Armagh Observatory and Planetarium

Annual Report and Accounts
For the year ended 31 March 2026

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under clause 8 of The Armagh Observatory and Planetarium (Northern Ireland) Order 1995,
as amended by Schedule 1, clause 6 of the Audit and Accountability (Northern Ireland)
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on
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The Trustees' Annual Report for the year ended 31 March 2026

The Board of Governors and Management Committee, who are the Trustees for Armagh Observatory and Planetarium (AOP) have pleasure in presenting the annual report and financial statements for this charity for the year ended 31 March 2026. These financial statements have been prepared in accordance with the accounting policies set out in note 1 to the accounts, with the guidance issued by the Department of Finance on the form and contents of the Annual Reports and Accounts of Executive Non-Departmental Public Bodies, *The Armagh Observatory and Planetarium (Northern Ireland) Order 1995* and Accounting and Reporting by Charities: Statement of Recommended Practice (SORP) applicable to charities preparing their accounts in accordance with the Financial Reporting Standard applicable in the UK and Republic of Ireland (FRS 102). The Remuneration and Staff report is prepared in accordance with the direction set out in The Government Financial Reporting Manual (FReM) 2025-26.

The sponsor Department for Armagh Observatory and Planetarium is the Department for Communities (DfC) (the Department).

Objectives and Activities

The organisation's statutory functions are set out at Article 4 of *The Armagh Observatory and Planetarium (Northern Ireland) Order 1995* (the Order). The Order requires that '*the Governors shall, for the purpose of developing and improving the knowledge, appreciation and practice of astronomy and related sciences, maintain and manage the Armagh Observatory and Planetarium and may take such other action as the Governors may think proper for the purpose of acquiring or disseminating knowledge relating to astronomy and related sciences'.*

In accordance with Paragraph 8(1) of Schedule 1 of the Order, the Armagh Observatory and Planetarium (AOP) Board of Governors has delegated the primary responsibility for the governance and management of AOP to a Management Committee with the statutory purpose of 'developing and improving the knowledge, appreciation and practice of astronomy and related sciences'.

AOP's Management Committee has corporate responsibility for ensuring that AOP fulfils the aims and objectives set by the Department for Communities (the sponsor Department) and approved by the Minister and for promoting the efficient, economic and effective use of resources.

As the primary responsibility for the governance and management of AOP has been delegated to a Management Committee, both the Members of the Board of Governors and the Members of the Management Committee are Charity Trustees.

Armagh Observatory is the oldest scientific institution in Northern Ireland, and the longest continuously operating astronomical research institute in the UK and Ireland. Armagh Planetarium is also the oldest operating planetarium in the UK and Ireland.

A Strategic Plan for 2021-26 was launched in September 2021 and this is now being implemented. The strategy is built around four strategic themes –



These strategic themes support the delivery of a number of Programme for Government Outcomes and have potential for synergies with multiple departmental strategies and objectives.

Our Mission:

> *"Our mission is the pursuit of knowledge and understanding of the cosmos, and the sharing of that knowledge in order to inspire future generations and enrich the intellectual, economic, social and cultural life of all."*

Our Vision:

> *"Our vision is to be recognised as an international centre of scientific excellence for the pursuit of astronomy and the public understanding of science, for our capacity for innovation and our extraordinary heritage, a place our community can be proud of."*

The organisation operates on the international stage and receives core funding from the Department and the receipt of external grants from the UK Science and Technology Facilities Council (STFC), and other grant-awarding bodies, such as the Leverhulme Trust, UK Space Agency and the European Research Council.

Our strategic objectives:

- To be a must-visit tourist destination
- To provide a vibrant community hub valued by and accessible to all
- Recognition as a significant Astronomical Heritage site
- To be recognised as a key player in international research and a centre for the public dissemination of science for national and international observatories
- To provide a valued resource used by a range of professional organisations for STE(A)M education
- To have a reputation that attracts high-profile international scientific conferences and events
- To be a leading-edge cultural and educational destination; a prestigious research institution and a regional hub for a shared state-of-the-art data visualisation facilities and immersive visitor experience
- To develop an Integrated Masterplan and Capital Development Plan for collaborative development of the AOP site and surrounding area as a centre of Research, Education and Leisure – enhancing opportunities for local people and contributing to the renaissance of the city.

Specifically for 2025-26, our objectives were:

1. To retain the current baseline complement of research staff necessary to ensure the minimum level of critical mass for a research organisation is maintained
2. To maintain the vitality of the PhD programme by enrolling a minimum of 3 new Astronomy PhD students each year to maintain a minimum student population of 12 over the 4-year study period
3. To retain a baseline level of staff that will ensure AOP can continue to provide a vibrant programme of activities and events throughout the year to maintain/increase 2025-26 visitor numbers and customer satisfaction levels
4. Continue to safeguard and maintain our built and natural heritage and historic instruments and collections
5. To retain baseline levels of staff that will ensure AOP can continue to maintain a governance framework which reflects best practice and provides the necessary assurances to stakeholders as set out in the Partnership Agreement between AOP and DfC

Achievements against specific key performance indicators are also listed on page 19.

Public Benefits

The Trustees confirm that they have complied with their duty to have regard to the guidance on Public Benefit produced by the Charities Commission of Northern Ireland under Section 4 of the Charities Act (Northern Ireland) 2008 (the public benefit requirement statutory guidance) and that this has informed the activities of the organisation in the year to 31 March 2026. This is demonstrated in the following summary of Principal Activities which provides detail on how the organisation has delivered against its objectives and the public benefit which has flowed from this.

Principal Activities

AOP Research and its International Standing

AOP is one of the oldest scientific research institutes in the UK and Ireland with a long-established reputation of research excellence. It is also one of very few astronomical institutions in the world to have a modern planetarium where its research can be effectively communicated and where a research-informed outreach and public engagement activity can be sustained. AOP is strategically engaged in front-line research in several key areas of astrophysics. These range from the study of our Solar System to that of distant galaxies, in keeping with the long and varied history of scientific achievements of the Armagh Observatory and with the desire to be perceived by the public as leaders in the strands of astronomical research that are communicated through the Planetarium.

Typically, around a quarter of AOP's research is funded by the award of project-specific external grants mainly from the UK Science and Technology Facilities Council (STFC), together with several ad hoc grants. These grants support projects led by individual research astronomers with the provision of PhD scholarships, post-doctoral research assistant (PDRA) salaries, computing equipment and observation/conference travel funding.

In 2025/2026, AOP researchers applied for four STFC Small Grants awards, but the applications were not successful in what was a particularly oversubscribed funding round. Although nine other UK departments of similar or greater size than AOP were similarly unsuccessful, this drawback still underscores how permanent staff numbers at AOP are close to the minimum critical value to ensure the economic sustainability of AOP's research in the UK funding landscape. Recognizing this limit, AOP has continued to diversify its funding portfolio.

For instance, on the EU-Horizon front, this year saw the successful conclusion of the 2024/2025 Advanced Grant application process led by Professor Jorick Vink. This represents an unprecedented achievement at AOP, which would not only bring nearly €2 million worth of research funding over the next 5 years, but will also support 3 PhD students and 2 post doctoral research assistants, thus effectively consolidating Armagh as a centre of research excellence in the study of Massive Stars. In early 2026, Professor Vink also applied for another STFC Small Grant.

At the same time, AOP capitalized on its previous capital and resource investments in sustaining its data-visualization research and education activities to obtain European Space Agency (ESA) funding for a six-month Kick-Start Activity to develop an AI-driven, real-time immersive tourism experience for planetarium domes and VR environments (led by Marc Sarzi). The funding is to develop a prototype showcasing Ireland and Northern Ireland's key touristic attractions as seen from space, and to carry out a market study for the commercial relevance of this application, both within and beyond Ireland. If successful, this project is set to unlock further ESA funding to support the development of a full commercial product.



The European Southern Observatory Very Large Telescope, with its array of 8-metre diameter telescopes in Chile.

AOP research requires the use of state-of-the-art observing and computing facilities internationally to obtain new astronomical data and allow its analysis. STFC and UK government support provides access to world-class international facilities, and AOP research staff are regularly awarded telescope time on some of the most sought-after telescopes in the world such as the European Southern Observatory (ESO) Very Large Telescope (VLT). In addition, its research staff have access to the 11-metre diameter Southern African Large Telescope (SALT). AOP is also a founder member of the international Gravitational-wave Optical Transient Observer (GOTO) project; a member of the UK consortia involved in building the detectors for Inouye Solar Telescope (IST); LOFAR (Low Frequency Array) radio telescope project and a consortium member of the Cherenkov Telescope Array (CTA) gamma-ray observatory and the BlackGem project which conducts optical surveys from Chile. AOP is in a leadership position for nearly a quarter of all the observing time dedicated to Large Programs run by the 15-meter diameter James Clerk Maxwell

Telescope (JCMT) in Hawaii.

These facilities can be extremely expensive to run so that, through the award of their use, the international astronomical community essentially entrusts astronomers at Armagh to make effective use of the data. For instance, the running cost of one observing night at VLT is about £50,000 whereas the cost of one HST orbit worth of observing time is around $75,000. This year alone, AOP researchers secured several nights at VLT over 64 hours of SALT telescope time, or three times the guaranteed time that AOP secures through its yearly contribution to SALT.

AOP research staff also play a full role in the international astronomical community. For instance, they serve on committees of bodies such as the Royal Astronomical Society (RAS), STFC, UK Space Agency, the International Astronomical Union (IAU), ESO time allocation panels, assess grant and research proposals on behalf of external funding agencies, review scientific papers and edit international academic journals, and act as external PhD examiners in the UK and beyond. AOP researchers also sit on scientific advisory panels or lead specific projects with future ground-based observing facilities (Vera Rubin Observatory, ELT-METIS, VLT-BlueMUSE), space satellites and missions (European Space Agency's future Plato and Comet Interceptor missions) and large-scale surveys (MOONs). Furthermore, some AOP Astronomers continue to serve as Presidents of several commissions of the International Astronomical Union (i.e., Stefano Bagnulo, Michael Burton and Simon Jeffery for commission B6, C4 and G5, respectively).

As another example of AOP's reputation, this year AOP has secured applications for three early-career fellowships to be hosted at AOP and attracted over 50 PhD applications from a wide variety of candidates, leading to the appointment of three new international PhD students from Chile, France and the United States. This is also thanks to AOP's advantageous student fee arrangement with QUB, which over time has allowed AOP to attract students from all over the world and achieve a vibrant diversity in our cohort that in turn prepares our students to be STEM champions, promoting equal opportunities in physics when they help at the Planetarium. In this respect, this year AOP secured an STFC Legacy Award funding to facilitate the visit of over 60 primary schools from economically underprivileged backgrounds and deliver key teachers' training, wherein AOP PhD students are playing a key role being present at each of such school visits, to deliver workshops and tell their own personal stories of what brought them to study Astronomy and to Armagh.

The role of SALT



The Southern African Large Telescope (SALT) is the largest telescope in the Southern Hemisphere. Participation in this major international facility brings visibility throughout the worldwide research community and AOP is presently the only UK research institution to engage in collaborations with other SALT international partners. Through such partnerships, AOP receives a return in terms of telescope time allocation that is equivalent to roughly 10 times its contribution, which in particular allowed Simon Jeffery to carry out over the years an unprecedented study of some of the more exotic stars in the Milky Way. As the only organization in the UK with shares in SALT, AOP has now a unique opportunity to promote both scientific and economic advantages in using this telescope to both the UK and Irish astronomers, creating further partnerships opportunities for AOP. For instance, in 2025-26 AOP facilitated the applications of an ERC grant in Birmingham and for a University Research Fellowship of the Royal Society to be hosted at AOP that included accessing SALT telescope. This is thanks to SALT being an ideal spectroscopic follow-up telescope for transient phenomena, given that it sits only a few hours east of Chile, where the Vera Rubin Telescope just started operating.

Research Highlights

To provide a practical understanding of how the work of AOP research contributes to the region's international reputation and understanding of the cosmos, the following provides some highlights of the research undertaken at AOP in the financial year. This draws from international collaborations and the award of observing time on highly competitive facilities, as well as direct support from the Department allowing AOP to participate in several key international projects (such as SALT, GOTO, IST, I-LOFAR, Comet Interceptor, CTA and BlackGem). Full bibliographic references can be found in the publication list appended to this report.

Stellar and Galaxy Evolution

Introduction

When we look up on a dark night, we may think that stars are immutable and isolated. Yet, although stars can live for as long as the age of the Universe, they can also undergo dramatic changes in a matter of seconds. They are not isolated from other stars. Some are found in pairs or tight groups and more generally stars are related to each other through the very way in which they form and evolve. Stars are born from giant clouds of gas and return matter to those clouds, seeding the birth of new stars as they fade away or sometimes explode in dramatic events. Furthermore, stars produce the heavy elements necessary for the formation of rocky planets and of life as we know it. In turn, the formation history of stars relates to the formation and evolution of the galaxies that contain them. Some galaxies no longer appear to form stars, unlike the case of the Milky Way. This may depend on whether fresh gas is available around them, on whether they have collided with other galaxies in the past or possibly on whether their central supermassive black hole suddenly becomes active and pours out tremendous amounts of energy capable of clearing its host galaxy of any star-forming gas material. Finally, galaxies are carried by the general expansion of the Universe and the evolution of the dominant, yet unknown dark-matter material in which they themselves are embedded. Understanding the formation and evolutions of stars and galaxies therefore ultimately means understanding our origin in relation to the very fabric of the Universe

Recent results – Massive Stars, White Dwarfs and Hydrogen-deficient Stars

AOP stellar studies range from the most massive and brightest young stars to the faintest and ageing stars or stellar remnants such as white dwarfs and black holes.

The research led by Jorick Vink is both theoretical and observational in nature and is supported by grants from STFC. The theoretical work is focused on understanding the formation and evolution of the most massive stars and stellar black holes in the Universe - objects that can shine up to ten million times brighter than our Sun. A key area of investigation concerns pair-instability supernovae, a rare type of stellar explosion in which the entire star is disrupted. These events play a crucial role in enriching galaxies with heavy elements, potentially contributing more to galactic chemical evolution than all lower-mass stars combined. STFC PDRA Gautham Sabhahit has provided the first hydrodynamically-consistent mass outflow rates for very massive stars (VMS). These are currently being implemented in Massive Star models in Jorick Vink's massive star group, and they will be used to make new predictions for Black Hole masses as well as ionising radiation of VMS in the Early Universe, when the Cosmos changed from the Dark Ages to the Universe we can see today. Professor Vink is also the Principal Investigator of the ESO-VLT Large Programme X-Shooting ULLYSES (XShootU), a collaboration that brings together around 100 experts in massive star astrophysics to study the stellar properties of massive stars in the low-metallicity environments of the Large and Small Magellanic Clouds. These galaxies serve as nearby analogues to the early Universe, offering critical insights into the nature of the very first stars, which are thought to have been extremely massive. In the past year alone, the XShootU programme has produced 4 peer-reviewed publications.

More than 90% of all stars will end their lives as white dwarfs: stellar embers with roughly the mass of the Sun squeezed into a body the size of Earth. Their density is almost unimaginable — like crushing a car down to the size of a coin — and their gravity is so strong that any planetary debris straying too close is pulled onto their surface. Many white dwarfs also possess powerful magnetic fields. In earlier work, a team led by staff astronomer Stefano Bagnulo discovered a striking example in which the magnetic field was funnelling the remains of a planetary system onto specific regions of a white dwarf, rather than allowing the material to spread evenly across the surface. Building on this discovery, the same team has now found that one of these planet-devouring white dwarfs rotates extraordinarily slowly. PhD student Michael Stroet is now carrying out a systematic study of the rotation rates of these stars. By measuring how fast or how slowly magnetic white dwarfs spin, the team hopes to uncover new clues about how their magnetic fields are generated, how long they survive, and what they can reveal about the final fate of planetary systems like our own.

Stars may pass through several stages after leaving the long-lived hydrogen-burning phase and becoming white dwarfs. Many become red giants, and a few become hot subdwarfs. Simon Jeffery and his team study the latter, with emphasis on stars that have lost most or all hydrogen from their surfaces. A survey comprising over 1000 observations of nearly 700 evolved stars using SALT was completed and published (Jeffery et al. 2026). It represents the largest sample of helium-rich hot subdwarfs and demonstrates the strong likelihood that they form in the dramatic merging of two white dwarfs (Dorsch, Jeffery, et al. in preparation). The survey has already led to several major discoveries, of which the zirconium-rich and lead-rich subdwarfs are notable. Observations with Hubble Space Telescope show extraordinary overabundances of meany heavy elements that match the pattern predicted for "i-process" neutron enrichment during a short phase of evolution shortly prior to theses heavy-metal stars becoming subdwarfs (Dorsch, Jeffery et al. 2026, submitted). SALT has also been used to observe large-amplitude pulsations observed in some faint blue stars, as previously studied theoretically (Jeffery 2025). The merging of compact objects such as white dwarfs and neutron stars is preceded by a long period of weak gravitational wave radiation and accompanied by a burst of strong gravitational waves. Yu et al. (2025) have been studying the likely signatures of

pre-merger binaries, since these contribute to the foreground noise which contaminates all gravitational-wave observations.

Recent results – Interstellar Medium of the Milky Way and Nearby Galaxies

Working with AOP Visitor Burcu Günay, Professor Michael Burton contributed to a study examining the use of the James Webb Space Telescope (JWST) to probe the composition of interstellar dust. A new photometric mapping method was proposed in a paper published in the Astronomical Journal (Gunay et al. 2025) to measure the spatial distribution of carbonaceous dust, siliceous dust, and water ice by using absorption features arising from the grains in the dense interstellar medium (ISM). The method employs low-resolution filters on JWST's near- and mid-infrared cameras to measure and map the optical depths of the 3.0 μm water ice –OH feature, the 3.4 μm aliphatic hydrocarbon $–CH_2$ feature, and the 10 μm silicate –SiO feature. The method provides extensive statistical data of the grains across wide fields in the ISM at minimal observing cost. The study presented the method's application to observational data from the literature to validate the measured optical depths and simulations to assess the accuracy of the method under various conditions. The work showed that the photometric method can be employed to obtain reasonably accurate measurements of optical depth. The paper demonstrates that JWST optical depth maps enable the independent exploration of abundance distributions of major grain components across a wide spatial coverage in the ISM.

This work is also related to the research of AOP's previous Öpik Fellow, Dr. David Eden, who was in post until December 2024 and maintains a Visiting Position at AOP. He was utilizing data from multiple JCMT Large Programs to investigate the causes of star formation in the Milky Way. These Large Programs are investigating star formation across all size scales in the Universe, from local-molecular clouds to the Andromeda Galaxy. These investigations are taking multiple approaches to investigate how star formation is regulated. The first is observing the magnetic fields in the high-mass star-forming region G28 which indicates that the gravitational collapse may change the orientation of the field (Hwang et al., including Eden, 2025). This is complemented by observing the star-formation efficiency across molecular cloud scales, the sites of star formation, within the Galactic Centre - determining that the efficiency of star formation there may only be temporarily low, with a large reservoir of potentially star-forming gas ready to form stars (King, Moore, Longmore, Eden et al., 2026), whilst the clouds in Andromeda may not currently be undergoing gravitational collapse (Deng et al., including Eden, 2025). The chemistry within dense-gas accumulations were also investigated, with the goal of expanding this work across the Galactic Plane in the coming year (Plume, Eden, et al., including Burton, 2026).

Recent results – Distant Galaxies at the Cosmic Noon and the Early Universe

Linking to external galaxies, Marc Sarzi's focus this year has been in supporting preparation efforts for the upcoming MOONRISE guaranteed-time observing survey that starting in October 2026 will use the newly installed multi-fibre high-resolution near-infrared-spectrograph MOONs at the ESO-VLT to study galaxies at the cosmic epoch when both star-formation activity and supermassive black-hole accretion peaked. For this he contributed to the preparation of the target selection for ANG-host galaxies in the MOONRISE survey and to the study of neutral-gas outflows in nearby galaxies (Hagedorn et al 2026), as his main objective will be to direct a new PhD student starting in October 2026 to carry out an unprecedented census of neutral-gas outflows at the cosmic peak of galactic star formation, to understand the relative role of star-formation and central black-hole accretion in transforming half of the galaxies from spiral star-forming galaxies into passively evolving elliptical galaxies since that early epoch in the story of our Universe.

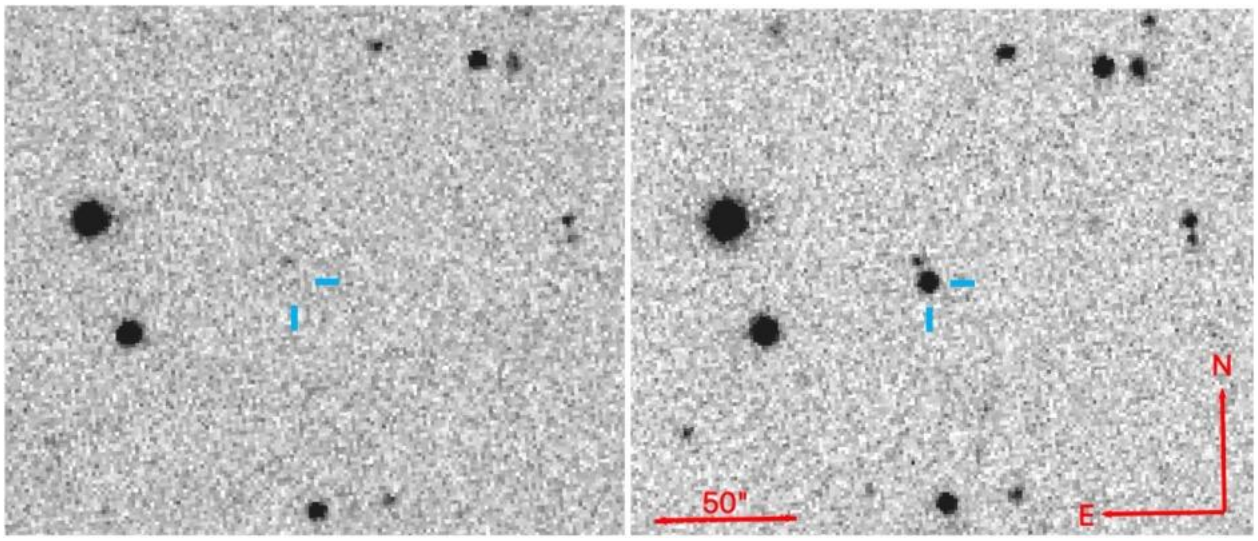
Finally, with the arrival of the new Öpik Fellow (Dr. Ryan Begley) in October 2025, research themes at AOP now extend to the early Universe. His work focuses on understanding the role of young star-forming galaxies in driving the Epoch of Reionization, often described as the "last major phase transition" in cosmic history within the first billion years. His recent first-author paper (Begley et al., 2026, MNRAS) presents a detailed spectroscopic analysis of high-redshift galaxies using JWST/EXCELS data, providing new constraints on the ionizing photon production efficiency and its dependence on galaxy properties. These results offer key insights into the physical processes governing the ionizing output of early galaxies. Since joining AOP, Ryan Begley has co-authored six additional papers in leading journals (MNRAS, ApJ), spanning topics including massive quiescent galaxies and the evolution of star formation and metallicity at high-redshift, all leveraging JWST datasets such as PRIMER, CAPERS, and EXCELS (>465 hours of observations). He has also co-led the development of PRIMER photometric catalogues, now widely used in multiple studies. Further observational programs include accepted JWST and HST proposals, as well as involvement in upcoming Roman Space Telescope projects, collectively positioning AOP at the forefront of early-universe galaxy studies.

All-sky optical surveys and accretion physics

Astronomers from the ancient world spotted new stars, "novae" or "supernovae", which suddenly appeared in the night sky and then gradually faded from view over weeks or months. We now know that many of these "transient" events occur when one star circling a white dwarf star unloads enough matter through the process of "accretion" onto the white dwarf to make it explode. These Supernovae 'Ia's have now been used to show the universe is expanding

at an accelerating rate. However, astronomers are not sure what kind of star the mass donor star is in these events. Gavin Ramsay has spent his career studying variable stars in general and compact binaries in particular and is closely involved with two international projects, the *Gravitational-wave Optical Transient Observer* (GOTO), which has sixteen 40 cm telescopes in both the island of La Palma in the Canaries and New South Wales in Australia, and *BlackGem* which has three 65 cm telescopes in La Silla in Chile. The main goal of both projects is to detect the optical counterpart of gravitational wave events such as the neutron star binary merger GW170817 which was discovered by the Ligo gravitational wave detectors in 2017. Professor Ramsay co-chairs the GOTO Executive Board which manages the project on a day-to-day basis.

By mapping the sky on a regular basis both GOTO and BlackGem discover new transients in our own Milky Way and the distant universe. GOTO is now one of the world's top discovering facilities of supernovae, with typically more than 200 discovered every month. It is currently not possible to follow up all these discoveries in detail but highlights include SN 2024cld (Killestein et al 2025) which originated in a massive star which GOTO discovered only hours after it exploded and SN 2024bfu and SN 2025qe (Magee et al 2025) which are SN 1ax supernovae which show fast rise times compared to most SN 1a events. GOTO can rapidly slew to Gamma-Ray Burst (GRB) events which are related to supernovae and merging neutron star events and has identified many optical counterparts to these cosmologically distant events (e.g. Dimple et al 2025, Kumar et al 2025).



The left-hand panel shows a GOTO image of the field of GRB 241105A taken 5.3 hrs before the gamma-ray event and the right panel shows a GOTO image taken 29 min after the event (Dimple et al 2025). It was later confirmed as having a red-shift of z=2.68 which is one of the most distant GRB's to be discovered.

As part of Professor Ramsay's continuing interest in compact accreting binaries, he was part of a team using X-ray observations of systems where the accreting white dwarf has magnetic field strengths >10 MG (~20 million times greater than the Earth's magnetic field strength). Filor et al (2025) report X-ray observations made using the NuSTAR satellite of the system EF Eri which suddenly restarted accreting 26 years after the flow from the mass donating star ceased and were able to measure the mass of the white dwarf. Deng et al (2025) used multiple X-ray telescopes to study the system ZTF J185139.81+171430.3 which indicated it was a massive white dwarf which could become a supernova in the future. Optical observations, including GOTO data, identified rare short duration outbursts from this system.

Stellar Activity

Sunspots were first recorded by Chinese astronomers several thousand years ago. We now know they are regions on the Sun which have strong magnetic fields and are the source of flares and coronal mass ejections which give rise to aurora on Earth. We can also infer the presence of spots on other stars because as they rotate into view, the star appears to dim since these spots are cooler than the rest of the star. The number of sunspots varies over a timescale of 11 years, called an `activity cycle', which can also be traced by other means such as measuring the characteristics of specific spectral lines. By comparing the number of spots and flares of stars of different masses over many years we gain important insight to how stars generate and sustain their magnetic field. Determining the number and energy of stellar flares are important for our understanding of the development of life on planets around other stars.

Gavin Ramsay together with his new PhD student Thomas Mitchell and Professor Gerry Doyle continue to study activity on low-mass and Solar type stars using data from the *TESS* satellite and ground-based telescopes such as the 10.4m Gran Telescopio Canarias (GTC) on La Palma and telescopes in Chile. Ramsay et al (2025) report observations of the rapidly (2.8 hrs) rotating low mass star LP 89-187 made using TESS and the high-speed camera

HiPERCAM on the GTC. By comparing the flare rate of LP 89-187 with stars of known ages, it helps us understand why many rapidly rotating low mass stars appear to show fewer flares than older stars. Thomas Mitchell is working with Gavin and Professor Chris Watson of QUB to develop tools to find spectral features which are less sensitive to stellar activity. This is essential if astronomers are going to find the small radial velocity shifts which Earth-like planets make on their host star. This work is directly related to preparation for ESA's Plato mission which aims to detect Earth-like planets orbiting a Solar type star in its habitable zone (Rauer et al 2025) and is due to be launched in Jan 2027. Professor Ramsay is the ESA Community Scientist for Plato and member of the Plato Science Working Team.

Solar System Studies

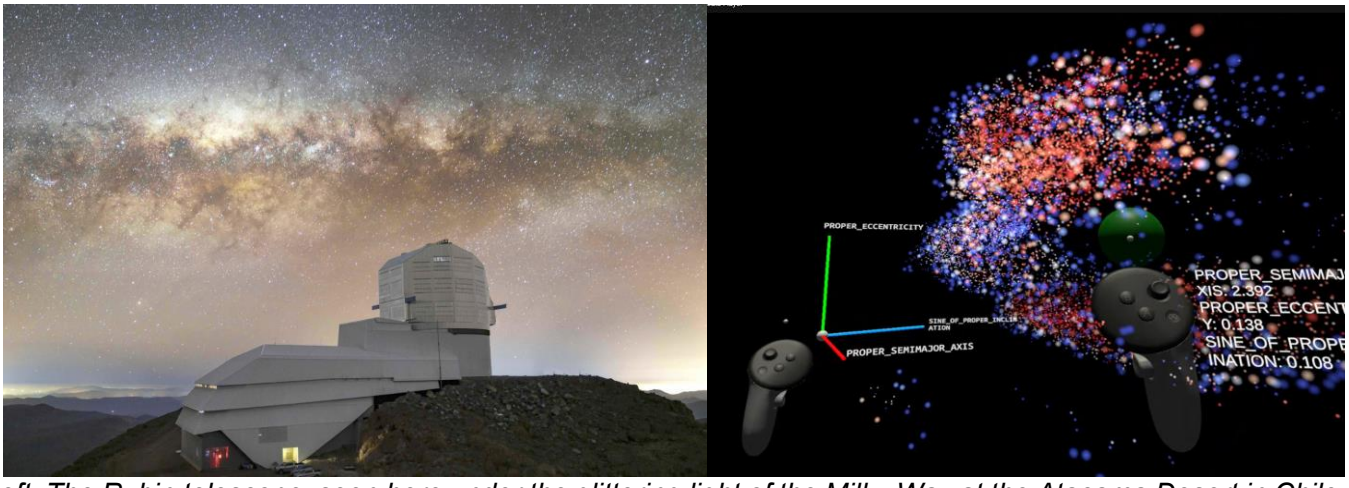
Introduction

Our Solar System is an extraordinary natural laboratory to study the formation and evolution of planetary systems around the Sun and other stars. AOP feeds into fundamental questions about how the Solar System and the Earth formed and the development of life in the Universe. Our study of comets, asteroids and planets impacts on models of solar system formation, the ever-present hazard to civilization if asteroids or comets hit our planet and on the origin of water and organic compounds necessary for life to exist. The space industry benefits from improved detailed knowledge and understanding of the near-Earth and interplanetary environment.

Recent results

Apostolos Christou reports significant progress on a 3-year project funded by a £135k Leverhulme Trust research grant. The project aims to develop advanced Artificial Intelligence tools to sift through the huge volume of asteroid data expected from the Vera Rubin telescope (pictured above left). Establishing the genealogy and provenance of the millions of asteroids between Mars and Jupiter is a crucial step in understanding the processes that evolve small body populations in our solar system and in planetary systems orbiting other stars. Traditional approaches to solve the problem of classifying asteroids into groups of common origin can struggle with cascading linkages ("chaining") when datasets get large and diverse. With Rubin expected to deliver millions of new measurements, researchers need scalable ways to classify families using Machine Learning and to make sense of those classifications.

During Year #1 of the project, the team retrieved and collated available datasets on asteroid colour, size & reflectivity. These are used to train Artificial Neural Network algorithms in classifying asteroids as family and non-family. ANN outcomes must additionally be validated (i.e. given a "reality check") in terms of the observed physical properties of asteroid families. The challenge is to find the optimal separation between training and validation features that maximises performance metrics but does not lead to non-sensical outcomes. Here we adopted a 'grid search' strategy with a set of 127 ANNs trained on all possible feature combinations. Although time-consuming, this approach ensured a robust optimisation of our chosen solution. Parallel to ANN development, project PDRA Dr Alexander Sivitilli worked to enhance an open-source virtual reality (VR) data exploration tool (iDaVIE) on our in-house Data Visualisation Laboratory facility. Once the asteroid data was imported to our local servers, we applied these tools to support quality control of Machine-Learning (ML, aka Neural Network) models that classify asteroids into families (pictured above right). These improvements make it easier to spot patterns, identify unusual objects ("interlopers"), and check whether algorithmic predictions are sensible. The work positions our team to handle the much larger datasets expected from upcoming sky surveys and contributes features back to the community-maintained iDaVIE platform.



Left: The Rubin telescope, seen here under the glittering light of the Milky Way at the Atacama Desert in Chile. The facility began commissioning operations in 2025. Right: Example of data visualisation applied to the asteroid families. Predicted family asteroids (large points) are colour-coded by prediction confidence as blue (less confident) or red (more confident).

The Hierarchical Clustering Method (HCM) algorithm has been the mainstay in the search for families in the main asteroid belt that formed from the breakup of a larger “parent” asteroid. However, it is difficult to measure the method’s efficiency in an objective fashion, since the parentage of asteroids that the HCM is applied to is not a priori known. In a paper now published in the journal Icarus, a team led by AOP PhD student Andrew Marshall-Lee inserted a set of artificially-generated (“synthetic”) asteroid families at different locations in the main belt and measured how effectively the HCM can recover the asteroid members of these families, while minimizing the inclusion of non-family members (family “interlopers”). The study showed the most crucial factor in the HCM's ability to cluster asteroids into families to be the relative asteroid number density between family and background. For families ~4x denser than the background, about 50% of the original family is recovered irrespective of age. However, to reach such relative densities for families older than 2 Gyr requires artificially reducing the synthetic background population. Families older than 2 billion yr would therefore be all-but-undetectable by the HCM in the real belt.

Closer to the Sun, a new study led by Apostolos Christou and published in the journal Astronomy & Astrophysics focused on a group of small asteroids that share an orbit with the planet Mars. Christou and colleagues carried out a census of these asteroids, in the process discovering three additional Mars Trojans (now adopted by the Minor Planet Center) and increasing the known population of these objects by a quarter. Furthermore, the team found that the orbits of Trojans are not random but instead fall into two or three distinct dynamical groups, suggesting the presence of several generations of asteroids and ongoing population evolution probably dating back to the formation of Mars itself some 4 billion yr ago.

Finally, AOP keeps on building on its internationally recognized expertise in polarimetry: a specialized technique that decodes subtle properties of light to reveal information that would otherwise remain hidden. In Solar System studies, polarimetry acts as a powerful remote-sensing tool, allowing astronomers to infer the size, surface texture, and composition of asteroids from afar.

Staff astronomer Stefano Bagnulo has secured funding from the European Space Agency (ESA) to apply this technique to the monitoring of Near-Earth Asteroids (NEAs), objects whose orbits bring them close to our planet. This work supports ESA’s planetary defence strategy, which aims to better understand and track objects that could, in rare cases, pose an impact risk to Earth. The importance of this effort is dramatically illustrated by Earth’s own history: around 66 million years ago, the impact of a large asteroid is thought to have triggered the mass extinction that wiped out the non-avian dinosaurs. The ESA funding also supports a new PhD project that started in October 2025, placing AOP at the heart of a timely and globally important challenge: helping to protect our planet from potential hazards. To support this project, Bagnulo has also secured more than 50 hours of observing time at the Very Large Telescope (VLT), with a close collaboration with a team of French astronomers providing additional rapid and detailed follow-up observations of the NEA targets.

Finally, Astronomers at the AOP have been closely studying comet 3I/ATLAS, the third interstellar object ever discovered passing through our solar system, using a special technique called polarimetry. This method looks at how light is scattered by the dust and gas around the comet, giving scientists clues about its composition and structure. What makes this especially exciting is that 3I/ATLAS comes from outside our solar system, so it carries material formed around another star. By observing it in this way, researchers can compare it to comets born here at home and learn whether the building blocks of planets are similar across the galaxy. In simple terms, it is like getting a rare sample from a distant world without ever leaving our own

Education and Community Outreach - Planetarium

At a Glance

Metric	2025–26 Outcome	Target
Total Visitors	67,194	67,000
Educational Visits	11,804	12,000
Outreach Engagements	14,821	11,500
Non-school Group Visits	76	66
Outreach Programme	Fully embedded, self-sustaining	Strategic priority
Membership Scheme	Launched and running	

Introduction

Armagh Observatory and Planetarium (AOP) is a unique institution that brings together cutting-edge scientific research and world-class public engagement within a heritage-rich environment steeped in astronomical legacy. Since its establishment in 1968, the Planetarium has earned an international reputation as a pioneering centre of excellence dedicated to advancing public understanding of science.

At the heart of AOP's mission is a commitment to making science accessible, engaging and inspiring for all. This is delivered through a public programme built on four foundational pillars*: education, inspiration, entertainment and outreach.* These pillars guide AOP's activities that serve audiences ranging from early years learners to lifelong enthusiasts.

Throughout 2025–26, AOP continued to strengthen its role as a regional leader in STEM engagement, delivering high-quality educational experiences both onsite and offsite, across communities.

A key educational priority was the successful transition of outreach from a funding-reliant activity into a core, self-sustaining programme. This was achieved while maintaining full-capacity delivery of the onsite education programme and thus increasing our annual engagement numbers. It also serves as a tool to market our onsite facility for family visits during the year.

Summer 2025 did not reach the expected and predicted visitor figures, a trend which is being felt across many other visitor centres in the UK and Ireland. However almost every other month outperformed visitor statistics held for the last decade with credit to the team for delivering in those busier than average months which meant that even with a below average summer attendance we still met our 67,000 visitor target for 2025-26. This success reflects the adaptability of the team, and the ability to respond to evolving audience needs, looking outside the box for events.

Education Programme

Education remains central to AOP's mission. The Planetarium delivered a comprehensive, curriculum-aligned education programme spanning Nursery through to Third Level, reaching 11,804 students.

Students engaged through a combination of:

- Immersive live fulldome shows
- Interactive, hands-on workshops
- Tours of the exhibition area
- Curriculum-linked science content across astronomy, Earth science and physics including for Junior Cycle in the South of Ireland

These experiences are designed not only to support formal learning outcomes but also to spark curiosity and inspire future career pathways in STEM.

Demand for the programme remained consistently high, with bookings operating at or near full capacity throughout the year. While some disruption occurred due to severe weather conditions which resulted in several cancellations as schools had to close, overall delivery remained strong and we narrowly missed our 12,000 pupil target. A waiting list of schools was held to try and accommodate those schools that could not get booked in due to no availability in our slots

which demonstrates the demand that we have for school visits.
Beyond direct delivery, the education programme contributed to educational development through:

- Teacher training and placements, in partnership with Stranmillis University College and Queen's University Belfast
- Attaining funding for schools that require financial assistance with transport costs
- Education through STEM and history and heritage stories on social channels and through Press Releases
- Opportunities for our PhD students to engage with the public enhancing their communication skills
- Focus on STEM role models at events
- Delivering on teachers learning objectives

We have also been delivering an STFC funded programme which helped schools with entry tickets to the Planetarium and a bursary towards transport costs. Communication and administration for this project has been overseen by Education Officer Lovisa Redpath and the delivery of the activities provided by our education team and PhD students. Schools take part in a range of experiments from our big book of experiments that we produced, and teachers learn how to do these experiments in the classroom. In 2025/6 we helped 13 schools that may not be able to visit us due to transport costs to engage with our education programme. This has been well received by the schools and will run for one more term in 2026/7.

Outreach and Community Engagement
A major achievement in 2025–26 was the successful embedding of outreach as a core offering, reaching 14,821 individuals across schools, festivals and community events.

This work plays a critical role in reducing geographic and economic barriers to access, extending engagement to rural and underserved communities and increasing AOP's visibility which can lead to more onsite visitations.

Delivery included the use of the mobile planetarium dome, enabling immersive science experiences to be brought directly into communities and also a partnership with the Royal Institution to deliver experiment-based STEM shows at schools led by Tours and Outreach Officer, Dr Rok Nezic.

Key collaborations strengthened the reach and impact of outreach activity, including:

- Partnership with the Royal Institution to deliver STEM experiment-based learning
- Support for Mayo Dark Skies initiatives
- Pilot deployments of the outreach dome in new venues such as Limavady Trainer Dome and Inishowen Maritime Museum

Delivery of the outreach programme is also using a fully electric vehicle which highlights our commitment to sustainability.

Public Engagement and Programming
The Planetarium delivered a dynamic and diverse public programme, contributing to overall visitor numbers exceeding target.

The year was characterised by:

- Record-breaking attendance during February half-term. Other months which were the highest visitor numbers recorded within the last decade include May, October, January and March.
- Continued growth in evening and adult-focused programming. A key priority this year was to expand our evening offering and for most of the year we were opened every Friday night for a range of activities from music shows to stargazing events, paint and sip events to dome corporate hire opportunities.
- Expansion of family, community and themed events linking in with our local Armagh community to expand afternoon activities, local schools for litter picks and ECO engagement and the launch of our membership scheme.

Major programme highlights included:

- Launch of *The Stellar Science Lab*, an interactive summer exhibition encouraging hands-on exploration. Whilst our summer season resulted in less than our projected numbers, the exhibition received incredibly positive feedback.

- To mark the centenary of Planetaria we held free afternoon shows for our local community which was well attended and brought local people back into “their” Planetarium giving them a sense of pride of place.
- A highlight of the month of July was the 230th Anniversary of MET Readings. This special event invited members of the public to the MET cage to witness a live weather recording, accompanied by real-time commentary. Visitors then enjoyed a family fun day at the Planetarium, featuring weather-themed activities and dome shows.
- Introduction of Telescope Tuesdays, increasing public access to our historical telescopes. A key priority of the Education and Outreach Manager was to open the Calver dome for public viewing of the telescope (not observations). Telescope Tuesdays allowed us in the summer to engage with the public on the historic telescopes and the history and heritage of the site. This is now embedded at other times of the year to replicate the public opening.
- Development of new experiences including sleepovers, immersive shows and creative events such as Paint and Sip. These pilots will continue to grow and be embedded in 2026/7. A key priority will be engagement with scout and girl guide groups for stargazing badges and sleepover events.
- Stargazing nights continued to be a major success in 2025-26, reaching full capacity. This year has been our most successful series yet. Prominent events such as the Artemis mission generated high public interest, and we were able to offer talks from STEM Ambassadors and our students at these events. Stargazing was moved to the human orrery for more space and better viewing opportunities. Other activities included talks in the Copernicus Hall, VR session in the DVL room, and simulated live night sky sessions in the dome. For 2026/7 a key priority will be to increase engagement with our amateur astronomer groups to provide more telescope viewing opportunities for our visitors.
- Small grant from ASDC for providing a Women in STEM event for which our PhD students and education staff gave public presentations during half-term and during the International Day of Women and Girls in Science. This was a small grant that had a significant impact! Our visitors were inspired by the stories of our staff and students, and the feedback was fantastic with many questions coming in on career paths. The impact on this was far-reaching with emails coming in from parents on how the event was well run and inspiring and from our students that wanted to replicate the event as they got a lot from it also in terms of communication and sharing of knowledge.
- Continued “Meet an Astronomer” events in the DVL and Rosse Rooms during non-term times, further enriching the visitor experience.

Seasonal programming including Star Wars Day, Mission Santa, and National Lottery Open Week successfully attracted both new and returning audiences, reinforcing the Planetarium’s role as a year-round destination.

Corporate Hire opportunities were taken when we could accommodate during the year and when capacity allowed. This was overseen by Senior Education Officer Ria McDonnell who increased our number of events during the year via careful calendar management. External events included corporate hire of the dome for *Beautifica* presentations - an immersive audiovisual experience, delivered by an external company which has expanded our corporate hire portfolio and attracted return visitors to other AOP programmes. *Sound Journey Under the Stars*, a relaxation and sound therapy session hosted by another external provider, has further showcased the Planetarium as a distinctive venue for alternative experiences.

Uniform group sleepovers were piloted in 2025/6 and overseen by Operations Manager Jessica Moon. The feedback from the groups was one of excitement and wanting to book again thus we will be looking into how we can expand these for 2026/7 as another experience that we can offer at the Planetarium.

We also piloted Birthday Party provision this year which was very well received and is an activity that we are now offering at weekends with provision of one party per morning slot. This allows us to offer a unique experience like no other with a dome show, workshop and making lasting memories for groups.

Our membership scheme was launched this year, a first of its kind at AOP. We have just over 50 memberships sold after a slow launch to test the system and are now ready to advertise further in the coming year. Memberships will allow us to engage with those visitors that regularly visit us, provide them with unique experiences and events to enable them to get more astronomical benefits from being a member of AOP.

Accessibility and Inclusion

Accessibility remained a defining priority throughout the year, with AOP continuing to lead in inclusive science engagement.

Key developments included:

- Delivery of Accessible Sundays, offering sensory experiences. This was piloted in March 2025 and then

programmed quarterly during 2025/6. However, due to the success and demand the sessions will be increased in 2026/7 and offered every other month.
- Collaboration with Tourism NI with staff presenting on our accessibility gains and best practices.
- Recognition through the Best Changing Places Toilet 2025 Award.
- Renewal of the JAM (Just A Minute) Card, and all front-line staff trained to recognise and support JAM Card users.

Significant progress was also made on inclusive content development, including a new dome show called *Sonic Cosmos*, an immersive dome experience designed for visually impaired audiences for which the Education and Outreach Manager received a funding award for and the Theatre Manager is developing alongside community groups to ensure we create a shared experience dome show.

These initiatives reflect a clear commitment to ensuring that science is accessible to all.

Innovation and Programme Development
Innovation remained a cornerstone of AOP's work, with continued investment in digital engagement, immersive content and research integration.

A key highlight was the Demystifying AI Exhibition, supported by funding from the Association of Science and Discovery Centres. This initiative introduced visitors to machine learning through interactive tools and real-world applications. It showcased how our staff are using AI tools in research and in education. AI is all around us, but we also want to highlight not to be afraid of the developments but also to educate on the dangers as well. Teachers have found this useful as they are finding their pupils are growing up with AI and they do know all about the topic, so it has helped them to navigate the topic.

Content development continued across a range of dome productions due to the dedication of our Theatre Producer Dr Kerem Cubuk, including:

- Sonic Cosmos
- Dragons in the Sky (with QUB)
- The Lucia Project
- In-house dome shows

Technical innovation also advanced through:

- Use of audio-visual production tools for content creation
- Exploration of VR-to-dome experiences
- Enhanced immersive audio development in collaboration with academic partners

This year the Education and Outreach Manager engaged with Tourism NI and ABC Council to be part of a cohort of local businesses to undertake a sustainability course run through Ulster University. The programme gave an understanding of sustainable tourism practices and their relevance to the balanced development of the destination as well educating on practical strategies to manage energy, water, and waste. After completion of the course and a presentation, a Level 4 Certificate in Sustainable Tourism Practice in Destinations was accredited by Ulster University Business School.

STEM Ambassador Programme
As the STEM Ambassador Delivery Partner for Northern Ireland, AOP plays a vital role in connecting education, industry and community.

The programme, which is fully funded over two years (approx. £200,000) allows AOP to employ two full-time staff, has expanded significantly in 2025–26, delivering:

- Increased ambassador engagement in schools and events
- Stronger partnerships across industry, academia and the public sector
- Representation at major events such as Science at Stormont
  This work is critical in:
- Raising awareness of STEM careers
- Providing young people with real-world role models
- Strengthening pathways from education into employment

Our project Manager, Hanagh Winter, has significantly enhanced our links with industry and raised AOP's profile with STEM industries. Hanagh has also been successful in attaining ESERO funding to expand her STEM activities through career roadshows and engagement in schools. Her activities have also brought STEM Ambassadors activities to life at the Planetarium, using the Copernicus Hall as a hub for talks and STEM activities including hosting the regional finals of the Quadcopter competitions for secondary schools.

A highlight activity delivered was a pilot "Northern Ireland Space Showcase" at the Planetarium, bringing together local industry and research partners to engage directly with young people. The event displayed the range of space-related careers available across the region, with a highlight on research pathways at AOP, and reinforced AOP's role in supporting and promoting space careers in Northern Ireland. Content captured from this event is now being developed into a "Northern Ireland in Space" dome show, alongside a dedicated Space Careers in Northern Ireland webpage to showcase local opportunities and pathways into the sector.

Through inspiring careers events, hands-on activities and inclusive outreach, we will work to challenge stereotypes and open young minds to the endless possibilities of a future in STEM.

Volunteering and Community Contribution
AOP has been facilitating volunteers for a number of years however in late 2025 through National Lottery Heritage Funding we recruited a Volunteer Coordinator, Kelly McGloin, to dedicate their time to overseeing this project which has given AOP support across the site in a wide range of activities.

Volunteers supported:

- Public events and outreach delivery
- Educational programme development
- Visitor experience enhancements
- Scanning on weather and historical documents for our website and records
- Historical archiving
  The programme has already delivered:
- 19 work experience placements
- University partnerships supporting student learning and development
  Volunteer contributions continue to enhance both organisational capacity and community connection.

Challenges and Outlook
Despite strong performance, the year presented several challenges:

- Severe weather disruptions impacting school visits
- Rising cost of fuel impacting school transport costs
- Operational pressures e.g. car parking restrictions, linked to high demand and capacity limits, flooding in Planetarium building and heating malfunctions.
- Departure of an Education Assistant in October 2025 (currently being recruited) leaving us a staff member down.

However, there were a lot of successes and in particular, growing our programming to achieve many months of record attendances.

Key priorities for the coming year include:
- Further expansion of outreach delivery and partnerships
- Continued development of immersive and accessible content
- Strengthening AOP's role as a regional hub for STEM engagement
- Ensuring that AOP remains the "Place for Space" and keeping on top of astronomy news and content for public consumption
- Assessment of the educational programme to align with changing curriculum needs
- Expand public programme and build upon pilot projects
- Actively seek funding that can help and assist schools with visitations

History and Heritage

History and Heritage Policy

AOP boasts a collection of over 35,000 historic documents, rare and antiquarian books, scientific instruments and photographs, up from 34,000 entries at the start of the financial year. This collection is unique on the Island of Ireland and one of the best-preserved observatory collections in the United Kingdom. The heritage policies implemented ensure that the collection is cared for in accordance with best practice and has allowed ongoing historical research. AOP remains represented on the Board of Directors of the Northern Ireland Museums Council by the Museum Collections Officer who began their three-year term in September 2023.

The eMuseum has 16,406 objects available for public viewing on the armagh.space website and also on the Museum Data Service. 1,055 new entries have been added to the collection during the financial year. This has included the first donation from the Fuller family of the historically important David Sinden Archive, which has generated research interest from abroad as well as supporting AOP's research into its own instruments.

In accordance with AOP's policy of making our collection available for the public and researchers to use we have continued to facilitate public information requests. The 2025-26 financial year brought 27 requests facilitated by the Museum Collections Officer. This included a three-month internship by an MA Student at QUB, and several visits by academics from around the world to access the Historical Collection for their own research. AOP has continued to work with the Geography Department of QUB and has successfully recruited the first History PhD Candidate in conjunction with the History Department, starting in October 2026.

AOP continued to enjoy the support of three Heritage Volunteers during the 2025-2026 Financial Year. These include an Archival Assistant, a Library Assistant and a Research Assistant. These posts have been recognized for their important contributions to the organization, including an invitation to attend an academic conference that was extended to the Volunteer Research Assistant in March 2026. In total volunteers contributed over 600 hours to the History and Heritage work at AOP.

With the assistance of the Living Space Committee, which continues to meet regularly throughout the year, all of the Museum and Heritage related policies were updated in 2025 to bring them into full compliance with AOP's reaccreditation ambitions for 2028. In addition, three new temporary exhibitions were hosted in the Planetarium; Cecilia Payne-Gaposchkin Centenary (which was suggested by the Living Space Committee and included a copy of the 1925 Thesis from the Library Collection), Astronomy in Southern Skies, and The Travels of Öpik (Curated by the Public History MA internship). In total this allowed over 200 objects from the collection, and 3 books from the library, to be displayed. In addition, the permanent display cabinet in the Planetarium Exhibition Cabinet was rejuvenated after five years of operations and was reinvigorated with new objects and photographs with the assistance of the Education Team.

Library and Archives

AOP's suite of technical equipment and historic collection is complemented by the finest astronomical study library on the Island of Ireland. The library provides an essential reference resource for AOP research and is open to all staff, students and volunteers. It contains over 4,000 textbooks, monographs, special reports, and conference proceedings covering nearly all disciplines in astronomy. Some 17,000 volumes from nearly two hundred scientific journal titles including nearly complete runs of all the major astronomy journals, as well as journals of significant historical interest.

During 2025-26 the collection has been supplemented by 60 new books on topics relevant to AOP research, up from 41 in 2024-25. Some 20 texts and conference proceedings were purchased with end-of-year funds. Acquisitions also include student theses completed in recent years, one volume published in conjunction with AOP and donations by staff and associates of AOP.

The AOP library is a reference library, with materials primarily consulted *in situ*, for which records are not currently maintained. Longer term loans are managed using a digital loan form; such materials remain on AOP premises in staff offices. There were 40 recorded loans in 2025-26, up from 30 in the previous year, though many loans remain unreported. The library has been maintained by the Museum Collections Officer between April 2025 and August 2025. Since August 2025 the library has been maintained by the Volunteer Library Assistant, Isabella Hughes, who has provided weekly support in dealing with returns, housekeeping, accessioning new volumes and major reorganization efforts.

Whilst still under enormous pressure for space, the AOP library remains an attractive space and a more effective research tool. It is increasingly demonstrating its potential for historical discovery as well as astronomical research. It has been used for the weekly Student Discussion, the weekly Research Seminar as well as the summer student placements, QUB 1st Year PhD Lectures and research meetings. It has been used monthly by the Armagh and District History group for their meetings.

Meteorological Record

As part of AOP's primary research role, staff and students take daily readings of a wide range of meteorological parameters at Armagh and maintain the Observatory's unique 230-year meteorological record and databank. This is believed to be the longest daily climate series in the UK and Ireland from a single site (though the logbook for the period June 1825 to December 1832 appears to have been lost), as well as being one of the longest in the world. The climate station has been continuously maintained since July 1795 with readings currently taken every day at 09:00 (GMT). The World Meteorological Organisation (WMO) has recognised Armagh with Centennial Station status for its longevity and importance in contributing to the climate record.

On 14 July 2025 the Observatory celebrated 230 years of daily observations with a special event focussed around watching the meteorological measurements being made in the Met Cage. Shane Kelly (principal weather observer for over 25 years – the longest serving person with this responsibility), was accompanied by a team of qualified Armagh Met observers, past and present. Around 200 people witnessed the event and were able to take part in some of the activities, such as estimating the cloud cover and determining the present weather. Armagh's weather station featured in the World Meteorological Organisation's (WMO) "State of Recognition" report for Centennial Observing Stations on account of this achievement[1]. For the first time the WMO also recognised that Armagh's weather record extends back to the 18th century, one of just 17 stations worldwide whose origins extend back this far.

The automated weather station (AWS) was installed by the Met Office in 2019, sampling the weather every minute. This now provides the primary source of weather data in the Met Office records (e.g., temperature, pressure, rain fall, windspeed) since it is automatically uploaded to the Met Office. The instruments are inside a second Stevenson Screen within an expanded meteorological enclosure to ensure that the AWS enclosure is identical to those used by the Met Office in their UK-wide network. Manual collection still continues and provides the only source for some of the data collected (e.g. sunshine) at Armagh.

Calibration of these data has enabled researchers and government agencies to use the Armagh series for reports and research into global warming. The data contributes to the UK Meteorological Office's main climate database and are released to the general public on a monthly basis through press releases and on our climate website (https://weather.armagh.space) whilst also contributing to the UK Meteorological Office's main climate database.

Climate change is a subject of strategic importance for Northern Ireland in this era of climate variability. Armagh's unique climate record provides an exceptionally long historical baseline, enabling better informed judgements to be made as to how Northern Ireland's climate has responded and is responding to climate change world-wide. AOP has a movable exhibition on the climate change in the Copernicus Hall, centred around an interactive Puffersphere presentation, together with supporting exhibits which expand on local impacts.

A series of python scripts store, analyse and provide access to the weather database via the weather webpage listed above. This includes both the manual data as well as the automated weather station data. This takes the monthly observers log, provides a means of entering the information via an online log, and in addition automatically downloads the data received from the automated station, to ingest these data sets into a new database. Analysis scripts then allow this database to be interrogated, e.g. to find climate extrema over any date range of interest. This includes enquiring about weather on any single day, as well as examining the data set over any period of interest and searching for climate records (extrema) over a period of interest. The automated weather station data is available to inspect online, in addition to the manual data. Plotting tools allow the user to see the weather over any time period, as well as to find when extrema in the various measured parameters occurred.

The three new PhD students who enrolled this past year (Emily Frank, Thomas Mitchell and Júlia Camões Alves) were trained during October-December 2025 on undertaking weather observations and then accredited as Level 1 Met Observers by the Director. Further, PhD student Michael Stroet was accredited as a Level 2 Meteorological Observer. This forms part of their PhD training in the techniques of scientific data measurement and analysis. The list of qualified Meteorological Observers, as well as those observers who have participated in the daily weather measurements made each year, has been updated with these observers on AOP's weather webpages (see https://www.armagh.space/weather/weather-observers-acknowledgements).

The highest and lowest dry bulb air temperatures recorded during the year (i.e., from 01/04/25 to 31/03/26) were 29.7°C on 12/07/25 (the 8th hottest maximum ever recorded in Armagh) and -3.4°C on 31/12/25, respectively, with the warmest and coldest days (derived from the average of the daily max & min temperatures) being 13/07/25 (21.9°C) and 05/01/26 (-0.1°C). The lowest grass minimum temperature, of -8.8°C, was recorded on 14/02/26. The soil temperature at 100cm depth ranged smoothly between 7.3°C and 17.2°C. The wettest day for the year was on 26/01/26 when 34.7mm of rain fell, whereas the sunniest day was 13/05/25 when 14.9 hours of sunshine were recorded.

[1] See https://library.wmo.int/records/item/58048-centennial-observing-stations-state-of-recognition-report-2025?offset=1.

The mean temperature for the year 2025 (i.e. the average of the daily max and min temperatures over the whole year) was 11.1°C, making it the second warmest year ever recorded in Armagh. The warmest year was 2023 (also 11.1°C), while 2022 was the 3rd warmest (10.9°C) and 2024 the 5th warmest (10.6°C). The year 2025 also had the 4th highest amount of sunshine on record (1464.1 hours). In contrast 2025 was the 45th driest year on record with 747.5 mm of rainfall measured.

Some extrema in the monthly data for the Armagh Meteorological Station for 2025 include:

- 3rd hottest ever June day (29.3°C on 20/06/25), 2nd hottest November day (17.6°C on 06/11/25),
- 3rd warmest April (Mean 10.8°C), 2nd warmest May (13.2°C), 4th warmest August (17.0°C),
- 3rd sunniest April (212.0 hours), sunniest-ever May (285.4 hours).

Support

AOP is committed to ensuring fit for purpose governance and support services to support the delivery of organisational objectives.

Information and Communications Technology (ICT)
ICT is fundamental to the delivery of AOP's mission as a leading scientific organisation and its operational and strategic goals. ICT operates in a fast-changing environment, and it will always be the aim to provide the best service and equipment within the resources available.

An ICT Strategy 2024-2028 was approved in March 2025. Progress against the targets will be reported to Audit and Risk Assurance Committee (ARAC) each quarter.

At an organisational level, the ICT Strategy will pursue the following outcomes to support this delivery:

- Protect the users, systems, data and reputation of AOP;
- Facilitate in-office and remote working;
- Facilitate cloud computing where practical and economic;
- Provide backup to recover from critical data loss;
- Provide cyber security compatible with supporting operational needs;
- Provide ICT training, support and assistance to users;
- Manage the ICT network across AOP;
- Renewal and/or repair of ICT equipment at AOP.

ICT is required to provide an overarching support structure to ensure fit for purpose technology and systems that facilitate the needs of research, education, heritage and corporate services, planning for the future, whilst at the same time protecting against risk.

AOP continues to modernise and improve its centralised ICT hub. All devices are now managed using Intune and are secured using multi-factor authentication and device registration. Auto patching of all Linux, Windows and Mac devices has reduced our exposure to cyber-attack. The focus now moves to software run on the devices as the next level of risk develops.

The biggest risk to AOP still remains user error through clicking on malicious links in emails. AOP mitigates this through regular reinforcement of messaging and a focus on continuing to educate users in best practice and system etiquette.

AI continues to bring benefits to AOP but also heightens the risk we face to an ever-increasing cyber threat. How we manage access to AI tools within AOP has become a priority with ICT, so we can take the benefit from this AI revolution without exposing our systems to undue risk.

Finance

AOP's finance function has been heavily reliant on agency staff during 2025-26 due to the loss of experienced finance personnel. The recruitment of a Grade 7 Accountant and a SO Accountant is under way.

AOP continues to experience significant cost pressures within a core budget that has remained relatively static for 8 years.

Human Resources
A Human Resources Strategy 2022-26 was developed and approved and is supported by an annual Human

Resources Action Plan. The 2025-26 plan has been implemented to include:

- Maintaining a Fit for Purpose Organisation Structure – review of the skills-gap paper and workforce planning papers in light of available budget and future needs; completion of necessary recruitment and training in a timely matter and identifying short term opportunities to plug skills gaps with short term projects or engagements;
- Continual review of Operating Models – supporting the Head of Education & Outreach in recruitment and retention of staff and reviewing staffing needs in the context of budgets and affordability.
- Employing and Investing in Motivated and Engaged Staff – supporting the annual appraisal process; completing/revising a rolling training plan; reviewing implementation of training plans in the context of available budget; preparing a case for award of a special bonus scheme; preparing for engagement events and supporting the health and wellbeing of PhD students; and
- Fair and Equitable Employment Policies and Procedures – completion of the annual Fair Employment return and Article 55 review, retention of Bronze Diversity Mark Award, review of policies, and induction and refresher training as required.

Diversity and Inclusion

AOP has an obligation under Section 75 of the Northern Ireland Act to ensure that equality of opportunity and good relations are central to policy making, policy implementation and review as well as service delivery. AOP monitors the composition of its workforce in terms of community background and sex and uses an equal opportunities monitoring form questionnaire. AOP submits an annual Fair Employment Monitoring return to the Equality Commission detailing staff composition and that of job applicants to AOP posts.

In the AOP Strategic Plan 2021-26 we state that having Fair and Equitable Employment Policies and Procedures is one of our key elements in delivering high standards. AOP has a number of policies in place including an Equal Opportunities Policy. We have also agreed a new ED&I Strategy & Action Plan 2025-2028 which incorporates a number of actions including reviewing, monitoring and training in policies and practices.

AOP currently holds the Diversity Mark NI Bronze Award and we continue to work through our targets as follows:

- To develop an Equality, Diversity and Inclusion Strategy;
- To increase the number of female research staff at AOP from 2 to 4; and
- To increase female representation on the AOP Management Committee from 3 to 5.

AOP retained Juno Practitioner status in August 2023. This is an award scheme that recognises and rewards university physics departments, schools of physics, and related institutes and organisations that can demonstrate they have taken action to address gender equality at all levels and to foster a more inclusive working environment. In June 2024 AOP became a signatory to the new Institute of Physics Inclusion Award that is currently being developed.

Governance

Governance and accountability continue to be strengthened and improved and risks reduced as demonstrated by external and internal audit reviews. Actions arising from effectiveness reviews undertaken by both ARAC and the Management Committee have also resulted in enhanced arrangements.

Future Redevelopment Project

AOP manages an extensive property estate which includes nine separate buildings, including the Grade A listed Observatory and a circa 20-acre historic estate. There are also several leases associated with land and property.

An Outline Business Case (OBC) for the AOP Estate Redevelopment Project, as approved by the Management Committee at its 125th meeting, was approved by the Board of Governors at the 2023 Annual Visitation and submitted to DfC in July 2023. To support the project a funding bid was made to the Heritage Lottery, "*Wisdom Begins with Wonder at the Armagh Observatory and Planetarium: where the past meets the future*" for c£6m. This was successful and AOP was awarded the funding in March 2024, to come in two stages, a Development and a Delivery phase. However, it has proved not possible for DfC to provide the necessary match component for AOP to be able to accept these funds. AOP was asked to update and re-submit the OBC. This was done with the help of the Strategic Investment Board who were engaged to assist, and the updated case (now known as OBC1) was approved by the Management Committee at a special meeting on 3 March 2025, endorsed by Archbishop McDowell on behalf of the Board of Governors, and re-submitted to DfC. This will be progressed in the 2025-26 financial year.

Funding required for the Outline Business Case (OBC1), which relates to the redevelopment of the AOP site, was approved by the Minister of Communities on 30 June 2025. In terms of the funding application, a total amount of £3,973k has been approved for the three years ending 31 March 2028.

Previously, The National Lottery Heritage Fund (NLHF) had allocated funding in the amount of £1,324k which was dependent on funding procured from other sources amounting to three-fold the funding allocated by NLHF.

The funding grant from DfC is therefore 75% of the total funding grant of £5,297k, with the balance of 25% being funded by NLHF.

The redevelopment project is imperative to future proof AOP's role into the next generation. The case for change is predicated by an estate that is outdated and misaligned to the expectations of modern-day visitors; a restricted footprint on challenging topography that limits incremental or add-on extensions to increasing its capacity; and a dome technology that is on the precipice of transformational change that will render the existing visitor experience technically unsustainable within the next decade.

The case made in the OBC is centred around five spending objectives:

1) To create a world-renowned centre of astronomical research excellence that attracts international conferences and research visitors.
2) To create a state-of-the-art facility to educate the public and future generations of young people in science and astronomy across the island of Ireland.
3) To create a relevant, inspiring and dynamic visitor experience for the domestic and international tourist visitor market.
4) To preserve the heritage of the scientific instruments and the Observatory, while maximising the public's enjoyment of, and access to, the heritage site and collections held by AOP.
5) To improve the long-term viability and sustainability of AOP; having an attraction that is unique within NI and Ireland; and encouraging economic development through promoting it as a state-of-the-art facility.

Net Zero

AOP's international research standing, and unique record of uninterrupted meteorological observations has allowed it to effectively communicate on the issue of climate change (CC) to the public. This is thanks to a temporary CC exhibition in the Planetarium, a CC Puffersphere display demonstrating AOP's own commitment to reducing its carbon footprint and its two state-of-the-art green energy power generation stations based on wind and solar power, the Smartflower and Windtree. Regrettably, both stations were damaged by Storm Eowyn and despite repair works carried out both stations remain presently disconnected.

As highlighted in previous year there remains significant challenges in decarbonising AOP research and education activities, both internal and external, mostly due to the historical and old state of the Observatory and Planetarium buildings, respectively. In this respect, the approval of AOP Redevelopment Project offers a new opportunity to make AOP an exemplar institution when it comes to green sustainability.

Achievements and Performance

The targets set for AOP in the 2025-26 Business Plan are shown in the following table. Actual performance achieved is shown along with the corresponding achievement in the previous financial year, where applicable.

Targets were achieved or exceeded in many areas; however, one target was not met. Whilst the total visitors target was exceeded the target in respect of school visitors was not achieved due to a number of school cancellations as a result of education and bus strikes and also snow.

KPI	Description	Target	As at 31 March 2026	As at 31 March 2025 (where applicable)	Comments
1	Attract 67,000 visitors (to include 55,000 public visitors and 12,000 school visitors)	67,000	Public 55,390	52,245	Total 67,194 visitors There were some school cancellations due to weather conditions
			School 11,804	11,658	
2	Outreach – maintain offsite engagement numbers	11,500	14,821	24,484	
3	Achieve 90% of visitors recording a satisfaction rating of 4 or 5 stars	90%+ evaluation ratings ≥ 4	90%	91%	
4	Achieve 5% uplift in income from admissions and trading	£570,000	£570,929	£528,671	
5	10% increase in non-school bookings from 24/25 baseline of 60	66	76	New KPI	
6	New Space Inspiration Ambassadors Sign-ups	6	9	New KPI	
7	Space Inspiration Interactions	24,000	32,980	New KPI	

Progress Key: Complete, Not Achieved

Financial Review

Operating Results

In the financial year to 31 March 2026, the value of charity funds decreased by £0.382m, summarised below:

	2026	2025
	£	£
Total incoming resources	3,074,138	3,546,337
Total outgoing resources	(3,613,369)	(3,914,671)
Net deficit	**(539,231)**	**(368,334)**
Gains on the revaluation of fixed and heritage assets	338,517	283,841
Actuarial gains on defined benefit pension scheme	(87,000)	43,000
Net movement in funds for the year	**(287,714)**	**(41,493)**
Movement in Restricted Funds		
Capital financing		
Capital grants received	35,000	140,000
Government grant fund	(281,520)	(788,014)
Revaluation reserve	92,984	46,935
Movement in Unrestricted Funds		
Restricted	1,234,393	72,681
Unrestricted	(1,368,571)	486,905
	(287,714)	**(41,493)**

The total income for the year was £3.074m, a decrease of £0.472m from 2024-25, mainly due to a decrease in DfC resource grant of £0.306m and a reduction in capital grant income of £0.105m, together with a decrease in other grants of £0.099m, offset by an increase in operating income of £0.034m.

Expenditure was £3.613m, a decrease of £0.301m from the previous year. Support costs, primarily professional fees, reduced by £151k, while depreciation fell by £183k as a result of decreased capital investment in recent years. Staff costs continue to be the largest component of operational expenditure, comprising 65% of all direct costs.

Unrestricted operating costs are funded primarily by DfC grant-in-aid. The balance of such unrestricted operating costs is funded by contributions from external grants, operating income, trading activities and miscellaneous income. We continue to seek other funding streams to maintain this important source of funds. In 2025-26 the Department provided 68% of the total income through recurrent and capital grant allocations (2024-25: 70%).

Net Assets

Net assets at 31 March 2026 were £12.147m (31 March 2025: £12.434m).

Reserves

The AOP reserves policy is included in note 1 of the accounts. Total accumulated funds are as follows:

Funds at 31 March	**2026**	**2025**
	£	£
Restricted funds	1,355,011	120,618
Unrestricted funds	2,976,492	4,591,583
Revaluation Reserve	7,815,165	7,722,181
Total Charity Funds	**12,146,668**	**12,434,382**

Going Concern

The Trustees are satisfied that the organisation is a going concern on the basis that it has a reasonable expectation that it will continue in operation for the foreseeable future. The financial statements are therefore prepared on a going concern basis.

Pension Reserve

AOP is a member of Northern Ireland Local Government Officers' Superannuation Committee (NILGOSC) which manages Local Government Pension Scheme (LGPS) Northern Ireland, which in turn provides a defined benefits pension to employees. At 31 March 2026 the surplus was calculated by independent actuaries at £3,707,000 (2025: surplus £2,888,000). The assets, defined benefit obligation and current service cost shown in note 19 to the accounts have been calculated based on the data and results of the 2022 triennial actuarial valuation. AOP has applied the principles of IFRIC14 in relation to pension surplus restriction. IFRIC14 requires allowances to be made for a minimum funding requirement, which limits the amount of economic benefit available to the excess of the value of prospective current service costs above the funding requirement.

Key Risks and Uncertainties

At year end, the key risks were identified as:

- Reputation – loss of confidence in AOP's ability to deliver acceptable level of research of international value due to significantly limited resources;
- Engagement:
  - Visitors – limitations to provide experiences that attract new and returning visitors and/or failure to engage local pride in AOP as a cherished asset;
  - Partners and collaborators – inadequate support and commitment from key stakeholders to be able to deliver future vision;
- Resources:
  - Staff – limited resources to recruit and retain an appropriately skilled, highly motivated and engaged workforce of sufficient capacity to satisfactorily deliver AOP objectives;
  - Financial – insufficient or poor management of allocated funds could result in sustainability objectives not being met and/or 'value for money (VfM)' objectives not being achieved;
- Asset Management:
  - Buildings and Heritage – lack of adequate planning for the long-term development needs of the estate and assets resulting in increasing reliance on remedial intervention and inadequate resources to protect and preserve heritage assets from irreparable decline;
  - Other physical assets including ICT – lack of adequate planning for the upkeep and renewal of plant and equipment resulting in reduced service delivery; and
- Governance and Planning:
  - Inadequate implementation or maintenance of best practice approaches to corporate governance and risk management resulting in loss of confidence and reputational damage and/or legal challenges;
  - Inadequate information/data security measures resulting in information breaches and/or cyber security breaches.

Integral to AOP's Risk Management Strategy of AOP, management regularly review the inherent level of risk for each of the above aspects and how the risk is currently managed. An Action Plan is documented to reduce the level of risk, mindful of the risk appetite or risk aversion of the organisation. This Risk Register is reviewed on a quarterly basis by the Audit and Risk Assurance Committee and approved by the Management Committee. A separate Risk Register is also used to identify and track risks associated with ICT. Many of the above risks derive from the uncertainty relating to funding. Until AOP has adequate funding appropriate to its needs and long-term security of funding, this situation is likely to continue. In managing these funding risks, the organisation has developed and maintained close communication links with the Department for Communities and submitted in-year monitoring bids for additional funding while carefully monitoring spend and financial resources. For many of the above risks all reasonable steps within AOP's control are being taken to mitigate the risk.

The above risks also take account of recommendations from internal and external audit reports. Significant progress has been made in addressing the weaknesses identified in previous years and considerable effort has been put into the management of these risks going forward.

Plans for Future Periods

AOP manages an extensive property estate which includes nine separate buildings, including the Grade A listed Observatory and a circa 20-acre historic estate. There are also several leases associated with land and property.

AOP's Corporate Strategy (2021-26) is set around the four key themes of Enduring Relevance, National and International Standing, Offering More and Pursuing our Priorities.

Leading on from this AOP, has prepared a Business Plan for 2026-27 for consideration by the Department. The business plan has been developed in the context of an unclear and uncertain financial environment, however AOP remains focused and optimistic towards continued achievements within its key priority areas. The Business Plan also emphasises the importance of furthering the Redevelopment Project while also maintaining the active research, education, outreach and heritage programmes conducted by AOP.

Future Redevelopment Project

An Outline Business Case (OBC) for the AOP Estate Redevelopment Project, as approved by the Management Committee at its 125th meeting, was approved by the Board of Governors at the 2023 Annual Visitation and submitted to DfC in July 2023. To support the project a funding bid was made to the Heritage Lottery, "*Wisdom Begins with Wonder at the Armagh Observatory and Planetarium: where the past meets the future*" for c£6m. This was successful and AOP were awarded the funding in March 2024, to come in two stages, a Development and a Delivery phase. AOP was then asked to update and re-submit the OBC. This was done with the help of the Strategic Investment Board who were engaged to assist, and the updated case (now known as OBC1) was approved by the Management Committee at a special meeting on 3 March 2025, endorsed by Archbishop McDowell on behalf of the Board of Governors, and re-submitted to DfC. A presentation on the OBC was made by the Director to DfC's Casework Committee, together with members of the management committee, along with representatives from DfC on 11 June 2025.

Funding required for the Outline Business Case (OBC1), which relates to the redevelopment of the AOP site, was then approved by the Minister of Communities on 30 June 2025. In terms of the funding application, a total amount of £3,973k has been approved for the three years ending 31 March 2028.

Previously, The National Lottery Heritage Fund (NLHF) had allocated funding in the amount of £ 1,324k which was dependent on funding procured from other sources amounting to three-fold the funding allocated by NLHF.
The funding grant from DfC is therefore 75% of the total funding grant of £5,297k, with the balance of 25% being funded by NLHF.

Colin McCrossan from SIB has been appointed Project Director for the Redevelopment Project. Permission to Start was received from the Heritage Lottery on 25 September 2025. A Project Initiation Document (PID) was then prepared. This set out the project arrangements and structures in order to procure, via tender, an Integrated Consultancy Team (ICT) who will then prepare the design plans for the redevelopment project to take it to planning approval stage (i.e., to RIBA Stage 3).

The winning tender (Integrated Consultancy Team – ICT) for the Redevelopment Project is comprised of an eminent consortium of architects led by Arup, the international engineering consultancy, working alongside global architecture practice Grimshaw and acclaimed local architects Todd, supported by project manager Gleeds. Other firms involved include conservation architects James Grieve and interpretative designers Tandem.

The Director is serving as interim Senior Responsible Owner for the Project Board, which held its first meeting on 8 October 2025.

The Minister for the Department for Communities, Gordon Lyons, formally launched the project in the Planetarium on 12 March 2026, along with the Director of The National Lottery Heritage Fund (NI), the other funder of the Development Phase of the project, together with the project manager for Arup, ABC Council Lord Mayor and AOP's Director, Michael Burton.

The redevelopment will revitalise AOP, creating a dynamic and immersive visitor experience for local and international audiences, including the first LED dome planetarium theatre in the UK. It represents a next-generation, design-led approach to a major scientific and cultural heritage institution, strengthening links between historic legacy, living science, societal research impact, and the education of future generations.

The redevelopment project is imperative to future proof AOP's role into the next generation. The case for change is predicated by an estate that is outdated and misaligned to the expectations of modern-day visitors; a restricted footprint on challenging topography that limits incremental or add-on extensions to increasing its capacity; and a dome technology that is on the precipice of transformational change that will render the existing visitor experience technically unsustainable within the next decade.

The case made in the OBC is centred around five spending objectives:

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3) To create a relevant, inspiring and dynamic visitor experience for the domestic and international tourist visitor market.
4) To preserve the heritage of the scientific instruments and the Observatory, while maximising the public's enjoyment of, and access to, the heritage site and collections held by AOP.
5) To improve the long-term viability and sustainability of AOP; having an attraction that is unique within NI and Ireland; and encouraging economic development through promoting it as a state-of-the-art facility.

A Project Initiation Document (PID) for the Development & Delivery Phases of the AOP Redevelopment Project sets out the Governance for the Project, which is directed by a Project Board. The Terms of Reference for the Project Board includes the purpose of the Project Board, its responsibilities and membership. The project has its own comprehensive Risk Register which is regularly updated and key risks and mitigations are reported to the Project Board as part of the Project Director's report.

The Astronomical Observatories of Ireland Partnership – UNESCO World Heritage

Drawing upon the deep links between the historic observatories of Armagh, Birr and Dunsink, AOP has formed a strategic partnership to strengthen our relationship – the Astronomical Observatories of Ireland (or AOI).

Three broad thematic areas are covered by the partnership:

1. Research: collaborative approaches to research which draw on the strengths of the partners to add value to our contributions to scientific knowledge.
2. Education, Heritage and Cultural Programming: building capacity across our three sites, including local and national relationships, to progress a UNESCO World Heritage application as a transnational property.
3. Impact and Place Making: developing complementary approaches that leverage the impact of our institutions in the areas of environment, community engagement, economy and tourism.

The AOI Oversight Board met at Birr Castle Demesne on 11 September 2025. Representing AOP were Archbishops John McDowell and Eamon Martin, for Birr Scientific Heritage Foundation Councillor John Carroll and for Dublin Institute for Advanced Studies Professors Mary Fowler and Janet Drew. AOI's strategic advisor Caitriona Mullan also attended. As part of the event a special ecumenical service was held in pavilion overlooking the Leviathan Telescope. The weather conditions during the service might be described as *biblical*.

An application had been made in 2024 for the AOI to join the UNESCO World Heritage Tentative List for Ireland. The Director, along with the Registrar of DIAS (Eucharia Meehan) and the Director of Dunsink Observatory & Chair of the Birr Scientific and Heritage Foundation (Peter Gallagher), were then interviewed on 23 January 2025 by the Expert Advisory Group appointed by the Irish Government to consider our application. On 18 April 2025 (World Heritage Day) the Minister for Housing, Local Government and Heritage for Ireland, James Browne, then announced that Birr and Dunsink observatories had been added to the World Heritage Tentative List for Ireland. The nomination has been placed on the UNESCO World Heritage Tentative list website[2]. Subsequently, Armagh, along with Birr and Dunsink have been working with the National Monument Service of Ireland to develop an MoU which will also involve Fingal and Offaly Councils in order to set a framework prepare the full UNESCO nomination. It has been determined that Offaly Council will lead the consortium. Armagh City, Banbridge and Craigavon Borough Councils will then sign a separate MoU with Offaly Council.

[2] See https://whc.unesco.org/en/tentativelists/6901/.

Accountability Report

Structure, Governance and Management

Armagh Observatory and Planetarium is a single statutory corporation and arms-length body (ALB). 'The Governors of The Armagh Observatory and Planetarium' are as described in *The Armagh Observatory and Planetarium (Northern Ireland) Order 1995*.

This 1995 Order superseded the original 1791 Act of the Irish Parliament entitled '*An Act for Settling and Preserving a Public Observatory and Museum in the City of Armagh For Ever'*, and an Amendment of the 1938 Act ('The University and Collegiate and Scientific Institutions Act [Northern Ireland], 1938').

AOP is a registered charity under the title "The Armagh Observatory and Planetarium".

Board of Governors

AOP is governed by a Board of Governors. Membership of the Board of Governors consists of:

- the Church of Ireland Archbishop of Armagh;
- the Dean of the Church of Ireland Cathedral of Armagh;
- the other members of the Chapter of the Church of Ireland Cathedral of Armagh;
- one Department nominee;
- one Queen's University Belfast (QUB) nominee; and
- up to three additional members nominated by the Board of Governors.

The Order places a statutory duty on "the Governors of Armagh Observatory and Planetarium" to maintain and manage AOP with the purpose of "developing and improving the knowledge, appreciation and practice of astronomy and related sciences."

The Board of Governors (the Board) has retained a role to ensure that the culture and character, history and patrimony embodied in AOP are protected and preserved and that the institution is managed in line with the statutory purpose outlined in the Order. This role will normally be fulfilled through an Annual Review meeting (visitation) where the Board will receive assurance as to the management and performance of AOP from the Management Committee.

Management Committee of Armagh Observatory and Planetarium

The Board has delegated primary responsibility for the governance and management of AOP to a Management Committee. The Management Committee has corporate responsibility for ensuring that AOP fulfils the aims and objectives set by the Department and approved by the Minister and for promoting the efficient, economic and effective use of resources. The Management Committee provides leadership, challenge, oversight, support and encouragement to the Director and staff.

The Management Committee comprises:

- three nominees from the Board of Governors;
- six nominees from the Department appointed through open competition;
- one nominee of Queen's University, Belfast;
- one nominee of the Science and Technology Facilities Council (STFC);
- one nominee of the Dublin Institute for Advanced Studies (DIAS);
- a Chair appointed through open competition; and
- up to three additional members co-opted by the Board of Governors. This is by exception and subject to Departmental approval.

The following committees are established as sub-committees of the Management Committee.

Audit and Risk Assurance Committee (ARAC)

The ARAC is a sub-committee of the Management Committee established in accordance with DAO (DoF) 02/25 Corporate governance in central government departments: Code of good practice NI (2025) and NIAO Effective Audit and Risk Assurance Committees Good Practice Guide (2025) (superseding DAO (DFP) 06/13 - Corporate

governance in central government departments: Code of Good Practice NI 2013, and in line with the HM Treasury Audit and Risk Assurance Committee Handbook (DoF 03/18)) to advise the Board of Governors, the Management Committee and the Director of AOP as Accounting Officer and to support them in their responsibilities for issues of organisational risks, internal control, governance and their associated assurances and in reviewing the reliability and integrity of these assurances.

Staffing Policy and Remuneration Committee

The Staffing Policy and Remuneration Committee is a sub-committee of the Management Committee and provides advice and recommendations to the Management Committee on employment issues.

Research and Education Advisory Committee

The Research and Education Advisory Committee is a sub-committee of the Management Committee and advises it on research and education issues.

Strategic Oversight Committee

The Strategic Oversight Committee is a sub-committee of the Management Committee, to oversee the work of the Project Board for AOP development (yet to be established). It has delegated authority to make decisions in relation to operations issues.

Further details on the membership of these Committees are set out in the Governance Statement on pages 35 to 44.

Reference and Administrative Details

Name of the Charity

The charity is registered and operates under the title of The Armagh Observatory and Planetarium.

Charity number

Registered with the Charity Commission for Northern Ireland 103948.

Principal Office

College Hill, Armagh, BT61 9DG

Trustees

Archbishop J McDowell, (Board Chair)
The Very Revd S Forster
The Venerable E Cairns
The Venerable Dr P Thompson Revd
Canon W M Adair BEM
Revd Canon M Hagan MBE (to 30 April 2026)
Revd Canon D Hilliard
Revd Canon A Totten OBE
Revd Canon G McMurray
Revd Canon C Darling (from 5 October 2025)
Mr G Cox
Professor A Fitzsimmons (to 1 May 2025)
Professor M Topping (from 1 May 2025)
Mr R Wilson OBE
Archbishop E Martin
Ms S Leslie
Mr J Briggs (Management Committee Chair)
Professor M Mathioudakis
Professor C Jackman (to 31 December 2025)
Professor M Darnley
Mr P Kennedy
Dr K Lemon (to 28 February 2026)
Mr E Rooney
Professor R Hunter (to 13 August 2025)
Ms G McVeigh
Mr R O'Hara

Professor G Cotter
Ms S Leverment
Dr E Meehan (from 1 January 2026)

Director and Accounting Officer

Professor Michael Burton

Auditors

Northern Ireland Audit Office, 106 University Street, BELFAST, BT7 1EU

Internal Auditors

Cooper Parry Audit (Ireland) Limited, 36-38 Northland Row, Dungannon, BT71 6AP

Bankers

Danske Bank, Donegal Square West, Belfast, BT1 6JS

Register of Interests

A Register of Interests is maintained for Board and Committee Members and Senior Management and is available for inspection at the Principal Address. Declared Interests by Board and Committee Members and the Director are available on the AOP website – www.armagh.space.

Related party transactions are shown in note 23 of the accounts.

Remote Contingent Liabilities

There were no remote contingent liabilities at 31st March 2026.

Losses and Special Payments

There were no losses or special payments during the financial year (2024-25 None).

Gifts

AOP adheres to the limits and rules laid out in its Partnership Agreement approved by the Department and the guidance in Managing Public Money Northern Ireland (MPMNI). There were no gifts made or accepted during the 2025-26 financial year that exceeded these limits.

Personal Data Related Incidents

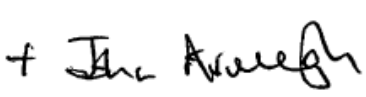
AOP has considered the requirement to report personal data related incidents. It is content that there were no such incidents in the year ended 31 March 2026.

Disclosure of Audit Information

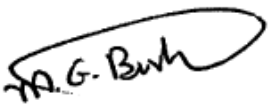
So far as the Accounting Officer is aware, there is no relevant audit information of which AOP's auditors are unaware. The Accounting Officer has taken all necessary steps to make himself aware of any relevant audit information and to establish that AOP's auditors are aware of that information.

Events after the end of the reporting period

There have been no events since the end of the financial year requiring disclosure.



Archbishop John McDowell
Chair of the Board of Trustees
Date: 2 October 2026



Professor Michael Burton
Accounting Officer
Date: 2 October 2026

Remuneration and Staff Report

The remuneration and staff report sets out AOP's remuneration policy for Board members and senior managers, reports on how that policy has been implemented and sets out the amounts awarded to the Director. In addition, the report provides details on remuneration and staff that users see as key to accountability.

Remuneration Policy

Annual NICS pay awards are made in the context of the wider public sector pay policy. On 26 March 2025, NICS People and Organisational Development division confirmed a pay award of a 3% consolidated increase with effect from 1 August 2024 and a 6% consolidated increase with effect from 1 August 2025.

AOP staff remuneration is aligned with NICS pay scales. The Accounting Officer is authorised by DfC to approve its pay remit and business case, notifying same to DfC, prior to implementation of the pay award. Staff received the first element of the pay award, including backpay, in May 2025, and the second element in September 2025.

Trustees

Trustees do not receive any remuneration. They receive travel and subsistence allowances at rates and on conditions determined by AOP, subject to Departmental approval. No Trustee receives pension benefits or makes pension contributions in their capacity as a Board member. During the financial year, trustees received travel and subsistence expenses of £2,987 (2025: £3,293).

Service Contracts

The Director of AOP, Professor Michael G. Burton, is the person in a senior position having authority and responsibility for directing and controlling the activities of the organisation. The service contract of the Director commenced on 1 August 2016.

Current terms and conditions for staff are those set out in various policies and individual employment contracts. Senior staff are permanent employees of AOP. The notice period for senior staff is three months. Termination payments are in accordance with contractual terms and those of the principal Civil Service Pension Scheme (NI).

Director's Remuneration (including Salary and Pension Entitlements) (Audited Information)

The following tables provide details of the remuneration and pension entitlements of the Director of the organisation.

Single Total Figure of Remuneration of Director							
	Salary (£'000)		**Pension Benefits* (£'000)**		**Total (£'000)**		**Percentage Change**
Official	**2025-26**	**2024-25**	**2025-26**	**2024-25**	**2025-26**	**2024-25**	
M.G. Burton	95-100	90-95	24	44	115-120	135-140	(11.2%)

** The value of pension benefits accrued during the year is calculated as the real increase in pension multiplied by 20 plus the real increase in any lump sum less the contributions made by the individual. The real increases exclude increases due to inflation and any increase or decrease due to a transfer of pension rights.*

'Salary' includes gross salary (on an accruals basis) to the extent that it is subject to UK taxation. There was no overtime, benefit-in-kind, bonus or other allowances. The salary of the Director shown above is based on the Northern Ireland Senior Civil Service Grade 5 pay scale.

Compensation on early retirement or for loss of office

No payment for compensation on early retirement or for loss of office has been made (2024-25: £nil).

AOP Fair Pay Disclosures (Audited Information)

AOP is required to disclose the relationship between the remuneration of the Director and the lower quartile, median and upper quartile remuneration of the organisation's workforce. The banded remuneration of the Director in the financial year 2025-26 was £95,000 - £100,000 (2024-25: £90,000 - £95,000). The relationship between the mid-point of this band and the remuneration of AOP's workforce is disclosed below.

2025-26	25th percentile	Median	75th percentile
Total remuneration	£25.796	£30.647	£41,221
Pay ratio	3.8:1	3.2:1	2.4:1

2024-25	25th percentile	Median	75th percentile
Total remuneration	£23,177	£33,791	£41,998
Pay ratio	4.0:1	2.7:1	2.2:1

Total remuneration includes salary, overtime and performance-related bonuses. It does not include severance payments, employer pension contributions and the cash equivalent transfer value of pensions. Remuneration ranged from £24,952 to £97,500. The 25th percentile remuneration increased as a result of increased numbers of casual staff who are paid on the NICS AA pay scale which increased by 11% during the year. Because overall employment numbers are low, small changes in the staffing structure can appear disproportionate.

The percentage changes in respect of AOP are shown in the following table. It should be noted that the calculation for the Director is based on the mid-point of the band within which their remuneration fell in each year.

Percentage change for:	2025-26 v 2024-25	2024-25 v 2023-24
Average employee salary and allowances	4.8%	-1.2%
Director's salary and allowances	5.4%	5.7%
Average employee performance pay and bonuses	N/A	-100%

No performance pay or bonus was payable to the Director in these years.

Pension Entitlements (Audited Information)

Official	Accrued pension at pension age as at 31/03/26	Real increase in pension at pension age	Accrued Lump Sum at 31/03/26	Real Increase in Lump Sum	CETV at 31/03/26	CETV at 31/03/25	Real Increase in CETV
	£'000	£'000	£'000	£'000	£'000	£'000	£'000
M.G. Burton	20	2	-	-	346	301	26

The figures enclosed are based on the previous year's guidance from the Department of Finance on the pension information that should be disclosed in accounts for 2025-26. The real increase in CETVs are based on the factors in force from 30 June 2023. There have been no changes to CETV factors between 31 March 2025 and 31 March 2026. When calculating the real increase in CETV and the pension benefits accrued during the year 2025-2026 for the single total figure of remuneration, NILGOSC takes account of inflation. The CPI increase for September 2025 was 3.8%.

Pension Scheme

Pension benefits are provided through the Northern Ireland Local Government Officers' Superannuation Committee Pension Scheme (NILGOSC). For members, 1/49th of pensionable pay will be added to their pension account each year and retirement pension is based on career average earnings. Details can be obtained at http://www.nilgosc.org.uk.

Active members of the pension scheme will receive an Annual Benefit Statement. The accrued pension quoted is the pension the member is entitled to receive when they reach their scheme pension age, or immediately on ceasing to be an active member of the scheme if they are at or over pension age.

Employee contribution rates for all members for the period covering 1 April 2025 to 31 March 2026 are as follows:

Pensionable Pay	Contribution Rate
£0 to £18,300	5.5%
£18,301 to £28,100	5.8%
£28,101 to £47,000	6.5%
£47,001 to £57,200	6.8%
£57,201 to £113,500	8.5%
More than £113,500	10.5%

Employer contribution rates are determined by the Scheme's actuary every three years. The actuary has finalised the triennial valuation as at 31 March 2025 and has certified the employers' contribution rates for three years from 1 April 2026 at 15.5%.

Cash Equivalent Transfer Values

A Cash Equivalent Transfer Value (CETV) is the actuarially assessed capitalised value of the pension scheme benefits accrued by a member at a particular point in time. The benefits valued are the member's accrued benefits and any contingent spouse's pension payable from the scheme. A CETV is a payment made by a pension scheme or arrangement to secure pension benefits in another pension scheme or arrangement when the member leaves a scheme and chooses to transfer the benefits accrued in their former scheme. The pension figures shown relate to the benefits that the individual has accrued as a consequence of their total membership of the pension scheme, not just their service in a senior capacity to which disclosure applies. The CETV figures include the value of any pension benefit in another scheme or arrangement which the individual has transferred to the NICS pension arrangements. They also include any additional pension benefit accrued to the member as a result of their purchasing additional years of pension service in the scheme at their own cost. CETVs are calculated in accordance with The Occupational Pension Schemes (Transfer Values) (Amendment) Regulations 2015 and do not take account of any actual or potential benefits resulting from Lifetime Allowance Tax which may be due when pension benefits are taken.

Real increase in CETV

This reflects the increase in CETV effectively funded by the employer. It does not include the increase in accrued pension due to inflation, contributions paid by the employee (including the value of any benefits transferred from another pension scheme or arrangement) and uses common market valuation factors for the start and end of the period. However, the real increase calculation uses common actuarial factors at the start and end of the period so that it disregards the effect of any changes in factors and focuses only on the increase that is funded by the employer.

Total Permanently Employed Staff Costs (Audited Information)

	Permanent staff £	Others[1] £	2025-26 £	2024-25 £
Wages and salaries	1,278,498	254,179	1,532,677	1,401,900
Social security costs	164,752	19,128	183,880	153,728
Employer's pension contributions	233,488	28,078	261,566	260,700
Defined benefit pension additional service cost	(80,000)	-	(80,000)	50,000
	1,596,738	301,385	1,898,123	1,866,328

[1] *"Others" includes £105,931 for agency staff*

Average staff numbers (Audited Information)

	Permanent staff	Others[2]	2025-26 Total Number	2024-25 Total Number
Average staff numbers	27.4	8.4	35.8	34.3

[2] *"Others" includes 3.59 fixed term, 2.43 casuals and 0.37 agency staff*

Staff Composition – permanent employees (full time equivalent)

	Male	Female
Directors/senior managers	2.1	1.1
Other employees	12.6	11.6

Staff Turnover

	2025-26	2024-25
Leavers as a percentage of average staff in post	11.6%	17.3%

Sickness Absence (Audited Information)

Staff sickness for the period 1 April 2025 to 31 March 2026 totalled 88 days (2025: 41 days) which equates to an
average per FTE of 1.20% (2025: 0.56%).

Expenditure on External Consultancy (Audited Information)

Expenditure on external consultancy during the year was £nil (2024-25: £nil).

Expenditure on Temporary Staff (Audited Information)

Expenditure on temporary staff during the year was £119,861 (2024-25: £31,158).

Off-payroll Engagements (Audited Information)

There were no “off-payroll” engagements in place as at 31 March 2026, nor were any arrangements entered into between 1 April 2025 and 31 March 2026.

Exit Packages (Audited Information)

There were no exit packages implemented during the year (2024-25 None).

Statement of the Responsibilities of the Governors and Accounting Officer

In accordance with The Armagh Observatory and Planetarium (Northern Ireland) Order 1995, The Governors shall prepare and submit to the Department a statement of accounts in respect of each financial year, and that statement shall be in such form and contain such information as the Department may direct and shall give a true and fair view of the state of the Governors' affairs at the end of the financial year and of the income and expenditure of the Governors in the financial year.

In preparing the accounts, the Accounting Officer is required to comply with the requirements of the Government Financial Reporting Manual and in particular to:

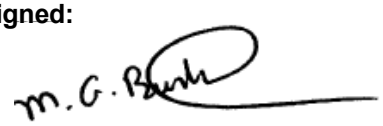
- observe the accounts direction issued by the Department of Finance, including the relevant accounting and disclosure requirements, and apply suitable accounting policies on a consistent basis;
- make judgements and estimates on a reasonable basis;
- state whether applicable accounting standards as set out in the Government Financial Reporting Manual have been followed, and disclose and explain any material departures in the accounts;
- prepare the accounts on a going concern basis; and
- confirm that the Annual Report and Accounts as a whole is fair, balanced and understandable and take personal responsibility for the Annual Report and Accounts and the judgements required for determining that it is fair, balanced and understandable.

The Department for Communities has appointed Professor M.G. Burton as Accounting Officer of AOP. The responsibilities of an Accounting Officer, including responsibility for the propriety and regularity of the public finances for which the Accounting Officer is answerable, for keeping proper records and for safeguarding AOP's assets, are set out in Managing Public Money Northern Ireland.

Statement of Disclosure of Information to the Auditors

As the Accounting Officer, I have taken all the steps that I ought to have taken to make myself aware of any relevant audit information and to establish that Armagh Observatory and Planetarium's auditors are aware of that information. So far as I am aware, there is no relevant audit information of which the auditors are unaware.

Signed:



Professor Michael Burton
Accounting Officer for Armagh Observatory and Planetarium

Date: 2 October 2026

Governance Statement

AOP is a Non-Departmental Public Body established under The Armagh Observatory and Planetarium (Northern Ireland) Order 1995.

1. Compliance with Corporate Governance Code

In 2025 the Department of Finance published Corporate Governance in Central Government Departments: Code of Good Practice NI. The Code draws on best practice in the public, private and charity sectors by: reinforcing the importance of corporate governance as a pre-requisite to achieving good financial management; reflecting changes in governance best practice, including increased emphasis on good leadership; and promoting better governance arrangements within departmental families.

The Code is written for departments, concentrating throughout on key principles which will have wider application for other parts of the public sector. Such bodies (including arms-length bodies (ALBs)) are encouraged to consider and adopt the practices set out in the Code wherever it is relevant and practical and suits their business needs.

AOP in so far as they are relevant for an arms-length body, complies with the principles of good practice in the Corporate Governance Code.

2. Governance Framework

Accounting Officer

Name	Accounting Officer
Professor Michael Burton – Director and Chief Executive	From 1 September 2016 onwards

Board of Governors

AOP is governed by a Board of Governors. Membership of the Board of Governors consists of:

- the Church of Ireland Archbishop of Armagh;
- the Dean of the Church of Ireland Cathedral of Armagh;
- the other members of the Chapter of the Church of Ireland Cathedral of Armagh;
- one DfC nominee;
- one Queen's University Belfast (QUB) nominee; and
- up to three additional members nominated by the Board of Governors.

During 2025-26 one Member was appointed to the Chapter of the Church of Ireland Cathedral of Armagh; Revd Canon Hagan retired; Professor Fitzsimmons retired and was replaced by Professor Topping; the term of office of Archbishop Martin and Ms Leslie was extended for 5 years and the term of office of Mr G Cox was extended for 6 months. There are currently two vacancies.

BOARD OF GOVERNORS			
GOVERNOR	**DATE OF APPOINTMENT**	**DATE OF EXPIRY**	**MEETINGS ATTENDED (max. 1)**
Archbishop J McDowell (Chair)	28 April 2020	None	1
The Very Revd S Forster Dean of Armagh	14 February 2021	None	1
The Ven E Cairns Archdeacon of Ardboe	13 December 2020	None	1
The Ven Dr P Thompson Archdeacon of Armagh	13 January 2019	None	1
Revd Canon W M Adair BEM	10 September 2008	None	0
Revd Canon D Hilliard	13 March 2016	None	0
Revd Canon M Hagan MBE (to 30 April 2026)	23 April 2023	None	1
Revd Canon A Totten OBE	20 October 2024	None	1
Revd Canon G McMurray	20 October 2024	None	1

Revd Canon C Darling	4 October 2025	None	0 from 0
VACANT (from 1 April 2025)			
Professor A Fitzsimmons (to 30 April 2025)	18 April 2019	30 April 2025	0 from 0
Professor M Topping	1 May 2025	30 April 2030	0
Mr R Wilson OBE	1 December 2019	30 November 2029	1
Archbishop E Martin	1 January 2021	31 December 2030	1
Ms S Leslie	1 June 2021	31 May 2031	1
Mr G Cox	1 March 2021	31 August 2026	1

During the Annual Visitation on 13 May 2025 the Board of Governors:

- noted receipt of the signed Partnership Agreement between the Department for Communities and AOP;
- noted the replacement of Professor Fitzsimmons by Professor Topping and 5-year extensions for Archbishop Martin and Ms Leslie;
- endorsed the continuing membership of Revd Canon Totten and Messrs Cox and Wilson as its nominees on the Management Committee;
- retrospectively approved three public appointments to the Management Committee;
- noted the appointment of two Board co-optees to the Management Committee;
- considered a paper on the recent organisational preparedness review undertaken by SIB, approved its 7 recommendations and charged the Management Committee with taking these forward;
- noted the draft Minutes of the Inaugural Meeting of the Astronomical Observatories of Ireland Oversight Board and the date for the next meeting;
- retrospectively approved an updated Outline Business Case (OBC1) for the Estate Redevelopment Project; and
- received an update on discussions regarding the lease with The Royal School, Armagh.

The Chair of the Management Committee provided a verbal report to the Board and the minutes of meetings of the Management Committee, Strategic Oversight Committee and Audit and Risk Assurance Committee between June 2024 and March 2025 (draft) were provided.

The Board also:

- approved the Annual Report and Accounts 2023-24 and the draft Annual Report and Accounts 2024-25;
- noted the Management Report for 2024-25 which included the Director's Report and a presentation on Research Highlights; Business Plan Objectives; Key Performance Indicators and Corporate and ICT Risk Registers as at February 2025;
- considered the first draft Business Plan 2025-26.

The Board confirmed that it was satisfied that comprehensive arrangements were in place to ensure that high-quality information was received to enable it to make informed decisions. Internal controls were in place to validate the accuracy and completeness of information presented to the Board.

Minutes of the meeting record the business carried out and actions agreed.

Management Committee of Armagh Observatory and Planetarium

The Management Committee comprises:

- a Chair appointed through open competition;
- three nominees from the Board of Governors;
- six nominees from DfC;
- one nominee of the Queen's University Belfast (QUB);
- one nominee of the Science and Technology Facilities Council (STFC);
- one nominee of the Dublin Institute for Advanced Studies (DIAS); and
- up to three additional members co-opted by the Board of Governors. This is by exception and subject to Departmental approval.

During 2025-26 there were a number of changes to the Management Committee membership. Professor

Hunter, a DfC appointment, resigned on 13 August 2025; DIAS representative Professor Jackman was replaced by Dr Meehan effective from 1 January 2026 and Dr Kirstin Lemon's term ended on 28 February 2026.

Additionally, Professor Darnley, STFC's representative was re-appointed for a 5 year term effective from 1 January 2026 and the term of office for Messrs Kennedy, Rooney and Cox was extended by 6 months.

There are currently two vacancies on the Management Committee.

MANAGEMENT COMMITTEE			
MEMBER	**DATE OF APPOINTMENT**	**DATE OF EXPIRY**	**MEETINGS ATTENDED (max. 5)**
Mr J Briggs (Chair)	1 January 2018	31 December 2027	5
Professor M Mathioudakis	11 November 2016	10 November 2026	4
Mr R Wilson OBE	1 December 2019	30 November 2029	1
Dr C Jackman	1 January 2021	31 December 2025	0 from 3
Dr M Darnley	1 January 2021	31 December 2030	5
Mr P Kennedy	1 March 2021	31 August 2026	3
Dr K Lemon	1 March 2021	28 February 2026	2 from 4
Mr E Rooney	1 March 2021	31 August 2026	3
Mr G Cox	19 May 2021	31 August 2026	5
Professor R Hunter	1 June 2024	13 August 2025	0 from 1
Ms G McVeigh	1 June 2024	31 May 2029	5
Mr R O'Hara	1 June 2024	31 May 2029	5
Professor G Cotter	1 October 2024	30 September 2027	2
Ms S Leverment	1 October 2024	30 September 2027	4
Revd Canon A Totten OBE	18 November 2024	NONE	5
Dr E Meehan	1 January 2026	31 December 2030	1 from 2

As the June 2025 meeting of the Management Committee was taking place correspondence was received from the Permanent Secretary advising of the approval of OBC1 for the Estate Redevelopment Project and the provision of match-funding of £3,974m. The Management Committee approved acceptance of the funding offer from The National Lottery Heritage Fund.

In September 2025 the Management Committee approved the Terms of Reference for both ARAC and REAC following review and update by the relevant Committee; noted a light touch review of the Partnership Agreement between DfC and AOP had concluded; noted that the Committee was approaching its 40th anniversary in October 2025 and approved the draft 2025-26 Business Plan, which was approved by the Minister on 8 January 2026.

In December 2025 the Management Committee noted that as required every 3 years under the terms of the Partnership Agreement an external review of Management Committee effectiveness was being commissioned through SIB.

At each of its meetings throughout the year the Committee received a report from the Director; updates from each of its standing sub-committees and approved relevant reports. Regular governance reports such as the Bi-Annual Assurance Statement, the Corporate Risk Register, ICT Risk Register, Key Performance Indicators and Finance reports were reviewed and approved. The Committee considered and noted amendments to policies that had been reviewed in line with the policy review process and approved new policies as appropriate.

At the Management Committee meetings in June, September and December there was a strategy part during which Strategic Oversight Committee matters discussed included:

- governance matters including draft Terms of Reference and the future role and purpose of SOC;
- corporate matters including the response to SIB Report recommendations; resourcing for Business as Usual and the Development Project and the lease with the Royal School Armagh;
- updates on discussions with DfC and The National Lottery Heritage Fund; engagement with QUB and the Astronomical Observatories of Ireland;

- redevelopment project matters including – the Project Board make-up; the Project Initiation Document; project governance structures and the Integrated Consultant Team (ICT) procurement and evaluation.

Internal controls are in place to validate the accuracy and completeness of information presented to the Management Committee.

Minutes of the meetings record the business carried out and actions agreed.

Audit and Risk Assurance Committee

The Audit and Risk Assurance Committee is drawn from the Management Committee and comprises a minimum of four and maximum of five members.

During 2025-26 there was one change to its membership. Dr Kirstin Lemon's term on the Management Committee ended on 28 February 2026.

AUDIT AND RISK ASSURANCE COMMITTEE	
MEMBER	**MEETINGS ATTENDED (max. 4)**
Mr P Kennedy Chair	3
Mr E Rooney	4
Dr K Lemon (to 28 February 2026)	3 from 3
Ms G McVeigh	3
Professor M Darnley	3

During 2025-26 the Audit and Risk Assurance Committee considered the Internal Audit Plan 2025-26; reports from Internal Audit on progress against the audit plan and on outstanding recommendations; updated Internal Audit Charter; ICT Strategy Action Plan Progress Reports; ICT Risk Register; Accounting Officer's Assurance Statements; Finance Reports; updated policies; Business Continuity; Annual Report and Accounts 2024-25 and the Report to Those Charged With Governance in respect of the 2024-25 Accounts.

The Committee is satisfied that the integrated approach, the frequency of meetings, the breadth of the business undertaken, the skills of Members and the range of attendees at meetings of the Committee has allowed the Committee to meet the governance requirements of the organisation and assisted the Management Committee to demonstrate its stewardship of the public resources with which it is charged.

The Committee is satisfied that the organisation has robust risk management arrangements in place which are in line with the good practice in the HM Treasury 'Orange Book' and are reviewed regularly by the Management Committee.

There were 6 internal audit recommendations from prior years outstanding, 4 of which have been completed. The Committee is satisfied that progress is being made to complete the remaining outstanding recommendations. Of the two internal audits reported on, there were 3 new internal audit recommendations identified, none of which have been implemented.

Minutes of the meetings record the business carried out and actions agreed.

Staffing Policy and Remuneration Committee

The Staffing Policy and Remuneration Committee is drawn from the Management Committee and comprises a minimum of four and maximum of five members.

During 2025-26 there was one change to its membership. Dr Kirstin Lemon's term on the Management Committee ended on 28 February 2026.

STAFFING POLICY AND REMUNERATION COMMITTEE	
MEMBER	**MEETINGS ATTENDED (max. 4)**
Mr E Rooney (Chair)	4
Mr J Briggs	4
Dr K Lemon (to 28 February 2026)	2
Mr P Kennedy	2
Mr R O'Hara	3

In 2025-26, amongst other matters, the Committee considered:

- staff leavers, vacancies and recruitment, including updates to the AOP Skills Gaps Analysis and information on a number of recruitment exercises that were carried out over the period;
- a number of Human Resources issues, including proposals for a staff engagement survey;
- updates to staff related policies, including Lone Working, Employers Pension Discretions Policy, Flexible and Hybrid Working, Retirement and Data Protection;
- updates on the AOP Equality, Diversity & Inclusion Strategy and Action Plan and the new Institute of Physics Inclusion Award; and
- the annual review of the Committee's own effectiveness.

Research and Education Advisory Committee

The Research and Education Advisory Committee is drawn from the Management Committee and comprises a minimum of four and maximum of five members.

During 2025-26 there were four changes to membership. Professor Cotter and Ms Leverment were appointed on 31 March 2025; Professor Hunter resigned from the Management Committee on 13 August 2025 and Dr Kirstin Lemon's term on the Management Committee ended on 28 February 2026.

RESEARCH AND EDUCATION ADVISORY COMMITTEE	
MEMBER	**MEETINGS ATTENDED (max. 3)**
Dr K Lemon (Chair) (to 28 February 2026)	3
Professor M Darnley	2
Professor M Mathioudakis	3
Professor R Hunter (to 13 August 2025)	0 from 1
Professor G Cotter (from 31 March 2025)	2
Ms S Leverment (from 31 March 2025)	2

REAC reviewed its Terms of Reference in September 2025.

In 2025-26, amongst other matters, the Committee considered:

- education and outreach activities, including visitor reports and development of an Education Strategy;
- research activities, including AOP Research Strategy; future planning for critical mass; South African Large Telescope (SALT); Research Excellence Framework (REF) updates;
- funding opportunities;
- Intellectual Property matters;
- wider impacts of AOP on NI; and
- potential changes to UK Visa and Settlement Rules.

Strategic Oversight Committee

The Strategic Oversight Committee's membership is drawn from the Management Committee and comprises 9 members.

During 2025-26 there was one change to membership. Dr Kirstin Lemon's term on the Management Committee ended on 28 February 2026.

STRATEGIC OVERSIGHT COMMITTEE	
MEMBER	**MEETINGS ATTENDED (max. 8)**
Mr J Briggs	6
Professor M Burton	5
Mr G Cox	7
Mr P Kennedy	2
Dr K Lemon (to 28 February 2026)	1 from 7
Mr R O'Hara	8
Mr E Rooney	6
Mr R Wilson	2
Ms G McVeigh	7

As outlined in the draft Terms of Reference, the purpose of the Strategic Oversight Committee (SOC) was to oversee all strands of AOP activity during the development phase of the redevelopment project to ensure there was a focus and consistency of approach towards achieving the organisation's objectives. It was intended to be more agile than the quarterly Management Committee meetings, with delegated authority to make decisions in relation to operations issues consistent with the shared vision. It had been envisaged that the Committee would also oversee the work of the Project Board for AOP development.

In 2025-26, amongst other matters, the Committee considered:

- governance matters including draft Terms of Reference and the future role and purpose of SOC;
- corporate matters including the response to SIB Report recommendations; resourcing for Business as Usual and the Development Project and the lease with the Royal School Armagh;
- updates on discussions with DfC and The National Lottery Heritage Fund; engagement with QUB and the Astronomical Observatories of Ireland;
- redevelopment project matters including – the Project Board make-up; the Project Initiation Document; project governance structures and the Integrated Consultant Team (ICT) procurement and evaluation.

Each quarterly meeting of the Management Committee had a strategy part where SOC matters as outlined above were discussed.

In 2025-26, amongst other matters, the Committee considered:

Conflicts of Interest

The organisation maintains a register of interests to ensure that potential conflicts of interest can be identified and addressed in advance of Board, Management Committee and other Committee discussions. The register is formally revisited on an annual basis. Where conflicts exist, they are recorded in the Committee minutes and the Chair of the meeting decides the most appropriate way of managing the conflict. This may include that member not taking part in discussions or making decisions on certain matters or being excluded for part or all of that meeting.

The Register of Interests for Board of Governors, Management Committee and senior staff is published on the AOP website in accordance with central government guidance.

Directors and Secretary

Professor Michael Burton, Director and Chief Executive.

The Corporate Manager provides a range of secretarial support services to the Board of Governors, Management Committee, Audit and Risk Assurance Committee and Strategic Oversight Committee; the HR and Policy Officer provides secretarial support to the Staffing Policy and Remuneration Committee and the Executive Officer to the Research and Education Advisory Committee.

3. Business Planning and Risk Management

Business Planning

'Our mission is the pursuit of knowledge and understanding of the cosmos, and the sharing of that knowledge in order to inspire future generations and enrich the intellectual, economic, social and cultural life of all.'

'Our vision is to be recognised as an international centre of scientific excellence for the pursuit of astronomy and the public understanding of science, for our capacity for innovation and our extraordinary heritage, a place our community can be proud of.'

The pillars that support us are – Knowledge, Legacy, People and Engagement.

The five-year strategy is built around four strategic themes - Enduring Relevance, National and International Standing, Offering More and Pursuing our Priorities.

The Strategic Plan aligns closely with the aims and objectives of the Observatory and Planetarium's sponsor - the Department for Communities (DfC) – and with the broader aims and objectives of the Northern Ireland Executive's Programme for Government. The organisation's Strategic Plan 2021-26 received Departmental approval on 17 August 2021.

The work of the Observatory encompasses both internationally acclaimed research and a unique cultural heritage — scientific, historical, architectural — as well as maintaining the unique daily climate series (the longest daily series from a single site in the UK and Ireland) and undertaking a world-class programme of science in the community, which complements the Planetarium's main business of education.

The Planetarium's main business is education, and all age and social groups are welcome to visit. The educational programmes and demonstrations are designed to include participation by children of pre-nursery age up to senior citizens and all age groups in between. The primary educational aim of the Planetarium is to endorse and promote the Science, Technology, Engineering, Arts and Mathematics (STEAM) agenda which promotes scientific careers to young people. All of the ancillary activities support the primary aim, with the additional target of offering excellent value for money, both to the visitors taking part and to the public purse. The Planetarium maintains a focus on being inclusive so that all children can enjoy the Planetarium experience.

Full details of all the Observatory and Planetarium's activities are provided in comprehensive Annual Reports which are available online at: www.armagh.space.

No Ministerial Directions have been given regarding the work of AOP.

Risk Management

Risk Management is an essential element of AOP's corporate governance framework and is closely linked to the system of internal control and business planning process. HM Treasury Orange Book establishes the concept of risk management and provides a basic introduction to its concepts, development and implementation of risk management process in government organisations. A robust risk management process assists AOP in identifying and managing issues which may hinder the achievement of objectives. The arrangements are regularly reviewed.

As well as ensuring that there is an effective system in place to deal with threats to AOP's aims and objectives, the organisation encourages a proactive approach to innovation and well-managed risk taking where there is potential to realise sustainable improvements in the organisation's research and educational services. For this reason, the organisation's Risk Appetite is 'Open'.

The Management Committee sets the risk appetite for AOP. The Accounting Officer, Senior Management Team and other staff are responsible for ensuring that residual risks are reduced to a level as low as reasonably practicable and wherever possible consistent with the level of risk appetite established by the Management Committee.

Updates are provided to the Audit and Risk Assurance Committee on the development and implementation of the risk management process across AOP. The Audit and Risk Assurance Committee provides the Accounting Officer with objective advice on issues concerning the risk, control and governance of the organisation and the associated assurances. An update on the main points considered by the Audit and

Risk Assurance Committee is provided to the Management Committee following each meeting and the Management Committee has access to all papers for the Audit and Risk Assurance Committee.

4. Fraud and Information Risk

The Accounting Officer has overall responsibility for managing the risk of fraud including:

- developing a fraud risk profile and undertaking a regular review of the fraud risks associated with each of the key organisational objectives in order to keep the profile current;
- establishing an effective fraud prevention policy and fraud response plan, commensurate with the level of fraud risk identified in the fraud risk profile;
- designing an effective control environment to prevent fraud commensurate with the fraud risk profile;
- operating appropriate pre-employment screening measures;
- establishing appropriate mechanisms for reporting fraud risk issues, reporting significant incidents of fraud, and coordinating assurances about the effectiveness of fraud prevention policies to support the Governance Statement;
- liaising with the Audit and Risk Assurance Committee;
- ensuring that all staff are aware of the organisation's fraud prevention policy and know what their responsibilities are in relation to combating fraud;
- ensuring fraud awareness training is provided as appropriate and, if necessary, more specific fraud prevention training and development is provided to relevant staff;
- ensuring that vigorous and prompt investigations are carried out if fraud occurs, is attempted or is suspected by the establishment of a Fraud Investigation Oversight Group;
- ensuring, where appropriate, legal and/or disciplinary action against perpetrators of fraud;
- ensuring, where appropriate, disciplinary action against supervisors where supervisory failures have contributed to the commission of fraud;
- ensuring, where appropriate, disciplinary action against staff who fail to report fraud;
- taking appropriate action to recover assets and losses;
- ensuring that appropriate action is taken to minimise the risk of similar frauds occurring in future; and
- ensuring that an anti-fraud culture is promoted throughout the organisation in line with the seven Nolan Principles of Public Life.

Risks to data and information held by the organisation are owned and managed by individuals designated as information asset owners. The Corporate Manager or Corporate Policy and HR Officer responds to requests for information under the Data Protection and Freedom of Information Acts following consultation with the Accounting Officer and the organisation's governing Committees, as appropriate.

AOP operates a Whistleblowing Policy which informs all members of the organisation of the standards of behaviour expected of them in carrying out their duties, and to provide information on the procedures to follow if a situation arises in which they are required to act in a way which is believed by them to be illegal, improper, or in breach of the Nolan Principles.

There was one Whistleblowing incident presented to ARAC in May 2025. It was reported to DfC as required under the Partnership Agreement and dealt with in line with the procedure outlined in the Whistleblowing Policy. The matter was addressed informally, in accordance with AOP Disciplinary Policy, and the Whistleblowing register updated to mark the report as 'closed'.

5. Governance and Accountability

AOP seeks to achieve excellence in good governance, in particular the precepts: (1) leadership; (2) effectiveness; (3) accountability and (4) sustainability.

The Chair of the Board of Governors has a particular leadership responsibility for securing the sustainability and vitality of the organisation in the long term; giving advice and direction in formulating AOP's forward look and overall strategy; ensuring that account is taken of guidance provided by the Minister or the Department; promoting the efficient and effective use of staff and other resources; encouraging high standards of probity amongst staff and Board and Committee members alike; and ensuring that the Board and its Committees meet at regular intervals throughout the year and that the Minutes of meetings accurately record the decisions taken and, where appropriate, the views of individual Board members.

Within AOP, the Director, supported by his Senior Management team, has responsibility for the management and effective operation of their organisation. Their operational responsibilities include:

- developing, implementing and monitoring the strategic and operational plans;
- undertaking financial management and Accounting Officer responsibilities;
- managing and developing a team of highly qualified professional and administrative staff;
- identifying and attracting sources of external income;
- promoting their respective organisations in relevant local, national and international arenas; and
- promoting Public Understanding of Science with the objective of improving the level of scientific literacy in the community and to ensure a strong link with government policy and the STEM agenda.

Members of the Board of Governors and of the Management Committee and their various Sub Committees exercise an effective challenge function on the leadership team in accord with their respective roles in the organisation. They also provide guidance and advice on strategic and operational matters such as Human Resource issues, accountability and relationships with stakeholders.

The members of these Committees are drawn from a very wide community background within, and beyond, Northern Ireland, and provide the organisation with a correspondingly wide range of expert knowledge and advice. All the Committees of AOP operate with full transparency and accountability, and over the last year have proved effective in the discharge of their duties and responsibilities.

It was agreed by the Board of Governors and the Management Committee that the governance arrangements in place removed the need for the current Board of Governors to complete an internal self-assessment of its effectiveness.

The Board of Governors and supporting Committees receive assurances from the Director and his Senior Management Team and Internal Audit that the governance and accountability processes are being managed effectively.

During 2024-25 two members of the Senior Management Team – the Head of Corporate Services and the Head of Finance and Income Generation – tendered their resignations with effect from 30 April 2025 and 31 May 2025 respectively. The two positions were temporarily combined into the post of Interim Head of Finance and Corporate Services pending a permanent appointment.

During 2025-26 the SO Accountant tendered her resignation effective from 30 September 2025. The position was filled through an agency between 15 September 2025 and 26 November 2025 and remained vacant until 30 March 2026 when it was filled again, through an agency. The Interim Head of Finance and Corporate Services resigned on 20 February 2026, effective from 6 March 2026. The former Head of Finance and Income Generation has been engaged on a short-term basis. A Chief Operating Officer has been recruited and commenced employment on 11 May 2026.

6. Sources of Independent Assurance

Internal Audit

CavanaghKelly was reappointed as Internal Auditors for the 3 years 2023-24 to 2025-26 using CPD as the Centre of Procurement Expertise. CavanaghKelly merged with and took on the name Cooper Parry from 1 August 2025. Their work was carried out in accordance with the Global Internal Audit Standards in the UK Public Sector.

A new Audit Strategy will be considered by the Audit and Risk Assurance Committee in June 2026.

During 2025-26 the Audit and Risk Assurance Committee considered reports on the following areas:

Audit Assignment	**Assurance Rating**
Data Protection	Satisfactory
Asset Management	Satisfactory
Revenue – School Booking System	Satisfactory

Follow-up of prior year recommendations	N/A

An overall satisfactory internal audit assurance opinion has been provided.

External Audit

The Comptroller and Auditor General (C&AG) is required to audit the financial statements under *The Armagh Observatory and Planetarium (Northern Ireland) Order 1995*. The C&AG is responsible for reporting whether in her opinion the financial statements give a true and fair view and whether they and the part of the Remuneration Report to be audited have been properly prepared in accordance with the Order and DfC directions made thereunder and applicable law and United Kingdom accounting standards.

A representative from the Northern Ireland Audit Office is invited to all Audit and Risk Assurance Committee meetings.

7. Review of the Effectiveness of the System of Internal Governance

The system of internal governance is designed to manage risk to a reasonable level, rather than to eliminate all risk of failure to achieve certain policies, aims and objectives; it can therefore only provide reasonable and not absolute assurance of effectiveness. The system of internal governance is based on an ongoing process designed to identify and prioritise risks to the achievement of the AOP policies, aims and objectives; to assess the likelihood of the events occurring and the impact should they be realised; and to manage the risks effectively, efficiently and economically. The system of internal governance has been in place in AOP for the year ended 31 March 2026 and up to the date of approval of the annual accounts, and accords with Department of Finance guidance.

As previously detailed in Section 2, the responsibilities of the Accounting Officer include the need to maintain a sound system of internal control which supports the achievement of the organisation's policies, aims and objectives. The review of the effectiveness of the system of internal governance has been informed by the assurances provided by relevant parties such as: Internal Audit and the Senior Management Team. Where weaknesses have been identified these have been promptly drawn, through normal reporting mechanisms, to the attention of the Audit and Risk Assurance Committee, Management Committee and/or Board of Governors, as appropriate.

The main procedures in place to monitor the effectiveness of the system of internal governance are as follows:

- ongoing independent assessment of the Observatory's research outputs;
- regular reports by financial staff on progress against principal financial targets and the projected financial outcome for the year and progress reports by staff responsible for major projects;
- detailed progress reports to the Management Committee and Board of Governors at their regular meetings and inclusion of performance measures and results against targets in the annual operating plan;
- annual reports on the system of internal control from internal auditors to the Audit and Risk Assurance Committee;
- regular Partnership meetings with officials from the Sponsor Department to consider operational and strategic issues and matters relating to the system of internal control;
- Bi-Annual Assurance Statements submitted to the Sponsor Department;
- periodic review of the AOP Risk Register by the Audit and Risk Assurance Committee, the Management Committee, the Accounting Officer and Senior Management Team and the Sponsor Department;
- continuous assessment of the quality of research through peer review of grant applications, applications for telescope time, and the submission of scientific papers to academic journals of international standing by AOP staff and students;
- peer review of the research quality, capability and output of the Observatory, and through participation in an objective external Assurance Committee, which provide an opinion on the adequacy and effectiveness of the system and contain recommendations for improvement; and
- annual reports from Northern Ireland Audit Office to the Audit and Risk Assurance Committee, the Management Committee and the Board of Governors on the Annual Report and Accounts, providing an opinion on the state of affairs of the organisation and its total incoming resources and expenditure of resources.

All reports based on the internal and external audits include opinions on the adequacy and effectiveness of risk management and the control framework in place. These matters are considered by the Audit and Risk Assurance Committee and are reported by the Audit and Risk Assurance Committee Chair to the Management Committee and the Board of Governors.

Weaknesses identified in AOP's control systems and internal governances are set out within the next section. Upon identification, plans were immediately put into place to address these issues.

8. Internal Governance Divergences

Update on Prior Years:

There are no outstanding internal audit recommendations from prior years.

Identification of New Issues:

Of the new issues identified by internal audit during 2025-26, one priority 3 recommendation remains outstanding.

During its audit for 2025-26, NIAO identified one priority 1 issue to be addressed by management in their area of responsibility, with a recommendation that all spend decisions follow central government procurement procedures and have the appropriate authority in place.

Management response: Senior management will take steps to review novel or contentious spending decisions to ensure that AOP Financial Policy and Procedures are followed (ongoing). AOP Financial Policy and Procedures will be regularly updated to comply with changes in DoF procurement guidance.

9. Conclusion

AOP has an effective governance structure and is operating to a high standard of integrity and probity. In signing this report, I have taken assurances, where available, from the Audit and Risk Assurance Committee and I will continue to monitor the Internal Audit and Northern Ireland Audit Office recommendations to ensure that all issues are appropriately addressed.

To the best of my knowledge this report provides a fair and accurate reflection of the business of AOP and of the status of the controls and checks that have been put in place to regulate and inform the organisation's committees.

Signed:  **Date: 2 October 2026**

Professor Michael Burton
Accounting Officer
Armagh Observatory & Planetarium

ARMAGH OBSERVATORY AND PLANETARIUM

THE CERTIFICATE AND REPORT OF THE COMPTROLLER AND AUDITOR GENERAL TO THE NORTHERN IRELAND ASSEMBLY

Opinion on financial statements

I certify that I have audited the financial statements of the Armagh Observatory and Planetarium for the year ended 31 March 2026 under the Armagh Observatory and Planetarium (Northern Ireland) Order 1995. The financial statements comprise: the Statement of Financial Activities, the Balance Sheet, the Cash Flow Statement; and the related notes including significant accounting policies. The financial reporting framework that has been applied in their preparation is applicable law and United Kingdom accounting standards including Financial Reporting Standard (FRS) 102, the Financial Reporting Standard applicable in the UK and Republic of Ireland (United Kingdom Generally Accepted Accounting Practice).

I have also audited the information in the Trustees' Annual Report and the Remuneration and Staff Report that is described in that report as having been audited.

In my opinion the financial statements:

- give a true and fair view of the state of Armagh Observatory and Planetarium's affairs as at 31 March 2026 and of its total incoming resources and expenditure of resources for the year then ended;
- have been properly prepared in accordance with the Financial Reporting Standard applicable in the UK and Republic of Ireland (FRS 102); and
- have been properly prepared in accordance with the Armagh Observatory and Planetarium (Northern Ireland) Order 1995 and Department for Communities directions issued thereunder.

Opinion on regularity

In my opinion, in all material respects the expenditure and income recorded in the financial statements have been applied to the purposes intended by the Assembly and the financial transactions recorded in the financial statements conform to the authorities which govern them.

Basis for opinions

I conducted my audit in accordance with International Standards on Auditing (ISAs) (UK), applicable law and Practice Note 10 'Audit of Financial Statements and Regularity of Public Sector Bodies in the United Kingdom'. My responsibilities under those standards are further described in the Auditor's responsibilities for the audit of the financial statements section of my certificate.

My staff and I are independent of Armagh Observatory and Planetarium in accordance with the ethical requirements that are relevant to my audit of the financial statements in the UK, including the Financial Reporting Council's Ethical Standard, and have fulfilled our other ethical responsibilities in accordance with these requirements.

I believe that the audit evidence obtained is sufficient and appropriate to provide a basis for my opinions.

Conclusions relating to going concern

In auditing the financial statements, I have concluded that Armagh Observatory and Planetarium's use of the going concern basis of accounting in the preparation of the financial statements is appropriate.

Based on the work I have performed, I have not identified any material uncertainties relating to events or conditions that, individually or collectively, may cast significant doubt on the Armagh Observatory and Planetarium's ability to continue as a going concern for a period of at least twelve months from when the financial statements are authorised for issue.

The going concern basis of accounting for Armagh Observatory and Planetarium is adopted in consideration of the requirements set out in the Government Financial Reporting Manual, which require entities to adopt the going concern basis of accounting in the preparation of the financial statements where it anticipated that the services which they provide will continue into the future.

My responsibilities and the responsibilities of the Trustees and the Accounting Officer with respect to going concern are described in the relevant sections of this certificate.

Other Information

The other information comprises the information included in the Trustees' Annual Report, Remuneration and Staff Report, Statement of Responsibilities of the Governors and Accounting Officer and the Governance Statement other than the financial statements, the parts of the Trustees' Report and Remuneration and Staff Report described in those reports as having been audited, and my audit certificate and report. The Trustees and the Accounting Officer are responsible for the other information included in the annual report. My opinion on the financial statements does not cover the other information and except to the extent otherwise explicitly stated in my certificate, I do not express any form of assurance conclusion thereon.

My responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or my knowledge obtained in the audit or otherwise appears to be materially misstated. If I identify such material inconsistencies or apparent material misstatements, I am required to determine whether this gives rise to a material misstatement in the financial statements themselves. If, based on the work I have performed, I conclude that there is a material misstatement of this other information, I am required to report that fact.

I have nothing to report in this regard.

Opinion on other matters

In my opinion the part of the Remuneration and Staff Report to be audited has been properly prepared in accordance with Department for Communities directions made under the Armagh Observatory and Planetarium (Northern Ireland) Order 1995.

In my opinion, based on the work undertaken in the course of the audit:

- the parts of the Trustees' Report and Remuneration and Staff Report have been properly prepared in accordance with Department for Communities directions made under the Armagh Observatory and Planetarium (Northern Ireland) Order 1995; and

- the information given in the Trustees' Annual Report for the financial year for which the financial statements are prepared is consistent with the financial statements.

Matters on which I report by exception

In the light of the knowledge and understanding of the Armagh Observatory and Planetarium and its environment obtained in the course of the audit, I have not identified material misstatements in the Trustees' Annual Report, Remuneration and Staff Report, Statement of Responsibilities of the Governors and Accounting Officer and the Governance Statement.

I have nothing to report in respect of the following matters which I report to you if, in my opinion:

- adequate accounting records have not been kept; or

- the financial statements and the parts of the Trustees' Report and Remuneration and Staff Report to be audited are not in agreement with the accounting records; or

- certain disclosures of remuneration specified by the Government Financial Report Manual are not made; or

- I have not received all of the information and explanations I require for my audit; or

- certain disclosures of remuneration specified by the Armagh Observatory and Planetarium (Northern Ireland) Order 1995. have not been made or parts of the Remuneration Report to be audited is not in agreement with the accounting records and returns; or

- the Governance Statement does not reflect compliance with the Department of Finance's guidance.

Responsibilities of the Governors and Accounting Officer for the financial statements

As explained more fully in the Statement of the Governors and Accounting Officer Responsibilities, the Governors and the Accounting Officer are responsible for:

- maintaining proper accounting records;
- the preparation of the financial statements in accordance with the applicable financial reporting framework and for being satisfied that they give a true and fair view;
- ensuring such internal controls are in place as deemed necessary to enable the preparation of financial statements to be free from material misstatement, whether due to fraud or error;
- ensuring the Trustees' Annual Report and the Remuneration and Staff Report, is prepared in accordance with the Government Financial Reporting Manual;
- assessing the Armagh Observatory and Planetarium's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the Governors and Accounting Officer anticipates that the services provided by Armagh Observatory and Planetarium will not continue to be provided in the future.

Auditor's responsibilities for the audit of the financial statements

My responsibility is to examine, certify and report on the financial statements in accordance with the Armagh Observatory and Planetarium (Northern Ireland) Order 1995.

My objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error and to issue a certificate that includes my opinion. Reasonable assurance is a high level of assurance but is not a guarantee that an audit conducted in accordance with ISAs (UK) will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

I design procedures in line with my responsibilities, outlined above, to detect material misstatements in respect of non-compliance with laws and regulation, including fraud.

My procedures included:

- obtaining an understanding of the legal and regulatory framework applicable to the Armagh Observatory and Planetarium through discussion with management and application of extensive public sector accountability knowledge. The key laws and regulations I considered included the Armagh Observatory and Planetarium (Northern Ireland) Order 1995;
- making enquires of management and those charged with governance on Armagh Observatory and Planetarium's compliance with laws and regulations;
- making enquiries of internal audit, management and those charged with governance as to susceptibility to irregularity and fraud, their assessment of the risk of material misstatement due to fraud and irregularity, and their knowledge of actual, suspected and alleged fraud and irregularity;
- completing risk assessment procedures to assess the susceptibility of Armagh Observatory and Planetarium's financial statements to material misstatement, including how fraud might occur. This included, but was not limited to, an engagement director led engagement team discussion on fraud to identify particular areas, transaction streams and business practices that may be susceptible to material misstatement due to fraud. As part of this discussion, I identified potential for fraud in the following areas: revenue recognition and posting of unusual journals;
- engagement director oversight to ensure the engagement team collectively had the appropriate competence, capabilities and skills to identify or recognise non-compliance with the applicable legal and regulatory framework throughout the audit;
- documenting and evaluating the design and implementation of internal controls in place to mitigate risk of material misstatement due to fraud and non-compliance with laws and regulations;

- designing audit procedures to address specific laws and regulations which the engagement team considered to have a direct material effect on the financial statements in terms of misstatement and irregularity, including fraud. These audit procedures included, but were not limited to, reading board and committee minutes, and agreeing financial statement disclosures to underlying supporting documentation and approvals as appropriate;

- addressing the risk of fraud as a result of management override of controls by:

    - performing analytical procedures to identify unusual or unexpected relationships or movements;

    - testing journal entries to identify potential anomalies, and inappropriate or unauthorised adjustments;

    - assessing whether judgements and other assumptions made in determining accounting estimates were indicative of potential bias; and

    - investigating significant or unusual transactions made outside of the normal course of business.

A further description of my responsibilities for the audit of the financial statements is located on the Financial Reporting Council's website www.frc.org.uk/auditorsresponsibilities. This description forms part of my certificate.

In addition, I am required to obtain evidence sufficient to give reasonable assurance that the expenditure and income recorded in the financial statements have been applied to the purposes intended by the Assembly and the financial transactions recorded in the financial statements conform to the authorities which govern them.

Report

I have no observations to make on these financial statements.



Dorinnia Carville
Comptroller and Auditor General
Northern Ireland Audit Office
106 University Street
BELFAST
BT7 1EU

12 October 2026

Armagh Observatory and Planetarium

Statement of Financial Activities for the year ended 31 March 2026

	Note	Unrestricted Funds 2026 £	Restricted Funds 2026 £	**Total Funds 2026 £**	Unrestricted Funds 2025 £	Restricted Funds 2025 £	**Total Funds 2025 £**
Income from:							
Charitable activities	2	2,460,268	424,970	**2,885,238**	2,726,531	635,118	**3,361,649**
Other trading activities	4	188,900	-	**188,900**	184,688	-	**184,688**
Total incoming resources		2,649,168	424,970	**3,074,138**	2,911,219	635,118	**3,546,337**
Expenditure on:							
Charitable activities	5	3,259,250	264,487	**3,523,737**	3,641,021	186,411	**3,827,432**
Other trading activities	7	89,632	-	**89,632**	87,239	-	**87,239**
Total outgoing expenditure		3,348,882	264,487	**3,613,369**	3,728,260	186,411	**3,914,671**
Net income / (expenditure)		(699,714)	160,483	**(539,231)**	(817,041)	448,707	**(368,334)**
Transfers between funds	15	(1,073,910)	1,073,910	**-**	376,026	(376,026)	**-**
Other recognised gains/(losses):							
Gains/(losses) on the revaluation of fixed assets and heritage assets	10 & 11	338,517	-	**338,517**	283,841	-	**283,841**
Actuarial gain/(loss) less provisions on defined benefit pension scheme	15 & 19	(87,000)	-	**(87,000)**	43,000	-	**43,000**
Net Movement in Funds		(1,522,107)	1,234,393	**(287,714)**	(114,174)	72,681	**(41,493)**
Reconciliation of funds							
Total funds brought forward at 1 April 2025		12,313,764	120,618	**12,434,382**	12,427,938	47,937	**12,475,875**
Total funds carried forward at 31 March 2026		10,791,657	1,355,011	**12,146,668**	12,313,764	120,618	**12,434,382**

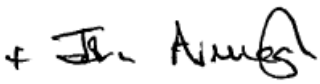
All amounts above relate to continuing operations of the organisation.
The notes on pages 51 to 63 form part of the financial statements.

Armagh Observatory and Planetarium

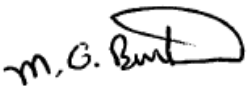
Balance Sheet as at 31 March 2026

	Note	2026	2025
Fixed Assets		**£**	**£**
Intangible assets	9	67,167	125,047
Tangible assets	10	9,769,067	9,356,826
Heritage Assets	11	2,996,570	2,996,570
Total fixed assets		12,832,804	12,478,443
Current assets			
Stocks	12	16,046	17,469
Debtors	13	93,022	104,982
Cash at bank and in hand	18	1,038,783	225,563
Total current assets		1,147,851	348,014
Creditors: amounts falling due within one year	14	(1,833,987)	(392,075)
Net current liabilities		(686,136)	(44,061)
Total assets less current liabilities		12,146,668	12,434,382
Creditors: amounts falling due after more than one year		-	-
Net assets excluding pension asset		12,146,668	12,434,382
Defined benefit pension scheme asset	19	-	-
Net assets		**12,146,668**	**12,434,382**
Funds			
Restricted funds	15	1,355,011	120,618
Unrestricted funds	15	2,976,492	4,591,583
Revaluation Reserves	15	7,815,165	7,722,181
Pension Reserve	15	-	-
Total Charity Funds		**12,146,668**	**12,434,382**

The financial statements on pages 48 to 63 were approved by the Board of Trustees of Armagh Observatory and Planetarium on 2 October 2026 and were signed on its behalf by:



Chair of the Board of Trustees
Archbishop John McDowell



Accounting Officer
Professor Michael Burton

Statement of cash flows for the year ended 31 March 2026

	Note	2026 £	2025 £
Net cash provided by operating activities	17	1,233,343	172,824
Cash flows from investing activities:			
Interest received		15,484	1,556
Purchase of tangible fixed assets		(435,607)	(239,766)
Sale of tangible fixed assets		-	-
		(420,123)	(238,210)
Increase / (decrease) in cash and cash equivalents		813,220	(65,386)

Further detail is reported in Notes 17 and 18.

Reconciliation of net cashflow to movement in net cash funds

		2026 £	2025 £
Increase / (decrease) in cash and cash equivalents in the year		813,220	(65,386)
Cash and cash equivalents at 1 April 2025		225,563	290,949
Cash and cash equivalents at 31 March 2026	18	1,038,783	225,563

The notes on pages 51 to 63 form part of the financial statements.

Notes to the financial statements for the year ended 31 March 2026

1 Summary of significant accounting policies

(a) Basis of accounting

These financial statements have been prepared in accordance with the historical cost convention as modified by the revaluation of certain assets. The accounts comply with relevant accounting standards and disclosure requirements issued by the Department of Finance. In all other aspects the financial statements comply with the Statement of Recommended Practice applicable to charities preparing their accounts in accordance with the Financial Reporting Standard applicable in the UK and Republic of Ireland (FRS102) (Charities SORP (FRS102)).

The Trustees of Armagh Observatory and Planetarium (AOP) confirm that they have complied with their duty to have regard to the guidance on Public Benefit produced by the Charities Commission of Northern Ireland under section 4 of the Charities Act (Northern Ireland) 2008 (the public benefit requirement statutory guidance) and that this has informed the activities of the organisation in the year to 31 March 2026.

The Trustees are satisfied that there are no material uncertainties related to events or conditions which cast significant doubt on the ability of Armagh Observatory and Planetarium to continue as a going concern.

(b) Incoming resources

Grant income from Department for Communities (DfC) is shown in the Statement of Financial Activities (SOFA) in the year in which it is received. Grants that relate to specific capital expenditure are initially recognised in the SOFA and transferred to a restricted fund, Government Grant for Fixed Assets. Where no restriction on the use of the assets exists the value is transferred to an unrestricted fund. Grants that relate to specific research projects are recognised in the Statement of Financial Activities and transferred to a restricted fund. Once the relevant conditions for recognition (entitlement and certainty of value) have been met, they are transferred to funds to match the relevant expenditure. Other grants are credited to the Statement of Financial Activities when receivable.

(c) Resources expended

Resources expended are accounted for on an accruals basis. Expenditure is classified under the principal charitable activities of Research, Education and Governance & Support.

(d) Pension scheme

The organisation provides pension benefits to its employees by participating in the Local Government Pension Scheme for Northern Ireland, administered by Northern Ireland Local Government Officers' Superannuation Committee (NILGOSC), which is a defined benefit scheme. Annual contributions to the NILGOSC scheme are determined by the scheme and based on actuarial advice. The operating costs of providing retirement benefits to the organisation's employees are recognised in accounting periods in which the benefits are earned by employees, and the related finance costs and other changes in value of the assets and liabilities are recognised in the period in which they arise. AOP applies the principles of IFRIC 14 in relation to pension surplus restriction. IFRIC 14 requires allowances to be made for a minimum funding requirement, which limits the amount of economic benefit available to the excess of the value of prospective current service costs above the funding requirement.

(e) Intangible fixed assets

Intangible fixed assets represent contributions to international astronomical research projects, financed by capital grant. They are identifiable, for example, as part of a major telescope installation. The organisation benefits in the form of research participation or collaboration, which in turn contributes to the research outputs. Intangible fixed assets are stated at cost and amortised over the expected life of the project.

(f) Tangible fixed assets

The cost of tangible fixed assets is their purchase cost or valuation together with any incidental costs of acquisition. Depreciation is calculated so as to write off the cost or valuation of tangible fixed assets, less their estimated residual values, on a straight-line basis over the expected useful economic lives of the assets concerned. Land is not depreciated.
The principal annual depreciation rates used are as follows:

Buildings	Estimated remaining asset life
Digistar	20%
Fixtures and fittings	20 - 25%
Office equipment	20 - 25%
Scientific equipment	10 - 25%
Exhibits	10 - 25%
Motor Vehicles	20%

Land and buildings are included in the balance sheet at depreciated replacement cost, estimated value in use or market value. Land and buildings are professionally revalued at least every 5 years in accordance with accounting guidance. Land and buildings were last revalued as at the 31 March 2026 by Collette Quinn MRICS on behalf of Land and Property Services. Revaluation gains (losses) are transferred to a revaluation reserve. Land and buildings in years where no revaluation occurs are restated using indices.

The valuations of Land and Buildings have been undertaken having regard to International Financial Reporting Standards (IFRS) as applied to the United Kingdom public sector and in accordance with HM Treasury guidance, International Valuation Standards and the requirements of the Royal Institution of Chartered Surveyors Valuation Global Standards 2025.

Other fixed assets (non Land & Buildings) with a life estimated over 5 years have a net book value of £35,449 at 31 March 2026. This accounts for 0.4% of the net book value of fixed assets. The Trustees do not consider it appropriate to carry out an annual indexation of such assets on grounds of immateriality.

(g) Heritage Assets

Armagh Observatory was founded in 1789 and from this date the Observatory has collected through its operations scientific items, books, furniture and other artefacts which would be considered heritage assets. It is not the policy of Armagh Observatory and Planetarium to acquire heritage assets but has collected such assets through donations and operations. As at 31 March 2025, heritage assets were re-valued for insurance purposes with reference to auction estimates for replacement. Antique books were valued by Doerr Dallas Valuations Limited. Meteorites were valued by Ulster Museum. Coram James Limited carried out a desktop valuation of clocks, scientific instruments, fine art, furniture and sculptures. The remainder were valued by experienced members of management. It is policy to regularly review the valuation of heritage assets. The heritage assets are being documented on the Collections Database.

Heritage assets are summarised in these accounts in four categories: Books; Clocks and watches; Scientific instruments; and Furniture, Artworks, etc, and are recorded in catalogues and on databases. Historic buildings which have heritage value are included within operational assets. These are included within property valuations as operational assets and continue to be used for operational purposes.

(h) Stocks

Stocks are stated at the lower of cost and net realisable value. In general, cost is determined on a first in first out basis. Provision is made where necessary for obsolete, slow moving and defective stocks.

(i) Debtors

Debtors comprise amounts due from customers, grants due, prepaid expenses and value added tax refunds.

(j) Cash at bank and in hand

Cash held in bank accounts payable on demand and cash floats.

(k) Creditors

Creditors comprise payments due to suppliers and accruals for other amounts due but not invoiced at the year end.

(l) Fund accounting

The organisation has various types of funds for which it is responsible, and which require separate disclosure, totalling £12,146,668 at 31 March 2026 (£12,434,382 at 31 March 2025).

Restricted funds

Grants or donations received which are earmarked by the donor for specific purposes. Such purposes are within the overall aims of the organisation.

Unrestricted funds

Unrestricted funds, comprising designated funds and undesignated funds, are those which are expendable at the discretion of the trustees in furtherance of the objectives of the organisation. In addition to expenditure on the provision of services, such funds may be held in order to finance capital investment and working capital.

Designated funds include the donated assets fund, the government grants fund and the general fund. The general fund is the day to day operating fund.

Donated assets are the buildings and grounds donated to the organisation in 1790 by its founder Archbishop Richard Robinson. The value is adjusted annually by any revaluation of the underlying assets.

The government grant fund represents the capital financing of the Charity's tangible fixed assets. The fund is reduced annually by a value equivalent to depreciation charged on the related assets.

Undesignated funds - These represent the revaluation reserve which records the movement from the revaluation of the Charity's assets and a pension reserve which matches the long term liability of an underfunded defined benefits pension scheme.

(m) Reserves policy

Armagh Observatory and Planetarium adopts a risk-based approach to establishing a sound system of control covering all types of risks to the aims and objectives of the organisation. There is a need to retain a sufficient level of unrestricted cash reserves to meet the risks associated with short term financial contingencies, uncertainties and demands. The Trustees do not believe there are any key assumptions or key sources of estimation uncertainty which could cause a material adjustment to the carrying amounts of assets and liabilities within the next reporting period. Armagh Observatory and Planetarium budgets to operate on an annual basis within a balanced funding formula of grant-in-aid and self-generated income.

Notes to the financial statements for the year ended 31 March 2026 (continued)

2 Income from charitable activities

	Note	Unrestricted Funds 2026 £	Restricted Funds 2026 £	Total Funds 2026 £	Total Funds 2025 £
Grant Income					
DfC Recurrent grant-in-aid		2,046,000	-	2,046,000	2,352,000
DfC In-year capital grant-in-aid		-	35,000	35,000	140,000
Total grant-in-aid from the DfC		2,046,000	35,000	2,081,000	2,492,000
Income from other grants and receipts	3	-	389,970	389,970	489,548
Total Grant Income		2,046,000	424,970	2,470,970	2,981,548
Operating Income					
Admissions		397,009	-	397,009	355,797
Profit/(loss) on disposal of fixed assets		-	-	-	-
Miscellaneous income		17,259	-	17,259	24,304
Total Operating Income		414,268	-	414,268	380,101
Total Income from Charitable Activities		**2,460,268**	**424,970**	**2,885,238**	**3,361,649**

3 Income from other grants and receipts

	Note	Unrestricted Funds 2026 £	Restricted Funds 2026 £	Total Funds 2026 £	Total Funds 2025 £
STFC/UKRI Education, Research and Student grants		-	199,177	199,177	225,202
Europlanet 2025 RI grant		-	3,682	3,682	-
UKRI Open Access block grant		-	1,475	1,475	5,848
Science Foundation Ireland grant		-	-	-	46,166
ASDC grants		-	10,490	10,490	9,167
STEM Learning		-	6,447	6,447	-
Tourism NI grants		-	-	-	2,413
Royal Astronomical society grant		-	1,250	1,250	2,500
National Lottery Heritage Fund		-	-	-	39,995
JobStart scheme		-	879	879	-
STEM Ambassadors grant		-	111,096	111,096	27,774
UKSA Space For All grant		-	55,474	55,474	10,601
Leverhulme grant		-	-	-	41,753
Shared Island grant		-	-	-	75,782
Sundry grants and donations		-	-	-	2,347
Total other grants and receipts	2	-	389,970	389,970	489,548

4 Income from other trading activities

	Unrestricted Funds 2026 £	Restricted Funds 2026 £	Total Funds 2026 £	Total Funds 2025 £
Shop income	150,503	-	150,503	154,050
Rental income	38,397	-	38,397	30,638
Total Income from other trading	188,900	-	188,900	184,688

Notes to the financial statements for the year ended 31 March 2026 (continued)

5 Expenditure on charitable activities

	Note	Unrestricted Funds 2026 £	Restricted Funds 2026 £	Total Funds 2026 £	Total Funds 2025 £
Research	6	1,052,104	190,072	1,242,176	1,289,501
Education	6	1,338,449	74,415	1,412,864	1,446,180
Governance and Support	6	868,697	-	868,697	1,091,751
		3,259,250	264,487	3,523,737	3,827,432

6 Expenditure on charitable activities

	Note	Unrestricted Funds 2026 £	Restricted Funds 2026 £	Total Funds 2026 £	Total Funds 2025 £
Research					
Staff costs		557,549	101,422	658,971	633,770
Direct costs		192,007	88,650	280,657	280,736
Support costs		100,247	-	100,247	140,399
Depreciation		202,301	-	202,301	234,596
	5	1,052,104	190,072	1,242,176	1,289,501
Education					
Staff costs		575,879	62,216	638,095	500,831
Direct costs		163,165	7,147	170,312	162,583
Support costs		223,999	5,052	229,051	260,259
Depreciation		375,406	-	375,406	522,507
	5	1,338,449	74,415	1,412,864	1,446,180
Governance and Support					
Staff costs		601,057	-	601,057	731,727
Direct costs		13,268	-	13,268	21,987
Support costs		227,422	-	227,422	307,126
Depreciation		26,950	-	26,950	30,911
	5	868,697	-	868,697	1,091,751

Included within Governance and Support costs are the following governance costs:

	Unrestricted Funds 2026 £	Restricted Funds 2026 £	Total Funds 2026 £	Total Funds 2025 £
Management Committee expenses	4,085	-	4,085	6,911
Internal Audit	14,782	-	14,782	14,743
External Audit	29,640	-	29,640	27,400
	48,507	-	48,507	49,054

The cost of audit shown above includes £29,640 fees payable to Northern Ireland Audit Office for statutory audit. NIAO does not provide any other service.

7 Expenditure on trading activities

	Unrestricted Funds 2026 £	Restricted Funds 2026 £	Total Funds 2026 £	Total Funds 2025 £
Trading				
Direct costs	89,632	-	89,632	87,239
	89,632	-	89,632	87,239

Notes to the financial statements for the year ended 31 March 2026 (continued)

8 Average staff numbers and related costs

	Permanent staff	Others	2026 Number	2025 Number
Average staff numbers	27.4	8.4	35.8	34.3

Staff costs comprise:	Permanent staff	Others	2026	2025
	£	£	£	£
Wages and salaries	1,278,498	254,179	1,532,677	1,401,900
Social security costs	164,752	19,128	183,880	153,728
Employer's pension contributions	233,488	28,078	261,566	260,700
Defined benefit pension additional service cost	(80,000)	-	(80,000)	50,000
	1,596,738	301,385	1,898,123	1,866,328

The number of employees whose employee benefits (excluding employer pension costs) exceeded £60,000 was:

	2026 Number	2025 Number
£60,001 - £70,000	5	6
£70,001 - £80,000	1	1
£80,001 - £90,000	-	-
£90,001 - £100,000	1	1

The key management personnel of the organisation comprise the trustees and the Executive Director.

The total amount of employee benefits (including employer pension contributions) received by the Executive Director for his services to the organisation was £113,894 (2025: £107,893).

There was no remuneration paid to trustees during the year (2025: Nil). Travel and subsistence expenses reimbursed to trustees amounted to £2,987 (2025: £3,293).

Average student numbers and related costs (not included above)

	2026 Number	2025 Number
PhD students	9.0	8.4

	2026	2025
	£	£
Student maintenance grants & stipends	197,692	186,776

Notes to the financial statements for the year ended 31 March 2026 (continued)

9 Intangible fixed assets

	2026 £	2025 £
Cost		
At 1 April	622,018	622,018
Additions	-	-
Disposals	-	-
At 31 March	622,018	622,018
Depreciation		
At 1 April	496,971	415,391
Charge for year	57,880	81,580
Disposals	-	-
At 31 March	554,851	496,971
Net book value		
At 31 March 2026	**67,167**	**125,047**
At 31 March 2025	**125,047**	**206,627**

10 Tangible fixed assets

	Freehold Land & buildings £	Exhibits £	Assets Under Construction £	Digistar Projection System £	Scientific Equipment £	Other Equipment & Vehicles £	Total £
Cost or valuation							
At 1 April 2025	8,840,932	1,196,458	-	496,159	672,625	1,369,296	12,575,470
Asset revaluation	92,984	-	-	-	-	-	92,984
Additions	-	27,911	465,265	50,870	-	76,454	620,500
Transfers	-	-	-	-	-	-	-
Disposals	-	-	-	-	-	(1,259)	(1,259)
At 31 March 2026	8,933,916	1,224,369	465,265	547,029	672,625	1,444,491	13,287,695
Depreciation							
At 1 April 2025	-	901,240	-	496,159	643,584	1,177,661	3,218,644
Adjustment for asset revaluation	(245,533)	-	-	-	-	-	(245,533)
Charge for year	245,533	150,796	-	10,174	19,469	120,804	546,776
Disposals	-	-	-	-	-	(1,259)	(1,259)
At 31 March 2026	-	1,052,036	-	506,333	663,053	1,297,206	3,518,628
Net book value							
At 31 March 2026	**8,933,916**	**172,333**	**465,265**	**40,696**	**9,572**	**147,285**	**9,769,067**
At 31 March 2025	**8,840,932**	**295,218**	**-**	**-**	**29,041**	**191,635**	**9,356,826**

DfC granted an in-year capital allocation in respect of Tangible fixed asset additions of £620,500, but as AOP had sufficient cash reserves at year end, most of the funds were not drawn down until 2026-27.

If the land and buildings had not been valued, they would have been included at the following amounts:

	2026 £	2025 £
Cost	3,961,818	3,961,818
Aggregate depreciation	(1,418,372)	(1,339,413)
Net book value based on historic cost	2,543,446	2,622,405

Depreciation on tangible fixed assets for the year was £546,776 (2025: £706,434).

Land and buildings include grounds and buildings with a net book value of £2,229,720 (2025: £2,193,642) which were donated to the organisation in 1790 by Archbishop Richard Robinson, the founder of the organisation.

Armagh Observatory and Planetarium includes in fixed assets any expenditure over £1,500 (on an item or group of related items) which is expected to be used for more than a year.

Notes to the financial statements for the year ended 31 March 2026 (continued)

11 Heritage assets

At Valuation	Books	Clocks & Watches	Scientific Equipment	Furniture, Artworks, etc	Total
	£	£	£	£	£
Carrying Amount at 1 April 2025	644,075	625,600	1,436,500	290,395	2,996,570
Additions	-	-	-	-	-
Revaluation	-	-	-	-	-
Disposals	-	-	-	-	-
Depreciation / impairment	-	-	-	-	-
Carrying Amount at 31 March 2026	644,075	625,600	1,436,500	290,395	2,996,570

It is policy to regularly review the valuation of heritage assets and to carry out a formal revaluation at least once every five years. The most recent valuation took place in 2025.

Summary of heritage asset transactions

There were no charges for impairment or disposals of heritage assets in the five years ended 31 March 2026. Through a donation, there was a single purchase costing £600 in 2024-25. Ordnance Survey maps of Ireland and map chests owned by Armagh Observatory & Planetarium but held in Robinson Library, Armagh, were valued for the first time in 2021-22 at £100,000.

12 Stocks

	2026	2025
	£	£
Goods for resale	16,046	17,469

13 Debtors

	2026	2025
	£	£
Trade debtors	21,816	36,976
Prepayments and accrued income	40,841	56,402
Other debtors	30,365	11,604
	93,022	104,982

14 Creditors: amounts falling due within one year

	2026	2025 Re-stated
	£	£
Trade creditors	108,565	31,641
Accruals and sundry creditors	424,809	328,581
Deferred income	1,260,968	-
Taxation and social security	39,645	31,853
	1,833,987	392,075

Grants that are subject to performance-related conditions received in advance of meeting those conditions is accounted for as a liability and shown on the balance sheet as deferred income. In 2025-26, AOP received an advance payment in respect of its European Research Council ION-FLUX grant.

Notes to the financial statements for the year ended 31 March 2026 (continued)

15 Statement of Funds

	At 1 April 2025	Income	Expenditure	Revaluation	Transfers	At 31 March 2026
	£	£	£	£	£	£
Restricted Funds						
Government grant for fixed assets	-	35,000	-	-	(35,000)	-
Other grants for fixed assets	-	-	-	-	-	-
Restricted resource grants	120,618	389,970	(264,487)	-	1,108,910	1,355,011
Total restricted funds	**120,618**	**424,970**	**(264,487)**	**-**	**1,073,910**	**1,355,011**
Unrestricted Funds						
Designated Funds						
Donated assets reserve	1,720,283	-	-	-	-	1,720,283
Government grant for assets	1,182,312	-	-	-	(246,520)	935,792
General fund	1,688,988	2,649,168	(3,348,882)	-	(668,857)	320,417
	4,591,583	**2,649,168**	**(3,348,882)**	**-**	**(915,377)**	**2,976,492**
Undesignated Funds						
Revaluation reserve - Land & Buildings	6,033,332	-	-	338,517	(245,533)	6,126,316
Revaluation reserve - Heritage Assets	1,688,849	-	-	-	-	1,688,849
Pension reserve	-	-	-	(87,000)	87,000	-
	7,722,181	**-**	**-**	**251,517**	**(158,533)**	**7,815,165**
Total Unrestricted Funds	**12,313,764**	**2,649,168**	**(3,348,882)**	**251,517**	**(1,073,910)**	**10,791,657**
Total Funds	**12,434,382**	**3,074,138**	**(3,613,369)**	**251,517**	**-**	**12,146,668**

Details of Transfers between funds	£
Release of restricted resource grant available to offset overheads	1,108,910
Release of deferred capital grant*	(281,520)
Transfer of defined benefit pension service and interest cost	87,000
Transfer of depreciation adjustment on asset revaluation to general fund	(245,533)
General fund	**(668,857)**

**Release reduced by £86,955 to compensate for over-release in 2024/25.*

16 Analysis of net assets between funds

	Pension Reserve	Revaluation Reserve	Unrestricted Funds	Restricted Funds	Total Funds
	£	£	£	£	£
Tangible fixed assets	-	6,126,316	3,709,918	-	9,836,234
Heritage assets	-	1,688,849	1,307,721	-	2,996,570
Current assets	-	-	1,147,851	-	1,147,851
Creditors: amounts falling due within one year	-	-	(1,833,987)	-	(1,833,987)
Net assets/(liabilities)	-	7,815,165	4,331,503	-	12,146,668

17 Reconciliation of net expenditure to net cash flow from operating activities

	2026	2025
	£	£
Net expenditure for the year per statement of financial activities	(539,231)	(368,334)
Adjustments for:		
Depreciation	604,656	788,014
Interest received	(15,484)	(1,556)
Defined benefit pension scheme service and interest cost less contributions payable	(87,000)	43,000
Decrease in stock	1,423	7,683
Decrease in debtors	11,960	8,158
Increase/(decrease) in creditors	1,257,019	(304,141)
Net cash provided by operating activities	1,233,343	172,824

Notes to the financial statements for the year ended 31 March 2026 (continued)

18 Analysis of cash and cash equivalents

	31 March 2026 £	31 March 2025 £
Cash at bank and in hand	1,038,783	225,563
Total cash and cash equivalents	1,038,783	225,563

19 Pension scheme

Introduction

The disclosures below relate to the funded liabilities within the Northern Ireland Local Government Officers' Superannuation Pension Fund (the "Fund") which is part of the Local Government Pension Scheme (Northern Ireland) (the "LGPS") and certain related unfunded liabilities which have been separately disclosed. The LGPS is a funded defined benefit plan with benefits earned up to 31 March 2015 being linked to final salary. Benefits after 31 March 2015 are based on a Career Average Revalued Earnings scheme. Details of the benefits earned over the period covered by this disclosure are set out in 'The Local Government Pension Scheme Regulations (Northern Ireland) 2014' (as amended) and 'The Local Government Pension Scheme (Amendment and Transitional Provisions) Regulations (Northern Ireland) 2014' (as amended). The unfunded pension arrangements relate to termination benefits made on a discretionary basis upon early retirement in respect of members of the Local Government Pension Scheme under the 'Local Government (Early Termination of Employment) (Discretionary Compensation) Regulations (Northern Ireland) 2007'.

Funding / Governance Arrangements of the LGPS

The funded nature of the LGPS requires participating employers and their employees to pay contributions into the Fund, calculated at a level intended to balance the pension liabilities with investment assets. Information on the framework for calculating contributions to be paid is set out in 'The Local Government Pension Scheme Regulations (Northern Ireland) 2014' and the Fund's Funding Strategy Statement. The last actuarial valuation was at 31 March 2025 and the contributions to be paid until 31 March 2029 resulting from that valuation are set out in the Fund's Rates and Adjustment Certificate. NILGOSC as the Scheme manager is responsible for the governance of the Fund.

Assets

The assets allocated to the Employer in the Fund are notional and are assumed to be invested in line with the investments of the Fund for the purposes of calculating the return over the accounting period. The Fund holds a significant proportion of its assets in liquid investments. As a consequence there will be no significant restriction on realising assets if a large payment is required to be paid from the Fund in relation to an employer's liabilities. The assets are invested in a diversified spread of investments and the approximate split of assets for the Fund as a whole is shown in the disclosures. NILGOSC may invest a small proportion of the Fund's investments in the assets of some of the employers participating in the Fund if it forms part of their balanced investment strategy.

The NILGOSC actuary, AON Solutions UK Ltd (AON), has provided the following details for the purposes of accounting for the Armagh Observatory and Planetarium's joint share of the Scheme in accordance with FRS 102 at 31 March 2026.

Key assumptions used by the actuary were:

	31 March 2026	31 March 2025
Discount rate	6.2%	5.8%
CPI inflation	2.8%	2.5%
Pension increases	2.8%	2.5%
Pension accounts revaluation rate	2.8%	2.5%
Salary increases	4.3%	4.0%

Mortality assumptions

	31 March 2026 Years	31 March 2025 Years
Males		
Pensioner member aged 65 at accounting date	22.0	21.6
Active member aged 45 at accounting date	22.3	22.2
Females		
Pensioner member aged 65 at accounting date	25.3	24.5
Active member aged 45 at accounting date	25.6	25.2

Notes to the financial statements for the year ended 31 March 2026 (continued)

19 Pension scheme (continued)

Asset Allocation

	Value at 31/03/26		Value at 31/03/25	
	%	£M	%	£M
Equities	43.1%	5.971	41.3%	5.027
Property	9.7%	1.344	9.5%	1.156
Government bonds	21.4%	2.964	15.7%	1.911
Corporate bonds	4.1%	0.568	3.9%	0.475
Multi Asset Credit	13.2%	1.828	13.0%	1.583
Cash	2.7%	0.374	10.7%	1.303
Other	5.8%	0.803	5.9%	0.718
Total	100.0%	13.852	100.0%	12.173

Reconciliation of funded and unfunded status to balance sheet

	Value at 31/03/2026 £'000	Value at 31/03/2025 £'000
Fair value of assets	13,852	12,173
Present value of funded defined benefit obligation	(10,145)	(9,285)
Funded status	3,707	2,888
Unrecognised asset	(3,707)	(2,888)
Present value of unfunded defined benefit obligation	-	-
Asset/(Liability) recognised on the balance sheet	-	-

The split of the liabilities at the last valuation between the various categories of members is as follows:

Active members	42%
Deferred pensioners	19%
Pensioners	39%

Amounts recognised in statement of financial activities

	Year to 31/03/2026 £'000	Year to 31/03/2025 £'000
Operating cost		
Current service cost	(185)	(313)
Financing cost		
Interest on net defined benefit liability	175	63
Interest on unrecognised asset	(168)	(56)
Pension expense recognised in statement of financial activities	(178)	(306)
Allowance for administrative expenses included in Current Service Cost	6	7

Amounts recognised in statement of funds

	Year to 31/03/2026 £'000	Year to 31/03/2025 £'000
Asset gains/(losses) arising during the period	986	(131)
Actuarial gains/(losses) due to changes in financial assumptions	114	1,749
Actuarial gains/(losses) due to changes in demographic assumptions	(106)	78
Actuarial gains/(losses) due to liability experience	(429)	4
Adjustment gains/(losses) due to restriction of surplus	(651)	(1,656)
Total amount recognised in statement of funds	(86)	44

Changes to the present value of defined benefit obligation

	Year to 31/03/2026 £'000	Year to 31/03/2025 £'000
Opening defined benefit obligation	9,285	10,612
Current service cost	185	313
Interest expense on defined benefit obligation	531	502
Contributions by participants	99	119
Actuarial gains/(losses) due to changes in financial assumptions	(114)	(1,749)
Actuarial gains/(losses) due to changes in demographic assumptions	106	(78)
Actuarial gains/(losses) due to liability experience	430	(4)
Net benefits paid out	(377)	(430)
Closing defined benefit obligation	10,145	9,285

Notes to the financial statements for the year ended 31 March 2026 (continued)

19 Pension scheme (continued)

Changes to the fair value of assets

	Year to 31/03/2026 £'000	Year to 31/03/2025 £'000
Opening fair value of assets	12,173	11,787
Interest income on assets	706	565
Remeasurement gains/(losses) on assets	986	(131)
Contributions by the employer	265	263
Contributions by participants	99	119
Net benefits paid out	(377)	(430)
Closing fair value of assets	13,852	12,173

Actual return on assets

	Year to 31/03/2026 £'000	Year to 31/03/2025 £'000
Interest income on assets	706	565
Gain/(loss) on assets	986	(131)
Actual return on assets	1,692	434

Sensitivity Analysis
Funded LGPS benefits

Discount rate assumptions

Adjustment to discount rate	**+0.1%pa**	**Base Figure**	**-0.1%pa**
Present value of total obligation (£m)	10.003	10.145	10.287
% change in present value of total obligation	-1.4%		1.4%
Projected service cost (£m)	0.187	0.195	0.203
Approximate % change in projected service cost	-4.2%		4.3%

Rate of general increase in salaries

Adjustment to salary increase rate	**+0.1%pa**	**Base Figure**	**-0.1%pa**
Present value of total obligation (£m)	10.155	10.145	10.135
% change in present value of total obligation	0.1		-0.1
Projected service cost (£m)	0.195	0.195	0.195
Approximate % change in projected service cost	0.0%		0.0%

Rate of increase to pensions in payment and deferred pension assumption, and rate of revaluation of pension account assumptions:

Adjustment to pension increase rate	**+0.1%pa**	**Base Figure**	**-0.1%pa**
Present value of total obligation (£m)	10.277	10.145	10.023
% change in present value of total obligation	1.3%		(1)
Projected service cost (£m)	0.203	0.195	0.187
Approximate % change in projected service cost	4.3%		-4.2%

Post retirement mortality assumption

Adjustment to mortality age rating assumption	**-1 year**	**Base Figure**	**+1 year**
Present value of total obligation (£m)	10.368	10.145	9.912
% change in present value of total obligation	2.2%		-2.3%
Projected service cost (£m)	0.202	0.195	-188.000
Approximate % change in projected service cost	3.5%		-3.6%

Notes to the financial statements for the year ended 31 March 2026 (continued)

19 Pension scheme (continued)

Pension Surplus Restriction

AOP has applied the principles of FRS 102 in relation to pension surplus restriction. FRS 102 outlines that a defined benefit plan asset can only be recognised to the extent that the plan surplus can be recovered through reduced contributions in the future or through refunds from the plan. AON has assessed that at 31 March 2026 the defined benefit plan asset is restricted to nil as no plan surplus can be recovered by these means.

Pensions Increase/Revaluation experience

AON have adjusted the defined benefit obligation to allow for actual CPI inflation being higher (or lower) than assumed, resulting in higher (or lower) increases to pensions in payment, revaluation of deferred pensions and increases to active pension accounts. Over this accounting period the adjustment is based on actual CPI inflation of 3.0% between 28 February 2025 and 28 February 2026.

Pay settlements for local government workers

The Local Government pay agreement for 2025/26 was an increase of 3.2%. For a typical employer this will be slightly lower than the pay increase that was assumed at the start of the accounting period, however it is unlikely to be materially different. Therefore, AON have not made an explicit allowance for any gain from pay awards this year.

20 Capital commitments

Capital commitments at 31 March 2026 totalled £4,807,623 (2025: £Nil) in respect of expenditure on projects commenced during the year. DfC has not agreed final funding for 2026-27.

21 Contingent liabilities

There were no contingent liabilities at the 31 March 2026 (2025: Nil).

22 Remote contingent liabilities (Audited)

There were no remote contingent liabilities at the 31 March 2026 (2025: Nil).

23 Related-party transactions

None of the members of the Board of Governors, the Management Committee, the Director or other related parties have undertaken any material transactions with the Armagh Observatory and Planetarium during the year. The Armagh Observatory and Planetarium has had various material transactions with a number of Government Departments, Executive Agencies and Non-Departmental Public Bodies in Northern Ireland. Most of these transactions have been with DfC, Construction and Procurement Delivery (CPD), Strategic Investment Board (SIB) and the Education Authority (EA). DfC provides recurrent and capital grant-in-aid (note 2), SIB provides professional advisory and consultancy services, and CPD and EA are the Centres of Procurement Expertise for the organisation. The Royal School Armagh leases land for playing fields at a nominal rent.

No other related party transactions took place in the year, other than certain trustees' expenses already disclosed in note 8.

24 Losses and special payments (Audited)

There were no losses or special payments during the year (2025: Nil).

25 Fees and charges (Audited)

AOP generates income from admissions, shop income and grant income. These income streams are disclosed in Notes 2, 3 and 4.

26 Financial instruments

As the cash requirements of the Armagh Observatory and Planetarium are met through grants from DfC and other grant funding bodies, financial instruments play a more limited role in creating risk than would apply to a non-public sector body of a similar size. The majority of financial instruments relate to contracts to buy non-financial items in line with expected purchase and usage requirements and the Armagh Observatory and Planetarium is therefore exposed to little credit, liquidity or market risk.

Notes to the financial statements for the year ended 31 March 2026 (continued)

27 Additional disclosures to comply with the Financial Reporting Manual (FReM)

FReM requires non-departmental public bodies to regard grant-in-aid received as contributions from controlling bodies giving rise to a financial interest in the residual interest of the body and hence accounting for as financing, that is by crediting them to income and expenditure reserve. In addition FReM requires grant-in-aid to be accounted for on a cash basis.

However, as the organisation is required to prepare accounts in accordance with the SORP for charities, DfC has given AOP permission to continue to treat grants as income. If AOP were required to comply with the FReM the result of this compliance would be as follows:

Statement of Financial Activities prepared under FReM

	Note	2026 £	2025 £
Incoming resources			
Incoming resources from research and other non-DfC grants	2	389,970	489,548
Operating income	2	414,268	380,101
Trading income	4	188,900	184,688
Total incoming resources		993,138	1,054,337
Resources expended			
Direct expenditure of the organisation		3,613,369	3,914,671
Total Resources expended		3,613,369	3,914,671
Net deficit for the year		(2,620,231)	(2,860,334)
Loss/(gain) on revaluation of Fixed Assets and Heritage Assets		338,517	283,841
Actuarial (loss)/gain on pension scheme		(87,000)	43,000
Amount transferred to funds		(2,368,714)	(2,533,493)

Analysis of funds prepared under the FReM

		2026 £	2025 £
Balance at 1 April		12,434,382	12,475,875
Grant-in-aid received in the year	2	2,081,000	2,492,000
Net operating costs for the year		(2,368,714)	(2,533,493)
Balance at 31 March		12,146,668	12,434,382

28 Events after the Reporting Date

1) Adjusting Events:

There were no events after the reporting date which would require adjustment to the financial statements.

2) Non-adjusting Events:

There were no events after the reporting date which fall into this category.

The Accounting Officer authorised the issue of these financial statements on 12 October 2026.

Appendix 1

Armagh Observatory and Planetarium
Refereed Journal Publications: April 2025 – March 2026

Abe K., et al., inc. **Burton M. G.**, 2025a, Galactic transient sources with the Cherenkov Telescope Array Observatory, Monthly Notices Royal Astronomical Society, 540, 205, doi: 10.1093/mnras/staf655, https://ui.adsabs.harvard.edu/abs/2025MNRAS.540..205A

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Bernini-Peron M., et al., inc. **Sabhahit G. N.**, **Vink J. S.**, 2025, Coupling hydrodynamics with comoving frame radiative transfer: III. The Wind Regime of Early-Type B Hypergiants, Astronomy & Astrophysics, 697, A41, doi:10.1051/0004-6361/202554127, https://ui.adsabs.harvard.edu/abs/2025AA...697A..41B

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Brands S. A., et al., inc. **Vink J. S.**, 2025, X-Shooting ULLYSES: Massive stars at low metallicity: XII. Clumped winds of O-type (super)giants in the Large Magellanic Cloud, Astronomy & Astrophysics, 697, A54, doi:10.1051/0004-6361/202452784, https://ui.adsabs.harvard.edu/abs/2025AA...697A..54B

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Yu S., et al., inc. **Jeffery C. S.**, 2026a, The diverse morphology of gravitational wave signals from merging neutron star—white dwarf binaries, Monthly Notices Royal Astronomical Society, 545, staf2077, doi:10.1093/mnras/staf2077, https://ui.adsabs.harvard.edu/abs/2026MNRAS.545f2077Y

Yu W., et al., inc. **Ramsay G.**, 2026b, The evolutionary history of ultra-compact accreting binaries: I. Chemical abundances and the formation channel of the eclipsing AM CVn system ZTF J225237.05−051917.4 from HST spectroscopy, Astronomy & Astrophysics, 706, A14, doi:10.1051/0004-6361/202557568, https://ui.adsabs.harvard.edu/abs/2026AA...706A..14Y

Zeegers S. T., et al., inc. **Günay B.**, 2025, Investigating Silicate, Carbon, and Water in the Diffuse Interstellar Medium: The First Shots from WISCI, Astrophysical Journal, 987, 25, doi:10.3847/1538-4357/add73b, https://ui.adsabs.harvard.edu/abs/2025ApJ...987...25Z

Armagh Observatory and Planetarium
Non Refereed Journal Publications: April 2025 – March 2026

Avsar P., **Cubuk K. O.**, O'Connor T., Wilson H., Patton D., Moore Z. 2025. Lessons from earth, reimagined for space: why pressure ulcer science must follow us beyond the atmosphere. J Tissue Viability. 2026;35(1):100978. Doi: https://doi.org/10.1016/j.jtv.2025.100978

Christou A., Georgakarakos N., Cuk M., Dell'Oro A., **Marshall-Lee A.**, **Humpage A.**, 2025a, in AAS/Division of Dynamical Astronomy Meeting. New asteroid families among the Martian Trojans. p. 102.02

Christou A., Georgakarakos N., **Marshall-Lee A.**, **Humpage A**., Cuk M., Dell'Oro A., 2025b, in EPSC-DPS Joint Meeting 2025. Evidence for cascade disruption and for collisions among the Martian Trojans. pp EPSC–DPS2025–668, doi:10.5194/epsc-dps2025-668

Da Deppo V., et al., inc. **Bagnulo S.**, 2025, in Bernard F., Karafolas N., Kubik P., Minoglou K., eds, Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series Vol. 13699, International Conference on Space Optics — ICSO 2024. The EnVisS fish-eye camera for the Comet Interceptor ESA mission: design and performance. p. 136995Q, doi:10.1117/12.3071592

Dermott S., Li D., **Christou A.**, 2025, in AAS/Division of Dynamical Astronomy Meeting. Random walk transport of small asteroids from the Main Belt to the inner solar system. p. 102.01

Garcia R., et al., inc. **Christou A.**, 2025, in EPSC-DPS Joint Meeting 2025. VIVA (Venus' Interior, Volcanism and Atmosphere): a Venus mission to reveal unknown interior structure, thermosphere dynamics and meteoroid flux from atmospheric response to seismic waves, volcanic events and external forcings. pp EPSC– DPS2025–688, doi:10.5194/epsc-dps2025-688

Godson B, et al. inc. **Ramsay G.**, 2025, Astronomical Telegram 17237: Early rise and quiescent detection of V462 Lupi (AT 2025nlr) as observed by GOTO

Gray Z., **Bagnulo S.**, Cellino A., Kwon Y., Muñoz O., 2025, in EPSC-DPS Joint Meeting 2025. Investigating Surface Variability of Main-Belt Asteroid (203) Pompeja through Spectropolarimetry. pp EPSC–DPS2025–1565, doi:10.5194/epsc-dps2025-1565

Humpage A., 2025, in EPSC-DPS Joint Meeting 2025. The dynamics and evolution of simulated near-Earth asteroid families and interplanetary dust. pp EPSC–DPS2025–1560, doi:10.5194/epsc-dps2025-1560

Kumar A. P., **Shetye J.**, Sellers S., Christian D., 2026, in American Astronomical Society Meeting Abstracts. Nowcasting Solar Flares from Ca II K Peaks: Dunn Solar Telescope Pilot Results. p. 430.05

Marshall-Lee A., **Christou A.**, **Sivitilli A.**, **Humpage A.**, 2025, in EPSC-DPS Joint Meeting 2025. Predicting the origins of C-type family halo asteroids using ANNs. pp EPSC–DPS2025–1603, doi:10.5194/epsc-dps2025-1603

Moroni M., et al., inc. **Christou A.**, 2025, in EPSC-DPS Joint Meeting 2025. Effects of Comet Encke's meteoroid stream on the seasonal variation of Mercury's Ca exosphere. pp EPSC–DPS2025–406, doi:10.5194/epsc-dps2025-406

Nezic R., 2025, in EPSC-DPS Joint Meeting 2025. The view is out of this world! Using a portable planetarium dome to widen science interest and engagement in schools. pp EPSC–DPS2025–1260, doi:10.5194/epsc-dps2025-1260

O'Neil D., et al., inc. **Ramsay G.**, 2025, Astronomical Telegram 17400: A bright optical transient, GOTO054206.46-670106.66, close to the LMC

Plane J., et al., inc. **Christou A.**, 2025, in EPSC-DPS Joint Meeting 2025. Cosmic Dust Ablation and the Metallic Layers in the Upper Atmospheres of the Terrestrial Planets. pp EPSC–DPS2025–722, doi:10.5194/epsc-dps2025-722

Shetye J., 2025, in 246th Meeting of the American Astronomical Society. Hybrid Machine Learning Forecasting for Hemispheric Solar Activity: Integrating Burst Prediction with Cycle Continuity. p. 210.05

Shetye J., Sellers S., 2025, in 246th Meeting of the American Astronomical Society. Chromospheric Flare Signatures from C- to X-Class: A High-Resolution Statistical Survey with the Dunn Solar Telescope. p. 307.12

Sivitilli A., **Marshall-Lee A.**, **Christou A.**, 2025, in EPSC-DPS Joint Meeting 2025. Supporting Machine Learning-Based Asteroid Family Classification with Immersive Visualisation. pp EPSC–DPS2025–1601, doi:10.5194/epsc-dps2025-1601

Vink J. S., 2025, in Nanayakkara T., Maseda M., eds, IAU Symposium Vol. 19, IAU Symposium. Very massive stars and Nitrogen-emitting galaxies. pp 106–111 (arXiv:2410.18980), doi:10.1017/S1743921324002539

Zhang H., et al., inc. **Sarzi M.**, 2026, in American Astronomical Society Meeting Abstracts. Tracing black hole-galaxy co-evolution across cosmic time: supermassive black hole mass measurements using gas dynamics from the local universe to unprecedented redshifts. p. 336.03D

During the reporting year, G Ramsay published many reports related to the discovery of transients, and is directly related to his work on the GOTO and BlackGem projects. The Transient Name Server (TNS) is an IAU supported service which reports newly discovered extragalactic transients. He led or was co-I on 867 TNS Discovery Reports, 59 TNS Classification Reports and 11 TNS AstroNotes. In addition he led or was co-I on 57 GRB Coordinates Network Circular Service (GCNs), which report the results of optical follow-up of Gravitational Wave and Gamma-ray Burst events.

Appendix 2

Armagh Observatory and Planetarium
Presentations: April 2025 – March 2026

Date	Speaker	Title	Location/Mode	Category
01 Apr 2025	C. Furey	The Wind Properties of O-stars at Sub-SMC Metallicity	PhD Student Discussion Meeting, Armagh Observatory and Planetarium, Co. Armagh	Research
07 Apr 2025	G. N. Sabhahit	Hydrodynamical Mass-loss Predictions for Very Massive Stars	Munichfest 2025 Conference: Celebrating 40 Years of Research on Hot Luminous Stars, La Palma, Spain	Research
08 Apr 2025	C. Furey	The Wind Properties of O-stars at Sub-SMC Metallicity	Munichfest 2025 Conference: Celebrating 40 Years of Research on Hot Luminous Stars, La Palma, Spain	Research
08 Apr 2025	K. Trakakis	Determining the Physical Conditions of the Interstellar Medium and the Structure of the Milky Way Galaxy - Present Your Research 2025	PhD Student Discussion Meeting, Armagh Observatory and Planetarium, Co. Armagh	Research
11 Apr 2025	M. Burton	The Astronomical Observatories of Ireland and UNESCO	Communicating Astronomy at Historic Observatories, Royal Astronomical Society Specialist Discussion Meeting, Royal Irish Academy, Dublin, Co Dublin, Ireland	Research/ Outreach/ Heritage
11 Apr 2025	M. McMahon	Surveying the Astronomical Observatories of Ireland Telescopes: An Instrument Network	Communicating Astronomy at Historic Observatories, Royal Astronomical Society Specialist Discussion Meeting, Royal Irish Academy, Dublin, Co Dublin, Ireland	Research/ Outreach/ Heritage
23 Apr 2025	M. Burton	Meet an Astronomer	Data Visualisation Laboratory, Armagh Planetarium, Co. Armagh	Outreach
24 Apr 2025	G. Ramsay	Meet an Astronomer	Data Visualisation Laboratory, Armagh Planetarium, Co. Armagh	Outreach
05 May 2025	J. S. Vink	Meet an Astronomer	Data Visualisation Laboratory, Armagh Planetarium, Co. Armagh	Outreach
07 May 2025	C. Furey	Update on Early O Stars	XShootU Workshop, Vienna, Austria	Research
07 May 2025	G. N. Sabhahit	Update on XShootU Evolution Benchmarking	XShootU Workshop, Vienna, Austria	Research
08 May 2025	C. J. Butler	Trends and Cycles in the Armagh Long Meteorological Series	Conference of Irish Geographers, Queen's University Belfast, Co. Antrim	
11 May 2025	M. Burton	The OBC for the AOP Redevelopment Project (with Greg Cox, Grainne McVeigh and Stan Brown)	Casework Committee, Department for Communities, Belfast, Co. Antrim	Corporate
14 May 2025	J. S. Vink	Mass Accretion and Mass Loss	Origins Colloquium, Astronomy Department, University of Virginia, USA, (Online)	Research
15 May 2025	C. S. Jeffery	Large-amplitude Pulsations in Faint Blue Stars (BLAPs)	Seminar, Armagh Observatory and Planetarium, Co. Armagh	Research

19 May 2025	A. Christou	New Asteroid Families Among the Martian Trojans	56th Annual Meeting of the Division of Dynamical Astronomy of the AAS, Atlanta, Georgia, USA	Research
21 May 2025	C. S. Jeffery	Large-amplitude Pulsations in Faint Blue Stars (BLAPs)	12th Workshop on sdOB Stars and Related Objects, Little Switzerland, N. Carolina, USA	Research
23 May 2025	A. Philip Monai	Unsupervised Approach to Spectral Classification of Hot Subdwarfs	12th Workshop on sdOB Stars and Related Objects, Little Switzerland, N. Carolina, USA	Research
30 May 2025	M. E. Bailey	Super Comets: Origins and Implications for Earth History	OM Dark Sky Observatory, Davagh Forest, Omagh, Co. Tyrone	Outreach
10 Jun 2025	J. S. Vink	Nitrogen Enrichment of Very Massive Stars	IAU Symposium 396: Massive Galaxies Across the Universe, Naples, Italy	Research
11 Jun 2025	M. E. Bailey	Giant Comets and Their Impacts Through Time	13th International Conference on the INSpiration of Astronomical Phenomena (INSAP XIII), Queen's University Belfast, Co Antrim	Research
13 Jun 2025	M. Burton	Engendering a Sense of Place Through the Astronomical Observatories of Ireland	13th International Conference on the INSpiration of Astronomical Phenomena (INSAP XIII), Armagh Planetarium, Co. Armagh	Outreach/ Heritage
13 Jun 2025	M. McMahon	Democracy in the Planetarium	13th International Conference on the INSpiration of Astronomical Phenomena (INSAP XIII), Armagh Planetarium, Co. Armagh	Outreach/ Heritage
18 Jun 2025	S. Bagnulo	NEOPOPs Polarimetry	NEOPOPs - Near-Earth Object Physical Observations and Properties Simulations Kick-Off Meeting, Rome, Italy	Research
18 Jun 2025	K. Trakakis	Determining the Physical Conditions of the Interstellar Medium and the Structure of the Milky Way Galaxy	Gas in Galaxies Workshop, University of Cardiff, Cardiff, Wales	Research
18 Jun 2025	J. S. Vink	Space: Stars, Planets, Galaxies, Black Holes	St. Teresa Primary School, Belfast, Co. Antrim	Outreach
23 Jun 2025	J. S. Vink	Chemical Enrichment by Very Massive Stars	European Astronomical Society (EAS) Annual Meeting, University College Cork, Co. Cork, Ireland	Research
25 Jun 2025	C. Furey	The Winds of Low Metallicity Massive Stars: A UV Perspective	European Astronomical Society (EAS) Annual Meeting, University College Cork, Co. Cork, Ireland	Research
25 Jun 2025	J. S. Vink	Very High Energy View on Massive Stellar Ecosystems	European Astronomical Society (EAS) Annual Meeting, University College Cork, Co. Cork, Ireland	Research
26 Jun 2026	C. S. Jeffery	The Populations and Products of Merging Double White Dwarfs	European Astronomical Society (EAS) Annual Meeting, University College Cork, Co. Cork, Ireland	Research
27 Jun 2025	M. Burton	Astronomy and World Heritage – Some Recent UNESCO Inscriptions	European Astronomical Society (EAS) Annual Meeting, University College Cork, Co. Cork, Ireland	Research/ Heritage
27 Jun 2025	M. Burton	Armagh, Birr and Dunsink Observatories – Prospects for World Heritage	European Astronomical Society (EAS) Annual Meeting, University College Cork, Co. Cork, Ireland	Research/ Heritage
01 Jul 2025	M. Burton	The Astronomical Observatories of Ireland Tentative List Sites	World Heritage UK Webinar (online)	Outreach/ Heritage

03 Jul 2025	M. Sarzi	Meet an Astronomer	Data Visualisation Laboratory, Armagh Planetarium, Co. Armagh	Outreach
09 Jul 2025	M. Burton	The Search for Life Elsewhere	Cosmic Conversations, Armagh Planetarium, Co. Armagh	Outreach
10 Jul 2025	J. S. Vink	Meet an Astronomer	Data Visualisation Laboratory, Armagh Planetarium, Co. Armagh	Outreach
14 Jul 2025	M. Burton	230 Years of Measuring the Weather in Armagh (compering with Heather Alexander and the AOP Met Observers)	Family Fun Day, Armagh Observatory and Planetarium, Co. Armagh	Outreach
17 Jul 2025	A. Christou	Meet an Astronomer	Data Visualisation Laboratory, Armagh Planetarium, Co. Armagh	Outreach
23 Jul 2025	M. Burton	A Hitchhiker's Guide to the Solar System	Cosmic Conversations, Armagh Planetarium, Co. Armagh	Outreach
24 Jul 2025	M. Burton	Meet an Astronomer	Data Visualisation Laboratory, Armagh Planetarium, Co. Armagh	Outreach
31 Jul 2025	S. Bagnulo	Meet an Astronomer	Data Visualisation Laboratory, Armagh Planetarium, Co. Armagh	Outreach
06 Aug 2025	M. Burton	The First Light in the Universe	Cosmic Conversations, Armagh Planetarium, Co. Armagh	Outreach
07 Aug 2025	M. Burton	Meet an Astronomer	Data Visualisation Laboratory, Armagh Planetarium, Co. Armagh	Outreach
08 Aug 2025	M. E. Bailey	Carleton's Astronomy: In His Own Words	William Carleton Summer School "Ulster Voices", Fivemiletown Library, Fivemiletown, Co Tyrone	Outreach
14 Aug 2025	C. S. Jeffery	Meet an Astronomer	Data Visualisation Laboratory, Armagh Planetarium, Co. Armagh	Outreach
21 Aug 2025	G. Ramsay	Meet an Astronomer	Data Visualisation Laboratory, Armagh Planetarium, Co. Armagh	Outreach
25 Aug 2025	C. S. Jeffery	Binaries and Merged Binaries from the SALT Survey of Helium-rich Hot Subdwarfs	Binary Stars in a New Era Conference, Lijiang, China	Research
28 Aug 2025	M. Sarzi	Meet an Astronomer	Data Visualisation Laboratory, Armagh Planetarium, Co. Armagh	Outreach
31 Aug 2025	M. Burton	The UNESCO Application of the Astronomical Observatories of Ireland	Workshop on Classical Observatories and UNESCO World Heritage, IAU Commission C4 (Astronomy and World Heritage), Hamburg Observatory, Germany	Research/ Heritage
02 Sep 2025	J. S. Vink	The Most Massive Stars and Multiple Populations.	Bridging Scales: Star Clusters and Their Host Galaxies from the Local to the High-z Universe Conference, Matera, Italy	Research
09 Sep 2025	K. Trakakis	Determining the Physical Conditions of the Interstellar Medium and the Structure of the Milky Way Galaxy	JCMT Summer School 2025, University College London, London, England	Research
10 Sep 2025	S. Bagnulo	The Variability of Magnetic White Dwarfs	Solar Polarisation Workshop 11, Prague, Czech Republic	Research
11 Sep 2025	A. Marshall Lee	Predicting the Origins of C-type Family Halos Using ANNs	EPSC-DPS Joint Meeting 2025, Helsinki, Finland	Research

11 Sep 2025	R. Nežič	The View is Out of this World! Using a Portable Planetarium Dome to Widen Science Interest and Engagement in Schools	EPSC-DPS Joint Meeting 2025, Helsinki, Finland	Research/ Outreach
15 Sep 2025	A. Marshall Lee	The Night Sky and Using a Telescope. A Live Presentation	Finn Lough Resort, Enniskillen, Co. Fermanagh	Outreach
16 Sep 2025	M. E. Bailey	Armagh Observatory: Measuring Climate Change Over More Than 230 Years	"41 Club", Omagh County Club, Omagh, Co. Tyrone	Outreach
17 Sep 2025	K. O. Çubuk	A Dome for Everyone	Digistar User Group Conference, Birmingham, England	Outreach
19 Sep 2025	C. Furey	Update on Early O stars	XShootU Workshop, Ensenada, Baja California, Mexico	Research
18 Sep 2025	J. S. Vink	The Heaviest Black Holes	IAU Symposium 402: Massive Stars Across Redshifts in the Era of WST and Large Surveys, Ensenada, Baha California, Mexico	Research
22 Sep 2025	G. N. Sabhahit	Winds and Ionising Fluxes from Very Massive Stars in the Early Universe	Hera 2025 Workshop, Pisa, Italy	Research
23 Sep 2025	K. O. Çubuk	What is astronomy?	Belfast Model School for Girls, Belfast, Co. Antrim (STEM Ambassador)	Outreach
24 Sep 2025	G. Ramsay	AM CVn Binaries and the Disc Instability Model	The 50th Anniversary Workshop of the Disk Instability Model in Compact Binary Stars, Tomakomai, Japan	Research
29 Sep 2025	K. O. Çubuk	What is astronomy?	Mercy College Belfast, Belfast, Co. Antrim (STEM Ambassador)	Outreach
30 Sep 2025	M. Burton	The Astronomical Observatories of Ireland: Progress Towards World Heritage	Alliance of Historic Observatories Annual Meeting, Lowell Observatory, Flagstaff, Arizona, USA (online)	Research/ Outreach/ Heritage
30 Sep 2025	M. Stroet	Polarimetry and PCA -- Magnetic White Dwarf Variability	PhD Student Discussion Meeting, Armagh Observatory and Planetarium, Co. Armagh	Research
02 Oct 2025	A. Marshall Lee	Pre-telescope Astronomy	Royal Institution Christmas Lectures Youth Summit Event, Armagh Planetarium, Co. Armagh	Outreach
02 Oct 2025	K. Trakakis	What Did They Know? And How to Stand on the Shoulders of Giants	Royal Institution Christmas Lectures Youth Summit Event, Armagh Planetarium, Co. Armagh	Outreach
04 Oct 2025	C. Furey, A. Philip Monai, K. Trakakis	Making Sense of the Universe Through Pictures	Family Fun Day, Armagh Planetarium, Co. Armagh	Outreach
07 Oct 2025	G. N. Sabhahit	Stellar Winds of Very Massive Stars	Indian Institute of Astrophysics, Bangalore, India	Research
09 Oct 2025	M. Burton	Partiview – Data Visualisation of Three-Dimensional Catalogues in the Dome	Data Visualisation Workshop, AOP Data Visualisation Laboratory, Armagh Planetarium, Co Armagh	Research
16 Oct 2025	M. Burton	An Introduction to the Armagh Observatory and Planetarium	DfC Financial Management Directorate, Armagh Planetarium, Co. Armagh	Corporate/ Outreach
16 Oct 2025	M. Burton	The Historic Astronomical Observatories of Ireland	Virginia Historical Society, Virginia Library, Co. Cavan, Ireland	Outreach

23 Oct 2025	M. Burton	The Armagh Observatory and Planetarium – Place, Space and Time	QUB “Geographies of Outer Space” Course Field Trip, Armagh Planetarium, Co. Armagh	Education
23 Oct 2025	G. Ramsay	AM CVn Binaries and the Disc Instability Model	Seminar, Armagh Observatory and Planetarium, Co. Armagh	Research
28 Oct 2025	M. Burton	Meet an Astronomer	Data Visualisation Laboratory, Armagh Planetarium, Co. Armagh	Outreach
29 Oct 2025	A. Christou	Meet an Astronomer	Data Visualisation Laboratory, Armagh Planetarium, Co. Armagh	Outreach
30 Oct 2025	R. Begley	Meet an Astronomer	Data Visualisation Laboratory, Armagh Planetarium, Co. Armagh	Outreach
31 Oct 2025	C. Furey	The Terrors of Space	Stargazing Evening, Armagh Observatory and Planetarium, Co. Armagh	Outreach
31 Oct 2025	A. Marshall Lee	The Night Sky and Using a Telescope. A Live Presentation	Stargazing Evening, Armagh Observatory and Planetarium, Co. Armagh	Outreach
02 Nov 2025	M. Burton	UNESCO World Heritage and the Historic Astronomical Observatories of Ireland	Mayo Dark Sky Festival, Newport Hotel, Newport, Co. Mayo, Ireland	Outreach/ Heritage
03 Nov 2025	M. E. Bailey	Armagh Observatory: History and Climate Change Over More Than 230 Years	Causeway U3A, Portstewart, Co. Antrim	Outreach
20 Nov 2025	C. Furey	Core Collapse Supernovae and Gravitational Wave Events in Massive Binaries	IAU G2 Commission (online)	Research
28 Nov 2025	A. Marshall Lee	History of the Solar System	Stargazing Evening, Armagh Observatory and Planetarium, Co. Armagh	Outreach
28 Nov 2025	A. Philip Monai	Data Visualisation Lab	Stargazing Evening, Armagh Observatory and Planetarium, Co. Armagh	Outreach
Nov 2025 - Mar 2026	R. Begley	I'm a Scientist	Online. Text-based, Interactive STEM Engagement Programme Connecting School Students Aged 10 to 18 with Scientists (Participated in 12 engagement sessions).	Outreach
01 Dec 2025	M. E. Bailey	Giant Comets and Their Impacts Through Time: The Remarkable Comet Encke	Northern Ireland Amateur Astronomy Society (NIAAS), Ballyclare, Co. Antrim	Outreach
05 Dec 2025	C. Furey	Update on Early O Stars	XShootU Meeting (online)	Research
05 Dec 2025	C. Furey	Update on Archival Galactic Sample	XShootU Meeting (online)	Research
09 Dec 2025	M. E. Bailey	Giant Comets and Their Impacts Through Time: The Remarkable Comet Encke	Benburb Priory Library and Museum, Benburb, Co. Tyrone	Outreach
09 Dec 2025	A. Philip Monai	Machine Learning 101: Supervised vs Unsupervised Learning	PhD Student Discussion Meeting, Armagh Observatory and Planetarium, Co. Armagh	Research
11 Dec 2025	A. Marshall Lee	The Night Sky and Using a Telescope. A Live Presentation	Stargazing Evening, Armagh Observatory and Planetarium, Co. Armagh	Outreach
16 Dec 2025	G. Ramsay	Space Missions – How They Happen	PhD Student Discussion Meeting, Armagh Observatory and Planetarium, Co. Armagh	Research
Jan 2026 - Aug 2026	A. Philip Monai A. Marshall Lee	Demystifying AI	Video presentation playing in Copernicus Hall, Armagh Planetarium, Co. Armagh	Research

19 Jan 2026	S. Bagnulo	The Magnetic Field of Isolated White Dwarfs	Space Research Institute (IWF), Graz, Austria	Research
20 Jan 2026	R. Begley	The EXCELS Survey: A Spectroscopic Investigation of the Ionizing Properties of Star-forming Galaxies	The Growth of Galaxies in the Early Universe, XI Conference, Sexten, Italy	Research
02 Feb 2026	A. Christou	The European Summer Eclipses of 2026 and 2027	Ballyclare High School, Ballyclare, Co Antrim	Outreach
03 Feb 2026	T. Mitchell	HARPS-N Solar Pitch	HARPS-N Meeting (Virtual), Geneva	Research
05 Feb 2026	C. S. Jeffery	Stellar Pulsation	Topics in Astrophysics, AOP/QUB PhD Programme, Armagh Observatory and Planetarium, Co. Armagh	Teaching
10 Feb 2026	G. Ramsay	Meet an Astronomer	Data Visualisation Laboratory, Armagh Planetarium, Co. Armagh	Outreach
11 Feb 2026	M. Burton	Meet an Astronomer	From Armagh Observatory to the Exploration of the Solar System, Data Visualisation Laboratory, Armagh Planetarium, Co. Armagh	Outreach
12 Feb 2026	R. Begley	Meet an Astronomer	Data Visualisation Laboratory, Armagh Planetarium, Co. Armagh	Outreach
12 Feb 2026	J. S. Vink	Radiative Transfer and Stellar Winds, Massive Stars, Black Holes and GWs	Topics in Astrophysics, AOP/QUB PhD Programme, Armagh Observatory and Planetarium, Co. Armagh	Teaching
13 Feb 2026	A. Christou	Meet an Astronomer	Data Visualisation Laboratory, Armagh Planetarium, Co. Armagh	Outreach
13 Feb 2026	A. Marshall Lee	The Night Sky and Using a Telescope. A Live Presentation	Stargazing Evening, Armagh Observatory and Planetarium, Co. Armagh	Outreach
13 Feb 2026	T. Mitchell	A Talk About Exoplanets	Stargazing Evening, Armagh Observatory and Planetarium, Co. Armagh	Outreach
13 Feb 2026	A. Philip Monai	Data Visualisation Lab	Stargazing Evening, Armagh Observatory and Planetarium, Co. Armagh	Outreach
17 Feb 2026	M. Burton	From Armagh Observatory to the Exploration of the Solar System	Northern Ireland Space Showcase, Armagh Planetarium, Co. Armagh	Outreach
17 Feb 2026	K. Trakakis	Determining the Physical Conditions of the Interstellar Medium and the Structure of the Milky Way Galaxy – Present Your Research 2026	PhD Student Discussion Meeting, Armagh Observatory and Planetarium, Co. Armagh	Research
19 Feb 2026	M. Sarzi	Galaxy Formation and Evolution, Through the Eyes of Integral-field Spectroscopy	Topics in Astrophysics, AOP/QUB PhD Programme, Armagh Observatory and Planetarium, Co. Armagh	Teaching
20 Feb 2026	A. Marshall Lee	Unintuitive Physics	Stargazing Evening, Armagh Observatory and Planetarium, Co. Armagh	Outreach
25 Feb 2026	AOP PhD Students	Student Research Jamboree	Maynooth University Undergraduate Students Visit, Armagh Observatory and Planetarium, Co. Armagh	Research
26 Feb 2026	M. Burton	Our Galaxy: Gas and Dust Amid the Stars	Topics in Astrophysics, AOP/QUB PhD Programme, Armagh Observatory and Planetarium, Co. Armagh	Teaching

27 Feb 2026	M. McMahon	Theatre of the Cosmos	School of Natural and Built Environment Research Day, Queen's University Belfast, Co. Antrim	Research/ History
03 Mar 2026	C. S. Jeffery	Modelling the Spectrum of a Shocked Star	IAU Commission G5 Seminar Series (online)	Research
04 Mar 2026	G. Ramsay	The Keplerian Revolution	Irish Astronomical Association Seminar, Queen's University Belfast, Co. Antrim	Outreach
05 Mar 2026	G. Ramsay	The Keplerian Revolution	Seminar, Armagh Observatory and Planetarium, Co. Armagh	Research
05 Mar 2026	S. Bagnulo	Introduction to Nighttime Polarimetry	Topics in Astrophysics, AOP/QUB PhD Programme, Armagh Observatory and Planetarium, Co. Armagh	Teaching
12 Mar 2026	R. Begley	The Epoch of Reionization and Galaxies in the High-redshift Universe	Topics in Astrophysics, AOP/QUB PhD Programme, Armagh Observatory and Planetarium, Co. Armagh	Teaching
12 Mar 2026	M. Burton	The AOP Redevelopment Project	Launch of the AOP Redevelopment Project, Armagh Planetarium, Co. Armagh	Outreach
19 Mar 2026	A. Christou	A Short Introduction to Orbital Motion	Topics in Astrophysics, AOP/QUB PhD Programme, Armagh Observatory and Planetarium, Co. Armagh	Teaching
24 Mar 2026	M. Stroet	Are Seemingly Constant Magnetic White Dwarfs Rapidly Rotating?	UK White Dwarf Meeting 2026, Queens' College, Cambridge, England	Research
26 Mar 2026	E. Manson	Decolonising Astronomical Science: The Geopolitically Networked Heritage of Irish Astronomy at Boyden Observatory, South Africa, 1950-1978	Observatory Networks Revisited Conference, National Maritime Museum Greenwich, London, England	History/ Research
26 Mar 2026	M. McMahon	The Grubb ‘Standard’ Equatorial At Armagh	Observatory Networks Revisited Conference, National Maritime Museum Greenwich, London, England	History/ Research
26 Mar 2026	G. Ramsay	Activity on the Sun and Other Stars	Topics in Astrophysics, AOP/QUB PhD Programme, Armagh Observatory and Planetarium, Co. Armagh	Teaching
26 Mar 2026	G. Ramsay	Multi-Messenger Astronomy	Topics in Astrophysics, AOP/QUB PhD Programme, Armagh Observatory and Planetarium, Co. Armagh	Teaching
27 Mar 2026	R. Begley	Demystify AI	Armagh Planetarium, Co. Armagh (STEM Ambassador)	Outreach
31 Mar 2026	M. Stroet	Are Seemingly Constant Magnetic White Dwarfs Rapidly Rotating?	PhD Student Discussion Meeting, Armagh Observatory and Planetarium, Co. Armagh	Research

Armagh Observatory and Planetarium
PhD Theses: April 2025 – March 2026

Placing astronomy: landscape, space and science at Armagh Observatory, 1790-1916.
Black, A. (Author). Dec 2025
Student thesis: Doctoral Thesis › Doctor of Philosophy
https://pure.qub.ac.uk/en/studentTheses/placing-astronomy-landscape-space-and-science-at-armagh-observato/

2026-2027
The dynamics and evolution of simulated near-earth asteroid families and interplanetary dust
Humpage, A. J. (Author). Jul 2026
Student thesis: Doctoral Thesis › Thesis with Publications
https://pure.qub.ac.uk/en/studentTheses/the-dynamics-and-evolution-of-simulated-near-earth-asteroid-famil/

Progenitors of heavy black holes from stellar evolution
Winch, E. R. J. (Author). Jul 2026
Student thesis: Doctoral Thesis › Doctor of Philosophy
https://pure.qub.ac.uk/en/studentTheses/progenitors-of-heavy-black-holes-from-stellar-evolution/

Appendix 3

Armagh Observatory and Planetarium
Education and Outreach: April 2025 – March 2026

Date	Event Description
Apr 2025 – Mar 2026	Outreach at various locations with the portable dome through AOP bookings or RI bookings
Apr 2025 – Mar 2026	In-reach from school and groups for Planetarium activities
Apr 2025 – Mar 2026	Non-term time events seasonally
Apr 2025 – Mar 2026	The Legendary Telescope Tours at Armagh Observatory
Apr 2025 – Mar 2026	DVL sessions seasonally
Apr 2025 – Mar 2026	Little Astronomers activity days various dates
Apr 2025 – Mar 2026	Accessible Sunday events quarterly throughout the year
Apr 2025 – Mar 2026	Weekend dome shows and during school holidays
Apr 2025	Inclusive & Accessible Tourism Workshop at The Ebrington Hotel
4 May 2025	International Star Wars Day: May The 4th Be With You
7 May 2025	Celebration of 100 years of Planetaria event
3 June 2025	ESB Science Blast – Belfast Outreach
June-August 2025	Stellar Science lab activities for summer in Cop. Hall
June 2025	Queen music screening at 4pm at weekends
July & Aug 2025	Telescope Tuesday events
14 July 2025	Family Fun Day for weather anniversary
July-August 2025	Cosmic Conversations with Michael Burton various dates in summer
21 August 2025	Ulster Museum Late outreach event
6 Sept 2025	Armagh Food and Cider Festival with ABC Council
13 Sept 2025	European Heritage Open Day Tours
22-30 Sept 2025	SRC Freshers outreach events – various campus
Oct-Dec 2025	Various sleepover events for uniform groups
Oct 2025-Mar 2026	Stargazing evening events – monthly
Oct 2025-Mar 2026	Paint and Sip evening events quarterly
2 Oct 2025	RI Youth Summit event
4 Oct 2025	Meet our PhD students event in Cop Hall for World Space Week
4-5 Oct 2025	International Observe the Moon event
8 Oct 2026	Grubb – 140-year birthday event
Oct 2025	Doom it Yourself – Live science show from AOP
Oct 2025	Last screening of Pink Floyd:50 Anniversary dome show
2 Nov 2025	25 Years Anniversary of ISS in space event
6 Nov 2025	Quadcopter finals event held in Cop Hall
19 Nov 2025	ITOA workshop – Slieve Donard
20 Nov 2025	Weatherbies STEM event
25 Nov 2025	Tourism Masterclass event at Royal School Outreach
25 Nov 2025	Space to Learn Careers Event at W5
27-30 Nov 2025	Georgian Festival activities inc. Observatory Tours

Date	Event Description
Nov-Dec	Mission Santa
Dec 2025	Festive wee planets in-house dome show events
Dec 2025	Christmas Lecturers Livestream event – various dates onsite
10 Jan 2026	Force Academy Training Events
24 Jan 2026	Holiday World showcase - Dublin
10-14 Feb 2026	The Ultimate Bubble show
11 Feb 2026	Women in Space Science: careers and Research event
17 Feb 2026	NI Space showcase in Cop Hall
21&22 Feb 2026	Orienteering at the Planetarium (NISF)
21 Feb 2026	Force Academy Training events
3-5 Mar 2026	Engineering Event for schools (Egg Drop activity)
10 Mar 2026	Experience the Calver Telescope event
17 Mar 2026	Paint and Pop kids event
March 2026	National Lottery Open Week events
26 & 27 Mar 2026	TNI Meet the Buyer Event – ICC Belfast

Armagh Observatory and Planetarium
Conferences/External Hire: April 2025 – March 2026

Date	Conference Title
Various Dates	Sound Journey under the Stars event (Hire of Dome)
Various Dates	Mesmerica/Beautifica corporate hire events of the dome
5 June 2025	Cancer Research UK Corporate Hire
10 June 2025	Solid Solutions Corporate Hire
13 June 2025	INSAP 13 conference in Cop Hall
20 & 27 June 2025	Music for Dome Corporate dome event
18 Sept 2025	Climate Change Division DfC - boardroom
8 October 2025	Armagh Council boardroom booking
16 October 2025	DFC finance directorate planning /strategic session
17 Jan 2026	EPIC entertainment Cop Hall Hire for kids event
8 Feb 2026	Terry Mosely birthday – Cop Hall hire
9 Feb 2026	Hire of Planetarium for Mae Murray visit
1 Mar 2026	Breathworks event – Hire of dome

Armagh Observatory and Planetarium
STEM Ambassadors: April 2025 – March 2026

Number of schools engaged:

Metric	2025/6
Number Primary schools reached	131
Number primary > 1 engagement	41
Number Secondary schools reached	131
Number secondary > 1 engagement	78
Number FE reached	6
Number FE > 1 engagement	4

We have representation from 187 organisations on the platform.
Activities by type as follows:

25/26		
Activity Type	# Activities	# Interactions
Practical activity	146	391
Presentation or Q&A	116	120
Training / Networking for STEM Ambassadors	75	117
Festival, exhibition or public event	51	70
Workplace visit	44	44
Careers fair	30	33
Support a Club	29	29
Mentoring	27	33
Mock interviews	24	26
Other	24	24
Work experience	20	21
Speed networking	16	17
Judging a competition or challenges	15	25
Advise educators	12	13
Supporting a student project/competition	10	31
Careers advice	9	9
Content or resource creation	9	10
Tutoring	8	8
Be an Enterprise Advisor	5	5
Be a school Governor	2	2
CV advice	2	2
Run a STEM Club	2	6
Supporting climate action plans	1	1
Total	**677**	**1037**