

# The Armagh Observatory and Planetarium

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Annual Report and Accounts for 2015/2016,  
year ended 31 March 2016

Laid before the Northern Ireland Assembly by the Department for Communities 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) Order 2003, on 7 February 2018.







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This publication is also available from our websites at [www.arm.ac.uk](http://www.arm.ac.uk) and [www.armaghplanet.com](http://www.armaghplanet.com)



# The Armagh Observatory and Planetarium Annual Report and Accounts for 2015/2016, year ended 31 March 2016

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## **The Trustees' Annual Report for the year ended 31 March 2016**

The Board of Governors, who are the Trustees for the Armagh Observatory and Planetarium has pleasure in presenting its annual report and financial statements for these two charities for the year ended 31 March 2016. 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 published on 16 July 2014.

The sponsor Department for the Armagh Observatory and Planetarium was the Department for Culture, Arts and Leisure (DCAL) until May 2016 when this was superseded by the Department for Communities (DfC)

### **Background to charitable status**

Historically the Armagh Observatory and the Armagh Planetarium were treated as being distinct institutions; being two component divisions of a single statutory corporation and arms-length body (ALB), 'The Governors of the Armagh Observatory and Planetarium' 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 This 1995 Order superseded the original 1791 Act of the Irish Parliament entitled '*An Act for Settling and Preserving a Public Observatory and Museum in the City of Armagh For Ever*',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 1938 ('The University and Collegiate and Scientific Institutions Act [Northern Ireland], 1938').

The Armagh Observatory is a recognized charity (reference XN 46022). The principal function of the Observatory, founded in 1789 as part of Archbishop Richard Robinson's vision to see the creation of a university in the City of Armagh, is to undertake original research of a world-class academic standard that broadens and expands our understanding of astronomy and related sciences.

The Armagh Planetarium, which is also a recognized charity (reference XN 48022), was founded by Dr Eric Mervyn Lindsay, the seventh director of the Armagh Observatory, and was officially opened on 1 May 1968. The Planetarium's primary activity is to disseminate scientific and technical knowledge of a wide range of scientific and STEM subjects, and to promote public understanding of astronomy and science through its programme of educational services for schools and the wider public.

From 1 April 2016 the Charity Commission for Northern Ireland has registered *The Governors of the Armagh Observatory and Planetarium* as a single charity. The 'unified' charity's reference number is NIC103948.

# **ARMAGH OBSERVATORY**

## **Objectives and Activities**

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

The organization's statutory functions are set out at Article 4 of *The Armagh Observatory and Planetarium (Northern Ireland) Order 1995*. 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'*.

The Vision of the Armagh Observatory, as derived from this legislation, is:

*'To build on its position as a thriving astronomical research institute, and to continue to expand our understanding of the Universe and of humanity's place in it.'*

Its Mission is :

*'To advance the knowledge and understanding of astronomy and related sciences through the execution, promotion and dissemination of astronomical research nationally and internationally in order to enrich the intellectual, economic, social and cultural life of the community.'*

Thus, the principal charitable objective of the Armagh Observatory which provides a significant public benefit, is to undertake original research of a world-class academic standard that broadens and expands our understanding of astronomy and related sciences. Important secondary functions include the organization's responsibilities to (i) promote, preserve and widen access to the heritage of astronomy at Armagh; (ii) maintain the continuity and precision of the unique more than 220-year long meteorological record at Armagh; and (iii) pursue a vibrant programme of Science in the Community in support of the Northern Ireland Executive's Science, Technology, Engineering and Mathematics (STEM) Strategy and the strategic goals of the former DCAL's Learning Strategy.

As part of the programme of Science in the Community, the Observatory undertakes a wide range of community service programmes in astronomy and related sciences and represents Northern Ireland on the national and international stage. Taken together, these activities feed into many areas of government policy, particularly those directed towards improving the economy, education and lifelong learning, and enhancing the attractiveness of Northern Ireland to national and international visitors.

There is a fluctuating population of approximately 35 staff and students, which at the end of 2015/16 included the Director, 7 Research Astronomers / Fellows, 3 PDRAs and 11 PhD students). There were also 6 external research associates and academic visitors. The Observatory has an active visitors programme, each year hosting typically between 10 and 20 temporary academic visitors from abroad, people who visit Armagh for periods ranging from one day up to several weeks at a time.

This group operates on the international stage and is underpinned by core funding from the former DCAL (the Department) and the receipt of external grants from the UK Science and Technology Facilities Council (STFC), the Leverhulme Trust and other grant-awarding bodies.

It is noteworthy that the use by Armagh Observatory staff of UK and international facilities located abroad or in space, which are paid for by the STFC from central UK government funds, corresponds to a further very significant element of external income 'in kind'. Thus, by operating on the international stage, the Armagh Observatory provides a very high rate of return per pound on the Department's and the NI Executive's support for astronomy at Armagh.

## **Principal Activities**

### **Research**

The Observatory carries out front-line astronomical research in three key areas of astrophysics, namely: Solar-System Science, Solar Physics, and Stellar and Galactic Astrophysics. Solar-System research encompasses the dynamical structure, evolution and origin of objects in the inner and outer solar system and comparative planetology and meteor physics. Solar Physics research uses data from spacecraft (for example SoHO [Solar and Heliospheric Observatory], Hinode, Stereo and SDO [Solar Dynamics Observatory]) and ground-based facilities (for example the Dunn Solar Telescope at Sacramento Peak Observatory and the New Solar Telescope at Big Bear Solar Observatory) to study fundamental questions such as how the Sun's outer atmosphere is heated, what drives the solar wind and the Sun's variable magnetic activity and its resulting effect on the Earth's climate. The Observatory's Stellar and Galactic research includes a wide range of investigations into the formation and evolution of stars. This takes into account factors such as a star's mass and evolutionary stage (from birth to the end of a star's lifetime); the interactions between stars; stellar mass loss through stellar winds; stellar oscillations and what they tell us about a

star's interior structure; stellar magnetic fields; extreme chemical abundances; the details of accretion physics; and wide-field surveys to discover a diverse range of astrophysically important short-period variable stars. Staff also carry out research on exoplanets and on objects called brown dwarfs, which are intermediate in mass between the largest planets and the smallest stars.

The breadth of these research themes illustrates the Observatory's primary long-term research function. The projects are often funded by external (i.e. non-Department) funding agencies with lead times of typically one or two years; they are normally led by an individual Research Astronomer and often require up to 3–5 years for completion.

### **Computer Facilities**

The Observatory's comprehensive computer facilities are used primarily for numerical analysis, computer modelling and data reduction. The computers and peripherals are largely funded by the Department, but occasionally by external research grants, for example those funded by the STFC, the Leverhulme Trust and various EU grants. Staff require access to high-end iMac and Linux workstations, and also have access to the Stokes supercomputer at the Irish Centre for High-End Computing (ICHEC), and through this facility to occasional advanced computer training programmes.

The Observatory has four high-performance computer systems, namely: 'Polar', with 4 x 64-bit AMD Opteron processors each having 16 cores giving a total of 64 processing units and with 128GB RAM; 'Polar2', with 4 x 64-bit AMD Opteron processors each having 16 cores giving a total of 64 processing units and with 128GB RAM; 'Eddington', with 2 x 64-bit Intel Xeon processors each having 8 cores giving a total of 16 processing units and with 132GB RAM; and 'm15', with 2 x 64 bit Intel Xeon processors each having 8 cores giving a total of 16 processing units and with 48 GB RAM.

These computing resources are used mainly for computationally intensive research projects in observational and theoretical astrophysics (including data reduction and modelling) in areas such as solar physics, stellar atmospheres and polarimetry, stellar winds, radiation hydrodynamics, numerical magneto-hydrodynamics, and solar system dynamics. In addition, the Observatory has over 130TB of on-line storage capacity. The internal network is a 1 Gbps backbone ethernet linked with switched hubs and the external connection to the Internet is via a commercial ISP, Atlas, and operates at 100Mbps both upstream and downstream.

### **Meteorological Record**

As part of the Observatory's primary research role, staff take daily readings of a wide range of meteorological parameters at Armagh and maintain a unique 220-year long meteorological record and data-bank (<http://climate.arm.ac.uk/>). This is believed to be the longest daily climate series in the UK and Ireland from a single site and one of the longest in the world. The climate station has been continuously maintained since 1794 December, with readings currently taken every day at 09:00 (GMT).

Calibration of these data has enabled researchers and government agencies to use the Armagh series for reports and research into global warming, and the data are released to the general public on a monthly basis through the Observatory's press releases and the Observatory's climate website (<http://climate.arm.ac.uk>), whilst also contributing to the UK Meteorological Office's main climate database. Climate change is a subject of strategic importance for Northern Ireland as we move into an era of rapid climate variability, and the Armagh Observatory'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.

### **International Standing**

The Armagh Observatory provides a strong, positive image of Northern Ireland on the international stage. Members of staff play a full role in the international astronomical community, for example serving on committees of bodies such as the Science and Technology Facilities Council (STFC), the Royal Astronomical Society, the Royal Irish Academy, and the International Astronomical Union (IAU); assessing grant and research proposals on behalf of external funding agencies; and reviewing scientific papers and editing international academic journals.

In addition, Observatory staff have access to world-class international facilities provided through STFC and UK Government subscriptions and bilateral agreements and collaborations involving individual Armagh Observatory research staff. Observatory staff regularly obtain telescope time on national and international facilities such as the ESO Very Large Telescope and various spacecraft missions (such as SoHO, SDO, Hinode, Stereo, Swift, XMM-Newton, and the Hubble Space Telescope).

Academic Staff obtain research grants from a wide range of grant awarding bodies (e.g. the STFC, the Royal Society, the Leverhulme Trust, British Council etc.), and through the Observatory's membership of the UK SALT Consortium (UKSC) have access to the 11-metre diameter Southern African Large Telescope (SALT) located at the Sutherland Observatory, South Africa. Complementing these international facilities, restoration of the Observatory's historic telescopes has brought opportunities to reintroduce some visual observing from Armagh, while new computer and camera technology has enabled a variety of new automatic observational programmes to be introduced from Armagh, recording data autonomously whenever the sky is clear.

## **Science in the Community - Developing the Social and Cultural Life of the Community**

During the year staff at the Armagh Observatory also maintained an active programme of Science in the Community, for example by providing guided tours of the Observatory and Astropark, holding special public lectures and exhibitions, delivering an outreach programme to schools, and supervising school children and undergraduates on a variety of work-experience programmes and summer research projects. The Observatory's Grounds, Astropark and Human Orrery are developed and maintained as a unique facility to enrich the lives of visitors to Armagh and residents alike.

In addition, there are more formal education programmes associated with the Observatory's programmes of work experience, student and teacher training, and engagement with the local community, elements of which all draw on the professional knowledge and expertise of research astronomers at Armagh. The innovative programme of Science in the Community helps to explain to a wide audience the results of modern astronomy and the benefits of carrying out international-level astronomy, particularly for education, learning and training in the 'STEM' subjects (Science, Technology, Engineering and Mathematics) that are of such importance for our knowledge-based economy.

### **STEAM**

In recent years there has been growing recognition of the importance of cross-cutting links between science and the arts, and indeed in many areas of activity that embrace elements of human creativity other than science. This is now developing into a new strategy known as STEAM, which aims to place the Arts (broadly understood) at the centre of STEM. It is evident that the Observatory, together with many other former DCAL Arm's Length Bodies (ALBs), is well positioned to contribute to the new STEAM agenda

### **Library and Archives**

The Observatory's suite of technical equipment is complemented by a Library and Archives which together represent one of the premier specialist collections of their kind in the world. The Library, Archives and Historic Scientific Instruments collection contain a unique collection of historic books and manuscripts, as well as a growing collection of images, photographic plates, scientific instruments, clocks and other artefacts concerning the development of modern astronomy from the Age of Enlightenment up to the present day, with specific reference to the important discoveries and scientific contributions made by the international research community at Armagh. In recent years more than 25,000 records have been added to the on-line, publicly accessible archives and library database, with many linking to associated images or digitized documents. The library catalogue with over 3,000 entries is also on-line.

### **Heritage Policy**

The Observatory's heritage policy is to progressively restore the historic buildings, scientific instruments, and historic books and other archives in its possession, placing the restored material where possible on display, or close to, its original location in the main Georgian Grade A listed building. The objective is to maintain the integrity of the Library, Archives and Historic Scientific Instruments as a coherent collection for future generations in the City of Armagh and to preserve this historic material and improve the environmental conditions in which it is held. The Observatory seeks to widen access to this material where possible so that researchers, or visitors to the Observatory's web-sites and others who may use the Observatory's facilities, will be able to use the material for individual research projects and appreciate more clearly the context in which the historic material was first acquired and then transferred into the 'museum' collection. As part of widening access we have installed eleven 'Virtual Visits' (<http://star.arm.ac.uk/virtualvisit/>), which are available online to everyone through the Internet. The Observatory's Library and Archives is a rich scientific, educational and cultural resource, resonating with the Observatory's position as Northern Ireland's oldest scientific institution.

### **Public Benefits**

#### **Disabled Access**

The Observatory has implemented reasonable adjustments necessary to widen access to its facilities by people with disabilities, whether visiting the Observatory or the Observatory Grounds and Astropark. These include (a) wheelchair access and the installation of additional seating in and around the Astropark; (b) the provision of ramps and other adjustments to the rear of the main building to facilitate wheelchair access; and (c) the installation of a disabled toilet in the Library. As part of widening access the Observatory maintains a rich website (<http://star.arm.ac.uk> and <http://climate.arm.ac.uk>), which contains a wealth of information regarding the organization and astronomy and related sciences more generally, and there are eleven 'Virtual Visits' (<http://star.arm.ac.uk/virtualvisit/>) that are available online to everyone through the Internet.

#### **Equal Opportunities**

The corporation is an equal opportunities employer, committed to ensuring that the talents and resources of all members of the corporation are utilised to the full. The corporation does not discriminate directly or indirectly on the grounds of religious belief, political opinion, trade union membership, gender, marital status, sexual orientation, age, disability, race, colour or ethnic origin, against any member of staff, full-time or part-time, or job applicant, actual or potential, in any aspect of the

corporation's activities, including matters of recruitment, training, promotion, appointment, nomination or selection for any position, job transfer or redundancy.

### Payment of Suppliers

The corporation is committed to the payment of all invoices not in dispute within agreed contractual terms. The corporation also recognizes the importance of paying invoices received as soon as possible and does everything practically possible to meet the 10-day prompt payment target in the Accounting Officer guidance of DAO 12/08 issued by the former Department of Finance and Personnel.

### Employee Information and Consultation

The corporation takes every opportunity to inform and consult with all members of the organisation on the corporation's activities and plans for the future through the dissemination of annual reports and operational plans, the provision of the latest information on research, educational and other activities through the web-sites, regular formal and informal briefing and discussion meetings, and consultations with staff representatives on employment-related and operational policies and procedures.

Further information on the Observatory is available at <http://star.arm.ac.uk/> and <http://climate.arm.ac.uk/>,

### Achievements and performance

The targets set for the Observatory in the 2015/16 Business plan are shown in the table below. The actual performance achieved is shown along with the corresponding achievement for the previous financial year. In all cases the target was met or exceeded. In some cases the target and achievement was shared between the Observatory and Planetarium, and these are shown below as "O/P".

The only area where the target was not fully achieved was in relation to organisational change and the progress to date is shown in greater detail in this section.

Area	Description	2015/16 Target	Actual as at 31 Mar 2016	Achievement	Actual as at 31 Mar 2015	Comments	O/P
<b>Visitors</b>	Number of hits to the Observatory's websites between 1 Jan – 31 December 2015 (million)	18	18	100%	18		O
<b>Outreach</b>	Number of participants at outreach events arranged by the Planetarium and Observatory by 31 March 2016	15,000	23,239	155%	16,052	The Mar 2015 figure represents participants at Planetarium events only.	O/P
	Number of work placements at the Observatory offered to school children from deprived areas[1] between 1 January – 31 December 2015 (PETPSE)	7	12	171%	9	Target exceeded	O
	Number of events arranged by the Observatory and Planetarium targeted at areas of multiple deprivation by 31 March 2016 (PETPSE)	6	16	267%	4	The Mar 2015 represents participants at Planetarium events only.	O/P
<b>Research</b>	Number of articles by Observatory staff/students published in refereed scientific journal publications by 31 December 2015	40	57	143%	44	Target exceeded	O
	Number of citations about the Observatory in mass media publications by 31 December 2015	250	643	257%	330	Target exceeded	O



Area	Description	2015/16 Target	Actual as at 31 Mar 2016	Achievement	Actual as at 31 Mar 2015	Comments	O/P
Resources	Observatory external income as a percentage of total income by 31 March 2016	18%	25.5%		19.9%	Target exceeded	O
	AOP payments processed within 10 days	90%	97%		97%	Target exceeded	O/P
Organisational Change	Implement Stage 1 of the Restructuring Project  Recruitment of a Chief Executive to be completed					<p><b>Objective 1:</b> By April 2016, to appoint a suitably skilled and experienced CEO to lead AOP - Prof Michael Burton is the appointed candidate who took up his position on 1 August 2016. Following training, he was appointed Accounting Officer from 1 September 2016.</p> <p><b>Objective 2:</b> By April 2016, to reform existing governance structures to deliver a new Management Board and Trustees and Guardians – On track: Through the Project Board, draft Terms of Reference (TOR) for the Board of Governors and the Management Committee have been developed which set out the revised functions of the bodies. Revised Terms of Reference for the two sub committees - the Audit and Risk Assurance Committee and the Employment Conditions and Remuneration Committee have also been prepared and have been considered by the Project Board. The Project Board considered these at Project Board meetings in January and March 2016 with further amendments suggested. These were presented to the Board in March 2016 and are now being further considered by the Board of Governors, the Management Committee, and the two sub-committees. The incoming CEO is being provided with an opportunity to comment on proposals before they are finalised. A 'go live' date for the new arrangements will be suggested by the Project Board following any final amendments to the documents with a view to final approval by March 2017. Ultimately, all of these will be forwarded to the Department for consideration and approval. The final Management Statement and Financial Memorandum will then be prepared following the finalisation of these TOR's. A Charitable Status application for the Armagh Observatory and Planetarium was submitted to the Charity Commission for Northern Ireland and approved for 1 April 2016.</p> <p><b>Objective 3:</b> By April 2016, to deliver progress toward single business, financial, human resource, estates and IT management systems at AOP: Some progress to date: The main focus of the Project to date has been on Objectives 1 and 2. Work on objective 3 has focused on some initial scoping work on issues in relation to HR, Education and Outreach and ICT. Two staff workshops have been facilitated by the Project Manager on Education and Outreach and ICT. Two consultancy exercises are being commissioned to progress the HR elements of the restructuring project.</p>	

[1] A deprived area is denoted by a school a) with 20% or greater entitlement to Free School Meals and/or b) registered on the Extended Schools Programme

# Financial Review: Armagh Observatory

## Operating Results

In the financial year to 31 March 2016, Armagh Observatory had an operating surplus of £17,627, after adjusting the net movement in funds for pensions. This compares to a deficit of £2,256 (restated) in 2014/15. The table below provides a reconciliation of the net movement in funds as presented in the SOFA, to operating result for recent years.

Armagh Observatory	2015/2016	2014/2015 (restated)	2013/2014
	£	£	£
Net movement in funds for the year after pension adjustments	238,262	(99,208)	73,979
Reversal of pension scheme adjustments:			
Pension service cost	169,000	146,000	175,000
Employer's pension contributions	(122,635)	(114,048)	(123,135)
Pension scheme finance costs/(income)	16,000	19,000	(60,000)
Actuarial (gain)/loss on pension scheme	(283,000)	46,000	(66,000)
Operating surplus/(deficit) before pension scheme adjustments	17,627	(2,256)	(156)

The total income for the year was £1.69m, an increase of £0.19m from 2014/15 restated, mostly due to an increase in external grant income.

Expenditure was £1.7m, an increase of £0.16m from the previous year restated, mostly attributable to the increase in staff costs which includes redundancy costs. Staff costs remain the largest component of operational expenditure. The number of permanent staff in post is consistent with the previous year and vacant posts remain unfilled.

Unrestricted operating costs are funded primarily by DCAL Grant-in-aid. The balance of such unrestricted operating costs are funded by contributions from external grants and miscellaneous income in an increasingly competitive financial environment. Observatory staff continue to seek other funding streams to maintain this important source of funds. In 2015/16 DCAL provided 76% of the total income through recurrent and capital grant allocations (2014/15: 80%).

## Net Assets

Net assets at 31 March 2016 were £2.568m (31 March 2015 restated: £2.317m). This includes a decrease of £0.221m in the pension scheme liability from £0.579m at 31 March 2015 to £0.358m at 31 March 2016.

## Reserves

Armagh Observatory has total accumulated reserves of £2.6m at 31 March 2016 (2014/15 restated: £2.3m). The reserves policy is included in note 1 of the accounts. Included in this is government grant reserves of £0.7m and designated funds of £2.1m. The balance of unrestricted reserves includes the accumulated deficit of £0.358m on the Nilgosc pension reserve.

The surplus for the year after pension adjustments, when transferred to unrestricted funds leaves a balance of £26,406 (2014/2015 restated: £8,779) in unrestricted funds before pension adjustments (page 43, note 13) and after accounting for a prior year adjustment in respect of accrued holiday pay (£70,265). Restricted funds of £34,056 (2014/15: £7,293) have risen due to unspent capital funding at the year end.

## Plans for Future Periods

- The Armagh Observatory and Planetarium will be recognised as a single charity by the Charity Commission for Northern Ireland (CCNI) from 1 April 2016. Previously the Observatory and Planetarium were separate charitable entities. For reporting purposes the organisation will no longer have to prepare two sets of statutory accounts.
- The Northern Ireland Executive has agreed a one year budget for 2016/17 but no budget has been decided for future years.
- Following the reorganisation of the Northern Ireland Executive departments, sponsorship responsibility for the Armagh Observatory and Planetarium will transfer from the Department of Culture, Arts and Leisure on 9 May 2016 to the Department for Communities (DfC).
- Following the completion of the *Review of the Organisation and Management of Armagh Observatory and Planetarium*, the Board of Governors has commenced a programme of Organisational Change which will be ongoing for a number of years.

- A Voluntary Exit Scheme for staff leaving in 2016/17 has received Departmental approval. It is expected that up to four staff posts will be released in year as both a restructuring and efficiency measure.
- Following a number of changes at Director level, the Permanent Secretary appointed an Interim Accounting Officer pending the arrival of a newly appointed Chief Executive mid-way through 2016/17.
- The primary function of the Corporation will continue to be to carry out international-quality research in astronomy and related sciences, to disseminate these results widely through a vibrant programme of Science in the Community, and to identify new ways to attract visitors to Armagh as part of its wider contribution to enriching the economic, social and cultural life of the local and national communities that it serves. This is in full alignment with the Department's vision to promote equality and tackle poverty and social exclusion.

## Structure, Governance and Management

The Armagh Observatory along with the Armagh Planetarium are two component divisions of a single statutory corporation and arms-length body (ALB), 'The Governors of the Armagh Observatory and Planetarium' 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 1938 ('The University and Collegiate and Scientific Institutions Act [Northern Ireland], 1938').

The Armagh Observatory is a recognized charity (HMRC reference XN 46022). The Observatory was founded in 1789 as part of Archbishop Richard Robinson's vision to see the creation of a university in the City of Armagh.

### Board of Governors

The Armagh Observatory and Planetarium 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 Board of Governors meets once a year, though it can call special meetings to discuss important issues that may arise. The Board formally approves the annual budget and future financial business plan, and receives and approves major strategies and projects where appropriate.

At the annual meeting the Board of Governors reviews, examines and approves all of the papers from the Management Committee and the Audit and Risk Assurance Committee meetings. During 2015/16 one special meeting of the Board of Governors was convened with the Management Committee to discuss the ongoing Review of the Organisation and Management of the Armagh Observatory and Planetarium.

### Management Committee of Armagh Observatory and Planetarium

The Board has established a Management Committee to provide specialist advice and expertise relating to Scientific Research and Education, and to fulfil certain duties of governance oversight and challenge.

The Management Committee comprises:

- the Church of Ireland Archbishop of Armagh (Chair) or his nominee (appointed as Chair);
- three nominees from the Board of Governors;
- six nominees from the Department;
- one nominee of the Queen's University, Belfast (vacant);
- 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.



### Audit and Risk Assurance Committee (ARAC)

The ARAC has been established to advise the Board of Governors, the Management Committee and the Accounting Officer on issues facing the organisation in respect of organisational risks, internal control, governance and their associated assurances.

### Employment Conditions and Remuneration Committee

The Committee advises the Directors, Management Committee and/or Board of Governors when there are specific matters relating to the terms of employment, temporary promotions and pay to be considered.

### Organisational Change Project Board

The Organisational Change Project Board was established to oversee the implementation of the proposals and recommendations arising from the Review of AOP.

Further details on the membership of these Committees is set out in the Governance Statement on page 22.

## **Reference and Administrative Details**

### **Name of the Charity**

The charity is registered and operates under the name of the Armagh Observatory

### **Charity number**

HMRC reference XN 46022

### **Principal Office**

College Hill, Armagh, BT61 9DG

### **Trustees**

Archbishop Richard Clarke, CHAIR  
The Very Rev G. Dunstan  
The Venerable Archdeacon T. Scott  
The Venerable Archdeacon A. Forster (appointed 11 October 2015)  
Rev Canon J.N.T. Campbell (retired 15 August 2015)  
Rev Canon W.J.A. Dawson  
Rev Canon W.M. Adair  
Rev Canon R.J.N. Porteus  
Rev Canon N.J. Hughes  
Rev Canon S.R.T. Boyd  
Rev Canon J. Moore (appointed 13 March 2016)  
Rev Canon D. Hilliard (appointed 13 March 2016)  
Professor S. Smartt  
Professor R. Oudmajer (reappointed 1 July 2015)  
Mr W.G. Berry (reappointed 1 January 2016)  
Professor A. Hibbert

### **Director and Accounting Officer**

Professor M.E. Bailey – Armagh Observatory Director to 31 May 2016 and Accounting Officer to 14 December 2015 (retired 31 May 2016).

Mr A. Hughes – Interim Accounting Officer, Armagh Observatory and Planetarium (from 14 December 2015 to 31 August 2016).

Professor Michael Burton – Chief Executive Armagh Observatory and Planetarium from 1 August 2016 and Accounting Officer from 1 September 2016.

### **Auditors**

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

## **Bankers**

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

## **Register of Interests**

A Register of Interests is maintained for Board members and the Executive Team and is available for inspection at the Principal Address.

Related party transactions are shown in note 24 of the accounts.

## **Personal data related incidents**

Armagh Observatory and Planetarium has given consideration to the requirement to report personal data related incidents. It is content that there were no such incidents in the year ended 31 March 2016.

## **Disclosure of Audit Information**

So far as the Accounting Officer is aware, there is no relevant audit information of which the Board'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 the Board's auditors are aware of that information.

## **Change of Funding Department**

In May 2016, as part of the restructuring of the Northern Ireland Civil Service, the number of Departments reduced. As a result, the Armagh Observatory and Planetarium funding Department changed from the Department of Culture Arts and Leisure to the Department for Communities.

## **Important events since the end of the financial year**

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



**Archbishop Richard Clarke**  
**Chair of the Board of Trustees**  
**Date: 16 November 2017**



**Professor Michael Burton**  
**Chief Executive**  
**Date: 16 November 2017**

# **ARMAGH PLANETARIUM**

## **Objectives and activities**

The Armagh Planetarium, which was founded by Dr Eric Mervyn Lindsay, the seventh director of the Armagh Observatory, was officially opened on 1 May 1968.

The organization's statutory functions, as shared with the Observatory, are set out at Article 4 of *The Armagh Observatory and Planetarium (Northern Ireland) Order 1995*. 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*'.

## **Mission Statement**

The Armagh Planetarium's Mission, as derived from its governing legislation, is 'to advance and promote the knowledge and understanding of astronomy and related sciences to all members of the community'.

The Planetarium's primary activity is to disseminate scientific and technical knowledge of a wide range of scientific and STEM subjects, and to promote public understanding of astronomy and science through its programme of educational services for schools and the wider public.

Our staff deliver interactive presentations using the latest projection and information technology to all age groups and abilities on a wide range of astronomical and scientific topics, including meteorite impacts, the planets, current astronomical phenomena and Earth sciences. Through the large number of visitors coming through its doors the Planetarium also plays a key role in promoting and enhancing tourism within Armagh City and District, now the wider council area known as the Armagh City, Banbridge and Craigavon Borough Council.

We aim to make our organisation the destination where every primary school level child in Northern Ireland experiences the mysteries of cosmos through our Digital Theatre shows, exhibitions and lectures. This accords with the strategic focus of the former Department of Culture Arts and Leisure (DCAL) whose overall vision is for 'a confident, creative, informed, and vibrant community.' Blending these statements together has led to the Planetarium positioning itself as a place where impressionable young minds can be encouraged to tackle the challenges and rewards of careers in Science, Technology, Engineering and Mathematics (STEM). This STEM agenda is being embraced and promoted all over the world by those governments that are aware of the impelling need to enhance the competitiveness of their workforce in a technologically sophisticated business environment.

Armagh Planetarium brings the exciting world of astronomy to audiences of all ages from nursery to seniors. Since opening in 1968 the Planetarium has stayed in the forefront of science education by adapting to the needs of our audiences, offering content that is both up to date and stimulating. The Planetarium's educational programme not only covers curriculum material but also introduces a broader range of fascinating topics to promote a deeper understanding of basic astronomy. Interactive learning experiences of astronomy are encouraged for all members of the community, and especially visiting school groups. Resources are provided for teachers on our website ([www.armaghplanet.com](http://www.armaghplanet.com)), including factsheets, videos and informed commentary on the latest astronomical news in our Astronotes blog.

Armagh Planetarium works with Queen's University Belfast to provide accredited courses in astronomy for teachers and adults. From inception, the Planetarium has responded to a steady stream of astronomical queries from the public and media. Armagh Planetarium is world-renowned as an innovative centre of excellence in promoting the public understanding of science.

## **Public Benefits**

### **Disabled Access**

Armagh Planetarium has implemented reasonable adjustments necessary to widen access to its facilities by people with disabilities. This includes a ramp at the front entrance for admission and throughout the exhibition space with ramps and double door access. A lift is available to the upper level where the theatre is located. Wheelchair bays along with a loop system are installed in the theatre. Disabled toilets are located on both the lower and upper levels and in the event of an emergency, ramps outside will aid exit from the upper level. In addition the Planetarium has braille on their signage inside the building.

### **Equal Opportunities**

The corporation is an equal opportunities employer, committed to ensuring that the talents and resources of all members of the corporation are utilised to the full. The corporation does not discriminate directly or indirectly on the grounds of religious belief, political opinion, trade union membership, gender, marital status, sexual orientation, age, disability, race, colour or



ethnic origin, against any member of staff, full-time or part-time, or job applicant, actual or potential, in any aspect of the corporation's activities, including matters of recruitment, training, promotion, appointment, nomination or selection for any position, job transfer or redundancy.

### Payment of Suppliers

The corporation is committed to the payment of all invoices not in dispute within agreed contractual terms. The corporation also recognizes the importance of paying invoices received as soon as possible and does everything practically possible to meet the 10-day prompt payment target in the Accounting Officer guidance of DAO 12/08 issued by the Department of Finance and Personnel.

### Employee Information and Consultation

The corporation takes every opportunity to inform and consult with all members of the organisation on the corporation's activities and plans for the future through the dissemination of annual reports and operational plans, the provision of the latest information on research, educational and other activities through the web-sites, regular formal and informal briefing and discussion meetings, and consultations with staff representatives on employment-related and operational policies and procedures.

Further information on the Planetarium is available at <http://www.armaghplanet.com>.

### Achievements and Performance

The targets set for the Planetarium in the 2015/16 Business plan are shown in the table below. The actual performance achieved is shown along with the corresponding achievement for the previous financial year. In all cases the target was met or exceeded. In some cases the target and achievement was shared between the Observatory and Planetarium, and these are shown below as "O/P".

The only area where the target was not fully achieved was in relation to organisational change and the progress to date is shown in greater detail in this section.

Area	Description	2015/16 Target	Actual as at 31 Mar 2016	Achievement	Actual as at 31 Mar 2015	Comments	O/P
Visitors	Total number of visitors to the Planetarium by 31 March 2016	40,000	52,204	131%	50,445	An increase of 1759 on 2014/15. 2015/16 benefitted from having Easter 2015 and Easter 2016	P
	Percentage of visitors to the Planetarium from schools on the Extended Schools Register or with high proportion of Free School Meals by 31 March 2016 (PETPSE)	25%	26%	106%	31%	% of pupils from schools on Extended Schools Register - these change depending on which schools have visited	P
		25%	50%	198%	47%	% of pupils with FSM % > 20%	P
	Number of page views of <a href="http://www.armaghplanet.com">www.armaghplanet.com</a> by 31 March 2016 (million)	1	2.8	279%	1.6	Target exceeded	P
	Number of participants in STEAM programmes at the Planetarium by 31 March 2016	1,600	4,237	265%	9,796	Target exceeded. In 2014/15 a Special Exhibition was scheduled along with more special events across the summer period.	P

Area	Description	Target	Actual as at 31 Mar 2016	Achievement	Actual as at 31 Mar 2015	Comments	O/P
<b>Outreach</b>	Number of participants at outreach events arranged by the Planetarium and Observatory by 31 March 2016	15,000	23,239	155%	16,052	The Mar 2015 figure represents participants at Planetarium events only.	O/P
	Number of events arranged by the Observatory and Planetarium targeted at areas of multiple deprivation by 31 March 2016 (PETPSE)	6	16	267%	4	The Mar 2015 represents participants at Planetarium events only.	O/P
	Planetarium self-generated income (through sales and admissions) as a percentage of total income by 31 March 2016	22%	29.5%		28.6%	Target exceeded	P
	AOP payments processed within 10 days	90%	97%		97%	Target exceeded	O/P
<b>Organisational Change</b>	Implement Stage 1 of the Restructuring Project  Recruitment of a Chief Executive to be completed					<p><b>Objective 1:</b> By April 2016, to appoint a suitably skilled and experienced CEO to lead AOP - Prof Michael Burton is the appointed candidate who took up his position on 1 August 2016. Following training, he was appointed Accounting Officer from 1 September 2016.</p> <p><b>Objective 2:</b> By April 2016, to reform existing governance structures to deliver a new Management Board and Trustees and Guardians – On track: Through the Project Board, draft Terms of Reference (TOR) for the Board of Governors and the Management Committee have been developed which set out the revised functions of the bodies. Revised Terms of Reference for the two sub committees - the Audit and Risk Assurance Committee and the Employment Conditions and Remuneration Committee have also been prepared and have been considered by the Project Board. The Project Board considered these at Project Board meetings in January and March 2016 with further amendments suggested. These were presented to the Board in March 2016 and are now being further considered by the Board of Governors, the Management Committee, and the two sub-committees. The incoming CEO is being provided with an opportunity to comment on proposals before they are finalised. A 'go live' date for the new arrangements will be suggested by the Project Board following any final amendments to the documents with a view to final approval by March 2017. Ultimately, all of these will be forwarded to the Department for consideration and approval. The final Management Statement and Financial Memorandum will then be prepared following the finalisation of these TOR's. A Charitable Status application for the Armagh Observatory and Planetarium was submitted to the Charity Commission for Northern Ireland and approved for 1 April 2016.</p> <p><b>Objective 3:</b> By April 2016, to deliver progress toward single business, financial, human resource, estates and IT management systems at AOP: Some progress to date: The main focus of the Project to date has been on Objectives 1 and 2. Work on objective 3 has focused on some initial scoping work on issues in relation to HR, Education and Outreach and ICT. Two staff workshops have been facilitated by the Project Manager on Education and Outreach and ICT. Two consultancy exercises are being commissioned to progress the HR elements of the restructuring project.</p>	

## Financial Review: Armagh Planetarium

### Operating Results

In the financial year to 31 March 2016, Armagh Planetarium had an operating surplus of £5,913, after adjusting the net movement in funds for pensions. This compares to a deficit of £5,097 in 2014/15 restated. The table below provides a reconciliation of the net movement in funds as presented in the SOFA, to operating result for recent years.

<b>Armagh Planetarium</b>	<b>2015/2016</b>	<b>2014/2015</b>	<b>2013/2014</b>
		<b>(restated)</b>	
	<b>£</b>	<b>£</b>	<b>£</b>
Net movement in funds for the year after pension adjustments	133,220	(121,899)	161,187
Reversal of pension scheme adjustments:			
Pension service cost	59,000	65,000	62,000
Employer's pension contributions	(49,307)	(54,198)	(54,789)
Pension scheme finance costs/(income)	21,000	23,000	(18,000)
Actuarial (gain)/loss on pension scheme	(158,000)	83,000	(157,000)
<b>Operating surplus/(deficit) before pension scheme adjustments</b>	<b>5,913</b>	<b>(5,097)</b>	<b>(6,602)</b>

The total income for the year was £0.733m, an increase of £0.031m from 2014/15 restated, mostly due to an increase in DCAL in-year recurrent funding. The Planetarium relies on DCAL Grant-in-aid as its principal source of funding, providing 74% of its total income through recurrent and capital grants in 2015/16 (2014/15 restated: 74%). This is supplemented by admissions and shop income.

Expenditure was £0.737m, an increase of £0.019m from the previous year, staff costs accounting for 57% of operating expenditure.

### Net Assets

Net assets at 31 March 2016 were £3.70m (31 March 2015 restated: £3.69m). This includes a decrease of £0.128m in the pension scheme liability from £0.681m at 31 March 2015 to £0.553m at 31 March 2016.

### Reserves

Armagh Planetarium has total accumulated reserves of £3.7m at 31 March 2016 (2014/15 restated: £3.7m). of the accounts. Included in this is government grant reserves of £0.4m and designated funds of £3.9m. The balance of unrestricted reserves includes the accumulated deficit of £0.553m on the Nilgosc pension reserve.

The surplus for the year after pension adjustments, when transferred to unrestricted funds leaves an accumulated deficit of £26,291 (2014/2015 restated: (£32,205)) in unrestricted funds before pension adjustments (page 58, note 15) and after accounting for a prior year adjustment in respect of accrued holiday pay (£21,713).

### Plans for Future Periods

- The Armagh Observatory and Planetarium will be recognised as a single charity by the Charity Commission for Northern Ireland (CCNI) from 1 April 2016. Previously the Observatory and Planetarium were separate charitable entities. For reporting purposes the organisation will no longer have to prepare two sets of statutory accounts.
- The Northern Ireland Executive has agreed a one year budget for 2016/17 but no budget has been decided for future years.
- Following the reorganisation of the Northern Ireland Executive departments, sponsorship responsibility for the Armagh Observatory and Planetarium will transfer from the Department of Culture, Arts and Leisure on 9 May 2016 to the Department for Communities (DfC).
- Following the completion of the *Review of the Organisation and Management of Armagh Observatory and Planetarium*, the Board of Governors has commenced a programme of Organisational Change which will be ongoing for a number of years.
- A Voluntary Exit Scheme for staff leaving in 2016/17 has received Departmental approval. It is expected that up to four staff posts will be released in year as both a restructuring and efficiency measure.
- Following a number of changes at Director level, the Permanent Secretary appointed an Interim Accounting Officer pending the arrival of a newly appointed Chief Executive mid-way through 2016/17.
- The primary function of the Corporation will continue to be to carry out international-quality research in astronomy and related sciences, to disseminate these results widely through a vibrant programme of Science in the Community, and to identify new ways to attract visitors to Armagh as part of its wider contribution to enriching the economic, social and cultural life of the local and national communities that it serves. This is in full alignment with the Department's vision to promote equality and tackle poverty and social exclusion.



## Structure, Governance and Management

The Armagh Observatory along with the Armagh Planetarium are two component divisions of a single statutory corporation and arms-length body (ALB), ‘The Governors of the Armagh Observatory and Planetarium’ 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 1938 (‘The University and Collegiate and Scientific Institutions Act [Northern Ireland], 1938’).

The Armagh Planetarium was founded by Dr Eric Mervyn Lindsay, the seventh director of the Armagh Observatory, and was officially opened on 1 May 1968. The Planetarium is a recognized charity (HMRC reference XN 48022).

### Board of Governors

The Armagh Observatory and Planetarium 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 Board of Governors meets once a year, though it can call special meetings to discuss important issues that may arise. The Board formally approves the annual budget and future financial business plan, and receives and approves major strategies and projects where appropriate. At the annual meeting the Board of Governors reviews, examines and approves all of the papers from the Management Committee and the Audit and Risk Assurance Committee meetings. During 2015/16 one special meeting of the Board of Governors was convened with the Management Committee to discuss the ongoing Review of the Organisation and Management of the Armagh Observatory and Planetarium.

### Management Committee of Armagh Observatory and Planetarium

The Board has established a Management Committee to provide specialist advice and expertise relating to Scientific Research and Education, and to fulfil certain duties of governance oversight and challenge.

The Management Committee comprises:

- the Church of Ireland Archbishop of Armagh (Chair) or his nominee (appointed as Chair);
- three nominees from the Board of Governors;
- six nominees from the Department;
- one nominee of the Queen’s University, Belfast (vacant);
- 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.

### Audit and Risk Assurance Committee (ARAC)

The ARAC has been established to advise the Board of Governors, the Management Committee and the Accounting Officer on issues facing the organisation in respect of organisational risks, internal control, governance and their associated assurances.

### Employment Conditions and Remuneration Committee

The Committee advises the Directors, Management Committee and/or Board of Governors when there are specific matters relating to the terms of employment, temporary promotions and pay to be considered.

## Organisational Change Project Board

The Organisational Change Project Board was established to oversee the implementation of the proposals and recommendations arising from the Review of AOP.

Further details on the membership of these Committees is set out in the Governance Statement on page 22.

## **Reference and Administrative Details**

### **Name of the Charity**

The charity is registered and operates under the name of the Armagh Planetarium

### **Charity number**

HMRC reference XN 48022

### **Principal Office**

College Hill, Armagh, BT61 9BD

### **Trustees**

Archbishop Richard Clarke, CHAIR  
The Very Rev G. Dunstan  
The Venerable Archdeacon T. Scott  
The Venerable Archdeacon A. Forster (appointed 11 October 2015)  
Rev Canon J.N.T. Campbell (retired 15 August 2015)  
Rev Canon W.J.A. Dawson  
Rev Canon W.M. Adair  
Rev Canon R.J.N. Porteus  
Rev Canon N.J. Hughes  
Rev Canon S.R.T. Boyd  
Rev Canon J. Moore (appointed 13 March 2016)  
Rev Canon D. Hilliard (appointed 13 March 2016)  
Professor S. Smartt  
Professor R. Oudmajer (reappointed 1 July 2015)  
Mr W.G. Berry (reappointed 1 January 2016)  
Professor A. Hibbert

### **Director and Accounting Officer**

Dr Tom Mason – Director and Accounting Officer, Armagh Planetarium (retired 30 April 2015).

Dr J Vink – Acting Head of Armagh Planetarium 15 June 2015 to 31 August 2016 and Accounting Officer 15 June 2015 to 14 December 2015.

Mr A. Hughes – Interim Accounting Officer, Armagh Observatory and Planetarium 14 December 2015 to 31 August 2016.

Professor Michael Burton – Chief Executive Armagh Observatory and Planetarium from 1 August 2016 and Accounting Officer from 1 September 2016.

### **Auditors**

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

### **Bankers**

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

### **Register of Interests**

A Register of Interests is maintained for Board members and the Executive Team and is available for inspection at the Principal Address.

Related party transactions are shown in note 24 of the accounts.

### **Personal data related incidents**

Armagh Observatory and Planetarium has given consideration to the requirement to report personal data related incidents. It is content that there were no such incidents in the year ended 31 March 2016.

### **Disclosure of Audit Information**

So far as the Accounting Officer is aware, there is no relevant audit information of which the Board'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 the Board's auditors are aware of that information.

### **Change of Funding Department**

In May 2016, as part of the restructuring of the Northern Ireland Civil Service, the number of Departments reduced. As a result, the Armagh Observatory and Planetarium funding Department changed from the Department of Culture Arts and Leisure to the Department for Communities.

### **Important events since the end of the financial year**

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



**Archbishop Richard Clarke**  
**Chair of the Board of Trustees**  
**Date: 16 November 2017**



**Professor Michael Burton**  
**Chief Executive**  
**Date: 16 November 2017**

## Remuneration Report — Armagh Observatory

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

### Remuneration

Single Total Figure of Remuneration						
Name	Salary 2015/2016	Pension Benefits* 2015/2016	Total 2015/2016	Salary 2014/2015	Pension Benefits 2014/2015	Total 2013/2014
	£'000	£	£'000	£'000	£	£'000
M.E. Bailey	60-65	10,633	70-75	60-65	9,077	70-75

\*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 or any increase or decreases due to a transfer of pension rights.

### Pension Entitlements

Name	Accrued Pension at 31 March 2016	Real Increase in Accrued Pension	Accrued Lump Sum at 31 March 2016	Real Increase in Lump Sum	CETV at 31 March 2016	CETV at 31 March 2015	Real Increase in CETV
	£'000	£'000	£'000	£'000	£'000	£'000	£'000
M.E. Bailey	25-30	0-2.5	65-70	(0-2.5)	624	630	(4)

Note: The Interim Accounting Officer Mr A Hughes was employed and paid by the former DCAL.

## Remuneration Report — Armagh Planetarium

The following tables provide details of the remuneration and pension entitlements of the Director of the Planetarium and the Acting Head of the Planetarium.

### Remuneration

Single Total Figure of Remuneration						
Name	Salary 2015/2016	Pension Benefits* 2015/2016	Total 2015/2016	Salary 2014/2015	Pension Benefits 2014/2015	Total 2014/2015
	£'000	£	£'000	£'000	£	£'000
T.R. Mason	5-10 <sup>1</sup>	1,678	5-10	60-65	16,144	80-85
J.S. Vink	5-10 <sup>2</sup>	2,498	10-15	-	-	-

\*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 or any increase or decreases due to a transfer of pension rights.

### Pension Entitlements

Name	Accrued Pension at 31 March 2016	Real Increase in Accrued Pension	Accrued Lump Sum at 31 March 2016	Real Increase in Lump Sum	CETV at 31 March 2016	CETV at 31 March 2015	Real Increase in CETV
	£'000	£'000	£'000	£'000	£'000	£'000	£'000
T.R. Mason	15-20	0-2.5	30-35	0-2.5	316 <sup>3</sup>	314	2
J.S. Vink	0-5	0-2.5	0-5	0-2.5	12	10 <sup>4</sup>	1

Note: The Interim Accounting Officer Mr A Hughes was employed and paid by the former DCAL.

<sup>1</sup> Dr Mason retired from service on 30 April 2015 – figure quoted is for the period 01 April 2015 to 30 April 2015.

<sup>2</sup> Dr Vink was appointed as Acting Head of the Planetarium on 15 June 2015 – figure quoted is for the period 15 June 2015 to 31 March 2016. The full year equivalent is £10,276.

<sup>3</sup> Value as at 30 April 2016

<sup>4</sup> Value as at 14 June 2015

The CETVs above have been calculated in accordance with guidance used by the Northern Ireland Civil Service in Employer Pension Notice EPN15/2016.

1. The Directors of the Observatory and Planetarium and the Acting Head of the Planetarium are the persons in senior positions having authority and responsibility for directing and controlling the activities of their respective organisations.
2. The salary of each Director/ Acting Head shown above is based on the Northern Ireland Civil Service Grade 6/7 pay scale respectively. No bonus was paid in the year and no benefits in kind were received.
3. The service contract of the Director of the Planetarium ended on 30 April 2015. The service contract of the Director of the Observatory ended on 31 May 2016. The Acting Head of the Planetarium was on a short-term temporary contract which commenced on 15 June 2015 and continued to 31 August 2016.
4. Pension benefits are provided through the Northern Ireland Local Government Officers' Superannuation Committee Pension Scheme (NILGOSC). In the period up to 31 March 2009 members paid contributions of 6% of pensionable earnings to the scheme up until retirement. From 1 April 2009 banded contribution rates were introduced and for the year 2015/2016 the Directors and Acting Head paid contributions of 8.5% on pensionable pay.
5. The main benefits payable on retirement for service up to 31 March 2009 are: (i) a retirement pension at a rate of 1/80th of final pensionable pay for each year of membership of the scheme; and (ii) a lump sum retirement grant at a rate of 3/80ths of pensionable pay for each year of membership of the scheme. On death after retirement, the surviving spouse will receive a pension payable for 3 months (6 months if there are dependent children) paid at the same rate as the monthly retirement pension at the date of death and thereafter a spouse's pension of half of the retirement pension for life. On death in service, the scheme pays a lump sum death grant of twice pensionable pay, normally to the surviving spouse or, if the member was not married, to next of kin. For service from 1 April 2009 retirement pension will be at a rate of 1/60<sup>th</sup> of pensionable pay for membership built up after 31 March 2009 and further rights on pension augmentation, flexible retirement and family pension rights on death were introduced. Details of the changes can be obtained at <http://www.nilgosc.org.uk>.
6. The real increase in pension payable, lump sum and cash equivalent transfer value (CETV) shown above have been adjusted to take account of inflation and market investment factors. The CETV figures include the value of any pension benefit in another scheme that the individual has transferred to NILGOSC.
7. A 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 to secure pension benefits in another scheme when the member leaves a scheme and chooses to transfer the benefits accrued in their former scheme.
8. Compensation for loss of office: Professor Bailey left under Voluntary Exit on 31 May 2016. He received a compensation payment of £108,016. The cost to Armagh Observatory of buying out the actuarial reduction on his pension was £365.

Signed:



**Professor Michael Burton**  
**Chief Executive**  
**Date: 16 November 2017**



## Statement of the Responsibilities of the Governors and Accounting Officer

Under the Audit and Accountability (Northern Ireland) Order 2003 the Governors are responsible for keeping proper accounts and proper records in relation to the accounts, and for preparing a statement of accounts in respect of each financial year in such form and containing such information as the former Department for Culture, Arts and Leisure (DCAL), with the approval of the former Department of Finance and Personnel, shall direct.

On 14 December 2015, the Accounting Officer of the Department designated a member of his Departmental staff as Interim Accounting Officer for the Armagh Observatory and Planetarium. Prior to this date the Accounting Officer of the Department designated the respective Directors of the Observatory and the Planetarium and the acting Head of the Planetarium as the Corporation's Accounting Officers on the dates shown in the Governance Statement in section 3. The Interim Accounting Officer ceased when the newly appointed Chief Executive of the Armagh Observatory and Planetarium was designated Accounting Officer on 1 September 2016.

The Accounting Officer has personal responsibility for the propriety and regularity of the public finances for which he is answerable and for the keeping of proper accounts. He is required to sign the accounts thereby accepting personal responsibility for their proper presentation and to sign the Governance Statement. The Accounting Officer's relevant responsibilities, including his responsibilities for the propriety and regularity of the public finances and for the keeping of proper records, are set out in Managing Public Money Northern Ireland.

The accounts are prepared on an accruals basis and give a true and fair view of the corporation's state of affairs at the end of the financial year and of its income and expenditure, total recognised gains and losses and cash flows for the financial year. The accounts have been prepared in accordance with the Statement of Recommended Practice "Accounting and Reporting by Charities" (SORP 2015). The financial statements comply with the guidance issued by the Department of Finance and Personnel on the form and contents of the Annual Reports and Accounts of Executive Non-Departmental Public Bodies and in particular:

- suitable accounting policies have been selected and applied consistently (subject to changes arising on the adoption of new accounting standards);
- reasonable and prudent judgements and estimates have been made;
- applicable accounting standards have been followed, subject to any material departures disclosed and explained in the financial statements;
- the financial statements have been prepared on the going concern basis, unless it is inappropriate to presume that the corporation will continue in business.

The Accounting Officer is also responsible for safeguarding the assets of the corporation and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

## Statement of Disclosure of Information to the Auditors

So far as the Accounting Officer of the Armagh Observatory and Planetarium, in office at the date of the approval of these financial statements, is aware:

- there is no relevant audit information relating to these respective charitable organizations of which the auditors are unaware; and
- he has taken all the steps that he ought to have taken as Accounting Officer in order to make himself aware of any relevant audit information relating to these charitable organizations and to establish that the auditors are aware of that information.

# Armagh Observatory and Planetarium: Governance Statement

## 1. Scope of Responsibility

The Board of Governors, Management Committee and Directors of the Armagh Observatory and Planetarium are required to prepare a statement of accounts for each financial year to be laid before the Northern Ireland Assembly. The accounts are prepared to show a true and fair view of the Corporation's financial activities during the year and of the Observatory and Planetarium's respective financial positions at the end of the year. The Observatory and Planetarium prepare separate audited accounts.

In preparing the Armagh Observatory's and Armagh Planetarium's accounts, the Board of Governors and Management Committee of the Armagh Observatory and Planetarium are required to:

- comply with the Government Financial Reporting Manual;
- observe the accounts direction issued by the government, including the relevant accounting and disclosure requirements, and apply suitable accounting policies on a consistent basis;
- make judgments and estimates that are reasonable and prudent;
- state whether applicable accounting standards and statements of recommended practice have been followed, and disclose and explain any material departures in the financial statements;
- prepare the financial statements on the going concern basis, unless it is inappropriate to presume that the Armagh Observatory and Planetarium will continue in operation.

## 2. Compliance with Corporate Governance Code

In April 2013 the former Department of Finance and Personnel issued Dear Accounting Officer (DFP) 06/13 regarding the revised Code of Good Practice on Corporate Governance in Central Government Departments.

While the 2013 Code has been written for central government departments, it concentrates throughout on key principles. As such, 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.

Armagh Observatory and Planetarium in so far as they are relevant for an arms-length body, comply with the principles of good practice in the Corporate Governance Code.

## 3. Governance Framework

### Accounting Officer

The Permanent Secretary of the Department appointed an Interim Accounting Officer from the former DCAL on 14 December 2015 until 31 August 2016. A new Chief Executive of the combined Armagh Observatory and Planetarium was appointed on 1 August 2016 and appointed as Accounting Officer on 1 September 2016. All officers who acted as Accounting Officer for the Observatory or Planetarium during 2015/16 are shown in the following table. The Accounting Officer, is responsible for the maintenance of a sound system of internal control as outlined in section 1.

Name	Accounting Officer – Period in 2015/16
Mr Alastair Hughes, DCAL appointee	From 14 December 2015 to 31 August 2016 (as Interim Accounting Officer)
Professor Mark Bailey Director, Armagh Observatory	1 April 2015 – 14 December 2015 (continues as Director of the Observatory)
Dr Tom Mason Director, Armagh Planetarium	1 April 2015 – 30 April 2015 (on retirement)
Dr Jorick Vink Acting Head of Armagh Planetarium	15 June 2015 – 14 December 2015 (on resignation as Accounting Officer, but continues as Acting Head of the Planetarium)

Professor Michael Burton – Chief Executive Armagh Observatory and Planetarium from 1 August 2016 and Accounting Officer from 1 September 2016.

## Board of Governors

The Armagh Observatory and Planetarium 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 DCAL nominee;
- one Queen's University Belfast (QUB) nominee; and
- up to three additional members nominated by the Board of Governors.

During 2015/16 the Venerable Archdeacon A. Forster, Rev Canon J. Moore and Rev Canon D. Hilliard were appointed to the Chapter of the Church of Ireland Cathedral of Armagh and hence the Board of Governors. Rev. Canon J.N.T Campbell retired from the Church of Ireland and the Board of Governors in August 2015. Professor Oudmaijer was reappointed from 1 July 2015 and Mr W.G. Berry from 1 January 2016. There remains one vacancy from within the Board of Governors nominees.

<b>BOARD OF GOVERNORS</b>			
<b>GOVERNOR</b>	<b>DATE OF APPOINTMENT</b>	<b>DATE OF EXPIRY</b>	<b>MEETINGS ATTENDED (max. 2)</b>
CHAIR Archbishop Richard Clarke	15 December 2012		2
The Dean: Very Rev G. Dunstan	4 December 2011		1
The Venerable Archdeacon T. Scott	9 November 2006		0
The Venerable Archdeacon A. Forster	11 October 2015		0
Rev Canon J.N.T. Campbell	23 February 2009	15 August 2015	0
Rev Canon W.J.A. Dawson	1998		1
Rev Canon W.M. Adair	10 September 2008		0
Rev Canon R.J.N. Porteus	1998		1
Rev Canon N.J. Hughes	16 November 2014		1
Rev Canon S.R.T. Boyd	6 October 2013		2
Rev Canon J. Moore	13 March 2016		0
Rev Canon D. Hilliard	13 March 2016		1
Professor S. Smartt	23 March 2012		1
Professor R. Oudmaijer	1 July 2015		2
Mr W.G. Berry	1 January 2016	Up to 31 December 2019	2
Professor A. Hibbert	28 March 2014		2

The Board of Governors meets once a year, though it can call special meetings to discuss important issues that may arise. The Board formally approves the annual budget and future financial business plan, and receives and approves major strategies and projects where appropriate. The Board has established a Management Committee to provide specialist advice and expertise relating to Scientific Research and Education, and to fulfil certain duties of governance oversight and challenge.

At the annual meeting the Board of Governors reviews, examines and approves all of the papers from the Management Committee and the Audit and Risk Assurance Committee meetings. At its meeting in 2016 it also considered the documents issued following the Organisational Change Project Board meetings.

During 2015/16 one special meeting of the Board of Governors was convened with the Management Committee to discuss the ongoing Review of the Organisation and Management of the Armagh Observatory and Planetarium.

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

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

## Management Committee of Armagh Observatory and Planetarium

The Management Committee comprises:

- the Church of Ireland Archbishop of Armagh (Chair) or his nominee (appointed as Chair);
- three nominees from the Board of Governors;
- six nominees from the former DCAL;
- one nominee of the Queen's University, Belfast (vacant);
- 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 2015/16 the Minister of the former Culture, Arts and Leisure made two re-appointments to the Management Committee. One of the Board of Governors' nominees was also re-nominated from 1 July 2015, leaving two vacant nominee positions and two Board of Governors' co-opted positions vacant.

<b>MANAGEMENT COMMITTEE</b>			
<b>MEMBER</b>	<b>DATE OF APPOINTMENT</b>	<b>DATE OF EXPIRY</b>	<b>MEETINGS ATTENDED (max. 4)</b>
CHAIR Archbishop R. Clarke	15 December 2012		3
DEPUTY CHAIR Professor A. Hibbert	18 March 2005		4
Professor T. Ray	4 March 2009		4
Professor M. Merrifield	1 January 1999		4
Professor R. Oudmaijer	1 July 2015		4
Mr B. Hannam	1 January 2016	Up to 31 December 2019	4
Dr M. McKay	1 January 2016	Up to 31 December 2019	2
Mrs P. Wilson	1 November 2014	31 October 2018	4
Professor L. Harra	1 November 2014	31 October 2018	4
Mr S. Brown	1 November 2014	31 October 2018	3
Mr P. McGurgan	1 November 2014	31 October 2018	3

During 2015/16 the Management Committee considered a wide range of business including updates on key performance indicators and developments relating to financial performance, scientific research, science education, outreach and engagement, staffing, health and safety, Bi-Annual Assurance Statements and Risk Registers as well as reports of the Audit and Risk Assurance Committee. Internal controls are in place to validate the accuracy and completeness of information presented to the Management Committee.

One special Management Committee meeting was convened with the Board of Governors to discuss the Review of the Organisation and Management of the Armagh Observatory and Planetarium.

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

### Audit and Risk Assurance Committee

The Audit and Risk Assurance Committee has been established to advise the Board of Governors, the Management Committee and the respective Directors of the Observatory and Planetarium as Accounting Officers on issues facing the organisation in respect of organisational risks, internal control, governance and their associated assurances.

<b>AUDIT AND RISK ASSURANCE COMMITTEE</b>	
<b>MEMBER</b>	<b>MEETINGS ATTENDED (max. 4)</b>
CHAIR Mr B. Hannam	4
Professor A. Hibbert	4
Professor L. Harra	4
Mr P. McGurgan	4

During 2015/16 the Audit and Risk Assurance Committee identified a number of areas where it could not provide an acceptable level of assurance to the Board of Governors or the Department in regard to the policies, procedures and practices relating to procurement, use of the credit card and the acceptance of gifts and hospitality at the Planetarium.

The Committee, through the work of an independent Internal Audit team, has identified where improvements are necessary, and where investigative action has been, or is being taken, to address these specific issues.

Following a review of organisational risks and the 'unification' of the risk register, the Committee is satisfied that the organisation now 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.

The Committee is also satisfied, from the evidence provided at meetings that a detailed work programme exists with the aim of implementing the recommendations arising from the Internal Audit carried out in 2015.

The Committee undertook an annual self-assessment exercise during 2015/16. There were no material findings identified as a result of this exercise.

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

### **Employment Conditions and Remuneration Committee**

The Employment Conditions and Remuneration Committee, by necessity, meets infrequently as two of the members reside outside of Northern Ireland. Given these circumstances, alternative arrangements have been made so that its extensive business can be conducted by email or other communication methods. Consequently no formal meetings of the Committee were held in 2015/16.

The Committee advises the Directors, Management Committee and/or Board of Governors when there are specific matters relating to the terms of employment, temporary promotions and pay to be considered. In 2015/16, amongst other matters, the Committee corresponded to consider the areas of:

- Special Bonus Payments
- The Voluntary Exit Scheme policy
- Business Continuity
- The advertising and selection of the Acting Head of the Planetarium.

The Committee comprises the Deputy Chair of the Management Committee and three named members of the Management Committee.

<b>EMPLOYMENT CONDITIONS AND REMUNERATION COMMITTEE</b>
CHAIR
Professor A. Hibbert
Dr M. McKay
Professor T. Ray
Mrs P. Wilson

### **Organisational Change Project Board**

The Board of Governors and Management Committee agreed on 26 February 2015 that an Organisational Change Project Board should be established to oversee the implementation of the proposals and recommendations arising from the Review of AOP. An Implementation Plan for Stage One was also approved at that time. The Project Board comprises the Deputy Chair of the Management Committee, three named members of the Management Committee and a representative from DCAL. A Project Manager was appointed to manage all activities relating to the implementation process and deliver the required outputs. The Project Board has communicated its progress to the Board of Governors, Management Committee and AOP staff through a series of written updates and several meetings throughout the year.



<b>ORGANISATIONAL CHANGE PROJECT BOARD</b>	
	<b>MEETINGS ATTENDED (max. 8)</b>
<b>CHAIR</b>	
Professor A. Hibbert	8
Mr S. Brown	8
Professor T. Ray	8
Mrs P. Wilson	8
Mr F. Devitt (DCAL)	6

In addition, the members of the Organisational Change Project Board were closely involved in the appointment of the new Chief Executive/Director of Armagh Observatory and Planetarium. Professor Smartt (Governor) also served on the Appointment Panel. Each Panel member took part in formal recruitment and selection training, preparation meetings and interviews. The Chief Executive/Director took up his post on 1 August 2016.

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

### **Conflicts of Interest**

The organisation also 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 which may include that member not taking part in discussions or making decisions on certain matters or being excluded for part/all of that meeting.

### **Directors and Secretary**

Professor M.E. Bailey	Director, Armagh Observatory
Dr Tom Mason	Director, Armagh Planetarium
Dr J. Vink	Acting Head of Armagh Planetarium
Professor Michael Burton	Chief Executive Armagh Observatory and Planetarium

The Operations Manager provides a range of secretarial support services to the Board of Governors, Management Committee and Audit and Risk Assurance Committee.

## **4. Business Planning and Risk Management**

### **Business Planning**

The Mission of Armagh Observatory and Planetarium is:

*“To advance the knowledge and understanding of astronomy and related sciences through the execution, promotion and dissemination of astronomical research nationally and internationally in order to enrich the intellectual, economic, social and cultural life of the community”.*

This aligns closely with the aims and objectives of the Observatory’s sponsor - the former Department of Culture, Arts and Leisure (DCAL) and also with the broader aims and objectives of the Northern Ireland Executive’s Programme for Government. The organisation’s unified Business Plan received Ministerial approval in June 2015.

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. Full details of all the Observatory’s activities are provided in comprehensive Annual Reports which are available in hard copy on request or online at: <http://star.arm.ac.uk/annrep/>.

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 is focused on actively assisting children from disadvantaged backgrounds to experience a visit to the site.

The 2015/16 Business Plan was approved by the Board of Governors on 19 March 2015 and subsequently approved by the Minister of the former DCAL on 4 June 2015.

From 1 April 2016 the organisation has been registered as a single charity by the Charity Commission of Northern Ireland. Prior to this the Observatory and the Planetarium were separate charitable organisations.

No Ministerial Directions have been given regarding the work of the Armagh Observatory and Planetarium.

## **Risk Management**

Risk Management is an essential element of the Armagh Observatory and Planetarium's corporate governance framework and is closely linked to the system of internal control and business planning process. A robust risk management process assists the Armagh Observatory and Planetarium 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 Armagh Observatory and Planetarium'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 the Armagh Observatory and Planetarium. The Accounting Officer, Interim Accounting Officer, Director of the Observatory, Acting Head of the Planetarium and other staff are responsible for ensuring that treated 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.

Quarterly updates are provided to the Audit and Risk Assurance Committee on the development and implementation of the risk management process across the Armagh Observatory and Planetarium. 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. A new risk was identified for the Planetarium in June 2015 in relation to injury to staff or members of the public due to identified maintenance and health and safety related activities not being carried out. These works were completed over the summer of 2015. The Observatory and Planetarium's Risk Registers were consolidated in January 2016.

## **5. Fraud and Information Risk**

The Accounting Officer of the Armagh Observatory and Planetarium 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 preliminary investigations are carried out if fraud occurs, is attempted or is suspected;
- 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; and
- ensuring that appropriate action is taken to minimise the risk of similar frauds occurring in future.

Risks to data and information held by the organisation are owned and managed by individuals designated as information asset owners. The Operations Manager responds to requests for information under the Data Protection and Freedom of Information Acts following consultation with the Director of the Observatory, Acting Head of the Planetarium, Interim Accounting Officer, Accounting Officer and the organisation's governing committees, as appropriate.

## 6. Governance and Accountability

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

The Chair has a particular leadership responsibility for securing the sustainability and vitality of the Corporation in the long term; giving advice and direction in formulating the Corporation'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 the Observatory and Planetarium, leadership is exercised by the Director of the Observatory, Acting Head of the Planetarium, Interim Accounting Officer and Accounting Officer who are responsible 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 (Observatory);
- promoting their respective organisation's 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 senior management committees are drawn from a very wide community background within, and beyond, Northern Ireland, and provide the Corporation with a correspondingly wide range of expert knowledge and advice. All the committees of the Corporation operate with full transparency and accountability, and over the last year have proved effective in the discharge of their duties and responsibilities.

The Management Committee completed an internal self-assessment of its effectiveness in 2014/15, using the National Audit Office template questionnaire. Committee members raised concerns about 1) the lack of objectives for the Committee, 2) not regularly reviewing its performance, 3) no long term strategy being in place for the organisation and 4) oversight by the Department appearing to be increasing. It was agreed that further work on these areas would be taken forward by the new Management Committee which was proposed in the ongoing *Review of the Organisation and Management of the Armagh Observatory and Planetarium*.

It was agreed by the Board of Governors and the Management Committee that the proposed governance changes arising from the Review removed the need for the current Board of Governors to complete an internal self-assessment of its effectiveness.

The Accounting Officer, Interim Accounting Officer and Board of Governors and supporting Committees receive assurances from the Director of the Observatory, Acting Head of the Planetarium and Internal Audit that the governance and accountability processes are being managed effectively.

## 7. Sources of Independent Assurance

### Internal Audit

The independent internal audit function is carried out by a contractor following a competitive tender process. The appointed firm operates to the standards defined in the Public Sector Internal Audit Standards.

The Terms of Reference for the Internal Audit work was approved by the Audit and Risk Assurance Committee in February 2016. The Audit and Risk Assurance Committee considered reports on the following areas in March 2016:

Audit Assignment	Level of Assurance
Focused Payroll	Unacceptable
Fixed Assets	Observatory – Satisfactory Planetarium - Unacceptable
Cash Handling and Income	Satisfactory
Human Resources	Limited
IT Security	Limited
Drawdown Process	Satisfactory
Procurement	Satisfactory
Follow up on previously accepted recommendations	Satisfactory

The commencement of the annual audit fieldwork took place in February 2016. This delay was due to Internal Audit conducting a Special Investigation into a series of irregularities identified at the Planetarium in May 2015, relating initially to some contracts awarded in April 2016. This work was requested by the Chair of the Audit and Risk Assurance Committee. The findings from this work are set out in Section 9.

Despite the identification of two areas where the level of assurance was deemed unacceptable, an overall **SATISFACTORY** annual assurance rating was awarded by Internal Audit on the adequacy, reliability and effectiveness of the Armagh Observatory and Planetarium's system of risk management, control and governance for the year ended 31 March 2016. This overall assurance took account of a range of mitigating factors including; the work undertaken to address recommendations from previous reports, the promptness of actions taken to address / contain these areas of concern and the likelihood of reoccurrence.

### External Audit

The organisation is also subject to independent scrutiny from the Northern Ireland Audit Office. The Audit Office is independent of Government and is tasked by the Assembly to hold the Northern Ireland Departments and their Agencies to account for their use of public money. The Comptroller and Auditor General works closely with the Assembly's Public Accounts Committee which can require Accounting Officers and senior officials to account for their actions in relation to the management of public funds.

A representative from the Northern Ireland Audit Office is invited to all Audit and Risk Assurance Committee meetings. The 2015/16 Audit Strategy was approved by the Audit and Risk Assurance Committee in March 2016.

## 8. 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 Armagh Observatory's and Planetarium's 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 the Armagh Observatory and Planetarium for the year ended 31 March 2016 and up to the date of approval of the annual accounts, and accords with Department of Finance and Personnel guidance.

As previously detailed in Section 3, 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, the Director of the Observatory and the Acting Head of the Planetarium. 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:

- The ongoing independent assessment of the Observatory's research outputs;

- regular reports by Observatory and Planetarium 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 Armagh Observatory and Planetarium Audit and Risk Assurance Committee;
- regular Accountability 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 and ALB Quarterly Monitoring Data Collection Templates submitted to the Sponsor Department;
- periodic review of the Armagh Observatory and Planetarium Risk Registers by the respective Directors, the Armagh Observatory and Planetarium Audit and Risk Assurance Committee, the Interim Accounting Officer and the Sponsor Department;
- Joint Issues Meeting chaired by the Sponsor Department with senior Planetarium and Observatory staff.
- 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 Armagh Observatory staff;
- 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 external auditors to the Management Committee and the Board of Governors on the material issues relating to the annual accounts, which provide an opinion on whether the accounts give a true and fair view of the affairs of the organisation and of its incoming resources and application 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 or Deputy Chair to the Management Committee and the Board of Governors.

A number of the organisation's policies have been reviewed throughout 2015/16. A Policy Sub-Group (Professor A. Hibbert and Mr P.McGurgan) has been established from the Management Committee. This Sub-Group considers the content of any new or revised policies prior to their consideration by the Board of Governors or Management Committee. The work of the Audit and Risk Assurance Committee includes reviews of the controls in place for effective management of information risk.

The *Review of the Organisation and Management of the Armagh Observatory and Planetarium* was carried out by the Strategic Investment Board in 2014/15. The Board of Governors agreed to implement some of the proposals and recommendations arising from this and an implementation plan has been progressed for stage 1. This includes the key governance and organisational changes and this is ongoing.

A range of weaknesses identified in the Corporation'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.

## **9. Internal Governance Divergences**

### **Update on Prior Years:**

#### **1. Equal Pay Issues**

In January 2016 a solicitor representing some staff wrote to the Chair of the Board of Governors on the matter of the NICS Equal Pay settlement. Specifically she contested the established position that staff in Non-Departmental Public Bodies should be excluded from the NICS's settlement payments and assimilation terms.

The organisation's written response stated that the issue of whether those employed in bodies outside the NICS should be entitled to take equal pay cases on the same grounds as those in the NICS was settled by the judgment of Judge Babington in the County Court. This followed NIPSA lodging a number of test cases against NICS departments alleging a breach of contract caused by management not applying the complete terms of the settlement to staff with NIO or PSNI service.

These cases were dismissed by Judge Babington on 7 March 2013, finding, among other things, that there was no implied contractual right of the plaintiffs to have their contracts reviewed in light of the settlement. This decision was not appealed by NIPSA. In the same manner, the Board of Governors contends that there is no legal entitlement for Armagh Observatory and Planetarium staff to have access to an equal pay settlement for an equal pay detriment which occurred in a separate organisation.



## 2. Special Bonus payments

Special bonus payments made to two Planetarium staff in 2013/14 (but identified in 2014/15) exceeded the former Department of Finance and Personnel's (DFP) limit of 0.2% of the pay bill. The overall cost of the Special Bonus payments was 0.45% of the Planetarium's pay bill. This matter has now been addressed and the former DFP subsequently approved the 2014/15 Pay Remit in March 2015.

## 3. 2014/15 Internal Audit Recommendations

The Corporation's Internal Auditors identified a number of weaknesses during work undertaken in 2014/15. Ten 'high' rated recommendations are being actively addressed, and one has not yet been implemented. This relates to the need to have a revised Board Operating Framework. This issue will be considered going forward as part of the ongoing Organisational Change activities.

The area of 'IT Security and Business Continuity' previously received a 'limited' assurance. Since this was awarded the recently appointed IT Manager has been actively documenting the controls and strengthening our IT environment. A significant amount of work on revising and developing the existing Business Continuity Plans has also been undertaken. Internal Audit's follow up review on previously accepted recommendations provides a SATISFACTORY level of assurance.

### Identification of New Issues:

#### 1. Irregularities at the Planetarium

In July 2015 the Chair of the Audit and Risk Assurance Committee commissioned Internal Audit to carry out an investigation into a series of procurement irregularities that had been brought to his attention. The investigation team considered the policies, procedures and practices relating to procurement, use of the Planetarium's credit card, the acceptance of gifts and hospitality. The team subsequently provided its opinion on the robustness of the management and control environment within the Planetarium. Its conclusion was that there was an UNACCEPTABLE ASSURANCE over the areas considered under the scope of the review.

The report identifies that one individual did not consistently consider: (i) The need for business cases; (ii) whether money was available in either capital and/or revenue to support spend; (iii) the requirements relating to the acceptance of gifts and hospitality; (iv) matters relating to the funding of gifts and hospitality; (v) completeness of reporting to audit committee; and (vi) compliance with policy and procedures over the use of the corporate credit card.

The report also identified that an employee's contract had been significantly modified but that this was not brought to the attention of the Sponsor Department for approval in advance of finalisation, in accordance with the terms of the Management Statement and Financial Memorandum.

Given these areas of concern the Internal Audit report concluded that there had been a '*wilful disregard*' of responsibilities by this individual.

As a response to these issues the organisation's internal financial procedures were immediately strengthened. For example, business cases now require the Accounting Officer's approval and delegated limits are also being strictly adhered to. As a result key staff are now acutely aware of the need to ensure that procurement guidance on obtaining quotations and awarding contracts is closely followed.

Increased levels of control over the location and safe storage of the Planetarium's IT equipment were also introduced and a full IT equipment identification exercise was carried out.

On discovery these matters were immediately brought to the attention of the former Department of Culture, Arts and Leisure, the former Department of Finance and Personnel and the Northern Ireland Audit Office. The former DCAL did not regularise these irregular expenditures. Although this investigation remains ongoing, it is clear that key controls were deliberately overridden on a number of occasions before May 2015.

#### 2. Salary overpayments

An Internal Audit review of the organisation's payroll systems identified that an ongoing misunderstanding of the annual pay settlement guidance issued by the Department of Finance and Personnel led to some staff receiving salary overpayments. The cumulative overpayment amounted to £7,553.

Staff who were entitled to receive an annual non-consolidated payment did not receive this as a one-off payment, rather it was incorrectly added onto their gross salaries. The result was that their final pay was positioned above the top of their grade's pay-scale.

The salaries of the affected staff were immediately realigned within the correct pay-bands in the following month. The recovery of these overpayments is being undertaken in accordance with the provisions of the organisation's current Financial Memorandum. This was agreed by the Audit and Risk Committee on 24 March 2016.

Further training is being provided for staff involved in the preparation and verification of the organisation's salaries.

## **10. Conclusion**

### **Armagh Observatory**

The Armagh Observatory has an effective governance structure and is operating to a high standard of integrity and probity.

### **Armagh Planetarium**

The Armagh Planetarium's governance structures did not operate effectively in the month of April 2015. Evidence has been presented that established procurement and other key procedures, including the appropriate disclosure of specific transactions to the Management and Audit and Risk Assurance Committees, were deliberately overridden by one individual.

It is important to note however that these matters were identified by other staff who promptly brought them to the attention of the Audit and Risk Committee and the Department. In this regard it is arguable that the operation of secondary level governance controls protected the organisation.

In the months following the Management Committee, the Audit and Risk Assurance Committee and staff have worked closely with the Sponsor Department and Internal Audit to significantly increase the levels of due diligence and oversight exercised over the Planetarium's activities.

Therefore while the effectiveness of the Planetarium's governance and reporting structure was weakened for a one month period at the start of the 2015/16 financial year, a range of mitigating factors including the promptness of actions taken to both address and contain these areas of concern, and the likelihood of reoccurrence indicate that for the following 11 months the Planetarium was able to re-establish an effective governance structure and that it is currently 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 the Armagh Observatory and Planetarium and of the status of the controls and checks that have been put in place to regulate and inform the organisation's committees.

**Signed:**



**Professor Michael Burton**  
**Chief Executive**  
**Date: 16 November 2017**

## **THE ARMAGH OBSERVATORY AND PLANETARIUM**

### **THE CERTIFICATE OF THE COMPTROLLER AND AUDITOR GENERAL TO THE NORTHERN IRELAND ASSEMBLY**

I certify that I have audited the financial statements of the Armagh Observatory and Planetarium for the year ended 31 March 2016 under the Armagh Observatory and Planetarium (Northern Ireland) Order 1995. These comprise the Statements of Financial Activities, the Statements of Recognised Gains and Losses, the Balance Sheets and the Cash Flow Statements and the related notes. These financial statements have been prepared under the accounting policies set out within them. I have also audited the information in the Remuneration Report that is described in that report as having been audited.

#### **Respective responsibilities of the Governors, Accounting Officers and Auditor**

As explained more fully in the Statement of the Responsibilities of the Governors and Accounting Officers, the Governors and Accounting Officers are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view. My responsibility is to audit, certify and report on the financial statements in accordance with the Armagh Observatory and Planetarium (Northern Ireland) Order 1995. I conducted my audit in accordance with International Standards on Auditing (UK and Ireland). Those standards require me and my staff to comply with the Auditing Practices Board's Ethical Standards for Auditors.

#### **Scope of the audit of the financial statements**

An audit involves obtaining evidence about the amounts and disclosures in the financial statements sufficient to give reasonable assurance that the financial statements are free from material misstatement, whether caused by fraud or error. This includes an assessment of: whether the accounting policies are appropriate to the Armagh Observatory and Planetarium's circumstances and have been consistently applied and adequately disclosed; the reasonableness of significant accounting estimates made by the governors; and the overall presentation of the financial statements. In addition I read all the financial and non-financial information in the Annual Report to identify material inconsistencies with the audited financial statements and to identify any information that is apparently materially incorrect based on, or materially inconsistent with, the knowledge acquired by me in the course of performing the audit. If I become aware of any apparent material misstatements or inconsistencies I consider the implications for my certificate.

I am required to obtain evidence sufficient to give reasonable assurance that the incoming and outgoing resources 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 qualified opinion on regularity**

The Armagh Observatory and Planetarium must submit business cases for purchases which exceed the Accounting Officers' delegated limit of £10,000 to the Department for Communities for approval. As valid business case approvals were not in place for three Direct Award Contracts made by the Armagh Planetarium, the Armagh Observatory and Planetarium has incurred irregular spend in 2015-16 of £49,969 in relation to amounts paid to the three suppliers.

#### **Qualified Opinion on regularity**

In my opinion, except for expenditure of £49,969, for which the Armagh Planetarium had no authority to incur, in all material respects the incoming resources and resources expended have been applied to the

purposes intended by the Assembly and the financial transactions conform to the authorities which govern them. My detailed observations are included in my report on pages 64 to 71.

### **Opinion on financial statements**

In my opinion:

- the financial statements give a true and fair view of the state of the Armagh Observatory and Planetarium's affairs as at 31 March 2016 and of its incoming resources and resources expended and cash flows for the year then ended; and
- the financial statements have been properly prepared in accordance with the Armagh Observatory and Planetarium (Northern Ireland) Order 1995 and Department of Communities (formerly Department of Culture Arts and Leisure) directions issued thereunder.

### **Opinion on other matters**

In my opinion:

- the part of the Remuneration 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; and
- the information given in the Management Commentary, Operating Reviews, Financial Review, Statement of the Responsibilities of the Governors and Accounting Officers, Statement of Disclosure of Information to the Auditors and Governance Statements for the financial year for which the financial statements are prepared is consistent with the financial statements.

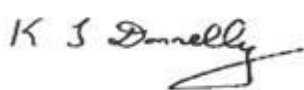
### **Matters on which I report by exception**

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 part of the Remuneration Report to be audited are not in agreement with the accounting records; or
- I have not received all of the information and explanations I require for my audit; or
- the Governance Statement does not reflect compliance with Department of Finance's (formerly the Department of Finance and Personnel) guidance.

### **Report**

My detailed observations are included in the report I have attached to the financial statements on pages 64 to 71.



**KJ Donnelly**  
Comptroller and Auditor General  
19 December 2017

Northern Ireland Audit Office  
106 University Street  
Belfast  
BT7 1EU

## Armagh Observatory

### Statement of financial activities for the year ended 31 March 2016

		Unrestricted funds 2016	Restricted funds 2016	<b>Total funds 2016</b>	Unrestricted funds 2015	Restricted funds 2015	<b>Total funds 2015 (as restated)</b>
	Notes	£	£	£	£	£	£
<b>Income from:</b>							
Donations	2	1,128,712	544,529	<b>1,673,241</b>	1,050,872	439,011	<b>1,489,883</b>
Investment income		6,341	-	<b>6,341</b>	5,983	-	<b>5,983</b>
Charitable activities		13,887	-	<b>13,887</b>	3,771	-	<b>3,771</b>
<b>Total incoming resources</b>		<b>1,148,940</b>	<b>544,529</b>	<b>1,693,469</b>	<b>1,060,626</b>	<b>439,011</b>	<b>1,499,637</b>
<b>Expenditure on:</b>							
Charitable activities	3	1,231,531	364,241	<b>1,595,772</b>	1,152,477	239,512	<b>1,391,989</b>
Capital expenditure		-	99,672	<b>99,672</b>	-	141,856	<b>141,856</b>
<b>Total resources expended</b>		<b>1,231,531</b>	<b>463,913</b>	<b>1,695,444</b>	<b>1,152,477</b>	<b>381,368</b>	<b>1,533,845</b>
<b>Net income/(expenditure) before finance income</b>		<b>(82,591)</b>	<b>80,616</b>	<b>(1,975)</b>	<b>(91,851)</b>	<b>57,643</b>	<b>(34,208)</b>
<b>Transfers between funds</b>	16	<b>53,853</b>	<b>(53,853)</b>	<b>-</b>	<b>57,643</b>	<b>(57,643)</b>	<b>-</b>
<b>Defined benefit scheme finance (cost)/income</b>		<b>(16,000)</b>	<b>-</b>	<b>(16,000)</b>	<b>(19,000)</b>	<b>-</b>	<b>(19,000)</b>
<b>Actuarial gains/(losses) on defined benefit pension scheme</b>	21	<b>283,000</b>	<b>-</b>	<b>283,000</b>	<b>(46,000)</b>	<b>-</b>	<b>(46,000)</b>
<b>Net movement in funds</b>		<b>238,262</b>	<b>26,763</b>	<b>265,025</b>	<b>(99,208)</b>	<b>-</b>	<b>(99,208)</b>
<b>Reconciliation of funds</b>							
Total funds brought forward at 1 April		(563,485)	7,293	<b>(556,192)</b>	(464,277)	7,293	<b>(456,984)</b>
<b>Total funds carried forward at 31 March</b>	13, 14	<b>(325,223)</b>	<b>34,056</b>	<b>(291,167)</b>	<b>(563,485)</b>	<b>7,293</b>	<b>(556,192)</b>

All amounts above relate to continuing operations of the corporation.

### Statement of recognised gains and losses

	<b>2016</b>	<b>2015</b>
		(as restated)
	£	£
Net movement in funds for the year - after finance costs	(17,975)	(53,208)
Prior year adjustment (note 28)	(70,265)	(69,001)
Net movement on government grant reserve	6,100	47,867
Net movement on donated assets reserve	(19,443)	(19,535)
Actuarial gain/(loss) on pension scheme	283,000	(46,000)
<b>Total gains/ (losses) recognised since last annual report</b>	<b>181,417</b>	<b>(139,877)</b>

## Armagh Observatory

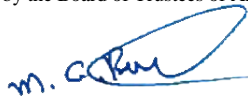
### Balance sheet at 31 March 2016

	Note	2016 £	2015 (as restated) £
<b>Fixed Assets</b>			
Tangible assets	8	2,875,116	2,888,459
<b>Current assets</b>			
Debtors	9	184,148	107,081
Cash at bank and in hand	19, 20	283,563	209,990
		467,711	317,071
<b>Creditors: amounts falling due within one year</b>	10	(416,598)	(309,983)
<b>Net current assets</b>		51,113	7,088
<b>Total assets less current liabilities</b>		2,926,229	2,895,547
<b>Creditors: amounts falling due after more than one year</b>		-	-
<b>Net assets excluding pension liability</b>		2,926,229	2,895,547
<b>Defined benefit pension scheme liability</b>	21	(358,000)	(579,000)
<b>Net assets</b>		2,568,229	2,316,547
<b>Funds</b>			
Unrestricted funds	13	(325,223)	(563,485)
Restricted funds	14	34,056	7,293
Government grant reserve	12	743,827	737,727
Designated funds	16	2,115,569	2,135,012
		2,568,229	2,316,547

The financial statements on pages 34 to 49 were approved by the Board of Trustees of Armagh Observatory on 16 November 2017 and were signed on its behalf by:



Archbishop Richard Clarke  
Chair of the Board of Trustees



Professor Michael Burton  
Chief Executive



## Armagh Observatory

### Cash flow statement for the year ended 31 March 2016

	Note	2016 £	2015 (as restated) £
<b>Net cashflow from operating activities</b>	18	77,335	(130,203)
<b>Cashflows from investing activities</b>			
Interest		46	318
Purchase of tangible fixed assets/equipment		(133,237)	(141,856)
Capital grants received		133,237	141,856
		46	318
<b>Cashflows from financing activities</b>		-	-
Bank charges and currency differences		(3,808)	-
<b>Increase in cash and cash equivalents</b>		73,573	(129,885)

Further detail is reported in Notes 18-20

## Notes to the financial statements for the year ended 31 March 2016

### 1 Accounting policies

#### Basis of Accounting

The financial statements have been prepared under direction issued by DCAL, in particular the requirement to recognise grant in aid received from them on a cash basis in order to present a true and fair view of Government funding. With the exception of this departure from the SORP, 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)).

#### 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:

	%
Furniture and fittings	2 - 15
Office equipment	10 - 20
Scientific equipment and other equipment	10 - 25
Buildings	2
Astropark	2 - 5
Exhibits and grounds	6 - 10
Motor Vehicles	25

Land and buildings are included in the balance sheet at depreciated replacement cost, estimated value in use or market value.

#### Incoming Resources

Grant income from DCAL is shown in the Statement of Financial Activities in the year in which it is received.

Grants that relate to specific capital expenditure are treated as deferred income which is then credited to the Statement of Financial Activities over the related asset's useful life. Grants that relate to specific research projects are treated as deferred income and credited to the Statement of Financial Activities over the lifetime of the related project. Other grants are credited to the Statement of Financial Activities when received.

#### Pension scheme

The corporation provides pension benefits to its employees by participating in the Northern Ireland Local Government Officers' Superannuation Committee (NILGOSC) Pension Scheme, which is a defined benefit scheme. Annual contributions to the NILGOSC scheme are based on actuarial advice. The operating costs of providing retirement benefits to the corporation'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.

#### Fund accounting

The corporation has various types of funds for which it is responsible, and which require separate disclosure. These are as follows:

##### 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

Funds which are expendable at the discretion of the trustees in furtherance of the objectives of the corporation. In addition to expenditure on the provision of services, such funds may be held in order to finance capital investment and working capital.

Government grant reserve - this fund represents the net book value of unrestricted assets, namely land and buildings, exhibits and grounds, astropark, equipment and historic telescopes, fixtures, equipment and motor vehicles.

Designated fund - Buildings and grounds donated to the corporation in 1790 by its founder Archbishop Richard Robinson.

#### Reserves policy

The Armagh Observatory 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. They have a need to retain a sufficient level of unrestricted cash reserves to meet the risks associated with financial contingencies, uncertainties and demands.

The Observatory considers that funds of between £50,000 and £100,000, approximately 5% of total annual expenditure, are sufficient to meet financial risks. The level of unrestricted funds (after reversal of pension adjustments) at 31 March 2016 dropped to £26,406 (from £79,044 at 31 March 2015) due to a prior year adjustment in respect of accounting for accrued holiday pay in accordance with FRS 102. The policy is reviewed on an annual basis.

The reserves are held in a short-term interest-bearing bank deposit account within the NICS banking arrangements, with any interest earned being used to fund operating costs.

## Armagh Observatory

### 2 Income from donations

	Note	Unrestricted funds 2016 £	Restricted funds 2016 £	Total funds 2016 £	Total funds 2015 £
DCAL Recurrent grant-in-aid		925,700	-	925,700	997,372
DCAL accrued VE grant-in-aid*		108,012	-	108,012	-
DCAL In-year recurrent grant-in-aid		95,000	-	95,000	53,500
DCAL Capital grant-in-aid		-	-	-	15,000
DCAL In-year capital grant-in-aid		-	160,000	160,000	135,000
<b>Total grant-in-aid from the DCAL</b>		<b>1,128,712</b>	<b>160,000</b>	<b>1,288,712</b>	<b>1,200,872</b>
Other grants and receipts	2b	-	427,994	427,994	256,502
Transfer to/from deferred income			(43,465)	(43,465)	32,509
		<b>1,128,712</b>	<b>544,529</b>	<b>1,673,241</b>	<b>1,489,883</b>

\*Included in the total Grant-in-Aid received from the Department of Culture Arts and Leisure is £108,012 relating to accrued VE funding, recognised to match against the accrued VE costs included within note 7. This funding was drawn down in 2016-17.

### 2b Other grants and receipts

	Unrestricted funds 2016 £	Restricted funds 2016 £	Total funds 2016 £	Total funds 2015 £
STFC Research, Visitor and Travel grants	-	346,955	346,955	160,702
DCAL Creativity Month	-	-	-	6,000
Leverhulme Trust	-	69,358	69,358	75,266
Leverhulme Artist-in-Residence	-	1,481	1,481	13,329
Around North Project	-	4,500	4,500	-
European Commission FP7 EuroPlaNet Project	-	-	-	1,205
Royal Society	-	5,700	5,700	-
	-	427,994	427,994	256,502

### 3 Expenditure on charitable activities

	Note	Unrestricted funds 2016 £	Restricted funds 2016 £	Total funds 2016 £	Total funds 2015 (as restated) £
Direct costs - research	4	1,074,510	330,492	1,405,002	1,210,249
Support costs - research	5	157,021	33,749	190,770	181,740
		<b>1,231,531</b>	<b>364,241</b>	<b>1,595,772</b>	<b>1,391,989</b>

### 4 Analysis of direct costs

	Unrestricted funds 2016 £	Restricted funds 2016 £	Total funds 2016 £	Total funds 2015 (as restated) £
Salaries and wages	834,934	157,364	992,298	826,266
Agency staff	38,483	-	38,483	39,984
Student maintenance grants	66,478	69,263	135,741	139,149
Scholarship and training	16,042	12,740	28,782	27,000
Travelling and subsistence	21,911	28,305	50,216	44,481
Computer consumables	18,041	19,967	38,008	20,297
Library and publications	40,745	-	40,745	41,808
Archive materials and services	5,860	-	5,860	21,450
Internet provision	6,900	-	6,900	8,630
Contribution to UKSC and SALT operating costs	11,200	-	11,200	18,250
Contribution to GOTO operating costs	-	30,000	30,000	-
Meetings and conferences	-	-	-	17
Visitor programme	7,371	-	7,371	3,726
Public Understanding of Science expenses	6,545	-	6,545	11,234
Leverhulme Artist in Residence	-	12,853	12,853	1,957
DCAL Creativity Month	-	-	-	6,000
	<b>1,074,510</b>	<b>330,492</b>	<b>1,405,002</b>	<b>1,210,249</b>

## Armagh Observatory

### 5 Analysis of support costs

	Note	Unrestricted funds 2016 £	Restricted funds 2016 £	Total funds 2016 £	Total funds 2015 £
Insurance		11,670	-	11,670	10,463
Heat, light and power		20,930	-	20,930	21,768
Property and grounds maintenance		62,421	-	62,421	43,311
Cleaning consumables		1,235	-	1,235	2,743
Cleaning agency staff costs		11,143	-	11,143	11,637
Postage and telephone		3,897	-	3,897	4,497
Recruitment costs		7,407	-	7,407	2,152
General expenses		9,550	185	9,735	10,122
Office and miscellaneous equipment		388	33,564	33,952	40,949
Bank charges and currency differences		3,808	-	3,808	-
Professional fees - property		-	-	-	5,641
Other professional fees		11,154	-	11,154	11,058
Stationery, printing and advertising		1,702	-	1,702	3,147
Governance costs	6	11,716	-	11,716	14,252
Depreciation		-	113,015	113,015	111,587
Release from grants reserve		-	(93,572)	(93,572)	(92,052)
Release from donated asset reserve		-	(19,443)	(19,443)	(19,535)
		157,021	33,749	190,770	181,740

### 6 Analysis of governance costs

	Unrestricted funds 2016 £	Restricted funds 2016 £	Total funds 2016 £	Total funds 2015 £
Management Committee	2,219	-	2,219	5,755
Audit	9,497	-	9,497	8,497
	11,716	-	11,716	14,252

## Armagh Observatory

### 7 Average staff numbers and related costs

	2016	2015
	Number	Number
Permanent staff	12.0	12.0
Fixed-term contract staff	3.6	2.5
Agency staff	1.2	1.2
	16.8	15.7

Included within the numbers above are the corporation's Operations Manager (whose salary is shared equally between the Observatory and Planetarium) and the Temporary Accountant (whose salary is apportioned between the Observatory and Planetarium in the ratio 3:1).

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

	2016	2015
	Number	Number
£70,001 - £80,000	-	1
£170,001 - £180,000	1	-

The key management personnel of the corporation comprise the trustees and the executive director.

The total amount of employee benefits (including employer pension contributions) received by key management personnel for their services to the corporation was £192,151 (2015: £82,915)

There was no remuneration paid to trustees during the year (2015: nil). Travel and subsistence expenses totalling £360.39 was reimbursed to 4 trustees (2015: £537.82 to 4 trustees).

		2016	2015
	Note	£	(as restated) £
<b>Permanent staff</b>			
Wages and salaries		519,489	516,044
Social security costs		46,825	44,007
Employer's pension contributions		101,318	98,119
Defined benefit pension service cost	21	46,365	31,952
Termination costs		108,016	-
		822,013	690,122
<b>Fixed-term contract staff costs</b>			
Wages and salaries		136,306	109,447
Social security costs		12,662	10,768
Employer's pension contributions		21,317	15,929
		170,285	136,144
<b>Total permanent and fixed-term contract staff</b>			
Wages and salaries		655,795	625,491
Social security costs		59,487	54,775
Employer's pension contributions		122,635	114,048
Defined benefit pension service cost	21	46,365	31,952
Termination costs		108,016	-
		992,298	826,266
Agency staff costs		49,626	51,621
<b>Total staff costs</b>		1,041,924	877,887

Staff costs above include 50% of the salary costs of the corporation's Operations Manager and 75% of the costs of the Temporary Accountant and a transfer to the Planetarium for the costs of the Acting Head of the Planetarium since his appointment in June.

Included in the figures is a 'Write-off' of £3,376 as agreed by the Department, in relation to salary overpayments.

The pension service cost of £46,365 is the actuarial present value of pension benefits earned by staff during the year.

Termination costs relate to compensation under the terms of the voluntary exit scheme.

### Average student numbers and related costs

	2016	2015
	Number	Number
PhD students	10.0	10.0
	2016	2015
	£	£
Student maintenance grants	135,741	139,149

8 Tangible fixed assets

	Freehold Land & buildings £	Exhibits and grounds £	Astropark £	Furniture Fittings £	Office Eqpt. £	Equipment & Historic telescopes £	Motor Van £	Total £
<b>Cost or valuation</b>								
At 1 April 2015	2,569,994	23,593	367,490	144,451	34,717	858,123	15,000	4,013,368
Asset revaluation	-	-	-	-	-	-	-	-
Additions	-	-	-	-	-	99,672	-	99,672
Disposals	-	-	-	(465)	-	-	-	(465)
<b>At 31 March 2016</b>	<b>2,569,994</b>	<b>23,593</b>	<b>367,490</b>	<b>143,986</b>	<b>34,717</b>	<b>957,795</b>	<b>15,000</b>	<b>4,112,575</b>
<b>Depreciation</b>								
At 1 April 2015	99,656	18,413	323,397	76,621	34,717	572,105	-	1,124,909
Adjustment for asset revaluation	-	-	-	-	-	-	-	-
Charge for year	33,218	1,778	7,350	8,093	-	59,576	3,000	113,015
Disposals	-	-	-	(465)	-	-	-	(465)
<b>At 31 March 2016</b>	<b>132,874</b>	<b>20,191</b>	<b>330,747</b>	<b>84,249</b>	<b>34,717</b>	<b>631,681</b>	<b>3,000</b>	<b>1,237,459</b>
<b>Net book value</b>								
<b>At 31 March 2016</b>	<b>2,437,120</b>	<b>3,402</b>	<b>36,743</b>	<b>59,737</b>	<b>-</b>	<b>326,114</b>	<b>12,000</b>	<b>2,875,116</b>
<b>Net book value</b>								
<b>At 31 March 2015</b>	<b>2,470,338</b>	<b>5,180</b>	<b>44,093</b>	<b>67,830</b>	<b>-</b>	<b>286,018</b>	<b>15,000</b>	<b>2,888,459</b>

Tangible fixed asset additions of £99,672 as shown above were funded as follows:

	£
DCAL Capital grant-in-aid	-
DCAL In-year capital grant-in-aid	99,672
	<u>99,672</u>

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

	2016 £	2015 £
Cost	715,334	715,334
Aggregate depreciation	(271,256)	(255,287)
<b>Net book value based on historic cost</b>	<b>444,078</b>	<b>460,047</b>

Depreciation on fixed assets for the year was £113,015 (2015: £111,587).

Land and buildings include grounds and buildings with a net book value of £1,766,531 at 31 March 2016 which were donated to the corporation in 1790 by Archbishop Richard Robinson, the founder of the corporation (31 March 2015: £1,785,175).

The Observatory includes in fixed assets any expenditure over £3,600 (on an item or group of related items) which is expected to be used for more than a year.

## Armagh Observatory

### 9 Debtors

	2016	2015
	£	£
Trade and grant debtors	123,980	45,987
Prepayments	53,797	54,358
Pension scheme	6,371	6,736
	184,148	107,081

### 10 Creditors: amounts falling due within one year

		2016	2015
	Note	£	(as restated) £
Trade creditors		25,359	22,007
Grant creditor		-	60,182
Accruals		236,449	111,081
Deferred income	11	154,789	116,713
		416,598	309,983

### 11 Analysis of deferred income

	2016	2015
	£	(as restated) £
Balance at 1 April 2015	116,713	233,652
Transfer to miscellaneous income	(684)	-
Transfer to statement of financial activities	(31,731)	(60,236)
Transfer from statement of financial activities	75,196	27,727
Grants repaid	(4,705)	(84,430)
Balance at 31 March 2016	154,789	116,713

### 12 Government grants reserve

	Land and buildings	Exhibits and grounds	Astropark	Furniture Fittings	Office Eqpt.	Equipment & Historic telescopes	Motor Van	Total
	£	£	£	£	£	£	£	£
Balance at 1 April 2015	319,606	5,180	44,093	67,830	-	286,018	15,000	737,727
Additions	-	-	-	-	-	99,672	-	99,672
Disposals	-	-	-	-	-	-	-	-
Amortised	(13,775)	(1,778)	(7,350)	(8,093)	-	(59,576)	(3,000)	(93,572)
Balance at 31 March 2016	305,831	3,402	36,743	59,737	-	326,114	12,000	743,827



## Armagh Observatory

### 13 Unrestricted funds

	Note	2016 £
Balance at 1 April 2015 as previously stated		(493,220)
Prior year adjustment	27	(70,265)
Balance at 1 April 2015 as restated		(563,485)
Incoming resources		1,148,940
Resources expended		(1,231,531)
Transfers between funds		53,853
Other finance costs		(16,000)
Actuarial gains		283,000
Balance at 31 March 2016		(325,223)

The unrestricted funds include a deficit of £358,000 (2015: £579,000) in respect of pension scheme liabilities of the pension fund.

Unrestricted funds after reversal of the pension adjustments are as follows:

	£
<b>Unrestricted funds at 31 March 2016</b>	
Balance on unrestricted funds at 31 March 2016	(325,223)
Reversal of pension scheme debtor at 31 March 2016	(6,371)
Reversal of pension scheme liability at 31 March 2016	358,000
Unrestricted funds at 31 March 2016 after reversal of pension adjustments	26,406

### 14 Restricted funds

	Balance 01/04/2015	Incoming resources	Resources expended	Transfer between funds	Transfer from defrd. income	Transfer to defrd. income	Balance 31/03/2016
	£	£	£	£	£	£	£
<b>DCAL grant-in-aid</b>							
SALT	5,031	-	-	-	-	-	5,031
Capital grant-in-aid	-	-	-	-	-	-	-
In-year capital grant-in-aid	-	160,000	(133,237)	-	-	-	26,763
	5,031	160,000	(133,237)	-	-	-	31,794
<b>Other grants</b>							
STFC grants	-	346,955	(233,269)	(53,853)	8,373	(68,206)	-
Leverhulme Trust	-	69,358	(81,344)	-	11,986	-	-
Lindsay Scholarship Fund	2,037	-	-	-	-	-	2,037
Around North	-	4,500	-	-	-	(4,500)	-
Leverhulme Artist-in-Residence	-	1,481	(12,853)	-	11,372	-	-
Royal Society	-	5,700	(3,210)	-	-	(2,490)	-
	2,037	427,994	(330,676)	(53,853)	31,731	(75,196)	2,037
<b>Donations</b>	225	-	-	-	-	-	225
	7,293	587,994	(463,913)	(53,853)	31,731	(75,196)	34,056

#### DCAL Grant-In-Aid

The Observatory received in-year capital grants of £160,000 from DCAL to fund expenditure on computer servers, collaborative research projects, commencement work on a new boiler, and technical equipment.

#### Other Grants and Receipts

The Observatory received funding from the STFC to fund a number of research projects during the year.

Funding was received from the Leverhulme Trust for a research project: Ultracool Dwarfs: A New Class of Stellar Lighthouse.

An Artist-in-Residence Grant was received from the Leverhulme Trust to fund the 'Beyond Limits' project.

These grants fund salary, travel and other direct costs of the research projects and provide a contribution towards the principal investigator's salary costs and indirect and estate costs.

## Armagh Observatory

### 15 Analysis of transfer between funds

The transfer from restricted to unrestricted funds represents funds received from the STFC and other grants towards grant supervisory salary costs and other general running costs of the Observatory.

### 16 Designated funds

	2016	2015
	£	£
<b>Revaluation of land and buildings</b>		
Balance at 1 April 2015	348,051	348,051
Transfer to donated assets reserve	-	-
Revaluation of land and buildings	-	-
Balance at 31 March 2016	348,051	348,051
<b>Donated assets reserve</b>		
Balance at 1 April 2015	1,786,961	1,806,496
Transfer from revaluation of land and buildings	-	-
Revaluation of donated land and buildings	-	-
Amortised	(19,443)	(19,535)
Balance at 31 March 2016	1,767,518	1,786,961
<b>Total designated funds at 31 March 2016</b>	<b>2,115,569</b>	<b>2,135,012</b>

Buildings and grounds with a net book value at 31 March 2016 of £1,766,531 (2015: £1,785,175) were donated to the corporation in 1790 by Archbishop Richard Robinson, the founder of the corporation.

The corporation's land and buildings were revalued at 31 March 2012 by Land and Property Services, an agency within the Department of Finance and Personnel, on the following bases:

#### Land and buildings

Operational land and buildings which are unique due to their specialised nature and design  
Operational non-specialised land and buildings  
Other land and buildings

#### Basis of valuation

depreciated replacement cost  
existing use value  
market value

### 17 Analysis of net assets between funds

	Designated Funds	Unrestricted Funds	Restricted Funds	Total Funds
	£	£	£	£
Tangible fixed assets	2,859,396	(18,336)	34,056	2,875,116
Current assets	-	274,359	193,352	467,711
Creditors: amounts falling due within one year	-	(223,246)	(193,352)	(416,598)
Pension scheme liability	-	(358,000)	-	(358,000)
<b>Net assets/(liabilities)</b>	<b>2,859,396</b>	<b>(325,223)</b>	<b>34,056</b>	<b>2,568,229</b>

### 18 Reconciliation of net income/(expenditure) to net cash flow from operating activities

	2016	2015
	£	(as restated) £
Net (expenditure) per statement of financial activities	(1,975)	(34,208)
Depreciation	113,015	111,587
Interest received	(46)	(318)
Interest paid and similar charges	3,808	-
Defined benefit pension scheme service cost less contributions payable	46,000	32,000
Amortisation - Government grant reserve	(93,572)	(92,052)
Amortisation - donated asset reserve	(19,443)	(19,535)
(Increase)/decrease in debtors	(77,067)	(19,938)
Increase/(decrease) in creditors	106,615	(107,739)
<b>Net cash inflow/ (outflow) from operating activities</b>	<b>77,335</b>	<b>(130,203)</b>

## Armagh Observatory

### 19 Analysis of cash and cash equivalents

	31 March 2016 £	1 April 2015 £
Cash at bank and in hand	283,563	209,990
<b>Total cash and cash equivalents</b>	<b>283,563</b>	<b>209,990</b>

### 20 Reconciliation of net cashflow to movement in net cash funds

	2016 £	2015 £
<b>Increase in cash and cash equivalents in the year</b>	73,573	(129,885)
Cash and cash equivalents at 1 April 2015	209,990	339,875
<b>Cash and cash equivalents at 31 March 2016</b>	<b>283,563</b>	<b>209,990</b>

### 21 Pension scheme

An actuarial valuation of the NILGOSC scheme was carried out at 31 March 2013. The funding level (ratio of assets to past service liabilities) at 31 March 2013 was 91% compared to 82% at 31 March 2010 corresponding to a funding deficit of £467million (£783m at 31 March 2010). It has been agreed that the employers' contribution rate for 2015/2016 of 20% will remain for the next year, with an increase anticipated from 1 April 2017 to remove the shortfall.

The disclosures below relate to the funded liabilities within the NILGOSC Pension Fund which is part of the Local Government Scheme (Northern Ireland). The NILGOSC actuary, Aon Hewitt Ltd, has provided the following details for the purposes of accounting for the Observatory's share of the scheme deficit in accordance with FRS 102 at 31 March 2016.

#### Financial assumptions used by the actuary were:

	31/3/2016 %	31/3/2015 %	31/3/2014 %
Rate of increase in salaries	3.2	3.3	3.9
RPI Inflation	2.8	2.9	3.4
CPI Inflation	1.7	1.8	2.4
Pension increases	1.7	1.8	2.4
Pension accounts revaluation rate	1.7	1.8	n/a
Discount rate	3.4	3.2	4.3

#### Mortality assumptions

	2016 Years	2015 Years
<b>Males</b>		
Member aged 65 at accounting date	22.3	22.2
Member aged 45 at accounting date	24.5	24.4
<b>Females</b>		
Member aged 65 at accounting date	24.8	24.7
Member aged 45 at accounting date	27.2	27.0

#### Asset Allocation

	Value at 31/3/2016 %	Value at 31/3/2015 %
Equities	71.9	73.0
Government Bonds	5.7	5.7
Corporate Bonds	6.4	6.5
Property	13.2	12.6
Cash	2.3	2.0
Other	0.5	0.2
	100.0	100.0

## Armagh Observatory

### 21 Pension scheme (cont'd)

#### Scheme balance sheet

	31/3/2016	31/3/2015
	£k	£k
Fair value of assets	5,113	4,937
Present value of funded defined benefit obligation	5,471	5,516
Funded status	(358)	(579)
Unrecognised asset	0	0
Deficit recognised in the balance sheet	(358)	(579)

#### Recognition in the statement of financial activities

	Year to 31/3/2016	Year to 31/3/2015
	£k	£k
<b>Operating cost</b>		
Current service costs	169	146
Past service cost	-	-
Curtailed cost	-	-
Settlement cost	-	-
<b>Financing cost</b>		
Interest on net defined benefit liability/(asset)	16	19
<b>Total pension expense recognised in SOFA</b>	185	165
Allowance for administrative expenses included in Current Service Cost	2	2

#### Reconciliation of defined benefit obligation

	Year to 31/3/2016	Year to 31/3/2015
	£k	£k
Opening defined benefit obligation	5,516	4,829
Current service cost	169	146
Past service cost	-	-
Interest cost	175	206
Contributions by members	48	40
Actuarial (gains)/ losses	(301)	429
Net benefits paid	(136)	(134)
Closing defined benefit obligation	5,471	5,516

#### Reconciliation of fair value of assets

	Year to 31/3/2016	Year to 31/3/2015
	£k	£k
Opening fair value of assets	4,937	4,347
Interest income on assets	159	187
Contributions by members	48	40
Contributions by the corporation	123	114
Remeasurement (losses)/ gains on assets	(18)	383
Net benefits paid	(136)	(134)
Closing fair value of assets	5,113	4,937

## Armagh Observatory

### 22 Commitments

There were no outstanding capital commitments at 31 March 2016 (2015: £nil).

### 23 Investment in Southern African Large Telescope Project

	2016	2015
	£	£
Total investment at 31 March	185,096	185,096
Provision for impairment at 31 March	(185,096)	(185,096)
Net book value at 31 March	-	-

The Southern African Large Telescope (SALT) project involved the construction of a 10-metre class telescope with related buildings at the Sutherland Outstation of the South African Astronomical Observatory in Northern Cape Province. The main objective is to advance science and education in South Africa through the promotion of deep-sky astronomy, and by participating in the project the Armagh Observatory has attained rights to use the telescope.

### 24 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 during the year. The Armagh Observatory has had various material transactions with a number of Government Departments, Executive Agencies and Non-Departmental Public Bodies in Northern Ireland and the UK. Most of these transactions have been with DCAL, the Central Procurement Directorate (CPD), the Science and Technology Facilities Council (STFC) and the Education Authority (EA). DCAL provides recurrent and capital grant-in-aid (page 38, note 2), the STFC provides grants for research projects (page 38, note 2) and CPD and EA are the Centres of Procurement Expertise for the corporation.

No related party transactions took place in the year, other than certain trustees' expenses already disclosed in note 7

### 25 Financial Instruments

As the cash requirements of the Observatory are met through grants from DCAL 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 the Observatory's expected purchase and usage requirements and the Observatory is therefore exposed to little credit, liquidity or market risk.

## Armagh Observatory

### 26 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 corporation is required to prepare accounts in accordance with the SORP for charities, DCAL has given the corporation permission to continue to treat grants as income. If the Observatory were required to comply with the FReM the result of this compliance would be as follows:

#### Statement of Financial Activities prepared under FReM

	2016	2015
	£	£
<b>Incoming resources</b>		
Incoming resources from research and other non-DCAL grants	384,529	289,011
Other incoming resources	20,228	9,754
<b>Total incoming resources</b>	<b>404,757</b>	<b>298,765</b>
<b>Resources expended</b>		
Direct expenditure of the corporation	1,595,772	1,391,989
Capital expenditure	99,672	141,856
<b>Total Resources expended</b>	<b>1,695,444</b>	<b>1,533,845</b>
<b>Net deficit for the year</b>	<b>(1,290,687)</b>	<b>(1,235,080)</b>
Finance (costs)/income - pension scheme	(16,000)	(19,000)
Actuarial gain/(loss) - pension scheme	283,000	(46,000)
<b>Amount transferred to funds</b>	<b>(1,023,687)</b>	<b>(1,300,080)</b>

#### Analysis of funds prepared under the FReM

	2016	2015
	£	£
<b>Balance at 1 April 2015</b>	<b>2,316,547</b>	<b>2,456,424</b>
Adjustment to opening funds	-	(69,001)
Movement in government grant reserve	6,100	47,867
Movement in designated funds	(19,443)	(19,535)
Grant-in-aid received in the year	1,288,712	1,200,872
Net operating costs for the year	(1,023,687)	(1,300,080)
<b>Balance at 31 March 2016</b>	<b>2,568,229</b>	<b>2,316,547</b>

### 27 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 would require disclosure in the financial statements.

### 28 Prior Year Adjustment

The Charities SORP (FRS 102) requires that accrued holiday pay should be recognised in the accounts. As this amounts to a change in accounting policy it has been disclosed as a prior year adjustment. Accrued holiday pay at 31 March 2014 was £69,001 and at 31 March 2015 was £70,265 (movement in accrual: £1,264).

## Armagh Observatory

### 29 Statement of changes in funds for the year ended 31 March 2015

	Unrestricted Funds £	Restricted Funds £	Total Funds £
Balance at 1 April 2014	(464,277)	7,293	(456,984)
<b>Financial activities for the year</b>			
Movement in funds for the year	(99,208)	-	(99,208)
<b>Balance at 31 March 2015</b>	<b>(563,485)</b>	<b>7,293</b>	<b>(556,192)</b>

### 30 Transition to FRS 102

Armagh Observatory transitioned to FRS 102 from previously extant UK GAAP as at 1 April 2014. The impact of the transition was as follows:

#### Reconciliation of funds at 1 April 2014

	£
Funds at 1 April 2014 under previous UK GAAP	(456,984)
<b>Funds at 1 April 2014 under FRS 102</b>	<b>(456,984)</b>

#### Reconciliation of funds at 1 April 2015

	Note	£
Funds at 1 April 2015 under previous UK GAAP		(485,927)
Transitional adjustment	28	(70,265)
<b>Funds at 1 April 2015 under FRS 102</b>		<b>(556,192)</b>

#### Reconciliation of statement of financial activities for the year ended 31 March 2015

	Note	£
Movement in funds for the year under UK GAAP		(97,944)
Transitional adjustment	28	(1,264)
Movement in funds for the year under FRS 102		(99,208)

### 31 Statement of changes in funds for the year ended 31 March 2016

	Unrestricted Funds £	Restricted Funds £	Total Funds £
Balance at 1 April 2015 (as previously reported)	(493,220)	7,293	(485,927)
Prior year adjustment (note 30)	(70,265)	-	(70,265)
<b>Balance at 31 March 2015 (as restated)</b>	<b>(563,485)</b>	<b>7,293</b>	<b>(556,192)</b>
<b>Financial activities for the year</b>			
Movement in funds for the year	238,262	26,763	265,025
<b>Balance at 31 March 2016</b>	<b>(325,223)</b>	<b>34,056</b>	<b>(291,167)</b>

The Accounting Officer authorised the issue of these financial statements on 19 December 2017.



## Armagh Planetarium

### Statement of financial activities for the year ended 31 March 2016

		Unrestricted funds 2016	Restricted funds 2016	<b>Total funds 2016</b>	Unrestricted funds 2015	Restricted funds 2015	<b>Total funds 2015 (as restated)</b>
	Notes	£	£	£	£	£	£
<b>Income from:</b>							
Donations	2	507,300	40,000	<b>547,300</b>	495,500	30,000	<b>525,500</b>
Investment income	3	8,891	-	<b>8,891</b>	6,230	-	<b>6,230</b>
Charitable activities	4	176,812	-	<b>176,812</b>	170,248	-	<b>170,248</b>
<b>Total incoming resources</b>		<b>693,003</b>	<b>40,000</b>	<b>733,003</b>	<b>671,978</b>	<b>30,000</b>	<b>701,978</b>
<b>Expenditure on:</b>							
Charitable activities	5	696,783	-	<b>696,783</b>	687,877	-	<b>687,877</b>
Capital expenditure		-	40,000	<b>40,000</b>	-	30,000	<b>30,000</b>
<b>Total resources expended</b>		<b>696,783</b>	<b>40,000</b>	<b>736,783</b>	<b>687,877</b>	<b>30,000</b>	<b>717,877</b>
<b>Net (expenditure)/income before finance cost</b>		<b>(3,780)</b>	<b>-</b>	<b>(3,780)</b>	<b>(15,899)</b>	<b>-</b>	<b>(15,899)</b>
<b>Defined benefit scheme finance (cost)/income</b>		<b>(21,000)</b>	<b>-</b>	<b>(21,000)</b>	<b>(23,000)</b>	<b>-</b>	<b>(23,000)</b>
<b>Actuarial gains/(losses) on defined benefit pension scheme</b>	22	<b>158,000</b>	<b>-</b>	<b>158,000</b>	<b>(83,000)</b>	<b>-</b>	<b>(83,000)</b>
<b>Net movement in funds</b>		<b>133,220</b>	<b>-</b>	<b>133,220</b>	<b>(121,899)</b>	<b>-</b>	<b>(121,899)</b>
<b>Reconciliation of funds</b>							
Total funds brought forward at 1 April		(694,856)	-	<b>(694,856)</b>	(572,957)	-	<b>(572,957)</b>
<b>Total funds carried forward at 31 March</b>	15	<b>(561,636)</b>	<b>-</b>	<b>(561,636)</b>	<b>(694,856)</b>	<b>-</b>	<b>(694,856)</b>

All amounts above relate to continuing operations of the corporation.

### Statement of recognised gains and losses

	<b>2016</b>	<b>2015</b>
	<b>(as restated)</b>	
	£	£
Net movement in funds for the year	(24,780)	(38,899)
Prior year adjustment (note 28)	(21,713)	(16,395)
Net movement on government grant reserve	(112,835)	(119,109)
Actuarial gain/(loss) on pension scheme	158,000	(83,000)
<b>Total (losses) recognised since last annual report</b>	<b>(1,328)</b>	<b>(257,403)</b>

## Armagh Planetarium

### Balance sheet at 31 March 2016

		2016	2015
		(as restated)	
	Notes	£	£
<b>Fixed assets</b>			
Tangible assets	10	4,269,151	4,381,986
<b>Current assets</b>			
Stock	11	10,186	14,732
Debtors	12	37,312	35,384
Cash at bank and in hand	20,21	85,165	14,190
		132,663	64,306
<b>Creditors: amounts falling due within one year</b>	13	(141,299)	(78,162)
<b>Net current assets</b>		(8,636)	(13,856)
<b>Total assets less current liabilities</b>		4,260,515	4,368,130
<b>Creditors: amounts falling due after more than one year</b>		-	-
<b>Net assets excluding pension liability</b>		4,260,515	4,368,130
<b>Defined benefit pension scheme liability</b>	22	(553,000)	(681,000)
<b>Net assets</b>		3,707,515	3,687,130
<b>Funds</b>			
Unrestricted funds	15	(561,636)	(694,856)
Government grant reserve	14	355,682	468,517
Designated funds	17	3,913,469	3,913,469
		3,707,515	3,687,130

The financial statements on pages 50 to 63 were approved by the Board of Trustees of Armagh Observatory on 16 November 2017 and were signed on its behalf by:



Archbishop Richard Clarke  
Chair of the Board of Trustees



Professor Michael Burton  
Chief Executive

## Armagh Planetarium

### Statement of Cash flows for the year ended 31 March 2016

		2016	2015
		(as restated)	
	Notes	£	£
<b>Net cashflow from operating activities</b>	19	73,442	15,661
<b>Cashflows from investing activities</b>			
Proceeds from sale of assets		690	-
Purchase of tangible fixed assets		(40,000)	(30,000)
Capital grants received		40,000	30,000
		690	-
<b>Cashflows from financing activities</b>			
Bank and credit card processing charges		(3,157)	(2,735)
<b>Increase in cash and cash equivalents</b>	20,21	70,975	12,926

## Notes to the financial statements for the year ended 31 March 2016

### 1 Accounting policies

The financial statements have been prepared under direction issued by DCAL, in particular the requirement to recognise grant in aid received from them on a cash basis in order to present a true and fair view of Government funding. With the exception of this departure from the SORP, 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)).

#### Tangible fixed assets

The cost of tangible fixed assets is their replacement 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 rates used are as follows:

	%
Digistar	10
Furniture and fittings	10 - 15
Office equipment	15 - 25
Equipment	10 - 25
Buildings	2
Exhibits	10 - 25
Vehicles	25

Land and buildings are included in the balance sheet at depreciated replacement cost, estimated value in use or market value.

#### Incoming Resources

Grant income from DCAL is shown in the Statement of Financial Activities in the year in which it is received.

Grants that relate to specific capital expenditure are treated as deferred income which is then credited to the Statement of Financial Activities over the related asset's useful life. Other grants are credited to the Statement of Financial Activities when received.

Grants that relate to specific capital expenditure are treated as deferred income which is then credited to the income and expenditure account over the related asset's useful life. Other grants are credited to the statement of financial activities when received.

#### Pension scheme

The corporation provides pension benefits to its employees by participating in the Northern Ireland Local Government Officers' Superannuation Committee (NILGOSC) Pension Scheme, which is a defined benefit scheme. Annual contributions to the NILGOSC scheme are based on actuarial advice. The operating costs of providing retirement benefits to the corporation'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.

#### Fund accounting

The corporation has various types of funds for which it is responsible, and which require separate disclosure. These are as follows:

##### 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

Funds which are expendable at the discretion of the Governors in furtherance of the charitable objects of the corporation. In addition to expenditure on the provision of services, such funds may be held in order to finance capital investment and working capital.

Government grant reserve - this fund together with the designated fund, represents the net book value of all unrestricted assets, namely digistar, buildings & grounds, equipment, exhibits and motor vehicles.

Designated fund -- this fund represents revalued land and buildings.

#### 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.

## Armagh Planetarium

### 2 Income from donations

	Unrestricted funds 2016 £	Restricted funds 2016 £	Total funds 2016 £	Total funds 2015 £
DCAL recurrent grant-in-aid	430,300	-	430,300	463,500
DCAL in-year recurrent grant-in-aid	77,000	-	77,000	29,500
DCAL capital grant-in-aid	-	-	-	15,000
DCAL in-year capital grant	-	40,000	40,000	15,000
Total grant-in-aid from the Department of Culture, Arts and Leisure	507,300	40,000	547,300	523,000
Other grants and receipts	-	-	-	2,500
	507,300	40,000	547,300	525,500

### 3 Investment Income

	Unrestricted funds 2016 £	Restricted funds 2016 £	Total funds 2016 £	Total funds 2015 £
Rental income	8,201	-	8,201	6,230
Profit on disposal of tangible fixed assets	690	-	690	-
	8,891	-	8,891	6,230

### 4 Income from charitable activities

	Unrestricted funds 2016 £	Restricted funds 2016 £	Total funds 2016 £	Total funds 2015 £
Admissions	142,864	-	142,864	129,538
Outreach income	492	-	492	-
Shop gross profit	32,502	-	32,502	37,969
Miscellaneous income	954	-	954	2,741
	176,812	-	176,812	170,248

### 5 Expenditure on charitable activities

	Total funds 2016 £	Total funds 2015 (as restated) £
Direct costs - education and outreach	526,774	530,575
Support costs - education and outreach	170,009	157,302
	696,783	687,877

## Armagh Planetarium

### 6 Analysis of direct costs

		Restricted funds 2016	Restricted funds 2016	Total funds 2016	Total 2,015 (as restated)
	Note	£	£	£	£
Salaries and wages	9	368,935	-	368,935	423,403
Agency staff	9	32,461	-	32,461	36,519
Travelling and subsistence		1,050	-	1,050	5,399
Equipment maintenance and consumables		30,690	-	30,690	23,927
Library and subscriptions		3,053	-	3,053	2,102
Production expenses		58,279	-	58,279	2,125
Exhibitions and events		27,163	-	27,163	26,909
Training		2,324	-	2,324	1,735
Vehicle expenses		1,350	-	1,350	2,416
Rates		232	-	232	236
Fundraising and publicity		1,237	-	1,237	5,804
		526,774	-	526,774	530,575

### 7 Analysis of support costs

		Unrestricted funds 2016	Restricted funds 2016	Total funds 2016	Total funds 2015 (as restated)
	Note	£	£	£	£
Insurance		16,128	-	16,128	14,862
Heat, light and power		46,594	-	46,594	55,659
General property repairs		31,324	-	31,324	27,125
Cleaning services and consumables		22,538	-	22,538	22,034
Postage and telephone		6,995	-	6,995	7,057
Bank and credit card processing charges		3,157	-	3,157	2,735
General expenses		1,584	-	1,584	1,697
Professional fees and licences		5,328	-	5,328	4,978
Printing and stationery		6,769	-	6,769	4,500
Recruitment		7,453	-	7,453	1,100
Governance costs	8	22,139	-	22,139	15,555
Loss on disposal		7,067	-	7,067	-
Transfer from grants reserve		(7,067)	-	(7,067)	-
Depreciation		145,768	-	145,768	149,109
Release from grants reserve		(145,768)	-	(145,768)	(149,109)
		170,009	-	170,009	157,302

### 8 Analysis of governance costs

	Unrestricted funds 2016	Restricted funds 2016	Total funds 2016	Total funds 2015
	£	£	£	£
Management Committee	2,341	-	2,341	5,103
Audit	19,798	-	19,798	10,452
	22,139	-	22,139	15,555

## Armagh Planetarium

### 9 Average staff numbers and related costs

#### Average staff numbers

	2016	2015
	Number	Number
Permanent staff	9.0	9.3
Fixed-term contract staff	0.7	0.5
Agency staff	1.3	3.0
	10.9	12.8

Included within the numbers above are the corporation's Operations Manager (whose salary is shared equally between the Planetarium and Observatory) and the Temporary Accountant (whose salary is apportioned between the Planetarium and Observatory in the ratio 1:3).

There were no employees whose employee benefits (excluding employer pension costs) exceeded £60,000:

	2016	2015
	Number	Number
£70,001 - £80,000	-	1

The key management personnel of the corporation comprise the trustees and the executive director/acting-head.

The total amount of employee benefits (including employer pension contributions) received by key management personnel for their services to the corporation was £17,352 (2015: £84,648)

There was no remuneration paid to trustees during the year (2015: nil). Travel and subsistence expenses totalling £360.39 was reimbursed to 4 trustees (2015: £537.82 to 4 trustees).

	2016	2015
	£	(as restated) £
	Note	
<b>Permanent staff</b>		
Wages and salaries	267,187	308,530
Social security costs	17,971	25,581
Employer's pension costs	49,307	54,198
Defined benefit pension service cost	22 9,693	10,802
	344,158	399,111
<b>Fixed-term contract staff costs</b>		
Wages and salaries	24,777	24,292
Social security costs	-	-
Employer's pension costs	-	-
Defined benefit pension service cost	22 -	-
	24,777	24,292
<b>Total permanent and fixed-term staff</b>		
Wages and salaries	291,964	332,822
Social security costs	17,971	25,581
Employer's pension costs	49,307	54,198
Defined benefit pension service cost	22 9,693	10,802
	368,935	423,403
Agency staff costs	32,461	36,519
<b>Total staff costs</b>	401,396	459,922

Staff costs above include 50% of the salary costs of the corporation's Operations Manager, 25% of the salary costs of the Temporary Accountant and a transfer from the Observatory for the costs of the Acting Heading of the Planetarium since his appointment in June. Also included is a 'Write-off' of £585 as agreed by the Department, in relation to salary overpayments. The pension service cost of £9,693 is the actuarial present value of pension benefits earned by staff during the year.



## Armagh Planetarium

### 10 Tangible fixed assets

	Digistar	Freehold Land and buildings	Equipment	Exhibits	Vehicles	Total
	£	£	£	£	£	£
<b>Cost or valuation</b>						
At 1 April 2015	1,200,332	4,306,860	384,108	153,256	22,878	6,067,434
Asset revaluation	-	-	-	-	-	-
Additions	-	-	28,145	11,855	-	40,000
Disposals	-	-	(29,610)	-	(8,702)	(38,312)
<b>At 31 March 2016</b>	<b>1,200,332</b>	<b>4,306,860</b>	<b>382,643</b>	<b>165,111</b>	<b>14,176</b>	<b>6,069,122</b>
<b>Depreciation</b>						
At 1 April 2015	1,016,588	218,016	303,085	139,057	8,702	1,685,448
Adjustment on asset revaluation	-	-	-	-	-	-
Charge for year	29,429	72,672	38,044	2,788	2,835	145,768
Disposals	-	-	(22,543)	-	(8,702)	(31,245)
<b>At 31 March 2016</b>	<b>1,046,017</b>	<b>290,688</b>	<b>318,586</b>	<b>141,845</b>	<b>2,835</b>	<b>1,799,971</b>
<b>Net book value</b>						
<b>At 31 March 2016</b>	<b>154,315</b>	<b>4,016,172</b>	<b>64,057</b>	<b>23,266</b>	<b>11,341</b>	<b>4,269,151</b>
<b>Net book value</b>						
<b>At 31 March 2015</b>	<b>183,744</b>	<b>4,088,844</b>	<b>81,023</b>	<b>14,199</b>	<b>14,176</b>	<b>4,381,986</b>

Tangible fixed asset additions of £40,000 as shown above were funded as follows:

	£
DCAL Capital grant-in-aid	-
DCAL In-year capital grant-in-aid	40,000
	<b>40,000</b>

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

	2016	2015
	£	£
Cost	1,351,239	1,351,239
Aggregate depreciation	(520,060)	(494,975)
<b>Net book value based on historic cost</b>	<b>831,179</b>	<b>856,264</b>

### 11 Stocks

	2016	2015
	£	£
Goods for resale	10,186	14,732

### 12 Debtors

	2016	2015
	£	£
Trade and grant debtors	3,528	3,820
Prepayments	5,725	6,780
VAT recoverable	10,404	6,435
Pension scheme	17,655	18,349
	<b>37,312</b>	<b>35,384</b>

### 13 Creditors: amounts falling due within one year

	2016	2015
	£	(as restated) £
Trade creditors	78,383	36,413
Accruals	62,916	41,749
	<b>141,299</b>	<b>78,162</b>

## Armagh Planetarium

### 14 Government grants reserve

	Digistar £	Buildings and grounds £	Equipment £	Exhibits £	Vehicles £	Total £
Balance at 1 April 2015	183,744	175,375	81,023	14,199	14,176	468,517
Additions	-	-	28,145	11,855	-	40,000
Disposals	-	-	(7,067)	-	-	(7,067)
Amortised	(29,429)	(72,672)	(38,044)	(2,788)	(2,835)	(145,768)
Balance at 31 March 2016	154,315	102,703	64,057	23,266	11,341	355,682

### 15 Unrestricted funds

	2016 £
Balance at 1 April 2015 as previously stated	(673,143)
Prior year adjustment (note 28)	(21,713)
Balance at 1 April 2015 as restated	(694,856)
Incoming resources	693,003
Resources expended	(696,783)
Other finance costs	(21,000)
Actuarial gain	158,000
Balance at 31 March 2016	(561,636)

The unrestricted funds reserve includes a deficit of £553,000 (2015: £681,000) in respect of pension scheme liabilities of the pension fund.

Unrestricted funds after reversal of the pension adjustments are as follows:

	£
<b>Unrestricted funds at 31 March 2016</b>	
Balance on unrestricted funds at 31 March 2016	(561,636)
Reversal of pension scheme debtor	(17,655)
Reversal of pension scheme liability	553,000
Unrestricted funds at 31 March 2016 after reversal of pension adjustments	(26,291)

### 16 Restricted funds

	Balance 01/04/2015 £	Incoming resources £	Resources expended £	Transfer between funds £	Transfer from defrd. income £	Transfer to defrd. income £	Balance 31/03/2016 £
<b>DCAL grant-in-aid</b>							
Capital-in-aid	-	40,000	(40,000)	-	-	-	-
<b>Total DCAL grant-in-aid</b>	-	40,000	(40,000)	-	-	-	-
<b>Total other grants and receipts</b>	-	-	-	-	-	-	-
	-	40,000	(40,000)	-	-	-	-

#### DCAL Grant-In-Aid

DCAL provided funding of £40,000 for theatre seating, exhibition area equipment, and office and technical equipment.

## Armagh Planetarium

### 17 Designated funds

	2016	2015
	£	£
<b>Revaluation of land and buildings</b>		
Balance at 1 April 2015	3,913,469	3,913,469
Revaluation of land and buildings	-	-
<b>Balance at 31 March 2016</b>	<b>3,913,469</b>	<b>3,913,469</b>

The corporation's land and buildings were revalued at 31 March 2012 by Land and Property Services, an Agency within the Department of Finance and Personnel on the following bases:

<b>Land and buildings</b>	<b>Basis</b>
Operational land and buildings which are unique due their specialised nature and design	depreciated replacement cost
Operational non-specialised land and buildings	existing use value
Other land and buildings	market value

### 18 Analysis of net assets between funds

	Designated funds 2016	Unrestricted funds 2016	Restricted funds 2016	Total funds
	£	£	£	£
Tangible fixed assets	4,269,151	-	-	4,269,151
Current assets	-	132,663	-	132,663
Creditors: amounts falling due within one year	-	(141,299)	-	(141,299)
Pension scheme liability	-	(553,000)	-	(553,000)
Creditors: amounts falling due after more than one year	-	-	-	-
<b>Net assets/(liabilities)</b>	<b>4,269,151</b>	<b>(561,636)</b>	<b>-</b>	<b>3,707,515</b>

### 19 Reconciliation of net income/(expenditure) to net cash flow from operating activities

	2016	2015
	£	(as restated) £
Net income/(expenditure) per statement of financial activities	(3,780)	(15,899)
Loss/(profit) on sale of assets	6,377	0
Interest paid and similar charges	3,157	2,735
Depreciation	145,768	149,109
Amortisation	(152,835)	(149,109)
Defined benefit pension scheme service cost less contributions payable	9,000	10,000
Decrease/(increase) in stock	4,546	(3,132)
(Increase)/decrease in debtors	(1,928)	6,272
Increase/(decrease) in creditors	63,137	15,685
<b>Net cash inflow from operating activities</b>	<b>73,442</b>	<b>15,661</b>

### 20 Analysis of cash and cash equivalents

	1 April 2016	31 March 2015
	£	£
Cash at bank and in hand	85,165	14,190
<b>Total cash and cash equivalents</b>	<b>85,165</b>	<b>14,190</b>

### 21 Reconciliation of net cashflow to movement in net cash funds

	2016	2015
	£	£
<b>Increase in cash and cash equivalents in the year</b>	<b>70,975</b>	<b>12,926</b>
Cash and cash equivalents at 1 April 2015	14,190	1,264
<b>Cash and cash equivalents at 31 March 2016</b>	<b>85,165</b>	<b>14,190</b>

## Armagh Planetarium

### 22 Pension scheme

An actuarial valuation of the NILGOSC scheme was carried out at 31 March 2013. The funding level (ratio of assets to past service liabilities) at 31 March 2013 was 91% compared to 82% at 31 March 2010 corresponding to a funding deficit of £467m (£783 million at 31 March 2010). It has been agreed that the employers' contribution rate for 2015/2016 of 20% will remain for the next year, with an increase anticipated from 1 April 2017 to remove the shortfall.

The disclosures below relate to the funded liabilities within the NILGOSC Pension Fund which is part of the Local Government Scheme (Northern Ireland), and certain related unfunded liabilities.

The NILGOSC actuary, Aon Hewitt Ltd, has provided the following details for the purposes of accounting for the Planetarium's share of the scheme deficit in accordance with FRS 102 at 31 March 2016.

#### Financial assumptions used by the actuary were:

	31/3/2016	31/3/2015	31/3/2014
	%	%	%
Rate of increase in salaries	3.3	3.3	3.9
RPI Inflation	2.9	2.9	3.4
CPI Inflation	1.8	1.8	2.4
Pension increases	1.8	1.8	2.4
Pension accounts revaluation rate	1.8	1.8	n/a
Discount rate	3.4	3.2	4.3

#### Mortality assumptions

	2016	2015
	Years	Years
<b>Males</b>		
Member aged 65 at accounting date	22.3	22.2
Member aged 45 at accounting date	24.5	24.4
<b>Females</b>		
Member aged 65 at accounting date	24.8	24.7
Member aged 45 at accounting date	27.2	27.0

#### Asset Allocation

	Value at	Value at
	31/3/2016	31/3/2015
	%	%
Equities	71.9	73.0
Government Bonds	5.7	5.7
Corporate Bonds	6.4	6.5
Property	13.2	12.6
Cash	2.3	2.0
Other	0.5	0.2
	100.0	100.0

#### Scheme balance sheet

	31/3/2016	31/3/2015
	£k	£k
Fair value of assets	2,836	2,742
Present value of funded defined benefit obligation	3,386	3,420
Funded status	(550)	(678)
Present value of unfunded defined benefit obligation	(3)	(3)
Deficit recognised in the balance sheet	(553)	(681)

#### Recognition in the statement of financial activities

	Year to	Year to
	31/3/2016	31/3/2015
	£k	£k
Asset gains/(losses)	(10)	212
Liability gains/(losses)	168	(295)
Total	158	(83)

## Armagh Planetarium

### 22 Pension scheme (cont'd)

#### Recognition in the statement of financial activities

	Year to 31/3/2016	Year to 31/3/2015
	£k	£k
<b>Operating cost</b>		
Current service costs	59	65
Past service cost	-	0
Curtailement cost	-	0
Settlement cost	-	0
<b>Financing cost</b>		
Interest on net defined benefit liability/(asset)	21	23
<b>Total pension expense recognised in SOFA</b>	<b>80</b>	<b>88</b>
Allowance for administrative expenses included in Current Service Cost	1	1

#### Reconciliation of defined benefit obligation

	Year to 31/3/2016	Year to 31/3/2015
	£k	£k
Opening defined benefit obligation	3,423	2,968
Current service cost	59	65
Past service cost	-	-
Interest cost	109	127
Contributions by members	16	17
Actuarial (gains)/ losses	(168)	295
Estimated unfunded benefits paid	0	0
Net benefits paid	(50)	(49)
Closing defined benefit obligation	3,389	3,423

#### Reconciliation of fair value of assets

	Year to 31/3/2016	Year to 31/3/2015
	£k	£k
Opening fair value of assets	2,742	2,403
Interest income on assets	88	104
Contributions by members	16	17
Contributions by the corporation	50	55
Remeasurement (losses)/ gains on assets	(10)	212
Net benefits paid	(50)	(49)
Closing fair value of assets	2,836	2,742

### 23 Commitments

There were no capital commitments at the 31 March 2016 (2015: £nil).

### 24 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 Planetarium during the year. The Armagh Planetarium has had various material transactions with a number of Government Departments, Executive Agencies and Non-Departmental Public Bodies in Northern Ireland and the UK. Most of these transactions have been with DCAL, the Education Authority (EA) and the Central Procurement Directorate (CPD). DCAL provide recurrent and capital grant-in-aid (page 54, note 2) and the SELB and the CPD are the Centres of Procurement Expertise for the corporation.

No related party transactions took place in the year, other than certain trustees' expenses already disclosed in note 9.

## Armagh Planetarium

### 25 Shop trading account

	2016 £	2015 £
<b>Sales</b>	75,377	68,512
<b>Less: cost of sales</b>		
Opening stock at 1 April 2015	14,732	11,600
Add: Purchases	38,329	33,675
	53,061	45,275
Less: closing stock at 31 March 2016	(10,186)	(14,732)
	42,875	30,543
<b>Gross profit</b>	32,502	37,969
<b>Gross profit %</b>	43	55

Note: Other costs relating to the Shop operations are included with other Planetarium costs under resources expended.

### 26 Financial Instruments

As the cash requirements of the Planetarium are met through grants from DCAL 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 the Planetarium's expected purchase and usage requirements and the Planetarium is therefore exposed to little credit, liquidity or market risk.

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

FRoM 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 then to income and expenditure reserve. In addition the FRoM requires grant-in-aid to be accounted for on a cash basis.

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

#### Statement of Financial Activities prepared under FRoM

	2016 £	2015 (as restated) £
<b>Incoming resources</b>		
Incoming resources from non-DCAL grants	-	2,500
Admissions and shop	176,812	170,248
Other incoming resources	8,891	6,230
<b>Total incoming resources</b>	185,703	178,978
<b>Resources expended</b>		
Direct expenditure of the corporation	696,783	687,877
Capital expenditure	40,000	30,000
<b>Total Resources expended</b>	736,783	717,877
<b>Net deficit for the year</b>	(551,080)	(538,899)
Finance income/(costs) - pension scheme	(21,000)	(23,000)
Actuarial (loss)/gain - pension scheme	158,000	(83,000)
<b>Amount transferred to funds</b>	(414,080)	(644,899)

#### Analysis of funds prepared under the FRoM

	2016 £	2015 £
<b>Balance at 1 April</b>	3,687,130	3,944,533
Adjustment to opening funds		(16,395)
Movement in government grant reserve	(112,835)	(119,109)
Movement in designated funds	-	-
Grant-in-aid received in the year	547,300	523,000
Net operating costs for the year	(414,080)	(644,899)
<b>Balance at 31 March</b>	3,707,515	3,687,130

## Armagh Planetarium

### 28 Prior Year Adjustment

The Charities SORP (FRS 102) requires that accrued holiday pay should be recognised in the accounts. As this amounts to a change in accounting policy it has been disclosed as a prior year adjustment. Accrued holiday pay at 31 March 2014 was £16,395 and at 31 March 2015 was £21,713 (movement in accrual: £5,318).

### 29 Statement of changes in funds for the year ended 31 March 2015

	Unrestricted Funds £	Restricted Funds £	Total Funds £
Balance at 1 April 2014	(572,957)	-	(572,957)
<b>Financial activities for the year</b>			
Movement in funds for the year	(121,899)	-	(121,899)
<b>Balance at 31 March 2015</b>	<b>(694,856)</b>	<b>-</b>	<b>(694,856)</b>

### 30 Transition to FRS 102

Armagh Planetarium transitioned to FRS 102 from previously extant UK GAAP as at 1 April 2014. The impact of the transition was as follows:

#### Reconciliation of funds at 1 April 2014

	£
Funds at 1 April 2014 under previous UK GAAP	(556,563)
<b>Funds at 1 April 2014 under FRS 102</b>	<b>(556,563)</b>

#### Reconciliation of funds at 1 April 2015

	Note	£
Funds at 1 April 2015 under previous UK GAAP		(673,143)
Transitional adjustment	28	(21,713)
<b>Funds at 1 April 2015 under FRS 102</b>		<b>(694,856)</b>

#### Reconciliation of statement of financial activities for the year ended 31 March 2015

	Note	£
Movement in funds for the year under UK GAAP		(116,581)
Transitional adjustment	28	(5,318)
<b>Movement in funds for the year under FRS 102</b>		<b>(121,899)</b>

### 31 Statement of changes in funds for the year ended 31 March 2016

	Unrestricted Funds £	Restricted Funds £	Total Funds £
Balance at 1 April 2015 (as previously reported)	(673,143)	-	(673,143)
Prior year adjustment (note 30)	(21,713)	-	(21,713)
<b>Balance at 31 March 2015 (as restated)</b>	<b>(694,856)</b>	<b>-</b>	<b>(694,856)</b>
<b>Financial activities for the year</b>			
Movement in funds for the year	133,220	-	133,220
<b>Balance at 31 March 2016</b>	<b>(561,636)</b>	<b>-</b>	<b>(561,636)</b>

### 32 Events after the Reporting Date

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

The Accounting Officer authorised the issue of these financial statements on 19 December 2017.

## The Report of the Comptroller and Auditor General

### Armagh Observatory and Planetarium Annual Report and Accounts 2015-16

#### Introduction

1. Until March 2016, the Armagh Observatory and the Armagh Planetarium were two distinct institutions within a single statutory corporation. Each operated under a Director and prepared separate annual accounts which were subject to audit.
2. The Director of the Armagh Observatory and the Director of the Armagh Planetarium were designated as Accounting Officers by the Department of Culture, Arts and Leisure (the Department). As such they had personal responsibility for the propriety and regularity of the public finances for which they were answerable and for keeping proper accounts. The Accounting Officers were also responsible for safeguarding the assets of the corporation and for taking reasonable steps for the prevention and detection of fraud and other irregularities.
3. Dr Tom Mason was appointed Director of the Armagh Planetarium on 1 August 1996 and was the Accounting Officer from 1 July 1997 until his retirement on 30 April 2015.
4. In April 2016, the Armagh Observatory and the Armagh Planetarium became one organisation. In May 2016, responsibility for this organisation transferred from the Department of Culture, Arts and Leisure to the Department for Communities. The current Chief Executive of the Armagh Observatory and Planetarium was appointed as the sole Accounting Officer in September 2016.

#### Investigations

5. In June 2015, the Armagh Observatory and Planetarium (AOP) Audit and Risk Committee was advised that a number of Single Tender Actions, in relation to Planetarium activities, had been made without appropriate approvals in place. Concerns were also raised in relation to entries in the Planetarium's hospitality register.
6. An initial examination of the supporting documentation found that the contracts were signed by Dr Mason and confirmed that appropriate procedures had not been followed. The AOP's internal auditors were asked to investigate further. Internal Audit began a comprehensive review and forensic audit of all transactions initiated by Dr Mason, in the period October 2013 to May 2015, to identify any non-compliance with AOP procedures for:
  - procurement;
  - and the use of the Planetarium's credit cards.
7. AOP and the Department were alerted to potential financial irregularities in relation to the purchase of high-value IT assets, some of which could not be located, and the potential misuse of the Planetarium's credit cards. In October 2015 the Department referred the matter to the Department of Finance's Group Fraud Investigation Service (GFIS) for further investigation.



8. The Internal Audit review was completed in March 2016, while GFIS reported their findings to the Department in October 2016.

### Issues identified

9. My review of the investigation reports identified four main issues:

- purchases made outside of AOP's procedures;
- the misuse of the Planetarium credit cards;
- the purchase of high value IT equipment; and
- the receipt and recording of hospitality.

### Purchases made outside of AOP's procedures

10. The investigations focused on three specific contracts<sup>1</sup>:

Supplier <sup>2</sup>	Contract Details	Value
A	Support of the Planetarium's projector and related technology	£15,030 per annum for three years
B	Purchase of two theatre shows	£14,342
C	Refurbishment of 93 seats	£20,597

11. With regards to Supplier A and Supplier B contracts:

- The Planetarium's Financial Controls and Procedures require that a business case is prepared for all non-routine purchases above £1,500 (excluding VAT). However, business cases had not been prepared for these purchases;
- The AOP Management Statement and Financial Memorandum (MSFM) issued by the Department in May 2009 advises that proposals for Single Tender Actions shall be subject to advice being taken from the Department of Finance's Central Procurement Directorate (CPD). However, no such advice had been sought from CPD in relation to these purchases; and
- Business cases for contracts exceeding the Accounting Officer's delegated limit of £10,000 should have been submitted to the Department for approval. This did not occur.

12. Dr Mason advised me that the Planetarium had been receiving *ad hoc* support from Supplier A for a number of years. He added that the Planetarium had tried to work with other suppliers but they were not competent to do the work required. Dr Mason considered that the arrangement with Supplier A needed to be formalised in order to future-proof the Planetarium theatre operation after he retired. His intention was "to provide a cushion for the Planetarium to weather the major changes in AOP's structure that were looming". He provided a similar explanation for the purchase of the two theatre shows.

<sup>1</sup> Although the investigations refer to contracts with the three suppliers, there is only a contract with Supplier A which was signed by Dr Mason on 6 April 2015. Invoices from Suppliers B and C were authorised by Dr Mason on 28 April 2015 and 10 April 2015 respectively. For the purpose of this report, reference to contracts has been retained.

<sup>2</sup> This report should not be seen as implying any criticism of these suppliers.

13. On 5 January 2015 the Department approved the business case and Single Tender Action to Supplier C for £20,000 to purchase 33 new seats at the Planetarium in 2014-15. CPD advice had been sought for the purchase of the 33 new seats. However, the 33 new seats were not purchased in the 2014-15 financial year and the Planetarium's 2014-15 capital budget was reduced. Dr Mason subsequently committed the Planetarium to the expenditure required to refurbish all 93 seats at the Planetarium in 2015-16 at a cost of £20,597 without having sufficient budget cover in 2015-16 or valid approval.
14. Dr Mason told me that his assessment was that new seating would be essential, and if it was not forthcoming the Planetarium would have to close. He considered that there would be money in the Planetarium's 2015-16 budget from his salary as he was only going to be in post until the end of April 2015. AOP advised me that Dr Mason did not discuss the budget with the Management Committee.
15. Dr Mason advised me that in his time as Director of the Planetarium, he fought to restore the AOP to its place as a world-renowned centre for astronomy education and his intention was to save the Planetarium as much money as possible. Regardless of his intentions, Dr Mason's actions in relation to these three contracts were a breach of the Planetarium's procedures and his Accounting Officer responsibilities as set out in the MSFM and Managing Public Money Northern Ireland. These resulted in irregular expenditure of £49,969 in 2015-16 and irregular spend of £15,582 in 2016-17. In addition, any expenditure incurred in 2017-18 in relation to the contract with Supplier A for support of the Planetarium's projector and related technology will be irregular spend.

#### **The misuse of the Planetarium credit cards**

16. Although the Planetarium's procedures (March 2013) refer to one credit card, the Planetarium actually had two cards.
17. As Internal Audit had noted that Dr Mason had used a Planetarium credit card to pay for his retirement functions in April 2015, and identified other issues of non-compliance with the Planetarium's credit card procedures, GFIS's investigation reviewed credit card expenditure from April 2011 to May 2015. This sought to identify any other credit card items which seemed unusual or outside of what would be considered normal business purchases. GFIS's report states that "this was not an easy task due to the poor nature of the records, lack of supporting documentation and the hand written annotations on some of the monthly bills (which we believe were made by Dr Mason)." Although Dr Mason responded to GFIS's initial invitation to meet and discuss certain issues, advising that he could be contacted again upon his return from holiday, he did not reply to GFIS's subsequent correspondence.
18. The issues identified in GFIS's analysis included:
  - some items were sent directly to Dr Mason's home address;
  - over £1,000 worth of gift cards had been purchased as staff bonuses;
  - the purchase of a games console, four computer games and flowers;
  - purchases at supermarkets and on-line stores without any explanation of what had been purchased; and
  - the purchase of a drone.

19. GFIS advised that “Without the opportunity to speak to Dr Mason it is difficult to ascertain whether or not these items could be related to a business need within AOP, or indeed in the case of the drone, was it really value for money to purchase this item for one small shot of film.”
20. It is disappointing that Dr Mason did not engage with GFIS during their investigation and afford them the opportunity to consider his responses. This would have enabled Dr Mason to explain his actions to AOP and facilitated AOP’s review of his explanations.
21. Dr Mason did however, provide me with detailed responses to the issues identified in GFIS’s analysis at paragraph 18 above. For example, he advised that he had purchased gift cards for the Planetarium staff to provide them with some small token of appreciation for their hard work and loyalty to the organisation. Dr Mason recalled that this was discussed with members of the Management Committee. AOP advised me the Management Committee members have no recollection of being informed of this expenditure. In addition, they advised that the correct procedure would have been to raise the issue via the Employment Conditions and Remuneration Committee. However, there is no record in the Committee minutes or the hospitality and gift register to support the expenditure.
22. I asked AOP how they satisfied themselves that there were no irregularities in periods prior to those examined by Internal Audit and GFIS. AOP advised me that they are not aware of any suggestion of irregularities in prior periods and it should be recognised that current management are newly in post and have no detailed knowledge of prior years. Almost all the permanent staff in place in prior years have left and the current temporary staff do not have detailed knowledge of those years. They consider that it is unlikely that the initiation of a detailed review of prior years, not focused on specific times or transactions would pass the value for money test.

### **Reimbursement of Credit Card Expenditure**

23. Dr Mason reimbursed AOP £422 in respect of his retirement functions which he had paid for using the Planetarium credit card. GFIS recommended that AOP consider recovery of money from Dr Mason for credit card purchases totalling £5,502 where GFIS concluded there can be no justification of business need and deemed to be inappropriate expenditure. AOP advised me that a letter had been sent to Dr Mason on 31 January 2017 seeking reimbursement of the £5,502, as recommended by GFIS. Dr Mason replied on 1 March 2017 stating that if AOP takes this matter to court he could explain fully all the expenditure. He suggested a mediation meeting. Dr Mason’s letter was discussed at the Audit and Risk Assurance Committee meeting on 29 March 2017, noting that GFIS had stated that there were no issues of criminality. The Committee concluded that it was not appropriate to hold a mediation meeting as there was nothing to mediate. The Committee agreed that Dr Mason’s duty was to explain expenditure on request without the need for a meeting.
24. Dr Mason advised me that he considered that all of the expenditure was directly related to the efficient running of the Planetarium and that most of the expenses and the circumstances were explained at the time to the Management Committee and specifically to the Vice Chairman. As noted at paragraph 20 it was in Dr Mason and AOP’s interest that he engaged with GFIS on matters raised with his use of the Planetarium’s credit cards. AOP advised me Dr Mason did not explain his

actions at the time and that although he had an obligation to follow due process, he did not do so. AOP added that a conversation in passing about possible options should not be construed as Management Committee approval.

### **The purchase of high value IT equipment**

25. The reviews of credit card expenditure identified the purchase of a number of IT items.
26. Physical verification of these purchases and other IT equipment was difficult as the Planetarium did not have a comprehensive asset register showing locations and tag numbers of all capitalised assets and other records were poor. A number of items could not be located and AOP believed they were in Dr Mason's possession.
27. In January 2016, almost ten months after his retirement, Dr Mason returned equipment which AOP advised had an estimated purchase cost of £9,500. Amongst the items returned were two laptops, a desktop computer, a drone, two action cameras and a projector.
28. GFIS concluded that "There can be no valid explanation why Dr Mason felt the necessity to have so much IT equipment at what was presumably his home address, and why it took the best part of 10 months after his retirement for him to return it."
29. Dr Mason advised me that he was responsible for IT at the Planetarium and that a lot of the equipment had been used and trialled at his home office. The Vice Chair of Management Committee and the Finance Officer knew that he had the IT equipment, and he had asked them both to let him know when the IT equipment needed to be returned. As none of the equipment was needed for day to day running of the Planetarium, he did not urgently attend to its return. He further stated that, when he was asked to return the equipment, he did so.
30. AOP advised me that it did not believe there was a need for so much expensive equipment to be taken away from the Planetarium. The Management Committee was not informed of Dr Mason's practice and is concerned that Dr Mason stated that he purchased equipment that was not needed for the day to day running of the Planetarium. AOP expected all equipment to be returned immediately on retirement without the need for it to issue a specific request.
31. When a member of staff leaves a public sector organisation any items belonging to the organisation, and held by the individual, should be returned immediately. Consequently AOP should have requested return of all the IT equipment held by Dr Mason as soon as he retired.
32. I asked AOP whether all missing items had been returned. AOP advised me that Dr Mason had signed a declaration that "all items owned by the Armagh Planetarium and Observatory which were in my possession at the time of my retirement have now been returned to the organisation." AOP are not aware of any items which have not been returned.
33. I asked AOP whether, in light of the issues raised in both investigations, it compiled a complete asset register and whether procedures had been put in place to ensure that it is updated on an on-going basis. AOP advised me that the asset register is reconciled to the accounting records and there is an on-going process to physically verify and tag:

- all older assets above a specified net book value; and
- all new additions.

### **The receipt and recording of hospitality**

34. The MSFM advises that a public servant should not receive any benefits of any kind from a third party which might reasonably be seen to compromise their personal judgement or integrity. It also advises that regardless of whether a gift or hospitality is accepted or declined, the Gifts and Hospitality Acceptance form must be completed by the recipient and that failure to declare in the Gifts and Hospitality Register may result in disciplinary action. Where the propriety of accepting a particular gift or offer of hospitality is in doubt, the advice of the sponsor Department should be sought.
35. The MSFM also indicates that where hospitality offered is an overseas visit, prior approval is required from the Accounting Officer or Chair of the Board.
36. In March 2015 Dr Mason undertook a five night trip to Utah which was fully funded by a supplier (Supplier A). I note that Dr Mason did not:
  - seek prior approval for the trip from the Chair of the Board;
  - seek advice from the Department given the unusual nature of the trip; and
  - record the trip in the Planetarium's Gifts and Hospitality Register.
37. In April 2015, Dr Mason awarded a contract to the same supplier for three years' support of the Planetarium's projector and related technology. As noted at paragraph 11 above, a business case was not prepared for this expenditure. Neither had Dr Mason sought advice from CPD nor the Department's approval for the Single Tender Action, which exceeded his delegated authority.
38. When interviewed by Internal Audit, Dr Mason stated that his Utah trip did not influence the award of any contracts or the purchase of any items. Dr Mason advised Internal Audit that the trip was to facilitate the carriage of a meteorite along with an item from a university and to discuss/work on a film on which he had previously provided input. Dr Mason considered that the trip would benefit the Planetarium as it would have a copy of the final product free of charge and would be included in the credits. AOP advised me that although Dr Mason received a credit at the end of the film as a contributor, AOP had to pay £8,552 for the film.
39. Dr Mason told me that there was no need to seek prior approval of the Board for the Utah trip as he reported all business trips after the event as had been agreed with the Board. This practice is contrary to the MSFM.

### **Conclusions**

40. As a result of Dr Mason's actions, Planetarium expenditure totalling £49,969 in 2015-16 in relation to three Single Tender Actions was irregular. Consequently I have qualified my audit opinion on the regularity of expenditure in the 2015-16 Armagh Observatory and Planetarium financial statements.

41. The Department for Communities' Accounting Officer has advised me that the issues which led to the AOP Accounts being qualified are a concern to him. In response to the investigations, the Department had written letters to the Chair of the AOP, the Accounting Officer and Chair of the Audit and Risk Assurance Committee to seek assurance that management are working closely with auditors to establish an action plan and implement all recommendations to minimise the risk of similar irregular activities happening again. The Department advised me that they had received an action plan from AOP in February 2017 and that AOP had assured them that the plan is being implemented.
42. GFIS recommended that no further action was taken against Dr Mason in terms of potential criminality.
43. Dr Mason advised me that throughout his tenure his financial transactions were approved by the Board and regularly audited by the internal and external auditors. However, as Accounting Officer, Dr Mason had a personal responsibility to check compliance with prescribed procedures and this responsibility remained, regardless of the extent to which non-compliance issues were identified and brought to his attention.
44. Dr Mason engaged with the Internal Audit review of the three Single Tender Actions and use of the Planetarium credit cards but did not engage with the subsequent GFIS review. Even as a former public servant it remained Dr Mason's responsibility to seek every opportunity to respond to questions on his conduct, while in public service, with the fullest possible responses. It is clear from his responses to me that he had detailed information which would have assisted the GFIS review.
45. High standards of conduct in public life are essential to maintain fairness and transparency in public services and to help ensure that public expenditure achieves value for money. Extensive guidance on best practice is in place to ensure the effective corporate governance of all public sector bodies and to help protect public servants. All senior public servants, including those in small organisations such as AOP, have a responsibility not only to follow guidance but to act as role models for others regarding matters of propriety. Senior staff should lead by example, especially in matters of conduct.
46. I have examined the Internal Audit and GFIS reports and Dr Mason's responses to me on the issues raised. I have referred to these in my report. Dr Mason told me that what he did was to benefit the Planetarium and its standing in the international community. I am concerned that, regardless of what he viewed as laudable objectives, as the Planetarium's Accounting Officer Dr Mason failed to follow guidance and best practice in relation to Single Tender Actions and in his use of the Planetarium's credit card. It is also disappointing that Dr Mason failed to consider whether a conflict of interest arose in relation to accepting hospitality from a supplier of one of these Single Tender Actions.
47. The role of Accounting Officer carries with it personal responsibilities in relation to regularity and propriety and the conduct of Accounting Officers should be beyond reproach. In my view, Dr Mason's actions were not up to this high standard, in his conduct as an Accounting Officer and specifically in his response to a GFIS review of his conduct.

48. I have also reported these matters in the Armagh Observatory and Planetarium's 2014-15 financial statements.



KJ Donnelly  
Comptroller and Auditor General  
Northern Ireland Audit Office  
106 University Street  
Belfast  
BT7 1EU

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