

# Project Appraisal Balance Sheet

## Part A: Project Context



Date **14/04/2022**

Version No. **P03 OSR**

Project Title	<b>N72-N73 Mallow Relief Road</b>
PRS Reference Number	<b>CC/18/16482</b>
Project Phase	<b>Phase 2: Option Selection</b>
National Roads Office	<b>Cork National Roads Office</b>
TII Project Manager	<b>Eddie Murphy</b>
Project Description	<b>A Relief Road of Mallow Town, comprising circa 5km of Type 2 Single Carriageway with online Active travel facilities along its length and complemented with offline active travel facilities.</b>
Scheme Cost €m (TSB)	<b>NDP Cost Category A/B (€30M - €60M)</b>
What Are The Likely Sources of Non-Exchequer Funding	<b>None</b>
TII Growth Scenario	<b>TII Central Growth</b>
Appraisal Team Author	<b>Barry Transportation / Systra</b>
Design Team Reviewer	<b>Tom Cannon</b>
TII Engineering Inspector	<b>Obey Mhondera</b>
External Auditor	<b>TII</b>
Modelling Base Year	<b>2019</b>
Scheme Opening Year	<b>2027</b>
Reference Number of Nearest TII Traffic Monitoring Unit(s)	<b>TMU N73 010.0 E and TMU N72 120.0 E</b>

Note - This PABS should be completed with reference to the latest version of TII PAG Unit 7.1. Users should always check that the correct version is followed prior to undertaking the PABS.

Air Quality & Climate	Climate - Carbon Dioxide (CO <sub>2</sub> )				Quantitative Statement Parameter						
	Tonnes of CO <sub>2</sub> produced in the Do Minimum Scenario?				1,415,756						
	Tonnes of CO <sub>2</sub> produced in the Do Something Scenario?				1,418,845						
	Ratio of CO <sub>2</sub> produced in Do Something Scenario to Do Minimum Scenario				1.00						
	Greenhouse Gasses				Monetised Benefits (€m)						
	Value of change in emissions				-€ 0.2						
	Significance Criteria				Substantial Beneficial	Moderate Beneficial	Slight Beneficial	Negligible	Slight Adverse	Moderate Adverse	Substantial Adverse
	Number of Sensitive Locations Experiencing Impacts That Are:				0	0	0	2	0	0	0
	Index of Overall Change in Exposure				Large Negative Index	Medium Negative Index	Small Negative Index	Small Positive Index	Medium Positive Index	Large Positive Index	
	Nitrogen Dioxide (NO <sub>2</sub> )				○	○	○	●	○	○	
	Particulate Matter (PM <sub>10</sub> )				○	○	○	●	○	○	
	Quantitative Statement		Qualitative Statement								
<b>Slightly Positive</b>		There are 2 properties within 50m of the centreline of the proposed option. The existing air quality in the area is of very good quality and the option will not result in an exceedance of the air quality standards or pollutant concentrations that will be close to exceeding the air quality standard limit values. The air quality and climate impacts are likely to be slightly positive.									

Noise & Vibration	Sensitive Receptors		Quantitative Statement Parameter
	Number of Sensitive Receptors Requiring Mitigation (i.e. the three conditions have been satisfied) Per Kilometre		18.35
	Number of Sensitive Receptors Requiring Mitigation (i.e. the three conditions have been satisfied), But It Is Not Feasible To Mitigate Noise To The Required Level Per Kilometre		0
	Quantitative Statement	Qualitative Statement	
	<b>Slightly Negative</b>	There are 297 properties within 300m of the centreline of the proposed option. This option takes traffic away from the existing N72 / N73 alignment and the more densely populated areas around Mallow town. This will potentially result in a perceptible reduction in traffic noise level for residential locations within 100m of the N72 / N73 alignment. Further assessment of mitigation of sensitive receptors will be conducted in Phase 3. The noise and vibration impacts are	

Waste	Unacceptable Material		Quantitative Statement Parameter No. (m <sup>3</sup> )
	Quantity Of Unacceptable Material Class U1 To Be Disposed Of Off Site?		9,550
	Quantity Of Unacceptable Material Class U2 To Be Disposed Of Off Site?		0
	Quantity Of Unacceptable Material and Contaminated Land/Hazardous Waste To Be Left In Situ?		38,198
	Quantitative Statement	Qualitative Statement	
	<b>Slightly Negative</b>	The proposed option at preliminary design stage has an estimated excavation of approximately 238,739 m <sup>3</sup> (excluding topsoil). Reusability of 60%, treatability of 20% and U1 of 20% was assumed. Of the U1 material, 80% is proposed to be reused on site, with 20% disposed off site. Therefore, the landfill waste quantity is 9,550m <sup>3</sup> and is considered to be slightly negative. Figures will be further modified pending the results of future Site Investigation and further	

# Project Appraisal Balance Sheet

## Part B: Environment



Landscape & Visual Amenity (incl. Light)	Landscape & Visual Amenity (incl. Light)	Profound Positive	Significant Positive	Moderate Positive	Slightly Positive	Imperceptible	Slightly Negative	Moderate Negative	Significant Negative	Profound Negative	
	Number of Impacts That Are:	0	0	0	0	0	445	118	104	0	
		National Landscape Designation / Listing			County Landscape Designation / Listing			Other Areas of Significant Landscape Value/Amenity			
	Number of Profound / Significant Impacts On Sites Of:	0			0			1			
	Quantitative Statement	Qualitative Statement									
<b>Highly Negative</b>	The proposed option would have a negative impact on visual amenity but with slight positive effects on restoration of a linear amenity with local connectivity. This option has potential to impact negatively on the amenity offered by biodiversity and cultural heritage.										

Biodiversity - Flora & Fauna	Impact on Ecological Receptors	International Importance	National Importance	County Importance	Local Importance (Higher value)	Local Importance (Lower value)
	Number of Significant Positive Impacts On Ecological Receptors Of:	0	0	0	0	0
	Number of Significant Negative Impacts On Ecological Receptors Of:	0	0	0	2	0
	Quantitative Statement	Qualitative Statement				
	<b>Slightly Negative</b>	The proposed option crosses two ecological sites of local importance at Asnigrove and at Ballyvinter Lower. The impacts on these sites are considered to be slightly negative. The option has potential for indirect impacts on Blackwater SAC which are considered to be slightly negative. The impacts on breeding and wintering birds are also considered to be slightly negative. The option is likely to have moderately negative impacts on bats and barn owls; and neutral				

Agriculture	Impact on Agriculture Holdings	Significant Positive Impact	Moderate Positive Impact	Slightly Positive Impact	Imperceptible Impact	Slightly Negative Impact	Moderate Negative Impact	Significant Negative Impact	Profound Negative Impact	
	Impacts On An Agricultural Holdings That Are:	0	0	0	2	7	2	2	0	
	Quantitative Statement	Qualitative Statement								
	<b>Highly Negative</b>	The proposed option will have a significant impact on two dairy farms and one farmyard. The option will have two moderate impacts which include one dairy farm. The agricultural impacts are likely to be highly negative.								

Non-Agricultural Properties	Impact on Non-Agriculture Properties	Significant Positive Impact	Moderate Positive Impact	Slightly Positive Impact	Imperceptible Impact	Slightly Negative Impact	Moderate Negative Impact	Significant Negative Impact	Profound Negative Impact	
	Number of Impacts That Are:	1		1		1	1			
	Quantitative Statement	Qualitative Statement								
	<b>Slightly Negative</b>	The proposed option has a significant positive impact on public facilities by improving vehicle, cycling and pedestrian connectivity, and removing congestion from the town centre. The connectivity to the train station has a slightly positive impact on the Transport & Infrastructure. One dwelling and two gardens are part of the CPO lands resulting in a slightly negative impact on properties. 5 utility diversions and the protection of 4 crossings are required for the construction of the scheme resulting in a moderately negative impact. The negative impacts exceed the positives for this sub-criterion, hence the overall non-								

Architectural Heritage	Impact on Architectural Heritage	Significant Positive Impact	Moderate Positive Impact	Slightly Positive Impact	Imperceptible Impact	Slightly Negative Impact	Moderate Negative Impact	Significant Negative Impact	Profound Negative Impact	
	Number of Impacts That Are:				0	1				
	Number of Impacts On Sites Of National Importance That Are:				0	1				
	Quantitative Statement	Qualitative Statement								
	<b>Slightly Negative</b>	The Option C corridor intersects one NIAH registered site; it has no notable impact on the settings of architectural sites. (NB CURRENTLY IN REVIEW PROCESS WITH K HANLEY)								

# Project Appraisal Balance Sheet

## Part B: Environment



Impact on Archaeological & Cultural Heritage		Significant Positive Impact	Moderate Positive Impact	Slightly Positive Impact	Imperceptible Impact	Slightly Negative Impact	Moderate Negative Impact	Significant Negative Impact	Profound Negative Impact	
Archaeological & Cultural Heritage	Number of Impacts That Are:					4	2			
	Number Of Impacts On Sites Of National Importance That Are:						2			
	Quantitative Statement	Qualitative Statement								
	<b>Moderately Negative</b>	Option C corridor has a potential direct impact on six archaeological monuments (four PGCs and two other RMP constraint zones); it has a potential moderate impact on the setting of two upstanding archaeological monuments. The Option C corridor intersects one NIAH registered site; it has no notable impact on the settings of architectural sites. (NB CURRENTLY IN REVIEW PROCESS WITH K HANLEY)								
Soils & Geology		Profound Positive	Significant Positive	Moderate Positive	Slightly Positive	Imperceptible	Slightly Negative	Moderate Negative	Significant Negative	Profound Negative
Soils & Geology	Number of Impacts That Are:	0	0	0	0	3	0	0	0	0
	Quantitative Statement	Qualitative Statement								
	<b>Neutral</b>	The impact of proposed option is based on length of route options over massively bedded limestone bedrock which could potentially contain unidentified karst features, the length of route options over soft soils and encountering historic disused quarry sites, and licensed IPPC licenced facilities. Overall the soils and geology impacts are likely to be neutral.								
Hydrology		Profound Positive	Significant Positive	Moderate Positive	Slightly Positive	Imperceptible	Slightly Negative	Moderate Negative	Significant Negative	Profound Negative
Hydrology	Number of Impacts That Are:	0	0	0	0	0	2	2	2	0
	Quantitative Statement	Qualitative Statement								
	<b>Moderately Negative</b>	The impacts of proposed option are based on the numbers of watercourse crossing, watercourse diversions and potential impacts on flood plains. The hydrological impacts are likely to be moderately negative.								
Hydrogeology		Profound Positive	Significant Positive	Moderate Positive	Slightly Positive	Imperceptible	Slightly Negative	Moderate Negative	Significant Negative	Profound Negative
Hydrogeology	Number of Impacts That Are:	0	0	0	0	0	2	1	1	0
	Quantitative Statement	Qualitative Statement								
	<b>Slightly Negative</b>	The proposed option has significant negative impacts on groundwater supplies (one public supply well) and moderate negative impacts on groundwater vulnerability. The impacts due to earthworks cuttings and the impacts on bedrock aquifers are considered to be slightly negative. Overall, the hydrogeological impacts are likely to be slightly negative.								
Overall Scale of Impact		Amended Scale of Impact								
<b>Slightly Negative</b>										

# Project Appraisal Balance Sheet

## Part C: Safety, Physical Activity, Economy, Accessibility and Social Inclusion and Integration Input Sheet



Safety	Collision Reduction		Total Collision Reduction	Casualty Reduction			Value Of Accident Reduction (€m)				
				Fatal	Serious	Minor					
		What is the Collision/Casualty Reduction Over 30 Years?	156.6	4	11.2	223.8	€ 8.6				
		Quantitative Statement	Qualitative Statement								
Highly Positive	The removal of traffic, especially through HGV traffic, from Mallow Town centre will result in a safer environment for both vulnerable road users and other traffic										
Safety	Security		Don't Know / NA	Highly Negative	Moderately Negative	Slightly Negative	Neutral	Slightly Positive	Moderately Positive	Highly Positive	
		What is the Expected Impact Of The Project On The Security Of Road Users?	○	○	○	○	○	○	●	○	
		Quantitative Statement	Qualitative Statement								
		Moderately Positive	The segregated pedestrian/cycle facilities along the mainline and active travel corridors being provided as part of the scheme will have a moderately positive impact on the security of vulnerable road users.								
Safety - Overall Scale of Impact			Safety - Amended Scale of Impact								
Highly Positive											

Physical Activity	Ambience		Don't Know / NA	Highly Negative	Moderately Negative	Slightly Negative	Neutral	Slightly Positive	Moderately Positive	Highly Positive	
		What is the expected impact of the project upon journey ambience?	○	○	○	○	○	○	○	○	●
		Quantitative Statement	Value of Benefit (€m)		Qualitative Statement						
		Highly Positive	€ 2.5	The segregated pedestrian/cycle facilities along the mainline and active travel facilities being provided as part of the scheme will have a highly positive impact on journey ambience, i.e. journey time and journey quality.							
Physical Activity	Absenteeism		Don't Know / NA	Highly Negative	Moderately Negative	Slightly Negative	Neutral	Slightly Positive	Moderately Positive	Highly Positive	
		What is the impact of the project on absenteeism?	○	○	○	○	○	○	○	●	○
		Quantitative Statement	Value of Benefit (€m)		Qualitative Statement						
		Moderately Positive	€ 0.0	The segregated pedestrian/cycle facilities along the mainline and active travel facilities being provided as part of the scheme will have a moderately positive impact on absenteeism (c. €43K in benefits).							
Physical Activity	Reduced Health Risk		Don't Know / NA	Highly Negative	Moderately Negative	Slightly Negative	Neutral	Slightly Positive	Moderately Positive	Highly Positive	
		What is the impact of the project on the reduction in relative risk for cyclists and walkers?	○	○	○	○	○	○	○	○	●
		Quantitative Statement	Value of Benefit (€m)		Qualitative Statement						
		Highly Positive	€ 1.1	The segregated pedestrian/cycle facilities along the mainline and active travel facilities being provided as part of the scheme encourage more users and will have a highly positive impact on the reduction of health risk.							
Physical Activity - Overall Scale of Impact			Physical Activity - Amended Scale of Impact								
Highly Positive											

# Project Appraisal Balance Sheet

## Part C: Safety, Physical Activity, Economy, Accessibility and Social Inclusion and Integration Input Sheet



Economy	Efficiency and Effectiveness		Commuting (€m)	Business (€m)	Other (€m)	Indirect Tax (€m)	Residual Value (€m)	Total Benefits (€m)				
		What Are The Benefits Of The Scheme?	€ 17.0	€ 3.8	-€ 0.8	€ 1.9	€ 19.6	€ 41.6				
		Quantitative Statement										
		The BCR for the option is + ve										
Economy	Wider Economic Impacts	What Impact Will The Project Have On....	Don't Know / NA	Highly Negative	Moderately Negative	Slightly Negative	Neutral	Slightly Positive	Moderately Positive	Highly Positive		
		Increase Competition In Markets?										
		Lead To Efficiencies In Clustering Of Economic Activity? (Agglomeration Benefits)										
		Attract Inward Investment?										
		Expand Local Labour Supply?										
		Contribute To Urban Regeneration										
		Quantitative Statement		Qualitative Statement								
		Slightly Positive		The option has a slightly positive impact score as the resulting reduction in through traffic and HGV's will attract inward investment and urban regeneration.								
Economy	Funding Impacts	What Impact Will The Project Have On....	Don't Know / NA	None	< 10%	10%-30%	> 30%					
		What Percentage Of Non-Exchequer Funding Is The Project Expected To Receive?										
		Quantitative Statement		Qualitative Statement								
		Neutral		The proposed Scheme currently does not have any committed non-exchequer funding and at this stage for the purposes of the Option Selection Process, it is assumed that all options would be 100% Irish exchequer funded.								
Economy - Overall Scale of Impact			Economy - Amended Scale of Impact									
Slightly Positive												

# Project Appraisal Balance Sheet

## Part C: Safety, Physical Activity, Economy, Accessibility and Social Inclusion and Integration Input Sheet



Accessibility and Social Inclusion	Deprived Areas	What Impact Will The Project Have On.....	Don't Know / NA	Highly Negative	Moderately Negative	Slightly Negative	Neutral	Slightly Positive	Moderately Positive	Highly Positive	
		Area Based Childhood Programme?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
		Rural Social Scheme?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
		Quantitative Statement	Qualitative Statement								
		Neutral	The option has a neutral impact score as it will have minimal impact on trips to and from areas of disadvantage.								
Accessibility and Social Inclusion	Vulnerable Groups	What Impact Will The Project Have On.....	Don't Know / NA	Highly Negative	Moderately Negative	Slightly Negative	Neutral	Slightly Positive	Moderately Positive	Highly Positive	
		Access To Employment or Vital Infrastructure?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
		Quantitative Statement	Qualitative Statement								
		Slightly Positive	The scheme will provide improved strategic road infrastructure providing safer and enhanced accessibility to the road network allowing for more efficient and safer accessibility for Vulnerable Groups to Mallow. The option has a slightly positive impact score as it greatly improves accessibility to Mallow General Hospital.								
		Accessibility & Social Inclusion - Overall Scale of Impact		Accessibility & Social Inclusion - Amended Scale of Impact							
Slightly Positive											



# Project Appraisal Balance Sheet

## Part C: Safety, Physical Activity, Economy, Accessibility and Social Inclusion and Integration Input Sheet



Integration	Transport Integration	What Impact Will The Project Have On.....	Don't Know / NA	Highly Negative	Moderately Negative	Slightly Negative	Neutral	Slightly Positive	Moderately Positive	Highly Positive	
		Connectivity of the Strategic Road Network?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
		Connectivity Between Transport Modes?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
		Sustainable Transport Networks?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
		Access to Other Transport Infrastructure Such As Ports and Airports?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
		Quantitative Statement	Qualitative Statement								
	Moderately Positive	The option has a moderately positive impact score as it improves the strategic road network, bypassing Mallow, it provides better connectivity to the train station and it includes sustainable pedestrian and cycle facilities.									
	Land Use Integration	What Impact Will The Project Have On.....	Don't Know / NA	Highly Negative	Moderately Negative	Slightly Negative	Neutral	Slightly Positive	Moderately Positive	Highly Positive	
		Objectives of Local and County Development Plans?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
		Strategic Connectivity for High Value Trips?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Urban Sprawl?		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Quantitative Statement		Qualitative Statement									
Moderately Positive		The option has a moderately positive impact score as it is specifically outlined as a priority in local and County Development Plans, it removes the town congestion from long east west trips, and doesn't encourage urban sprawl.									
Geographic Integration	What Impact Will The Project Have On.....	Don't Know / NA	Highly Negative	Moderately Negative	Slightly Negative	Neutral	Slightly Positive	Moderately Positive	Highly Positive		
	Cross Border Connectivity?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		
	The Trans European Transport network?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		
	Quantitative Statement	Qualitative Statement									
	Neutral	The option has a neutral impact considering the proximity and scale of the project.									
Other Government Policy Integration	How Will This Project Impact On The Wider Objectives of....	Don't Know / NA	Highly Negative	Moderately Negative	Slightly Negative	Neutral	Slightly Positive	Moderately Positive	Highly Positive		
	National Spatial Strategy/National Planning Framework	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>		
	Quantitative Statement	Qualitative Statement									
	Highly Positive	The option has a highly positive score considering that it is set out in the National Development Plan.									
<b>Integration - Overall Scale of Impact</b>		<b>Integration - Amended Scale of Impact</b>									
<b>Moderately Positive</b>											



# Project Appraisal Balance Sheet

## Part D: PABS Summary Table



Project Title		PRS Reference Number	CC/18/16482	Project Description					Scheme Cost (€m)	Date	
N72-N73 Mallow Relief Road		<b>Modelling Base Year</b>	2019	A Relief Road of Mallow Town, comprising circa 5km of Type 2 Single Carriageway with online Active travel facilities along its length and complemented with offline active travel facilities.					NDP Cost Category A/B (€30M - €60M)	14/04/2022	
		<b>Scheme Opening Year</b>	2027								
Criteria	Quantitative Statement	Summary of Keys Impacts (Qualitative Assessment)			Quantitative Assessment					Monetised (€m over 30 yrs)	
Environment	Air Quality and Climate	Slightly Positive	There are 2 properties within 50m of the centreline of the proposed option. The existing air quality in the area is of very good quality and the option will not result in an exceedance of the air quality standards or pollutant concentrations that will be close to exceeding the air quality standard limit values. The air quality and climate impacts are likely to be slightly positive.			Additional CO <sub>2</sub> (Tonnes)					3089
						Ratio of CO <sub>2</sub> Do-Min/Do-Some					1.00
	Noise and vibration	Slightly Negative	There are 297 properties within 300m of the centreline of the proposed option. This option takes traffic away from the existing N72 / N73 alignment and the more densely populated areas around Mallow town. This will potentially result in a perceptible reduction in traffic noise level for residential locations within 100m of the N72 /			Index of Overall Change in Exposure NO <sub>2</sub>					Small Positive Index
						Index of Overall Change in Exposure PM <sub>10</sub>					Small Positive Index
	Waste	Slightly Negative	The proposed option at preliminary design stage has an estimated excavation of approximately 238,739 m <sup>3</sup> (excluding topsoil). Reusability of 60%, treatability of 20% and U1 of 20% was assumed. Of the U1 material, 80% is proposed to be reused on site, with 20% disposed off site. Therefore, the landfill waste quantity is 9,550m <sup>3</sup> and is considered to be slightly negative. Figures will be further modified pending the results of future Site Investigation and further refinement of the design at Phase 3.			Unacceptable Material/Contaminated Land/Hazardous Waste to be ...					
						Disposed of Off Site					38,198
	Landscape & Visual Amenity (incl. Light)	Highly Negative	The proposed option would have a negative impact on visual amenity but with slight positive effect			No. of Sensitive Receptors Requiring Mitigation					18
						No. of Sensitive Receptors Requiring Mitigation (Not Feasible)					0
	Biodiversity, Flora & Fauna	Slightly Negative	The proposed option crosses two ecological sites of local importance at Ashgrove and at Ballyvinner Lower. The impacts on these sites are considered to be slightly negative. The option has potential for indirect impacts on Blackwater SAC which are considered to be slightly negative. The impacts on breeding and wintering birds are also considered to be slightly negative. The option is likely to have moderately negative impacts on bats and barn owls; and neutral impacts on Peregrine Falcon. Overall, the biodiversity impacts are likely to be slightly negative.			National					0
						County					0
	Agriculture	Highly Negative	The proposed option will have a significant impact on two dairy farms and one farmyard. The option will have two moderate impacts which include one dairy farm. The agricultural impacts are likely to be highly negative.			Impact on Agricultural Holdings that are:					
						Sig P Mod P Sli P I Sli N Mod N Sig N PN					0 0 0 2 7 2 2 0
	Non-Agricultural Properties	Slightly Negative	The proposed option has a significant positive impact on public facilities by improving vehicle, cycling and pedestrian connectivity, and removing congestion from the town centre. The connectivity to the train station has a slightly positive impact on the Transport & Infrastructure. One dwelling and two gardens are part of the CPO lands resulting in a slightly negative impact on properties. 5 utility diversions and the protection of 4 crossings are required for the construction of the scheme resulting in a moderately negative impact. The negative impacts exceed the positives for this sub-criterion, hence the overall non-agricultural impact of the option is considered			Impact on Non-Agricultural Properties					
Sig P Mod P Sli P I Sli N Mod N Sig N PN						1 0 1 0 1 1 0 0					
Architectural Heritage	Slightly Negative	The Option C corridor intersects one NIAH registered site; it has no notable impact on the settings of architectural sites. (NB CURRENTLY IN REVIEW PROCESS WITH K HANLEY)			No. of Impacts That Are:						
					No. of Impacts on Sites of National Importance That Are:					0 0 0 0 1 0 0 0	
Archaeological and Cultural Heritage	Moderately Negative	Option C corridor has a potential direct impact on six archaeological monuments (four PGCs and two other RMP constraint zones); it has a potential moderate impact on the setting of two upstanding archaeological monuments. The Option C corridor intersects one NIAH registered site; it has no notable impact on the settings of architectural sites. (NB CURRENTLY IN REVIEW)			No. of Impacts That Are:						
					No. of Impacts on Sites of National Importance That Are:					0 0 0 0 4 2 0 0	
Soils & Geology	Neutral	The impact of proposed option is based on length of route options over massively bedded limestone bedrock which could potentially contain unidentified karst features, the length of route options over soft soils and encountering historic disused quarry sites, and licensed IPPC licenced facilities. Overall the soils and geology impacts are likely to be neutral.			Number Of Impacts That Are:						
					PP Sig P Mod P Sli P I Sli N Mod N Sig N PN					0 0 0 0 3 0 0 0 0	
Hydrology	Moderately Negative	The impacts of proposed option are based on the numbers of watercourse crossing, watercourse diversions and potential impacts on flood plains. The hydrological impacts are likely to be moderately negative.			Number Of Impacts That Are:						
					PP Sig P Mod P Sli P I Sli N Mod N Sig N PN					0 0 0 0 0 2 2 2 0	
Hydrogeology	Slightly Negative	The proposed option has significant negative impacts on groundwater supplies (one public supply well) and moderate negative impacts on groundwater vulnerability. The impacts due to earthworks cuttings and the impacts on bedrock aquifers are considered to be slightly negative. Overall, the hydrogeological impacts are likely to be slightly negative.			Number Of Impacts That Are:						
					PP Sig P Mod P Sli P I Sli N Mod N Sig N PN					0 0 0 0 0 2 1 1 0	
Safety	Collision Reduction	Highly Positive	The removal of traffic, especially through HGV traffic, from Mallow Town centre will result in a safer environment for both vulnerable road users and other traffic			Collision Reduction Over 30 Years					Value of Change (€m)
						Collisions Casualties Fatal Serious Minor					156.6 239 4 11.2 223.8
Physical Activity	Security	Moderately Positive	The segregated pedestrian/cycle facilities along the mainline and active travel corridors being provided as part of the scheme will have a moderately positive impact on the security of vulnerable road users.								
Physical Activity	Ambience	Highly Positive	The segregated pedestrian/cycle facilities along the mainline and offline active travel facility being provided as part of the scheme will have a highly positive impact on journey ambience, i.e. journey time and journey quality.								€2.5
											€0.0
Physical Activity	Absenteeism	Moderately Positive	The segregated pedestrian/cycle facilities along the mainline and offline active travel facilities being provided as part of the scheme will have a moderately positive impact on absenteeism (c.€43K in benefits).								€1.1
Physical Activity	Reduced Health Risk	Highly Positive	The segregated pedestrian/cycle facilities along the mainline and offline active travel facility being provided as part of the scheme encourage more users and will have a highly positive impact on the reduction of health risk.								
Economy	Transport Efficiency and Effectiveness		The BCR for the option is + ve			Commutate Business Other Value of Change					€17.0 €3.8 -€0.8 €41.6
						Indirect Tax Res. Value					€1.9 €19.6
	Wider Economic Impact	Slightly Positive	The option has a slightly positive impact score as the resulting reduction in through traffic and HGV's will attract inward investment and urban regeneration.			Slightly Positive					
Expected Percentage of Non-Exchequer Funding						Neutral					
Funding	Neutral	The proposed Scheme currently does not have any committed non-exchequer funding and at this stage for the purposes of the Option Selection Process, it is assumed that all options would be 100% Irish exchequer funded.			Impact on Deprived Areas					Neutral	
					Impact on Access to Employment or Vital Infrastructure					Slightly Positive	
Accessibility and Social Inclusion	Deprived Geographic Areas	Neutral	The option has a neutral impact score as it will have minimal impact on trips to and from areas of disadvantage.			Moderately Positive					
						Moderately Positive					
Accessibility and Social Inclusion	Vulnerable Groups	Slightly Positive	The scheme will provide improved strategic road infrastructure providing safer and enhanced accessibility to the road network allowing for more efficient and safer accessibility for Vulnerable Groups to Mallow. The option has a slightly positive impact score as it greatly improves accessibility to Mallow General Hospital.			Neutral					
						Neutral					
Integration	Transport Integration	Moderately Positive	The option has a moderately positive impact score as it improves the strategic road network, bypassing Mallow, it provides better connectivity to the train station and it includes sustainable pedestrian and cycle facilities.			Highly Positive					
						Highly Positive					
Integration	Land-Use Integration	Moderately Positive	The option has a moderately positive impact score as it is specifically outlined as a priority in local and County Development Plans, it removes the town congestion from the east-west axis, and doesn't encourage urban sprawl.			Moderately Positive					
						Moderately Positive					
Integration	Geographical Integration	Neutral	The option has a neutral impact considering the proximity and scale of the project.			Neutral					
						Neutral					
Integration	Integration with Other Government Policies	Highly Positive	The option has a highly positive score considering that it is set out in the National Development Plan.			Highly Positive					
						Highly Positive					
Overall Scale of Impact	Environmental	Slightly Negative	Economy	Slightly Positive	Summary of Benefits						
	Safety	Highly Positive	Accessibility & Social Incl.	Slightly Positive	Present Value of Benefits (PVB) €54 Net Present Value (NPV) €24						
	Physical Activity	Highly Positive	Integration	Moderately Positive	Present Value of Costs (PVC) €30 Benefit to Cost Ratio (BCR) + ve						