



QGC

WHAT'S IN A SMOKY FLARE



Smoky flares are extremely rare flaring operations that produce visible smoke. Flaring is an important part of the process of safely producing LNG.



**FLARING IS AN
ESSENTIAL PART
OF THE SAFE
PRODUCTION
OF LNG.**

Although smoky flares occur less than 1 percent of the time, they are noticeable on the Gladstone skyline.

Shell's QGC business is committed to minimising smoky flaring at its Curtis Island LNG plant. Ongoing fine-tuning has resulted in a significant reduction in smoky flares since the plant was commissioned in 2015.

SMOKY FLARES ARE SIMILAR TO A CAMPFIRE OR A CANDLE FLAME.



SIMILAR TO A CAMPFIRE

A smoky flare has a similar chemical composition to smoke from a campfire or candle flame.

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The visible component of a smoky flare are particles of carbon.

These are generated when small amounts of excess refrigerant gases—predominantly propane and ethylene—which cannot be recovered and reused, are sent to flare.

When methane and refrigerant gases are burnt in the flare they produce mostly (99%+) carbon dioxide and water.

They can also produce small amounts of other products that commonly occur in nature, such as carbon monoxide, nitrogen oxides, sulphur dioxide and carbon particles.



NO HEALTH IMPACTS PREDICTED

While this smoke is visible for short periods, based on dispersion modelling that considers the stack height and gas composition, and on Queensland Government air quality monitoring, no health or environmental impacts are predicted from flaring at Curtis Island.

INDEPENDENT AIR QUALITY MONITORING

A network of monitoring stations operated by the Queensland Department of Environment and Science takes continual readings of Gladstone's air quality. The readings can be viewed at www.apps.des.qld.gov.au/air-quality

Region	Station	Carbon Monoxide (8hr Av) (ppm)	Nitrogen Dioxide (1hr Av) (ppm)	Ozone (1hr Av) (ppm)	Sulfur Dioxide (1hr Av) (ppm)	Particles TSP (24hr Av) (ug/m ³)	Particle PM10 (24hr Av) (ug/m ³)	Particle PM2.5 (24hr Av) (ug/m ³)	Visibility (1hr Av) (Mm ³)
Gladstone	Targinie		0.008		0.001		14.5	5.8	25
	Fisherman's Landing		0.004		0		14.2	6.2	26
	Boat Creek		0.008		0		15.1	6.8	25
	Clinton		0.005		0.013		9.2	3	18
	Memorial Park		0.024	0.028	0.017				
	Auckland Point						24.4		
	South Gladstone		0.01		0		17.6	9.8	19
	Boyne Island	0	0.001		0		11.2	4.5	20

Index values legend

Not available	very good	Good	Fair	Poor	Very poor
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CONTACT DETAILS

Please contact Shell's QGC business for more information.

1800 030 443 (toll-free)

email: community@shell.com.au

QGC Pty Ltd.

275 George St

Brisbane QLD 4000,

Australia