

N3 Virginia Bypass

Option Selection Report Volume 7 Project Appraisal Balance Sheet



May 2023

Overarching Structure of Option Selection Report

Volume Ref. No. & Title	Contents
Volume 0 – Executive Summary	
Volume 1 – Main Report	
Volume 2 – Drawings	Part A – Corridor Drawings Part B – Constraints and Environmental Drawings
Volume 3 – Constraints Study Report	Main Report
Volume 4 – Stage 1 Assessment Appendices	Part A – Not Used Part B – Assessment Scoring Matrix
Volume 5 – Stage 2 Environmental Appraisal Report	Main Report & Associated Appendices
Volume 6 – Engineering Appendices	Part A – Assessment of Alternatives Part B – Traffic Modelling Report Part C – Not Used Part D – Not Used Part E – RSA Stage F Part 1 Report Part F – RSA Stage F Part 2 Report Part G – Road Safety Impact Assessment Part H – Geotechnical SOI & PSSR
Volume 7 – Project Appraisal Balance Sheet (PABS)	PABS

Project Appraisal Balance Sheet

Part A: Project Context



Date: **19/07/2022**
Version No.: **C01 OSR**

Project Title	N3 Virginia Bypass
PRS Reference Number	CN/19/18686
Project Phase	Phase 2: Option Selection
National Roads Office	Cavan County Council, Road Design Office
TII Project Manager	Patrick Duffy
Project Description	A bypass of Virginia Town, comprising circa 14.5km of Type 2 Dual Carriageway, with Link roads north and south of Virginia and with online active travel facilities along its length.
Scheme Cost €m (TSB)	NDP Cost Category C (upper end of middle third of NDP cost range)
What Are The Likely Sources of Non-Exchequer Funding	None
TII Growth Scenario	TII Central Growth
Appraisal Team Author	Barry Transportation / Systra
Design Team Reviewer	Tom Cannon
TII Engineering Inspector	Vishal Chintapalli
External Auditor	
Modelling Base Year	2020
Scheme Opening Year	2028
Reference Number of Nearest TII Traffic Monitoring Unit(s)	TMU N03 070.0 N (on N3 between Maghera and Derver)

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 ₂)					Quantitative Statement Parameter					
	Tonnes of CO ₂ produced in the Do Minimum Scenario?					2,548,306					
	Tonnes of CO ₂ produced in the Do Something Scenario?					2,628,611					
	Ratio of CO ₂ produced in Do Something Scenario to Do Minimum Scenario					1.03					
	Greenhouse Gasses					Monetised Benefits (€m)					
	Value of change in emissions					-€ 0.5					
	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	4	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 ₂)				○	○	○	○	●	○	
	Particulate Matter (PM ₁₀)				○	○	○	○	●	○	
	Quantitative Statement		Qualitative Statement								
Slightly Positive		Based on the elements of Option Selection outlined in Guidelines for the Treatment of Air Quality in National Road Schemes during the Planning and Construction of National Road Schemes (Revised May 2011), in terms of the Index of Overall NOx and PM10 Exposure, the Preferred Option may be deemed to be Option A. Option C is the 2nd most preferred option. Option Cv2 is the 3rd most preferred option. Option D is the 4th most preferred option. In terms of the Index of Overall NOx and PM10 Exposure, Option Cv1, Option E and Option Ev1 could be rated as the worst ranked options. In terms of the TII Carbon Tool for lifecycle carbon emissions for each proposed options, Option E is preferred with Option B least preferred. However, there is relatively little difference between any of the proposed options in comparison to the total greenhouse gas emissions in Ireland in 2019 of 59,777.6 kt CO2 equivalent.									

Noise & Vibration	Sensitive Receptors		Quantitative Statement Parameter
	Number of Sensitive Receptors Requiring Mitigation (i.e. the three conditions have been satisfied) Per Kilometre		80
	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		
	Quantitative Statement	Qualitative Statement	
Highly Negative	There are 369 properties within 300m of the centreline of the proposed option. This option takes traffic away from the existing N3 alignment and Virginia town. Further assessment of mitigation of sensitive receptors will be conducted in Phase 3. The noise and vibration impacts are likely to be highly negative.		

Waste	Unacceptable Material		Quantitative Statement Parameter No. (m ³)
	Quantity Of Unacceptable Material Class U1 To Be Disposed Of Off Site?		127,098
	Quantity Of Unacceptable Material Class U2 To Be Disposed Of Off Site?		500
	Quantity Of Unacceptable Material and Contaminated Land/Hazardous Waste To Be Left In Situ?		0
	Quantitative Statement	Qualitative Statement	
Slightly Negative	The proposed option at preliminary design stage has an estimated excavation of approximately 1.4 million m3 excluding topsoil (earthworks cuttings plus excavations below earthworks outline). 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 127,098 m3 and is considered to be slightly negative. The volume of unacceptable material (Class U2) has been estimated at 500m3 and is also 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.		

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	96	687	147	53	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			1			1			
	Quantitative Statement	Qualitative Statement									
Highly Negative	This option would impact negatively on the highly sensitive northern portion of this study area where it runs parallel to the Blackwater [Kells], a river corridor of scenic value and amenity potential. This would be the option that has the potential of affecting the views of a high number of receptors due to its proximity to the town of Virginia. The option would be visible from Bruse Hill and Murmod Hill reducing the amenity value of these features. The potential impact on the remainder of this option corridor would be low.										

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	6	2	0
	Quantitative Statement	Qualitative Statement				
	Moderately Negative	The proposed option crosses six ecological sites of potential county importance and two ecological sites of local importance. These impacts are considered to be moderately negative. The option has potential for indirect impacts on Lough Ramor pNHA and River Boyne and River Blackwater SAC/SPA, which are considered to be slightly negative. The option is likely to have moderately negative impacts on bats, and breeding and wintering birds.				

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	6	27	33	6	0	
	Quantitative Statement	Qualitative Statement								
	Highly Negative	The proposed option alignment will negatively impact on 72 agricultural properties. The direct impact on these properties is deemed to be significant on six, moderate on 33, slight on 27 and not significant on six properties. One farmhouse will be acquired under the CPO and three farmyards will be negatively impacted. There will be a significant negative impact on one dairy farm enterprise. Overall, there is a Highly Negative impact on agriculture.								

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:	0	1	0	0	2	3	0	0	
	Quantitative Statement	Qualitative Statement								
	Slightly Negative	The proposed option has a moderately positive impact on public facilities by improving vehicle, cycling and pedestrian connectivity, and removing congestion from the town centre. One dwelling and eight gardens are part of the CPO lands resulting in a moderately negative impact on properties. 3 utility diversions and the protection of 5 crossings are required for the construction of the scheme resulting in a moderately negative impact. The option passes through 1.64 km of forestry along its length, resulting in moderate negative impacts. The options results in slightly negative impacts on zoned development lands, and transport and infrastructure. The negative impacts exceed the positives for this sub-criterion, hence the overall non-agricultural impact of the option is considered to be slightly negative.								

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:									
	Number of Impacts On Sites Of National Importance That Are:									
	Quantitative Statement	Qualitative Statement								
	Neutral	Architectural, Archaeological and Cultural Heritage Impacts assessed together and included in the next heading.								

Project Appraisal Balance Sheet

Part B: Environment



Archaeological & Cultural Heritage	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
	Number of Impacts That Are:	0	0	0	6	17	8	1	0
	Number Of Impacts On Sites Of National Importance That Are:	0	0	0	1	0	0	0	0
	Quantitative Statement	Qualitative Statement							
Moderately Negative	Significant impact on a well defined (but denuded) recorded ringfort CV039-013---; alignment footprint likely to impact in part. Moderate impacts on 5 no. recorded archaeological sites, 3 no. recorded architectural heritage sites, including a farmhouse, Cornashesk demesne lands and gate-lodge. Slight impacts relate to 13 no. recorded archaeological sites >75m from centreline, two recorded church (architectural heritage) sites, and two unrecorded architectural heritage sites: a former mill site and Murmod bridge. Imperceptible impacts relate to four previously excavated archaeological sites, two unrecorded architectural heritage sites and the National Monument of Loughcrew/Slieve na Calliagh archaeological complex. It is also noted that a total of eight areas of archaeological potential at river/water crossing points have been identified, including the River Blackwater, which have potential profound levels of impact on any potential sub-surface unrecorded archaeological remains (area of heightened archaeological sensitivities), and another area of archaeological potential noted during field survey that is identified as having slight level of impact. Overall the option traverses within two broad areas of potential cultural heritage note within the study area and runs close to Lisgrea Lough at the northern portion (heightened sensitivity for sub-surface archaeological remains). Overall this option is deemed moderately negative.								

Soils & Geology	Soils & Geology	Profound Positive	Significant Positive	Moderate Positive	Slightly Positive	Imperceptible	Slightly Negative	Moderate Negative	Significant Negative	Profound Negative	
	Number of Impacts That Are:	0	0	1	1	3	2	2	1	0	
	Quantitative Statement	Qualitative Statement									
	Slightly Negative	The proposed option has significant negative impacts on aggregate potential (resource sterilisation), moderate negative impacts on geomorphology and the geoheritage site at Bruse Hill and slightly negative impacts on soft soils and landfills and contaminated sites. The option has one slightly positive impact on pits and quarries, and one moderately positive impact on aggregate potential (reusability). The impacts on karst features, bedrock geology and licenced facilities are neutral. It is overall ranked as slightly negative for soils and geology.									

Hydrology	Hydrology	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	12	7	0	0	
	Quantitative Statement	Qualitative Statement									
	Slightly Negative	The impacts of proposed option are based on the numbers of watercourse crossing, watercourse diversions and potential impacts on flood plains. The assessment also takes into account the likely improvement in water quality due to the installation of a positive drainage scheme. The hydrological impacts are likely to be minor or slightly negative.									

Hydrogeology	Hydrogeology	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	3	0	1	0	
	Quantitative Statement	Qualitative Statement									
	Slightly Negative	The proposed option has significant negative impacts on groundwater vulnerability. The impacts due to earthworks cuttings, and the impacts on bedrock aquifers and Groundwater Dependent Terrestrial Ecosystems are considered to be slightly negative. Overall, the hydrogeological impacts are likely to be slightly negative.									

Overall Scale of Impact	Amended Scale of Impact
Moderately Negative	

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?	463	21	72	370	€ 35.3				
		Quantitative Statement	Qualitative Statement								
Highly Positive	Proposed bypass will follow a safer alignment and remove approx. 80% of traffic along existing N3 (with a high collision rate), including removal of HGV traffic from within Virginia Town.										
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?	<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"/>
		Quantitative Statement	Qualitative Statement								
		Highly Positive	Segregated pedestrian/cycle facilities along mainline and links provided, with approx. 80% reduction of traffic from the existing N3, including HGVs from within Virginia, will greatly enhance safety and security of VRUs.								
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?	<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"/>
		Quantitative Statement	Value of Benefit (€m)	Qualitative Statement							
		Moderately Positive	The VRU facilities along the proposed scheme will have good connectivity to existing footway and walking routes and with the removal of significant traffic, including HGVs, from Virginia Town; the option will offer safer facilities and will encourage recreational activity.								
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?	<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"/>
		Quantitative Statement	Value of Benefit (€m)	Qualitative Statement							
		Moderately Positive	Segregated pedestrian/cycle facilities along the mainline and links provided as part of the scheme are likely to result in increased physical activity which in turn is likely to have a beneficial effect on work absenteeism.								
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?	<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"/>
		Quantitative Statement	Value of Benefit (€m)	Qualitative Statement							
		Highly Positive	Segregated pedestrian/cycle facilities along mainline and links provided, with approx. 80% reduction of traffic from the existing N3, including HGVs from within Virginia, will greatly enhance safety of VRUs.								
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



		Commuting (€m)	Business (€m)	Other (€m)	Indirect Tax (€m)	Residual Value (€m)	Total Benefits (€m)				
Economy	Efficiency and Effectiveness										
		Quantitative Statement									
		The bypass will result in journey time savings of up to 13 minutes during average peak periods, and greater for the more congested times of the week or year (i.e. Fridays). This time saving will greatly reduce the cost of travel.									
	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?	<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"/>	
		Lead To Efficiencies In Clustering Of Economic Activity? (Agglomeration Benefits)	<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"/>	
		Attract Inward Investment?	<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"/>	
		Expand Local Labour Supply?	<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"/>	
		Contribute To Urban Regeneration	<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								
	Moderately Positive	Up to approx. 80% reduction of traffic from the N3, including HGVs from within Virginia, will provide opportunity to enhance the public realm. Proposed junctions near to Virginia will allow easy access to all areas of Virginia and environs.									
	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?	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				
		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 envisaged that the scheme will be 100% Irish exchequer funded.								
Economy - Overall Scale of Impact		Economy - Amended Scale of Impact									
Slightly Positive		Moderately Positive									
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 type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	
		Rural Social Scheme?	<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"/>	
		Quantitative Statement	Qualitative Statement								
	Slightly Positive	Removal of congestion from within Virginia will improve access to facilities from disadvantaged areas.									
	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"/>	
		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 Virginia and will greatly improve journey time reliability to Cavan & Dublin Hospitals.								
	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 type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
		Quantitative Statement	Qualitative Statement								
	Highly Positive	Journey time savings around Virginia of up to 13 minutes during average peaks periods. Reduced congestion around the town will greatly improve journey time reliability on strategic network. The removal of traffic from the town will also benefit the journey times for bus journeys through the town.									
	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 checked="" type="radio"/>	<input type="radio"/>	
		Strategic Connectivity for High Value Trips?	<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"/>	
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"/>		
Quantitative Statement		Qualitative Statement									
Moderately Positive		Bypass is specifically outlined as a priority in local and County Development Plans, it removes the town congestion for north south strategic traffic, and will comply with compact growth objectives.									
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 type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>		
	The Trans European Transport network?	<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"/>		
	Quantitative Statement	Qualitative Statement									
	Moderately Positive	The bypass will improve journey time reliability between Dublin and Cavan, Border and the North-West Region and will also allow for reliable journey times to connect with the Ten-T network in NI.									
	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.									
Integration - Overall Scale of Impact		Integration - Amended Scale of Impact									
Highly Positive											

Project Appraisal Balance Sheet



Part D: PABS Summary Table

Project Title		PRS Reference Number	CN/19/18686	Project Description				Scheme Cost (€m)	Date			
N3 Virginia Bypass		Modelling Base Year	2020	A bypass of Virginia Town, comprising circa 14.5km of Type 2 Dual Carriageway, with Link roads north and south of Virginia and with online active travel facilities along its length.				NDP Cost Category C (upper end of middle third of NDP cost range)	19/07/2022			
		Scheme Opening Year	2028									
Criteria	Quantitative Statement	Summary of Keys Impacts (Qualitative Assessment)				Quantitative Assessment				Monetised (€m over 30 yrs)		
Environment	Air Quality and Climate	Slightly Positive	Based on the elements of Option Selection outlined in Guidelines for the Treatment of Air Quality in National Road Schemes during the Planning and Construction of National Road Schemes (Revised May 2011), in terms of the Index of Overall NOx and PM10 Exposure, the Preferred Option may be deemed to be Option A. Option C is the 2nd most preferred option. Option Cv2 is the 3rd most preferred option. Option D is the 4th most preferred option. In terms of the Index of Overall NOx and PM10 Exposure, Option Cv1, Option E and Option Ev1 could be rated as the worst ranked options. In terms of the TII Carbon Tool for lifecycle carbon emissions for each proposed options, Option E is preferred with Option B least preferred. However, there is relatively little difference between any of the proposed options in comparison to the total greenhouse gas emissions in Ireland in 2019 of 59,777.6 kt CO2 equivalent.				Additional CO2 (Tonnes) 80305 Ratio of CO2 Do-Min/Do-Some 1.03 Index of Overall Change in Exposure NO2 Medium Positive Index Index of Overall Change in Exposure PM10 Medium Positive Index				Value of Change in Emissions (€m) -€0.470	
	Noise and vibration	Highly Negative	There are 369 properties within 300m of the centreline of the proposed option. This option takes traffic away from the existing N3 alignment and Virginia town. Further assessment of mitigation of sensitive receptors will be conducted in Phase 3. The noise and vibration impacts are likely to be highly negative.				No. of Sensitive Receptors Requiring Mitigation 80 No. of Sensitive Receptors Requiring Mitigation (Not Feasible) 0					
	Waste	Slightly Negative	The proposed option at preliminary design stage has an estimated excavation of approximately 1.4 million m3 excluding topsoil (earthworks cuttings plus excavations below earthworks outline). 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 127,098 m3 and is considered to be slightly negative. The volume of unacceptable material (Class U2) has been estimated at 500m3 and is also 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 U1 [m³] U2 [m³] Left in Situ [m³ land waste] 0					
	Landscape & Visual Amenity (Incl. Light)	Highly Negative	This option would impact negatively on the highly sensitive northern portion of this study area where it runs parallel to the Blackwater [Kells], a river corridor of scenic value and amenity potential. This would be the option that has the potential of affecting the views of a high number of receptors due to its proximity to the town of Virginia. The option would be visible from Bruse Hill and Murmod Hill reducing the amenity value of these features. The potential impact on the remainder of this option corridor would be low.				No. of Impacts That Are: No. of Profound/Significant Impacts on Sites Of: PP Sig P Mod P Sli P I Sli N Mod N Sig N PN 0 0 0 0 0 96 687 147 53 0					
	Biodiversity, Flora & Fauna	Moderately Negative	The proposed option crosses six ecological sites of potential county importance and two ecological sites of local importance. These impacts are considered to be moderately negative. The option has potential for indirect impacts on Lough Ramor pNHA and River Boyne and River Blackwater SAC/SPA, which are considered to be slightly negative. The option is likely to have moderately negative impacts on bats, and breeding and wintering birds.				II NI CI LI(H) LI(L) Number of Positive Impacts 0 0 0 0 0 Number of Negative Impacts 0 0 6 2 0					
	Agriculture	Highly Negative	The proposed option alignment will negatively impact on 72 agricultural properties. The direct impact on these properties is deemed to be significant on six, moderate on 33, slight on 27 and not significant on six properties. One farmhouse will be acquired under the CPO and three farmyards will be negatively impacted. There will be a significant negative impact on one dairy farm enterprise. Overall, there is a Highly Negative impact on agriculture.				Impact on Agricultural Holdings that are: Sig P Mod P Sli P I Sli N Mod N Sig N PN 0 0 0 6 27 33 6 0					
	Non-Agricultural Properties	Slightly Negative	The proposed option has a moderately positive impact on public facilities by improving vehicle, cycling and pedestrian connectivity, and removing congestion from the town centre. One dwelling and eight gardens are part of the CPO lands resulting in a moderately negative impact on properties. 3 utility diversions and the protection of 5 crossings are required for the construction of the scheme resulting in a moderately negative impact. The option passes through 1.64 km of forestry along its length, resulting in moderate negative impacts. The options results in slightly negative impacts on zoned development lands, and transport and infrastructure. The negative impacts exceed the positives for this sub-criterion, hence the overall non-agricultural impact of the option is considered to be slightly negative.				Impact on Non-Agricultural Properties Sig P Mod P Sli P I Sli N Mod N Sig N PN 0 1 0 0 2 3 0 0					
	Architectural Heritage	Neutral	Architectural, Archaeological and Cultural Heritage Impacts assessed together and included in the next heading.				No. of Impacts That Are: No. of Impacts on Sites of National Importance That Are: Sig P Mod P Sli P I Sli N Mod N Sig N PN 0 0 0 0 0 0 0 0 0					
	Archaeological and Cultural Heritage	Moderately Negative	Significant impact on a well defined (but denuded) recorded ringfort CV039-013--; alignment footprint likely to impact in part. Moderate impacts on 5 no. recorded archaeological sites, 3 no. recorded architectural heritage sites, including a farmhouse, Cornashesk demesne lands and gate-lodge. Slight impacts relate to 13 no. recorded archaeological sites >75m from centreline, two recorded church (architectural heritage) sites, and two unrecorded architectural heritage sites: a former mill site and Murmod bridge. Imperceptible impacts relate to four previously excavated archaeological sites, two unrecorded architectural heritage sites and the National Monument of Loughcrew/Slieve na Calliagh archaeological complex. It is also noted that a total of eight areas of archaeological potential at river/water crossing points have been identified, including the River Blackwater, which have potential profound levels of impact on any potential sub-surface unrecorded archaeological remains (area of heightened archaeological sensitivities), and another area of archaeological potential noted during field survey that is identified as having slight level of impact. Overall the option traverses within two broad areas of potential cultural heritage note within the study area and runs close to Lisgrea Lough at the northern portion (heightened sensitivity for sub-surface archaeological remains). Overall this option is deemed moderately negative.				No. of Impacts That Are: No. of Impacts on Sites of National Importance That Are: Sig P Mod P Sli P I Sli N Mod N Sig N PN 0 0 0 6 17 8 1 0					
	Soils & Geology	Slightly Negative	The proposed option has significant negative impacts on aggregate potential (resource sterilisation), moderate negative impacts on geomorphology and the geoheritage site at Bruse Hill and slightly negative impacts on soft soils and landfills and contaminated sites. The option has one slightly positive impact on pits and quarries, and one moderately positive impact on aggregate potential (reusability). The impacts on karst features, bedrock geology and licenced facilities are neutral. It is overall ranked as slightly negative for soils and geology.				Number Of Impacts That Are: PP Sig P Mod P Sli P I Sli N Mod N Sig N PN 0 0 1 1 3 2 2 1 0					
	Hydrology	Slightly Negative	The impacts of proposed option are based on the numbers of watercourse crossing, watercourse diversions and potential impacts on flood plains. The assessment also takes into account the likely improvement in water quality due to the installation of a positive drainage scheme. The hydrological impacts are likely to be minor or 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 12 7 0 0					
	Hydrogeology	Slightly Negative	The proposed option has significant negative impacts on groundwater vulnerability. The impacts due to earthworks cuttings, and the impacts on bedrock aquifers and Groundwater Dependent Terrestrial Ecosystems 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 3 0 1 0					
	Safety	Collision Reduction	Highly Positive	Proposed bypass will follow a safer alignment and remove approx. 80% of traffic along existing N3 (with a high collision rate), including removal of HGV traffic from within Virginia Town.				Collision Reduction Over 30 Years Collisions Casualties Fatal Serious Minor 463 463 21 72 370				Value of Change (€m) €35.3
Security		Highly Positive	Segregated pedestrian/cycle facilities along mainline and links provided, with approx. 80% reduction of traffic from the existing N3, including HGVs from within Virginia, will greatly enhance safety and security of VRUs.									
Physical Activity	Ambience	Moderately Positive	The VRU facilities along the proposed scheme will have good connectivity to existing footway and walking routes and with the removal of significant traffic, including HGVs, from Virginia Town; the option will offer safer facilities and will encourage recreational activity.									
	Absenteeism	Moderately Positive	Segregated pedestrian/cycle facilities along the mainline and links provided as part of the scheme are likely to result in increased physical activity which in turn is likely to have a beneficial effect on work absenteeism.									
	Reduced Health Risk	Highly Positive	Segregated pedestrian/cycle facilities along mainline and links provided, with approx. 80% reduction of traffic from the existing N3, including HGVs from within Virginia, will greatly enhance safety of VRUs.									
Economy	Transport Efficiency and Effectiveness		The bypass will result in journey time savings of up to 13 minutes during average peak periods, and greater for the more congested times of the week or year (i.e. Fridays). This time saving will greatly reduce the cost of travel.								Commute Business Other Value of Change Indirect Tax Res. Value	
	Wider Economic Impact	Moderately Positive	Up to approx. 80% reduction of traffic from the N3, including HGVs from within Virginia, will provide opportunity to enhance the public realm. Proposed junctions near to Virginia will allow easy access to all areas of Virginia and environs.				Moderately Positive					
	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 envisaged that the scheme will be 100% Irish exchequer funded.				Expected Percentage of Non-Exchequer Funding Neutral					
Accessibility and Social Inclusion	Deprived Geographic Areas	Slightly Positive	Removal of congestion from within Virginia will improve access to facilities from disadvantaged areas.				Impact on Deprived Areas Slightly Positive					
	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 Virginia and will greatly improve journey time reliability to Cavan & Dublin Hospitals.				Impact on Access to Employment or Vital Infrastructure Slightly Positive					
	Transport Integration	Highly Positive	Journey time savings around Virginia of up to 13 minutes during average peaks periods. Reduced congestion around the town will greatly improve journey time reliability on strategic network. The removal of traffic from the town will also benefit the journey times for bus journeys through the town.				Highly Positive					
	Land-Use Integration	Moderately Positive	Bypass is specifically outlined as a priority in local and County Development Plans, it removes the town congestion for north south strategic traffic, and will comply with compact growth objectives.				Moderately Positive					
	Geographical Integration	Moderately Positive	The bypass will improve journey time reliability between Dublin and Cavan, Border and the North-West Region and will also allow for reliable journey times to connect with the Ten-T network in NI.				Moderately Positive					
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						
Overall Scale of Impact		Environmental	Moderately Negative	Economy	Moderately Positive							
		Safety	Highly Positive	Accessibility & Social	Slightly Positive							
		Physical Activity	Highly Positive	Integration	Highly Positive							