Schedule 1: Air Discharge Permit - Consent Conditions

1. This consent is for discharges to air from the manufacture of iron, steel and steel products from the Operating Area of New Zealand Steel (see Figure A) at 131 Mission Bush Road, Glenbrook. Specifically, this permit authorises discharges to air from:

    a. An Iron Making Plant requiring the combustion of up to 702,000 tonnes per year of coal and waste gases;

    b. A Steel Making Plant producing steel slab and steel billets from molten iron;

    c. Rolling Mills producing coils from cast slab and flat steel products;

    d. Finishing Plants manufacturing a range of metal-coated and colour coated products; and

    e. Ancillary processes including;

        (i) vanadium recovery by controlled oxygen blowing;

        (ii) waste steel reprocessing and flaring of gases from the steel furnace

        (iii) waste heat recovery, steam and electricity generation;

        (iv) combustion of up to 2.2 PJ per year of natural gas for heating and supplementary electricity generation;

        (v) slag cooling, storage, handling and reprocessing;

        (vi) crushing of slag by-product;

        (vii) raw materials and process materials (e.g., RPCC) storage and handling;

        (viii) acid recovery in natural gas fired roasters;

        (ix) drying of solvent-based paints;

        (x) commercial iron plating of up to 500 tonnes per day (179,000 tonnes per year);

        (xi) combustion of natural gas and/or diesel in 19 generators for a total gross heat release of up to 62 MW; and

        (xii) 4.2 MW natural gas fired back-up generators for emergency use.

    Processes must be carried out in accordance with the documents and drawings and all supporting additional information submitted with the application, detailed in Appendix A, and referenced by the Council as resource consent number DIS60376538.

2. Air discharge consent number DIS60376538 expires 25 years following the date of commencement unless it has been surrendered or been cancelled at an earlier date pursuant to the RMA.

3. The Consent Holder must pay the Council an initial consent compliance monitoring charge of $1,026 (inclusive of GST), plus any further monitoring charge or charges to recover the actual and reasonable costs incurred to ensure compliance with the conditions attached to this consent.

   Advice note:

   The initial monitoring deposit is to cover the cost of inspecting the site, carrying out tests, reviewing conditions, updating files, etc., all being work to ensure compliance with the resource consent. In order to recover actual and reasonable costs, monitoring of conditions, in excess of those covered by the deposit, shall be charged at the relevant hourly rate applicable at the time. The Consent Holder will be advised of the further monitoring charge. Only after all conditions of the resource consent have been met, will the Council issue a letter confirming compliance on request of the Consent Holder.

4. Access to the relevant parts of the Operational Area and Site must be permitted at all reasonable times to enable the servants or agents of the Council to carry out inspections, surveys, investigations, tests, measurements or take samples whilst adhering to the consent holder's health and safety policy.

5. The Consent Holder is responsible for discharges of contaminants to air from the Site and must make any person undertaking activities on site, on its behalf, aware of any relevant conditions of this consent.

Suitably Qualified and Experienced Air Quality Practitioner

6. Within three months of the commencement of this consent, the Consent Holder must engage a Suitably Qualified and Experienced Air Quality Practitioner (SQEP:AQ) and notify the Council. The notification to Council must include a brief Curriculum Vitae of the SQEP:AQ so that the Council can certify if the SQEP:AQ has sufficient prior experience in assessing the air quality effects of major industrial facilities and accreditation of their credibility by a professional society.

   Advice Note:

   The Council's certification of the SQEP:AQ shall be based on an evaluation of their experience, qualifications, and accreditation with professional/industry organisations. An air quality professional (such as a Certified Air Quality Professional, as recognised by the Clean Air Society of Australia and New Zealand), with a tertiary degree and at least 15 years' relevant experience is an example of the calibre of SQEP:AQ that could be certified. The SQEP:AQ may change over time with notification to be provided to the Council, and certification of the change.

Environment Committee

7. The Consent Holder must maintain, support the functions of, and meet the reasonable costs of an Environment Committee for the duration of the consent. The Consent Holder must extend invitations to join the Environment Committee and notify the Council of the names and professional affiliations of members. As far as practicable, the Environment Committee must comprise of at least one representative from each of the following:

    a. Local residents from the Glenbrook and Waiuku area (which may be a representative of the Franklin Local Board).

    b. Auckland Council Licensing and Regulatory Compliance (the Team Leader – Compliance Monitoring).

    c. Auckland Regional Public Health Service.

    d. Ngāti Tamaoho.

    e. Ngāti Te Ata.

    Advice Note:

    The established NZ Steel Environment Committee may perform the role of the Environment Committee in this condition. The members of the Environment Committee may change over time with notification to be provided to the Council.

8. The Consent Holder must use its best endeavours to ensure that the Environment Committee meets at least annually in November of each year. Any matters of concern raised by the Environment Committee regarding air discharges from the Operational Area and associated air quality effects must be:

    a. recorded by the Consent Holder in minutes of each meeting, which are circulated to the Environment Committee members and notified to the Council within ten working days of that meeting;

    b. addressed by the Consent Holder in an update to the Environment Committee at its next meeting.

    Advice Note:

    Further meetings of the Environment Committee may also be held throughout the year. The SQEP:AQ, engaged in accordance with Condition 6, may also attend Environment Committee meetings.

9. At least 20 working days prior to the Environment Committee Meeting in November of each year, the Consent Holder must submit the Annual Air Quality Report (prepared in accordance with Condition 30 for the preceding July-June consent reporting year) to the Council and the SQEP:AQ (engaged in accordance with Condition 6). The Consent Holder must present a summary of this Annual Air Quality Report, any

comments received from the Council and/or the SQEP:AQ, and/or any more recent air quality data available, at the Environment Committee Meetings.

9A. At least 20 working days prior to the next Environment Committee Meeting following preparation of a Response Report in accordance with Condition 32, the Consent Holder must submit the Independent Air Quality Review Report (prepared in accordance with Condition 31 or Condition 33) and associated Response Report to the Council and the SQEP:AQ (engaged in accordance with Condition 6). The Consent Holder must present a summary of each Independent Air Quality Review Report and the associated Response Report, and any comments received from the Council and/or the SQEP:AQ, at the next Environment Committee meeting following submission of a Response Report to Council.

Limit Conditions

10. There must be no dust and/or odour caused by discharges from the Operational Area which, in the opinion of an enforcement officer when assessed in accordance with the Good Practice Guides for Assessing and Managing Dust/Odour (Ministry for the Environment, 2016), is the cause of a noxious, dangerous, offensive, or objectionable effect beyond the boundary of the Site.

Advice Note:

The determination of whether a discharge of dust or odour is the cause of offensive or objectionable effects is made by suitably trained Council enforcement officers in accordance with the procedures outlined in the Good Practice Guides, including consideration of the FIDOL factors (frequency, intensity, duration, offensiveness, and location).

11. Air discharges within the Operational Area must not give rise to visible emissions, other than water vapour or heat haze, to an extent which, in the opinion of an enforcement officer when assessed in accordance with the Good Practice Guides for Assessing and Managing Dust/Odour (Ministry for the Environment, 2016), is the cause of a noxious, dangerous, offensive, or objectionable effect beyond the boundary of the Site.

12. Except as authorised by this consent, there must be no harmful air pollutant beyond the boundary of the Site, caused by discharges from activities undertaken within the Operational Area, which is present at a concentration that causes, or is likely to cause adverse effects to human health, ecosystems, or property.

13. Without limiting the generality of Conditions 10 to 12 and the requirement to minimise discharges as far as practicable in Condition 14, discharges of harmful air pollutants from the specified stacks must not exceed the following discharge limits (averaged across three representative samples taken in accordance with Condition 21 and emission concentrations (in mg/m^3) corrected to 'standard conditions' of 0°C, 101.325 kPa, and a dry gas basis):

Stack name	Contaminant	Discharge limit per stack
Multi-Hearth Furnace (MHF) Stacks (4 stacks: IP1-IP4)	Total Filterable Particulate Matter	Before 30 June 2028: 75 mg/m³ and 5.2 kg/hr After 1 July 2028: 50 mg/m³ and 3.5 kg/hr
	Nitrogen oxides (as Nitrogen dioxide)	75 kg/hr
	Sulphur dioxide	60 kg/hr
Kiln Stacks (4 stacks: IP23-IP26)	Total Filterable Particulate Matter	Before 30 June 2033: 75 mg/m³ and 5.2 kg/hr After 1 July 2033: 50 mg/m³ and 3.5 kg/hr
	Nitrogen oxides (as Nitrogen dioxide)	13 kg/hr
	Sulphur dioxide	7 kg/hr
Melter Baghouses (Metalside & Slagside) (3 stacks: IP32-IP34)	Fine Filterable Particulate Matter less than 2.5 µm in diameter ($PM_{2.5}$)	15 mg/m³ and 1.0 kg/hr
Slab Reheat Furnace (1 stack: HSM1)	Nitrogen oxides (as Nitrogen dioxide)	19 kg/hr
Primary Concentrate Dryer Baghouse (1 stack: SR1)	Total Filterable Particulate Matter	125 mg/m^3
KOBM Flarestack (1 stack: SP1)	Total Filterable Particulate Matter	200 (peak) 160 (annual average)
Acid Regeneration Plant (1 stack: CSM1)	Hydrogen chloride	45 mg/m^3
Pickle Line scrubber (1 stack: CSM3)	Hydrogen chloride	20 mg/m^3

Process Conditions: Minimising air discharges

14. All air discharges authorised by this consent must be maintained at the minimum practicable level at all times. This includes, but is not limited to, adherence to the following measures, limits, and minimum requirements:

    a. Implementation of, and adherence to, the Air Quality Management Plan (AQMP) certified under Condition 15.

    b. Minimising dust discharges from vehicle movements by:

(i) Utilising dust suppression methods on unpaved areas of the Site where discharges of dust are likely to arise, including frequent watering and/or chemical stabilisation of unsealed roads.

(ii) Minimising vehicle movements across unsealed surfaces.

(iii) Ensuring all roads with frequent vehicle movements are sealed within 12 months of this resource consent commencing.

(iv) Maintaining sealed roads free from accumulated dust-generating material by frequent sweeping.

(v) Maintaining unsealed surfaces where discharges of dust are likely to arise through grading and rolling to minimise dust, and stabilisation of exits from unsealed surfaces onto sealed roads.

(vi) Ensuring a speed limit of less than 20 km/hr along unsealed surfaces.

(vii) Maintaining and utilising a wheel wash for heavy vehicles exiting onto Brookside Road to minimise tracking of dust-generating material onto public roads.

c. Minimising dust discharges from stockpiles by:

(i) Maintaining stockpiles in a condition (including height and moisture content) to minimise the wind-entrainment of dust.

(ii) Monitoring the condition of stockpiled coal to identify and respond to conditions conducive to spontaneous combustion.

d. Minimising dust discharges from baghouse dust collector units by:

(i) The collection of dust from baghouse dust collector units within sealed containers at all times and the timely removal of full containers.

(ii) Daily visual inspections of the discharges and effective operation of baghouse dust collector units.

(iii) At least 12-monthly dye testing of all baghouses to detect any bag failures, with any deteriorated filter bags replaced as soon as practicable.

(iv) Providing for the upward (vertical) discharge of exhaust emissions from all baghouses without obstruction as soon as practicable but no later than 30 June 2028.

e. Minimising dust from the transfer, handling, and processing of materials by:

(i) Covering the ends of conveyors drop-points and minimising loss of material from conveyors.

(ii) Minimising transfer drop heights.

(iii) Utilising water sprays or other means of dust suppression when using any crushing or screening equipment.

(iv) Minimising the disturbance and tipping heights of all materials.

(v) Minimising air interaction when slag tipping, including by minimising the height of tipping.

(vi) Undertaking fume suppression on all iron plating activities except for those required under urgency to protect staff health and safety.

f. Managing air pollutant discharges from ancillary combustion activities by:

(i) Maintaining and operating vehicles and mobile machinery in accordance with the manufacturer's instructions to minimise diesel exhaust emissions, including at least annual routine maintenance.

(ii) Maintaining and operating natural-gas combustion equipment and any diesel generators permanently located at the Site in accordance with the manufacturer's instructions to minimise exhaust emissions, including at least annual combustion efficiency tuning.

(iii) Maintaining and operating continuous combustion efficiency monitoring and tuning for waste-gas co-generation combustion devices, including routine calibration in accordance with the manufacturer's instructions.

(iv) Monitoring of gas leaks around the Kilns Co-generation Plant bypass damper to ensure that carbon monoxide emissions are kept to a practicable minimum.

(v) No disposal of waste materials generated within the Site by open burning.

(vi) Providing for the upward (vertical) discharge of exhaust emissions from the diesel generators without obstruction.

(vii) Utilising diesel or biodiesel blends for mobile and stationary energy that is certified as suitable for on-road use within New Zealand.

(viii) Ensuring a maximum cumulative of 62 MW total gross heat release from diesel generators, with each unit having a maximum 7 MW total gross heat release.

g. Managing air pollutant discharges from the Iron Plant (in addition to 14(a-c)):

(i) Ensuring a maximum sulphur content of 0.5% by weight in the blended coal used in the Multi-Hearth Furnaces (MHF).

(ii) Ensuring a maximum cumulative mercury content of 0.12 mg/kg in the blended coal and limestone used in the MHF.

(iii) Minimising fugitive emissions by the maintenance of containment, ducting, and extraction equipment in a good condition (free from leaks) and with sufficient airflow to maintain negative pressure across air pollutant sources and draw air pollutants to emission control systems.

(iv) Maintaining and monitoring of the Iron Plant emissions control systems to minimise stack discharges of PM_{10}, NO_x, CO and SO_2 as far as practicable and not exceed the limits specified by Condition 13.

(v) Monitoring of the Iron Plant emissions control systems operating parameters to ensure ongoing performance is within the expected range for each parameter, as set out in the AQMP.

(vi) Maintaining and operating the continuous in-stack particulate monitoring system for the Melters baghouse stacks (IP32, IP33 & IP34), including details of trigger levels and alerts as set out in the AQMP to ensure that any discharges that indicate a failure of the filter bags are immediately identified and remediated.

(vii) Minimising flaring of waste-gases, with a target of <15% of Melters waste gases flared per month.

(viii) Minimising emergency venting where waste-gases bypass the emission control systems and/or flares.

(ix) Minimising the tipping of Reduced Primary Concentrate and Char (RPCC) from the Kilns, including by the utilisation of buffer storage and enclosed recovery systems.

(x) Each stage of the Iron Making process must not commence operation without the associated emission control system being fully operational and functioning correctly. Should a breakdown of control equipment occur during processing, the control equipment must be repaired and reinstated as soon as practicable.

(xi) Utilising the 'Pan Conveyor Scrubbers' to control emissions from the transfer of material from the MHF to the Kilns is to be operational as far as practicable during the operation of these conveyors.

h. Managing air pollutant discharges from the Steel Plant (in addition to 14(a-c)):

(i) Minimising fugitive emissions by the maintenance of containment (including ladle lids and the Steel Plant building cladding and roof), ducting and extraction equipment in a good condition (free from leaks) and with sufficient airflow to maintain negative pressure across air pollutant sources and draw air pollutants to emission control systems.

(ii) Maintaining and monitoring of the Steel Plant emissions control systems to minimise discharges of TSP, NO_x, and CO as far as practicable.

(iii) Ensuring each stage of the Steel Making process does not commence operation without the associated air pollution control equipment being fully operational and functioning correctly. Should a breakdown of control equipment occur during processing, the control equipment must be repaired and reinstated as soon as practicable.

(iv) Minimising emergency venting where KOBM waste-gases bypass the emission control systems.

(v) Minimising non-ferrous contaminants in steel scrap input into the KOBM.

(vi) Monitoring of the KOBM scrubber operating parameters to ensure ongoing performance is within the expected range for each parameter, as set out in the AQMP.

i. Managing air pollutant discharges from the Rolling Mills and Finishing Plants (in addition to 14(a-c)):

(i) Minimising fugitive emissions by the maintenance of containment, ducting, and extraction equipment in a good condition (free from leaks) and with sufficient airflow to maintain negative pressure across air pollutant sources and draw air pollutants to emission control systems.

(ii) Monitoring of the Acid Regeneration Plant and packed tower scrubber emission control systems operating parameters to ensure ongoing performance is within the expected range for each parameter, as set out in the AQMP.

(iii) Operating the afterburners within the paint coating lines so that all waste gases from solvent-based paint application and curing are held at a minimum temperature of 750°C for the prime oven incinerator and 650°C for the finish oven incinerator, in excess oxygen for a minimum period of 0.5 seconds.

Process Conditions: Air Quality Management Plan

15. Within six months of the date of commencement of this consent an Air Quality Management Plan (AQMP) must be submitted to the Council for certification that the AQMP meets the objective and includes the information required by Condition 16 in sufficient detail. The Consent Holder must meet the costs of the production, certification, monitoring, and review of the AQMP. Up until the date of certification of the AQMP, the Consent Holder shall comply with the procedures in place immediately prior to the commencement of this resource consent.

16. The objective of the AQMP is to detail the monitoring, management and operational procedures, methodologies, and contingency plans required to comply with the conditions of this consent, including measures to minimise air discharges as far as practicable in accordance with Condition 14. The AQMP must include the following:

a. Identification of all sources for discharges of contaminants into air, including fugitive emissions, on a map showing the location of each source.

b. Describe how the management and operational procedures, methodologies, and contingency plans necessary to comply with the conditions of this consent are implemented by an Environmental Management System (compliant with ISO 14001 or equivalent) that includes:

   (i) Methods and/or procedures to minimise air discharges as far as practicable, including all measures specified by Condition 14.

   (ii) Methods and/or procedures to minimise stack emission discharges of contaminants into air, including the details of the inspection, maintenance, monitoring, and contingency procedures in place for all emissions control equipment.

   (iii) Actions that will be taken in response to any faults or alarm conditions that have the potential to affect discharges to air.

   (iv) Methods and/or procedures to minimise fugitive emissions of contaminants into air, including the details of inspection, maintenance, monitoring, and contingency procedures.

   (v) Set out the operating parameters of emission control systems referred to in Condition 14.

c. Set out:

   (i) Methods and/or procedures for recording the frequency of fugitive emissions from RPCC losses, Iron Plating, and flaring of Melter gas, and the operational or management measures to minimise these emissions to the extent practicable; and

   (ii) Targets for reducing RPCC losses, if these are recommended in the Improvements Feasibility Report required by Condition 18(a).

d. Describe the methods and/or procedures for process and air quality monitoring (including stack testing, and ambient air quality and meteorological monitoring) required by this consent, including:

   (i) Monitoring methods and locations.

   (ii) Record-keeping and reporting (including maximum sulphur and mercury in coal contents and the matters specified by Condition 20).

   (iii) Trigger levels, response, notification, and contingency procedures.

e. The identification of relevant responsibilities of the Consent Holder's employees, agents, and contractors in relation to the AQMP.

f. Dust Contingency Measures for the immediate notification, investigation, and contingency methods and/or procedures for any exceedances of the 1-hour average TSP and PM_{10} Trigger Investigation Levels recorded (refer Condition 26).

g. The methods and/or procedures for the receipt, recording and handling of air quality complaints received (refer Condition 28).

h. Set out the management of change processes for any modifications to the processes, materials, and activities set out in the Consent Application, including:

(i) Assessment of whether changes are material;

(ii) Whether the changes ensure the effects are the same or similar in character, intensity, and scale to the effects described by the application documents (Condition 1);

(iii) whether the changes require associated changes to the certified AQMP; and

(iv) in the event that changes are required to the certified AQMP, assessment of whether changes to the certified AQMP are material, such that they must be submitted to the Council for certification prior to implementation, in accordance with Condition 17.

17. The AQMP must be reviewed, in detail, at least once every five-years to ensure it is up-to-date. All updates must be submitted to the Council for certification prior to implementation.

Advice Note:

The Council acknowledges that the Air Quality Management Plan is intended to provide flexibility both for the consent holder and the Council for the management of the air discharges. Accordingly, the Air Quality Management Plan will need to be kept up to date. Any reviews should be in accordance with the stated objectives of the management plan and limited to the scope of this consent.

Certification of the Air Quality Management Plan by the Council relates only to those aspects of the management plan that are relevant under the RMA. The certification does not amount to an approval or acceptance of suitability by the Council of any elements of the management plan that relate to other legislation, for example, but not limited to, the Building Act 2004 or the Health and Safety at Work Act 2015.

One-off Conditions: Improvements Feasibility Report

18. Within one year of the commencement of this consent, the Consent Holder must submit to the Council an Improvements Feasibility Report detailing an investigation of the effectiveness and operational and commercial feasibility of improving:

a. The emissions control of handling and recovery of Reduced Primary Concentrate and Char (RPCC) produced by the Kilns that cannot be immediately processed by the Melters, including by the installation of an in-line crushing system for direct recovery of RPCC and/or additional buffer storage capacity;

b. The emissions capture and control systems for the Vanadium Recovery Unit within the Steel Plant; and

c. Fugitive dust control in relation to storage, handling and processing of bulk materials including associated vehicle movements on site roadways and yard areas.

19. The Improvements Feasibility Report required by Condition 18 must be submitted to the SQEP:AQ for peer-review, with any comments received from the SQEP:AQ regarding the adequacy of the report to effectively minimise air discharges appended to the Improvements Feasibility Report when submitted to the Council.

Monitoring Conditions: Process monitoring

20. The Consent Holder must monitor and record the following process details in accordance with and from the date of the certified AQMP, with this information to be held on site, summarised in Annual Air Quality Reports prepared in accordance with Condition 30 and made available to the Council on request:

a. The sulphur and mercury content of coal in the feed to the Multi Hearth Furnaces, in percent by weight.

b. The coal feed rate to the Multi Hearth Furnaces and annual steel production.

c. The mass of RPCC that is tipped and the reason for each incident.

d. The mass of Iron Plated per year, including:

(i) The reason for the plating event (i.e., process disruption or Commercial Iron Plating).

(ii) The use of fume suppression, as a percentage of total plated iron.

(iii) In the case of unsuppressed Iron Plating, the reason suppression is not used.

e. The flaring of Melter gas as a percentage of total Melter gas produced and reasons for flaring.

f. The times of emergency venting where waste gases are discharged without treatment by the emission control systems within the Iron and Steel Plants, and the reasons for venting.

g. The operating parameters of emission control systems as described within the AQMP, including:

(i) Downtimes for emission control equipment when process operations continue.

(ii) The temperature of the waste gases at the exit of thermal oxidation emission control systems (afterburners and incinerators).

(iii) The differential pressure across scrubbers and fabric filters.

(iv) The liquid flow rates within scrubbers.

(v) The acid regeneration flow rate and pH of scrubber water at the Acid Regeneration Plant.

(vi) Continuous in-stack emissions monitoring data.

(vii) Flame out from the KOBM Stack at times when CO concentrations exceed 30% by volume.

h. Daily inspections of all baghouses for visible emissions.

i. The quantities of fuels consumed for stationary energy, process heat and metallurgical processes.

j. The times of operations of stationary combustion processes, including any portable diesel generators.

Advice Note:

The process monitoring is to ensure that measures relevant to the discharges of contaminants into air are adequately monitored and maintained in accordance with the AQMP to minimise air quality effects. The Council may request a summary or details of this data at any time, including as a supplement to the Annual Air Quality Report to better understand potential influences on stack emissions or ambient air quality.

Monitoring Conditions: Stack testing

21. Emission tests must be conducted on the following stacks to provide information and determine compliance with Condition 13. These tests must:

a. Be conducted during process conditions that are representative of the maximum normal emissions.

b. Comprise not less than three separate representative samples for each source and each stack testing round.

c. Be undertaken utilising:

(i) AS4323.2-1995, ISO 9096:2003 or US EPA Method 5 for TSP;

(ii) US EPA Method 201A for PM_{10} & $PM_{2.5}$;

(iii) US EPA Method 7E for NO_x;

(iv) US EPA Method 10 for CO;

(v) US EPA Method 3A for O_2 and CO_2;

(vi) US EPA Method 6C for SO_2;

(vii) US EPA Method 26A for HCl and Cl_2;

(viii) or other equivalent methods certified by the Council (see advice note below).

d. Correct the emission concentration results to 273.15°K, 101.325 kPa and a dry gas basis.

e. Be carried out by companies with appropriate independent accreditation for the methods required for testing at the Site.

f. Be undertaken at accessible stack sampling points that are constructed and maintained in accordance with the above testing standards.

g. Be reported as part of the Annual Air Quality Report in accordance with Condition 30(a).

h. Be undertaken in accordance with the following schedule:

Stack name	Contaminant	Minimum frequency of stack testing rounds (unless varied by Condition 23)
MHF Stacks (4 stacks: IP1-IP4)	Total Filterable Particulate Matter	• Twice per year. • Each stack testing round must sample a minimum of two stacks. • Each individual stack must be sampled at least once per year.
	Combustion gases (nitrogen oxides, nitrogen dioxide, carbon monoxide, carbon dioxide)	
	Sulphur dioxide	
Kiln Stacks (4 stacks: IP23-IP26)	Total Filterable Particulate Matter	• Twice per year. • Each stack testing round must sample a minimum of two stacks. • Each individual stack must be sampled at least once per year.
	Combustion gases (nitrogen oxides, nitrogen dioxide, carbon monoxide, carbon dioxide)	
	Sulphur dioxide	
Melter Baghouses (Metalside & Slagside) (3 stacks: IP32-IP34)	Size-Speciated Filterable Particulate Matter (TSP & $PM_{2.5}$)	Once per year.

Stack name	Contaminant	Minimum frequency of stack testing rounds (unless varied by Condition 23)
Slab Reheat Furnace (1 stack: HSM1)	Combustion gases (nitrogen oxides, nitrogen dioxide, carbon monoxide, carbon dioxide)	Once per year.
Acid Regeneration Plant (1 stack: CSM1)	Total Filterable Particulate Matter	Once per two years.
	Hydrogen chloride & Chlorine	

Advice Note:

Council's certification of an alternate method for source emissions testing will be based on a demonstrated advantage or equivalence of the method over the specified method for the accuracy and precision of results

22. In addition to the routine stack testing required by Condition 21, further stack testing must be undertaken at minor stack sources and the Steel Plant air discharge sources to determine the effectiveness of emission control systems and to provide emissions data for the five-yearly Independent Air Quality Review Report required by Condition 31. This further stack testing must include, as a minimum, testing for the discharges of Total Filterable Particulate Matter from the following sources at the specified frequencies:

Source name	Minimum frequency of stack testing rounds (unless varied by Condition 23)
Steel Plant Baghouse	Once per two years
KOBM Flare Stack	Once per two years
Slab Reheat Furnace	Once per five years
Pickle Line Scrubber	Once per five years
Primary Concentrate Drier Baghouse	Once per five years

Advice Note:

The emissions testing required by Condition 22 should be undertaken in general accordance with the technical requirements of Condition 21, acknowledging that non-standard testing methods are required for the Steel Plant Baghouse sources. The results of these further tests may be compared against the assumptions detailed by Appendix C of the Modelling Report (Tonkin +Taylor, 2021).

23. Following at least five years of stack testing in accordance with Conditions 21 and 22, the minimum frequencies of stack testing may be altered by the Council. The minimum frequency of stack testing required must provide adequate emissions data for each scheduled contaminant, proportionate to the level of risk of non-compliance with any of the conditions of this consent (including the Trigger Investigation Levels and requirement to minimise air discharges).

Advice Note:

To support any proposed reduction of stack testing frequency for any contaminant at a stack, the Consent Holder should submit to the Council a justification for the reduction with reference to past testing results and other environmental monitoring data. This justification should also include details of consultation with the Environment Committee.

Monitoring Conditions: Ambient Air Quality Monitoring

24. The Consent Holder must, by no later than 1 July 2023, operate a meteorological monitoring station to measure wind speed, wind direction, temperature, and rainfall at the site. The monitor must continuously log these meteorological conditions in accordance with standard AS/NZS 3580.14:2014 (or equivalent certified by the Council) in real-time so that the readings are immediately retrievable.

25. The Consent Holder must, by no later than 1 July 2023, measure the concentration of air pollutants in ambient air in the vicinity of the Site utilising equipment taking continuous measurements. The ambient air quality monitoring must be undertaken in accordance with the standards scheduled by the National Environmental Standards for Air Quality where relevant, or an equivalent method certified by the Council, and include, at minimum, the following contaminants monitored at the following locations (as shown on Figure A):

Ambient monitor location	Contaminants to be monitored
Training Centre (Site 3)	Total Suspended Particulate Matter (TSP)
	PM_{10}
64 Glenbrook Beach Road (Site 20)	PM_{10}
	$PM_{2.5}$
	NO_2
Boundary Road, Waipipi (Site 18)	PM_{10}
	$PM_{2.5}$
Glenbrook School	PM_{10}
	$PM_{2.5}$
Mission Bush (Site 25)	PM_{10}
	$PM_{2.5}$
	NO_2

Advice Note:

Council's certification of an alternate method for ambient air quality monitoring will be based on a demonstrated advantage or equivalence of the method over the specified method for the accuracy and precision of results. Ambient air quality monitors that have been certified by regulatory or scientific organisations as achieving equivalence with standards similar to those scheduled by the NES:AQ may be certified in accordance with this provision.

Reporting Conditions: Incidents and complaints

26. In the event that ambient air quality monitoring in accordance with Condition 25 at any site shows that TSP, PM_{10}, $PM_{2.5}$, and/or NO_2 levels exceed the Trigger Investigation Levels prescribed by this Condition, the Consent Holder must conduct an investigation into the cause of the exceedance. If the cause of the Trigger Investigation Levels exceedance is identified as being an activity undertaken within the Operational Area, the Consent Holder must:

    a. Within three working days of the verified result, notify the Council.

    b. If the exceeded Trigger Investigation Levels is for TSP or PM_{10} (1-hour average), implement the relevant Dust Contingency Measures of the certified AQMP as soon as practicable.

    c. Within ten working days, undertake a further investigation and submit this to the Council, with the investigation to include:

        (i) A review of operational conditions.

        (ii) A review of meteorological conditions.

        (iii) A review of any influences not related to the activities authorised by this consent that may have contributed to elevated levels.

        (iv) Details of actions taken or proposed to reduce air pollutant levels.

Contaminant	Trigger Investigation Levels (and averaging period)
TSP	250 µg/m³ (1-hour average)
	120 µg/m³ (24-hour average)
PM_{10}	45 µg/m³ (24-hour average)
	120 µg/m³ (1-hour average)
Particulate Matter less than 2.5 µm in aerodynamic diameter ($PM_{2.5}$)	22.5 µg/m³ (24-hour average)
	60 µg/m³ (1-hour average)
Nitrogen dioxide	180 µg/m³ (1-hour average)
	25 µg/m^3 (24-hour average)

27. The Council must be notified as soon as practicable in the event of any significant discharge to air, which results or has the potential to result in a breach of air quality conditions or adverse effects on the environment. The following information must be supplied:

    a. Details of the nature of the discharge.

    b. An explanation of the cause of the incident.

c. Relevant ambient air quality monitoring data recorded.

d. Details of remediation action taken or proposed.

Advice Note:

Significant discharges to be notified to Council in accordance with this condition include abnormal air discharges arising from emission control systems failures. An email to monitoring@aucklandCouncil.govt.nz should be sent detailing the nature of the issue and what contingency measures are to be implemented to minimise potential effects.

28. All air quality complaints that are received must be recorded and reported as follows:

a. Within one working day of receiving the complaint, the complaint details are to be reported to the Council and must include (to the extent these are held by the Consent Holder) the date, time, location, and nature of the complaint.

b. Within three working days of the complaint, the complaint details to be reported to the Council must include (to the extent these are held by the Consent Holder):

(i) The name, phone number and address of the complainant, unless the complainant elects not to supply these details.

(ii) Weather conditions at time of the complaint as recorded by the on-site meteorological monitor.

(iii) Relevant ambient air quality monitoring data recorded at the time of the complaint.

(iv) A description of the possible cause of the complaint, whether related to activities within the Operational Area or outside of the Consent Holder's control.

(v) Any remedial actions undertaken or proposed.

29. Details of all inspections, records, monitoring, and test results that are required by the conditions of this consent must be kept for a minimum of five years from the date of each entry and must be provided to the Council on request.

Reporting Conditions: Annual Air Quality Report

30. Prior to 1 September of each calendar year, the Consent Holder must prepare and submit an Annual Air Quality Report to Council for certification, and to the SQEP:AQ for review. The report must detail all matters listed below, for the preceding consent reporting year (1 July to 30 June). Once certified as sufficiently addressing the required matters by Council, the Consent Holder must publish the Annual Air Quality Report, together with contact details for enquires in relation to the report, in an online location accessible by members of the public and notify members of the Environment Committee of its availability. The Annual Air Quality Report must include the following:

a. Results of stack testing undertaken in accordance with Conditions 21 and 22, including:

   (i) A summary of the stack testing data with a comparison of the results to the discharge limits of Condition 13.

   (ii) A summary of trends for stack discharges over at least the past five years of stack testing results.

   (iii) Details of any exceedances of the limits in Condition 13, and any subsequent action to investigate and if necessary to remedy any exceedances.

   (iv) As an Appendix to the Annual Air Quality Report, reports detailing how each round of stack testing was undertaken and the results, including the test methods employed, the raw data obtained during the tests, the relevant operating parameters, and all calculations. The operating parameters to be reported include the rate of production for the relevant process and operational status of the relevant emission control systems.

b. A summary of all ambient air quality and meteorological monitoring undertaken in accordance with Conditions 24 and 25, including:

   (i) Details of any exceedances of the Trigger Investigation Levels notified to the Council in accordance with Conditions 26.

   (ii) A comparison of recorded ambient air quality with relevant New Zealand standards and guidelines.

   (iii) Statistical analysis of recorded ambient air quality to detail the mean, median, 75th, 95th, 99th percentiles and maximum air quality values recorded for each monitoring location.

c. A summary of any incidents involving significant discharges of air pollutants notified to the Council in accordance with Condition 27.

d. A summary of any complaints received and provided to the Council in accordance with Condition 28.

e. A summary of any material process changes made within the Operational Area, as certified by the Council as part of the AQMP, within the past consent reporting year that affect air discharges.

f. A summary of any proposed material process changes for the coming consent reporting year that would affect air discharges or air quality monitoring.

g. Details of any identified emerging trends with respect to the information presented in accordance with subclauses (a) to (e) above and including as a result of comparison with data previously collected and reported where relevant.

Advice Note:

The Annual Air Quality Report must be submitted to the Council and the SQEP:AQ (engaged in accordance with Condition 6) for review prior to the November Environment Committee meetings as per the requirements of Condition 9. A summary of the Annual Air Quality Report, and any comments received from the Council or SQEP:AQ, is to be presented at the November Environment Committee meeting.

Reporting Conditions: Five-yearly Independent Review Report

31. The Consent Holder must engage the SQEP:AQ (certified by Council under the provisions of Condition 6) to prepare a comprehensive Independent Air Quality Review Report at least once every five years for the duration of this consent. The Consent Holder must provide the SQEP:AQ with all information and data necessary to complete the Independent Air Quality Review Report. The Independent Air Quality Review Report must be submitted to the Council by 1 October every fifth year for the duration of the consent for certification that it sufficiently addresses the required matters. The Council may review (internally or externally) the Independent Air Quality Review Report as part of this certification with the cost of any such review borne by the Consent Holder. As a minimum, the report must include the following information:

    a. A summary of the five previous Annual Air Quality Reports prepared in accordance with Condition 30.

    b. A detailed review of the air pollutant discharges from the Iron Plant, quantifying emissions of air pollutants from the MHF, Kilns and Melters stacks.

    c. A detailed review of the air pollutant discharges from the Steel Plant, quantifying emissions from the Steel Plant baghouse, KOBM stack and fugitive emission sources, including by analysing emissions data collected in accordance with Condition 21.

    d. Review and commentary regarding the discharges, management, and resulting off-site effects of PM_{10} from fugitive sources, including uncaptured process fumes, emergency venting, product tipping, vehicle movements and raw materials handling.

    e. Accounting for the information provided in (a) to (d), commentary regarding compliance with the conditions of this consent (including the requirement of Condition 14 that discharges are minimised as far as practicable), and commentary regarding the actual and potential adverse effects of the air discharges. The commentary must:

        (i) Compare data with previously collected and reported results.

        (ii) Identify and comment on any emerging ambient air and stack test monitoring trends.

(iii) Critically evaluate the performance of the procedures and engineering controls in place to minimise adverse air quality effects, review any improvements undertaken and make recommendations on any additional improvements needed, with respect to procedures or engineering controls relating to the exercise of this consent.

(iv) Critically evaluate the adequacy of air quality monitoring undertaken, recommending any further monitoring information required to effectively understand and evaluate air discharges and adverse air quality effects.

(v) Identify any material effects beyond those identified in the assessments referenced in Appendix A and provide recommendations for further assessment.

f. Any other issue relevant to air discharges and air quality effects considered important by the Consent Holder, the Council, or Environment Committee.

Advice Note:

The Independent Air Quality Review Report is an independent expert audit of the NZ Steel Operational Area's air discharges and resulting adverse air quality effects, to identify trends and information gaps. The SQEP:AQ should reference (and not duplicate) the information presented in the Annual Air Quality Reports to provide this expert audit and commentary.

Reporting Conditions: Response Report

32. The Consent Holder must prepare a Response Report to each Independent Air Quality Review Report and submit this to the Council within two months of the Independent Air Quality Review Report being submitted. The Response must include:

a. Commentary regarding how any recommendations of the Independent Air Quality Review Report are to be further investigated for feasibility and/or implemented, including timeframes for any investigation or implementation.

b. A review of all significant sources of emissions relevant to any material effects beyond those identified in the assessments referenced in Appendix A as identified by the Independent Air Quality Review Report in response to Condition 31(e)(v). This review must include:

(i) The techniques applied to control emissions.

(ii) A description of alternative methods for minimising the discharge compared to that currently used at the site.

(iii) Identification of any of the alternative methods in (ii) that would reduce adverse effects.

(iv) The feasibility, including financial implications, of adopting the methods identified in (iii).

(v) An overall evaluation of whether current practice is the best practicable option.

c. Where the Response identifies that current practice is no longer the best practicable option, the Response must include a proposal of steps to be taken to adopt the best practicable option, and a timetable in which those steps are to be taken.

33. The Council may require an out-of-cycle Independent Air Quality Review Report in accordance with all or part of Condition 32, where there is a significant adverse effect on the environment arising from the exercise of the consent, which was not foreseen at the time of the application.

Review Condition

34. Under section 128 of the RMA, the conditions of this consent may be reviewed by the Manager Resource Consents at the Consent Holder's cost in order to:

a. Deal with any significant adverse effects on the environment arising from the exercise of the consent which was not foreseen at the time the application was considered and which is appropriate to deal with at the time of the review.

b. Consider the adequacy of conditions which avoid, remedy, or mitigate nuisance and adverse effects beyond the boundary of the Site, particularly if regular or frequent complaints have been received and validated by an enforcement officer.

c. Consider the adequacy and necessity of conditions for monitoring air discharges and air quality effects, particularly if past monitoring data demonstrates an altered risk of human health effects (such as ambient air quality monitoring data which is consistently low in comparison to ambient air quality assessment criteria).

d. Consider developments in control technology and management practices that would enable practical reductions in the discharge of contaminants to air.

e. To require the Consent Holder to adopt the best practicable option to remove or reduce any adverse effect on the environment arising from the exercise of this consent.

f. Alter the monitoring requirements, including requiring further monitoring, or increasing or reducing the frequency of monitoring.

g. Consider the adequacy of conditions in the event that the ambient monitoring undertaken indicates that exceedances of the Resource Management (National Environmental Standards for Air Quality) Regulations 2004 (NES:AQ) or any subsequent amendments have occurred or are likely.

h. Take into account any Act of Parliament, regulation, national policy statement, regional policy statement or relevant regional plan that relates to limiting, recording or mitigating emissions authorised by this consent.

Additionally, the consent may be reviewed by the Manager Resource Consents at any time, if it is found that the information made available to the Council in the application contained inaccuracies which materially influenced the decision and the effects of the exercise of the consent are such that it is necessary to apply more appropriate conditions.

Advice notes

1. *Any reference to number of days within this decision refers to working days as defined in s2 of the RMA.*

2. *For the purpose of compliance with the conditions of consent, "the Council" refers to the Council's monitoring officer unless otherwise specified. Please email monitoring@aucklandCouncil.govt.nz to identify your allocated officer.*

3. *For more information on the resource consent process with Auckland Council see the Council's website: www.aucklandCouncil.govt.nz. General information on resource consents, including making an application to vary or cancel consent conditions can be found on the Ministry for the Environment's website: www.mfe.govt.nz.*

4. *If you disagree with any of the above conditions, and/or disagree with the additional charges relating to the processing of the application(s), you have a right of objection pursuant to sections 357A and/or 357B of the Resource Management Act 1991. Any objection must be made in writing to the Council within 15 working days of your receipt of this decision (for s357A) or receipt of the Council invoice (for s357B).*

5. *The consent holder is responsible for obtaining all other necessary consents, permits, and licences, including those under the Building Act 2004, and the Heritage New Zealand Pouhere Taonga Act 2014. This consent does not remove the need to comply with all other applicable Acts (including the Property Law Act 2007 and the Health and Safety at Work Act 2015), regulations, relevant Bylaws, and rules of law. This consent does not constitute building consent approval. Please check whether a building consent is required under the Building Act 2004.*

6. *Any administrative charge fixed in accordance with section 36(1) of the Resource Management Act 1991 (RMA) and any additional charge required pursuant to section 36(3) in respect of this consent shall be paid to Auckland Council.*

7. *The initial monitoring deposit is to cover the cost of inspecting the Site, carrying out tests, reviewing conditions, updating files, etc., all being work to ensure compliance with the resource consent. In order to recover actual and reasonable costs, monitoring of conditions, in excess of those covered by the deposit, shall be charged at the relevant hourly rate applicable at the time. The consent holder will be advised of the further monitoring charges.*

8. *The Council may at any time undertake or require source emission testing and/or any other monitoring to ensure compliance with the conditions of this consent. The*

consent holder is advised that they will be required to pay for the costs of this monitoring as per Advice Note 6.

GLOSSARY OF ACRONYMS AND TERMS

Acronym or term	Definition
Trigger Investigation Levels	Set by Condition 26
AQMP	Air Quality Management Plan
Consent reporting year	1 July – 30 June
Dust Contingency Measures	As set out in the AQMP
FIDOL	Frequency, Intensity, Duration, Offensiveness, and Location
GPG: Dust	Good Practice Guides for Assessing and Managing Dust/Odour
KOBM	Klockner Oxygen Blown Maxhutte (Oxygen Steel Making Furnace)
Materials	Includes raw materials, consumable manufacturing products, co-products, scrap metal and waste.
Operational Area	The 'Operational Area' is the portion of the Site where air discharge activities authorised by this consent occur, as defined by the white-dash boundaries of Figure 7.
Site	The 'Site' comprises all properties owned by NZ Steel Ltd, as defined by the orange boundaries of Figure 7.
SQEP:AQ	Suitably Qualified and Experienced air quality Practitioner, as defined by Condition 6.

Figure A: Definition of ‘Site’ and ‘Operating Area’ and Monitoring Sites

Appendix A

Application Form and Assessment of Environmental Effects prepared by Tonkin + Taylor Limited, dated 18 October 2021

Report title and reference	Author	Rev	Dated
Air Quality Assessment. Ref: 1010577.0000	Tonkin & Taylor Ltd	1.1	18/10/2021
NZ Steel Ltd, Air Discharge Permit: Assessment of Landscape and Visual Effects. Ref: 20936 LVA01	LA4	-	30/03/2021
New Zealand Steel: Economic Impact Assessment. Ref: 6188	berl	-	March 2021
Relevant Objectives and Policies	Tonkin & Taylor Ltd	-	April 2021

Drawing title and reference	Author	Rev	Dated
NZ Steel Location and Context Plan	T+T	0	22/04/2021
NZ Steel AUP Zoning and Overlays Plan	T+T	0	22/04/2021
NZ Steel Key Plant and Processes Plan	T+T	0	22/04/2021
Nearest Neighbouring Dwellings and Ambient Monitoring Sites	T+T	0	22/04/2021
Ambient Air Monitoring Site Locations	T+T	0	22/04/2021
Drinking Water Sampling Locations	T+T	0	22/04/2021
Northern Yard Activity Overview	T+T	0	22/04/2022
Significant Ecological Areas (SEA)	T+T	0	22/04/2021
Statutory Acknowledgement Areas and Cultural Heritage Inventory	T+T	0	22/04/2021

Other additional information	Author	Rev	Dated
New Zealand Steel - Glenbrook Steel Mill Reconsenting: Response to Request for Further Information (Council Ref: DIS60376538)	Tonkin + Taylor Ltd	-	18/10/2021
Ref: Iwi Consultation: NZS Resource Consent Application	Ngaati Te Ata	-	31 March 2021
Email: Re: NZ Steel Air Quality AEE Consultation/CVA	Lucille Rutherford (Ngati Tamaoho)	-	6 April 2021
Appendix 1: Air quality monitoring at Glenbrook School and Sandspit Reserve	New Zealand Steel	1.1	March 2022