



Clare County Council

# KILLALOE BYPASS, SHANNON BRIDGE CROSSING AND R494 IMPROVEMENT ENVIRONMENTAL IMPACT STATEMENT VOLUME 1 - NON TECHNICAL SUMMARY



North Tipperary  
County Council



February 2012



# **KILLALOE BYPASS SHANNON BRIDGE CROSSING AND R494 IMPROVEMENT**

## **VOLUME 1**

### **NON-TECHNICAL SUMMARY OF THE ENVIRONMENTAL IMPACT STATEMENT**

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# Part I

## Background Information and General Description

### 1.0 INTRODUCTION

This Environmental Impact Statement for the proposed Killaloe Bypass, Shannon Bridge Crossing and R494 Improvement has been prepared by Roughan & O'Donovan, Consulting Engineers on the instruction of Clare County Council and North Tipperary County Council.

The purpose of the proposed Killaloe Bypass, Shannon Bridge Crossing and R494 Improvement is to provide a high quality road for the transport of people and goods, in safety and comfort, in accordance with national, regional and local objectives. It is required to overcome the inadequacies of the existing road network in facilitating improved traffic circulation and reducing congestion and delays in Killaloe and Ballina along with the provision of improved pedestrian and cyclist facilities to improve safety in the towns.

### 2.0 BACKGROUND TO THE PROPOSED ROAD DEVELOPMENT

#### 2.1 Existing Road Network

The existing road network through Ballina and Killaloe is dominated by the R494 from the R445 junction (formally N7) at Birdhill on the old main Limerick to Dublin Road to the Killaloe Bridge and the R463 in Killaloe and continuing north to Scarriff and the west.

The existing R463 Regional Road comprises a single carriageway rural road of varying standard passing through rural countryside in County Clare and the town of Killaloe. In addition to the existing R463, the mainline intercepts two existing local roads, Hill Road (L3078) and Creeveroe Road (L3076). Both of these local roads are narrow single carriageways.

The Killaloe Bridge consists of a thirteen span masonry arch bridge joining the towns of Killaloe and Ballina and linking the R494 in Ballina with the R463 in Killaloe (**Plate 2.1**). The bridge has an approximately 4.95 metre wide carriageway with a one way system controlled by traffic lights at either side of the bridge. Pedestrians share the bridge with vehicular traffic with a number of pedestrian refuges available along the length of the bridge.

The existing R494 Regional Road joins the R445 Birdhill to Nenagh, via Ballina. It generally comprises a single carriageway rural road of varying standard. The carriageway width varies, but generally is approximately 6.0m wide and without hard shoulders.

The relevant section of the existing R494, extends for a distance of just over 3.5km. At its northern end, it intercepts the existing R496 at Roolagh Junction (**Plate 2.3**); while at its southern end it intersects the existing R445 (old N7), just north of Birdhill.

The existing R496 Regional Road comprises a single carriageway rural road of varying standard. This road serves as an alternative (easterly) route from Ballina to the R445 (north of Birdhill).



**Plate 2.1 Existing Killaloe Bridge**



**Plate 2.2 R494 junction in Ballina approaching Killaloe Bridge**



**Plate 2.3 Roolagh Junction, Ballina (R494 and R463)**

## **2.2 The Need for the Scheme**

The Killaloe Bypass, Shannon Bridge Crossing and R494 Improvement is now proposed by Clare County Council and North Tipperary County Council so as to provide the appropriate road infrastructure for Killaloe / Ballina towns whose historical character and community infrastructure is threatened by heavy traffic. The scheme proposes to cater for the planned local, regional and national development in this area.

## **2.3 Function of the Proposed Scheme**

The primary objectives of the Killaloe Bypass, Shannon Bridge Crossing and R494 Improvement scheme are:

- (a) Give effect to and facilitate local, regional and national development policy/objectives;
- (b) To provide a second river crossing between the towns of Killaloe and Ballina and to reduce congestion and delays on the existing Killaloe bridge;
- (c) To improve traffic safety by removing through traffic from the existing route over the Killaloe Bridge;
- (d) To improve the environment of Ballina / Killaloe by removing a significant portion of north/south through traffic;
- (e) To upgrade the R494 to allow for better use by pedestrians and cyclists, and to improve safety aspects of the road; and
- (f) To reduce travel times along the route.

### 3.0 DESCRIPTION OF THE SCHEME

The proposed Killaloe Bypass, Shannon Bridge Crossing and R494 Improvement Scheme will provide a western bypass of Killaloe, a new bridge crossing of the River Shannon and an upgrade of the existing R494 regional road from Ballina to the R445 at Birdhill. The entire scheme is approximately 6.2km and will cross the River Shannon approximately 1km to the south of the existing Killaloe Bridge.

The proposed scheme has been broken down into three sections as follows:

1. Killaloe Bypass: This part of the Scheme aims to create a western bypass around the town of Killaloe which will connect the R463 to the north of town with the proposed Shannon Bridge Crossing section and R463 to the south of the town.
2. Shannon Bridge Crossing: This section of the Scheme will cross the River Shannon approximately 1km south of the existing Killaloe Bridge and will connect the proposed Killaloe Bypass with the R494.
3. R494 Upgrade: This section will involve widening, regrading and local realignment of the R494 from its junction with the R496 and proposed Shannon Bridge Crossing south of Ballina, as far as the junction with the R445 north of Birdhill.

The overall route of the proposed scheme is illustrated in **Figure 1 to Figure 5** with the proposed Shannon Bridge outlined in **Figure 6**.

### 4.0 OUTLINE OF ALTERNATIVES CONSIDERED

The proposal for the Killaloe Bypass, Shannon Bridge Crossing and R494 has progressed through a number of stages including the Constraints Studies, followed by the Route Selection Studies, which has been followed by preliminary design of the Preferred Route Option. The assessment of several alternative Routes considered the following factors:

- Engineering suitability
- Traffic Safety
- Traffic Impact
- Archaeology and Cultural Heritage
- Ecology
- Landscape and Visual impact
- Agricultural Land-Use
- Geology, Hydrology and Hydrogeology
- Economics

Following detailed investigations for a Shannon River Crossing the current proposed location was considered the favourable option. The Preferred Route was further developed during the preliminary design stage to provide the best route possible in environmental, engineering and economic terms. Determination of the location of the Shannon Bridge allowed for examination of route options for the Killaloe Bypass and the development of a preliminary design of the best route option.

## 5.0 TRAFFIC ASSESSMENT

The proposed Scheme will significantly improve traffic safety and congestion in Killaloe and Ballina. This will greatly enhance the residential amenity within the towns. Traffic modelling was completed taking in to account base year traffic and future predictions based on zoning and traffic demand. This allowed for the creation of a predicted future traffic demand for the towns. The future models demonstrate significant savings in journey times through the Killaloe-Ballina area on journeys that can avail of the bypass & bridge crossing.

Accident data shows that a significant portion of accidents in the vicinity of Ballina and Killaloe occurred on the main approaches to the towns along the R463, R494 and R496 between the period of 1996 and 2002. Most of these accidents occurred along tight bends and blind corners, where there was evidence that speeding was a main factor.

The proposed Scheme includes the provision of roundabouts at the intersections with the existing regional roads at the R463 on the north and south side of Killaloe and at the intersection of the R494 and R496 on the south side of Ballina. These roundabouts will provide a traffic calming effect on the approaches to the towns.

Furthermore the reduction in through traffic at Killaloe and Ballina may result in a decrease in accidents in these urban areas.

## Part II Significant Environmental Effects and Proposed Mitigation Measures

### 6.0 HUMAN BEINGS

As with many other towns and villages in Ireland, Ballina and Killaloe has experienced a high growth in traffic with limited associated upgrading of the public road infrastructure (**Plate 6.1**). The proximity to Limerick means they are within convenient commuting distance to the city. Ballina and Killaloe have grown as satellite towns due to their close links with Limerick. A large amount of land in Ballina is planned for future residential development with a lesser amount in Killaloe; Ballina has seen a significant increase in population in the last two census counts. Congestion is further exacerbated by regional traffic that use the bridge as a more direct access between areas of west Clare and the northeast and also as a bypass of Limerick. The success of these towns and the surrounding hinterlands of west Clare is reliant on road infrastructure for intra and inter county movement and access.

Minor delays due to traffic management and diversions will arise for the local community during the construction phase of the proposed scheme, but these will be minimised through Traffic Management Plans. There are likely to be noise and dust related impacts associated with the construction works; however these will be kept to a minimum.

Once operational, the community will experience reduced travel times and safer driving conditions along the length of the proposed Scheme. This will arise from the

journeys availing of the bypass and bridge crossing compared to journeys through the towns and over the existing bridge. Removal of Heavy Goods Vehicle (HGV) traffic from the route over the existing bridge will greatly improve the journey times and safety issues currently managed through the one-way separated traffic signal system. Travel through Killaloe / Ballina for local trips will also improve by reduced traffic demand at the traffic signals on the bridge. These are considered as significant positive impacts.



**Plate 6.1 Traffic on the Approaches to Killaloe Bridge junction from Ballina South**

## **7.0 THE NATURAL ENVIRONMENT**

### **7.1 Terrestrial Ecology (Flora, Fauna and Habitat)**

The proposed road will cross the Lower River Shannon, which is part of the designated area that is the Lower River Shannon Special Area of Conservation (**Plate 7.1, Figure 7**). The remaining works include the provision of a bypass of Killaloe through predominantly agricultural lands and the upgrade of the existing R494 where disturbance to wildlife is limited.

With mitigation measures in place, the impact of the proposed scheme on the ecological environment along the proposed route will be moderate at specific locations, namely the River Shannon and associated habitats, Kilmastulla River and at Ballyvally Estate woodland. Over time as the landscaping at these locations matures, the impact will be lessened. There will be no significant impact on the overall integrity of the Lower River Shannon cSAC. Elsewhere along the proposed route the impacts will be minor.





**Plate 7.1 Proposed location of bridge crossing over the Lower River Shannon cSAC**

## **7.2 Noise and Vibration**

The noise environment in the vicinity of the proposed scheme has been characterised by a set of traffic noise surveys. The existing noise levels are typical of a semi-rural area in the vicinity of a major road.

Noise levels with the scheme and a suitable low noise surface in place have been predicted to be within acceptable levels therefore no further remedial measures are required.

Indicative noise levels during the construction phase of the scheme have been predicted. It has been shown that it is possible to comply with construction noise limits. A Construction Management Plan will adhere to recommended noise levels and working hour restrictions.

## **7.3 Air Quality**

The proposed road scheme will redirect traffic away from the towns of Killaloe and Ballina, to areas where fewer people are exposed to traffic emissions, which will benefit the majority of the local population without exposing people living near the new route to significant levels of emissions. By taking traffic away and reducing congestions the scheme will lead to a reduction in air pollution by enabling more efficient engine performance.

The construction phase impact for air quality will be limited through application of a dust minimisation plan.

## **7.4 Climate**

The impact of the Killaloe Bypass, Shannon Bridge Crossing and R494 Improvement on climate will be negligible in the national context. No significant micro-climatic effects are expected as a result of the scheme.

## **7.5 Soils and Geology**

No County Geological Sites have been identified within the proposed scheme land take area. The development will have no environmental impact on the soils and geology of the area.

The construction requirements will as far as practical maintain an earthworks balance throughout the scheme thus reducing the area of landfill required. The scheme will have an overall earthworks surplus but requirements for disposal off site will be mitigated by effective programming of construction activities. Mitigation measures are also proposed to minimise erosion of soils.

## **8.0 LANDSCAPE AND VISUAL IMPACT**

The scheme crosses through an area whose landscape has a significant visual amenity resulting from natural and cultural heritage. The most outstanding features include the Slieve Bernagh and Arra Mountains, the River Shannon and in the distance Lough Derg.

The scheme begins at a proposed roundabout on the R463 north of Killaloe town. This stretch of regional road (Ogonelloe to O'Briensbridge) contains scenic views of high value. However there are no outwards views located at the starting point of the scheme as it is flanked on both sides of the road by mature hedgerows and semi-mature woodland. These existing trees hide the Killaloe Bypass from a large number of surrounding visual receptors. In the short term the scheme will cause the removal of woodland but these will be replanted and the impact in the long term will be neutralised.

The scheme significantly cuts into the foot of the Slieve Bernagh Mountains and dissects the mature wooded boundary of Ballyvally Demesne. This will generate a negative landscape impact. In the short term, sensitive receptors on the Ballina side of the valley will experience a moderate to slight visual impact as the scheme cuts through the southern mature boundaries of Ballyvally and through a large adjacent field. In the long term however; this impact will be mitigated against since the steep embankments and boundary line of the bypass will be planted with woodland mixes to integrate it into the landscape.

As the scheme crosses existing local roads visual negative impacts are created where the local road is crossed to connect with the proposed road. The mitigation planting proposed for these sections will unite with the surrounding existing vegetation and screen adjacent dwellings to reduce their affect. In most cases this will result in a slight permanent neutral visual impact although in a minority of situations this will be a moderate permanent negative visual impact.

The Shannon bridge crossing will create a landscape impact and a significant visual impact. However there are a limited number of views of the proposed bridge. The bridge will have a positive impact on Killaloe and Ballina towns as it will reduce the traffic congestion experienced within the towns. Another long term improvement may

include the provision of panoramic views for motorists to heighten their travel experience and the creation of further opportunities for pedestrian and cyclists along the road corridor to appreciate the high scenic quality of the surrounding landscape.

The upgrading of the R494 for the most part follows the existing road. However to improve its safety it must be widened and realigned in places causing the removal of a large area of existing roadside vegetation, which previously screened dwellings from roadusers. In the short term the strong sense of enclosure felt along the R494 from the touching tree canopies will be lost. In the long term however; the mitigation measures put in place will reduce these negative affects on the visual amenity of the locality once planting has established resulting in a permanent moderate neutral impact. In some instances positive views of adjacent hills and pasture will be opened up which will have a positive visual impact.

## 9.0 MATERIAL ASSETS

The Killaloe Bypass section of the scheme impacts predominantly on agricultural land and will have a major impact on one farm in particular. Twenty two Farms will be impacted in total although to varying degrees many of which are minor to not significant.

There will be two currently used dwellings acquired as part of the scheme. House curtilage will be acquired from a number of other properties.

## 10.0 ARCHAEOLOGY, ARCHITECTURAL AND CULTURAL HERITAGE

On the Clare side of the river the proposed road is predominantly in green fields. The scheme will be within 20m of the Gate Lodge of Ballyvally and will breach the estate boundary. A possible enclosure (Recorded Monument CL045-057 – H7) (**Plate 10.1**) is adjacent to the route in Knockyclovaun townland. Other than these, there are no known archaeological monuments or architectural structures within 50m of the preferred route. The route will be more than 100m from Clarisford House, the former bishop's palace, but will sever the direct road link between the palace and Killaloe Cathedral, breaching the western demesne boundary. The route will also cross the Limerick-Killaloe canal and involve the removal of the remains of some adjacent buildings, possibly including a lime kiln. A number of structures marked on 19th and early 20th century maps may be impacted by the scheme. The site of a stone cross in the grounds of Clarisford Palace may lie within the footprint of the scheme, although the cross itself was probably only erected there in 1820 and removed in the 1930s.

The scheme will have a positive impact on the historic town of Killaloe and, in particular, the existing bridge, both of which currently suffer the effects of heavy traffic and would benefit from the routing of vehicles away from the town.

The River Shannon should be considered to be of archaeological potential and three potential sites that may be impacted were identified in an earlier underwater survey, a collapsed dry-stone wall a dry-stone culvert and a magnetic anomaly seen by a geophysical survey of the river bed. The crossing is close to the location of Friar's Island, an early ecclesiastical centre, submerged by the Shannon Hydro Electric Scheme in 1929.

On the Tipperary side of the River Shannon the scheme mostly involves the upgrading of an existing road (R494). The major impact will be on the strip of land immediately adjacent to the road where there are several structures shown on 19th and early 20th century maps that no longer have surface expression but may have sub-surface remains. There may also be remains of buildings facing onto the road that pre-date the earliest detailed maps. Road upgrading will also impact on a number of bridges and culverts and a stone farm building will be removed. As with Killaloe, the historic town on Ballina will benefit from reduced traffic volumes, creating a positive impact.



**Plate 10.1 Location of CL045-057 (possible enclosure)**

## **11.0 MITIGATION MEASURES - SUMMARY**

The principal mitigation measures proposed in the scheme are as follows:

- Pre-construction surveys will be required to confirm the locations for mammal underpasses, relocation of badger setts, wildlife fencing, bat protection etc along with any new mitigation requirements due to more recent activity of mammals.
- Extensive landscape planting of the route will be undertaken to compensate for trees and hedgerows that will be removed.
- Pre construction surveys and test excavations will be carried out as part of archaeological investigations.
- Pollution control measures will be provided to protect the River Shannon and tributaries both during the construction and operational phases as required in NRA Guidance documents.
- Appropriate traffic management measures will be taken during the construction period to ensure that any traffic disruption is kept to a minimum.

## 12.0 FURTHER INFORMATION

The full Environmental Impact Statement and the Natura impact Statement will be on display and available for inspection for not less than six weeks from the date of publication at the following locations as detailed in the published newspaper notices:

- Clare County Council, New Road, Ennis, Co. Clare;
- North Tipperary County Council, Nenagh, Co. Tipperary;
- South East Clare Area Office, Westbury Centre, Knockballynameath, Co. Clare;
- Scarriff Area Office, Mountshannon Road, Scarriff, Co. Clare;
- North Tipperary County Council, Civic Offices, Limerick Road, Nenagh, Co. Tipperary;
- Newport Area Office, Main Street, Newport, Co. Tipperary.

The Environmental Impact Statement (or parts thereof) and Natura Impact Statement are available for purchase from the above addresses. The Environmental Impact Statement (Volumes 1 - 3) may be purchased on payment of a fee of €50. Copies are also available on CD for purchase on payment of a fee €10. The Natura Impact Statement and Environmental Impact Statement Non Technical Summary may be purchased on payment of a fee of €10 each.

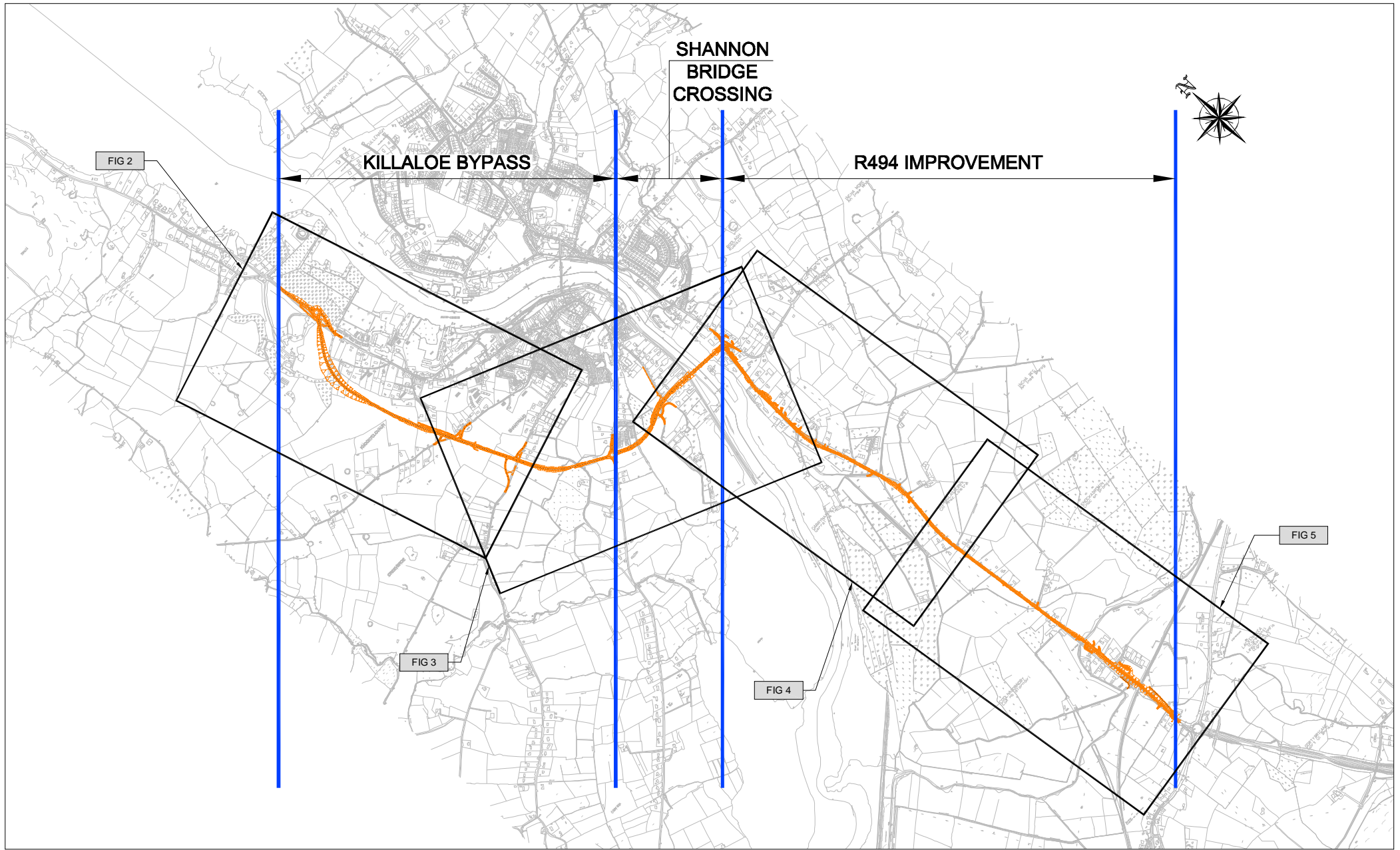
Alternatively the Non-Technical Summary of the EIS can be viewed on the Clare and North Tipperary County Council websites ([www.clarecoco.ie](http://www.clarecoco.ie) and [www.tipperarynorth.ie](http://www.tipperarynorth.ie)).

## 13.0 WHAT HAPPENS NEXT?

Written submissions relating to the likely environmental effects of the proposed road development may be made to An Bord Pleanála (the Board) by the public or by prescribed bodies prior to the date specified in published newspaper notices. An Oral Hearing may be held should the statutory requirements for one be met. Written submissions, together with any representations made at any oral hearing, will be considered by the Board in making its decision on whether or not to approve the scheme with or without modifications. The Board's decision will be published in one or more newspapers circulating in the area, including where appropriate, particulars of any modifications to the scheme.

All submissions in relation to this development should be sent to the Board at the following address:

An Bord Pleanála,  
64 Marborough Street,  
Dublin 1.



**KILLALOE BYPASS, SHANNON BRIDGE CROSSING & R494 IMPROVEMENT**

**ENVIRONMENTAL IMPACT STATEMENT**



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**LEGEND**

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FOOTPATH	
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LANDSCAPE AREAS	
LAND ACQUISITION LINE	



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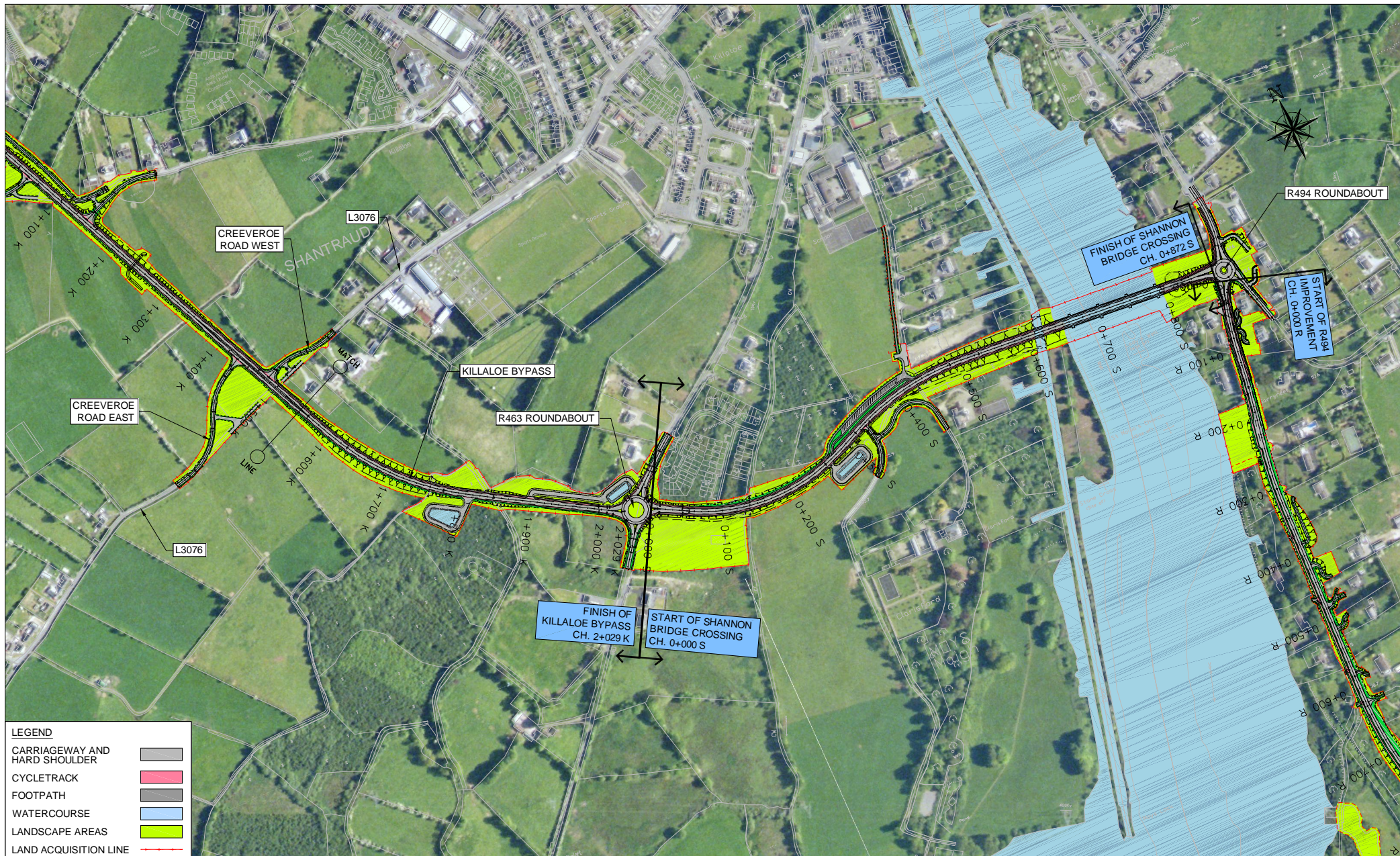
**KILLALOE BYPASS, SHANNON BRIDGE CROSSING & R494 IMPROVEMENT**

**ENVIRONMENTAL IMPACT STATEMENT**

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**LEGEND**

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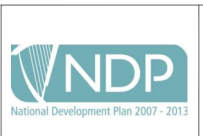
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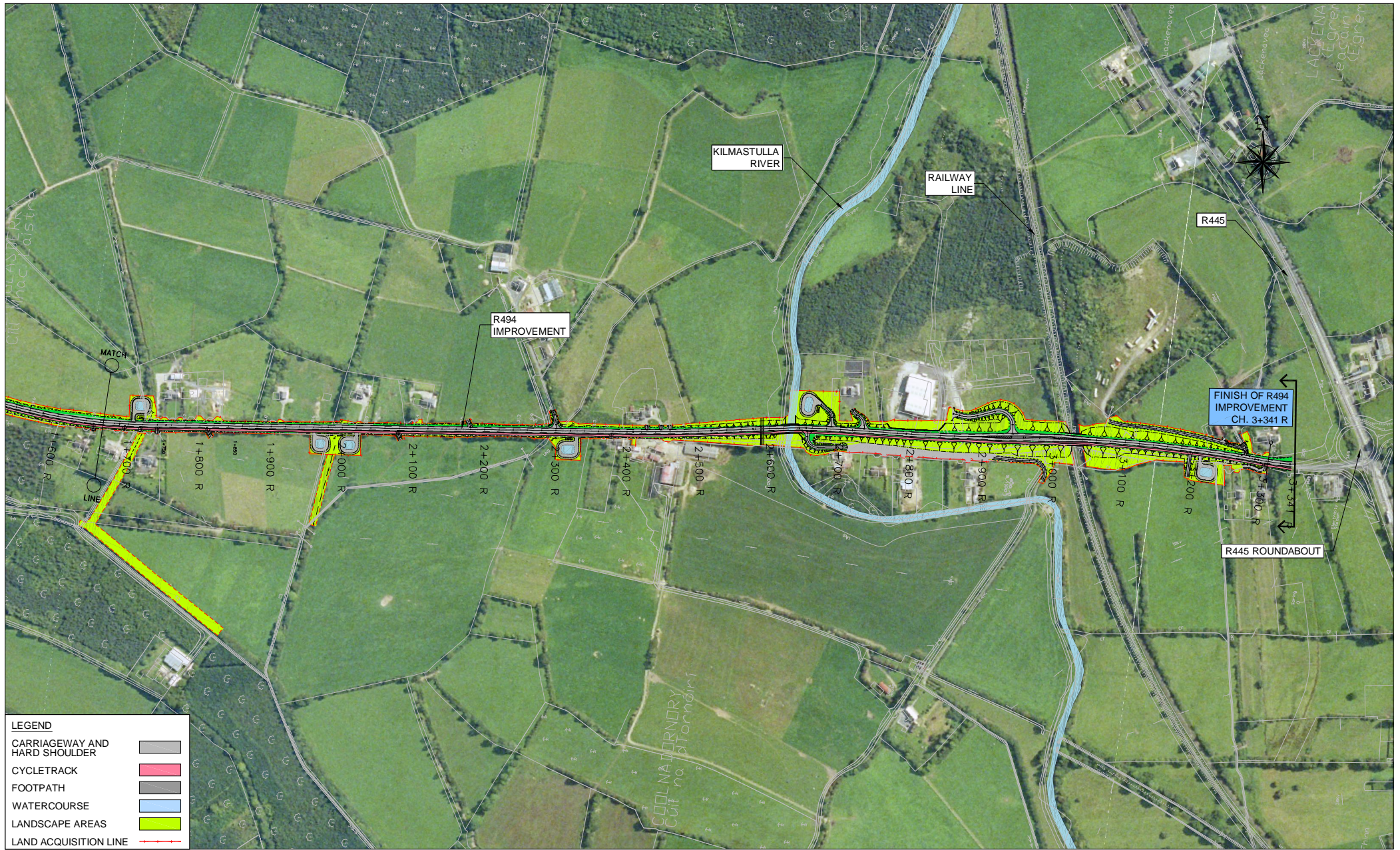
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**LEGEND**

CARRIAGEWAY AND HARD SHOULDER	
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**KILLALOE BYPASS, SHANNON BRIDGE CROSSING & R494 IMPROVEMENT**

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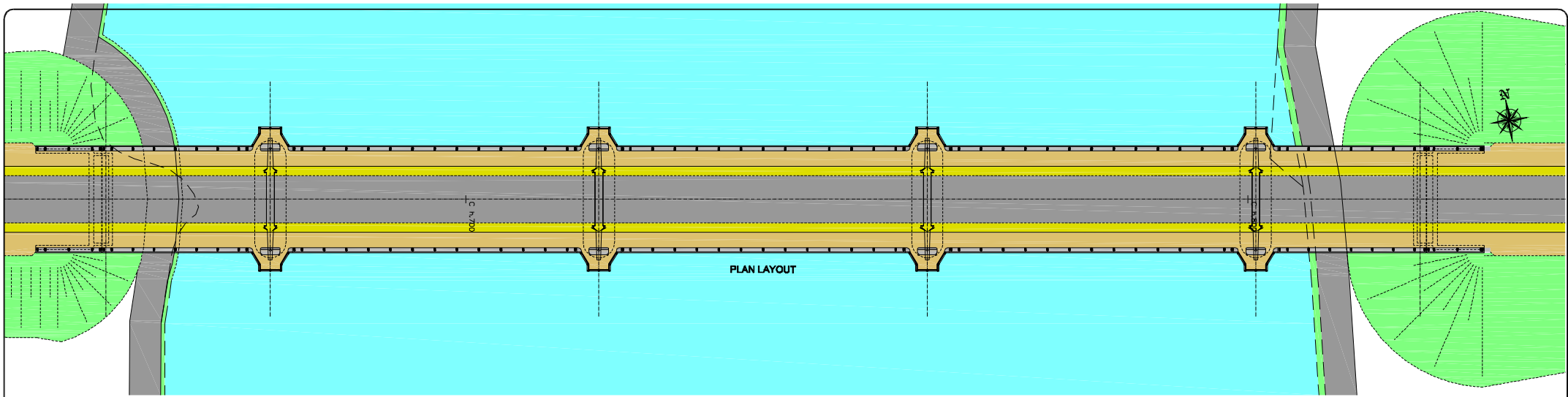
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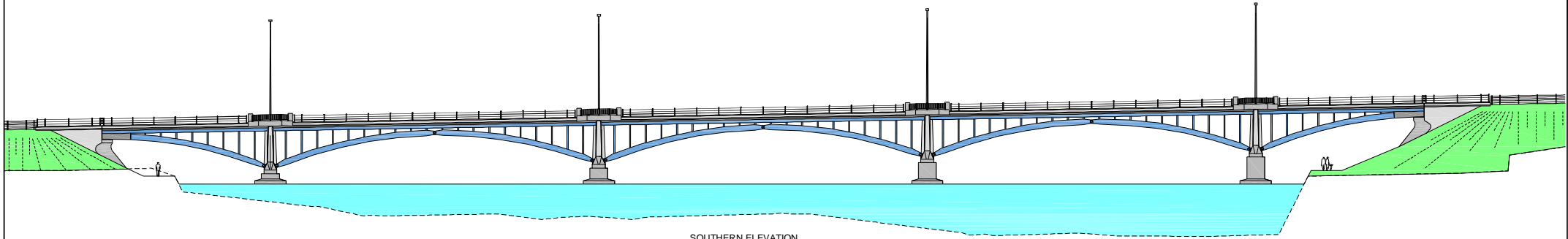
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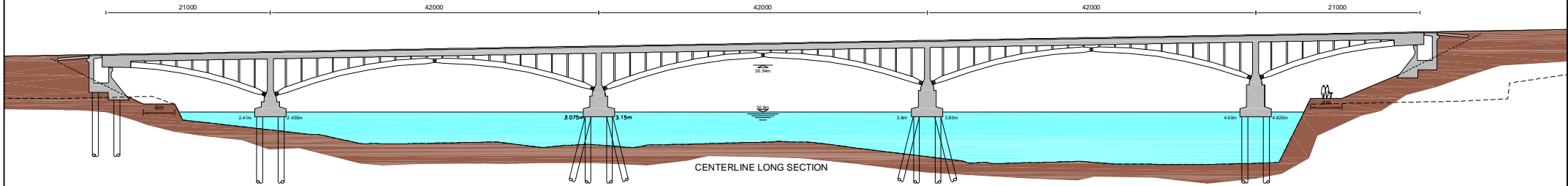
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PLAN LAYOUT



SOUTHERN ELEVATION



CENTERLINE LONG SECTION



**KILLALOE BYPASS, SHANNON BRIDGE CROSSING & R494 IMPROVEMENT**

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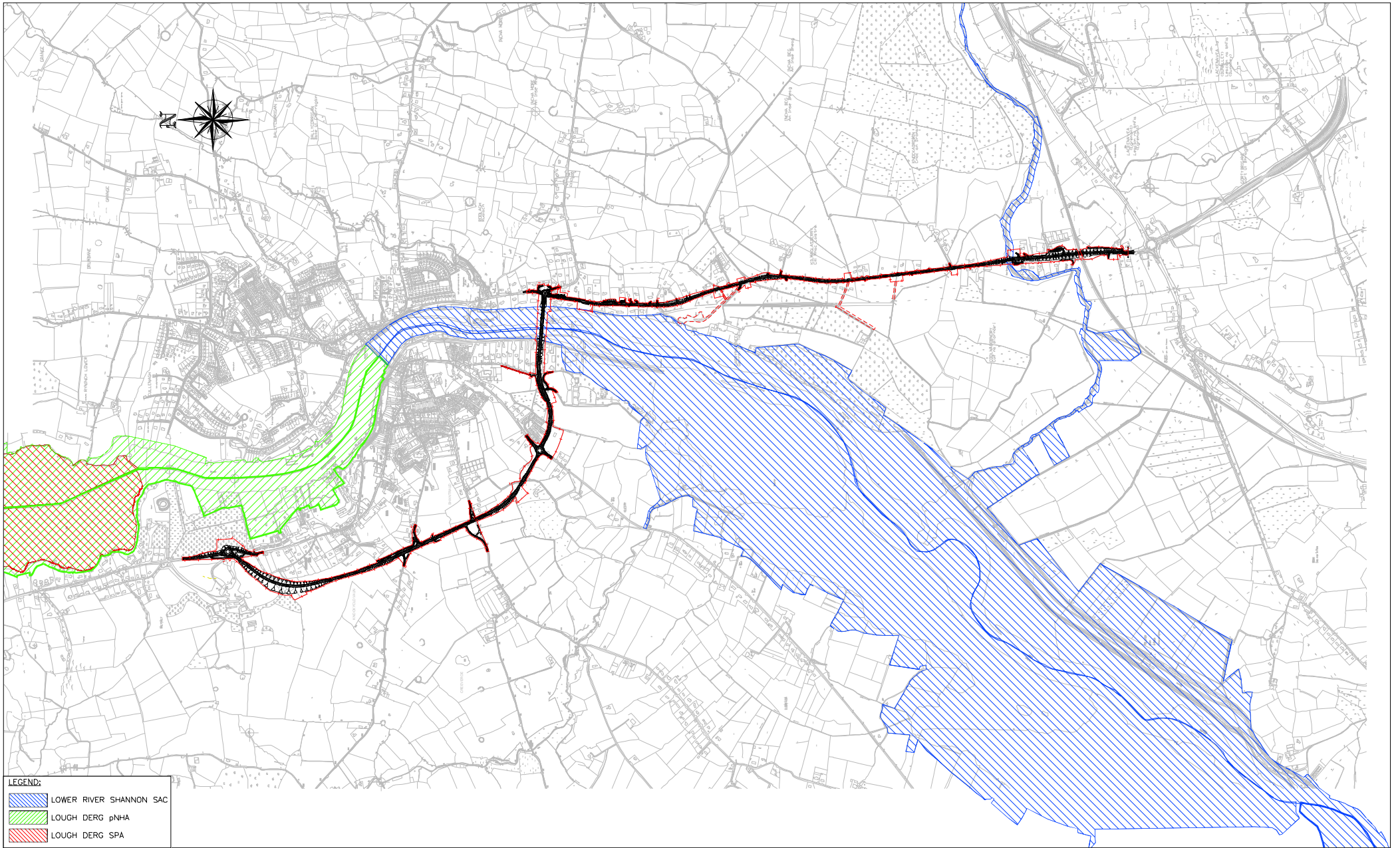


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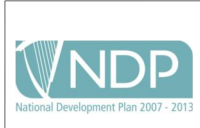
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**LEGEND:**

	LOWER RIVER SHANNON SAC
	LOUGH DERG pNHA
	LOUGH DERG SPA



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**KILLALOE BYPASS, SHANNON BRIDGE CROSSING  
 & R494 IMPROVEMENT**

**ENVIRONMENTAL IMPACT STATEMENT**

**Roughan & O'Donovan**  
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Drawing Title			
CONSERVATION DESIGNATIONS			
Drawn:	LA	Job No:	07.527
Scale:	1:5000	Date:	JAN '12
Approved:		Drawing No:	FIG 7
Checked:		Rev:	

Designed:	SG	Checked:	BC	Approved:	RTP	Status:	NTS
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