

Proposed development of a Renewable Energy Combined Heat and Power Plant and associated wood chip and shavings production facility, Blairingone.



INTRODUCTION

Background

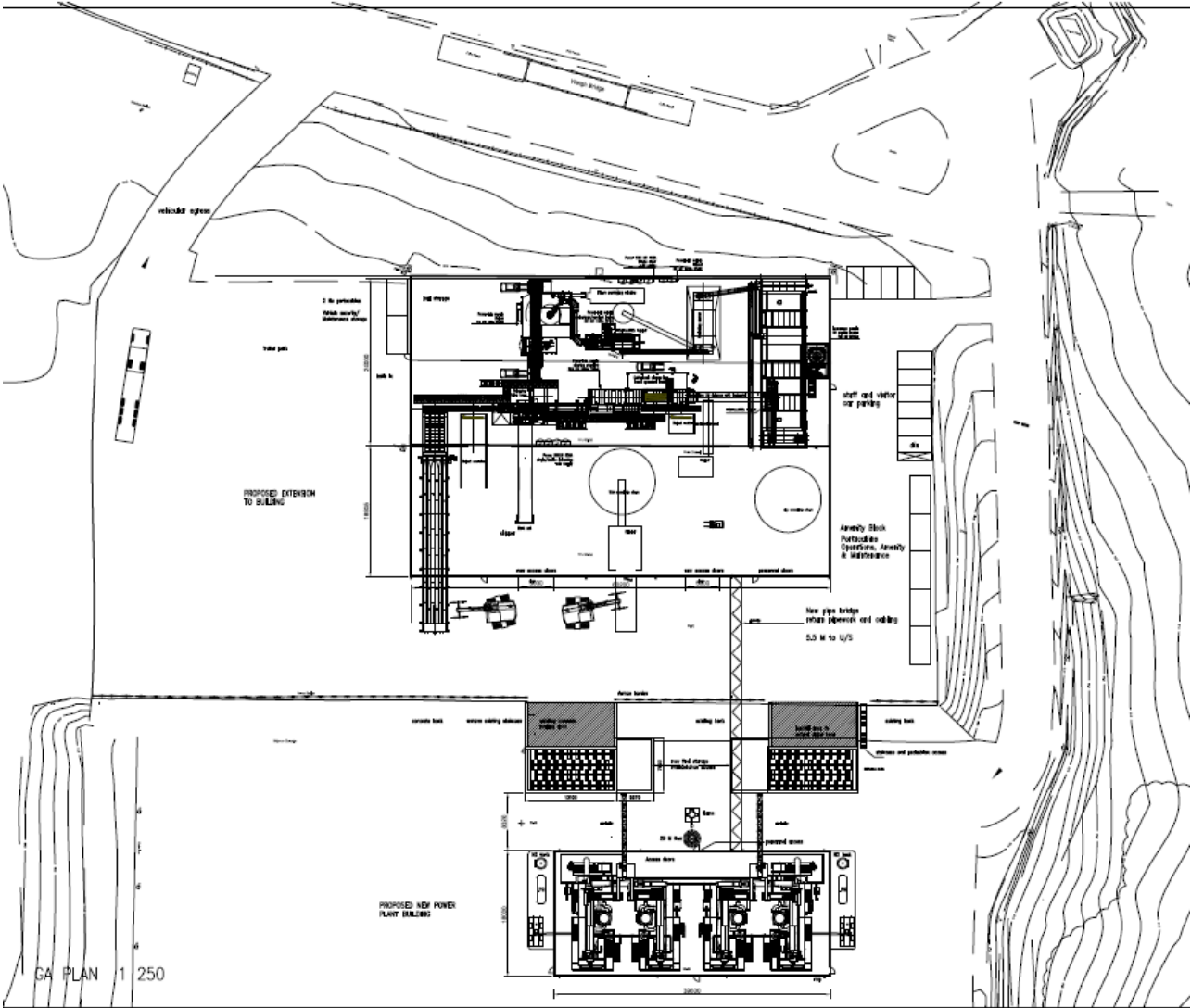
- Overview of Scheme
- Technology – CHP
- Technology – Shavings Plant

Part 2: Areas of Concern

- Air Quality
- Noise
- Traffic
- Fuel

Part 3: Questions and Answers

Overview of Scheme - Layout



Technology – CHP Plant

Development Partnership Between 2 Highly Respected Organisations:

Danish Technical University
National Laboratory For Sustainable Energy

+ Weiss A/S
(Part of the Envikraft Invest)

The screenshot shows the homepage of the Riso DTU National Laboratory for Sustainable Energy. The header includes the logo and navigation tabs for Research, Education, Business Relations, Meet us, Job and Career, News and Calendar, Knowledge Base, and About Riso. The main content area features a large image of green leaves with a search bar and a 'Quick links' section with buttons for 'Find employee', 'Find expert', and 'Find publication'. Below this, there are sections for 'Business relations' and 'Education', each with a list of links. A 'News' section is visible at the bottom, showing recent articles with dates and titles.

The screenshot shows the homepage of the Weiss A/S website. The header features the Weiss logo and navigation tabs for ABOUT WEISS, KNOW HOW, TECHNOLOGY, SERVICE, STAGE-GATE PROCESS, and CONTACT. The main content area is divided into two columns: 'READ MORE ABOUT' and 'HISTORY'. The 'HISTORY' section contains a list of bullet points detailing the company's development from 1922 to 2009, including its acquisition by Envikraft Invest A/S.

- In 1922 the brothers Weiss established a company manufacturing combustion systems for solid fuels in Dillenburg, Germany.
- During the 20th century the company develops the product and makes a name of WEISS as a strong manufacturer of combustion systems.
- Upon the energy crisis in the 1970's the Danish company Nordfab A/S, supplier of complete filtration systems to the wood working industries decides to take up the supply of combustion plants to complement their product mix. The combustion plants are successfully introduced for recovery of heat from the wood waste.
- In 1987 Nordfab A/S acquires the German company WEISS GmbH. At the time WEISS A/S has divisions in Germany, France and Denmark - these are now all owned by Nordfab A/S.
- Nordfab A/S sees the great potential in combustion plants using bio fuels for the Danish district heating sector.
- In the beginning of the 1980's the very first district heating plant was delivered. This plant is the starting signal for a still growing activity within the field.
- As a result of a strategic decision the A.P. Møller-owned DISA A/S buys Nordfab A/S in 1991.
- From a strategic point of view it is decided to focus on extraction and air processing at Nordfab A/S and in 1996 the energy division is split off. In a management buy-out the day-to-day management takes over and WEISS A/S is established as an independent private limited company. The company has maintained its growth and is today one of the leading suppliers to the district heating sector in Denmark and to the processing industry in Europe.
- Juli 2009 the shares in Weiss A/S were acquired by Envikraft Invest A/S. Envikraft Invest A/S has thereby reinforced the group of companies now including Envikraft A/S, SEM S&I Industri a/s and Weiss A/S. The achieved synergy consolidating the companies, will strengthen all three companies to meet the coming possibilities in the biomass and waste combustion business. Weiss A/S proceeds, as earlier, to sell, project and install combustion systems for household and industrial waste, wood chips, straw and other biomass products within the energy sector.

Technology – Shavings Plant

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Baling equipment & industrial balers product range:

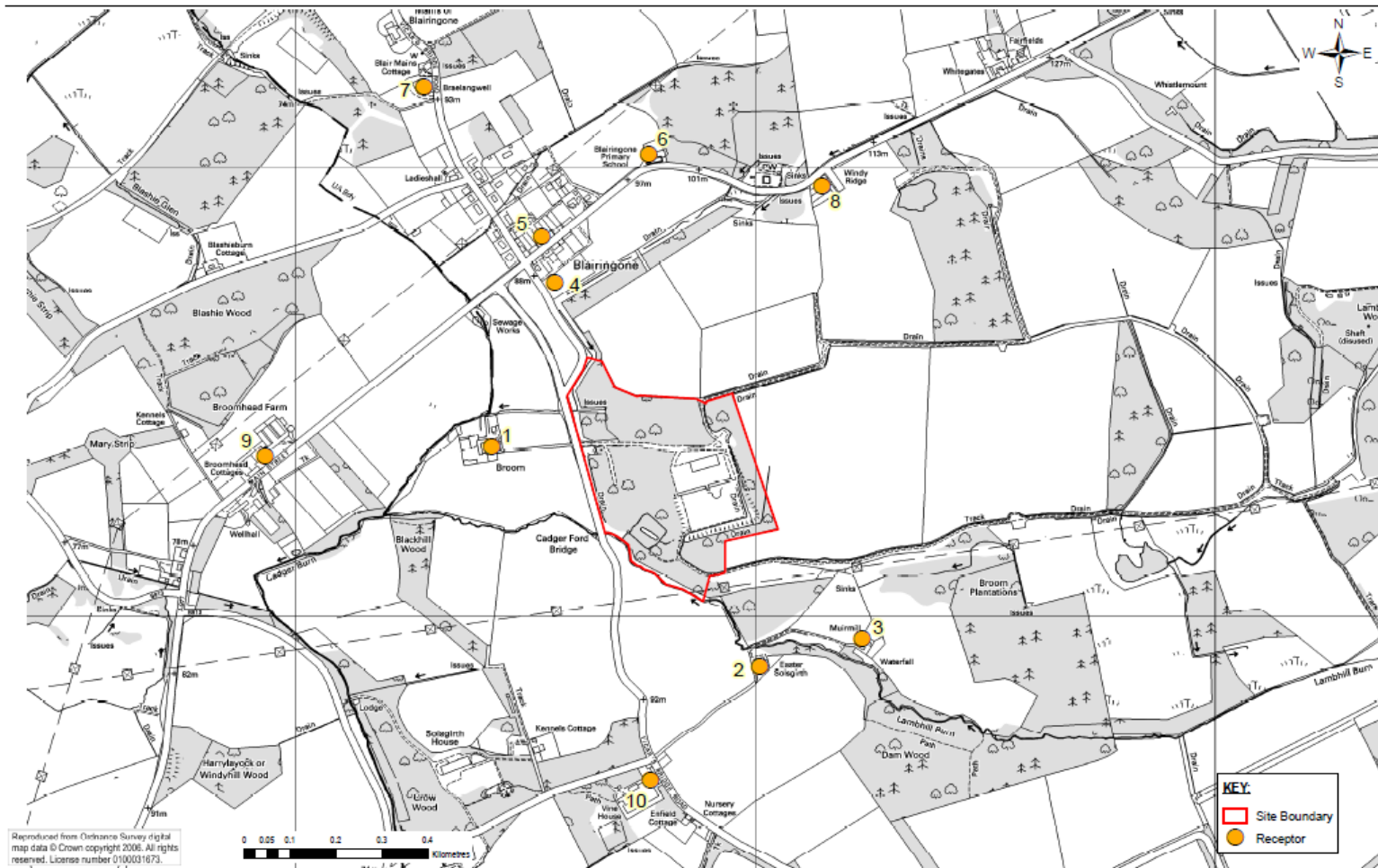
Air Quality Assessment

Table 6: Estimated background concentrations used in the assessment

Pollutant	2012
NO _x (µg/m ³)	7.46
NO ₂ (µg/m ³)	5.47
PM ₁₀ (µg/m ³)	9.54
CO (mg/m ³)	0.07

Based on DEFRA background mapping data.

Air Quality Assessment



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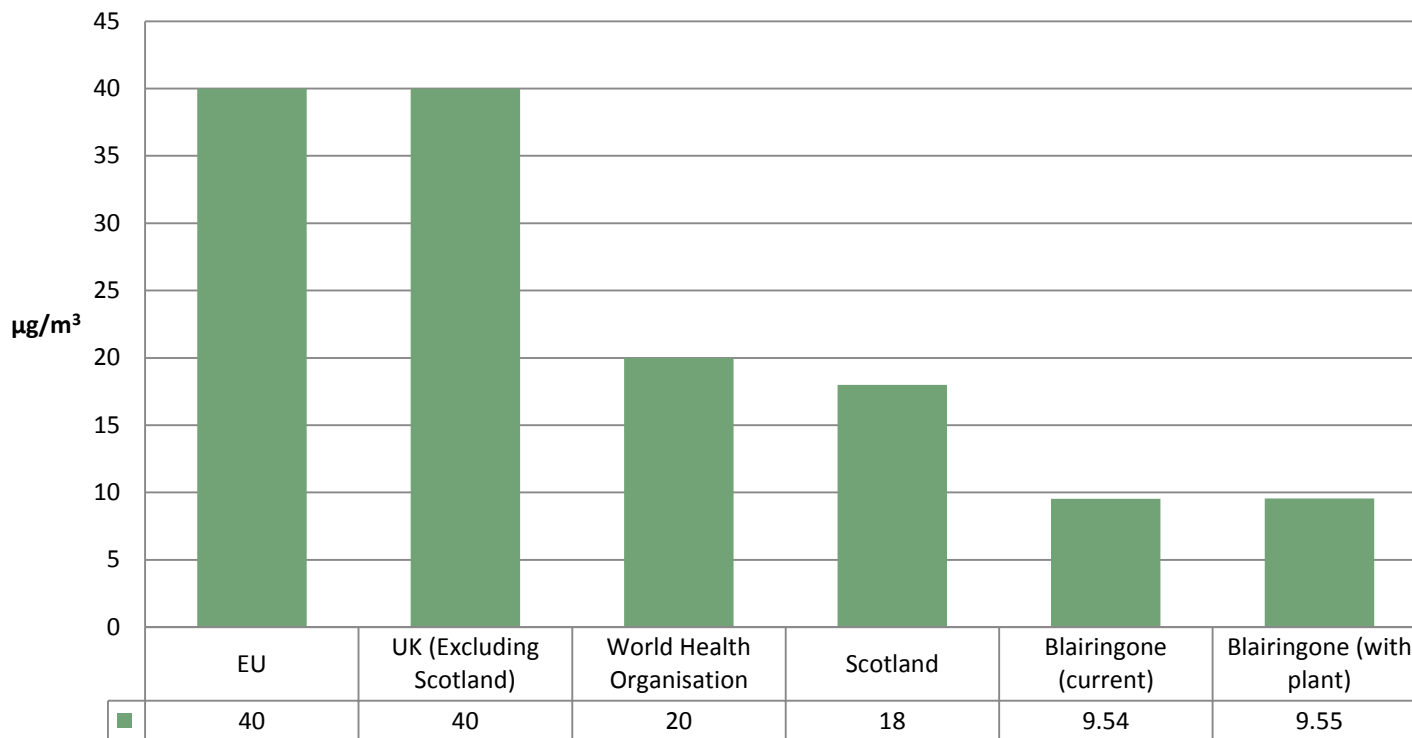
Air Quality Assessment

Table 7: Assessment Results at Specific Assessment Receptors

Receptor	Annual Mean PM ₁₀ (µg/m ³)	98.08 th Percentile of Daily Mean PM ₁₀ (µg/m ³)	Annual Mean NO ₂ (µg/m ³)	99.8 th Percentile of Hourly Mean NO ₂ (µg/m ³)	Maximum daily running 8 hr mean CO (mg/m ³)
1	9.55	9.66	5.87	18.65	0.60
2	9.55	9.61	5.63	19.48	0.57
3	9.55	9.61	5.68	16.42	0.63
4	9.54	9.56	5.53	13.52	0.56
5	9.54	9.56	5.52	13.43	0.56
6	9.54	9.56	5.55	14.53	0.57
7	9.54	9.55	5.50	12.87	0.56
8	9.55	9.59	5.66	15.27	0.57
9	9.55	9.61	5.72	15.79	0.57
10	9.54	9.56	5.54	13.58	0.56
AQS Objective	18µg/m ³	50µg/m ³	40µg/m ³	200µg/m ³	10mg/m ³

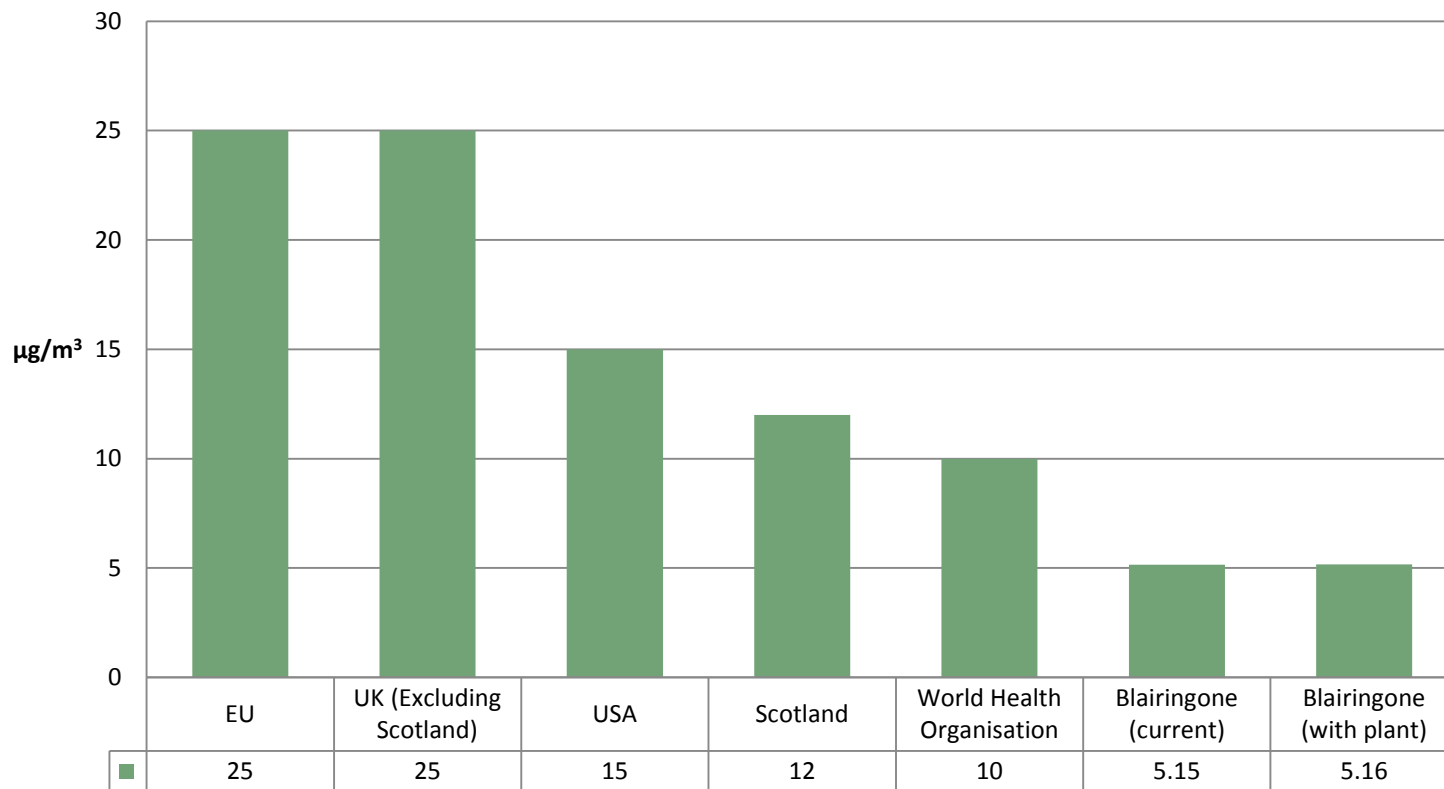
Air Quality Assessment – PM 10

PM 10 Annual Mean Targets - $\mu\text{g}/\text{m}^3$



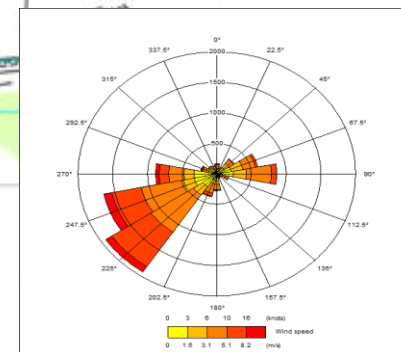
Air Quality Assessment – PM 2.5

PM 2.5 Annual Mean Targets - $\mu\text{g}/\text{m}^3$



Air Quality Assessment

Plot 1: Annual Mean NO₂ Concentrations (µg/m³) –
Contour Intervals are 5µg/m³ starting at 10µg/m³



Air Quality Assessment

Plot 2: Annual Mean PM₁₀ Concentrations ($\mu\text{g}/\text{m}^3$) – 9.7 $\mu\text{g}/\text{m}^3$ contour shown



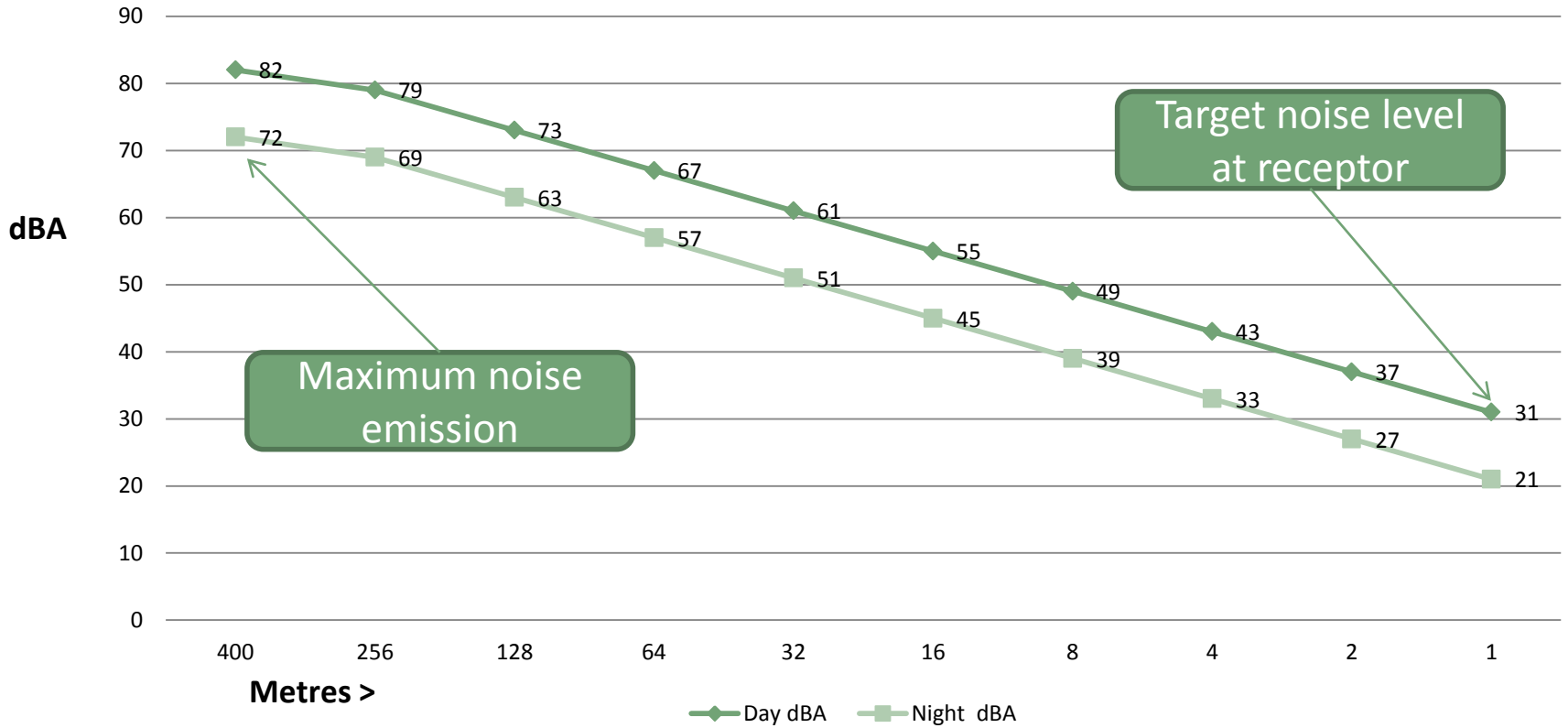
Noise

Table 5.1: Maximum cumulative operational noise limits

Receptor distances	Maximum cumulative operational noise limits ($L_{Aeq,T}$) (dB)	
	Daytime (0700 - 2300h)	Night time (2300 - 0700h)
Broom Farm	36	23
Easter Solsgirth	31	22
Muirmill	31	21

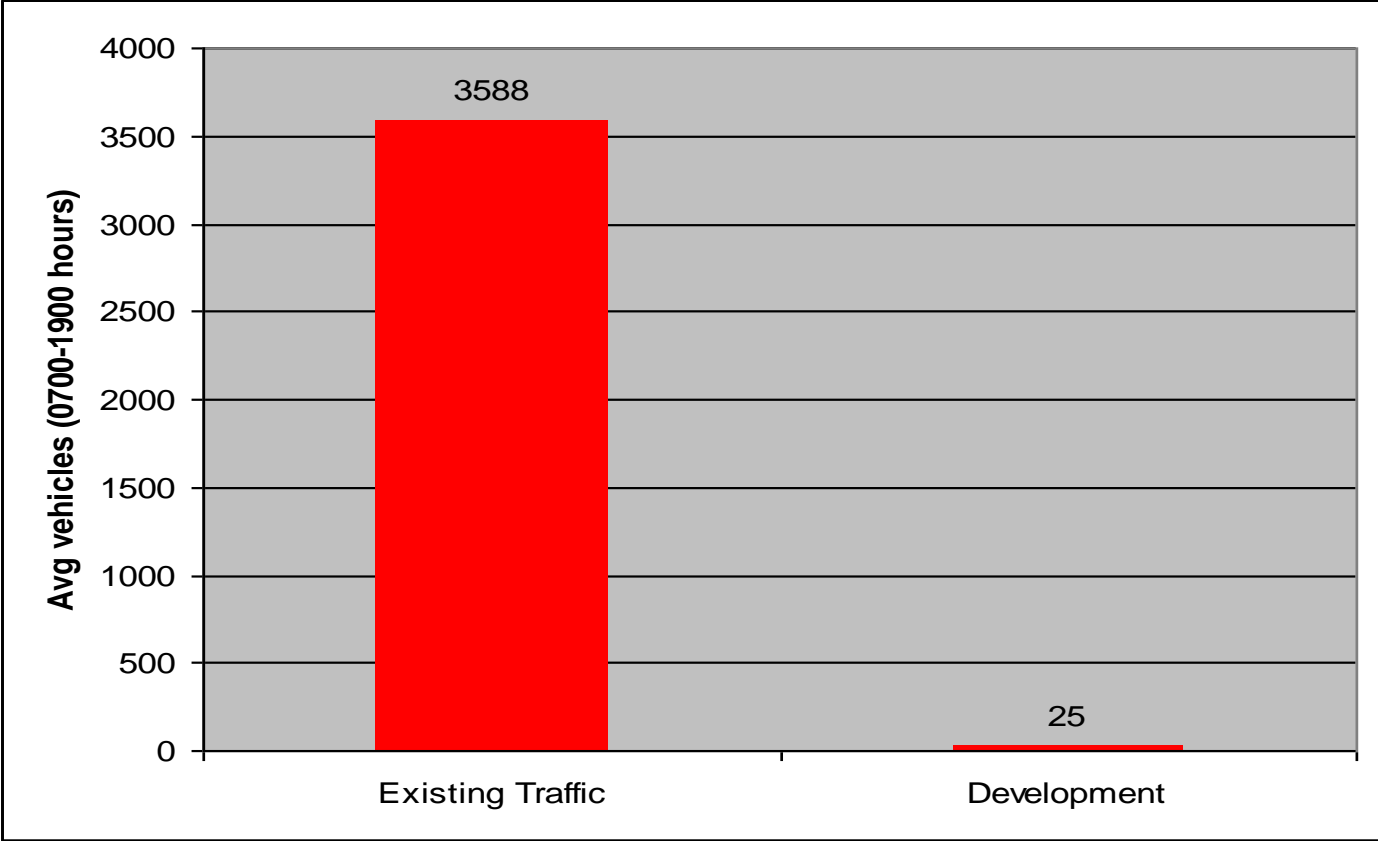
Noise

Noise Reduction Over Distance



Traffic Assessment

Graph 7.1: Average existing daily two-way traffic flows on A977 compared to predicted traffic generated by the proposed development.



Fuel

- No intention of using any form of waste as a fuel
- Design of plant will not allow for proper processing of waste
- Planning consent will not allow for processing of waste

- **We are prepared to enter into a Good Neighbour Agreement in respect of the commitment NOT to utilise waste as a fuel feedstock. A Good Neighbour Agreement is a voluntary agreement which is legally binding and entered into between the developer and the community. The community can enforce its terms akin to a normal contract. They have been introduced into the planning system in Scotland from 1 February this year and are considered a mechanism to govern land management/operations and are intended to help alleviate objections, such as the above.**

Summary

- A high quality investment providing employment opportunities on site and further up the supply chain – haulage and forestry
- Supporting Scotland's climate change agenda

- Not a WASTE handling facility
- Reinvigorating a brownfield site
- Imperceptible air quality impact
- Minimal visual appearance impact
- Noise and other emissions will be carefully managed

Summary

- **‘Scottish Natural Heritage strongly supports the development of renewable energy, including bioenergy, as part of the Government’s action on climate change’.**
- **‘The development of bioenergy in Scotland offers the opportunity to utilise land for forestry and energy crops in a way which could benefit both landscapes and wildlife and which can be accommodated alongside existing land management practices. The bioenergy industry provides opportunities for enhanced rural employment and can contribute to the sustainable and dynamic economy for Scotland’.**

QUESTIONS AND ANSWERS