Nuclear Decommissioning Authority

Version 18

November 2010

Client Specification

Dounreay

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Client Specification Contents

1.0 Introduction

This document sets out the Authority's requirements in respect of the delivery of decommissioning of the Dounreay Site. It currently covers two contract periods:

- the period of the Site Licence Company Agreement (the "**SLCA**") from the commencement of the SLCA to the delivery of the Interim End State (the "**IES**"); and;[1]
- the period post the SLCA, during which time the material will be stored on Site until disposal facilities are available and the final decommissioning of the Site completed.

The Client Specification forms Schedule 1 of the SLCA. The areas of the Client Specification which form contractual obligations are referenced in Section 2. Unless expressed to the contrary, defined terms shall have the meanings as set out in the SLCA.

1.1 Strategic Requirements

The Site Strategic Specification (the "**SSS**") contained in Annex 1 sets out the current strategy which is to be delivered. Where these lead to outputs, deliverables or constraints these have been translated into contractual outputs which are listed in the output section of the Client Specification (at Section 3). Section 3 contains the outputs, deliverables, Cardinal milestones and constraints.

There are a number of cases where the Contractor is required to investigate alternatives to determine whether an improved strategy exists. In the event that the Authority agrees to such an improved strategy, the Change Control mechanism in the SLCA will be invoked.

1.2 Client Specification

The Client Specification contains details of outputs required to be met by the Contractor in relation to the Interim End State, the duration of the Contract and

[1] The current drafting contains some of the requirements for the completion of the existing M&O Contract which runs until 2012. These are provided for information and will be deleted prior to the final version being produced;

the Post Interim End State along with the details of any additional services to be provided through the Contract Term.

2.0 Specification Contents

Section	Purpose	Contractual Requirement
Strategic Context (Section 2.1)	To provide background information to allow underpinning of the basis of LTP10.	No.
Strategic Preferences(Section 2.2)	To provide background information as to the Authority's current thinking and direction of travel relative to strategy delivery.	No. This provides a better understanding of the contractual requirements in Section 4 – Alternative Strategies.
Site Strategic Specification (Annex 1 and Section 2.3)	To specify the strategies to be employed in developing the Contractor's Performance LTP.	No. This sets out the Authority's expectations with respect to Dounreay and the other Authority sites. Where there is a contractual requirement as a result these have been incorporated into the Client Specification in Section 3
Authority Requirements and Milestones (Section 3)	Key outputs to be delivered.	Yes.
Authority Assumptions and Scope Quantification (Section 5)	To address uncertainty and allow consistency in tender returns.	Yes.
Contractor Assumptions (Section 6)	To allow clarity around tender.	Yes.
Authority Furnished Service (Section 7)	To provide information relative to the Authority furnished services, which, if used to deliver the Performance LTP will be provided free of cost and should therefore be excluded from the Target Cost.	Yes. See Section 7.
Process and System Requirements (Section 8)	To provide information in relation to system and process to be complied with in the delivery of the Client Specification and the requirements of the SLCA.	Yes. See Section 8.
Alternative Strategies (Section 4)	Alternative strategies which should be costed within the tender.	May become a contractual requirement should the strategy be changed to one

		of the options costed. The cost information will form the basis of any revised Target Cost relative to that option should the Contract be changed. See Section 4

2.1 Strategic Context

The current Dounreay Site strategy is described in detail in the LTP Site summary and supporting documents. Version 1.1 of the Site Strategic Specification (SSS) reflects the assumptions which give rise to the baseline scope that is included in LTP 10, and in the Green text in the Client Specification and the SSS defines the "**Baseline Strategy**" for each strategic area. The key principles expressed by the Site Strategic Specification are:

- the Site is managed in the first instance to an Interim End State and then, when future facilities are available, to the Final End State;
- a prioritisation process, complying with the guidance provided in EGPR07, is utilised on the Site to direct the available funding to most appropriately address the systematic reduction of risk and hazard on the Site. This involves the retrieval, treatment and stabilisation of the highest hazard materials, for example, the destruction of liquid metals and cementation of the raffinates which resulted from historic reprocessing operations on the Site;
- that stabilised waste forms are conditioned for disposal and put into long term interim storage, without the need for further treatment prior to disposal, pending the availability of a waste storage or disposal facility. The final routing of the material is dependent on developing Scottish radioactive waste policy and/or a national decision on the acceptability, location, timing and development of UK repository facilities for stabilised nuclear waste materials;
- ILW wastes are planned to be stored until between 2040 and 2060 when it is assumed that a disposal facility will be available and the interim stores emptied;
- Fuels are planned to be stored until 2076. The date is derived from the original Dounreay programme and based on the assumed availability of a disposal facility for fuels; and
- the stores for fuels and for ILW, at IES must be suitable for storage until 2100 to provide contingency against the late availability of disposal facilities.

The table below describes the status of all the major work streams on the Site to achieve the Interim End State.

Work Stream	Status at IES based on Baseline Strategy
Nuclear Fuels	Passivated, if required and stored in a form suitable (when placed in the appropriate

	package) for disposal or transport to another site in 2076
Uranium	Characterised and conditioned suitable for storage on Site or at another Authority site. Stored on Site until 2076.
Plutonium	Characterised and conditioned suitable for storage on Site or at Sellafield. Stored on site until 2076.
DFR	Reactor decommissioned and buildings demolished
PFR	Reactor decommissioned, all waste segregated and packaged.
Fuel Cycle Areas Plants	All plants decommissioned, all waste segregated and packaged.
Liquid Metals	All Liquid metals destroyed or passivated. Any resulting effluents treated and discharged.
All other plants except ILW store, Fuel Stores and ancillary buildings	Buildings decommissioned, demolished to foundation plinth level and all waste segregated and packaged.
Shaft and Silo	All waste retrieved, segregated and packaged for disposal. Voids backfilled.
Liquid wastes from previous Site activities	All liquids retrieved and packaged.
Decommissioning Wastes	All wastes treated in compliance with waste hierarchy. ILW waste packaged in compliance with LoC, suitable for disposal and consolidation in ILW store. Transport to disposal location between 2040 and 2060.
ILW	All wastes packaged in compliance with LoC, suitable for disposal and consolidation in ILW store. Transport to disposal location between 2040 and 2060. Overseas owned wastes returned to customers.
Old LLW Pits	Waste retrieved and re-disposed in new LLW Disposal Facility adjacent to Dounreay site.
Landfill 42	Engineered for closure and Environmental Safety Case put in place.
Ground and Ground water	Fully characterised and remediated to a level that allows the "no danger" threshold to be met in 2333 and the conditions of the Environmental Safety Case to be in place without the need for further remediation.
New LLW Disposal Facility	Engineered for closure and Environmental Safety Case in place.
Buildings	All buildings demolished to foundation level, except those needed for the on-going interim safe storage of waste or fuels at IES.

	Once materials moved to a storage location (after IES) remaining buildings demolished.

2.2 Strategic Preferences and Opportunities

Whilst the majority of the strategic context used to build the current Baseline Strategy is valid, LTP10 has largely been put in place looking for Dounreay specific solutions. It is recognised that there may be potential opportunities to generate better solutions than those currently described by the current plan through the utilisation of other Authority estate sites and/or assets. Mainly, these relate to the potential to consolidate material streams at other sites, thereby eliminating the need for specific Dounreay solutions for these materials.

The ultimate exemplification of these opportunities would be the elimination of whole facilities from the Dounreay Baseline Strategy (preferably without generating new facilities elsewhere) or elimination of overhead, such as the need for a civil nuclear constabulary at Dounreay. This could be achieved for example by the consolidation of higher security category nuclear materials on other Authority sites.

The other areas where changes are expected to the Client Specification relate to the routes for ILW wastes. The current specifications reflect the requirement to send ILW to the GDF. The Scottish Government is currently consulting on a revised Higher Activity Waste Policy for Scotland. Should this result in changes these will be reflected via a revised Client Specification.

Opportunities may also exist for pursuing different waste disposal routes, particularly for the lower activity or clean/exempt wastes, than those that are currently assumed in the Baseline Strategy.

In order to endorse a different strategy, the Authority needs to be convinced that a business case exists for the alternative strategy and that it represents better value on an estate wide basis than the strategy currently being executed. Over time the Authority, in conjunction with the Contractor, will examine these opportunities and if a business case exists, the Authority will instruct the Contractor via a revised Client Specification. The Authority contract management team will then administer a contract change to reflect the revised scope.

The Authority also expects that there will be co-operation between SLCs to develop solutions that represent the best value across the estate, not solely on a site by site basis. Development of alternative strategies that utilise all appropriate Authority assets, not just those at Dounreay, in order to facilitate the development of national strategies is expected of the Contractor.

2.3 Site Strategic Specification

One of the main components of the Client Specification is the Site Strategic Specification including the individual Strategic Option Diagrams (the "**SODs**") for each topic strategy (please see Annex 1). The SODs capture the Authority topic strategy objectives and, importantly, provide clear and unambiguous strategic direction to the Contractor, as it relates to the many and varied topic strategies that constitute the overarching Authority strategy.

This strategic direction from the SSS has been captured in the Authority Requirements in Section 3 and must be used by the Contractor to construct a Contract Baseline and Performance LTP which, with due regard to safety, security and environmental factors and with due recognition of affordability, deliverability and sustainability considerations, delivers the overarching Authority strategy.
For completeness, the Site Strategic Specification also includes instructions for other Authority sites. This allows the Contractor to see the requirements placed at other sites and to reassure itself that the Contractor's strategies that require other sites for their execution are correctly reflected on the necessary sites. Only the requirements relative to Dounreay form part of the Requirements for this Contract.

The Requirements that result from the SSS are included in the output tables in Section 3. Compliance with the output and service requirements in Section 3 constitutes compliance with the SSS. It should be noted that the colour coding from the SSS has been retained in the Client Specification in Section 3. Requirements shown in green are the Baseline Strategies around which the Contract Baseline and Performance LTP must be built. The requirements coloured orange are contingent strategies for which the Authority requires the Contractor to carry out work pursuant to developing or underpinning an alternative approach but are NOT the basis on which the Performance LTP should be built. The strategies coloured coded deep orange in the SSS are dormant strategies and those coloured red are those that have been considered and rejected. The Contractor should not undertake any work relative to these strategies and there are no Requirements relative to them included in Section 3 of the Client Specification.

The following are known issues associated with Site. For the sake of clarity it is worth noting that the following are excluded from the scope of the current Authority Requirements:

- Construction of any additional facilities required as the result of changes to Government waste policy; and
- Discharge of any liability for land leased to other nuclear operators (as detailed in SOD A1).

3.0 Authority Requirements

3.1 Introduction

The Contractor is responsible for delivering the Interim End State for Dounreay in accordance with the Contract. The Interim End State is the definition of the condition in which the Dounreay Site should be delivered to the Authority at the end of the Contract Term. The principle behind the Interim End State is that the Site remediation should be completed with all materials either removed or packaged to approved standards for disposal in a final disposition facility or for storage on Site. Waste stores and packages on Site should be designed to allow storage until final disposal facilities are available.

3.2 Definitions

The Contract applies to delivery of the Interim End State to the DSRL Nuclear Licensed Site (the "**Site**") as depicted on the map included at Schedule 7 of the SLCA and delivery of any additional requirements including statutory requirements off the Licensed Site.

Interim End State (IES) – this is defined through the Authority Requirements detailed in Section 3.3. It is the combination of the physical state of the Site and the processes, systems and arrangements retained to support the delivery of the FES and for the Site to remain in compliance with its legislative requirements. The final contamination levels left in situ at the Interim End State must be such that the Final End State can be met without further remediation activity.

Final End State (FES) – the end state for the Site agreed with Regulators and stakeholders. The current definition of the Final End State is 'the Site will be delicensed in 2333'. At this point all the material stored on site at IES will have been removed and all structures and will have been demolished to foundation plinth level. The planning assumptions on which the plan to get to FES should be built are contained in Section 5. This may not be the most sustainable end state and the Contractor is required to manage the Final End State definition as part of its scope to deliver the Interim End State.

The Authority Requirements detail the following:

- The Outputs at IES in Section 3.3 comprising;

  i. The Outputs relating to the status of the Site and ground conditions to be achieved at IES (Requirements set out at CS Table 3.3.1);
  ii. The Outputs relating to the Buildings to be Retained at IES (Requirements set out at CS Table 3.3.2);
  iii. The Outputs Required to achieve IES and to support Post Contract Delivery (Requirements set out at CS Table 3.3.3);

- The Requirements for the Provision of Services through Contract Duration in Section 3.4 (Requirements set out at CS Table 3.4).

- The Cardinal Milestones in Section 3.5 (Tables 3.5.1 – 3.5.8); and

- [the Operating Plan (please see Section 3.6). The Operating Plan is the Authority's high-level tool for communication of its major deliverables for its Estate to the wider stakeholder community. It is used within the M&O contract and updated annually. It will not be included in the final Client Specification but is included here for completeness and to allow participant to see the current DSRL commitments, particularly relative to financial year 12/13 which form the first year of the new contract. It is anticipated that the Contractor will be required to deliver the commitments in the operating plan and this will be achieved though the mechanisms of the SLCA and through the Authority mandating these requirements either as additional Cardinal Milestone or Requirements in Section 3.4]

3.3 Outputs at Interim End State

3.3.1 Site and Ground Condition

Ref	Requirements	Contractual Requirement	Evidence of Completion[2]
1	**Site End State Consultation**	To support the Authority's Baseline Strategy that the Interim End State and the Final End State definitions together articulate the Site restoration objectives, the Contractor shall: • develop the Performance LTP as detailed in Requirement 25a, in accordance with the outcome of the Site End State Consultation save where there is any conflict with this Client Specification in which case the requirements and obligations set out in the Client Specification shall take precedence.	Submission of the Detailed Performance LTP in an acceptable form to the Authority within the required time (see Requirement (25A) and in compliance with PCP-M including the Contractor Annexe.
2	**Removal of Buildings**	The Contractor shall: • remove all structures, on the Site to the level of the foundation plinth other than those structures detailed in Annex 5 of the Client Specification.[3] [4]as being required to achieve and maintain the IES; and • deliver to the Authority the surveys required by the Site	Delivery to the Authority of photographic evidence and surveys in accordance with Requirement 2, showing the building has been removed. The Authority shall be entitled to carry out confirmatory Site surveys.

[2] This column (for each Section of the Requirements) is still to be fully populated

[3] The acceptability of the Contractor's proposals will be discussed in dialogue. The buildings to be retained will be added as an Annex to the Client Specification from the information extracted from the participants Final Tender

		Characterisation Plan to demonstrate to the reasonable satisfaction of the Authority that the surfaces of remaining structures and foundations are free from potentially mobile contamination.	
3	**Other potential uses of buildings**	Where the Contractor wishes to retain any structure on the Site which is not listed in Annex 5 a business case must be produced by the Contractor in accordance with EGG08 and approved by the Authority. Where such approval has not been obtained, the relevant structure shall be removed to the level of the foundation plinth.	Delivery to the Authority by the Contractor of a business case produced in accordance with EGG08 and approved by the Authority. If the Authority has not approved the retention of the particular structure on the Site, the Contractor shall provide the Evidence of Completion set out in Requirement 2
4a	**Site Drains**	The Contractor shall leave all drains on the Site in situ provided that the Contamination levels of such drains are low enough to meet all applicable Regulatory Requirements and to meet the Contamination levels required to achieve the Final End State in 2333 without further remediation activity after IES. The Contractor shall clearly identify on Site Drawings the location of all drains that are to be retained and left in situ. Any drains that can not be left in situ shall be remediated in accordance with Requirement 8	The provision, at the Authority request, by the Contractor of the Site Environmental Safety Case (produced in accordance with Requirement 8) that includes all details of any residual contamination associated with the drains which are retained. The provision of evidence to the satisfaction of the Authority that the Contractor has complied with all applicable Regulatory Requirements, including the those of BPM and BPEO, and has received all required approvals as relevant from the appropriate Regulator. Confirmation by the Contractor to the Authority that it has updated the Site Drawings showing all drains and other buried utility services that are to be left in situ on the Site such updated Site Drawing to be available to the Authority on request.

4b	**Surface water run off**	The Contractor shall ensure: • that the drains on Site are sufficient to manage future surface water run off. Any additional drainage required shall be installed to BS[**xxxx**][5]; • any additional drainage required pursuant to this Requirement shall be clearly identified on the Site Drawings	The provision of evidence to the satisfaction of the Authority that the Contractor has complied with all applicable Regulatory Requirements.
5	**Roads and Footpaths**	The Contractor shall leave all roads and footpaths on the Site in situ provided that the Contamination levels of such roads are low enough to meet all applicable Regulatory Requirements and to meet the Contamination levels required to achieve the Final End State in 2333 without further remediation activity after IES. The Contractor shall clearly identify on Site Drawings the location of all roads that are to be retained and left in situ. Any roads or footpaths than can not be left in situ shall be remediated in accordance with Requirement 8.	The provision at the Authority request, by the Contractor of the Site Environmental Safety Case (produced in accordance with Requirement 8) that includes all details of any residual contamination associated with the roads and footpaths which are retained. The provision of evidence to the satisfaction of the Authority that the Contractor has complied with all applicable Regulatory Requirements, including BPM and BPEO, and has received all required approvals as relevant from the appropriate Regulator. Confirmation by the Contractor to the Authority that it has updated the Site Drawing showing all roads and footpath that are to be left in situ on the Site such updated Site Drawing to be available to the

[5] NDA to check the applicable BS standard for surface water drainage.

			Authority on request.
6	**Foundations and Substructures**	The Contractor shall leave all foundations on the Site in situ provided that the Contamination levels of such foundations are low enough to meet all applicable Regulatory Requirements and to meet the Contamination levels required to achieve the Final End State in 2333 without further remediation activity after IES. The Contractor shall clearly identify on Site Drawings the location of all foundations that are to be retained and left in situ. Where removal to the foundation plinth creates any voids these shall be backfilled. Any foundations than can not be left in situ shall be remediated in accordance with Requirement 8. Where concrete substructures exist, which are not part of a building foundation, they may be left in situ provided that they meet the same conditions as would have been required had they been classed as foundations. This requirement would apply to the secondary containment associated with reactors and underground cells. Any ancillary metal components associated underground sub-structures such are cell lings, pipe work, tank supports should be removed[6]	The provision, at the Authority's request, by the Contractor of the Site Environmental Safety Case (produced in accordance with Requirement 8) that includes all details of any residual contamination associated with the foundations. Confirmation by the Contractor to the Authority that it has updated the Site Drawing showing all foundations that are to be left in situ on the Site such updated Site Drawing to be available to the Authority on request. The provision of evidence to the satisfaction of the Authority that the Contractor has complied with all applicable Regulatory Requirements, including BPM and BPEO, and has received all required approvals as relevant from the appropriate Regulator in relation to this Requirement.

[6] If bidders are unsure of the interpretation of this requirement they should aim to clarify through dialogue and the CS will be amended as necessary to remove any ambiguity.

6a	**Waste disposal**	The Contractor shall ensure that any waste resulting from the removal of foundations, structures, drains, roads or any other Site restoration activity required pursuant to this Agreement shall be Disposed of in accordance all Legislation, Regulatory Requirements and Requirements 44 and 46 as applicable.	
7	**Landscaping**	The Contractor shall carry out a soft landscaping scheme in order that the Site blends with the local environment. As part of such a scheme, all disturbed land, where appropriate (and such obligation shall exclude land left at the level of the foundation plinth or roads, shall be coated with top soil and reseeded with native vegetation.[7]	Confirmation by the Contractor that the work as defined by the Performance LTP relative to soft landscaping has been completed. Visual inspection by the Authority at IES to confirm soft landscaping has been completed to the Authority's satisfaction.
8	**Contamination**	In the event that any area of the Site has Radioactive Contamination levels, in ground or ground water, above those required to meet FES by the end of the Term, the Contractor shall be required to demonstrate to the Authority's satisfaction, acting reasonably, that such Radioactive Contamination will be capable of meeting the "no danger" threshold by 2333 (as determined by the NII acting in accordance with the provisions of the Nuclear Installation Act 1965) without any further remediation	For Radioactive Contamination, the Contractor must demonstrate to the reasonable satisfaction of the Authority that any residual Radioactive Contamination will be capable of meeting the 'no danger' threshold by 2333. For delicensing[10] of the Site, the Contractor must demonstrate the achievement of 'no danger' in relation to all Radioactive Contamination by 2333

[7] Query whether LA will wish to be involved in soft landscaping of site. However, as this is a PCG matter, participants will want to be very clear as to what compliance means.
[8] NDA to seek confirmation that the the NII in terms of their endorsement of such a plan
[9] NDA is still giving consideration on how it assures itself that the characterisation plan proposed is acceptable, interim deliverables are currently being considered.
[10] Please refer to the NII guidance on delicensing at http://www.hse.gov.uk/nuclear/delicensing.pdf

		activity being required after the end of the Term. The Contractor shall be required to demonstrate that any residual Contamination which is to be left in situ is controlled as radioactive material and that the risk that it poses is acceptable through the completion of a Site Environmental Safety Case that: • details how Contamination levels in ground and ground water have been measured via a robust characterisation plan which has been seen by SEPA who support the use of the plan and the endorsement [8]of the NII[9]; • details any residual radioactive or non-radioactive Contamination, any necessary controls and monitoring regime to be put in place by the Contractor; • confirms that due approval for the Site Environmental Safety Cases has been obtained from the appropriate Regulator(s); • confirms that the FES will be achieved with respect to both non-radioactive Contamination and Radioactive Contamination; and • demonstrates that all residual Contamination (radioactive or non radioactive) does not pose a risk to safety, health or the environment in the period between the IES and the Final End State.	as determined by the NII acting in accordance with the provisions of the Nuclear Installation Act 1965. Delivery to the Authority by the Contractor of satisfactory evidence that a Site Environmental Safety Case is in place and meets the requirements set out in Requirement 8.
9	**Landfill 42**	The Contractor shall take all necessary steps to ensure that Landfill 42 shall be closed such that it will be safe for the future and meets all legislative requirements. This may include the installation of engineered cap and/or barriers as necessary to ensure the long term prevention of harm to people or the environment as defined by the site Environmental Safety Case.	Delivery to the Authority by the Contractor of evidence that a Safety Case for Landfill 42 is in place which sets out: details of any residual radioactive Contamination, any necessary controls and monitoring regime to be put in place and confirmation that due approval has been obtained from the appropriate Regulator(s).

			The provision of technical drawings showing any cap and engineering barriers and monitoring points. Delivery to the Authority by the Contractor of appropriate evidence to the Authority's satisfaction that the Waste Management licence has been surrendered.
10	**Liquid effluent discharge system**	The Contractor shall ensure that the liquid Waste management system for the Site is isolated and the Diffusers are appropriately protected from disturbance or inadvertent intrusion.	Delivery to the Authority by the Contractor of evidence that a Safety Case demonstrating that any residual safety or environmental risk of disturbance or inadvertent intrusion, as a result of the isolation employed at the Site, has been delivered to the satisfaction of the appropriate Regulator(s).

3.3.2 Buildings to be Retained at Interim End State

Ref	Requirements	Contractual Requirement	Evidence of Completion[11]
11	**ILW Stores**	The Contractor shall ensure that all ILW is packaged for final Disposal in accordance with Letters of Compliance issued by the Disposal Authority. The Contractor shall deliver to the Authority records that demonstrate that the Waste has been appropriately: (a) characterised (b) treated and conditioned (as necessary) (c) packaged (d) handled (e) stored, and (f) periodically inspected in compliance with the ILW Store Safety Case and the Contractor's Quality Management System. Waste management activities at the Site shall be carried out in accordance with ISO 9001, or equivalent third party accredited Quality Management Systems (referred to in the SLCA as an Integrated Management System) and in a manner which complies with the Waste Products Specification assessed under	Delivery to the Authority by the Contractor of Letters of Compliance, in relation to all Waste forms stored at the IES, issued by the appropriate Disposal Authority. Delivery by the Contractor to the Authority of evidence that records have been compiled demonstrating to the Authority's satisfaction that the Waste has been: (a) characterised (b) treated and conditioned (as necessary) (c) packaged (d) handled (e) stored, and (f) periodically inspected in accordance with an ISO 9001, or equivalent third party accredited Quality Management System and in a manner which complies with the Waste Products Specification assessed under the Letter of Compliance process for each relevant Waste form.

[11] This column (for each Section of the Requirements) is still to be fully populated

		the Letters of Compliance process for each Waste form**,** such that waste remains disposable throughout the interim storage period. Waste records must also be retained by the Contractor such that they remain accessible at all times to the Authority and Contractor.	
11a	**Fuel and Nuclear Material Stores**	Nuclear Fuels and Nuclear Materials should be characterised and packaged in a form that is suitable, without further treatment for (i) long term storage at the Site until at least 2076 and; (ii) transport to another Authority site when placed in an suitable transport package and; (iii) storage at any potential Authority receipt site as specified in Requirements 30a[iii], 31a[i], 31c[i], 33b[i], 34b, 34f[iii], 34e[ii] and [iii], unless an NDA Estate wide business case has demonstrated that storage at these sites is not viable and; (iv) ultimate Disposal when placed in a disposal package, without further primary packaging. The Contractor shall define the necessary procedural requirements and scope required to be undertaken in order to load the Nuclear Fuel into final outer packages for Disposal at the Site. For the purposes of defining the scope of the activity described in this Requirement, the Contractor shall assume that this takes place after the IES[12]	Delivery to the Authority by the Contractor of evidence of compliance with the Site Conditions for Acceptance and any other potential recipient site's Conditions for Acceptance for storage. Delivery to the Authority by the Contractor of Letters of Compliance, encompassing all Fuel in Disposal form stored on the Site as at IES, issued by the appropriate Disposal Authority. Delivery to the Authority by the Contractor of evidence that records have been compiled demonstrating that the Waste has been: (a) packaged (b) treated (c) handled and (d) stored in accordance with an ISO 9001 certified, or equivalent third party accredited Quality Management System and in a manner which

[12] Final packaging for Disposal (overpack for loading into a repository) is excluded from the Interim End State contract but should be included in the Contractor's plans to get to the Final End State.

		Nuclear Fuels and Nuclear Materials shall be (a) packaged, (b) treated, (c) handled and periodically inspected and (d) stored at the Site in accordance with ISO 9001, or equivalent third party accredited, Quality Management System (referred to in the SLCA as an Integrated Management System) and in a manner which complies with the Waste Products Specification assessed by the Disposal Authority as part of its assessment of disposability for Nuclear Fuel or Nuclear Materials and the Fuel store Safety Case. Records in relation to Nuclear Fuel or Nuclear Materials must be retained by the Contractor such that they remain accessible at all times to the Authority and Contractor.	complies with the Waste Products Specification assessed by the Disposal Authority as part of its assessment of disposability for Nuclear Fuel. Delivery to the Authority by the Contractor of a Final End State LTP (in compliance with the obligations of Requirement 72) detailing the scope necessary to remove material from the stores, to construct and operate a packaging plant, to export Fuels to a Disposal facility and for the subsequent Decommissioning of the packaging plant.
12	**Store Design Life and Storage Conditions**	Any new ILW, Nuclear Fuel or nuclear material stores that are erected by the Contractor and are required for storage of materials on the Site at IES shall be designed to have a structural Design Life of 100 years. Any new ILW, Nuclear Fuel or nuclear material stores shall be designed to employ the principle of Passive Safety as far as practicable. Services and exterior surface materials for the new ILW, Nuclear Fuel or nuclear material stores[13] with a Design Life of less than 100 years shall be designed to allow replacements without the need to access high radiation areas within the new ILW, Nuclear	Delivery to the Authority by the Contractor at IES of suitable evidence to substantiate the 100 year Design Life time based on the materials that the Contractor consigns to the relevant ILW, Nuclear Fuel or nuclear material store. Such evidence to include, as appropriate: • design records; • underpinning engineering calculations; and • the design assessment provided to underpin the relevant store Safety Case, to the satisfaction of the Regulators.

[13] This is means to be things like the electrical services, lighting, vent (if required), cranes etc. and surface material referred to the like of building cladding

		Fuel or nuclear material stores. The environmental parameters for new ILW, Nuclear Fuel or nuclear material stores on Site shall be suitable to maintain the contents in the condition required by the transport Safety Case. Such Safety Case shall be prepared in accordance with Requirement 56	Delivery to the Authority by the Contractor of a detailed schedule of planned future periodic building maintenance or scheduled asset replacement required to be made to the relevant store in order to sustain a 100 Design Life of the relevant Store throughout the storage period, in a form and substance satisfactory to the Authority, acting reasonably. Delivery to the Authority by the Contractor of the Safety Case referred to in Requirement 12.
13	**Future emptying of Stores**	All new ILW, Nuclear Fuel or nuclear material stores shall be designed, built and maintained to a standard and design that allows such ILW, Nuclear Fuel or nuclear material store to be emptied by an entity acting in accordance with Good Industry Practice and in compliance with the relevant Safety Case requirements and the loading plan for the Disposal facility as issued by the Disposal Authority at any date between the date on which the IES is achieved and 2100. There is no requirement to construct a facility for the overpacking of Fuels for Disposal prior to the IES, however the Contractor shall prepare and submit to the Authority a Scheme Design for such a facility. Such Scheme Design shall provide for a Design Life of a period of at least 10 years.	Delivery to the Authority by the Contractor at IES of a plan detailing, planned maintenance or scheduled asset replacement in the ILW, Nuclear Fuel or nuclear material stores throughout the Design Life of the relevant store to allow exportability to be maintained in place at IES and in accordance with Requirement 13. Delivery to the Authority by the Contractor at IES, of a Scheme Design and associated records for Disposal overpack facility/route in a form and substance satisfactory to the Authority, acting reasonably
16	**Transport Safety Cases for materials in storage at IES**	The Contractor shall provide to the Authority transport Safety Cases that meet the standards appropriate for all Waste, Nuclear Fuels and nuclear materials stored on the Site. The transport Safety Case shall include identification of the transport route, the transport package and details of the	Delivery to the Authority by the Contractor of suitable evidence that appropriate transport Safety Cases are in place and, with confirmation in principle from the Regulator responsible for transport of nuclear materials that such Safety Cases are suitable to meet the required standards.

		condition that the relevant material and package should be in at the time of transport. The transport Safety Case shall take into consideration any anticipated degradation as a result of the storage in the planned storage conditions and define any quality assurance or monitoring checks that need to be executed prior to consignment to ensure that the condition of the relevant Waste, Nuclear Fuel or nuclear material is as reflected in the transport Safety Case. Such Safety Cases shall be prepared in accordance with Requirement 56.	
18	**LLW Disposal Facility.**	The Contractor shall complete the Disposal of all LLW in accordance with Legislation and Regulatory Requirements and then the LLW facility shall be closed such that it will no longer receive Waste and the Contractor shall demonstrate that the LLW Disposal Facility is safe for the future, this may include the installation of engineered cap and or barriers if they are required to ensure the long term prevention of harm to people or the environment.	Delivery to the Authority by the Contractor of satisfactory evidence that an Environmental Safety Case for the LLW Disposal Facility has been amended to the satisfaction of SEPA, to reflect the post closure arrangements and sets out: details of the material Disposed, any necessary controls and monitoring regime to be put in place. Delivery to the Authority by the Contractor of appropriate evidence to the Authority's satisfaction that the disposal authorisation has been revoked. Delivery to the Authority by the Contractor of suitable evidence to demonstrate that the Waste has been Disposed of in accordance with an ISO 9001 or equivalent third party accredited Quality Management System and that records detailing the inventory in compliance with the appropriate Regulatory Requirements have been kept. Delivery to the Authority by the Contractor of updated technical drawings of the LLW Disposal

Facility identifying final engineering of the closure of the facility and detailing any monitoring points required as part the Safety Case.

3.3.3 Outputs Required at Interim End State to Support Post Contract Delivery

Ref	Requirements	Contractual Requirement	Evidence of Completion[14]
60	**Utilities**	The Contractor shall at least 12 months prior to the planned IES Date: [i] provide the Site infrastructure including water and power, as necessary to support maintenance of the Site Facilities post Interim End State until such Facilities are no longer required; [ii] provide assessments to demonstrate that the residual life of the Site Facilities are sufficient for the requirement under [i] above or that asset management and/or replacement plans are in place showing maintenance required to allow infrastructure to endure until it is no longer required; [iii] ensure that contracts are in place with utility providers for the provision of utility services to the Site Facilities for a minimum of 2 years beyond the Expiry Date.	The provision of evidence to the satisfaction of the Authority that the Contractor has complied with all applicable Regulatory Requirements in relation to the obligations set out in Requirement 60 (including drawings showing utility installation, underpinning engineering calculations and assessments to demonstrate that the residual life of the Site Facilities is sufficient for the requirement under 60[i] and if so requested by the Authority copies of the contracts referred to in Requirement 60[iii].
61	**Systems, processes, procedures and arrangements to support delivery post IES**	At least 12 months prior to the planned IES Datethe Contractor shall put in place suitable and adequate arrangements under the Nuclear Site Licence to allow the Site to continue to be licensed and to maintain compliance with all relevant Legislation, Regulatory Requirements and environmental authorisations, including such processes, procedures and contracts, skills and	The provision of the results of Licence Compliance Audits by the NII and Environmental Audits by SEPA, undertaken in the 24 months prior to IES delivery. The Authority may also undertaken supplementary

[14] This column (for each Section of the Requirements) is still to be fully populated

		capability necessary to implement those arrangements.	Audits against Regulatory Requirements, in the final year of the contract to demonstrate compliance with Requirement 61. Any Audit finding which requires remedial action by the Contractor to demonstrate compliance against Requirement 61 must be implemented to the reasonable satisfaction of the Authority prior to the IES.
61a	**Security Arrangements**	At least 12 months prior to the planned IES Date the Contractor shall: [i]a ensure appropriate security measures are in place, including a Security Plan which has been approved by OCNS along with arrangements, processes and procedures and contracts to implement the Security Plan; [i]b ensure that Sensitive Nuclear Information (SIN) is protected in accordance with the OCNS Security Policy Framework (SPF) and associated Civil Nuclear Security Standards [i]c ensure that Personnel Security measures as detailed in the Civil Nuclear Security Standard No. 3 are applied to all personnel with access to Nuclear Material, Other Radioactive Material or Other Sensitive Nuclear Information.	The delivery to the Authority of the a letter from OCNS confirming that an acceptable Security Plan as referred to in Requirement 61a is in place.
61b	**Maintenance and surveillance arrangements**	[ii] ensure maintenance and surveillance arrangements in accordance with Requirement 58 for all facilities and infrastructure remaining on Site at the IES are in place, including the necessary processes, procedures and contracts for their implementation;	Compliance with Requirement 61b shall be demonstrated through Audit against the Requirement 58 and the Contractor's Management System and the requirements for Asset Management and the requirements of the Site Environmental Safety Case, by the Authority in the

		[iii] ensure such maintenance and surveillance arrangements encompass both planned maintenance and corrective action in response to deterioration revealed by surveillance activity and shall include but not be limited to a schedule of routine inspections required by the Environmental Safety Case for the LLW Disposal facility and shall demonstrate adequate on-going facility performance through ground water monitoring;	final year of the Agreement. Any Audit finding which requires remedial action by the Contractor to demonstrate compliance against Requirement 61 must to implemented to the reasonable satisfaction of the Authority prior to the IES.
61c	**Site, facility and environmental safety cases.**	[iv] maintain Site, facility and Environmental Safety Cases as required under the Nuclear Installations Act and relevant environmental legislation and Environmental Authorisations. This should include the management of the Site Environmental Safety Case to meet the Final End State including the processes, procedures and contracts to implement such maintenance arrangements;	Compliance with Requirement 61c shall be demonstrated through Audit the Contractor's Management System for maintenance of Safety Cases, by the Authority in the final year of the Agreement. Any Audit finding which requires remedial action by the Contractor to demonstrate compliance against Requirement 61c must to implemented to the reasonable satisfaction of the Authority prior to the IES.
61d	**Statutory Health Physics monitoring**.	[v] ensure that health physics monitoring arrangements of the Site and locality as required by all relevant Legislation, Regulatory Requirements and the Site and facility Safety Cases and Environmental Safety Case are in place and include the processes, procedures and contracts to implement such arrangements;	Compliance with Requirement 61d shall be demonstrated through Audit against the Site Environmental Safety Case requirements and the Contractor's Management System for health physics monitoring, by the Authority in the final year of the Agreement. Any Audit finding which requires remedial action by the Contractor to demonstrate compliance against Requirement 61d must to implemented to the reasonable satisfaction of the Authority prior to the

			IES.
61e	**Environmental monitoring**	[vi] ensure environmental monitoring arrangements of the Site and locality as required by the Environmental Safety Case are in place and include the processes, procedures and contracts to implement such arrangements;	Compliance with Requirement 61e shall be demonstrated through Audit against the Site Environmental Safety Case requirements and the Contractors Management System for managing environmental monitoring, by the Authority, in the final year of the Agreement. Any Audit finding which requires remedial action by the Contractor to demonstrate compliance against Requirement 61e must to implemented to the reasonable satisfaction of the Authority prior to the IES.
61f	**Dounreay Land Condition Records**	[vii] ensure arrangements for the management of the Dounreay Land Condition Records are in place and include the process, procedures and contracts to implement such arrangements;	Compliance with Requirement 61f shall be demonstrated through Audit against the Contractors Management System for managing Land Condition Records, by the Authority, by the Authority in the final year of the Agreement. Any Audit finding which requires remedial action by the Contractor to demonstrate compliance against Requirement 61f must to implemented to the reasonable satisfaction of the Authority prior to the IES.
61g	**Nuclear Material Accountancy**	[viii] ensure arrangements for the management of Nuclear Material Accountancy are in place and include the processes, procedures and contracts to implement such arrangements and include access arrangements for DGENER;	Delivery to the Authority by the Contractor of the BTC (Basic Technical Characteristics) document in accordance with Requirement 68[viii] and such evidence as the Authority may require todemonstrate that the DGENER Particular

		[ix] procure that the BTC (Basic Technical Characteristics) document is revised to reflect IES and submitted and agreed with DGENER; [x] request a DGENER Particular Safeguard Provision and implement such provision through internal procedures.	Safeguard Provision (PSP) has been implemented through internal procedures. Compliance with Requirement 61g shall be demonstrated through Audit against the requirements of the PSP and the Contractors Management System relative to safeguards provisions, by the Authority, in the final year of the Agreement. Any Audit finding which requires remedial action by the Contractor to demonstrate compliance against Requirement 61g must to implemented to the reasonable satisfaction of the Authority prior to the IES.
61h	**Emergency Arrangements**	[xi] manage site emergency arrangements inventory taking and the processes, procedures and contracts to implement such arrangements are included; [xii] manage the arrangements for Emergency Physical Inventory Takings (EPITs) and the procedures and contracts to implement such arrangements	Compliance with Requirement 61h shall be demonstrated through Audit against the requirements of the Nuclear Installation Act relative to Emergency Arrangements, the requirement of DGENER relative to emergency arrangements and the Contractors Management System, by the Authority, in the final year of the Agreement. Any Audit finding which requires remedial action by the Contractor to demonstrate compliance against Requirement 61h must to implemented to the reasonable satisfaction of the Authority prior to the IES.
61i	**Document management system and records**	[xii] have in place a document management system suitable for managing and maintaining records and procedures required to deliver the Final End State. This will include but not be limited to	Compliance with Requirement 61i, the Public Records Act and Cabinet Office Guidance on Information Security shall be demonstrated through

		records for stores and packages and those relating to the GIS; [xiii] ensure that at the IES all records shall be dealt with in one of the following ways: (a) be stored on Site in compliance with Regulatory Requirements, Legislation and Cabinet Office guidance for use in delivering the Final End State; or (b) have been determined that they are not a Public Record and destroyed; or (c) have been archived; In the event that there is conflict between Requirement 61i[xiii] and the requirements of clause 15 of the SLCA, the SLCA takes precedence. [xiv] as appropriate on or before the date on which the IES is achieved, destroy or archive all documents not required for the Final End State; [xv] demonstrate to the Authority its compliance with Cabinet Office Guidance on Managing Information at the Interim End State	Audit by the Authority, in the final year of the Agreement. Any Audit finding which requires remedial action by the Contractor to demonstrate compliance against Requirement 61i must to implemented to the reasonable satisfaction of the Authority prior to the IES.
61j	**Skills**	[xvii] ensure that the necessary skills and capability are in place, either in DSRL staff or the supply chain, to implement the above requirements.	Compliance with Requirement 71 shall be demonstrated through Authority review of the skills plan and the requirement of the plan to get to the FES, in the final year of the Agreement.

			Any Audit finding which requires remedial action by the Contractor to demonstrate compliance against Requirement 61h must to implemented to the reasonable satisfaction of the Authority prior to the IES.
72	**Plan to delivery FES**	3 years prior to the planned IES Date the Contractor shall: [i] provide the Final End State LTP in compliance with PCP-M, including the Contractor Annexe; [ii] the Final End State LTP shall set out in detail: • the work required to be carried out to store Wastes and Nuclear Fuels, including the operation and maintenance of stores in compliance with Regulatory Requirements and delivery of the schedule of planned future periodic building maintenance and/or scheduled asset replacement plan delivered under Requirements 12 of the Client Specification; • the work required to build and operate any necessary export facilities; • the work required to transfer all the Wastes and Nuclear Fuel and nuclear materials to a final Disposal facility; • the work required to demolish the buildings on Site and Dispose of the resulting Waste; • the work required to meet the condition of the Final End State; • the periodic review and update of transport and disposability assessments to take account of changes in regulatory standards; • the revised arrangements to transfer packages of Waste;	Delivery to the Authority by the Contractor of the plan referred to in and in accordance with Requirement 72. Compliance with Requirement 72 shall be demonstrated to the Authority via Authority and/or 3rd party review of the plan against Requirement 72 and the PCP-M, including the Contractor Annex requirements, in the final year of the Agreement. Any findings as a result of the review that require remedial action by the Contractor to demonstrate compliance against Requirement 72/PCP-M, including the Contractor Annexe, must be implemented to the reasonable satisfaction of the Authority prior to the IES.

		• any change in condition of the store; • package availability and continued compliance with the Disposal facility's CFA; • the ability to export material from the store at a maximum of three years notice throughout the period between date on which the IES is achieved and the transport to a Disposal facility; • the periodic review and maintenance of facility Safety Cases; • the management of the Site Environmental Safety Case to meet the Final End State including the processes, procedures and contracts to implement such arrangements; • appropriate provision for stakeholder engagement between IES and FES.	
73 73a	**Organogram to Delivery FES**	3 years prior to the planned IES Date the the Contractor shall: [i] provide its proposed organogram for the on-going organisation of the Site beyond the date on which the IES is achieved.	Delivery to the Authority by the Contractor of the organogram referred to in Requirement 73[i] at the Commencement Date.

74	**Management Standards**	12 months prior to the planned IES Date the Contractor shall: [i] demonstrate compliance with ISO 9001, 14001 and 18001 or equivalent third party accredited standard for arrangements in place after IES is achieved.	Compliance with Requirement 74 shall be demonstrated through Audit by the Authority, in the final year of the Agreement. Any Audit finding which requires remedial action by the Contractor to demonstrate compliance against Requirement 74 must to implemented to the reasonable satisfaction of the Authority prior to the IES.

3.4 Services Required through the Contract Duration and Additional Constraints

Ref	Requirements	Contractual Requirement	Evidence of Completion[15]
20	Particles	The Contractor shall continue to provide for the scope of the services provided by the Sea Bed Monitoring Contract which requires: [i] completion of monitoring of the 64 hectare area of sea bed as depicted by the map in Annex 3 of the Client Specification[16]; (ii) execute a further monitoring sweep of the plume area (as depicted by the Map in Annex 3 of the Client Speciation) to provide reassurance that most of the Particles have been recovered; (iii) recover any Particles found as a result of [i] and [ii], conduct analysis as necessary to determine their significance and Dispose as radioactive Waste; (iv) agree with SEPA and PRAG(D) that as a result of activities in (i), (ii) and (iii) a suitable end state has been reached that	The Authority to discuss with Participants during dialogue the means by which the Authority assures itself that the on-going service requirements are delivered to the Authority's satisfaction and that the performance standards are such that the Authority has confidence that the IES deliverables will be achieved[19] n.b. The Contractor shall provide evidence to the Authority that an agreement has been reached with the Regulators and their advisory bodies and Stakeholders that a satisfactory end state for Particles has been reached and that no further remediation is required.

[15] This column (for each Section of the Requirements) is still to be fully populated
[16] of which it is anticipated there will be less than 20 Ha to complete at the Commencement Date.
[17] This is currently planned to cease in April 12 so need to review before the FT version of the CS is produced and the clause below.
[18] It is currently envisaged that agreement will be reached by April 2012.
[19] Text in pink will be replaced at ITSFT stage to reflect the Authority's requirements for final tender submissions.

		seabed monitoring can cease. If agreement can not be reached, the Contractor shall propose an agreed programme of additional monitoring in accordance with the change control provisions under the SCLA Agreement. The Contractor is required to: (v) undertake a programme of statutory beach monitoring as per Annex 4 of the client specification found in accordance with the RSA93 Authorisation and continue to implement according to any subsequent changes to the RSA93 Authorisation; (vi) undertake a programme of non-statutory beach monitoring as per Annex 4 of the Client Specification;[17] (vii) obtain agreement from SEPA and PRAG(D) to the cessation of non-statutory beach monitoring or if such agreement from SEPA and PRAG(D) can not be obtained, that Contractor shall agree an alternative programme with SEPA and PRAG(D) which shall be dealt with as a Contract Change;[18] (vii) recover any particles found as a result of [v] and [vi], conduct analysis as necessary to determine their significance and Dispose as radioactive Waste.	
21	**3rd Party Services provided by the SLC**	The Contractor is required to continue with the following Customer Contracts, in accordance with the terms of the SLCA, until such time as the Customer wished to terminate the following Customer Contracts or until otherwise instructed by	[Not applicable]

		the Authority: [i] the RSRL contract for Payroll Services, dated [x]; and [ii] the UKAEA (NDBP) contract for Payroll Services, dated [x]; and [iii] the UKAEA contract for Payroll Services, dated [x]; and [iv] the Doosan Babcock contract, dated [x] for Occupational Health Services [v] the Nuvia Contract for Occupational Health Services, dated [x] [vi] the NDSL contract for Occupational Health Services, dated [x] [vi] the Johnson controls contract for Occupation Health Services, dated [x] [vii] the ABSL contract for Occupational Health Services , dated [x]	
21a	**Management of NDA**	The Contractor Shall act as the Authority's agent in	

[20] This requirement relates principally to the off-site environmental monitoring stations and will be detailed in full in the next update to the CS.

	Own Land and facilities	managing NDA owned landed surrounding the Site including the management of tenancy agreements with 3rd party tenants where they exist. Manage, maintain and operate NDA owned assets located off Site in compliance with the lease agreements listed in Schedule 7 of the SLCA[20]	
22	**KnK Sodium**	The Contractor shall : [i] Dispose of KnK Sodium in accordance with applicable Legislation and Regulatory Requirements; and [ii] liaise and cooperate with the Authority to agree the financial settlement between KnK and AEAT and other relevant parties associated with the Disposal of KnK Sodium.	The Contractor shall provide to the Authority, at its request, evidence of the transport to a licensed Disposal site and the contract with the licensed Disposal company for the Disposal of the KnK sodium
23	**National Waste Inventory**	The Contractor shall provide to the Authority or the Department of Energy and Climate Change, or its successor department, information and/or assistance reasonably requested by the Authority to allow the tri-annual (the first UK Inventory being the 2013 UK Inventory) completion of the UK Inventory. Such information and/or assistance may include but is not limited to: [i] provision of information on radioactive wastes; [ii] provision of information on radioactive material that may become waste in the future; [iii] receipt of data from the previous UK Inventory in either electronic or paper form;	Delivery of the information requested in Requirement 23 to the Authority's reasonable satisfaction.

		[iv] reviewing the information provided and endorsing amending or deleting the information as required; [v] responding to and addressing queries on the supplied information; [vi] reviewing draft reports and approving the content for release into the public domain.	
23a	**Waste Management Cases**	The Contractor shall ensure that Radioactive Waste Management Cases are produced as part of the Site Integrated Waste Management Strategy and submitted to SEPA to demonstrate the arrangements for the characterisation, processing, conditioning and packaging for disposal of all Higher Activity Waste Streams.	
24	**Consolidation Plan**	[i] The Contractor shall produce a Consolidation Plan to cover the activities it intends to undertake in order to implement its plans for the Site[21], prior to the fully developed Performance LTP being submitted in compliance with Requirement 25a. [ii] The Consolidation Plan shall be produced in compliance with PCP-M including the Contractor Annexe and include any activities that the Contractor plans to undertake that are not part of the existing LTP. As a minimum the Consolidation Plan shall contain; (a) the programme for developing and submitting the Performance LTP;	Submission to the Authority of the report detailed in Requirement 24[iv] no later than 9 months after the Commencement Date.

[21] The Consolidation plan should be submitted as part of the response to the ITSFT and be the mechanism for implementing the Contractors plans for the Site as set out in their response to the ITSFT.

		(b) detail of any management changes the Contractor plans to execute, including the plan to obtain License Condition 36 approvals for such changes; (c) the programme of activities required to prepare for and implement any changes to processes and systems required to implement the Contractor's proposals. [iii] The Consolidation Plan shall be added to the LTP that exists at Contract Award through Change Control, such that the overall Annual Site Funding Limit is maintained in accordance with Schedule 6. [iv] At the end of the Consolidation Phase the Contractor shall produce and submit alongside the Performance LTP a report demonstrating that the activities in the Consolidation Plan have been completed and showing any revised management structure.	
25	**Long Term Planning**	The Contractor shall prepare, maintain and provide a Long Term Plan to deliver the IES and FES. A version of this plan as it exists at that time shall be provided to the Authority by no later than 31st March in each year of the Agreement for the purposes of updating the National Liabilities Estimate. This shall include the estimate for the scope, schedule and cost for the delivery of the Final End State that applies at that date, in compliance with the PCP-M including the Contractor Annexe.	The provision of a Long Term Plan in compliance with PCP-M.
25a	**Performance LTP**	The Contractor shall deliver the Performance LTP in	The provision of a satisfactory Performance LTP.

	accordance with these Requirements and the requirements of the Agreement and in compliance with PCP-M and the Contractor Annexe to the Authority within a maximum of 9 months of the Commencement Date.[22]

		[iv] ensure that any 3rd Party contracts for services required by Vulcan Site which require Site facilities no longer required to discharge the IES contain commercial terms which ensure that the Authority is not economically or otherwise disadvantaged, including costs associated with changes or delays to the Performance LTP resulting directly from the execution of contracts for the Vulcan Site; [v] seek the Authority's prior written approval (not to be unreasonably withheld provided that there is no adverse effect (directly or indirectly) on the Authority (or any other part of its estate) or on the achievements of any Cardinal Milestone or other obligations under this Agreement) to all new contracts in relation to the Vulcan Site; [vi] when developing programmes for the discharge of the Authority's liabilities the Contractor shall not consider the impact of 3rd party liabilities beyond those set out in the Client Specification and after liaising with MOD in relation to the Vulcan Site having used reasonable endeavours to phase work to facilitate the ongoing operational support to MOD in relation to the Vulcan site.	
26b	**Minimising Impact of Vulcan on Site Plans**	To support the Authority's strategic contingency to consider the impact of liabilities held by Third Parties on the Decommissioning of the Site so that the Authority is able to ensure overall value for money, the Contractor shall: [i] liaise and cooperate in relation to the Vulcan Site through attendance at ad hoc meetings (on approximately a quarterly basis) with the Authority and/or the Ministry of Defence or other	

		interested parties [ii] maintain awareness of the Ministry of Defence's current plan for the future of the Vulcan Site and the impacts such plans may have on the Performance LTP; [iii] use reasonable endeavours to mitigate any potential adverse impact the Ministry of Defence's plans for the future of the Vulcan Site may have on the Performance LTP specifically; [iv] recommend to the Authority any appropriate action that can be taken to mitigate the impact that any liabilities owned by Third Parties may have on the Performance LTP; [v] enable the Authority to manage the impact of its Decommissioning programme on liabilities owed to Third Parties at the Site by including decision milestones in the Performance LTP. Such decision milestones to be submitted by the Contractor to the Authority on an annual basis.	
26c	**NRTE Vulcan Decommissioning**	**Waste Services** [i] Should the Decommissioning of the Vulcan Site be carried out by a party other than the Contractor, the Contractor shall, provided the Contractor is reasonably able to provide the waste services required in relation to the Decommissioning of the Vulcan Site, enter into a contract with the relevant party for the	

		provision of such services, on such terms as shall be reasonable and proper in the circumstances[23]. [ii] Subject to [iii] below, the contract for such waste services should, subject to the terms of the relevant contract, provide terms no less advantageous than those contained in the SLCA. [iii] Not withstanding [i] and [ii] above the terms of the contracts for waste services for the Vulcan Site should be on such terms that the Authority is not economically or otherwise disadvantaged, such that any and all costs due to delays or rephasing of the Performance LTP as a result of executing such a contract are charged under such contract. **Vulcan Decommissioning Services** [iv] Should MOD or its nominated contractor wish to enter in to contract with DSRL for the provision of decommissioning for the Vulcan Site, such a contract would be treated as a Customer Contract. The Contractor shall be required to extend pricing terms to the MOD or its nominated contractor which are no less favourable than those applicable under the SLCA. [v] Prior to entering into a contract for the provision of Decommissioning for the Vulcan Site, the Contractor shall	

[23] To be discussed in dialogue.

		submit to the Authority, for its approval, a business case in compliance with EGG08[24], which comprehensively assesses the business impact to the Authority as result of undertaking such work. In particular such a business case should quantify the impact of undertaking the Decommissioning of the Vulcan Site with respect to the schedule, cost, risk and hazard reduction profile of Performance LTP. [vi] In the event of a contract for the Decommissioning being approved the associated change to the Performance LTP shall be subject to Change Control.	
27		**SMS/TS/A2/SOD001** **Site End States**	
		To support the Authority's Baseline Strategy of the Interim End State and Final End State definitions together articulating the Site restoration objectives, the Contractor shall: [i] ensure that the Performance LTP takes account of the outcome of the Site End State Consultation. [ii] inform the Authority of any projects, programmes, etc. likely to impact upon the Interim End State or likely to foreclose Interim End State options; [iii] advise the Authority if it reasonably believes that the terms	

[24] It is intended that this will ultimately refer to the SAV process, which then references out to part of various EGG requirements; the means to contractualise this is still being worked on.

		of the Interim End State should be reviewed; [iv] pursuant to [iii] above, participate in and cooperate with the Authority to determine what constitutes "fit for purpose" Site restoration objectives; [v] periodically review whenever reasonably necessary and at the very least within five years of the Commencement Date and on each fifth anniversary date thereafter opportunities for an alternative Interim End State and / or Final End State and notify the Authority of any areas of the Interim End State and / or Final End State that could be modified in order to deliver better value for money to the Authority; [[vi] monitor on at least an annual basis the emerging situation with regard to the Environmental Safety Case at LLWR and, if appropriate, advise the Authority as to whether a strategy of in situ Disposal of the LLW Pits at the Site should be pursued instead of retrieval; [vii] continue to mange the relationship with Historic Scotland relative to the implementation of the Dounreay Heritage Strategy.	
28		**SMS/TS/A3/SOD001**	

		Land Quality Management Strategy	
		To support the Authority's Baseline Strategy of LQM to protect people and the environment and to achieve the site end state(s) at a rate that represents greatest value for money to the Authority, the Contractor shall: [i] manage, in manner which is consistent with Good Industry Practice, and in compliance with Regulatory Requirements and Legislation, radioactive and non-radioactive Contamination in, on or under land within the Site and any Contamination emanating from the Site or from land for which the Contractor is deemed to be responsible under relevant Regulatory Requirements or Legislation; [ii] undertake risk-based decision-making in good time to identify areas of significant risk so that the Contractor can put in place appropriate remediation programmes such that the risks identified are mitigated on a timely basis, preventing further significant deterioration of the ground condition; [iii] develop and execute a fully-justified and proportionate LQM Plan in accordance with Regulatory Requirements that, to the Authority's satisfaction: • identifies, characterises, monitors and assesses areas of potential concern to a level required to inform risk-	Delivery to the Authority of a satisfactory LQM Plan in accordance with the obligations set out in this Requirement and of evidence showing that the Contractor has maintained all LQM records (including the submission of all such records if requested by the Authority). Reports – demonstration of management to the plan.

[25] EGG01 currently being revised.

		based decision-making; • includes risk-based schedules and plans for managing ground and groundwater; and • includes appropriate application of the Waste management hierarchy; [iv] maintain LQM records required for ongoing management by current and future users of the Site; [v] ensure LQM programmes are scheduled appropriately so that they are adequate to ensure reassurance monitoring and to avoid (re)Contamination of ground; [vi] ensure that Waste processing routes are planned in a timely manner such that they are in place when required in accordance with Good Industry Practice and Regulatory Requirements; [vii] in accordance with EGG01, report to the Authority the status of land quality, the Site LQM Plan and likely Waste arising[25]; [viii] continue engagement with good practice working groups as appropriate e.g. the Authority's Inter-Industry Group for Contaminated Land Management and Site Restoration Issues; and [ix] assist and cooperate with the Authority to establish the risk to people and environment from Contamination (radioactive and non-radioactive) within Authority owned land outside of the Site.	

		SMS/TS/A4/SOD001 **Decommissioning and Clean-Up**	
29a	**Continuous Decommissioning**	To support the Authority's Baseline Strategy in relation to continuous Decommissioning the Contractor shall, at the end of operation of any facility on Site: (i) develop and implement the Decommissioning programme in accordance with Good Industry Practice and Regulatory Requirements; (ii) give priority to the Decommissioning programme where it mitigates the highest safety and environmental risks and hazards; and (iii) ensure that the Decommissioning programme complies with the Authority's Decommissioning Principles. To the extent that the SLC Annual Funding Limit or other relevant factors including knowledge or skills base[26] availability do not permit the Contractor to implement the Decommissioning programme on a continuous basis, the Contractor shall defer Decommissioning of facilities or parts thereof in accordance Requirement 29b. Where such deferrals result from Authority instructed Changes, such as an alternative SLC Annual Site Funding Limit, such	

[26] To be further developed by the Authority in conjunction with the drafting in the SLCA.

		Changes shall be subject to Change Control. For avoidance of doubt deferrals resulting from the Contractor's management of work on the Site will not constitute a Change.	
29b	**Deferred Decommissioning**	To support the Authority's Baseline Strategy in relation to deferred Decommissioning the Contractor shall: To the extent that the SLC Annual Funding Limit or other relevant factors including knowledge or skills base availability, do not permit the Contractor to implement the Decommissioning programme on a continuous basis, the Contractor shall (in accordance with Good Industry Practice and Regulatory Requirements): (i) defer Decommissioning of facilities (or parts thereof) provided that the facilities (or parts thereof) subject to the deferral of Decommissioning give rise to a [Tolerable] risk at all times. (ii) take into account all relevant factors including the capability to re-initiate the Decommissioning programme associated with knowledge retention and skills base and value for money benefit to the Authority to be gained from the deferral in deciding which programmes to defer; (iii) ensure the Decommissioning programme complies with the Decommissioning Principles.	

30		**SMS/TS/B1/SOD001** **UK Pu Disposition**	
30a		To support the Authority's Baseline Strategy for indefinite storage of plutonium the Contractor shall: [i] compile an electronic database for existing records of plutonium inventory by no later than the first anniversary of the Commencement Date; [ii] liaise with and co-operate with Sellafield Ltd to prepare and deliver to the Authority a business case for the early export[27] of plutonium powder to Sellafield. This business case shall include consideration of the opportunity to avoid the need for a new Nuclear Fuels store at the Site, consideration of the NDA Estate wide impact and be prepared in accordance with EGG08; [iii] in accordance with Good Industry Practice and Regulatory Requirements characterise, stabilise and condition appropriately the plutonium and package in cans that are acceptable to Sellafield and in a form suitable to be: a) stored in a new store at the Site until 2076; b) transported to (when placed in a suitable transport package) and stored at Sellafield; and	The provision of evidence to the satisfaction of the Authority that the Contractor has compiled an electronic database for existing records of plutonium inventory by no later than the second anniversary of the Commencement Date including submission of such database if the Authority requests. Delivery to the Authority by the Contractor of a business case produced in accordance with EGG08 and approved by the Authority in relation to the early export of Group [xxx] fuels to Sellafield.

[27] The Authority envisages that this should be done significantly in advance of 2076 – to be discussed in dialogue.

		[iv] agree with Sellafield the storage cans to be used for storage on Site and the transport packages that can be accepted into Sellafield facilities and plan and ensure that storage is consistent with the use of such packages; [v] assist and co-operate with INS in their procurement of the termination of the Legacy Fuel Contracts on terms that are reasonable to the Authority, as detailed in Section 5.4 of the Client Specification. This support may include but is not limited to attendance at Customer meetings and provision of historical contractual knowledge/advice; [vi] act as the consigner of any plutonium to be returned from the Site to the Legacy Fuel Contracts' customers as a result of [v] above.	
30b		To support the Authority's strategic contingency of conditioning of plutonium for direct Disposal the Contractor shall: [i] ensure that the capability to provide an export route for plutonium powder to Sellafield within [10][28] years of an instruction by the Authority of the requirement to provide an export route.	The provision of evidence to the satisfaction of the Authority that the Contractor has the capability to provide an export route for plutonium powder to Sellafield within 10 years of an instruction by the Authority of the requirement to provide an export route.
		To support the Authority's strategic contingency of re-use as spent fuel the Contractor shall:	The provision of evidence to the satisfaction of the Authority that the Contractor has liaised with the

[28] The NDA is considering a shorter timeframe for this requirement

		[i] investigate whether the Contractor can take samples of the chlorine contaminated material; [ii] liaise with the Authority and NNL to determine the type and number of samples that shall be taken and whether the samples of chlorine contaminated plutonium can be shipped to Sellafield for analysis to determine whether the work should be executed (Change Control shall apply if relevant).	Authority and the [NNL] to determine the type and number of samples of the chlorine contaminated material that should be taken to determine whether the material shall be moved to Sellafield for storage and future treatment and whether samples of the chlorine contaminated material can be shipped to Sellafield for analysis.
31		**SMS/TS/B2./SOD002** **UK Un-irradiated Uranics Disposition**	
31a		To support the Authority's Baseline Strategy of extended storage of uranium the Contractor shall: [i] in accordance with Good Industry Practice and Regulatory Requirements characterise, stabilise and condition appropriately and package in cans that are acceptable to Sellafield, Capenhurst or Springfields as appropriate and in a form suitable to be: a) stored in a new store at the Site until 2076; b) transported to (when placed in a suitable transport package) and stored at Sellafield, Springfields or Capenhurst as appropriate; and c) agree with Sellafield, Springfields or Capenhurst, as appropriate, the storage cans to be used for storage on Site and the transport packages that can be accepted into the required facilities on those sites, and plan and ensure that	

		storage is consistent with the use of such packages; [ii] characterise, stabilise, condition, package and store the material in cans in new store at the Site; [iii] confirm that such storage and storage cans comply with the Safety Case and shall provide a transport Safety Case in respect of such storage and storage cans (such Safety Case shall be prepared in accordance with Requirement 56); [iv] ensure materials stored and material of the storage cans will be suitable for transport in accordance with the transport Safety Case and the Package Safety Case.	
31b		To support the Authority's strategic contingency of consolidation of uranium for interim storage at other Authority sites; The Contractor shall liaise and cooperate with Sellafield, Capenhurst and Springfieds to prepare and deliver a business case to the Authority in relation to the possible consolidation of storage with any or all of Sellafield, Capenhurst and Springfields. The business case shall be prepared in accordance with EGG08 and consider the NDA Estate wide impacts. Such business case shall include: (i) consideration of the residual life of the storage	Delivery to the Authority by the Contractor of a business case approved by the Authority and produced in accordance with EGG08 and the requirements of Requirement 31b in relation to the possible consolidation of storage with any or all of Sellafield, Capenhurst and Springfields.

[29] Due to its possible closure.

		facilities at each of these sites; (ii) detailed cost estimates that are based on "in principle" agreements for the conditioning for Disposal of materials at the relevant sites; and due account must be taken of the requirement to ship materials for conditioning for Disposal to Springfields by no later than 1 April 2013.[29]	
31c		To support the Authority's strategic contingency of down-blending and subsequent sale of HEU the Contractor shall: [i] liaise and cooperate with Springfields, Capenhurst and/or Sellafield as appropriate to prepare and deliver to the Authority a business case in accordance with EGG08 in relation to down blend highly enriched uranium, either at Dounreay or on another site, to allow sale of such material. Such a business case should consider the NDA Estate wide impacts.	Delivery to the Authority by the Contractor of a business case approved by the Authority and produced in accordance with EGG08 in relation to down blend highly enriched uranium, either at Dounreay or on another site, to allow sale of such material.
32		**SMS/TS/B2/SOD002** **Overseas owned Uranics**	
		To support the Authority's Baseline Strategy in relation to returning Waste to the customers where possible or taking title to said Waste if this is not possible, the Contractor shall:	

[31] Except in relation to the one commercial legacy fuel contract with UKAEA, transport costs are assumed to be covered by customers and should be excluded from the TC.

		[i] continue to manage the close-out and termination of the one Legacy Fuel Contract that remains with UKAEA NBPB and the one other contract where waste is to be returned as detailed in Section 5.4 of the Client Specification. Manage the return of any Waste or Nuclear Fuels that result from the negotiation to terminate; [ii] provide commercial and technical support to INS with respect to their management of the Legacy Fuel Contracts, (as detailed in Section 5.4 of the Client Specification) [30] that have been novated to the Authority and return the Waste and assist and co-operate with INS in their procurement of the termination of such contracts on terms and conditions that are reasonable to the Authority; [iii] this support may include (but is not limited to) attendance at customer meetings, provision of historical contractual knowledge/advice, technical support related to Waste specifications / allocation / attribution / equivalence and Waste return operations, etc.; [iv] act as consigner for any materials to be returned to customers. This is bounded by the return of Nuclear Fuel associated with the three remaining contracts where customers still have title to Nuclear Fuels on the Site and return of a maximum of 450 ILW drums as per the returns schedule provided by INS for the contracts which they are managing as detailed in Section 5.4 of the Client Specification; [31]	

		[vi] If required by the terms of the commercial settlements negotiated as per Requirement 32a obtain all Necessary Consents and add this material to the UK Inventory under Authority ownership.	
		SMS/TS/C1/SOD001 **Magnox Spent Fuel**	
33a(i)		To support the Authority's Baseline Strategy of reprocessing spent Metallic Nuclear Fuel the Contractor shall: [i] Deliver the DFR breeder fuel to Sellafield in line with Cardinal Milestones for reprocessing as part of the Magnox Operating Plan. [ii] actively pursue the option of including the DFR driver element with the DFR breeder fuel to be sent to Sellafield for reprocessing and advice the Authority if this is possible.	If so requested by the Authority, the delivery of the Consignment documentation demonstration shipment of the In Reactor and Out of Reactor Materials to Sellafield and the receipt of said Materials at Sellafield by the Cardinal Milestones relating to these movements.
33a(ii)		To support the Authority's Baseline Strategy relative to the **one DFR driver element:** [i] develop the LOC and continue the technical programmes to underpin the LOC and obtain LOC consent to enable conditioning of the Nuclear Fuel to be executed before the date on which the IES, is achieved leaving the Nuclear Fuel in a form suitable for Disposal	
33b		To support the Authority's contingency strategy to condition, interim store and Dispose of Metallic Fuel in a GDF as ILW the Contractor shall: [i] develop the LOC and continue the technical programmes to	If so requested by the Authority, the delivery of the LOC referred to in Requirement 33c

		underpin the LOC and obtain LOC consent to enable conditioning of the Nuclear Fuel to be executed before the date on which the IES, is achieved leaving the Nuclear Fuel in a form suitable for Disposal Work should only commence on this option in the event that the project performance shows that the Strategic Baseline is at risk as demonstrated by the reporting against Cardinal Milestone Dates as determined by the Authority.	
33c		To support the Authority's strategic contingency to condition Metallic Nuclear Fuel, store and Dispose of in the Geological Disposal Facility, the Contractor shall: [i] prepare and deliver a business case to the Authority in accordance with EGG08 in relation to dry storage of DFR Fuel; [ii] contact Magnox Drying Project Manager to determine whether such material can fit within the Magnox Drying scope.	Delivery to the Authority by the Contractor of a business case approved by the Authority and produced in accordance with EGG08 in relation to dry storage of DFR Fuel.
34		**SMS/TS/C3/SOD001** **UK Exotics Disposition**	
34a		To support the Authority's Baseline Strategy of indefinite storage for Georgian Fuel the Contractor shall: [i] ensure that all necessary provisions are in place such that the Georgian Fuel will be stored on the Site until 2076; [ii] ensure that Fuel is stored in a form suitable for transport (when placed in a suitable transport package) to another	

		location.	
34b		To support the Authority's Baseline Strategy of conditioning for storage where necessary, storing and conditioning for Disposal the Contractor shall: **For Group 1 Irradiated Miscellaneous fuels, (including thorium based fuel (but excluding the Georgian fuel) and Group 4 Irradiated Oxide:** [i] evaluate the hazard during the interim storage period and evaluate the suitability for transport; [ii] where the evaluation in [i] demonstrates that the Nuclear Fuel is not suitable for storage for the Interim storage period or is not suitable for transport, condition such material so that it is suitable for the Interim storage period and for transport. [iii] store in form which is suitable for (a) storage on Site until 2076; (b) transport (when placed in a suitable transport package) to Sellafield; (c) final Disposal without the need for further treatment beyond the addition of Disposal over-packs; [iv] obtain LoC (or equivalent) for the Disposal of this Nuclear Fuel.	
34c		To support the Authority's strategic contingency to consolidate storage prior to Disposal the Contractor shall: **For Group 1 Irradiated Miscellaneous fuels, (including thorium based fuel but excluding the Georgian fuel) and Group 4 Irradiated Oxide):**	Delivery to the Authority by the Contractor of a business case approved by the Authority and produced in accordance with EGG08 in relation to the transport of the Group 1 (excluding the Georgian Fuel and Group 4 Nuclear Fuel) to Sellafield.

		[i] liaise and cooperate with Sellafield to prepare and deliver an NDA Estate wide business case to the Authority, in compliance with the requirement of EGG08, to transport the Group 1 (excluding the Georgian Fuel and Group 4 Nuclear Fuel) to Sellafield.	
34f		To support the Authority's Baseline Strategy in relation to stabilising, storing, conditioning and sending carbide Fuel to the GDF for disposal the Contractor shall: [i] assess the hazard posed by the Interim Storage Period of carbide Nuclear Fuel; [ii] assume that the material needs to be passivated and convert to oxide unless the Contractor is able to justify direct Disposal of this material through the RWMD process on a timescale that the Authority agrees would allow the material to be passivated prior to the Interim End State should a justification for direct Disposal not meet with RWMDs requirements.; [iii] characterise, stabilise, condition, package and store the material in cans in new store at the Site. Such storage cans shall in be in a form acceptable for storage at Sellafield, Capenhurst and Springfield as appropriate; [iv] confirm that such storage and storage cans comply with the longer term interim storage Safety Case and shall provide a transport Safety Case in respect of this passivated fuel (such Safety Case shall be prepared in accordance with Requirement 56);	

		[v] ensure materials stored and material of the storage cans will be suitable for transport in accordance with the transport Safety Case and the Package Safety Case and in a form suitable for: • interim storage at the Site; • transport to an alternative Authority site; and • interim storage at an alternative site; [vi] if the carbide is converted to oxide as a result of the passivaton and/or stabilisation described in [ii] or [iii] Requirement 31 shall apply.	
34e		To support the Authority's contingency strategy for conditioning using an existing Authority facility, prior to Disposal the Contractor shall for **Carbide Fuel:** . [i] liaise and co-operate with Sellafield in its preparation of a business case to assess the strategic opportunity of passivation of the Sellafield mixed Carbide at Dounreay and the interim storage of the resulting oxide fuel product in line with the Plutonium strategy referred to in Requirement 30.	Delivery to the Authority by the Contractor of evidence of conducting technical underpinning to determine if direct Disposal of the Fuel is possible and of a business case approved by the Authority and produced in accordance with EGG08 in relation to the consolidation, treatment and/or storage of the carbide material either at Springfields for the unirradiated uranium carbide or at Sellafield for the irradiated and mixed carbide.
34g		To support the Authority's contingency strategy for Consolidation of fuels at other NDA sites prior to Direct Disposal, the Contractor shall for **Irradiated Carbide Fuel:**	

		[i] conduct technical underpinning to determine if direct Disposal of the irradiated Carbide Fuel is possible. Should such direct disposal be technically possible, as demonstrated through an approved LoC, work with Sellafield Ltd to prepare and deliver to the Authority a business case to consolidate the irradiated Carbide Fuel are Sellafield and direct dispose of such irradiated Carbide fuel and avoid the need for the construction of an irradiated Carbide Fuel passivation facility.	
35		**SMS/TS/D1 SOD003/D** **HAW: Overseas owned ILW**	
35a		To support the Authority's Baseline Strategy in Scotland, in relation to the return of overseas customers' ILW to the country of origin, the Contractor shall: [I] return Waste to country of origin in accordance with the Legacy Fuel Contracts detailed in Section 5.4 of the Client Specification; [ii] liaise and cooperate with INS to support them in securing acceptable transport routes; [iii] continue to manage the close-out and termination of the one Legacy Fuel Contract with UKAEA and manage the return	

[32] Except in relation to the one commercial legacy fuel contract with UKAEA, transport costs are assumed to be covered by customers and should be excluded from the TC.

		of any Waste] or Nuclear Fuels that result from the negotiation to terminate; [iv] provide commercial and technical support to INS with respect to managing the Legacy Fuel Contracts detailed in Section 5.4 of the Client Specification that have been novated to the Authority and returning the Waste. This support may include (but is not limited to) attendance at customer meetings, provision of historical contractual knowledge/advice, technical support related to Waste specifications / allocation / attribution / equivalence and Waste return operations, etc.; [v] act as consigner for any materials to be returned to customers, this is bounded by the return of Nuclear Fuel associated with the two remaining contracts where customers still have title to Nuclear Fuels on the Site and return of a maximum of 450 ILW drums as per the returns schedule provided by INS for the contracts which they are managing[32]	
35b		To support the Authority's strategic contingency, in Scotland, to explore opportunities to substitute the ILW for an equivalent amount of HLW and return to the country of origin, the Contractor shall: [I] in accordance with the results of the Scottish Government's Public Consultation on Waste Return, liaise and cooperate with the INS aid them in their agreement of contractual terms in respect to acceptable Waste forms; [ii] prepare and deliver to the Authority a business case in accordance with EGG08 which investigates the possibilities to substitute ILW for an equivalent amount of HLW. Such a	Delivery to the Authority by the Contractor of a business case approved by the Authority and produced in accordance with EGG08 in relation to the investigation of the possibilities to substitute ILW for an equivalent amount of HLW.

		business case should consider the NDA Estate wide impacts; Subject to the Authority's approval of this business case: [iii] liaise and cooperate with INS/Sellafield to support them, if requiring in their agreement of the logistics of HLW returns from Sellafield; and [iv] liaise and cooperate with INS to support them in agreeing acceptable transport routes with the Legacy Fuel Contract customers.	
36		**SMS/TS/D1/SOD004** **HAW – Wet ILW Disposal**	
36a		To support the Authority's Baseline Strategy in relation to the exportation of wet and/or potentially mobile ILW to the Geological Disposal Facility, the Contractor shall: [i] obtain all Necessary Consents and approvals (including the LoC) to enable Disposal of this material to an acceptable Disposal facility; [ii] ensure transport Safety Cases are in place for all Waste forms (such Safety Case shall be prepared in accordance with Requirement 56); [iii] make plans for transportation of the material to the acceptable Disposal facility in accordance with the terms of the LoC and transport Safety Case between 2040 and 2060; [iv] for the purposes of this requirement, the Contractor shall	

		assume that conditioned packages are not routed to Sellafield prior to export to the Geological Disposal Facility. **[This requirement should be read in conjunction with requirement 39 relating to the interim storage of wet ILW.]**	
36b		To support the Authority's strategic contingency to condition wet and/or potentially mobile ILW for continued storage on Site or near surface near site storage, the Contractor shall: [i] inform the Authority, within 18 months of the Commencement Date, of the cost of implementing a strategy of near Site, near surface storage for a period of 300 years and of any implications for planning permissions and land management in relation to such strategy. In doing so, the Contractor shall assess the likely role of existing stores and those which are contributing to this strategy; [ii] inform the Authority if there are step changes of >£5m in the cost profile for implementing the strategy, referred to in [i], associated with, for example, the construction of replacement stores as existing stores reach end of Design Life.	Delivery to the Authority by the Contractor of a report in accordance with the provisions of and which contains the details set out in Requirement 36b.
37		**SMS/TS/D1/SOD005** **HAW – Solid ILW Disposal**	
37a		To support the Authority's Baseline Strategy in relation to conditioning solid ILW for exportation to the Geological Disposal Facility for Disposal, the Contractor shall: [i] obtain all Necessary Consents and approvals (including the LoC) to enable Disposal of this material to an acceptable Disposal facility;	

		[ii] ensure transport Safety Cases are in place for all [Waste] forms (such Safety Case shall be prepared in accordance with Requirement 56); [iii] make plans for transportation of the material to the acceptable Disposal facility in accordance with the terms of the LoC and transport Safety Case between 2040 and 2060; [iv] for the purposes of this requirement, the Contractor shall assume that conditioned packages are not routed to Sellafield prior to export to the Geological Disposal Facility. **[This requirement should be read in conjunction with requirement 40 relating to the interim storage of solid ILW.]**	
37b		To support the Authority's strategic contingency to condition solid ILW for decay, condition Waste for Disposal as LAW and/or exempt waste the Contractor shall: [i] prepare and deliver to the Authority a business case in accordance with EGG08 which sets out the relevant considerations in relation to: • decay storage of ILW and subsequent Disposal as LLW, provided that decay to a lower waste category shall take place with in the design life time of the ILW store of subcategories of solid ILW. Such a business case shall cover the NDA Estate wide impacts;	Delivery to the Authority by the Contractor of a business case approved by the Authority and produced in accordance with EGG08 in relation to consideration of decay storage of ILW and Disposal as LLW and the Contractor's storage strategy.

		[ii] in relation to any material suitable for decay storage the Contractor shall implement a storage strategy that does not preclude a decay storage option, identifying and segregating such waste to facilitate their routing into a LLW stream.	
37c		To support the Authority's strategic contingency to condition solid ILW for continued storage on Site or near Site, near surface storage, the Contractor shall: [i] inform the Authority, within 18 months of the Commencement Date, of the cost of implementing a strategy of near Site, near surface storage for a period of 300 years and of any implications for planning permissions and land management in relation to such strategy. In doing so, the Contractor shall assess the likely role of existing stores and those which are contributing to this strategy; [ii] inform the Authority if there are step changes of >£5m in the cost profile for implementing the strategy, referred to in [i], associated with, for example, the construction of replacement stores as existing stores reach end of Design Life.	Delivery to the Authority by the Contractor of a report in accordance with the provisions of and which contains the details set out in Requirement 37c.
38		**SMS/TS/D1/SOD006** **HAW Graphite – Disposal**	
38a		To support the Authority's Baseline Strategy in relation to conditioning graphite for Disposal to the Geological Disposal Facility, the Contractor shall: [i] obtain all Necessary Consents and approvals (including the LoC) to enable Disposal of this material to an acceptable Disposal facility; [ii] ensure transport Safety Cases are in place for all [Waste]	

		forms (such Safety Case shall be prepared in accordance with Requirement 56); [iii] make plans for transportation of the material to the acceptable Disposal facility in accordance with the terms of the LoC and transport Safety Case between 2040 and 2060.	
38b		To support the Authority's strategic contingency to condition graphite for alternative Disposal (treat and shallow burial), the Contractor shall: [i] review Disposal solutions at other Scottish Sites and advise the Authority if the Contractor considers that these other Disposal solutions represent a viable strategy in relation to the graphite on the Site;	Delivery to the Authority by the Contractor of a report in accordance with the provisions of and which contains the details set out in Requirement 38b.
38c		To support the Authority's strategic contingency to condition graphite for alternative Disposal (treat and dispose as LLW), the Contractor shall: [i explore the possibilities to Dispose of graphite as LLW on or near Scottish Sites as a result of the work being conducted by other Licensees in Scotland; [ii] provided that a viable opportunity exists to Dispose material as LLW on or near other Scottish Sites, prepare and deliver to the Authority a business case in accordance with EGG08 to revise the strategy for Disposal of this material. Such a	If applicable, delivery to the Authority by the Contractor of a business case approved by the Authority and produced in accordance with EGG08 in relation to opportunities to Dispose material as LLW on or near other Scottish sites.

[33] The Authority to check with SA in relation to the timing requirement for this BC.

		business case should consider the NDA Estate wide impacts.[33]	
38d		To support the Authority's strategic contingency to condition graphite for continued storage on Site, the Contractor shall: [i] inform the Authority, within 18 months of the Commencement Date, of the cost of implementing a strategy of near Site, near surface storage for a period of 300 years and of any implications for planning permissions and land management in relation to such strategy. In doing so, the Contractor shall assess the likely role of existing stores and those which are contributing to this strategy. [ii] inform the Authority if there are step changes of >£5m in the cost profile for implementing the strategy, referred to in [i], associated with, for example, the construction of replacement stores as existing stores reach end of Design Life.	Delivery to the Authority by the Contractor of a report in accordance with the provisions of and which contains the details set out in Requirement 38c.
39		**SMS/TS/D1/SOD008** **HAW:Wet ILW – Interim Storage**	
		To support the Authority's Baseline Strategy in relation to the interim storage of conditioned wet and/or potentially mobile ILW pending Disposal, the Contractor shall: [i] manage HAW as part of an integrated approach to Waste management. In doing so, minimise waste and apply the waste management hierarchy approach taking into account value for money, affordability and the protection of health, safety, security and the environment; [ii] treat, condition and package material for long-term storage and/or Disposal in compliance with an approved LoC;	

		[iii] for the purposes of [ii] above, ensure stores will be suitable for storage until 2100; [iv] ensure that any new ILW stores shall be built with a Design Life of at least 100 years; [v] in advance of the planned shipment date to the Disposal facility ensure that the Waste meets the CFA. **[This requirement should be read in conjunction with requirement 36 relating to the Disposal of wet ILW]**	
40		**SMS/TS/D1/SOD009** **HAW: Solid ILW – Interim Storage**	
40a		To support the Authority's Baseline Strategy in relation to the interim storage of conditioned solid ILW prior to Disposal to the Geological Disposal Facility, the Contractor shall: [i] manage HAW as part of an integrated approach to Waste management. In doing so, minimise waste and apply the waste management hierarchy approach taking into account value for money, affordability and the protection of health, safety, security and the environment; [ii] treat, condition and package material for long-term storage and/or Disposal in compliance with an approved LoC; [iii] for the purposes of [ii] above, ensure stores will be suitable for storage until 2100; [iv] ensure that any new ILW stores shall be built with a Design	

		Life of at least 100 years; [v] in advance of the planned shipment date to the Disposal facility ensure that the Waste meets the CFA. **[This requirement should be read in conjunction requirement 37 relating to the Disposal of solid ILW.]**	
40b		To support the Authority's Baseline Strategy in relation to the storage of solid ILW and the deferment of conditioning, the Contractor shall: [i] manage HAW as part of an integrated approach to Waste management. In doing so, minimise waste and apply the waste management hierarchy approach taking into account value for money, affordability and the protection of health, safety, security and the environment; [ii] continue to store material in an unconditioned form, until the Contractor has brought an appropriate Conditioning Facility into operation; [iii] where any solid ILW is appropriate for decay storage, continue to store until a decision is made by the Authority on the decay storage business case. Should the business case referred to in 37b be approved dispose at LLW once the LLW thresholds have been met.	
42		**SMS/TS/D1/SOD010** **HAW: Graphite – Interim Storage**	
42a		To support the Authority's Baseline Strategy in relation to the interim storage of conditioned graphite prior to Disposal to the	

		Geological Disposal Facility, the Contractor shall: [i] manage HAW as part of an integrated approach to Waste management. In doing so, minimise waste and apply the waste management hierarchy approach taking into account value for money, affordability and the protection of health, safety, security and the environment; [ii] package reactor graphite, without further treatment, for long-term storage and Disposal in compliance with an approved LoC; [iii] treat, condition and package Thorium High Temperature Reactor (THTR) graphite for long-term storage and Disposal in compliance with an approved LoC; [iv] for the purposes of [ii] and [iii] above, ensure stores will be suitable for storage until 2100 and plan to transport between 2040 and 2060; [v] ensure that any new ILW stores shall be built with a Design Life of at least 100 years; [vi]In advance of the planned shipment date to the Disposal facility ensure that the Waste meets the CFA.	
42b		To support the Authority's Baseline Strategy in relation to the interim storage of unconditioned graphite, the Contractor shall: [i] manage HAW as part of an integrated approach to Waste management. In doing so, minimise waste and apply the waste management hierarchy approach taking into account value for	

		money, affordability and the protection of health, safety, security and the environment; [ii] continue to store Thorium High Temperature (THTR) graphite in an unconditioned form, until the Contractor has brought an appropriate Conditioning Facility into operation at which time the Contractor shall comply with Requirement 42a.	
43		**SMS/TS/D1/SOD011/** **ILW Thorium**	
43a		To support the Authority's Baseline Strategy in relation to the treatment, conditioning and Disposal of thorium ILW, the Contractor shall: [i] manage HAW as part of an integrated approach to Waste management. In doing so, minimise waste and apply the waste management hierarchy approach taking into account value for money, affordability and the protection of health, safety, security and the environment; [ii] obtain all Necessary Consents and approvals (including the LoC) to enable long-term storage and/or Disposal; [iii] treat, condition and package material for long-term storage and/or Disposal in compliance with an approved LoC; [iv] ensure stores will be suitable for storage until 2100; [v] ensure transport Safety Cases are in place for all thorium Waste forms (such Safety Case shall be prepared in accordance with Requirement 56); [vi] plan to transport material to an acceptable Disposal Facility	

		in accordance with the terms of the LoC and transport Safety Case between 2040 and 2060. [vii] for the purposes of this requirement, assume that conditioned packages are not routed to Sellafield prior to export to the Geological Disposal Facility; [viii] in advance of the planned shipment date to the Disposal facility ensure that the thorium Waste meets the CFA.	
43b		To support the Authority's Baseline Strategy in relation to interim storage of Thorium ILW, the Contractor shall: [i] manage HAW as part of an integrated approach to Waste management. In doing so, minimise waste and apply the waste management hierarchy approach taking into account value for money, affordability and the protection of health, safety, security and the environment; [ii] continue to store the material in unconditioned form until a Conditioning Facility]is constructed; [iii] once an Conditioning Facility is provided, the Contractor shall comply with Requirement 43a;	
44		**SMS/TS/D2/SOD001** **UK Low Activity Waste**	
44a		To support the Authority's Baseline Strategy in relation to maximising the operating lifetime of existing authorised LLW Disposal facilities and optimising the use of the planned UK LLW Disposal capacity, the Contractor shall:	

		[i] manage solid LLW in accordance with the UK Strategy for the Management of Solid LLW; [ii] in relation to the obligation in [i], apply the following principles: [A] manage LLW as part of an integrated approach to Waste management; [B] undertake effective characterisation programmes to ensure rigorous underpinning of Waste information and support good decision making within the regulatory framework; [C] adopt and implement a Waste hierarchy methodology to achieve the following: • where practicable, prevent low level Waste creation; • minimise the amount of LLW to be managed in order to maximise resource and costs benefits; • promote reuse to defer Waste production and extend the life of resources; • recycling of metallic LLW as a preference unless a compelling case is made for an alternative route; • size reduce Waste to ensure best use of Disposal capacity; • use Disposal capacity sparingly, and as a last resort, [D] ensure rigorous consideration of supply chain options, including Segregated Waste Services at LLWR, prior to investment in new infrastructure and Waste processing routes.	

		To support the Authority's Baseline Strategy in relation to the provision of new/alternative UK authorised LLW Disposal facilities in addition to those existing facilities on Site or locally, the Contractor shall: [i] develop new Disposal routes for LLW in accordance with the existing plan for a new LLW Disposal facility at the Site; [ii] optimise the use of such new LLW Disposal facility.	
44c		To support the Authority's strategic contingency for the provision of new/alternative UK authorised LLW Disposal facilities in addition to those existing facilities on Site or locally and for the consideration of co-Disposal with other Wastes, the Contractor shall: [i] review on a frequency in line with Integration Waste Strategy updates~~,~~ whether new opportunities arise to utilise any new UK authorised LLW Disposal facilities and consider co-Disposal with other Wastes and inform the Authority of any such opportunities that represent a value for money benefit to the Authority.	If so requested by the Authority, the delivery of a report confirming that the Contractor has complied with the obligation set out in Requirement 44c and how it has done so.
44d		To support the Authority's strategic contingency for the provision of new/alternative UK authorised LLW Disposal facilities in addition to those existing facilities on Site or locally and for the consideration of Waste treatment and Disposal to international Disposal facilities, the Contractor shall: [i] retain as an option for the treatment (but not the Disposal) of LLW, the utilisation of the services through Segregated Waste Services at LLWR.	

45		**SMS/TS/D2/SOD002** **Lower Activity Wastes (Liquid and Gaseous)**	
		To support the Authority's Baseline Strategy in relation to the strategic alignment with the implementation of the UK Radioactive Discharge Strategy, the Contractor shall: [i] manage the environmental impact of liquid and gaseous discharges through appropriate application of BPEO & BPM and in line with UK Strategy for Radioactive Discharges through compliance with Regulatory Authorisations.	
46		**SMS/TS/D3/SOD001** **Non-Rad & Hazardous Waste**	
		To support the Authority's Baseline Strategy in relation to the strategic alignment with UK and national strategies, the Contractor shall: [i] manage the Directive Wastes in accordance with Scotland's Zero Waste Plan for the management of non-radioactive and hazardous Waste arisings at the Site and consider as part of the Site Integrated Waste strategy; [ii] for the purposes of [i] of this specification, Controlled Wastes shall include Waste that has been declared exempt from regulation under the Radioactive Substances Act 1993 and is managed in practical terms as Directive Waste); [iii] in relation to the obligations in [i] and [ii], apply the following principles: * adopt and implement Waste hierarchy methodology for non-radioactive hazardous and non-hazardous Waste	

		management; * adopt, where appropriate, suitable decision making criteria (e.g. Best Available Techniques (BAT)) to ensure effective application of the Waste hierarchy; * apply a rigorous approach to Waste characterisation and segregation; * periodic review of Waste treatment routes, coinciding with IWS updates, with the aim of ensuring the optimum solution is deployed; * consider the Proximity Principle Disposing of Waste in the nearest appropriate facility.	
47		**SMS/TS/E1/SOD001** **Land and Property - availability**	
47a		To support the Authority's Baseline Strategy in relation to the reduction of the land footprint to the minimum required for the Contractor to deliver the Authority mission, the Contractor shall: [i] co-operate with any Authority initiative to release land and/or facilities as required; [ii] assist and cooperate with the Authority in relation to the Disposal strategy for surplus land; [iii] continue to manage the approach road between the A836 and the Site gate, including off-Site car parking. The management should include maintaining security and safety management for the access route to the Site and any physical maintenance necessary to maintain the road in a good condition.	
47b		**To support the Authority's contingent strategy to retain existing land and acquire new land in pursuit of the Site**	

		mission, the Contractor shall: [i] assist and co-operate with the Authority in its acquisition of any land required in pursuit of the delivery of the IES.	
48		**SMS/TS/E1/SOD002** **Land and Property – End Use**	
48a		To support the Authority's Baseline Strategy in relation to maximising the benefit to the socio-economics of the local area, the Contractor shall, by entering partnership working with the local community and local economic regeneration bodies: [i] when considering the end use of facilities, and in compliance with Requirement 3, consider the socio-economic impact of such facilities.	
48b		To support the Authority's Baseline Strategy in relation to maximising the benefit to the environment by managing the wildlife on the Site, the Contractor shall: [i] assist, liaise and cooperate with the Authority to continue the sensitive management and protection of the Site.	
49		**SMS/TS/F1/SOD001** **Skills and Capability**	
		To support the Authority's Baseline Strategy in relation to working with the SLCs to develop a standardised, consolidated and rationalised approach to people across the Authority	If so requested by the Authority, the delivery of the skills strategy referred to in Requirement 49[iii] and plans referred to in 49[v].

[34] Such collaboration activities are estimated to require the HR Director for 10 mandays per annum and the other mangers for around 60 mandays/annum (excluding travel). These estimates are indicative, and will be discussed further during dialogue.

		Estate, the Contractor shall (in accordance with the Authority's overarching People Strategy) [i] analyse the resource demand, skilling and capability requirements to deliver the Performance LTP, on a short, medium and long term basis; [ii] identify skills/capability gaps; [iii] produce a plan showing how it intends to provide the skill and capabilities necessary to delivery the Performance LTP based on [i] & [ii] above and to manage the downturn in requirements over time; [iv] actively work/collaborate with other SLCs/PBOs via Authority established Forums such as the Authority's People Strategy Board to: (a) ensure such plans as are referred to in [iii] optimise available skills and capabilities across the Authority Estate; (b) supports collaborative initiatives such as the Authority's Shared Services Alliance and the Authority's Engineering and Technology Information Forum; (c) identify Authority Estate wide opportunities relative to human resources which can be subjected to a business case.[34] [v] where an Authority business case demonstrates savings as a result of the opportunities identified in [iv]c implement these opportunities as part of the plan referred to in [iii]. Estate wide	

		opportunities that do not lead directly to a reduction of Target Cost in the SCLA will be subject to Change Control**.**	
50		**SMS/TS/F2/SOD001** **Research and Development**	
		To support the Authority's Baseline Strategy in relation to ensuring that decommissioning and clean-up plans are technically underpinned by sufficient and appropriate R&D, the Contractor shall: [i] ensure that technical underpinning and short, medium and long-term research and development requirements to deliver the IES are fully detailed in the Performance LTP (production of TBuRD ref. PCP07 and EGG10); [ii] ensure that research and development requirements to underpin the Performance LTP is reflected in the Performance LTP, even if opportunities exist to pursue different options; [iii] communicate common research and development needs, risks and opportunities via the Authority's National Waste Research Forum; [iv] actively share with other SLCs good practice in research and development programmes and consider implementation, as appropriate, or good practice identified by other SLCs; [v] subject to the provisions of the Agreement utilise PBO expertise , through reach back arrangements where they exist, Contractor research and development requirements;	

		[vi] pursuant to the provisions of Requirement 49 identify and support the preservation of key scientific and technical skills required to: (a) deliver the IES; and (b) optimise available skills and capabilities for the NDA Estate.	
51		**SMS/TS/F3/SOD001** **Information Risk Management**	
		To support the Authority's Baseline Strategy in relation to the requirement that the Authority and the wider Authority Estate (including subsidiaries and SLCs) are compliant with the statutory, regulatory and HMG guidelines on Information Security, Information Assurance and Information Risk Management, the Contractor shall: [i] comply with all Guidelines on Managing Information;[35] [ii] submit reports required to comply with Guidelines on Managing Information to the Authority's Senior Information Risk Owner to allow reporting across the Authority Estate and to enable the Authority to fulfil its legal obligations; [iii] ensure appropriate systems are maintained to: • maintain corporate memory;	The Contractor shall deliver reports in accordance with Requirement 51(ii).

[35] To be discussed further in a dialogue and amended as necessary

		• facilitate skills transfer and plan for succession; • disseminate best practice; and • share information to safeguard skills and experience required for future activities within the Authority's estate; [iv] participate in the Authority's cross estate information sharing forums and implement agreed outcomes where they generate efficiency savings to the Target Cost or significant benefit to the Authority; and [vii] comply with the Records Agreement.	
52		**SMS/TS/F4/SOD001** **Socio -Economics**	
		To support the Authority's Baseline Strategy in relation to the Authority's requirement to take account of the socio-economic consequences of its plans, engage with local agencies for economic development, to provide financial support to the SLCs for economic expenditure and to provide direct socio-economic funding the Contractor shall: i) comply with the requirements of the Authority's Socio-Economic Policy; ii) maintain the Socio-economic commitments set out in the Life Time Plan (LTP) which exists on the Commencement date and as defined in the current, approved Dounreay Socio Economic Development Pla;	Delivery to the Authority by the Contractor of the Socio-Economic Development Plan and report in accordance with the provisions in Requirement 52.

		iii On an annual basis, develop and submit for the Authority's approval, in accordance with Clause 9.2 of the SLC(a), in conjunction with the Performance LTP, a 3 year rolling Socio-Economic Development Plan, setting out how the Contractor will comply with the Authority's Socio Economic Policy, interpreted locally as the Authority's Socio Economic Caithness and North Sutherland Priority Area Plan June 2009, or as later amended and include: (a) the events activities or functions which that Contractor intends to in compliance with the Authority; (b) the costs of these intended events, activities or functions; (c) the reasons for the selection of these events by the Contractor; and (d) the ways in which it is expected that social, economic or Environmental benefits will be conferred on the local community as a result; iv) on an annual basis, consult with local stakeholder partners on the Socio-Economic Development Plan referred to in (iii) and as a result, amend to reflect the outcome of consultation provided that it remains in compliance with: a. the Authority's Socio-Economic Policy; b. the Authority's Socio-Economic Caithness and	

		North Sutherland Priority Area Plan June 2009 (or as later amended); c. Caithness and North Sutherland Regeneration Partnership Action Plan; d. Annual Site Funding Limit (ASFL). Ring-fenced funding of £500,000, or as later directed by Authority, provided from within the ASFL, shall be allocated to DSRL funded socio-economic activities; v) in order to support Caithness and North Sutherland Regeneration Partnership's priority socio-economic activities, the Contractor will: a. Support and influence national and local regeneration agencies b. Communicate with employees and Trade Unions to develop workforce transition plans at the appropriate time c. Develop individual transition plans and transition training/support programmes as appropriate d. Work with the supply chain to inform and support them in their own workforce transition plans e. Make available the skills and capability plant produced in compliance with Requirement 49[iii] to	

		local interested parties; vi) jointly develop and enter into a Stakeholder & Socio-Economic Partnering Agreement with the Authority and the PBO. The Stakeholder & Socio-Economic Partnering Agreement will provide clarity on how the parties intend to collaborate and cooperate in order to deliver the stakeholder communications and socio-economic activity requirements; and vii) in conjunction with the Performance LTP submission, inform the Authority of the planned Staffing Profile for the Site and Provide updates should this profile change by more than 5% in any one year of the Performance LTP.	
53		**SMS/TS/F5/SOD001** **Competition**	
		To support the Authority's Baseline Strategy in relation to the requirement to select Parent Body Organisations in accordance with the Public Procurement Regulations and Energy Act obligations, the Contractor shall when required: [i] assist and cooperate with the Authority's competition team through	

[36] To be further developed by the Authority in conjunction with the drafting in the SLCA.

		(a) the provision of requested information, either by the Authority or perspective bidders; (b) the formation of a team, at the start of the competition process to facilitate the Site support to competition (including Site access by bidders) and to manage the subsequent transition to the new PBO; (c) as part of the team detailed in (b) above provide a liaison point of contact to the Authority. [ii] observe any reasonable competition protocols determined by the Authority.[36]	
54		**SMS/TS/F8/SOD001** **Supply Chain**	
54a		To support the Authority's Baseline Strategy in relation to the Authority's requirement to optimise the supply chain across the Authority Estate, the Contractor shall: [i] liaise and cooperate with other SLCs to seek efficiencies, share best practice and information and implement the output of such collaboration; [ii] apply Good Industry Practise in communication with the supply chain to ensure information is available in an open, transparent, accurate, timely and consistent manner.	
54b		To support the Authority's Baseline Strategy in relation to the Authority's requirement to work with other nuclear clients and explore synergies with other industries, the Contractor shall: [I] liaise and cooperate with the wider nuclear estate and other	

		industries to seek and implement best practice.	
55		**SMS/TS/F9/SOD001** **Stakeholder Engagement**	
		To support the Authority's Baseline Strategy in relation to pursuing open and transparent communication, developing individual communication strategies as appropriate, the Contractor shall: [i] carry out public and stakeholder engagement and communication in accordance with Good Industry Practice; [ii] comply with the principles set out in the [Public, Stakeholder Engagement and Communications Topic Strategy Summary]; [iii] within 3 months of the Commencement Date the Contractor shall put in place a communications protocol agreement between the Contractor and the Authority, in line with that which existed under the M&O Contract; [iv] maintain a website (www.dounreay.com) until the date on which the IES is achieved. [v] provide secretarial and administrative support to the Dounreay Stakeholder Group in accordance with the Authority's Guidance for Site Stakeholder Groups (SSG). This support shall be funded by the Contractor through the SLCA as an allowable cost to be included in the Target Cost.	
56		**SMS/TS/F10/SOD001** **Transport and Logistics**	
		To support the Authority's Baseline Strategy in relation to the	

		Authority's requirement to work with SLCs and Regulators to define principles under which they procure transport services, the Contractor shall: [i] in developing plans in relation to transporting Waste, Nuclear Fuel or nuclear material from the Site to an intermediate or final storage facility take into consideration: • safety; • security; • cost; • environmental impact; • disturbance throughout transport route; • value for money to the Authority; and • effective utilisation of existing Authority owned assets and resources; [ii] liaise with the Authority to ensure use of Authority transport assets and capability are appropriately considered and to co-ordinate Waste, Nuclear Fuel or nuclear material movement to central facilities; [iii] ensure that the suitability of existing infrastructure, particularly the use of Authority Assets, is considered before the Contractor invests in new infrastructure.	
57		**SMS/TS/F11/SOD001/A** **HSSSEQ**	
		To support the Authority's Baseline Strategy in relation to the requirement to secure legal compliance with the UK HSSSEQ legislation and Energy Act requirements, the application of Good Industry Practice and the pursuit of continuous improvements in Health, Safety, Security, Safeguards,	

		Environment and Quality (HSSSEQ) performance and the best overall balance of outcomes, the Contractor shall: [i] pursue an approach that strives towards a goal of no harm to people or to the environment; [ii] put in place fit-for-purpose HSSSEQ arrangements which minimise waste and inefficiency and are appropriate and optimised to the circumstances of their application; [iii] put in place arrangements that manage in a suitable manner, balancing the control and management of short term risk with management of the hazard lifecycle, to achieve the best overall outcomes; [iv] maintain the existing DSRL HSSSEQ continuous improvement programme, in accordance with Good Industry Practice; [v] share best practice across the Authority Estate and work together with the rest of the Authority Estate to develop common solutions where appropriate~~;~~ [vi] assist and liaise with the Authority to develop common agendas and reflect these in discussions with the Regulators and responses to future consultations; [vii] maintain constructive and effective relationships with Regulators; [viii] maintain the existing open reporting culture such that	

		information on HSSSEQ is provided by the Contractor to the Authority on a timescale commensurate with the significance of the issue being reported.	
58		**SMS/TS/F12/SOD001/A** **Asset Management**	
		To support the Authority's Baseline Strategy in relation to the requirement to adopt a recognised asset management standard such as the Publicly Available Specification PAS 55, the Contractor shall implement an asset management system in accordance with: [i] Good Industry Practice so as to demonstrate a maturity level of 3 as measured in the Publicly Available Specification – 55; [ii] any relevant and recognised guidance (e.g. HSE, IAEA, professional bodies, etc.) associated with the management of assets. The Contractor's asset management system should reflect the Authority's agreed principles[37] incorporated in the relevant SLC documents as at the Commencement Date.	
59		**SMS/TS/M1/SOD001/A** **International Relations**	
		To support the Authority's Baseline Strategy in relation to the	

[37] The principles are still being discussed with the SLC and will be made available once they are authorised.

		Authority's requirement to maintain strategic international relationships, including bilateral agreements where appropriate and to facilitate access to international organisations for SLCs as well as SLCs utilising reach back routes, the Contractor shall: [i] utilise the Authority's international relationship routes, as defined in the International Relations Topic Strategy Summary to: (a) foster good contacts within overseas counterpart organisations; and (b) facilitate the exchange of information and other collaboration mechanisms; in pursuit of delivery of the IES delivery; [ii] subject to the provisions of the Agreement utilise Parent Body expertise and relationships as appropriate to deliver the Authority's contractual requirements.	

3.5 Cardinal Milestones

3.5.1 – Decommissioning Active Facilities							
Drivers	**Potential Value**	**Cardinal Milestone**		**Contract Baselines Date**	**Stretch Target (M&O)/Comments**	**Definition of Completion**	**SOD Ref**
Reduce hazards and hotel costs Safe interim storage of wastes and nuclear materials	Hazard reduction in a cost effective and environmentally sustainable manner Reduction in security costs through consolidation of materials	**Contract Term – Delivery of IES**					
		A	Handover of D1209 two stack vent system to enable cleaning an decommissioning of redundant vent to commence	Q4 2011/12			**A4**
		B	Demolish redundant D1207 LLW facility to slab level in accordance with the mission to decommission the site	Q2 2011/12			**A4**
		Encapsulation of Liquid Wastes and Decommissioning of Liquid Storage Facilities					
		1	Encapsulation of higher activity liquors in cement through Dounreay Cementation Plant	2010/11 80 m^3 2011/12 100 m^3 2012/13 100 m^3		All wastes from tanks ( ) processes through the encapsulation tank, heels washed out and processed or disposed of according the to the activity levels and operating ceased	D1/8
		M28	MTR Raffinate Immobilisation Complete			All MTR tank processing complete and tank heels washout out to a level of xx (activity and level to be specified)	D1/8
		M29	POCO of D2700			All operational inventories removed form the plant and plant demonstrated to meet the conditions of the safety case conditions for decommissioning to commence.	D1/8
		M30	Dounreay Site encapsulation plant and store operational			Plant fully commissioned, operational safety case in place and authorised and design	D1/8

						throughputs for the plant and store demonstrated.	
		M3 1	ADU Floc Immobilisation Complete			All Floc removed form the Floc Storage Tanks and heels washed out to a level of [xx (activity and level to be specified)]	D1/8
		M3 2	DFR Raffinate Immobilisation Complete			All DFR Raffinate Storage Tanks emptied and heels washed out to a level of [xx (activity and level to be specified)]	D1/8
		M3 3	PFR Raffinate Immobilisation Complete			All PFR Raffinate Storage Tanks emptied and heels washed out to a level of [xx (activity and level to be specified)]	D1/8
		M3 4	D1208 POCOed			All operational inventories and wash liquors removed from the plant and plant demonstrated to meet the conditions of the safety case conditions for decommissioning to commence.	A4
		M3 5	Liquid Raffinate and Misc Liquid Waste Encapsulation Plant POCOed			All operational inventories and wash liquors removed from the plant and plant demonstrated to meet the conditions of the safety case conditions for decommissioning to commence.	A4
		M3 6	Solvent Destruction complete			Solvent contained in the Storage Tanks and miscellaneous solvents removed from tanks and destroyed. Demonstration that any solvent residues meet the conditions of the decommissioning safety case including any environmental requirements.	D1/8
		M3	D1208 storage tanks decommissioned and			All tanks removed from D1208, ILW	A4

		7	all waste packaged for disposal or disposed of.			waste packaged for disposal, building demolished, LLW disposed of and voids backfilled.	
		M38	All ILW in store in compliance with Requirement 11 of the Client Specification			Demonstration that all wastes are in store and meet the Conditions for Acceptance of the Disposal Facility and requirements of the transport safety in compliance with Requirement 11 of the Client Specification.	D1/5, 6,8,9, 10,11
		Fuels					
		M39	Construction of new fissile store complete			Construction complete, operational safety case in place and planned loading rate demonstrated	
		M40	Construction of new Fuel characterisation facilities for the characterisation of materials complete			Plant constructed, fully commissioned, operational safety case in place and design throughputs demonstrated to the reasonable satisfaction of the Authority	B1, B2, C1, C3
		M41	Fuels characterised for future management in accordance with R11a or otherwise removed from the Site in accordance with the Client Specification			Demonstration that all fuels have the necessary characterisation data to satisfy the interim storage safety case, transport safety case and Conditions for acceptance for other receipts sites where these are specified as part of the Client Specification.	B1,B2 ,C1,C 3
		M42	Carbide fuels passivated in compliance with Requirement 34f of the Client Specification			Carbide fuels converted to oxide and demonstrated to have all the necessary characterisation data to satisfy the interim storage safety case, transport safety case and Conditions for acceptance at other receipts sites where these are	C3

						specified as part of the Client Specification.	
		M43	All fuels in long term safe store or shipped off-Site			Fuels in storage at IES demonstrated to meet the LoC (or fuels equivalent) for the Disposal Facility and demonstrated to meet (when placed in an appropriate package) the requirements for transport or disposal.	B2
		M44	Fuel and Nuclear Material characterisation and passivation facility decontaminated suitable for demolition			Surface activity removed such that the requirements of the decommissioning safety case have been satisfied and the plant is demonstrated to be suitable for demolition without the need for future decontamination.	
		M45	D2670 decontaminated, suitable for demolition			Surface activity removed such that the requirements of the decommissioning safety case have been satisfied and the plant is demonstrated to be suitable for demolition without the need for future decontamination.	B1,B2,C1,C3
		M46	Security arrangement that apply at the IES implemented			Nuclear materials removed from site or consolidated to minimise the categorisation of the site and facilities on the site. Security regime for these conditions reflected in the site security plan and approved by OCNS. Revised security plan implemented.	
		Active Facilities Decommissioning					
		M47	DMTR Decontamination completed			Surface activity removed such that the requirements of the decommissioning safety case have	A4

						been satisfied and the plant is demonstrated to be suitable for demolition without the need for future decontamination.	

		9				condition which complies with an approved LoC.	
		Contingent Strategies					
		M55	Develop business case to investigate consolidation of uranics and exotic fuels with other similar materials on other Authority sites and the early export of plutonium to Sellafield			Submission of business case which considered the estate wide business case to the Authority relative to movement of fuels and nuclear materials to other locations, in compliance with EGG08.	B?, C1, C2
		Milestones Post Contract Delivery – to be planned as part of FES plan					
		(i)	Transfer remaining waste and fuels to the final disposition location.			Demonstration of receipt of all materials from the site at the Disposal Facility or other Authority Site.	

3.5.2 – Dounreay Fast Reactor Decommissioning

Drivers	Potential Value	Cardinal Milestone		Contract Baselines Date	Stretch Target (M&O)/Comments	Definition of Completion	SOD Ref
Complete processing of liquid metals as soon as practicable. Secure alternative spent fuel	Hazard reduction from liquid metals Reduction in security costs through consolidation of materials	**Contract Term – Delivery of IES**					
		A	Commence dispatch of at least 15 Breeder Flasks to Sellafield	Q3 2011/12			C3
		B	Complete dispatch of at least 15 Breeder Flasks to Sellafield	Q4 2011/12			C3
		C	Complete destruction of NaK Batches	90/annum			A4
		M2	Complete inner sphere inactive commissioning of the Breeder Fuel Removal plant at DFR	Q1 2012/13		Inactive commissioning complete, commissioning report written and authorisation received to	A4

management options in case of failure of the encapsulation strategy for DFR fuel. Safe interim storage of fuel.						commence active commissioning	
		M1	Complete NaK Destruction	Q4 2012/13		All bulk NaK removed such that the residual NaK can be processed through the planned residues route and the in reactor DFR Breeder Fuel can be removed.	A4
		M3	Drain and decontaminate DFR pond ready for demolition in accordance with the strategy to remove hazards			Surface activity removed such that the requirements of the decommissioning safety case have been satisfied and the plant is demonstrated to be suitable for demolition without the need for future decontamination.	A4
		M4	Complete DFR Fuel Removal from Reactor			All DFR Fuel removed from the Reactor (see also milestone 11)	A4
		M5	Complete removal of all DFR liquid metal residues			All DFR liquid metals passivated. Demonstration that the liquid metal hazard has been eliminated and authorisation to remove the conditions imposed by the safety case relative to liquid metals received.	A4
		M6	Decontaminate DFR structures suitable for demolition			Surface activity removed such that the requirements of the decommissioning safety case have been satisfied and the plant is demonstrated to be suitable for demolition without the need for future decontamination.	A4
		M7	Demolish all DFR structures to foundation plinth level.			All structures , including the Breeder Fuel Removal Plant, demolished to foundation plinth level, resulting waste dispose of and any voids backfilled.	A4
		M8	Export route, including the commissioning of	Dec 11		Inactive commissioning complete,	C3

			the equipment to export the out of reactor DFR Fuel ready to export to Sellafield			commissioning report written and authorisation to commence active commissioning received.	
		M9	Completion of delivery of all out of reactor DFR fuel to Sellafield	July 2013		Nuclear material transfer paperwork in place to demonstrate receipt at Sellafield of all the out of reactor DFR fuel.	C3
		M10	Completion of delivery of all in reactor DFR fuel to Sellafield	15th Aug 2016		Nuclear material transfer paperwork in place to demonstrate receipt at Sellafield of all the in reactor DFR fuel.	C3
		Contingent Strategies					
		Milestones Post Contract Delivery – to be planned as part of FES plan					

3.5.3 – Prototype Fast Reactor Decommissioning

Drivers	Potential Value	Cardinal Milestone		Contract Baselines Date	Stretch Target (M&O)/Comments	Definition of Completion	SOD Ref
Complete processing of residual liquid metals Safe interim storage and management of fuels Make process towards Interim End State	Hazard reduction from liquid metals Reduction in security costs through consolidation of materials	**Contract Term – Delivery of IES**					
			Remove 137 of the 176 spent fuel cans from the buffer fuel store and pond matrix	Q4 2013			
			Remove and destroy sodium from the contaminated material at PFR	2010/11 11 loads 2011/12 15 loads 2012/13 10 loads			
		M12	Complete the removal of spent fuel cans from the buffer fuel store and pond matrix			Consignor paperwork to demonstrate that all the can have been removed and received at the planned location	A4
		M11	All PFR liquid metals destroyed, including KnK Sodium			All PFR liquid metals removed. Demonstration that the liquid metal hazard has been eliminated and authorisation to remove the conditions imposed by the safety case relative to liquid metals received.	A4
		M13	Fuel treated and transferred to cask store			Demonstration that all fuel is now in storage in cask store and that it is suitable for transport and disposal (when placed in the appropriate package)	C3
		M14	Reactor Dismantled			Reactor removed, all resulting waste disposed off. Area reclassified.	A4

		M15	Decontamination of PFR pond, suitable for final disposal			Surface activity removed such that the requirements of the decommissioning safety case have been satisfied and the plant is demonstrated to be suitable for demolition without the need for future decontamination.	A4
		M16	Decontamination of PFR fuel caves suitable for final disposal			Surface activity removed such that the requirements of the decommissioning safety case have been satisfied and the plant is demonstrated to be suitable for demolition without the need for future decontamination.	A4
		M17	PFR structures demolished to foundation plinth level			All structures demolished to foundation plinth level, resulting waste disposed of and any voids backfilled.	A4
		M18	Reactor Waste Packaging Plant actively commissioned and operating to design throughput			Operational safety case in place and design throughputs demonstrated.	A4
		Contingent Strategies					
		Milestones Post Contract Delivery – to be planned as part of FES plan					

3.5.4 – Shaft and Silo Decommissioning

Drivers	Potential Value	Cardinal Milestone		Contract Baselines Date	Stretch Target (M&O)/Comments	Definition of Completion	SOD Ref
Retrieval of the historic ILW disposals, ensuring aestivation to a standard which allows future disposal to an appropriate facility.	Hazard reduction form Shaft retrievals Stakeholder acceptability of the end state Modern disposal records available for the future	**Contract Term – Delivery of IES**					
		M19	Shaft Headworks Operational			Plant fully commissioned, operational safety case in place and design throughputs demonstrated from export through to store loading	D1/8
		M20	Silo Headworks Operational			Plant fully commissioned, operational safety case in place and design throughputs demonstrated from export through to store loading	D1/8
		M21	Solid Waste Encapsulation Plant Operational				
			Silo waste retrieval and encapsulation complete			All waste retrieved and residual contamination shown to meet the requirements of the Interim End State	D1/8
		M23	Shaft waste retrieval and encapsulation complete			All waste retrieved and residual contamination shown to meet the requirements of the Interim End State	D1/8
		M25	Silo declassified and backfilled			Void filled and any necessary engineering barriers required to meet the conditions of the Site Environmental Safety Case installed.	A2
		M25	Shaft backfilled and capped			Voids filled and any necessary engineering barriers required to	A2

						meet the conditions of the Site Environmental Safety Case installed.	
		Contingent Strategies					
		Milestones Post Contract Delivery – to be planned as part of FES plan					
		(i)	Transfer remaining waste to final disposal location				D1/4-6

3.5.5 – Site Decommissioning – Non-Active Facilities

Drivers	Potential Value	Cardinal Milestone		Contract Baselines Date	Stretch Target (M&O)/Comments	Definition of Completion	SOD Ref
Making progress to achieving the Interim End State	Minimisation of cost associated with maintenance of redundant facilities.	**Contract Term – Delivery of IES**					
			Balance of site structures demolished			All structure other than those retained at IES and those mentioned specifically within other Cardinal Milestones demolished to foundation plinth level, resulting waste disposed of and any voids backfilled.	A4, A2
		Contingent Strategies					
		Milestones Post Contract Delivery – to be planned as part of FES plan					

3.5.6 – Waste Services3.5.6 – Waste Services							
Drivers	**Potential Value**	**Cardinal Milestone**		**Contract Baselines Date**	**Stretch Target (M&O)/Comments**	**Definition of Completion**	**SOD Ref**
Provision of waste service necessary to facilitate hazard reduction and decommissioning	Minimisation of impact of waste services through the appropriate application of waste hierarchy	**Contract Term – Delivery of IES**					
		M56	SEPA RSA authorisation received for new LLW facility			Authorisation received from SEPA	D2/1
		M57	NII Authorisation received for Operational Safety Case for new LLW Facility			Authorisation received from NII	D2/1
		M59	New LLW Facility, including the grouting plant operational and operating to design throughput			Plant operational, operational safety case in place and authorised, design throughput from waste receipt, through the grouting and waste encapsulation process demonstrated.	A2,A3
		M60	LLW Pit Retrieval Complete			All waste removed and re-disposed of in the new LLW facility. Waste transfer and waste disposal records in place.	A2
		M61	LLW Facility closed - facility capped and environmental safety case in place			Demonstration that the facility has been closed in compliance with authorised Site Environmental Safety Case.	A2
		Contingent Strategies					
		Milestones Post Contract Delivery – to be planned as part of FES plan					
		(i)	Waste form the decommissioning of the buildings in place at IES dispose of				

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3.5.7 – Site Closure and Environmental Remediation

Drivers	Potential Value	Cardinal Milestone		Contract Baselines Date	Stretch Target (M&O)/Comments	Definition of Completion	SOD Ref
Risk from contamination left in situ demonstrated to be tolerable at IES Institutional controls in place Limited intervention require to manage the Site post IES	Site safe and secure with minimal intervention	**Contract Term – Delivery of IES**					
		MM 62	Strategy for particle management agreed with stakeholders			Stakeholder agreement to (including as a minimum DSG, Local and Scottish Government and Regulators) the particle management strategy obtained such that the Performance LTP can reflect the scope to achieve this End State without the need for further change control.	A2,A3
		M6 3	All soil/groundwater remediation complete in compliance with Requirements 8 of the Client Specification			Defined in Table 3.3.1	A2,A3
		M6 4	Regulatory agreement reached on soil clean-up and groundwater levels			Written agreement in place with the Regulators of the standards that will need to be met at IES to ensure that the FES can be achieved. This must address the issue of localised areas of higher activity and detail the basis by which it is established that the risk to people and to the Environment is at an acceptably low level.	A2,A3
		M6 5	Characterisation of land and groundwater complete			Demonstration that the planned characterised as detailed in the agreed LQM plan has been completed.	A2,A3
		M6 6	Particles remediated to agreed end point			Demonstration that the End State	A2,A3

						which was agreed in Milestone 1 has been met, through the submission of radiological surveys.	
		M67	Site wide environmental safety case in place and approved			Authorisation from the regulators for the Site Environmental Safety Case, encompassing all contamination including that in authorised disposal sites (LLW Facility and Landfill 42) Evidence that the Contractor has worked with SEPA to review and rationalise the permits (including CAR permits, PPC permits and waste management licenses), and regulatory authorisations in place at the IES and that those licenses no longer required have been surrendered.	A2,A3
		M71	Article 37 submission to Scottish Government to cover the time period between IES and FES			Provision of to the Authority of evidence that SEPA views the Article 37 as a quality submission, meeting the necessary requirements and has endorsed its onward transmittal to the European Commission.	
		Milestones Post Contract Delivery – to be planned as part of FES plan					
		(i)	All waste packages ILW shipped to final storage/disposal location				**D1/4/5/6**
		(ii)	All fuels shipped to GDF				**B1/B2/C1/C3**
		(iii)	All buildings demolished and resulting				**A4**

			wastes disposed off				
		(iv)	Final institutional care arrangements in (place				**A2**
		(v)	Final end state achieved				**A2**

3.5.8 – Project Support

Drivers	Potential Value	Cardinal Milestone		Contract Baselines Date	Stretch Target (M&O)/Comments	Definition of Completion	SOD Ref
Support the Site to reach IES	Hazard reduction in a cost effective and environmentally sustainable manner through appropriate management of hotel costs	**Contract Term – Delivery of IES**					
		M70	Submission of FES plan and associated deliverable 3 years prior to contract completion to facilitate competition of the post IES contract in compliance with requirements 72, 73, and 73a[i] of the Client Specification	3 years prior to contract completion			
		M71	Submission of IES deliverable 12 months prior to IES to enable audit prior to IES completion in compliance with requirements 60, 61 (in its entirety), 73(a)[ii] and 74 of the Client Specification.	1 year prior to IES completion			
		Contingent Strategies					
		Milestones Post Contract Delivery – to be planned as part of FES plan					

3.6 Operating Plan Requirements DSR Limited

Dounreay								
		Delivery Period						
Description of Incentivised Metrics with base and stretch targets		**2010/11**				**2011/12**	**2012/13**	
		Q1	**Q2**	**Q3**	**Q4**			
Bulk Sodium Potassium (NaK) destruction at Dounreay Fast Reactor								
Base/DSO	No. of batches of NaK destruction	25	50	65	90	90	80	
Stretch	No. of batches of NaK destruction				110	110	40	
Encapsulate highly active liquors in cement at the Cementation Plant (DCP)								
Base/DSO	Encapsulate m3 of highly active liquors in cement				80	100	100	
Stretch	Encapsulate m3 of highly active liquors in cement				100	110	110	
Removal of spent fuel cans from the PFR buffer store and pond matrix								
Base/DSO	Remove 137 of 176 spent cans (remaining 39 programmed for 2013/14)				26	39	72	
Remove and destroy sodium from contaminated material at the Prototype Fast Reactor Plant								
Base	Remove and destroy XX loads of sodium from contaminated material at the Prototype Fast Reactor	2	6	9	11	15	10	

Description of Payment Milestone with base and stretch targets		Delivery Period		
		2011/11	2011/12	2012/13
Integration and active commissioning of Fuel Cycle ventilation system				
Base/DSO	Complete integration and active commissioning of Fuel Cycle Area ventilation system	Q4		
Sanction and validation for Phase 1 of new LLW facility				
Base/DSO	Complete sanction and validation for Phase 1 of new LLW facility	Q4		
Low Active Drain Installation for shaft and silo waste treatment plant				
Base	Complete LAD installation for the shaft and silo waste treatment plant. This must be constructed to empty ILW from the shaft	Q3		
Remote Handling Intermediate Level Waste (RHILW) immobilisation and encapsulation facility				
Base/DSO	Complete Phase 4 Preconstruction Safety Case Review design of RHILW immobilisation and encapsulation facility	Q4		
Inner Sphere inactive commissioning of the Breeder Fuel Removal plant at the Dounreay Fast Reactor (DFR)				
Base	Complete Inner Sphere inactive commissioning of the Breeder Fuel Removal plant at the Dounreay Fast Reactor (DFR)			Q1
Redundant Sub-Sea Effluent Discharge Pipeline				
Base	Complete grouting of redundant sub sea effluent discharge pipeline and diffuser to avoid contamination being exposed to the environment		Q4	
Bulk Sodium Potassium (NaK) destruction at Dounreay Fast Reactor				
Base	Complete NaK Destruction			Q4
Stretch	Stretch to complete in 2012			Q2
D1209 Stack Vent				
Base	Handover of D1209 two stack vent system to enable cleaning and decommissioning of redundant vent to commence	Q4		
DFR Pond				
Base	Drain and decontaminate DFR pond ready for demolition in accordance with the strategy to remove hazards			Q1
D1207 LLW Facility				
Base	Demolish redundant D1207 LLW facility to slab level in accordance with the mission to decommission the Site		Q2	
Achieve Regulator Approval of Post Operational Safety Case for capping of Landfill 42				
Base	Dounreay Environment Committee and Regulator approved Post Operational Safety Case (POSC) for capping of Landfill 42	Q4		
Complete Decommissioning of sentencing tanks at Dounreay Materials Test Reactor				
Base	Complete decommissioning of the D1251 Sentencing Tanks		Q4	

Description of Payment Milestone with base and stretch targets		Delivery Period		
		2011/11	2011/12	2012/13
Integration and active commissioning of Fuel Cycle Area ventilation system				
Base	Complete decladding of Out of Reactor Breeder Fuel	Q3		
Base	Remove decladding machine from D2001	Q4		
Base	Complete installation of equipment for loading flasks with Breeder Fuel		Q2	
Base	Commence despatch of at least 15 Breeder flasks to Sellafield		Q3	
Base	Complete despatch of at least 15 Breeder flasks to Sellafield		Q4	
Ongoing support to the DSRL PBO Competition, completing Transition and Exit plans and ensuring DSRL treats all participants equally				
Obtain Authority approval for the Transition and Exit plans		Q3		
Complete set-up of data room		Q3		
Complete change controls associated with “flat” £150M funding		Q3		

4.0 Alternative Strategies (each to be read in the context of the quoted reference elements of Section 3 (Authority Requirements) of this Client Specification

1. Opportunity to store/condition fuels at alternative sites and minimise security costs - as illustrated, by way of examples, in references 30b, 31b, 33a(i), 33c, 34a(ii), 34c and 34g),.
2. Opportunity to generate an environmental safety case for the LLW Pits, eliminating the need to retrieve - see reference 27 (vi).

3. Opportunity to define a more sustainable Final End State - see reference 27(v).
4. Opportunity to define alternative disposal routes for graphite waste – see references 38b, c and d.
5. Opportunity to include Vulcan ILW in Dounreay stores – see references 26c(i), (ii) and (iii).
6. Opportunity to treat 40 kg mixed carbide through characterisation facility – see reference 34e(i).
7. Opportunity to consolidate irradiated carbide at Sellafield, followed by direct disposal, thereby avoiding the construction of the irradiated carbide treatment plant - see reference 34g.

5.0 Authority Assumptions and Scope Quantification

Authority Assumptions will be further developed through dialogue. A full list will be published with the Invitation to Submit Final Tender.

i. Volumes of contaminated land are assumed to be as specified in Inventory of Radioactive Contamination in the Ground 2008, Feb 2010, DEC(10)P279 and in particular Table 14 and the clarifying paragraph below relating to zone 14A.[39]

ii. The waste from Landfill 42 should not be retrieved.

iii. No scope to maintain the Dounreay Castle structure, other than that required to ensure safety, should be included.

iv. Should no conditions be imposed by Scottish Heritage at ITSFT the Target Cost should include the minimum maintenance regime to ensure that it poses no safety hazard to personnel on Site

v. Plans for future ILW transport to the final disposal facility should take place between 2040 and 2060, with safe storage available until 2100 if required.

vi. Particles – for the purposes of the Target Cost assume that the End State for particles will be achieved when the planned scope, described in Requirement 20, is completed.

vii. Plan to move Fuels and Nuclear Materials to a Disposal facility in 2076, with the capability to store until 2100 if necessary.

viii. Plan to demolish the stores and structures in place at IES after their contents have been emptied and plan to dispose of the resulting waste.

ix. Plan to review the management arrangements that are in place for the Site and implement such arrangements are required after the wastes and fuels are removed from the site

x. Plan to maintain the necessary institution controls until the site is delicensed, and any additional controls required by the Site Environmental Safety Case thereafter.

xi. Exclude from the Target Cost all costs in relation to the construction, operation and decommissioning of the plant for packaging Fuels for Disposal. For the avoidance of doubt, the Final End State LTP (pursuant to Requirement 72) shall include a schedule and a detailed costs breakdown in relation to the plant during the time period between IES and the FES. Assume that the final outer package is a copper canister.

[39] Reference to be updated when the 2009 Inventory Data is available.

5.1 Waste Inventory

Radioactive Wastes

Waste Type		Raw in Store (m^3)	Estimated Future Arisings (m^3)	Total[8] (m^3)	No. of Packages in Store	Package Type	Package Information Date
HLW		N/A	N/A	N/A	N/A		
RHILW	**Solid ILW**	222	1770	1992	0		
	Sludge	116	357	473	3142		
	Liquids (inc solvent)	885	0	885	0	500 litre drums	01/04/2010
CHILW	**Solid**	1038	289	1327	0		
	Liquid	82	0	82	0		
LLW	**Solid**	592	52656	53248	410	HHISOs	01/04/2009
	Sludge	16	32	48			
HVLA		1820	13499	15319			
HVLA (left in situ)							

Clean and Exempt Wastes

Waste Type		Raw in Store (m^3)	Estimated Future Arisings (m^3)	Total (m^3)
Exempt	**Inert**	**0**	68664	68664
	Non-Hazardous	**0**	25214	25214
	Hazardous	**0**	640	640
Clean	**Inert**	**0**	483085	483085
	Hazardous	**0**	64669	64669
	Non-Hazardous	**0**	1533	1533

* Note: data is extracted from the Integrated Waste Strategy for LTP10 and is not live data. Figures may have changed and will be updated for the ITSFT.

These figures are taken from the 2010 waste inventory which provides further details of the waste streams, planned treatment routes and the estimating basis where appropriate.

5.2 Dounreay Nuclear Inventory [RESTRICTED DATA REMOVED FROM THIS VERSION OF THE DOUMENT UNTIL SECURITY ASPECTS LETTER IS COMPLETED]

Fuel Type	Mass (HM kg)	Group Fuel Inventory Group
Irradiated Miscellaneous		1
Wastes		2
Plutonium – Unirradiated		3
Irradiated Oxide		4
Thorium – Unirradiated		5
Enriched Uranium – Unirradiated		7
DFR Breeder – Irradiated		8
Natural/Depleted Uranium		9
Carbide		10
Total		

Data as at 26th January 2010

5.3 Status of Waste Disposability Assessment

Dounreay Letter of Comfort/Compliance - As at 12/03/2010

NDA RWMD File Ref	Other Doc Ref	Waste Stream	Stage	Date
TPC 10 004	UX/53/12	MTR Liquors in Dounreay Cementation Plant	Conceptual	11/06/90
TPC 10 004	UX/53/12	500 Litre "Liquor" drum for DCP	Drum Only	04/01/91
TPC 10 631	LOC/553493	PFR Mixer Breeder Sections	Conceptual	8/01/08
TPC 10 470	LOC/9542129	Irradiated Thorium Fuel Pin Pieces	Conceptual	13/02/2009
TPC 11 050	LOC/10305789	DFR Decom - reactor metals	Conceptual	9/05/2009
TPC 11 050	LOC/10307035	DFR Decom – DFR Graphite	Conceptual	9/05/2009
TPC 11 070	LOC/11990933	THTR Graphite	Conceptual	05/03/2010

No Letter of Compliance (at Present)

LTR/500310	N/A	DFR Breeder Waste (Out of Reactor)		
TPC 10 166	LTR/9796479	D3200 Shaft & Silo Wastes	Conceptual	08/10/2008
TPC 11 010	LTR/9257787	Dounreay Oxide Fuels*	Pre-Conceptual	08/12/2008
TPC 11 013	LTR/9329415	Carbide Fuels*	Pre-Conceptual	09/01/2009

Submissions Being Assessed or In Preparation

N/A	N/A	PFR Mixer Breeder Sections	Interim	Preparation
N/A	N/A	Dounreay PCM	Conceptual	Preparation
N/A	N/A	Dounreay UCM	Conceptual	Preparation

*submissions made under the HLW/Spent Fuel Concept

5.4 Status of Close-Out of Legacy Fuel Contracts Position as at July 2010

Customer	Quantity of Fuel Potentially Requiring Return by DSRL	Quantity of Waste Potentially Requiring Return to Customer* Waste substitution may require return of alternative waste forms *(as measured in MTR cement drums unless otherwise stated)	Current Status of Termination Negotiations	Action required by DSRL	Party to the Contract
A	None	Not required (TBC)	NDA lead for contractual settlement	DSRL to provide technical support.	NDA
B	~10kg total U (92.4% enr)	N/A	Initial discussion taken place with DSRL/IRE to evaluate alternative options to return of the fuel	Further meeting to review progress. Assessment will then take place on position to handover lead to INS.	UKAEA NDPB
C	None	124 MTR cemented drums to be returned within next 12 months	Discussions almost complete, agreements and transport arrangements/licences are being finalised	DSRL will consign /complete the waste moves	NDA
D	(to UK) No fuel to be moved to/from Dounreay	Not required (TBC)	INS in negotiation	Treat U plates with Dounreay fuels as part of Performance LTP. Remove scope for Pu plates from LTP10	NDA
E	None	66	Awaits Scottish Govt policy decision on Waste Substitution	DSRL to provide technical support in respect of waste specification. DSRL leading discussion with Scottish Government of Waste Substitution	NDA with the exception of one contract that is still with UKAEA NDPB and is awaiting novation to NDA
F	None	5 (PFR Drums)	Awaits Scottish Govt policy decision on Waste Substitution	DSRL to provide technical support in respect of waste specification. DSRL leading discussion with Scottish Government of Waste Substitution	NDA
G	None	51	Awaits Scottish Govt policy	DSRL to provide technical support in	NDA

			decision on Waste Substitution	respect of waste specification. DSRL leading discussion with Scottish Government of Waste Substitution	
H	None	Likely that a specific waste form will be returned for this contract	Awaits Scottish Govt policy decision on Waste Substitution	DSRL leading discussion with Scottish Government of Waste Substitution DSRL to provide technical support is respect of waste specification.	NDA
I	None	39	Awaits Scottish Govt policy decision on Waste Substitution	DSRL leading discussion with Scottish Government of Waste Substitution DSRL to provide technical support	NDA
J	None	15	Awaits Scottish Govt policy decision on Waste Substitution	DSRL leading discussion with Scottish Government of Waste Substitution DSRL to provide technical support	NDA
K	None	6	Awaits Scottish Govt policy decision on Waste Substitution	DSRL leading discussion with Scottish Government of Waste Substitution DSRL to provide technical support	NDA
L	None	31	Awaits Scottish Govt policy decision on Waste Substitution	DSRL leading discussion with Scottish Government of Waste Substitution DSRL to provide technical support	NDA
M	55kg HM	I (PFR Drum)	Awaits Scottish Govt policy decision on Waste Substitution	DSRL leading discussion with Scottish Government of Waste Substitution DSRL to provide technical support	NDA
N	400 kgHM	13 (PFR)	Awaits Scottish Govt policy decision on Waste Substitution	DSRL leading discussion with Scottish Government of Waste Substitution DSRL to provide technical support	NDA

INS Leading xxxx **DSRL Leading** **NDA Leading**

6.0 Contractor Assumptions

This section is to be populated following dialogue[40].

[40] Where possible it is the Authority's preference that assumptions agreed during the dialogue period should be included in the version of the Client Specification issued prior to ITSFT, avoiding the need for additional Contractor Assumptions and ensuring tender returns are on the same basis.

7.0 Authority Deliverables Authority Assets and Authority IP
(to be read in conjunction with Clause 12 of the SLCA)

7.1 Authority Deliverables

7.1.1 Insurance

Insurance (save for Director's Liability insurance) is procured and provided by the Authority. The Contractor is required to collaborate in the procurement of the insurance programme, submit annual proposal forms, appoint the Authority's broker as its broker and inform the broker of any changes to the insurance requirements.

The Contractor is required to submit claims on behalf of the Authority.

7.2 Access to Authority Assets (to be read in conjunction with Clause 6.1 of the SLCA)

Where the Authority owns assets at any of its sites, which could be used in pursuit of the SLCA, it would wish to make those assets available, providing the Contractor produces a satisfactory business case that demonstrates the use of such Authority Assets by the Contractor is the most advantageous use of such assets.

7.3 Provision of UKAEA Ltd IP under license (to be read in conjunction with Clause 29 and Schedule 8 of the SLCA)

The following IP, formerly owned by UKAEA is available for use in the execution of the Contract under a royalty free licence (licence between NDA and UKAEA dated 01/04/07) to use the Intellectual Property rights. A list of this IP is detailed below.

There may be other costs, to be included in the Target Cost, associated with using packages associated with this IP, for example ATOM where DSRL have entered into a Service Level Agreement (under NEC3) for associated system support, hosting, helpdesk and maintenance services direct with UKAEA Ltd.

Title	Description
Water Vapour Nitrogen (WVN) cleaning process	Process for removal of trace alkali metals in vessels and pipework. Successful pilot trials at Janetstown and cleaning of secondary sodium circuits at PFR. IPR may belong in part to third parties.
PRICE	Cost estimating tool with associated data set.
SPS	Programme for planning, modelling and identification of inconsistent assumptions. Similar packages exist in the market place.

Title	Description
ATOM	Programme for tracking nuclear material. IPR jointly owned with third party software house.
IMAGES	Programme for management of land quality information. Developed by third party software house IPR held by a combination of UKAEA and third party.
VULCAN modelling capability	3D geological modelling programme. Used at Dounreay. Proprietarily system probably owned by third party.
EMMA	Remotely operated inspection device. Developed for decommissioning high and medium active PIE cells.
500 litre waste drums and lids	Various designs for ILW drums including fixtures and fittings.
Retrieval Machine 2	Design, manuals and specification for machine to retrieve waste from mortuary holes.
Gamma gates	Devices used to provide radiation shielding during waste transfer operations.
Waste encapsulation plant	Design and concepts of Harwell plant.
Intrusive Survey equipment	Measures gamma dose rate, air and probe temperatures, plus has viewing camera. Uses a combination of commercially available products.
Non-intrusive Survey equipment	Camera equipment for viewing inside Windscale piles. Combination of commercially available equipment.
Reactivity monitoring probe for use in fire damaged reactors (Windscale)	Believed to have been built using commercially available products.
Drum venting equipment	Used for the safe and effective venting of sealed waste drums that may be experiencing build-up of gases (particularly if the waste was damp and contained metals when it was drummed).
Type 3360 modular flasks	Old Flask Design. Requires significant

Title	Description
	alterations to the user's working systems in order to deploy it. IPR likely to belong to AEAT.
Transactive, Type B transport package	Package for transport of alpha contaminated material e.g. PCM. IPR likely to be held by AEAT as development predates split from UKAEA by AEAT in 1996.
Sodium Disposal Plant	Developed to convert bulk volumes of sodium

Title	Description
Fathoms ROV	A remotely operated vehicle, jointly developed, between Fathoms & UKAEA. Used for underwater particle detection trials at sea
Clay/Polymer Encapsulation	Waste Encapsulation Techniques

Provision of UKAEA Ltd IP Previously used on the Site

The PBA in place between the NDA and UKAEA Ltd dated 01/04/2008 provides for the use of IP used by DSRL in the delivery of the LTP to be used by the DSRL for the duration of the decommissioning programme.

The clause states:

14.1 **IP Contributed by the PBO**

Licence to Authority and SLC

14.1.1 Without prejudice to the rights and obligations under the UKAEA IP Licence Agreement, any IP made available to the SLC by the PBO for the purpose of fulfilling its obligations under the DSRL M&O Contract whether such IP is [illegible] (**"Parent IP"**) shall also be, and is hereby, licensed in perpetuity to the Authority in its current application as of the Commencement Date for utilisation in the Authority Field of Use without payment of royalty fees (except to the extent otherwise agreed) and then sub-licensed in perpetuity by the Authority to the SLC who in turn shall be entitled to grant sub-licences to its Subcontractors under the DSRL M&O Contract in each case without payment of royalty fees. Subject to the PBO's consent (such consent not to be unreasonably withheld or delayed), the Authority shall have the right to sub-license the Parent IP to other SLCs for use in relation to their activities falling within the Authority Field of Use on any Designated Sites without payment of royalty fees who shall be entitled to grant sub-licences to their subcontractors for use in relation to their activities falling within the Authority Field of Use without payment of royalty fees. The Authority's right to use and sub-license the Parent IP shall remain in force both during the term of the DSRL M&O Contract and after the DSRL M&O Contract has expired or has been terminated until the Authority reasonably determines that the Parent IP is no longer needed in relation to any Designated Sites for which the Authority has obtained the rights to use the IP.

14.1.2 Any Parent IP that is directly or indirectly required to enable the Authority or its licensees to use or exploit any Developed IP shall also be licensed in perpetuity to the Authority for utilisation in the Authority Field of Use without payment of royalty fees (except to the extent otherwise agreed). The Authority shall have the right to sublicense such Parent IP to the SLC who in turn shall be entitled to grant sub-licences to its Subcontractors under the DSRL M&O Contract in each case without payment of royalty fees. The Authority shall have the right to sub-license such Parent IP to other SLCs for use in relation to their activities falling within the Authority Field of Use without payment of royalty fees who shall be entitled to grant sub-licences to their subcontractors for use in relation to their activities falling within the Authority Field of Use, without payment of royalty fees. The Authority's right to use and sublicense the Parent IP shall remain in force both during the term of this Agreement and after this Agreement has expired or has been terminated until the Authority reasonably determines that the Parent IP is no longer needed to enable the use of any Developed IP.

8.0 Process and System Requirements[41]

8.1 Engineering Requirements

EGG02	Guidance Note for the Assessment of Asset Care Requirements for Inclusion in Life Time Plans
EGG04	Guidance Note for 09/10 Annual Life Time Plan Requirement Document
EGG06	Requirements for the Inclusion, Presentation and Control of Hazard Baselines with Life Time Plans
EGG08	NDA Guidance on the Production of Business Cases
EGG08-F01	Business Case Evaluation Form
EGG10	Technical Baseline and Underpinning Research and Development Requirements
EGG10-01	R&D Table Template
EGP11	Knowledge Management Policy
EGP12	NDA Intellectual Property Policy and Strategy
EGPR02	NDA Prioritisation – Calculation of Safety and Environmental Detriment Score
EGPR04-F02	Technology Research/Investment Process
EGPR04-F04	Contractor Output Review
EGPR09	Procedure for the Application of CT-14
EGPR07	The NDA's Prioritisation Process
EGPR02-WI01	Instruction for the Calculation of Radiological Hazard Potential
EGPR02-WI02	Instruction for the Calculation of Chemical Hazard Potential
EGPR10	Analysing, Developing, Monitoring and Evaluation of Skills
EGPR10-A7.2	Standard Resource Directory
EGPR10-A7.3	NDA Summary Data Submission
ENG-01	Specification for the Content and Format for a Site Integrated Waste Strategy

[41] Please note that the engineering requirements are still to be reviewed by the process owner and may be subject to change.

ENG-02	Companion Document to Integrated Waste Strategy Specification
SCG01	Guidance Note for Determining the Security Requirements for Inclusion in Lifetime Plan

8.2 Finance Requirements

FNP01	NDA Accounting Policies	Release 2
FNP02	NDA Site Licence Company Accounting and Reporting Policy	Release 2
FNPR04	NDA Site Licence Company Cash Payment and Cashflow Forecasting Procedure	Release 0
FNP09	SLC, Subsidiary and NDA Internal Guidance Note - Losses and Special Payments	Release 1
FNP09-F01	Proforma for Reporting NDA Internal Losses and Special Payments	Release 1

Internal Audit

ADP02	Governance and Assurance Policy

8.3 Project Control Requirements

The contractor is required to comply with the PCP-M (Release 1) comprising the Contractor Annex following procedures:

PCP-01	Work Breakdown Structure
PCP-01-01	Work Breakdown Structure Dictionary and Guidelines
PCP-04	Charging Practices
PCP-05	Change Control
PCP-07	Baseline Management
PCP-09	Cost Estimating
PCP-10	Risk Management
PCP-11	Scheduling
PCP-13	Progress Reporting and Reviews
PCP-16	Opportunity Management
PCP-17	Sanction and Validation

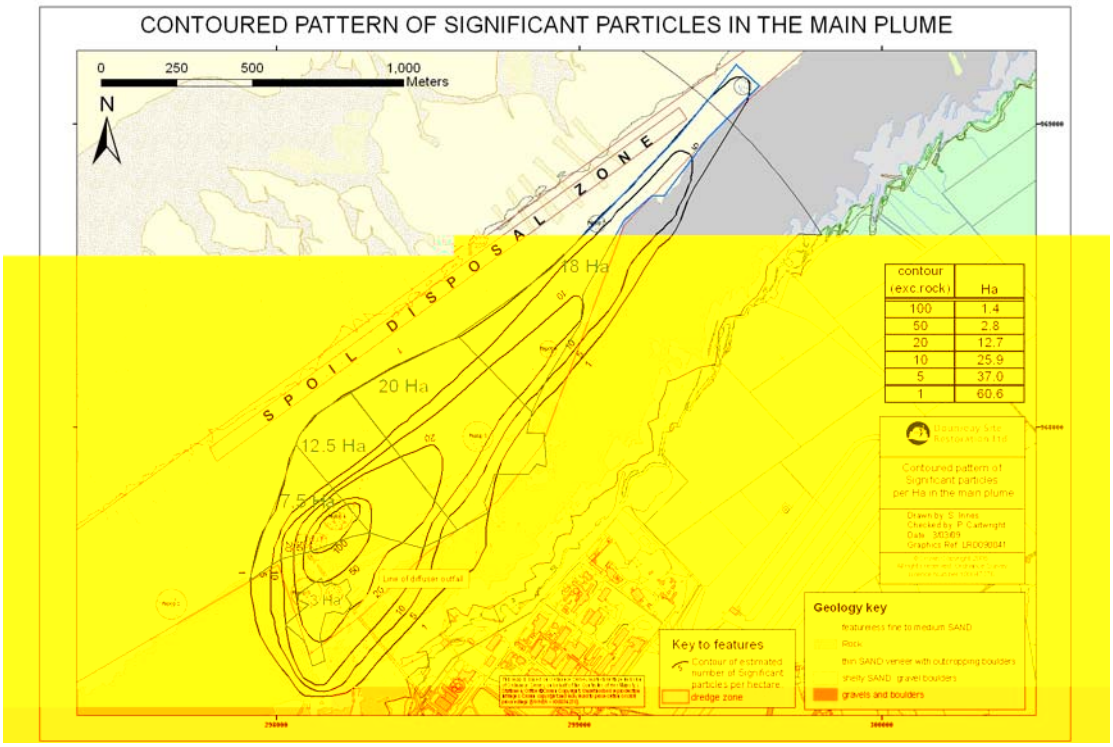
Annex 1 – Site Strategic Specification

[SSS to be added]

Annex 2 – Nuclear Licensed Site

Not Used

Annex 3 – Map Depicting Particles Plume Off-shore



Annex 4 – Beach Monitoring Programme

Statutory

Survey Location	Frequency of Monitoring
Sandside Bay Areas to be surveyed are the main beach, harbour and north beach	Monthly
Sandside Bay Strandline on the main beach	Fortnightly, completed during the statutory monthly survey (above)
Dounreay East Foreshore	Fortnightly, except during the bird nesting period, 1 May to 31 August
Dounreay West Foreshore	Fortnightly, except during the bird nesting period, 1 may to 31 August
Thurso Beach	Three times per year
Thurso Strandline. The strandline on the main beach	Three times per year. These surveys are not completed during the same period as the main Thurso beach survey
Scrabster Beach	Three times per year
Scrabster Strandline. The strandline on the main beach	Three times per year. These surveys are not completed during the same period as the main Scrabster beach survey
Crosskirk. Accessible sandy areas on the beach	Six times per year
Brims Ness. Accessible sandy areas on the beach	Six times per year
Dunnet Strandline. The strandline on the main beach	Four times per year

Non Statutory

Survey Location	Frequency of Monitoring
Sandside Bay Enhanced survey. Coverage of areas on the main beach	Monthly
Dounreay East Foreshore	Monthly, during the bird nesting period, 1 May to 31 August
Dounreay West Foreshore	May and August surveys, during the bird nesting period, 1 May to 31 August
Dounreay Foreshore. Sandy/shingle areas of the Dounreay Foreshore (areas out with the statutory east and west locations)	Twice per year, in September and March (to tie in with the offshore particle retrieval project)
Dunnet Beach, targeted areas. Survey of the two main public access areas of the beach. Completed at the same time as the statutory Dunnet strandline survey	Four times per year
Murkle Beach	Annually
Peedie Beach	Annually
Melvich Beach	Annually

Annex 5 – Buildings to be Retained at IES