



An Australian Government Initiative

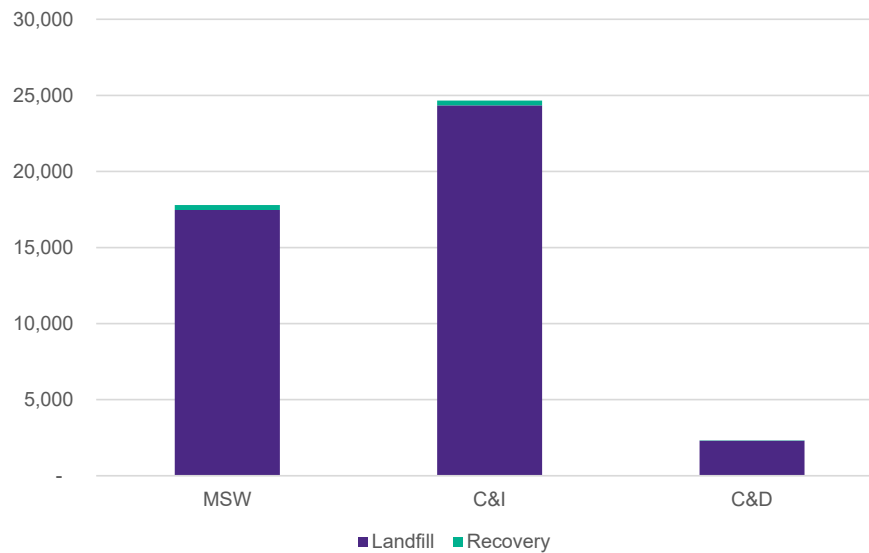


FNQ Plastics Industry Project
-Key findings of feasibility assessment

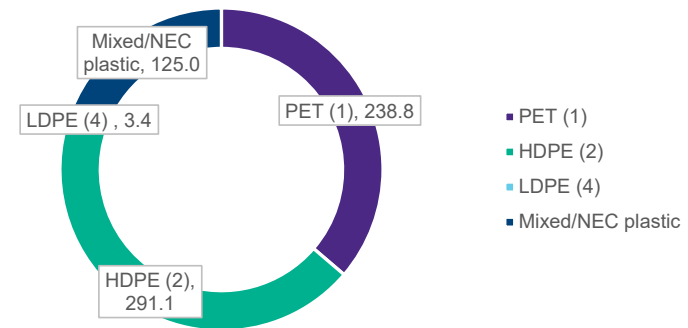


Regional Development Australia
Tropical North

Material Flow Analysis – Recovery rate



- Disproportionately low base level of recovery in FNQ
- Recovery rate of 1.9% in FNQ, compared to:
 - 5.7% of Queensland
 - 9.4% for Australia



Options Analysed

- Full quantitative analysis of recycling hub options:
 - **Option 1 (HDPE):** Existing market and potential clean sources of feedstock
 - **Option 2 (PET):** High demand for rPET
- Economic assessment of Waste to Energy (WTE):
 - **Option 3 (WtE):** Recover energy from residual until hub can recycle the residual
- Longer term considerations
 - **Option 4 – PVC**
 - **Option 5 – Greater Recovery** - expansion of recycling hub

Location and Feedstock

- Cairns 'Hub' with 'Spokes' across FNQ as Cairns has:
 - highest population density
 - strongest transport links
 - labour supply and supporting industries

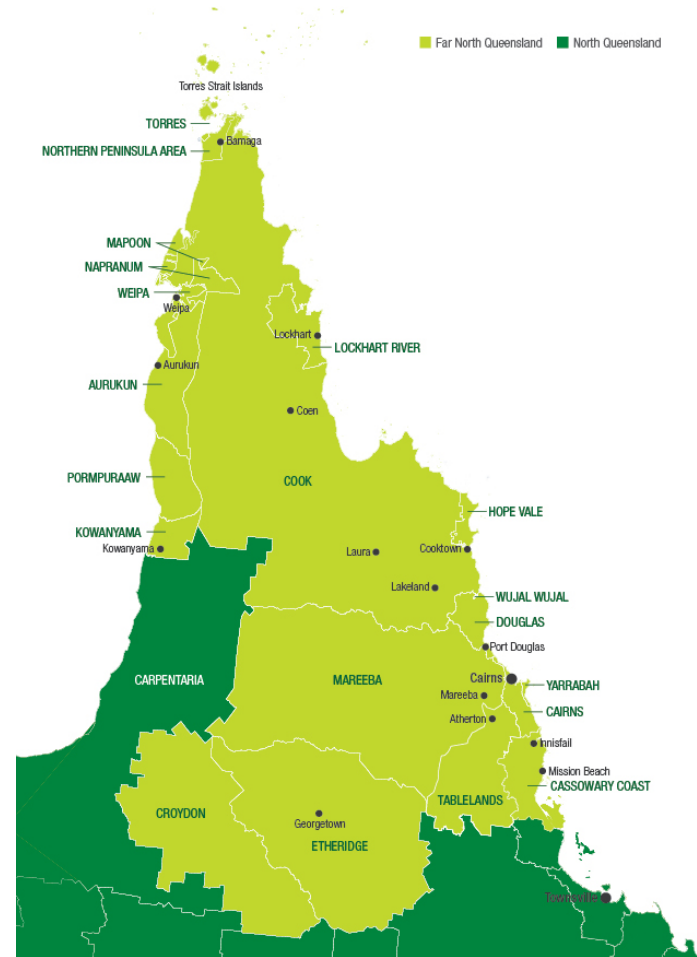
Restricted to 150km radius to reduce transport costs

Table 5: Potential feasible supply of HDPE feedstock in FNQ

Potential source ¹	HDPE (t.p.a)	PET (t.p.a)	Average distance from Cairns (km)	Estimated additional bins required ²
Lotus Glen (Prison)	45	7	77	2
Mungulli Milk	78	156	133	2
FNQ Banana farms	1,125	-	75	15
Babinda Springs	202	58	58	2
Malanda Dairy	1,116	18	75	3
Allans Pool Shops	2,600	-	10	15

¹ Hospitals are another potential source of supply (e.g. Cairns hospital) but further investigation is required to estimate the volume of material

² Estimated based on volume and number of discrete source locations



Cost Benefit Analysis and Env Outcomes

- Multi-polymer plant option is expected to provide net benefit to Qld of \$50.6 NPV and BCR of 3.1
- Litter outcomes depends on away from home collection

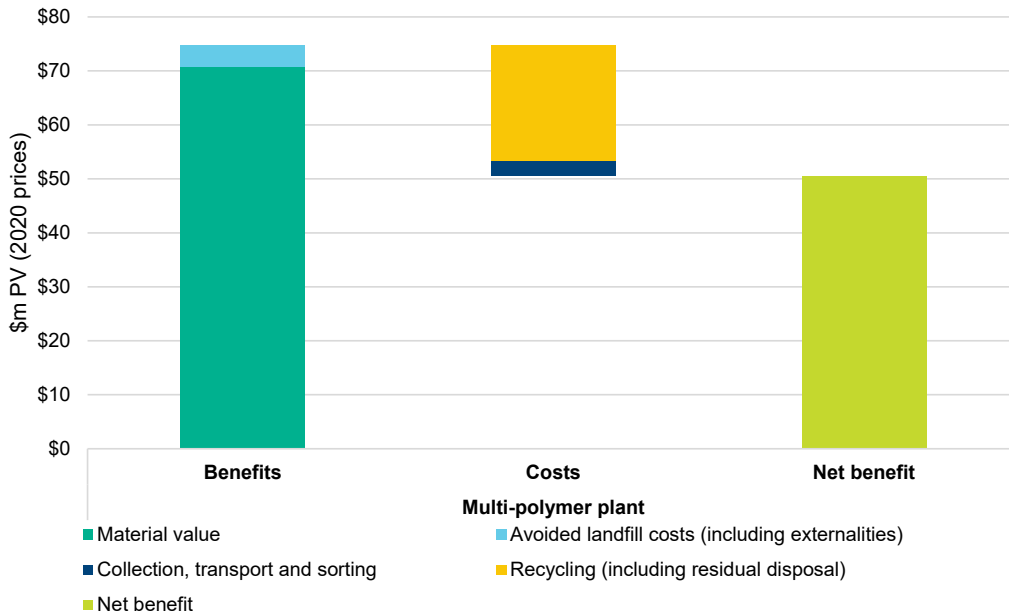


Table 6: Environmental impact of option

Environmental impact	Business as usual	Multi-polymer plant
Increased recovery of plastics	-	5,405 t.p.a
Recovery rate (FNQ, 2022)	1.9%	17.1%
Embodied emissions reduced	-	5,082 tCO ₂ -e / year

Economic impacts

Economic impacts	Multi-polymer plant
Expenditure	\$m
Capital investment	10.3
Annual operating expenditure	1.0 / yr
Contribution to GRP (Year 1)	\$m
Direct	\$3.2 / yr
Flow-on ¹	\$6.7 / yr
Total	\$9.9 / yr
Contribution to GRP (ongoing)	\$m
Direct	\$0.3 / yr
Flow-on ¹	\$0.5 / yr
Total	\$0.8 / yr
Contribution to employment (Year 1)	FTE / year
Direct	30 / yr
Flow-on ¹	53 / yr
Total	83 / yr
Contribution to employment (ongoing)	FTE / year
Direct	4 / yr
Flow-on ¹	6 / yr
Total	8 / yr

- Provide economic stimulus to the region including the creation of up to 83 FTE direct and indirect jobs during construction and up to 8 during operation
- Return on investment of 39% IRR and payback period of 4 years (without funding)

Funding

- Australian Government will invest \$190 million into the Recycling Modernisation Fund which will leverage \$600 million of recycling infrastructure investment and drive a billion-dollar transformation of Australia's waste and recycling capacity.
- It is understood funding is provided through to the states and territories through National Partnership Agreements.
- The Queensland Government is finalising arrangements to deliver investment via the Recycling Modernisation Fund, announced by the Australian Government on 6 July 2020.
- This will see both governments co-investing in recycling infrastructure to build capacity for onshore processing of waste types subject to the export ban.

Contact

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