Climate Change Technical Policy

1. Purpose

1.1. Auckland Transport (AT) recognises that changing climatic conditions will significantly impact the transport system of Auckland including AT controlled operations, services, and assets.

1.2. The purpose of this operational policy is to provide technical direction and assist the organisation to mitigate, prepare for, adapt or otherwise respond to climate related risks and impacts across all aspects of AT's business including:

- demonstrating commitment to well-informed climate related decision making.
- supporting early and systemic identification, analysis and assessment of climate related risks and impacts.
- supporting the development of strategies, plans, standards, and activities for controlling, mitigating, and adapting to climate related risks and impacts.
- highlighting key roles and responsibilities for the management of climate related risk and impacts.

1.3. The policy aligns with the National Adaptation Plan infrastructure objectives:

- reduce the vulnerability of assets exposed to climate change.
- ensure all new infrastructure is fit for a changing climate.
- use renewal programmes to improve adaptive capacity.

1.4. This policy also supports or contributes towards Auckland Council and central government climate transition planning and processes, and the delivery of central government, Auckland Council and AT's climate, environment and sustainability related strategic goals, objectives and targets including to:

- restore and protect the wellbeing of Auckland's living systems,
- accelerate Auckland's transition to our low-emissions, climate resilient future; and
- provide inclusive access to social and economic opportunities.

2. Who and what does this policy apply to?

This policy applies to all AT employees (including fixed and temporary employees) and all AT representatives; including contractors or consultants, secondees, agency temporary workers and volunteers.

It also applies to any AT project that involves physical assets that interact with the environment. This means that our contractors and consultants working on AT projects need to be aware of the principles and considerations of this policy.

This policy must be adhered to while you are at work as well as any time that someone else might reasonably assume you are acting in your AT role. Where this policy uses pronouns like “you”, “your”, “we”, or “us”, it is referring to anyone listed above, who this policy applies to.

3. Policy Principles

This policy is intended to:

- **support decision-making** despite uncertainty by considering long-term climate impacts, managing climate risks, and allowing for uncertainty when planning for future risk.
- **encourage response** to the changing climate through dynamic and iterative processes.
- **reduce the vulnerability of assets** exposed to climate impacts and prioritise **risk management** so that transport services can continue if **climate hazards** occur.
- **minimise environmental and biodiversity impacts** by adopting a precautionary approach towards proposed activities where effects on the environment and biodiversity are uncertain, unknown, or little understood but potentially significant.
- **prioritise activities by understanding** where infrastructure assets and their services are exposed and vulnerable to climate impacts, considering the capacities and opportunities of AT, suppliers, and the community to act and maximising the renewal programmes to improve adaptive capacity.

4. Considerations

When you are planning, designing, or constructing any AT project, including new assets and renewals, the following aspects need to be considered-

4.1 Biodiversity, and the Environment

Proposed actions to reduce emissions, including product choices, should consider the impact on biodiversity and environment outcomes described in AT’s Hīkina te Wero: Environmental Action Plan 2020 – 2030.

AT acknowledges the complexity of assessing the emissions profile and biodiversity / environmental impacts of products and activities. In some cases, a product or activity may reduce emissions but adversely impact biodiversity or the environment.

Where new activities or products are proposed for the purpose of reducing emissions, the Science & Sustainability Team are available to support the assessment of overall benefits and answer any questions you may have.

4.2 Sharing of AT climate related data and information

Climate related data needs to be approved before being released to any external party to ensure factors such as the sensitivity or completeness of the data has been considered.

Climate related data includes but is not limited to asset-based **adaptation** assessments and emissions calculations.

Climate related data and information must not be shared with external recipients, unless approved for release by the Chief Scientist or Chief Engineer.

Where the Chief Scientist or Chief Engineer consider it to be relevant, the Director – Infrastructure & Place will be informed prior to release. Any data-sharing activity must align with and comply with the Data Policy to ensure appropriate governance and protection.

4.3 Adaptation & Resilience of Assets

The planning, design and construction of new assets and renewals must demonstrate resilience to the physical impacts of the changing climate as forecast to be experienced over the lifespan of the asset, using **either**:

1. The **Shared Socio-Economic Pathways (SSP)** scenarios given in the Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment as recommended by the Ministry for the Environment in their guidance document Interim guidance on the use of new sea-level rise projections; or the New Zealand specific climate projections Aotearoa New Zealand climate projections | Ministry for the Environment.

2. A **Dynamic Adaptive Policy Pathways (DAPP)** approach.
   Note: check with the Adaptation & Environment Team and the Science & Sustainability for existing site-specific adaptation plans.

This section may be updated with Policy Owner approval. Changes will be tracked in Appendix 2.

Activities should demonstrate adaptation to the physical impacts of the changing climate for each type of development or activity in accordance with Tabel 1 below.

Table 1. Technical Information by Development or Activity type

Technical Information by Development or Activity Type		
Development or Activity Type	Risk Appetite adopted by AT Board[2]	Must demonstrate adaptation to the physical impacts of the changing climate as forecast below, over the whole-of-life of the asset[3]
Greenfields development/ major new infrastructure[1]	Cautious	Avoid hazard risk using the **SSP3 - 7.0M** trajectory except for sea level rise, where the **SSP5 - 8.5M** trajectory should be used.
Redevelopment (intensification) and existing development and infrastructure[1]	Cautious	**SSP3 - 7.0M or DAPP** Adapt to hazards by conducting a risk assessment using the SSP3-7.0M trajectory or using the DAPP approach. A **SSP2 - 4.5M** climate trajectory may be considered upon completion of a sensitivity assessment, based on criticality and location of assets.

Technical Information by Development or Activity Type		
Development or Activity Type	Risk Appetite adopted by AT Board[2]	Must demonstrate adaptation to the physical impacts of the changing climate as forecast below, over the whole-of-life of the asset[3]
Relocatable activities / developments / short-lived assets[1]	Cautious	**SSP2 - 4.5M or DAPP** Adapt to hazards by conducting a risk assessment using the SSP2 – 4.5M trajectory or using the DAPP approach.
Trials of activities or assets investigating reductions in environmental impacts, emissions, or climate risks.	N/A	Require an approved project plan or business case demonstrating a balance between a high likelihood of successful delivery and a high degree of reward and value for money.

Notes:
1 – For projects in delivery at the time of policy adoption or amendment, changes to design may be implemented on a case-by-case basis as recommended by the Chief Engineer and approved by the Director, Infrastructure & Place.
*2 – **Risk appetite** is related to the risks to assets from forecast changes in climatic conditions.*
*3 – SSP [number of scenario] - [RCP trajectory] e.g., SSP5 – 8.5 = SSP scenario 5 – RCP8.5. (**H+** means considerations are based on the upper end of the range. **M** means considerations are based on the median of the range.)*

Forecast conditions

When implementing this policy, use the most recent IPCC assessment report, as well as the following forecast information for New Zealand conditions from the Ministry for the Environment and National Institute of Water and Atmospheric Research (NIWA) (see Table 2 below).

Table 2. Forecasting Reference Documents

Forecasts for	Use these reference documents
Global forecasts	Sixth Assessment Report - IPCC
NZ climate projection insights and guidance	Aotearoa New Zealand climate projections | Ministry for the Environment
Regional Forecasts (select Auckland)	Climate projections summary dashboard | Ministry for the Environment Auckland climate change CMIP6 projections for the Auckland region - Knowledge Auckland
Sea level (NZ) & Vertical Land Movement (VLM)	Coastal hazards and climate change guidance

Forecasts for	Use these reference documents
Coastal instability & erosion	Auckland Council Technical Report, TR2017/030-3 - Auckland Region climate change projections and impacts (knowledgeauckland.org.nz) (September 2020) with associated Global Information Security (GIS) layers: Areas Susceptible to Coastal Instability and Erosion GIS map (Auckland Council)
Heat Stress	Auckland climate change CMIP6 projections for the Auckland region - Knowledge Auckland
Flood maps	Auckland Flood viewer

Note: See Appendix 2 for a list of previous reference documents (if any).

4.4 Organisational climate related risk appetite

AT has an overall climate related risk and three sub-categories of climate related risk, with associated risk appetites:

Climate change overall risk	Events leading to the failure to appropriately respond to or prepare for the impacts of transition to, adaptation for, and mitigation of climate change. This includes impacts on AT's physical assets (such as technology and the road network), operational activities (such as public transport services) and AT staff and customers (through health, safety, and wellbeing frameworks). This also includes the impact of funding shortages on the ability to deliver climate change solutions.
Subcategories	• Mitigation • Adaptation • Transition

The overall climate related risk appetite and subcategory risk appetites must be considered during planning, design and construction of new assets and renewals, procurement, and any other AT activities.

The most recent Climate Risk appetite ratings can be found on the AT website.

5. Climate Change Mitigation – Green House Gas (GHG) emissions

This section relates to all AT emissions reporting (e.g. climate financial disclosures) and may be updated with policy owner approval following any change to standards or protocols. Changes will be tracked in Appendix 2.

AT supports the national and regional target of reaching net zero by 2050 and will act to reduce greenhouse gas emissions by:

a) setting operational and embodied emissions reduction targets based on robust information from or endorsed by respected sources[1];

b) using a system-based approach for whole-of-life emissions including embodied, operational, enabled and end-of-use in infrastructure development; and including whole-of-life emissions assessment requirements in decision making for each stage of infrastructure project development including business case/optioneering.

c) continuously improving energy-efficiency, and reduce operational emissions and expenses by:

   i. implementing energy efficiency, electrification and distributed renewable generation and

   ii. use an energy management system, with monitoring and targeting, to manage energy effectively; and

   iii. closely monitor areas of business and activities aiming for continual improvement of energy-efficiency.

AT's GHG emissions inventory will be verified annually in alignment with ISO 14064-3 and meet the principles and requirements of the:

- GHG Protocol Corporate Standard,
- ISO 14064-1 standard,
- GHG Protocol Scope 2 Guidance, and
- GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard.

Appendix 1 contains further guidance on AT's approach including inventory base year, base year reset, consolidation approach, significant threshold, emissions factor source and cut-off dates.

6. Definitions

Term	Definition
Adaptation	A response strategy to anticipate and cope with impacts that cannot be (or are not) avoided under different scenarios of climate change (Denton et al, 2014). The process of adjustment to actual or expected climate and its effects. In human systems, adaptation seeks to moderate or avoid harm or exploit beneficial opportunities.

[1] Respected sources refers organisations such as the International Panel on Climate Change (IPCC), the Ministry for the Environment (MfE), the National Institute of Water and Atmospheric Research (NIWA) and SeaChange, GHG Protocol, or ISO standards.

Term	Definition
Climate hazards	Climate hazards propagate as climate-driven events or progressive and ongoing trends that cause damage and loss to human and natural systems.
Dynamic Adaptative Policy Pathways (DAPP)	Dynamic adaptive policy pathways, which anticipates pathways of adaptation options or actions, working with the widening uncertainties in sea-level rise projections and being responsive (dynamic) to the ensuing changes.
Greenhouse Gas Protocol materiality threshold	The Greenhouse Gas Protocol accounting and reporting standards are a global standardised framework to measure and manage greenhouse gas (GHG) emissions from operations, value chains and mitigation actions. The materiality threshold is a concept employed in the process of verification. It is often used to determine whether an error or omission is a material discrepancy or not.
Physical risks	Risks that are directly related to the physical impact of a climate hazard.
Representative Concentration Pathways (RCP)	Representative Concentration Pathways, comprising radiative forcing scenarios for deriving climate-related projections in the Fifth Assessment Report by IPCC on climate change (published 2013–14) and combined with SSPs in the Sixth Assessment Report by IPCC on climate change (published 2021–22). e.g., RCP4.5, RCP6, RCP8.5
Risk	The effect of uncertainty on objectives (from International Standards Organisation (ISO) 31000).
Risk appetite	The amount and type of risk AT is prepared to pursue or retain (from ISO 73).
Risk management	Coordinated activities to direct and control AT with regard to risk. The planned and systematic approach to the identification, evaluation and control of risks which threaten the achievement of AT's objectives (from ISO 31000).
Shared Socio-economic Pathway (SSP)	Shared Socio-economic Pathways, comprising socio-economic assumptions driving emissions, used in the Sixth Assessment Report by IPCC on climate change (published 2021–22) to complement RCPs, to produce climate-related projections.

7. Roles and Responsibilities

Role	Responsibility
All employees and AT representatives	• Understand and comply with this policy. • Understand the climate risks and impacts relevant to their area of responsibility and follow the associated policy and procedures.
All People Managers	• Understand the organisational climate related risk appetite. • Actively lead and promote the implementation of the Climate Change Technical Policy within their business areas and groups. • Responsible for embedding a culture of proactive emissions reduction and climate adaptation in their area/s of responsibility. • Report on climate change related performance to appropriate Director or Thought Leader.
AT Board (Board)	• Review and endorse an appropriate governance structure for climate change management, including, where appropriate, board and executive level committees and delegated authorities. • Approve AT's climate risk appetite levels. • Monitor the organisation's management of climate related risks through review of regular risk reporting by management.

Role	Responsibility
AT Chief Executive (Policy Approver)	• Approves significant amendments to the Climate Change Technical Policy.
Chief Engineer	• Recommends changes to designs on a case-by-case basis, where a design was approved prior to a change in this policy but has not yet been implemented. • Reviews climate related data and information for external release.
Head of Science & Sustainability (Chief Scientist) (Policy Owner)	• Climate adaptation and Environmental assessment, including embodied emissions, is led by AT's Chief Scientist. • Approves Climate Change Technical Policy updates to reference documents, materiality thresholds, or Board endorsed targets or climate related risk appetites as per delegations stated in the policy. • Reviews significantly amended Climate Change Technical Policy for approval by the Chief Executive. • Reviews climate related data and information for external release. • Ensure policy is up-to-date and is based on the best available information to meet its Purpose and Principles. • Ensures adaptation activities are led by senior management across all departments, to ensure that risk management and resilience is embedded within the organisation in a manner that corresponds directly to the key risk areas identified in Climate Risk Assessments.
Director Infrastructure & Place	• Holds delegated financial authority for approving changes to designs as recommended by the Chief Engineer.
Executive Leadership Team (ELT)	• Understand the organisational climate related risk appetite. • Actively lead and promote implementation of this policy across the organisation. • Accountable for the implementation of this policy across the business areas under their control. • Resolve conflicting objectives that may arise from mitigation of or adaptation to changing climatic conditions. • Ensure the organisation has the structures, processes, and accountability to support climate-related decision-making. • Provide information to allow the Board of Directors to understand changing climatic conditions may have material impacts on the organisation's objectives, and the effectiveness of current controls.

Role	Responsibility
Finance & Assurance Committee (FAC)	• Review climate risk appetite levels for approval by the Board. • Monitor the organisation's management of climate related risks through review of regular risk reporting by management.
Science & Sustainability Division (Policy Contact)	• The subject matter experts in this policy area. • Works with other staff to ensure strategy, policies, processes, business practices, guidelines, approvals, governance, and oversight to enable effective implementation of this policy. • Leads work on climate adaptation, environmental assessment, and GHG emissions.

8. Supporting Information

Legislative compliance	This Policy supports AT's compliance with the following legislation: • Financial Sector (Climate-related Disclosures and Other Matters) Amendment Act 2021 • Local Government (Auckland Council) Act 2009 • Climate Standard -1
Supporting documents	• Aotearoa New Zealand climate projections | Ministry for the Environment • Areas Susceptible to Coastal Instability and Erosion GIS map (Auckland Council) • Auckland climate change CMIP6 projections for the Auckland region - Knowledge Auckland • Auckland Council Technical Report, TR2017/030-3 - Auckland Region climate change projections and impacts (knowledgeauckland.org.nz) (September 2020) • Auckland Flood Viewer • Auckland Transport Risk Management Policy • Coastal hazards and climate change guidance • Climate projections summary dashboard | Ministry for the Environment • GHG Protocol Corporate Standard

	• GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard • GHG Protocol Scope 2 Guidance • Interim Guidance on the use of new sea-level rise • MfE Coastal Hazards and Climate Change Guidance • The National Adaption Plan • Sixth Assessment Report - IPCC
Supporting Tools	• Auckland Transport Risk Management Framework • Project Emissions Estimation Tool (PEET)
Related documents	• AT Sustainability Strategy • Hīkina te Wero: Environment Action Plan • AT Climate Transition Plan 2025 • AT Adaptation Framework and Action Plan 2025

9. Non-Compliance

Climate risk and impact management supports compliance to multiple governance, legal, regulatory, government and shareholder requirements. Non-compliance perceived or otherwise, with those requirements can lead to increased scrutiny, investigations and reviews, penalties and in extreme circumstances prosecution and fines.

10. Approval & Review

AT recognises the need for annual review of this policy as:

- the data and methodologies used to measure, attribute, or forecast climate related risk and impact are not yet mature; and
- there a wide range of uncertain outcomes of when climate risks will impact assets.

Policy Owner: Head of Science & Sustainability (Chief Scientist)

Policy Contact: Science & Sustainability Division

Approved by:

Chief Executive

Approval date:

Effective date:

Next review date:

AT reserves the right to review, amend or add to this policy at any time upon reasonable notice to employees and representatives.

Appendix 1: Emissions Calculations

This schedule is intended to provide additional guidance on GHG emission calculation methodology. It does not form part of the policy and may be changed or updated at any time with Policy Owner approval.

Consolidation Approach	AT uses an operational control consolidation approach to account for the GHG emissions. Refer to the GHG Protocol Corporate Value Chain Standard for comprehensive guidance on this approach.
Inventory Reporting Period	AT reports its annual GHG Emissions Inventory based on the Financial Year (July to June).
Inventory Category Reporting	Auckland Transport categorises activities, including the emissions inventory, by activity type covering both Categories 1-6 under ISO 14064-1:2018 and Scopes 1-3 under GHG Protocol.
Base Year	AT GHG Emissions Inventory: Financial Year 2021/22 AT Embodied Emissions: Financial Year 2021/22.
Base Year GHG emissions recalculation process	AT ensures the representativeness of the base year GHG Emissions Inventory by following the base-year recalculation policy guidance from ISO 14064-2018 and aligning with the GHG Protocol Corporate Accounting and Reporting Standard requirements. As per these standards, certain situations may trigger a recalculation of the base-year for the GHG Emissions Inventory including: • Structural changes to organisational boundaries (i.e., acquisitions, divestitures or mergers of businesses or facilities) • Adjustment of specific emissions Key Performance Indicators/s (KPIs) boundaries • Changes to regulatory or shareholder-defined obligations or responsibilities. • Changes in calculation methodology, improvements in the accuracy of emission factors and other assumptions or data monitoring, noting the cut-off dates set out in the 'Emissions factor source and use' section below. • Discovery of significant errors or several cumulative errors that are collectively significant. Base-year recalculations will not occur for: • growth/decline of AT services, facilities, or assets, such as commissioning or de-commissioning of Public Transport (PT) bus or ferry services routes or assets.

	• acquisitions or divestment of operations that did not exist in the base year. • AT documents recalculations of base-year and other historical years in subsequent GHG Emission Inventory reports.
Emissions factor source and use	AT's annual GHG Emissions Inventory uses the most recently released GHG emissions factors guidance document from the Ministry for the Environment (MfE) as at the last day of the Financial Year (30 June). This also applies to base year and historical year recalculations, and significant thresholds. Any emissions guidance released by MfE after 30 June shall be considered in the subsequent year's GHG emissions inventory. If a specific emissions factor aligning with the Financial Year reporting period (July-June) is not available in the MfE guidance of the current years GHG Emissions Inventory, AT may apply a more recent set of factors published by MfE. If a MfE endorsed emissions factor is not available for an activity, AT may source an emissions factor: • based on the advice of an inventory verifier/verifier organisation or • based on a Life Cycle Assessment carried out by an accredited organisation or • based on AT's own activities subject to emissions verifier acceptance. • AT uses the emissions factors that align best with the appropriate reporting year period for any calculation or recalculation of the historical emissions inventory. For example, the electricity emissions factor of a previous calendar year is used for July to December period of the base year, and the emissions factor of the succeeding calendar year is used for January to June period of the base year.
Significant threshold	AT recalculates base-year emissions of the whole inventory: if the cumulative effect of any of the situations set out above equal or exceeds a significance threshold of 5% of base-year emissions. at AT's discretion, where changes represent less than 5% of base-year emissions. AT assesses the impact of the changes on the successive year's historical emissions and updates them, accordingly, noting the cut-off dates set out in the 'Emissions factor source and use' section above.

Emissions inventory alignment with KPI's	AT updates and maintains individual GHG emissions reduction Key Performance Indicator's base year emissions (including KPI's historical years' emissions) in alignment with the whole emissions inventory according to the respective activities and boundaries. Emissions recalculation is tested at whole inventory level not at individual KPI level. However, AT should apply the materiality of the emissions KPI in comparative disclosure.
Annual emissions inventory publication	AT intends to publish its verified annual GHG emissions inventory of a Fiscal Year by the end of August of succeeding Fiscal Year.

Appendix 2: Tracking Changes to Policy

Reference documents in this policy may be changed at any time with approval from the policy owners (jointly or severally).

As decisions may be based on the reference documents provided by this policy at a point in time (such as design and cost estimates) a record must be kept of what reference documents have previously been in use and the time periods they were applicable.

Significant changes to the policy that are **approved by Policy Approver**, will be tracked in the table below:

Date of approval	Version	Changes
01/12/2022 - Initial Board endorsement	V1	-
31 January 2022		Inclusion of neutral risk appetite for transition risk sub-category in S6, following risk appetite endorsement by the Board.
27 February 2024		AT Board reassigned this policy as a Tier 2 policy (requiring CE Approval)
21 March 2024	V2	2024 policy review at the recommendation of Audit NZ • Amended name of policy from “Climate Change Adaptation Policy” to “Climate Change Technical Policy”. • Removed original appendix 1 (quick reference tables and graphics) as they have been included within the policy. • Added section 7 on carbon calculations & emissions inventory (as recommended by AuditNZ) and a new appendix 1 with additional GHG calculation information. • Updated roles and responsibilities and made minor clarifications to text. • Updated technical information to align with MfE 2024 Coastal Hazards & Climate Change Guidance.
13 November 2024	V3	• Inclusion of ‘Data and Information Sharing’ section. • Minor changes to text for clarity.
01/05/2026	V4	• Minor changes to text and formatting for clarity following feedback from contractors. Updates to data sets and risk appetites.

Changes or updates to reference documents (subversion changes), materiality thresholds, targets or climate related risk appetites that are **approved by the Policy Owner** will be tracked in the table below:

Updated section, approval by & date	Detail of retired reference documents, materiality thresholds, targets, or climate related risk appetites	Period reference document was in use
• 21/03/2024 S5 Adaptation & Resilience of Assets: Forecast conditions	**Removed**: Interim guidance on the use of new sea-level rise projections; (www.mfe.govt.nz) (https://environment.govt.nz/publications/interim-guidance-on-the-use-of-new-sea-level-rise-projections/) **Replaced**: Global Forecast "Fifth Assessment Report — IPCC" with "Sixth Assessment Report – IPCC"	In use from Jan 2023 - 21 March 2024
• 21/10/2024 S5 Adaptation & Resilience of Assets: Forecast conditions	**Include:** NZ climate projection insights and guidance (https://environment.govt.nz/facts-and-science/climate-change/climate-change-projections/)	In use from 21/10/2024
• 21/10/2024 S5 Adaptation & Resilience of Assets: Forecast conditions	**Include:** Regional forecasts (select Auckland) (https://environment.govt.nz/facts-and-science/climate-change/climate-change-projections/)	In use from 21/10/2024
• 21/10/2024 S5 Adaptation & Resilience of Assets: Forecast conditions	**Removed**: Temperature NIWA: Projected regional climate change hazards: Zone 1: Regional snapshot of projected climate changes and hazards (https://niwa.co.nz/adaptationtoolbox/regionalprojections/zone1)	In use from 01/02/2023 – 21/10/2024
• 21/10/2024 S5 Adaptation & Resilience of Assets: Forecast conditions	**Removed**: Rainfall Intensity NIWA: 2018 High Intensity Rainfall Design System. Version 4 Prepared for Envirolink. HIRDS is a simple online tool that can estimate the magnitude and frequency of high intensity rainfall at any point in New Zealand. https://niwa.co.nz/information-services/hirds	In use from 01/02/2023 – 21/10/2024

Updated section, approval by & date	Detail of retired reference documents, materiality thresholds, targets, or climate related risk appetites	Period reference document was in use
• 01/05/2025 S5 Adaptation & Resilience of Assets: Forecast conditions	Include: Auckland climate change CMIP6 projections for the Auckland region - Knowledge Auckland for both Regional Conditions and Heat Stress	In use from 01/05/2026