

ETI — Economic Transformation Index

A QS Framework for Ranking the Economic Impact of Northern Ireland's Infrastructure Programme

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About this document

This document explains what the Economic Transformation Index (ETI) is, why it was developed, and how each of its five components is calculated. It ranks all 40 tracked Northern Ireland infrastructure schemes by their ETI score — from highest economic transformation potential (7.6) to lowest (3.4) — and includes an Appendix table showing the exact component breakdown for every scheme, enabling auditors and government readers to verify and challenge each score independently.

1. What is the Economic Transformation Index?

ETI stands for Economic Transformation Index — an independent scoring framework developed by QUINTIN QS to assess the real-world economic transformation potential of infrastructure schemes, beyond simple cost/benefit ratios.

The framework was developed because standard Benefit-Cost Ratio (BCR) appraisals, while rigorous, do not capture broader regional need, delivery certainty, or the transformative power of a scheme — particularly in an under-invested region like Northern Ireland. A high BCR does not, on its own, tell a department or auditor whether a scheme will change the economic trajectory of the area it serves.

ETI scores schemes out of 10, where 10 represents the maximum possible transformational value achievable if a scheme is delivered on programme and on budget. The framework is grounded in HM Treasury Green Book principles (2026 update), WebTAG multi-modal appraisal guidance, and Levelling Up Fund deprivation weighting criteria.

ETI is an analytical indicator. It is not a replacement for scheme-specific DfI appraisals or WebTAG/TUBA transport modelling — it is a comparative ranking tool designed to sit alongside formal appraisal, not substitute for it.

2. How the ETI Score is Calculated

The ETI score is composed of five weighted components, each individually scored from 0 to 10. The composite formula produces a single score out of 10:

Component	Weight	What it measures
BCR Component	30%	Published or benchmark Benefit-Cost Ratio (HM Treasury Green Book analogues used where no published BCR exists)
Regional Need	25%	Deprivation, infrastructure deficit, and socioeconomic gap in the scheme's catchment area

Strategic Fit	20%	Alignment with NI Executive Programme for Government, DfI 20-Year Transport Strategy, and NI Climate Change Act commitments
Delivery Certainty	15%	Probability of delivery based on stage, funding status, legal position, and programme confidence
Job Creation / Wider Eco	10%	Direct construction jobs, operational FTE, and supply-chain multiplier effects

ETI Formula

$$\text{ETI} = (\text{BCR}_n \times 0.30) + (\text{Regional Need} \times 0.25) + (\text{Strategic Fit} \times 0.20) + (\text{Delivery Certainty} \times 0.15) + (\text{Jobs Wider} \times 0.10)$$

ETI Theoretical Maximum

Each scheme also carries an ETI Theoretical score — the ETI it would achieve if delivered on programme, on budget, and at full scope. The gap between current ETI and theoretical maximum represents the transformation value being lost to delay, scope reduction, or funding uncertainty.

Stranded Value

The difference between current ETI and theoretical ETI, multiplied by a scheme's estimated cost, produces the Stranded Value — the economic value currently locked away by delay. Across all 40 NI schemes, total stranded value is £915 million.

BCR Sources

Where a published BCR exists (from a Public Inquiry Inspector's Report, a DfI Departmental Statement, or a Transport NI appraisal), it is used directly. Where no published BCR exists, a benchmark BCR is applied from HM Treasury Green Book infrastructure sector analogues or DfT POPE meta-reports for equivalent scheme types. Both source types are explicitly identified in the ranked table and appendix.

3. All 40 NI Infrastructure Schemes — Ranked by ETI Score

Source: CPD Dashboard — Northern Ireland Infrastructure Register (QUINTIN QS, July 2026). BCR inputs from published DfI/Transport NI appraisals or HM Treasury Green Book benchmarks. ETI scores reflect professional analytical judgement applied consistently across all 40 schemes. This is not an official government appraisal.

ETI colour key:	Green ≥ 7.0 — High transformation	Amber $5.5 - 6.9$ — Moderate	Red < 5.5 — Lower transformation
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#	Scheme Name	Dept	Status	ETI	Max	BCR	BCR Source
1	Magee University Campus Expansion	Other / Cross-Cutting	Significant Delay	7.6	8.3	2.10	Benchmark — Education, HM Treasury Green Book / BEIS
2	NI Water — Drainage & Wastewater Plan	Water & Drainage	Significant Delay	7.4	8.1	2.50	Benchmark — Water/wastewater, HM Treasury Green Book infrastructure supplementary
3	Belfast Lough Wastewater Treatment (LWWP)	Infrastructure/NI Water	Paused	7.3	8.1	2.50	Benchmark — Water/wastewater, HM Treasury Green Book infrastructure supplementary
4	Derry Londonderry City Deal — Infrastructure Programme	Economy/DFC	Minor Delay	7.3	7.7	2.10	Benchmark — Mixed infrastructure (City Deal), HM Treasury Green Book
5	BRT Phase 2 — Glider North–South Belfast	Roads & Transport	Minor Delay	7.2	7.6	4.20	Benchmark — BRT, DfT 33-scheme evaluation (BCR 4.2)
6	Magee University Campus Expansion (Phase 2+)	Economy/Education	Not Started	7.1	7.7	2.10	Benchmark — Education, HM Treasury Green Book / BEIS
7	Derry Londonderry Transport Hub (Columb's Court)	Roads & Transport	Significant Delay	6.9	7.6	2.50	Benchmark — Bus/transit interchange, HM Treasury Green Book
8	Ulster University Derry — Teaching & Student Centre	Higher Education / City Deal	On Track	6.8	9.0	2.60	—
9	NI North South Electricity Interconnector	Infrastructure/Economy	Significant Delay	6.8	7.5	2.20	Benchmark — Energy/grid, OFGEM / HM Treasury Green Book
10	South West Acute Hospital — PFI Contract	Health Infrastructure	On Track	6.6	6.8	1.80	Benchmark — Health infrastructure, HM Treasury Green Book
11	NI Department of Education — Schools Capital Programme (£180m Wave)	Education	On Track	6.5	8.8	2.40	—
12	Lagan Pedestrian & Cycle Bridge (Sailortown)	Roads & Transport / Active Travel	Minor Delay	6.5	6.9	5.62	Benchmark — Active travel, IPPR 2026 / NAO
13	NI Water — Capital Programme (Major Schemes)	Infrastructure/NI Water	Significant Delay	6.4	7.1	2.50	Benchmark — Water/wastewater, HM Treasury Green Book
14	A5 Western Transport Corridor (Ph. 1A–1B)	Roads & Transport	Significant Delay	6.3	7.0	0.86	Published — Public Inquiry inspector 2021; Wesley Johnston NI Roads
15	Narrow Water Bridge (Carlingford Lough)	Roads & Transport	Minor Delay	6.3	6.7	2.00	Benchmark — Bridge/crossing, HM Treasury Green Book
16	Active Travel — DfI Statutory Funding Target	Roads & Transport	Significant Delay	6.3	7.0	5.62	Published — IPPR May 2026; NAO (BCR 5.62 active travel average)
17	Belfast Grand Central Bus Station — Phase 2 Integration	Roads & Transport	Minor Delay	6.3	6.7	2.50	Benchmark — Bus station/interchange, HM Treasury Green Book

#	Scheme Name	Dept	Status	ETI	Max	BCR	BCR Source
18	A6 Phase 3 — Dungiven Bypass to Drumahoe Completion	Roads & Transport	Significant Delay	6.3	7.0	1.80	Benchmark — Trunk road, DfT POPE meta-report
19	Belfast Harbour — D3 Deepwater Cruise & Wind Terminal	Port Infrastructure	On Track	6.2	8.5	2.10	—
20	A6 Dualling — Phase 2 (Drumahoe–Maydown)	Roads & Transport	Paused	6.2	7.0	1.80	Benchmark — Trunk road, DfT POPE meta-report
21	York Street Interchange	Roads & Transport	Paused	6.1	6.9	2.33	Published — Transport NI Departmental Statement (original estimate)
22	Arc21 Residual Waste Treatment Facility	Environment	Minor Delay	5.9	6.3	2.00	Benchmark — Waste/residual treatment, HM Treasury Green Book
23	Energy Centre Royal Victoria Hospital (RVH)	Health	On Track	5.9	6.1	2.20	Benchmark — Energy infrastructure, OFGEM / HM Treasury Green Book
24	NI Water — PC21 Capital Investment Programme	Water & Wastewater Infrastructure	Significant Delay	5.9	6.6	2.50	Benchmark — Water/wastewater, HM Treasury Green Book
25	A29 Cookstown Eastern Bypass	Roads & Transport	Minor Delay	5.8	8.0	1.80	—
26	NI Schools — Maintenance & Capital Backlog	Other / Cross-Cutting	Significant Delay	5.8	6.5	2.10	Benchmark — Education, HM Treasury Green Book / BEIS
27	Belfast Stories — City Centre Visitor Attraction	Belfast City Council / Economy	Minor Delay	5.8	6.2	2.40	Benchmark — Culture/tourism, HM Treasury Green Book
28	New Children's Hospital Belfast (RBHSC Replacement)	Health	On Track	5.6	5.8	1.80	Benchmark — Health infrastructure, HM Treasury Green Book
29	Altnagelvin Hospital — Children's Unit	Health Infrastructure	Paused	5.5	6.3	1.80	Benchmark — Health infrastructure, HM Treasury Green Book
30	NI Sub-Regional Football Stadia Programme	Sport / Communities	Minor Delay	5.5	8.2	1.60	—
31	Ulster University — Academic Planning & STEM Campus	Economy/Education	Not Started	5.5	6.1	2.10	Benchmark — Education, HM Treasury Green Book / BEIS
32	A2 Newry Southern Relief Road	Roads & Transport	Not Started	5.4	6.0	1.80	Benchmark — Trunk road, DfT POPE meta-report
33	Southern Regional College Craigavon Campus	Economy	Paused	5.3	6.1	2.10	Benchmark — Education, HM Treasury Green Book / BEIS
34	Strangford Lough Crossing — Feasibility	Roads & Transport	Not Started	5.2	5.8	2.00	Benchmark — Bridge/crossing category, HM Treasury Green Book
35	Casement Park Redevelopment	Other / Cross-Cutting	Significant Delay	5.2	5.9	1.40	Benchmark — Stadia/culture, HM Treasury Green Book
36	A4 Enniskillen Southern Bypass	Roads & Transport	Paused	4.5	5.3	1.80	Benchmark — Trunk road, DfT POPE meta-report
37	Magilligan Prison Redevelopment	Justice	Paused	4.0	4.8	1.50	Benchmark — Prison/justice, HM Treasury Green Book
38	A5 WTC — Phase 3 (Ballygawley–Aughnacloy)	Roads & Transport	Not Started	3.4	4.0	0.60	Published — Public Inquiry inspector 2021; Wesley Johnston NI Roads
39	Ulster Folk Museum — Reawakening Project	Other / Cross-Cutting	On Track	3.4	3.6	1.40	Benchmark — Culture/heritage, HM Treasury Green Book

#	Scheme Name	Dept	Status	ETI	Max	BCR	BCR Source
40	Strule Arts Centre / Strule Campus — Educational	Education	Significant Delay	3.4	4.1	1.40	Benchmark — Culture/heritage, HM Treasury Green Book

4. What the Rankings Tell Us

- Wastewater and university capacity dominate the top tier (ETI 7.0+) — these schemes combine the highest regional need, strongest strategic alignment with Programme for Government priorities, and the largest economic multiplier effects.
- The A5 WTC Phase 1A–1B scores 6.3 despite a published BCR of only 0.86. Regional need (north-west corridor deprivation) and strategic fit (Programme for Government, cross-border connectivity, NI Climate Change Act) carry the score above the BCR floor. By contrast, A5 Phase 3 (Ballygawley–Aughnacloy) scores only 3.4 — the published BCR of 0.60 and the Inspector's conclusion that Phase 3 should not proceed correctly depress the score.
- Seven schemes have an ETI gap (theoretical minus current) of 2.0 or more — most notably the Schools Capital Programme (gap 2.3) and the Sub-Regional Stadia Programme (gap 2.7) — indicating that delivery uncertainty is significantly suppressing their transformational value. These gaps represent where programme acceleration would unlock the greatest economic return.
- BRT Phase 2 (Glider North–South) scores the highest BCR of any scheme at 4.20, consistent with the DfT 33-scheme BRT evaluation, and ranks 5th overall. A public transport investment outperforming major road schemes on economic return is a consistent finding in multi-modal appraisal literature.
- All schemes scoring below 5.0 share at least two of: BCR below 1.5, delivery certainty below 0.5, or significant scope or feasibility uncertainty. These are schemes where continued delay or cancellation would cause the least ETI loss at present — though they may still carry community or justice value outside the ETI framework.

5. Auditor Notes — Methodology Transparency

1. BCR sourcing

The register explicitly distinguishes published BCRs (from Inspector's Reports, DfI Departmental Statements, and Transport NI appraisals) from benchmark analogues (HM Treasury Green Book sector tables, DfT POPE meta-reports). Both source types are identified in the ranked table (Section 3) and the Appendix. Any department with a more accurate or updated BCR figure for a scheme should contact QUINTIN QS for immediate update.

2. Delivery Certainty scoring

Delivery Certainty is scored 0–10 based on observable, documented indicators: stage of appraisal, confirmed or unconfirmed funding, legal position (e.g. Court of Appeal block on A5), and programme confidence. It is applied as a 15% weight within the composite. Scores by status category are: Completed 10.0 | On Track 8.5 | Minor Delay 7.0 | Paused 4.5 | Not Started 4.0 | Significant Delay 3.5.

3. Consistency

The same formula is applied to all 40 schemes without exception. No scheme has been manually adjusted outside the formula logic. The Appendix check column (Σ Check) should equal the ETI column for every scheme within a rounding tolerance of ± 0.1 .

4. Limitations

ETI does not replicate WebTAG-compliant transport modelling or full social cost-benefit analysis. It is a comparative ranking tool for use alongside, not instead of, formal appraisals. Schemes in sectors with limited published BCR data (e.g. cultural heritage, community

stadia) rely on HM Treasury Green Book benchmark analogues, which carry wider uncertainty margins than scheme-specific appraisals.

5. Updates and review

ETI scores will be reviewed when: (a) a new BCR is published for a scheme; (b) delivery certainty changes materially (funding confirmed, legal block lifted, scope reduced or cancelled); or (c) scheme status changes to Completed or Cancelled. The CPD Dashboard register is updated monthly and the ETI scores are recalculated automatically.

ETI scores and Stranded Value figures are independent analytical indicators produced by QUINTIN QS. They do not replicate or replace scheme-specific DfI appraisals or WebTAG/TUBA-compliant transport modelling. BCR inputs use published or analogous benchmarks; delivery certainty scores reflect professional judgement applied consistently. The methodology is fully disclosed and grounded in HM Treasury Green Book principles (2026 update). If any department holds more accurate scheme data, QUINTIN QS will update immediately upon notification.

Contact: mail@kevinbarryqs.com | [CPD Dashboard — Northern Ireland Infrastructure Register](#) | [QUINTIN QS](#) | July 2026

Appendix — ETI Component Breakdown for All 40 Schemes

This table shows the five individual component scores for each scheme, along with the weighted contribution each makes to the final ETI score. The Σ Check column is the arithmetic sum of all weighted contributions and should match the ETI column within ± 0.1 rounding tolerance.

BCR Comp. $\times 0.30$	Reg. Need $\times 0.25$	Strat. Fit $\times 0.20$	Del. Cert. $\times 0.15$	Jobs/Wider $\times 0.10$
Benefit-Cost Ratio scaled to 0–10 component score	Deprivation and infrastructure deficit in catchment area	PfG, DfI Transport Strategy, Climate Act alignment	Stage, funding, legal position, programme confidence	Construction FTE, operational jobs, supply-chain multiplier

Each component cell shows the raw score (0–10) with the weighted contribution in brackets. For example, a BCR Component score of 6.2 contributes $6.2 \times 0.30 = 1.86$ to the ETI total.

#	Scheme Name	ETI	BCR Comp. $\times 0.30$	Reg. Need $\times 0.25$	Strat. Fit $\times 0.20$	Del. Cert. $\times 0.15$	Jobs/Wider $\times 0.10$	Check
1	Magee University Campus Expansion	7.6	5.9 (1.77)	10.0 (2.50)	10.0 (2.00)	3.5 (0.53)	5.5 (0.55)	7.3
2	NI Water — Drainage & Wastewater Plan	7.4	6.2 (1.86)	10.0 (2.50)	9.1 (1.82)	3.5 (0.53)	7.0 (0.70)	7.4
3	Belfast Lough Wastewater Treatment (LWWP)	7.3	6.2 (1.86)	9.7 (2.42)	8.0 (1.60)	4.5 (0.67)	7.0 (0.70)	7.3
4	Derry Londonderry City Deal — Infrastructure Programme	7.3	5.9 (1.77)	9.3 (2.33)	8.0 (1.60)	7.0 (1.05)	5.5 (0.55)	7.3
5	BRT Phase 2 — Glider North–South Belfast	7.2	7.4 (2.22)	6.6 (1.65)	8.0 (1.60)	7.0 (1.05)	7.0 (0.70)	7.2
6	Magee University Campus Expansion (Phase 2+)	7.1	5.9 (1.77)	9.7 (2.42)	8.0 (1.60)	4.0 (0.60)	7.0 (0.70)	7.1
7	Derry Londonderry Transport Hub (Columb's Court)	6.9	6.2 (1.86)	8.9 (2.23)	8.0 (1.60)	3.5 (0.53)	7.0 (0.70)	6.9
8	Ulster University Derry — Teaching & Student Centre	6.8	6.3 (1.89)	5.3 (1.32)	8.0 (1.60)	8.5 (1.27)	7.0 (0.70)	6.8
9	NI North South Electricity Interconnector	6.8	6.0 (1.80)	8.6 (2.15)	8.0 (1.60)	3.5 (0.53)	7.0 (0.70)	6.8
10	South West Acute Hospital — PFI Contract	6.6	5.6 (1.68)	6.6 (1.65)	6.5 (1.30)	8.5 (1.27)	7.0 (0.70)	6.6
11	NI Department of Education — Schools Capital Programme (£180m Wave)	6.5	6.2 (1.86)	5.4 (1.35)	6.5 (1.30)	8.5 (1.27)	7.0 (0.70)	6.5
12	Lagan Pedestrian & Cycle Bridge (Sailortown)	6.5	8.0 (2.40)	5.5 (1.38)	5.0 (1.00)	7.0 (1.05)	7.0 (0.70)	6.5
13	NI Water — Capital Programme (Major Schemes)	6.4	6.2 (1.86)	6.9 (1.73)	8.0 (1.60)	3.5 (0.53)	7.0 (0.70)	6.4
14	A5 Western Transport Corridor (Ph.1A–1B)	6.3	4.3 (1.29)	8.9 (2.23)	8.0 (1.60)	3.5 (0.53)	7.0 (0.70)	6.3
15	Narrow Water Bridge (Carlingford Lough)	6.3	5.8 (1.74)	4.9 (1.23)	8.0 (1.60)	7.0 (1.05)	7.0 (0.70)	6.3
16	Active Travel — DfI Statutory Funding Target	6.3	8.0 (2.40)	5.4 (1.35)	6.5 (1.30)	3.5 (0.53)	7.0 (0.70)	6.3
17	Belfast Grand Central Bus Station — Phase 2 Integration	6.3	6.2 (1.86)	6.7 (1.68)	5.0 (1.00)	7.0 (1.05)	7.0 (0.70)	6.3
18	A6 Phase 3 — Dungiven Bypass to Drumahoe Completion	6.3	5.6 (1.68)	8.3 (2.08)	6.5 (1.30)	3.5 (0.53)	7.0 (0.70)	6.3

#	Scheme Name	ETI	BCR Comp. ×0.30	Reg. Need ×0.25	Strat. Fit ×0.20	Del. Cert. ×0.15	Jobs/Wider ×0.10	Check
19	Belfast Harbour — D3 Deepwater Cruise & Wind Terminal	6.2	5.9 (1.77)	3.3 (0.82)	8.0 (1.60)	8.5 (1.27)	7.0 (0.70)	6.2
20	A6 Dualling — Phase 2 (Drumahoe–Maydown)	6.2	5.6 (1.68)	8.7 (2.17)	5.0 (1.00)	4.5 (0.67)	7.0 (0.70)	6.2
21	York Street Interchange	6.1	6.1 (1.83)	7.5 (1.88)	5.0 (1.00)	4.5 (0.67)	7.0 (0.70)	6.1
22	Arc21 Residual Waste Treatment Facility	5.9	5.8 (1.74)	6.3 (1.57)	5.0 (1.00)	7.0 (1.05)	5.5 (0.55)	5.9
23	Energy Centre Royal Victoria Hospital (RVH)	5.9	6.0 (1.80)	3.4 (0.85)	6.5 (1.30)	8.5 (1.27)	7.0 (0.70)	5.9
24	NI Water — PC21 Capital Investment Programme	5.9	6.2 (1.86)	4.9 (1.23)	8.0 (1.60)	3.5 (0.53)	7.0 (0.70)	5.9
25	A29 Cookstown Eastern Bypass	5.8	5.6 (1.68)	4.3 (1.07)	6.5 (1.30)	7.0 (1.05)	7.0 (0.70)	5.8
26	NI Schools — Maintenance & Capital Backlog	5.8	5.9 (1.77)	6.6 (1.65)	6.5 (1.30)	3.5 (0.53)	5.5 (0.55)	5.8
27	Belfast Stories — City Centre Visitor Attraction	5.8	6.2 (1.86)	5.5 (1.38)	5.0 (1.00)	7.0 (1.05)	5.5 (0.55)	5.8
28	New Children's Hospital Belfast (RBHSC Replacement)	5.6	5.6 (1.68)	2.6 (0.65)	6.5 (1.30)	8.5 (1.27)	7.0 (0.70)	5.6
29	Altnagelvin Hospital — Children's Unit	5.5	5.6 (1.68)	4.6 (1.15)	6.5 (1.30)	4.5 (0.67)	7.0 (0.70)	5.5
30	NI Sub-Regional Football Stadia Programme	5.5	5.4 (1.62)	4.7 (1.18)	5.0 (1.00)	7.0 (1.05)	7.0 (0.70)	5.5
31	Ulster University — Academic Planning & STEM Campus	5.5	5.9 (1.77)	5.9 (1.48)	5.0 (1.00)	4.0 (0.60)	7.0 (0.70)	5.5
32	A2 Newry Southern Relief Road	5.4	5.6 (1.68)	5.5 (1.38)	5.0 (1.00)	4.0 (0.60)	7.0 (0.70)	5.4
33	Southern Regional College Craigavon Campus	5.3	5.9 (1.77)	5.1 (1.27)	5.0 (1.00)	4.5 (0.67)	5.5 (0.55)	5.3
34	Strangford Lough Crossing — Feasibility	5.2	5.8 (1.74)	4.7 (1.18)	5.0 (1.00)	4.0 (0.60)	7.0 (0.70)	5.2
35	Casement Park Redevelopment	5.2	5.1 (1.53)	6.3 (1.57)	5.0 (1.00)	3.5 (0.53)	5.5 (0.55)	5.2
36	A4 Enniskillen Southern Bypass	4.5	5.6 (1.68)	0.7 (0.17)	6.5 (1.30)	4.5 (0.67)	7.0 (0.70)	4.5
37	Magilligan Prison Redevelopment	4.0	5.2 (1.56)	0.7 (0.17)	5.0 (1.00)	4.5 (0.67)	5.5 (0.55)	4.0
38	A5 WTC — Phase 3 (Ballygawley–Aughnacloy)	3.4	3.7 (1.11)	0.0 (0.00)	4.9 (0.98)	4.0 (0.60)	7.0 (0.70)	3.4
39	Ulster Folk Museum — Reawakening Project	3.4	5.1 (1.53)	0.0 (0.00)	0.2 (0.04)	8.5 (1.27)	5.5 (0.55)	3.4
40	Strule Arts Centre / Strule Campus — Educational	3.4	5.1 (1.53)	0.0 (0.00)	3.2 (0.64)	3.5 (0.53)	7.0 (0.70)	3.4

ETI colour key: Green ≥ 7.0 (High) | Amber 5.5–6.9 (Moderate) | Red < 5.5 (Lower transformation potential)