PFAS Remediation of the Former Fire Training Ground (FFTG) at Rockhampton Airport, Queensland

SUBMISSION 1.0
(PUBLIC)

STATEMENT OF EVIDENCE TO THE
PARLIAMENTARY STANDING COMMITTEE ON
PUBLIC WORKS

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Executive Summary

1. The proposed project prioritises remedial actions as part of Airservices Australia's approach to the management of Per- and Poly-Fluoroalkyl Substances (PFAS) contamination resulting from the historical firefighting operations on the site of the Former Firefighting Training Ground (FFTG) at Rockhampton Airport, Queensland. Airservices proactively identified the site for remediation as the contamination source is in a non-operational area of the site lease enabling removal/remediation works to occur without affecting airport operational service delivery.
2. Remediation will be conducted in accordance with a Remediation Action Plan (RAP) prepared by an independent consultancy firm (GHD), reviewed by an independent third-party Technical Advisor (a qualified Queensland contaminated land auditor), in consultation with Rockhampton Regional Council, the owners and operators of Rockhampton Airport.
3. The project scope of works prioritises removal and/or management of PFAS impacted:
    - Infrastructure (FFTG concrete pad)
    - Soil
4. Remediation prioritises soil remediation based on the site conditions and investigation results to date. More than 90% of the estimated PFAS mass (130 kg) in the soils will be remediated. This is expected to significantly mitigate risks to potential receptors on-site and to reduce so far as reasonably practical the migration of PFAS on the Site.
5. Works are expected to be completed approximately 5-8 months after commencement, subject to favourable weather conditions in far north Queensland. The expected life and whole-of-life costs of the proposed works is $24,975,000 which is inclusive of post-remedial testing and validation, as well as a contingency of $4,904,810.
6. Airservices operates under an Environmental Management System that aligns to the International Standard ISO 14001, and the Project will be executed under appropriate environmental and heritage management plans
7. Project design has included completion of a self-assessments under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) Significant Impact Guidelines 1.1 and 1.2. This assessment concludes that the Project will not have significant impact on any Protected Matter.

Project Title

Airservices Australia, PFAS Remediation of Former Fire Training Ground (FFTG) at Rockhampton Airport, Queensland.

Airservices Australia

8. Airservices Australia (Airservices) is a government-owned organisation established under the *Air Services Act 1995* for the provision of air traffic management, air navigation support (communications infrastructure, radar and navigation aids) and Aviation Rescue Fire Fighting (ARFF) services to the aviation industry.

9. Airservices derives its revenue from the provision of air traffic control and ARFF services, which funds its operating expenses and investment in capital works.

10. Airservices operates commercially on a fee-for-service basis and generally receives no Government appropriations.

Context

11. PFAS is a group of manufactured chemicals that have historically been used in commercial products and for industrial applications such as firefighting foam. Historically, firefighting foams containing PFAS were used by firefighting organisations around Australia, including Airservices. PFAS chemicals formed part of the chemical composition of Aqueous Fire Fighting Foams (AFFF) which were effective in fighting liquid fuel fires due to their excellent thermal stability and hydrophobic properties.

12. The unique chemical compound characteristics of PFAS make them non-biodegradable and highly soluble in water, which means they can readily leach into soil, surface water and groundwater leading to bioaccumulation. Given the chemical properties and the prevalent use of PFAS historically in Australia, the National Chemicals Working Group of the Heads of the Australian and New Zealand Environmental Protection Agency has classified PFAS as a high priority for environmental regulators around Australia and current advice is that exposure to PFAS should be limited.

13. The PFAS National Environmental Management Plan (PFAS NEMP v2) provides guidelines and recommendations for risk-based prioritisation of sites likely to have been contaminated, specifically evaluating both the likelihood and consequence of harm occurring from historical use and/or potential mass of PFAS used on the Site.

Purpose of works

14. The proposed project prioritises removal and/or management of PFAS-impacted:

    - Infrastructure – FFTG concrete pad
    - Soil

15. These works aim to remediate via off-airport disposal of more than 90% of the estimated PFAS mass residing in soil and on the Site. This removal will require the excavation of approximately 8,760 m^3 of soils (see Table 2 below). Modelling estimates that approximately 138.2 kg of PFAS mass resides in the remediation area to a depth 2.0 metres below ground level (mBGL).

16. As the majority of PFAS mass is located within shallow soil (<2.0 m below grounds surface), the remediation of more than 90% of contaminated soils on the Site will result in a reduction of the risk profile at the Site and is expected to result in consequential improvement to groundwater and surface water conditions, reducing the overall risk of ongoing migration of PFAS from the site.

Need for works

17. The presence and extent of PFAS at Rockhampton Airport is currently the subject of a Detailed Site Investigation (DSI) and Human Health and Ecological Risk Assessment (HHERA) commissioned by Airservices in accordance with guidance provided by the National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) (NEPM).

18. Sampling conducted during the DSI (and prior studies commissioned by Airservices and others) has identified PFAS in soil, sediment, surface water and groundwater at and downgradient of the site with concentrations above relevant guidelines as contained in the PFAS NEMP v2.

19. Based on these results, and consistent with guidance provided in the PFAS NEPM v2 relating to developing risk-based remediation strategies, Airservices has proactively identified the FFTG site for remediation as the contamination source is in a non-operational area of the site lease enabling remediation works to occur without affecting airport operational service delivery.

20. The overarching objective of the remediation works is to reduce the overall PFAS footprint on site by removing a known PFAS source and thereby reduce overall exposure pathways.

Options considered

21. A detailed options assessment has been prepared in accordance with national guidance documents including the PFAS NEPM (v2), and the National Remediation Framework. This options assessment is presented within the Remediation Action Plan and factors in the

availability of remediation technologies, the value for money in achieving the remediation objectives and the sustainability of options.

22. A ‘do nothing’ option was considered however this option would be inconsistent with guidance to take precautionary risk-based management.

23. Soil remediation was the chosen preferred option to achieve the remediation objectives. As a subset of soil remediation, the works will utilise a range of remediation options consistent with adopted national remediation hierarchy.

24. Active remediation of groundwater was not considered to be a viable option at this point in time due as 96% of the PFAS mass migration has been demonstrated to be via the surface water pathway and only 4% via groundwater. Groundwater will continue to be monitored at the completion of the remedial works and the requirement for groundwater remediation will be reassessed periodically.

Scope of works

Site

25. The FFTG area is in the western part of the airport adjacent to the boundary (as depicted in Figure 1 and Figure 2 in Appendix 2). Whilst on airport land, the FFTG is not subject to access and security restrictions as it is outside of the secure airport perimeter fence. Areas of land around the FFTG are leased to graziers to allow livestock grazing.

26. The site is situated on a flood plain with an elevation of approximately 9 metres Australian Height Datum. Surface water flow from the FFTG flows towards and into the adjacent Lion Creek.

27. The lease area covers approximately 7,170 m^2, previously used for ARFF training exercises including the use of water and aqueous film forming foam (AFFF) for firefighting purposes. The FFTG has not been used for ARFF training since circa 2010.

28. The layout of the FFTG primarily comprises grassed surface, except for a small concrete training pad which underlies the large mock-up unit (LMU) – a metal training prop used to mimic an aircraft fire and emergency response.

29. The project design is informed and guided by the PFAS NEMP v2 and will be implemented according to relevant state and federal legislation while complying with the conditions of the site lease. The project design has been shared with key stakeholders including the lease holder of the airport. For details on the parties consulted see paragraph 59.

Table 1: FFTG Rockhampton Airport, Queensland - Site Identification Information (RAP, GHD 15 January 2025)

Attribute	Detail
Traditional Owners	Darumbal country
Street Address	Canoona Rd, Rockhampton, Queensland (Airport Address)
FFTG Leased Area	A total of approximately 7170 m^2
Title Identifiers	Lot 6 CP906611
Owner	Rockhampton Regional Council (RRC)
Local Government	Rockhampton Regional Council
Current Land Use	Special purpose[1] - Airport and associated commercial enterprises

Planning and design concepts

30. Iterative investigations at the site since 2008 have assessed, and monitored soil, sediment, surface water and groundwater impacts. Supporting investigations including ecological risk assessments, human health risk assessments, and a series of groundwater and soil monitoring events have culminated in the production of the RAP. The RAP addresses soil, sediment, surface water, and groundwater infrastructure impacts at and from the FFTG.

31. The proposed project prioritises removal and/or management of PFAS-impacted:
    - Infrastructure – FFTG concrete pad
    - Soil

32. Site maps showing infrastructure, and the area for remediation can be found in Appendix 2 Figure 2. The objective of these works is to remediate 90% of the estimated PFAS mass residing in soil on the site by remediation soil with PFAS concentrations greater than 1 mg/kg (PFOS+PFHxS). This willl involve an estimated excavation requirement of approximately 8,760 m^3 of soils, see Table 2.

33. Modelling estimates that approximately 129.8 kg of PFAS mass resides in the remediation area to a depth 2.0 metres below ground level. Removal of the bulk of PFAS mass residing on site will result in a reduction of the risk profile at the site and is expected to result in a consequential improvement to groundwater and surface water conditions, reducing the overall risk of ongoing migration of PFAS from the site.

34. The site remediation includes a combination of excavation, treatment and transportation for disposal at appropriately licensed landfills or thermal destruction interstate (if required).

35. Soil excavated from the remediation footprint will be stockpiled and assessed for its remedial fate. Low-level PFAS impacted soil that meets landfill acceptance criteria will be disposed without further treatment. Intermediate material that does not initially meet landfill acceptance criteria will firstly be treated by mixing with selected stabilising agents, such as activated carbon, to reduce PFAS leach concentrations to below acceptance criteria before being disposed off-site to an appropriately licensed landfill.

36. Should leachable PFAS concentrations from stabilised soils values exceed landfill acceptance criteria, soils will be transported off-site for interstate thermal destruction. Thermal treatment uses heat to 'destroy' PFAS and is conducted under strict emission control protocols.

37. Excavated soil is not proposed to be re-used on site due to the site being located within a flood-prone zone.

38. Reclaimed soil with lower PFAS impacts from the area surrounding the excavation will be used to re-shape the final surface to aid drainage.

Table 2: FFTG Waste Characterisation Approach (RAP, GHD 15 January 25)

PFAS Concentration range*	PFAS Toxicity Characteristic Leach Procedure (TCLP) (mg/L)	Category	Disposal Approach	Estimated Volume m^3(based on Soil PFAS model outputs**)
Sum of PFOS and PFHxS < 6 mg/kg PFOA <16 mg/kg	Sum of PFAS < 0.05	Low impact soil	Off site landfill disposal, no treatment/stabilisation required	4,187 m^3
Sum of PFOS and PFHxS > 6 mg/kg and <40 mg/kg	Sum of PFAS > 0.05	Intermediate impact soil	Soil stabilisation (refer to Section 8.6) and offsite landfill disposal	2,552 m^3
Sum of PFOS and PFHxS > 40 mg/kg	Sum of PFAS > 0.05 and unlikely to be able to achieve <0.05mg/L after stabilisation	High impact soil	Off site (interstate) transport for thermal destruction	238 m^3

*PFAS concentration range to be confirmed by landfill facility.

** Volume estimation based on 50% Confidence Interval (CI)

Note: Total volumes in Table 2 vary slightly from the 8,760 m^3 volume of excavation presented in Paragraph 15 as the values in Table 2 do not account for the excavation design including batters set at 1:3.

39. The objectives of these remediation are to:

- Reduce risk from PFAS impacts to humans by remediation via removal od impacted soils that exceed the Health Investigation Levels (HILs) for public open space (1mg/kg PFOS+PFHxS (HIL-C)) noting that access to the site is not constrained by airport perimeter security fencing.
- Reduce risk of exposure to PFAS for ecological receptors by excavation, treatment and off-site disposal of PFOS + PFHxS impacted soils that exceed concentrations equal to or greater than the criteria protective of ecological receptors via direct exposure (1 mg/kg PFOS+PFHxS) to the extent practicable
- Manage and mitigate future PFAS migration via surface and/or groundwater
    - Removal of a combined 90% of the residual PFAS mass in soil to reduce the transfer of PFAS to groundwater and surface water, which is expected to result in a consequential improvement to groundwater and surface water conditions, reducing the overall risk of ongoing migration of PFAS from the site.

40. Airservices has appointed JBS&G as a voluntary third-party Technical Advisor during the development of the RAP and will retain their services during the remediation works. The Technical Advisor is an accredited QLD contaminated Land Auditor.

Project scope

41. The project scope includes:

- Installation of temporary boundary fencing to enable safe site access
- Demolition and removal of FFTG concrete pad
- Removal (excavation) and stockpiling of soil
- Depending on remedial fate, transportation of soil to an appropriately licensed landfill with or without treatment to stabilise the soil and reduce leachable PFAS concentrations or where PFOS + PFHxS concentration is >50 mg/kg to an interstate thermal destruction facility
- Backfilling excavation site/s with reclaimed soil from the area surrounding the remediation excavation, and/or imported clean fill to achieve final landform elevations specified in RAP.
- Final surface contouring to direct run-off away from the remediation area to existing airport-related drainage systems to prevent water infiltration and/or surface water run-off
- Pre- and post-remediation surface water mass flux studies
- Baseline groundwater mass flux assessments conducted as soon as practical following completion of soil remediation activities
- Rehabilitation and revegetation of the areas of the Site affected by the works.

42. No permanent infrastructure will be constructed as part of the works, however, the following transportable facilities, plant and equipment will be installed, operated and maintained to complete the works:

- Temporary site fencing around the perimeter of the remediation works area including boundary fence relocation
- Temporary haul roads, stockpile areas and associated hardstand areas
- Temporary site facilities for the remediation contractors workforce including site offices and associated worker amenities
- Sheet piling for the creation of cells to allow the safe extraction and validation of the contaminated soil
- Temporary site services and equipment including fuel oil, electricity, water, excavators and other similar earthwork equipment

43. All decommissioned infrastructure will be segregated (and recycled) to the extent practical and lawfully disposed of off-Airport as construction and demolition waste in accordance with applicable regulations.

Security & Fire protection measures

44. Access to the site will be controlled by the principal contractor. No changes to Airport boundary fences are proposed, however a temporary fence surrounding the site will be required to secure the site. Site access will be restricted to authorised personnel and will only be permitted following a mandatory site induction process.

45. The works will be undertaken with due consideration and consultation with the Rockhampton Airport and Rockhampton City Council (the owners and operators of Rockhampton Airport) and associated services.

Workplace health and safety measures

46. Airservices and its contractors are committed to workplace health and safety. In accordance with Section 35(4) of the *Building and Construction Industry Improvement Act 2005* (Commonwealth), the remediation works contractor(s) will be required to hold full occupational health and safety accreditation from the Officer of the Federal Safety Commissioner under the Australian Government Building and Construction Work Health and Safety Accreditation Scheme.

47. The proposed works will be undertaken in accordance with relevant Queensland *Occupational Health and Safety Legislation (Work Health and Safety Act 2011)* and the approved project specific WHS Management Plan.

48. The site will be secured to prevent public access during construction. No special or unusual public safety risks have been identified.

Plans and drawings

49. Please refer to Appendix 1 for remediation methodologies and Appendix 2 for site and remediation area maps.

Other issues

Key legislation

50. All works will be conducted on land owned by Rockhampton City Council and a large proportion within Airservices existing lease of the FFTG. The proposed remediation does not require acquisition of additional land nor change to existing land use conditions.

51. The legislative framework for the planning and approval of works at the site includes:

    - Commonwealth Legislation including:
        - *Workplace Health and Safety Act* 2011 as amended 2016
        - *Environment Protection and Biodiversity Conservation Act* 1999 (EPBC Act) 1999 and Regulations 2000
        - National Environment Protection (Movement of Controlled Wastes between States and Territories) Measure 1998
    - State Legislation, as it relates to off-airport disposal of PFAS impacted soil and importation of clean-fill particularly the *QLD Environment Protection Act 1994.*

52. The works will be undertaken in accordance with relevant Australian Standards and codes of practice including but not limited to:

    - National Environmental Protection (Assessment of Site Contamination) Measure (1999) (NEPM)
    - Australian Standard AS 4482.1, Guide to the Sampling and Investigation of Potentially Contaminated Soil Part 1: Non-volatile and Semi-volatile Compounds
    - Australian Standard AS4482.2 Guide to the sampling and investigation of potentially contaminated soil. Part 2: Volatile substances
    - Department of Environment, Tourism, Science and Innovation, Model operating conditions (2017), ERA 60 – Waste disposal ESR/2015/1667, Version 5.02, 8 October 2019
    - Department of Environment, Tourism, Science and Innovation (2020), Guideline: Disposal permit to remove, treat and dispose contaminated soil ESR/2020/5353, Version 1.00, 24 June 2020
    - Environment Protection Agency Victoria (2024), Soil sampling for waste soils, Publication 702.2, IWRG702, 17 May 2024

Heritage and geographical considerations

53. The QLD Cultural Heritage Online Portal established under the QLD Aboriginal Cultural Heritage Act 2003 and the Torres Strait Islander Cultural Heritage Act 2003 does not identify the site as having areas of potential heritage sensitivity.

54. An unexpected finds procedure will be developed during the development of the CEMP (to be completed prior to remediation works), this procedure will specify management actions required to be undertaken during execution of the Project to preserve heritage sensitive areas/items or sites should they be encountered.

Environmental impact assessments

55. A Self-Assessment under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) has been completed against the Significant Impact Guidelines 1.1 and 1.2. The Self-Assessment does not indicate significant impacts on any matter protected under the Act are likely to occur as a result of the works. Airservices has determined that the Project is not required to be referred to the Minister for the Environment and Water under the EPBC Act.

56. Airservices operates under an Environmental Management System that aligns to the International Standard ISO 14001. The Project will be executed under appropriate environmental and heritage management plans commensurate with the scope of the Project.

Impact on local community

57. The impact of the proposed remediation works on the local community is likely to be minimal given the location of the FFTG. Traffic flow to and from the site is likely to be affected during the following periods:

    - When plant and machinery is mobilised to the site;
    - When soil is being disposed off-site;
    - When clean top soil is imported as a growth medium; and
    - When plant and machinery is de-mobilised from the site.

58. Traffic impact will be mitigated through a Traffic Management Plan established prior to the works commencing.

Stakeholder consultation

59. Airservices continues a program of engagement with key stakeholders including:

    - Rockhampton Regional Council (the owner and operator of Rockhampton airport)
    - Queensland Agencies including:
        - QLD Department of Environment, Tourism, Science and Innovation
        - QLD Department of Health
        - QLD Department of Primary Industries

60. Further information on stakeholder consultation is provided in the Confidential submission.

Cost Effectiveness and Public Value

Project cost and budget

61. The expected life and whole-of-life costs of the proposed works is $24,975,000 which includes a contingency of $4,904,810.

62. This cost estimate includes delivery of the RAP, remediation works costs including excavation, treatment and disposal of soil/sediment, export to off-site thermal destruction facility (as required), landscaping and make- good. The estimate includes the costs of Airservices' internal labour, application/authority fees and charges, laboratory validating costs (pre, during and post works), management fees and technical expertise costs including contingencies.

63. The cost estimate was prepared by a quantity surveyor and is at a P80 level of confidence. The detailed cost breakdown is provided in the confidential cost estimate (Submission 1.1).

Project delivery method

64. All Airservices projects are managed in accordance with Airservices' Project Program and Portfolio Management Framework, which is based on four project life-cycle stages – Start up, Define, Execute and Close. An independent 'gate' review is conducted at the end of each stage to ensure readiness to proceed to the next phase.

65. Airservices will appoint an internal Project Manager and Contract Manager to manage and oversee the Principal Contractor who will engaged by Airservices following parliamentary approval for the works to proceed.

Project schedule

66. Subject to Parliamentary approval, Airservices expects to approach the market and engage a contractor as soon as possible. Due to the 'wet season' at Rockhampton, remediation works will be timed to occur outside of this period to reduce risks associated with runoff from open excavation areas. Works would therefore be expected to occur between March 2026 and August 2026.

Public value

67. The proposed works will address the impact of the historical use of PFAS containing firefighting foams at the FFTG.

68. The remedial process is anticipated to mitigate the migration of the contamination and will have a non-financial indirect impact on the common good.

Appendices

Appendix 1 – Remediation Action Plan (RAP) Summary

GHD Pty Ltd (GHD) was commissioned by Airservices Australia (Airservices) to prepare a Remedial Action Plan (RAP) for per- and poly-fluoroalkyl substances (PFAS) impacts identified at and near the former fire training ground (FFTG) at the Rockhampton Airport (the Airport). This RAP has been developed to implement planned soil remediation at the FFTG. Off-Airport remediation is not considered in this RAP.

The Site (also referred to as the remediation area) comprises the FFTG. Remedial activities will include removal, treatment and off-site disposal to an appropriately licensed landfill or thermal destruction facility of PFAS impacted soil and infrastructure.

The content presented in this RAP focusses on soil remediation with consequential improvement expected to groundwater and surface water conditions as a result of reducing the residual PFAS mass from the FFTG source area. At present, the Site setting and conditions along with available data supports a position of no active groundwater remediation. This position is further supported by the findings of the preliminary remedial options assessment, presented in this RAP. Consequently, this RAP outlines a staged approach to groundwater remedial assessment and action and determining if future action is warranted.

PFAS impact has occurred at the FFTG as a result of the historical use (direct release) and handling of aqueous film forming foam (AFFF) during firefighting training events.

The objectives of the RAP are to describe practical solutions to manage the PFAS impacted soil and infrastructure at the FFTG and select an appropriate preferred soil remedial methodology that will reduce the leachable PFAS mass at and near the FFTG and minimise PFAS flux from the remediation area to Lion Creek.

Suitable remedial options were assessed for their ability to achieve the following soil remediation objectives:

- Reduce risk of exposure to PFAS for on-site personnel and ecological receptors by excavation, treatment and off-site disposal to an appropriately licensed landfill or interstate thermal destruction facility of impacted infrastructure and impacted soils above a defined threshold concentration.
- Remove PFAS impacted soil from the FFTG to:
    - Ensure the Site is suitable for future commercial and industrial land use
    - Reduce vertical infiltration of PFAS into underlying groundwater, and

  - Reduce the potential for contaminated source runoff (via overland flow towards Lion Creek). – At the Site, eliminate human health exposure risk and reduce the identified ecological risk to as low as reasonably practicable.

- Reduce potential infiltration of contaminated water through the soil profile to the underlying groundwater aquifer and reduce the risk of impact to off-Airport groundwater users.
- Reduce potential risks to users of the surface waters of Lion Creek or local groundwater in the vicinity for the purposes of livestock watering.

It is anticipated that by achieving soil remediation objectives, that a long-term reduction in PFAS concentrations and PFAS mass flux migrating to surface water and groundwater both on-site and off-Airport will consequently be achieved as a result of reducing the residual PFAS mass from the FFTG source area that can be mobilised.

A detailed options assessment was completed for soil. Groundwater was not considered at this time, as the mass flux study found that groundwater contributed only 4% of total PFAS mass flux vs 96% of PFAS mass flux being via surface water. It is currently considered premature to consider active groundwater remediation. As a consequence, this RAP considers a staged approach to groundwater remediation, which will comprise groundwater monitoring activities pre- and post-soil remediation. The results of this monitoring would be complimented with testing of aquifer properties to determine the need for and requirements of any future direct groundwater remediation.

For soil remediation a combination of excavation, stabilisation and/or off-Airport disposal and/or off-Airport thermal destruction was selected as the preferred option for the remediation area. Following excavation, soil treatment and disposal with the stabilised product, surficial soil from around the remediation area will be reclaimed and reshaped to achieve final landform elevations. The final surface will be contoured such that run off will be directed away from the remediation area to new surface water drainage lines to minimise infiltration.

Remediation performance and validation will be measured via

- Estimation (based on laboratory measurement) of excavated/managed PFAS mass
- Rainfall simulation to demonstrate the remediated area meets the remedial criteria
- Groundwater and surface water mass flux study post remedial works (comparison of pre- and post-remediation mass flux estimates leaving the Site)

Long-term performance will be measured via reduction of PFAS concentrations in surface water and groundwater samples in the remedial area and immediately down gradient.

Prior to undertaking the remedial works, the following documentation will be prepared:

- Validation Sampling Plan (VSP) outlining the sampling, analysis, and quality requirements for the validation and remedial option sampling to be undertaken during the remedial works

- Remedial technical specification outlining the proposed technical approach to the remediation, including staging, excavation plan, soil treatment methodology and treatment criteria, work, health and safety requirements, and environmental management procedures.

Based on the review and assessment of the available data at the time of preparing this RAP, establishment remedial objectives, assessment of feasible remedials options, and provision of the remediation and validation methodologies presented, successful remediation of the PFAS impacted soil at the Site with commensurate improvements in PFAS impacts in groundwater under the Site is considered achievable by implementing this RAP. Data gaps have been identified and remain.

Relevant gaps will be assessed prior to commencing the remedial / excavation works.

Appendix 2 - Site Maps

Airservices Australia, PFAS Remediation of Former Fire Training Ground (FFTG) at Rockhampton Airport, Queensland (RAP, GHD 15 January 2025)

Figure 1: Site Location Map (RAP, GHD 15 January 2025)

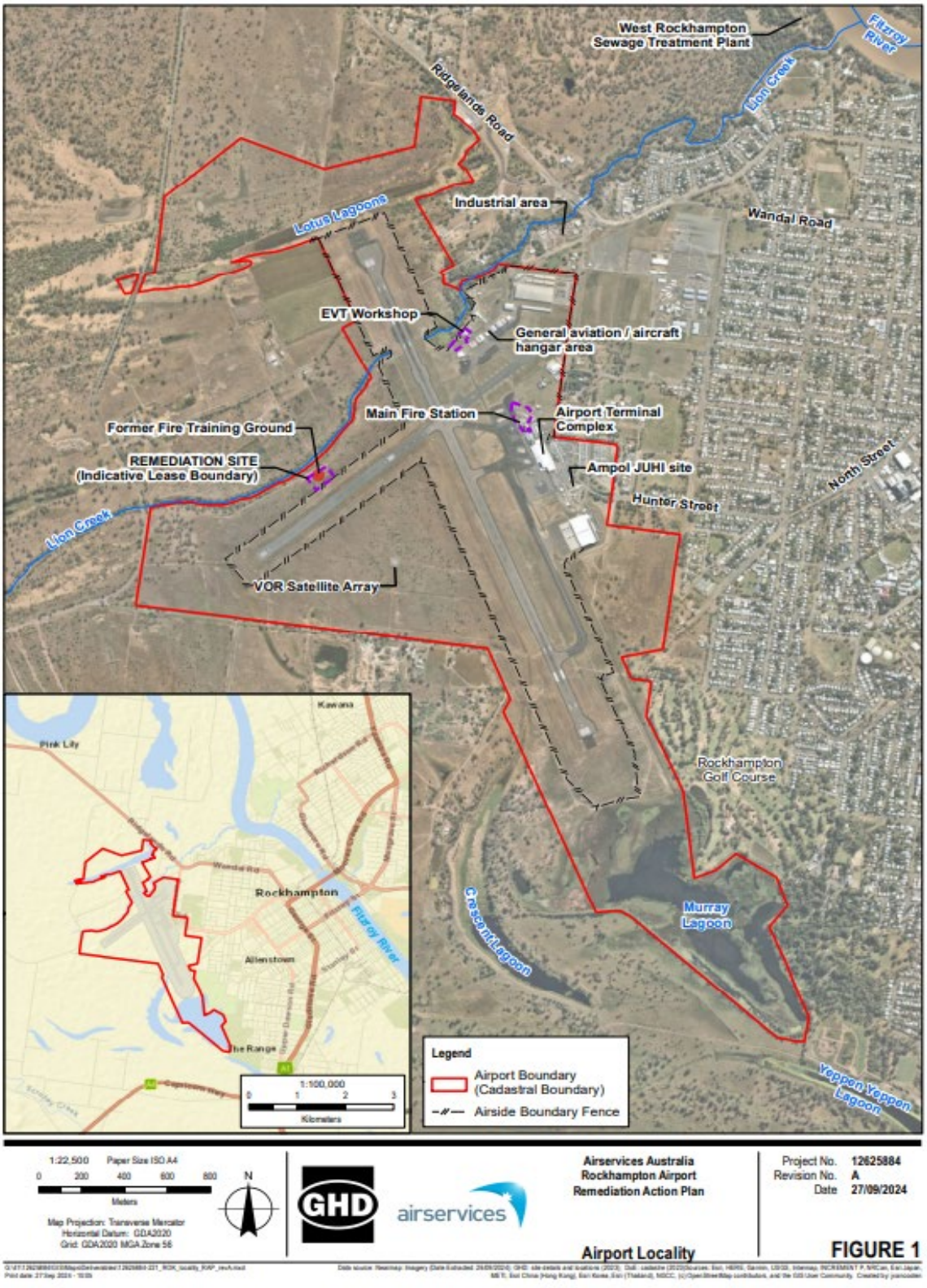

Figure 2: Remediation Area Map (RAP, GHD January 2025)