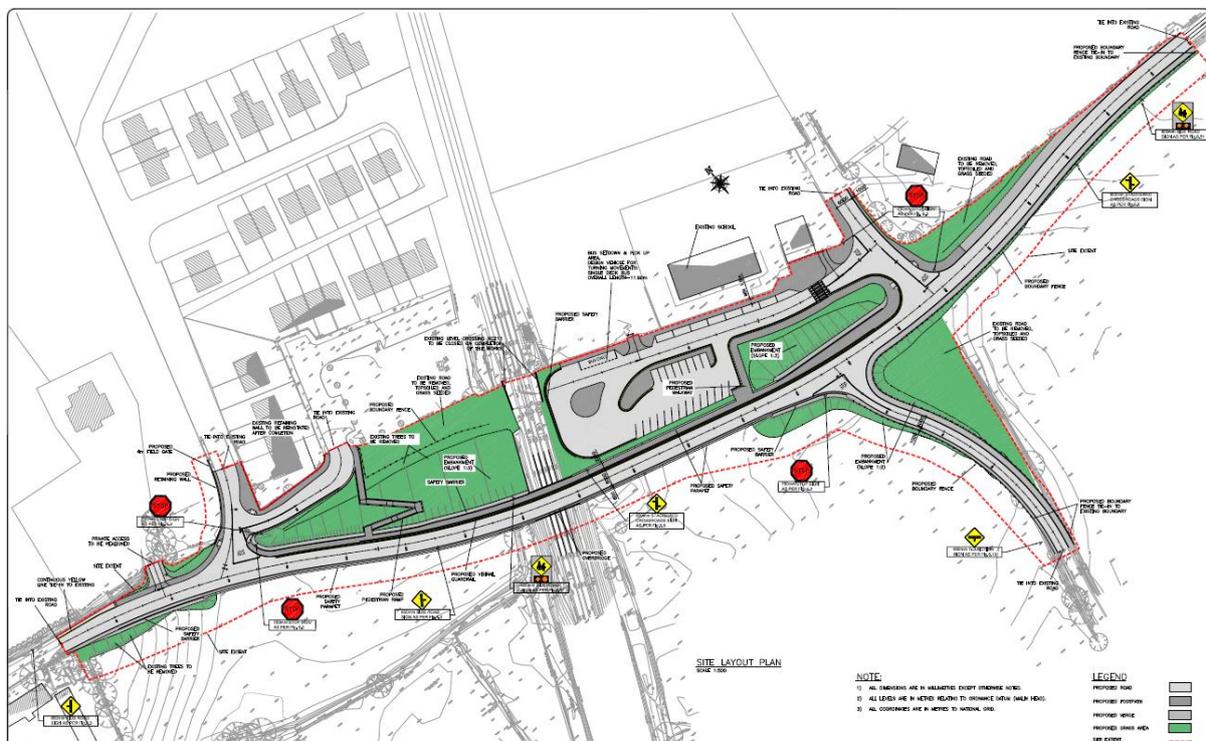


Figure 9.3 – XC212 Overbridge Option

In March 2011, Cork County Council sought planning permission under Section 179 of the Planning and Development Act, 2000 and Part 8 of the Planning and Development Regulations, 2001. The scheme included significant improvement works in the vicinity of the existing school (access, turning

and parking facilities for school buses and access for school drop offs and collections). A number of objections were made to the scheme following publication of the planning application, these primarily related to the proximity of the overbridge to the Beechwood housing estate and the school. Further objections were raised by local residents during a public meeting in April 2011, again these related to the proximity of the overbridge to the Beechwood housing estate and the school. The planning application for the scheme was withdrawn in May 2011. The local residents produced alternative proposals for the closure of the level crossing in late 2011, these proposals significantly extended the scheme and substantially increased the land take requirements.

When these schemes were being developed, it was proposed to progress the seven level crossing closures as individual schemes. Planning permission was to be sought from the relevant local authority and any lands required for the scheme were to be acquired by agreement from landowners.

Subsequent to the closure attempt in 2011, the alternative access proposal was not progressed due to funding constraints.

Cork County Council's 2017 Local Area Plan for the Fermoy Municipal District includes a reservation for the possible construction of a new road realignment as detailed on Figure 9.4 below.

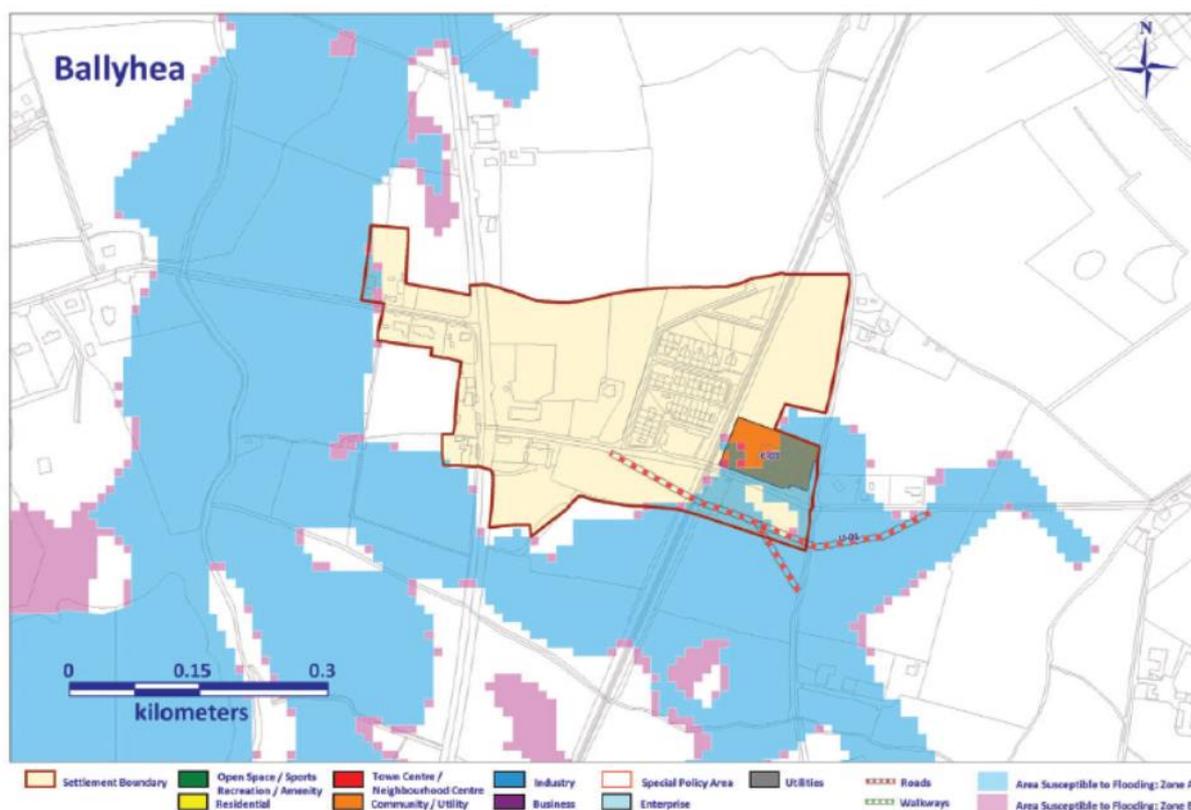


Figure 9.4 – Extract from Cork County Council LAP for Ballyheha

### 9.3. Proposed Solution

The preferred solution for the elimination/de-manning of the level crossing XC212, Ballycoskery is through the provision of alternative access across the railway line via a new overbridge. It is proposed that the necessary planning permission, land acquisition and extinguishments of rights of way for the proposed solution will be provided through the application to An Bord Pleanála for a Railway Order to eliminate/de-man the remaining manned public road level crossings on the Cork Line.

## 10. XC215, Shinanagh

### 10.1. Introduction

Level Crossing XC215, Shinanagh is a 'CD-Type' manually operated gated level crossing located at 134 miles 260 yards on the Dublin to Cork. The level crossing is located on local road L1320 in the townland of Imphrick, County Cork.



Image capture: Sep 2009 © 2019 Google

Figure 10.1 – Level Crossing XC215

XC215 is designated a 'CD-Type' level crossing but it has been operated as a 'CX-Type' level crossing for over 25 years and is manned on a 24 hour basis. Its operation as a 'CX-Type' crossing results in the gates being normally open to road traffic with the gate keeper closing the gates as required for rail traffic.

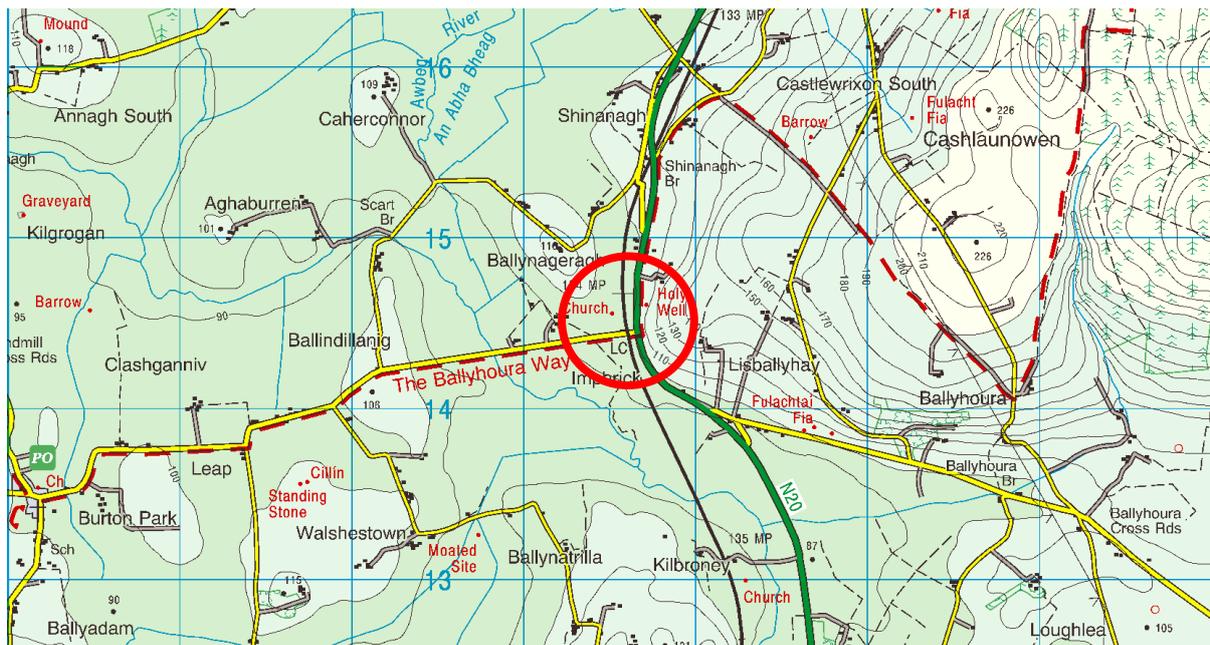


Figure 10.2 – XC215 Site Location

The level crossing is located in a rural area with low density individual housing in the vicinity. The level crossing is immediately adjacent to the junction between the N20 National Primary Route and the L1320 local road. The N20 national Primary route is due to be downgraded on the completion of the M20 in 2027. The level crossing is proximate to the Awbeg River which is a tributary of the Blackwater River Special Area of Conservation (Site No. 002170). There are known archaeological monuments in the vicinity of the level crossing, refer to the Archaeological Assessment Reports in Appendix C.

The Average Annual Daily Traffic (AADT) usage of the level crossing was calculated at 1053 following a 24 hour traffic count in June 2011. The level crossing has a Collective Risk Factor of  $4.80 \times 10^{-3}$  and is currently ranked 18 of 970 level crossings on the IÉ network in the LCRM.

## 10.2. History

In 2010, Iarnród Éireann commissioned Roughan & O'Donovan Consulting Engineers to develop concept stage options for the closure of the level crossing XC215. 2 no. options for the provision of alternative access via a new overbridge to the south of the level crossing or via an existing overbridge (OBC306) to the north of the level crossing were developed, refer to Figure 10.3 below. The cost of the schemes were estimated at €3.0m (new overbridge) and €2.0m (existing overbridge) at the time.

When the concept stage options were being developed, it was proposed to progress the seven level crossing closures as individual schemes. Planning permission was to be sought from the relevant local authority and any lands required for the scheme were to be acquired by agreement from landowners. No discussions were held with the affected landowners.

Subsequent to the development of concept designs in 2011, the alternative access proposal was not progressed due to funding constraints.

## 10.3. Proposed Solution

The preferred solution for the elimination/de-manning of the level crossing XC215, Shinanagh is through provision of alternative access across the railway line via a new overbridge. It is proposed that the necessary planning permission, land acquisition and extinguishments of rights of way for the proposed solution will be provided through the application to An Bord Pleanála for a Railway Order to eliminate/de-man the remaining manned public road level crossings on the Cork Line.

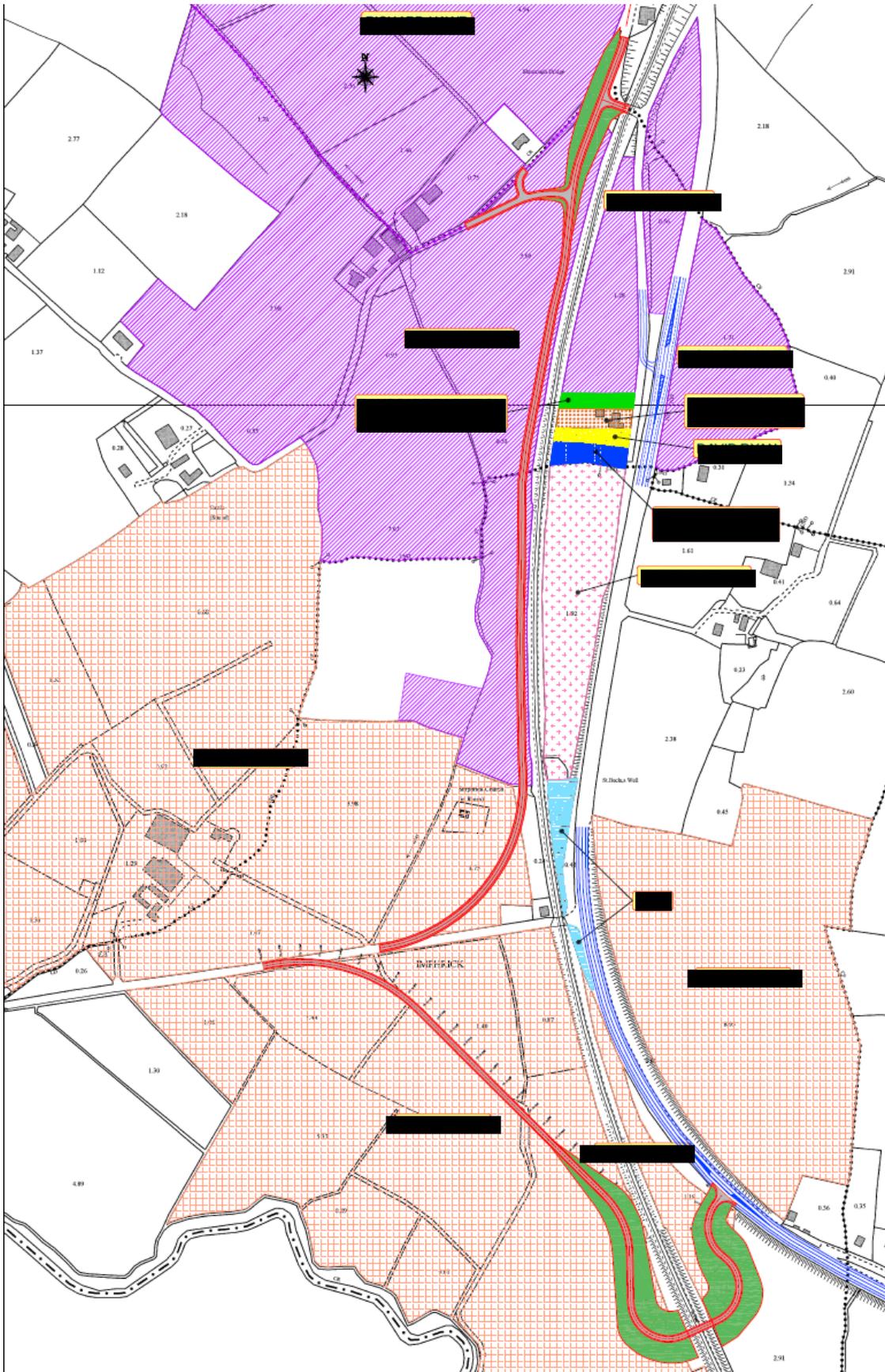


Figure 10.3 – XC215 Overbridge & Alternative Access Route Options

## 11. XC219, Buttevant

### 11.1. Introduction

Level Crossing XC219, Shinanagh is a 'CX-Type' manually operated gated level crossing located at 137 miles 315 yards on the Dublin to Cork. The level crossing is located on regional road R522 just on the outskirts of Buttevant in the townland of Greggane, County Cork.



Image capture: May 2011 © 2019 Google

Figure 11.1 – Level Crossing XC219

The level crossing is manned on a 24 hour basis and the gates are normally open to road traffic with the gate keeper closing the gates as required for rail traffic.

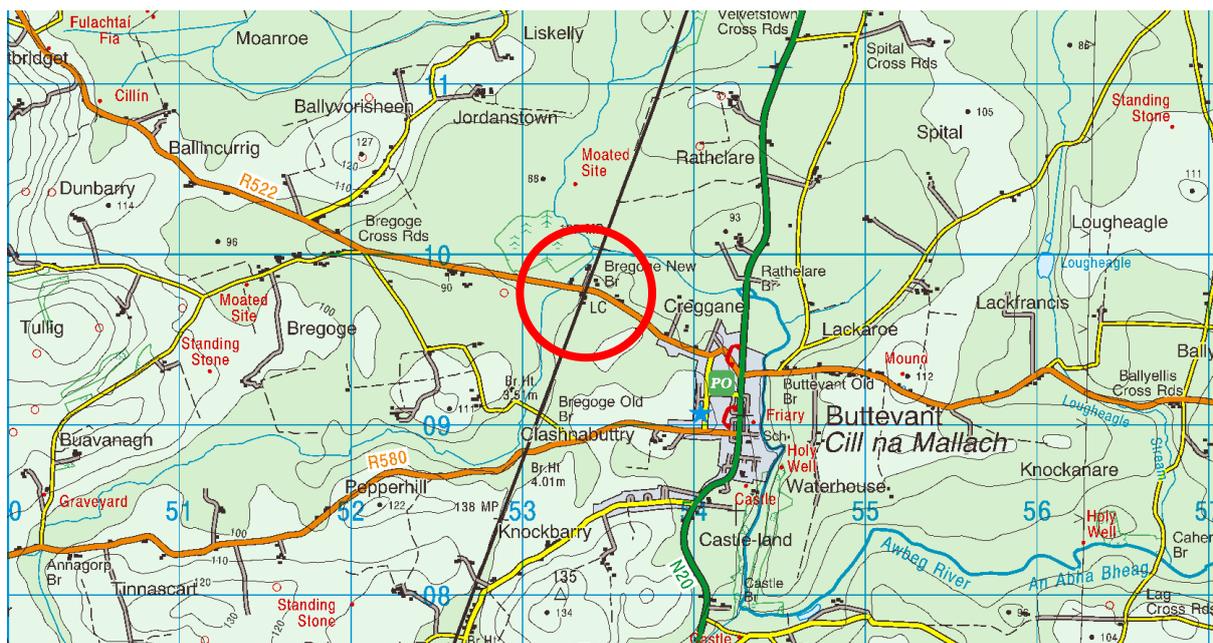


Figure 11.2 – XC219 Site Location

The level crossing is located in a rural area with low density individual housing in the vicinity. The level crossing is directly adjacent to the former Buttevant Station, the site of the former station is currently in use by Iarnród Éireann as a maintenance yard and contains a number of derelict buildings. The level crossing is proximate to the Awbeg River which is a tributary of the Blackwater River Special Area of Conservation (Site No. 002170). There are known archaeological monuments in the vicinity of the level crossing, refer to the Archaeological Assessment Reports in Appendix C.

The Average Annual Daily Traffic (AADT) usage of the level crossing was calculated at 2185 following a 24 hour traffic count in June 2011. The level crossing has a Collective Risk Factor of  $2.10 \times 10^{-3}$  and is currently ranked 38 of 970 level crossings on the IÉ network.

## 11.2. History

In 2010, Iarnród Éireann commissioned Roughan & O'Donovan Consulting Engineers to develop concept stage options for the closure of the level crossing XC219. The provision of alternative access via a new overbridge was developed to close XC219, refer to Figure 11.3 below. The cost of the scheme was estimated at €2.3m at the time.

When the concept stage options were being developed, it was proposed to progress the seven level crossing closures as individual schemes. Planning permission was to be sought from the relevant local authority and any lands required for the scheme were to be acquired by agreement from landowners.

Initial discussions were held with the affected landowners and their solicitors/engineers, to whom the scheme was broadly acceptable. The concept design was further developed in conjunction with Cork County Council with the intention of seeking planning permission for the scheme, however no further progress was made due to funding constraints.

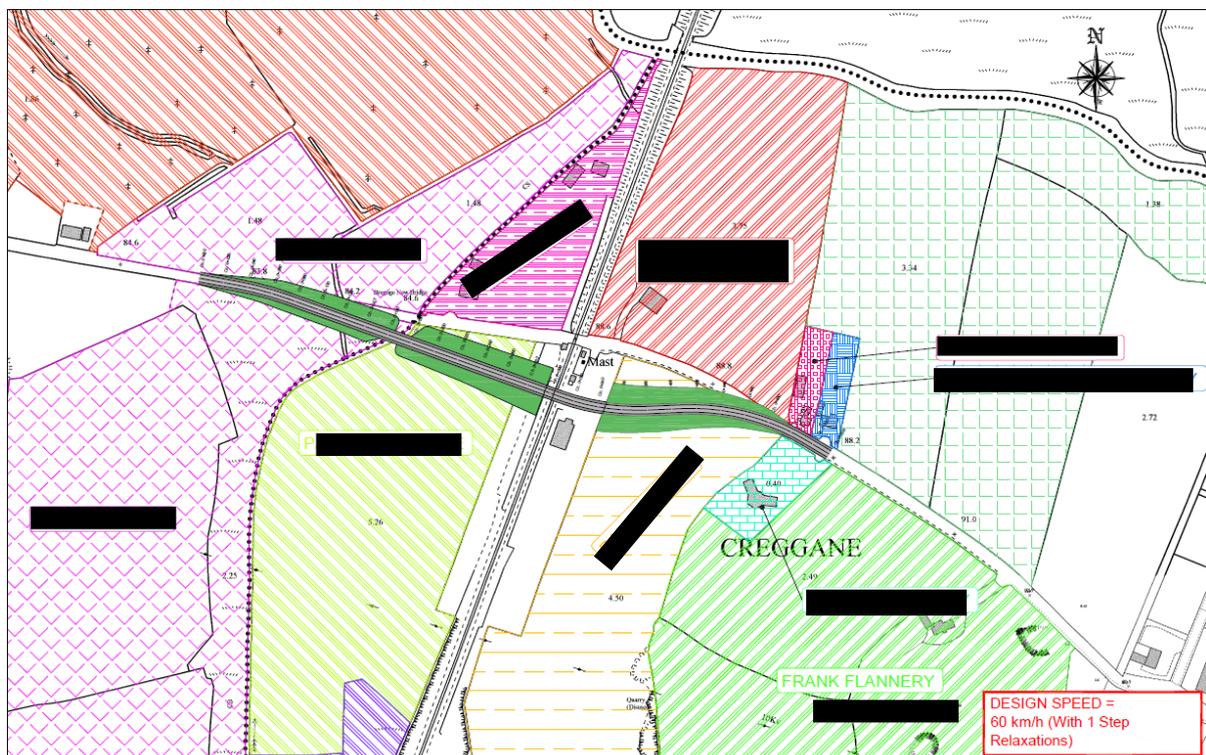


Figure 11.3 – XC219 Overbridge Option

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### 11.3. Proposed Solution

The preferred solution for the elimination/de-manning of the level crossing XC219, Buttevant is through the provision of alternative access across the railway line via a new overbridge. It is proposed that the necessary planning permission, land acquisition and extinguishments of rights of way for the proposed solution will be provided through the application to An Bord Pleanála for a Railway Order to eliminate/de-man the remaining manned public road level crossings on the Cork Line.

## 12. Recommendation

The options considered for the elimination/de-manning of the level crossings included closure (extinguishment of the public right of way across the level crossing), provision of alternative access through the construction of an access road and/or overbridge and the upgrade to a CCTV level crossing. These options were then appraised using findings from a multi-criteria analysis and a preferred concept solution was identified for each of the level crossing, subject to further design development.

Details of each of the level crossings and the recommendations of the feasibility study are summarised in the following Table 3 below.

Level Crossing	Proposed Solution
XC187 - Fantstown	Closure
XC201 - Thomastown	New Overbridge
XC209 - Ballyhay	Upgrade to CCTV Level Crossing
XC211 - Newtown	New Alternative Access Road (with Overbridge for XC212)
XC212 - Ballycoskery	New Overbridge (with Alternative Access Road for XC211 )
XC215 - Shinanagh	New Overbridge
XC219 - Buttevant	New Overbridge

**Table 3 – Recommended Solutions**

CIÉ Solicitors have advised that the necessary planning permission, land acquisition and extinguishments of rights of way for the proposed solutions would be best achieved through the application to An Bord Pleanála for a Railway Order.

It is now recommended that the project is progressed as follows:

1. Multi-disciplinary design consultants are engaged to develop the preferred concept stage scheme designs for each of the 7 level crossings to preliminary design stage and to update the overall project cost estimate accordingly;
2. An application for a Railway Order for the project is prepared and submitted to An Bord Pleanála;
3. Subject to the granting of a Railway Order for the project, the detailed design should be completed and tenders for the construction stage prepared.

