

NGN Environmental Aspects

Aspect *The elements of NGN's activities, products and services that can interact with the environment, e.g. an emission.*

Impact *Changes to the environment (adverse and beneficial) resulting from an aspect, e.g. air pollution caused by an emission.*

NGN's Environmental Aspects and Impacts have been identified through analysis as outlined in [NGN/PM/SHE61 Environmental Significance](#).

There is a risk that any of NGN's environmental aspects could have a negative impact on the environment and harm the company's image despite not being classed as significant. For this reason, all aspects must be managed and planning action put in place where necessary. Procedures must be followed to minimise any risk as much as possible.

Significant Environmental Aspects

In accordance with NGN/PM/SHE61, environmental aspects are awarded a significance score rating (up to a maximum of 25) based on their likelihood of occurrence and potential severity, with the following guidance:

- Significance score 15+ = significant;
- Significance scores 20+ = must be managed with a specific programme.

Based on NGN's latest Environmental Aspects and Impacts Register (dated September 2017), the following significant aspects were identified:

Aspect	Impact	Significance Rating
Use of Virgin Aggregate	Depletion of resources	16
PE pipe production	Depletion of resources	15
Use of Gas	Depletion of resources, Air pollution (including contribution of greenhouse gases)	20
Venting Gas	Air pollution (including contribution of greenhouse gases), Nuisance (noise and odour)	15
Use of Electricity	Depletion of resources, Air pollution (including contribution of greenhouse gases)	20
Use of Fuel	Depletion of resources, Air pollution (including contribution of greenhouse gases)	15
Gas Transportation	Air pollution (including contribution of greenhouse gases), Nuisance (odour)	15
Traffic Management	Air pollution (including contribution of greenhouse gases), Nuisance	20
Contaminated Land	Water pollution, Land Pollution, Legal compliance with environmental regulations (EPA 1990), Nuisance to adjacent sites	15

Aspect	Impact	Significance Rating
Disposal of Waste (excluding excavation spoil)	Waste Disposal (to Landfill), Legal compliance with waste management regulations	16

The aspects relevant to roles within NGN are detailed in the full version of the Aspects and Impacts Register, and summarised below for the Significant Aspects:

	Use of Virgin Aggregate	PE pipe production	Use of Gas	Venting Gas	Use of Electricity	Use of Fuel	Gas Transportation	Traffic management	Contaminated Land	Disposal of Waste (excluding excavation spoil)
Procurement	✓	✓			✓	✓		✓		✓
Offices/Depots			✓		✓	✓				✓
<i>Operational Activities</i>										
Electrical and Instrumentation				✓	✓	✓				✓
Emergency						✓	✓	✓	✓	✓
Pipelines & Maintenance	✓	✓	✓	✓	✓	✓	✓		✓	✓
Contaminated Land Management	✓					✓			✓	✓
Offtakes & Pressure Reduction Stations		✓	✓	✓	✓	✓	✓		✓	✓
Above Ground Installations		✓	✓	✓	✓	✓	✓		✓	✓
Repair & Replacement / street works	✓	✓		✓		✓	✓	✓	✓	✓
Major Projects	✓	✓		✓	✓	✓	✓		✓	✓
Gas Holder Demolition	✓		✓	✓		✓	✓		✓	✓

Summary of Significant Aspects applicability by NGN Role

NGN's significant aspects carry a much higher risk and as such are managed through specific improvement programmes. In addition, innovative projects are underway which aim to reduce the environmental impact of our significant aspects.

Planning Action

NGN plans actions against all Environmental Aspects and Impacts, with dedicated improvement programmes related to those which have been identified as significant. The following programmes are in place:

- Air: Business Carbon Footprint (BCF) & Air Quality
- Resource Management: Spoil, Aggregate & Waste
- Land contamination

The improvement programmes detail the objectives and actions to achieve them for the relevant areas.

Aspect: Use of Virgin Aggregate		Programme: Spoil & Aggregate
Issue	Relies on energy intensive finite source	
Risk	Supply issues and increases NGN BCF	
Opportunity	To increase the amount of recycled aggregate used	
Innovation	Support sites to produce HAUC approved recycled aggregate.	
Use of PE pipe		Programme: BCF
Issue	PE pipe contributes a high proportion to our BCF	
Risk	Supply issues and increases NGN BCF	
Opportunity	To reduce the amount of waste and consequently BCF	
Innovation	Utilise a Hexitrailer to reduce PE pipe waste. Sell waste PE for recycling.	
Use of gas		Programme: BCF
Issue	Reliance on a non-renewable energy source	
Risk	Risk of supply issues and increases NGN BCF	
Opportunity	To push towards more sustainable options and a more reliable supply	
Innovation	H21 project aims to make Leeds the first Hydrogen powered city, making our gas supply cleaner and more reliable	
Use of electricity		Programme: BCF
Issue	Reliance on energy production from non-renewable sources	
Opportunity	To innovate and develop renewable technologies which will be more reliable, save money and reduce the BCF	
Innovation	NGN are looking to install alternative energy sources on Above Ground Installation (AGI) sites and using solar panels for cathodic protection. These alternatives will be more efficient than the technologies already in place.	
Leakage from the network		Programme: BCF
Issue	Leakage is a high proportion of NGN's BCF that in turn increases risk to the network due to impacts of climate change	
Opportunity	To reduce leakage, decrease NGN BCF, save money and improve public opinions	
Use of fuel		Programme: BCF
Issue	Fuel use contributes a high proportion of NGNs non-leakage BCF. This increases the risk to the network due to impacts of climate change and increases the risk to health from poor air quality	
Opportunity	To decrease fuel use by taking advantage of alternative technologies/fuel.	
Innovation	Trials for compressed natural gas (CNG), hybrid, electric and hydrogen vehicles	
Traffic Management		Programme: Air Quality
Issue	Causes disruption/nuisance to the public and risks	
Risk	Negative impacts on NGN's reputation	
Opportunity	To implement effective traffic management and plan works where possible to prevent disruption as much as possible, and decrease the risk to health cause by poor air quality.	
Innovation	Trials for smart traffic lights	
Waste		Programme: Waste

Issue	NGN produces a large amount of <u>waste</u> , some of which is recycled, some is landfilled which is expensive and risks filling up landfill space. Landfilled waste also contributes to the production of greenhouse gases.
Opportunity	To reduce the amount of waste produced and recycle the waste that can be diverted from landfill.