



Sellafield Ltd

# PPP

## Annual Report

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**YEAR 3: MAY 2021 - MAY 2022**

**AN INTELLIGENT CLIENT PUBLICATION**





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# Introduction

The Programme and Project Partners (PPP) was created in May 2019 to support Sellafield Ltd's purpose of creating a clean and safe environment for future generations that will be achieved by:

- Safe, secure and sustainable site stewardship.
- Progress at pace.
- Lifetime value for money.

The PPP brings together four delivery Partners to work collaboratively to deliver approximately £7billion worth of projects that will treat and store nuclear materials to enable the decommissioning and remediation of legacy facilities.

This is the third annual review of PPP performance covering all aspects of PPP delivery and Client oversight.

PPP builds on learnings from delivery of Sellafield Ltd's "legacy" projects which were delivered through a more traditional Engineer Procure Construct (EPC) delivery model and combines it with the large programme and project delivery experience of four international Partners. Delivery of 'legacy' projects at Sellafield typically fell short of expectations and several issues were identified including:

- Lack of construction input into design.
- Lengthy procurement exercises on each project.
- Lack of continuity of delivery partners and loss of knowledge from project to project.
- Limited ability for the supply chain to invest in skills and capability without a pipeline of future work.

The PPP model was designed to specifically address these points.

This diagram sets the eight PPP benefits in the context of the Sellafield Ltd purpose and three strategic aims, together with the PPP's five Critical Success Factors.





The partnership comprises KBR as the Integration Partner, Jacobs Clean Energy Ltd as the Design Partner, Morgan Sindall as the Civils Construction Partner and Doosan Babcock as the Process Construction Partner. Sellafield Ltd's role in the model is two-fold:

1. To enable and oversee PPP delivery as a Client organisation.
2. To deploy capability into delivery as a "Fifth Partner" working alongside the Partner organisations.

Built upon a foundation of collaboration, the PPP model incentivises all Partners to work together to deliver the required project outcomes within cost and schedule. While the Partners can earn profit for in-year delivery, an Aligned Incentive Fund provides a greater collective profit opportunity as projects move through completion, commissioning and successfully into operations.

The 20-year duration of PPP enables efficiency in the delivery of the Major Project programme through transfer of knowledge and capability from project to project as well as a wider range of anticipated benefits captured in the Critical Success Factors (CSFs):

#### Cost management

Sharp focus on cost and project lifecycle forecasting to bring cost certainty and double-digit % savings on project outturn costs based on Client approved detailed design baseline.

#### Employment

The longevity of the relationship and subsequent confidence to invest within the workforce and the local areas. Investment in training and apprentices as well as a significant reduction in agency supplied workers at all levels of the Sellafield Ltd supply chain.

#### Outcome

The successful delivery of major projects driven by aligned incentives for the successful delivery of project outputs, i.e. the opportunity to earn fee at Sellafield Ltd by delivering ahead of Sellafield Ltd expectations.

#### Output

Early Contractor Involvement (ECI) from project conception ensuring the right project is executed and creates more certainty of achieving the programme and project milestones and targets.

#### Workforce skills

Upskilling of the wider Sellafield Ltd and supply chain capability through porosity and longevity of the relationship. Create long-term operations that bring benefit to the wider workforce outside the Partner construct.

These CSFs are supported by a further five Success Factors in the areas of resource efficiency, employer capabilities improved, procurement efficiency, programme efficiency.

## Benefits of the PPP Model



**B1** Improved predictability of Project Cost and Schedule Outturn



**B2** Accelerated High Hazard Reduction



**B3** Increased Value for Money (VfM) for the UK Tax Payer



**B4** New opportunities for Sellafield Ltd, the Partners and their people



**B5** Enhanced employment opportunities for Project Personnel in West Cumbria & Warrington (Socio-Economic)



**B6** Enhanced reputation (Improved Stakeholder Confidence)



**B7** Sellafield recognised as having areas of Project Excellence within Infrastructure and Projects Authority (IPA), our supply chain and Government



**B8** Enhanced Sustainability Performance by projects increases social value and decreases environmental impact



# Performance to date

Since the launch of PPP three years ago it has successfully mobilised to undertake delivery responsibility for three in-flight “transition” Major Projects (SRP, SCP, and RAP) while also supporting the early delivery stages of two “future” Major Projects (BEPPS 2 and LSS1). PPP has mobilised a team of approximately 1,500 personnel (including both directly hired staff and wider supply chain) delivering a portfolio worth over £337 million per annum. Significant milestones have been achieved, not least the setting of the Major Project Baselines for the SRP and SCP projects.

This performance report on the PPP from the Sellafield Ltd Client aims to provide a comprehensive overview of performance over the last 12 months across the Major Projects, supporting PPP Services and enabling Site Wide Project Delivery Improvements undertaken by PPP. The report also covers the performance of the Sellafield Ltd Client organisation in its role to oversee and enable PPP.

A look ahead, providing an overview of the key objectives for the PPP through its fourth year of delivery and beyond, is also included. This represents the continued focus on improvement as the PPP matures.





PPP has made good progress since its launch in 2019. Whilst there has been strong performance in some areas and improvements sought in others, on balance it is on course to deliver Business Case benefits.







## Foreword

At Sellafield we're investing in one of the largest portfolios of complex major projects in the country. I have a clear ambition for our project delivery to have Sellafield Ltd recognised as an upper quartile major project delivery organisation.

This will come from projects consistently running to time, cost, quality and most importantly, safely. PPP is an integral part of that. While we recognise the huge progress made so far, I'm now keen to see us accelerate PPP performance and integrate it further into our business.

I'm proud of the way we have collectively delivered against our commitments over the last year, as well as advancing our ambitions for the future. This year, PPP has helped us achieve all key targets at 'excellent' and all operating plan milestones were delivered.

The full business cases for the Sellafield Retreatment Plant (SRP) and SIXEP Continuity Plant (SCP) were approved.

Three months ahead of schedule, and our teams have completed the construction of a world class testing laboratory as part of the Concrete Batch plant.

Safety performance is better than national construction accident averages, however, there have been several near miss events that have caused concern. PPP has reacted very positively to this with the delivery of the Safety Hub and remains vigilant and determined to continually improve safety.

We have also faced challenges with the forecast cost of the Replacement Analytical Project and I have been very pleased with the collaborative effort that has underpinned the optimisation response.

I am passionate about growing and attracting the best talent to effectively deliver our projects and wider purpose, and it's great to see PPP bringing in that talent from across the country. Part of being an employer of choice is being a high performing team and I am equally passionate about driving that performance culture. At the start of Year 3 we embarked on a strategy that recognised the good performance happening and leverage this to increase the drive for the PPP to be the delivery model of choice. This included making changes to the Client team to be more enabling and driving change in the Partners. I'm delighted to see, with the leadership and support of the Client, the Partners have restructured to create a greater focus on project and programme performance. I welcome Duncan Elliott as the Head of the PPP as well as other new additions to the management team which I am confident will strengthen the focus on performance going forward.

I am looking forward to the next phase of PPP maturity and working with Partners to jointly drive project delivery at Sellafield Ltd into upper quartile performance.

**Andy Sharples**

Projects Director for Sellafield Ltd



# Foreword

For the PPP Client Team, it has been a year of real growth and transition, to ensure we're fit to enable PPP's future – driving for 'Performance Today – Performance Tomorrow'.

In taking the lead for the Client, I was keen to see it shift from its historic strong focus on governance and assurance, to become a highly collaborative enabling Client team, focused on driving and accelerating PPP's performance.

This change is supported by a merging with the Project Delivery Directorate's newly formed Performance Management Office, and we are proud to have extended our reach to provide Client support for all major projects at Sellafield Ltd, within and outside of the PPP model.

As Andy noted, PPP achieved all key targets and milestones in 2021/22, and this is largely due to the effort that has gone into strengthening relationships. We have maintained a level of humility, trust and commitment to each other.

As we move into year four of the partnership, Client expectations of PPP performance increases, along with our duty to enable our Partners in the most effective way. This coming year we are looking for tangible evidence that project performance remains on a positive trajectory and that Business Case Benefits are being realised.

In stakeholder space, I am delighted to see Sellafield Ltd and PPP recognised as a valued contributor to the industry's project delivery conversation, in forums such as Project 13 and at events such as Transforming Infrastructure Performance.

Sharing the progress and learnings of PPP has resulted in a positive response from Government and Industry leaders and we will continue to work to ensure that confidence is maintained through excellent project performance.

## **Richard Lennard**

Head of Client for Project Delivery, Sellafield Ltd





## Response from the Partners to the PPP Annual Report

I joined the PPP team halfway through year 3 and am delighted to have become part of what is the most exciting infrastructure programme in the UK today.

Three years into PPP's journey and there is so much to be proud of, our team has matured significantly, we have a growing number of interns, apprentices and graduates, our projects are progressing at pace and our focus on collaboration becomes stronger every day.

I had the honour recently of using a new digital collaborative platform called the BIM Cave on our biggest project, this is the kind of innovation PPP is bringing to the table, delivering significant savings for the taxpayer and successfully using digital modelling to accelerate the whole project lifecycle.

It is a critical time for the partnership to continue to drive project performance whilst also bringing our programmatic approach across the whole portfolio of projects, and this is where it will really come into its own.

All of this success relies on us maintaining a relentless focus on becoming 'knowingly safe'. One of my personal highlights is seeing the contribution PPP is making to the new Safety Hub, which brings together Sellafield Ltd's largest supply chain organisations to collaborate to achieve a zero-harm culture – where everyone goes home safe every day.

Social impact and sustainability are key to achieving PPP benefits, and throughout this report you'll see how we are holding ourselves and our long-term supply partners to account for driving those agendas. Recently seeing one of our key delivery partners open a new delivery hub in West Cumbria was a real symbolic step for us.

We recognise what needs to be done to position PPP as a leader for the next 17 years, which is why we have established an acceleration programme to move performance from Good to Great. This will see a sharper focus on our people and project performance, while underpinning the wider ambitions of PPP.

### **Duncan Elliott**

Head of the Programme and Project Partners (PPP)





PPP team  
members  
working  
on SCP



This Annual Report presents the performance picture of PPP for Year 3 of its contractual life, for the period of May 2021 to May 2022. It is intended to present an unbiased fact-based view of PPP performance, both by project and by programme. Each section is designed to be able to be read in isolation, presenting useful measures of performance for the year followed by commentary on what it tells us and the overall assessment of status.





# Executive Summary

The finding of this report is that there is a body of evidence supporting a view of overall effective performance, recognising the challenges of projects inherited from Sellafield Ltd under legacy arrangements. Whilst there are some issues, they are being proactively raised and addressed both by the PPP itself and through Client interventions and the PPP remains on course to deliver its expected benefits. Looking forward there is a need to focus on stronger integration in projects, supply chain performance and delivering new projects 'the PPP way'.

## Context

Sellafield Ltd's historic approach to complex major project delivery had fallen below stakeholder expectations for a range of reasons, resulting in multiple reviews and audits setting out the steps to improve project delivery, requiring a radical change of approach. In 2019 Sellafield Ltd procured the Programme and Project Partners (PPP) Model as the vehicle to transform project delivery. The PPP was a key part of Sellafield Ltd's journey to introduce a Programmatic approach to initiation with clear functional specifications and developing realistic time and cost estimates.

Whilst in the fullness of the 20-year life of the model many projects will be wholly delivered by the PPP, in the initial years the programme is predominantly comprised of major projects initiated under traditional Sellafield Ltd practices and transitioned to the PPP during its first year.

Three in-flight projects were transitioned to PPP within six months of contract commencement, which had been initiated between 2003 and 2015 with delivery ongoing since 2014 under historical Sellafield Ltd practices. These included the Sellafield Retreatment Plant (SRP), Sellafield Continuity Plant (SCP) and Replacement Analytical Plant (RAP), including the challenges faced in setting the first ever Major Project Baselines, including price and schedule.

In addition are the first two projects to be initiated fully within the PPP environment, namely the Lightly Shielded Box Store 1 (LSS1) and Box Encapsulation Product Store 2 (BEPPS2). Looking forward, PPP is initiating and delivering the full infrastructure delivery portfolio at Sellafield Ltd until 2029, via pipeline of major projects throughout their full lifecycle, and more work is under way on the definition of the pipeline as a key priority for Year 4.

## Projects

Three years following the launch of PPP, our Partners are accountable and delivering five of the Major Projects critical to Sellafield Ltd's purpose. These five projects (detailed in this section) range from early lifecycle to full construction stages. The committed projects represent ~£5billion in lifetime value with a £300million in-year investment.

The five projects provide a platform for all four Partners to contribute and show their value, whilst the scale and complexity provides a meaningful opportunity for them to collaborate in the safe delivery to time, quality and cost.

On balance the previous year has seen strong performance in project delivery coupled with a number of challenges and risks acting as important reminders that success is not guaranteed.

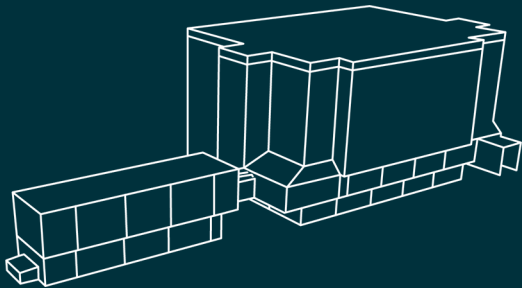
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THE COMMITTED PROJECTS REPRESENT

~£5billion

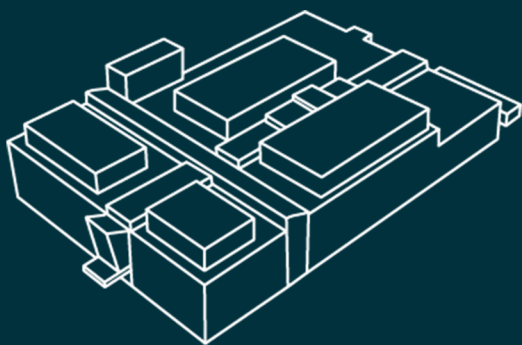
IN LIFETIME VALUE WITH A £300MILLION IN-YEAR INVESTMENT

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## SRP (Sellafield Product and Residue Store Retreatment Plant)

2022 marked a pivotal year for SRP as it transitioned from design to construction. Following approval of the Full Business Case (FBC), the project has progressed at pace, including procurement of key delivery packages, resulting in being ahead of its overall target schedule. The transition to construction brought new challenges and a number of safety events and near misses have served as a sobering reminder of the new risks the project must focus on to be successful. Civil works have progressed well, although Covid-19 and productivity risks have caused some float to be eroded, and the project is now moving its focus to systems integration and key plant and equipment packages.

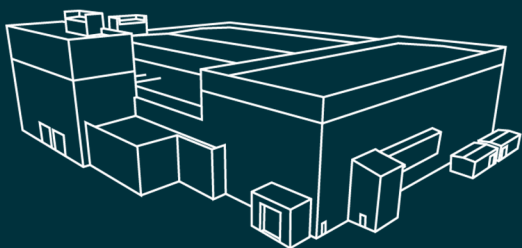


## Replacement Analytical Project (RAP)

Since approval of the Outline Business Case (OBC), RAP project performance has trended towards challenging the strategic tolerances. Significant Client led interventions have been initiated over the last 12 months to correct the projects performance trends. An executive-level senior oversight group has been established bringing together representatives from the key stakeholder groups, independent performance reviews have been conducted and Client led workstreams undertaken by independent experts to challenge scope assumptions and optimise project delivery were initiated in December 2021.

As a result of the optimisation – an approach that would not have been possible under a traditional delivery model – significant progress has been made in stabilising and strengthening the project leadership and addressing the performance trends.

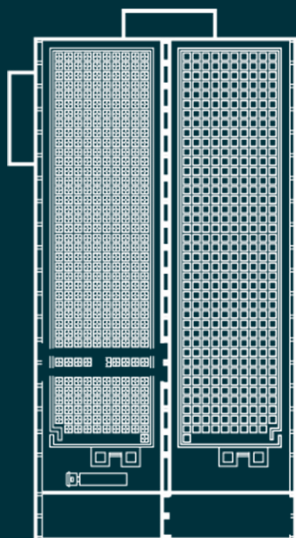
Alongside assurance interventions from the Infrastructure and Projects Authority, Nuclear Decommissioning Agency, Projects and Investment Committee of the Department for Business, Energy and Industrial Strategy and Her Majesty's Treasury the project is now on course to complete detailed design in late 2023 and receive FBC approval from HMG in 2024.



## Box Encapsulation Plant Product Store (BEPPS2)

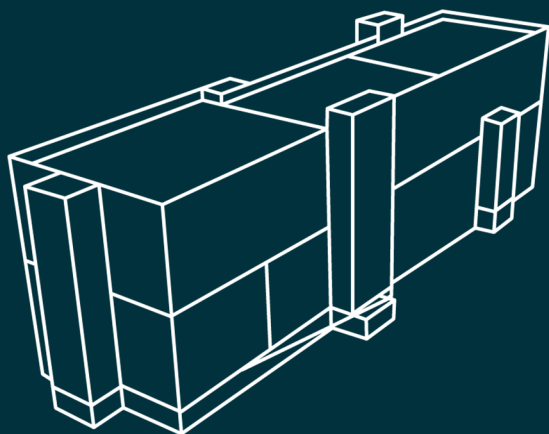
BEPPS2 progressed well in Year 3 to complete concept design stage and move into preliminary design stage as well as commence the OBC. A review of Sellafield Ltd enterprise priorities led to an evaluation of BEPPS2 timescales and the project has worked to optimise the schedule to align with the enterprise funding decisions. When the decision was taken to slow down the project PPP successfully relocated most of the resource across other PPP projects to help address their resources challenges, as faced by all of the industry. A revised plan for OBC 'get to gate' has been agreed with stakeholders and is currently being implemented.





## Lightly Shielded Store (LSS1)

Through the year the LSS1 project team progressed towards production of the OBC and commenced resource mobilisation. The project had looked for opportunities to optimise the store layout and manage programme waste assumptions associated with radiological shielding working collaboratively with the programme and Client team. During production of the estimate and schedule, a number of programmatic interfaces and dependencies were identified and a strategic pause was initiated March 2022 to enable the interfaces to mature, specifically land availability and clearance. The Sellafield Ltd strategic decision will allow the land programme to evaluate scope and schedule to ensure alignment with the LSS project scope and schedule assumptions and enable Sellafield Ltd to manage overall programme delivery and integration. This will enhance the land management strategy for the benefit of all projects. This scenario has shown the benefits of the PPP model and demonstrates the portfolio approach to project delivery mitigating the risk (cost and time) of demobilisation and remobilisation, has led to no contract cancellations, and has enabled the retention of knowledge and key skills.



## Site Ion Exchange Effluent Plant (SIXEP) Continuity Plant (SCP)

PPP has had a good year delivering the SCP project with year-end schedule performance in line with the Major Project Baseline. The project started the year working collaboratively with the Client team to set the Major Project Baseline and finished the year delivering all in year milestones. Significant process was made on Project Wide Objective 1 (the first of seven milestones) namely the completion of the first 2 large stainless steel process vessels, ready for performance testing early in Year 4.

The procurement and installation of the construction tower cranes was a critical enabler to commencing structural steel work erection and was enabled through the PPP strategic decision to procure rather than lease the cranes which could subsequently be utilised on other projects and ensure value for money, with a cost saving of near £1m.

Whilst the project has had strong progress, the challenge remains that there is a substantial body of work ahead with the procurement of key suppliers, equipment and mechanical and electrical work to occur and the project will need to remain focused to ensure delivery.

## Safety

PPP performance against accident metrics is better than typical national Construction accident data and the number of Zero Harm days (instances where no injuries occurred) achieved is at 95%. However, this year the Client observed an emerging pattern of minor injuries, which led to a survey that showed a disconnect between leadership and operational roles. That data has been used to create a Safety Hub around twelve key themes, three of which will be a key delivery focus in Year 4. Activities from the Safety Hub will be used site wide, demonstrating PPP bringing best practice to the wider enterprise.

## Benefits

Benefit realisation progress has seen steady achievement that is ahead of the timelines in the Full Business Case (FBC), however strong Client pressure remains to increase the ambition around the level and speed of benefits that can be realised. In advance of PPP FBC timelines, £1.075billion of benefits have been identified, of which £130.8m have been validated over the PPP lifetime. New benefit initiatives launched in Year 3 include:

- **Ideas Portal:** PPP's Ideas Portal has been launched with 135 improvement ideas submitted to date. The implementation of the Ideas Portal is providing a simple portal for the PPP to submit ideas and best practice with the plan to expand to the wider supply chain soon.

- **Introduction of Benefit B8:** The level of Sellafield Ltd and PPP's shared ambition, paired with the global importance of social impact and sustainability, means there is now a jointly developed eighth Benefit that will positively impact workforce, communities and the environment.
- **'Good to Great' Performance Acceleration Programme:** The 5 Good to Great Workstreams are bringing benefits through the unlocking of the programme approach, digital delivery, project delivery processes, high performing team development and skills and talent development.

The priority for Year 3 of PPP was to bring a step change from strategy development to full implementation and early benefits realisation. Significant progress has been clearly demonstrated in this area over the last 12 months, at both a programme and project level. Going into the fourth year of the contract PPP is in a strong position to capitalise on these early successes.

Turner & Townsend undertook an independent benefits review of the PPP, noting:

"It is pleasing to report that overall, there has been good progress in realising the PPP FBC benefits. People are clearly excited by the opportunity of being part of a long-term partnership between SL and the PPP, creating an enduring capability which is recognised for efficient and effective delivery of the Sellafield Mission – to safely and securely remediate the Sellafield site to benefit the industry, nation and region. It is evident through our interviews and meetings that the PPP is very passionate and committed to delivering great project outcomes for Sellafield Ltd and to the benefit of its wider community."







## EHSSQ Assurance

PPP assurance activities conducted during Year 3 found some gaps in the self-assurance programme prepared by PPP and the availability of resource to meet current and future demand. It also found some documentation anomalies and the need for further integration of the assurance across PPP. There was also uncertainty in the direction for the Collaborative Management Plan and some specific findings relating to fire safety on construction sites.

Actions are in place to follow up or remedy these findings. The PPP Client continues to mature a joined-up approach to assurance, spanning PPP services, the Aligned Delivery Teams and Client.

Use is still being made of the assurance maturity framework to provide a risk-based outcome focused approach and assessments completed in 2021 show that most activities are now at the 'Defined' category of assurance maturity.

## Cultural Maturity

A collaborative working culture is at the core of making the PPP model a success for all parties. Year 3 saw significant improvements in the cultural maturity of the PPP. Key foundational activities to support cultural maturity were put in place, as recognised by Deloitte in their independent cultural maturity assessment which saw the PPP performing operational value in the majority of areas, moving from an average score of 3/10 in Year 2 to 5/10 in Year 3. Focus areas for Year 4 will see greater emphasis to embed values and behaviours into people's day to day ways of working including a Line Manager Training Programme, PPP staff excellence awards and the start of the PPP High Performing Teams, focused on bringing all behavioural aspects together in team environments to address live issues and opportunities.

## Performance Assurance Framework (PAF)

The Performance Assurance Framework (PAF) for the PPP helps the Client and Partners to assess and drive performance. It is a collaborative and structured scoring process using a scale agreed by all five parties within PPP, which provides an objective assessment of Sellafield Ltd, the Client and PPP performance by using evidence per project.

Year 3 saw the completion of the third PAF Assurance Cycle which found overall steady progress across all workstreams, with a notable increase in the number of performance measures scoring at Operational Value (Level 2) compared to Minimum Requirements Met (Level 1).

In addition, output measures are scoring higher, meaning that improvements made through input efforts (enablers) in previous cycles are starting to show results (quantitative outcomes). Project measures were introduced for Assurance Cycle 3 for most workstreams for the first time and achieved average input score of 1.3, and an average output score of 1.8. Apart from Environment and Sustainability, which lags due to its lack of early involvement in projects, the introduction of Project Level scoring in Cycle 3 has highlighted strong performance and progress in discrete project initiatives. In contrast, there is relative immaturity at programme level of implementing these best practice initiatives consistently across the portfolio, which is a clear area of improvement targeted for future cycles.

## Key Targets

Key Targets are agreed between Sellafield Ltd and the Nuclear Decommissioning Authority as the key areas of performance that will be measured in year.

In 2021/22 there were two Key Targets in relation to PPP of which both achieved a performance rating of excellent:

- Schedule Adherence for SCP and SRP.
- Demonstrable progress towards the delivery of the PPP Critical Success Factors.

## Key Performance Indicators

Sellafield Ltd and the PPP Partners agree KPIs for the PPP to measure in-year performance. The KPIs were jointly proposed and agreed between the Lot Partners and the Client through a collaborative process focused on project specific targets such as RAP Preliminary Design Completion, alongside strategic and behavioural objectives such as Social Impact Improvement and Collaborative Behaviours.

Eleven of the twelve KPI were fully achieved by the Lot Partners, with the remaining KPI partially achieved. This meant achievement of 98% of the available Contract Specific Profit (CSP) weighted on the KPIs.

## Sellafield Ltd

Sellafield Ltd continues to mature as a Client organisation for the PPP delivery model. The PPP Client has established effective governance and assurance arrangements to oversee and enable PPP delivery. Through the last year the Client has increased focus on managing the performance of the PPP Partnership and broadened its remit to cover other Sellafield Ltd major projects which presents the opportunity for collective performance improvement. Five strategic drivers are identified for the Client through Year 4 of the contract and beyond to enable improved performance.

To maintain the early momentum gained by the PPP Client in the early years the leadership of the Client organisation has been refreshed in the latter part of the year. Richard Lennard has been appointed Head of Client for PPP with an initial remit to enable delivery and manage the performance of the PPP partnership. To further leverage the capabilities and knowledge of the PPP Client organisation for the benefit of the wider Sellafield Ltd organisation the PPP Client role will expand to cover "legacy" Major Projects including Box Encapsulation Plant (BEP) and Security Projects. This broader remit will enable the PPP Client to share learning more readily across a broader portfolio of projects to improve performance. The "legacy" projects will help inform the "transition" and "future" projects to be delivered through PPP.

## Partners

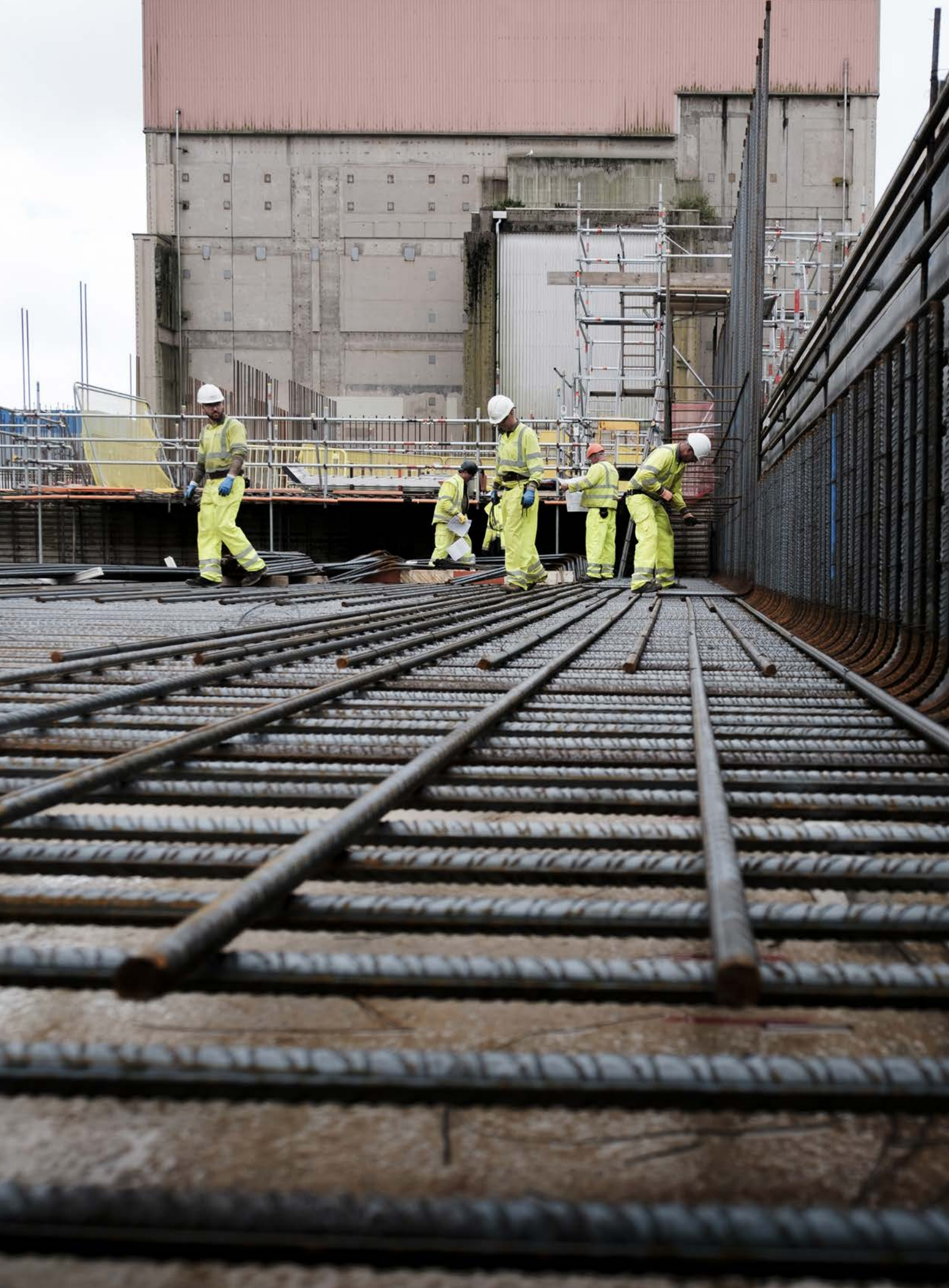
Performance overall in Year 3 has been good, resulting in examples of excellence. With the leadership and support of the Client team, the Partners restructured their leadership team to respond to the desire to build on efforts to date to achieve consistent project and programme wide performance. Duncan Elliott was brought in as the Head of PPP as well other new additions to the management team to strengthen the focus on performance going forward. As part of this, there has been a strong focus on the PPP Good to Great programme, led by the Integrator, with a range of activities being implemented to improve portfolio and programme benefits alongside project delivery via the Integrator.

PPP continued its growth in Year 3, with an increase in year of 195% overall turnover from Year 2. This increase is almost solely in relation to delivery of Major Projects as SRP and SCP have both moved into the construction delivery phase in year, with significant delivery through the civil construction phases on both projects. Across the board there was a 25% growth in PPP Resources, People resource growth over the year is not proportional to turnover growth. This is as would be expected with the increasing importance of the PPP Supply Chain in delivery of our Major Projects.













## Supply Chain

Year 3 has seen a step change in performance with procurements no longer delivered for individual projects, with significant opportunity now being identified through the PPP Supply Chain Strategy at a programme level. The PPP Supply Chain team have awarded four Multi-Project Procurements (MPPs) and, in doing so, also achieving the first Project Wide Objective on the Sellafield Product and Residue Store Retreatment Plant (SRP).

Four MPPs have been awarded, and, in doing so, has achieved the first Project Wide Objective on the Sellafield Product and Residue Store Retreatment Plant (SRP) (Refer to the Projects section of this report). These MPPs cover key delivery areas such as Heating, Ventilation and Air Conditioning (HVAC), Electrician Instrumentation, Mechanical Pipework and Mechanical Fabrication. These are all key major project delivery challenges and Sellafield Ltd and the PPP have seen new entrants bidding for work due to the scale of the opportunities offered, with significant investment and social value being identified through the successful bidders. The total contract value is up to £800million with up to 8 more MPPs yet to be placed.

## Financial Analysis

Year 1 spend was focused on mobilisation onto projects and the establishment of PPP Services. Year 2 spend supported an increase in construction activity and project delivery. Year 3 has seen a continuation of that trend towards project delivery comprising 85% of total spend (compared to 54% in Year 2). The long-term nature of the PPP model has enabled the Partners to invest with confidence, resulting in 90% of the workforce being directly employed.

## Aligned Incentive Fund

As a result of SRP achieving its first Project Wide Objective, Year 3 saw £7million credited to the Aligned Incentive Fund with current incentive opportunities across SRP and SCP totalling £89million. Year 3 also saw the go-live of the Client's Operational Cost and Profit Model (OCPM) which has been developed for the management of the fund by the Client with Supply Chain Partners. This model enables effective and factual analysis to be conducted against performance of the PPP model with live data, enabling timely decision making.

## Triennial Review

The first triennial was completed in Year 3 and identified that the current incentivisation mechanism within the PPP contracts is operating as planned and is still considered robust. The key finding is that the PPP model should remain unchanged at this time. The review also identified areas for action and monitoring to ensure continued robustness of the incentivisation model up to the point of the next planned review in 2025 which included continued engagement and education on the incentive model through the PPP.

## Pipeline

The Sellafield Ltd pipeline is a live list that responds to the latest Sellafield Ltd portfolio needs. In Year 3 some projects have been added to the pipeline and some projects have been removed, as studies progress and more detail of Sellafield Ltd's lifetime requirements developed over time. The Client and all Partners agree the next priority for PPP in Year 4 will be to look at the pipeline and how to drive innovation, new techniques and design maturity through replication and incorporate the learnings from the first three PPP projects. This will further support programmatic decision making and enable portfolio level decisions to respond to policy and strategic drivers that influence the pipeline.

# Year 4 Lookahead

As PPP moves into the fourth year of delivery the focus will be maintained on delivering successful outcomes on the transition projects while ensuring that future projects are increasingly delivered in the 'PPP Way', with priorities including:



**Focus on enabling PPP delivery through removal of barriers to performance that exist within Sellafield Ltd**



**Striving to ensure that Sellafield Ltd's Key Targets and the PPP Partner KPIs are successfully delivered through the year**



**Greater focus on direct engagement with projects and the PPP leadership team to nurture effective working relationships based on conversation in the first instance**



**Support the establishment of "Delivery Hub" offices at strategic locations across the UK to support PPP in addressing challenges on capability**



**Complete an optimisation review of the RAP project and build identified opportunities into the Major Project Baseline, ensuring lessons learned are embedded in all future projects before they reach the Outline Business Case phase**



**A greater presence on the project sites and in Partner offices to support safe delivery of the programme**



**Devolve authority for decision making and approval of the Aligned Delivery teams into the PPP partnership**



**Continue to support the PPP performance acceleration programme ('Good to Great')**



**Implement pre-approval of PPP sub-contracts to enable accelerated delivery by the Partners**



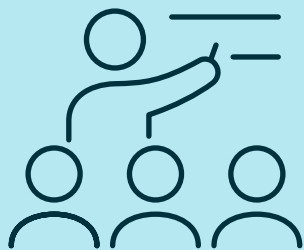




# PPP Project Performance Introduction

Three years following the launch of PPP, our Partners are now accountable and delivering five of the Major Projects critical to Sellafield Ltd's purpose. These five projects (detailed in this section) range from early lifecycle to full construction stages. The committed projects represent ~£5billion in lifetime value with a £300million in-year investment. The five projects provide a platform for all four Partners to contribute and show their value, whilst the scale and complexity provides a meaningful opportunity for them to collaborate in the safe delivery to time, quality and cost. On balance the previous year has seen strong performance in project delivery coupled with a number of challenges and risks acting as important reminders that success is not guaranteed.

## Key highlights include:



### INTRODUCTION OF THE SENIOR RESPONSIBLE OWNER ROLE

The Senior Responsible Owner role was introduced in Year 3. The year also saw clearer and more focused project performance reporting coupled with the Client's greater emphasis on enabling performance.



### LEARNING CAN BE APPLIED TO OTHER PROJECTS

Having a single delivery model means that learning can be applied to other projects. Learning was directly and immediately applied from SRP to the SCP project, resulting in the second successful setting of an MPB and Her Majesty's Government's (HMG) approval of the Full Business Case (FBC) in January 2022. The Infrastructure Project Authority (IPA) in its Gate 3 review commented "The SCP project is in many ways an exemplar not solely within the Sellafield environment but within the wider infrastructure sector".



### AREAS FOR FURTHER IMPROVEMENT

Whilst there have been significant successes there are some areas of risk or concern that continue to require attention. Progress remains ahead of the MPB baseline for Change SRP to Sellafield Product and Residue Store Retreatment Plan (SRP) project and Site Ion Exchange Effluent Plant (SIXEP) Continuity Plant (SCP) project, however we continue to draw attention to erosion of float and apply focus on mitigation and recovery plans. The IPA recorded a red Delivery Confidence Assessment for the final transition project, Replacement Analytical Project (RAP). This finding coincided with a Client led initiative to establish strong PPP control and leadership of the project to address concerns that performance was trending outside strategic tolerances. Significant progress has been made and five of the six IPA recommendations are complete with the final recommendation on plan.



### THE PPP MODEL ACHIEVED A SIGNIFICANT 'FIRST' FOR THE NUCLEAR INDUSTRY

During the year the PPP model achieved a significant 'first' for the nuclear industry, working collaboratively to achieve approval of the SRP Full Business Case, including the first ever Major Project Baseline (MPB). The approval included full sanctioning and funding release. Construction activities for the building foundations and walls are well under way, with all critical long lead plant items under contract for manufacture.

A key benefit of the PPP model is the application of Early Contractor Involvement (ECI). The two “future” projects initiated under PPP, Box Encapsulation Plant Product Store (BEPPS2) and Lightly Shielded Store (LSS1), have held successful ECI workshops promoting collaborative working and setting the foundations for improved predictability of cost and schedule outturn, increased value for money for the UK taxpayer, enhanced reputation and improved stakeholder confidence.

A review of Sellafield Ltd enterprise priorities and project interdependencies has impacted the pace of these two projects, with the decision taken to slow BEPPS and to temporarily pause LSS. Whilst this situation is disappointing this scenario has shown the benefits of the PPP model and demonstrates the portfolio approach to project delivery mitigating the risk (cost and time) of demobilisation and remobilisation, has led to no contract cancellations, and has enabled the retention of knowledge and key skills.

## The Major Project Baseline (MPB) explained

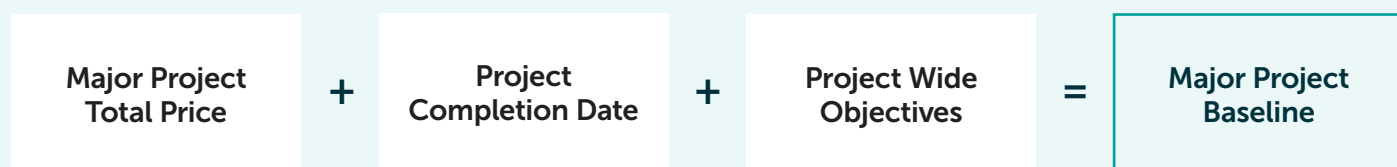
The MPB is the baseline against which PPP delivery performance is measured and incentivised for each major project.

It is set by the Client at the end of stage 3 “Define” in the Gated Process and is a key input to the Full Business Case (FBC) which forms the basis of the government’s investment decision for each of the Major Projects.

The MPB comprises: Project Completion date, Project Wide Objectives (PWOs), the Major Project Total Price (MPTP) and the Aligned Incentive Fund (AIF). This is supported by a comprehensive set of fully aligned supporting information including the Project Functional Specification, Employer’s Assumptions and Employers Design Information, risk modelling and assurance records.

It is vital that the MPB represents value for money whilst presenting adequate opportunity for profit for performance by the PPP partners.

To strike this balance the MPB is built on collaborative engagement between the Client, the Project’s Aligned Delivery Team (ADT), and PPP Services, and is underpinned by rigorous internal and independent external assurance benchmarking.



# Sellafield Product and Residue Store Retreatment Plant (SRP)

The storage of degraded Special Nuclear Material (SNM) packages across several different stores across Sellafield Ltd presents an intolerable risk position from the potential loss of containment from the failure of a single package. The Sellafield Product and Residue Store Retreatment Plant (SRP) is required to safely and securely treat and re-package SNM into new 100-year packages that will be transferred into the Sellafield Product and Residue Store for long-term storage.

In 2019 the project focused on establishing its leadership team under the PPP model. This has served the project well with that leadership team remaining steady through to 2022. Their stakeholder relationships and corporate memory have helped the project navigate through challenges to the current day, whilst maintaining performance ahead of the Major Project Baseline.

2022 marked a pivotal year for SRP as it transitioned from design to construction. Following approval of the Full Business Case (FBC), the project has progressed at pace, including procurement of key delivery packages, resulting in being ahead of its overall target schedule. The transition to construction brought new challenges and a number of safety events and near misses have served as a sobering reminder of the new risks the project must focus on to be successful. Civil works have progressed well, although Covid-19 and productivity risks have caused some float to be eroded, and the project is now moving its focus to systems integration and key plant and equipment packages.

PPP Price  
**£1,260m**



Full business  
case approved  
**July 2021**



People mobilised  
**372**



Supply Chain  
members engaged  
**59**





## Performance Snapshot

### Schedule

Milestone	Target	Actual
100 year package – phases 5 and 6 procurement complete	23/09/21	06/09/21
Full Business Case approved (full sanctioning and funding release)	15/09/21	06/07/21
Security interface – Phase 2 security fence modifications commenced	22/10/21	18/08/21
Glove box – Group 500 Procurement contract awarded	04/08/21	13/07/21
Glove box – Group 400 procurement contract awarded	04/08/21	13/07/21
HVAC contract award (PWO) (OP-2021-128)	26/01/22	26/01/22
Control systems contract award	08/10/21	21/09/21

### Finance (in £m)

Budgeted Cost of Work Scheduled (planned cost of what was originally planned)	£106.5
Budgeted Cost of Work Performed (planned cost of what was actually delivered)	£117.5
Actual Cost of Work Performed (actual cost of what was actually delivered)	£104.7
Schedule Performance Index	1.10
Cost Performance Index	1.12

### Health and Safety

	Target	Actual
Recordable Injury Frequency Rate	0.25	0.58
Lost Time Accident Frequency Rate	0.13	0.19
RIDDOR Reportable Frequency Rate	0.03	0.00

## Forward Look

The project wide objective (PWOs) below are the milestones against which delivery performance is incentivised under the Aligned Incentive Fund.

PWO 2 – SRP New Build – Weather Tight Box Complete (Civil Nuclear Security capability)	April 2024
PWO 3 – Glovebox Systems – Integrated Works Testing Complete	July 2025
PWO 4 – B2015 Service Building – Installation Complete	November 2025
PWO 5 – Glovebox System Process Lines ready for Inactive Commissioning	October 2026
PWO 6 – Licensed Instrument Approvals Granted – Complete Inactive Commissioning	April 2028
SRP Build: Commence Active Commissioning	April 2028
SRP Build: Complete Active Commissioning	February 2029

## SRP 'BIM Cave'

The construction site for SRP has brought in an immersive digital experience. Building Information Modelling (BIM) has been used on Sellafield projects for a while now, creating interactive 3D plans to guide construction work. The new system provides a 'BIM cave' in the project's open plan office area. The 'cave' provides an interactive touchscreen, and immersive experience, and is compatible with all software solutions required on the project.

*"The BIM cave allows 3D modelling and 4D planning to be executed 'live' on the site and enhances the project's daily 'line of sight' planning by allowing people to visualise the plan and interfaces. This leading step is already resolving interface clashes and provides a better understanding for our workforce and supply chain. This is another advancement for deployment of BIM on Sellafield projects."*

John Leslie, Senior Project Manager, SRP





## Commentary

SRP has demonstrated successful in-year delivery with positives in achieving the FBC ahead of schedule as well as the 'first of a kind' Project Wide Objective for the Multi-Project Procurement (MPP) contract for Heating, Ventilation and Air Conditioning (HVAC).

This is tempered by challenges with several non-injurious safety incidents that resulted in the site being stood down to ensure learning was disseminated. Management of future risks around the availability of specialist resources in design and manufacturing and increased focus on safety in construction coupled with maintaining the strong delivery momentum gained by having secured the critical supply chain for key areas will be fundamental to the whole life performance of the project. The project team is demonstrably focused on these challenges, giving confidence to sustainable performance going forward.

### In-year notable achievements include:

- Delivery against the Major Project Baseline by securing the critical supply chain for glove boxes (high-end manufacture), control system, HVAC and Mechanical, Electrical Instrumentation, Control and Automation (MEICA).
- Receiving HM Treasury approval for the FBC two months ahead of schedule in June 2021.
- Delivery of the 'first of a kind' Project Wide Objective (PWO) where the MPP contract for HVAC was awarded to Balfour Beatty Kilpatrick on schedule in January 2022. This is the first PWO to be achieved and is a great demonstration of delivery performance and validation of the incentive model.
- SRP successfully achieved its Key Target agreed between Sellafield Ltd and the Nuclear Decommissioning Authority (NDA) for schedule adherence as well as the Annual Operating Plan milestones agreed between the PPP Partners and Sellafield Ltd, including three that were either on or ahead of the deterministic schedule and seven ahead of the project's P50 schedule (P50 means 50% of the calculated estimates will be equal or exceed the estimate, also known as the median).
- PPP has invested in strengthening the project leadership team to effectively oversee, manage and control delivery risks.
- The Quantitative Risk Assessment (QRA) model currently highlights PWO 2 and PWO 4 as being at risk, and the project is proactively developing mitigation and recovery plans with the supply chain.
- Increased focus on managing Client interfaces and dependencies upon other projects such as the delivery of the 11kV substation via Sellafield Ltd Infrastructure.
- An Adjustment Event for the impact of Covid-19 post June 2021 has been approved and implemented, amending the Major Project Baseline (MPB) and the remaining PWOs as appropriate.
- Project has been impacted by a number of safety incidents (such as a dropped scaffold pole) that resulted in the site being stood down but has proactively embraced and shared the learning, resulting in an increased focus on safety in construction and the establishment of the Safety Hub.
- PPP is actively developing its delivery strategy to mitigate risks associated with limitations regarding specialist alpha capability resources in design and manufacturing. In recognition of wider sector demand, the approach is to manage, develop and share specialist resources across PPP.
- Early Contractor Involvement (ECI) commenced with the Key Delivery Partners for Electrical and Instrumentation (NG Bailey) and Mechanical Pipework (Balfour Beatty Kilpatrick), increasing confidence in scope and deliverability of future main contracts.
- The Project has built confidence in the delivery of the future PWO for the Weather Tight Process Building with the casting of the first-floor slab completed, construction commenced on the second-floor walls and the contract placed for structural steelwork. Construction challenges and float erosion impacted as a result of reduced productivity (by Kiers) and a lack of steel workers due to UK market demand.
- All nine main contracts for Glove Boxes are placed and in manufacture for the schedule critical glove box lines, laying the foundation to achieve the future PWO for glovebox integrated works testing. As part of this the project has been successful in challenging functional requirements.
- The 'BIM Cave' is now available to enable 4D planning which will help to mitigate integration risks and support construction and installation (refer case study).
- Like all projects, the short-term impact of hyperinflation on baseline, sanction and funding is being reviewed and managed closely by the project and Client.

# SIXEP Continuity Plant (SCP)

The existing Site Ion Exchange Effluent Plant (SIXEP) has been in operation since 1985. It removes radioactivity from various site effluent streams on the Sellafield site, acting as the 'kidneys' of the site by filtering out radioactive material before discharging it to the sea. That capability is needed until around 2060 and due to the age of the original SIXEP, which was originally designed to operate for 25 years, a new facility is needed to enable continuous operations. The SIXEP Continuity Plant (SCP) will ensure the continued availability of effluent treatment via SIXEP and provide ongoing future capability for the Sellafield site.

The project has two main components – a new facility to be constructed north of the existing SIXEP facility which will replace the effluent treatment function of SIXEP, and modifications to the existing SIXEP plant to allow effluent to be diverted to the new facility.

PPP has had a good year delivering the SCP project with year-end schedule performance in line with the Major Project Baseline (MPB). The project started the year working collaboratively with the Client team to set the MPB and finished the year delivering all in year milestones. Significant progress was made on Project Wide Objective 1 (PWO) (the first of seven milestones) namely the completion of the first 2 large stainless steel process vessels, ready for performance testing early in Year 4. The procurement and installation of the construction tower cranes was a critical enabler to commencing structural steel work erection and was enabled through the PPP strategic decision to procure rather than lease the cranes which could subsequently be utilised on other projects and ensure value for money, with a cost saving of near £1million.

For 2022/23 the challenge is even greater, the baseline position is to deliver £169million of scope. To do this the project must place its contracts on time, ensure it provides support to its supply chain, manage its risks effectively, identify opportunities to protect the schedule and act on them and ensure value for money is delivered.

PPP Price  
**£950m**



Full business  
case approved  
**Dec 2021**



People mobilised  
**151**



Supply Chain  
members engaged  
**22**





## Performance Snapshot

### Schedule

Milestone	Target	Actual
Manufacturing of structural steel for services building	12/08/21	29/10/21
Decision point 2 for valves	15/11/21	24/09/21
Investment Review Panel (IRP) approval	24/07/21	28/06/21
Process building slab pours	12/08/21	04/10/21
Contract for remaining valves	01/02/22	15/11/21
Design for Manufacture for west pipebridge design	05/08/21	03/11/21
Services building slab foundation	21/02/22	10/02/22
Tanks and vessels – manufacture charge supply tank T21101	28/03/22	01/02/22

### Finance (in £m)

Budgeted Cost of Work Scheduled (planned cost of what was originally planned)	£90.3
Budgeted Cost of Work Performed (planned cost of what was actually delivered)	£89.9
Actual Cost of Work Performed (actual cost of what was actually delivered)	£80.9
Schedule Performance Index	1.00
Cost Performance Index	1.11

### Health and Safety

	Target	Actual
Recordable Injury Frequency Rate	0.03	0.00
Lost Time Accident Frequency Rate	0.13	0.00
RIDDOR Reportable Frequency Rate	0.25	0.00

## Forward Look

The PWOs below are the milestones against which delivery performance is incentivised under the Aligned Incentive Fund (AIF).

PWO 1: First two Universal Vessels fabricated and ready for trials	July 2022
PWO 2: Service Building Weathertight	January 2024
PWO 3: Completion of Photo-voltaric modules	May 2025
PWO 4: Handover of Buffer Storage Tanks Cell to Commissioning	June 2026
PWO 5: Handover of Services Building from Construction to Commissioning	April 2027
PWO 6: Handover of Effluent Treatment Cell to Commissioning	August 2027
PWO 7: Licence Instrument to enter Active Commissioning obtained	April 2029
SCP Project Complete: Complete Active Commissioning	May 2030

## SCP on track to hit its first Project Wide Objective (PWO)

The SCP project is fast approaching Project Wide Objective 1, namely the completion of the first two large stainless steel process vessels – Universal Vessels (UVs) 1 and 7 by West Cumberland Engineering (WCEL), ready for performance testing by July 11, 2022. Phase 1 of the Universal Vessel Test Rig Assembly is now complete and the two vessels are now in an advanced stage of fabrication. This has been achieved through great collaboration between a key local supply chain partner and the SCP Aligned Delivery Team.

*"An excellent achievement by West Cumberland Engineering for successfully completing fabrication and testing of all the phase one vessels, plus the first of the phase 2 vessels, Polyelectrolyte Mixing Tank (T23001), will also be completed later this month. During the fabrication of the phase 1 vessels, we have gained Learning from Experience (LFE) from a number of fabrication issues that will be applied to improve the fabrication process of the remaining Vessel Design Packages (VDPs) for the SCP Project."*

Steph Elwood, SCP Vessels Team Lead

*"A really pleasing milestone to achieve on the manufacturing programme. This has come about via excellent collaborative working between a key local supply chain partner and the SCP Aligned Delivery Team, across the lot partners. The work done and the lessons learned on the first phase puts us in a great position to deliver the remainder of the Tanks and Vessels scope."*

Jon Hutchcroft, SCP Trade Package Manager



## Commentary

2021/22 has been an important year for SCP, seeing the delivery progress and positive industry recognition in the following areas:

- All key 2021/22 milestones were completed with 5 of the 7 delivered on time or ahead of schedule. This included delivering the foundation slab early, fabrication of the Universal Vessels and approval of the Full Business Case (FBC).
- Due to significant progress in year, PWO 1, namely the first two Universal Vessels ready for testing, is due for completion in July 2022 and the project is forecasting delivery ahead of schedule. PWO 2, Service Building Weathertight, is on track for delivery in March 2024.
- During setting of the MPB, seven Project Wide Objectives (PWO) were identified for SCP and categorised with a bronze, silver and gold status during collaborative negotiations.
- The project team has been awarded the first PPP Zero Harm award after achieving 2million hours without a lost time accident.
- SCP was the second project to set a MPB and therefore built on both SRP's approach and subsequent learning from experience (LFE) activities. The FBC was approved by HM Treasury in December 2021, two months ahead of schedule. The submission was well received through governance routes and hailed as best in class. Post implementation, two adjustment events have been raised which have impacted the MPB and end date by two months, namely Covid-19 impacts and unforeseen ground conditions. The implementation of the adjustment events and the collaborative work between PPP and the PPP Client team is an example of the PPP model in action and provided an opportunity to develop the process.
- The Infrastructure and Projects Authority (IPA) conducted a review of SCP in October 2021, identifying it as an exemplar for Sellafield Ltd and wider infrastructure projects. The review found the project was set up for success and that the PPP environment was adding benefit.
- The impact of hyperinflation on the baseline, sanction and funding is being reviewed and managed closely by the project and Client. Costs increases are being seen across a number of workpacks.

The project is performing consistently and is controlled by a well-established project team with issues being proactively raised, and action plans initiated. For example, the project team is currently forecasting PWO 6, effluent treatment cell handover, is at risk following a rerun of the risk model and is working to understand the forecast date and to mitigate the delay.

Planning for the tie-in of SCP to SIXEP is going well and there has been proactive engagement with the Client team with positive HAZOPs and technical review meetings. Supply chain engagement has commenced, and the project understands the importance of developing an appropriate strategy for modification and then connection into the two valve points.

### SCP celebrates achieving 2 million hours without a lost time incident

In April 2022 the SCP project received a PPP Zero Harm Achievement Award for achieving 2million hours without a lost time incident. Since the inception of Zero Harm, this is the first reward of its kind and represents a fantastic safety milestone.

*"Whilst all of us continue to strive for higher performance and certainty of safe and healthy delivery for our people it's great to see the effort the SCP team is putting into keeping people safe and healthy and the resultant success the project team has achieved – well done and keep up the great work!"*

Duncan Elliot, Head of PPP

# Replacement Analytical Project (RAP)

The Replacement Analytical Project (RAP) project sits within the Site Management Value Stream as part of the Analytical Services Programme which provides a key service to maintain safe and secure operations on the Sellafield site. It involves modifying the National Nuclear Laboratory's Central Laboratory (NNLCL) at Sellafield Ltd to provide vital analytical services to the site. RAP provides additional site resilience, capacity and UK capability beyond the current site labs which have been in operation since the 1940s.

Preliminary design was completed in July 2021 and detailed design is progressing for all the project workstreams; High Active (HA), Medium Active (MA), Special Nuclear Materials (SNM) and Balance of Plant (BoP). The project is also developing the Analytical Equipment (AE) that will be used in the new laboratories.

Since approval of the Outline Business Case (OBC) the project performance has trended towards challenging the strategic tolerances. Significant Client led interventions have been initiated over the last 12 months to correct the projects performance trends. An executive-level Senior Oversight Group (SOG) has been established bringing together representatives from the key stakeholder groups.

Independent performance reviews have been conducted and Client led workstreams undertaken by independent experts to challenge scope assumptions and optimise project delivery. Significant progress has been made by PPP in stabilising and strengthening the project leadership and addressing the performance trends. Assurance interventions from the Infrastructure and Projects Authority (IPA), Nuclear Decommissioning Agency (NDA), Projects and Investment Committee of the Department for Business, Energy and Industrial Strategy (BEIS) and Her Majesty's Treasury (HMT) give confidence the project is now on course to complete detailed design by October 2023 and receive Full Business Case (FBC) approval from Her Majesty's Government (HMG) in 2024.

PPP Price  
setting due  
**Oct 2023**



Full business  
case approved  
**July 2024**



People  
mobilised  
**326**



Supply Chain  
members engaged  
**39**





## Performance Snapshot

### Schedule

Milestone	Target	Actual
SNM Displacement – Provision of 3rd Floor Labs	30/11/21	30/11/21
HA Preliminary Design Complete	06/08/21	06/08/21
MA Preliminary Design Complete	28/07/21	28/07/21
BoP Preliminary Design Complete	25/06/21	25/06/21
AED Bundle 6 Modifier Task Order 1 Contract Award	10/05/21	10/05/21

### Finance (in £m)

Budgeted Cost of Work Scheduled (planned cost of what was originally planned)	£53.5
Budgeted Cost of Work Performed (planned cost of what was actually delivered)	£35.5
Actual Cost of Work Performed (actual cost of what was actually delivered)	£44.4
Schedule Performance Index	0.66
Cost Performance Index	0.80

### Health and Safety

	Target	Actual
Recordable Injury Frequency Rate	0.28	0.00
Lost Time Accident Frequency Rate	0.15	0.00
RIDDOR Reportable Frequency Rate	0.04	0.00

## Forward Look

Detailed Design Gate	October 2023
Full Business Case Approval	July 2024
Project Completion	July 2028-January 2029*

\*Dates taken from the Outline Business Case, however are subject to completion of the optimisation process occurring in Year 4.

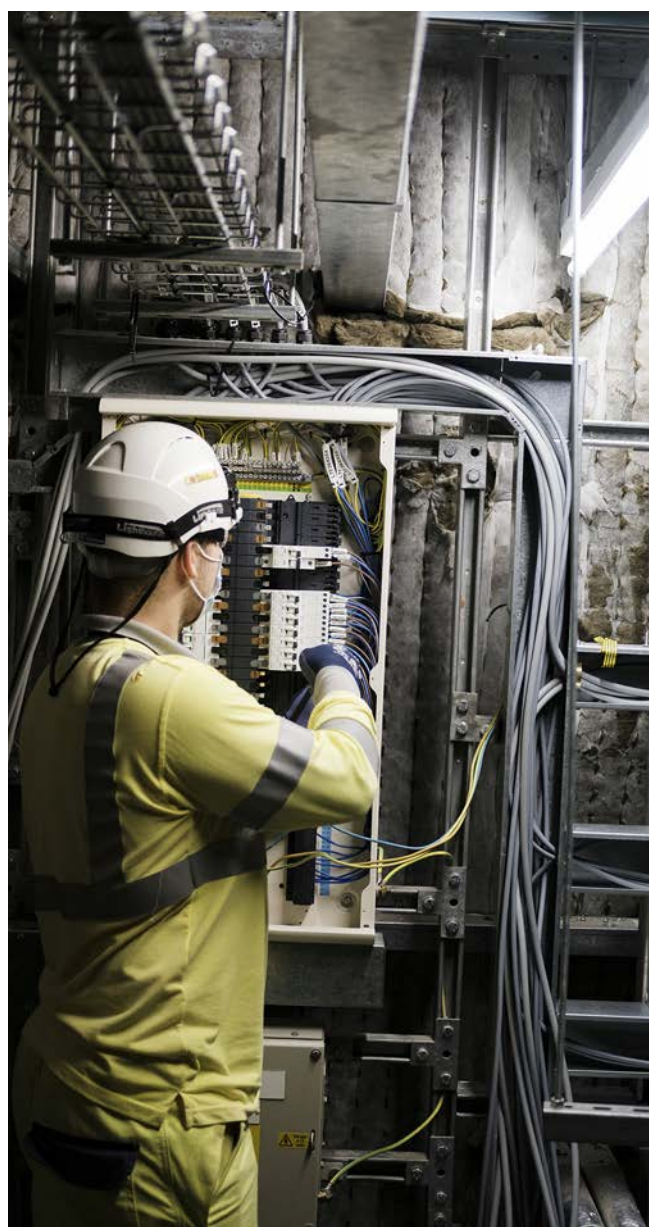
### Successful analytical equipment trials for RAP

The RAP Analytical Equipment Development (AED) team and one of their equipment modifiers, NIS Ltd, successfully completed preliminary designs for 21 new instruments through collaboration with supply chain and a local SME, PAR Systems.

Over the last twelve months, the team has worked to establish a collaborative relationship with NIS Ltd, Sellafield Ltd and NNL to successfully deliver the first of these equipment works orders.

*"RAP successfully achieved the delivery of SL/NDA Operating Plan Target; to move two laboratories from the Ground Floor to the 3rd Floor in Central Lab to make space for the new special nuclear materials laboratory. The project also achieved the completion of preliminary design with all streams now in detailed design, this also supported the PPP KPI being achieved. RAP is receiving a great deal of support from senior stakeholders to make sure it is fully optimised, and successfully completed two reviews to identify improvement opportunities which are now being assessed."*

Alan Haile, Senior Project Manager, RAP





## Commentary

RAP has faced several delivery challenges over the last 12 months and PPP, Client and IPA interventions have been initiated as a result of performance trends that have challenged both the programme's strategic tolerances and OBC performance ranges. To correct negative performance trends the following performance interventions have been initiated by the PPP, Client and external stakeholders:

- Following the March 2021 PPP Partner review, in June, the Client established a Senior Oversight Group (SOG) of executive project sponsorship to undertake an independent review of schedule and cost.
- The completed reviews were shared with the IPA in November 2021 at a Project 'Gate 0' Annual Review. IPA returned a Red delivery confidence assessment in recognition that the project was forecasting to exceed OBC ranges, which were set prior to PPP mobilisation.
- Performance trends were shared with Sellafield Ltd's Programme and Project Committee in February 2022 and, despite performance slippages, the project's Strategic and Economic Case were re-affirmed.
- The IPA's follow up review was completed in March 2022, with the Red delivery confidence assessment remaining in place and the next level of assurance initiated, namely the scheduling of a Case Conference with the IPA, BEIS and HMT which was held in June 2022.
- An NDA Accounting Officer assurance review was undertaken in April 2022 ahead of a project update to the Parliamentary Investment Committee (PIC).

The Executive review, sponsored by the SOG, produced its first outputs in November 2021. These indicated a project completion range of November 2028 – November 2031, comparable to the programme's strategic tolerance of late 2030, with a most likely outturn cost range of £900million to £1.1billion, comparable to the OBC P50 of £680m (fully escalated) (P50 means 50% of the calculated estimates will be equal or exceed the estimate, also known as the median).

The Client initiated an optimisation workstream in December 2021 to challenge scope, constraints, design solutions, delivery methodology and sequencing to identify potential schedule and cost recovery options.

This work was led by independent experts and included all key stakeholder groups and is due to conclude with final recommendations for implementation in July 2022, where a revised high-level schedule and cost forecast will be provided by the project. This output will also be used to inform the updated delivery strategy required to realise the opportunities ahead of the detailed design completion and next formal sanction gate (the FBC) which is forecast to go to Sellafield Ltd's Investment Review Panel (IRP) in December 2023 and Government in July 2024.

Despite the challenges the project has faced, RAP has continued to make progress, with key milestones delivered in the last year, including the completion of Preliminary Design (a KPI agreed with Sellafield Ltd) and a Sellafield Operating Plan Target to move two laboratories from the Ground Floor to the third Floor in the Central Lab.

With strong collaboration between SRO, Programme, Client, PPP and Project, alongside the support of the SOG, RAP has been able to address key challenges, stabilise leadership, identify and progress opportunities and develop a robust plan through optimisation through to the Detail Design Gate and FBC submission. This has increased stakeholder confidence in delivery and demonstrated the benefit of the PPP model with delivery partners from the construction phase of the project being involved in the identification of challenges and solutions through design.

Looking forward RAP is progressing to close out the final IPA actions, which will conclude alongside final down selection of optimisation workstreams in July 2022. External stakeholder assurance and intervention will continue with the Case Conference review in June 2022, a follow-up update to PIC in September 2022 and the next annual IPA assurance Gate 0 review in November 2022.

The project remains within sanction for the current phase of works and is on target to complete detailed design by October 2023, with the project Major Project Baseline due to be agreed by late 2023. The FBC is forecast to be approved at IRP by December 2023 and approved at HMG by July 2024.

# Lightly Shielded Store 1 (LSS1)

The purpose of the Lightly Shielded Store (LSS1) facility is to receive, handle and store low fissile contact handled intermediate level waste packages (containing both conditioned and unconditioned waste) for above ground interim storage pending the availability of the Geological Disposal Facility (GDF).

Through 2021/22 the LSS1 project team have been progressing towards production of the Outline Business Case (OBC) and had commenced resource mobilisation. The project had looked for opportunities to optimise the store layout and manage programme waste assumptions associated with radiological shielding working collaboratively with the programme and Client team. During production of the estimate and schedule a number of programmatic interfaces and dependencies were identified and a strategic pause was initiated in March 2022 to enable the interfaces to mature, specifically land availability and clearance.

The Sellafield Ltd strategic decision will allow the wider land programme (outside of the PPP's scope) to evaluate scope and schedule to ensure alignment with the LSS1 project scope and schedule assumptions and enable Sellafield Ltd to manage overall programme delivery and integration. PPP has efficiently demobilised 54 individuals into other PPP projects, and a small LSS1 team has been retained with key roles supporting progression of the Project Functional Specification (PFS) and looking at programme opportunities and delivery schedules associated with the Waste programme and Land programme.

Whilst this situation is disappointing, it has demonstrated the benefits of the PPP model. The portfolio approach to project delivery, mitigating the risk (cost and time) of demobilisation and remobilisation, has led to no contract cancellations, and has enabled the retention of knowledge and key skills. The

project team worked closely with PPP Services to engage affected individuals and take the opportunity to identify the appropriate team to remain on the project, proactively working to progress parallel work fronts and prepare for project restart. The programme has continued to emphasise the importance of the storage capacity and capability that LSS1 will provide to Sellafield Ltd and subsequently is re-evaluating the strategic case for LSS1 and the pipeline project LSS2.

The strategic pause has affected PPP and supply chain confidence in the project pipeline which was presented during the tender phase and a number of questions have been raised to the Client team regarding pipeline assumptions and project delivery interdependencies that are presented on the Sellafield site (such as land availability, services, programme assumptions, enterprise decisions). The Partners have also received questions from the supply chain, particularly for specialist skills which require long-term investment and development. Refer to the Pipeline section of this report for more detail.





## Performance Snapshot

### Schedule

Milestone	Target	Actual
Planning Application Submitted	21/04/21	23/12/21
Concept Stage Multi-Discipline Design Review	22/09/21	27/05/21
Concept Stage Project Validation Review	04/12/21	Not complete in year
Preliminary Design Stage	23/08/21	Not complete in year

Note: performance figures reflect project is paused and has not been rebaselined.

### Finance (in £m)

Budgeted Cost of Work Scheduled (planned cost of what was originally planned)	£16.6
Budgeted Cost of Work Performed (planned cost of what was actually delivered)	£3.5
Actual Cost of Work Performed (actual cost of what was actually delivered)	£4.9
Schedule Performance Index	0.21
Cost Performance Index	0.71

Note: performance figures reflect project is paused and has not been rebaselined.

### Health and Safety

	Target	Actual
Recordable Injury Frequency Rate	0.25	0.00
Lost Time Accident (LTA) Frequency Rate	0.13	0.00
RIDDOR Reportable Frequency Rate	0.03	0.00

Note: performance figures reflect project is under an instructed slow-down and has not been rebaselined.

## Forward Look

As explained in the Project Snapshot, LSS1 is currently paused. The below forward target dates remain however are subject to a degree of uncertainty until the pause is lifted.

Preliminary Design Multi-Discipline Design Review Complete	2023
LSS1 Plot Available	2025
Project Close Out	2028

### Early Contractor Involvement (ECI) workshops a success for LSS1 and BEPPS2

The LSS1 and BEPPS2 teams held several ECI workshops in late 2021. The workshops brought PPP staff and suppliers together, aiming to improve major project delivery performance at the Sellafield site through learning from experience, particularly in the early stages of a project. 20 suppliers were invited to the sessions and 16 took part. This enabled suppliers to find out more about the PPP way of delivering projects and in return PPP has benefited from the expertise attendees brought to the sessions, positively challenging and knowledge sharing – offering solutions to develop improved designs.

The ECI workshops promote collaborative working and supports PPP's business case benefits of improved predictability of cost and schedule outturn, increased value for money for the UK taxpayer, enhanced reputation (improved stakeholder confidence) and Sellafield Ltd being recognised for project excellence. Other benefits include promoting supply chain innovation and best practice performance in terms of productivity, quality and safety.

*"ECI is a fundamental element of project delivery, defining the PPP way. The ECI sessions enabled the BEPPS and LSS1 teams to do things differently, working collaboratively with suppliers early on in the project, benefiting from diversity of thought and challenging designs. Ultimately, this will improve project performance, outcome certainty and reduce risk. One such example included the design for a steel staircase. A steel manufacturer actually encouraged us to consider developing designs for a concrete cast staircase instead of steel given that steel would be icy in winter months and is expensive to install. The design team has taken this away to look into it. Just one example of the positive ideas and conversations that were held in the sessions."*

Paula Acton,  
PPP Supply Chain Manager on LSS1 and BEPPS2

**The ECI manual is available on the PPP Intranet.**



## Commentary



Project spend at the end of Year 3 was £9.5million against a sanction of £12.7million. The Project will produce an update paper to the Sellafield Ltd's Investment Review Panel (IRP) including re-use of existing sanction for the 2022/23 spend during the strategic pause.

During Year 3 £4.9million was spent, and during this time the project had banked a number of key decisions and retired some risks associated with crane design and the Project Functional Specification. This investment is not seen as a waste as the work challenged assumptions from the programme and led to a programme wide review of interfacing projects and scope. The project team also progressed a number of improvement opportunities which have subsequently been cascaded onto other projects, including early contractor involvement, design levels of definition, overall project specifications, external risk identification, engineering estimating and framing.

### Achievements in year included:

- Jointly with BEPPS2, successfully engaged early contractor involvement (ECI) with a supplier to enable the development of an appropriate crane solution.
- The project team optimised the store layout and increased the number of storage positions by challenging PFS assumptions and optimising the crane and building designs.
- Opportunities were identified around the welfare building layout and location of key equipment. If progressed this would have led to a reduction in complexity and cost.
- The project identified the radiological risk associated with constructing LSS2 while operating LSS1. A project led engagement with the Waste Capability Programme and Client team identified the opportunity to design and build the first bay of LSS2 as part of the LSS1 project and look at the interfaces between both facilities. This was a good example of PPP taking a portfolio approach and looking at longer term benefits to Sellafield Ltd programmes.

The LSS1 Key Performance Indicator (KPI) to deliver an optimisation report was partially achieved in line with a revised submission date. There was effective collaboration between the project, PPP Services and the Sellafield Ltd Client team to identify the KPI delivery strategy and the report identified key areas of opportunity that will lead to project optimisation between the OBC to Full Business Case (FBC) phase.



# Box Encapsulation Plant Product Store 2 (BEPPS2)

The second Box Encapsulation Plant Product Store (BEPPS2) will take intermediate level waste from Sellafield Ltd's legacy facilities. This waste, created by our retrievals and remediation programmes, is stored in either 3m<sup>3</sup> boxes or four-drum stillages. The facility itself will be connected via a tunnel to the Box Encapsulation Plant (BEP).

Work is under way to complete concept design stage and move into preliminary design stage and the Outline Business Case (OBC) is well under production. PPP and Sellafield Ltd have been proactively looking for opportunities to improve the project assurance approach to support building on the experiences of the SCP assurance and governance approach at Full Business Case (FBC). The project was well set up and actively mitigating risks through design and had a good understanding of the Project Functional Specification (PFS) requirements and key decisions to be made within phase. These were visible to all stakeholders and well managed. The PFS was updated to include additional scope associated with tunnel connection to BEP.

A review of Sellafield Ltd enterprise priorities has led to an evaluation of the timescales for BEPPS2 and the project has worked to optimise the schedule to align with the enterprise funding decisions. The project presented five options and the decision has been taken to slow down the project. PPP has successfully relocated most of the resource across other PPP projects. Remobilisation will lead to risks with the Mechanical, Electrical Instrumentation, Control and Automation (MEICA) Key Delivery Partner and resource ramp up and a current assumed impact of 38 weeks and cost increase of £6.6m is being reviewed by the project and Client team along with subsequent impact to agreed in-year Key Performance Indicators (KPI). A revised plan for OBC 'get to gate' has been agreed with stakeholders and is currently being implemented.

The impact of the slowdown has led the programme to re-evaluate assumptions around decommissioning activities and store loading rates and the strategic tolerance for BEPPS2 availability has been changed from 2030-2034 to 2032-2037.



## Performance Snapshot

### Schedule

Milestone	Target	Actual
Complete Concept Stage Area 000 Design Review	27/07/21	14/04/21
Concept Stage Multi Discipline Design Review Undertaken	15/07/21	09/06/21
Concept Stage Design Actions Close Out Plan	03/09/21	13/08/21
Opportunities Realisation Document	18/02/22	11/02/22
BEPPS-DIF Makes Site Available	01/03/22	Not complete in year
Sellafield Project Execution Review (SPER) Stage 1 Docs Issued	05/11/21	18/02/22
SPER Stage 2 Docs Issued	03/12/21	Not complete in year
Complete SPER Stage 3 Review	21/01/22	Not complete in year

### Finance (in £m)

Budgeted Cost of Work Scheduled (planned cost of what was originally planned)	£9.9
Budgeted Cost of Work Performed (planned cost of what was actually delivered)	£6.4
Actual Cost of Work Performed (actual cost of what was actually delivered)	£5.8
Schedule Performance Index	0.65
Cost Performance Index	1.10

### Health and Safety

	Target	Actual
Recordable Injury Frequency Rate	0.25	0.00
Lost Time Accident Frequency Rate	0.13	0.00
RIDDOR Reportable Frequency Rate	0.03	0.00

Note: performance figures reflect project is under an instructed slow-down and has not been rebaselined.



## Forward Look

As explained in the Project Snapshot, BEPPS2 is currently the subject of a slow down. The below forward target dates are under review.

Complete SPER Stage 3 Review	May 2022
Outline Business Case to Investment Review Panel (IRP)	June 2022
Nuclear Decommissioning Authority Group Investment Committee	August 2022
Preliminary Stage Multi Discipline Design Review	September 2022
Full Business Case to IRP	August 2024
Building Watertight	June 2027
Handover for Active Commissioning	September 2030

## Commentary

The Project successfully achieved its optimisation KPI (Key Performance Indicator) ahead of schedule through strong collaboration between the Project, PPP services and the Client team. The deliverables identified key areas of opportunity that will lead to project optimisation between the OBC to the FBC phase.

Other achievements in year include:

- Jointly with LSS1 successfully engaged Early Contractor Involvement (ECI) with a supplier to enable the development of an appropriate crane solution.
- Proactive engagement with the Office for Nuclear Regulation (ONR) has led to a clear understanding of regulatory challenges at a programme and project level and enabled the project to put in place regulatory action trackers and strategies.
- Modern Methods of construction opportunities are being explored to further improve the project delivery approach.

A sanction storyboard was taken to Investment Review Panel (IRP) in April 2022 to highlight the need to sanction at a higher level than usual for OBC. The progression of this work will pave the way for future projects to demonstrate the Sellafield Ltd approach to the revised gated process and benefits of the PPP model. The IRP recognised this as a positive effect from the PPP model and early supply chain engagement compared to historical Sellafield Ltd projects.

## **BEPPS2 HVAC system will reduce carbon footprint and achieve significant cost savings**

A fresh approach to the Box Encapsulation Plant Product Store 2 (BEPPS2) heating, ventilation, and air conditioning (HVAC) system implementation is expected to substantially reduce the overall cost and carbon footprint over the lifetime of the project.

Traditionally, steam mains have been used for HVAC systems on site, however this is very inefficient, therefore the BEPPS2 design team utilised a robust engineering approach and selected the Direct Exchange (DX) Air Source heat pump system for the facility (see below). This is considered market best practice. The design incorporated the use of heat recovery Air Handling Units to reduce energy consumption and reduce carbon impacts.

This HVAC system enables the recovery of 85% of the heat, a much-reduced operational footprint, a substantial 90% reduction in carbon footprint, a potential saving of up to £4million overall through heat recovery and reduced flow rates over the lifetime of the plant. Other site facilities, including LSS1 are now utilising this HVAC system design and are forecasting an emission saving of 18,983,190kg CO<sub>2</sub>, expected to save over £8million across the lifetime of plant operations. Other plants are now implementing this design as the standard HVAC system.

This redesign will provide skilled jobs to staff as the suppliers will train on site teams to undertake inspections, diagnostics and maintenance. This will develop site wide skills for now and in the future.

This has positively contributed towards collaboration, ethical supply chain behaviour, achieving sustainable development goals and Sellafield Ltd's carbon reduction roadmaps.

*"We applied relatively newer, commercially available technologies to achieve considerable cost savings in terms of energy usage for the BEPPS2 and LSS1 HVAC systems. The designs were challenged, as they were not widely adopted on the Sellafield site, however the HVAC team obtained relevant learning from experience and pushed back against the challenges to deliver a system, which we are proud to say contributes to the sustainable vision for the future of Sellafield."*

Paul Booth, BEPPS2 Lead HVAC Engineer

*"This is a fantastic example of how improved engineered solutions can be achieved through effective collaboration whilst also incorporating wider industry learning from experience. Being able to introduce a tried and tested technology like this at Sellafield is a fantastic achievement for all involved."*

Stephen Hodgson, BEPPS2 Project Manager

# PPP Environment, Health, Safety, Security and Quality Performance (EHSSQ)

## Safety Performance

PPP performance against accident metrics is better than typical national Construction accident data and the number of Zero Harm days (instances where no injuries occurred) achieved is at 95%. PPP has established a wider range of metrics for 21/22 which is encouraging and now include Number of Zero Harm Days, consecutive hours worked without a lost time event, number of condition reports raised per 1000 hours worked and Zero Harm Leadership Tours conducted.

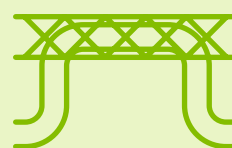
### Accident reporting performance 2021/22

	PPP Projects	Sellafield Ltd Target	Sellafield Ltd Performance
Recordable Injury Frequency Rate	0.26	0.25	0.37
Lost Time Accident Frequency Rate	0.09	0.13	0.26
RIDDOR Reportable Frequency Rate	0.00	0.03	0.06

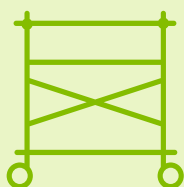
However there have been several near miss events during 2020/21 which have caused concern and include:



A dropped Scaffold pole on the SRP construction site.



Podium Steps made contact with Pipebridge during lifting operations at SCP.



Unauthorised modification of a scaffold structure at SCP.



Dumper Truck tilted onto side at SRP.



The PPP is delivering in the following 3 focus areas to make improvements in the Safety Performance following these events:

## 1. Safety Questionnaire

With the help of an external, independent resource a Safety Questionnaire has been developed for the SCP and SRP white- and blue-collar workforce. The questionnaire covers several topics including safety processes, safety discussions, relationships, engagements, safety concerns, training, and feedback. Once the analysis has been completed a series of improvement actions will be undertaken.

## 2. Health Safety and Well Being Hub for all Sellafield Major Projects

Agreement has been reached to develop a common set of safety standards that can be consistently applied across PPP. This will be done through the establishment of a Health Safety and Well Being hub. The hub idea is based on work previously done in the Highways Infrastructure sector and the intention is to identify the best practice from the supply chain and then for those standards to be implemented across PPP. The PPP representative and the EHSSQ Lead for PPP services are taking an active role in the Hub. Several topic areas have been identified for the first phase and the standards for these topics are currently being drafted by a cross section of supply chain organisations.

## 3. Leadership Management for Safety

Since the commencement of PPP, the focus has been on assuring industry minimum standards are met and understanding the expectations and requirements of the Sellafield Management System, Sellafield Contractor Standards, Sellafield Safety Instructions to develop and deliver the Health Safety and Well Being Collaborative Management Plan.

The Leadership Management for Safety Strategy was delivered in February 2022 and identifies the health and safety vision, mission, and objectives for the next 3 years. It is supported by an implementation plan which will identify and track specific activities to deliver the strategic health and safety objectives for PPP.

The strategy has 6 critical focus areas:

- Strengthen the visibility and engagement of our leadership
- Effectively engage and communicate with our people
- Promote a healthier PPP for all
- Cultivate a culture of curiosity and challenge
- Ensure successful performance measures are proactive and anticipate risk with effective learning
- Empower our people to be our strength and to be nuclear professionals

A good start has been made in the early activities within the implementation plan and the Production of the Leadership and Management for Safety strategy was one of the KPIs successfully delivered for 21/22. The recording of weekly inspections, monthly audits and leadership tours with key codes now enables improvement in the trending of these activities from a reactive approach to more predictive indicators of performance. There was also a successful Zero Harm day held in February 2022 to provide a focus for safety and renew the commitment to realising Zero Harm.

## Covid-19

Project and office work continued to operate within the Sellafield Enterprise Risk Assessment (ERA) that was produced for Covid-19. The ERA detailed the controls for minimising risk of transmission from transportation of personnel to the workplace, the reporting of cases, cleaning regimes, and any proximity working requirements. Daily construction cell calls were held involving PPP projects to manage the changes to the Covid-19 arrangements, answer questions and report any impact on safety. The assurance conducted on the Covid-19 controls were generally positive and show that the arrangements were working in line with the ERA.

## Environmental Performance

Overall, across PPP environmental performance during 2021/22 has been good; the significant Environment Events rate is zero across PPP, compared to 0.04 for Sellafield Ltd against a target of 0.12. Positive collaborative working is taking place across PPP Services, the project Aligned Delivery Teams and PPP Client. Environmental challenges that have arisen on the construction sites, have been managed in accordance with the requirements and without resulting in an environmental impact. Assurance activities have not resulted in any significant interventions. Concern remains over the projects undertaking early, timely engagement to support obtaining all necessary internal approvals and external permits prior to any waste(s) being generated; this will be an area of focus moving into 2022/23.

Publishing of the PPP Net Zero Carbon Reduction Roadmap and Climate Resilience Roadmap is considered a significant step forward, providing the framework for reducing PPP's emissions to 2039 and its ability to adapt and maximise climate resilience. Use of the Environment and Sustainability Workstream as part of the Performance Assurance Framework (PAF) in conjunction with the development of an Environmental Improvement Plan has already realised some performance improvement within 2021/22, most notably within Sustainability and Whole Lifecycle Assessment and PAF Cycle 3 has commenced for the Environment and Sustainability Workstream in April 2022 considering both Programme and Project level improvements. Further focus is required in 2022/23 to produce more detailed Environment dashboard metrics.

## Quality Performance

PPP Quality performance over 2021/22 has been good. A combination of oversight and assurance techniques have been used to evidence this performance. Audits of procurement and supply chain quality arrangements have been carried out as part of a risk-based approach to quality oversight, which was recognised as good practice by the Office for Nuclear Regulation. Areas of best practice were found for sharing across PPP and the wider business and improvements are being implemented where necessary to further strengthen current processes.

PPP Client Quality supported the Sellafield Ltd Nuclear Independent Oversight supply chain audit which demonstrated that adequate PPP Supply chain arrangements are in place. The PPP Inspection Authority strategy has been implemented and Right First-Time metrics produced and acted upon. Any quality issues identified through the year e.g., the quality in one area of the SRP concrete pours and non-conformances raised on SRP screw furnaces have been investigated and corrective action agreed with key stakeholders, including the ONR.

Over 2021/22, PPP Quality has continued to meet the minimum requirements in the Performance Assurance Framework and achieved over half of the operational value requirements. A set of PPP Quality objectives has been agreed for the coming year and achievement of these shall be driven through the collaborative PPP Quality Transformation Plan. The transformation plan established this year, encompasses Quality improvement activities which will add most value to projects. Further focus is required in 2022/23 to produce more detailed Quality dashboard metrics.

## Security

Generally, security performance has been good across PPP. There are currently >2000 people holding security clearance. Security Aspect Letters (SALs) are present for the Lot Partners and the appropriate flow down SALs have been cascaded to wider sub-contractors. The two areas where future improvements are required are the timely renewal of passes and ensuring the secure storage and transfer of any Official Sensitive information into any PPP sharepoint environment. Improvements are planned to enhance the overall PPP security culture, including staff awareness and training which has already commenced. Priorities for Year 4 include establishing assurance schedules for PPP services and for the Sellafield Ltd Intelligent Customer covering cyber security.

The transformation plan established this year, encompasses Quality improvement activities which will add most value to projects.





# PPP Benefits and Site Wide Project Delivery Improvements Introduction

Sellafield Ltd procured the PPP Model as the vehicle to transform project delivery, and a suite of benefits was presented in the Full Business Case (FBC) that would serve as evidence of that transformation. Progress at the end of Year 3 has seen steady achievement, that is ahead of the timelines in the FBC. It should be noted that, during the procurement stage of PPP, it was envisaged Years 0-5 would focus on enabling the PPP, with limited benefits (both qualitative and quantitative) expected to be realised as a consequence of where the three transition projects were in their lifecycle, and the limited influence the PPP model would have on these. Regardless, strong stakeholder pressure remains to increase the ambition around the level and speed of benefits that can be realised.

A key part of benefits realisation is the Site Wide Project Delivery Improvements (SWPDI) capability. SWPDI aims to bring the best ideas and innovations into one place to help achieve the ambition of PPP, developing and nurturing better ways of doing things across the site and respective organisations, benefiting projects, people, the Sellafield Ltd purpose and all partnering organisations. The 'Good to Great' workstreams are also identifying an increasing number of benefits (refer to Partners section).

Overall, PPP currently has 230 'live' opportunities identified in the benefit register to achieve defined benefits to Sellafield Ltd to date. These are spread across all 8 of the benefit areas and represents an increase of around 44% during the year. This demonstrates the ambition, desire and determination to exceed expectations in this area.

As explained in the Introduction section, the anticipated benefits of the PPP are:



**B1** Improved predictability of Project Cost and Schedule Outturn



**B2** Accelerated High Hazard Reduction



**B3** Increased Value for Money (VfM) for the UK Tax Payer



**B4** New opportunities for Sellafield Ltd, the Partners and their people



**B5** Enhanced employment opportunities for Project Personnel in West Cumbria & Warrington (Socio-Economic)



**B6** Enhanced reputation (Improved Stakeholder Confidence)



**B7** Sellafield recognised as having areas of Project Excellence within Infrastructure and Projects Authority (IPA), our supply chain and Government.



**B8** Enhanced Sustainability Performance by projects increases social value and decreases environmental impact.

Benefit Category		Identified		Accepted or in Delivery
		May 2021	May 2022	
B1	Improved predictability of cost and schedule outturn	30	48	6
B2	Accelerated high hazard reduction	20	17	2
B3	Increased value for money for the UK taxpayer	56	86	15
B4	New opportunities for Sellafield and its people	3	4	1
B5	Enhanced employment opportunities	5	7	1
B6	Enhanced reputation (improved stakeholder confidence)	35	31	7
B7	SL recognised as having areas of project excellence	11	17	4
B8	Enhanced sustainability (social and environmental)	NA	20	0
Total		160	230	36

In advance of PPP FBC timelines, £1.075billion of benefits have been identified, of which £130.8million have been validated over the PPP lifetime.

#### New for 2021/22

- **Ideas Portal:** PPP's Ideas Portal has been launched with 135 improvement ideas submitted to date. The implementation of the Ideas Portal is providing a simple portal for the PPP to submit ideas and best practice with the plan to expand to the wider supply chain soon.
- **Introduction of Benefit B8:** The level of Sellafield Ltd and PPP's shared ambition, paired with the global importance of social impact and sustainability, means there is now a jointly developed eighth Benefit that will positively impact workforce, communities and the environment.
- **Good to Great:** The 5 Good to Great Workstreams are bringing benefits through the unlocking of the programme approach, digital delivery, project delivery processes, high performing team development and skills and talent development (refer to Partners section).

The priority for Year 3 of PPP was to bring a step change from strategy development to full implementation and early benefits realisation. Significant progress has been clearly demonstrated in this area over the last 12 months, at both a programme and project level. Going into the fourth year of the contract PPP is in a strong position to capitalise on these early successes.

To support this the PPP Benefits and SWPDI Teams are currently trialling the software tool Amplify which is a strategic program management software which can be used to support the overall benefits management realisation and demonstrate return on investment of SWPDI – with the intention that if the trial is successful and it can be confirmed that all requirements can be met, this will be launched within year 4 of the contract.

Turner & Townsend recently undertook an independent benefits review of the PPP, noting:

*"It is pleasing to report that overall, there has been good progress in realising the PPP FBC benefits. It is evident through our interviews and meetings that the PPP is very passionate and committed to delivering great project outcomes for Sellafield Ltd and to the benefit of its wider community."*

*"People are clearly excited by the opportunity of being part of a long-term partnership between Sellafield Ltd and the PPP, creating an enduring capability which is recognised for efficient and effective delivery of the Sellafield Ltd Mission – to safely and securely remediate the Sellafield site to benefit the industry, nation and region."*

*"Knowledge and best practice are freely shared across the PPP. SCP and SRP projects in construction are providing insights to BEPPS2 which is currently at inception stage."*



# Improved Predictability of Cost and Schedule Outturn

Year 3 saw the achievement of the Key Target for schedule adherence for SCP and SRP (excellent rating) and the achievement of 6/6 operating plan milestones across the PPP Projects.

In addition, several key initiatives were delivered that have made a significant contribution to the ongoing achievement of improved predictability of cost and schedule outturn, including:

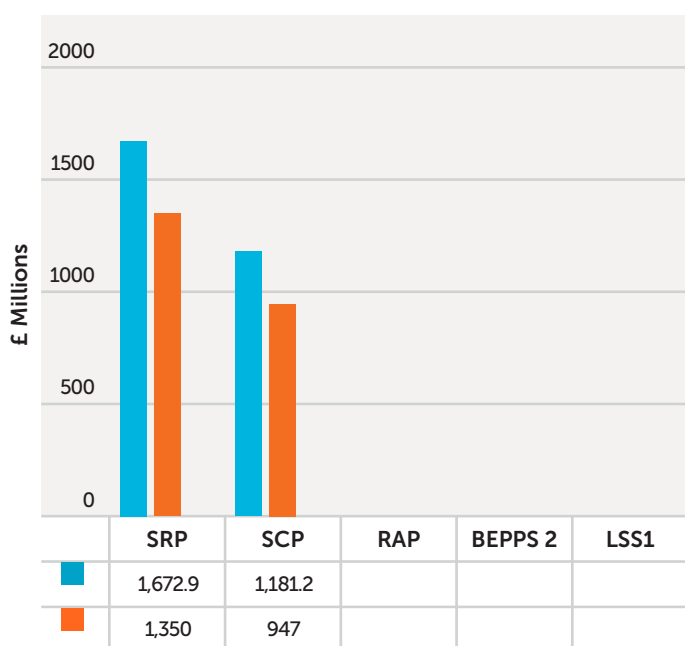
- Major Project Baseline Review completed jointly by the Partners and the Client.
- Major Project Resource and Key Quantity Long Range Forecast.
- The Lightly Shielded Store 1 (LSS1) Design Strategy Implementation.

In Year 2 one of PPP's biggest achievements was the setting of the Major Project Baseline (MPB) for the Sellafield Product and Residue Store Retreatment Plant (SRP). This year PPP has capitalised on that success, combined with learnings from it, to use it as the basis for the SIXEP Continuity Plant (SCP) Major Project Baseline that has now been set.

SCP and SRP are currently forecast to achieve combined cost and schedule outturn against the Major Project Baseline. This is a major achievement, given that SCP and SRP are the first major projects to take effect. Since the introduction of the PPP model, significant improvements have been made to the predictability of project cost and schedule (B1), which have historically shown 30% overruns.

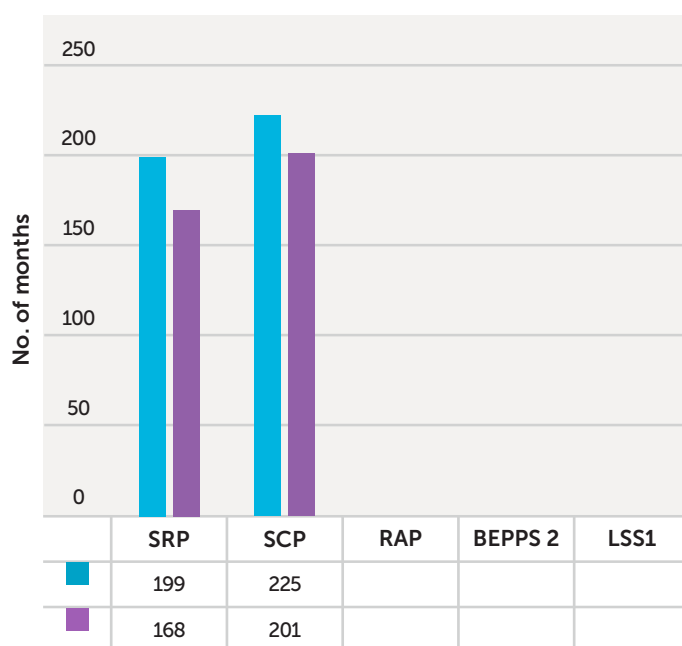
## Predictability of Cost

Deviation for Major Projects:  
Initiation to Final Outturn Costs (P01 FY22/23)



## Predictability of Schedule

Deviation for Major Projects:  
Initiation to Final Outturn Duration (P01 FY22/23)



**Key:** ■ P80 Sanction ■ Current EAC (£m)

**Key:** ■ P80 Sanction ■ Current EAC (Duration)



## SCP Major Project Baseline

*"The SCP Major Project Baseline was set by the Sellafield Client in June 21 following a comprehensive process of collaboration, assurance, benchmarking and stakeholder engagement. The MPB built in learning from the earlier SRP MPB including improved assurance and risk management. The MPB is a major component of the SCP Full Business Case which was approved by HMT two months ahead of schedule in December 2021 and was hailed as best in class."*

Paul Deeran, Head of Project Lifecycle

*"2021/22 has been a really important year for the project, delivering key milestones across the board – including the valve prototype 1 completion and manufacture which was achieved ahead of schedule. As we move into the second year of delivery against the Major Project Baseline the pace will increase further, with the building superstructure taking shape and most of our major sub-contracts mobilising on and off site."*

Jeremy Hunt, Head of Project SCP





## Accelerated High Hazard Reduction

This benefit is closely linked to B1 Improved Predictability of Cost and Schedule Outturn, as any acceleration to the schedule is considered as accelerated high hazard reduction as PPP aligns to the site objective to create a clean and safe environment for future generations.

PPP has been proactively working to reduce hazards by using technology at the design stage to simulate design conflicts, helping reduce the likelihood of the hazard occurring as part of installation and by driving early contractor involvement. For example, a challenge to the specification for the Sellafield Product and Residue Store Retreatment Plant (SRP) Batch Furnace has resulted in a specification that will significantly reduce downtime in operations post construction, hence improving the throughput of the plant and reducing the time to deal with the hazardous material being re-processed.

More generally, SRP has made visible progress on the Sellafield site during construction phase. The schedule remains ahead, and significant procurements have been let securing the critical supply chain for glove boxes (high-end manufacture), control system, HVAC and Mechanical, Electrical Instrumentation, Control and Automation (MEICA). They have also introduced an improved inspection, reporting and analysis regime (see case study) which encourages collaboration and a questioning attitude which in turn is helping to change the mindset and culture of the teams on how to improve Environment, Health, Safety, Security and Quality (EHSSQ) performance

On SCP, progress against the FBC is being maintained and the project delivered all key milestones including the valve prototype 1 completion and manufacturing which was achieved ahead of schedule.

On RAP the project achieved the operating plan milestones to move two laboratories from the ground floor to the third floor into the central laboratories to make space for the special nuclear materials laboratory and seen the completion of preliminary design with all streams now in detail design.

The concrete batcher and BEPPS2 projects have made great progress, with the first of the batcher deliveries on site and prelim design and production of the outline business case on BEPPS2 progressing well.

PPP has also been actively engaged with the Client led major project reporting improvement project. The working group has established a new Client owned Project on a Page product which has been deployed across all current major projects within PPP – and work is ongoing to ‘automate and integrate’ this product with core data systems through collaborative working with the Sellafield Ltd Enterprise Digital Reporting Services.

This product is underpinned and informed by the PPP Project Status Report (PSR) which reviews project performance against a deterministic baseline. PPP is standardising these formats across the PPP portfolio, with PSR reviews providing verification of status and Project on a Page outputs at P50. This tiered approach establishes clear performance management layers, to create lines of defence for SL.

The priorities moving forward are to; drive performance improvement against deterministic baselines and improve the quality of PSR reports, which in turn will enable SL to drive performance improvement through the PMO, whilst providing an integrated perspective on project performance across the portfolio to the benefit of SL and NDA.

## SRP Environment, Health and Safety, Security and Quality Strategy: how local initiatives are helping to accelerate high hazard reduction

In June 2021 SRP introduced a more detailed weekly inspection, reporting and analysis regime as part of the projects Environment, Health, Safety, Security and Quality (EHSSQ) strategy, which prompts the questions where issues are identified; why the issue occurred and what drove the issue both from an individual and organisational point of view. This new and improved inspection reporting criterion provides a greater level of data which can be analysed by the SRP's EHSSQ team to understand "why" more than "what" and has been seen to contribute to B2. Accelerated High Hazard Reduction.

*"I'm a Senior Health and Safety Advisor, acting as lead for SPRS Interfaces, Mechanical, Electrical Instrumentation, Control and Automation (MEICA) and Fit Out (Construction, Commissioning and Pre Ops). I developed a new Health and Safety inspection proforma for SRP, the objective being to create a more efficient inspection report which took less time to complete and also generated a more valuable output.*

*The report allowed the causal factors and root causes of findings to be recorded, this data can be grammatically represented and utilised as method of visual feedback in meetings. Over monthly periods the data can be trended to identify short term variance in safe/unsafe acts and conditions.*

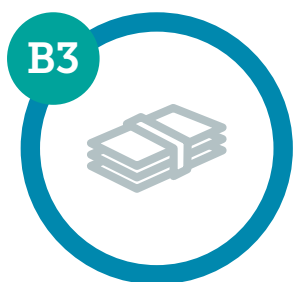
*Furthermore, quarterly/annually, the data can be triaged to demonstrate leading and lagging indicators in performance, which can be strategically utilised as a vehicle for informed dynamic management of Health and Safety on the SRP Project.*

*The proforma has since been implemented across all PPP projects and digitised by PPP services for further ease of use. Sellafield Project Delivery Directorate have now recognised the value of the system and are intending to adopt the proforma as a minimum standard."*

Mark Atkinson, Senior Health and Safety Advisor for SRP







## Increased Value for Money for the UK Tax Payer

PPP has a financial efficiency target of £700million and has since set itself an ambitious stretch target of £1.4billion.

'Big Ticket' programme level initiatives have been identified, including:

- Implementing a Common Data Environment (~£200million savings).
- Multi-Project Procurement (MPP) (~£200million).
- Transferring Workforce (~£47million savings – see case study).
- Utilising Early Contractor Involvement in BEPPS2.

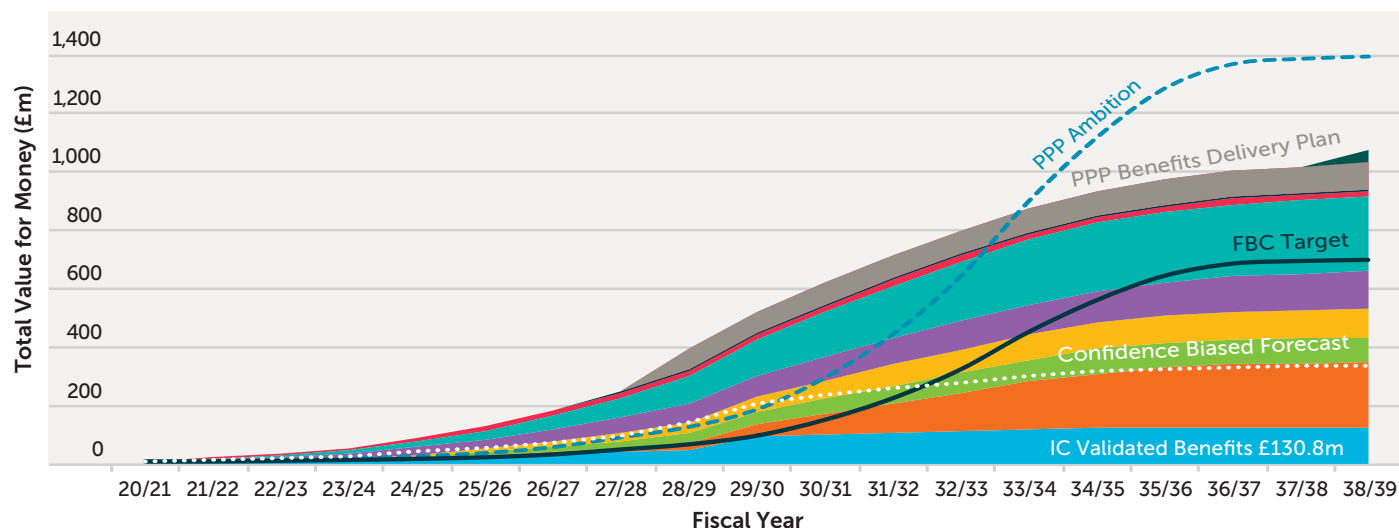
The total value of live opportunities identified currently stands at £1.075billion of which £130.8million of these have already been validated over the PPP lifetime – a significant increase from year 2 which saw the validated savings at £14.5million.

As only 12% of these opportunities have been validated to date there is still a risk to the achievement of this benefit however PPP and the client are committed to driving this benefit forward.

During Year 3 it was also identified that there was a disparity between stakeholder expectations of the early realisation of VFM benefits compared to the PPP FBC commitment. However, PPP's increased ambition to deliver VFM savings is closing this gap, momentum is building, and we are on track to significantly exceed commitments.

The focus for Year 4 will be to look at:

- Further develop VFM benefits of the overall PPP model inclusive of the commercial savings.
- Opportunities to identify more 'big-ticket' programme level benefits, which can drive a significant proportion of the benefits target.



**Key:** Validated CDE CLAW MPP Programme PPP Model Project SWPDI Operations Post 2039

## PPP Timebank

Timebank is a system which uses the credits of 'time' rather than money for the purpose of supporting social impact initiatives. In other words, it coordinates corporate volunteering effort centrally. Hours committed will be invested against the priorities of timebank (set by PPP Social Impact Department).

PPP's expectation is 1 day of volunteering time (or 8 hours) per 1 FTE, per year from the supply chain. The minimum benefit to the taxpayer equates to £76 per volunteer day, but the impact ranges based on the individual's projects. A few examples of outcomes of community projects include improved skills for local residents, improved self-confidence and increased levels of funding by using expertise from PPP. For example: where volunteering of expert time unlocked £200k of funding.

A recent initiative that has been supported is the Good Lives Project which is a collaborative community growing project that aims to offer real life skills and employment skills through gardening horticulture for those from disadvantaged backgrounds. The volunteers helped with groundworks which essentially saved the site from being closed indefinitely.

*"I am so very grateful to you and your team for all the work you have carried out on the Good Lives site. This means that the project can go ahead with the aim of providing therapeutic help and to support to our Learners, many of whom are struggling with multiple, complex issues."*

Karen Jones, Good Lives Project Lead

## Transferring Workforce (access to the workforce)

On site today, projects typically use minibuses and operate in silos regarding transport. The interim solution of the Transferring Workforce is focusing on moving towards a programme methodology which will share buses between projects, improving efficiency as a result. The SRP project team had explored the use of larger buses (52 seats) and by utilising their Learning from Experience (LFE), PPP is migrating this approach across all projects to combine the use of larger buses (75 seats) with an agile and efficient system that allows a reaction to demand fluctuation. The fully implemented Transferring Workforce solution will capture all transporting of project personnel in a single framework contract with Stagecoach.

This will provide significant efficiencies of scale, reduction in congestion and carbon emissions and allow Sellafield to become better neighbours to our local communities.

Services are currently operating from Park and Ride locations at Lillyhall, Kangol, Yottenfews with a pickup service also at Seascale. A Framework contract is due to be in place by end of May which will allow any project to call off a bus service as required under the terms of the framework. As usage increases due to project workload additional park and ride facilities will be added along the A595. A communications plan is currently being established to recover SOVAs from project staff to switch to the bussing service, which will put PPP ahead of the Enterprise schedule in the recovery of SOVAs. A small number of SOVAs will remain for essential use.

**B4**

## New Opportunities for Sellafield and its people

Approximately 185 Sellafield Ltd personnel are currently deployed in the PPP. Many of these have been provided opportunities which would not have existed prior to the implementation of PPP. In addition to this, opportunities have also been made available for secondments into Partner organisations on an ad hoc basis to deliver non-PPP scope. Good progress has been made in this area during year 3, however an increased focus is required going forward in order to encourage and maximisation of this benefit.

### International project opportunities via the PPP model

As part of Sellafield senior leaders' succession planning, the company worked with KBR to provide Neil Crewdson the previous Interim Projects Director a secondment to suit his development needs.

Neil has worked in the company since he was 16, and while he had worked in most aspects and areas of the business up to executive level, he discussed with the CEO a desire to gain external experience in a commercial organisation to provide different insights and experiences, so he can help Sellafield to be an industry leading client organisation and provide greater bench strength.

With KBR global reach Neil worked with the organisation on a shortlist of roles that gave the optimum development opportunity, the selected secondment was working for the KBR Australia region as a Programme Director.

Neil moved over to Sydney in November 2021 and his initial role is working on the South Australian Water Company contract as the programme director for the capital investment programme, Sydney Water has partnered with KBR to help them deliver this important programme of work.

Neil noted;

*"While this is a totally different industry to Sellafield, delivering large capital investment programmes have many similarities and shared challenges. In some areas I have been able to bring insights from the work we have delivered at Sellafield to Sydney Water, and in other areas I will be able to bring some concepts back to Sellafield to help us become a top quartile infrastructure delivery organisation. As well as the Sydney Water role I have been getting experience in bid development (winning new work), profit and loss accountability and client management."*



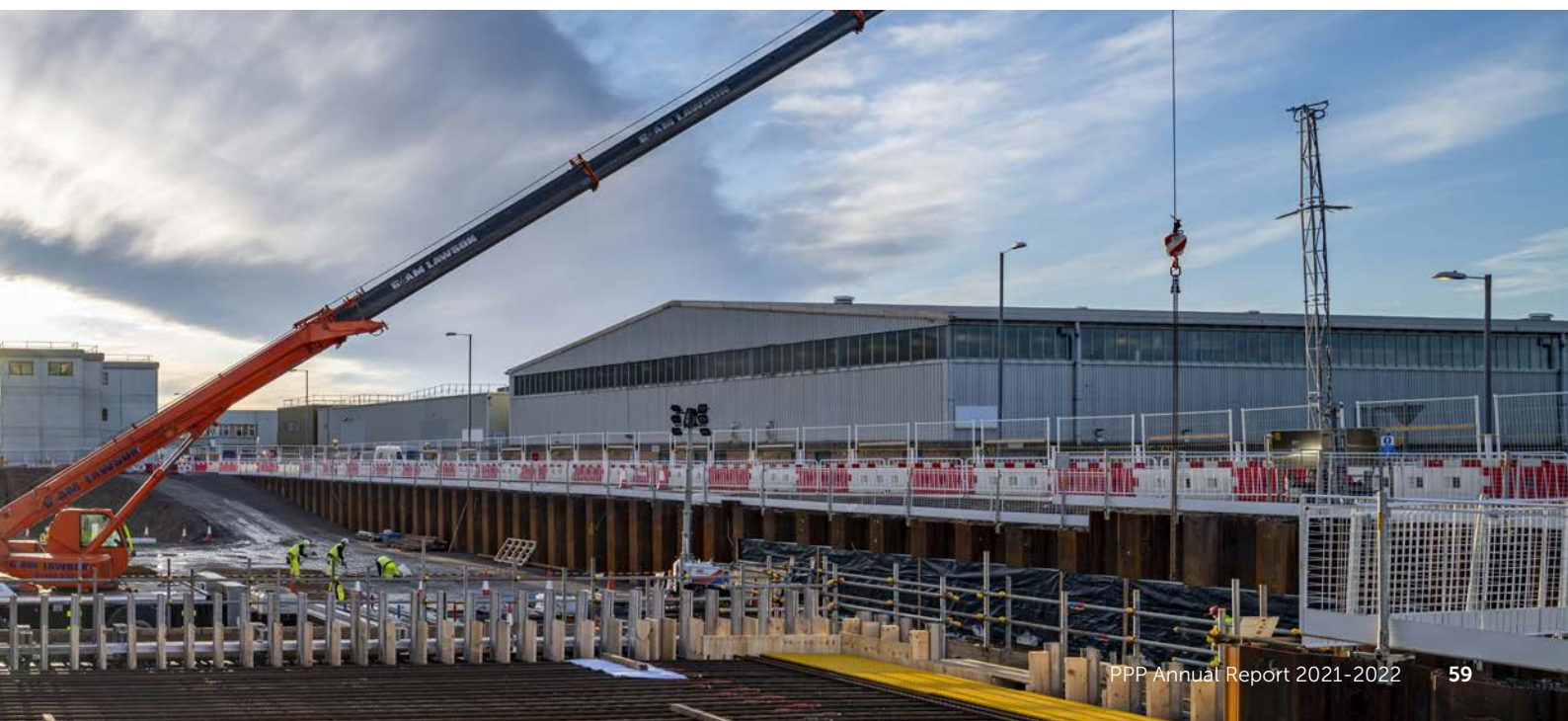


## PPP opportunities for Sellafield people on SRP

*"I have worked on the Sellafield site for over 30 years in which time I have had many varied and challenging roles. I have found working in the PPP model probably the most exciting and challenging. The PPP model has given me an opportunity that I would not normally have had. I used to represent the client as the CDM (construction design and management) representative which involved supporting the PPP projects and carrying out assurance on the SRP project on behalf of Sellafield.*

*When the opportunity arose to transfer into the SRP Aligned Delivery Team I jumped at the chance. I had been involved in PPP since 2018 prior to the placement of the contract and have seen Sellafield change to help the model deliver. Working in the ADT feels different from working in a Sellafield role, there is a different pace, a drive to innovate and challenge the status quo to help deliver the project to the right quality, cost and time."*

Graham Young, Stakeholder Manager, SRP





## Enhanced employment opportunities for project personnel in West Cumbria and Warrington

As at March 2022, PPP employed:



One of the key initiatives in this area has been the PPP internship programme which provides training and employment for disadvantaged groups in West Cumbria.

The internship programme will bring cohorts of people together with shared experience and shared barriers and provide an opportunity to develop skills and move closer to the job market. The programme is in essence paid employment that includes on the job training.

The programme was commended by Sellafield Ltd at the end of Year 3, winning a Manifesto Wave Award in the category of 'Be a Supportive Employer, Neighbour and Industrial Partner'. Upon successful completion of the programme candidates apply for full-time roles within PPP.

Looking forward, the focus is to continue and expand progress in this area to increase the opportunities being provided to local people.

### EJ Parker Technical Services open hub on Whitehaven Harbour

3rd May



MARATHON MAN: Gary McKee opens new business hub

EJ Parker Technical Services has opened a new office on Whitehaven's harbour front.

The engineering company has created a local business hub, having won an 18-year contract with the Programme and Project Partners (PPP) at Sellafield.

# PPP Internship Programme

## AMY'S STORY

Amy joined the Programme and Project Partners (PPP) internship programme in February 2021 after leaving school a year earlier and struggling to find the right career opportunity locally. Amy is one of six interns who joined the partnership in April 2021 as part of PPP's first ever intern cohort and is already making the most of opportunities on PPP. Amy is part of the resourcing and talent team on PPP and is supporting the Partners to recruit the talent they need to complete their transformation of Sellafield Ltd and create a clean and safe environment for future generations.

***"After finding the PPP internship opportunities advertised through the Job Centre, my work coach informed me that they were really good opportunities – so I applied. After being accepted onto the scheme and completing a four-week virtual skills academy to prepare me for the workplace, I was interviewed and successfully appointed to the role. My aim is to make sure I get everything I can out of this experience."***

## MITCHELL'S STORY

Mitchell is already making the most of opportunities on PPP. Since April 2021, Mitchell has undertaken a comprehensive onboarding programme to learn more about PPP and what his role will involve. In September 2021 he joined PPP's Replacement Analytical Project (RAP) as a Planner Intern.

***"I applied for the role because I had an interest in planning and project controls, and during the skills academy I met some of the people I would be working with which made me feel more comfortable in applying and being interviewed. My ambition for the future is to travel, I know that the skills I'm learning are transferable and project controls expertise is needed worldwide so it is one of my many goals to work on projects across the world."***

## ABBIE'S STORY

Since leaving college Abbie had a few part-time jobs which allowed her to develop her skills and work experience, but she really wanted a career. Abbie heard about the PPP internship scheme through Inspira – a company helping with employability skills – and it sounded perfect. Abbie lives in West Cumbria and wanted to stay close to home and hit the ground running in her career, so the internship was an opportunity she couldn't pass up. After undertaking PPP's four-week Skills Academy, Abbie was interviewed and successfully appointed to the communications and stakeholder engagement intern role. She's hit the ground running and her enthusiasm is second to none.

***"My first month since starting my role as a communications and stakeholder engagement intern has been one of the most inspiring and proud moments of my life. I have met some of the most supportive people, and I can't thank them enough. The work I have achieved so far has been exciting to be a part of – from completing content plans with my buddy Rebecca Mills to finishing several online courses to develop my knowledge. I already feel like I have learned and taken so much away from it. I look forward to the next steps on my 18-month internship and the opportunities PPP will bring."***





## Enhanced Reputation (Improved Stakeholder Confidence)

There is a strong connection between benefit B6 and B7 – as being recognised as having areas of project excellence in turn enhances reputation and stakeholder confidence.

Government stakeholder interest is high, especially in the PPP model, providing significant opportunity to enhance reputation. We have also recently been sharing best practice with HS2, Hinkley and Heathrow. Significant engagement with senior government stakeholders to set out value of Project 13 and PPP models. This engagement includes the Client performing as a member of the Infrastructure Client Group Executive Board as well as the Strategy Board for Project 13 as well as routinely presenting at key infrastructure sector events such as Transforming Infrastructure Live and other learning events by the Institute of Civil Engineering. It also includes participating in knowledge sharing with organisations like Sizewell C, Network Rail, Airbus, Heathrow, East-West Rail, TEPCO, AWE and High Speed 2. Discussions continue to build the narrative and assure government that value for money is being offered.

It is widely appreciated that benefits will be a significant factor in the judging of the success of the PPP model. Looking to demonstrate that Sellafield Ltd is ahead of the curve on benefits.

The PPP developed the supply chain social impact (SI) toolkit is featured on the UK government website [www.Gov.uk](http://www.Gov.uk). The publication on Gov.uk and the continued highlighting of the Social Impact tool at industry events and with industry bodies such as Britain's Energy Coast Business Cluster together with the measures taken by the PPP bolsters the stakeholder confidence and enhances Sellafield's reputation in the UK infrastructure and other industries (see case study).

A consistent approach to capturing and reporting PPP media coverage was established at the end of Year 3, the benefits of which will be seen in year 4. An example page is shown here containing the PPP LinkedIn highlights for April 2022.

Throughout the year there was various media coverage positioning Sellafield Ltd's PPP as thought leaders in transforming UK infrastructure and supply chain. Some example coverage can be on the adjacent page.

*"We are getting industry recognition from large infrastructure programmes who are excited by PPP. It is helping others to win work and helping us to attract the best talent."*

Rick Lennard, Head of Client for PPP

*The current positive position on benefit 1 is helping to demonstrate the positive impact that the PPP model is having upon Sellafield programmes, enhancing the reputation of the PPP."*

Turner & Townsend independent view



## Social Impact Toolkit

PPP's Social Impact team launched the social impact toolkit in July 2021 – its aim is to support businesses and nuclear industry subject matter experts (SME) in understanding what social impact is, why it is important and how best to embed it in our procurement process – ultimately supporting positive changes in the community.

Social impact was embedded as an integral part of the 20-year PPP contract model. The PPP supply chain will deliver billions of pounds in spend, we want this to have a significantly positive impact on the economic, social, and environmental wellbeing of our communities.

That means that in all PPP tender bids, positive social impact measures and deliverables are expected when bidding for contract opportunities. Those bidding for work are expected to address how they would maximise social value for the local community via their proposals on major projects at Sellafield site. The PPP social impact team uses the social impact toolkit to support and coach those businesses in the supply chain that require it; highlighting areas of opportunity that would provide the most sustainable benefits.

The toolkit provides more detail to help businesses understand how the PPP works together to enhance local employment opportunities, support pandemic recovery, generate more value for money for UK taxpayers and deliver positive life changing effects for people in West Cumbria and Warrington.

*"We're constantly engaging with our supply chain partners; using the social impact toolkit builds on that activity by providing an easy-to-access resource and demonstrating how fundamental this activity is to Sellafield's mission by housing it on Sellafield's gov.uk website."*

Luke Richardson, PPP Head of Social Impact

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### Sellafield: a model for leading change in a complex world


12 April 2022

Sellafield Ltd is leading a 100-year project to create a clean and safe environment for future generations across the UK nuclear industry's vast research and development site in Cumbria. Richard Leonard, Head of Client, Programme and Project Partners (PPP) at Sellafield, explains how its game-changing procurement model will transform outcomes across its portfolio of construction projects, while also revolutionising the industry.

Since the world's first nuclear power station opened in 1956 at Calder Hall on the Sellafield site in Cumbria, the UK has been a global leader in the research and development of nuclear technology.

The main focus for Sellafield is the complex work being carried out by the Nuclear Decommissioning Authority (NDA) to contain and make safe the legacy of its past activity. About two thirds of the NDA's annual £3.6bn budget is committed to delivering one of the most complex portfolios of construction projects in the world.

"Sellafield is at the heart of the nuclear industry in the UK," explains Richard Leonard, pointing out that the site has been central to developing the UK's nuclear skill base over the last 65 years.



“The Sellafield nuclear site is the highest hazard nuclear site in Europe and with the largest inventory of untreated waste in the world. Safely decommissioning the site is of national importance to the UK.”

### 'TURNING UP THE PRIDE DIAL'



The new managing director of the Programme and Project Partners at Sellafield wants to inspire collaboration in the local supply chain.

**DEVELOPING MAJOR PROJECTS IS ESSENTIAL** to achieve Sellafield's aim of creating a clean and safe environment for future generations.

In delivering these large-scale infrastructure projects, the Programme and Project Partnership (PPP) is creating new partnerships and new opportunities for the supply chain, economy and communities.

PPP has been brought together to deliver all Sellafield's major infrastructure over a 20-year period. The strength of its structure lies in its common purpose and its shared goals and incentives.

It is a 20-year partnership between the four supply chain partners and Sellafield. It is designed to be collaborative, innovative and responsive to change, and to create an enduring capability for the delivery of major projects. It is based on the principles of creating an 'integrated' organisation that is aligned and commercially incentivised to deliver better outcomes.

PPP comprises KBR (integration partner), Jacobs (design and engineering partner), Morgan Sindall Infrastructure (civils construction management partner), Dossart Babcock Ltd (process construction management partner) and Sellafield Ltd.

Together they support the site's 100-year decommissioning programme and the transformation of Sellafield Ltd.

**The story so far**

The Programme and Project Partnership is more than a framework to deliver major projects. It is a commercial and behavioural model that ensures collaborative working, as one team, is the only option.

PPP is fundamentally changing the way projects are delivered at Sellafield. Its success hinges on all colleagues, partners and supply chain playing a part in making project delivery successful.



## A new approach to project delivery at Sellafield

Almost three years into its 20-year life, the Programme and Project Partners model used at Sellafield is beginning to achieve firsts for the nuclear industry

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### EXCELLENT PROJECTS ENABLING VIBRANT COMMUNITIES

NUCLEAR SAFETY



Below: The PPP vision is to create a clean and safe environment for future generations, while opening vibrant opportunities for supply chain, economy and communities



# Sellafield Ltd recognised as having areas of project excellence

Sellafield Ltd's PPP is part of the industry's ongoing discussion on major project delivery.

This includes participation in the Infrastructure Client Group and Project 13. This was reinforced at a national Transforming Infrastructure Performance event in April 2022, hosted by the Institute of Civil Engineers, when the CEO for the Infrastructure and Projects Authority (IPA) and the Chair of the Infrastructure Client Group (ICG) both made reference to the PPP as an industry leading model helping to drive the national infrastructure agenda.

In Year 3 PPP was also featured by the IPA among their good practice examples in the Major Project Delivery Routemaps.

Turner & Townsend independent view is that:

*"Sellafield and the PPP have a strong culture across the team of learning from industry best practice, whilst sharing the knowledge that they are building through this venture."*

## Sellafield PPP examples in Government Guidance

In July 2021 the government's Infrastructure and Projects Authority published its guidance 'Routemap' modules for major project delivery, including the PPP among its good practice examples. The PPP is included in the modules for Procurement, Requirements, Delivery Planning and Organisational Design and Development.

Inclusion of these good practice examples demonstrates PPP is setting industry exemplars of collaboration and organisational development through aligning behaviours that are recognised externally by key stakeholders.

The Project Routemap is the IPA's support tool for novel or complex major projects. It helps sponsors and clients understand the capabilities needed to set projects up for success, incorporating learning from other major projects and programmes. The IPA is the centre of expertise for infrastructure and major projects, sitting at the heart of government and reporting to the Cabinet Office and HM Treasury in the UK.

**Rq Project Routemap: Requirements**

### Good practice examples

**Example 1**  
**A shared vision of success to enable collaboration: A Sellafield Ltd case study**

In pursuit of its mission to create a clean and safe environment for future generations, the Sellafield Ltd nuclear site is home to one of the most complex portfolios of construction projects in the world, stretching over many decades. The Programme and Project Partner model was an opportunity to achieve a step change in project delivery by bringing together the best of industry in a collaborative approach. Four partner organisations (NHR, Jacobs, Morgan Sindall Infrastructure Ltd and Ouseval Balcroft) were procured to work alongside Sellafield Ltd to deliver £2bn worth of projects over a 20-year period.

During the mobilisation phase of the programme, Sellafield Ltd worked with its four partners to translate its own organisational vision into a Programme and Project Partner mission statement to be achieved through five objectives.

Together the project partners co-created a visual representation of their mission statement, shown on the next page. This rich picture captures all the component economic, environmental and social outcomes and benefits that they aspire to achieve through improved project delivery. By engaging the partners in its development, this approach ensured that collective buy-in and support. The visual representation is also a helpful and easy-to-understand way of cascading the mission and objectives across Sellafield Ltd and the partner organisations.

The joint commitment and efforts to enable collaborative behaviours have been recognised by industry as best practice. In 2018, Sellafield Ltd, with the support of its partners, gained accreditation in ISO4001 Collaborative Business Relationship Management system (Suggested Reading 13). The Institute for Collaborative Working also presented Sellafield Ltd with the Collaborative Award for the Supply Chain category in 2020.

Subsidiary Ltds	Programme and Project Partner mission	Objectives	Cost	Employment	Outcomes	Output	Skills and abilities
We are creating a clean and safe environment for future generations.	A long-term partnership between Sellafield and Programme and Project Partners creating an enduring quality which is recognised for effective and efficient delivery of a cleaner and safer environment for future generations.	The objectives	Increased cost certainty and double-digit cost savings on major project total costs	Invest in the local workforce, training and employment	Realisation of agreed benefits through successful delivery of our major project outputs	Increased safety and security of the site	Enhanced workforce and supply chain capability through delivery of our major project outputs

The Programme and Project Partner culture will enable us to:

- Establish a business of safety
- Build an ambitious workforce
- Grow the business and develop for people to thrive
- Engage and empower our teams
- Build relationships and capabilities

Practice Introduction to Routemap modules Cross-selling themes project partners Requirements, and why they're important Typical findings Pillars of effective requirements management Considerations Good practice examples Suggested further reading Glossary Acknowledgements

**OD Project Routemap: Organisational Design & Development**

### Good practice examples

**Example 1**  
**Aligning behaviours of programme partners: A Sellafield Ltd case study**

In pursuit of its mission to create a clean and safe environment for future generations, the Sellafield Ltd nuclear site is home to one of the most complex portfolios of construction projects in the world, stretching over many decades. The Programme and Project Partner model created an opportunity to achieve a step change in project delivery by bringing together the best of industry in a collaborative approach. Four partner organisations (NHR, Jacobs, Morgan Sindall Infrastructure Ltd and Ouseval Balcroft) were procured to work alongside Sellafield Ltd to deliver £2bn worth of projects over a 20-year period.

During mobilisation work, Sellafield Ltd and its partners co-created a relationship management plan, which included the five core principles set out to the right. The plan also included aligned behavioural targets and measurement arrangements, which have been included in the partner annual behavioural key performance indicators. A dedicated team is required to measure and support behaviours using a staff pulse check and results from an independent annual cultural maturity assessment. The team also supports the incorporation of behavioural competencies in the attraction, recruitment, on-boarding and performance management of new staff, as well as cascading the desired behaviours throughout the Programme and Project Partner model.

This approach to aligning behaviours was effective in enabling collaborative behaviours to be recognised by industry as best practice. In 2018, Sellafield Ltd, with the support of its partners, gained accreditation in ISO4001 Collaborative Business Relationship Management system (Suggested Reading 13). The Institute for Collaborative Working also presented Sellafield Ltd with the Collaborative Award for the Supply Chain category in 2020.

Practice Introduction to Routemap modules Cross-selling themes project partners Organisational design & development, and why they're important Typical findings Pillars of effective organisational design & development Considerations Good practice examples Suggested further reading Glossary Acknowledgements

**Pr Project Routemap: Procurement**

### Good practice examples

**Example 3**  
**Using behavioural assessments in evaluation: A Sellafield Ltd case study**

A robust evaluation of behavioural and cultural fit should be considered before embarking on a long-term strategic partnership. Capability gaps should be identified as part of market engagement and can be addressed through training and additional procurement, but behavioural alignment must be present from the start for a partnership to succeed. This alignment can be tested and developed as part of the tender process. A good cultural fit is a critical enabler for collaborative working and effective problem solving, leading to better and faster delivery (Suggested Reading 13).

This example describes how Sellafield Ltd developed behavioural assessment methodology to support the procurement of four Project and Programme Partner organisations. This ensured that Sellafield Ltd had a clear understanding of the behaviours they wanted from prospective partners and could carry out transparent evaluation of bidders during procurement.

In pursuit of its mission to create a clean and safe environment for future generations, the Sellafield nuclear site is home to one of the most complex portfolios of construction projects in the world, stretching over many decades. The Project and Programme Partner model created an opportunity to achieve a step change in project delivery by bringing together the best of industry in a collaborative approach. Four partner organisations (NHR, Jacobs, Morgan Sindall Infrastructure Ltd and Ouseval Balcroft) were procured to work alongside Sellafield Ltd to deliver £2bn worth of projects over a 20-year period.

The longevity and high value of the works meant that it was critical that the capability procured embodied the behaviours essential to the success of the partnership model. A central part of the procurement process was the development of a Project and Programme Partner behavioural model, which comprised 30% of the overall scoring for the procurement. The model was developed, and through engagement, was refined to 25 desired behavioural characteristics, each aligned to one of five Themes. A methodology to assess these behaviours was developed and agreed with key assurance bodies, including Sellafield Ltd's senior leadership team, to ensure compliance requirements were met.

The behavioural assessment was central to the procurement, to which there were no appeals or non-compliance raised. Post contract award, Sellafield Ltd and the four partners further strengthened their focus on behaviour by developing a Relationship Management Plan to actively drive the desired culture through delivery. In 2018, Sellafield Ltd, with the support of its partners, gained accreditation in ISO4001 Collaborative Business Relationship Management system (Suggested Reading 13). The Institute for Collaborative Working also presented Sellafield Ltd with the Collaborative Award for the Supply Chain category in 2020.

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Practice Introduction to Routemap modules Cross-selling themes project partners Requirements, and why they're important Typical findings Pillars of effective requirements management Considerations Good practice examples Suggested further reading Glossary Acknowledgements

**DP Project Routemap: Delivery Planning**

### Good practice examples

**Example 7**  
**Collaborating to establish a major programme baseline: A Sellafield Ltd case study**

This example demonstrates the benefit of taking a collaborative approach to developing baselines early in the project.

The Sellafield nuclear site is home to one of the most complex portfolios of construction projects in the world, stretching over many decades. The Programme and Project Partner model between Sellafield Ltd and four partner organisations was developed to achieve a step change in project delivery by bringing together the best of industry in a collaborative approach.

One of the first tasks for the newly formed integrated team was to set the baseline for one of the largest projects in the world, the Sellafield fuel rod and nuclear core replacement plant. This project will safely replace special nuclear material packages, return them to 100-year packages and transfer them to be safely and securely stored in the new core and beyond.

The baseline includes the nature and scope of the project, how it will be delivered, what it will cost and how delivery performance will be measured and incentivised. This is incorporated into the business case that forms the basis of the government's investment decision.

Previously, the baseline-setting process had lacked contractor and supply chain input which often led to increased costs, delays and a lack of confidence in Sellafield Ltd's project delivery capability. The baseline was set following several months of collaboration with the Programme and Project Partners. It was also subject to comprehensive benchmarking and assurance by both internal and independent expert bodies which helped to give the baseline credibility with stakeholders. Their work included analysis of construction works in both nuclear and non-nuclear sectors. The baseline is now built into the full business case for the Sellafield replacement plant which gained approval by the government in early 2021.

This new collaborative approach to baselining represents a significant step change for Sellafield. It has been a key factor in the success of the project, accelerating high hazard reduction and mitigating the reputational risk of poor project delivery. This baseline development process will be applied to all future pipeline projects by Sellafield Ltd, incorporating lessons learned.

Subsidiary Ltds	Programme and Project Partner mission	Objectives	Cost	Employment	Outcomes	Output	Skills and abilities
We are creating a clean and safe environment for future generations.	A long-term partnership between Sellafield and Programme and Project Partners creating an enduring quality which is recognised for effective and efficient delivery of a cleaner and safer environment for future generations.	The objectives	Increased cost certainty and double-digit cost savings on major project total costs	Invest in the local workforce, training and employment	Realisation of agreed benefits through successful delivery of our major project outputs	Increased safety and security of the site	Enhanced workforce and supply chain capability through delivery of our major project outputs

Practice Introduction to Routemap modules Cross-selling themes project partners Delivery planning and why they're important Typical findings Pillars of effective delivery planning Considerations Good practice examples Suggested further reading Glossary Acknowledgements





# Enhanced Sustainability Performance by projects increases social value and decreases environmental impact

This year, the PPP approach to sustainability was strengthened with the introduction of an eighth benefit: ***Enhanced sustainability performance by projects increases social value and decreases environmental impact.***

The PPP Sustainability Framework set out the strategy for Sustainability under the headings of Performance, Planet, People and Partnership. During the year we have added our Implementation Plan, Communications approach, Carbon and Climate Resilience Roadmaps. The achievements arising from these are summarised in the PPP Sustainability Impact Report.

The Carbon Roadmap, delivered in Year 3, set out its ambition to reach net-zero carbon emissions by 2039, supporting Sellafield Ltd's goal of 80% reduction Scope 3 emissions (indirect emissions from Sellafield Ltd's value chain) by 2050. To effectively prioritise and deliver towards creating a positive legacy for future generations and to reach the net-zero goal, the Sustainability Implementation Plan was developed to build upon the themes within the Sustainability Framework.

In line with the Sellafield Ltd Social Impact Strategy (SiX), PPP has built its social impact delivery around five themes: Localisation, Local Business Development, Opportunity, Engagement, and Volunteering. PPP has made great strides in progressing social impact by developing the Social Impact Toolkit, Internship Scheme, and the Timebank. Recognising the impact of PPP within social impact is greater than the five Partners alone, over 90% of contracts over the value of £100,000 contain social impact commitments. Going forwards, PPP is working with these Supply Chain Partners to build upon Timebank and the Internship Scheme, as well as create an education programme to engage young people in STEAM (science, technology, engineering, art, and mathematics) subjects.

*"An amazing piece of work that is omni-comprehensive of all sustainability aspects."*

NDA feedback on the PPP Sustainability Framework

*"A positive example for other BEIS ALBs, as well as perhaps influencing the wider Nuclear industry as a key part of that."*

BEIS feedback on the PPP Sustainability Framework

## Carbon Emissions benchmarking – A Collective Approach

With the aim to monitor CO<sub>2</sub> emissions within the PPP projects, a standard carbon emissions benchmark methodology and data has been established, this is the collective approach agreed by the lot partners. The establishment of the benchmark forms a crucial part of the PPP's High-Level Net Zero Reduction and Climate Resilience Roadmap and will be used to refine CO<sub>2</sub> emissions data, and to monitor and report year-on-year carbon footprints reduction and/or improvements in performance.

Since Sellafield projects have not previously captured a baseline to benchmark carbon emissions, this is a transformation to better the sustainability performance and PPP projects can now monitor their CO<sub>2</sub> emissions and work towards the target of Net Zero Carbon 2039.

# Benefits – Site Wide Project Delivery Improvements

Since the introduction of the PPP Ideas Portal in 2021, 135 improvement ideas have been submitted, covering best practice, learning from experience and potential site wide improvements. 69 of the ideas have been approved by the review committee and are now live (with 30 of these accounted for in the benefits register due to their maturity and categorisation). The use of this Ideas Portal is being actively promoted to seek further initiatives to accelerate benefit realisation.

A review during Year 3 saw an amalgamation of effort between Sellafield Ltd and PPP to provide one focused project delivery improvements approach to deliver common outcomes. This has resulted in a single strategic approach identifying 16 outcomes which are aligned to the 8 overall benefits and PPP's Critical Success Factors and Success Factors (refer to Introduction section).

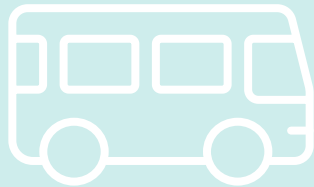
<b>OC 01</b>	Structured Requirements Management
<b>OC 02</b>	Programme and Project Capability and Capacity
<b>OC 03</b>	Assurance Arrangements
<b>OC 04</b>	Improved Porosity between Sellafield Ltd Staff and the Supply Chain
<b>OC 05</b>	Improved Productivity
<b>OC 06</b>	Improved Construction Logistics
<b>OC 07</b>	Improved Management of Projects
<b>OC 08</b>	Fit for Purpose, Underpinned Business Cases
<b>OC 09</b>	Effective, Timely and Honest Reporting
<b>OC 10</b>	A Continuous Improvement
<b>OC 11</b>	Effective and Efficient Inspection, Test and Commissioning
<b>OC 12</b>	Capability and Capacity
<b>OC 13</b>	Create New Market Opportunities
<b>OC 14</b>	Zero Carbon
<b>OC 15</b>	Social Value
<b>OC 16</b>	Environmental Impacts

The Site Wide Project Delivery Improvements (SWPDI) submitted 13 improvements for sanction during Year 3. Of which 9 are currently being progressed (2 were rejected and 2 were unable to secure the funding required).

## Highlights of the SWPDI include:

### TRANSPORTATION

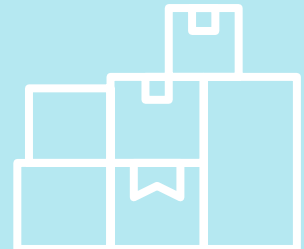
SAVING OF  
**£47  
million**



The implementation of PPP buses to transport project personnel to the workplace has not only provided a saving to the projects but has delivered a more focused transport solution from a single pick-up point direct to the project reducing the overall travelling time. This benefit has been validated at a saving of £47million over the lifetime of PPP.

### STORAGE OF MATERIALS

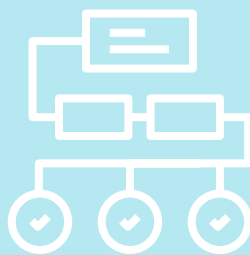
DEVELOPED  
SOLUTION FOR  
THE FIRST STAGE  
OF SAFE STORAGE  
AT LILLYHALL



For PPP it is critical to provide just in time deliveries to meet the requirements of the project. Having materials and equipment stored locally ready for call off allows the project to advance the current programmes without the risk of material or product shortages and provides greater flexibility for space management on site. Working with Sellafield the PPP has developed the solution for the first stage storage capability at Lillyhall..

### SELLAFIELD COORDINATION CENTRE

SOFTWARE  
SOLUTION  
PROVIDED



This has seen a software solution provide a pilot demonstrator showing the activities being undertaken across the wider Sellafield and how this affects all operation enterprises in common areas. It draws data from road closures, project work, utility/infrastructure works, area closures, building operational restrictions, etc, to show in a common mapping system. In the future this will allow planners or controllers of operational works to see the wider effect of their operations – and therefore aid more effective project delivery.

### PERSONAL PROTECTIVE EQUIPMENT (PPE) RECYCLING SOLUTION

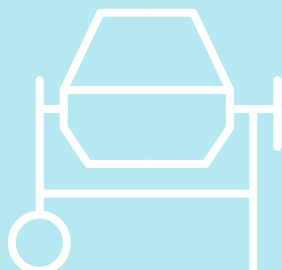
PPE RECYCLING  
SOLUTION TRIALS



This is about doing the right thing and diverting waste from landfill. At present Sellafield Ltd alone (excluding the supply chain) directly purchase seven tonnes of polyester in its PPE every year all of which is lost to the organisation – and society – through on or off-site disposal. However, PPP is now working with a supplier to trial a PPE recycling solution on SCP, this will provide PPE recycling bins for the correct management of inert discarded PPE. The intention is that if successful this will be implemented across the Sellafield site.

### THE CONCRETE INNOVATION WORKING GROUP

IMPROVED  
CONCRETE MIX  
SOLUTIONS



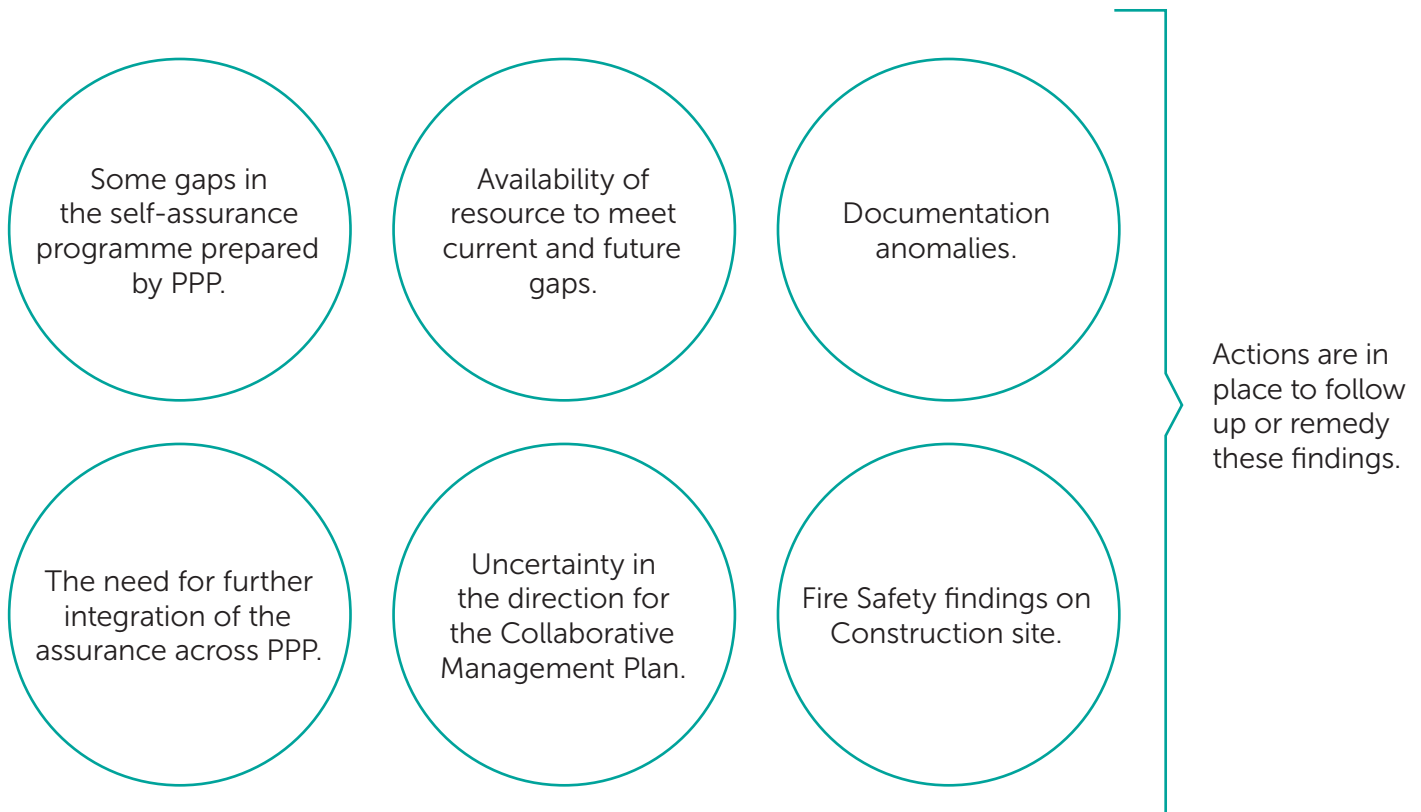
This group has been initiated to focus on delivering short, medium and long-term improvements in the way Sellafield Ltd utilises concrete. Made up of subject matter experts across Sellafield Ltd, PPP, and the supply chain, the group is developing improved concrete mix solutions, improving the carbon concrete product selection and reviewing what concrete types are used in what situations so that the most cost-effective solution is utilised whilst meeting the overall output specifications of the projects.



# EHSQ Assurance

## EHSQ Assurance Maturity

Key PPP findings and observations from assurance conducted in 2021/22 were:



## Intelligent Customer

There were two Green rated interventions completed by the Office for Nuclear Regulation (ONR) in 2021/22, in relation to Security Intelligent Customer arrangements for Physical and Personnel Security, and a Cyber Intelligent Customer compliance inspection in readiness for the Collaborative Cloud Environment.

PPP Intelligent Customer arrangements are now judged best in class by the ONR, and a network of people has been established within the Project disciplines to meet the nuclear safety and nuclear security principles within the various ONR guidance and Licence Condition requirements.

This enables the Client to make the positive statement that PPP arrangements show that requirements are being met for Intelligent Customer, Site Licence, Environmental Permit and Security. However some areas require improvements to strengthen and streamline the arrangements and their use. These areas are known and identified routinely in Client Performance Period reports.

The PPP Client continues to mature a joined-up approach to assurance, spanning PPP services, the Aligned Delivery Teams and Client. Use is still being made of the assurance maturity framework to provide a risk-based outcome focused approach and assessments completed in 2021 show that most activities are now at Level 3. Defined maturity as shown in the diagram (noting Outcome Focused and Delivery Performance are both at Level 2. Performed).

	1. Initial	2. Performed	3. Defined	4. Managed	5. Optimised
<b>Drives Value</b>	No other customer involvement in the process	Limited customer involvement in the process	Value derived from customer requirements	Value activity managed and non value added minimised	Process contributing to Enterprise performance
<b>Risk Based</b>	Risk is not applied in Assurance planning	Risk is limited to planning and activity is standardised	Risk is considered in planning and activity delivery	Risk is a regularly occurring factor in planning and delivery	Risk is the driving factor and activity is proportionate to it
<b>Outcome Focused</b>	Process primary focus is procedural compliance	<b>Primary focus is compliance with some consideration on outcome</b>	Outcome is equally considered with compliance	Outcome has greater focus than compliance	Achieving Outcome is primary focus of assurance
<b>Drives Improvements</b>	No foundation or commitment for improvement	Local improvements are identified	Improvements and identified locally with some consideration to the enterprise	Improvements are identified for both local and enterprise	Identifies improvement and tracks improvements to a sustained position
<b>Integrated uniform systems</b>	No integration of Assurance activities	Limited integration of Assurance activities	Assurance activities are planned within a common system	Integration of assurance in majority areas	Targeted assurance plans utilising concurrence
<b>Independent from delivery</b>	No distinction between business delivery and assurance	Delivered with some independent resource but controlled by same	Delivered with independent resource but controlled by same	Complete and clear demarcation between assurance and business delivery	Independently identified assurance and externally delivered
<b>Performance Managed</b>	Process is documented	Performance monitoring is applied	Performance measures are defined across the process	Performance measures are tracked against process parameters	Process measures are targeted at process optimisation
<b>Delivery Performance</b>	Delivery impacted adversely by volume of assurance	<b>Delivery performance moderately affected by assurance activities</b>	Delivery performance affected by assurance in minor capacity	Delivery performance partially optimised	Delivery performance fully optimised

# PPP Performance: Culture

A collaborative working culture is at the core of making the PPP model a success for all parties. Year 3 saw significant improvements in the cultural maturity of the PPP. Key foundational activities to support cultural maturity were put in place, as recognised by Deloitte in their independent cultural maturity assessment, which saw the PPP achieve an overall maturity improvement to average a score of 5/10, compared to 3/10 in Year 2. Focus areas for Year 4 will see greater emphasis to embed values and behaviours into people's day to day ways of working including a Line Manager Training Programme, PPP staff excellence awards and the start of the PPP High Performing Teams, focused on bringing all behavioural aspects together in team environments to address live issues and opportunities.

## Performance Snapshot

To help measure and support progress in the cultural maturity of the PPP, all parties jointly undergo an independent annual assessment. Following a baseline exercise in 2020, Deloitte conducted the second review of PPP in 2021 to measure progress against proposed target shifts in cultural maturity. As per the diagram, PPP's cultural maturity is measured in ten areas, which have been aligned to the PPP Performance Assurance Framework (PAF) measurement tiers. Of these, targets for Values and Beliefs, Employee Experience and Leadership also formed part of the 2021/22 PPP KPIs and Sellafield Ltd PPP Key Target, fostering a shared commitment. Recommendations also go into the PPP cultural development 'One Plan' as improvement actions.

## Commentary

In Year 3 the PPP has made progress to implement a number of important foundational activities to support cultural maturity, which is reflected in the Deloitte study showing a shift from an average of 3/10 to a 5/10. There has been significant progress in all areas, with six targets achieved and four exceeded. The next step is to push into strategic value, requiring more progress in areas such as Talent Management, currently the lowest rated, and will improve with a consistent approach across PPP. Activities are planned for Year 4 to address this, including a Line Manager Training Programme focused on helping the managers in PPP who manage 'rainbow' teams comprising members from multiple employing organisations. Other actions include an online Jobs Board, a new Learning Management System and an improved human resource database.

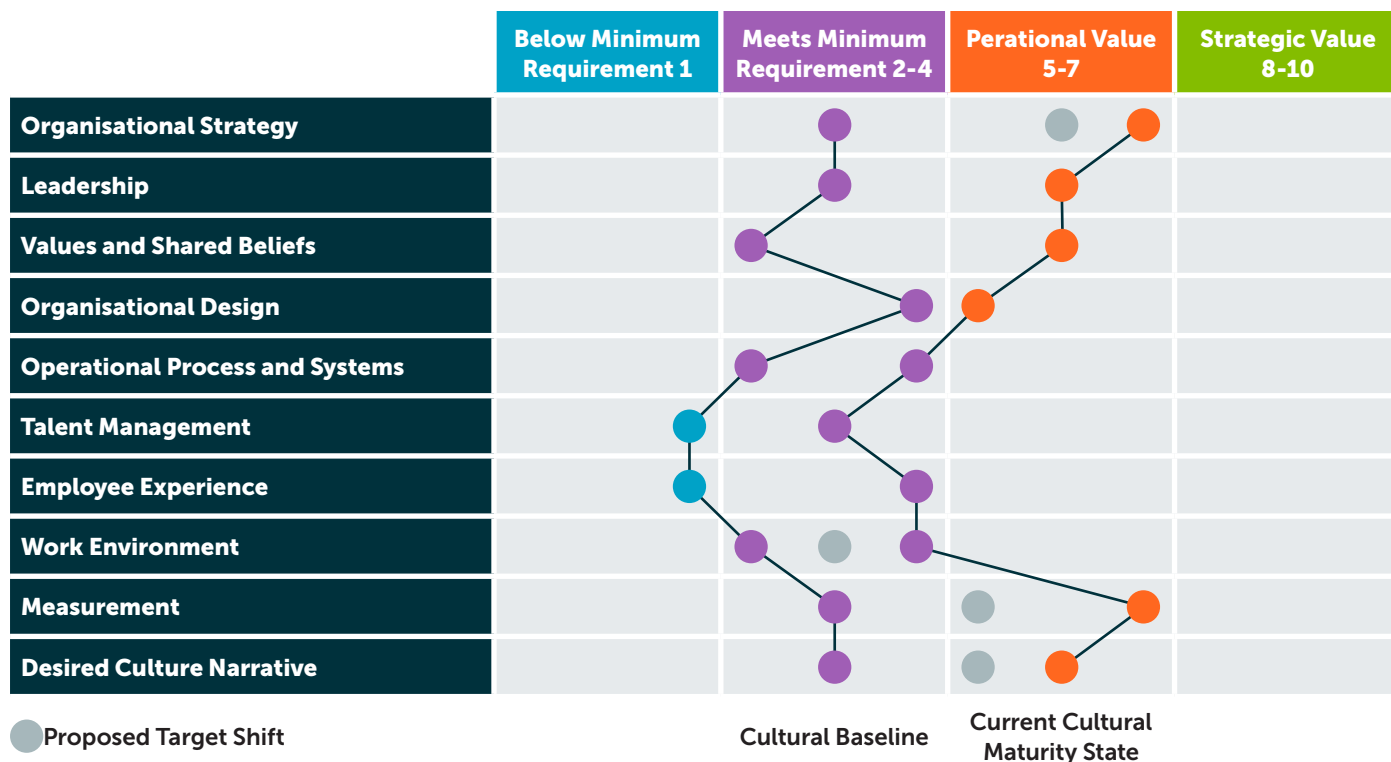
Technology projects currently under way in support of the next stage of the Common Data Environment will also help respond to pulse check feedback and improve performance in the Maturity Assessment areas of Operational Processes and Systems, Employee Experience and Work Environment. More effective communication with staff is also likely to improve performance, noting the pulse check feedback that sharing information from leaders and in team meetings were popular responses and currently considered to be underutilised.

The cultural maturity of PPP can be improved by building on the foundations now in place to embed values and behaviours in people's day to day ways of working. New Year 4 cultural development activities to support this include the PPP Awards to recognise excellence, celebrate success and build a library of achievement stories. The PPP High Performing Teams programme will also start, focused on bringing all behavioural aspects together in team environments to address live issues and opportunities.

Year 4 will also see the formalisation of the People's Forum, a key inclusion activity launched at the end of Year 3, comprising a cross section of leaders together with People Champions who have volunteered from across PPP to help progress diversity in PPP. In Year 4 the PPP will also pursue accreditation with the Centre for Diversity as an Investor in Diversity.



## 2021 PPP Cultural Maturity Assessment Results



Complementing this assessment, PPP also conducts a 6-monthly staff pulse check to hear the views of all members of PPP to help monitor whether the work on PPP's culture is helping make it a safe, fulfilling and collaborative environment.

Four rounds are now complete, most recently in April 2022 with 288 responses (~21%), a decrease in engagement levels from the prior three surveys (~40%). Survey fatigue is suspected to be a key reason for the lower response rate, due to a clash with several other surveys in the same month, and a review of survey arrangements is also being undertaken to determine the most effective way to engage with members of PPP.

However, the results are largely consistent with the previous survey in October 2021, which had a higher response rate of 454 (~40%). Learnings are taken from each round and results are shared and discussed at the PPP Executive, Management Board, Senior Leadership Team and Client Lead team level, followed by 'you said, we did' communications. As with the Cultural Maturity Assessment, the PPP's cultural development 'One Plan' is updated with improvement actions.

# 2022 PPP Staff Pulse Check Results

## Positive sentiment

97% are clear on the standards needed for a nuclear safety and security culture (96% October 2021, 94% April 2021)

89% feel PPP is a safe place to voice opinions and ideas openly without fear of reprisal (87% October 2021, 84% April 2021)

85% feel valued and respected by their manager (86% October 2021, 84% April 2021)

80% feel they have a part to play in delivering PPP benefits (82% October 2021, 81% April 2021)

80% understand the day to day expectations of them (82% October 2021, 71% April 2021)

77% feel leadership are ensuring nuclear safety is a high priority (77% October 2021, 66% April 2021)

75% feel motivated to learn from experience and improve ways of working (77% October 2021, 75% April 2021)

74% feel valued by their colleagues (76% October 2021, 72% April 2021)

69% are proud to work as part of PPP (73% October 2021, 70% April 2021)



Areas for improvement

62%	would like to receive more communication from their line manager (new)	56%	are encouraged to seek diverse opinions to solve problems (57% October 2021, 64% April 2021)
51%	feel part of one PPP team (51% October 2021, 53% April 2021)	57%	see leaders role modelling collaborative behaviours (63% October 2021, 60% April 2021)
53%	feel they can develop professionally (57% October 2021, 57% April 2021)	58%	are encouraged to consider social impact (59% October 2021, 59% April 2021)







## Performance Assurance Framework (PAF)

The Performance Assurance Framework (PAF) for the PPP helps the Client and Partners to assess and drive performance. It is a collaborative and structured scoring process using a scale agreed by all five parties within PPP, which provides an objective assessment of Sellafield Ltd, the Client and PPP performance by using evidence per project.

Year 3 saw the completion of the third PAF Assurance Cycle which found overall steady progress across all workstreams, with a notable increase in the number of performance measures scoring at Operational Value (Level 2) compared to Minimum Requirements Met (Level 1). In addition, output measures are scoring higher, meaning that improvements made through input efforts (enablers) in previous cycles are starting to show results (quantitative outcomes).

Project measures were introduced for Assurance Cycle 3 for most workstreams for the first time. Project level performance overall achieved an average input score of 1.3, and an average output score of 1.8. Apart from Environment and Sustainability, which lags due to its lack of early involvement in projects, the introduction of Project Level scoring in PAF Cycle 3 has highlighted strong performance and progress in discrete project initiatives.



In contrast, there is relative immaturity at programme level of implementing these best practice initiatives consistently across the portfolio, which is a clear area of improvement targeted for future cycles.

The process is independently verified by Turner & Townsend, who also provide a view on how performance compares to the benchmark of other major projects and programmes such as for Heathrow and Crossrail. The following diagram provides a summary Assurance Cycle 3, including how it compares to Cycles 1 and 2, as well as to the independent benchmarks. The benchmarking data for Programme scores only suggests that the direction and magnitude of overall value increase in Cycle 3 is very close to aligning with expectations, with total averaged input scores of 1.4 slightly under the overall target of 1.5, and output score of 1.7 exceeding benchmark of 1.6.

## PAF Scores Progression

The comparison of score progress against the agreed benchmark scores is summarised in Table 2 below. Guidance in interpreting the contents of the table is provided in the legend as follows:

Scoring Cycle Progress	Scoring Level Achieved	
<span style="color: #008080;">■</span> Cycle 1 – 2019/20	<span style="color: #000080;">L0</span> Level 0 – Below Standard	<span style="color: #FF0000;">PG</span> Programme Level Scores
<span style="color: #FFA500;">■</span> Cycle 2 – 2020/21	<span style="color: #000080;">L1</span> Level 1 – Meets Minimum Requirements	<span style="color: #008000;">PJ</span> Project Level Scores
<span style="color: #800080;">■</span> Cycle 3 – 2021/22	<span style="color: #000080;">L2</span> Level 2 – Operational Value	<span style="color: #0000FF;">C2</span> Cycle Benchmark Score
	<span style="color: #000080;">L3</span> Level 3 – Strategic Value	<span style="color: #0000FF;">C3</span> Cycle Actual Score

														Benchmark v Actual					
WORKSTREAM		L0				L1				L2 L3				C1	C1	C2	C2	C3	C3
PPP Overall																			
PG	Input score	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>	0.6	0.6	1.2	1.2	1.5	1.4								
	Output score	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>	0.9	0.9	1.3	1.5	1.6	1.7								
PJ	Input score	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>	-	-	-	-	-	1.3								
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Environment & Sustainability																			
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Note: PPP Projects were included for the first time in Cycle 3 in relevant workstreams (PPP Overall, Environment & Sustainability, Quality, Health & Safety and P3M Delivery). Benchmarks apply at programme level only.

# Workstream Overview

## Environment and Sustainability

Environment and Sustainability has demonstrated steady improvement across the 3 PAF cycles, and through the publishing of the PPP Net Zero Carbon Reduction Roadmap, Climate Resilience Roadmap and the PPP Sustainability Framework Implementation Plan, together with the resourcing of key environmental and sustainability posts, the foundations have been laid to achieve a Level 2 – Operational value in future cycles. The introduction of the Sustainability and Whole Lifecycle Assessment pillars into PAF in cycle 3 has demonstrated significant improvements in these areas to support PPP's long-term ambitions of reducing emissions and enhancing its ability to maximise climate resilience. These documents are the framework to drive collaboration and share good practice across the PPP. Level 3 was achieved for two Output measures.

The focus of PAF Cycle 4 will be implementing a consistent Core Environmental Training Plan across the PPP and the early involvement of environmental professionals in projects to embed the environmental and sustainability principles and support contractor performance improvement. Beyond that, the planned development and implementation of the Carbon Tool will provide the means to accurately assess the Partners' and contractors' performance against carbon targets.

## Employer Performance

Employer Performance has demonstrated steady improvement across all existing pillars. To date, this current cycle has resulted in the biggest year on year improvement. The PDD Client Capability Plan and Succession Plans are now in place, along with the construction of the Client Target Operating Model and tranche plans. There has been good progress made in delivering tools, for example, the resourcing tool. These tools and processes should be fully understood across the organisation and used effectively to realise their effectiveness. A monthly PPP Performance meeting has been launched along with a new shift in culture for these meetings by introducing well-being moments.

## Security

The workstream has made limited progress since Cycle 2, although there has been no regression in working practices. Security has successfully retained its established processes, implementing reviews and recording and assessing risks. The relatively high turnover in the team and the lack of knowledge transfer has contributed to the stable state for the workstream.

The focus for future cycles should be on rolling out Security processes consistently across projects, and on monitoring and reporting. In PAF Cycle 4, consideration is required as to what specific quantitative performance measures could be used within Security Dashboards and KPIs, and their applicability across all projects and at programme level, and how these will be embedded in PPP and evidenced via PAF.

## Commercial Management

Improvement in the overall score was realised in PAF Cycle 3, with most scores staying stable as some assessment criteria were reset. Application for Payments (AfP) and Cost Assurance pillars have improved by streamlining the AfP process, leading to higher levels of efficiency and compatibility with Sellafeld Finance systems and project controls. Similarly, under the Contract Management pillar, there are plans in place to deploy the internet-based contract management system (EPMS) during Cycle 4. The Supply Chain and Procurement pillar demonstrated a programmatic approach to procurement strategies, adding value by encouraging Early Contractor Involvement.

Good progress is expected over the next 6 months with EPMS system going live. The focus for Cycle 4 is system enhancement reviews and training. Further development of contract training resources by identifying specific training subject areas required through reviews and feedback facilities. Cost Assurance to establish a 3-year contract assurance review plan for discussion with the Client to provide clarity, efficiency and enable agreement of reporting structure. A consistent move towards standardisation of PPP and Client's procurement processes, coupled with implementing an integrated supply chain database that facilitates the communication of risk management plans and measurement of supply chain performance data at higher levels of sophistication. These will set the foundations for working as one-unit.



## Quality

There has been steady improvement at programme level with substantial progress attained at project level, particularly on SCP, SRP and RAP. This was due in part to Quality programme level measures being underpinned by project level performance in the previous cycle. Incremental improvements in the consistency of quality documentation across projects, particularly SCP, SRP and RAP have assisted in driving this growth. Resource plans, Zero Concession plans, Quality Assurance plans are just some examples encapsulated in this cycle and have been employed to support performance improvement across Sellafield. Quality dashboards have been designed and issued to all projects, successfully capturing and relaying data for zero concession reports, monthly project reports, and audit reports. And providing clear feedback and an assessment of quality performance across PPP and the Client.

Two projects, RAP and LSS1, have just fallen short of the 90% target threshold of having their respective audits completed and closed out. Achieving this will help the Audit and Surveillance pillar to reach operational status at a project level. Addressing Succession plans, closing out actions from the Quality Development Plan and ensuring all requirements of the CMP are achieved, will help drive further improvement and enhance scores at a programme level. With 3 out the 4 Pillar outputs at project level now at operational status, there is the opportunity to advance maturity and focus on strategic level for cycle 4.

## Health and Safety

There has been steady progress in the consistency of Health and Safety strategy, stakeholder engagement and audits were evidenced in PAF Cycle 3, with incremental improvements in the consistency of Health and Safety inputs and outputs at a project level, particularly SCP and SRP which have contributed to an increase in score at programme level. There has been improvement in developing and implementing Health and Safety assurance plans, providing a framework that is driving collaboration and sharing of good practice across projects. An incident on site caused the output score to regress significantly from 3 to 1.8 on the Performance and Reporting pillar, following which improvements were made in the processes for investigating Health and Safety incidents consistently. PAF has also improved the investigation processes with clear consistency across projects.

The focus for Cycle 4 is to maintain and promote the improvements made at project level with the view to incorporating those improvements as standard practice across the ADTs. PPP Services is to be a key member of the EHS Community of Practice which will position it to drive the embedment of LfE from projects and, facilitated by standardisation of processes, to enable trending analysis to support the development of value-add tools outside of PPP for site-wide benefit.

## P3M Delivery

Operational benefits are demonstrated across the PPP, driven through collaborative initiatives focusing on certain areas, notably: risk management; PPP and Enterprise Project Performance Assurance Reviews; improvement plans driven through the Engineering Roadmap; and quantifiable benefits achieved through the Site Wide Project Delivery Improvement Ideas Portal. Advances in the integration of IM systems and mapping of data flows are strengthening the integrity of the Common Data Environment and facilitating the capture of valuable metrics at a project level, however improvements are required to produce meaningful outputs and trends for benchmarking at a programme/strategic level.

Although Programme Level scores appear to have declined in the previous cycle, P3M scores previously combined Delivery and Enablers, and Enablers are maturing at a faster rate than Delivery pillars (i.e. the comparison of scores to Cycle 2 is not strictly like-for-like). It is evident that the measures were previously considered in the context of delivery on projects, and not viewed at a strategic level for consistency of process or in application across the PPP.

## P3M Enablers

P3M Enablers has demonstrated steady improvement across all existing pillars, six of the areas are Level 2 and four are at the top end of Level 1. The addition of the new Sustainability pillar this cycle has already shown progress and demonstrates PPP's long-term ambitions of reducing carbon emissions, promoting and embedding sustainability in the workplace and throughout various PPP programmes and processes towards reaching its ambition of providing world class delivery in sustainability. The implementation of the Social Impact Toolkit has created Social Value awareness throughout PPP which in turn has helped enhance good practice for the Sellafield supply chain. Through collaborative working workshops, the appointment of Collaboration Facilitators in all teams together with behaviour toolkits in place based around the PPP behavioural framework. PPP has achieved significant progress in the annual Cultural Maturity Assessment conducted by Deloitte, with six target shifts achieved and four exceeded.

More work in the new social Sustainability area to appoint the Sustainability Champions will see improvements in cycle 4, as well as increasing the participation rates on the PPP employee experience survey to 50% or higher and moving the final cultural maturity areas.

# Key Targets

Key Targets are agreed between Sellafield Ltd and the Nuclear Decommissioning Authority as the key areas of performance that will be measured in year. In 2021/22 the key target in relation to PPP were:

## Demonstrable progress towards the delivery of the Programme and Project Partners (PPP) Critical Success Factors

### Strategic Driver:

Lead the UK in predictable project delivery.

### Status:

Excellent (Project is ahead of schedule with clear proactive schedule management).

## Schedule Adherence for the SIXEP Continuity Plant (SCP) and the Sellafield Product and Residue Store Retreatment Plant (SRP)

### Strategic Driver:

Lead the UK in predictable project delivery.

### Status:

Excellent (Project is ahead of schedule with clear proactive schedule management).

### SRP Schedule Adherence:

*"I am delighted with the project's leadership and the team's performance this year on delivering the scope; in fact it is an immense achievement that we delivered more than a year's scope in a year, secured our critical supply chains and made progress on every front in starting the manufacture, procurement, completing design and progressing the civil super structure at site. This is simply down to the quality of the people from all five partners working both collaboratively and effectively together as a team overcoming challenges to perform. This is recognised in achieving the Key Target of Schedule adherence at the Excellent status which gives confidence that the project is on track and is currently ahead of its performance baseline in time and cost."*

Steve Harnwell, Head of Project SRP

### SCP Schedule Adherence:

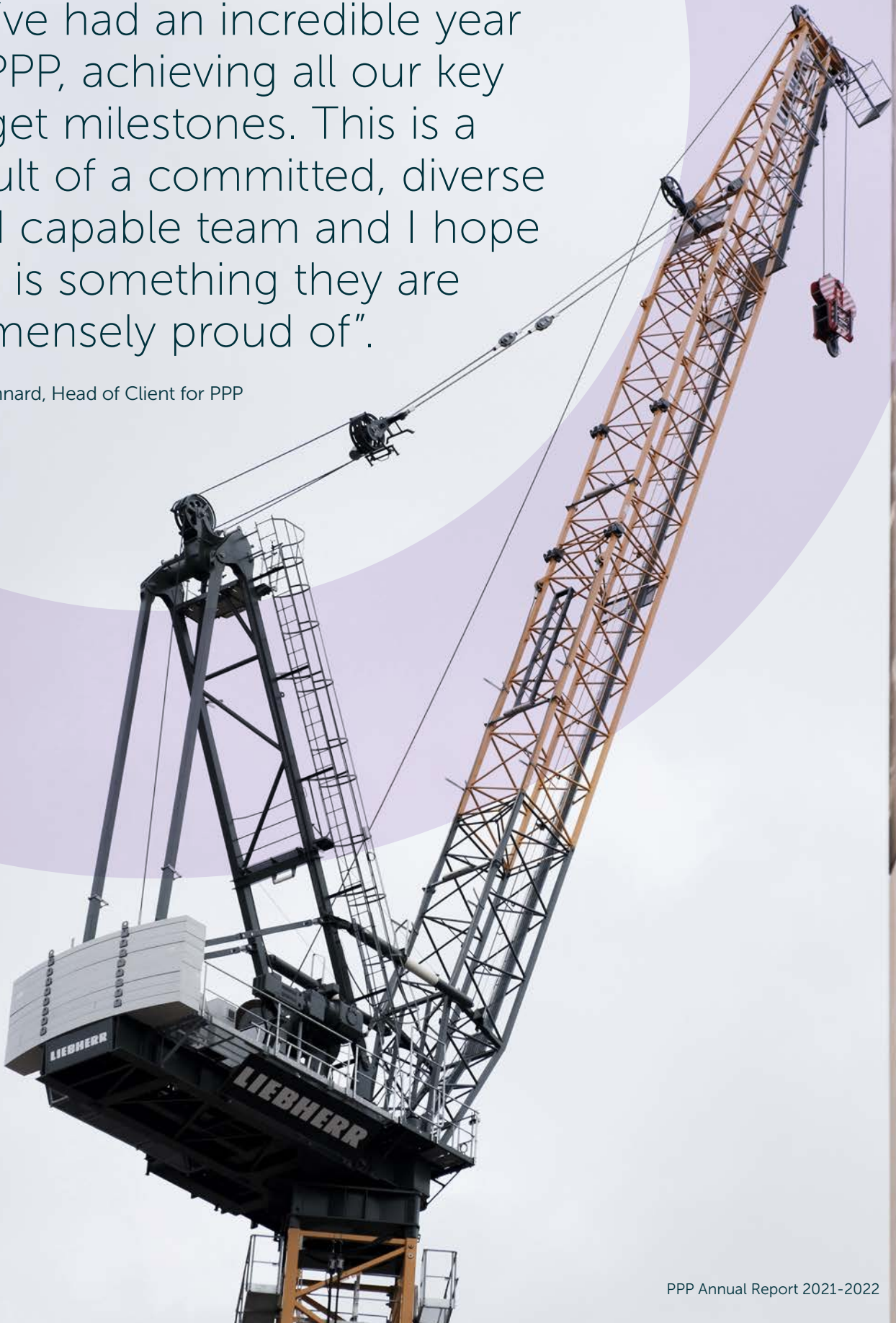
*"SCP met the schedule adherence KT at excellent rating having met all our key in year milestones. It was a great year for the project with everyone working hard to support the delivery of such a strategically important project."*

Simon Wilcock, Head of Project SCP

### Overall view:

"We've had an incredible year in PPP, achieving all our key target milestones. This is a result of a committed, diverse and capable team and I hope this is something they are immensely proud of".

Rick Lennard, Head of Client for PPP





## PPP Key Target Criteria



### Criteria 1: Social Impact

"In line with the Sellafield Social Impact Strategy (SiX), PPP has built their social impact delivery around five themes: Localisation, Local Business Development, Opportunity, Engagement, and Volunteering. PPP has made great strides in progressing social impact by developing the Social Impact Toolkit, Internship Scheme, and Timebank. Recognising the impact of PPP is greater than the five Partners alone, over 90% of contracts over the value of £100k contain social impact commitments. Through this partnership with the supply chain, PPP will build upon the existing social impact programmes, as well as create new ones, such as an education programme to engage young people in STEAM (science, technology, engineering, art, and mathematics) subjects. Together, these steps will ensure a lasting legacy of skills and capabilities across the communities of West Cumbria and beyond."

**Kathryn Ambrose, PPP Client Sustainability Manager**



### Criteria 2: Sustainability

"This year, the PPP approach to sustainability was strengthened with the introduction of an eight benefit: Enhanced sustainability performance by projects increases social value and decreases environmental impact. PPP also set out its ambition to reach net-zero carbon emissions by 2039, supporting Sellafield Ltd's goal of 80% reduction in Scope 3 emissions by 2050. To understand the actions that must be taken now to secure delivery of the new benefit, PPP developed a Sustainability Implementation Plan, which prioritises activities set out within the Sustainability Framework. By defining its net-zero ambition and by setting out a three-year sustainability action plan, PPP is supporting Sellafield's carbon reduction targets and building a positive legacy for future generations."

**Kathryn Ambrose, PPP Client Sustainability Manager**



### Criteria 3: Collaborative Behaviours

"Our ability to work collaboratively is the foundation of our ethos and approach to successful delivery. Part of our work in this area has been to focus in on key areas that were highlighted during our initial annual survey. Our latest survey results have provided a valuable snapshot into those 10 key areas around our principles, behaviours, beliefs, leadership and importantly the experience of those working within PPP. I'm delighted to confirm that we have met our targets in six areas and exceeded in four areas which is a fantastic achievement for PPP. However, our journey doesn't stop here – it gives us a strong and stable platform to continue building on our successes and empowering PPP to achieve our mission."

**Rebecca Ballantyne, PPP Client Cultural Development Manager**



### Criteria 4: Resourcing

"The initial cohort of graduates and apprentices is the first time the PPP has recruited an intake together as a partnership – this sets the scene for the early talent programme for PPP, and it is exciting to support the development of the PPP's future leaders."

**Paul Deeran, PPP Client Head of Programme**



### Criteria 5: Benefits Management

"The achievement of the Key Target element on Benefits was a fantastic result and demonstrated the benefits identifications and validation process moving into being used as 'business as usual'. It was predicated on working through at least 10% of the total register of ideas, opportunities and initiatives that result in a benefit and being able to declare they are validated and accepted by the Client. This was achieved early and contributed to an excellent score against the overall target."

**Jeremy Reid, PPP Client Head of Programme Management**

# KPIs

Sellafield Ltd and the PPP Partners agree KPIs for the PPP to measure in-year performance.

The KPIs were jointly proposed and agreed between the Lot Partners and the Client through a collaborative process focused on project specific targets such as RAP Preliminary Design Completion, alongside strategic and behavioural objectives such as Social Impact Improvement and Collaborative Behaviours.

Eleven of the twelve KPI were fully achieved by the Lot Partners in FY 2021/22, with the remaining KPI partially achieved.

This meant achievement of 98% of the available Contract Specific Profit (CSP) weighted on the KPIs.

In 2021/22 the KPIs comprised the following areas:

<b>KPI 1</b>	Award Three Multi-Project Procurements (MPP).
<b>KPI 2</b>	Deliver the Early Contractor Involvement (ECI) Manual.
<b>KPI 3</b>	Demonstrable progress towards the delivery of PPP Benefits.
<b>KPI 4</b>	The Community is visibly benefiting from delivery of the PPP in West Cumbria and Warrington areas.
<b>KPI 5</b>	Deliver and operate the PPP Collaborative Environment that will be the foundations of the Common Data Environment.
<b>KPI 6</b>	Evidence delivery of the Sustainability Framework, including the Carbon Reduction Roadmap and Climate Resilience Roadmap.
<b>KPI 7</b>	Collaborative Behaviours – achieve target score uplifts in Leadership, Values and Beliefs and Employee Experience.
<b>KPI 8</b>	Appointment of the first cohort of PPP graduates and/or apprentices with an appropriate structured training programme to manage their development.
<b>KPI 9</b>	Develop an integrated PPP identity and ingrain a culture of Leadership and Management for Safety.
<b>KPI 10</b>	Design and engineering execution planning of the BEPPS2 project to demonstrate value through design, reduce complexity, risk and cost to support increased project certainty.
<b>KPI 11</b>	Design and engineering execution planning of the LSS1 project to demonstrate value through design, reduce complexity, risk and cost to support increased project certainty.
<b>KPI 12</b>	Completion of the RAP preliminary design stage.

# PPP Performance: Sellafield Ltd

Sellafield Ltd continues to mature as a Client organisation for the PPP delivery model. The PPP Client has established effective governance and assurance arrangements to oversee and enable PPP delivery. Through the last year the PPP Client has increased focus on managing the performance of the PPP Partnership and broadened its remit to cover other Sellafield Ltd major projects which presents the opportunity for collective performance improvement. Five strategic drivers are identified for the Client through year 4 of the contract and beyond to enable improved performance.

Client commercial processes are well established, and performance is demonstrated through consistent on-time payment to the PPP Partners and robust control of scope and change. Early successes have been achieved through setting of Major Project Baselines for two of the “transition” projects (SRP and SCP) and subsequent approval of the Full Business Cases sanctioning the projects to completion. This represents a significant effort on the part of the PPP Client working in collaboration with the PPP Partner organisations and the broader Sellafield Ltd organisation to deliver these pioneering baselines against which the performance and incentivisation of the PPP Partners will be determined.

The Client has responded well to the challenges presented by the Covid-19 pandemic and has maintained the delivery momentum on Major Projects. Inflationary pressures on the Sellafield Ltd budget remain and continue to be a focus area for the PPP Client working with the PPP Partners and the broader Sellafield Ltd organisation.

Specific successes for the PPP Client through the third year of the PPP model include:

- Setting the Major Project Baselines for the SRP and SCP projects.
- Recognition from the Office of Nuclear Regulation (ONR) that the Intelligent Customer duties of the PPP Client are being successfully discharged.
- Positive feedback through the Enhanced Commercial Assurance (ECA) process for sanction requests with learning from earlier submissions embedded.
- Setting carbon baselines for PPP projects helping drive a tangible focus on sustainability.

To maintain the momentum gained by the PPP Client in the early years the leadership of the Client organisation has been refreshed in the latter part of the year. Richard Lennard has been appointed Head of Client for PPP with an initial remit to enable delivery and manage the performance of the PPP partnership.

Progress has been made in these areas with continued focus on the PPP Executive Committee and investment in the senior business to business relationships between Sellafield Ltd and the PPP Partner organisations including visits to the Lot 1 Partner head office, the Lot 4 partner’s head office and fabrication workshops, and executive led dialogue on safety across all organisations.

An increased focus on senior stakeholder engagement has seen the PPP Client organisation take a more prominent role across the infrastructure sector through the Infrastructure Client Group and Project 13. Learning from PPP has been shared bi-laterally with a number of other prominent Client organisations including Network Rail, High Speed 2, Anglian Water, and Heathrow.

The PPP Client will take an active role in performance management of PPP delivery on behalf of Sellafield Ltd. Restructure of the Client organisation to incorporate a Portfolio Management Office capability has taken place and the Client organisation will progressively increase focus in this area through year 4 of PPP delivery. This strengthening of performance management arrangements will ensure that the PPP is held to account for delivery of the project portfolio going forward.

To further leverage the capabilities and knowledge of the PPP Client organisation for the benefit of the wider Sellafield Ltd organisation the PPP Client role will expand to cover “legacy” Major Projects including Box Encapsulation Plant (BEP) and Security Projects. This broader remit will enable the PPP Client to more readily share learning across a broader portfolio of projects to improve performance. The “legacy” projects will help inform the “transition” and “future” projects to be delivered through PPP. The Client will also facilitate transfer of knowledge and approach from the PPP Partners to the “legacy” Major projects with the opportunity for the PPP partnership to deliver increased value through support with project oversight.





Five strategic drivers have been identified for the Client organisation with the intent of improving performance of PPP today while creating sustainable performance tomorrow:

- 1 Maintain Stakeholder confidence through fit for purpose assurance and governance.
- 2 Stimulate and enable the Good to Great performance acceleration programme with passion and pride.
- 3 Drive establishment of a world class PPP supply chain.
- 4 Cultivate and nurture a stronger culture of horizontal and cross-organisation collaboration
- 5 Help RAP and new projects establish a stable environment to accelerate project performance.

The PPP Client continues to seek external measures and benchmarks for performance to further drive improvement.

Over the course of Year 3, the following reviews have taken place:

- **Project 13 Maturity Assessment.** Maturity has moved beyond simple collaboration and is demonstrating integrated functions and relationships across all criteria with the exception of Digital Transformation which has not matured.
- **Deloitte Cultural Maturity Assessment.** Improved maturity by 30% in October 2021 compared to April 2022 with the majority of criteria assessed as delivering "Operational Value".
- **Turner & Townsend Performance Assurance Framework.** Performance exceeds minimum contract requirements in a number of areas with further work required to effectively enable PPP delivery and to provide certainty in the pipeline.

In summary, the PPP Client organisation continues to improve in performance and will re-focus efforts to effectively performance manage PPP delivery going forwards. The broader remit of the Client organisation to cover legacy major projects in addition to the transition and future projects reflects the increasing maturity of the organisation and provides the opportunity for consistency in delivery.

# PPP Performance: Partners

Performance overall in Year 3 has been good, resulting in examples of excellence. With the leadership and support of the Client team, the Partners restructured their leadership team to respond to the desire to build on efforts to date to achieve consistent project and programme wide performance. Duncan Elliott was brought in as the Head of PPP as well as other new additions to the management team to strengthen the focus on performance going forward. As part of this, there has been a strong focus on the PPP Good to Great programme, led by the Integrator, with a range of activities being implemented to improve portfolio and programme benefits alongside project delivery via the Integrator.

The PPP continued its growth in Year 3, with an increase in year of 195% overall turnover from Year 2. This increase is almost solely in relation to delivery of Major Projects as SRP and SCP have both moved into the construction delivery phase in year, with significant delivery through the civil construction phases on both projects. Aligned to this, the biggest turnover growth being realised through Lot 3 with delivery of SRP (Morgan Sindall) and Lot 4 (Doosan) with SCP. Lot 2 (Jacobs) has also seen significant growth as extant design delivery arrangements have transferred and the growth in design delivery on RAP. Lot 1 (KBR) turnover has grown but not to the same degree as the other Lot Partners, identifying that involvement in Project Delivery is not as significant as the other Lot Partners.

Across the board there was a 25% growth in PPP Resources, People resource growth over the year is not proportional to turnover growth. This is as would be expected with the increasing importance of the PPP Supply Chain in delivery of our Major Projects.

Small to Medium Enterprise (SME) performance has improved through the year, this again is linked to the increasing delivery role of the PPP Supply Chain. Lots 1 and 2 are predominantly in self-delivery at this time, with opportunities being identified moving forward to increase the role of Supply Chain in specific support areas. Lot 3, and particularly Lot 4, have improved and identify positively in their engagement with SMEs and notably, Lot 4 scope on SCP lends itself successfully to the engagement of SMEs.

This year, the PPP has actively engaged the Social Value agenda, with increasing importance and involvement of Social Impact criteria in tender evaluation (>95%) and with the contractual obligation through KPIs of the Key Delivery Partners.

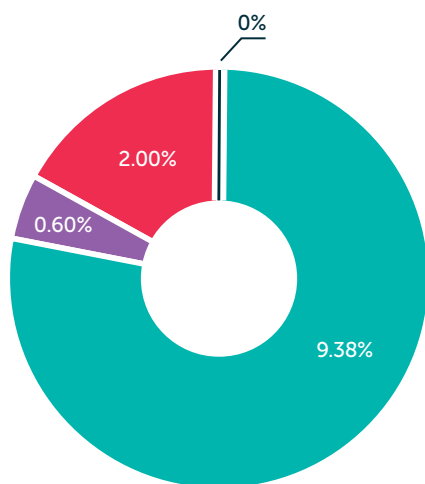
Alongside SME measurements, the Lot Partners show an improving trend when measured against the Government's Prompt Payment Code, achieving the 95% standard expected by government, with both Lots 1 and 3 now meeting this target. Lot 2 performance was hindered early in the year due to a new cost and payment system introduced which affected two quarters of performance, but there is no further concern with their performance. Lot 4 has repeatedly been unable to achieve the expected standard, with a correction action plan now developed and greater intervention and engagement between the PPP Lot Partner and supporting Corporate overheads.

## KPI Performance – Contract Specific Profit (CSP) By Partner – FY 21/22

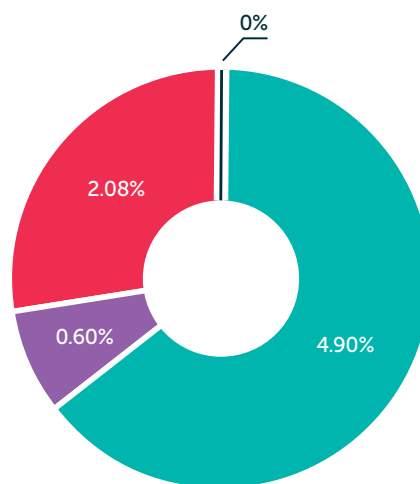
	Contract	Achieved
KBR	2.40%	2.37%
Jacobs	2.40%	2.34%
Morgan Sindall	3.20%	3.16%
Doosan Babcock	2.00%	1.98%

## Corporate Overhead and Profit By Partner – Cumulative

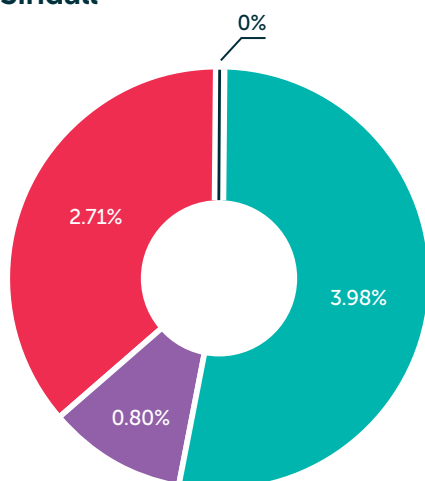
Integration Partner –  
KBR



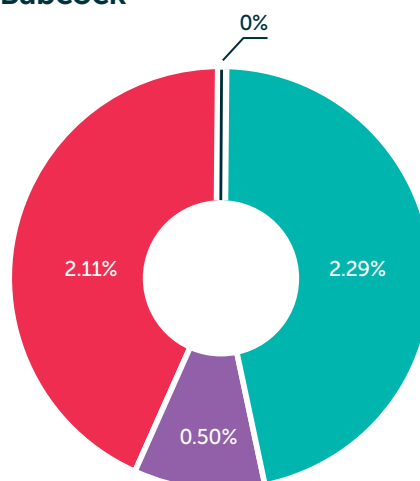
Design & Engineering Partner –  
Jacobs



Infrastructure Partner –  
Morgan Sindall



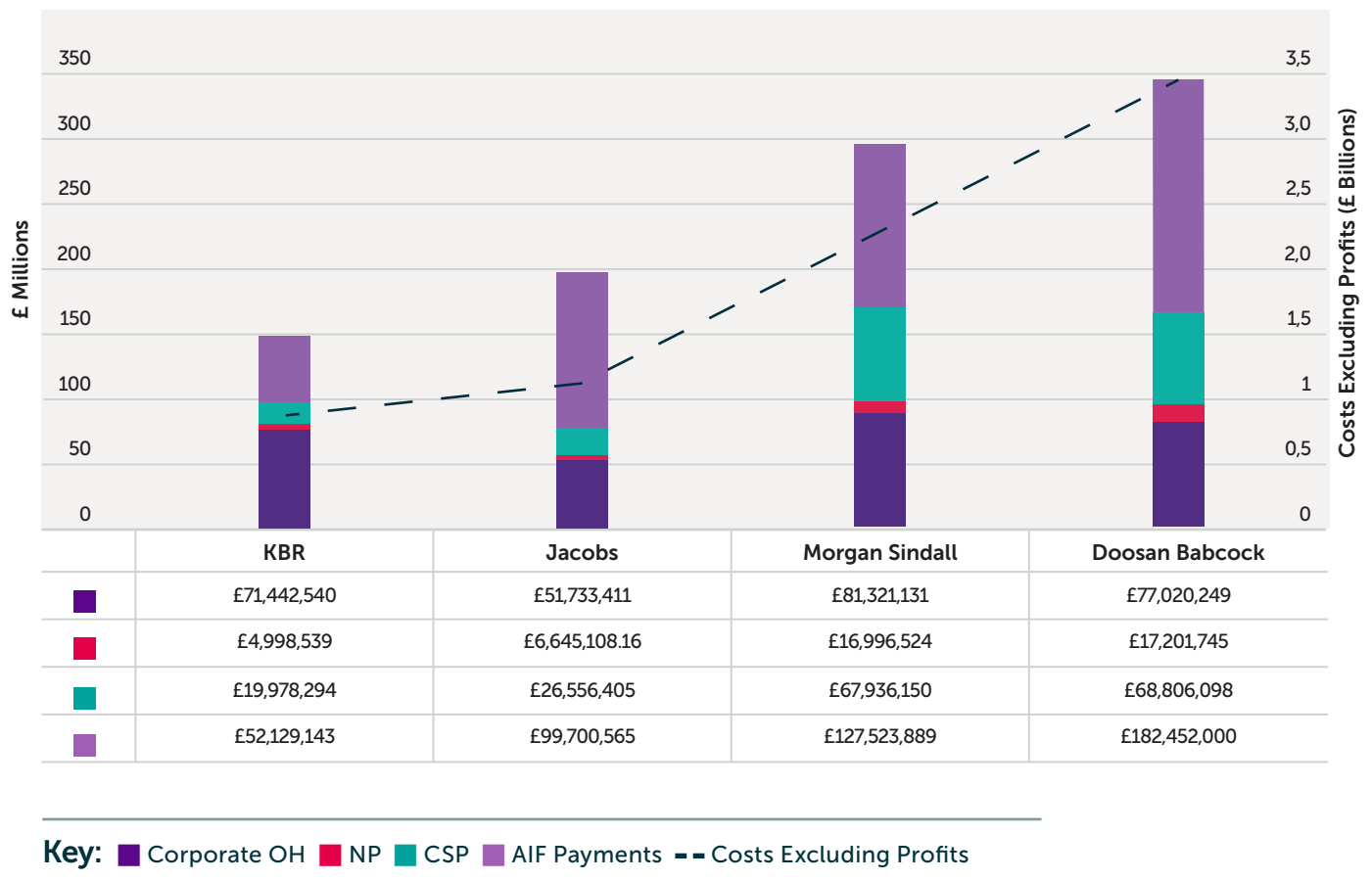
Process Partner –  
Doosan Babcock



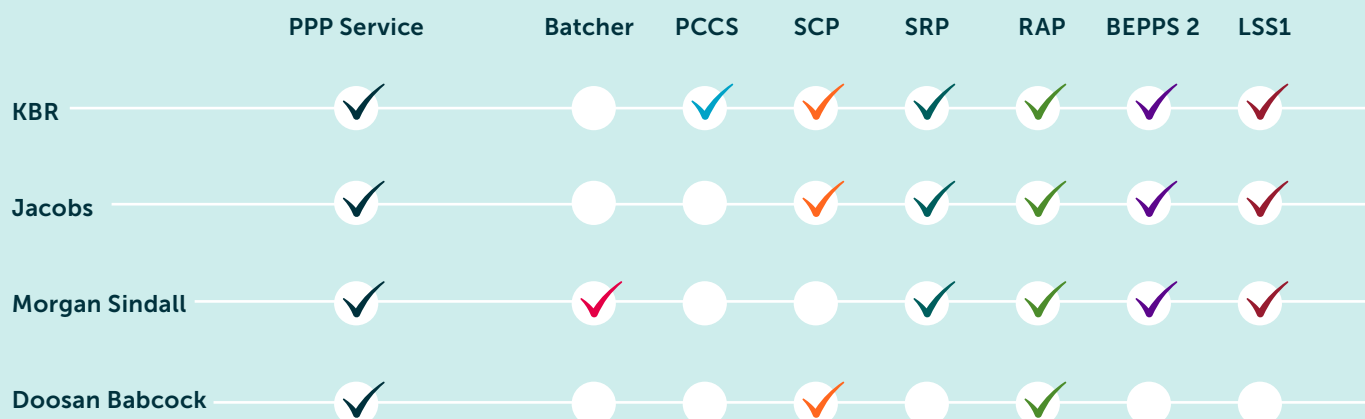
**Key:** ■ Corporate Overhead ■ Nominal Profit ■ CSP ■ AIF



## All Partners – Summary of Final Forecast Cost, Corporate Overheads, Nominal Profit, Contract Specific Profit and Aligned Incentive Fund Payments

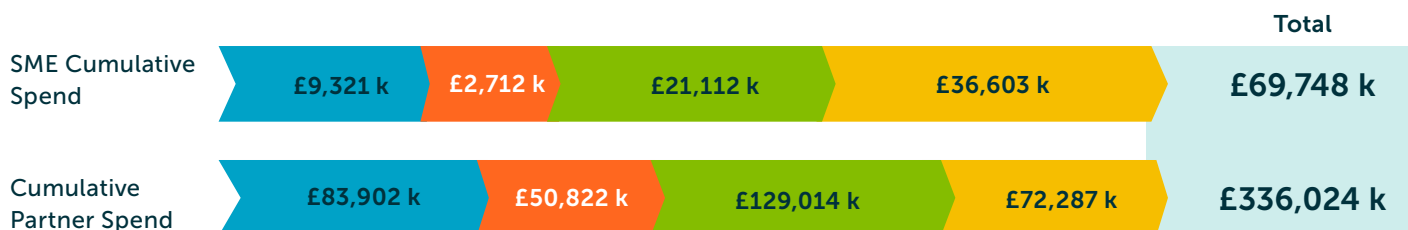


## Key Projects Undertaken by Partners

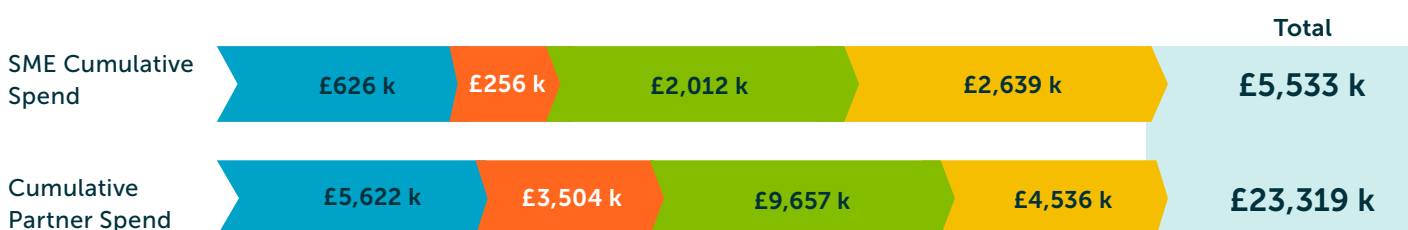


## SME Spend in Relation to Partner Turnover

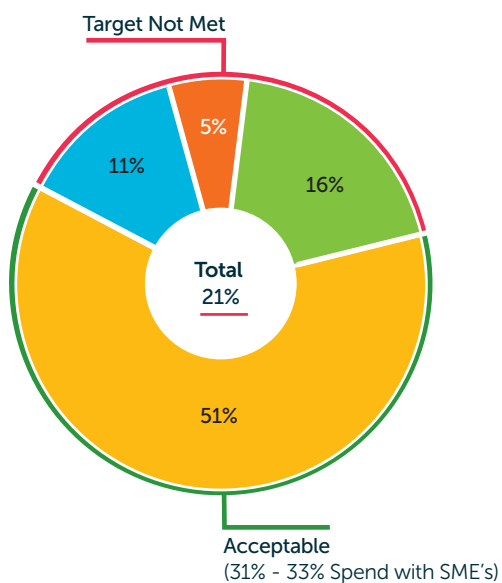
### Cumulative Totals Since Contract Commencement



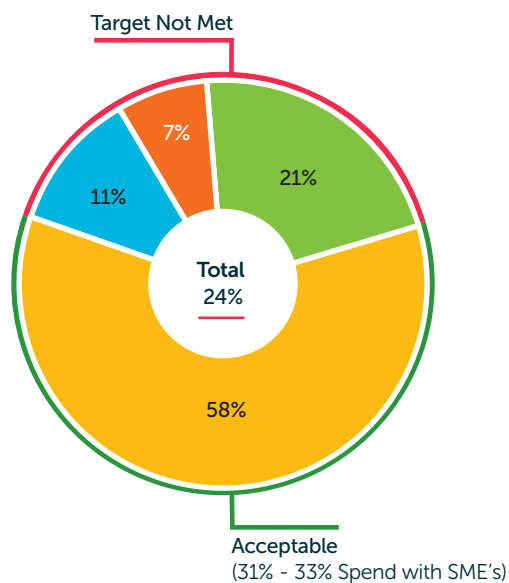
### Totals for Year 3



### Cumulative Percentage Since Contract Commencement



### Total Percentage for Year 3



**Key:** ■ KBR ■ Jacobs ■ Morgan Sindall ■ Doosan Babcock

## PPP Supply Chain Payment Performance Review

	KBR	Jacobs	Morgan Sindall	Doosan Babcock	Date of Report	29/03/2022
Average time taken to pay invoices (no. of days)	35	25	29	64	Financial Year	2021/2022
Average no. of days payments late	(9.4)	(0.2)	(3.5)	(34.5)	Reporting Period/Quarter	2021/2022 Q3
Invoices paid:	50	75	317	115	Q1 April-June, Q2 July-Sept Q3 Oct-Dec, Q4 Jan-March	
• Within 30 days	41	71	223	35		
• Within 30 days	82%	95%	70%	305		
• In 31 to 60 days	6	4	86	41		
• In 31 to 60 days	12%	5%	27%	36%		
Total paid within 60 days	47	75	309	76		
Total % paid within 60 days	94%	100%	97%	66%		
In 61 days or more	3	0	8	39		
In 61 days or more	6%	0%	3%	34%		
	KBR	Jacobs	Morgan Sindall	Doosan Babcock	PPP Specific Supply Chain Performance	
Invoices due but not paid within Contract terms	7	4	32	80	Invoice due but not paid within Contract terms	
Invoices due but not paid within Contract terms	14%	5.3%	10.1%	69.6%	KBR	14%
					Jacobs	5%
					Morgan Sindall	10%
					Doosan Babcock	70%

### FY 2020/21

	Q1	Q2	Q3	Q4	Average
KBR	50%	52%	18%	46%	41.5%
Jacobs	100%	100%	55%	12%	66.8%
Morgan Sindall	52%	42%	38%	44%	44%
Doosan Babcock	100%	95%	90%	93%	94.5%

### FY 2021/22

	Q1	Q2	Q3	Q4	Average
KBR	47.2%	5.3%	14%		22.2%
Jacobs	16.3%	11.7%	5.3%		11.1%
Morgan Sindall	34.3%	16.1%	10.1%		20.2
Doosan Babcock	67.5	53.5	69.6		63.6

### Aligned Incentive Fund (AIF)

Date	Event	Details	Balance Change	Value of Fund
26 Jan 2022	PWO	Sellafield Product & Residue Store Retreatment Plant	£7,638,783.00	£7,638,783.00
01 Apr 2022	Indexation	Interest Payment for FUY 2021/22	£21,005.00	£7,659,788.00



# PPP 'Good to Great' Performance Acceleration

## In Year 3 the Partners launched the 'Good to Great' programme focused on accelerating PPP performance via five workstreams:

- Unlocking the benefits of programme delivery.
- Transformation through digital delivery.
- Integrated whole-life project delivery processes.
- Collaborative delivery and high performing teams.
- Capability and skills development for the future.

## Initial 'Good to Great' achievements in Year 3 include:

- Agreed terms with Stagecoach for transferring workforce programme.
- Location and space identified, and fit-out provider engaged for the Common Warehouses for consolidation and distribution.
- Business case approval for concrete wash out and vacuum excavator wash out facilities.
- Demonstration and funding for implementation complete for the Sellafield Coordination Centre.
- Initial deliverables complete to support PPP integrated processes (e.g. universal numbering, Reference data library issued, master deliverables register template).
- PPP Peoples Forum launched.
- 'Breakfast with' sessions commenced with Management Board members.
- PPP Intranet landing pages go-live.
- Pipeline Project Resource Forecast Working group established.
- Line manager training launched.

## 'Good to Great' priorities for Year 4 include:

- Standard libraries updated for standard catalogue (Building Information Management).
- Progress map completed for Engineering information flow through construction and procurement.
- Transferring workforce to the workface bus programme under way.
- Tender package design complete for the Common Warehouses for consolidation and distribution.
- Personal Protective Equipment (PPE) recycling programme under way.
- WiFi acceleration option (upgrade) complete.
- Standard libraries in use for integrated processes.
- Core Collaboration Management Plans and future PPP Way defined.
- Skills school business case submitted.
- Reinvigoration of PPP Induction.
- Delivery of the PPP Share and Learn series.
- High Performing Teams pilot completed.
- First Key Delivery Partner Forum held.

# PPP Performance: Supply Chain

In developing the PPP model, it was expected that between 60% and 70% of spend through PPP would be delivered by a PPP Supply Chain.

The ability of the PPP to now engage that supply chain is integral to the partnership and, in turn, the PPP Supply Chain must therefore deliver significant value and benefits in order for PPP to be successful. In Year 3, the Client has seen a step change in performance, where key procurements are no longer delivered for individual projects, and significant opportunity now being identified through the PPP Supply Chain Strategy at the enterprise level.

To maximise the benefits of an enterprise delivery approach, PPP has assessed the pipeline of projects to establish synergies in procurement requirements. In line with the PPP Critical Success Factors (refer to the Introduction section), in Year 3 these requirements started to be leveraged through the use of long-term strategic frameworks called Multi-Project Procurements (MPPs). These frameworks mirror the approach of PPP, enabling greater flow of PPP model principles into the wider supply chain enabling true alignment between all Partners, facilitating effective delivery.

To date, the PPP Supply Chain team have awarded four MPPs and, in doing so, also achieved the first Project Wide Objective on the Sellafield Product and Residue Store Retreatment Plant (SRP) (Refer to the Projects section of this report).

The MPPs cover key delivery areas such as Heating, Ventilation and Air Conditioning (HVAC), Electrical and Instrumentation, Mechanical Pipework and Mechanical Fabrication. These packages represent key project disciplines that are critical delivery enablers for major projects at Sellafield. As a result of direct alignment between the PPP model and subsequent offering into the Supply Chain, PPP has seen healthy competition of existing and new entrants bidding for work due to the scale of the opportunities offered, with significant investment and social value being identified through the successful tenders.

## Through delivery of the Supply Chain Strategy, PPP and Sellafield are seeing the early signs of:



Greater predictability in Major Project delivery through Early Contractor Involvement, increasing standardisation and opening modular opportunity.



Improved project performance and norms through the creation of Should Cost models and Continuous Improvement.



Enhanced Social Value thanks to increased investment through the delivery of the PPP pipeline with opportunities for SME delivery, new employment, skills development and career enhancement

## Case Study Key Delivery Partner Hub

The Key Delivery Partner (KDP) Hub is a direct result of the long-term opportunity provided by the MPP Strategy.

Our HVAC partner EJ Parker identified as a part of their bid the creation of a local office to support the delivery of the framework, upon working with their fellow KDP Partners this has started to develop into a shared area in Whitehaven where KDPs can deliver aligned performance, shared growth and value to PPP.

## Case study SME Matchmaker Scheme

The SME Matchmaker scheme was built to provide "Optimal economic and social value and efficient project delivery through the creation of beneficial long-term partnerships between PPP's MPP Partners, SMEs and local companies."

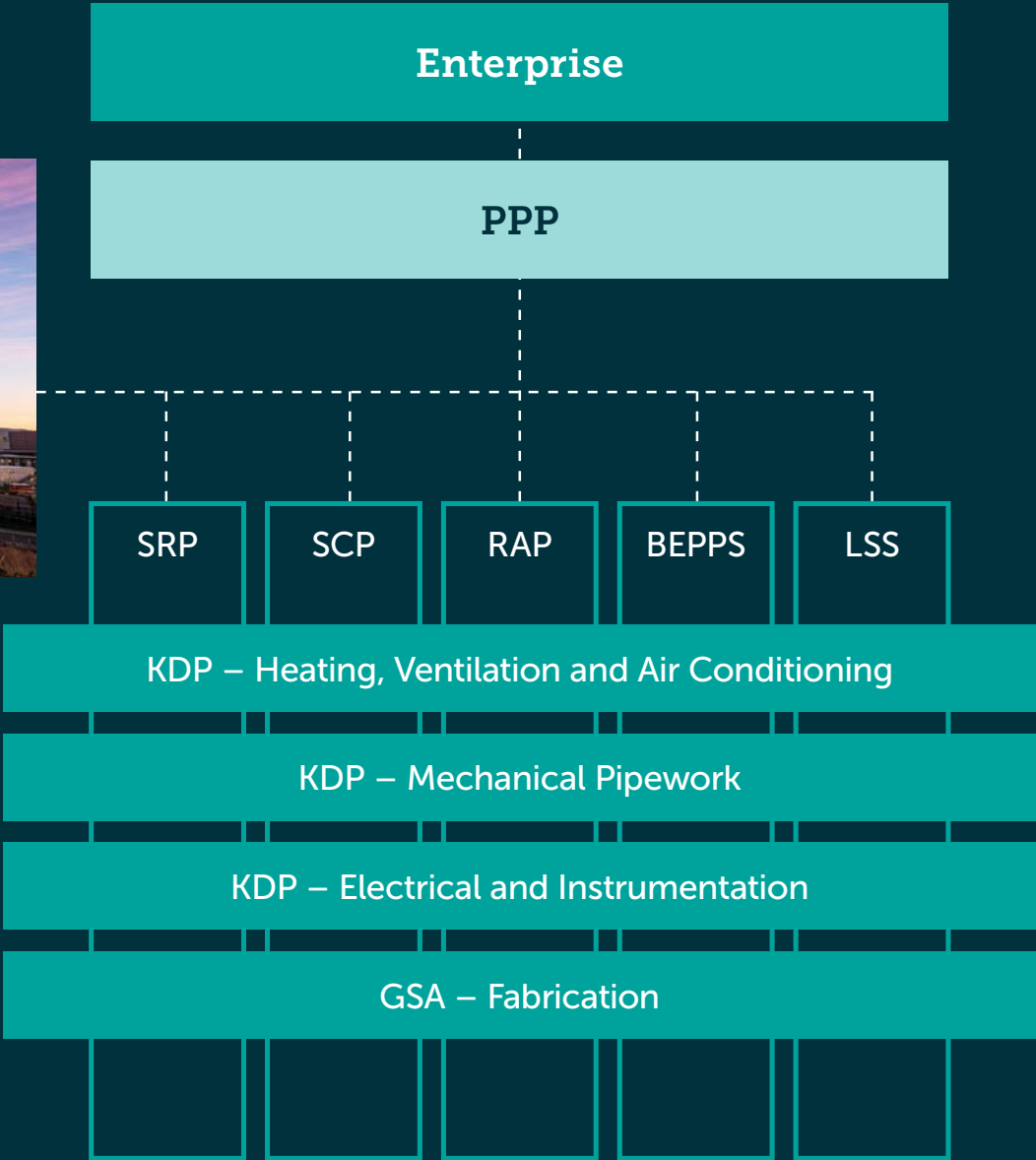
Successes to date include the identification of 65 SME partners through the successful MPP contract awards.

THE TOTAL CONTRACT  
VALUE IS UP TO

# £800m

WITH UP TO 8 MORE MPPS  
YET TO BE PLACED.

# Enterprise Graph



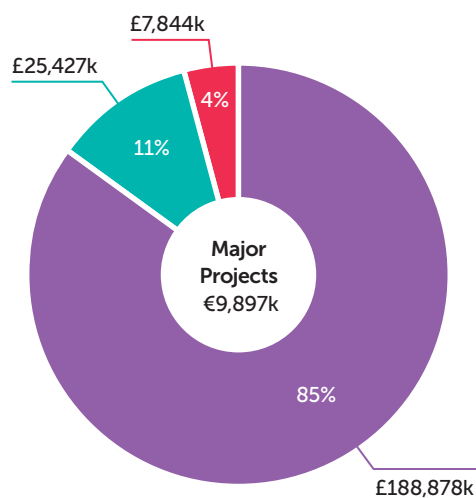




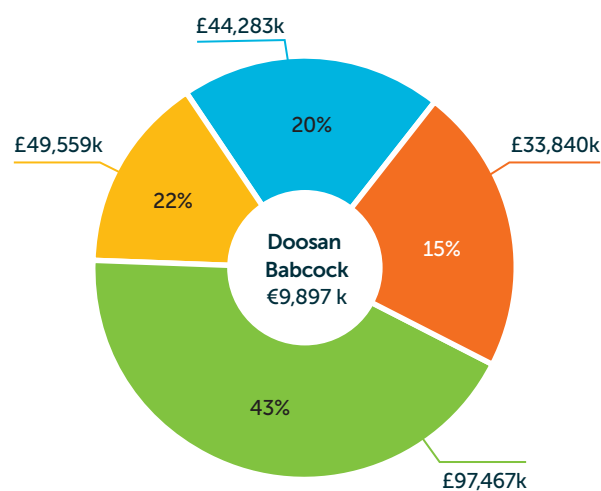
# PPP Financial Analysis

Year 1 spend was focused on mobilisation and transition of our live projects and the establishment of the PPP model. Year 2 spend maintained the mobilisation theme whilst supporting an increase in construction activity and project delivery. Year 3 has seen a continuation of increased project delivery comprising 85% of total spend (compared to 54% in Year 2).

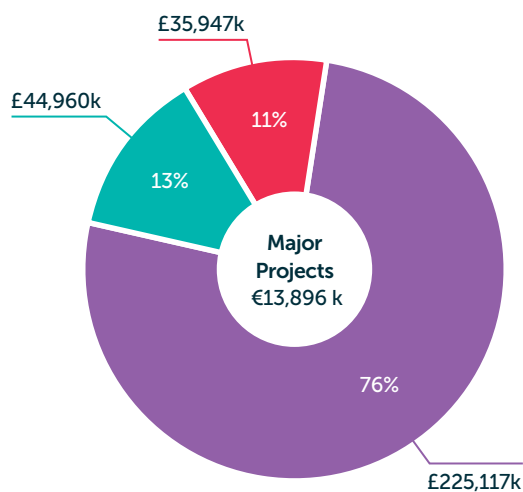
Where the money was spent (May 21-May 22)



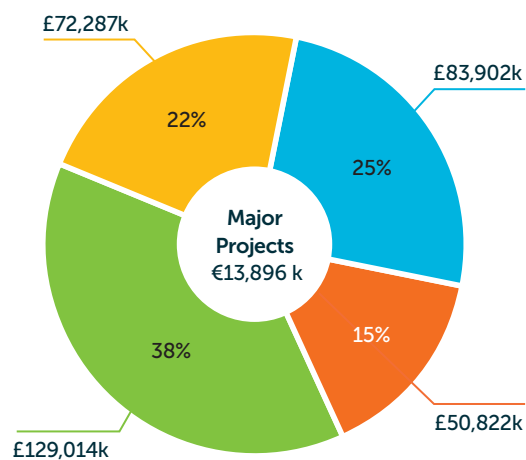
With whom (May 21-May 22)



Where the money was spent (Cumulative)



With whom (Cumulative)



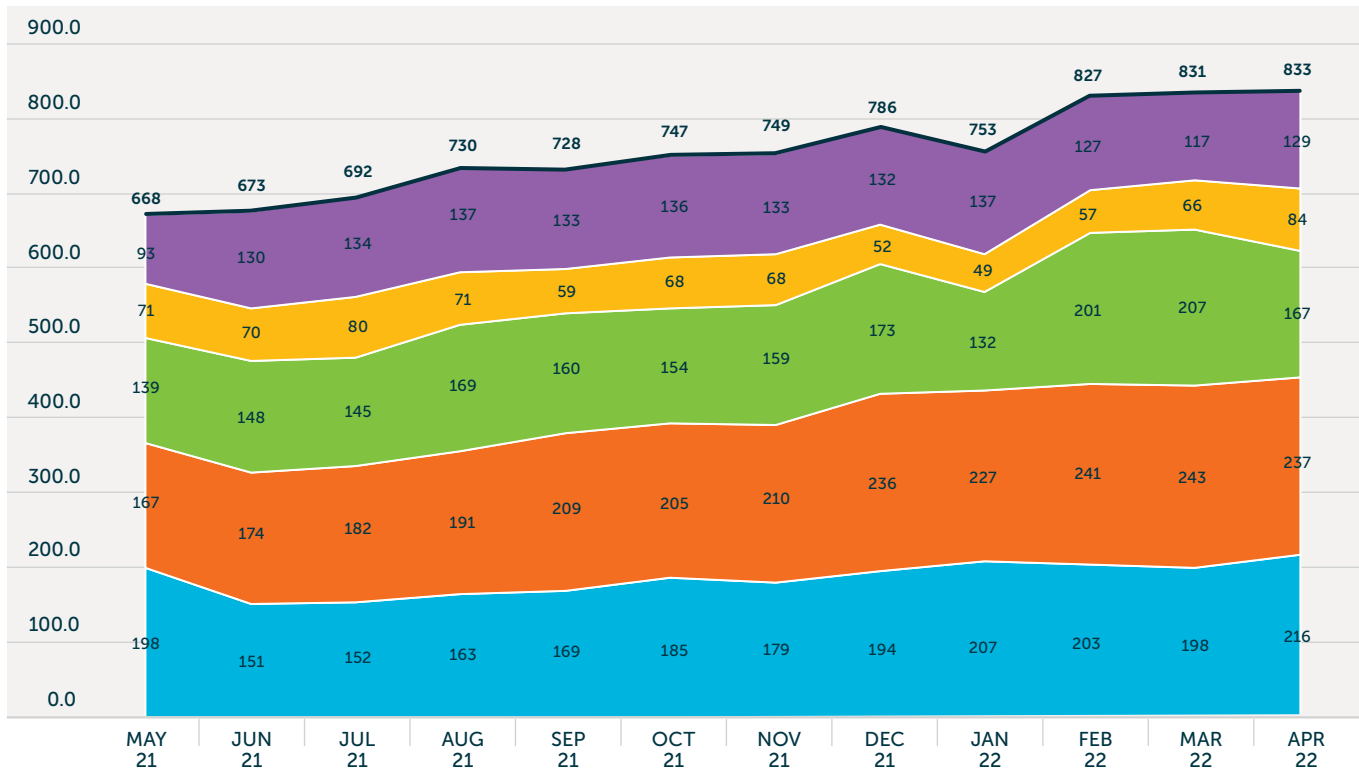
Key: Major Projects SWPDI PPP Services

Key: KBR Jacobs Morgan Sindall Doosan Babcock

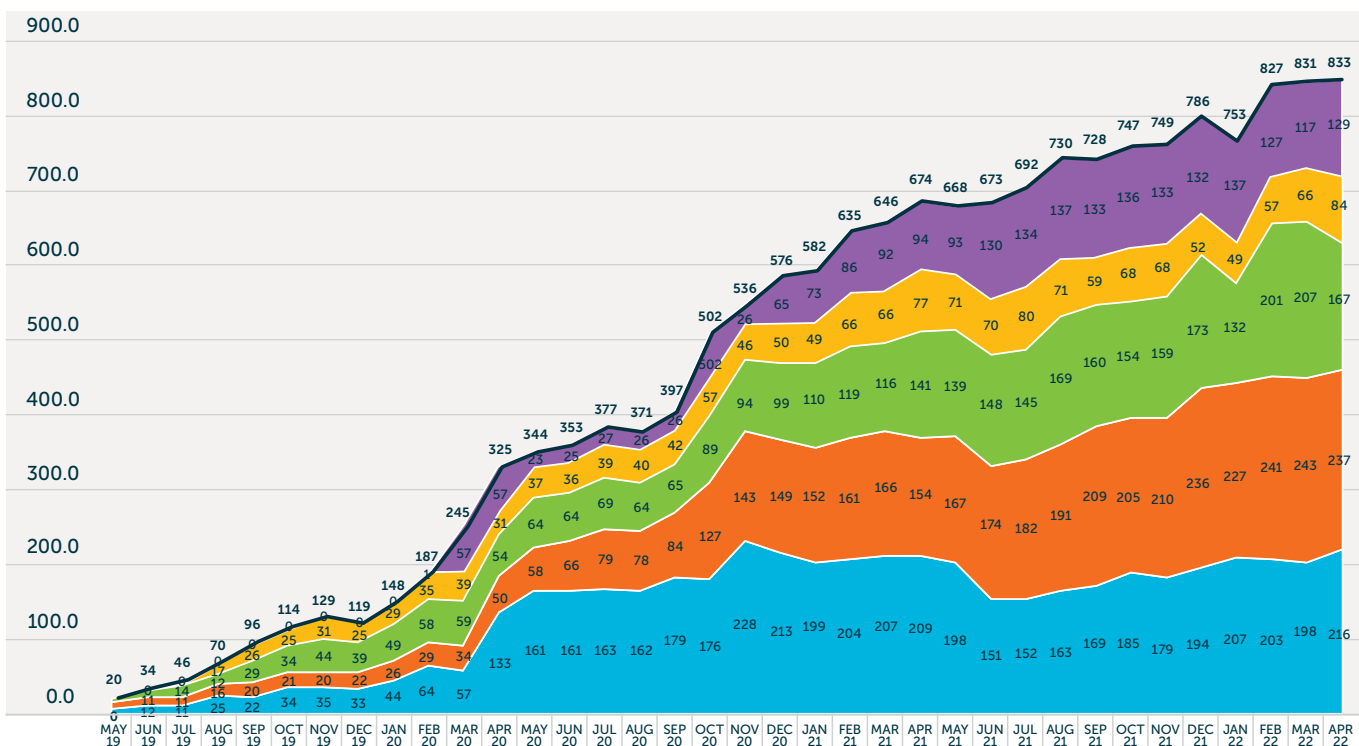
## Employees – Full Time Equivalents

The long-term nature of the PPP model has enabled the Partners to invest with confidence, resulting in 90% of the workforce being directly employed, this supports the Critical Success factors and is a step change in performance from previous delivery models.

### Annual Report Period May 21 to 22



### PPP Lifetime



**Key:** KBR Jacobs Morgan Sindall Doosan Babcock PCCS — Total



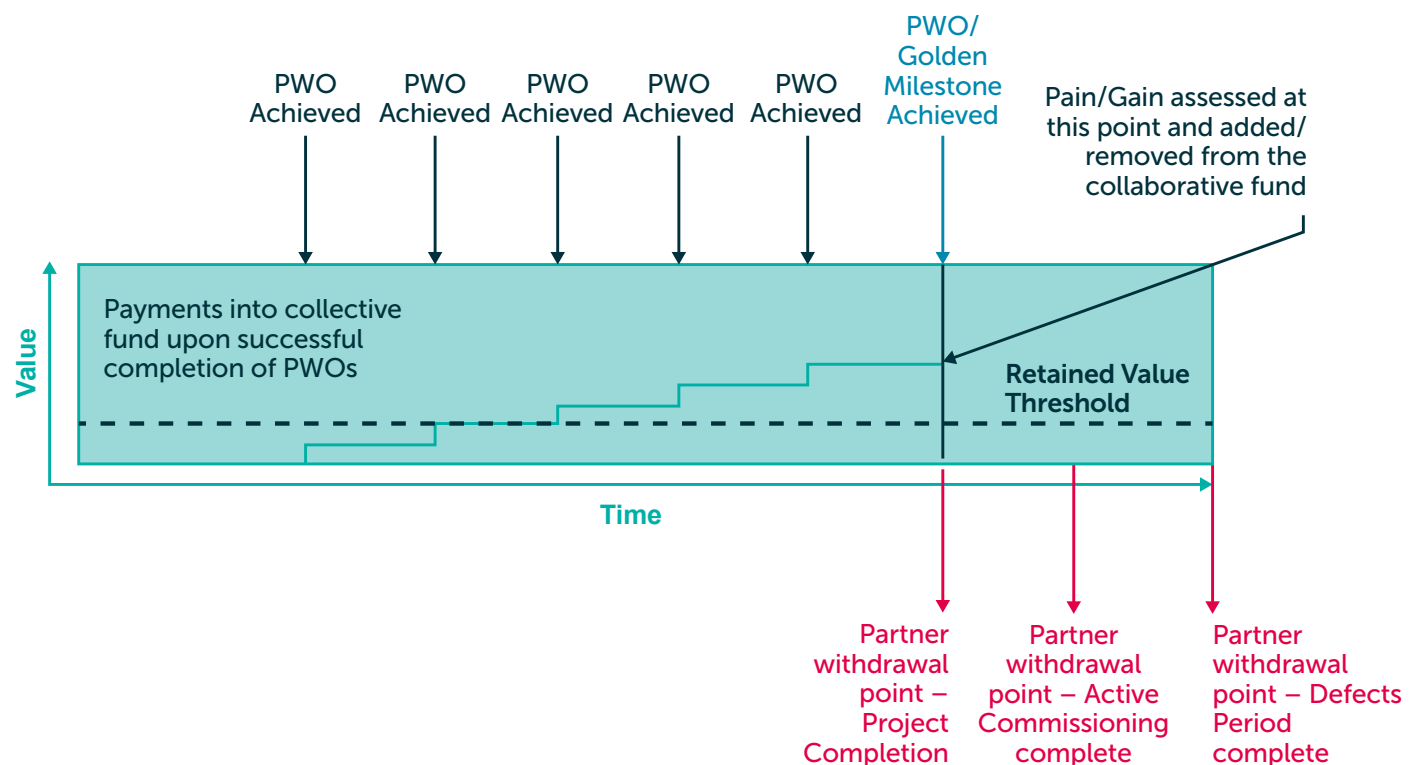
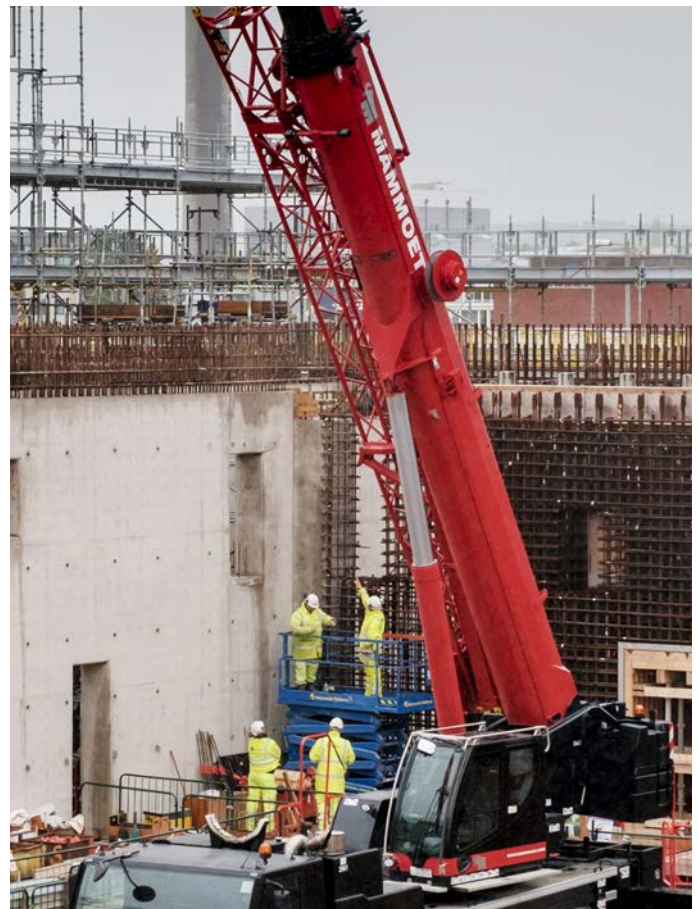
# PPP Aligned Incentive Fund

The Aligned Incentive Fund (AIF) is the third aspect of the PPP incentive model, becoming available on the creation of a Major Project Baseline.

The fund acts as a mechanism to reward performance (5% of the Major Project Baseline) in delivery of our Major Projects via the identification and completion of Project Wide Objectives (PWOs) which are cardinal delivery milestones in achievement of the functional specification.

Achievement of these PWOs enables payment into the fund of the weighted value of the PWO awaiting achievement of Project Completion, which is the first point at which the fund can pay out dependent on performance of schedule and cost.

Year 3 saw the go-live of the Client's Operational Cost and Profit Model (OCPM) which has been developed for the management of the fund by the Client with Supply Chain Partners. This model enables effective and factual analysis to be conducted against performance of the PPP model with live data, enabling timely decision making. To date, upon the achievement of SRPs PWO 1, there is currently £7million residing in the Aligned Incentive Fund with current incentive opportunities across SRP and SCP totalling £89million.





## PPP Triennial Review

Given the longevity of the contract, it was always recognised that ongoing reviews to ensure the integrity and robustness of the PPP contract incentivisation model would be required, this obligation in the contract was termed the “triennial review” (Review).

This was a Client led process, with Sellafield Ltd Executive sponsorship from both the Sellafield Ltd Supply Chain Director, Susan Lussem and Project Delivery Director, Andy Sharples. The Review has maintained ongoing stakeholder engagement through Government and Nuclear Decommissioning Authority (NDA) to ensure outputs from the Review were understood. The Review was conducted through desktop analysis, document review, benchmarking, financial analysis and interviews with the Client and Lot Partner teams. The output was assured by Deloitte on behalf of the Client.

The main conclusion from the Review was that the incentivisation mechanism within the PPP suite of contracts is operating as planned, was considered robust and should remain unchanged at this time. The review identified areas for action and monitoring to ensure continued robustness of the incentivisation model up to the point of the next planned review in 2025 which included continued engagement and education on the incentive model through the PPP.

The detailed findings are provided separately from this Annual Report, in the ‘Triennial Review – Aligned Incentive Report’.

Overall, PPP is demonstrating positive movement in the delivery of the Critical Success Factors (CSFs), as well as good progress against the contractual Success Factors, Obligations and expected Benefits (refer to the Introduction section). The model is being embraced by the Partners and their intended ethos is being built into the PPP way of working with performance now starting to achieve incentivisation opportunity through the Aligned Incentive Fund.

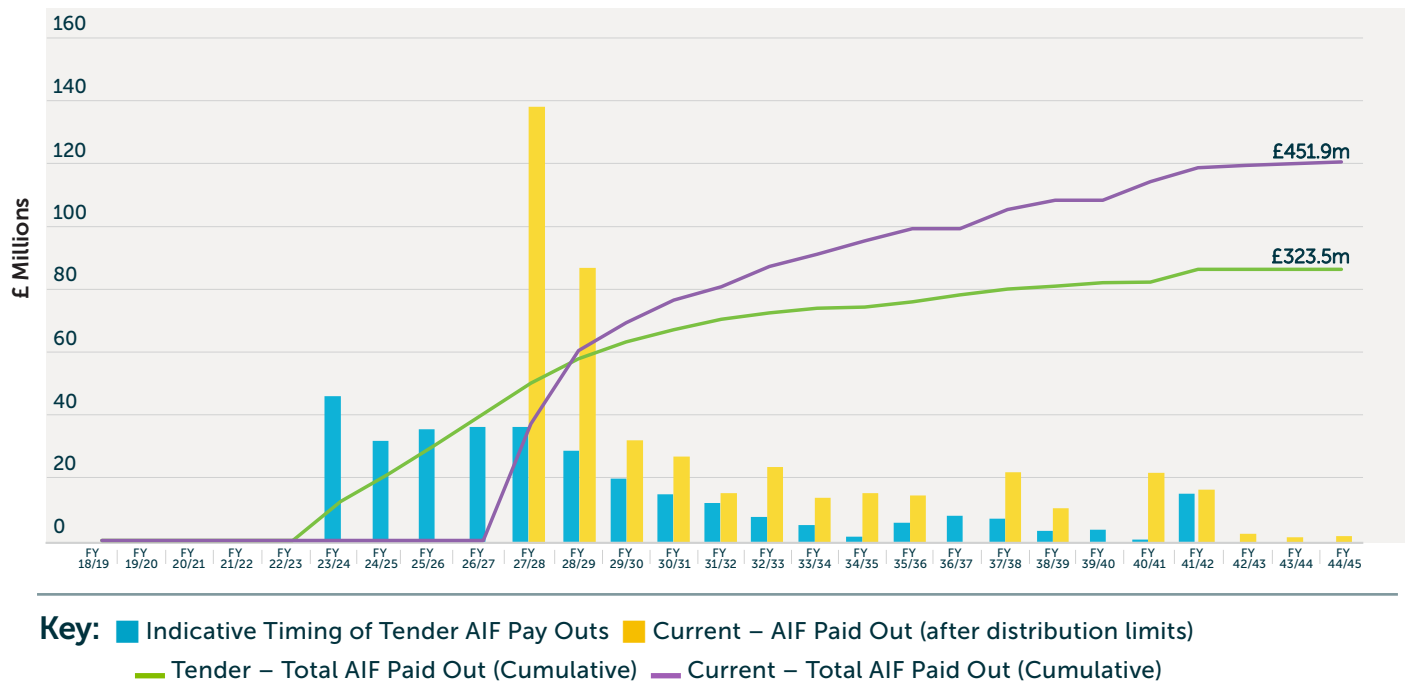
In terms of future expected PPP performance, the graph below shows the comparison of the expected payment profile from the fund from tender position to current delivery forecasts. Since tender, the assessment dates have been re-profiled through the setting of the Major Project Baselines (MPBs). The MPBs have been market informed and form a better Should Cost delivery mechanism based on a design which has been reviewed in detail and is therefore considered accurate. This in turn gives predictability on delivery. PPP has worked hard to agree an accurate MPB for both SCP and SRP which has provided a good platform for robust and accurate project performance. This increase in predictability was one of the key objectives and expectations behind the PPP delivery model.



## AIF Paid Out All Partners (Indicative Timing of Tender Projects)

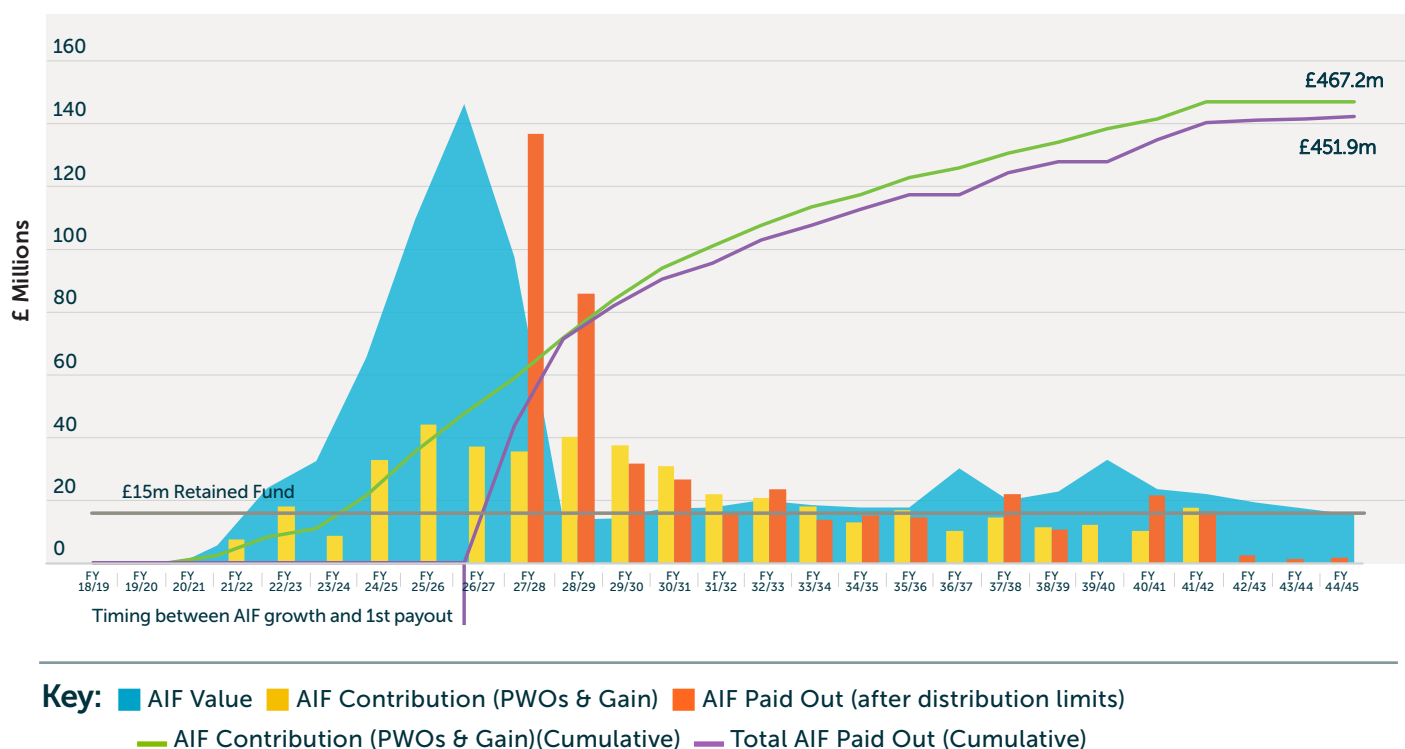
The graph below shows the relationship between payments into the fund, alongside payments out to the Lot Partners. It shows that the inclusion of Project Wider Objectives (PWOs) from in-flight and planned future projects, significantly increases the profit available to the Partners through PWO achievement. The pipeline has significantly increased from the

tender position, potentially netting the Partners more profit than that available at the point of tender, dependent of course on performance. It also identifies that initial pay-outs from the Aligned Incentive Fund now occur later than originally modelled, this will be an area of ongoing monitoring and dialogue over the next three year term.



## Aligned Incentive Fund Contribution v Payout

The below shows the relationship between payments into the fund, alongside payments to the Lot Partners.

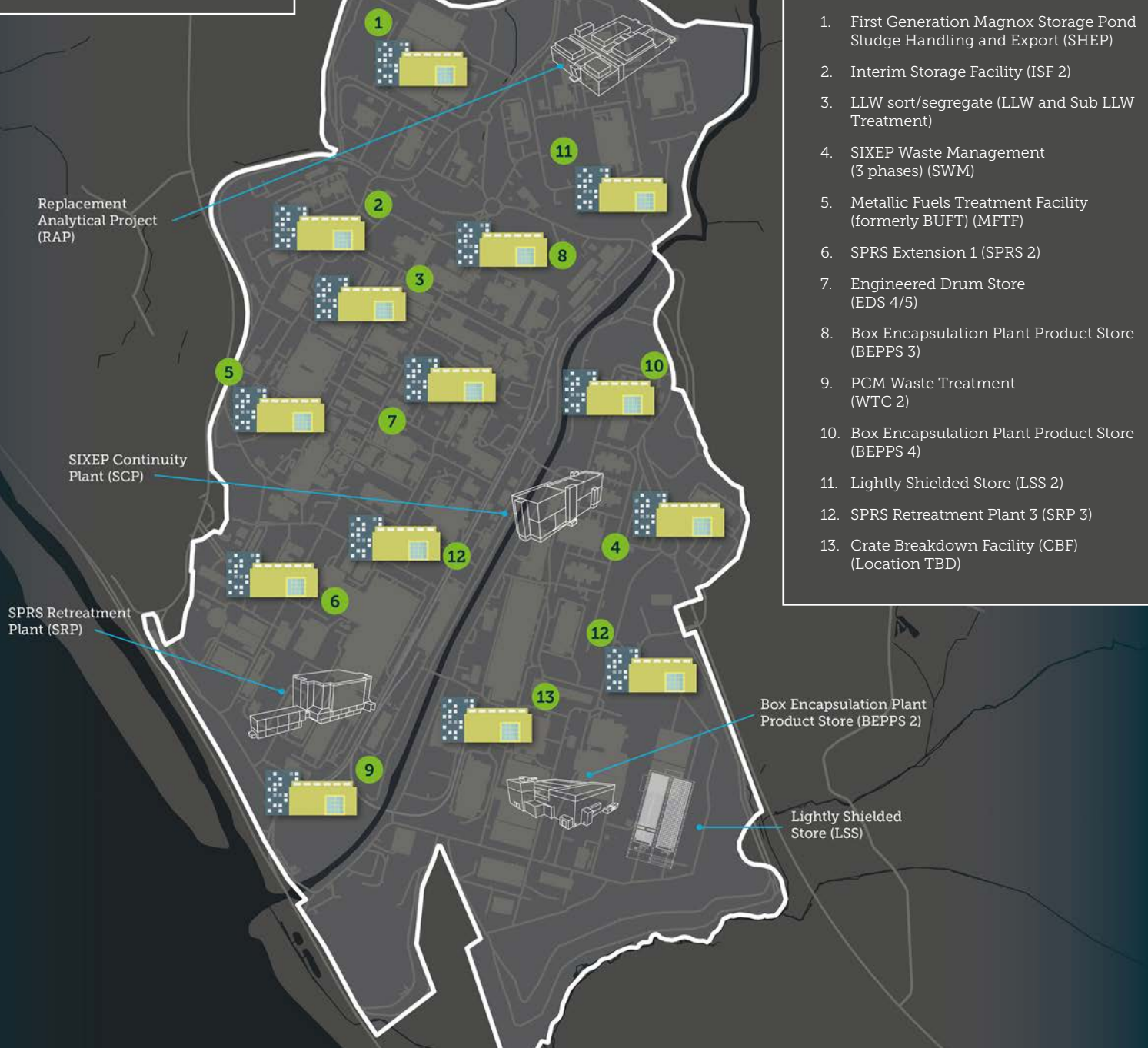




# PPP Pipeline

## In-Flight' Projects

## Future Projects



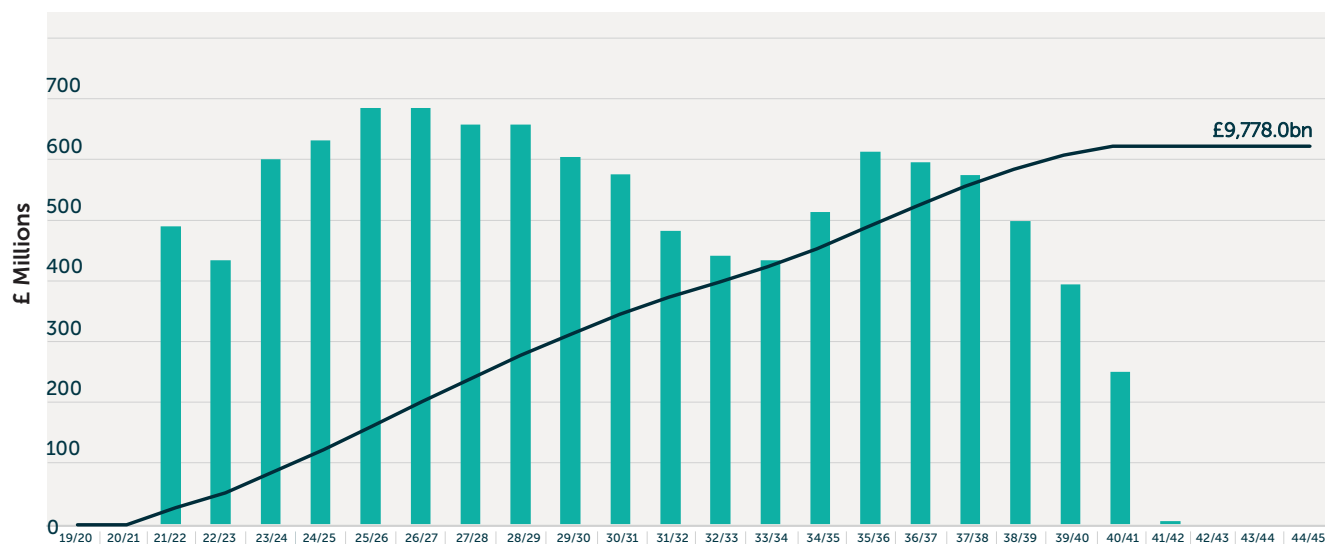
The Sellafeld pipeline is a live list of the major projects planned to be delivered by PPP. It is generated from the Sellafeld business strategy and corporate plan.

The pipeline enables a significant step forward in the management of risk and opportunity across the entire portfolio. As an example, modelling and analysis of the pipeline data enables identification of capability and capacity demand to support planning, mitigation, and optimisation.

Owing to the long-term nature and programmatic uncertainties the pipeline is dynamic. Since PPP was launched in 2019 four projects have been added to the pipeline and 11 projects removed as studies progress and Sellafeld's lifetime requirements develop.

In Year 3 there are 13 projects in the pipeline with an estimated value of ~£7bn. Including the five in-flight projects this takes the estimated potential value over the 20-year contract to ~£9.5bn. Based on the current pipeline PPP will be delivering around 17 projects by 2028. It is expected that the PPP funding envelope will need review at an appropriate point in consultation with key stakeholders.

The pipeline now reflects the new gated process at Sellafeld, launched in the Management System in April 2022. The headline objective is to reduce uncertainty at the front end of projects by doing more work up front, hence increasing project confidence in time and cost ranges. Reference class forecasting and government guidelines on optimism bias (green book) have also been included in the new process.



	2019/2020	2020/2021	2021/2022	2022/2023	2023/2024	2024/2025	2025/2026
<b>Total</b>	£0.00	£0.00	£442.9m	£392.2m	£542.3m	£570.3m	£618.5m
<b>Total (Cumulative)</b>	£0.00	£0.00	£442.9m	£835.2m	£1,377.6bn	£1,947.9bn	£2,566.4bn

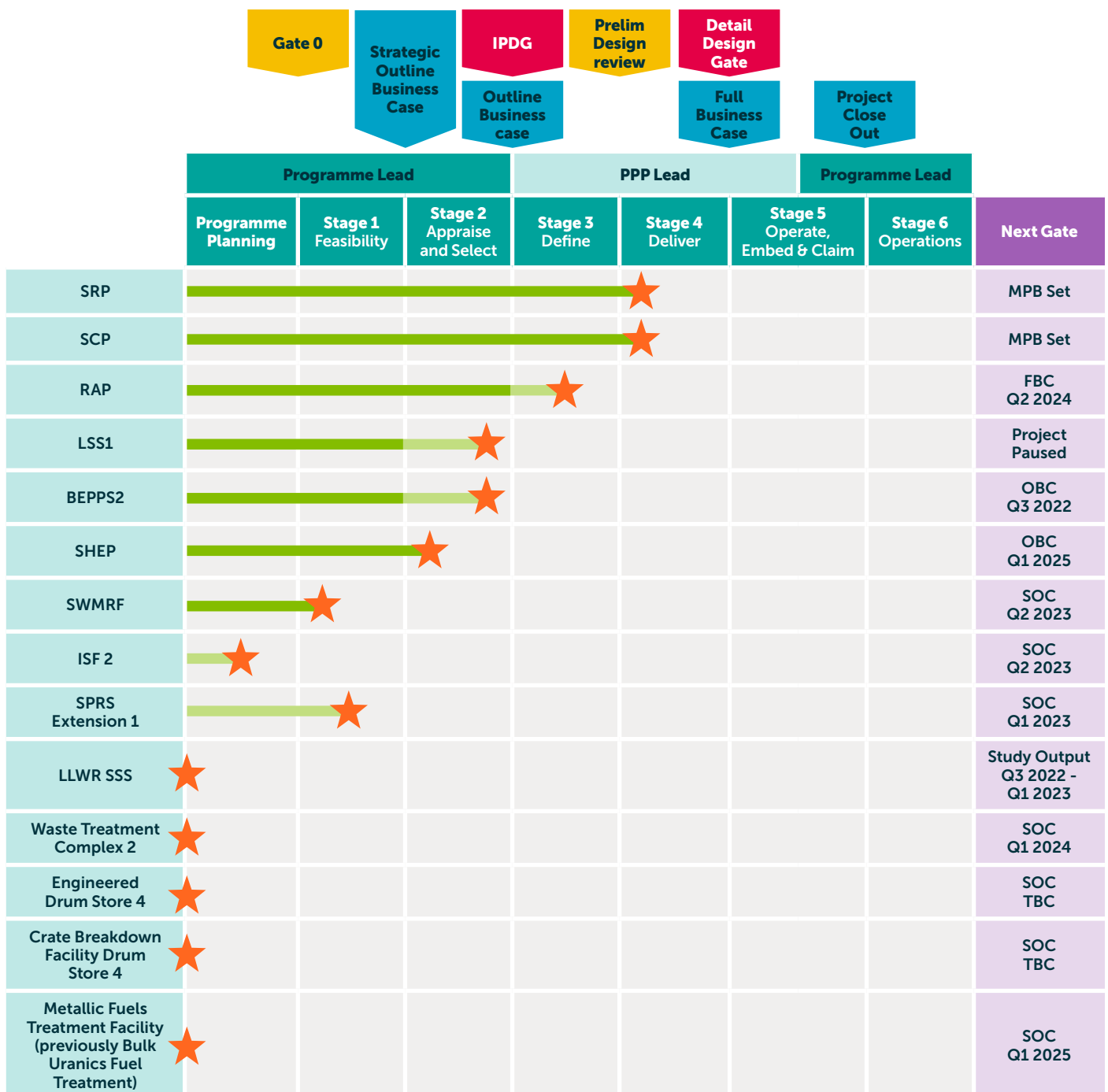
	2026/2027	2027/2028	2028/2029	2029/2030	2030/2031	2031/2032	2032/2033
<b>Total</b>	£618.4m	£593.3m	£593.6m	£545.1m	£519.9m	£436.4m	£398.5m
<b>Total (Cumulative)</b>	£3,184.9bn	£3,778.2bn	£4,371.9bn	£4,917.0bn	£5,436.9bn	£5,873.3bn	£6,271.9bn

	2033/2034	2034/2035	2035/2036	2036/2037	2037/2038	2038/2039	2039/2040
<b>Total</b>	£392.6m	£463.9m	£553.3m	£538.1m	£518.8m	£450.6m	£356.9m
<b>Total (Cumulative)</b>	£6,664.5bn	£7,128.5bn	£7,681.9bn	£8,220.0bn	£8,738.9bn	£9,189.5bn	£9,546.4bn

	2040/2041	2041/2042	2042/2043	2043/2044	2044/2045
<b>Total</b>	£226.8m	£4,736.0bn	£0.00	£0.00	£0.00
<b>Total (Cumulative)</b>	£9,773.3bn	£9,778.0bn	£9,778.0bn	£9,778.0bn	£9,778.0bn

Note: Figures have been rounded.

## PPP Pipeline Timeframes





The SIXEP Waste Management Phase 1 – Receipt Facility (SWMRF) has been highlighted as a front runner in the application of this new gated process.

Alongside this, Box Encapsulation Plant Product Store 2 (BEPPS2) is the first project to develop an Outline Business Case (OBC) under the new gated process and will be the first PPP project to run through the full lifecycle under the new arrangements.

This, along with the introduction of the new Senior Responsible Owner (SRO) model, is set to define the scope of projects more clearly before they are launched, and to launch them at the right time for the business. Whilst this is of clear benefit to the PPP model, inevitably there will be some realignment on the forward schedule for pipeline projects.

The Retrievals programme leading the Sludge Handling and Export Plant (SHEP) has been supported by PPP as the project progresses to a single viable option ahead of OBC and handover to PPP in 2025/26.

PPP continues to support programme studies that will facilitate the future pipeline or projects such as Sellafield Product and Residue Store (SPRS) Extension and Interim Storage Facility 2 (ISF2).

The strategic pause of LSS1 has impacted Partner confidence in the project pipeline. This is a shared concern for both the Client, Partners and the wider supply chain and will be the subject of increased focus in Year 4 to re-establish confidence in the plan.

The pipeline data must reflect corporate plans, study outputs, PPP Early Contractor Involvement learning and current project performance. A key focus for year 4 is improving the pipeline characterisation and building effective working relationships with key stakeholders, including Senior Responsible Owners, the Enterprise Portfolio Office, and the Partners. We will build on this to support the identification and assessment of options to accelerate the Sellafield mission or deliver other strategic drivers such as consideration of the construction of BEPPS3 and BEPPS4 in series with BEPPS2.



# PPP Year 4 Lookahead

As PPP moves into the fourth year of delivery the focus will be maintained on delivering successful outcomes on the transition projects while ensuring that future projects to be delivered by the PPP are set-up for success. This will be done against a backdrop of inflationary pressure on Sellafield Ltd's project portfolio and will require a strong focus on budget optimisation.



# KPIs

KPIs have been agreed for the PPP for Year 4. These KPIs give the opportunity for the Partners to earn in-year profit through their own individual performance as well as through collaboration across the partnership. This is reflected by each Partner having four individual KPIs and contributing to delivery of four shared KPIs. The KPIs are shown in the table below:

Topic Area	Lot	Description	Date
Supply Chain Relationship Management (SCRM)	1	PPP Supply Chain Manager will facilitate SCRM across the supply chain base via a Supplier Relationship Management (SRM) strategy and creation of a Key Delivery Partner (KDP) forum. This will be a quarterly review of relationship, performance, risks focused upon actions and mitigations.	31 Jul 22
PPP Awards	1	To celebrate successes for PPP including innovation, ideas, performance, and safety (individual, supply chain and team).	30 Jun 22
Multi-Project Partners (MPPs)	1	Contract award of MPPs and frameworks placed with Key Delivery Partners (KDPs). To ensure further three MPPs are placed with KDPs on PPP within the agreed FY22/23 schedule.	10 Jan 23
SWMRF PDRI	1	SIXEP Waste Management Retrievals Facility SWMRF Project Definition Rating Index (PDRI) Output Report.	30 Nov 22
Object Management	2	Design Maturity methodology developed and demonstrated using a structured approach; a process to progress design and engineering development on a project to a measurable and demonstrable progress aligned to a gated process.	30 Sep 22
BEPPS2 Preliminary Engineering MDDR	2	Multi-Discipline Design Review (MDDR) activities complete for Preliminary engineering stage on BEPPS2.	28 Feb 23
BEPPS2 MMC	2	Modern Methods of Construction (MMC) feasibility study on BEPPS2.	30 Nov 22
Integration of sustainable based decision-making during Design Phases	2	To provide examples of how Sustainability (e.g., United Nations Sustainability Goals Development Goals (SDG)) have been embedded into the Design lifecycle.	31 Jan 23



Topic Area	Lot	Description	Date
<b>SRP underground enabling works</b>	3	Main Underground Services Complete – Phase 1 High Voltage Ducting/Waste and Raw Water/Surface Water Main Drains (Package 144).	31 Aug 22
<b>Construction Hazard School</b>	3	Implement a PPP Nuclear Construction Training School (previously called Construction Hazard School) that encourages innovation and collaboration during the induction and training process, allowing the site workforce to understand key site hazards from a safe environment.	31-Oct-22
<b>Construction Village for RAP</b>	3	Completion and Handover of Construction and Welfare Facility (Construction Village) – subject to output from strategic opportunity studies.	13 Mar 23
<b>Concrete batching plant</b>	3	New Concrete batching plant to provide concrete to PPP projects.	04 Nov 22
<b>SCP – Contract award ejectors</b>	4	Contract award for steam and air ejectors.	28 Feb 23
<b>SCP – Manufacture Encast items</b>	4	Complete manufacture of Encast Items above +8.5m level.	31 May 22
<b>SCP Early Start-up Review</b>	4	<p>Joint PPP Services, SCP Project and Sellafield Client assurance of the early Start-up review milestone (to clarify, this includes Commissioning and Pre-Ops).</p> <p>The assurance touch point will examine:</p> <ul style="list-style-type: none"> <li>• Start-up strategy.</li> <li>• Resource strategy and organisational structure to deliver Start-up scope.</li> <li>• Delivery scope, schedule and cost estimate vs current position.</li> <li>• Procedures/Arrangements to deliver scope.</li> <li>• Risk identification.</li> </ul>	30 Nov 22

Topic Area	Lot	Description	Date
<b>Human Performance – Safety</b>	ALL	To carry out a programme of Human Performance Coaching in support of PPP Culture Change Model. A programme of Human Performance Coaching for all members of the PPP Aligned Delivery Teams and their Supply Chain.	31 Mar 23
<b>Site Safety standards</b>	ALL	Develop and Implement PPP site safety standards in accordance with the PPP Leadership and Management for safety implementation plan.	31 Mar 23
<b>RAP Implementation of Optimisation Decisions</b>	ALL	Implementation of agreed/approved optimisation decisions based on the reviews carried out by MACE and PPP.	11 Nov 22
<b>Capability and Skills</b>	ALL	Attracting, developing, and retaining the greatest talent from across the UK is central to the success of the PPP model. This KPI will make an in-year contribution creating a dynamic and diverse workforce and transforming PPP into 'the' place to work in UK infrastructure projects, whilst meeting project resource demands.	31 Mar 23

Through Year 4, the PPP client organisation will optimise arrangements to ensure that a proactive performance management ethos is embedded and that the broader remit as client for the “legacy” projects in addition to the “transition” and “future” projects is fulfilled. Opportunities will be sought to optimise delivery of the client role and other supporting functions across project delivery with the aim of increasing efficiency in non-delivery areas to better support project delivery. The PPP client organisation will also support the Head of PPP as their new leadership structure is embedded.

To support this, several focus areas are planned throughout the fourth year of PPP delivery:

- Focus on enabling PPP delivery through removal of barriers to performance that exist within Sellafeld.
- Ensuring interfaces between PPP projects and the broader Sellafeld Ltd organisation (e.g. land for BEPPS2 and SRP power supply) are effectively managed.
- Greater focus on direct engagement with projects and the PPP leadership team to nurture effective working relationships based on conversation in the first instance.
- Complete an optimisation review of the RAP project and build identified opportunities into the Major Project Baseline.
- Optimising the pipeline of future PPP projects to enable Sellafeld Ltd to make strategic choices to deliver best value.
- Devolve authority for decision making and approval of the Aligned Delivery teams into the PPP partnership.
- Implement pre-approval of PPP sub-contracts to enable accelerated delivery by the Partners.
- Support the establishment of “Delivery Hub” offices at strategic locations across the UK to support PPP in addressing challenges on capability.
- A greater presence on the project sites and in Partner offices to support safe delivery of the programme.
- Striving to ensure that Sellafeld’s Key Targets and the PPP Partner KPIs are successfully delivered through the year.
- Facilitating the deployment of a Common Data Environment (CDE) to enable collaborative project delivery.
- Continue to support the PPP ‘Good to Great’ Performance Acceleration programme.

# Glossary of Terms

Acronym	Description
ADT	Aligned Delivery Team
AIA	Aligned Incentive Agreement
AIF	Aligned Incentive Fund
BEIS	(Department for) Business Energy and Industrial Strategy
BIM	Building Information Modelling
CBS	Cost Breakdown Schedule
CMP	Collaborative Management Plan
CSP	Contract Specific Profit
DU	Duration Uncertainty
ECI	Early Contractor Involvement
EHSSQ	Environment, Health, Safety, Security and Quality
EU	Estimating Uncertainty
FBC	Full Business Case
FTE	Full Time Equivalent
HMG	Her Majesty's Government
HVAC	Heating, Ventilation and Air-Conditioning
IAAP	Integrated Assurance and Approvals Plan
IPA	Infrastructure and Projects Authority
IPAG	Independent Project Assurance Group
IRP	(SL) Investment Review Panel
KDP	Key Delivery Partner
KPI	Key Performance Indicator
KT	Key Target



LFE	Learning from Experience
MEICA	Mechanical, Electrical Instrumentation, Control and Automation
MPB	Major Project Baseline
MPP	Multi-Project Procurement
MPTP	Major Project Total Price
NDA	Nuclear Decommissioning Authority
OBC	Outline Business Case
PAF	Performance Assurance Framework
PFS	Project Functional Specification
PPP	Programme Project Partners
PWOs	Project Wide Objectives
QRA	Qualitative Risk Assessment
QSRA	Quantitative Schedule Risk Analysis
RCF	Reference Class Forecasting
SCN	Services Commencement Notice
SCP	SIXEP Continuity Plant
SL	Sellafield Ltd
SME	Small to Medium Enterprise
SOG	Strategic Oversight Group
SPER	SL Project Execution Review
SQEP	Suitably Qualified and Experienced Persons
SRP	Sellafield Product and Residue Store Retreatment Plant
T&T	Turner & Townsend

