

Responses to queries raised during the TII Standards Roadshow 16 April and 21 May 2021				Any further queries relating to TII Publications should be emailed to <a href="mailto:infopubs@tii.ie">infopubs@tii.ie</a>	
Topic	Presenter	Organisation	Date	Query	Response
Departures from Standards	Bryan Kennedy	TII	16/04/2021	For non-national roads where Transport Infrastructure Ireland (TII) standards or Design Manual for Urban Roads and Streets (DMURS) are used how are Departures from Standards addressed?	As stated in the Departures standard (GE-GEN-01005), the TII Departures system can only be used for national, and for local and regional roads that are part of a National Road Project funded by TII. For non-national road schemes, the use of TII Standards, and any departures from them, should be referred to the relevant local authority.
Departures from Standards	Bryan Kennedy	TII	16/04/2021	In recent Strategic Housing Development (SHD) meetings An Bord Pleanála inspectors have indicated a concern in relation to the use of British Planning standards that have not been adopted nationally/locally but might be relied upon in relation to a development. European Union (EU) standards should be used in preference to non adopted British standards. What is the situation in respect of Engineering standards?	In TII Publications, precedence is always given to EU standards where they exist. In our standards and technical documents, TII refers to non-EU standards only where EU standards do not exist or for aspects not covered by EU standards. If a reference is made in TII documents to any other standard (UK or otherwise) that has been superseded by an EU standard, then the EU standard should be used. TII is aware that there may be outdated references in our documents: our policy is to correct these as they are identified.
Departures from Standards	Bryan Kennedy	TII	16/04/2021	On a national road where DMURS is the governing design document, how are departures from standards addressed?	A Departure from DMURS requirements cannot be dealt with using the TII Departures system as DMURS is not a TII standard. DMURS is a Department of Transport document: all queries relating to DMURS should be referred to the Department. However, if a DMURS Scheme is to be carried out on the National Road Network then a Design Report in accordance with DN-GEO-03030 should be submitted through the Departures Portal for review.
Departures from Standards	Bryan Kennedy	TII	16/04/2021	Should Departure Applications be made when working on a pavement scheme where it is not practical to utilise TII Standard Construction Details (SCD)? There is usually a requirement to utilise a bespoke design on these schemes?	If there are any geometric design changes to the cross section, horizontal alignment, vertical alignment or other design elements then a Design Report may be required in accordance with DN-GEO-03030. Further queries can be emailed to <a href="mailto:infopubs@tii.ie">infopubs@tii.ie</a> .

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Departures from Standards	Bryan Kennedy	TII	16/04/2021	In the breakdown of the departures received in the graph shown for the year 2020, is there a further breakdown of the number of submissions received for the departures from TII standards to DMURS for the TII network within the 60kph/50kph limits?	A Departure from DMURS requirements cannot be dealt with using the TII Departures system as DMURS is not a TII standard. However, if a designer is designing a scheme in an Urban Area (60km/h or less) on a National Road they must submit a Design Report through the TII Departures Portal in accordance with DN-GEO-03030. It is possible to extract the number of Design Reports submitted in accordance with DN-GEO-03030 for DMURS Schemes on National Roads. Further queries can be emailed to <a href="mailto:infopubs@tii.ie">infopubs@tii.ie</a> .
Departures from Standards	Bryan Kennedy	TII	16/04/2021	Are TII standards applicable in the Rural speed locations (100km/h) and DMURS within the urban speed limits?	Yes. TII Publications are applicable on national roads within the rural areas with a speed limit of greater than 60km/h. On roads with a speed limit of 60km/h or less, DMURS is the applicable standard unless a derogation is granted.
Departures from Standards	Bryan Kennedy	TII	16/04/2021	A follow on question, is there a breakdown of the submissions seeking departures for DMURS indicating how many of those were successful for the applicant?	A Departure from DMURS requirements cannot be dealt with using the TII Departures system as DMURS is not a TII standard. However, if a designer is designing a scheme in an Urban Area (60km/h or less) on a National Road they must submit a Design Report through the TII Departures Portal in accordance with DN-GEO-03030. It is possible to extract the number of Design Reports submitted in accordance with DN-GEO-03030 for DMURS Schemes on National Roads. Further queries can be emailed to <a href="mailto:infopubs@tii.ie">infopubs@tii.ie</a> .
Departures from Standards	Bryan Kennedy	TII	16/04/2021	Where DMURS is used, it specifically states in the document that the DMRB is not to be used. However there is lack of technical guidance in the DMURS, e.g. roundabout design. What standards are designers to use in urban areas?	The designer can use the TII Publications for technical guidance, however, departures from TII Publications are not accepted or reviewed as part of a DMURS Scheme as the DMURS is the applicable standard. However, if a designer is designing a scheme in an Urban Area (60km/h or less) on a National Road they must submit a Design Report through the TII Departures Portal in accordance with DN-GEO-03030.
Departures from Standards	Bryan Kennedy	TII	16/04/2021	Some Local Authorities (LA) are changing cross-sections as part of pavement schemes e.g. wider singles changing to 3.65m travelling lanes but resulting in wider hard shoulders. Should these have Preliminary Design Reports (PDRs) and associated departure applications?	If a Local Authority is changing the cross-section of a National Road then a Design Report in accordance with DN-GEO-03030 is required. This also applies to removal of deceleration lanes, advance stop lines, and others.
Departures from Standards	Bryan Kennedy	TII	16/04/2021	If TII publications don't apply to 60kph DMURS areas, it is the case that there should not be any departures from TII publications?	That is correct: there are no Departures from TII Publications in a 60km/h zone as DMURS is the applicable design standard. However, under DN-GEO-03030 there is a requirement to submit a Design Report through the Departures Portal for review. If the designer is departing from the Specification or Requirements for Measuring and Pricing (RMP) then a Departure Application is required.
Departures from Standards	Bryan Kennedy	TII	21/05/2021	When uploading departure documents is it possible to remove/delete a document uploaded in error?	Currently there is no function available within the Portal to delete or remove files uploaded in error. We are currently reviewing the portal with the IT Developers and a function to allow files uploaded in error can be examined.

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Departures from Standards	Bryan Kennedy	TII	21/05/2021	Are there any plans to perhaps look into why such a large number of geometric departures are routinely required? Does the fact that geometric departures are almost 'normalised' have something to say about the nature of the standards that could be worth delving into in depth?	TII is currently carrying out a review of all the Geometric Design Standards and as part of this review all departure applications will be examined. It should be noted that all departure applications are assessed based on their own merits and while a Departure Application has been accepted on one scheme or in one location that does not mean it will be accepted on another scheme or in a different location.
Departures from Standards	Bryan Kennedy	TII	21/05/2021	Are Departures from Standard procedures applicable to the Traffic Signs Manual (TSM), including temporary layouts designed in accordance with TSM Chapter 8, Temporary Traffic Management?	The Traffic Signs Manual is a publication prepared by the Department of Transport and not a Transport Infrastructure Ireland Publication. TII only review Departure Applications from TII Publications. Note that the Traffic Signs Manual must be complied with .
Departures from Standards	Bryan Kennedy	TII	21/05/2021	Is there any follow-up to look at the impact of approved departures post construction and in use?	The relevant road authority who submits the Departure Application or who have the application submitted on their behalf is responsible for ensuring that the Departure is implemented and that any mitigation measures listed in the Departure application or as part of the Acceptance are put in place. TII does not have any role in following up to look at the impact of accepted Departures post construction and in use.
Departures from Standards	Bryan Kennedy	TII	21/05/2021	Are there any plans to expand upon the list of streams and publications on the portal to include the Specification for works (SPW) documents?	TII are currently reviewing the portal with the IT Developers and additional lists for Streams and Publications will be added into the portal.
Departures from Standards	Bryan Kennedy	TII	21/05/2021	How are TII managing the submission of Preliminary Design Reports and departures for DMURS/Urban Realm Schemes. What is TII's role in this?	TII review all Design Reports (as per DN-GEO-03030) submitted on National Road Schemes, which include DMURS/Urban Road Schemes. While these schemes are designed in accordance with the DMURS which is published by the Department of Transport, TII has an overseeing role to ensure a Safe and Resilient National Road Network. Applicants must submit a Design Report in accordance with DN-GEO-03030 outlining their proposed design principles and how they intend to achieve them. However, for DMURS/Urban Road Schemes this Design Report shall not include any departures from the Geometric Design Standards. If the applicant wishes to depart from the TII Specification or Requirements for Measuring and Pricing (RMP) they must submit a separate Departure Application. Any further queries can be submitted to infopubs@tii.ie.
Project Management Guidelines and Cost Management Manual	Michael Gaughan	TII	16/04/2021	Does compliance with to the Cost Management Manual (CMM) satisfy Public Spending Code (PSC), Common Appraisal Framework (CAF) & Capital Works Management Framework (CWMF) compliance?	The Cost Management Manual (CMM) takes cognisance of the requirements of the PSC, CAF and the CWMF.
Project Management Guidelines and Cost Management Manual	Michael Gaughan	TII	16/04/2021	Is there an update to come for the construction contract administration guidelines?	Contract administration is to be undertaken in accordance with the particulars of the contract employed.

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Project Management Guidelines and Cost Management Manual	Michael Gaughan	TII	21/05/2021	Who carries out the Reference Class forecasting, is it the project team or TII / external?	TII undertakes reference class forecasting. TII holds a structured workshop to use expert judgement to consider both Target Cost figures and record any specific project factors that may exist that would lead to the project being either more or less risky than the reference class. Attendees at this structured workshop will be the TII Senior Engineering Inspector, the TII Regional Manager and the TII Head of Project Services. The Project Manager and other members of the project team may be invited at the discretion of the TII Senior Engineering Inspector.
Project Management Guidelines and Cost Management Manual	Michael Gaughan	TII	21/05/2021	Regarding Sustainability on Major Projects, is there a target date for sustainability/climate action initiatives? In the interim, are there any recommendations to incorporate climate action initiatives, e.g. alternative fuels, park and share/ride, segregation of active travel network?	Initiatives and works in this sphere are ongoing.
Project Management Guidelines and Cost Management Manual	Michael Gaughan	TII	21/05/2021	Question on the Cost Management Manual. Is there a new Risk Register that has recently been developed that is not yet available on the Download Section of the TII publications website? If yes, when will it be formally available?	Risk register templates have been slightly updated. These have been uploaded to the 'Downloads' section of the TII Publications Website.
Project Management Guidelines and Cost Management Manual	Michael Gaughan	TII	21/05/2021	Do the latest CMM updates require separate cost estimates for Active Travel facilities on projects? This can be tricky to achieve on some projects (e.g. Type 2 dual carriageway with cycle track). This may result in inconsistencies across cost methodology on projects. Any comments / guidance on this?	Base cost estimates require project teams to identify costs associated with 'Walking / Cycling / Public Transport Connectivity / Asset Renewal' in accordance with TII CMM.
Project Management Manual for Minor Projects	Stephen Barry	Arup	16/04/2021	What procedures are to be used on minor schemes less than €5m?	The Project Manager's Manual for Minor National Road Projects (PE-PMG-02043) is applicable to 'Minor' projects. These are projects with a value between €5m and €20m. Projects under a value of €5m are not deemed 'Minor' projects under this Manual. However, TII may, at their own discretion, apply this Manual (or sections of this Manual) to specific projects with a value less than €5m. In such cases, TII, in conjunction with the Project Manager (PM), will determine how to apply this Manual (or sections of this Manual) for these specific projects. For projects with a value under €5m, a PM should refer to the Design Phase Procedure for Road Safety Improvement Schemes, Urban Renewal Schemes and Local Improvement Schemes (DN-GEO-03030).
Project Management Manual for Minor Projects	Stephen Barry	Arup	16/04/2021	The recent update to Unit 12 (Minor Projects) states that Minor Projects are split into 3 categories, 1 being 'Online/offline improvements < 3km'. If Total Cost Estimate < €20Mn but length >3km is the Minor National Road Projects PMG the applicable document?	Yes. If a project has a value between €5m and €20m, the Project Manager's Manual for Minor National Road Projects (PE-PMG-02043) is the applicable document. It was acknowledged that, when this document was published in December 2020, the Project Appraisal Guidelines (PAG) were in the process of being reviewed and updated. The Project Management Guidelines (PMG) suite of documents will be reviewed and updated where necessary in due course taking cognisance of more recent Project Appraisal Guidelines (PAG) updates.

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Project Management Manual for Minor Projects	Stephen Barry	Arup	16/04/2021	The Public Spending Code recommends a long list of options to be appraised. Is there a minimum number of Do Something corridor options to be identified prior to Stage 1 Appraisal - Phase 2 Option Selection?	A minimum number of options to be identified is not set out in the Project Manager's Manual for Minor National Road Projects (PE-PMG-02043). This is very much on a case by case basis as the number of feasible options will vary depending on the specific project constraints and other factors.
Project Management Manual for Minor Projects	Stephen Barry	Arup	16/04/2021	Is there an overlap between "Road Safety Improvement Scheme Approval Procedure" GE-STY-01037 and Project Management Guidelines for Minor Projects?	The Road Safety Improvement Scheme Approval Procedure (GE-STY-01037), the Design Phase Procedure for Road Safety Improvement Schemes, Urban Renewal Schemes and Local Improvement Schemes (DN-GEO-03030) and other documents set out within DN-GEO-03030 are generally applicable to projects with a value less than €5m. The Project Manager's Manual for Minor National Road Projects (PE-PMG-02043) is generally applicable to projects with a value greater than €5m. If a project is potentially applicable to more than one guidance document, the PM should contact TII, who will, in conjunction with the PM, determine the appropriate way forward. This would be done on a case by case basis.
Project Management Manual for Minor Projects	Stephen Barry	Arup	16/04/2021	If the PSC wishes to avoid the selection of a pre-defined solution how is the Project Manger to select the appropriate cost estimate and therefore decide if the Project is Minor or Major at Phase 0?	At Phase 0, the PM should, based on the information available to them, determine a high level cost estimate. This will then provide a steer on the applicable guidance document. If a project estimate is potentially +/- €20m and therefore clarity is required, the PM should contact TII, who will, in conjunction with the PM, determine the appropriate way forward. This should be done on a case by case basis.
Project Management Manual for Minor Projects	Stephen Barry	Arup	16/04/2021	What happens if a project starts out being appraised as a Minor at Phase 0 but subsequently it becomes apparent that it is actually a Major in terms of the PMG?	If a project estimate is potentially +/- €20m and therefore clarity is required, the PM should contact TII. If a project is progressed through a number of phases as a 'Minor' project and then subsequently the project value is revised above €20m, the PM should also contact TII as soon as possible. TII, in conjunction with the PM, will determine the appropriate way forward. This should be done on a case by case basis.
Project Management Manual for Minor Projects	Stephen Barry	Arup	16/04/2021	For minor projects, once formal TII approval has been given after Phase 0 to proceed to Phase 1, is there a requirement to request approval to proceed to Phase 2 as no Gate review statement is required for Phase 2?	A formal Gate Review process is not required to proceed from Phase 1 to Phase 2. At the end of Project Phase 0, Phase 3, Phase 4, Phase 5 and Phase 7, a Gate Review is required. As a Project is being developed, the documentary evidence as outlined within the Manual is prepared and finalised. This should then be available, if so required by TII during the Project lifecycle.

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Vehicle Restraint Systems	Eoin Doyle	Arup	16/04/2021	Should aesthetics of the barrier be considered when specifying barriers in areas of outstanding beauty and designated landscapes?	The first step should always be to consider if the hazard can be mitigated and remove the need for barriers in the first instance. This is not always possible and if aesthetics are important at a location, this can be considered in the type of safety barrier used e.g. timber-clad barriers are available but it is important to ensure these have been properly certified and they are durable for the environment in which they are being installed. There are now also vinyl wrapped barriers which can be used to give a rusty/brown look to the steel to blend in with the environment. If the design of a fully-compliant barrier is not achievable in particular locations, a solution such as high containment kerbs with appropriate warning signage may blend better into the environment but this would need to be developed in line with the requirements of DN-REQ-03079. The key thing is the balance of road safety versus aesthetics and this will be down to the particular risks at the location.
Vehicle Restraint Systems	Eoin Doyle	Arup	16/04/2021	Is it possible to get the details for the Vehicle Restraint System (VRS) course please?	The course is run by Engineers Ireland. The upcoming course at the end of May is unfortunately booked out. If you contact EI they have a waiting list and TII are hoping to run an additional course in Autumn.
Vehicle Restraint Systems	Eoin Doyle	Arup	16/04/2021	Are barriers tested and certified for use with a concrete surface water channel on the roadside of the barrier?	No. Barriers are certified through testing in specific conditions in a controlled environment in line with the requirements of EN 1317 to allow manufacturers to declare the performance of their product and sell on the EU Market. They are tested on flat ground with no obstacles. As per section 3.12 of DN-REQ-03034 "The inclusion of surface water channels in the set-back area is acceptable in accordance with the requirements of DN-DNG-03068."
Vehicle Restraint Systems	Eoin Doyle	Arup	16/04/2021	During the design of a Pavement Scheme where the VRS risk assessment identifies a requirement for a VRS but there is no existing working width available and the construction of the required working width is deemed beyond the scope of a Pavement Scheme. How can the risk identified be closed out?	The first step should always be to consider if the hazard can be mitigated and remove the need for barriers in the first instance. This is not always feasible so in these instances the project manager should liaise with TII network operations as the barrier works could potentially be covered under the separate VRS replacement programme ( <a href="mailto:barriers@tii.ie">barriers@tii.ie</a> ).
Vehicle Restraint Systems	Eoin Doyle	Arup	16/04/2021	Is there a maximum set back for VRS adjacent to carriageways?	No, there is no maximum set back. The distance between the barrier and the road needs to be balanced between allowing room for an errant vehicle to recover if the space exists and ensuring the hazard is far enough back from the barrier that it is outside the working width of the barrier. See section 3.12 and 3.13 of DN-REQ-03034 for further guidance on this.
Vehicle Restraint Systems	Eoin Doyle	Arup	16/04/2021	Is there a document to identify all the VRS used on National roads?	There is no TII document available. However the Irish Barrier Association (an industry led association) has developed a useful guide for identifying VRS on the network. It is available for download on their website <a href="http://irishbarrierassociation.ie">http://irishbarrierassociation.ie</a> .
Vehicle Restraint Systems	Eoin Doyle	Arup	16/04/2021	For existing public lighting columns at junctions on 100km/hr national roads, is there a TII policy to retrofit safety barriers? (pre forgiving roadside sites)	No, there is no specific programme currently. There are examples of where junction upgrade projects have removed existing safety barriers at junctions by replacing existing lighting columns with passively safe lighting columns through consultation with TII Road Safety.

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Vehicle Restraint Systems	Eoin Doyle	Arup	21/05/2021	What level of design detail should be undertaken at preliminary design stage to ensure post Compulsory Purchase Order (CPO) detailed design can achieve the intended forgiving roadsides?	The level of design required needs to be at a sufficient level of detail to understand the land take requirements to achieve forgiving roadsides, e.g. wide enough to allow for the use of flatter gradients. If a design has incorporated forgiving roadsides as part of the planning process, it is also important to cover the possibility of this being reversed in the detailed design at a later stage for short term cost reasons, e.g. where a D&B contractor steepens the gradients to save on earthworks and adds a barrier. This could be negated by including a requirement within the works requirements that side slopes are maintained at the slopes indicated in the preliminary design.
Vehicle Restraint Systems	Eoin Doyle	Arup	21/05/2021	Is there any way of identifying the containment level and/or working width of existing barriers on site by means of stamps on the rail or post spacings?	Because of the various different types of barrier and different manufacturers there is no consistent way of doing this. Some manufacturers may have a stamp on the post with this information but not all. In the future this will be made easier as all new VRS are required to have labels as per: <a href="https://www.tiipublications.ie/library/CC-SCD-00416-01.pdf">https://www.tiipublications.ie/library/CC-SCD-00416-01.pdf</a> .  The Irish Barrier Association have a useful document for identifying different types of barrier on the network as per the link below: <a href="http://irishbarrierassociation.ie/wp-content/uploads/2018/10/IBA-VRS-Identification-Guide-v1.1.pdf">http://irishbarrierassociation.ie/wp-content/uploads/2018/10/IBA-VRS-Identification-Guide-v1.1.pdf</a> .
Vehicle Restraint Systems	Eoin Doyle	Arup	21/05/2021	In the event of barrier failure to contain an errant vehicle, resulting in a fatal or serious casualty, who is responsible for assessment of the damage to the barrier and VRS system, to determine whether the failure was a manufacturing issue, an installation issue, a design issue or an issue regarding the series 400 ground conditions/corrosion protection etc, as assessed and certified by the chartered engineer? Also, is the planned periodic VRS training/CPD available for all interested parties, or just those who have already completed the TII VRS Training course?	This will vary dependent on the type of road and who it is being managed by e.g. Local Authority versus MMaRC Contractor. In relation to the VRS Independent Chartered Engineer, they are certifying a very particular element of the works i.e. that the ground conditions have been tested in accordance with the manufacturers requirements and that the results are within the acceptable limits as specified by the manufacturer. This is documented in a report with specific information given. See page 19 - final part of section 3.2.2: <a href="https://www.tiipublications.ie/library/CC-SPW-00400-07.pdf">https://www.tiipublications.ie/library/CC-SPW-00400-07.pdf</a> for the details of what the chartered engineer is certifying.  Regarding the periodic training, this is not limited only to those who have attended the TII VRS training; however attendance at the TII VRS Design course training is a pre-requisite for becoming a VRS ICE.
Vehicle Restraint Systems	Eoin Doyle	Arup	21/05/2021	The barrier post test you referred to is for anchorages in drilled holes as per TII series 400. Is the same test applicable for alternative anchorage systems? This isn't clear in TII Series 400.	The push-pull test is for use in soils: see section 3.2.2 <a href="https://www.tiipublications.ie/library/CC-SPW-00400-07.pdf">https://www.tiipublications.ie/library/CC-SPW-00400-07.pdf</a>
Vehicle Restraint Systems	Eoin Doyle	Arup	21/05/2021	I noted in the middle east that water filled barriers at all high mast lighting was becoming mandatory, including at sign gantries and particularly at junctions. If this going to become more prevalent in Ireland, obviously our speed restrictions in urban areas reduce the need for as many as out there.	This is not something I am currently aware of. The focus in Ireland has been around mitigation of hazards including research in relation to the reduction of lighting requirements at junctions.
Vehicle Restraint Systems	Eoin Doyle	Arup	21/05/2021	What level of insurances are required for the Chartered Engineer witnessing & signing off on safety barrier testing?	See section 2.5 of <a href="https://www.tiipublications.ie/library/CC-REQ-04009-01.pdf">https://www.tiipublications.ie/library/CC-REQ-04009-01.pdf</a>

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Vehicle Restraint Systems	Eoin Doyle	Arup	21/05/2021	The transition details between levels of containment and between material types was being brought up 15yrs ago and still seems to be the case. Where approvals or derogation have been provided that could be considered generic even if given to a specific supplier could these not be included in standards amendments going forward?	This was the reason for the introduction of DN-REQ-03081 Transition Assessment Procedure. This allows a consistent approach to the submission and assessment of transitions for use on Irish national roads. If a transition is approved for use on one project under 03081, it is added to the TII Compliant Transitions list and can be used on any projects going forward where the same two products are to be connected. Given the variations in product types from different manufacturers it is not appropriate to have generic transitions. See link to current TII Compliant Transitions List <a href="https://www.tiipublications.ie/downloads/transition-assessment/Compliant-Transitions-List-26-02-21.pdf">https://www.tiipublications.ie/downloads/transition-assessment/Compliant-Transitions-List-26-02-21.pdf</a> .
Vehicle Restraint Systems	Eoin Doyle	Arup	21/05/2021	Does the existing suite of Requirements for Measurement and Pricing (RMP) allow for the pricing of the independent engineer?	Yes, the item coverage for safety barriers in CC-RMP-00400 includes item (g) certification by an independent Chartered Engineer.
Landscape Character Assessment and Landscape and Visual Impact Assessment of Proposed National Roads	Tony Williams	TII	16/04/2021	How will existing road verges and medians on completed major road schemes be dealt with? Is it a proposal that TII are considering Wild Flower meadows/planting as part of landscaping treatments? Most major road schemes are maintained by operators and not the local authorities, also could it be encouraged on both National Primary and Secondary roads?	The TII sustainability and environmental policies are very much based on the National Pollinator plans and other national programmes such as Biodiversity in particular. Our current planting regimes are predominantly native. TII uses more exotic species sometimes as emphasis and acknowledgement of changes on approach to urban areas which also assists in increasing driver awareness. Wild flower seeding is now part of our maintenance regime and TII is fine-tuning the use of wild flowers and natives to not only increase biodiversity but also to reflect the native plant and animal populations. Local seed is thus an important part of this and so TII must encourage communities to 'play a part'. Perhaps TII can integrate such activities in our engagement at local level and through our colleagues in the local authorities and local community groups. It is in this way that TII may all influence a positive outcome from primary routes to the 'Boreen' (Bótharín).
Landscape Character Assessment and Landscape and Visual Impact Assessment of Proposed National Roads	Tony Williams	TII	16/04/2021	Would visual impact of a project in an area of outstanding beauty trump any safety measures being provided?	The analysis of a site and the alignment / realignment must primarily be safe. In an area of outstanding beauty or local importance, for instance a viewing point, the response must include an accommodation of this 'desire to look' and so parking and observation areas must sometimes (not always) be included (in my view). Should, for instance, a view on a curve be across a beautiful vista (very likely in our Isle), then TII would where necessary place the required safety barrier in the first instance. It is then a matter of placing a viewing point (with advance notice of same) which may be a lay-by or some such means to allow this activity. This area within a scheme must then be viewed in overall terms of how it would 'operate'. Would there be a need to regulate this stopping and viewing activity? Yes, usually. Would facilities be required, etc, or is it just a minor road widening and a lay-by with a sign. Nature is the best designer and so our schemes must 'knit a course' between ensuring safety (1) and facilitating viewing points (2).

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The Management of Invasive Alien Plant Species on National Roads	Christian Nea	TII	16/04/2021	Noxious species haven't been included in the Invasive Alien Plant Species documents. Is there a reason for this, and so should the 2010 document be the primary guide for noxious species?	A decision was made to focus purely on Invasive Alien Plant Species within these Environment stream documents. The NRA 2010 document is still available on TII's website, but given the passage of time, it should be read in a circumspect manner.
The Management of Invasive Alien Plant Species on National Roads	Christian Nea	TII	16/04/2021	Who is responsible for treatment of Invasive Species along Riverbanks, The Office of Public Works (OPW) or Landowners?	I do not know the answer to this question: please redirect the query to the OPW.
The Management of Invasive Alien Plant Species on National Roads	Christian Nea	TII	16/04/2021	I note that Japanese Knotweed is an invasive species which requires a lengthy treatment process however does Himalayan knotweed pose the same threat?	Himalayan knotweed is less widely distributed, so would be less regularly encountered. However, where it is encountered it would pose a similar threat.
The Management of Invasive Alien Plant Species on National Roads	Christian Nea	TII	16/04/2021	Has there been any experience with legal proceedings taken by an adjoining landowner against the road authority or an LA regarding the spread of IAPS into private property from the public road/public property?	I am not aware of any Irish legal proceedings taken by an adjoining landowner against a road authority/local authority regarding the spread of IAPS on to a private property from the public road/public property. However, the management of IAPS technical guidance and standards documents summarise developments in the Tort of Private Nuisance in the UK in the Williams v. Network Rail Infrastructure Ltd. case.
The Management of Invasive Alien Plant Species on National Roads	Christian Nea	TII	16/04/2021	What is TII's preferred method of treatment of Himalayan Balsam?	Whilst the documents outline control methods, they do not identify preferred methods of treatment. This is deliberate. The documents require the following of procedures and processes and the input of key personnel to derive appropriate methods of treatment to suit the individual circumstances.
The Management of Invasive Alien Plant Species on National Roads	Christian Nea	TII	21/05/2021	In terms of the use of pesticides and the specification for new works control, are there any recent innovative control measures (avoiding pesticide use on newly planted site) that have been implemented on the network that is worth replicating?	The term 'pesticide' is an umbrella term, which includes herbicide, insecticide and fungicide. There are methods for managing certain IAPS that do not involve herbicides, such as cutting, pulling, excavation and burial. There are novel methods for managing Japanese knotweed that do not involve herbicide usage, such as: the release of a Japanese insect similar to an aphid; the use of steam soil injection; and the use of goats. These novel methods might not be completely effective. TII's standard and technical documents nor call-off contracts issued previously under its framework do not specify particular methodologies. They require the input of key personnel and a process to determine an appropriate management response in the given circumstances.

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The Management of Invasive Alien Plant Species on National Roads	Christian Nea	TII	21/05/2021	Are there any plans to create a new TII framework to appoint Contractors to eradicate any outstanding IAPs along National Roads or is it up to each individual Local authority?	There are no plans to create a new TII framework. The local government operational procurement centre (LGOPC) are in the process of creating a Dynamic Purchasing System (DPS - a kind of flexible framework) in relation to IAPS management. I understand that this DPS will go live at the end of this month. Local authorities can create call-off contracts under this DPS. This is done by creating a supplementary Request for Tender along with associated documents, such as Works Requirements and Pricing Document. A draft Request for Tender (RFT - attached to an explanatory email) has already been sent by TII to all relevant local authorities. TII has also created allocations for the management of IAPS for all local authorities. Given the seasonality of managing IAPS, it is important that local authorities start investigating the DPS and drafting call-off documents as soon as possible.
The Management of Invasive Alien Plant Species on National Roads	Christian Nea	TII	21/05/2021	Does the existing suite of Requirements for Measurement and Pricing (RMP) allow for the pricing of specialist Ecologist / Horticulturalist and for the treatment of the alien species that is located within the site? If not are there any plans to update the RMP?	The standard suite of documents in TII's Requirements for Measurement and Pricing (RMP) do not specifically refer to specialist Ecologist / Horticulturalist and treatment of the alien species. Therefore, these items are typically dealt with through departures to the RMP to enable pricing for each specific project's requirements. Whilst there are currently no plans in place to update the RMP to create measurement items for both these items, this may be something that TII examine in future.
Pavement	Tom Casey and Eddie Winterlich	TII	16/04/2021	Do TII carry out any QA audits of suppliers of bitumen products at their plants or is this down to each project to do for on site delivered materials only?	Bituminous products must be supplied in accordance with the Construction Products Regulations requirements. The verification procedure is through the Market Surveillance Authority (MSA). (Note: TII specifications require retention of a joint agreed sample for retention and potential future use by the MSA)
Pavement	Tom Casey and Eddie Winterlich	TII	16/04/2021	Did not know to search for CC-PAV documents, that's helpful. Will there be more documents coming under this heading?	Yes, upcoming issues will address Hydraulically Bound Mixtures (HBM), Low Energy Bound Mixtures (LEBM) and mastic asphalt
Pavement	Tom Casey and Eddie Winterlich	TII	21/05/2021	For Motorway Category, how is it possible to have a Site Category at 0.30 - there is no Motorway with AADF of 2,500? The vast majority of Irish Motorways are new, well designed, very safe and should be low risk?	Category is applied on the basis of CV/lane/day: however there is a current research project to define a commercial vehicle. In the interim, a default of 10% c.v. per lane is used. The IL for motorways as non event roads reflects the low risk of a wet skid incident.
Pavement	Tom Casey and Eddie Winterlich	TII	21/05/2021	The old/previous Standard did indeed use cv/lane/day and that would assist in applying a lower risk to certain motorway lanes. Is there plans to use that rather than AADF?	Once the research into definition and measurement techniques for c.v. has been completed (hopefully Q3 this year) TII will publish complementary standards updates.
Pavement	Tom Casey and Eddie Winterlich	TII	21/05/2021	Are there plans to look at appropriate skid resistance levels on the approach to Toll Plazas?	No, the application of the standard is clear for each event type. It is the designers' responsibility to understand and apply the appropriate category.
Pavement	Tom Casey and Eddie Winterlich	TII	21/05/2021	If investigatory levels for SCRIM are specified as per HD28 in a PPP Contract should HD28 be used for the duration of the concession or should the more up to date documents be used?	The PPP contract should indicate the approach to requirements and updates to those. I would however comment that in general PPP are for motorways so they are non-event categories in general.

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Pavement	Tom Casey and Eddie Winterlich	TII	21/05/2021	Are any recycled plastic or glass asphalt roads being introduced/trialled; as in UK, India and South Africa 'et al' as part of move to sustainability and Carbon reduction?	Some trials were carried out using these material some years ago. Currently TII is focusing our sustainability approach on the use of Reclaimed Asphalt Pavement (RAP), Warm Mixes and the quantities used. TII is also looking toward the use of a lean design with the use of the IAPDM (Irish Analytical Pavement Design Method) which TII hope to publish this year.
Pavement	Tom Casey and Eddie Winterlich	TII	21/05/2021	PSV Category K and U1 referencing approaches to pedestrian crossings; does this relate only to controlled pedestrian crossings, rather than uncontrolled crossings?	There is no distinction between controlled or uncontrolled crossings.
Road Safety – Road Safety Improvement Schemes	Suzanne Meade	TII	16/04/2021	Quick query in relation to PDR's for Road Safety Improvement Schemes (RSIS), is there a formal approval procedure for the PDR prior to submission with the Road Safety Authority (RSA) & departures on the portal? Or is it just submitted to the TII Safety Engineer/Inspector for each Region?	No, the formal submission of Design Reports is via the TII Departures portal. Prior to submission, you may wish to discuss the content with the TII Safety Engineer/Inspector for each Region.
Road Safety – Road Safety Improvement Schemes	Suzanne Meade	TII	16/04/2021	Often a Pavement scheme and RSIS scheme overlap, each with their own reporting and approval routes and procedures which can become very confusing. Can these be streamlined in any way?	Where RSIS and PARR schemes overlap, the deliverables for each should be agreed with the RSIS or PARR TII Engineer/Inspector based on whichever scheme has the greater value.
Road Safety – Road Safety Improvement Schemes	Suzanne Meade	TII	16/04/2021	What is the capital threshold for safety schemes requiring compliance with the specific requirements of PMG and PAG?	This was mentioned in the Slides: if an RSIS is at or over €500,000 then the PMG and PAG kick in. Very few RSIS exceed this level of funding because it is intended as a low cost intervention programme. However, sometimes this situation may arise. TII recommends discussing this with the Regional Road Safety Engineer (RRSE) and TII at an early stage so TII can advise.
Road Safety – Road Safety Improvement Schemes	Suzanne Meade	TII	16/04/2021	Why is there such a long delay in the publishing of validated collision data nationally?	TII provide LAs with aggregate collision data for information annually. This question can be directed to the RSA who have indicated that they have very long validation lead ins using PULSE.
Road Safety – Road Safety Improvement Schemes	Suzanne Meade	TII	16/04/2021	Is there any specific guidance or training available for the assessment of the Collision Modification Factor required for the feasibility and options report?	TII provides some training at the Road Safety Audit Conference and there are excellent training webinars and videos in the training section of the CMF Clearing House too. Also, if you do the Sligo Institute of Technology RSA Cert, CMF are covered.
Road Safety – Road Safety Improvement Schemes	Suzanne Meade	TII	16/04/2021	Please confirm that changes to cross section as part of pavement schemes require a PDR. These changes are happening outside of safety schemes and are apparently to update the cross section to current standards (not always appropriate in my view).	Yes, this is a design change and a Design report is required.
Road Safety – Road Safety Improvement Schemes	Suzanne Meade	TII	16/04/2021	Is the RSI Round M 2018-2020 analysis published somewhere?	This will be circulated to Local Authorities via TII road safety engineers.
Road Safety – Road Safety Improvement Schemes	Suzanne Meade	TII	16/04/2021	Is the TII Road Safety Scheme Approval Procedure applicable to a PARR scheme that includes works to replace existing footpath surface and installation of tactile paving at existing junctions in an urban area but does not involve any changes to the existing kerb lines?	Yes, if funding from the road safety is required.
Road Safety – Road Safety Improvement Schemes	Suzanne Meade	TII	16/04/2021	I believe that the safety document GE-STY-01037 should be referenced in the relevant pavement technical document such as AM-PAV-06050. The Designer should be referred to this document and advised to resolve RSI issues in a PARR scheme. What are your thought on this? Is there any discussion on coordinating the RSI within the different departments in TII? i.e. pavement section and safety section...	PARR and safety schemes are coordinated at the local authority level depending on the local authority programme of works. AM-PAV-06050 is cross referenced in GE-STY-01037 Figure 2.1, section 2.9, 2.10 and in the letter seeking TII approval.

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Road Safety – Road Safety Improvement Schemes	Suzanne Meade	TII	21/05/2021	Phase 3 is Preliminary Design. As such, can you confirm that TII Safety have no further involvement in approvals for a RSI scheme post commencement of this phase as per the slide presented?	The approvals process is set out in TII standard GE-STY-01037 Appendix A.
Road Safety – Road Safety Improvement Schemes	Suzanne Meade	TII	21/05/2021	Have you done work with the RSA and their collision statistics? Will there be an update to the statistics (beyond 2016 data) or could TII take over these collision statistics to use and do cluster analysis etc.?	Yes, TII works with the RSA but we do not prepare collision statistics for the RSA. It is TII's understanding that the RSA will publish stats beyond 2016. TII currently provide network analysis to the local authorities for the national roads on an annual basis.
Road Safety – Road Safety Improvement Schemes	Suzanne Meade	TII	21/05/2021	As most Safety Schemes relate to legacy road sections, can TII confirm that Full Design Standards apply to RSI projects and are TII satisfied that the scale and extent of an RSI scheme can be controlled in such circumstances?	This is accommodated in TII standards. For further information on the preparation of improvement please refer to TII standard DN-GEN-03030 Design Phase Procedure for Road Safety Improvement Schemes, Urban Renewal Schemes and Local Improvement Schemes.
Road Safety – Road Safety Improvement Schemes	Suzanne Meade	TII	21/05/2021	Where certain DMURS or CYCLE Manual standards do not cover certain safety issues like VRS on approach to bridges. Should departures from TII standards be directly through TII or through the authority if not a TII project per se?	Yes, for national roads, the formal submission is via the TII Departures portal. Prior to submission, you may wish to discuss the content with the TII Safety Engineer/Inspector for each Region.
Road Safety – Road Safety Improvement Schemes	Suzanne Meade	TII	21/05/2021	LIS (Local Improvement Scheme) is an established term in Local Authority Programmes please ensure your definition is consistent with theirs if you propose to use the term.	Noted: this term has been used in TII standards for many years.
Road Safety – Road Safety Improvement Schemes	Suzanne Meade	TII	21/05/2021	TII Delineation Scheme Projects can effectively introduce/remove or amend overtaking sections across the road network. In this case, does the introduction 03030 now require a Preliminary Design to be carried out for Road Marking and Maintenance Works?	DN-GEO-03030 has always required a Design Report when design changes are part of any improvement scheme. If a road alignment or maintenance works requires a design change to the national road network, then a Design Report is required.
Road Safety – Road Safety Improvement Schemes	Suzanne Meade	TII	21/05/2021	Do 'Quality Audits' need to be undertaken by a certified Road Safety Auditor?	There are two elements to a quality audit, one element is a DMURS street design audit and the other element is a road safety audit carried out in accordance with TII Standards. The street design audit is carried out by the project team and the road safety audit is carried out by certified independent auditors. For more information please refer to DMURS.ie supplementary material.
General	Bryan Kennedy	TII	16/04/2021	Is TII actively looking at updating the junction design standards to include for Dutch style roundabouts, protected intersections and various other improvements for active travel / cycling? If so, any timeline for the release of the new standards?	TII is currently undertaking a review of all the Geometric Design Standards which includes the Junction Design Standard. A part of this work package a review of geometric design standards from other countries is being undertaken. The use of single lane roundabouts with single entry and exit lanes, smaller entry and exit radii and radial approaches instead of tangential approaches will be investigated for use in areas where there maybe potential conflict points with non-motorised users (NMU). This review will be ongoing throughout 2021. If you have any further questions please email infopubs@tii.ie.

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General	AnnMarie Gallagher	Arup/TII	21/05/2021	Regardless of current policies to widely develop active travel provisions, would you agree that it would be important that maintenance and discrete works such as pavement and small safety projects dealing with specific issues are not encumbered with limited use active travel elements?	TII supports the implementation of national transport strategy as determined by the Department of Transport. TII is also responsible for implementation of the EU Road Infrastructure Safety Management (RISM) directive that places a particular emphasis on the safety of vulnerable road users (VRU). Having regard to national policy and road safety TII Standards provide guidance on the provision of facilities for VRUs. In doing so TII seeks to reduce the risk and number of collisions, injuries and deaths on our road infrastructure. Active travel facilities are a matter for the local authority in the first instance as the road authority to determine where there is a need for facilities or where the authority plans to provide Active Travel routes and networks as part of their Development Plans and transport Strategies.
General	Albert Daly	TII	16/04/2021	Just to make the point that the approval process for Finance and operate (F&O), Road Safety Improvement Scheme (RSIS), Preliminary Design Report (PDR) and Pavement Asset Repair and Renewal (PARR) Scheme reports, particularly in an urban area with DMURS, can be very significant where a scheme may have originally started out as a 'simple' pavement scheme.	Noted
General	Albert Daly	TII	16/04/2021	Regarding TII training courses, will other training courses be provided. I note there was an intention to provide training in Drainage Design for example. Is there a plan in place to provide these training courses?	TII organises a number of training courses relating to our standards. Some of these are targeted specifically at LAs and National Road Design Offices (NRDOs): these are advertised through formal contacts (via CEOs, DoSs and Senior Engineers). Other courses are publicised by email to registered users of TII Publications (see "Subscribe to TII Alerts" on the bottom of the TII Publications front page). Some of these are organised through organisations such as Engineers Ireland - these are also advertised through these organisations' systems. Training relating to Road Drainage is being planned: this has not yet been formulated.