



# NDA Response to Public Accounts Committee Recommendations, October 2021

## Attachment to Letter CEO(21)-0058

### 1. Introduction

This paper is being submitted by the Nuclear Decommissioning Authority (NDA) to the Public Accounts Committee (PAC) in response to Recommendations of the Twenty-First Report of Session 2017-19, Sixty-Fifth Report of Session 2017-19 and Twenty-Eighth Report of Session 2019-21.

Responses to three of the outstanding Recommendations of the 2017-19 Sessions were requested by the PAC on a timescale of 6 months after the publication of the independent Magnox Inquiry into the award of the Magnox decommissioning contract by the Nuclear Decommissioning Authority, related litigation and its subsequent termination, published in March 2021.

A further outstanding Recommendation response linked to this Inquiry from the 2017-19 Sessions and four outstanding Recommendation responses from the 2019-21 Session were offered, by the NDA, on a similar timescale.

The responses included in this paper close out each of these Recommendations, leaving just one further Recommendation from the 2019-21 Session to be closed out by Spring 2022.

### 2. Twenty-First Report of Session 2017-19, Department for Business, Energy and Industrial Strategy, Nuclear Decommissioning Authority's Magnox contract

**Conclusion 1:** The Nuclear Decommissioning Authority designed, and HM Treasury and the Department for Business, Energy & Industrial Strategy approved, an overly complex and opaque procurement process.

**Recommendation 1:** The Cabinet Office, NDA and the Department should each set out how they have changed advice and guidance, as a result of the lessons from the Magnox procurement, on how best to evaluate bids to ensure that future procurements are fair, transparent and open to effective scrutiny.

Since 2017, the NDA, as a group, has invested heavily in building the necessary commercial capability that was highlighted as being deficient in the events leading up to the Magnox Inquiry.

As an immediate step, the NDA recruited a new Commercial Director reporting directly to the Chief Executive Officer and with an additional indirect reporting line into the Government Chief Commercial Officer. Approved in 2019, by the then Chief Executive of the Civil Service, the NDA set out a group Commercial Blueprint, articulating the plans for a significant model change of its commercial capability.

A new operating model was subsequently implemented for the procurement function, built upon industry best practice category management principles. This included significant recruitment of both public and private sector expertise to establish a central procurement & commercial function of over 40 commercial practitioners and experts. This was supplemented by additional capability focused on commercial skills, process and assurance as well as management of revenue contracts.



In 2019, a number of group-wide Government Commercial Operating Standards (GCOS) assessments were undertaken to inform areas of strength and development. A revised assessment under the new Commercial Continuous Improvement Assessment Framework (CCIAF) was undertaken in July 2021, with a step change achieved in the overall Group outcome. Improvement Plans are currently in development, in line with the Government Commercial Function continuous improvement cycle to enhance and further consolidate the 'Better' score attained in 2021.

The following text describes how the NDA has made significant changes to its advice and guidance on how best to evaluate bids, to ensure that future procurements are fair, transparent and guided by the outputs from the GCOS and CCIAF assessments and by the findings and recommendations of the independent Magnox Inquiry.

### **Simplification of Competition Rules**

Competition rules are now defined through critical success factors, which are set out in the business case / procurement strategy. Clear alignment to the design of the procurement stems from there. Undertaking assurance in the early phase of procurement is key and this is achieved via the keyholder and Enhanced Commercial Assurance (ECA) procedures described in the Assurance and Governance section below.

### **Evaluation Criteria**

As part of the evaluation design, procurement teams, supported, where appropriate, by legal advisors now review the evaluation criteria to ensure the questions are unambiguous, transparent and suitably linked to the outcomes of the specific procurement. The criteria are often a combination of tried and tested assessment criteria and bespoke questions to address the specifics of the procurement. Once designed procurement teams will look for opportunities for potential 'gaming' by tenderers against likely scenarios to optimise the model and provide assurance that the desired outcomes can be achieved. For more complex procurements, external advisors (legal and commercial) are often engaged to provide additional perspective on both the evaluation design and gaming / scenario analysis.

Appointment of a suitably senior and experienced SRO ensures clear business ownership of evaluation criteria. Evaluation criteria are assured as part of the ECA process (see below) with clear linkage back to the critical success factors in the procurement strategy / business case. Where additional policy requirements are introduced (such as social value) they are linked directly to the policies which require them.

### **Pass/Fail Criteria**

Under revised NDA processes and in line with standard Government practice, Pass/Fail questions are now limited to Selection Criteria only (i.e. they are not used at the award stage), although it should be noted that minimum thresholds can, and are, used at Award Stage.

The Selection stage now adopts a standardised Selection Questionnaire which aligns with Cabinet Office guidance, with pass/fail criteria generally being limited to critical legal or regulatory requirements. The impact of thresholds at award stage is subject to stress testing to understand the potential impact and ensure that any thresholds are proportionate and relevant to the required outcomes, although it should be recognised that when and how to use thresholds is a commercial judgement.

### **Scenario Testing of Award Criteria**

For complex procurements stress / scenario testing is now undertaken and assurance of this activity forms part of the ECA process (see below), looking at both the robustness of the defined mechanism



and the appropriateness of the outcomes achieved. Standardised questions are used where relevant to apply learning to subsequent procurements. Again, for complex procurement activity, legal reviews are undertaken to ensure the criteria are clear and transparent.

### **Record Keeping**

Contemporaneous records of dialogue meetings and sharing with bidders a record of any decisions reached or assurances given, which they may rely upon in their tenders, is part of the standard approach for all Competitive Dialogue or Competitive Procedure with Negotiation procurements. For complex procurements audio recordings may be made and retained to provide an additional layer of assurance.

### **Training**

Training is provided to all evaluators on the expectations and requirements of the role, with more in-depth training provided for complex procurements. The training covers aspects such as: context and consequences of getting it wrong, key roles and obligations of the evaluation team, conflicts of interest, the evaluation process including moderation, and the importance of robust record keeping and use of objective assessments.

### **Moderation**

It is now standard practice in the NDA that evaluation processes employ moderation to ensure consistency of standards and approach. In addition, tender documents explicitly specify the mechanisms which would be used to resolve any areas of deadlock, to remove ambiguity.

### **Governance**

Corporate governance processes, with significant Board and Executive input, are adopted across the group for the early development of the programme business case, through strategic outline case (where relevant) and into the outline business case.

For the most complex procurements, Steering Groups, Project Boards or Competition Boards are adopted. These oversight groups typically include Executive sponsors, key demanders / clients and functional leads to ensure the procurement and strategy reflects the ultimate needs of the organisation. It is only after this stage, having involved senior executives with relevant responsibilities within any strategy for complex procurement, that the procurement 'black box' phase commences.

An SRO is appointed to each complex procurement. This is an individual with the seniority and experience appropriate to the procurement in question and training is now available through the Government Commercial College.

The tiered governance model for each operating company is that of an Executive level Investment Panel, up to a Board of Directors. Where the request exceeds the authority of the group business, this is also subject to approval at the NDA Group Investment Committee (GIC). Any cases which exceed the NDA's group delegation are also subject to the NDA Board approval prior to submission to BEIS and Treasury.

### **Assurance**

Where procurements exceed the delegated authority of the operating companies, the NDA applies its Keyholder assurance process (introduced in 2019) to ensure the case is robust from a strategic, economic, commercial, financial and management perspective.

The NDA also now utilises an Enhanced Commercial Assurance (ECA) Procedure to give confidence on commercial proposals by undertaking second- and third-line assurance at key stages. The ECA formally



involves senior Commercial professionals within the NDA group, BEIS, Cabinet Office, and includes representation from other Government bodies where appropriate such as Crown Commercial Services, Government Property Agency, and Treasury in a clearly defined assurance route, building that assurance earlier into a project's lifecycle.

ECA plays a prominent role in the Group-wide application of Cabinet Office Commercial controls. The utilisation and robustness of the ECA process has enabled NDA and Cabinet Office to develop a transparent and pragmatic response to the pan-Government withdrawal of previous controls exemptions.

**Conclusion 3:** The NDA dramatically under-estimated the scale and cost of decommissioning the Magnox sites, which ultimately led to the early termination of the contract.

**Recommendation 3:** To address the Committee's concerns about NDA's oversight of taxpayer's money on existing and future contracts, the NDA should set out clearly to the Committee how it will develop and maintain the right information on the state of its sites. It should do so within 6 months of the publication of the Government's Independent Inquiry.

The risks and hazards the Nuclear Decommissioning Authority (NDA) manages are amongst the most challenging anywhere in the world and, internationally, there are few programmes of the same scale and complexity.

While all major projects carry risk (as demonstrated in numerous high-profile projects such as HS2 and Hinkley Point), the high levels of uncertainty that are inherent in the decommissioning of historic nuclear facilities, with often unknown inventories and/or levels of chemical or radiological degradation, brings an additional level of complexity to designs and introduces variability to early estimating.

The Parent Body Organisation (PBO) contracts that the NDA awarded from 2008, were set against the best understanding of the state of its sites at the time and the scope of work that was required to deliver the decommissioning mission for each. However, decommissioning work at each of the sites at this time was at a relatively early stage, with the PBOs helping to realign expertise and attention from the traditional operational focus, assisted by global resources from international sites where the decommissioning programme was more mature. This inevitably increased the NDA's understanding of the state of its sites and the scope of work that was required to address them.

This greater understanding of the scope associated with the decommissioning mission brought an increasing risk of material variation to the contracts with consequent non-compliance with European procurement legislation. This was particularly prevalent at Magnox (directly leading to termination of the contract) and at the Low Level Waste Repository (LLWR), where a change in strategy for waste disposal meant that the PBO contract was no longer sustainable. A similar issue was emerging at Dounreay. Therefore, it became apparent that the PBO contracts were not suitable for sites where there remained high levels of uncertainty over the scope of the decommissioning task.

The same uncertainty over scope, combined with the hazardous and complex nature of the work involved, also meant that transfer of risk to the private sector was not feasible. Even at LLWR, which has a relatively low level of complexity, there was minimal transfer of risk.

Since 2017, the NDA has therefore realigned its delivery strategy from outsourcing the management of its sites through the private sector (PBOs) to a group structure of wholly owned subsidiaries, thus



eliminating the risk of repeating the Magnox contracting experience. Consequently, in 2021, the PBO contracts at both Dounreay and LLWR were terminated, and the NDA formed wholly owned subsidiaries to progress the decommissioning of all its site for the foreseeable future.

The risk to the taxpayer associated with contractual claims resulting from uncertainty and increased understanding of the state of the NDA's sites has therefore been mitigated.

However, the NDA and its subsidiaries remain committed to continually improving its understanding of the sites and, since the 2018 PAC hearing, a number of measures and factors have been implemented by NDA and its subsidiaries to improve the collective knowledge of the sites and thereby reduce the impacts of uncertainty. For example:

- The collaborative approach that has been generated through the subsidiary model and the Group Leadership Team (GLT), which includes the CEOs of the subsidiaries, means that the collective knowledge of the group is far greater and subject to much fewer internal barriers. The creation of a transparent and collaborative culture is an ongoing focus for the GLT.
- The One NDA philosophy and GLT now encourages greater resource mobility within the group's companies. This in turn leads to better dissemination of knowledge and a greater appreciation of challenges across the entire group. A number of examples exists of key individuals transferring or being seconded into the corporate centre to undertake roles which benefit greatly from their detailed knowledge of the operating companies.
- Further asset condition knowledge has been gleaned through the NDA's work on improved asset management. The NDA group has developed good practice techniques in this regard using learning from other sectors, such as aerospace, and is working collaboratively across the group on the creation of standard guidance.
- The use of new technology (such as drone surveys, Geographic Information System (GIS) mapping, remote monitoring etc) has provided a better insight into areas of the sites, some of which were previously inaccessible. This has drawn on technologies and learning from other sectors which have common challenges regarding access and hazardous conditions.
- The Lifetime Plans are being progressively updated by the Operating Companies under the oversight of their respective Boards, following the transition from the PBO model, through to the final end-state of the sites. These will better reflect the latest knowledge of detailed conditions at each of the NDA's sites.
- The UK Radioactive Waste Inventory is updated every three years to reflect the latest knowledge on current and future radioactive waste arisings. At each iteration this inventory improves the knowledge of the nature and quantity of wastes requiring treatment, storage and ultimate disposal.

NDA is benefiting from the measures described above and, where appropriate, applying techniques such as 'lead and learn' to benefit from development work in one area to improve techniques and approaches to other areas of the NDA's decommissioning operations.

However, due to the nature of the NDA's decommissioning work and the difficulties associated with working on existing buildings and equipment, there will always be inherent uncertainties associated with



the NDA's work. Our work often involves first of a kind projects and accessing areas and radioactive wastes which have been stored for several years without modern standard record keeping. This inevitably results in uncertainties of scope, schedule and costs, but, as stated above, the direct exposure for the UK taxpayer to contractual claims resulting from this has been mitigated.

**Conclusion 6:** The catalogue of failures throughout the Magnox contract highlights key lessons to be learned by both the NDA and central Government.

**Recommendation 6:** Within 6 months of its publication, the NDA and the Department should submit a report to the Committee on what progress they have made on implementing the recommendations of the Independent Inquiry.

In July 2021, the NDA published its integrated response to the Magnox Inquiry and the BEIS Departmental Review, making this document accessible to the public through the gov.uk website. A copy of this document was also sent by the CEO of the NDA directly to the Chair of the Public Accounts Committee in July 2021.

In this Reviews Response document, the NDA set out publicly what lessons had been learned and what progress it had made on implementing the recommendations of the independent inquiry. Forward plans and target close out dates were presented for areas where further development remained to be done.



### 3. Sixty-Fifth Report of Session 2017-19, Department for Business, Energy & Industrial Strategy, Nuclear Decommissioning Authority: risk reduction at Sellafield

**Conclusion 4:** Given the complexity, cost and long-term nature of the work at the site, the NDA's and the Department's assurance is not providing appropriate oversight of, and challenge to Sellafield Limited's performance.

**Recommendation 4:** The NDA and the Department should write to the Committee to set out clearly how assurance and oversight will be strengthened. They should do this within six months of the publication of the government's independent inquiry into the failed Magnox Contract.

The NDA's Reviews Response Document "Nuclear Decommissioning Authority response to the Magnox Inquiry and the BEIS Departmental Review, July 2021", which has been published on gov.uk and provided directly to the PAC, sets out how oversight and assurance have been strengthened, for Sellafield and all other parts of the NDA group, since the publication of this PAC report. The Reviews Response Document also sets out the NDAs forward plans, informed by the respective independent reviews, for further strengthening in these areas, with target close out dates provided for close out of the associated work.

The text below provides an overview of what has been and is being done in these areas for the whole of the NDA group, including Sellafield.

#### 1. Oversight

##### **Government Oversight of the NDA**

Work has been going on for some time to rationalise and specify the Government's reporting requirements of the NDA. The NDA now reports both corporate performance measures and Group Key Target (GKT) performance into BEIS. The NDA Chair's performance is reviewed by the Permanent Secretary on an annual basis, which is informed by stakeholder feedback. To enhance this, the NDA now reports its top-level risks through an established BEIS platform.

In light of the transition from being a contracting client to a subsidiary owner, the NDA is currently revising its internal reporting structure and mechanisms to support Government oversight, led by the Group Chief Finance Officer (CFO). This work was initiated by the One NDA Beacon Project "Mission Progress Reporting" and is now being delivered as part of the Integrated Finance Framework (see Section 11.1).

Moving forward, a more formalised process is being implemented for the NDA Chair's performance review from 2020/21 onwards and a process will be agreed that allows for greater Government input to the development of GKTs.

##### **Internal Governance**

A number of changes have been made to NDA's internal governance arrangements, with additional resources being recruited since both reviews were launched. NDA has also formed an additional Board Committee, the Projects and Programmes Committee (P&PCo), to target the areas of greatest impact and criticality. The P&PCo complements the Audit and Risk Assurance Committee (A&RAC), to allow the NDA Board opportunity to review and contribute to the oversight of major programmes and also act as a mechanism for sharing knowledge and learning between operating companies.



The NDA Chair's review, primarily focussing on Procurement and Project Delivery and due to report in the summer of 2021, has included consideration of how the effectiveness of the P&PCo can be further developed.

Risk is handled as a Matter Reserved for the Board, as is common and in accordance with corporate governance best practice and in particular, the FRC Corporate Governance Code). The risk work carried out by the Executive and reviewed at A&RAC and P&PCo is regularly considered at the Board.

### **Internal Audit**

During 2018/19, the NDA appointed a Group Head of Internal Audit, with a particular focus on aligning and improving audit and advisory services across the group in support of strengthened A&RAC oversight. The development and implementation of a 'virtual' group internal audit function and target operating model has improved the quality and consistency of group-wide arrangements and has also further supported the NDA's overall visibility, understanding and ongoing improvement of matters of corporate governance, risk management and internal control. The A&RAC has continued to strengthen relationships and arrangements with the group's supporting Audit and Oversight Committees at the subsidiaries and site licence companies, evidenced by the group-wide representation and input at the NDA group A&RAC and Internal Audit events.

During 2019/20, the NDA's group internal audit function collated and reported against a group internal audit plan for the first time. The NDA introduced the concept of group audit themes; an aligned approach to the review of significant group-wide risks and controls. This is providing valuable and strengthened oversight of pervasive challenges and examples of good practice for sharing. Key themes have included the NDA's response to the evolving cyber risk and EU Exit and improving its contract and asset management arrangements. Internal audit work is also designed to provide assurance over key business processes, along with specific corporate and business risks.

A significant focus of the group-wide work during 2020/21 was to provide assurance over the development and implementation of supplier relief schemes in response to COVID-19 – an efficient and effective response to a significant emerging risk. The findings from the internal audit reports across the group receive close attention from both the Executive / GLT and the Board via the A&RAC. Addressing these topics with a group-wide approach to risk and control is not only strengthening oversight but also enabling a collaborative and consistent approach to the development and implementation of improvement activities.

### **Further Development of Internal Governance**

At NDA Board level, further governance arrangements are being put in place, with the introduction of a new Board Committee, the Sustainability and Governance Committee, which will oversee sustainability, social value and governance goals and impacts. The Board is reviewing Matters Reserved for the Board and is working to enhance the clarity regarding which Matters are delegated to Board Committees, as opposed to those which will be discussed and debated at the NDA Board.

Within the broader group, the change in operating model described previously is giving the NDA the opportunity to streamline the governance processes of the group. As NDA moves towards the new group operating model, the number of core business Boards will be reduced from 10 to 5 (including the NDA Board). This is scheduled to be achieved in 2022. In parallel, there is an opportunity to reduce the number of Independent Non-Executive Directors (INEDs) on specific Boards (while also being cognisant of the additional demands of the Magnox Board, with the proposed introduction of Dounreay from 2022





(subject to Government and regulatory approval) and staggered transfer of the seven AGR stations post-defueling). This will further help to streamline the NDA's internal governance arrangements.

Specific to Sellafield, the recent appointment of the Sellafield CEO to the NDA's Group Leadership Team, and the attendance of BEIS and UKGI at Sellafield's quarterly accounting officer reviews, will generate more direct visibility of the subsidiary to government.

### **Framework Document**

A number of recommendations in the Magnox Inquiry and Departmental Review relate to the framework defining how BEIS, UKGI and the NDA work together, as captured in the NDA's Framework Document (FWD). The FWD does not convey any legal powers or responsibilities, but sets out the overall framework within which NDA, BEIS and UKGI will work together. In the event of conflict between the FWD and the Act, the Act will prevail.

The FWD broadly covers governance and accountability arrangements; accounting officer responsibilities; the construct of the NDA board; and expectations for audit and compliance, management of finances and people.

The NDA's FWD has recently been updated, however it is recognised that a further update is required to reflect the operating model changes of the group, such as clarifying the role of NDA as an owner of subsidiaries (as distinct from contracting with the private sector) and the role of the subsidiary Boards.

As such, it is intended that the FWD will be updated over the next 18 months. In future, it will be kept up to date in accordance with Cabinet Office best-practice cycle of every three years; or whenever the organisation has a period of fundamental change in purpose, direction or governance.

### **Structure of the NDA Group**

The structure of the NDA group has been evolving, since 2016, from a contracting client organisation to a group of wholly owned subsidiaries.

While the PBO model did bring a number of improvements, over time it became clear to the NDA that the positioning of the interface with the private sector in this way did not effectively manage the uncertainty of decommissioning aged nuclear sites with high levels of emergent challenges. The NDA has therefore been fundamentally changing the way it manages the group, including Sellafield, the details of which are provided in Section 2 of the Reviews Response Document.

## **2. Assurance**

The NDA's assurance capabilities and systems have been developed and strengthened significantly since the PAC report was issued. This has been achieved through three main activities:

- Implementing good practices of integrated risk and assurance, as the basis of all developments;
- Launching new versions of the policies, strategies, processes, and procedures in the Quality Management System (QMS). These have been co-created with the Heads of functions from across the group; and
- Supporting the NDA group subsidiaries implement their '3 Lines of Defence' model, to be the best they can be. A key component is designing in the appropriate assurance as early as possible.



### **Resources and Capability**

The NDA has recently reviewed its assurance capability through a series of maturity assessments across the group. These are undertaken independently from the assurance process and reported to the Audit and Risk Assurance Committee of the Board. Improvement plans against these maturity assessments are agreed for all parts of the NDA group.

The NDA group has developed a network of over 50 IPA certified assurance reviewers including assurance practitioners from the wider NDA Operating Companies. These individuals can be called upon to support reviews. There is now an intent to use cross NDA group SMEs for assurance reviews. The full subsidiary model makes it easier to move Subject Matter Experts (SMEs) between operating companies for these purposes. The NDA Corporate Centre Assurance Team also comprises individuals who are IPA qualified Review Team Leaders (RTL).

To maintain their qualifications, it is incumbent on reviewers (particularly RTL's) to undertake Continuous Professional Development. This is achieved by attending IPA briefings and conducting at least one (external to the NDA) review within the UK Government Portfolio per annum.

The NDA Assurance Team is now approached directly by other Governmental Departments seeking their expertise to deliver reviews for them. The team has also undertaken the accredited APM Assurance Practitioner Course which concludes with passing an exam.

To facilitate further improvements, a Capability Framework for Assurance is being finalised. This will be rolled out across the group and support both capability and competency development. It will enable the selection of appropriate individuals to undertake specific assurance reviews. Training to support this is being developed and will be implemented.

Additionally, to supplement the NDA group's internal resources and capabilities, several assurance resource frameworks are in place to provide external resource expertise, where necessary, for specific reviews. These are available to the NDA Corporate Centre and NDA's subsidiaries (Sellafield, LLWR and RWM). Where there are shortfalls in staffing, recruitment is being undertaken.

'Lead and Learn' activities, such as Cross Industry workshops and seminars, are held regularly to support learning.

### **Systems and Processes**

The concept model of 'Risk – Control – Assure' is at the heart of the system design for integrating risk and assurance. This covers all Lines of Defence, both within the operating companies and the NDA Corporate Centre. A planning approach is now being implemented to co-ordinate assurance activities across the group. This is supporting better efficiency and effectiveness and enabling the NDA to shorten, where possible, the governance timelines.

To support changes/improvements, the following products have been delivered:

- Annual Integrated Assurance Approval Plan (IAAP) for the group, taking key information from each business and testing effective integration and reviewing against key themes
- Improved tools and techniques of assurance – supporting the Infrastructure Projects Authority (IPA) refresh
- Capability and competency model for both assurance and risk roles – presently being finalised
- Making available a range of training, education and awareness courses and seminars



- Communities of practice – Assurance Reviewer Community events happen at least quarterly

### **Integrated Assurance Approval Plan**

The first NDA group Integrated Assurance Approval Plan (IAAP) was presented to the NDA Executive Committee (now the Group Leadership Team (GLT)) and the Audit & Risk Assurance Committee (A&RAC), in March 2020.

There is now a process in place to produce these annual IAAPs, building from the individual assurance plans of the group operating companies and the NDA Corporate Centre. Each major project, programme or significant business decision is required to have its own IAAP. These are prioritised for activities based on an assessment of risk and uncertainty, value, complexity, and a number of other factors.

The NDA A&RAC recommends approval of the Internal Audit plan for the group, informed by second line assurance activities. This information is captured and presented in the Group IAAP. Any changes are managed through a change management process. Themes from reviews are reported to GLT and A&RAC.

### **Assurance Management System**

The NDA Corporate Centre has developed an Assurance Management System (AMS). This comprising six Process Descriptions. At the top there is the NDA Group Assurance Policy, below which are process descriptions setting out the Operating Model and the NDA Group Assurance Framework. Finally, below these are more detailed processes setting out how the annual Assurance Plan is derived and reviews are conducted. These have allowed us to capture into processes best practices and achieve consistency in how assurance is delivered – such as Terms of Reference, key holder reviews, recommendations articulated, and action management conducted.

The AMS will be reviewed at the end of 2021/22 to ensure learning and improvements are updated into the processes. The NDA Group Heads of Assurance are working together to set the standards of what good is, informed by external benchmarks and insights (particularly from the IPA).



#### 4. Twenty-Eighth Report of Session 2019-21, Department for Business, Energy & Industrial Strategy, The Nuclear Decommissioning Authority's management of the Magnox contract

**Conclusion 1:** There remains significant uncertainty over the cost and timetable for decommissioning the Magnox sites and estimates continue to increase.

**Recommendation 1a:** The Nuclear Decommissioning Authority should set out how it will develop a clearer means of reporting publicly on the level of uncertainty and risk across its sites.

As highlighted earlier, the risks and hazards the Nuclear Decommissioning Authority (NDA) manages are amongst the most challenging anywhere in the world and internationally there are few programmes of the same scale and complexity.

The NDA has a number of documents which communicate its forward plans and costs. These documents set out its key milestones, intended programme of work and information in relation to its lifetime cost estimates, namely:

- NDA Strategy
- NDA Business plan
- NDA Mission progress report
- NDA Annual Report and Accounts including details on the Nuclear Provision

These documents are also the NDA's means of publicly communicating the challenges and uncertainties associated with its mission. Of these documents, the Strategy, Mission Progress Report and the Nuclear Provision are the most important for explaining the long-term nature of the mission and the levels of uncertainty across the sites, including the Magnox sites.

The Mission Progress Report demonstrates how much progress has been made to the NDA's mission since 2005, and how much further is left to go over the next 120-plus years. The cross reference to this in the NDA's Annual Report and accounts has been included in a National Audit Office good practice guide.

The Strategy, Business Plan and Annual Report and Accounts (including the Nuclear Provision) have recently been updated and published, between March and June 2021.

**Recommendation 1b:** The Nuclear Decommissioning Authority should also set out how it will prioritise its work on its sites in order to decommission them in the safest and most efficient way.

In accordance with the Energy Act 2004, the latest NDA Strategy was published in March 2021, following a period of statutory public consultation. This document sets out how the NDA will approach delivery of its mission and prioritise its work across the entirety of its sites in order to decommission them in the most efficient and effective way. The NDA uses the Value Framework to inform its decisions and ensure transparency in the NDA's decision making through use of established factors to consider when assessing strategic options. This approach is used generically across, and within, the estate and is used in the spending review process to inform national level prioritisation. As a whole, the NDA programme will collectively be prioritised towards reducing risk, reducing lifetime costs and growing skills and knowledge to deliver benefits both nationally and to local communities.



The latest NDA strategy also includes a significant change to the strategy for decommissioning the Magnox reactor sites.

Since the publication of the previous strategy in 2016, the NDA has been considering the best approach to decommissioning its Magnox sites.

The previous strategy for decommissioning Magnox reactor sites was developed over 30 years ago and involved a blanket approach of clearing most buildings and then leaving the reactors and sites in a safe and secure state for several decades, before final site clearance. This strategy was generally referred to as a “deferral” or “care and maintenance” strategy.

In 2016, the NDA committed to reviewing this strategy with Magnox Limited to take account of new experience and developments in the decommissioning landscape. Bradwell had previously been named as a lead site when the strategy was blanket deferral, and much of this new experience has come from placing Bradwell into an interim state suitable for long-term deferral. As well as developing innovative approaches to decommissioning (e.g. developing techniques to retrieve, condition and package Intermediate Level Waste (ILW)), the experience at Bradwell has improved the NDA’s understanding of the costs and risks associated with preparing sites for deferral. It has also demonstrated that some sites are unsuitable for longer periods of deferral.

The work completed by Magnox Limited at Bradwell has helped to demonstrate that interim storage of waste in a dedicated facility is neither as complex nor as expensive as previously thought, albeit dependent on site-specific factors including the views of local stakeholders.

Following on from the learning gained at Bradwell and analysis of the other contextual developments, a comprehensive review of the Magnox reactor decommissioning strategy was carried out and its conclusion was included in the March 2021 Strategy update.

The NDA has concluded that, whilst the deferred decommissioning strategy continues to have benefits in some cases, it is not appropriate as a blanket strategy for all reactors in the Magnox fleet because of their different design, location, age and physical condition. Consequently, the NDA has endorsed a site-specific approach to Magnox reactor decommissioning which will involve a mix of decommissioning strategies. For some sites this will result in their decommissioning being prioritised and brought forward whilst for others a deferral strategy with varying deferral periods will be the chosen approach.

In doing so, the NDA is using its Value Framework to help to set how it will prioritise its work on its Magnox sites in order to decommission them in the most efficient and effective way. The Magnox reactor decommissioning programme, similar to the national level approach, will collectively be prioritised towards reducing risk, reducing lifetime costs and growing skills and knowledge to deliver benefits both nationally and to local communities.

Magnox Limited is now preparing a business case (or cases), informed by local and national stakeholder views, for implementing this strategic change. Key programme dates for the Magnox sites will be progressively included in the NDA’s annual Business Plan, with the next version to published in Spring/Summer 2022.



**Conclusion 2:** The uncertainty affecting the Magnox sites reflects a wider uncertainty about the costs and timetable of decommissioning the whole civil nuclear estate.

**Recommendation 2a:** Taking into account the feedback from its public consultation, the Nuclear Decommissioning Authority should exploit opportunities to reduce the time taken to decommission its sites and should identify the impact of such reductions on the cost profile.

The NDA continuously seeks opportunities to reduce the time and cost of its decommissioning activities at all of its sites. The Energy Act 2004 specifically requires the NDA to review and update its strategy every five years and, in doing so, the NDA is required to conduct a public consultation and engage with key stakeholders. Following a comprehensive public consultation process, the NDA published its latest strategy in March 2021.

The strategy outlines the approach to delivering its mission, ensuring that the UK's nuclear legacy sites are decommissioned and cleaned up safely, securely, cost-effectively and in ways that protect people and the environment, and includes actions being taken to improve strategic outcomes. NDA also continuously looks for more effective and efficient ways of how it delivers its strategy through a collaborative focus across the estate on performance improvement and technical innovation.

The development of the strategy (taking into account the feedback from its public consultation), includes seeking opportunities to reduce the time taken to decommission the sites, based on a range of policy and strategy interventions. A good example of this is the revised strategy and prioritisation for the decommissioning of the Magnox sites as described in the response to Recommendation 1b.

The Integrated Waste Management (IWM) section of the 2021 NDA Strategy describes another good example of the NDA seeking to reduce the time taken, and the cost incurred, to decommission its sites by driving changes in waste management policy and in behaviour and culture, to allow waste producers to flexibly and effectively manage their waste as well as to develop proportionate waste management solutions. The IWM programme will incorporate a system approach and comprise a broad spectrum of activities that bring value to the NDA group and wider industry.

The strategic outcomes of the five yearly strategy review are subsequently reflected in the NDA Business Plan which is updated every three years and includes a twenty-year overview, key activities across the group over the next three years and details the funding available for the next year. The NDA updated and published its Business Plan in March 2021.

The detailed impact of changes in the cost profile resulting from strategic opportunities for each of the NDA's sites/subsidiaries are reflected in their respective lifetime plans, which are updated routinely and cumulatively reflected in the NDA's Nuclear Provision and Total Expenditure Profile, as detailed in the Annual Report and Accounts (last published in July 2021). The accountability to produce the Life-time plan resides with the operating companies, under the oversight of their respective boards.



**Recommendation 2b:** The department and the Nuclear Decommissioning Authority should take whatever steps are necessary to provide a firmer estimate of the cost of decommissioning the sites of the Advanced Gas-Cooled Reactors so that the public has a more reliable indicator of the scale of the public liability.

In June 2021, it was announced that the UK government and EDF had agreed improved arrangements to deliver the safe and efficient decommissioning of Britain's seven Advanced Gas-Cooled Reactors (AGR) stations, due to reach the end of their operational lives this decade.

As part of these arrangements, the NDA was directed by BEIS to take on the future ownership of seven EDF advanced gas reactor sites and their decommissioning once they've been defueled. EDF's defueling work will be supported by Sellafield and then as the sites move over, the work to decommission the fleet will be undertaken by Magnox Ltd.

Decommissioning the AGR fleet is nationally important, and the NDA now looks forward to working with BEIS and EDF to ensure the seamless transfer of stations in the coming years. The first AGR is expected to transfer to the NDA and into Magnox in around 5 years, with the final one due to move over in around a decade.

The objective of BEIS's deal with EDF was to deliver better value for money for the taxpayer in the decommissioning of AGR nuclear reactors.

It will mean EDF will aim to shorten the time they take to safely remove the fuel from the power stations as they come offline, before working closely with the NDA to transfer ownership of the stations to the NDA.

With the Nuclear Decommissioning Authority currently decommissioning older Magnox stations, their expertise and the economies of scale of working on these and the AGR nuclear reactors combined, will ensure the long-term clean-up of these sites is done more efficiently.

Under these new arrangements, the NDA, working closely with EDF, will be in a good position to provide a firmer estimate of the cost of decommissioning the sites of the AGRs so that the public has a more reliable indicator of the scale of the public liability.

**Conclusion 3:** A shortage of the right skills within the Nuclear Decommissioning Authority and across the nuclear industry remains a significant barrier to progress.

**Recommendation 3:** Within 6 months of publication of this report, the department and the Nuclear Decommissioning Authority should publish a detailed plan for how they plan to meet the demand for skills across the UK nuclear industry over the next 5–10 years.

The development and retention of a skilled workforce for the UK nuclear industry is a key focus for the NDA.

The People section in the NDA's Strategy 4 document (published in March 21) outlines the NDA's aspiration and commitments for the future and how it plans to meet the demand for skills across the UK nuclear industry. This People strategy and its key threads/focus areas have been developed together with a range of partners and stakeholders across the UK nuclear industry.



Building on the progress made in our previous strategies, this updated People Strategy has taken into consideration many different factors: the complexity of skills requirements; the unique geographies of some of our locations; a diverse range of stakeholders who have a legitimate interest in the progress of the NDA's mission; our relationships with regulators, UK government and the devolved administrations; the funding model and the necessity to deliver value from a taxpayer's perspective.

The March 2021 People Strategy has 3 focus areas:

- Ensure we have the right people in the right roles at the right time to deliver the mission
- Create the culture in which our people can thrive
- Work in partnership with our recognised trade unions and the broader stakeholder community

An overview of our detailed plans for each of these focus areas are presented in the People section of the 2021 NDA Strategy 4 document.

Moving forward, the NDA will continue to work with its stakeholders and across the group and the wider nuclear sector to ensure that it understands what the skills demand will be in the future and how the NDA can effectively play its role to address people challenges such as national skills shortages, supply chain capacity and attraction into the sector. The NDA will continue its work with the Nuclear Skills Strategy Group (NSSG) to provide strategic leadership in the people and skills landscape and will align our strategy to the themes within the NSSG roadmap.

As the representative nuclear sector body on strategic skills the NSSG, currently chaired by NDA and supported by BEIS, creates and publishes a Nuclear Workforce Assessment Report. An updated version is due to be published in December 2021. The information contained within the updated report will continue to support evidence-based planning for future interventions and activities the sector will need to meet its skills requirements. The NSSG will facilitate these in a continued alliance with key skills partners through the NSSG Delivery Plan that is updated and reported against annually.

The NDA also has a strategic role in the delivery of the objectives and outcomes within the Nuclear Sector Deal.

**Conclusion 4:** For the new delivery model to work, it will be vital that the department exercises strong oversight of the Nuclear Decommissioning Authority and implements the findings of forthcoming reviews into the failure of the original Magnox contract and the role of the Authority.

**Recommendation 4a:** On publication of the Holliday report and tailored review, the department and the Nuclear Decommissioning Authority should set out publicly what has been learnt from them and how the reports are being used to inform the development of the new delivery and governance models.

In July 2021, the NDA published its response to the Magnox Inquiry and the BEIS Departmental Review. In this document, the NDA set out publicly (through the gov.uk website) what lessons had been learned and what actions had been taken to date. Forward plans and target close out dates were presented in this document to demonstrate how the reports are being used to inform an integrated programme of work where further development is required, including delivery and governance models.





**Conclusion 5:** The Nuclear Decommissioning Authority is not doing enough to exploit its various assets, either for the benefit of local communities or the UK economy as a whole.

**Recommendation 5:** The NDA should develop a strategy for maximising the economic benefits of developing and, where appropriate, exporting its knowledge and assets to alleviate the burden on the taxpayer. These include the skills and experience of the UK nuclear industry, the decommissioning technologies it has developed, and the land and other physical assets the NDA holds.

A key feature of the NDA's vision is 'being trusted to do more in the UK and globally' and its ambitions are laid out in the NDA Strategy 4 document, published in March 2021. Accordingly, the NDA is exploring all available options to optimise revenue from existing assets. This includes working with BEIS to identify opportunities that could emerge from changes in policy.

### ***Skills and Experience***

While the NDA recognises that the primary mission is the safe, secure and efficient delivery of its current portfolio of decommissioning work, the skills and capabilities of the NDA group represent a significant asset to the UK, which can be utilised to deliver more value for money to the taxpayer, by deploying these assets to other nuclear decommissioning work.

The NDA therefore has developed a supply chain strategy that seeks to build commercial capability to maintain a resilient, sustainable, diverse, ethical and innovative supply chain that optimises value for money for the UK taxpayer when sourcing goods and services. The NDA group has an annual budget of circa £3.3 billion of which around £1.9 billion flows through the supply chain.

There are many examples of companies within the UK supply chain developing techniques and equipment which they are then able to deploy on specialist work in other countries such as at Fukushima in Japan, and in other sectors. The NDA already supports the UK Nuclear Sector deal, the skills agenda for the nuclear industry and the Department for International Trade's export agenda.

### ***UK Non-NDA Liabilities***

Third party owned nuclear materials are located on some of the NDA's sites, as a result of historic activities and inherited contracts. In addition, some other UK nuclear operators, such as the MOD and EDF Energy, have existing and predicted future liabilities. These are collectively termed non-NDA liabilities. In some instances, it may be more appropriate for the NDA group to manage these liabilities where this would deliver benefit to the taxpayer by simplifying contractual arrangements, optimising the use of existing facilities and ensuring each organisation's skills are focussed on their respective missions e.g. the management of a quantity of Atomic Weapons Establishment (AWE) High Active Waste.

Separate to these arrangements, the NDA has a further function placed upon it to undertake specified tasks or to provide expert advice to the Secretary of State or to third parties in relation to non-NDA liabilities. These additional requirements cover both expert support and scope delivery.

The NDA's strategy for the management of non-NDA liabilities is focussed on 3 key themes:

- We will manage and deliver our existing contractual commitments, simplifying arrangements where possible
- We will take on additional liabilities where we are required to do so by UK Government



- We will work with other organisations in considering opportunities where there may be wider benefits to the UK and present these to Government for consideration.

### ***International Relations and Technology Transfer***

The NDA's previous strategies highlighted the importance of the global nuclear landscape and that our experience and expertise means it has a great deal to contribute. The Energy Act 2004 places obligations on us to adopt good practice in the delivery of our mission, so collaboration with our counterparts is essential.

Equally, as a pioneer in nuclear decommissioning, the NDA has a responsibility to share its experience and demonstrate leadership globally to improve safety in the delivery of decommissioning and remediation. The NDA has established an extensive portfolio of partnerships in fulfilling these obligations and remains committed to developing these further.

Our previous Strategy (2016) noted that the NDA was being asked to do more by government to promote the nuclear sector's interests overseas and support the development of export opportunities. Since then, our involvement has continued to grow in line with our role as an expert partner organisation, as set out in the Nuclear Sector Deal and Export Strategy, published in 2018. This strategy makes explicit the dual role of our international relations in benefiting both our mission delivery and UK interests more broadly.

The NDA's updated strategy will see the NDA group taking a more targeted and integrated approach to international engagement, building on the opportunities that One NDA provides to better leverage the group's knowhow, brand, and relationships to deliver a range of benefits. This includes supporting the supply chain in exporting – by helping to develop markets based on the sharing of the UK's experience, showcasing work on its sites, and making available its intellectual property - as well as delivering revenue for the taxpayer. To date, the NDA has supported over £50m exports by UK industry into Japan. It will use its suite of collaboration agreements to work with counterpart organisations on common challenges, sharing experience and skills, conducting peer reviews, and optimising cost through joint technology development projects, helping to ensure it meets obligations to ensure best practice.

The nuclear decommissioning market is growing globally and the NDA will continue to use its experience and relationships to enhance the reputation of the UK nuclear industry. As highlighted in the updated Strategy, the NDA will showcase the skills and technologies in the UK-based supply chain, supporting them to access international markets directly and indirectly (through support of the Department for International Trade (DIT) campaign groups). Where appropriate, we will provide NDA-owned information and knowhow to support these activities. Building on its successful work in supporting accident recovery at Fukushima, the NDA will work with the UK government to identify other opportunities and priority markets.