



Office for
Nuclear Regulation

Annual Report and Financial Position

2013/14

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Overview

Chairman's Foreword



Nick Baldwin
Chair

It is my pleasure to present this annual report, which provides an overview of our achievements during 2013/14 and our closing financial position prior to our incorporation as a statutory body on April 2014. It is a companion document to HSE's statutory Annual Report and Accounts for 2013/14, which has been laid before Parliament.

2013/14 was a particularly important year for us as we prepared for our incorporation. During the year, we successfully delivered all of the functions, procedures and processes necessary to support the new organisation and consequently demonstrated to the Government that we were ready to become an independent organisation. That is not to say that our journey is over, and we are clear further challenges lie before us.

In April 2013, we published our Annual Plan, which explains how we would continue to seek improvements in nuclear safety and security in 2013/14 and intensify our preparations to become an independent statutory body. I am delighted to say that we fulfilled the commitments in that plan, focusing on and improving the effectiveness of our regulatory activity in making a difference to nuclear standards and security.

We could not have delivered what we did in 2013/14 without the commitment of our Board and the massive organisational change that has taken place since the appointment of John Jenkins as the Chief Executive Officer in April 2013. Under his leadership, a permanent, stable senior management team was put in place and the organisational structure has been modernised in line with the latest principles of good corporate governance. The Executive Team is strong and of high calibre. Responsibilities are transparent, thereby ensuring accountability.

All this helped us tremendously in satisfying the Government that we could manage our own affairs as an independent statutory body and our biggest achievement in the year was to become established as a public corporation on 1 April 2014. Of course, we could not have achieved this without the help and support of our own people and key officials in government departments. My Board colleagues and I are

confident that we can build on the foundations put in place on our journey towards incorporation, and we look forward to taking ONR forward as an exemplary independent regulator.

Nick Baldwin, Chair

Chief Executive Officer's review of the year



John Jenkins
*Chief Executive
Officer*

Looking back on my first year as Chief Executive Officer of ONR, it is pleasing to see how much the organisation has achieved. Our incorporation on 1 April 2014 was a result of hard work by all of ONR's staff, who continued to deliver business as usual, whilst undergoing considerable organisational change. In order to vest we had to assure the Government, and of course ourselves, that we were fit for purpose. This focused on our leadership and our regulatory effectiveness and efficiency, so that Parliament could be confident that we were capable of managing ourselves properly under our own governance arrangements.

For our 'shadow running' year of 2013/14, ONR ensured that the principles of HM Treasury's *Managing Public Money* were applied in the organisation and we have made massive strides with this, as evidenced in positive audit opinions from Internal Audit on ONR's financial management. Under the leadership of the Deputy Chief Executive, we are continuing to drive greater value for money and cost consciousness throughout the organisation, with the financial target for 2013/14 agreed with the Minister being bettered and efficiencies delivered amounting to some £2.5m.

In November 2013 we published the inaugural report of the Chief Nuclear Inspector (CNI), which considered all of our regulatory activity and summarised our independent judgements on the areas we regulate. It covered the period up to 31 March 2013 and provided a significant piece of assurance work to build confidence in the work we do to deliver our mission, to hold the industry to account on behalf of the public. As part of our continuing commitment to openness and transparency we have included in this document the CNI's annual statement of regulatory activity for 2013/14 which provides assurance on the safety and security of the estate we regulate. We will continue to provide this annual statement which, in future years, will be included in our statutory annual report and accounts.

Under the Board's direction, we now have clear priorities for our regulatory activity. Sellafield will continue to be our top priority for some time into the future and the Board is clear that we need to be radical in addressing the challenges at the site. We have been working with the licensee to develop a strategy that will ensure their attention focuses clearly on risk reduction.

I am particularly proud of the visible, lasting improvements in our emergency preparedness and response arrangements, where there are now robust on- and off-site capability maps, extendibility guidance and criteria; and in particular what we have done to facilitate the development of the new nuclear estate, which includes our work on the Generic Design Assessment of Hitachi's advanced boiling water reactor design.

All of the above has been delivered at the peak of organisational change, and has impacted on every member of staff to some extent. It is to their credit that they have risen to the challenge and have seen the successful culmination of several years' effort to create the new ONR. It bodes well that we have such a dedicated team whose collective expertise, skills and knowledge across all disciplines will take us forward into the future. It is my privilege to lead and work with that team.

John Jenkins, Chief Executive

The ONR Board

Non Executives



Nick Baldwin, ONR Chair

Nick has been the ONR Chair since April 2011. Prior to that he was a non executive director of Scottish and Southern Energy and the Nuclear Decommissioning Authority and, until July 2002, the Chief Executive of Powergen, having joined the company in 1989, holding a series of board-level and senior management positions. He is the Chair of Sanctuary Housing Group, and the Chair of Ambitious About Autism. He is a Chartered Engineer, Chartered Director, a Fellow of the Institution of Mechanical Engineers and the Institution of Engineering and Technology, and a Member of the Institute of Energy. Nick represents ONR on the HSE Board.



Jonathan Baume

Jonathan Baume was until recently General Secretary and Chief Executive of the FDA, a trade union and professional organisation representing senior public sector managers. He is currently one of 11 Civil Service Commissioners and a member of the Advisory, Conciliation and Arbitration Service (ACAS) Council representing employee interests. He has held a number of lay and representative posts in the trade union movement in a career spanning almost 40 years, including a role at the TUC in policy development on employment law and diversity. He represents HSE on the ONR Board.



Steve Bundred

Steve Bundred chairs the ONR Audit and Risk Assurance Committee. His previous non executive roles have included chairmanship of Monitor, the Independent Regulator of NHS Foundation Trusts, and of the Higher Education Regulation Review Group. He has also held several other ministerial appointments and was Deputy Pro-Chancellor of City University until 2009. He is an accountant by profession and has held Chief Executive positions at the Audit Commission (from 2003–2010), the Improvement and Development Agency for Local Government, and the London Borough of Camden, where before that he was Director of Finance and Deputy Chief Executive.



John Crackett

John Crackett chairs the ONR Remuneration Committee. Previously John was Managing Director of Central Networks, the UK's second-largest distributor of electricity – and also E.ON UK Board member responsible for safety, health and environment. John is a Chartered Engineer, and a Fellow of two professional institutions. His career has spanned power station design, project management, operational management; and running generation, business services, IT, energy services and distribution businesses. He is a trustee of sustainable energy and social housing charities, and advises the MoD on electricity generation and distribution.



Liz Siberry

Liz Siberry chairs the ONR Security Committee. From 2008–2011, Liz was the Director of the Centre for the Protection of National Infrastructure (CPNI), which is responsible for providing advice on security issues (physical, personnel and information/cyber) to the nine sectors of the UK critical national infrastructure, including energy. She has been a member of various director-level industry groups and worked with international counterparts in Europe, North America and Australasia. As chair or member of various interdepartmental committees, she also worked with a range of government departments and agencies and the devolved administrations. Before becoming Director CPNI, Liz was a departmental HR director, responsible for training, recruitment, health and safety, as well as HR operations.

Executives



John Jenkins, Chief Executive Officer and Accounting Officer

John is a Chartered Engineer and Member of the Institution of Civil Engineers, with over 30 years' experience in private and, latterly, public sectors at a senior level. He was appointed to ONR as the Chief Operating Officer (COO) in June 2012 and subsequently Chief Executive Officer in April 2013. He has led ONR through a significant programme of change, appointing senior staff to create a stable and mandated team and overseeing a successful IRRS Mission that received a commendation from the IRRS team. The creation of ONR as a Public Corporation pursuant to the Energy Act 2013 was the major milestone in his first two years at ONR. John's role is to lead and protect the organisation in the coming years as the twin challenges of demographic-driven reduction in staff and increased regulating needs reach their peaks simultaneously.



Les Philpott, Deputy Chief Executive

Les Philpott supports the CEO in leading ONR and also leads ONR's corporate functions, including setting and delivering strategy, corporate governance, all ONR business services, policy management and key stakeholder relationship management. Les has wide experience in public management, including transforming public services, policy formulation and advice to Ministers, finance and human resource management, and large-scale public purchasing and supply. Les' previous career included senior management posts in central government. He is a Chartered Accountant (public finance).



Andy Hall, Chief Nuclear Inspector

Dr Andy Hall joined HSE's Nuclear Installations Inspectorate (NII) in 1988 having previously worked at the UK Atomic Energy Authority undertaking research and technical analysis (including analysis of the Chernobyl accident). He has a range of experience in technical assessment, site inspection and policy work on international harmonisation of nuclear safety standards. As a Deputy Chief Inspector he headed up several different nuclear directorates and led ONR's technical activities to learn lessons from the accident at the Fukushima Dai-ichi nuclear power station. He was appointed as ONR's Chief Nuclear Inspector in December 2013. He was educated at the University of Oxford, having undertaken seven years' post-graduate and post-doctoral research in theoretical astrophysics and where he was elected a Research Fellow and Member of the governing body of St Edmund Hall. He has recently been appointed as the new Chair of the European Nuclear Safety Regulators Group (ENSREG), providing ONR with an excellent profile within Europe.



David Senior, Director of Regulatory Assurance

David Senior took up appointment as the Director of Regulatory Assurance and Executive Board member on 1 July 2014. Previously he was a Programme Director across two of ONR's front line operational programmes, the Defence Programme and the Decommissioning, Fuel & Waste Programme; and prior to that he was responsible for Nuclear & Radioactive Waste Policy at the Department of Energy & Climate Change. David has extensive regulatory experience across the wider nuclear industry acquired over 18 years. He was responsible for delivering a landmark regulatory policy that has secured a stage-wise reduction in stocks of heat-generating highly active liquor stocks in the United Kingdom, thus securing wider international confidence. He is a Chartered Mechanical Engineer.

Annual report

About ONR

ONR is a public non-finance corporation sponsored by the Department for Work and Pensions (DWP) with some oversight from the Department of Energy and Climate Change (DECC).

Purpose of ONR

ONR was established in 2011 as an agency of the Health and Safety Executive (HSE), with its own governing Board and Executive. However, under the Energy Act 2013, ONR became an independent statutory body on 1 April 2014. ONR's mission is:

“To provide efficient and effective regulation of the nuclear industry, holding it to account on behalf of the public”

ONR's statutory purposes fall into five categories:

- Nuclear safety
- Nuclear site health and safety
- Civil nuclear security
- Nuclear safeguards
- Transport of radioactive materials

Further details of ONR's purposes are set out in the Energy Act 2013.

The Secretary of State for Work and Pensions has the principal responsibility to Parliament for ONR governance, finance and performance in relation to conventional health and safety. These responsibilities are delegated to the Minister for Disabled People, the Right Honourable Mike Penning MP, who will account for such matters in Parliament.

A number of other Secretaries of State are answerable in Parliament for aspects of ONR's activity:

The Secretary of State for Energy and Climate Change is accountable to Parliament for the UK civil nuclear regulatory framework and policies including civil nuclear safety and security; emergency

planning and response; nuclear safeguards; and the transport of radioactive material by road, rail and inland waterways.

The Secretary of State for Defence is accountable to Parliament for nuclear safety and security at nuclear sites operated wholly or mainly for defence purposes.

The work of ONR is also subject to administrative agreements with several other departments and regulators with related or overlapping functions and responsibilities.

ONR strategies and plans

ONR's vision to be "*Universally respected for securing confidence in nuclear safety and security*" acknowledges that people want to feel safe and secure from the hazards of the nuclear industry whether they stem from the physical operation of nuclear activities, safeguarding of nuclear material, transport of radioactive materials or the security of nuclear facilities. To this end, the outcome ONR seeks is a nuclear industry that:

- controls its hazards safely, securely and effectively;
- has a culture of continuous improvement and sustained excellence in operations;
- whenever possible, shares information about its activities with the public.

These outcomes set the strategic direction for ONR's Annual Plan for 2013/14¹ under which there were a number of priority objectives designed to contribute to their achievement. There is evidence throughout this report of our achievements of those objectives, the regulatory achievements being comprehensively reported in the Chief Nuclear Inspector's Annual Statement. Table 1 presents the priority objectives, with page references to where progress against them can be seen.

The detailed objectives and milestones to deliver the Annual Plan were captured in an underpinning operating plan, which in turn informed individual team members' personal Performance Agreements. In delivering its objectives and performing its functions, ONR placed high priority on providing value for money for its stakeholders and being fully accountable for this.

In recognition of the importance of effective communications to its future success, ONR has published a revised Communications Strategy.² The Communications Strategy launched a new mission

1 www.onr.org.uk/documents/annual-plan-2013-2014.pdf

2 www.onr.org.uk/documents/onr-corporate-communications-strategy.pdf

statement “To provide efficient and effective regulation of the nuclear industry, holding it to account on behalf of the public” and set out ONR’s approach to achieving effective external and internal communications.

ONR is revising its high level strategy to reflect its work following incorporation and the challenges confronting nuclear regulation in the medium to longer term. The new strategy is due to be published towards the end of 2014.

Delivering outcomes

Table 1: ONR’s priority objectives

Outcome: A nuclear industry that controls its hazards safely, securely and effectively	
<i>Priority objectives</i>	<i>Progress (page reference)</i>
The reduction of risk and hazard in legacy ponds and silos at Sellafield.	21–25
Ensure civil nuclear licensees, dutyholders and potential licensees comply with legislation relevant to their activities.	23, 26, 27, 31, 33
Begin the Generic Design Assessment of the Advanced Boiling Water Reactor design.	21
Approve National Objectives, Requirements and Model Standards (NORMS) compliant Nuclear Site Security Plans (NSSPs) including improvements schedules within agreed timescales.	30, 32
Assess submissions for permissioning transport activities requiring Competent Authority approval and issue permissioning documents as appropriate.	33

Outcome: A nuclear industry that has a culture of continuous improvement and sustained excellence in operations	
<i>Priority objectives</i>	<i>Progress (Page reference)</i>
Facilitate visible, lasting improvements in the UK's emergency preparedness and response organisation taking into account international good practice and the lessons learnt from the Fukushima nuclear accident.	34–35
Permit the staged construction of a number of major projects.	27
Continue the regulatory activity in relation to the Materials Consolidation Project to secure the protection of people and society from the hazards arising from the transfer of nuclear materials from UKAEA sites to Sellafield.	See comment ³
Participate in international peer review and regulatory support missions, including the International Atomic Energy Agency Integrated Regulatory Review Service, and provide support to overseas countries developing regulatory systems for new nuclear power programmes.	14
Assist the civil nuclear industry to improve its security by facilitating the exchange of security information, development of security competencies and security culture.	31–32

Outcome: All our stakeholders value our work	
<i>Priority objectives</i>	<i>Progress (Page reference)</i>
Produce clear and consistent accounts of all our regulatory activities and publish as much of this as possible in accordance with our commitment to a policy of presumption of disclosure.	14–35
Prepare to implement the Government's intention to change ONR's legal status from an agency of HSE to a new statutory public body.	3
Produce a new Communications Strategy for 2013/14 and beyond, engaging our stakeholders as appropriate, that promotes openness and transparency in ONR's work and supports our internal programme of change to improve what we do.	10
Deliver a financial strategy that secures value for money throughout ONR's operations and ensures full transparency in the costs of nuclear regulation.	4, 40, 45–46

3 Ongoing – key milestone, December 2014.

Key performance indicators for 2013/14

ONR agreed with the Board and Ministers five key performance indicators for 2013/14.⁴ The following provides detail of the actual performance against target.

Table 2: Key performance indicators for 2013/14

	Target	Achievement
KPI 1		
Reports completed to deadline	95%	90%
KPI 2		
Inspections achieved compared to plan	95%	92%
KPI 3		
Financial performance		
● budget outturn within	+/- 3%	+ 1.5%
KPI 4		
Completion of planned milestones		92%
KPI 5		
Completion of stage gate reviews of the statutory ONR project	Successful completion 2 to 4	100%

Our people

ONR's People Strategy was agreed with the ONR Board in December 2013. It sets out our approach to people policies after vesting as a public corporation, and the use of the flexibilities available to us.

In establishing ONR's performance management practices, we undertook a review of our objective setting and mid-year evaluation to ensure that management are able to address training and skills needs; and we have also ensured that talent management arrangements are now in place for all grades to assist with succession planning.

A recruitment programme for staff across all grades and disciplines has taken place through the year to address the demographic trend that the organisation was facing. We now have a more stable workforce with the correct balance of nuclear specialists, administration and other relevant skills and expertise.

There has been continued attention paid to attendance management, with the annual average working days lost for the year to 31 March

⁴ The KPIs presented here are final figures. Those presented in HSE's Annual Report and Accounts were indicative at the time of publication and therefore are slightly different.

2014 being 3.59. This is a significant reduction compared to the 2012/13 figure of 6.4.

ONR held its own staff survey in 2013 and as a result we have focused attention on developing our staff through a range of training and development programmes, including Leadership, Career and Development Management and other management events. We have also established an ONR Equality and Diversity group.

In preparation for receiving their new warrants under the Energy Act 2013, all warranted inspectors undertook a rigorous mandatory training programme, which included thorough testing so they could demonstrate understanding of the responsibility they carry and the powers under which they perform.

Sustainability

A detailed Sustainability report is included in the [HSE Annual Report and Accounts 2013/14](#).⁵

Chief Nuclear Inspector's Annual Statement

It is my pleasure to present to you this annual assurance statement, which summarises ONR's regulatory activity from 1 April 2013 to 31 March 2014. I would like to highlight some of our significant achievements during the year:

- Our work on the Generic Design Assessment (GDA) of Hitachi-GE's advanced boiling water reactor (ABWR) design, concluding the first phase of the process in December.
- Granting our first formal regulatory permission to AWE to proceed with the construction of Pegasus, a new facility at Aldermaston. This is one of a series of new-build projects that will be constructed to replace ageing facilities and support the maintenance of the United Kingdom's strategic nuclear deterrent.
- The work we have done to drive forward improvements at Sellafield particularly accelerating hazard and risk reduction across the site, including a range of formal enforcement actions, such as the successful prosecution of Sellafield for the incorrect disposal of radioactive waste as well as a number of Improvement Notices.
- In the autumn, we saw the third of a series of peer review missions to the UK by the International Atomic Energy Agency's (IAEA) Integrated Regulatory Review Service (IRRS) which provided an external accreditation of ONR and the resulting report provided us with much credit, commenting that it had been

5 www.hse.gov.uk/aboutus/reports/index.htm

the most successful follow-up mission undertaken in any IAEA member state to date.

- We are also now realising the benefits of our revised goal-setting regulatory framework for nuclear security regulation that is improving regulatory effectiveness and delivering greater integration of safety and security regulation. Further work is in progress to publish revisions to our Safety Assessment Principles later this year.

Our annual plan for the 2013/14 reporting year highlighted our front line regulatory activities, milestones and priorities in line with our vision and mission statement. These are areas we judged will enable us to have the most impact in achieving sustained compliance with the high standards expected and influencing improvements in nuclear safety and security. Our work in each of the programmes summarises our activities and highlights with respect to this plan as well as our future strategy and focus for regulating the nuclear industry. This annual assurance report summarises our regulatory activities in 2013/14, our shadow year as a public corporation.

Improving our regulatory effectiveness and efficiency

Over the past year, we implemented several significant changes to our regulatory processes that will enhance our ability to maximise our effectiveness and efficiency. These include:

- Establishing our Regulatory Assurance Function to provide our Board and external stakeholders, particularly Ministers, with assurance on: quality and robustness of our regulatory processes and decisions; availability of regulatory and technical guidance and processes to our inspectors; and continued competence of our inspectors.
- Implementing a revised approach to inspection across all of our nuclear safety programmes. This involved introduction of a system-based framework which is focused on the critical safety systems and structures derived from the licensees' safety cases to ensure these are operated and maintained in accordance with the safety case. These inspections were effective in providing us with evidence and the requisite assurance and highlighted areas where there were shortfalls.
- Better integration of our regulatory framework and activities in areas of nuclear (and non-nuclear or conventional) health and safety, security and safeguards on licensed sites and in transport of radioactive material.

Overview of our regulatory attention in 2013/14

Over the past reporting year, ONR has evidence that all licensees operated safely and securely and ensured the protection of the public and their workforce. Table 3 summarises our regulatory attention applied to nuclear licensed sites over the past year. Our judgement is that there are areas that require attention above the standard high level that ONR applies to all licensed sites. This judgement is informed by the level of hazard and risk posed by the installation. Our assessment is underpinned by indicators and additional qualitative measures that we use to analyse the information gathered through our regulatory activities. These include:

- number and significance of regulatory issues related to each site and their timely resolution;
- reportable events and follow-up investigations carried out by our inspectors;
- enforcement actions;
- emergency preparedness and response capability;
- progress made with implementation of Fukushima Action Plans;
- progress made towards delivery of safety-significant developments on site.

Table 3: Regulatory attention applied to nuclear licensed sites

ONR regulatory attention level	Site (listed alphabetically within each attention level)	Judgement on whether performance is improving ↑, maintaining level ↔, or declining ↓
1 Significantly enhanced level of regulatory attention	Sellafield decommissioning (legacy ponds and silos)	↔
	Atomic Weapons Establishment, Aldermaston	↔
2 Enhanced level of regulatory attention	Devonport Dockyard	↑
	Dounreay	↓
	Dungeness B	↑
	Heysham 1	↔
	Sellafield – remainder of estate	↓

ONR regulatory attention level	Site (listed alphabetically within each attention level)	Judgement on whether performance is improving ↑, maintaining level ↔, or declining ↓
3 Routine level of regulatory attention expected, relative to the hazard on the site	Atomic Weapons Establishment, Burghfield	↔
	Barrow	↔
	Berkeley	↔
	Bradwell	↔
	Capenhurst	↔
	Chapelcross	↔
	Derby	↔
	Dungeness A	↔
	GE Healthcare (2 sites)	↔
	Hartlepool	↔
	Harwell	↑
	Heysham 2	↑
	Hinkley Point A	↔
	Hinkley Point B	↑
	Hinkley Point C	↔
	Hunterston A	↔
	Hunterston B	↔
	Imperial College research reactor	↔
	Low-level waste repository	↔
	Oldbury	↔
	Rosyth	↔
	Sizewell A	↔
	Sizewell B	↔
	Springfields	↔
	Studsvik	↔
	Torness	↔
	Trawsfynydd	↔
	Winfrith	↔
Wylfa	↔	

Forward look

Our [Annual Plan for 2014/15](#)⁶ sets out our regulatory priorities. These are securing the acceleration of risk- and hazard-reduction at Sellafield; completing our work in establishing our regulatory assurance function; and effective and efficient GDA of new reactor designs that could be built in the UK. These will remain the main focus of our regulatory attention over the coming year.

We are committed also to ensuring that the regulatory framework, our processes and standards are subject to periodic review and remain fit for purpose, implementing learning from their application. In line with this commitment and in order to implement learning from the 2011 Fukushima accident, we embarked on review of our Safety Assessment Principles. Whilst the review did not identify any significant gaps, it provided the opportunity for clarification and amplification of a number of areas, mainly related to coverage of severe accidents. The review will be concluded in 2014 and has involved engagement with our licensees and other stakeholders.

Safe nuclear power, reactor new build and reactor designs

Operating reactors

Current and future challenges

The UK's fleet of reactors has been generating electricity for over 40 years and this gives rise to the challenge of safety-related ageing and obsolescence issues that licensees continue to manage. Some ageing issues can be controlled and managed by maintenance and replacement of components. For the advanced gas-cooled reactors (AGRs), the graphite core and the boilers cannot be replaced and are likely to be the most significant life-limiting features.

Our focus is therefore to secure the safe operation of the existing fleet and to ensure that the licensees have robust plans and organisational capability to monitor, maintain, and where appropriate replace critical systems and components required for nuclear safety. Key areas of current and future regulatory focus are:

- The licensees' development of improved safety cases for the graphite reactor cores for a number of reactors.
- Lifetime asset management issues associated with ageing of various safety significant components such as control and instrumentation.

6 www.onr.org.uk/documents/2014/onr-annual-plan-14-15.pdf

Safety performance

Over the past reporting year, all of the AGRs, the PWR at Sizewell B and the remaining operational Magnox reactor at Wylfa operated safely, and the licensees made adequate provisions to protect the health, safety and security of the public and their workforce. Our judgement is supported by evidence from our assessment and inspection activities and steady operation of the reactors, with a relatively small number of unplanned shutdowns and reportable events (above INES 0⁷). None of the events reported compromised the safety of the public or the workforce and we are satisfied that, in all cases, the licensees took appropriate corrective actions in response to these events. Overall, our judgement is that the operating reactor licensees have a strong and positive safety culture with open reporting of events that should provide a sound basis for maintaining and improving nuclear safety and security.

At Dungeness B, a number of specific issues related to data processing systems and combined issues of graphite ageing and boiler integrity informed our intervention strategy and we monitored the licensee's response to these issues to ensure a satisfactory resolution of these.

Furthermore, following the Fukushima accident, the licensee identified and reported an anomaly in its safety case for unlikely flooding events at Dungeness B and put significant effort to resolve this and to implement the physical improvements needed. Given its significance, we gave additional attention to regulating this.

These issues together with a series of unplanned reactor shutdowns resulted in delay to implementation of some planned safety improvements. We now see progress in addressing these and judge that the licensee's performance is improving. We will, however, continue to give appropriate regulatory attention to ensure the licensee maintains this improving trend and secures safe and reliable operations at Dungeness B.

Over the past year, our regulatory work at Heysham 1 was focused on ensuring that the licensee is addressing plant reliability issues arising from maintenance errors and omissions. These issues have contributed to a number of unplanned reactor shutdowns. An additional issue that required our regulatory attention was related to structural integrity of boilers which remove heat from the reactors. Permitting the safe return to operation of the reactor as a result of this issue resulted in our enhanced regulatory attention at Heysham 1 (see Regulatory milestones).

7 International Nuclear and Radiological Nuclear Event Scale (INES) is a tool for promptly communicating to the public in consistent terms the safety significance of reported nuclear and radiological incidents and accidents. On this scale, INES 0 has no nuclear safety significance and INES 1 is considered as an anomaly.

Regulatory milestones: Highlights

We granted permission for a number of key activities including:

- **Return to service of Dungeness B** – following identification of an anomaly in the safety case for unlikely flooding events, the licensee took a conservative decision and shut down both reactors. The licensee constructed improved protection features in the following weeks, and ONR's assessment of the revised safety case and engagement with the licensee allowed us to permit the return to service of the reactors with an improved safety case and physical improvements.
- **Heysham 1 Reactor 1 start-up following the maintenance outage** – during the outage the licensee obtained an anomalous test result from one of the boiler units which remove heat from the reactor. Consequently, the licensee sought our permission to restart and operate the reactor at reduced power levels, with the boiler removed from service. This was justified by a time-limited safety case for an operating period of six months until further inspection could be undertaken on the affected boiler unit and the issue fully understood and resolved. Our permission involved significant inspection and assessment work in a number of engineering disciplines which provided us with evidence that the licensee had made a robust case for safe reactor start-up and operation. We are continuing our engagement with the licensee, focusing on ensuring it develops and implements a satisfactory long-term solution in support of continued safe operation.
- **Hunterston B super-articulated control rod installation** – to support an enhanced shutdown capability, we granted permission for the licensee to install the first super-articulated control rod into a reactor at Hunterston B. This followed a similar permission granted months earlier at Hinkley Point B, taking account of our earlier assessment of the reliability of the new control rods, and their satisfactory performance at Hinkley Point B.

Reactor new build

Following our granting of a nuclear site licence for two reactors at Hinkley Point C (HPC), we began our work in assessing the site-specific design in a number of engineering and other disciplines. Our work is progressing well and we are satisfied that NNB Generation Company is responding positively to the technical queries that we have raised. This work will inform our decision on whether to grant Consent for the first planned concrete-pour on site in October 2015. HPC is expected to be the first civil nuclear power project in the UK for over 25 years and we will continue to give appropriate attention to this project to drive timely implementation of key safety improvements. We have also commenced regulatory interactions with

Horizon Nuclear Power Ltd, which is seeking to obtain a nuclear site licence to construct and operate two power reactors at Wylfa in Anglesey.

Generic design assessment (GDA)

Jointly with the Environment Agency, we began the technical assessment of the UK ABWR design in January 2014. This represents the start of a four-year assessment of the safety, security and environmental aspects of the design, which is planned to be constructed on the Wylfa site in North Wales, subject to the necessary permissions. Our work to conclude the second phase will be finalised over the coming weeks. This will inform the more in-depth assessment of the safety claims and arguments put forward by the requesting party in support of the generic design. So far we have already identified a number of design and safety case issues that are being resolved, which highlights one of the key benefits of the GDA process – early resolution of design issues well in advance of any construction.

During the year we have held discussions with DECC on the number of requests that we are likely to receive from requesting parties to undertake GDAs. This information has been used to inform our planning and to ensure that we are able to meet the likely demand without affecting our other strategic priorities.

Forward look

Within the civil nuclear reactor programme we will continue our work to:

- ensure licensees' safe operation of the existing operational reactors, recognising ageing and asset management issues and continuous safety and security improvements. This will involve assessment of licensees' safety cases submitted to ONR in support of safe operation of the reactors beyond their originally intended design life;
- secure key safety improvements built into the design in new-build projects;
- ensure new reactor designs that could be built in the UK would be safe and secure.

Recognising the resource demands needed for effective regulation of these areas, we have developed strategies that involve working with the supply chain to support our judgement in assessing technical areas.

Revised regulatory strategy for the Sellafield programme

Sellafield ranks as one of Europe's largest industrial complexes, storing significant quantities of radioactive waste. Given the age and fragility of many of the facilities on site, it is a national priority to

reduce the hazard and risk on site in a safe and timely manner. This means that we need to focus our regulatory attention on retrieval of legacy material from the old ponds and silos and to ensure safe operation and availability of the supporting facilities on site that are essential to this process. Whilst responsibility for hazard and risk reduction rests with Sellafield Limited (SL) and the Nuclear Decommissioning Authority (NDA), we have identified regulation of Sellafield as our number one regulatory priority and highlighted this in our Annual Plan for 2014/15.

In order to help accelerate risk- and hazard-reduction at Sellafield, we have recently changed our regulatory approach and refreshed our regulatory team. We believe that it will take time to resolve the complex issues which have led to the current situation and the ongoing delays in risk- and hazard-reduction. We have outlined our priorities to Sellafield and expect them and other stakeholders, such as NDA, to respond to the challenges we have outlined.

Our new regulatory strategy for Sellafield consists of a number of strands, each one intended to contribute to the accelerated risk- and hazard-reduction on site. Our aim is to ensure that:

- resources are used effectively;
- Sellafield's procedures and practices are effective and efficient and do not delay progress or divert effort from key priority tasks;
- Sellafield is developing fit-for-purpose solutions to resolve issues rather than those that are complex or over-engineered, an approach that in the past contributed to delays in risk- and hazard-reduction.

We will also examine the incentives, as well as potential obstructions, to determine whether Sellafield staff are empowered to move to new ways of working.

In light of this, we have revised our inspection and assessment plans, as well as the regulatory issues we pursue with the licensee, to enhance alignment with this strategy. We have also revised our communication with Sellafield to improve clarity of our regulatory expectations.

Holding Sellafield to account

We have evidence that facilities on the Sellafield site have operated safely and that the licensee has made adequate provisions to protect the health, safety and security of the public and its workforce. However, we recognise that some of the older facilities at Sellafield do not meet modern engineering standards and their safety cases therefore cannot demonstrate the high standards required for nuclear facilities. This does not mean that operations and activities on these facilities are unsafe but it highlights further the need for a new regulatory approach that enables accelerated risk- and hazard-reduction.

Our revised approach does not imply lowering of regulatory standards. Indeed, we are progressing appropriate enforcement actions in a number of areas where we believe Sellafield has failed to meet its legal obligations.

ONR has issued formal cautions to two Sellafield employees, following investigation into a contamination event that occurred in December 2013. The investigation revealed that the workers had carried out unauthorised work in violation of Sellafield's approved safe systems of work, which could have resulted in the exposure of personnel to increased levels of ionising radiation. We found no evidence that Sellafield's systems of work for controlling such activities were in any way deficient.

We have also taken formal enforcement action relating to Sellafield's failure to implement appropriate engineered protection for shielded access into radiological areas within the Fuel Handling Plant. The licensee must implement and maintain required safety standards to minimise the potential for harm to the public and its workers. Although in this instance the shortfall did not result in harm to workers or the public, it compromised one of the safety barriers in place in the interest of safety. The licensee is now working to implement the required measures within the timescales we have specified.

Further enforcement action follows our investigation of a number of events relating to problems with electrical supplies. The most significant of these was in the Waste Vitrification Plant (WVP), where a loss of power supply to the ventilation system led to widespread contamination of one of the production lines. We are now requiring the licensee to implement a number of improvements to the facility to ensure such events will not be repeated in the future. Sellafield is also taking appropriate action to clean up the contamination, ensuring the safety of its workforce.

In addition to nuclear safety, our field of regulatory responsibilities at nuclear licensed sites includes non-nuclear or conventional health and safety. We seek to ensure that Sellafield also maintains appropriate safety standards in this area. To this effect, we issued an Improvement Notice to ensure appropriate standards are applied in managing and maintaining the cooling towers on the Site Ion Exchange Plant. This is to ensure that the licensee takes all reasonably practicable measures to minimise the risk of exposure to workers and the public of Legionella bacteria.

In all of these areas, we will continue to monitor Sellafield's progress to ensure the required improvements are made in a timely manner.

Regulatory milestones: Highlights

In line with our new strategy, we permitted a number of key activities to enable safe retrieval of legacy material from the old ponds and silos and ensure availability of the supporting facilities on site that

are essential to this process. Our permissions were supported by inspection activities and assessment of the licensee's safety cases to ensure the licensee met the high standards of safety required. Key permissions include:

- **Installation, commissioning and operation of a passive ventilation system in Magnox Swarf Storage Silo (MSSS)** – the system enhances the capability to protect the public in the unlikely event of a prolonged power failure by providing additional means for removing hydrogen that is produced as a by-product of waste storage in this legacy facility.
- **Return to service of Evaporator B to support reprocessing of radioactive waste for safe storage following a temporary shutdown to ensure continued safe operations** – the facility makes a significant contribution to reprocessing of radioactive waste.
- **Restart of operations at the Magnox Reprocessing Plant following production issues** – the facility experienced problems with the flow of ferrous sulphamate, a key element in the chemical process, during the initial few hours of plant start-up. When attempts to stabilise the flow rate were unsuccessful, SL shut the plant down safely and in accordance with the site safety case. In line with our revised strategy for regulating Sellafield, ONR was able to allow the plant to recommence operations, whilst at the same time removing some of the excessive bureaucracy that may have previously delayed the restart.
- **Operation of the 60-tonne hoist in First Generation Magnox Storage Pond** – this will enable removal of legacy material and also the installation of additional equipment that will assist future larger-scale remediation.

Forward look

Our future regulatory activities will be targeted at areas where we expect to achieve most risk- and hazard-reduction on site. Some of these will bring benefits in the short term, for example our agreement to a single standard for nuclear lifts across the site. Other areas are long-term projects, for example agreement for operation of a second skip-handling machine which is required for the removal of irradiated fuel from legacy ponds.

In relation to our new strategy, key areas of current and future regulatory focus are:

- timely delivery by the licensee of decommissioning milestones agreed with ONR, including implementation of appropriate measures to reduce the risks arising from a number of legacy facilities in the case of unlikely external events;

- the repackaging and transfer of nuclear material residues to a more robust store in a timely manner that will have a positive impact on the off-site emergency planning area;
- Sellafield's work to strengthen its internal challenge function, including its internal assurance capability, thereby enhancing the safety culture on site;
- the licensee's progress towards ongoing improvements related to the site resilience, including emergency management, electrical distribution and back-up systems and security enhancements. A specific focus is the joint intervention by ONR's nuclear safety and security programmes to secure accelerated delivery of the Main Sellafield Control Facility.

In all of these areas we are engaging with Sellafield Ltd to bring about satisfactory solutions to address these.

Safety on defence nuclear sites

Our defence team regulates across the Defence Nuclear Programme in accordance with applicable legislation. In broad terms the programme comprises the construction, maintenance, operation and decommissioning of nuclear-powered submarines together with the production and maintenance of UK nuclear weapons. Our team has a key interface with the Defence Nuclear Safety Regulator (DNSR), recognising DNSR's regulatory responsibilities where defence has exemptions from relevant legislation such as the Nuclear Installations Act 1965. Effective and efficient regulation is therefore achieved by us working closely with DNSR to ensure coherent, complete and seamless regulation of all Defence Nuclear Programme activities.

Our weapons sub-programme covers the regulation of the AWE licensed sites at Aldermaston and Burghfield. The submarine propulsion sub-programme covers licensed sites at Derby (manufacture and testing of UK submarine reactor fuel), Barrow (construction and testing of nuclear submarines), Devonport Dockyard (maintenance, repair, refitting and refuelling of the UK's nuclear submarines) and Rosyth Dockyard (largely decommissioned; some radioactive material in storage).

Our defence programme also regulates a number of sites that are not licensed but for which ONR has responsibilities under the Health and Safety at Work etc Act 1974, Ionising Radiations Regulations 1999 and Radiation (Emergency Preparedness and Public Information) Regulations 2001. These are: HM Naval Bases at Clyde and Devonport, 5 Basin in Devonport Dockyard, Vulcan Naval Reactor Test Establishment and submarine operational berths.

Safety performance

We have evidence that all sites across the Defence Nuclear Programme control the nuclear and radiological hazard well, meet the required safety standards and protect the safety of the public and their workforce. The Defence Nuclear Programme remains busy and faces the challenge of shortages of suitably qualified and experienced personnel in key areas. ONR judges that site safety is being maintained but these shortages may affect longer-term programme delivery.

Devonport Dockyard was identified in the previous Chief Inspector's Report as receiving enhanced attention from ONR. This was due to the range of ageing facilities and the timeliness and quality of periodic safety reviews, a number of safety cases that do not meet expectations, required facility upgrades, new facility build to reinstate the ability to defuel submarines at the end of their service life, and stretched resources during a very busy submarine maintenance programme. During the year, progress has been made with developing a Through Life Management Plan for the facilities which recognises the investment that will be needed to ensure their safety and availability into the future. A number of improvements have also been made to the facilities in the Submarine Refit Complex which improve safety and which implement recommendations from Fukushima studies. There has been progress with construction of new defuelling facilities and the approach to decommissioning of old facilities has been of good standard.

Also at Devonport Dockyard, we took enforcement action in relation to occasions where written instructions required for safe operation were breached (rated INES 0). None of these affected the safety of the public or the workforce, but they potentially compromised one of the multiple barriers in place to ensure nuclear safety. The licensee responded effectively and addressed the issues within specified timescales. The Improvement Notice has been closed.

The AWE (Aldermaston and Burghfield) sites were identified in the previous Chief Inspector's Report as receiving enhanced attention from ONR because of the range of ageing facilities and the timeliness and quality of periodic reviews, a number of safety cases that do not meet expectations, and significant effort being expended on facility upgrades and major new build projects. Progress has been made this year but our enhanced attention on these matters will continue, particularly at the Aldermaston site. The Burghfield site is less complex and we have this year judged the appropriate level of attention as 'routine'.

We are currently investigating AWE Aldermaston's apparent failure to meet a formal regulatory requirement (specification) that required the reduction in volume and encapsulation of 1000 drums of intermediate

level waste by February 2014. We are also in discussion with AWE about events relating to shortfalls in the operability and availability of building fire detection systems. For both matters we will consider whether enforcement action is appropriate in accordance with ONR's enforcement policy. However, we are satisfied that there are no immediate safety concerns.

The Derby fuel-manufacturing site has a number of ageing facilities for which periodic reviews of safety have identified shortcomings against modern standards. ONR's regulatory focus is to ensure safe operation of these facilities until their replacement, which is in progress, with significant investment delivering new facilities that are being built to modern standards. ONR's interventions on the first of these facilities have identified issues with the construction method, assurance of the build quality and licensee oversight of the contractors. It is evident that the licensee is committed to addressing these issues.

At Barrow, 2014 will see the launch and commissioning of the latest Astute Class submarine, HMS Artful. ONR focus is to ensure that the licensed nuclear safety-significant activities are carried out safely, which has included reviewing the licensee's justifications relating to the structure of the Quay used for commissioning activities.

Regulatory milestones: Highlights

Our work over the past year monitored the continued safe operation of the defence nuclear sites and has enabled the licensees to achieve key milestones that contribute to long-term risk and hazard reduction. Key regulatory decisions included:

- **Permitting the commencement of equipment installation for the MENSA project** – MENSA is a major new-build project and will replace the existing assembly and disassembly facilities at AWE Burghfield. Our regulatory decision was supported by assessment of the licensee's safety cases for the design and construction of structures and systems.
- **Agreeing the pre-construction safety case for the Pegasus project** – Pegasus will replace an old facility at AWE Aldermaston and will be used to process radioactive materials. Our permission enables further construction and followed assessment of a number of safety cases and resolution of issues we had identified as part of the assessment process.
- **Use of '15 Dock' at Devonport Royal Dockyard Limited** – Our permission enabled the use of the facility for Trafalgar Class submarines after an extensive revision of the safety case by the licensee to address safety-significant recommendations arising from its periodic review and implementation of the safety case within the facility.

Forward look

The ageing infrastructure which supports the Defence Nuclear Programme needs to continue to be safely managed through effective maintenance and periodic reviews of safety. The commitment to replacement new facilities, to further improve safety, needs to be maintained and delivered in a timely manner, along with continued progress in decommissioning and disposal programmes. Recognising the expanding nature and national priority of the Defence Nuclear Programme, we will continue to ensure a suitable level of ONR attention to assure ourselves and the public that it is being delivered in a safe manner.

Our strategy is therefore to continue our work to:

- Ensure sustained safe operation of the existing facilities, with appropriate ageing management and safety reviews.
- Ensure new-build projects are constructed to modern standards.
- Encourage production of 'Right First Time' safety cases.
- Ensure dutyholders have a positive safety culture with a focus on continuous improvement.

Safety of decommissioning, fuel and waste (DFW)

Our DFW Programme covers regulation of the defuelling and decommissioning of nuclear power reactors, fuel cycle and waste, and restoration sites: 19 sites in total. Our strategy for regulation of these sites is to ensure that the licensees manage their operations safely, progressively reduce their hazard and adopt proportionate arrangements for dealing with the waste that has accumulated on them during their operation and decommissioning.

Our DFW team leads on waste policy matters on behalf of ONR and works with the NDA to provide regulatory advice to facilitate the Government's current preferred option for disposition of UK's civil plutonium. Our aim in this area is to ensure that potential consortia consider the legal requirements for nuclear safety, security, transport and safeguards when making their proposals to the NDA.

We have continued to support the Government's Managing Radioactive Waste Safely policy implementation. We have participated in public consultation exercises to explain our role in how we would regulate any future geological disposal facility (GDF). Our ongoing engagement in this work is to ensure any potential facility meets the required high standards for nuclear installations and safe radioactive waste management.

Safety performance

The sites regulated by our DFW Programme are subject to planned routine regulatory inspection and assessment and may require regulatory permissions which are proportionate to the hazard they present.

Our focus in regulating the decommissioning and defuelling Magnox reactor sites is to ensure that they are each made fit to enter Care and Maintenance phase in line with NDA strategy. This phase is intended to last several decades and be followed by final site clearance. Preparations for Care and Maintenance include: removing fuel from the reactors and storage ponds; retrieving intermediate level waste from current stores and treating it or converting it to forms suitable for long-term storage or disposal; making sure of the integrity of critical safety systems of the defuelled reactors for the future. Through our regulatory work, we have evidence that the licensee has made satisfactory progress towards these aims and met the required safety standards in managing its operations and activities.

Our inspections of the shutdown reactors at Dounreay found that a number of limits and conditions identified in the safety case were not implemented to the required standards through operating instructions. Whilst this did not compromise the safety of the public or the workforce on site, it potentially compromised one of the barriers in place in the interest of safety and was reported to ONR as an event (INES 1). The licensee took appropriate steps and examined the extent of this issue in other facilities on site, and as a result ceased operations in all higher-hazard facilities. We monitored the implementation of corrective measures by the licensee which were effective in addressing the shortfalls. We will monitor the licensee's compliance with the safety case requirements as part of our routine engagements and inspections on site.

Our inspection and assessment activities on other DFW sites have provided us with evidence that the licensees met the required safety standards in managing their operations and made safety improvements where required.

Regulatory milestones: Highlights

Over the past year, we monitored the safe operations and decommissioning activities on DFW sites. Highlights included:

- Our work with the licensees to develop appropriate Care and Maintenance arrangements for the decommissioning Magnox reactors.
- Continued regulatory activities across all functions (Safety, Security and Transport) within ONR to ensure that consolidation of special nuclear material from various DFW sites to modern facilities in Sellafield is carried out safely and securely.

- Our engagements with Magnox sites that led to the formal submission of their Fukushima close-out report to ONR. This describes the actions taken, and the few remaining actions necessary, to fully address ONR's Fukushima-related recommendations relevant to these sites. Whilst our engagement with the licensee did not identify any issues with the scope of work, we will assess the submission to ensure all relevant recommendations are addressed to the required standards.

Forward look

We will continue proportionate regulation of the sites in our DFW Programme to ensure the licensees have a strong safety culture and resilient organisational capability, including a strong internal challenge function.

Only two of the Magnox sites in our DFW Programme now have fuel, and in the coming year we expect one of them, Sizewell A, to complete defuelling. We will regulate this, and assess the expected subsequent request for permission to have proportionately less onerous operating rules and emergency capability. The periodic review of safety continues at the Magnox sites and is due for completion over the coming months. We will assess these to ensure the licensee has identified changes to the safety cases and maintenance and inspection regimes required for nuclear safety systems.

Security of the civil nuclear sector

Security regulation acts in consort with safety regulation to ensure safe and secure power operation and decommissioning of the civil nuclear sector. Fundamental to this was the introduction of National Objectives, Requirements and Model Standards (NORMS) in 2012, facilitating the introduction of a goal-setting approach to security regulation aligned with the nuclear safety regulatory approach. Building on this foundation, our key security regulatory priorities for 2013/14 were:

- assessment and approval of Nuclear Site Security Plans (NSSPs) against the requirements of NORMS by April 2014;
- reviews of security at nuclear fuel cycle sites and nuclear transport security, and dissemination of appropriate information security guidance for the nuclear sector on the new Government Security Classification system;
- encourage and support improved security culture in dutyholder organisations.

Security performance

Our regulatory activities are focused on the following topic areas:

- Physical site protection;
- Cyber and information security;
- Nuclear material transport security; and
- Vetting and personnel security.

Based on the regulatory evidence gathered, we judge that, overall, the civil nuclear industry met its security obligations during 2013/14. We have, however, identified areas where improvements were needed and dutyholders are making steady progress towards improving standards and meeting the required security objectives. Key to measuring the industry's performance was delivery against the priorities for the year.

NSSPs were assessed to ensure that dutyholders have appropriate arrangements in place to meet required security objectives. This process was a significant undertaking involving assessment and follow-up engagement between ONR and industry. All plans were approved by March 2014 and we considered that they contained adequate security arrangements.

In addition to routine regulatory activity, we completed our reviews of security at nuclear fuel cycle sites and nuclear transport security and are following up the findings of these reviews.

Security culture underpins the effective delivery of security at sites; the sector will increasingly benefit from the maturing sound security culture practices actively being promoted by ONR. Whilst some dutyholders are further advanced than others, ONR is satisfied that progress is being made by all and that good practice is increasingly being shared between organisations. ONR will continue working collaboratively, with dutyholders and others, to assure sustained progress.

The reporting of security events is a legal requirement for dutyholders. In the last year, 301 events were reported, representing a 6% increase on the previous year's total. We believe this rise to be within reporting expectations and it does not represent a significant departure from industry meeting its security objectives. We encourage event reporting and consider the level of reporting to be an indicator of a good security culture and open reporting system.

Notable events reported this year related to an attempted criminal entry into an office block at a defuelled research reactor and two instances involving information security where there was potential for the loss or compromise of Sensitive Nuclear Information. In these cases, appropriate enforcement action has been taken against dutyholders resulting in revised arrangements being developed and implemented which met the required security objectives.

Forward look

With the introduction of NORMS, we began our journey to revise our regulatory approach towards a goal-setting security framework. Our revised approach will result in further tangible steps towards better integration of security and safety to enhance consistency and coherence of regulation, thereby achieving overall improved regulatory effectiveness.

In common with the rest of the Critical National Infrastructure, we have invested in developing a comprehensive cyber security programme which enables understanding of current and emerging issues in this dynamic environment. The aim is to provide a comprehensive view of risk and vulnerabilities across the sector against which a baseline can be set, priorities established and progress measured. This will allow assessment of the extant regulatory model and approach.

Another key strategic aim is to drive improved assurance, both internally and throughout the industry. We will therefore continue to champion the development of security performance indicators and their integration within business processes. We will also continue to promote industry ownership, particularly at board level, and responsibility for security in order to ensure dutyholders accept security as being good business, fostering a culture of excellence in performance, compliance and continuous improvement. Such a change is required to allow ONR to have confidence in dutyholders' operations and target its compliance activity accordingly.

In support of these aims, NORMS will undergo two major revisions in 2016 and 2019 to incorporate these aims and objectives.

Cross-ONR programme of work

In addition to our site-facing programmes, we undertake a wide range of activities that span all areas we regulate. These activities include gathering thematic operational intelligence, regulating conventional health and safety, off-site emergency planning and response, radioactive materials transport and ensuring safeguards obligations for the UK are met. Key aspects of our work in these areas are summarised below, the elements related to off-site emergency preparedness and response are presented in a separate section.

Conventional health and safety and fire

Vesting has resulted in ONR becoming responsible for non-nuclear 'conventional' or 'industrial' activity health and safety regulation on nuclear sites. The newly established in-house conventional health and safety team has, where possible, identified synergies or integrated this work with other programmes, including supporting our continued engagement in the GDA process. During the past year we have worked closely with HSE to develop arrangements to ensure consistency of regulatory approach and to support national health and

safety programmes. Respective roles and responsibilities have been clearly defined in areas such as construction, where a collaborative approach between the regulators now applies.

We completed a programme of fire safety compliance interventions at sites to share best practice and to encourage continuing improvements in fire safety. We continued our assessment of fire engineering strategies and influencing of fire safety provisions for nuclear new build reactors and other construction projects at existing licensed sites. We have continued to provide HSE with advice.

Radioactive materials transport

Our radioactive materials transport team undertakes regulatory activities to secure safety of nuclear and radioactive materials in transport and to ensure dutyholders remain compliant with the relevant legislation. We also perform certain competent authority functions on behalf of the Civil Aviation Authority, the Maritime and Coastguard Agency and the Department of Environment Northern Ireland. To this effect, our specialists issue transport licences, which involve inspection and assessment to justify the claims made in dutyholder safety cases. The team also undertakes inspections of dutyholders throughout England, Scotland and Wales.

Our work over the past year has provided us with confidence that transport of radioactive material is safe and secure.

We issued 43 transport licences during the year, as planned, which involved significant inspection and assessment work to verify the claims made in dutyholder safety cases. We also undertook over 50 inspections of dutyholders throughout England, Scotland and Wales.

Over the past year, dutyholders reported transport-related events to ONR. None of these events compromised safety or security of the public and, overall, we consider that dutyholders responded appropriately to these events to ensure the root causes were addressed, preventing their reoccurrence. There were however areas where shortfalls were identified. These were pursued by our transport specialists and appropriate, proportionate, enforcement action was taken against dutyholders in both the nuclear sector and the non-nuclear sector (the latter relating to transport associated with industrial and medical activities). Specifically, we prosecuted Sellafield Ltd for the incorrect transportation in relation to the disposal of radioactive material as it represented a significant shortfall in implementation of processes and procedures for safe transport and disposal of radioactive waste. We will continue to monitor the licensees' work to ensure continued compliance and implementation of corrective actions.

Our priorities for 2014/15 include the effective and efficient delivery of GB radioactive material transport Competent Authority functions, both directly and on behalf of others.

Safeguards

The primary safeguards regulators are the international safeguards inspectorates of the IAEA and the European Commission (Euratom), and it is their independent verification and conclusions on which the safeguards regime depends. Our safeguards team therefore does not duplicate these activities, but monitors safeguards implementation in the UK. We support and intervene as necessary with all parties involved, to help ensure that the UK meets safeguards obligations. We also fulfil the safeguards-related reporting obligations that are the direct responsibility of the UK Government (as opposed to nuclear operators in the UK). As part of our work, we provided Euratom with initial reports to enable implementation of streamlined Euratom safeguards arrangements for locations outside major licensed sites in the UK.

Euratom and IAEA reporting on their verification activities in respect of civil nuclear material in the UK during 2013 concluded there had been no diversion of material from peaceful use.

Learning from Fukushima/emergency preparedness & response

ONR has continued to work closely with Government and other agencies to ensure the UK's nuclear emergency planning and response arrangements remain robust through the learning and implementation of improvements from the Fukushima Dai-ichi nuclear accident in March 2011.

The Government's National Nuclear Emergency Planning and Response Programme was set up by DECC to address national recommendations arising from the Chief Nuclear Inspector's post-Fukushima report. During the year, we have made a significant input to this important national programme of work through the completion of our initial work in producing on-site and off-site capability maps. These capability maps set out ONR's judgement of the emergency response capabilities of licensees, other nuclear operators and local authorities such that any gaps can be identified and closed.

ONR's regulation of emergency preparedness and response for nuclear sites in the UK focuses on protecting workers on-site and the communities living beyond the site boundaries in the event of a nuclear emergency. From our planned interventions, we conclude that on-site emergency preparedness and response arrangements and their implementation across the UK nuclear estate meet the required standards of safety. This is underpinned by our inspection and assessment work throughout the year and our judgement on the emergency exercises licensees undertake to demonstrate their preparedness in this area. A generic area of improvement relates to better integration of safety and security arrangements for responding to emergencies on the civil nuclear licensed sites. This issue is being

progressed by licensees through industry-level engagement, to which ONR is contributing.

Highlights in 2013/14 included proof of concept exercises to demonstrate the capability of EDF Nuclear Generation Limited in relation to:

- testing the new emergency vehicles and deployment of back-up equipment from a strategic store in unlikely external events;
- testing Command and Control aspects in a prolonged event at multiple sites in real time.

These exercises were successful in demonstrating the effectiveness of the licensees' preparedness and training.

Over the past year, the licensees have made safety enhancements to implement learning from the Fukushima accident and to improve resilience of the sites to unlikely external events. A major milestone achieved within the civil nuclear power sector was the opening of a new emergency response centre at Sizewell B where back-up emergency equipment will be stored.

As regards the regulation of off-site emergency planning, our emergency preparedness and response team has produced revised principles⁸ for the determination of local authority off-site emergency planning areas determined under REPPiR 2001. This means that we now look beyond the technical assessment of the hazards on the site and consider other strategic and practical factors judged necessary in the interests of public safety. These principles have been applied in the determination of a revised off-site emergency planning area for Sizewell, and will be sequentially applied to the determination of all future REPPiR local authority off-site emergency planning areas.

A complete update on progress made with implementation of the Chief Nuclear Inspector's post-Fukushima recommendations was provided in October 2013. We are currently reviewing progress in implementation of these recommendations since that time and intend to publish a further complete update on our website later this year. Early indications are that a significant number of the recommendations and stress test outcomes have been completed, but we need to make sure that our expectations have been met before we can agree to closure.

Dr Andy Hall
Chief Nuclear Inspector

8 www.onr.org.uk/depz-onr-principles.htm

Governance

Annual Governance Statement

1 Introduction

- 1.1 In line with HM Treasury's *Managing Public Money*, this statement explains ONR's governance arrangements, our key activities undertaken during the year, the control and assurance frameworks in place to monitor effectiveness of delivery, how risk is managed, including the key risks faced in 2013/14, and our stewardship of resources.

2. The Governance Framework

- 2.1 The governance arrangements under which ONR operates are set out within a Framework Document.⁹ The Framework Document provides for ONR to have its own Board with corporate responsibility for ensuring that ONR fulfilled the aims set out in the document and any objectives and key performance measures agreed under it.

3 The ONR Board

- 3.1 The Board sets the strategic framework and direction for ONR and is responsible for ensuring high standards of corporate governance. It approves plans and budgets, monitors performance and ensures the maintenance of the control framework, through which it gains assurance on the management of risks and the system of internal control.
- 3.2 The Board has a prescribed structure, which provides for the appointment of up to seven Non Executive members and four Executive members. The ONR Chair was appointed by the HSE/ ONR Sponsor Minister (Department for Work and Pensions). The appointments of the Non Executive Board members were extended by agreement with the Office of the Commissioner of Public Appointments at ONR's request.

9 www.onr.org.uk/documents/2014/onr-dwp-framework.pdf

- 3.3 The Board met on eight occasions during the year. Board member attendance and absences are recorded in the [Board meeting minutes](#).¹⁰

4 The committees of the Board

- 4.1 There are four standing committees of the ONR Board:

- **The Audit and Risk Assurance Committee (ARAC)** reviews the effectiveness of ONR's internal control system, including financial, operational and compliance controls and corporate risk management. Key activities during 2013/14 included:
 - Overview of the further development of ONR's Corporate Risk Register, following the Board's determination of its key priorities for 2014/15 and beyond.
 - A close review of ONR's preparations for IAEA's Integrated Regulatory Review Service follow-up mission in October 2013.
 - Regular reviews of ONR's readiness to vest as a public corporation, with particular focus on ONR's ability to comply with the principles of financial management in HM Treasury's Managing Public Money.
 - A review of the initial work being undertaken by the Executive to assurance map all the sources and methods of assurance across the organisation.

The ARAC is chaired by a Non Executive Board member (who is a qualified accountant), with two fellow Non Executive Board members and one independent member (also an accountant) making up the committee.

- **The Nominations Committee** makes recommendations to the Board for the appointment of new members resulting in advice to the Sponsor Minister regarding Non Executive (not the ONR Chair or the HSE member) and Executive appointments. The committee also advises on Board training and development matters. It is chaired by the ONR Chair.

Its main activity in 2013/14 was overseeing the appointments of the Executive appointments to the ONR Board.

- **The Remuneration Committee** has oversight over all matters relating to the remuneration and performance of the Executive members of ONR – Chief Executive Officer, Chief Nuclear Inspector, Deputy Chief Executive and the Director of Regulatory Assurance. It is chaired by an ONR Non Executive Board member.

In 2013/14 the committee agreed the pay award for the senior civil servants within ONR.

10 www.onr.org.uk/meetings

- **The Security Committee** is responsible for providing assurance to the Board that ONR is providing efficient and effective regulation of the nuclear industry with respect to risks from malicious intent, holding it to account on behalf of the public. It is chaired by the ONR 'security' Non Executive member.

During the year the committee has considered the position with regard to security at nuclear installations and examined ONR's performance in regulating security, providing advice to the Board.

5 The Executive Management Team

- 5.1 The Executive Team is accountable for implementing the strategy and plans approved by the Board. It articulates the Board's requirements to the wider Leadership Team that manages the day-to-day business across the organisation.
- 5.2 From 1 April 2013, the Executive consisted of the Chief Executive, the Deputy Chief Executive, the Chief Nuclear Inspector and First Deputy Chief Nuclear Inspector. In the autumn of 2013 a recruitment programme to permanently appoint the CNI and a number of Deputy Chief Inspectors was undertaken. The post of First Deputy CNI was removed from the structure.

6 Performance of the Board and its committees

- 6.1 The Chairman carries out an annual appraisal with each Non Executive Board member and the ARAC Chair similarly conducts an appraisal with the independent member.
- 6.2 The Board considered its effectiveness as part of a Strategy Event in September 2013, which was externally facilitated. However, at two separate meetings since, it assessed its role going forward when ONR would be a public corporation. In February 2014, the Board undertook a skills audit and agreed the key competencies and requisite skills needed to be a statutory Board.
- 6.3 The Audit and Risk Assurance Committee underwent the NAO Audit Committee self-assessment, from which a number of key outcomes were agreed, in particular that the committee had the correct range and level of skills and experience with a collective understanding of governance, assurance, financial and risk management.

7 Accountability

- 7.1 From 1 April 2014, ONR's Accounting Officer is the Chief Executive Officer. In delivering its accountability, ONR has a direct line of communication with DWP as sponsor body and DECC. DWP is accountable to Parliament for governance of the ONR, the effective use of its resources and for conventional health and safety at nuclear

sites. The Secretary of State for the Department of Energy and Climate Change is accountable to Parliament for the development and effective delivery of the UK civil nuclear regulatory framework and policies. This includes the provision to the Secretary of State of Energy and Climate Change of effective assurance information across all these areas by the ONR and other parties so that the Secretary of State can fulfil his function to Parliament.

- 7.2 During the year, the sponsorship role with DWP was discharged through meetings of the Nuclear Regulatory Programme Board. Additionally, ONR submitted monthly data to DWP on its forecasts for and use of resources, and quarterly on its operational performance. In future, given that ONR became a public corporation on 1 April 2014, DWP will formally exercise its sponsorship role of ONR through quarterly meetings of a Sponsorship Board at which senior officials from DWP and ONR review ONR's operational and financial performance, key risks and emerging issues.
- 7.3 Regular meetings are also scheduled through the year to meet the Sponsor Minister in DWP, as well as meetings with the responsible minister in DECC.

8 Code of Corporate Governance

- 8.1 The Code of Corporate Governance, published in 2011, is primarily for ministerial departments. However, organisations such as ONR should adopt and adhere to the code to the extent that it is practical, appropriate and not incompatible with any statutory or other authoritative requirements. The Board adopted its own Code of Practice, which reflects the Code of Corporate Governance. It includes the Board's Standing Orders and a schedule of decisions reserved to the Board.

9 Managing conflicts of interest

- 9.1 All Board members, including the independent member of the ARAC and the Executive have a duty to update any changes to their register of interests.¹¹ As well as their own proactive notifications, all are actively reminded on a six-monthly basis to review and update their register.
- 9.2. The Board Code of Practice documents the process to be followed should a Board member identify a potential conflict of interest. On receipt of the papers for a Board meeting, members consider their content and are required to alert the Chair to any potential conflicts of interest. Given the representative nature of the Board's composition, the only conflicts that are considered to prevent a member from taking

11 www.onr.org.uk/onr-board.htm

part in a discussion are where there is a material financial interest. Such instances are recorded in the minutes, which are available on ONR's website¹².

10 Stewardship of resources and ensuring value for money

10.1 During 2013/14 the Executive has focused on ensuring that ONR complies fully with HM Treasury's *Managing Public Money* and a number of key developments and activities have been implemented, including:

- Repositioning the way in which ONR manages its resources so that it delivers nuclear regulation for the future in the way that promotes efficient use of resources, driving out unnecessary costs.
- A target that financial performance should outturn within +/- 3% of the mid-year budget was set and, as a result of robust challenge and management, ONR's outturn was within this tolerance at the year end.
- The Deputy Chief Executive's programme of meetings with licensees and dutyholders (fulfilling the commitment in the 2013/14 Annual Plan) to ensure that ONR's charging regime was understood.

11 People management

11.1 ONR's People Strategy was agreed with the ONR Board and published in December 2013, setting out its approach to people policies after vesting as a public corporation and the use of its flexibilities. The strategy also underpins ONR's approach to its People Survey. More information on people management is shown at page 13.

12 Data quality to support the Board's needs

12.1 The Board receives reports at its meetings to support its discussions. All reports comply with a prescribed layout to ensure that the Board is able to focus on the key issues and the decisions which are required.

12.2 Financial and performance data which is provided to the Board is extracted from ONR's corporate accounting or operational systems. These data systems and the procedures that support their use are subject to regular, planned internal quality assurance checks by the teams that operate them, independent internal audits and, from time-to-time, external assurance by, for example, the National Audit Office (NAO).

13 Transparency

13.1 A central plank of the ONR Board's strategy is promoting openness and transparency in nuclear regulation, based on a presumption of

12 www.onr.org.uk/meetings

disclosure. Thus, wherever possible, papers for and minutes of Board and Standing Committee meetings have been published.

- 13.2 ONR has an established Freedom of Information (Fol) and correspondence unit. During 2013/14, ONR received 62 Fol requests, which were handled in accordance with the Act.
- 13.4 There have been no complaints or requests pertaining to the Data Protection Act.

14 The control framework

14.1 *Setting objectives and operational performance management*

- 14.1.2 The Framework Document required the ONR Board to agree objectives and key performance measures and, as shown earlier in this report, these were presented in the Annual Plan for 2013/14, which was agreed by the Sponsor Minister and published on ONR's website. The ONR Board has assessed performance against objectives via quarterly reports from the Finance Director, which are comprehensive reports that include information on financial, operational and regulatory performance. The performance information has been developed through the year and, throughout its development, the Board has challenged the robustness of the data and information presented.

14.2 *Risk management, compliance and internal control*

- 14.2.1 The ONR Chief Executive has overall responsibility for maintaining a sound system of internal control to support the achievement of ONR's policies, aims and objectives, whilst safeguarding public funds and ONR assets. Even the most effective systems of risk management and internal control can provide only reasonable and not absolute assurance against material misstatement or loss. The system of internal control is designed to manage risk to an acceptable level rather than eliminate all risk of failure to achieve policies, aims, objectives, strategic priorities, outputs and outcomes.
- 14.2.2 During 2013/14 ONR has strengthened the improvements to the systems of internal control so that ONR fully complies with the standards of probity and compliance expected of public sector bodies.
- 14.2.3 ONR has a continuous process for identifying, assessing, evaluating and managing significant risks. The Board has set ONR's policy and attitude towards risk and the Audit and Risk Assurance Committee, on behalf of the Board, has determined the effectiveness of the arrangements, basing its assurance on the reports it has received from Management, Internal Audit and external sources, including the Integrated Regulatory Review Service. The ONR Risk Panel, led by the Deputy Chief Executive, was responsible for overseeing ONR's Corporate Risk Register and the associated management process.

- 14.2.4 The Corporate Risk Register underwent a full review in the autumn of 2013 as a result of the Board strategy event in September 2013, when the Board determined its key corporate priorities for 2014/15 and beyond. The review resulted in eight headline corporate risks, which reflect those priorities.
- 14.2.5 At the 2013/14 year end, the residual risk rating for all headline corporate risks was assessed as being under control, indicating that appropriate risk control and mitigation measures were being managed satisfactorily.

15 Internal Audit

- 15.1 For 2013/14 Internal Audit (IA) services were provided by DWP's Internal Audit, whose programme of work was informed by an IA plan that was agreed by the ARAC at the start of the year. The Plan was revised on several occasions to ensure that IA were able to focus on the key areas of risk at the right time. For 2013/14, IA provided assurance on a range of topics under the following headings:
- Governance, including ONR's readiness to vest as a public corporation, compliance with HM Treasury's *Managing Public Money*, and the reliability of its Key Performance Indicators.
 - Risk management.
 - Internal control, which covered financial, management and operational areas.
- 15.2 In consideration of the audits completed and undertaken in 2013/14, IA provided an opinion that ONR had adequate systems of control, governance and risk management in place, which provide reasonable assurance regarding the effective and efficient achievement of its objectives.

16 Assurance received from the ONR Audit and Risk Assurance Committee

- 16.1 The ARAC completed its programme of work for the year and produced an annual report of its work for consideration by the Accounting Officer and ONR's Board.
- 16.2 In reporting to the Board following each of its meetings, the ARAC has not highlighted any issues in relation to ONR which require further disclosure within this Governance Statement.

17 Statements of assurance provided by ONR's Leadership Team

- 17.1 For this year, the Leadership Team provided individual statements of assurance, which have in turn informed this Governance Statement.

18 Compliance matters

18.1 Data/information security

18.1.1 Following an extensive monitoring programme throughout the year, information security has been considerably improved on last year's performance and there were no losses of data which required recording in this statement.

19 Fraud and bribery

19.1 ONR staff were required to comply with the central Fraud and Bribery Policy. During the year, ONR reviewed the policy as part of the development of its own Staff Handbook and refreshed it. Staff have been reminded of the policy and their associated responsibilities through a series of staff briefings.

19.2 No incidents of fraud or bribery (actual or suspected) were reported during the year.

20 Whistleblowing

20.1 In accordance with its Terms of Reference, the ARAC undertook a review of ONR's whistleblowing policy and made recommendations in readiness for ONR as a public corporation. These have now been completed and ONR's policy and procedures for whistleblowing, which accord with the Public Interest Disclosure Act, are included within the Staff Handbook. There have been no disclosures made under the Act or complaints made under the whistleblowing policy during 2013/14.

21 Health and Safety

21.1 ONR has established an ONR Health and Safety Committee. Its principal function is to promote the health and safety of all staff and visitors whether working for, or visiting ONR premises, or other premises when people are on ONR business. It meets the requirements laid down in the Safety Representatives and Safety Committee Regulations 1977 (as amended) and section 2(4) of the Health and Safety at Work Act 1974 and consists of a balanced team of management and Trade Union representatives. During the year, the Committee has: reviewed all health and safety incidents; launched new initiatives to improve incident reporting and raise the profile of health and safety issues; and produced a new ONR Health and Safety Policy. It also produced a set of related KPIs shown in table 4.

Table 4: Health and safety performance indicators with Red/Amber/Green (RAG) rating

	↑ improving ↔ maintaining ↓ declining
ILL HEALTH: Reduce reported cases of work-related ill health by 25%.	↑
ILL HEALTH: Reduce cases of DSE-related ill health by 25%.	↑
ILL HEALTH: Reduce cases of work-related stress by 25%.	↑
WELL-BEING: Average working days lost due to to sickness absence less than 6.24 days per employee.	↔
ILL HEALTH: 100% staff undertake on-line DSE assessment within 1 month of joining or desk move.	↔
ILL HEALTH: 100% DSE high risk action reports actioned by administrator & assessor within 4 weeks of self-assessment.	↔
SAFETY: 100% visiting staff undertake safe driver training within 3 months of joining, refresher every 5 years and all post road traffic accident.	↔
ILL HEALTH: 100% IH1 reports of work-related stress allocated to investigator within 2 weeks of report received.	↔
SAFETY: 0 instances of 0.5 millisievert and above individual radiation doses (ONR threshold for investigation).	↔

- 21.2 The Committee sets a personal example in being proactive and positive and, throughout the year, has encouraged good health and safety practices including formally recognising individuals for reporting safety issues or where staff have taken positive health and safety action. It has also organised a staff health screening session provided by Lloyds Pharmacy.

22 Review of effectiveness

- 22.1 ONR has concentrated its efforts throughout the year on strengthening arrangements in its operation and performance that would negatively impact on its ability to stand alone as a public corporation and has made improvements such that confidence in its ability to vest has resulted in the successful transition to public corporation status.

23 Significant control challenges faced by ONR

- 23.1 Based on the assessments set out above, there are no significant control challenges faced by ONR.

John Jenkins

Chief Executive and Accounting Officer
Office for Nuclear Regulation

Financial position

Financial Review 2013/14

At the beginning of the year a target for ONR’s financial performance to outturn within +/- 3% of the mid-year budget was set. This was achieved at the year end.

Table 5 shows the summary financial position for ONR as it became a public corporation on 1 April 2014. All assets and liabilities transferred from HSE to ONR on 1 April 2014, when ONR became a public corporation.

The full accounts of ONR as an agency are illustrated in HSE’s Annual Report and Accounts 2013/14 (see HSE’s website).

Total income and expenditure 2013/14

Income £M		Expenditure £M
From ONR charges	£51.4	
Grant in Aid	£3.1	
Total income	£54.5	£54.5

2013/14 ONR Outturn by programme in £Ms

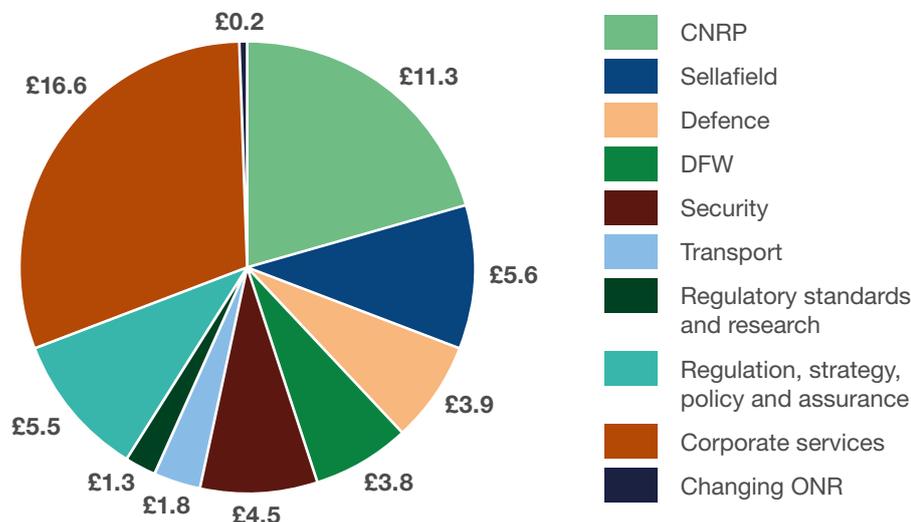


Table 5: Closing Position as at 31 March 2014

	31 March 2014 £'000
Non-Current Assets	
Property, plant and equipment	856
Trade and other receivables due after more than one year	-
Total non-current assets	856
Current assets	
Trade and other receivables	14 432
Other current assets	-
Cash and cash equivalents	-
Total current assets	14 432
Total assets	15 288
Current Liabilities	
Trade and other payables	(3 984)
Total current liabilities	(3 984)
Non current assets plus/less net current assets/ liabilities	11 304
Non-current liabilities	
Other payables	-
Total non-current liabilities	0
Assets less liabilities	11 304
Taxpayers' equity	
General fund	11 304
Total taxpayers' equity	11 304

John Jenkins

Chief Executive Officer

Office for Nuclear Regulation

Accounting Officer (with effect from 1 April 2014)

July 2014



Office for Nuclear Regulation

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Published 07/14

Further information about ONR is available at www.onr.org.uk