



## Bradwell Site

### Draft Minutes of the 65<sup>th</sup> Local Community Liaison Council (LCLC) Meeting

Mundon Victory Hall  
Wednesday 06<sup>th</sup> December 2017

**Present:**

LCLC Executive:

**Cllr John White**  
Mrs Tracey Finn  
Mrs Jo Pashley

**Deputy Chairman**

LCLC Secretariat, Magnox  
Minute Taker, Magnox

LCLC Members:

Cllr Peter Banks  
**Cllr Dave Bragg**  
**Cllr Tim Drain**  
Rowland Cook  
Philip Heaton  
Jonathan Jenkins  
Alan Krailing  
Bob Nichols  
Barry Turner  
**Cllr Adrian Fluker**  
**Cllr Sylvia Wargent**  
Cllr Marion Gibson  
Cllr Ruth Langley  
Cllr Prof Lew Schnurr  
Angela Vincent

West Mersea Town Council  
**West Mersea Town Council**  
**Bradwell Parish Council**  
ONR Inspector  
Environment Agency Site Inspector  
Nuclear Decommissioning Authority  
Bradwell EHSS&Q Manager, Magnox  
Bradwell Closure Director, Magnox  
BANNG West Mersea  
**Maldon District Council**  
**West Mersea Town Council**  
St Lawrence Parish Council  
St Lawrence Parish Council  
Heybridge Parish Council  
Communications Manager, Magnox

**Bold type - denotes voting members**

Members of the public in attendance:

John Harrison  
Mr Mullis



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### 1. INTRODUCTION

2895 The Deputy Chairman John White opened the meeting and gave his apologies for the Chairman unfortunately Brian Main is feeling under the weather. John gave a brief introduction about his background and welcomed those present, in particular those who were new or returning to the meeting. New attendees were invited to introduce themselves and the following introductions were made:

- Cllr Marion Gibson – St Lawrence Parish Council
- Cllr Ruth Langley - St Lawrence Parish Council

### 2. APOLOGIES FOR ABSENCE

2896 Clerk confirmed apologies had been received from:

- Brian Main - LCLC Chairman
- Cllr Julie Gooding - Rochford District Council
- Steve Dickson - Essex County Council
- Donna Walton – Braintree District Council
- Cllr John Griffin – Rochford District Council
- Mark Wilson - Braintree District Council
- Cllr Richard van Dulken – Braintree District Council

### 3. APPROVAL OF THE PREVIOUS MINUTES

2897 The LCLC minutes resulting from the 64<sup>th</sup> Meeting held on 21<sup>st</sup> June 2017 were considered and amendments noted. There were a couple of clarifications required over confirmation of actions.

### 4. MATTERS ARISING FROM THE PREVIOUS MINUTES

2898 There were no matters arising from the previous meeting minutes.

### 5. SITE REPORT: Update

2899 Mr Bob Nichols, Site Closure Director, provided a presentation to update attendees about site activities since the previous LCLC meeting (held 21<sup>st</sup> June 2017). Mr Bob Nichols made the following key points:

- Title Picture was taken in May 2017 it shows a lot of the temporary activities going on around the whole site and equipment moves, with spoil being taken down into the Turbine Hall void.
- Safety and Environment:
  - FED operations and post operational clean out completed, the permit has now been surrendered for any associated discharges related to the FED programme.
  - Gaseous discharges continue to reduce steadily towards C&M, these are from: diesel generators, normal atmosphere of the building breathing and asbestos phase strip small units for filtration.
  - An application has been made to the EA for a C&M permit for Bradwell.
  - The ONR have recently reviewed our arrangements for Asbestos Management. The team came in and looked at the conventional safety aspect how we manage to prepare the site for any residual asbestos that will be left, how it is contained and the plan inspections over a period of time. The review went well and the comments made have been incorporated.

Injury perspective since the last meeting has continued to be positive, and there have been no significant injuries, although there have been a couple of minor injuries, an operative descended a mobile scaffold tower and step onto a roll of polythene, which had rolled underneath the steps. The operative twisted his ankle.

An operative was taking scaffold down, there is a lot of temporary power cables on the scaffold for lighting, cable ties are used to hold the cables in place the tie was on a knuckle joint and the operative couldn't cut in the usual way with the nippers due to the location so a Stanley blade was used to cut, it slipped and cut his thumb in the process, both injuries were preventable and



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are down to situational awareness.

An operative suffered a back injury whilst deplanting, a plate slipped and jarred his back, this was preventable had two people been doing the task.

In view of the above events a new safety enhancement plan has been introduced on site to help with complacency and awareness, Bob now holds a fortnightly safety stand-down with all the first line supervisors, a slide pack is prepared on safety awareness, complacency & behavioural safety development, the expectation is they go out and present the same information through pre-job briefs etc. Bob also meets with the Contractors Leadership forum every month as a significant part of the Bradwell team are now contractors and not Magnox based employees, this reinforces the Magnox expectations and standards.

If it doesn't look right stop and rethink the works, re-evaluate the hazards.

- Lifetime Plan:
  - Physical Works complete in November 2019 – the site have been able to pull back and are now targeting the August 2018 time frame, due to sequencing of works and parallel working.
  - Fuel Element Debris (FED) opportunity being realised 145 tonnes sent to the LLW.
    - Reduces fiscal impacts on Tax Payers.
  - Revised Physical Works complete in August 2018.
- Staffing Projections:
  - Stars show trigger events, completion of projects, this can lead to a downturn in workforce if they cannot support the rest of the works on site.
  - Some resources are being re-assigned to other sites where this is possible, the real focus is meeting people's aspirational goals.
  - Currently we are running at 275 on site as a peak at any week, this is usually a smaller number on a Monday, the site works every other weekend, contractors work an 11 day fortnight, and this optimises cost for the contractors.
  - Bradwell no longer operate a shift with the exception of security, we now have a red light green light system, red light close green light the sites open simple but effective. We operate between 06:00 – 18:00 with a Duty controller, after that everybody should be offsite, works outside these hours has to be planned.
- Delivery Progress since last meeting – FED/ILW:
  - FED dissolution completed.
    - Deplant of FED Dissolution Facility commenced, crane in to remove shielding on the ADAP plant.
  - Intermediate Level Waste (ILW) completed, the picture on the slide related to this shows the Advance Vacuum Drying System (AVDS) ductile cast iron containers, this is what the ILW is stored in. Wet sludge is put into the container and the container hood wraps around with the vacuum on top as it heats up the vapour evaporates off, its then transferred off its basically clean water and place in a plastic container, once the sludge is dried and consolidated it goes back to be refilled with wet sludge, this process is repeated until the containers maximum internal volume is achieved.
    - 142 of 152 packages completed – each package drying time is different depending on moisture content. They are cast iron and have 6" thick walls. The external integrity of the paint is inspected if required they are touched up. These containers will stay in the ISF until the Geological Disposal Facility (GDF) is built.
    - Following completion of conditioning the plant will be removed and transported to be used at Chapelcross and Oldbury.
  - Permission for regional storage received, first shipment from Dungeness expected in January 2018.
- Plant & Structures:
  - R1 C&M Entry Ready – all interior is ready for C&M, Site Decommissioning Committee (SDC) internal challenge process is underway to review that every requirement for C&M has been met, the building is under lock and key, with a process for entry in place.



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- R2 – Asbestos remediation underway and backout works commenced, down to the lower areas now.
- Phase 2 cladding has commenced on both Reactors, in the original schedule R1 was going to be carried out ahead of R2, these works are now happening simultaneously to pull back the R2 schedule, the same contractor is carrying out the phase 2 cladding and the pond over clad.
- Installation of new security systems underway, unfortunately pictures such as camera locations and microwave technology can be shown, but it is a state of the art security system with intruder alert detection, Sizewell will be managing Bradwell in its entirety during C&M.
- Ponds & Vaults:
  - Ponds Over Cladding.
    - o Detailed design – complete – galvanised steel structure, cladding has certified rating following the Grenfell Tower incident.
    - o Planning permission – granted.
    - o Contractor mobilised August 2017.
    - o Pre Piling investigations complete, Piling to commence December 2017 – currently we are behind schedule about 6 weeks this is due to the amount of underground structures found around foundation locations, most likely dating back to the construction phase, however it has provided a clear way for every foundation location and cut the pile locations in half, multiple piles in clusters will now be installed and connected in with a beam. The pre investigation was the right this to do but it created a lot of design changes.
- Bradwell in care and maintenance phase:
  - All physical works and waste treatment operations completed – no activities on site.
  - Site is quiescent, safe and passive state.
  - Periodic delivery of waste packages from Sizewell and Dungeness into the Bradwell store in the early years –will probably start January to February 2018.
  - No need for any urgent response – very robust tolerance to faults, there will be monitors in the voids and ponds detecting any water ingress.
  - ONR reviewing care and maintenance safety case.
    - o No entry into care & maintenance phase until ONR and EA are content.
- Site Management in Care and Maintenance:
  - Very little work taking place – no need for staff to be based at the site, although there will still be security on site probably through to 2019, taking in the packages delivery timeframes.
  - Magnox remain responsible for Bradwell in care and maintenance – Sizewell will manage Bradwell.
  - Ongoing management of the site will continue, e.g.:
    - o Routine inspections – frequency on some things will be an annual basis, structural steel will be 5 yearly.
    - o Monitoring systems maintenance.
    - o Local stakeholder engagement.
  - Bradwell Site Director and Bradwell management team will be based at Sizewell.
- Preparing the site for Care and Maintenance:
  - Four key work areas:
    - o Physical: preparing the site, plant and wastes so that they are passively safe and meet the requirements of the safety case commitments.
    - o Knowledge: collecting together and handing over all of the information about the site to colleagues at Sizewell, the site has been divided into 28 zones, each with its own knowledge and information pack, each area is identified with a steel plaque the pack will contain any hazards known.
    - o Activities: handing over the activities that continue to need to be done in the care and maintenance phase to colleagues at Sizewell – demonstration of handover of areas is being completed to ensure adequate handover.
    - o People: releasing the people who currently work at the Bradwell site – maintaining the license conditions with the correct skill sets, the site holds a Resource Governance Panel every 2 weeks to ensure the release of people corresponds with



the site needs.

- On track to support entry to care and maintenance in the second half of 2018.

- Care and Maintenance – how will the site be protected?:

- Robust buildings, fences, intruder alarm systems and cameras will ensure the site is secure and can detect unauthorised activity on-site.
- Alarm systems and cameras will be remotely controlled and observed.
- Security guards will be used to support these systems – and will be on site during package deliveries.
- Response plans will be prepared and tested and approved by our regulator for foreseeable events.
- Essex Police will be involved in establishing and testing the response plans to make sure they are appropriate.

There will be vegetation control for the site as a 5 meter strip must be maintained around the boundary.

- Operations in Care and Maintenance:

- Off-site:
  - o Continuous monitoring of plant and security systems.
- On-site:
  - o To periodically inspect the condition of the buildings.
  - o To periodically inspect waste packages within the ILW store.
  - o Testing site monitoring equipment.
- On-site activities will be planned into packages of work.
  - o Most activities performed on yearly basis.
  - o More detailed inspections every 5 years.
- Annual work is expected to take a few weeks a year, while 5-yearly visits may take about 6-8 weeks.
- Reactive work will occur through:
  - o Plant monitoring through off-site monitoring centre.
  - o Response to external event (e.g. high wind speeds) Seismic events, would cause an immediate inspection.
- Planned projects (e.g. waste package transfers).
  - o Defined periods of work.

- Socio-economics:

- Magnox socio-economic scheme is managed on behalf of the NDA, with an annual funding portfolio of up to £1 million across the 12 Magnox sites.
- Three levels of funding available:
  - o Up to £1,000 for small projects neighbouring Magnox sites.
  - o Up to £10,000 capital expenditure towards a sustainable project.
  - o Over £10,000 to support large projects that help towards mitigating the impact of decommissioning.
  - o In 2016/17 we approved 9 applications totalling £33,087.
  - o To date for 2017/18 seven applications have been approved totalling £82,412.
    - o Saltmarsh 75 - £544.
    - o Burnham Hillside Bowls club - £250.
    - o Maldon & District Community Voluntary Service - £800.
    - o Dengie Project Trust (Knightswood Centre) - £2,190.
    - o Home-Start Essex (Maldon District volunteers) - £2,128.
    - o Maldon District Council - £60,000.
    - o Maldon District Council - £16,500 (second year payment).
  - o Contact Haf Morris on 01797 343549.
- Visit <https://magnoxsocioeconomic.com/> for more information.

- Images of the site shown and Bob briefly explains some of the remaining works, around the base of the Reactors the final phase of the cladding is still to be installed, concrete troughs are being installed along the side of the building, the trough has a high side and a low side, the final sheets



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of the cladding will tuck into the trough this will divert any rain water away from the building, we want to keep the building dry, moisture creates corrosion.

- Final doors are going on the east side of the facility, steel being installed and cladders have mobilised.
- A lot of spoil is going into the Turbine Hall Void from demolition of free standing walls inside of building.
- Sewage Treatment area final works are progressing, all the final rain water will settle at the low point on site.
- FED plant is going through deactivation, the control room has already been removed, cabling deplamt has commenced.
- Ponds structure foundation going in on the goliath track side, all boring have been completed identifying the piling locations.
- Porta cabins have started to be removed.
- Car park remediation has started.
- ADAP plant demolition has commenced.
- Security works are progressing, all new fence line and cameras are being installed, with new welfare buildings and a control station.
- A computer generated image of what the site will look like in August /September 2018, there may be a few still working on site finishing off the final paperwork handover.

2900 Mr John Harrison, asked for confirmation whether access to the cast iron containers will be required for seal replacement inspections. Bob replied that the packages will have vents on them, seal replacement will not be of any purpose, there is inspection criteria Bob is unsure of the details but he will look into it.

**ACTION – Bob will confirm inspection criteria of the cast iron containers.**

2901 Mr John Harrison, mention the recent international communications article, confirmation sought what is happening about the communications to Sizewell, Bob replied that it is the state of the art technology being used, however any system can be disrupted, Bob can take it back to the security lead to ask the question on the vulnerability of the system.

**ACTION – Bob will question the vulnerability of the communication system with the security lead.**

2902 Mr Barry Turner West Mersea resident, can the site confirm the strengthening of the boilers has been completed, Bob responded yes R1 has been strengthened and completed R2 strengthening works are still underway. Galvanised steel columns and struts have been installed internally not just in the boiler house but some of the surrounding structure that. There will be an inspection regime probably starting of annually going to a five year inspection, the existing structure will form part of the inspection. Part of the ONR reviews related to the dew point inside the building, additional air monitoring inside for humidity levels in the building, there will be a certain corrosion element humidity which is a big factor. A whole level which used to be the roof has been turned into a grated platform, this will give access for inspections.

2903 Mr Barry Turner West Mersea resident, at the last meeting thought that the FED plant decommissioning would be completed in about 4-5 months has there been a problem with that? Bob replied there were two locations for interior access areas found that could not be flushed through by normal means there were pockets of very high radioactivity, it took about 6 – 8 weeks to develop a better way of getting that material out, dose rate for individuals have to be protected where possible, a survey of where the hot spots were was undertaken, that took some time but the analysis went well. The tank has a swallow bottom so a special spray nozzle had to be designed for directional drive to flush the material through. By removing this material additional ILW waste was not being created. There was a similar problem with the ADAP plant, it was taken apart by hand, using containments with no spillage extra time was taken to get it right. The columns will be more challenging, will need to cut tank open and vacuum out collect and test, they will be size reduced in place.



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- 2904 Cllr Peter Banks West Mersea Town Council, asked for clarification on the FED/ILW, following completion of conditioning the plant will be removed and transported to be used at Chapelcross and Oldbury. Bob responded that none of the surrounding components of the AVDS that manage the withdrawal of the vapour is contaminated all the kit, the hoods, the connecting pipework the entire basic framework can be re-used. Chapelcross will go through the same process as Bradwell so the equipment and some of the operating people will go with the plant. It is a really simple system nothing upstream of a certain point has any contamination.
- 2905 Cllr David Bragg West Mersea Town Council, stated that the safestore was originally going to be for Bradwell's waste, now Dungeness and Sizewell waste will stored in there, just how much space will be left if it is full up where will be residual waste go? Bob replied that the facility was sized for the planned volumes, the Magnox sites they are grouped by regions, they are looking at building one for each region one location is more cost effective, building costs, monitoring and inspections. So inside the facility the units will be stacked two high, when it's full it's full, if there is more waste than planned it will have to be stored elsewhere.  
**ACTION - Tracey Finn will send the plan of the loading plan ISF building out to the LCLC members again.**
- 2906 Cllr David Bragg West Mersea Town Council, so the site will not be closed down until after the packages have been completed. Bob replied that the site will be re-opened when the packages arrive from Dungeness or Sizewell. Security will remain on site until at least end of 2019. The site will be open but only intermittently when the packages are delivered or inspected, the team from Sizewell will come up to site for the deliveries.
- 2907 Cllr David Bragg asked is there a chance that when the packages are inspected they deteriorate to a safe level and could they be taken out of storage. Bob replied maybe someday but not in our lifetime, Rowland Cook ONR Inspector confirmed the principle is correct but it wouldn't happen for a long time, the waste in the facility is destined for the (GDF) Geological Deposal Facility.
- 2908 Mr Barry Turner member of the public, asked for confirmation when the original plan for the facility was discussed they were told it was only going to be for Bradwell waste, if it was planned to house the regional waste people were mis-led the truth from the start. Bob replied saying he wasn't sure what the original design looked like. Jonathan Jenkin answered stating if was not the intention when Bradwell ILW store was designed and constructed it was purely for Bradwell's waste, at that point the best estimates for waste that would be generator and stored were used, during the cause of the decommissioning programme, techniques and recycling the actual quantities was substantially smaller, this has resulted in the spare capacity that exists now.
- 2909 Mr John White thanked Mr Bob Nichols for the opening presentation.

## 6. NUCLEAR DECOMMISSIONING AUTHORITY (NDA) UPDATE

- 2910 Mr Jonathan Jenkin provided an updated report.
- Formal notice has been served to Cavendish Fluor Partnership (CFP) the contract will terminate at the end of August 2019.
  - Holliday enquiry set up by the Secretary of State, looking into the reasons why the contract failed is proceeding and has published an interim report, setting out a number of provisional recommendations and observations, this will continue into the New Year until the final report is produced.
  - The National Audit office has published a report on the Magnox contract.
  - Public parliamentary commitment have taken evidence from a number of people including Chief Executive David Peattie and former Chief Executive John Clarke who was the accounting officer during the time of Magnox competition, this is still available on IPlayer parliamentary channel for another two weeks.
  - Both of these enquiries have produced some quite critical observations, which the NDA are considering very carefully and are committed to applying any lessons of learning.
  - In the meantime works are going on to set up the arrangement post August 2019. Advice has been submitted to Government of what the arrangements would be, the Secretary of State will probably wait for the Holliday report.



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- The first national stakeholder summit was held in Cumbria the 18<sup>th</sup> & 19<sup>th</sup> September, representatives from a wide range of stakeholder organisations from SSGs, NGA, Local authorities etc. more third party speakers involved.
- Annual supply chain held in Manchester, more information available on the NDA website.
- NDA has introduced a new electronic newsletter, called #decomm, it's a different format and details will be on the December update and website.

2911 Mr John White thanked Mr Jonathan Jenkin for his report.

### 7. OFFICE FOR NUCLEAR REGULATION (ONR) REPORT

2912 Rowland Cook ONR Inspector for the South East site covering Bradwell, Sizewell & Dungeness briefly gave some background information of his career before presenting his update.

- Routine Matters - as most of the routine inspection items are no longer there, the ONR has taken the principle of the routine inspection and applied them to the decommissioning activities on site, to make sure those decommissioning activities are kept under control, so far against license conditions there have been good results. One of the problems was with the FED plant, Magnox stopped and worked out a safe way to continue.
- The 24 hour shift work, involved a small change to the emergency arrangements, these were subject to approval by the ONR, Magnox applied for the change, ONR had no issue.
- Non-routine matters - nothing to report.
- Regulatory Activity – ONR has issued a specification to implement formal permissioning of the change to C&M operations. The specification simply requires that Magnox apply for formal consent from the ONR prior to implementing the switch to C&M operations. ONR considered this appropriate as Bradwell will be the first of the Magnox ex-power generating sites to enter this phase of operation.
- There is a level of background works to prepare the site to enter C&M, all the procedures in place ready for C&M to work with all the remote management of the site by Sizewell, the ONR are spending as much time looking at all these arrangements as they are the physical works. There is a lot of work to do and this continues with monitoring and inspections against the arrangements and the license conditions focusing on all the works to ensure it is all close out to a satisfied standards.
- C&M safety case submission, Magnox submitted the justification to ONR, ONR then assess. This is currently going through the assessment process.
- News from the ONR – ONR has appointed Mark Foy as the new Chief Nuclear Inspector, following Dr Richard Savage change in personal circumstance.

2913 Cllr Adrian Fluker Maldon District Council, asked will outside agencies be engaged with, specifically the police before C&M is agreed, there is a huge problem with both Essex Police and Essex Fire & Rescue. Rowland replied that the security department within the ONR do liaise with the local authorities. It was suggested that perhaps for the next meeting the Security side of the ONR attend.  
**ACTION – Duncan Barley to attend the next meeting.**

2914 Mr John White thanks Rowland for his presentation.

### 8. ENVIRONMENT AGENCY (EA) REPORT

2915 Mr Phil Heaton, EA regulator provided an update.

Already discussed during this meeting is an application made by the site to go to C&M, to the EA this is a relaxation of the controls as there will not be staff on site all the time, negotiating what the appropriate timings for maintenance of environmental equipment and any discharges will be, over the coming months discussions and consultations will continue. The EA will write to the LCLC with details in the New Year with details of a 28 day consultation period.

The EA recently did a consultation with the LCLC which concluded last March this will probably be the similar timescale of consulting through January and determining March time 2018.

There will be reductions in limits but there will be relaxation of monitoring controls, there are a number of monitoring regimes in operation at Nuclear sites one is the independent carried out by the Environment Agency that was increased during the FED processing, from January next year it will go back to the baseline level of monitoring, it is anticipated that amount of monitoring will continue in terms of reassurance through C&M so the off-site programme will continue during C&M, there will still



be soil and grass samples that are used to check the environment is safe around site.

- *Site Inspections:* no inspections were carried out, there is an inspection on asset management in March 2018. This is expected to be a two day inspection although there are a few buildings they will be left in situ for a long time and could degrade over time.

2916 Mr Barry Turner member of BANNG, questioned the reactor vessel and the graphite cores are now going to remain, can it be confirmed that by the time of final clearance the internal radioactivity of the reactors will have decayed to safe levels. Phil Heaton replied that because they contain carbon 14 they will not be safe in 100 years' time but the levels will have reduced, so it will make reactor dismantling easier because of the reduced level of dose from other items, however graphite is particularly unhelpful having such a long half-life, today or a hundred years it doesn't make that much difference.

2917 Mr Barry Turner member of BANNG, if it will still be very hazardous has anybody established the final removal process, what is happening at the moment is a partial decommissioning the ILW store, covered ponds and reactor building are all remaining, years ago the LCLC were originally shown a green field site with picnic tables on it completely clear of nuclear elements and open to the public, and this was expected in 25 years, this is a lot different 10 years later. This leaves in place a great deal of hazardous substances for future generations to pick up the tab for, at some future cost that no-body really knows but it's all part of the total cost of the total activity that should have been beneficial to the UK population, is anyone analysing the total cost of all this activity when its finished to see if it was all worthwhile.

John White responded that the very next agenda item will cover most of those points.

Rowland Cook responded, in any kind of remediation operation there are certain general principles and certain things you need to achieve, the first thing is to engineer a way into the structure to access the material concerned whether that is residual FED material or a graphite core it's the same principle just on a different scale, once you have engineered your way in you have to recover the material, there are several different ways of doing this, but once you've recovered it its put in a safe container, you need to have a means to take it to the store where it can be stored safety. These operations are well understood, there's a lot of works going on at Sellafield remediating the facilities and hazardous materials where there are a whole range of different methods and each one tuned to the specifics of the facility and material that they are dealing with, so in terms of doing the works safety there is already a great deal of experience with this kind of work, engineering safe ways of recovering and getting a whole range of different type of storage solutions depending on the specific materials. In terms of graphite, dealing with a stable structure with no high temperatures to make it catch fire, no pressures to make it explode, in terms of breaking that structure apart, a meteorite would be required to powderise the graphite and disperse across the country side.

2918 Mr John White thanked Mr Phil Heaton for his report.

## 9. NDA REACTOR DECOMMISSIONING PRESENTATION

2919 Mr Jonathan Jenkin provided his presentation. Briefly re-capped the current decommissioning strategy, the current plan is focused on preparing the reactors, safestore and the immediate waste store everything that remains on site into a safe and secure state of quiescent called C&M, typically the sites will be left prior to final reactor dismantling and final site clearance for 65-85 years although this does vary from site to site.

### Intended Benefits of Strategy

- Radioactive decay – allows for significant worker access and reduces the category of some radioactive waste from ILW to LLW.
- Avoids the need for interim storage of wastes pending consignment to Geological Disposal Facility (GDF).
- Substantial reduction of lifecycle costs (on discounted basis) – if you defer work it tends to be cheaper.

### Risks of Current Strategy

- Loss of skills, knowledge and capability to undertake final site clearance.
- Potential loss of records and information.



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- Reduced supply chain involvement in Magnox decommissioning.
- Profile of hazards change, there will be radioactive decay. Dominant hazards in later stages of decommissioning will be more conventional than radiological – therefore reduces one benefit of deferred dismantling.
- Potential for higher costs resulting from asset deterioration and potential need to acquire knowledge/information before final dismantling.
- Taking up land that could be used for other purposes.
- Uncertainty over future economic circumstances and regulatory standards.

### What has changed?

- Advances in remote decommissioning show that reactors can be dismantled promptly after shutdown without significant worker access.
- Significant experience of handling and packaging ILW at Magnox sites.
- Govt. policies on management of higher activity wastes (HAW) have developed over time, aim to investigate alternative disposal options for disposal where Scottish policy does not support deep geological disposal.
- New waste routes are available for the disposal of LLW to authorised landfill, the recycling of metals and the interim storage of HAW.
- If a shorter period of deferral is preferable, there is an opportunity to avoid expenditure on some C&M preparations at some sites.

### Strategy Review

- As promised in Strategy 3, Magnox have developed and evaluated credible options for the timing of reactor dismantling.
- NDA is reviewing if a case can be made to change the existing strategy.
- No decisions have yet been made.
- NDA review will consider both the Timing and Sequencing of Magnox reactor dismantling across the UK Magnox fleet.
- Phase 1 – making a case to change the current strategy – will require Govt. approval.
- If the case for change can be made, NDA will consider which site(s) to accelerate first.

### Timing for dismantling

Factors that most influence Timing include:

1. Knowledge management.
2. Supply chain / innovation.
3. Early clearance of site(s) to enable release for other purposes, including 'new for old' option for nuclear new build.
4. Retention of knowledge.
5. Avoiding loss of skilled staff.
6. Greater investment in UK 'nuclear' skills, driving efficiency and ability to develop business within UK or abroad.
7. Supporting BEIS Industrial Strategy.
8. Greater confidence in UK nuclear overall – more likely for investment and support for new missions.
9. AGR and Magnox synergies.
10. Ageing of plant and asset condition.

### Sequence of dismantling

Factors that most influence Sequencing include:

1. Waste management, interim storage or other disposal options.
2. Synergies with AGR decommissioning.
3. Calder Hall.
4. The ability to lead and learn from one site to another.
5. Affordability and lifetime costs.
6. Local factors – impact on particular sites.
7. New missions – new for old.
8. Management of ageing assets.
9. Availability of resources and the ability to deploy them.

Fleet wide acceleration will not be feasible, due to finance resources and the supply chain capacity.

### What we are doing



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- Taking Magnox work and developing a UK perspective – a case for change.
- Timing and Sequencing examined in two distinct phases.
- Gathering numerical underpinning of Magnox work, particularly waste generation rates, package requirements and effects of ageing plant.
- Strategic Enablers:
  - Supply chain, benefits and disbenefits, UK plc contribution.
  - Maintenance of sufficient knowledge and skills.
  - Savings with continuous approach (no start/stop, efficiencies).
  - Enabling other missions: i.e. release land earlier.
- Relationship between 'A' Magnox and 'B' AGR station.

### Stakeholder Engagement

- Interested in stakeholders' views, especially which factors are most important to them.
- Early and ongoing discussion with SSGs, Local Authorities and NuLeAF.
- NDA intend to undertake the review in two phases:
  - Timing: to establish if a case can be made for accelerating reactor dismantling at one or more Magnox sites(s).
  - Sequencing: to determine which site(s) to accelerate first.
- Plan to publish two papers (on Timing and Sequencing) for public and stakeholder comment.
- Currently developing an engagement plan to support both phases of the review.
- Timing of both phases and detailed stakeholder engagement plan still to be determined.

### Engagement Timeline

The programme for these works is still being defined, the Stakeholder Engagement Plan is still being developed. However papers on timing and sequencing will be published for public comment and more engagement activities to support, there will be workshops where some of the factors will be looked at in more detail. Currently the following meetings are already scheduled:

- National Stakeholder Summit.
- All local Stakeholder Groups.
- NuLeAF which represents local authorities – in addition to other local authority meetings.

### Conclusions

- NDA is considering whether a case for change of strategy can be made.
- Constraints such as resources and affordability will mean fleet wide acceleration is not feasible.
- It is likely a case will be made for between one and three sites.
- The whole sequence will not be determined as factors may change over time.
- Interested in stakeholders' views, especially which factors are most important to them.
- Feedback will be used to inform both the case for any change in strategy and which sites should be accelerated first.

2920 Mr John Harrison member of the public, thanked Jonathan for the presentation, and asked where he could obtain a copy from. Jonathan stated that the presentation will be emailed out.

**ACTION – Tracey Finn to send the NDA presentation out to LCLC members.**

2921 Cllr Prof Lew Schnurr, Heybridge Parish Council, there is a short fall of research effort to develop or use development that other states have made available, for deep geological storage and requested that his concerns about the lack of innovative progress in this area are feedback, or alternatively who can he write to? Jonathan responded that he will convey the comments, the organisation responsible for the development of the Geological Disposal Facility (GDF) is RWM (Radioactive Waste Management) they are a subsidiary company of the NDA and they have a communications team, the contact details can be sent out. There will be another presentation on the GDF at some point, the government had planned on launching another round of consultations but that has been delayed due to other Government business.

2922 Mr John White thanked Mr Jonathan Jenkin for the presentation.

## 10. LCLC CHAIRMAN'S FEEDBACK

2923 Mr John White mentioned the National Stakeholder Group meeting two days of hard debate, Andy Blowers paper was good.



## Local Community Liaison Council

National SSG meeting rescheduled to 14<sup>th</sup> February 2018.

### SSG CONSTITUTION

- 2924 Last passed in December 2008 and approved by the NDA in November 2009. Mr John White asked the views of those present on their opinion, there are a few mild alterations nothing major and the current constitution has worked for the last 11 years, there could possibly only be another 2 or 3 meetings, was it worthwhile changing the constitution now?
- 2925 Mr John Harrison Member of the public, asked why this group will no longer meet, the site will still be there, what is the NDAs motivation for continuing or discontinuing this meeting. Jonathan Jenkin responded the NDA have made no decision on what the future arrangements on engaging with the local community may be, when the site enters C&M no-one present at the meeting will stop being stakeholders and there will still be the need for the NDA to engage with people and to provide information, how that is done is the question. Aside from that once the site enters C&M and once the process is running smoothly there probably will not be the need to have two meeting a year forever. Its finding what the right point is to move to the new arrangements, what those arrangements are need to be thought about over the next year.
- 2926 Mr John Harrison Member of the public, requested that it continues as a face to face meeting in the future.
- 2927 Cllr Tim Drain Bradwell Parish Council, suggested that discussion of this item is deferred until December 2018 meeting after the site is scheduled to have gone into C&M, so by that stage it is known what the future process of the LCLC is, with that information a more informed decision about any amendments to the constitution can be made. Mr John Harrison member of the public, seconded the proposal.

### 11. ANY OTHER BUSINESS

- 2928 Cllr Tim Drain Bradwell Parish Council, mentioned that there has been a lot of nuisance with people using motorcycles and quad bikes off road and on the beach, they seem to be accessing the beach from land around the power station, is there any CCTV or monitoring that can be used to help and made available to the police. Bob Nichols responded that he would let security on site know and we would forward any information we obtain to the police.  
**ACTION – Bob Nichols to speak to site security regarding the motorcycles and quad bikes using the beach.**

- 2929 Bob Nichols Closure Director Bradwell, mentioned that we are looking to do a LCLC site visit probably towards the end of March, then the group could actually see the site and the progress.

### 12. DATE AND TIME OF NEXT MEETING

- 2930 Wednesday, 13<sup>th</sup> June 2018, Mundon Victory Hall, 9.30 for 10.00am.

### 13. CLOSE

- 2931 Chairman closed the meeting.