

# Presentation outline

## Background

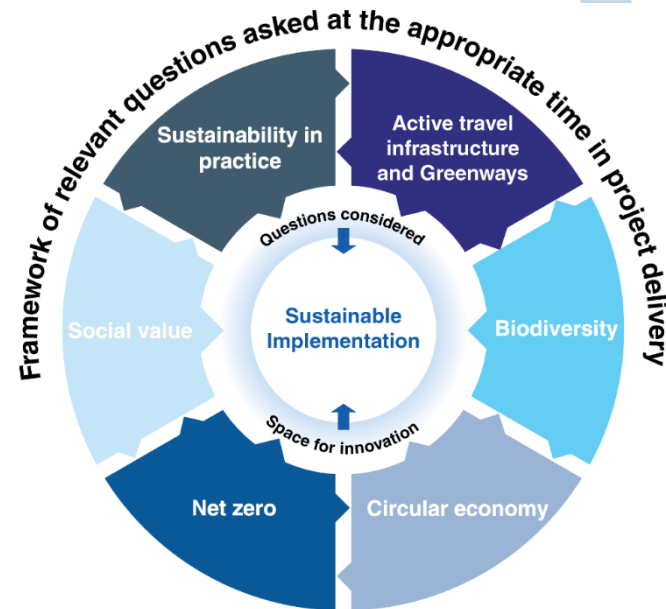
- Legislation & Policy
  - Timeline and pace of change
  - NIFTI example
- TII Sustainability Implementation Plan

## SIP Practical Guide

- Aims, main inputs and elements
- Workflows and feedback mechanism
  - Phase 0 workflow
  - Workflows Phases 0-7
- Other related documents
- Case studies

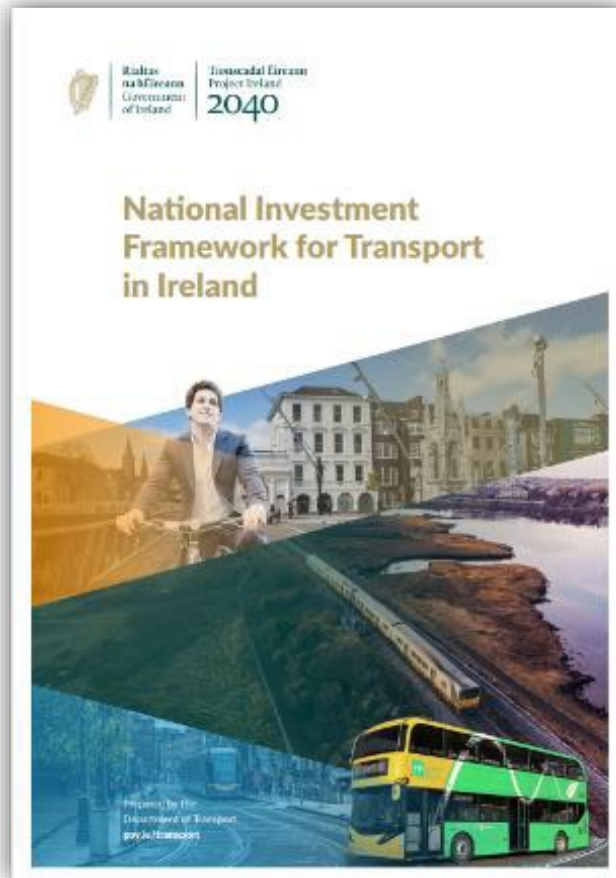
## Questions

# Sustainability Implementation Plan for Transport Infrastructure Ireland



# Legislation & Policy

## NIFTI example



December 2021

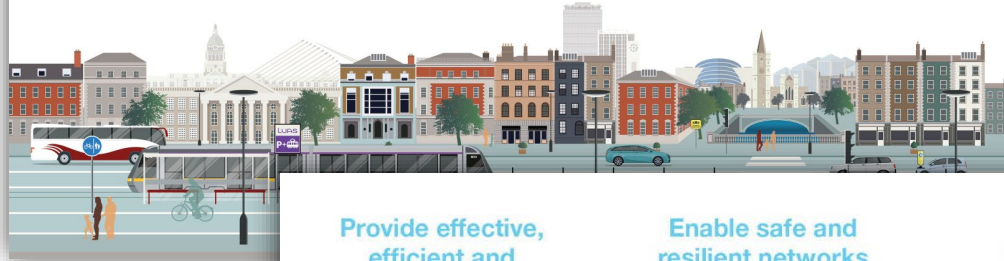
The modal hierarchy has *active travel* as the first consideration, followed by *public transport* and crucially *private vehicles* form the third and final level.



The intervention hierarchy from first to last is '*maintain*', '*optimise*', '*improve*' and '*new*'.

Understanding needed to enable implementation

# Sustainability Implementation Plan for Transport Infrastructure Ireland



## Provide effective, efficient and equitable mobility

Enable compact urban growth and regional accessibility through networks and services that support more efficient journeys, more effective connectivity and increased accessibility.

## Enable safe and resilient networks and services

Enable safe, secure, accessible and inclusive travel through the provision of transport networks, systems and services that are resilient to future change.

## Collaborate for a holistic approach

Develop smart and sustainable assets and services through innovating and improving the planning, design, construction, operation and maintenance of the transport network, increasing collaboration and systems-thinking to seek mutual gains and mitigate negative externalities.

## Deliver end-to-end improvements

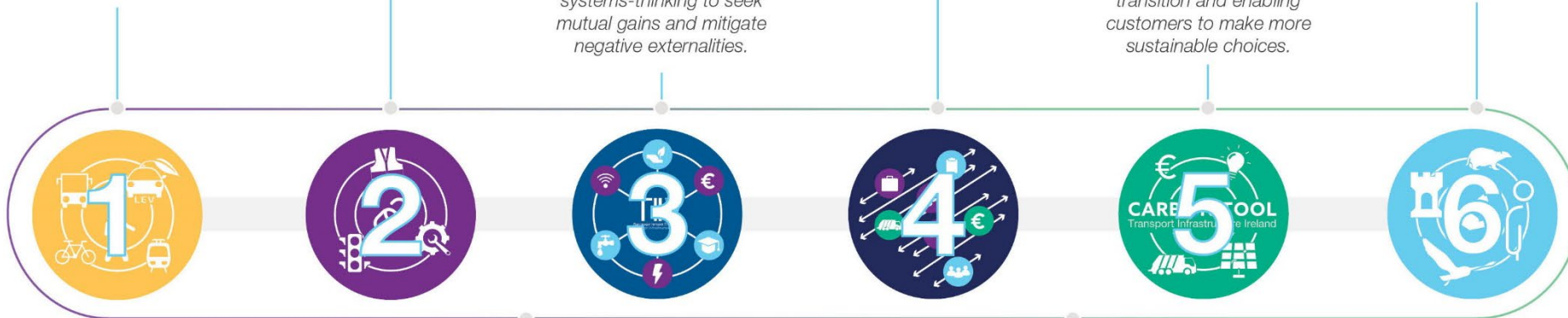
Deliver enhanced whole life-cycle value through impact and influence on stakeholders, partners and suppliers.

## Transition to net zero

Reduce the carbon impact of construction, operation and use of the transport network through responsible use of resources, reuse and repurposing, as well as driving the net-zero transition and enabling customers to make more sustainable choices.

## Create total value for society

Maintain and enhance the balanced delivery of economic, environmental and social value through robust planning, rigorous appraisal and decisions that prioritise sustainability.



Leadership, Collaboration and Partnership

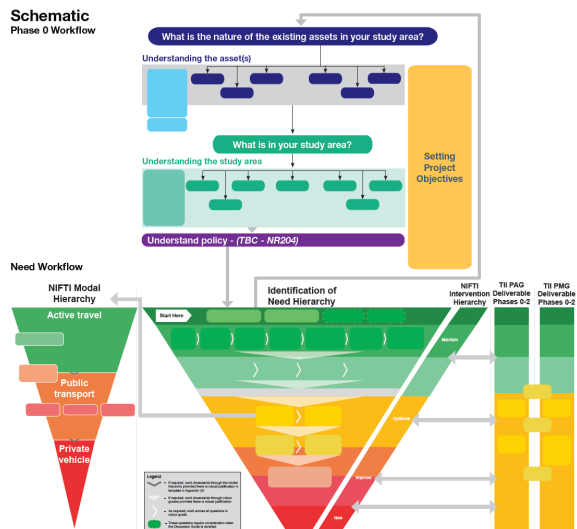
Working Together and Enabling People

# Elements of Guide

Flow charts for decision making – greatest impact at earlier phases

Workflows that ask the right questions at the right time

### Schematic Phase 0 Workflow



### Biodiversity

**How can we ensure biodiversity net gain in projects?**

**Identify opportunities to leave biodiversity in a better state than before.**

Projects should contribute to halting current biodiversity losses by applying the mitigation hierarchy in decreasing order of preference from avoid, to mitigate, to compensate. Each project should also seek overall biodiversity enhancement or net biodiversity gain which would sit outside of the mitigation hierarchy. This involves moving from a traditional approach of using the mitigation hierarchy to prevent significant effects to seeking opportunities within each project to create positive biodiversity outcomes.

Projects should create a biodiversity net gain legacy.

**Best practice examples**

- Through a thoughtful design process on the A30 Highways Limited (HLL) Project, UK, the project created beautiful, integrated, biodiverse and connected habitats. Collectively, these features provide an overall impact greater than the sum of the parts. An interdisciplinary team of landscape architects, ecologists, heritage consultants and water specialists developed a holistic environmental infrastructure strategy to achieve the vision and create a long lasting legacy of green infrastructure for the Cornish environment - *Asp for Highways England*
- Site-relevant garden beds (pergolas) at Laxappton Station car park in New South Wales, Australia remove pollutants from stormwater before it enters local waterways - *Transport for New South Wales, Australia*
- For the N23 Link to Abbey Project, existing native meadows were retained by planting indigenous non-native C20 ferns, an early meadow species that led native C20 ferns and they are native biodiversity. The rock only ferns fern species that are native ferns that require meadow habitat such as ground nesting birds.

Roads	Greenway	Active Travel	Project Type	Also related to	Project Phases							Measurable (Yes/No)	Unit	
					0	1	2	3	4	5	6			7
					Scope and Approval	Concept and Feasibility	Option Selection	Design and Environment	Statutory Process	Enabling and Procurement	Construction & Implementation	Close Out and Review		
1	Have you considered developing a biodiversity plan responsive to the local environment with a relevant expert?	Social value	✓	✓	✓	✓	✓	✓	✓	✓	✓	No	N/a	
2	Has the team mapped out areas for potential biodiversity gain within the project boundary in consultation with biodiversity/landscape expert from local authority?	Climate	✓	✓	✓	✓	✓	✓	✓	✓	✓	Yes	area of biodiversity net gain	
3	Have you considered low level planting of native species adjacent to infrastructure rather than typical grass mow? Consider maintenance strategy and soil characteristics when proposing native/seed planting.		✓	✓	✓	✓	✓	✓	✓	✓	✓	Yes	area (m2)	
4	Have pollinator friendly landscape specifications been considered, including consideration of All Ireland Pollinator Plan recommendations?	Biodiversity	✓	✓	✓	✓	✓	✓	✓	✓	✓	No	N/a	
5	Can new habitats be introduced/encouraged as part of the project?	Climate	✓	✓	✓	✓	✓	✓	✓	✓	✓	Yes	area (m2)	
6	Have you considered methodologies to avoid unwanted transfer of seeds in topsoil and water between parts of the site? (Note this is already a legal requirement for invasive species and the question is not relating to flood?)		✓	✓	✓	✓	✓	✓	✓	✓	✓	No	N/a	

Wayfinding to other relevant documents

Best Practice Case Studies

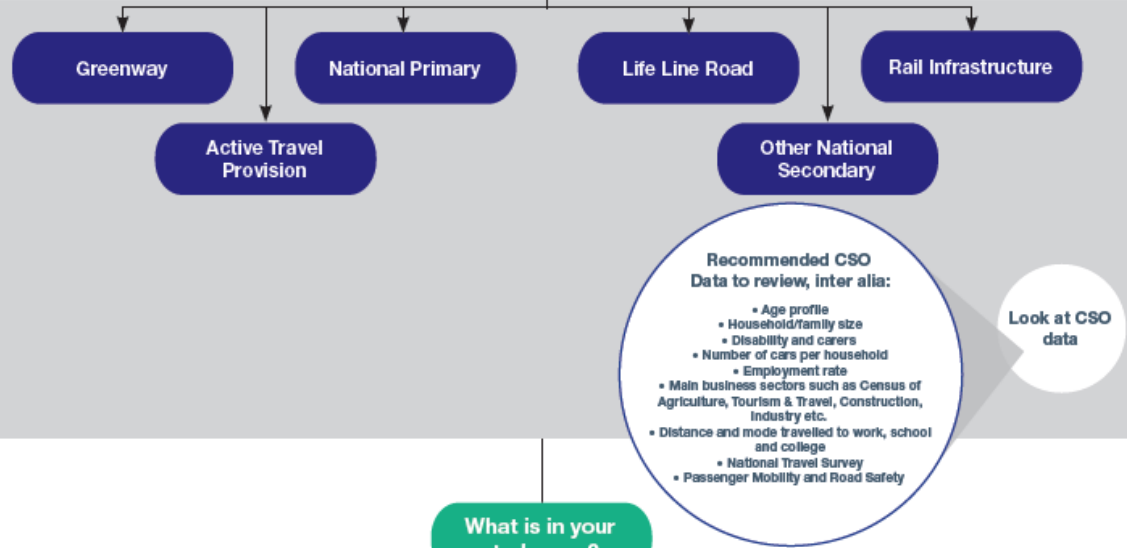


# Phase 0 Workflow

## Understanding the asset(s)

### Context to answer question for asset

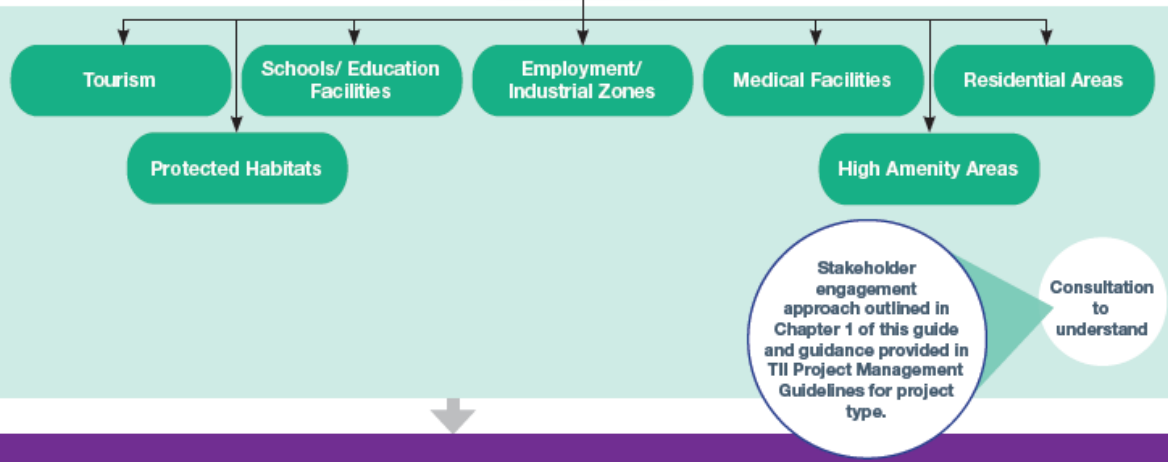
1. What is the function of the asset?
2. Does the asset have identified problems?
3. Who is using the asset, and for what purpose?
4. Who is not using the asset?
- 4a. Is there a gap in asset usage that needs to be addressed?
- 4b. Why is there a gap? Identify the range of potential users/existing users/user gap for the asset
5. Have you considered how usage/function may change in the future, including review of relevant strategies and plans?
6. Have you identified the amenities/schools/employment zones around the asset?



## Understanding the study area

### Context to answer question for study area

1. Are there existing or future planned facilities/amenities?
2. Have you identified opportunities as well as constraints in the study area?
3. Have you consulted a stakeholder group relevant to the study area features, and proportionate to the scale of intended problem alleviation?



## Understand policy

**To Identification of Need Hierarchy, Question:**  
What is (are) the initial identified problem(s)?

**From Identification of Need Hierarchy, Question:**  
What is the nature of the assets in your study area?

Setting Project Objectives based on identified problems from this analysis (iterative process)

# Workflows Phases 0-7

## Social Value

How can we maximise value of projects?

**Identify opportunities for social value creation at all project phases, and take action to realise these opportunities.**

Project decision-makers can maintain and enhance the balanced delivery of economic, environmental and social value through robust planning, rigorous appraisal and decisions that prioritise sustainability. The social, natural and financial costs and benefits of any project decision should be understood before action is taken accordingly.

Till land is thought of as public space for public good. The land is used to:

- Preserve and enhance the environment, and capture carbon emissions to help the fight against climate change; and
- Provide space for people to move safely and access essential services, to socialise and to connect with each other and the environment.

Social value in projects can be maximised through understanding community needs via engagement, and incorporating these into project decisions. Thus ensuring that project impacts are not just balanced, but actively create and preserve public value.

## Best practice examples

The Gosford Passing Loops Project in Australia installed a glow path comprising a non-toxic photoluminescent material. This aims to increase the feeling of safety within the community - *Transport for New South Wales, Australia (2017)*

In Killeagh, County Cork, footpath widening was used in transition zones to better connect local communities which resulted in improvements in social value, inclusivity and active travel in the townland. - *Transport Infrastructure Ireland, DN-GEO-03084*

Walking school buses are frequently used in the UK and US to promote active travel to and from school in a safe and organised way. They consist of a group of pupils with adults at the front and back, often wearing high-vis jackets to make them more visible. There are multiple benefits to this approach including improved safety due to better visibility and social benefits as children have more time to socialise with one another. - *Sustrans & Arup, 2022*

**Consultation with the community to understand their needs and provide infrastructure that meets these can enable such initiatives as this example.**

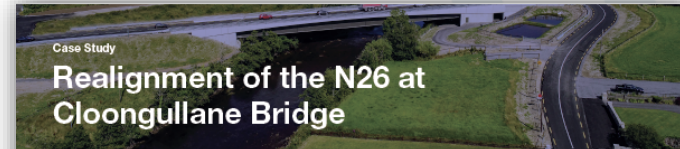
	Question/ Example	Project Type	Also related to	Project Phases							Measurable (Yes/No)	Unit	
				0 Scope and Appraisal	1 Concept and Feasibility	2 Option Selection	3 Design and Environment	4 Statutory Process	5 Enabling and Procurement	6 Construction & Implementation			7 Close Out and Review
1	Have you considered all potential user groups in the Stakeholders engagement plan? How?		Diversity & inclusion			✓	✓	✓	✓	✓	✓	No	N/a
2	Has a diversity and equality impact assessment or something similar been considered for the project?		Diversity & Inclusion		✓	✓	✓					No	N/a
3	Has engagement with all user groups been undertaken to capture lived experience, and seek solutions to potential barriers?		Community engagement, Diversity & Inclusion		✓	✓	✓	✓				No	N/a
4	Has a local apprenticeship/ upskilling scheme been considered for the construction stage of the project?								✓	✓		No	N/a
5	Has the project been examined to determine how it impacts on enhancing access to education and employment?			✓	✓	✓	✓	✓	✓	✓	✓	No	N/a
6	Have you considered the needs of non-motorised user links with other planned schemes such as safety, facilities, "vulnerable user needs, accessibility, inclusivity, in consideration of Local Authority plans, policies and objectives?"		Safety, diversity and inclusion	✓	✓	✓	✓	✓	✓	✓		No	N/a

\*VRU (vulnerable road user) definition: The VRU that need to be considered to "designing for road users", and are not limited to the following: pedestrians (old, young, those with mobility or sight impairment); cyclists; equestrians; motorcyclists, T1 Road Safety Audit Guidelines



# Case Studies

- Aim to inspire by showing examples of sustainability
- Provide a mechanism for best practice sharing





**Case Study**  
**Realignment of the N26 at Cloongullane Bridge**

**Project Overview**  
A 2km realignment of the N26 National Primary Road including a new 83m long clear span bridge crossing the River Moy, taking through-traffic from a 200-year-old stone arch bridge. The new bridge crosses the River Moy Special Area of Conservation (SAC), and comprises a single span over the River Moy with the abutments set back from the riverbanks to protect an alluvial woodland habitat.

**Sustainability Implementation:**

- To coincide with the official opening of the project, the local community and Mayo National Roads Office launched a joint publication entitled: "Cloongullane Bridge Past and Present" containing community reflections on the old bridge and a record of the new bridge from concept to completion.
- In a way, the construction of the new bridge gives the old bridge back to the community, as increasing traffic levels had made the old bridge uninviting for non-motorised users.
- The gathering of stories and memories of the old

<b>Project Name</b>	Realignment of the N26 at Cloongullane Bridge
<b>Project Type</b>	
<b>Project Location</b>	County Mayo, Ireland
<b>Project Stage/ TII Project Phase</b>	TII Phase 7 - Closeout & Review
<b>Client</b>	Mayo Council Council
<b>Designer/ Contractor</b>	Roughan & O'Donovan-AECOM / BAM Civil
<b>Completion Date</b>	July 2022

bridge at Cloongullane has observed  
centuries of progress for  
the new bridge will herald a new era  
and I commend and congratulate  
in its delivery. I especially  
to communities of Cloongullane,  
and Killasnoo who have had to put  
considerable disruption during the  
construction period. The old bridge will take  
a smaller role but its presence at the  
the East Mayo community will still be  
present. It will stand proudly over the River  
guardian of many memories and in  
with its beautiful surroundings.  
Colleary T.D.





Bonneagar Iompair Éireann  
Transport Infrastructure Ireland



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