

**Submission on the DTTaS
Greenway Development
Strategy Consultation
14 July 2017**



Note: Following the format provided in the consultation documents we have filled in a question template. Additional comment on the consultation paper is provided first followed by the template.

Key points

The concept of a Greenway Development Strategy is misconceived and should be set aside. What is needed is a national strategy and program for the delivery of Objective 3 of the National Cycle Policy Framework (NCPF): Signed rural cycle networks for tourism and recreation. The current consultation should be set aside and a new consultation opened for the purpose of securing the prompt and timely delivery of Objective 3. The starting point for the new strategy should be the NCPF and the 2007 Fáilte Ireland Strategy for the Development of Irish Cycle Tourism. It should also incorporate the learnings of the “bottom up” approach that has delivered extensive cycle routes in Germany and the Netherlands. The 2010 National Cycle Network (NCN) Scoping study by the NRA (Now TII) should be set aside. Questions arise regarding the level of understanding of the authors. The manner in which the TII NCN proposals were compiled also shows an extremely poor attitude to civil society. This poor attitude from TII has carried through to the conduct of proposed NCN schemes and has resulted in unneeded controversy and divisiveness. Along with setting aside the TII document TII itself should be removed as the lead agency in coordinating rural cycling schemes.

Main body: Observations on the Greenway Consultation Document.

In Galway, the conduct of the Dublin Galway greenway proposals has been highly divisive and controversial. The net result has been to damage the brand of cycling and cycling tourism within significant sections of rural communities. In this context any attempt to widen the discussion and find a different process is welcome. This said there is a fundamental and fatal problem with the consultation paper and proposed Greenway Development Strategy. The issue can be found in first three sentences of the Minister’s foreword. He states with regards to the Western Greenway in Mayo “*We have seen that providing a safe, segregated space for cycling and walking will bring people in their droves to the countryside, to cycle and walk as a family, to avail of stunning views, fresh air and a sense of peace*”. This is correct however what he does not state is that the people are arriving in droves primarily by car and when they are finished they must go home by car.

You cannot have a functioning roads network that consists only of motorways. Likewise you cannot have a functioning cycle network that consists only of greenways. The implication, and underlying assumption, of the proposed Greenway Development Strategy is that for many cycling will remain an activity that is accessed by car. Greenways or “Cycleways” cannot deliver full benefits for Ireland unless they are used as one component in a comprehensive network of routes linking destinations. Greenways are only one form of cycling provision. Other components in such a network will include roads shared with motor traffic, roads with some form of segregation such as roadside cycle tracks and so on. Accordingly the concept of a Greenway Development Strategy is fundamentally flawed and misconceived and as a result should be set aside. What is needed is a national strategy and program for the delivery of Objective 3 of the National Cycle Policy Framework (NCPF): Signed rural cycle networks for tourism and recreation.

Policy Context

The consultation paper makes reference to various policy sources including

- People, Place and Policy – Growing Tourism to 2025
- National Physical Activity Plan 2016
- Realising our Rural Potential
- National Planning Framework – Ireland 2040 Our Plan
- National Mitigation Plan

It states that the proposed Greenway Development Strategy can support the objectives of these reports. This is true. However, a strategy focussed on greenways or cycleways can only do so in a limited, disjointed and fragmentary way. When they involve taking private lands, greenways can become a highly expensive and uneconomical form of provision.

Why invest in greenways?

This section contains reference to various benefits including

- Economic benefits
- Social and environmental benefits
- Health and well-being benefits
- Rural regeneration

All these benefits are not isolated to greenways or cycleways. These are all benefits of investing in, and facilitating, cycling and walking. The same benefits are often achievable without dedicated greenways or cycleways. This includes job creation, the consultation paper contains claims that capital investment in greenways will create jobs. The correct and responsible management of existing infrastructure could have the same job creation effect with minimal capital expenditure. One passage gives particular cause for concern.

“Of course, these figures are based on those taking cycling holidays. It is likely that tourists visiting Ireland will encompass cycling within their holiday rather than being the sole purpose of the holiday.”

This provides further confirmation that proposed Greenway Strategy is informed by an attitude that cycling is an activity that is accessed by car. The presence of this comment would appear to confirm a lack of ambition within the DTTaS and is further evidence of an apparent aim to evade or avoid delivery of the National Cycle Policy Framework. The extensive range of potential benefits acknowledged in the consultation paper confirms that an approach limited to a “Greenway Development Strategy” is fundamentally flawed and misconceived and as a result should be set aside. The best way for the widest number of citizens to obtain these benefits is a national strategy and program for the delivery of Objective 3 of the National Cycle Policy Framework (NCPF).

Common issues arising in the development of Greenways

See template response

What approach should be taken to the future development of greenways?

This section states that the development of an interconnected network of greenways could provide the basis of a cycle tourism project. This is true but it would be a very limited product and it could be expensive to create. An approach focused on greenways, at the expense of less involved methods, would also deprive many communities of the opportunity to develop local cycling routes, a cycling culture, and comprehensive cycling tourism products. This section also makes reference to the 2010 NRA (Now TII) National Cycling Network Scoping Study. As we deal with in our template response below, questions arise regarding the level of understanding of the authors. The manner in which the TII NCN proposals were compiled also shows an extremely poor attitude to civil society. This poor attitude from TII has carried through to the conduct of proposed NCN schemes and has resulted in unneeded controversy and divisiveness. Along with setting aside the TII document TII itself should be removed as the lead agency in coordinating rural cycling schemes.

The consultation document states that *“The Study was, however, referenced in the funding calls launched by the Department in 2012 and 2014. However, the on-road projects awarded funded under these funding calls have not proven to be as successful as those that were off-road or predominantly off-road, i.e. greenways.”* This requires further examination. As we show below, whether by accident or for some other reason the authors of the NRA document contrived to avoid best practice and to avoid key recommendations of the previous 2007 Failte Ireland Cycling Tourism Strategy. The NRA NCN document gives the impression of having been drafted by regional roads engineers for the purpose of justifying engineering works within Regional “R” and National “N” roads. The greenway consultation paper provides a list of schemes approved for funding under the National Cycle Network heading and sections of it make for depressing reading. In 2012 five of the schemes appear to have involved marking cycle lanes or “cycle tracks” within the hard shoulders of existing roads.

Hard shoulders are already acknowledged as a type of cycling facility in Ireland and elsewhere. The arterial nature of the traffic and traffic speeds on most roads with hard shoulders generally makes them unsuitable locations for child cyclists or less confident adults. However, they have an established value for more confident adult cyclists. Hard shoulders attract occasional use as a slow lane by motorised traffic. Some cyclists are uncomfortable with this; however it has the side-effect of sweeping any debris to the side of the road. Hard shoulders stay “usable” as a cycle facility because they are naturally “swept” from time to time. Hard shoulders on Irish national routes have provided a huge rural cycling infrastructure. A 1975 An Foras Forbartha report on cycling included this finding “Hard shoulders on national primary routes reduce cyclist accident rates by as much as 50%”. Hard shoulders are a practical rather than ideal solution – even so the extra space improves safety and comfort, and roads with hard shoulder are often arguably safer, more comfortable and more attractive cycling environments than the main roads in the urban centres they connect. “Changing the colour of the paint” by marking cycle lanes in hard shoulders does nothing to address the nature of the traffic using the roads. It does nothing to increase the overall length of cycle network of that character. Worse it may create a false expectation of safety and attract novice cyclists to a route that is fundamentally unsuitable to their needs. It may also have the side effect of reducing the cleaning effect that was keeping them usable for cyclists. All these issues were established prior to 2012 when cycling interests had already raised serious reservations about marking cycle lanes in hard shoulders.

In summary, for informed cyclists looking at the situation, marking cycle lanes in hard shoulders is at best a profoundly misguided and at worst a straightforwardly cynical use of public money. It has the appearance of a scheme concocted for the purpose of consuming state cycling budgets for no net benefit.

If these schemes then failed to provide a more generally suitable cycling environment this is not an argument in favour of greenways, it is an argument for improved governance over the manner in which the DTTaS spends tax payer’s money.

Eurovelo

With regards to Eurovelo type routes the consultation paper makes reference to standards that it claims the European Cyclists Federation sets for different types of cyclists and different types of routes. No reference or source is given. We have reviewed the 2014 Eurovelo Certification Standard Manual and are unable to map the content of this document to the terminology used in the DTTaS paper. The consultation document continues with this passage: “The standards for experienced cyclists and even occasional cyclists can generally be achieved on roads identified on the routes with low traffic volumes. However, it is difficult to achieve the higher standards required for inexperienced cyclists and families on on-road routes.” It does not appear that this passage is derived directly from any Eurovelo guidelines. Instead it seems to be an interpretation inserted by the authors of DTTaS consultation document.

It remains a fact that other countries, Germany being one example, have created extensive family-friendly cycle routes that are shared with some level of motor traffic. The key point is that measures are taken to restrict unsuitable traffic from these routes and low speed limits are applied. Examples are routes restricted to local motor-traffic or residents cars only and routes restricted to agricultural or other vehicles accessing land. The current Minister

already has powers to deliver similar measures for local communities. Under the roads acts the Minister already has the power to designate particular roads for particular purposes. Alternatively under the same acts the Minister has the power to declare particular roads to be protected and hence restricted to specified classes of vehicle. Finally under the Road Traffic Acts the Minister has the power to close certain roads to certain types of vehicle or to make regulations “(d) prohibiting or restricting traffic or specified traffic from using a specified road or specified parts of the road (including footways or parts of the road reserved for pedal cycles);”

It does not appear that there is any inherent difficulty involved in applying similar treatments in Ireland. Given that this approach would be virtually cost free in terms of capital expenditure it seems difficult to explain the apparently overwhelming focus on greenways coming from the DTTaS.

Template Answers Follow Below

Why invest in Greenways

Questions for consideration

Do you agree that the State should invest in greenways?

Response: By “greenway” we assume the authors are referring to what are termed cycleways in Irish law (distinct separate public roads reserved for cyclists and pedestrians). The answer is yes the state should invest in cycleways as one component of a balanced program of provision. With regret this is a somewhat strange question. We are not aware of any serious contributor who objects to cycleways in themselves. What has caused controversy and opposition has been the manner in which cycleway proposals have been conducted and the refusal of state actors to accept any other form of cycle route provision on particular corridors.

What do you consider to be the most important benefits that greenways can deliver in Ireland?

Response: The benefits of investing in cycling do not require restating here. Cycleways cannot deliver full benefits for Ireland unless they are used as one component in a comprehensive network of routes linking destinations. Cycleways are only one form of cycling provision. You cannot have a functioning roads network that consists only of motorways. Likewise you cannot have a functioning cycle network that consists only of cycleways. Other components in such a network will include roads shared with motor traffic, roads with some form of segregation such as roadside cycle tracks and so on.

Are there benefits to be derived from greenways other than those set out above?

Response: The benefits of investing in cycling do not require restating here

What benefits should be given primary consideration when considering investment in future greenway projects?

Response: The proposed greenways strategy is misconceived and should be set aside. The idea of cycleways or greenways being a separate program isolated from the delivery of Objective 3 of the NCPF should be abandoned.

Should the State invest in greenways that do not offer the full range of benefits set out in this Chapter, e.g. greenways that do not offer real potential to develop tourist/visitor interest but provide a local recreational facility?

Response: Yes. The most glaring examples of this are the service roads constructed parallel to the new motorways. These service roads were constructed mainly to facilitate farmers whose properties were severed by the motorway. In most cases they do not have any through motorised traffic and only provide access for local landowners. They are often well displaced laterally from the motorway and

separated by fencing, embankments and vegetation. They have already been constructed at state expense and, if connected, they would provide ideal opportunities for walking and cycling for local communities. Cycling beside a motorway is unlikely to be the option of first choice for tourists but tourists should not be the first consideration in delivering Objective 3 of the NCPF. The first consideration should be “what opportunities are there do something for the local community?”.

However, TII have demonstrably failed to use this opportunity. The manner in which TII have conducted their motorway projects undermines their credibility as an agency that can claim to have an interest in cycling. In Galway, there are long sections of service road available beside the M6 but no effort was made to connect them as a resource for cycling or walking. This failure by TII reinforces the need to remove TII as the lead agency in delivering long distance cycling routes.

Common issues arising in the development of greenways

Questions for consideration

How should local authorities and/or other greenway project developers engage with local communities on greenway proposals?

Response: The way this question is phrased indicates an incorrect attitude. Successful recreational networks are built from the bottom up. If there is a feature in a local area that is adaptable as a cycleway or cycle route then it is likely that there have already been community groups working for years to develop it often against the hostility and opposition of state actors. If the proposer of a project is unable to show a long history of community involvement and is not able to show that consultation and community discussion has already taken place then that project should be rejected by the DTTaS.

Overall this question implies an incorrect attitude to project delivery and reinforces the view that the whole concept of a “greenway delivery strategy” is misconceived and should be set aside.

What level of consultation should take place and at what stage should this be initiated?

Response: Again the way this question is phrased indicates an incorrect attitude. As already stated, if there is a feature in a local area that is adaptable as a cycleway then it is likely that there have already been community groups working for years to develop it often against the hostility and opposition of state actors. Rather than conceiving projects in isolation and then dropping them out the sky, the state should start by supporting local communities with the tools they need to deliver local projects. Give communities the necessary support and the project ideas will follow.

Is consultation as part of any statutory requirements sufficient?

Response: No what usually happens is not “consultation” but a “consultation process”. If the DTTaS is serious about delivering projects then a good starting point would be internal training on what constitutes meaningful consultation. This could be followed by a defined code of practice.

Use of Public/State Land vs private land for development of Greenways

Questions for consideration

Should local authorities and/or other project developers seek to use State-owned lands, where possible, for the development of greenways?

Response: Again the focus on cycleways is too narrow. Clearly state lands are the option of first choice in the delivery of Objective 3 of the NCPF. In this regard the roads network is the most important example of state land to be considered. The roads network clearly provides the most ready opportunities. Other countries have made the decision that many roads have a primary function other than moving motor traffic at speed. Other countries have made the decision to manage minor rural roads and tracks in a way that permits only appropriate motorised traffic and preserves the road as an amenity for walking and cycling.

Ireland must be mature enough to do the same thing.

With regards to traffic-free cycleways. There are various lands in state ownership that provide corridors suitable to be adapted as traffic free cycleways. Examples are various disused railways, Bord na mona lands, Coillte lands, motorway service corridors, canals and so on. There should be a presumption that these corridors will automatically be used to provide cycle ways unless other considerations apply. So in the west the disused railway line running north from Athenry should be converted without further ado. We know of no credible objections to converting the closed railway. In the east, the concerns around the Barrow path are valid and should be taken on board.

Are there reasons why State-owned lands should not be used for the further development of greenways in the State?

Are there particular types of State-owned lands that would not be appropriate for the development of greenways? If so, why?

Response: These are essentially the same question. The answer is yes. There is no point pursuing the construction of cycleways simply because land is available. Some terrain may not be suitable or there may be other considerations such as apply such

as in the case of the River Barrow corridor. In essence, the question only arises because the whole concept of a “greenway delivery strategy” is misconceived. If the issue was being discussed in the context of a strategy for delivery of Objective 3 of the NCPF then the priorities would be clear.

How can the synergies between ‘blueways’ and ‘greenways’ be maximised to provide most benefit to the future development of outdoor recreational infrastructure in the State?

Response: This sounds like some kind of marketing speak. Cycleways cannot deliver full benefits for Ireland unless they are used as one component in a comprehensive network of routes linking destinations. Cycleways are only one form of cycling provision. You cannot have a functioning roads network that consists only of motorways. Likewise you cannot have a functioning cycle network that consists only of cycleways. Other components in such a network will include roads shared with motor traffic, roads with some form of segregation such as roadside cycle tracks and so on.

Land Access Arrangements

Questions for consideration

Is the permissive access model an appropriate basis for the future development of greenways in the State?

Response: Yes.

Permissive access arrangements can avoid potentially expensive land acquisition costs in the development of greenways but are there other benefits to using this model that would render it more appropriate in certain circumstances?

Response: Yes. We cannot imagine a successful cycling facility that is imposed by coercion on the people whose land it passes through. Just because somebody in a state agency has the power to use Compulsory Purchase Order (CPO) it does not follow that this is a good idea or that it will actually deliver a workable solution. If state actors choose to use coercion and raw power in pursuit of some theoretical NCN project then this is likely to backfire. The people who are most likely to receive any backlash are not the civil servants indulging their powers but the unsuspecting cycling visitors to a hostile location.

It is precisely this coercive CPO-led approach by the TII that has backfired in Galway and which underlines the need remove TII as the lead agency rural cycle routes.

What type of greenway projects would permissive access be suitable for?

Response: Projects involving privately owned land.

Are there projects that it would be unsuitable for?

Response: Yes any project where the full range of alternatives had not been considered and where comprehensive consultation, negotiation and arbitration had not already taken place.

Acquisition of land

Questions for consideration

Where a proposed greenway route involves access to privately owned land do you think that CPO is a valid mechanism for the acquisition of land on a route?

Response: Yes. Compulsory Purchase Order (CPO) might be needed to provide a final link in certain types of route. However we restate the point that dedicated cycleways are only one form of provision. Every effort should be made to explore all available options first. Where finally CPO is considered it should come after consultation, negotiation and arbitration. CPO should be with the agreement of the land owners. CPO by coercion places the users of a cycle facility in conflict with landowners.

At what level should consultation take place with landowners where CPO is being considered - at the individual landowner level or with representative bodies?

Response: This question assumes that CPO would be considered as the option of first choice and that the next decision is who to consult. This is a bizarre and destructive attitude in our view. It is this kind of thinking that illustrates why some projects have created trenchant opposition. If this is indicative of the attitudes informing the proposed greenway development strategy then this further evidence that it is misconceived and should be set aside.

What approach should be taken to the future development of greenways – a network approach or other?

Questions for consideration

Should the concept of the National Cycle Network as proposed in the 2010 NCN Scoping Study be developed or set aside?

Response: The 2010 NCN Scoping Study should be set aside. Instead the 2007 Failte Ireland document should be taken as a starting point. There are curious errors and omissions in the 2010 NCN document. In our view those who drafted the 2010 NCN proposals also displayed a poor attitude to stakeholders from civil society.

In terms of errors, in the 2010 NCN document the authors make confusing use of terminology. In Ireland, the terms “cycleway” and “road” are very clearly stated and defined under the Roads Act. The full definitions are provided in an appendix to this document but to put it simply in Irish law a “cycleway” is a stand-alone road dedicated to cyclists or cyclists and walkers and from which other traffic is excluded. In the 2010 NCN document, the term cycleway is used interchangeably to describe cycle facilities within other main roads and placing cyclists in close physical proximity to high speed traffic. The study authors then use the term “cycle trail” to indicate what are termed cycleways in Irish law. It appears that at best the authors (from the National Roads Authority) did not understand the legal frameworks governing Irish roads. Whatever the reason, the report uses terminology in a manner that might tend to confuse readers about what was being proposed.

In terms of omissions, the 2007 Failte Ireland Cycling Strategy is explicitly mentioned in the term of reference for 2010 NCN document. The Failte Ireland document included the use of minor low-traffic country roads and lanes as a fundamental part of their proposed cycle network. The 2010 NCN document makes no mention of this and does not include this option in their defined list of route types. In addition, the Failte Ireland document states explicitly that busy R and N roads are to be avoided “Generally due to high traffic levels and high speeds we wish to avoid cycling on N or R-roads”. In the 2010 NCN document three of the four route types specified show cyclists placed in close proximity to motor traffic on R or N type roads including an interurban dual-carriageway. Rather than being a way forward, the omissions from the 2010 NCN document invite speculation that it was intended to avoid and undermine best practice in the provision of rural cycling routes. Overall the 2010 NCN document appears to have been drafted by a group of regional roads engineers for the purpose of justifying engineering works involving R and N roads.

Finally there is the attitude to civil society. The 2010 NCN document lists 15 stakeholders. It also states that there was detailed engagement with those stakeholders. However the list comprises exclusively state actors. There are no representatives of cycling interests, rural development interests, farming interests, or community structures such as community fora. The 2010 NCN document was apparently compiled by a group that did not consider the community as stakeholders in an NCN project. In our view this displays a poor attitude. From our perspective it is difficult to see how a program drafted and proposed with such an attitude could hope to be successful.

Is it appropriate for the State to invest in individual greenway projects that may never have potential to connect to other greenways or substantially off-road cycle facilities?

Response: Yes. We repeat our previous observations. Cycleways cannot deliver full benefits for Ireland unless they are used as one component in a comprehensive network of routes linking destinations. Cycleways are only one form of cycling provision. You cannot have a functioning roads network that consists only of motorways. Likewise you cannot have a functioning cycle network that consists only of cycleways. Other components in such a network will include roads shared with motor traffic, roads with some form of segregation such as roadside cycle tracks and so on.

Should the Greenways Strategy aim to develop a network of interconnected greenways or should alternative approaches be considered?

Response: We repeat our previous observation. Cycleways cannot deliver full benefits for Ireland unless they are used as one component in a comprehensive network of routes linking destinations. Cycleways are only one form of cycling provision. You cannot have a functioning roads network that consists only of motorways. Likewise you cannot have a functioning cycle network that consists only of cycleways. Other components in such a network will include roads shared with motor traffic, roads with some form of segregation such as roadside cycle tracks and so on.

An approach based on EuroVelo?

Questions for consideration

Do EuroVelo 1 and EuroVelo 2 offer an approach for the development of greenways and other cycle routes in Ireland?

Response: Yes. To restate, what is needed is a strategy to deliver Objective 3 of the NCPF. A study of the Eurovelo model and of the way it arose in Germany, the Netherlands and elsewhere shows that Eurovelo is an excellent model for the delivery of Objective 3 of the NCPF. Cycleways or “greenways” will also be part of that model along with other forms of provision.

Do you have experience of cycling on a Eurovelo route on continental Europe? Do you think the development of EuroVelo routes in Ireland would help to increase cycle numbers?

Response: This question misunderstands the nature of Eurovelo. Eurovelo was not dropped out of the sky from above. What happened was that the state in Germany, the Netherlands and elsewhere gave local authorities the tools needed to create a network of local cycle routes for local communities. As these local routes grew they connected with each other to create a larger network. Eurovelo is a list of potential long distance routes obtained by drawing a map connecting these established local networks together.

Should the focus of the Greenways Strategy be on greenways in the strictest sense (fully or substantially off-road) or should the use of lightly-trafficked roads like those on EuroVelo routes also be considered if a ‘network’ approach is to be taken? What role, if any, should EuroVelo routes play in the Greenways Strategy?

Response: The proposed greenways strategy is misconceived and should be set aside. The idea of cycleways or greenways being a separate program isolated from the delivery of Objective 3 of the NCPF should be abandoned.

What role, if any, should EuroVelo routes play in the Greenways Strategy?

Response: The proposed greenways strategy is misconceived and should be set aside. The idea of cycleways or greenways being a separate program isolated from the delivery of Objective 3 of the NCPF should be abandoned.

Urban Greenways

Question for consideration

Should the Greenways Strategy address the development of urban greenways or should these continue to be pursued in the context of urban Transport Strategies as referenced above?

Response: This is the same as the question above regarding state lands. With regards to traffic-free cycleways. There are various lands in state ownership that provide corridors suitable to be adapted as traffic free cycleways. Examples are various disused railways, HSE lands, Boards of works lands, Coillte lands, motorway service corridors, canals and so on. There should be a presumption that these corridors will automatically be used to provide cycle ways unless other considerations apply. However the provision of recreational routes is not an alternative to providing cycling friendly road conditions across the wider urban roads network.

Greenway users, standards and accessibility

Questions for consideration

What type of surface should be used on Greenways?

Response: A cycleway or “greenway” is a road, they should be surfaced as roads using smooth rolled tarmac unless there are other considerations.

Should different areas (rural/urban) have different surfaces?

Response: A cycleway or “greenway” is a road, they should be surfaced as roads using smooth rolled tarmac unless there are other considerations.

Should access be controlled or open?

Response: Access should be physically open to the widest range of users including wheel chair users, cargo bikes and bike trailers such as for small children. Kissing gates etc should have no place on cycling routes. There should be a national program to remove kissing gates.

Appendix Legal Definitions

ROADS ACT, 1993 Section 68: Cycleways

68.—(1) In this section "cycleway" means a public road or proposed public road reserved for the exclusive use of pedal cyclists or pedal cyclists and pedestrians.

(2) (a) A road authority may construct (or otherwise provide) and maintain a cycleway.

(b) Where a road authority constructs or otherwise provides a cycleway it shall by order declare either—

(i) that the cycleway is for the exclusive use of pedal cyclists, or

(ii) that the cycleway is for the exclusive use of pedal cyclists and pedestrians.

(c) Any person who uses a cycleway in contravention of an order under paragraph (b) shall be guilty of an offence.

ROADS ACT, 1993 Interpretation

“road” includes—

(a) any street, lane, footpath, square, court, alley or passage,

(b) any bridge, viaduct, underpass, subway, tunnel, overpass, overbridge, flyover, carriageway (whether single or multiple), pavement or footway,

(c) any weighbridge or other facility for the weighing or inspection of vehicles, toll plaza or other facility for the collection of tolls, service area, emergency telephone, first aid post, culvert, arch, gulley, railing, fence, wall, barrier, guardrail, margin, kerb, lay-by, hard shoulder, island, pedestrian refuge, median, central reserve, channelliser, roundabout, gantry, pole, ramp, bollard, pipe, wire, cable, sign, signal or lighting forming part of the road, and

(d) any other structure or thing forming part of the road and—

(i) necessary for the safety, convenience or amenity of road users or for the construction, maintenance, operation or management of the road or for the protection of the environment, or

(ii) prescribed by the Minister;