

Constraints Analysis for the Proposed Cornwall Perimeter Highway



Constraints Analysis

- Evaluate the environmental and socio-economic constraints for four potential highway routes
 - Desktop review
 - Landowner input/feedback (Landowner Information Session Aug. 3, 2016)
- Results of the constraints analysis intended to assist PEITIE in choosing a final route for the Project

Environmental Criteria

- Watercourses, waterbodies and wetlands
- Protected areas and conservation areas
- Existing corridors
- Species at risk, species of conservation concern, and sensitive areas
- Forested areas

Socio-economic Criteria

- Designated lands and private land
- Buildings impacted
- Total number of properties crossed
- Public land use
- Agricultural land use
- Archaeological features

Physical Criteria

- Steep slopes
- Infrastructure crossings

Results

Option 1

- 2nd highest score in environmental criteria (23.2)
- lowest score in socio-economic criteria (18.15)
- 2nd highest overall weighted score (69.85)

Option 2

- lowest score in environmental criteria (13.8)
- lowest score in socio-economic criteria (18.15)
- lowest overall weighted score (60.45)

Results

Option 3

- 2nd lowest score in environmental criteria (21.4)
- 2nd highest score in socio-economic criteria (19.35)
- 2nd lowest overall weighted score (69.25)

Option 4

- highest score in environmental criteria (26.4)
- highest score in socio-economic criteria (19.5)
- highest overall weighted score (74.4)

Constraints Analysis Results - Routes for the Cornwall Perimeter Highway

Criteria	Weight (%)	Route Option 1		Route Option 2	
		Ranking	Score	Ranking	Score
Environmental Criteria					
Watercourse and Waterbody Crossings	25%	10	2.5	3	0.75
Wetland Crossings	20%	7	1.4	4	0.8
Protected Areas and Conservation Areas	20%	1	0.2	1	0.2
Parallel to Existing Corridor	15%	0	0	0	0
Species at Risk, Species of Conservation Concern, and Sensitive Areas	10%	10	1	10	1
Forested Areas	10%	7	0.7	7	0.7
Score for Environmental Criteria			5.8		3.45
Weighted Score for Environmental Criteria	40%		23.2		13.8
Socio-economic Criteria					
Designated Lands and Private Land	15%	6	0.9	5	0.75
Buildings Within 100 m of RoW	15%	8	1.2	7	1.05
Total Number of Properties Crossed	15%	9	1.35	8	1.2
Public Land Use	10%	10	1	10	1
Industrial Land Use	10%	7	0.7	7	0.7
Agricultural Land Use	20%	0	0	3	0.6
Registered Archaeological Sites and Elevated Archaeological Potential Areas	15%	6	0.9	5	0.75
Score for Socio-economic Criteria			6.05		6.05
Weighted Score for Socio-economic Criteria	30%		18.15		18.15
Physical Criteria					
Length	50%	9	4.5	9	4.5
Steep Slopes	25%	10	2.5	10	2.5
Infrastructure Crossings	25%	10	2.5	10	2.5
Score for Physical Criteria			9.5		9.5
Weighted Score for Physical Criteria	30%		28.5		28.5
Overall Weighted Score			69.85		60.45

Constraints Analysis Results - Routes for the Cornwall Perimeter Highway

Criteria	Weight (%)	Route Option 3		Route Option 4	
		Ranking	Score	Ranking	Score
Environmental Criteria					
Watercourse and Waterbody Crossings	25%	5	1.25	10	2.5
Wetland Crossings	20%	10	2	7	1.4
Protected Areas and Conservation Areas	20%	2	0.4	5	1
Parallel to Existing Corridor	15%	0	0	0	0
Species at Risk, Species of Conservation Concern, and Sensitive Areas	10%	10	1	10	1
Forested Areas	10%	7	0.7	7	0.7
Score for Environmental Criteria			5.35		6.6
Weighted Score for Environmental Criteria	40%		21.4		26.4
Socio-economic Criteria					
Designated Lands and Private Land	15%	5	0.75	6	0.9
Buildings Within 100 m of RoW	15%	8	1.2	10	1.5
Total Number of Properties Crossed	15%	9	1.35	10	1.5
Public Land Use	10%	10	1	10	1
Industrial Land Use	10%	7	0.7	7	0.7
Agricultural Land Use	20%	2	0.4	0	0
Registered Archaeological Sites and Elevated Archaeological Potential Areas	15%	7	1.05	6	0.9
Score for Socio-economic Criteria			6.45		6.5
Weighted Score for Socio-economic Criteria	30%		19.35		19.5
Physical Criteria					
Length	50%	9	4.5	9	4.5
Steep Slopes	25%	10	2.5	10	2.5
Infrastructure Crossings	25%	10	2.5	10	2.5
Score for Physical Criteria			9.5		9.5
Weighted Score for Physical Criteria	30%		28.5		28.5
Overall Weighted Score			69.25		74.4

Results – Landowner Consultation

- 29 landowners invited (~40 people attended)
- 12 landowner comment forms submitted to Stantec
- 3 comments received specifically related to known environmental info, typical land use, or commercial or recreational activities about properties in the area of the Project
- 4 landowners submitted comments highlighting Option 4 as preferred option
- Specific comments forwarded along to PEITIE and will be addressed during landowner acquisition process

Summary

- Route Option 4 scored highest in environmental and socio-economic criteria categories
- Route Option 4 possesses environmental and socio-economic characteristics best suited for the highway
- Physical criteria not found to be differentiator among the routes
- Landowner comments from landowner information session taken into consideration in analysis
- Based on higher overall weighted score and the landowner comments received, **preferred route is Route Option 4**