

Road Safety Inspections



Laois County Council
Áras an Chontae, Portlaoise, Co. Laois

TII Conference September 2019

Farhan Nasiem

Road Safety Inspections



Laois County Council
Áras an Chontae, Portlaoise, Co. Laois

Introduction

- Farhan Nasiem – Senior Executive Engineer
Road Design – Laois County Council

- Brief outline on how Laois County Council Manages & Implements RSIs

Road Safety Inspections



Laois County Council
Áras an Chontae, Portlaoise, Co. Laois

Introduction

- TII approached LCC in July 2018 to undertake RSI improvement works as per TII Publication Road Safety Inspection AM-STY-06044
- TII provided LCC with N77, N78 & N80 NS Route RSI Feasibility Reports & lists of RSI's summarised

County Laois, Priority by Route

N80 TII External Work

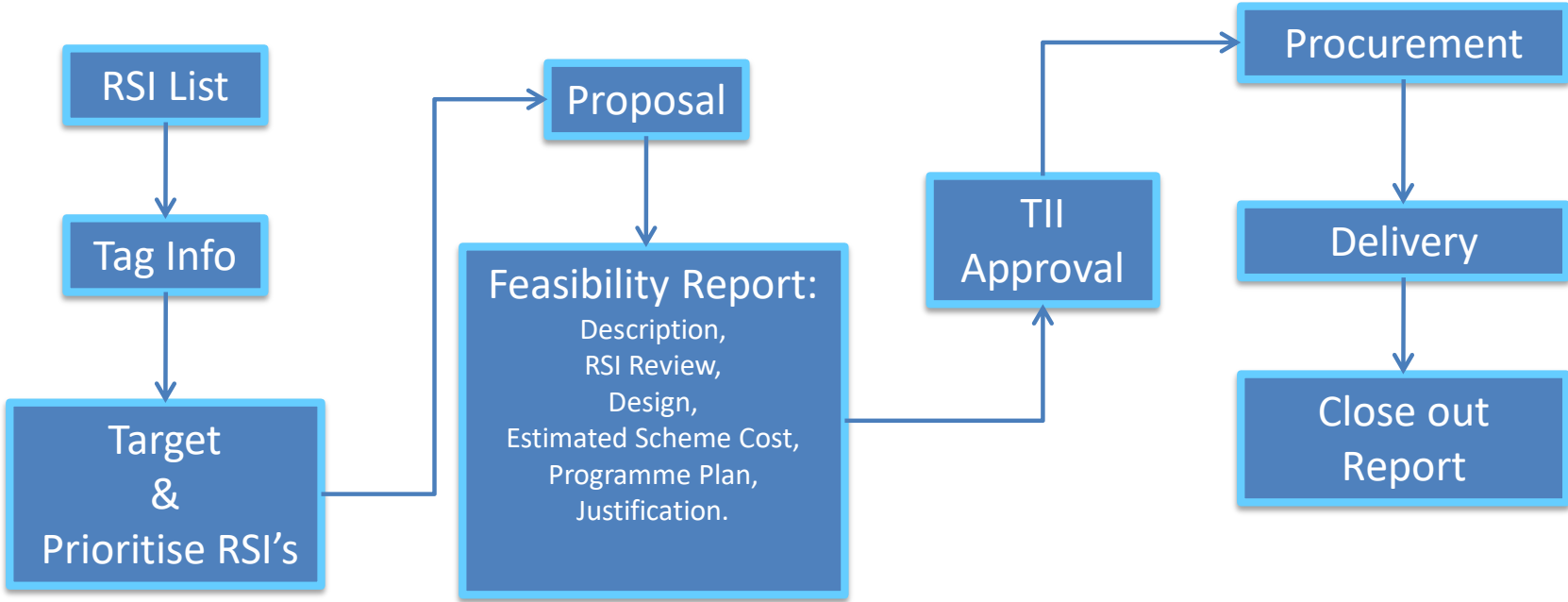
PRIORITY	Total	Sum of COST
3	3	9,813
5	11	37,910
6	40	923,658
7	6	865,692
8	42	106,681
Ex. Item	2	0
Grand Total	104	1,943,754

N80 TII External Work

PRIORITY	Total	Sum of COST
Lighting	7	214,964
Local Issue for Local Authority	27	147,633
Minor Alignment - Landtake Required	28	1,010,875
Minor Alignment - No Landtake Required	6	44,621
Surface / Pavement	9	54,920
Traffic Signal Review	2	225,825
Utility Provider	7	30,320
Vegetation	1	1,167
VRU Provision	17	213,430
Grand Total	104	1,943,754

Example of N80
104 summarised RSI's

Road Safety Inspections



Road Safety Inspections



Laois County Council
Áras an Chontae, Portlaoise, Co. Laois

What we did:

1. Select projects
2. In house design or ready to go sites with highest priority
3. Feasibility report, TII approval, procurement & delivery.
4. Some RSI issues are included in 2019 & 2020 Pavement Schemes

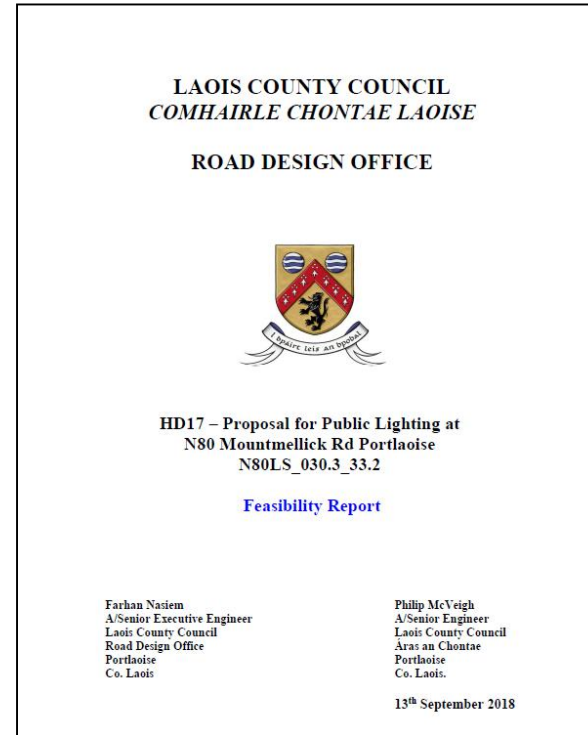
Road Safety Inspections



Laois County Council
Áras an Chontae, Portlaoise, Co. Laois

WHAT WE DID:

1. When we received projects from TII
2. How we delivered



Road Safety Inspections

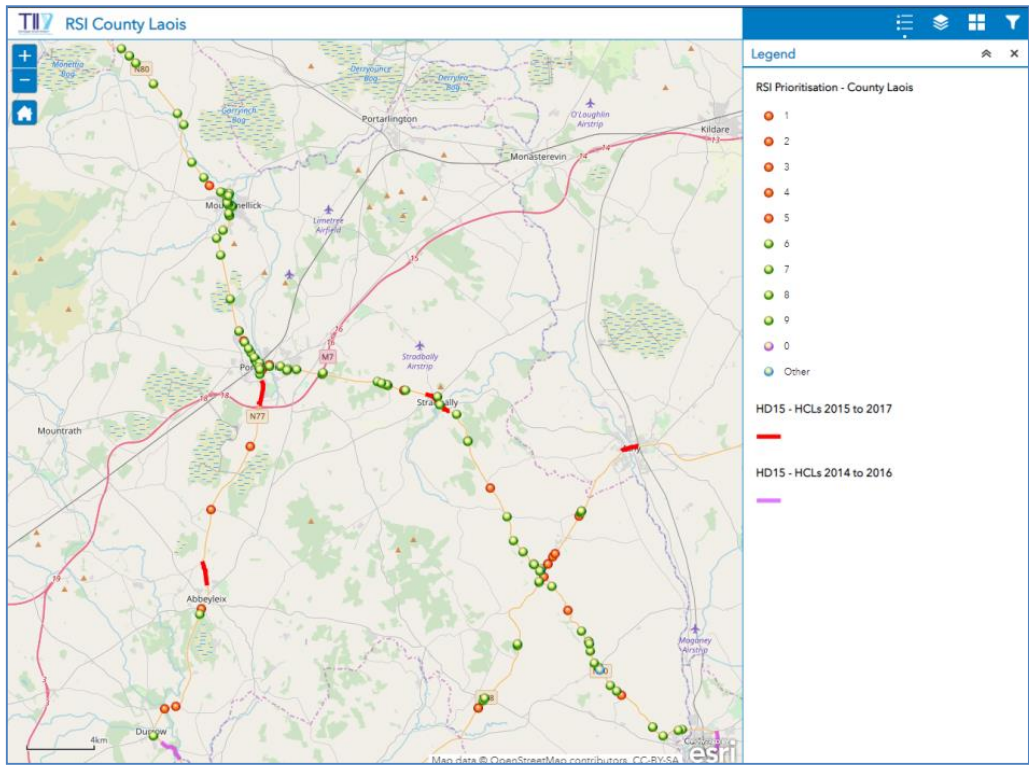


Laois County Council
Áras an Chontae, Portlaoise, Co. Laois

PROJECTS DELIVERED IN 2018/2019

1. N80 Abbeyleix Rd Roundabout Portlaoise - pedestrian crossing upgrade
2. N80 Market Square Portlaoise – pedestrian crossing upgrades
3. N77 Abbeyleix Rd Portlaoise – improved insufficient lighting
4. N80/Bay Rd junction Mountmellick - improved insufficient lighting & signage
5. N80 Tullamore Rd Mountmellick – ESB poles relocated due to close proximity to road edge of kerb line
6. N80 JFL Ave Roundabout Portlaoise – improved insufficient lighting and pedestrian crossing upgrades
7. N80 junction with R427 in Stradbally – installation of new pedestrian crossing and improved insufficient lighting
8. N80 Mountmellick Rd Portlaoise – ESB poles relocated due to close proximity to road edge of kerb line and improved insufficient lighting
9. N77 Durrrow - improved insufficient lighting
10. N78 Ballylynan – Removal of roadside hazard (tree)
11. N80 Simmons Mill – Removal of roadside hazard (milk tank)
12. N80 Coolhenry – Removal of roadside hazard (trees)

Road Safety Inspections



- Target Priority 1,2 and 3 issues
- Prioritise using RSI GIS and Excel Spreadsheet
- Submit proposals for the coming year in December
- Select deliverable schemes

Road Safety Inspections



Laois County Council
Áras an Chontae, Portlaoise, Co. Laois

- Bigger schemes may require consultants
- Can apply for consultants and run mini competition
- Can elevate Priority 6, 7 & 8 if justified, maybe there are more incidents after the RSI Survey was carried out.
- Try to include in pavement schemes

Road Safety Inspections



Laois County Council
Áras an Chontae, Portlaoise, Co. Laois

- Example of N80 Mountmellick Rd Portlaoise
- This were 4 lower priority RSIs on the road with priorities 7 & 8.
- RSI's were for insufficient lighting, roadside hazards of utility poles, gullies too low, and issues with footpaths levels at crossings.
- Solution involved civil works such as trenching for ducting, footpath repairs, lighting upgrade and repair of footpaths.
- They were grouped together in the one proposal and the priority was elevated due to an upcoming pavement scheme.



Examples - RSI 33138 N80 Co. Laois. Removal of roadside hazard (tank)



Laois County Council
Áras an Chontae, Portlaoise, Co. Laois

Before



Examples - RSI 33138 N80 Co. Laois. Removal of roadside hazard (tank)



Laois County Council
Áras an Chontae, Portlaoise, Co. Laois

After



Examples - RSI 9206 N77 Provide sufficient public lighting to light roads/paths



Laois County Council
Áras an Chontae, Portlaoise, Co. Laois

Before



Examples - RSI 9206 N77 Provide sufficient public lighting to light roads/paths



Laois County Council
Áras an Chontae, Portlaoise, Co. Laois

After



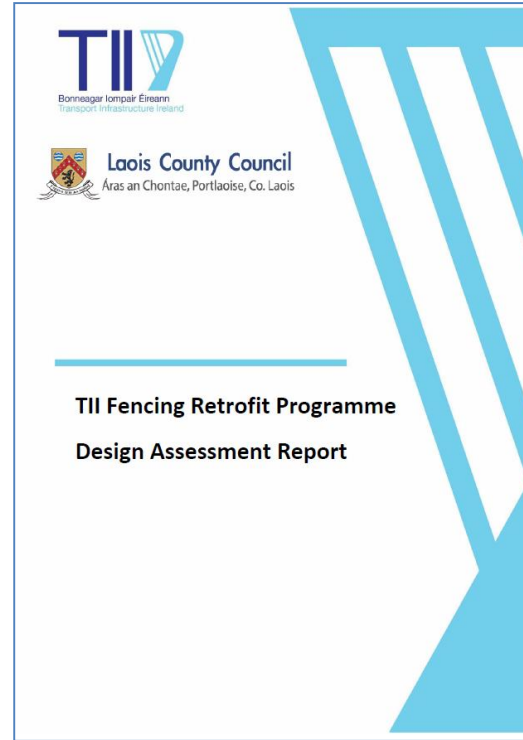
Fencing Retrofit Programme



Laois County Council
Áras an Chontae, Portlaoise, Co. Laois

Fencing Retrofit

- Process
- Review
- Spreadsheet Development



Fencing Retrofit Programme



Laois County Council
Áras an Chontae, Portlaoise, Co. Laois

Fencing Retrofit

- Sites logged on GeoApp in 2018
- Selection of sites
- Design Assessment Report
- TII Approval
- Procurement
- Delivery

TII Fencing Retrofit Programme - Assessment Report - Version V02

Note to Attention: Y Data entry required
G Automatic output

TII

Ref:	County:	Route:	Location:	Google Streetview Link:	Co-ordinate:
N80LS-FE03	Laois	N80	Corbally, Ballyadams	https://www.google.com/maps	52.945527, -7.085918

1 of 8. Existing Site Details

Existing Fence Type	Timber Post & rail
Length of Fencing (m):	340
Category: <small>(in accord. with Table 2-1)</small>	2
Posted Speed Limit:	100km/h
Hard Shoulder Width (m):	1.00
Set-Back to Fence from EOB (m):	2.00
Geometric Features: <small>(e.g. jncls/accesses/HAVAs/Ability etc.)</small>	<ul style="list-style-type: none">• Single Carriageway with 1m hard shoulder• Inside of long bend
Other Features/ Existing VRS Details (if any):	
Existing Tie-In Details:	
Upstream:	<ul style="list-style-type: none">• Hedging
Downstream:	<ul style="list-style-type: none">• Hedging

Existing Section of Fencing Under Consideration: (Mapping by Bing)

1

Fencing Retrofit Programme



Laos County Council
 Áras an Chontae, Portlaoise, Co. Laois

Fencing Retrofit

Projects Delivered in 2019

- N80 Park Upper, Stradbally
- N80 Corbally, Ballyadams x 2
- N80 Lought or Commons, Mountmellick
- N80 Derrycloney, Mountmellick

Item	Quantity	Description
End Post / Straining Post	1	200mm x 175mm (H x W) 30mm 200kg/24MPa
Cross Member	1	270mm x 100mm (H x W) 30mm 200kg/24MPa
Brace Pin	1	120mm x 100mm Galvanized Pin
Galvanized Steel Brace Pin	1	120mm x 100mm Galvanized Pin
Bel Log	1	100mm x 75mm 200kg/24MPa Round Wire Fencing Nails
Capel T-Clips	13	Galvanized Wire Joints

NOTES:

1. FENCES SHALL BE CONSTRUCTED AND ERECTED IN ACCORDANCE WITH CP-960/960-1 & CP-960/960-2.
2. AN END POST OF FENCING SHALL BE PROVIDED AT EVERY CORNER AND AT EVERY STRAINING POST. ADDITIONAL STRAINING POSTS SHALL BE PROVIDED AT THE POINTS OF CURVATURE OF THE FENCE LINE. THE STRAINING POSTS SHALL BE LOCATED ON THE BOUNDARY CENTER WHERE STRAINING AND INTERMEDIATE POSTS ARE TO BE PROVIDED. THEY SHALL BE POINTED AS PER SECTION 1. STANDARD POST HOLES FALLING IN FOOT TO BE EXPANDED TO THE DEPTH SHOWN ON THE DRAWING OR, WITH THE DEVELOPER'S AGREEMENT, TO A DEPTH OF 100mm. THE TOP OF THE POST SHALL BUTTIFY OUT AND TRIMMED TO CONFORM WITH THE RECOMMENDATION OF CP-960 AND SHALL BE SECURED TO THE FULL HEIGHT OF THE POST. THE HEIGHT OF THE POST SHALL BE AS SHOWN IN CP-960/960-1.
3. WHEN THE GROUND CROSS FALL ACROSS A SECTION OF FENCE EXCEEDS 1:4, THE PERMANENT FENCE & FENCING POST HEIGHTS SHALL BE INCREASED BY A NUMBER OF LOGS.
4. CURVES SHOULD BE AVOIDED WHERE POSSIBLE. WHERE A CURVE CANNOT BE AVOIDED THE WIRE SHOULD ALWAYS BE ON THE OUTSIDE OF THE CURVE WITH THE WIRE PRESSING AGAINST THE POST THROUGHOUT.
5. WHERE A CURVE CANNOT BE AVOIDED AND THE CHANGE IN DIRECTION MEASURED AT EACH POST WITHIN THE CURVE IS 15.0° TO 75.0° (1:1 TO 1:3), THE STRAINING POST SHALL BE LOCATED AT 270° FROM THE 15.0° TO 75.0° (1:1 TO 1:3) ANGLE. IF THE ANGLE IS GREATER THAN 75.0° (1:3), THE STRAINING POST SHALL BE LOCATED AT 90° FROM THE 15.0° TO 75.0° (1:1 TO 1:3) ANGLE. IF THE ANGLE IS GREATER THAN 90° (1:1), THE STRAINING POST SHALL BE LOCATED AT 135° FROM THE 15.0° TO 75.0° (1:1 TO 1:3) ANGLE. IF THE ANGLE IS GREATER THAN 135° (1:1), THE STRAINING POST SHALL BE LOCATED AT 180° FROM THE 15.0° TO 75.0° (1:1 TO 1:3) ANGLE. IF THE ANGLE IS GREATER THAN 180° (1:1), THE STRAINING POST SHALL BE LOCATED AT 225° FROM THE 15.0° TO 75.0° (1:1 TO 1:3) ANGLE. IF THE ANGLE IS GREATER THAN 225° (1:1), THE STRAINING POST SHALL BE LOCATED AT 270° FROM THE 15.0° TO 75.0° (1:1 TO 1:3) ANGLE. IF THE ANGLE IS GREATER THAN 270° (1:1), THE STRAINING POST SHALL BE LOCATED AT 315° FROM THE 15.0° TO 75.0° (1:1 TO 1:3) ANGLE. IF THE ANGLE IS GREATER THAN 315° (1:1), THE STRAINING POST SHALL BE LOCATED AT 360° FROM THE 15.0° TO 75.0° (1:1 TO 1:3) ANGLE.
6. WIRE MESH SHOULD BE TERMINATED AT AN END POST BY WEAVING THE HORIZONTAL LINE WIRE AROUND THE END POST FIVE TIMES AND SECURING THEM BACK TOGETHER. WIRE SHOULD NOT BE STAPLED TO THE END POST AS THEY MAY CAUSE DETACHMENT OF THE STRAINING POST.
7. WIRE MESH SHALL BE SECURED TO THE FIELD SIDE OF POSTS USING WIRE JOINTS WITH WIRE STRAINING POSTS. SECOND WIRE HORIZONTAL WIRE SHALL BE SECURED TO THE END POST AS THEY MAY CAUSE DETACHMENT OF THE STRAINING POST.
8. WIRE MESH SHALL BE SECURED TO THE FIELD SIDE OF POSTS USING WIRE JOINTS WITH WIRE STRAINING POSTS. SECOND WIRE HORIZONTAL WIRE SHALL BE SECURED TO THE END POST AS THEY MAY CAUSE DETACHMENT OF THE STRAINING POST.
9. WIRE MESH SHALL BE SECURED TO THE FIELD SIDE OF POSTS USING WIRE JOINTS WITH WIRE STRAINING POSTS. SECOND WIRE HORIZONTAL WIRE SHALL BE SECURED TO THE END POST AS THEY MAY CAUSE DETACHMENT OF THE STRAINING POST.
10. THE RECOMMENDED TENSION FOR THE WIRE MESH IS 40kg/m FOR LINE WIRE. WIRE MESH TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S GUIDELINES AND TENSION CHECKED ON SITE BY AUTHORIZED BODY.
11. WHERE THE FENCE IS REQUIRED TO BE STORM RESISTANT, THE DETAIL IN CP-960/960-2 SHALL BE USED.
12. THE FENCE SHALL BE INSTALLED TO THE INSIDE OF THE BOUNDARY LINE. THE DETAIL IN CP-960/960-2 SHALL BE USED FOR THE FENCE FROM ITS INSTALLATION. ADDITIONAL STRAINING POSTS WILL BE REQUIRED AT PEAKS AND TROUGH IN ORDER TO MAINTAIN THE TENSION TO PREVENT SAGGING. DETAIL IN CP-960/960-2 SHALL BE USED FOR THE FENCE. EACH ADDITIONAL STRAINING POSTS TO BE PROVIDED WITH 80% CONCRETE. IN ACCORDANCE WITH CP-208 TO AVOID THE RISK OF SECONDARY LOGS CAUSE THE LIFE OF THE FENCE. THE FENCE SHALL BE CUT OFF AT EACH STRAINING POST AS SHOWN IN CP-960/960-1.
13. THE FENCE SHALL BE INSTALLED TO THE INSIDE OF THE BOUNDARY LINE. THE DETAIL IN CP-960/960-2 SHALL BE USED FOR THE FENCE FROM ITS INSTALLATION. ADDITIONAL STRAINING POSTS WILL BE REQUIRED AT PEAKS AND TROUGH IN ORDER TO MAINTAIN THE TENSION TO PREVENT SAGGING. DETAIL IN CP-960/960-2 SHALL BE USED FOR THE FENCE. EACH ADDITIONAL STRAINING POSTS TO BE PROVIDED WITH 80% CONCRETE. IN ACCORDANCE WITH CP-208 TO AVOID THE RISK OF SECONDARY LOGS CAUSE THE LIFE OF THE FENCE. THE FENCE SHALL BE CUT OFF AT EACH STRAINING POST AS SHOWN IN CP-960/960-1.
14. THE FENCE SHALL BE INSTALLED TO THE INSIDE OF THE BOUNDARY LINE. THE DETAIL IN CP-960/960-2 SHALL BE USED FOR THE FENCE FROM ITS INSTALLATION. ADDITIONAL STRAINING POSTS WILL BE REQUIRED AT PEAKS AND TROUGH IN ORDER TO MAINTAIN THE TENSION TO PREVENT SAGGING. DETAIL IN CP-960/960-2 SHALL BE USED FOR THE FENCE. EACH ADDITIONAL STRAINING POSTS TO BE PROVIDED WITH 80% CONCRETE. IN ACCORDANCE WITH CP-208 TO AVOID THE RISK OF SECONDARY LOGS CAUSE THE LIFE OF THE FENCE. THE FENCE SHALL BE CUT OFF AT EACH STRAINING POST AS SHOWN IN CP-960/960-1.
15. THE FENCE SHALL BE INSTALLED TO THE INSIDE OF THE BOUNDARY LINE. THE DETAIL IN CP-960/960-2 SHALL BE USED FOR THE FENCE FROM ITS INSTALLATION. ADDITIONAL STRAINING POSTS WILL BE REQUIRED AT PEAKS AND TROUGH IN ORDER TO MAINTAIN THE TENSION TO PREVENT SAGGING. DETAIL IN CP-960/960-2 SHALL BE USED FOR THE FENCE. EACH ADDITIONAL STRAINING POSTS TO BE PROVIDED WITH 80% CONCRETE. IN ACCORDANCE WITH CP-208 TO AVOID THE RISK OF SECONDARY LOGS CAUSE THE LIFE OF THE FENCE. THE FENCE SHALL BE CUT OFF AT EACH STRAINING POST AS SHOWN IN CP-960/960-1.
16. THE FENCE SHALL BE INSTALLED TO THE INSIDE OF THE BOUNDARY LINE. THE DETAIL IN CP-960/960-2 SHALL BE USED FOR THE FENCE FROM ITS INSTALLATION. ADDITIONAL STRAINING POSTS WILL BE REQUIRED AT PEAKS AND TROUGH IN ORDER TO MAINTAIN THE TENSION TO PREVENT SAGGING. DETAIL IN CP-960/960-2 SHALL BE USED FOR THE FENCE. EACH ADDITIONAL STRAINING POSTS TO BE PROVIDED WITH 80% CONCRETE. IN ACCORDANCE WITH CP-208 TO AVOID THE RISK OF SECONDARY LOGS CAUSE THE LIFE OF THE FENCE. THE FENCE SHALL BE CUT OFF AT EACH STRAINING POST AS SHOWN IN CP-960/960-1.
17. THE FENCE SHALL BE INSTALLED TO THE INSIDE OF THE BOUNDARY LINE. THE DETAIL IN CP-960/960-2 SHALL BE USED FOR THE FENCE FROM ITS INSTALLATION. ADDITIONAL STRAINING POSTS WILL BE REQUIRED AT PEAKS AND TROUGH IN ORDER TO MAINTAIN THE TENSION TO PREVENT SAGGING. DETAIL IN CP-960/960-2 SHALL BE USED FOR THE FENCE. EACH ADDITIONAL STRAINING POSTS TO BE PROVIDED WITH 80% CONCRETE. IN ACCORDANCE WITH CP-208 TO AVOID THE RISK OF SECONDARY LOGS CAUSE THE LIFE OF THE FENCE. THE FENCE SHALL BE CUT OFF AT EACH STRAINING POST AS SHOWN IN CP-960/960-1.
18. THE FENCE SHALL BE INSTALLED TO THE INSIDE OF THE BOUNDARY LINE. THE DETAIL IN CP-960/960-2 SHALL BE USED FOR THE FENCE FROM ITS INSTALLATION. ADDITIONAL STRAINING POSTS WILL BE REQUIRED AT PEAKS AND TROUGH IN ORDER TO MAINTAIN THE TENSION TO PREVENT SAGGING. DETAIL IN CP-960/960-2 SHALL BE USED FOR THE FENCE. EACH ADDITIONAL STRAINING POSTS TO BE PROVIDED WITH 80% CONCRETE. IN ACCORDANCE WITH CP-208 TO AVOID THE RISK OF SECONDARY LOGS CAUSE THE LIFE OF THE FENCE. THE FENCE SHALL BE CUT OFF AT EACH STRAINING POST AS SHOWN IN CP-960/960-1.
19. THE FENCE SHALL BE INSTALLED TO THE INSIDE OF THE BOUNDARY LINE. THE DETAIL IN CP-960/960-2 SHALL BE USED FOR THE FENCE FROM ITS INSTALLATION. ADDITIONAL STRAINING POSTS WILL BE REQUIRED AT PEAKS AND TROUGH IN ORDER TO MAINTAIN THE TENSION TO PREVENT SAGGING. DETAIL IN CP-960/960-2 SHALL BE USED FOR THE FENCE. EACH ADDITIONAL STRAINING POSTS TO BE PROVIDED WITH 80% CONCRETE. IN ACCORDANCE WITH CP-208 TO AVOID THE RISK OF SECONDARY LOGS CAUSE THE LIFE OF THE FENCE. THE FENCE SHALL BE CUT OFF AT EACH STRAINING POST AS SHOWN IN CP-960/960-1.
20. FENCING SHALL BE TO BE BLACK IN COLOUR UNLESS OTHERWISE STATED.
21. WHERE LENGTH OF FENCING SHALL BE TO BE JOINED, THE CONNECTIONS TO BE MADE WITH A GALVANIZED ANTI-RUST JOINTING BUSH OR BY JOINED INTERVAL WIRE WITH IN CHAINING BUSHES. REFER TO CP-960/960-2.

Example - RSI 33109 N80 Co. Laois. Unforgiving roadside hazard. Removal of post and fence rail and replaced with a timber post and tension mesh fence in accordance with RCD 300/21.



Laois County Council
Áras an Chontae, Portlaoise, Co. Laois

Fencing Retrofit

Before



Example - RSI 33109 N80 Co. Laois. Unforgiving roadside hazard. Removal of knee high post and fence rail and replaced with a timber post



Laois County Council
Áras an Chontae, Portlaoise, Co. Laois

Fencing Retrofit

After



Example - RSI 33109 N80 Co. Laois. Unforgiving roadside hazard. Removal of post and fence rail and replaced with a timber post and tension mesh fence in accordance with RCD 300/21.



Laois County Council
Áras an Chontae, Portlaoise, Co. Laois

Fencing Retrofit

Before



Example - RSI 33109 N80 Co. Laois. Unforgiving roadside hazard. Removal of post and fence rail and replaced with a timber post and tension mesh fence in accordance with RCD 300/21.



Laois County Council
Áras an Chontae, Portlaoise, Co. Laois

Fencing Retrofit

After





Laois County Council
Áras an Chontae, Portlaoise, Co. Laois

END Thank You