SWANBANK GREEN STEEL MILL
community considerations

One of the greatest modern global challenges is 'sustainable' development – where economic prosperity and industry job creation doesn't cost us the earth.

Literally.

Our project brings the latest technological advancements and industry best practice to the Ipswich City Council, ensuring minimum impact from our green steel mill project on the surrounding environment and neighbouring residential communities.

At Future Forgeworks, we prioritise the surrounding community and environment in our mill's operations planning and design. We are driven by our core value #WeThriveTogether, with our surrounding communities being foundational to this value.

Green **AND** minimum impact

We have undertaken extensive engineering studies and technical assessments with our plant manufacturing partner, **SMS group**, and plant concept engineering partner, **Aurecon**, to verify our mill's compliance with all relevant legislation and regulations.

- ✓ Noise impact assessment
- ✓ Air quality report
- ✓ Stormwater management plan
- ✓ Traffic impact assessment
- ✓ Bushfire hazard assessment and management plan
- ✓ Historical mining risk assessment
- ✓ Chemical and hazardous substance storage management plan
- ✓ Operational management plan

FUTURE FORGEWORKS

Swanbank Steel Mill – Aurecon Render (May 2025)

SWANBANK GREEN STEEL MILL
community considerations cont.

NOISE QUALITY

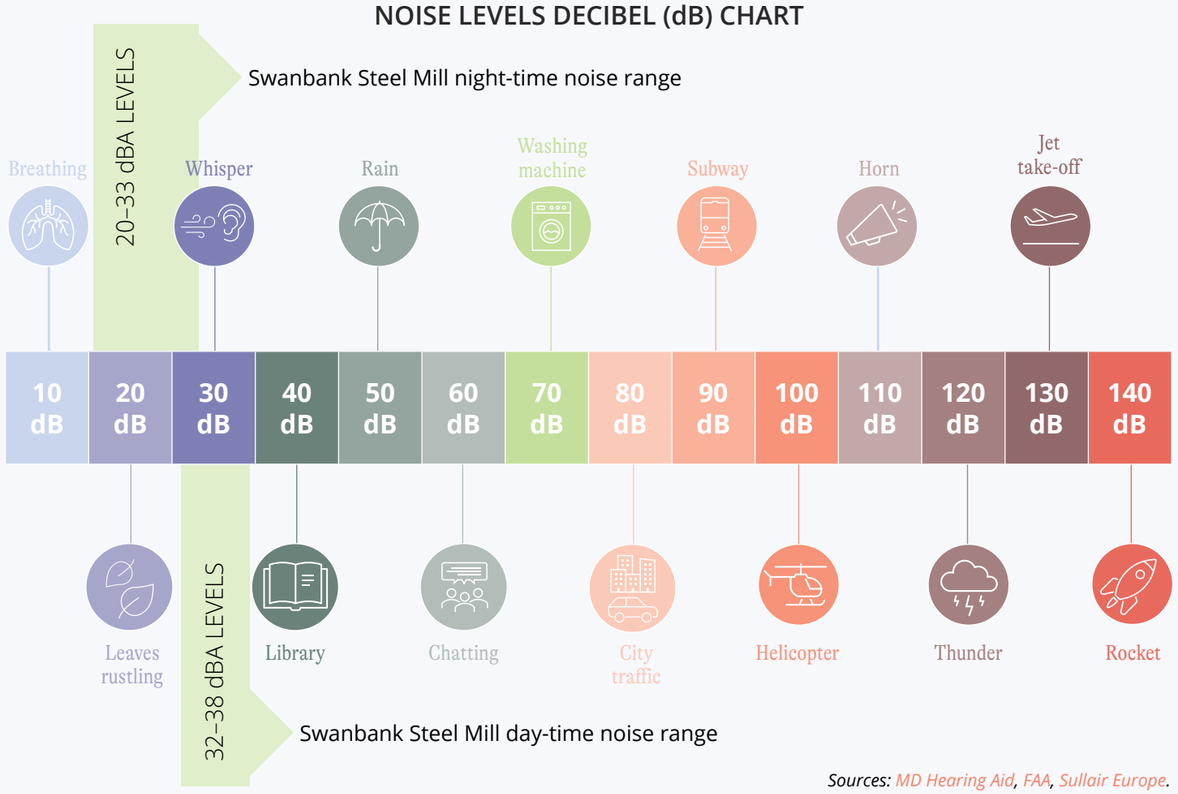
Electric arc furnace steel mills are globally renowned for being quiet. Our mill's layout, enclosed construction and ventilation stack have been designed to suppress noise generated by the manufacturing process and preserve noise quality on surrounding residential streets.

MEASURES
An exploration of noise mitigation opportunities was conducted during concept engineering, with building cladding, absorptive silencers, screening, acoustic louvres and staggered operations identified to ensure minimal impact to community while meeting legislative requirements.

ASSESSMENT OUTCOME
Modelling using these mitigants demonstrate that our mill will comply against the applicable noise criteria, with minimal impact to the nearest surrounding residential suburbs; quieter than the background noise created at night by fauna (insects etc). The predicted noise level of the manufacturing process at the closest suburb is 34 dBA (day-time) and 26 dBA (night). In comparison to everyday noise sources, the volume will be quieter than sitting in a library (see *Noise Levels Decibel Chart*).

	Day	Evening	Night
Noise limit	<50 dBA	<46 dBA	<37 dBA
Our steel mill	32–38 dBA	32–38 dBA	20–33 dBA

Noise limit criterion based on *The City of Ipswich Planning Scheme, SC6.9 Noise Impact Planning Scheme Policy* and background noise assessments.



Sources: MD Hearing Aid, FAA, Sullair Europe.

We understand odour is an area of concern for local communities. For this reason, air quality has been front of mind in our mill's engineering design. Given the enclosed operations, processing technology, safe work management plans and materials utilised, the air released by the Swanbank Steel Mill will be **odourless**.

AIR QUALITY

Secondary steel production is traditionally odourless. Our mill will not generate or store putrescible waste; and scrap metal processing and finishing operations (including painting or coating) will be conducted off-site. Further, our manufacturing processes will use state-of-the-art EAF milling technology from SMS group to optimise air quality and mitigate emissions.

FUME TREATMENT PLANT
The main contributor to air quality compliance is our fume treatment plant **(1)** and associated processes. The mill will extract fumes created by the enclosed melt shop via a dedicated vacuum and ducting system. Fumes collected from the furnaces will be cooled before being injected with activated carbon – the safest, most efficient technology to eliminate particulate matter. From there, the air will be pushed through filters, where dust and residual metals will be bagged and disposed of off-site, leaving clean air to be discharged via the release stack.

SCRAP METAL – STRICT QUALITY STANDARDS
Our mill will not process scrap metal; instead, this will be handled by our partners at Rocklea. Before recycled metal is brought to the mill, it is separated from non-metallic materials, hazardous substances or pollutants harmful to the health of the environment – in accordance with the *Institute of Scrap Recycling Industry* specifications. All incoming scrap metal will be inspected in the open scrap yard **(2)** to ensure it meets these strict quality standards. Non-compliant scrap metal will be turned away, ensuring scrap metal feedstock is free from materials that impact air quality.

REMOVAL AND REUSE
Steel impurities collected from the furnaces will be cooled indoors before being transferred to covered slag pits **(3)** as a hardened material. The majority of waste products generated at the mill will be collected for reuse in other industrial applications (e.g. road construction, paving), providing further ways we contribute to South-East Queensland's circular economy.

ASSESSMENT OUTCOME
Independent air quality modelling for the Swanbank Steel Mill predicts that particulate matter with a diameter of 2.5 micrometers or less ($PM_{2.5}$) received by any neighbouring communities will be at most 5% of the current allowable cumulative annual average concentration. This means that the Swanbank Steel Mill meets the objective of ecologically sustainable development. Environmental values, namely health and biodiversity of ecosystems, human health and wellbeing, and environmental aesthetics, will be upheld.

	Concentration	Percentage
$PM_{2.5}$ objective	≤ 7 µg/m³	≤ 100%
Our steel mill	≤ 0.4 µg/m³	≤ 5%

Objective based on the *Environmental Protection (Air) Policy Amendment 2024*. Industrial activities with annual $PM_{2.5}$ objectives up to 7 µg/m³ are deemed to meet environmental values required for ecologically sustainable development.

The content in this brochure summarises the main engineering studies completed for the Swanbank Green Steel Mill. The technical assessments are available in full and can be downloaded via the Ipswich City Council website as part of our development application.

- NOISE
- AIR
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