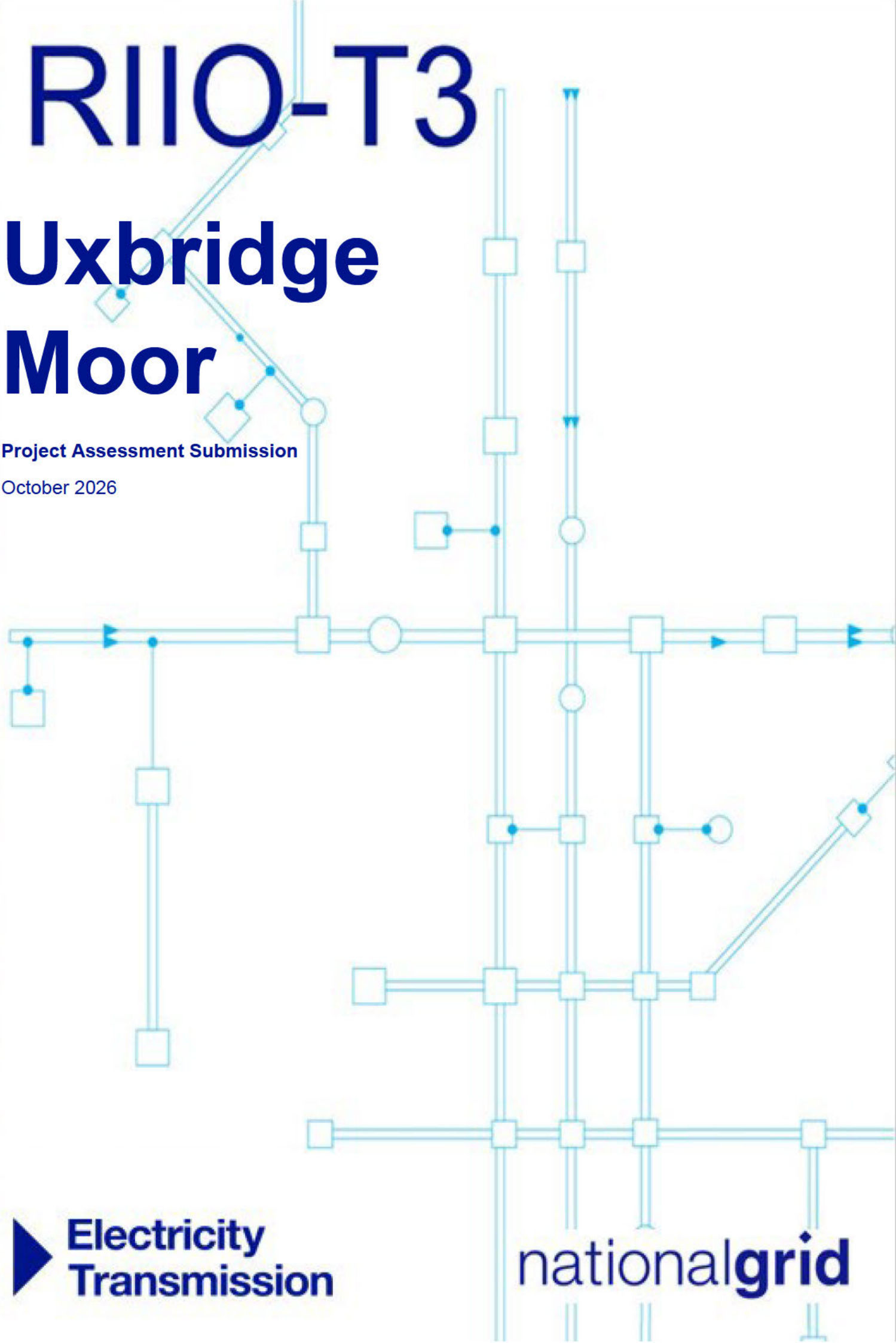
RIIO-T3

Uxbridge Moor

Project Assessment Submission

October 2026



Electricity Transmission

nationalgrid

Contents

Reference and summary table v

Executive summary vii

1. Introduction 1

1.1 Context 1
1.2 Drivers 1
1.3 Output of the investment 3
1.4 Changes since earlier regulatory submission 4
1.5 Cost 7
1.6 Risk 7

2. Detailed developments 9

2.1 Project Output 9
2.2 Customer Connections 14
2.3 Project Design, Scope and Site Developments 17
2.4 Programme Development since FNC 20
2.5 Cost Development 23
2.6 Construction works 31
2.7 Land and consents 31

3. Costs 34

3.1 Investment costs 34
3.2 Cost Drivers 37
3.3 Updated cost benefit analysis 43
3.4 Programme impacts 44
3.5 Benchmarking 45
3.6 Risk 48
3.7 Ongoing efficiency and real price effects 55

4. Deliverability and procurement 58

4.1 Delivery strategy 58
4.2 Programme and Delivery Team structure 59
4.3 Supply chain capacity 65
4.4 Outage planning 66
4.5 Procurement 67

5. Conclusion 69

Appendix A Glossary A1
Appendix B Location B1
Appendix C Design C1
Appendix D Construction D1
Appendix E Land strategy and consent E1
Appendix F Delivery strategy F1
Appendix G Cost model G1
Appendix H Cost assurance H1
Appendix I National Grid costs I1
Appendix J Cost benefit analysis J1
Appendix K Programme timelines K1
Appendix L Benchmarking L1
Appendix M Risk register M1
Appendix N P6 Programme N1
Appendix O Procurement O1
Appendix P RRP Tables P1

List of Figures

Figure 1: Proximity of Uxbridge Moor to the existing Iver substation 3
Figure 2: Uxbridge Moor project outputs 4
Figure 3: Investment location within the NGET route map 4
Figure 4: 3D view of Uxbridge Moor substation 11
Figure 5: 3D view of Uxbridge Moor 12
Figure 6: 3D view of Uxbridge Moor 13
Figure 7: Uxbridge Moor technical site layout 14
Figure 8: Principal contributors to 21-month ECI Stage 1 programme impact prior to mitigation 22
Figure 9: FNC to PA cost reconciliation (2023/24 prices) 24
Figure 10: Uxbridge Moor project cost summary 37
Figure 11: Uxbridge Moor Benchmarking Findings 47
Figure 12: QSRA summary illustration 51
Figure 13: Risk benchmarking – risk as a percentage of project base cost estimate (total cost less risk estimate) 53
Figure 14: Project delivery summary illustration 60
Figure 15: Uxbridge Moor delivery team structure 63
Figure 16: Uxbridge Moor Delivery Programme 64
Figure 17: Summary of scheduled outages 67
Figure 18: Project location - transmission route map B1
Figure 19: Customer Locations B2
Figure 20: Project location – satellite map – West London part 1 B3
Figure 21: Project location – satellite map – West London part 2 B4
Figure 22: Project location – Uxbridge Moor Layout with reference to existing Iver substation and M25 B5
Figure 23: CDM plan of substation area D3
Figure 24: Temporary and permanent land rights E1
Figure 25: Uxbridge Moor site boundaries with freehold (red), temporary access routes (brown) E4
Figure 26: Risk management process flowchart F9
Figure 27: Uxbridge Moor Delivery Programme K1
Figure 28: Procurement process flowchart O1

List of Tables

Table 1: Cost breakdown summary (23/24 prices) 7
Table 2: Uxbridge Moor risk allowance inputs 8
Table 3: Uxbridge Moor technical scope of investment 10
Table 4: Details of Uxbridge Moor customer connections 15
Table 5: Development and Quantification of the Approved FNC Solution [redacted] 25
Table 6: Post-FNC Scope Development and External Cost Drivers [redacted] 27
Table 7: Quantified cost mitigations 30
Table 8: Uxbridge Moor project cost summary 36
Table 9: Project cost breakdown 38
Table 10: Preliminary (Stage 1) and main works (Stage 2) costs 40
Table 11: Stage 1 main works contractor costs 40
Table 12: Stage 2 main works contractor costs 40
Table 13: Procurement and third-party costs 41
Table 14: Third party costs 42
Table 15: National Grid internal, land and portfolio costs 43
Table 16: Lifetime CBA by price control period (23/24 base prices, central carbon pricing, discounted values) 44
Table 17: Alternative completion date scenarios 45
Table 18: Key risk themes identified for Uxbridge Moor 49
Table 19: QSRA summary 50
Table 20: QCRA summary 51
Table 21: Top 5 Quantified discrete project risks by Factored EMV, 23/24 prices 52
Table 22: Project delivery dates 60
Table 23: Uxbridge Moor submission Summary 69
Table 24: Glossary A1

Table 25: Key for CDM plan of substation area D3
Table 26: Temporary land rights E2
Table 27: Permanent land rights E3
Table 28: Land acquisition, planning and consents timeline E5
Table 29: Summary of the discharge conditions associated with planning permission E6
Table 30: Secondary consents E8
Table 31: Stakeholder engagement overview F4
Table 32: Project management/Project delivery (23/24 price base) I1
Table 33: Project services (23/24 price base) I2
Table 34: ET Ops (23/24 price base) I3
Table 35: Lands, legal and consents (23/24 price base) I4
Table 36: National Grid portfolio costs (23/24 price base) I4
Table 37: Summary of the approach to appraising each supplier on Lot 3 - substations O2
Table 38: Tender process milestones O6

Reference and summary table

Field	Description
Project name	Uxbridge Moor
TO's preferred re-opener track	Project Assessment (PA)
RRP reference	NGT500544
BPDT / Scheme reference number	NGT500544
Load Board reference	NGT500544
Investment driver(s)	The investment driver is the facilitation of [redacted] contracted customer connections, representing [redacted] demand in the Slough and West London area. The investment project is driven by large-scale [redacted] demand and will establish a new Grid Supply Point (GSP) to support the significant concentration of contracted demand within a constrained part of the transmission network.
Project outputs	New SF_6-free 400/132kV GSP [redacted]
PASE alignment	Non-PASE compliant, as the solution uses compact GIS substations to minimise the development footprint on the available Green Belt land.
Costs (23/24 prices)	Total project cost: [redacted] PA Funding request: [redacted] Expenditure incurred to date: [redacted]
Delivery year	[redacted]
Extension cost	Not applicable – new substation.
Applicable reporting tables	BPDT 10.5 ET Pipeline log and RRP26 E1.11_ET Pipeline Log

Historic funding interactions	Not applicable - This project has not received any historic funding or Pre-Construction Funding (PCF).
Interactive projects	• **East Claydon – Amersham – Iver OHL upgrade:** The most significant interface with Uxbridge Moor. Both projects require coordinated design, access, outages, protection and control (P&C) modifications, and commissioning activities at Iver. Any delay could impact outage windows and prevent Uxbridge Moor from operating at full capacity. • **Iver/Denham Works:** A direct shared-site dependency due to the proximity of the new Uxbridge Moor substation to the existing Iver site. Key interfaces include site access, construction sequencing, temporary operational arrangements, outages, P&C changes, commissioning, and support for the 14 customer connections. Delays may also affect SGT commissioning and site LV capacity. • **East Claydon Works:** An indirect dependency. Ongoing upgrade activities could restrict access to P&C databases, drawings and engineering resources, potentially resulting in delays, resequencing or increased costs. • **Amersham Works:** An indirect dependency with similar risks around access to P&C databases and engineering information. The project also supports wider network reconfiguration to a three-way and two-ended circuit arrangement, improving network resilience and influencing Uxbridge Moor integration. • **West London Upgrade:** Uxbridge Moor is a key component of the wider West London reinforcement programme, providing capacity where Iver can no longer accommodate customer demand. Coordination is required across programme delivery, land access, outages, temporary arrangements and commissioning activities. **Portfolio-level interactions:** • **BTNO (Bramford to Twinstead):** No direct physical or construction interface with Uxbridge Moor. Any dependency is limited to portfolio-level outage planning and transmission system access coordination. • **HWUP (Hackney, Tottenham & Waltham Cross Uprate Project):** No direct physical interface. The main interaction is at portfolio level, where outage planning and system security requirements may compete for network access and resources. **Northwest London Reinforcement (ESC1 / SER4 / LETC):** No direct physical or construction interface with Uxbridge Moor. The programme comprises the Elstree to St John's Wood Cable (ESC1), Sundon to Elstree Reconductoring (SER4) and Letchmore Heath Substation (LETC) projects. Any dependency is limited to portfolio-level outage planning, resource constraints and transmission system access coordination, where competing outage requirements or system security considerations may influence delivery sequencing.
Historic funding interactions	[redacted]

Spend apportionment	**T2 (FY 2022 - 2026)**	**T3 (FY 2027 - 2031)**	**T4+ (FY 2032 - 2037+)**
	[redacted]	[redacted]	[redacted]

Executive summary

Project summary

The Uxbridge Moor project will deliver a new transmission substation in Buckinghamshire [redacted] serving the Slough and West London area. Upon completion, it is expected to be one of the largest substations developed on the National Grid Electricity Transmission (NGET) network by capacity, [redacted] The project will comprise of a new Sulphur hexafluoride (SF_6)-free 400/132kV substation, [redacted] The use of compact SF_6-free Gas Insulated Switchgear (GIS) technology optimises the project's physical footprint and environmental impact building the substation to its maximum efficient scale up front.

A key objective throughout project development has been to meet the critical outage window for 400kV in [redacted] and deliver the significant volume of customer connections as soon as possible. Access to the transmission system is increasingly constrained across the portfolio, with outage opportunities of the scale required for Uxbridge Moor becoming progressively more challenging to obtain. Securing [redacted] outage window is therefore fundamental to connecting the substation to the transmission network and maintaining the planned customer connection dates.

Submission purpose

The purpose of this submission is to seek Ofgem's Project Assessment (PA) Decision for the Uxbridge Moor substation investment under Special Licence Condition 3.18 (Load Re-Opener and Price Control Deliverable). It sets out the material changes since the Final Needs Case (FNC) submission and provides quantified and benchmarked details relating to the project's final scope, programme, costs and risks.

It provides an updated reflection of the deliverability including constraints within procurement, planning and consents, detailed design, outages and programme development. This ensures cost and delivery confidence to support Ofgem's assessment of the requested allowance.

Description of the investment

The project comprises of a new SF_6-free 400kV and 132kV Grid Supply Point (GSP) and the associated transmission infrastructure required to facilitate the connection of contracted customer demand. This includes new 400kV and 132kV GIS substations, [redacted]

Main changes since the Final Needs Case submission

Since the submission of the FNC in October 2024, the project has advanced significantly through detailed design, planning determination, contractor engagement, procurement, site investigations

and enabling works, providing significant confidence in the scope, programme, cost and risk profile associated with the delivery of the Uxbridge Moor investment.

Several material developments have emerged since FNC as the project has matured and scope, requirements and delivery arrangements have become defined. These include site specific constraints, access and infrastructure requirements, utility diversions, programme evolution, equipment procurement outcomes and wider market conditions.

[redacted]

[redacted]

The drivers of the main cost changes are:

- **Development and Quantification of Approved FNC Solutio** [redacted]
- **Post-FNC Scope Development and External Cost Drivers** [redacted]

A summary of the main changes since FNC are provided in Section 2 detailed development.

Costs, risk and value for consumers

[redacted]

[1] The estimated cost of delivering the defined project scope before the addition of risk.

There is a high degree of cost confidence, including quantified risk, supported by the maturity of the design, advanced procurement activities and the [redacted] The project risk allowance has been established through a structured risk management framework and Quantitative Risk Analysis (QRA), ensuring that quantified risk levels are appropriate for the scale, complexity and risk profile of the project.

Since FNC, project costs have increased because of scope development, design maturity, programme extensions and wider market conditions. These changes reflect the evolution of the project and increased certainty of delivery requirements rather than cost inefficiency. The Cost Benefit Analysis (CBA) demonstrates that the preferred option continues to deliver the greatest consumer benefit and remains the most appropriate solution to facilitate the customer demand.

Cost assurance activities, including supplier engagement, benchmarking and commercial challenge, provide confidence that the proposed investment represents an efficient and economical solution for consumers.

Procurement and delivery strategy

Uxbridge Moor is being delivered through a two stage ECI model under the RIIO-2 Electricity Construction Framework, with [redacted] appointed to deliver the project scope as the Main Works Contractor (MWC).

[redacted]

Stage 1 ECI has provided the opportunity to mature the design, refine scope requirements, progress procurement for critical long lead equipment and identify selected Stage 2 activities to be brought forward where appropriate, supporting programme recovery and reducing delivery risk. This increased confidence in the project's cost and programme position prior to undertaking Stage 2 main works.

[redacted]

Benchmarking and efficiency assurance

[redacted]

[redacted]

1. Introduction

1.1 Context

This PA provides information to Ofgem to support its assessment of the proposed allowance for the Uxbridge Moor project, which serves [redacted] demand. The customer connection requirement remains unchanged from the FNC.

The FNC was submitted to Ofgem in October 2024. Whilst a formal FNC determination remains outstanding, National Grid has continued to progress development of the preferred solution at FNC and associated project activities, incurring significant expenditure at risk to maintain programme momentum. This has enabled early procurement, design, surveys, enabling outage planning activities to continue in support of the planned delivery programme.

Given the significant expenditure already committed at risk, timely progression of the PA is important to provide regulatory clarity as the project moves towards its main construction phase. While National Grid will continue to progress the project to maintain programme momentum, further delay to the regulatory determination would increase the level of expenditure incurred ahead of formal approval and create greater uncertainty around the project's funding position.

Since FNC, the project has progressed through detailed design, surveys, site investigations, procurement and delivery planning activities. [redacted], through Stage 1 activities completed to date, has provided certainty regarding the project's scope, programme, risks and costs.

[redacted] National Grid therefore considers the project to have reached an appropriate level of maturity to support Project Assessment.

This PA sets out the material changes since FNC and provides the information required to support Ofgem's assessment of the project's final scope, cost estimate, delivery strategy, programme and associated funding requirement. This submission is made under Special Licence Condition 3.18 (Load Reopener and Price Control Deliverable) and in accordance with Ofgem's RIIO-ET3 Load Reopener Guidance and Submission Requirements Document.

1.2 Drivers

The primary driver for this investment is to facilitate the connection of [redacted] of demand in Slough and West London area, through the development of a new transmission substation called Uxbridge Moor in Buckinghamshire, next to Iver substation. The investment driver remains unchanged since FNC.

The project is solely driven by [redacted] demand and represents one of the largest concentrations of new load currently seeking connection to the transmission network. Without investment in Uxbridge Moor, the existing network infrastructure, including Iver substation (see Figure 1), would be unable to provide compliant connection offers and facilitate the contracted customer requirements.

[redacted]

[redacted]

[redacted]

[redacted]

Wider Strategic Stakeholder Landscape

The capacity constraints affecting West London have been subject to sustained coordination and engagement across a broad range of stakeholders, including the Mayor of London/Greater London Authority (GLA), West London Business, West London Alliance, local authorities, National Grid, Scottish and Southern Electricity Networks (SSEN) and Ofgem. These engagements have broadly highlighted the importance of electricity infrastructure in supporting [redacted] investment, economic growth and wider development ambitions across West London and the UK. Within this wider context, Uxbridge Moor enables one of the largest additions to electricity transmission demand capacity in the UK.

[redacted]

[redacted]

Figure 1: Proximity of Uxbridge Moor to the existing Iver substation

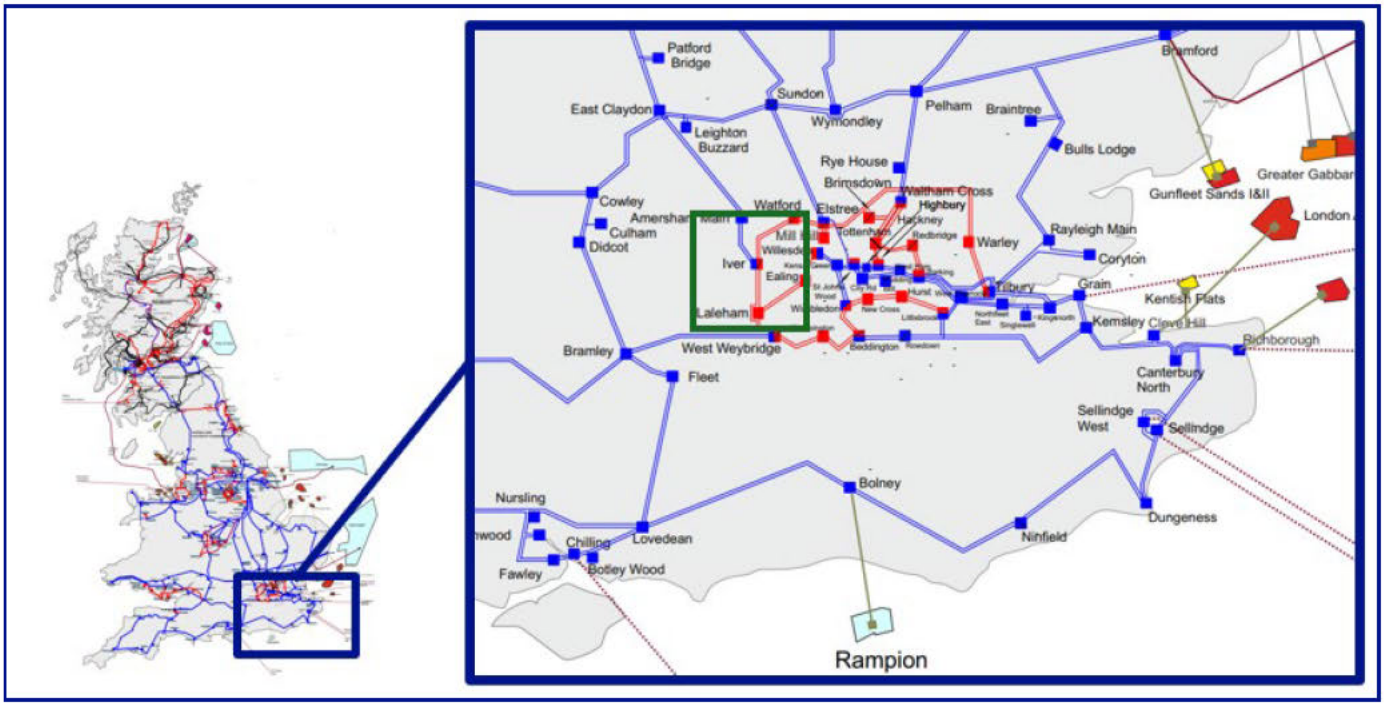


1.3 Output of the investment

Uxbridge Moor will deliver [redacted] new connection capacity [redacted] through a compact, low-impact substation design. The project is among the first generation of National Grid substations to deploy SF_6-free GIS technology at this scale, with indoor 400kV and 132kV GIS enabling an exceptionally high concentration of demand to be accommodated within the footprint.



Figure 3: Investment location within the NGET route map



1.4 Changes since earlier regulatory submission

Since submission of the FNC, the Uxbridge Moor project has progressed through planning and consenting determination, land acquisition, detailed design, enabling works and procurement. As the project has matured, there is now a substantially robust and evidenced understanding of the technical scope, delivery programme, costs and risks required to deliver the investment.

Key updates and changes since FNC submission are summarised as follows:

Procurement

[redacted]

Stage 1 development

The planning application was submitted to Buckinghamshire Council [redacted] and planning permission was granted [redacted]. The extended determination reflected the complexity of the application, including the project's Green Belt location, significant land footprint and the level of consideration required by the Council. Furthermore, the planning permission granted by Buckinghamshire Council was subject to further approval by the Secretary of State, [redacted]

This reinforced the importance of minimising the development footprint. The alternative mixed AIS/GIS and full AIS solutions assessed at FNC would have required sites approximately 2.5 and 4.3 times the size of the selected GIS solution respectively. These substantially larger land requirements would have increased the planning and consenting challenges, including the potential impact on the Green Belt, visual amenity and the risk of planning acquisition constraints.

[redacted] This has allowed the enabling works necessary to deliver the project. Substantial progress has been made in discharging the consents conditions required to commence construction.

Compared to the programme presented at FNC:

[redacted]

Further information on technical and scope developments is provided in Section 2.4 and 4.2. Further information on lands and consents is provided in Section 2.7 and Appendix E.

Design development and scope maturity

Detailed design and engineering activities, site surveys and enabling works undertaken since FNC have significantly advanced the maturity of the project design and scope. This work has refined engineering solutions, resolved key site and design uncertainties, and provided a more complete understanding of the project's requirements and constraints. This has increased confidence in the interrelated scope, programme and costs presented within this PA, providing a stronger basis for the deliverability of the preferred solution than at FNC.

Key developments since FNC include:

[redacted]

Further information is provided in Section 2.3 and Appendix C.

[4] Stage 2 NTP is planned for Q4 2026, ahead of full Stage 1 completion in April 2027. This reflects the planned overlap of the two stages, with selected Stage 2 activities commencing while the remaining Stage 1 activities are completed, to maintain programme momentum and support efficient delivery.

Cost development and risk position

[redacted]

The project cost presented in this Project Assessment submission therefore reflects a more certain cost position than was available at FNC. The cost has been subject to extensive assurance, benchmarking and commercial challenge.

The project's risk position has similarly matured, with risks identified, quantified and incorporated through a structured Quantitative Risk Analysis process.

Further information is provided in Section 2.5, 3.6 and Appendices H, L and M.

1.5 Cost

[redacted]

1.6 Risk

The Uxbridge Moor project includes a risk allowance [redacted]

This risk allowance reflects the uncertainty associated with delivering a complex transmission infrastructure project and has been derived through the project's comprehensive QRA process.

[redacted]



2. Detailed developments

Headlines

- The project output and customer connection drivers for investment are unchanged from FNC.
- Uxbridge Moor has progressed Stage 1, surveys, enabling works, detailed engineering and design, achieved the necessary planning and consents, acquired the land and rights significantly increasing the project's maturity and construction readiness.
- [redacted]
- The FNC cost estimate was submitted at an early stage of project maturity and was inherently subject to significant uncertainty. The assessed PA cost position now reflects the defined scope, programme and delivery position for Uxbridge Moor. The main drivers of cost changes include procurement, Stage 1 additions and scope & design developments.

This section summarises the outputs of the Uxbridge Moor project and outlines the key detailed developments of the project that have been realised. The section evidences our confidence on project delivery scope and explains how the project has evolved through changes to scope, design, programme and cost to reach the point of delivery.

The project outputs and the customer connection drivers remain unchanged, meaning that the consumer benefit, as established at FNC, will continue to be realised. An update is also provided on construction works, planning and consent and lands acquisition.

2.1 Project Output

The output of investment for which funding is sought through this PA is unchanged and comprises the delivery of a new SF_6-free 400kV and 132kV GSP and the associated transmission infrastructure required to facilitate the connection of customer demand.

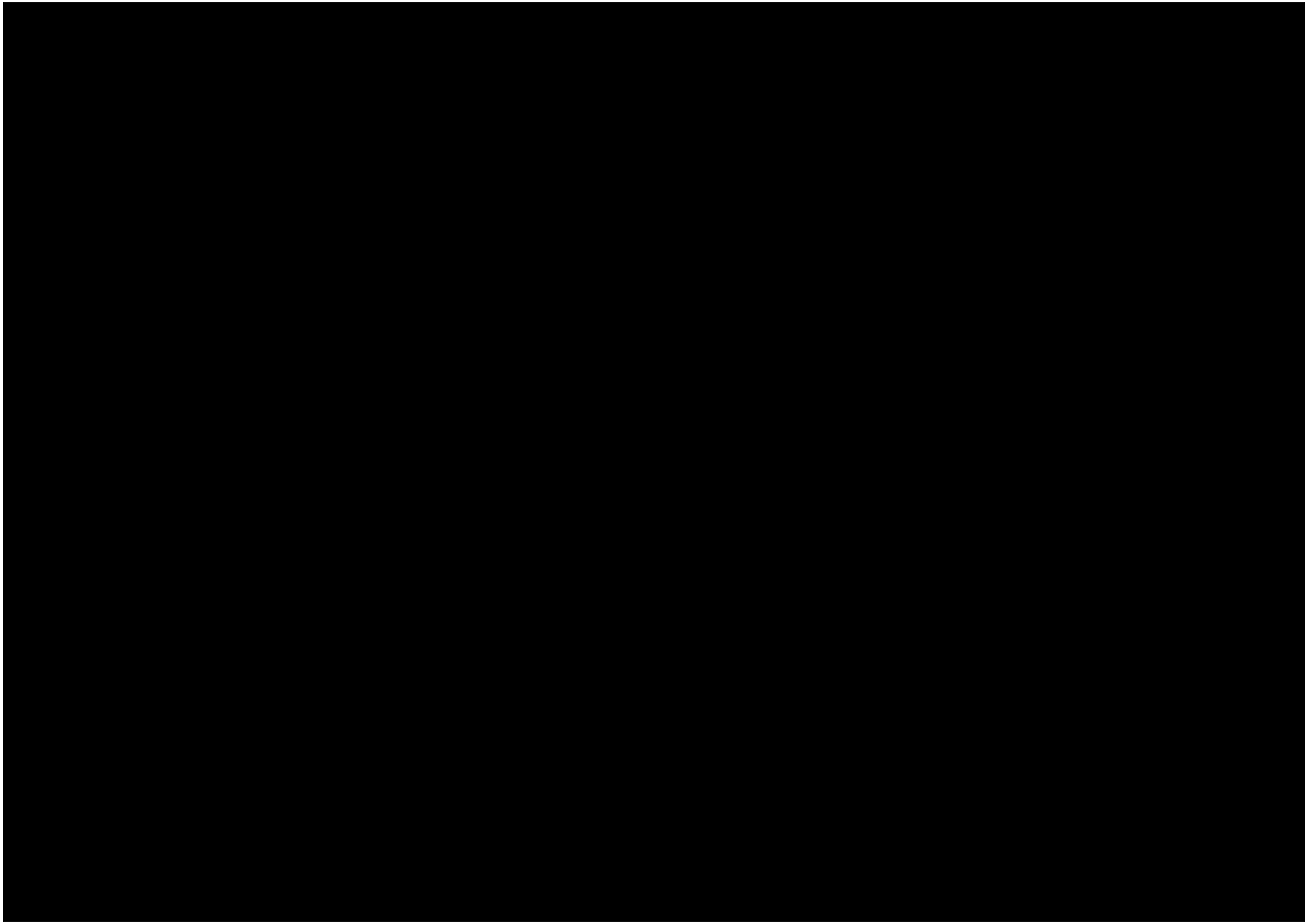
This includes new 400kV and 132kV GIS substations, [redacted]

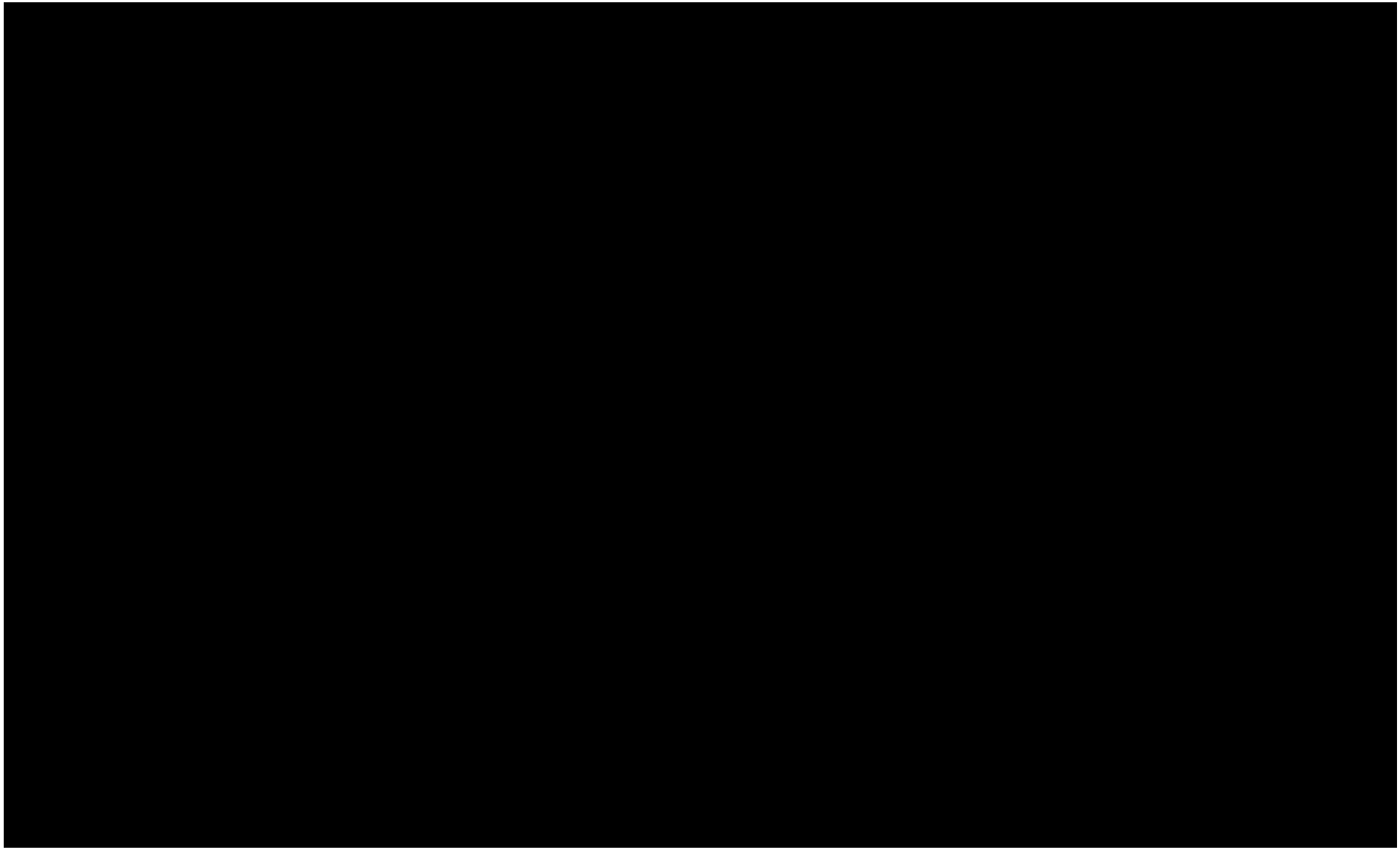
Since FNC, the design has progressed through ECI Stage 1 detailed engineering and design development, providing a more mature understanding of the technical scope and design necessary to deliver the customer connections. The overall technical solution remains materially unchanged since the FNC submission.

The principal technical scope included within this funding request is summarised in Table 3 below.



The subsequent sections of this chapter describe the key engineering, site, delivery, cost and programme developments since FNC, reflecting the increased level of project maturity achieved through ECI Stage 1. These developments have culminated in the more mature technical scope and delivery approach that form the basis of this funding request.







[redacted]

2.2 Customer Connections

The investment represents one of the largest (by capacity) and most strategically important new substations on National Grid's network, enabling large-scale new demand and supporting long-term economic growth across West London, critical to wider UK digital infrastructure ambitions.

[redacted]

[redacted]

Importantly, the customer portfolio remains materially unchanged from that presented within the FNC submission, with no customers having withdrawn from the scheme. This provides continued confidence in the underlying need for the investment and demonstrates the enduring demand for transmission capacity in the area. [redacted]

[redacted]

[redacted]

[redacted]

Customer commitment and investment resilience

The customer portfolio supporting Uxbridge Moor remains materially unchanged since submission of the FNC, with no customers having withdrawn from the project. [redacted] This continues to provide confidence in both the underlying customer demand and the enduring need for the investment.

[redacted]

[redacted]

[redacted]

To deliver strategic network investment on time, least-regret decisions must be taken ahead of absolute customer certainty. Delaying investment until all requirements are fixed creates a greater risk of failing to provide the network capacity required to facilitate customer connections in the required timeframes.

Importantly, the investment case for Uxbridge Moor is not dependent on every customer progressing exactly as currently expected. The scheme has been developed as a low regret investment to address a significant and concentrated cluster of demand in West London [redacted] While individual customer requirements may change over time, National Grid remains confident that the underlying need for transmission capacity in this location remains robust.

[redacted]

[redacted]

2.3 Project Design, Scope and Site Developments

The FNC was developed using the information available at the time, including FEED-level engineering, desktop studies and preliminary design assumptions. Since FNC, detailed engineering, surveys, enabling works and design assurance activities have significantly advanced understanding of site conditions, customer requirements, operational needs and engineering constraints. As a result, several aspects of the project scope have evolved, either through refinement of assumptions made at FNC or through identification of additional requirements that could only be fully understood through detailed design development.

We discuss the cost implications in Section 2.5 below.

Collectively, these developments have increased National Grid's confidence in the interrelated scope, programme and costs presented within this PA, providing a stronger basis for confidence in the deliverability and construction of the preferred solution. We highlight key developments below.

[redacted]

[redacted]

2.4 Programme Development since FNC

ECI Stage 1 programme impacts

Extended Planning & Consenting Activities

The Planning approval process with Buckinghamshire County Council took materially longer than anticipated, .

The planning application was submitted to Buckinghamshire Council , with planning permission granted in . The extended determination reflected the complexity of consenting a major infrastructure development within the Green Belt, including its significant land requirements, visual impact and the level of consideration required by the Council and statutory consultees. Furthermore, the planning permission granted by Buckinghamshire Council was subject to the approval of Section 5 Green Belt consent by the Secretary of State for permission to build on Green Belt land, National Grid mitigated the resulting programme impact by securing access

agreements and progressing environmental, ecological, archaeological and ground investigations under licence in parallel with the planning process, enabling design development to continue and supporting earlier mobilisation following approval. These measures limited the overall programme impact associated with planning and consenting [redacted]

[redacted]

Further detail on consenting milestones is provided in Table 28 of Appendix E.

This delay described was associated with the determination of the principal planning application for the substation development and associated infrastructure, and is separate from the later planning application required for the revised temporary access strategy described below.

Development of the revised access strategy

The original temporary construction access strategy was found to be unviable following structural assessments [redacted] As a result, Buckinghamshire Council did not support the proposed access solution, requiring development of an alternative temporary access strategy. A separate and standalone planning application for the revised access arrangements was submitted [redacted] consent received [redacted] and pre-commencement conditions discharged in [redacted]

Design Development Delays

As the design matured, additional project-specific requirements, technical refinements and site constraints were identified, requiring further design development and assurance. [redacted]

Archaeological Constraints

Archaeological discoveries during site investigations required extended mitigation works, specialist assessments and further regulatory approvals before construction activities could progress. While initial trial trenching identified areas of archaeological potential, subsequent topsoil stripping uncovered significantly more extensive finds than anticipated [redacted] The scale and significance of these discoveries required additional excavation, recording and mitigation activities across the site before affected areas could be released for construction. [redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

Programme mitigation strategy

Whilst the constraints described above (see ECI Stage 1 programme impacts) resulted in an [redacted] impact to ECI Stage 1 completion, National Grid's programme mitigation measures reduced the impact to substation commissioning [redacted] This was achieved through prioritisation of critical outage requirements, overlapping Stage 1 and Stage 2 activities, and programme optimisation undertaken [redacted]

- **Acceleration of 400kV substation to align with outage**: Prioritising the 400kV substation works required to secure the [redacted] outage window to connect substation to the transmission network. [redacted]
- **Commencing surveys under licence ahead of Section 5 Green Belt Approval:** National Grid secured access agreements to undertake site surveys and investigations ahead of Section 5 Green Belt Approval by Secretary of State. Progressing environmental, ecological, archaeological and ground investigations in parallel with the

planning process informed design development, reduced post-consent activities and enabled earlier mobilisation following approval.

- **Overlapping Stage 2 and Stage 1 critical works**: Rather than maintaining a sequential approach, elements of Stage 2 main works construction have been brought forward and are being progressed in parallel with the completion of Stage 1 enabling works where practical (see Delivery Programme Section 4.2). This includes earlier progression of detailed design, risk-based staged design assurance, early commencement and resequencing of selected civil works. This overlapping of programme stages enabled critical activities to commence earlier, reducing the effect of Stage 1 delays on the overall project completion date.
- **Programme optimisation with MPN**: Through a series of collaborative workshops [redacted] the National Grid project team were able to successfully challenge the sequence, duration and logic of works to significantly shorten the programme [redacted]

[redacted]

2.5 Cost Development

The Uxbridge Moor FNC identified an estimate of [redacted] (2023/24 prices) based on the level of engineering definition, procurement information and delivery planning arrangements available at the time. The estimate was prepared prior to the completion of detailed design, intrusive ground investigations, further procurement activities, planning determination, contractor development of delivery methodologies and the receipt of updated supplier and third-party quotations.

As a result, the forecast necessarily relied on significant benchmark information, preliminary engineering assumptions, concept-level quantities and the best available market intelligence to establish a preliminary estimate of delivering the approved project solution.

The current PA cost is of [redacted] (including contract inflation) representing an increase of [redacted] relative to the market-informed FNC estimate.

Review of the underlying cost development indicates that the movement arises from two distinct categories.

1. **Development and Quantification of the Approved FNC Solution**

[redacted]

[redacted]

2. Post-FNC Scope Development and External Cost Drivers

[redacted]

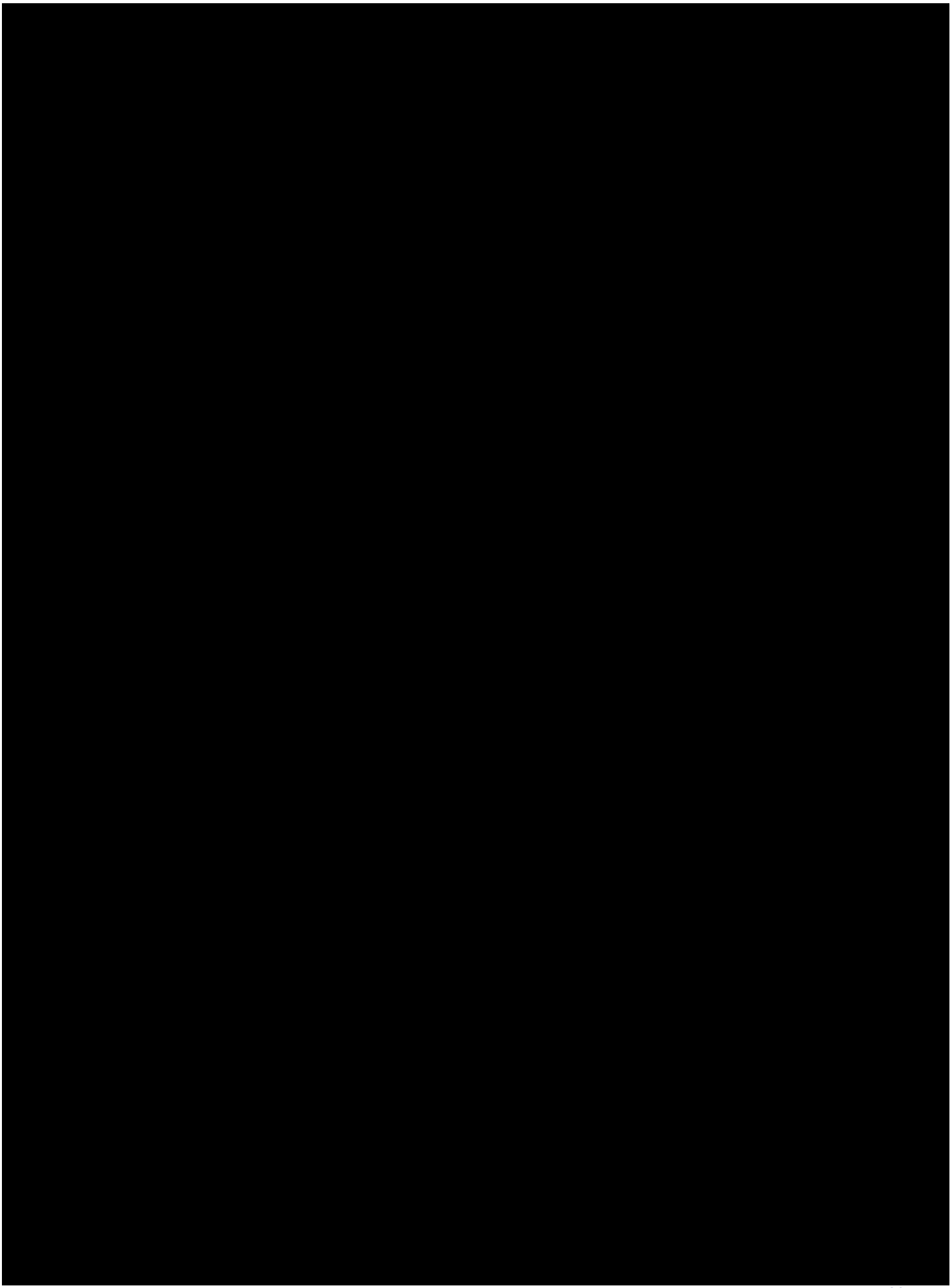
The movement from FNC to PA can therefore be separated into two distinct categories, as shown in Figure 9, Table 5 and Table 6, with more detailed information presented in Appendix L. The quantified variances presented in this assessment should not be interpreted as precise measurements of individual cost movements. Given the interrelationship between the underlying drivers, certain cost impacts contribute to multiple categories and cannot be attributed exclusively to a single source. The allocations adopted therefore represent the most appropriate classification of the available evidence and should be regarded as directionally robust indicators of relative cost impact rather than definitive allocations of precisely attributable cost.

[redacted]

[redacted]

[7] An early-stage estimate, with a +/- 30% range, developed using benchmark data, parametric techniques and preliminary engineering assumptions prior to completion of detailed design. As project definition matures, conceptual allowances are progressively replaced by defined quantities, delivery methodologies and project-specific cost information.











[redacted]

Accordingly, the total movement between the FNC estimate and the current PA project cost is considered justified, evidenced and necessary to deliver the approved Uxbridge Moor scope safely, appropriately and in accordance with the requirements identified through project development.

Quantitative cost mitigations

Whilst project costs have increased since FNC, National Grid has continued to actively challenge costs and identify opportunities to mitigate, avoid or reduce expenditure where this could be achieved without adversely affecting safety, programme delivery or project outcomes.

A range of commercial interventions, scope optimisation activities and delivery decisions have prevented additional cost growth and reduced consumer exposure to further increases. [redacted]

[redacted]

The quantified benefits associated with these activities are presented in Table 7. Collectively, these interventions total [redacted] and demonstrate the project's continued focus on delivering value for consumers whilst maintaining the required delivery programme and technical outcomes.

[redacted]

Qualitative cost mitigations

In addition to the quantified cost mitigation measures presented above, a number of project decisions and interventions have delivered significant value through the avoidance of further cost increases and programme impacts. Whilst the benefits of these actions cannot always be robustly or directly quantified, they have been important in maintaining project deliverability, protecting key programme milestones and reducing the risk of further cost escalation.

A key example is the decision to prioritise and accelerate the 400kV GIS equipment design, manufacture and procurement. [redacted] the decision protected a significantly greater value by preserving the critical path to the [redacted] outage windows [redacted]

Further examples include the implementation of a revised temporary access strategy [redacted] o maintain programme continuity, accelerating critical enabling activities, and implementing a range of programme protection measures to preserve outage windows and maintain the overall delivery strategy. These actions have helped reduce the risk of further programme delay and associated prolongation costs that would otherwise have arisen.

Whilst the financial impact of these interventions cannot be isolated with sufficient certainty to support a quantified saving, National Grid considers them to have contributed materially to maintaining project timelines and delivery and limiting further cost growth.

2.6 Construction works

This section provides an overview of the construction work activities required to deliver the project. It summarises the works already undertaken and outlines the key construction activities required to successfully complete the project. Further supporting details can be found in Appendix D.

[redacted]

[redacted]

The successful delivery of significant complex Stage 1 enabling civils works has de-risked the project's realisation of the Stage 2 main works delivery. [redacted]

2.7 Land and consents

The section provides an overview of the lands and consents strategy and the activities undertaken since FNC. Uxbridge Moor has successfully received the necessary planning and consents and

acquired the land and rights required to build the substation. Further information is provided on the access strategy, and third-party works being delivered by the project.

Land Acquisition

[redacted]

- Permanent rights were secured to facilitate the long-term operation and maintenance of the asset. These included rights for the site, access infrastructure, drainage systems, utility connections, ecological mitigation areas and landscaping. Additional rights were obtained for the new access road, access gate widening works required for SGTs delivery, and new quarry access gates. All permanent land requirements necessary for the operation of the completed asset have been secured.
- Temporary land requirements are more limited because most of the works are located within the planning boundary on National Grid-owned land. Temporary rights are primarily required for construction access [redacted] These rights will only be used during construction and commissioning before being relinquished.

Consents & Third-Party Works

The project received planning permission in [redacted]

The planning process and subsequent discharge of planning conditions required extensive engagement with local authorities, statutory consultees and environmental regulators. The duration and complexity of planning and condition discharge activities in a green belt location contributed to programme delays and have been a factor in extending the overall delivery programme. [redacted]

[redacted]

Furthermore, significant archaeological discoveries during site investigations required extended mitigation works, specialist assessments and further regulatory approvals before construction activities could progress. [redacted]

Additional information on the land and consents strategy can be found in Appendix E.

3. Costs

Headlines

[redacted]

- The project cost has been developed through detailed design progression and market engagement and has been subject to robust internal cost assurance and benchmarking. See Section 3.5 and Appendix L for further information.
- Section 3.3 presents the updated cost benefit analysis reflecting developments since FNC submission. The updated assessment confirms the preferred solution continues to provide the greatest net benefit for consumers to meet the customer connection requirements.

3.1 Investment costs

This section presents the quantified and benchmarked cost of delivering Uxbridge Moor, provides an overview of the principal cost categories and summarises the maturity of the cost position. All cost figures presented in this section are in 2023/24 prices, unless otherwise stated.

The quantified and benchmarked cost for delivering the project in line with the proposed scope is [redacted] in 2023/24 prices.

[redacted]

For further details, please see Appendix G Cost model.

The presented costs include actual expenditure incurred to date and estimated expenditure through detailed design, procurement, construction, commissioning and project close-out. It covers the MWC, directly procured equipment, third party works, National Grid Operations (ET Ops) and project resources, land, consents, legal costs, National Grid portfolio costs, contract inflation and the quantified project risk allowance.

Direct project expenditure total [redacted], while Closely Associated Indirect (CAI) expenditure totals [redacted]. MWC expenditure totals [redacted], reflecting the scale of the substation, civil, electrical, overhead line, cable and enabling works.

The cost firmness assessment classifies [redacted] as fixed and [redacted] as agreed re measurable. Together, these categories total [redacted] with the remaining [redacted] is classified as estimated. This provides significant confidence in the robustness of the quantified costs.

Table 8 presents the cost category summary supporting the [redacted] cost in 2023/24 prices and the corresponding total PA Funding request of [redacted].

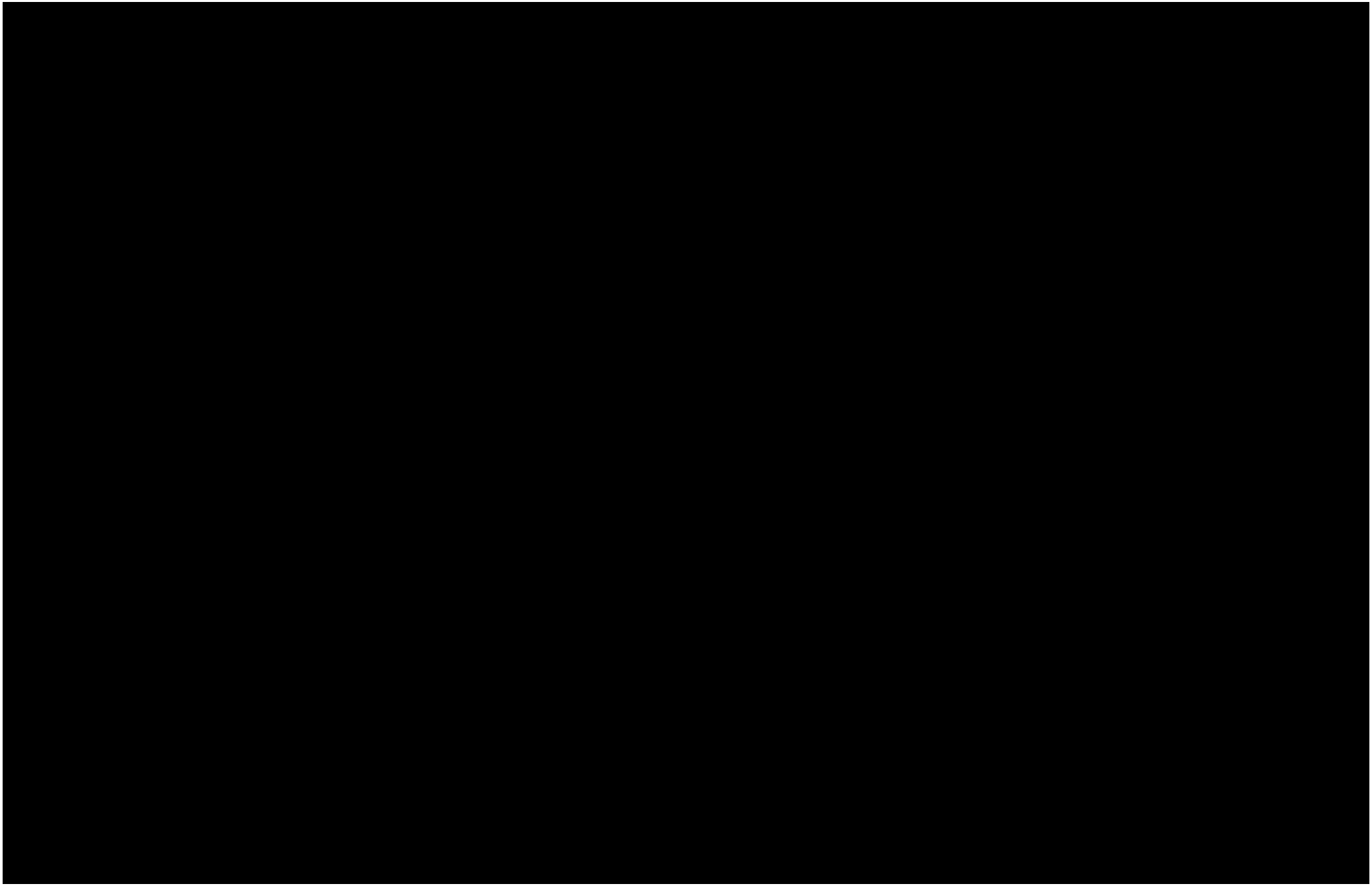
All cost figures have been rounded to two decimal places, meaning some totals within tables in this document may not add up exactly. Please refer to Appendix G Cost model for further details.

Cost assurance

Both the MWC and overall project costs have been subject to review and commercial challenge as the project has progressed through design, procurement and delivery. This has included review and challenge of MWC cost submissions, including tender queries, negotiations and scrutiny of the principal cost drivers. The review has also considered supporting supplier and subcontractor quotations and assessed contractor resource, programme and other material assumptions against the anticipated scope and delivery requirements.

The assurance process has considered the allocation and ownership of risk between National Grid and its contractors. Benchmarking against comparable transmission projects has also been used to test the cost position against relevant internal and industry comparators.

Further detail on the assurance activities and supporting evidence is provided in Appendix H, while Section 2.5 explains how the cost position has developed from the earlier regulatory estimate.

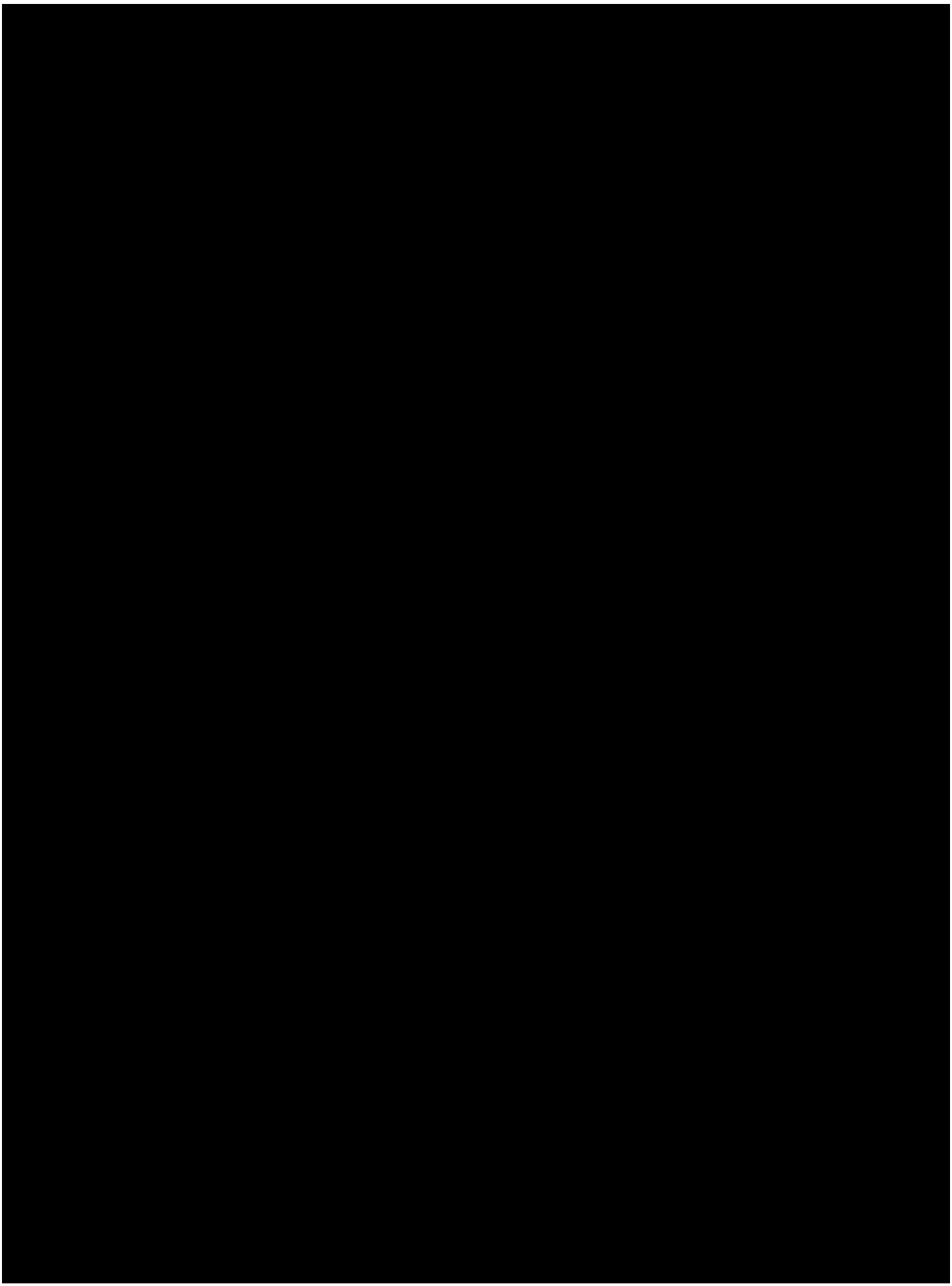


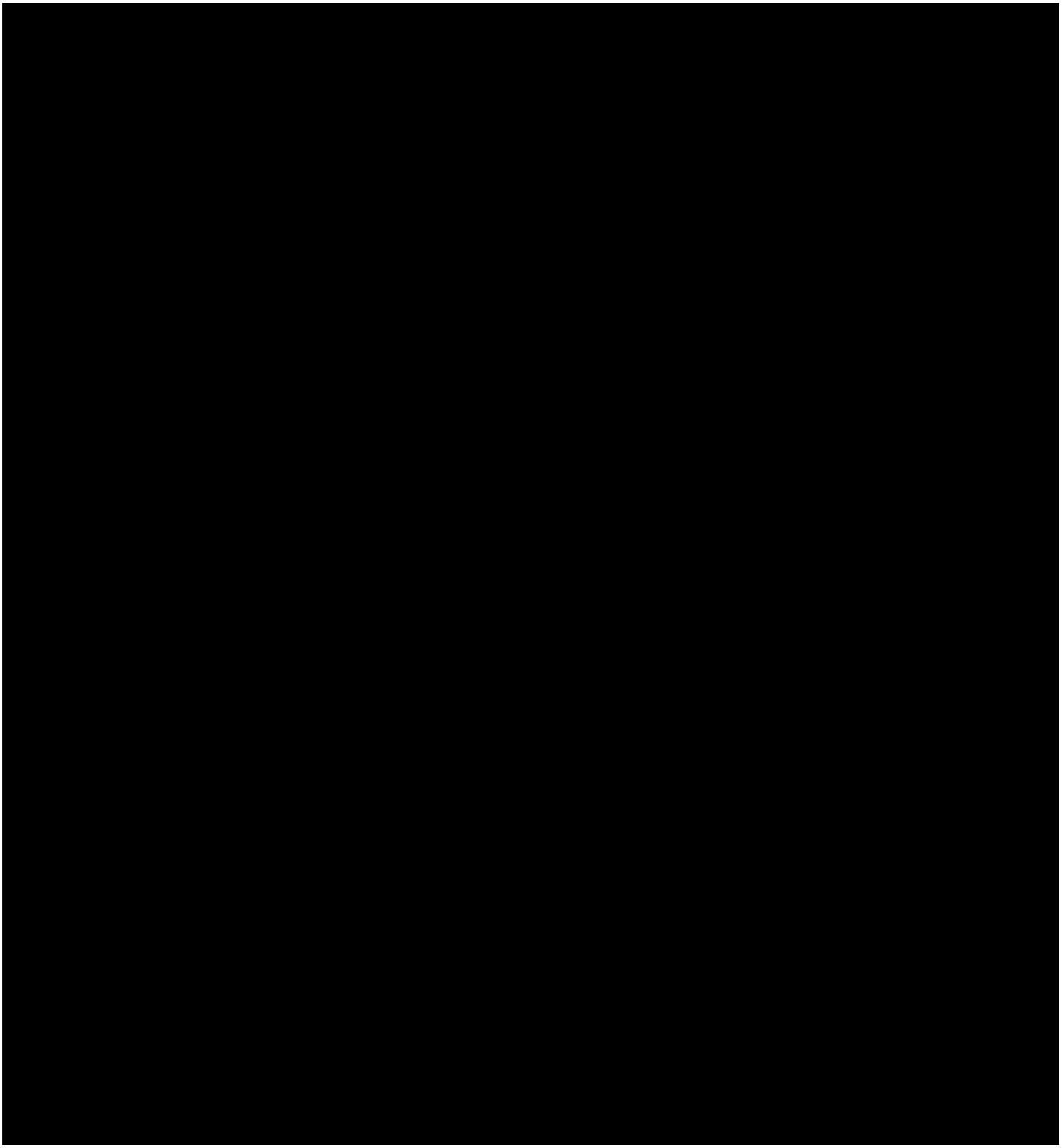
3.2 Cost Drivers

This section explains the principal components of the [redacted] cost and the activities included within each cost category. MWC costs are the largest cost driver, totalling [redacted]. This comprises [redacted] for Stage 1 and [redacted] for Stage 2. This can be seen below in Figure 10. Further details of each cost category are provided in Table 9 below.

[redacted]

The cost profile reflects the scale and technical complexity and site-specific constraints and issues as described in Chapter 2 of delivering the new 400kV and 132kV substations [redacted]





Contractor costs

[redacted]

[redacted]

Table 11 presents a detailed breakdown of the Stage 1 preliminary and enabling works.

[redacted]

Table 12 covers Stage 2 completion of the design and the principal construction, installation and commissioning activities.

[redacted]















National Grid internal, land and portfolio costs

National Grid internal resource costs for Portfolio Costs, ET Operations, project management and project services total [redacted] Land, consents and legal costs total [redacted] These costs relate to securing the land, access rights, consents and legal support required to develop and deliver the project.

National Grid portfolio costs

National Grid has established, and must maintain, a single integrated delivery organisation sized to deliver the whole of the forecast RIIO-T3 work programme, comprising engineering, project management, design, planning, commercial and support capability. The final determination baseline allowances, however, fund only that share of the organisation associated with the baseline programme, such that only a proportion of the Closely Associated Indirect (CAI) cost is recovered through allowances already granted, with the remainder dependent on funding routes that crystallise only as future work is approved.

That CAI includes National Grids portfolio and indirect costs, a part of which represents the shared delivery capability allocated to projects – the enabling network design, programme leadership, engineering, consenting, commercial, governance, digital and finance capability that is not booked directly to an individual project but is nonetheless required to deliver it. That capability must be in place ahead of many individual approvals, and the same organisation delivers both baseline and future outputs. It is therefore right and proper that, after baseline allowances, load-related volume drivers, Price Control Deliverable (PCD) and other mechanisms have been applied, the residual efficient direct and indirect cost is recovered through the relevant reopeners. Approved outputs should carry the efficient organisational costs required to deliver them.

[redacted]

3.3 Updated cost benefit analysis

We have undertaken an updated Cost Benefit Analysis (CBA) in light of developments since the FNC submission to confirm that the preferred solution continues to deliver the best overall cost-efficient outcome for consumers. The updated CBA reflects revised project costs, programme developments, market engagement outcomes and the increased maturity of the project scope and delivery strategy, as set out in Section 2. We have reassessed the shortlisted options considered at FNC on a consistent basis.

The updated assessment reaches the same conclusion as the FNC. Whilst project costs, programme assumptions and delivery arrangements have evolved since FNC, the relative performance of the shortlisted options remains broadly unchanged and the rationale for selecting the preferred option continues to apply.

Table 16 presents the updated CBA results. As was the case at FNC, Option E-2 delivers the highest Net Present Value (NPV) of the shortlisted options, with Option E-3 performing only marginally lower. However, we remain confident that Option E-3 remains appropriate to the customer connection requirements because it offers the best balance of cost, programme deliverability and long-term consumer benefit. Its substantially smaller substation footprint by around 70%, reduces land take impacts on Green Belt land and subsequent biodiversity, improves stakeholder acceptability, provides greater confidence in securing planning consent, and ultimately delivering the required customer connection outputs.

We consider the additional discounted cost relative to Option E-2 proportionate to the material reduction in planning and delivery risk.

The updated assessment therefore confirms that Option E-3 remains the appropriate solution. Consistent with the conclusions reached at FNC, we consider that the wider planning, environmental and deliverability benefits associated with Option E-3 outweigh the relatively small difference in monetised NPV, resulting in the best overall outcome for consumers.

The CBA is provided in Appendix J.

Table 16: Lifetime CBA by price control period (23/24 base prices, central carbon pricing, discounted values)

Option	Costs (discounted) (£m)	Benefits (discounted) (£m)	NPV (£m)
Option E-1: New 400kV AIS and 132kV AIS substation	[redacted]	[redacted]	[redacted]
Option E-2: New 400kV AIS and 132kV SF_6-free GIS substation	[redacted]	[redacted]	[redacted]
Option E-3: New 400kV SF_6-free GIS and 132kV SF_6-free GIS substation (Selected option)	[redacted]	[redacted]	[redacted]

3.4 Programme impacts

The updated CBA presented in Section 3.3. confirms that, consistent with the conclusions reached at FNC, Option E-3 remains the preferred solution despite not achieving the highest monetised NPV. In reaching this conclusion, National Grid considered not only the quantified costs and benefits of each option, but also the planning, land acquisition, consenting and delivery risks associated with the alternative designs.

The Uxbridge Moor project experienced programme challenges during development, as outlined in Section 2.4. Despite these challenges, which included planning and consenting delays, programme mitigation measures applied by National Grid enabled the project to limit the impact on substation commissioning dates.

Selection of an alternative design, such as Option E-1 (400kV AIS and 132kV AIS) or Option E-2 (400kV AIS and 132kV GIS) as presented in the FNC, would have introduced additional programme pressures beyond those already experienced by the project. The AIS-based options require significantly greater land take than the selected GIS design and would have required additional land to be secured in close proximity to both the existing Iver transmission infrastructure and the cluster of contracted customer developments served by the project.

The larger footprint would further constrain site selection, increased land acquisition requirements and prolonged planning and consenting activities. This would have compounded the types of programme challenges already encountered during project development, extended the development programme beyond the planned outage windows required to connect the substation into the existing transmission network. In particular, the outages required to connect the project to the 400kV network are on the project's critical path.

Selection of an alternative AIS-based design would have required further front-end development activity, including additional land acquisition, planning and consenting. This would have made delivery sufficiently advanced to utilise the planned [redacted] outage windows unachievable. As noted in the summary and reference table, the number and scale of other transmission projects planned on the network significantly constrain the availability of suitable alternative outage windows. Given the duration and sequencing of the outages required to energise Uxbridge Moor, missing the [redacted] windows could therefore delay substation commissioning and the associated customer connections by up to four years maximum.

The preferred GIS solution presented in this PA therefore represented the most deliverable option for meeting the required customer connections.

Table 17: Alternative completion date scenarios

Scenario	Scenario description	Completion Implications
1	**Continue with the current approach: Option E-3 (400kV GIS and 132kV GIS substation) progressed through this PA.**	[redacted]
2	**Alternative Design: Option E-1 (400kV AIS and 132kV AIS) or Option E-2 (400kV AIS and 132kV GIS) as assessed in the FNC.**	Increased land acquisition, planning and consenting requirements arising from the substantially larger footprint required on Green Belt land, with the mixed AIS/GIS and full AIS alternatives approximately 2.5 and 4.3 times the size of the selected compact GIS solution respectively. National Grid considers there was a credible risk that planning consent for an AIS-based solution would not have been secured. Even if consent had been obtained, the additional land acquisition, design and consenting activities would likely have extended the development programme beyond the planned [redacted] outage windows. Given the outage cycles and interaction with other schemes in the area, this could, in a worst-case scenario, have delayed the next feasible outage opportunity, and therefore substation commissioning and customer connections, by up to four years.

3.5 Benchmarking

To provide assurance that the Uxbridge Moor cost estimate is appropriate and represents value for consumers, benchmarking has been undertaken against a range of internal and external comparator datasets. The analysis considers key cost drivers, including project management, design and substation unit costs, together with an independent assurance review of the final contractor submission.

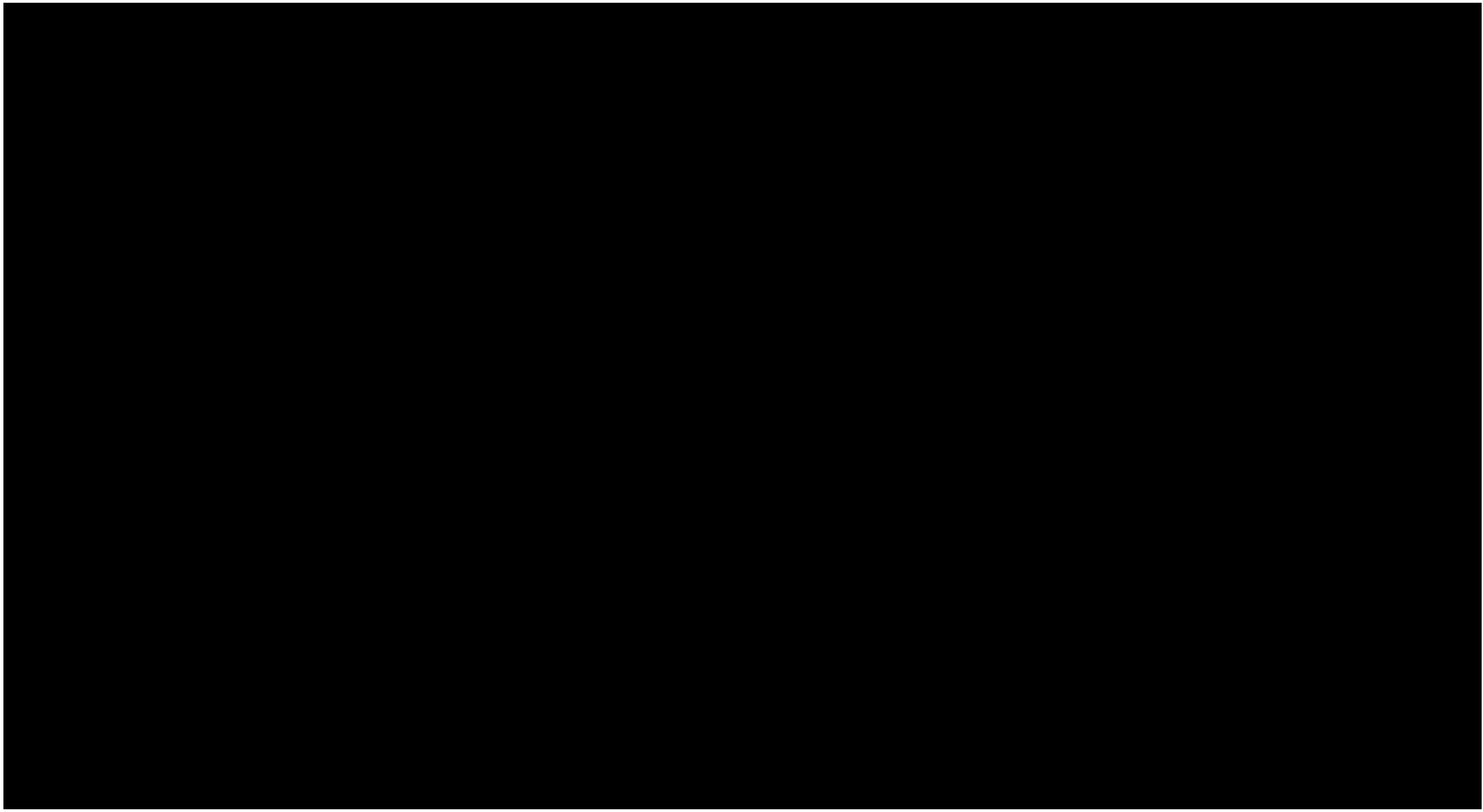
The benchmarking indicates that Uxbridge Moor is generally positioned within, or below, relevant comparator ranges. This outcome is particularly noteworthy given the project's complexity, which includes brownfield delivery constraints, integration with operational transmission assets, GIS technology deployment, extensive protection and control modifications, overhead line works and delivery within a constrained supply chain environment.

Market intelligence and recent procurement outcomes indicate that labour availability, equipment supply constraints and inflationary pressures continue to influence costs across the transmission sector. Despite these market conditions, Uxbridge Moor compares favourably against the relevant benchmark datasets.

The benchmarking assessment has been supplemented by detailed commercial challenge with the MWC and independent cost assurance, which resulted in closer alignment between contractor pricing and National Grid's independent assurance estimate. This provides confidence that the

procurement approach adopted and the resulting cost estimates are appropriate for a project of this scale, complexity and delivery profile.

A summary of the benchmarking results is provided in Figure 11. The full benchmarking report is included in Appendix L.



3.6 Risk

Headlines

The QRA identifies the project risk allowance of [redacted] (23/24 prices). The project risk allowance is the quantified sum required to manage project uncertainty arising from estimating uncertainty, schedule risk and quantified discrete risks. This allowance forms the basis of the risk allowance included within the Uxbridge Moor cost model.

Effective risk management has been embedded throughout the development, design, procurement and delivery planning of Uxbridge Moor. The latest review demonstrates that the project [redacted] These themes consistently emerge as the principal contributors to both schedule and cost uncertainty.

Risks have been identified through multidisciplinary workshops involving engineering, commercial, procurement, planning and programme specialists, supported by supplier engagement, contractor negotiations, lessons learned from comparable projects and subject matter expert (SME) review.

The resulting project risk register forms the basis of both the Quantitative Schedule Risk Analysis (QSRA) and Quantitative Cost Risk Analysis (QCRA), ensuring that qualitative and quantitative assessments remain aligned to a common project baseline. Accordingly, the quantified risk allowance reflects the uncertainty and risk exposure present at the time funding is sought. As the project progresses, active risk management is expected to reduce individual risk exposures; however, this should not alter the basis on which the risk allowance was assessed, as doing so would fail to recognise the uncertainty that existed at the point of submission and the value delivered through effective risk management.

The latest review demonstrates that the project remains deliverable; however, successful delivery continues to depend upon effective management of the key risk themes.

Risk identification

A total of [redacted] discrete risks have been identified for Uxbridge Moor and grouped into seven risk themes, as summarised in Table 18 below. These themes form the basis of the project's risk management and mitigation activities. A comprehensive project discrete risk register is provided in Appendix M and further information on risk management strategy can be found in Appendix F.

Table 18: Key risk themes identified for Uxbridge Moor

Category	Description	Count	(%)
[redacted]			

The risk profile demonstrates that the principal delivery challenges for Uxbridge Moor are not driven by individual technical uncertainties, but by the coordination of complex interfaces across outages, third parties, suppliers and construction activities. The concentration of risks within these categories highlights that successful delivery will depend on maintaining programme alignment across multiple stakeholders, securing critical outage access and managing key supply chain and delivery interfaces throughout the project lifecycle.

Quantitative Risk Analysis

Quantitative Risk Analysis (QRA) has been undertaken to assess the impact of uncertainty on the delivery of the Uxbridge Moor project and determine the appropriate level of programme and cost allowance. The analysis is based on the latest project programme, cost and project risk register.

The QRA comprises a QSRA and a QCRA. The QSRA assesses the impact of programme uncertainty and discrete schedule risks on forecast completion dates. The resulting schedule outputs are then incorporated into the QCRA through agreed programme prolongation and time-dependent cost assumptions.

The QCRA combines the following components:

- Base Cost – the approved project costs excluding the risk allowance.
- Estimating Uncertainty – uncertainty associated with the maturity and accuracy of the project costs.
- Schedule Related Costs – costs arising from programme delay, informed by the QSRA.
- Discrete Project Risks – quantified cost impacts from individual project risks included within the risk register and cost risk model.

These components are combined using Monte Carlo simulation to produce probabilistic forecasts of project cost and schedule outcomes. Together, the QSRA and QCRA provide the quantitative basis for determining the project risk allowance and assessing programme and cost confidence.

Quantitative Schedule Risk Analysis

The QSRA evaluates the effect of programme uncertainty and discrete schedule risks on project completion dates. The deterministic programme has a substation completion date of [redacted] This reflects the date for which the substation is built and energised, and National Grid has substantially delivered its scope. Subsequent customer connections depend on customer commissioning activities and sequencing.

The principal contributors to forecast schedule risk position include:

[redacted]

These findings are consistent with the qualitative risk assessment and demonstrate that programme uncertainty is concentrated within a relatively small number of key delivery drivers, enabling management effort and mitigation activities to be focused on those areas expected to have the greatest influence on delivery confidence.

Whilst delays to planned outages have been incorporated within the QSRA and are a principal contributor to the forecast schedule risk position, the contribution of outage-related risks to the overall QSRA outcome may not fully reflect the potentially disproportionate programme consequences of losing or re-sequencing critical outage opportunities. This reflects the cyclical nature of outage availability and calendars, where relatively limited disruption may, in certain circumstances, result in activities being deferred to a subsequent outage window and therefore give rise to disproportionate impacts on overall programme delivery.

Table 19: QSRA summary

Forecast	Date
Completion of Substation Commissioning	[redacted]
Mean	[redacted]
P50	[redacted]

Note: *Mean represents the average forecast completion date produced by the QSRA simulation.*

[redacted]

Quantitative Cost Risk Analysis

The QCRA evaluates the impact of schedule related costs and discrete project risks on overall project expenditure. [redacted]

The principal contributors to forecast cost uncertainty include:

[redacted]

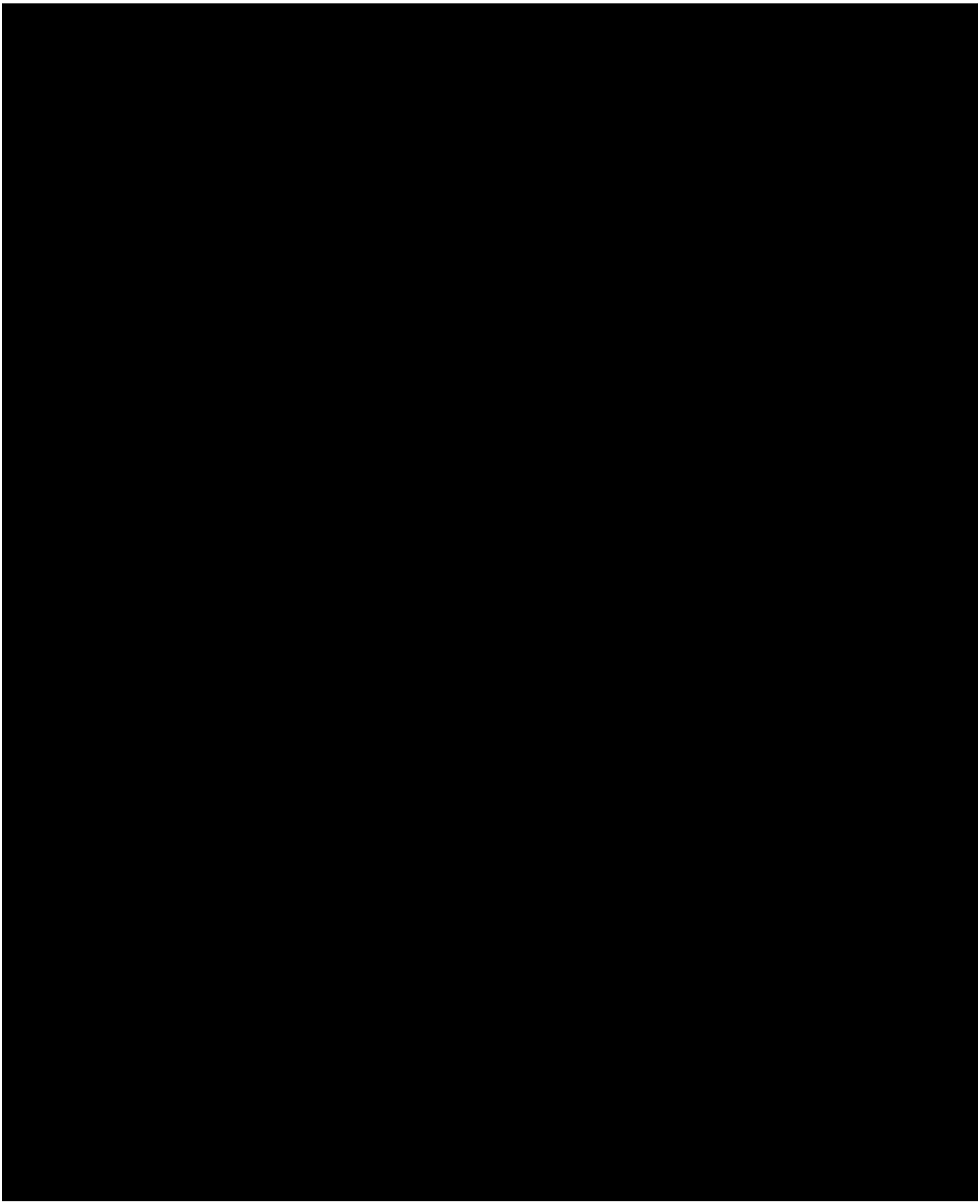
These findings are consistent with the principal schedule drivers identified within the QSRA and confirm that project management effort should remain focused on those strategic delivery themes offering the greatest opportunity to reduce both programme and cost uncertainty.

Table 20: QCRA summary

23/24 prices(£m)	Mean	P50
QCRA Output	[redacted]	[redacted]

Top 5 Quantified Discrete Project Risks by Factored EMV

The following table presents the five highest value discrete project risks identified within the Uxbridge Moor risk register, ranked by their Factored Expected Monetary Value (EMV). Factored EMV represents the probability-weighted cost exposure for each risk, calculated based on its likelihood of occurrence and estimated financial impact.



Risk benchmarking

In developing Uxbridge Moor, we have taken lessons learned from several similar projects such as Didcot, Woolavington and Pembroke substation rebuild and new build projects. This ensures the Uxbridge Moor project team learns from those projects to ensure a timely project delivery for

the additional customer connections to the network. Uxbridge Moor has a similar level of risk allowance to the other National Grid projects at [redacted] This reflects the additional challenges and complexity associated with its larger scale, land and planning constraints as a greenfield site, SF6-free technology certification, multiple third-party interfaces and a more challenging market and procurement context.

[redacted]

Caution needs to be exercised when interpreting our results:

- There are project-specific risks associated with each project that need to be considered, including outage dependencies, commissioning requirements, interface management, resource availability, consent-related activities, and other schedule-critical delivery challenges identified through the analysis. As these factors will vary from project to project, there are challenges with using direct percentage comparisons alone.
- Didcot's risk allowance of [redacted] reflects the project's stage of delivery rather than a lower assessment of inherent risk. The remaining comparator projects have been assessed at or before contract award, when the risks associated with tendering, mobilisation, enabling works and long-lead equipment manufacture were still live and carried in full. [redacted]

As the project benchmarking presented above is based on live projects rather than completed project outturns, a supplementary cross-check of the project's risk allowance has been undertaken, using a reference class forecasting (RCF) model calibrated to Uxbridge Moor's maturity, complexity and delivery characteristics.

Developed by Oxford Global Projects using independent data from comparable projects, the model provides an external, standardised view of the potential impact of project and portfolio risks on outcomes. This doesn't replace the project-specific risk assessment and is directionally consistent with the greater use of reference-class evidence envisaged under CSNP and RIIO-T3 mechanisms.

For Uxbridge Moor's assessed parameters, maturity and complexity, the RCF model indicates risk allowances equivalent to [redacted] of the project base cost at P45, P50 and P55 respectively. The project's QCRA risk estimate is at [redacted] of base cost estimate, slightly above the RCF average observed across comparable projects. However, it is still considered within acceptable ranges. Inevitably, some projects will be higher than the average and this benchmark result reflects Uxbridge Moor's complexity, including its interfaces with other projects, and the material exposure associated with securing the required transmission outage.

Whilst the QSRA captures the combined impact of programme uncertainty and quantified schedule risks, including outage-related risks, the potential consequences of disruption to critical outage opportunities can be disproportionately greater reflected within the P50 forecast. Due to the constrained nature of transmission outage planning and the need to coordinate system access across multiple major programmes, including HWUP, BTNO and West London, recovery from an outage-related disruption may require activities to be rescheduled to a future outage.

In extreme cases, this could result in a materially extended programme impact while the project awaits the next feasible outage opportunity, with consequential effects on project costs, delivery activities and wider programme interfaces. The project's risk allowance therefore reflects and accounts for the probability of such events and potential consequences. Should this significant risk be removed from the risk allowance and later materialise, any resulting outage-related delays that arise from events outside NGET's reasonable control should therefore be eligible for treatment as qualifying delays under a COAE mechanism with a 0% reopener threshold.

COAE and High Impact Low Probability risk approach

The risk allowances are focused on risks that can be reasonably identified, quantified and mitigated at the point of assessment and managed through normal project planning and delivery processes. The resulting allowance requested reflects the project's expected uncertainty position based on the information available, scope maturity, delivery strategy, and market conditions at the time of assessment.

As projects progress, risks may materialise, reduce, transfer or be replaced by new risks and opportunities. Improvements in project maturity, surveys, design development, procurement activities and mitigation measures can all change the overall risk profile of a project over time. The risk allowance should therefore be viewed as a probabilistic assessment of foreseeable uncertainty at the point of assessment, rather than a fixed measure of uncertainty throughout the project lifecycle.

Considering the above, our approach provides a consistent basis for project assessment and reflects the efficient level of uncertainty associated with project delivery when funding is requested. The PA must be assessed against the context in which it was submitted. If Ofgem's determination of the PA is delayed and assessment is carried out against a later project position, the submission cannot be selectively reopened: it would need to be revised in full, so that scope, cost, risk and delivery assumptions are considered on a consistent basis.

None of the identified risks are considered likely to meet the Cost and Output Adjusting Event (COAE) threshold. Therefore, we assume 0% reopener recovery for efficient costs associated with risks that meet the COAE criteria.

This approach ensures that consumers pay only for the expected cost of reasonably foreseeable uncertainty, rather than highly remote or speculative events. It is also consistent with the use of probabilistic risk assessment techniques, which recognise that actual outcomes will vary around the assessed estimate. Some risks will not materialise, whilst the impact of others may exceed expectations. Across a portfolio of projects, this provides an appropriate balance between

protecting consumers from unnecessary upfront costs and ensuring efficient delivery can be financed.

At the same time, it remains essential that the regulatory framework retains sufficient flexibility to address truly exceptional external events that could not have been efficiently anticipated or managed through normal project controls, such as a pandemic, global conflict, major legislative change or significant supply chain disruption affecting costs, labour or materials availability.

This approach strikes an appropriate balance between protecting consumers from unnecessary upfront costs whilst ensuring that companies are not exposed to unmanageable external events which could not reasonably have been planned for, quantified or mitigated at the time the assessment was undertaken.

For the avoidance of doubt, National Grid considers that where multiple qualifying COAE events occur, eligible impacts should be considered on a cumulative basis when assessing whether the applicable threshold has been met, rather than each event being assessed separately. Ofgem should issue any direction necessary to give effect to this treatment under the relevant licence provisions[8], rather than being assessed in isolation.

3.7 Ongoing efficiency and real price effects

Consistent with the case-by-case approach set out in Ofgem's RIIO-T3 Final Determination[9], this section sets out National Grid's position in relation to the application of Ongoing Efficiency (OE) and Real Price Effects (RPEs) for the Uxbridge Moor PA.

Ongoing Efficiency (OE)

OE should not be applied to this project. The PA already reflects high-confidence, efficient delivery costs, including identified productivity, commercial and technology-driven efficiencies. Applying an additional ongoing efficiency challenge would therefore generate duplicative efficiencies rather than capturing genuinely new productivity gains.

In the RIIO-T3 Final Determinations, Ofgem describes OE as a mechanism to capture the productivity improvements that efficient network companies can reasonably be expected to realise over time through innovation, technology adoption and improved ways of working. This approach is appropriate where allowances are established sufficiently in advance of delivery and residual opportunities for future efficiencies remain.

The circumstances of a Project Assessment are materially different. The purpose of the assessment is to establish the efficient cost of delivering a specific, mature project using project-specific evidence, including developed designs, procurement outcomes, contractual arrangements, commercial negotiations and prevailing market prices. As a result, the allowance reflects the efficient cost of delivery evidenced at the time of assessment rather than an estimate of future portfolio expenditure.

Applying OE in this context will reduce allowances below the efficient cost identified through the Project Assessment process and would be inconsistent with the case-by-case approach to re-opener assessments set out in the RIIO-T3 Final Determinations.

[8] Licence condition 3.18.28

[9] RIIO-3 Final Determinations Overview Document

https://www.ofgem.gov.uk/sites/default/files/2025-12/RIIO-3-Final-Determinations-overview.pdf

Under the adopted two-stage ECI strategy for Uxbridge Moor, Stage 1 was undertaken [redacted] to enable technical, commercial and programme uncertainties to be reduced prior to establishing the commercial position for the main construction works.

For Stage 2, [redacted]

In addition, [redacted] of total project costs have now been fixed, agreed measurable or otherwise commercially established, limiting the scope for further material efficiencies to be secured through subsequent commercial negotiations. These efficiencies are already embedded within the PA cost estimate and have therefore been taken into account in determining the efficient cost allowance for the project. Applying an additional OE adjustment would therefore risk double-counting efficiencies that have already been secured within the estimate. In these circumstances, National Grid does not consider that a further OE challenge would deliver additional consumer value and therefore considers its application to be disproportionate.

Any application of OE should be supported by project-specific evidence demonstrating that further efficiency opportunities remain available beyond those already reflected through design development, procurement, benchmarking and commercial challenge.

Real Price Effects (RPEs)

The Uxbridge Moor project exhibits the characteristics identified by Ofgem for considering Real Price Effects (RPEs). It is a major network infrastructure investment, and the main construction works are forecast to span seven regulatory years, [redacted] As such, cost pressures may evolve differently from general Consumer Prices Index (CPIH) inflation over the delivery period.

As we have seen in other projects, construction-specific indices can diverge materially from CPIH, either positively or negatively, and provide a closer reflection of the underlying labour, materials and supply chain costs associated with project delivery. As such, reliance on CPIH alone may not accurately capture the inflationary pressures to which this project is exposed. Applying project-specific inflation measures therefore supports a forecast that more appropriately reflects efficient expected costs while limiting the potential for systematic over or under recovery arising from differences between general and construction-sector inflation.

However, the submitted estimate already incorporates project-specific pricing and framework-based inflation assumptions that are supported by market evidence. These arrangements provide direct evidence of the inflation exposure expected to be incurred during project delivery and are therefore more representative than generic inflation indices.

Consistent with our response to PA Q1 in Ofgem's RIIO-ET3 Load Re-opener May 2026 submission window Draft Determinations published on 27 August 2026, we consider that significant weight should be given to project-specific contractual arrangements and market evidence when assessing RPEs. This approach better aligns the treatment of inflation with the costs expected to be incurred and helps ensure that efficient inflation-related costs are

recognised, while avoiding double counting of inflationary impacts already reflected within the submitted forecast.

The proposed approach is symmetric, as construction indices may outperform or underperform CPIH. It therefore improves cost reflectivity and reduces the risk of either over or under recovery relative to efficient project costs.

4. Deliverability and procurement

Headlines

- National Grid has developed the design, procurement and programme for Uxbridge Moor to realise high levels of confidence in our delivery strategy. Delivery is managed through an integrated team and a programme aligned to internal project development [redacted] governance.
- The project has resolved and mitigated substantial site-specific risks and has focused on early supply chain engagement, to optimise the earliest possible substation completion in [redacted], subsequent customer connection dates and maintaining the available outage windows.

[redacted]

- Early procurement of long-lead equipment and progression of the ECI strategy have established confidence in the project's delivery programme, target cost position and deliverability.

4.1 Delivery strategy

National Grid is confident that the project is deliverable within the programme presented in this section. This view is supported by design maturity, procurement progress, contractor engagement, governance arrangements and the management of quantified and assessed risks.

The detailed delivery strategy for Uxbridge Moor is provided in Appendix F. The strategy includes the following:

- Programme leadership and organisational structure
- Delivery partner and supply chain management
- Change control and performance management
- Programme structure and milestones
- Programme management philosophy
- Interface and stakeholder management
- Programme assurance and performance reporting
- Delivery readiness and recovery planning
- Project workstreams and responsibilities
- Risk management strategy
- Programme prolongation

The programme management approach is focused on delivering a safe, timely, and efficient investment that meets legal, licence, technical, and consumer value requirements. Delivery is aligned with National Grid's [redacted] internal governance framework, providing clear accountability, proportionate assurance, commercial controls to manage risk and support timely, high-quality delivery.

[redacted]

[redacted]

[redacted]

An integrated programme has been implemented that brings together activities of the responsible parties including National Grid, [redacted] Customers, Suppliers, and key third parties such as utilities, overhead line (OHL) operators, and local authorities. This approach enables alignment across delivery partners, coordination of interdependent activities, and supports efficient delivery by working to shared milestones and maintaining proactive communication, reducing risk, and ensuring minimal disruption to the network and surrounding communities.

The approach incorporates structured stakeholder engagement with communities, landowners, and statutory bodies to support interface management and minimise construction risk.

4.2 Programme and Delivery Team structure

Since submission of FNC, the project has achieved the following significant milestones:

[redacted]

Figure 16 shows the programme Gantt chart outlining the full delivery schedule through to Project Completion [redacted], including overlapping Stage 1 and Stage 2 works, interactions and interdependencies, sectional and final completions, outage windows [redacted] reinstatement and demobilisation.

The programme has been affected by delays, as outlined in Section 2.4, associated with planning approvals, land acquisition, utility diversions, environmental constraints and design maturity. However, the project team has implemented measures to limit programme impacts, including programme resequencing, overlapping construction activities, accelerating 132kV works, and commencing selected Stage 2 construction activities before full design maturity where safe and practicable to do so.

[redacted] The latest programme reflects the more mature position now available through detailed development with MPN and key suppliers, reflecting interface requirements and dependencies,

The delivery programme has prioritised critical 400kV infrastructure works to secure the [redacted] outage window and avoid the risk of significantly greater delays and associated prolongation costs. [redacted]

The Uxbridge Moor delivery programme is presented in Figure 14 below and the P6 programme is presented in Appendix N.

Project Delivery Date

National Grid's delivery strategy is based on the deterministic programme[10] presented in Figure 14 and Appendix N. This programme represents the project's planned delivery schedule, based on the scope, delivery strategy and programme management measures described throughout this submission. It reflects the dates that National Grid is actively managing the project to deliver against and forms the basis of the delivery strategy and cost position presented within this PA.

The deterministic programme includes:

[redacted]

[10] The planned delivery schedule that National Grid is actively managing the project to achieve, excluding schedule risk allowances.

[redacted]

P50 Delivery Date

National Grid has undertaken a Quantitative Schedule Risk Analysis (QSRA) to assess the impact of programme uncertainty and quantified project risks on delivery outcomes. This assessment generates a range of probabilistic completion dates, including the P50 delivery date.

The P50 date corresponds to the 50th percentile outcome from the schedule risk analysis, indicating an equal likelihood of the programme completing before or after this date. Further detail on the QSRA methodology, assumptions, schedule risk drivers and resulting probabilistic completion dates is provided in Section 3.6.

For Uxbridge Moor, the P50 400kV and 132kV substation commissioning date is [redacted]. This reflects the potential schedule impacts associated with residual programme uncertainty and principal quantified risk drivers identified through the QSRA, including engineering and design maturity, contractor delivery performance, planned outages, procurement of long-lead equipment, third-party interfaces, and external approvals and stakeholder dependencies.

The deterministic programme of [redacted] remains the basis of National Grid's delivery strategy and reflects the programme that we are actively managing to deliver. The P50 date is provided to support Ofgem's assessment of project deliverability, programme risk and, where applicable, the setting of a Major Projects ODI-F target date, consistent with the Load Re-opener Guidance. Should any such risk occur impacting any of the key dates, we would in the first instance look to agree and execute a recovery plan with the MWC to avoid any impact on overall completion or customer connections.

The deterministic date reflects our intention to deliver to an ambitious yet achievable programme date. However, for the purposes of setting the PCD date, the P50 date represents and appropriate basis. It reflects the central forecast outcome, incorporates project-specific schedule risks and uncertainties through the QSRA, and provides a stretching but realistic commitment against which delivery performance can be assessed.

Accordingly, National Grid proposes a PCD delivery date of [redacted], aligned to the P50 commissioning date for the Uxbridge Moor substation.

Licence Obligation (LO) Delivery Date

Whilst the P50 delivery date provides an appropriate basis for establishing the PCD and, where applicable, informing the Major Projects ODI-F target delivery date, it is not an appropriate basis for establishing a Licence Obligation delivery date.

National Grid supports clear accountability for the delivery of funded outputs. However, PCDs and Licence Obligations serve different regulatory purposes and should not be calibrated in the same way. A PCD protects consumers by linking allowed funding to delivery. A Licence Obligation is materially different. It is an enforceable compliance requirement, supported by statutory enforcement powers, and is intended to operate as a regulatory backstop for significant delivery failure.

This distinction is reflected within the RIIO-ET3 framework. Ofgem recognises, in paragraph 4.75 of the ET Annex to the RIIO-ET3 Final Determinations, that PCDs and Licence Obligations perform different functions, with PCDs providing accountability for delivery and Licence Obligations acting as an enforcement mechanism where non-delivery or materially late delivery gives rise to consumer detriment.

Using a P50 date as a Licence Obligation delivery date would set the compliance threshold at the most likely forecast outcome, not at a robust minimum standard backstop for delivery. By definition, a P50 date accepts that delivery could reasonably fall either side of that date. It therefore does not distinguish between genuine underperformance and normal project uncertainty.

If the P50 date is used for a Licence Obligation delivery date, breaches become a foreseeable outcome of the date-setting methodology rather than a meaningful indicator of poor delivery. Consistent with the Accelerated Strategic Transmission Investment (ASTI) framework and the approach adopted under Special Condition 3.19 for Centralised Strategic Network Plan (CSNP) outputs, any Licence Obligation delivery date must therefore be set at a date that is at least 12 months after the PCD delivery date. This principle is recognised in paragraph 4.196 of the ET Annex to the RIIO-ET3 Final Determinations for CSNP outputs. There, in responding to arguments from TOs about the interaction between delivery incentives and Licence Obligations, Ofgem notes that Licence Obligations provide enforcement powers that do not flow from the delivery incentive, including the ability to take steps to secure delivery where a TO has failed, or appears likely to fail, to deliver by twelve months after the delivery date. Ofgem therefore already recognises that the primary delivery date and the compliance backstop date perform different functions within the regulatory framework and should, accordingly, be set at different dates.

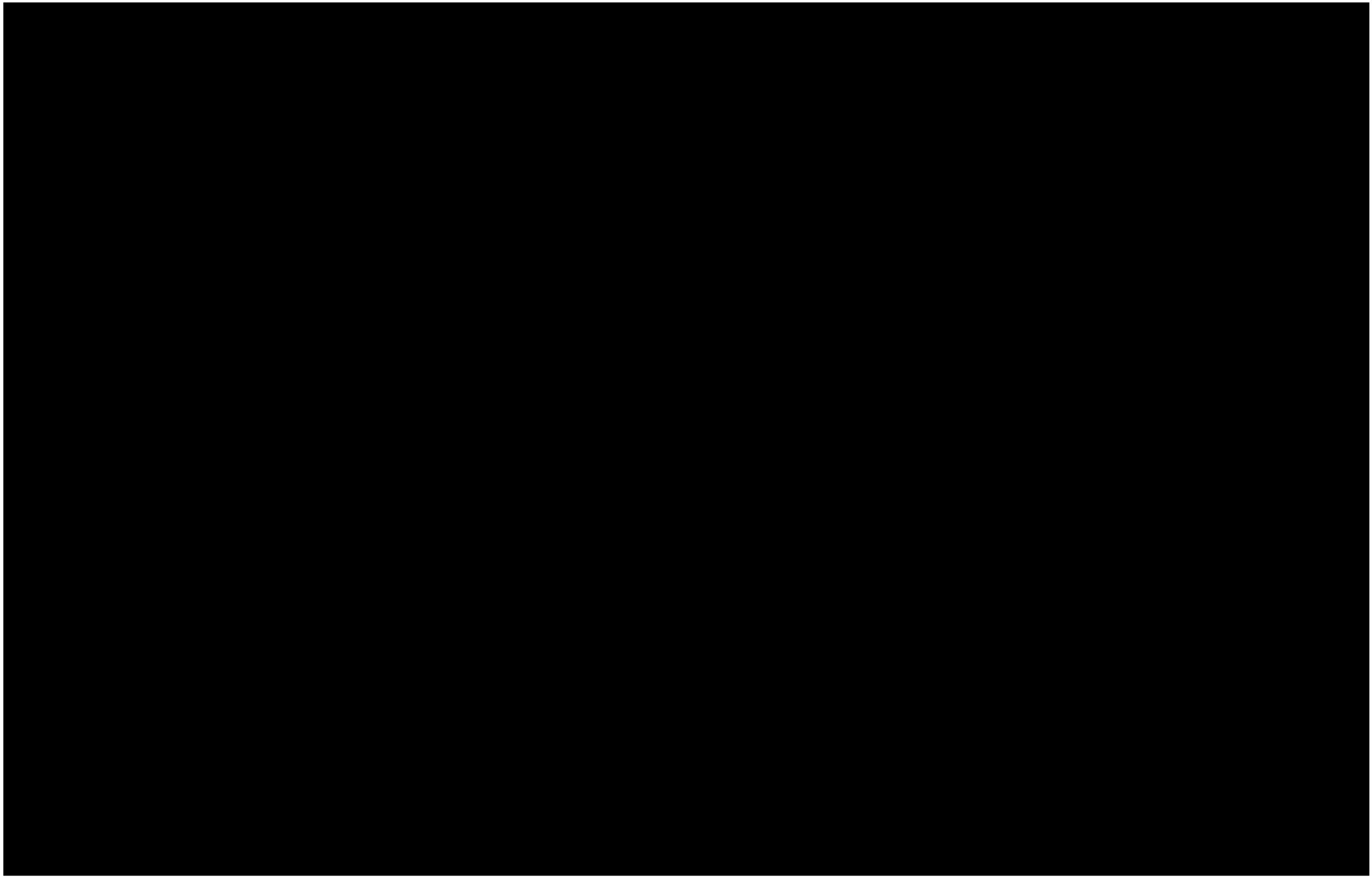
For these reasons, it would be an error of fact and would not be a proportionate and targeted regulatory intervention for Ofgem to establish the PCD and Licence Obligation delivery dates as aligned, and we reserve our right to appeal any future licence modification implementing the PA decision on such basis to the Competition and Markets Authority.

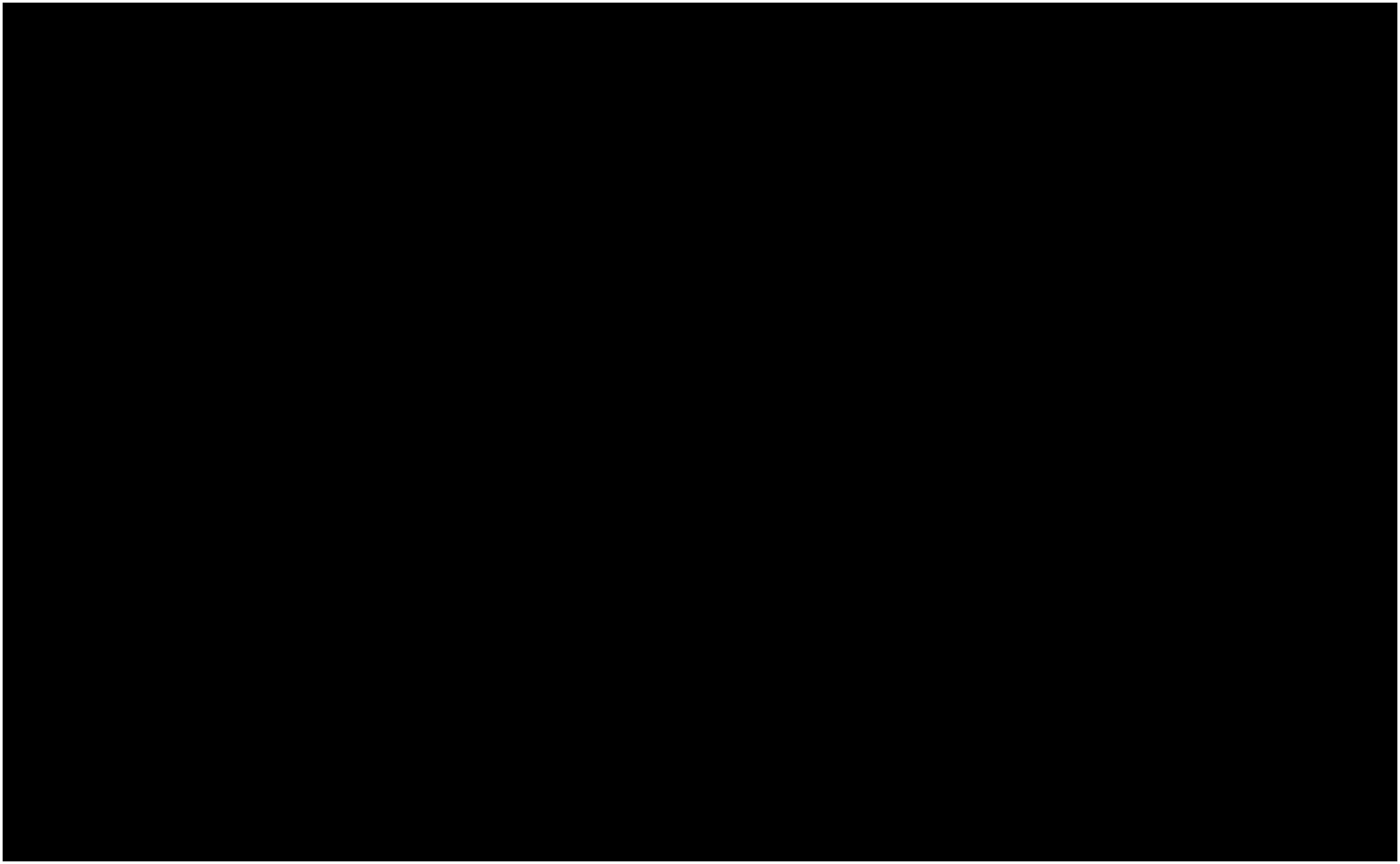
Delivery Team Structure

The detailed delivery strategy for Uxbridge Moor is provided above in Section 4.1 and further developed in Appendix F.

National Grid is equipped with a fully established core delivery team for the Uxbridge Moor project, with clearly defined roles aligned to the programme's key workstreams shown below in Figure 15. The team's structure covers critical functions including project management, engineering, regulation, commercial and finance, Programme Management Office (PMO) and governance.

The project delivery size and structure are proportionate to the project complexity and the number of interfaces required (such as third party, direct procurement, site specific factors and scale of customer connection). Further details can be found in the Appendix F supporting document and Appendix I.





4.3 Supply chain capacity

The project is being delivered within a constrained transmission supply chain environment, with increasing demand for specialist equipment, manufacturing capacity and skilled resources across the sector. Early supplier engagement and procurement of critical long-lead equipment have been key to maintaining the project programme and supporting delivery of the planned outage strategy.

GIS Switchgear Procurement

[redacted]

SGT Procurement

[redacted]

[redacted]

4.4 Outage planning

The delivery strategy for Uxbridge Moor has been developed around the availability of transmission system outages, which represent a critical programme constraint for the project. Detailed coordination has been undertaken with National Grid's outage planning and system operations teams to align construction activities, overhead line works, protection and control modifications and commissioning activities with available outage opportunities, whilst minimising impacts on network operation and security of supply.

The programme focuses on securing the [redacted] outages, which represents the earliest feasible window for connecting Uxbridge Moor into the transmission network. Maintaining these outage dates is therefore fundamental to achieving the earliest possible customer connection programme and delivering the contracted customer outputs.

[redacted] key outages have been incorporated into the project programme to facilitate overhead line diversions, protection and control modifications and final connection of the new substation into the transmission system. These outages are summarised in Figure 17.

The outage strategy has been developed in coordination with National Grid's wider outage planning process and interfaces with other major transmission projects, including Hackney Waltham Cross Upgrade Project (HWUP) and the Bramford to Twinstead Network Optimisation (BTNO) project. Given the limited availability of transmission outages and competing network demands, delivery of the 400kV scope has been prioritised to ensure readiness for the critical [redacted] outage window. Failure to secure this outage opportunity would result in the project competing for future outage access, potentially delaying energisation and customer connections by up to four years.

Following agreement of the outage strategy, the project programme has been structured to maximise pre-outage construction and commissioning activities, thereby minimising the volume of work required during outage periods and reducing overall programme risk. Critical long-lead procurement, detailed engineering development and construction sequencing have also been aligned to ensure readiness ahead of outage commencement.

[redacted] The required outages have been identified through the project programme, with the relevant Scheme Required Documents (SRDs) prepared and the requirements incorporated into the long-term outage plan for FY29 and beyond. These requirements have also been assessed against other currently known system access requirements, with potential outage conflicts and constraints being managed through ongoing coordination and advance planning ahead of the formal NESO review. As is standard for transmission projects, outages are identified and provisionally planned several years in advance but remain subject to NESO approval through the Year Ahead process, typically around 12–18 months before delivery. This allows NESO to coordinate requirements across other planned outages, network constraints and system security needs. The project has therefore completed the appropriate level of outage planning for this stage; [redacted]



4.5 Procurement



5. Conclusion

This submission is made under Special Licence Condition 3.18 (Load Re-opener and Price Control Deliverable (LRt)), and in accordance with Ofgem's RIIO-ET3 Load Re-opener Guidance and Submissions Requirements Document. National Grid is seeking a PA Decision and approval of the PA Funding request of [redacted], to deliver the Uxbridge Moor project.

The need for the investment remains unchanged from the FNC. Uxbridge Moor maintains the requirement to facilitate contracted customer demand in the Slough and West London area and remains the most efficient and deliverable solution available to provide the network capability necessary to meet customer connection requirements.

The project will deliver new SF_6 free 400kV and 132kV substations [redacted] The evidence presented throughout this submission demonstrates that the project continues to represent an appropriate and deliverable investment.

Project costs have been subject to extensive assurance, benchmarking, market testing and commercial scrutiny. Delivery risks have been actively managed through project development, procurement and contractual arrangements. The risk allowance of [redacted] included within the funding request reflects the inherent uncertainty associated with delivering a complex transmission infrastructure project and has been derived through the project's comprehensive QRA process. Further cost certainty is established with [redacted] secured through fixed or agreed re-measurable contractual arrangements.

Confirmation of the PA decision within the timeframe envisaged under Special Condition 3.18 would provide the regulatory certainty needed to support efficient project execution, maintain delivery momentum and maximise value for consumers.

In addition to the funding request set out in this submission, the RIIO-ET3 regulatory framework and Load Related Re-opener Guidance provide mechanisms for addressing qualifying changes in project scope, cost and risk during delivery. Where such changes arise, National Grid considers that the eligible impacts of multiple qualifying COAE events should be assessed cumulatively, consistent with the Licence provisions. We also request a bespoke 0% threshold for qualifying low-likelihood, high-impact events that cannot be robustly quantified ex-ante and are therefore not reflected in the PA funding request. This avoids unnecessary inclusion of further allowances in funding request in the interest of consumers, while ensuring efficient costs can be recovered only where qualifying events do occur.

Table 23: Uxbridge Moor submission Summary

Submission summary	
Main driver	Connection of a [redacted] cluster of new data centre driven customer demand across West London and Slough.
Funding Request	[redacted]
Outputs	New 400kV and 132kV Uxbridge Moor Substation. Associated transmission infrastructure.
Proposed PCD	Delivery and commissioning of the new 400kV and 132kV Uxbridge Moor Substation by [redacted]

Appendix A
Glossary

Table 24: Glossary

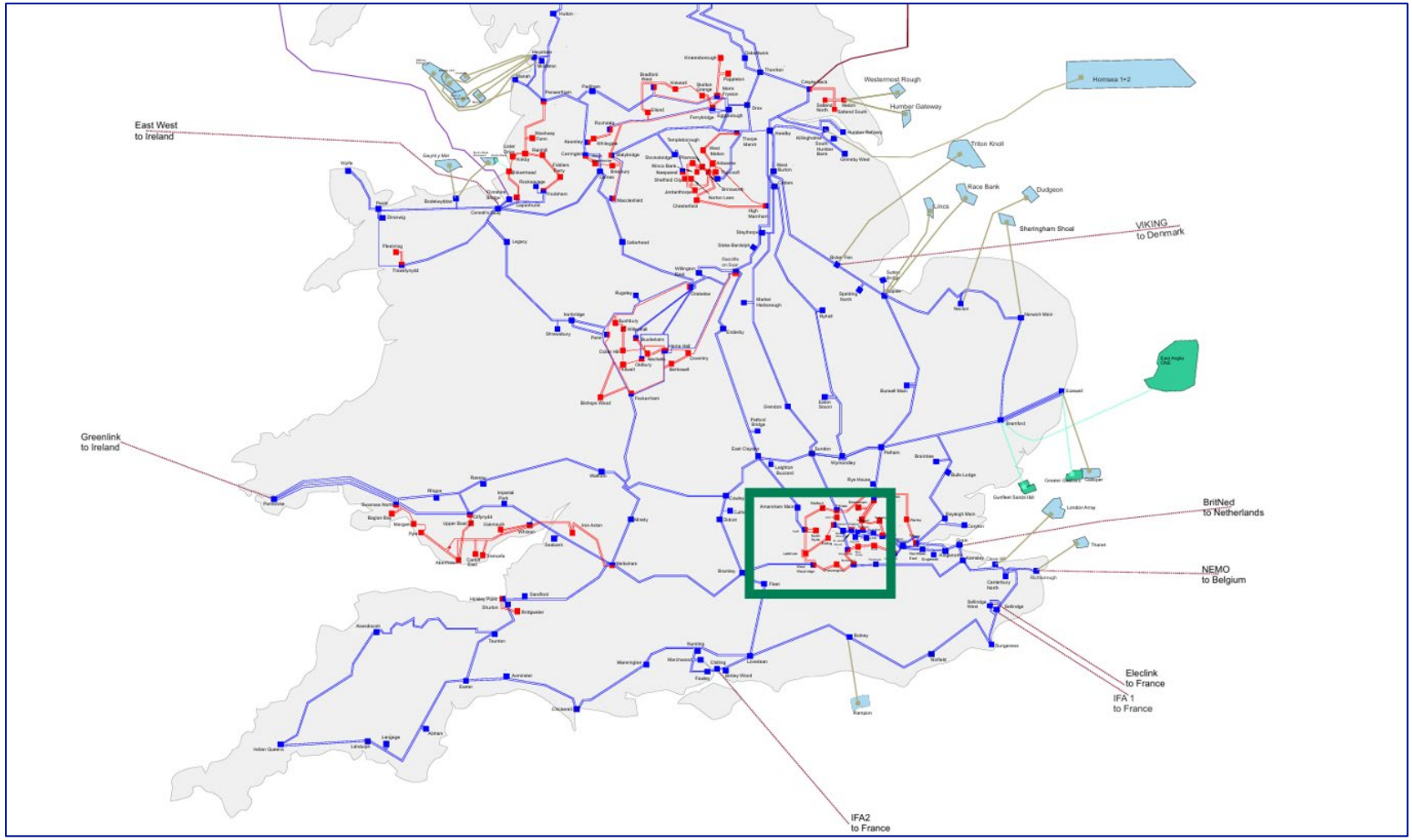
Abbreviation	Description
A	Ampere
ACL	Available for Commercial Load
AIL	Abnormal Indivisible Load
AIS	Air Insulated Switchgear
[redacted]	[redacted]
AMS	Arboriculture Method Statement
[redacted]	[redacted]
BCC	Buckinghamshire County Council
BPDT	Business Plan Data Table
CAI	Construction Alliance Incentive
CBA	Cost Benefit Analysis
CDM	Construction Design Management
CE	Compensation Event
CEMP	Construction Environment Management Plan
CEN	Compensation Event Notification
[redacted]	[redacted]
COAE	Cost and Output Adjustment Event
[redacted]	[redacted]
CPIH	Consumer Prices Index including owner occupiers' Housing
CTMP	Construction Traffic Management Plan
DID	Design Intent Document
DNO	Distribution Network Operator
EA	Environment Agency
EU	Estimating Uncertainty
ECI	Early Contractor Involvement
EPC	Engineering, Procurement and Construction
ET	Electricity Transmission
ET Ops	Electricity Transmission Operations
FEED	Front End Engineering Design

Abbreviation	Description
FAT	Fixed Appliance Testing
FID	Final Investment Decision
FNC	Final Needs Case
FRAP	Flood Risk Activity Permit
FRS	Functional Requirements Specification
FSA	First Site Access
[redacted]	[redacted]
GIB	Gas-insulated Busbars
GIC	Group Investment Committee
GIS	Gas Insulated Switchgear
GLA	Greater London Authority
GSP	Grid Supply Point
GVA	Gross Value Added.
HDD	Horizontal Directional Drilling
HILP	High Impact Low Probability
HMI	Human Machine Interface
IDNO	Independent Distribution Network Operator
ISS	Integrated Security Solution
LCC	Local Control Cubicle
LEMP	Landscape and Ecological Management Plan
LPA	Local Planning Authority
LRt	Load Reopener and Price Control Deliverable
LV	Low Voltage
LVAC/DC	Low Voltage Alternating Current / Direct Current
MEWP	Mobile Elevated Working Platform
[redacted]	[redacted]
MVA	Megavolt - Ampere
MW	Megawatt
MWC	Main Works Contractor
[redacted]	[redacted]
NESO	National Energy System Operator
NG	National Grid
NGET	National Grid Electricity Transmission
NPV	Net Present Value
NTP	Notice to Proceed
OE	Ongoing Efficiency

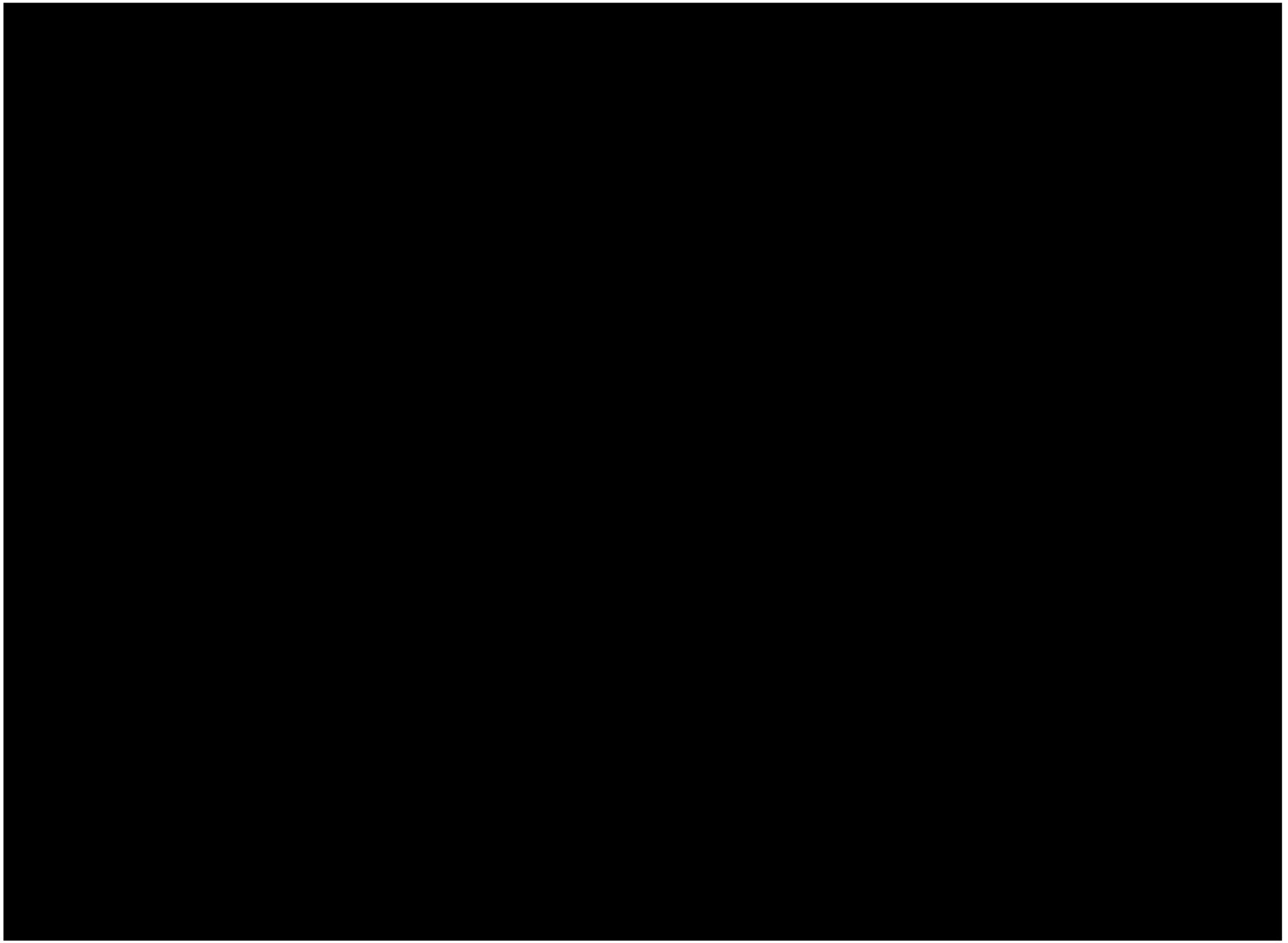
Abbreviation	Description
OEM	Original Equipment Manufacturer
Ofgem	Office of Gas and Electricity Markets, Great Britain's energy regulator.
OHL	Overhead Line
P&C	Protection & Control
PA	Project Assessment
PASE	Pre-approval of Solutions by Engineering
PCD	Price Control Deliverable
PCF	Pre-Construction Funding
PMO	Programme Management Office
QCRA	Quantitative Cost Risk Analysis
QRA	Quantitative Risk Analysis
QSRA	Quantitative Schedule Risk Analysis
RAMS	Reviews Risk Assessments and Method Statements
RIIO-2	Revenue = Incentives + Innovation + Outputs 2
RIIO-ET3	Revenue = Incentives + Innovation + Outputs, the third RIIO electricity transmission price control period.
RPE	Real Price Effects
RRP	Regulatory Reporting Pack
SAT	Site Acceptance Testing
SCADA	Supervisory Control and Data Acquisition.
SCS	Substation Control System
SF_6	Sulphur hexafluoride, an insulating gas traditionally used in high-voltage switchgear
SGTs	Super Grid Transformers
SMEs	Subject Matter Experts
SPMT	Self-Propelled Modular Transporter
SQSS	Security and Quality of Supply Standard
SSEN	Scottish and Southern Electricity Networks
SSORP	Substation Safety Operational Requirements Procedure
TEC	Transmission Entry Capacity.
TO	Transmission Owner
TPP	Tree Protection Plan
TS	Technical Specification
WSI	Written Scheme of Investigation

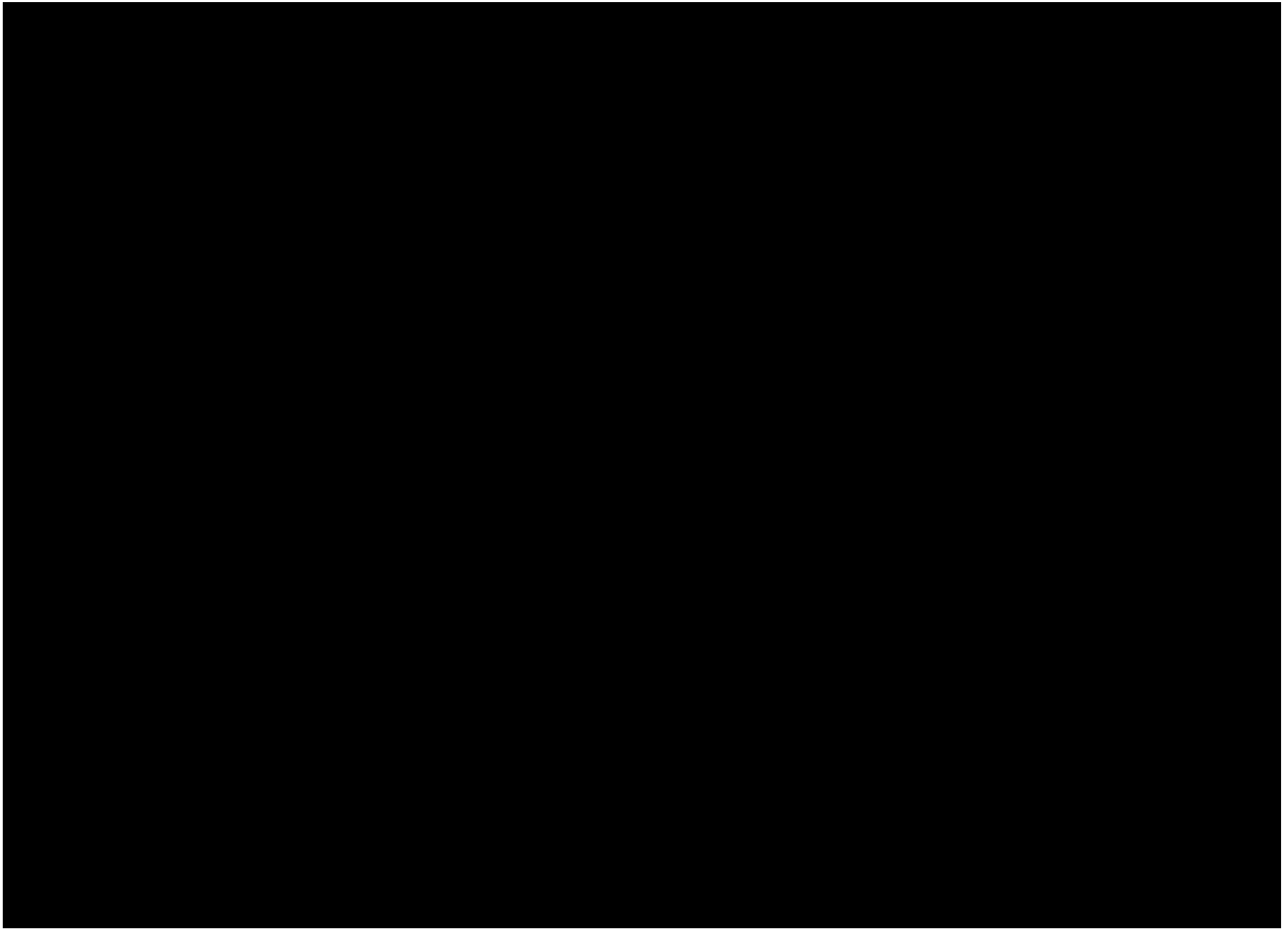
Appendix B
Location

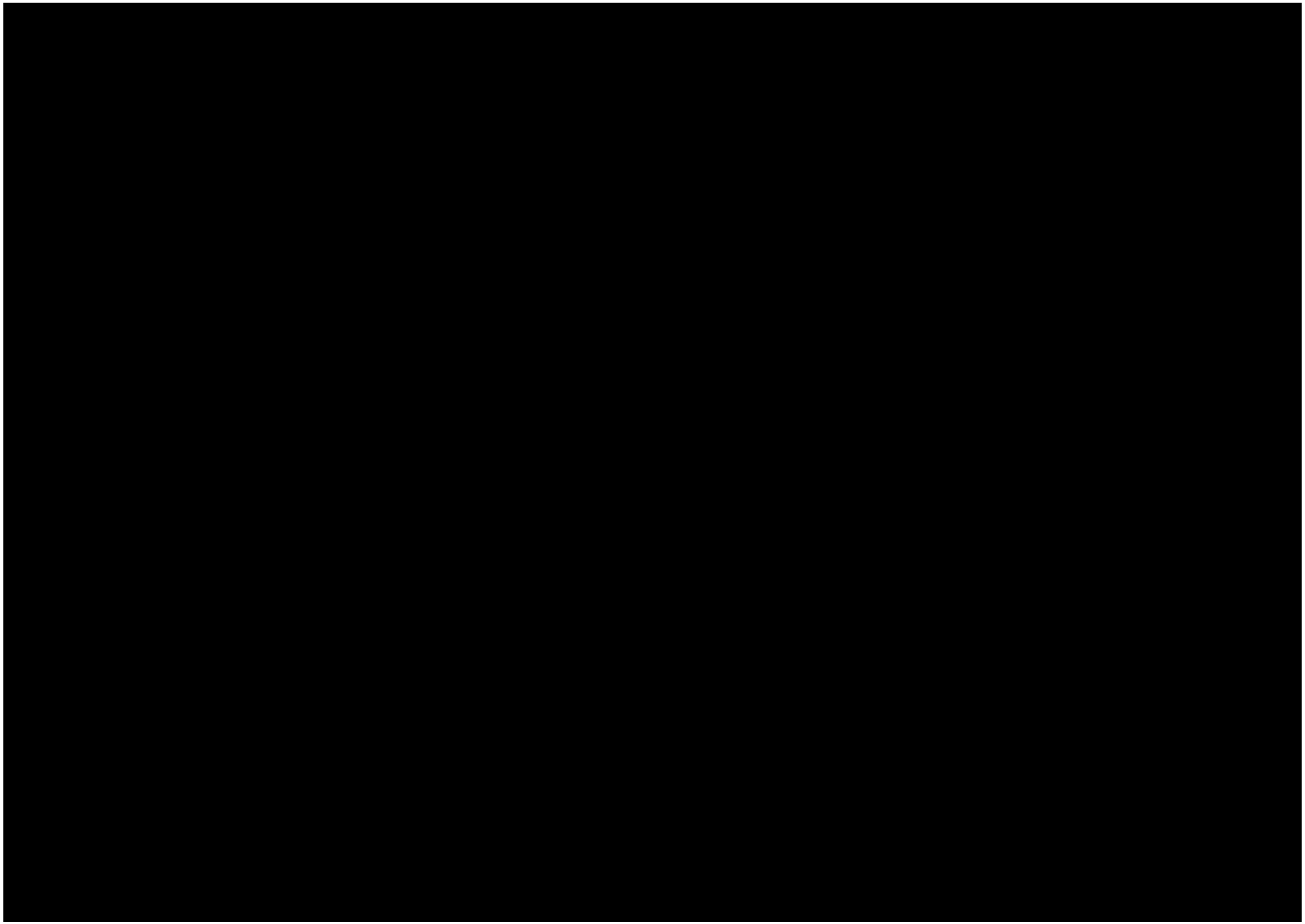
Figure 18: Project location - transmission route map









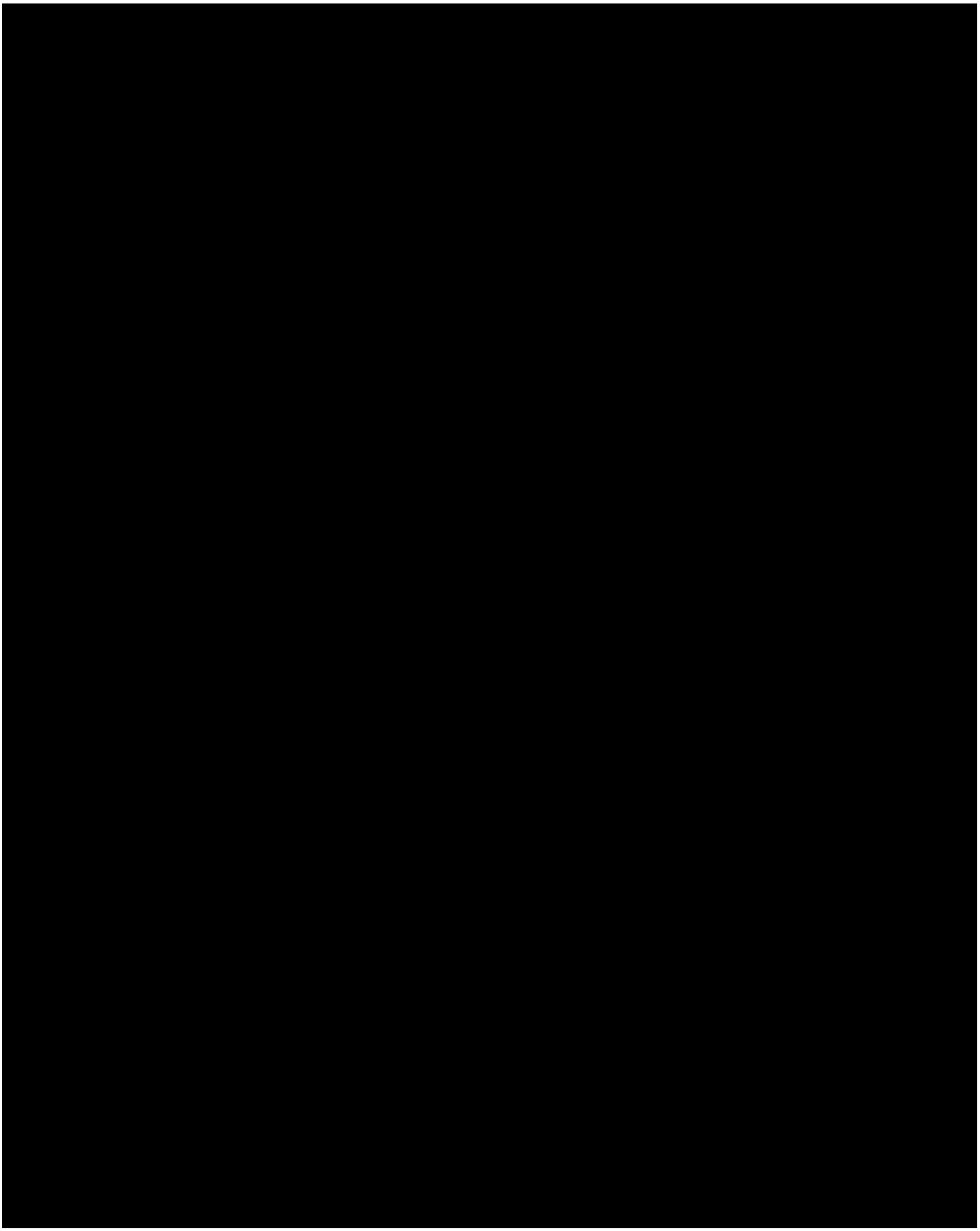


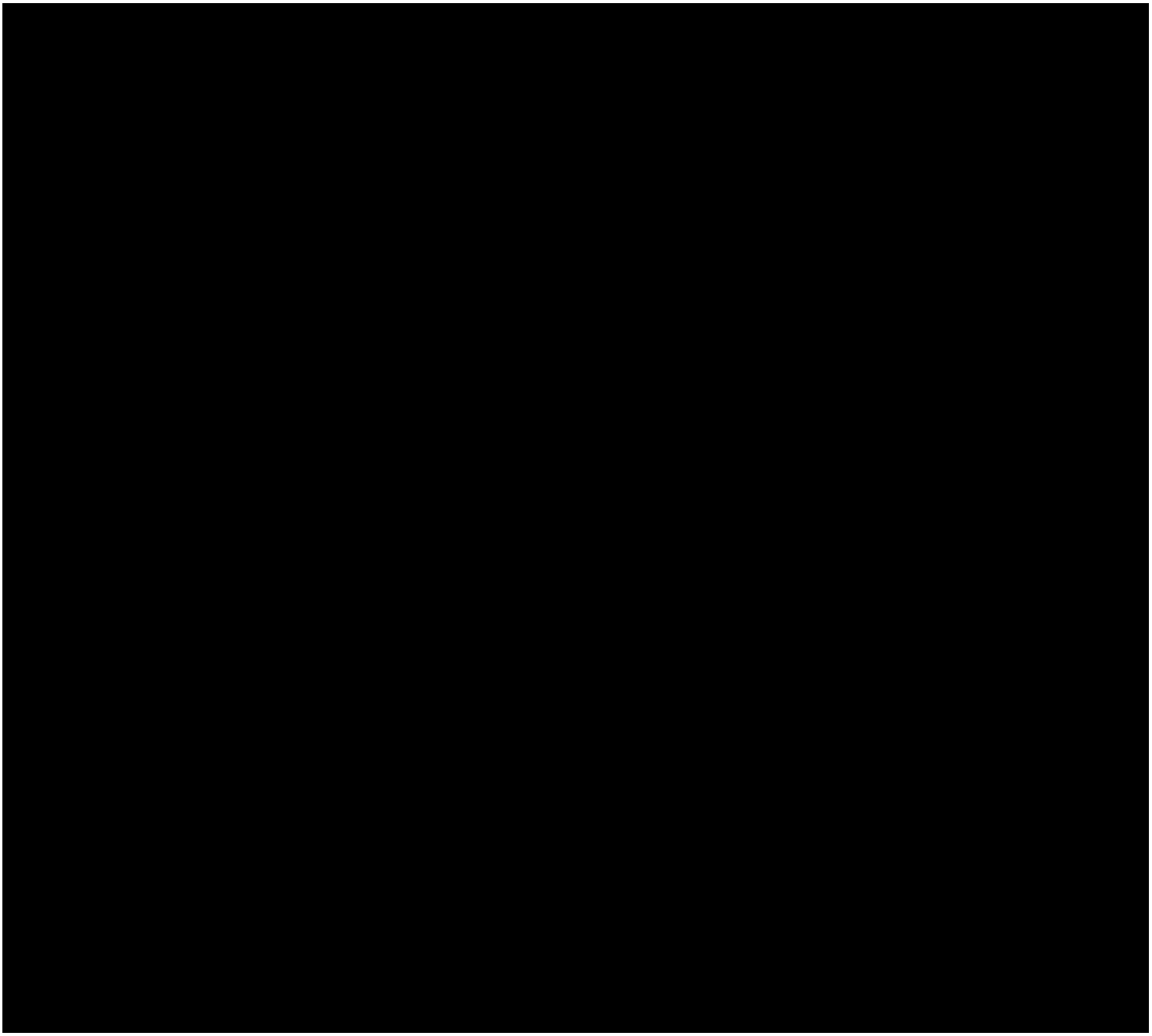
Appendix C
Design

Document is supplied alongside this submission.

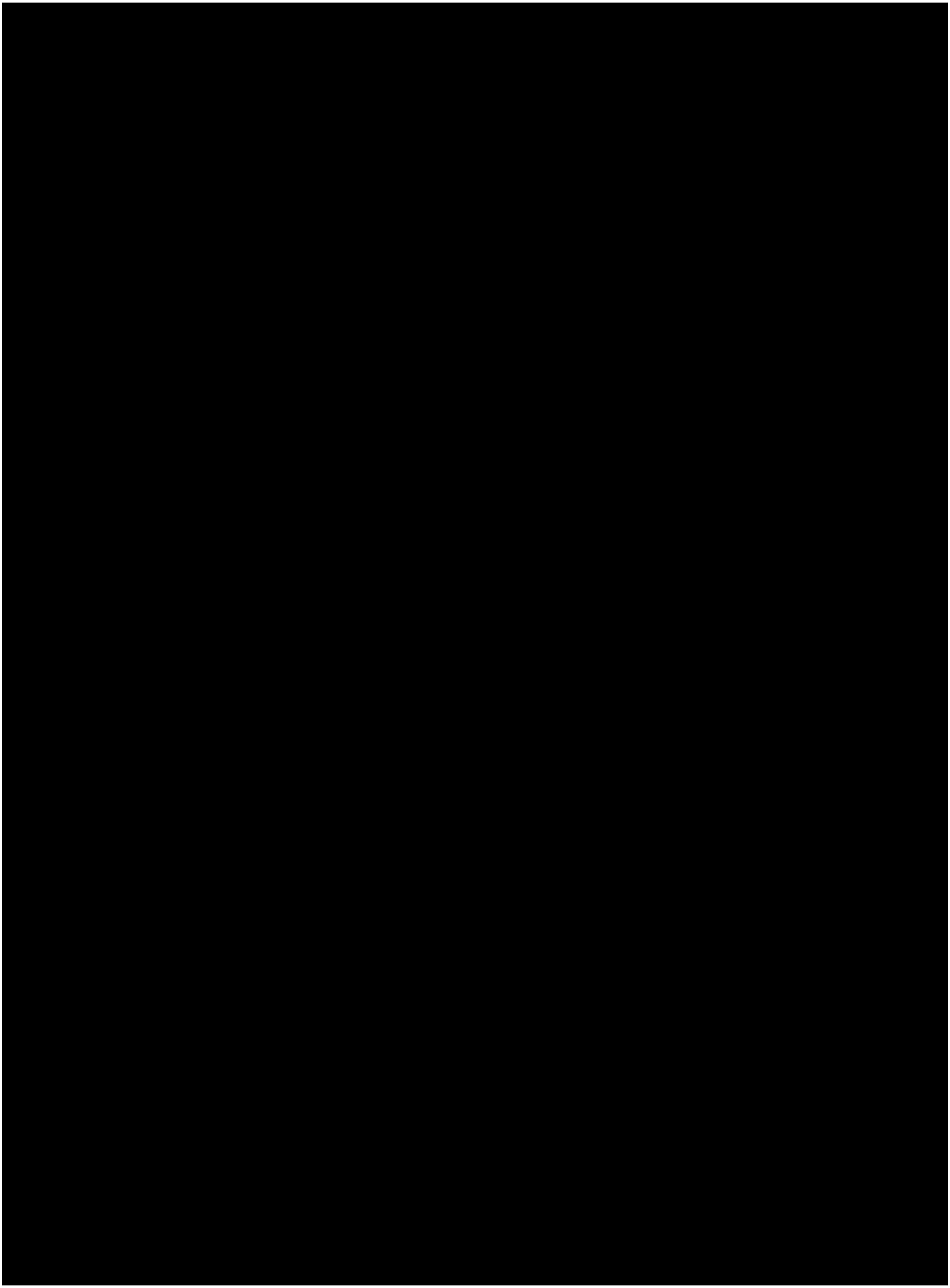
Appendix D
Construction

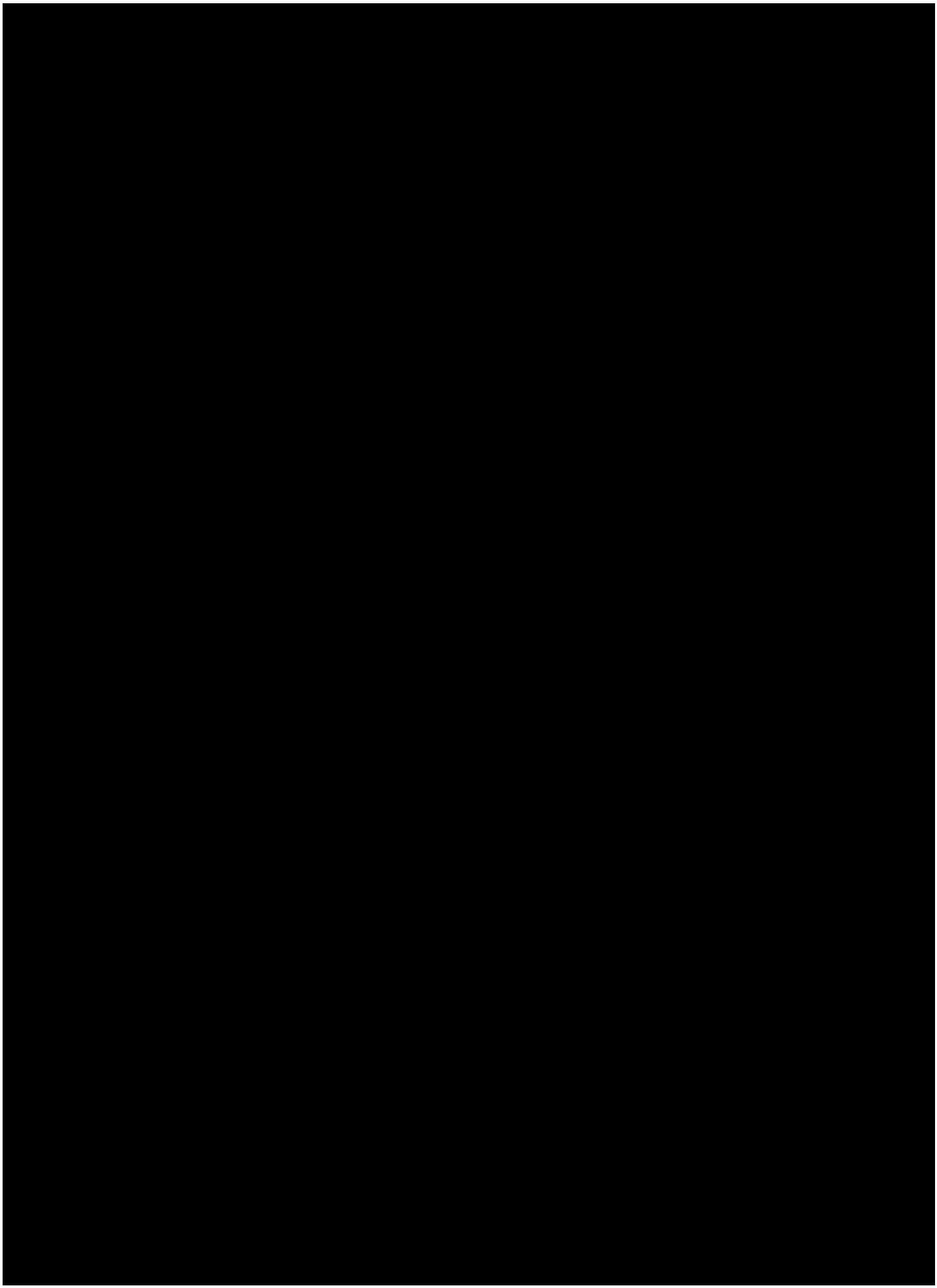
[redacted]













Appendix E
Land strategy and consent

The land rights required for the Uxbridge Moor Substation are shown in Figure 24, including the permanent land required for operation and maintenance of the asset and the temporary land required for construction activities and access.

It should be noted that no semi-permanent rights are in place for the project, meaning there will be no laydown area associated with the works. All other activities are located within the red line planning boundary on National Grid acquired land and will be undertaken within the areas already subject to the planning applications.



Temporary land rights

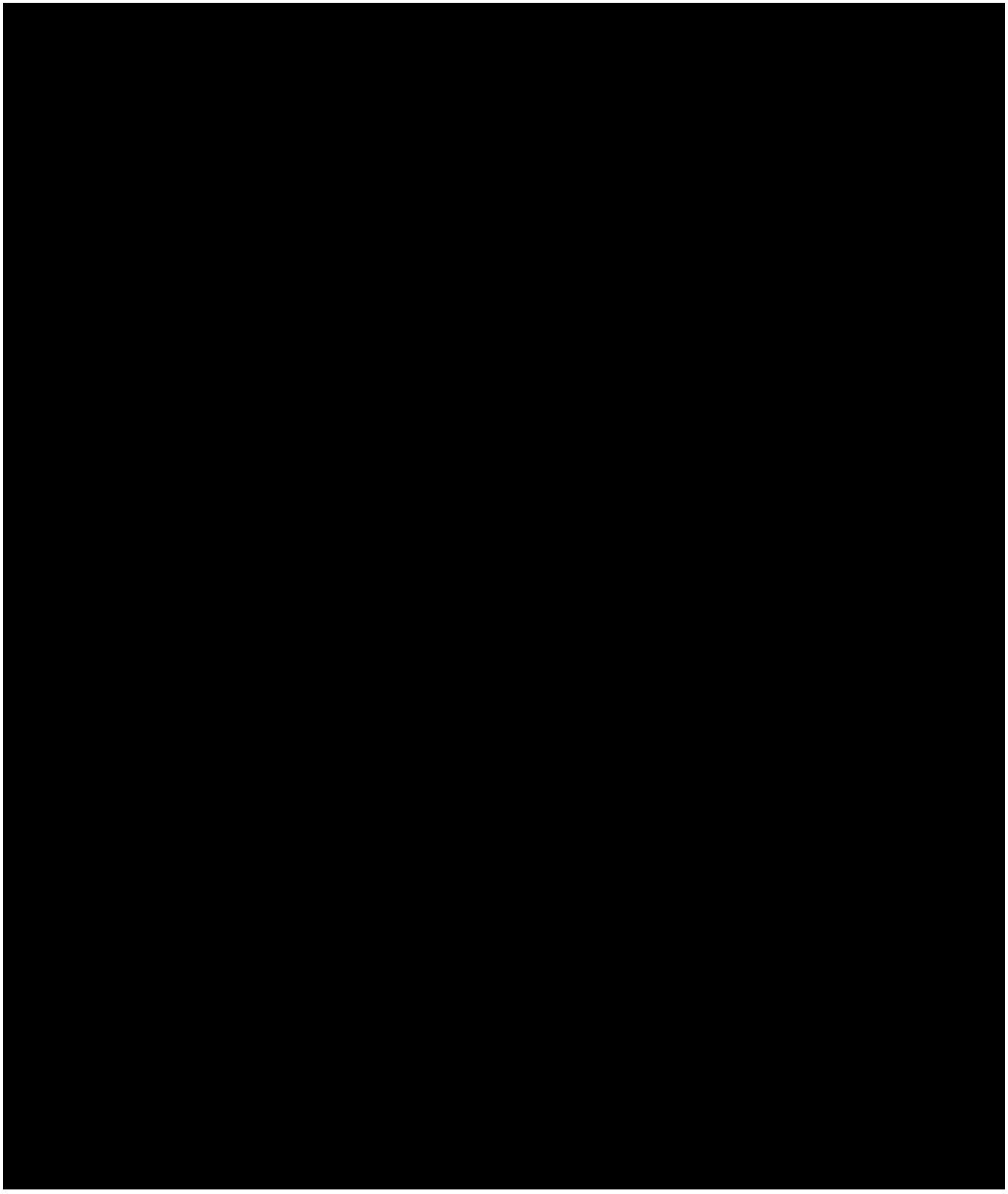




Permanent land rights



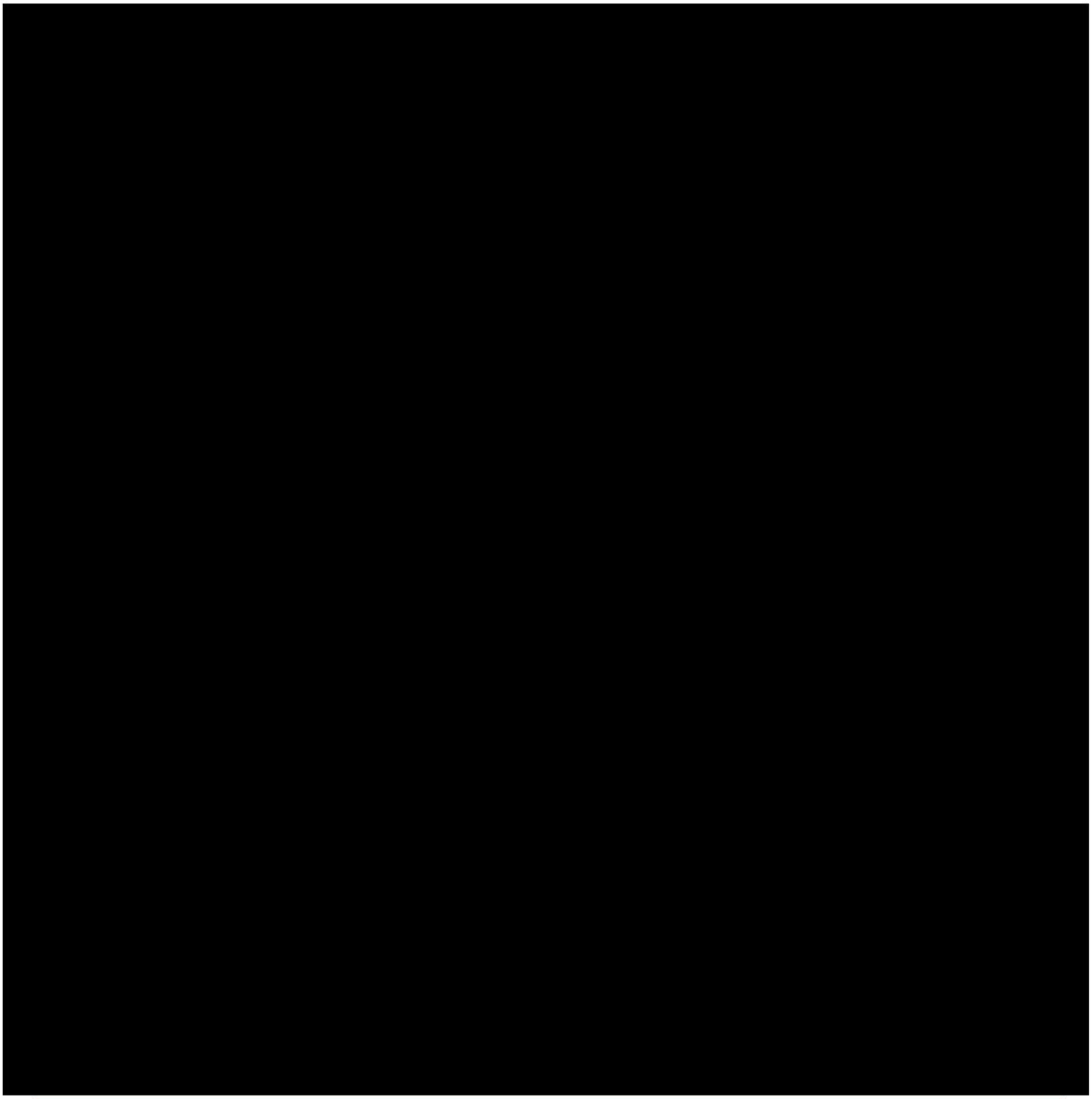




Primary consents

[redacted]

Uxbridge Moor was granted its planning permission and primary consents to build the project, subject to 22 discharge conditions listed in Table 29. These relate to activities required prior to, during construction, before first use and following completion.



[redacted]

Secondary Consents

[redacted]

[redacted]

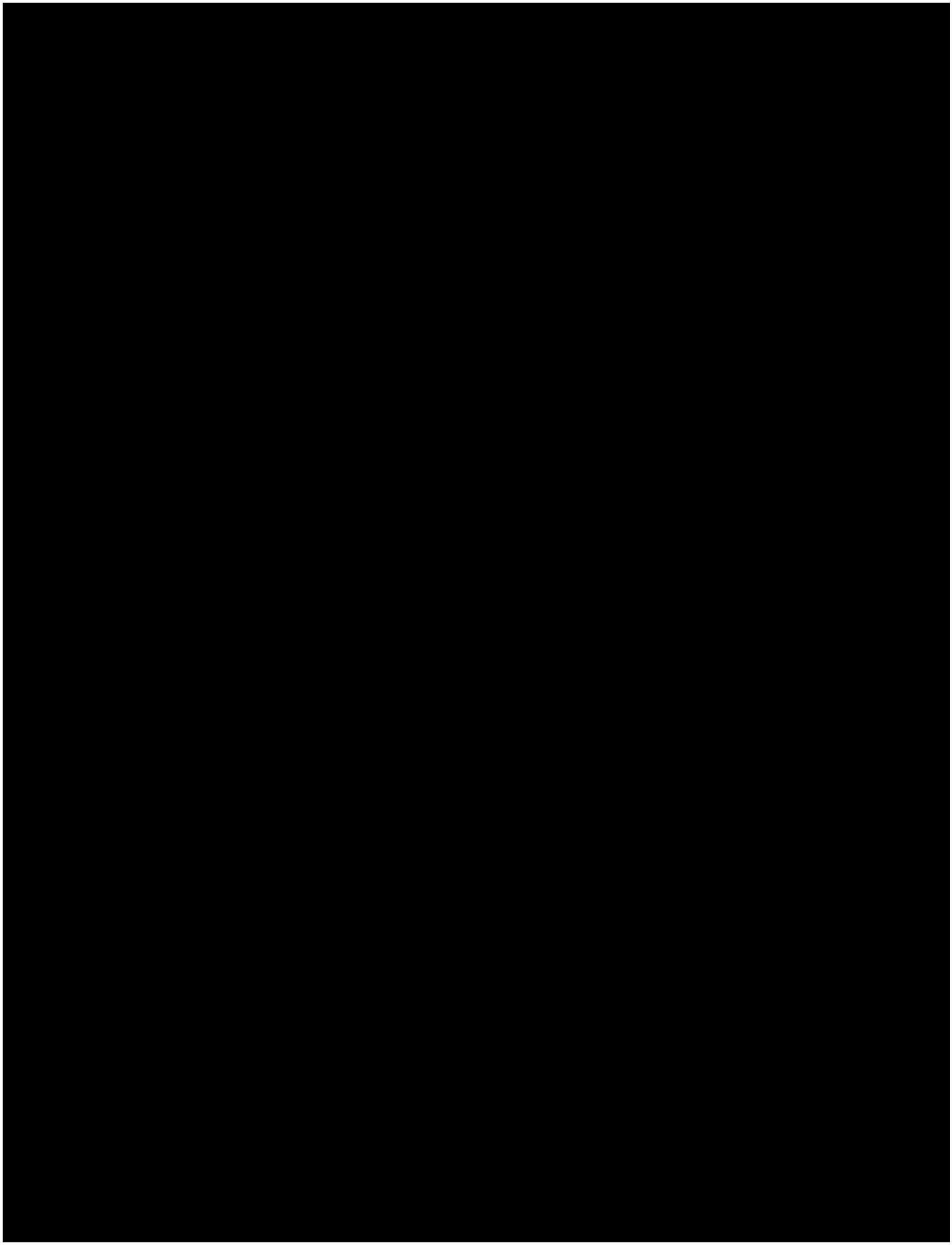
Consents and Permit Status

[redacted]

[redacted]

Other Third Parties works

[redacted]





Appendix F
Delivery strategy

This Appendix provides details of Uxbridge Moor's Delivery Strategy including the approach, programme, governance, risk management and organisational structure.

[redacted]



[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

Table 31: Stakeholder engagement overview

Stakeholder category / stakeholder	Description	Engagement undertaken
Customers and system coordination		
[redacted]		
[redacted]		
NESO	Responsible for management of the connections queue and wider system coordination.	Coordination of customer sequencing and connection arrangements in accordance with the reformed queue position.
Delivery partners and supply chain		
[redacted]		
[redacted]		
[redacted]		
Utilities and service		

Stakeholder category / stakeholder	Description	Engagement undertaken
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
Planning, highways and statutory authorities		
Buckinghamshire Council	Local planning authority, former landowner and relevant highways authority.	Engagement throughout planning determination, discharge of conditions, archaeological approvals, land acquisition and highway access arrangements.
Environment Agency	Environmental regulator responsible for flood-risk, drainage, abstraction and discharge approvals.	Engagement on Flood Risk Activity Permits, outfalls, drainage proposals, water abstraction and environmental compliance.
Natural England	Statutory environmental body with responsibilities relating to protected species and ecological mitigation.	Engagement on ecological requirements, including the licensing and mitigation arrangements for Great Crested Newts.
National Highways	Responsible for the strategic road network, including interfaces with the M25.	Engagement on temporary construction access using the bridge over the M25 and associated access and licensing requirements.
Landowners and occupiers		

Stakeholder category / stakeholder	Description	Engagement undertaken
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
Local communities and affected parties		
Residents	People living near the construction site and associated access routes.	Engagement through the planning and construction processes to communicate the works and manage potential local effects.

Stakeholder category / stakeholder	Description	Engagement undertaken
Local businesses	Businesses potentially affected by construction traffic, access arrangements or nearby works.	Communication on planned activities and coordination intended to minimise avoidable disruption.
Users of surrounding roads	Road users potentially affected by construction traffic and site access arrangements.	Management through the Construction Traffic Management Plan and coordination of temporary and permanent access arrangements.
Users of public rights of way	Users of footpaths or access routes affected by the development.	Engagement and coordination on crossing arrangements, safe access and any controls required during construction.
Archaeology and heritage		
Buckinghamshire Council archaeology team	Responsible for approving the archaeological investigation and mitigation approach.	Engagement on the Written Scheme of Investigation, archaeological findings, watching briefs and formal sign-off of affected working areas.
[redacted]	[redacted]	[redacted]
Strategic planning and regional growth stakeholders		
Greater London Authority (GLA)	Regional planning authority responsible for strategic infrastructure planning, growth policy and future development across Greater London.	Engagement to understand future demand growth forecasts, regional infrastructure priorities and the role of electricity infrastructure in supporting housing, economic growth and digital infrastructure across London.
Deputy Mayor's Infrastructure and Planning Teams	Responsible for strategic infrastructure coordination and long-term planning across London.	Engagement to understand future infrastructure requirements associated with data centre growth, wider electrification and long-term capacity planning across London.
West London Business	Regional business organisation representing businesses and economic interests across West London.	Engagement to understand regional growth ambitions, investment requirements and the importance of electricity infrastructure in supporting future business growth and competitiveness across West London.







Appendix G
Cost model

[redacted]

Appendix H
Cost assurance

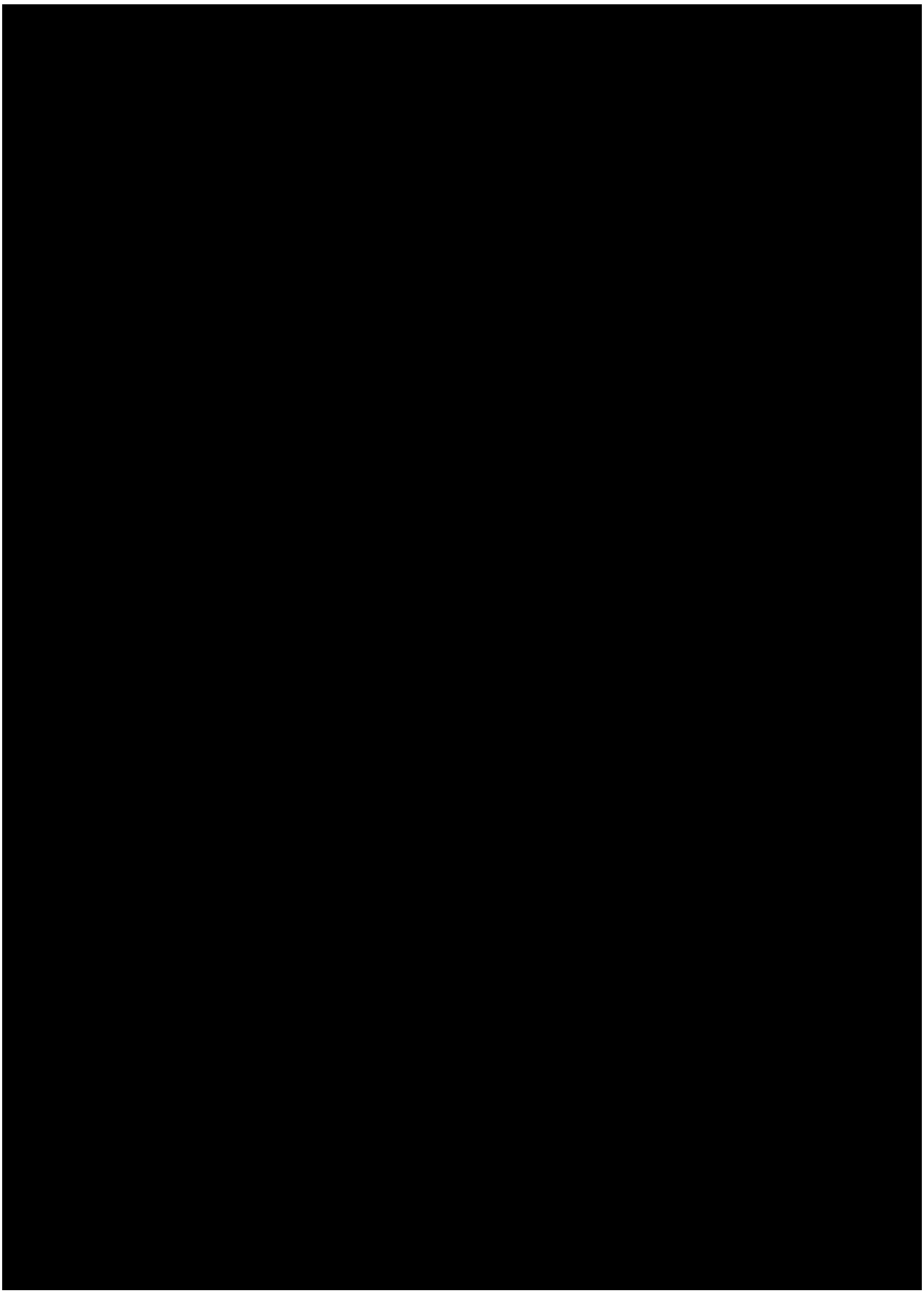
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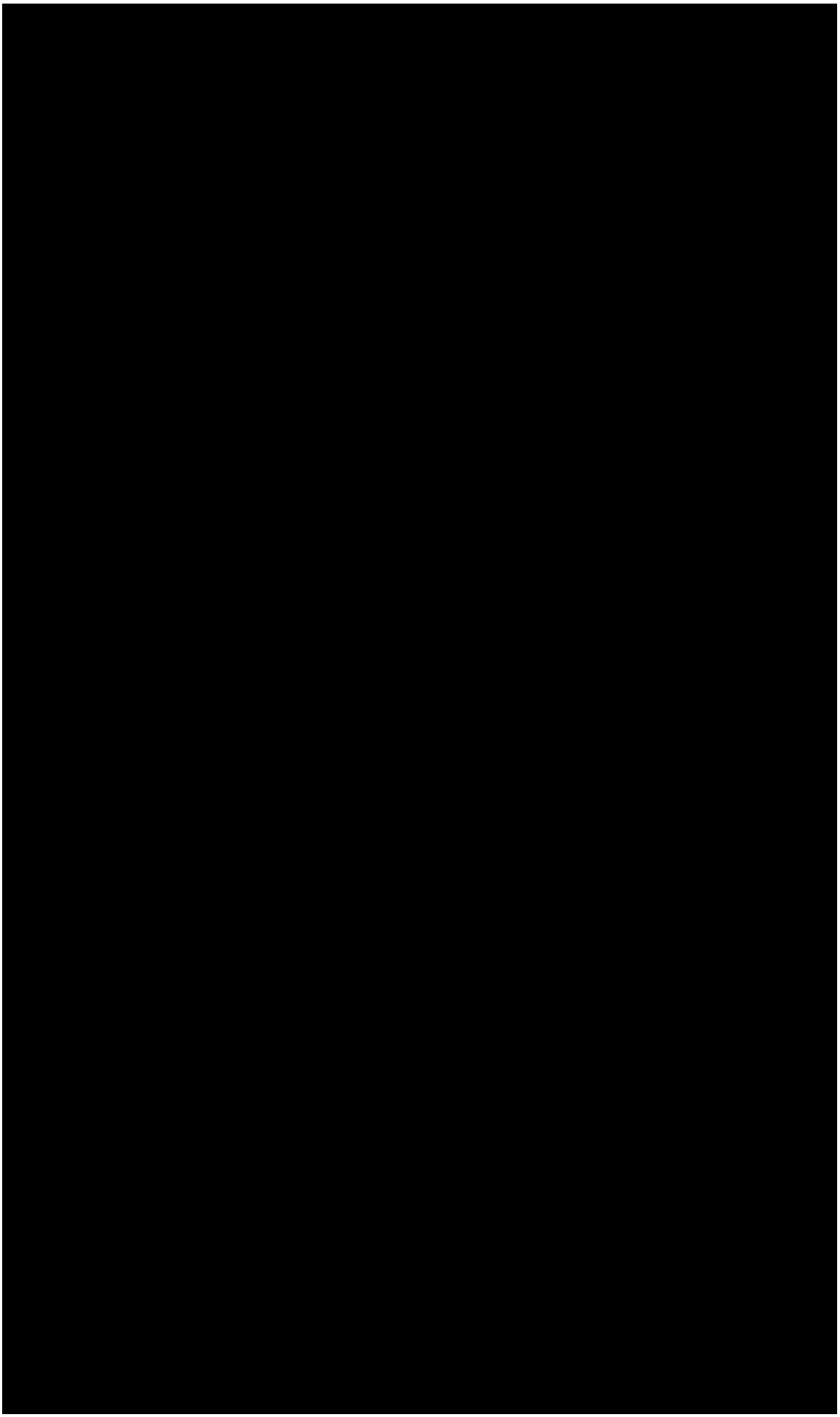
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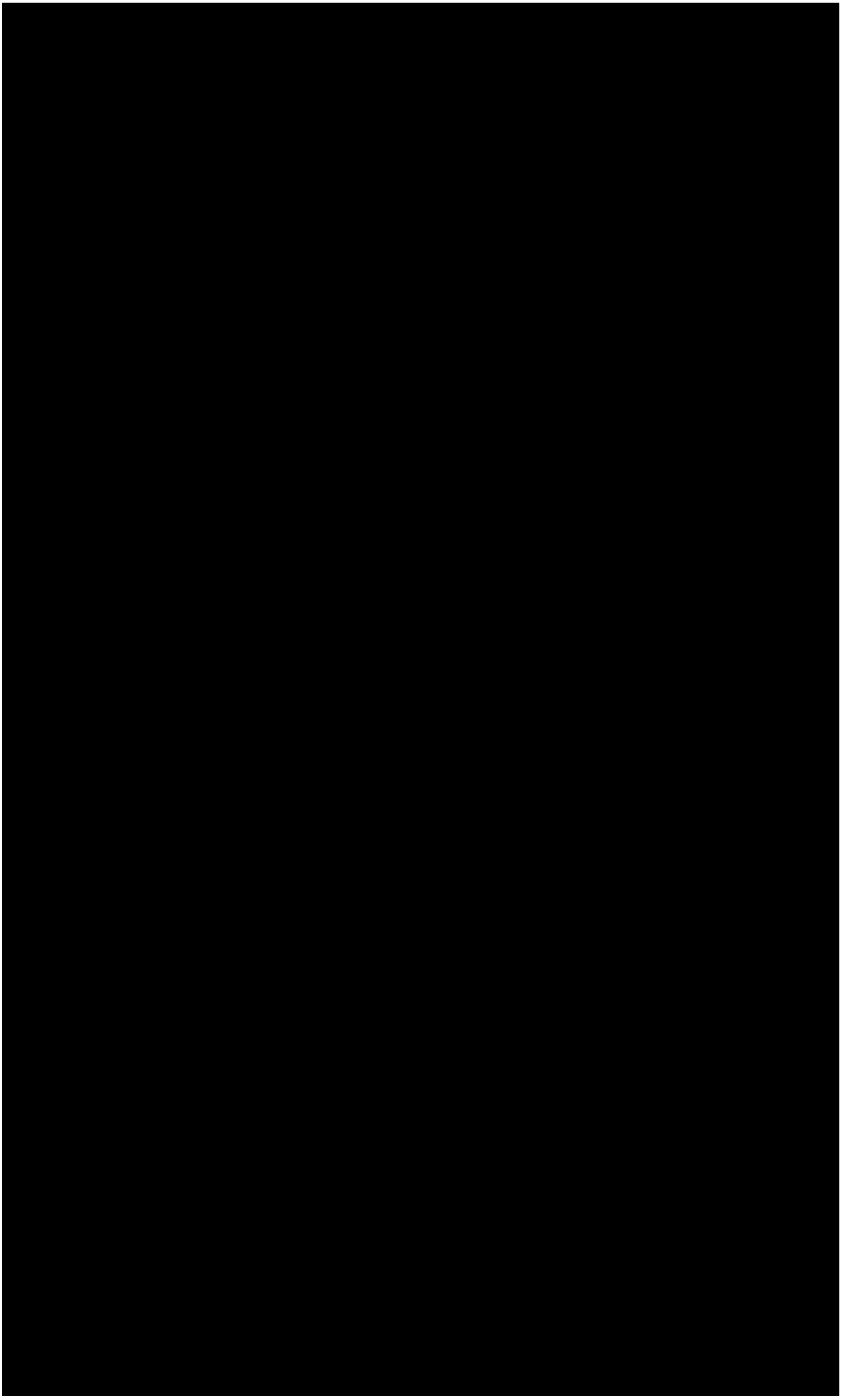
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Appendix I
National Grid costs









Appendix J
Cost benefit analysis

[redacted]

Appendix K
Programme timelines



Appendix L
Benchmarking

[redacted]

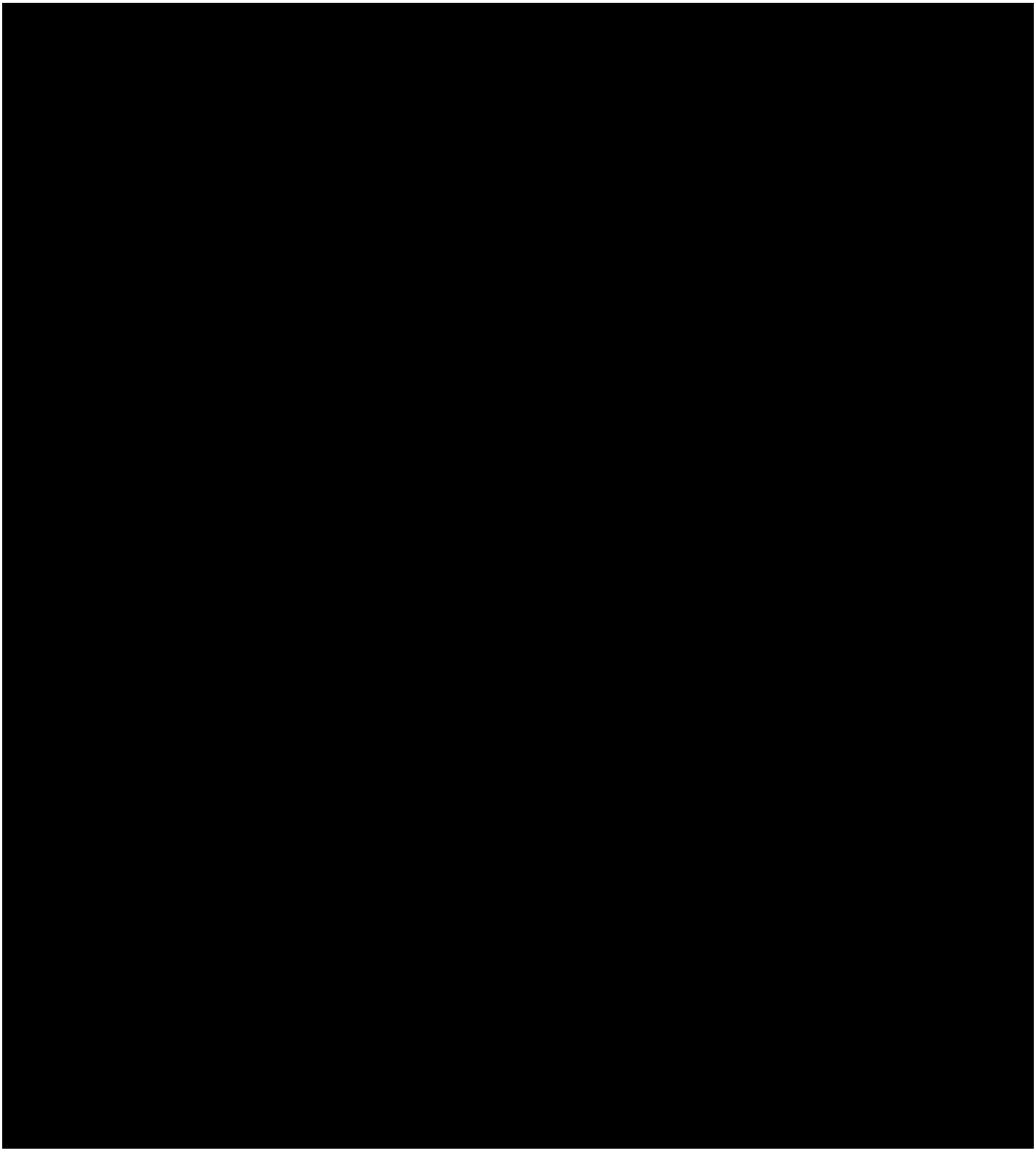
Appendix M
Risk register

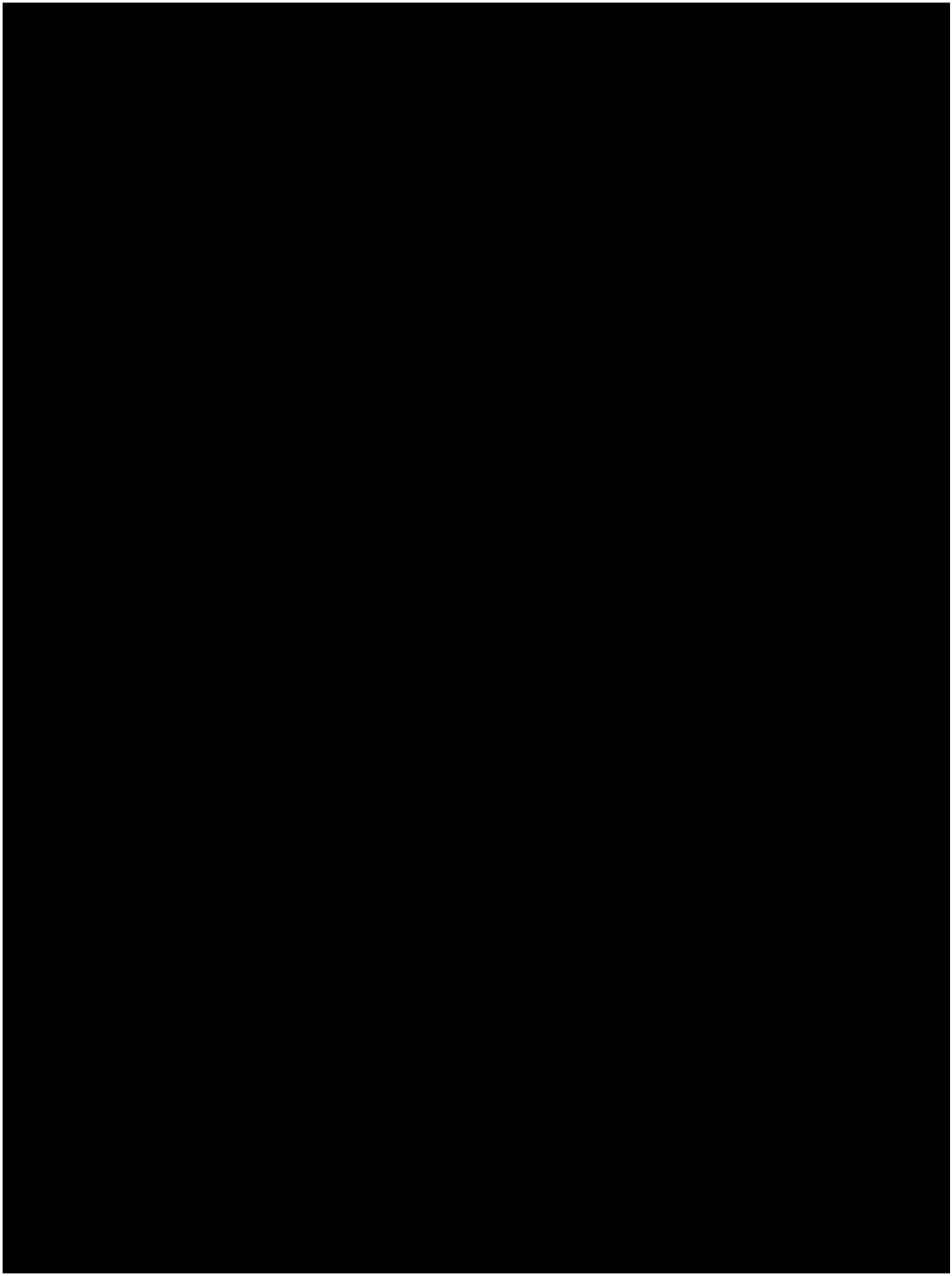
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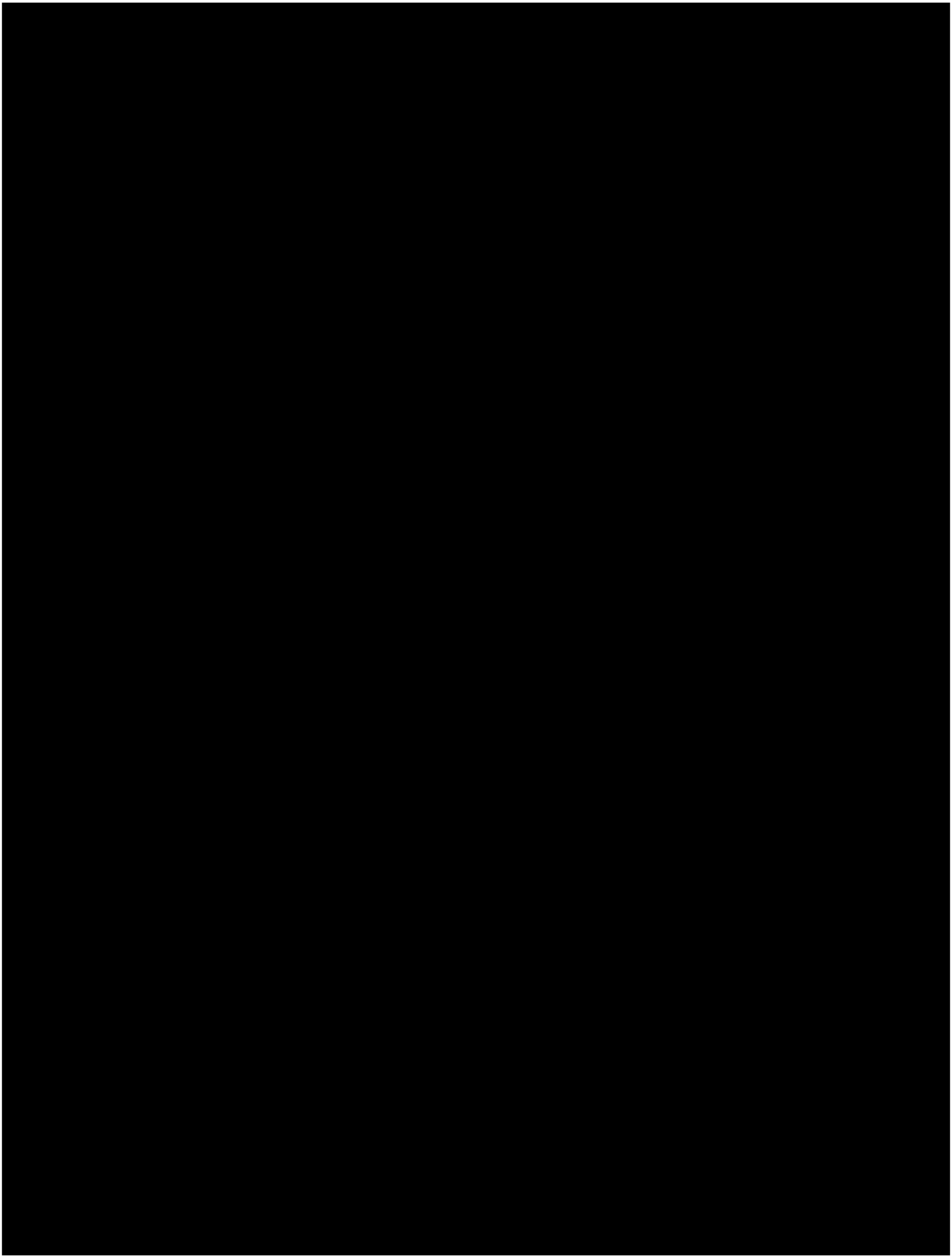
Appendix N
P6 Programme

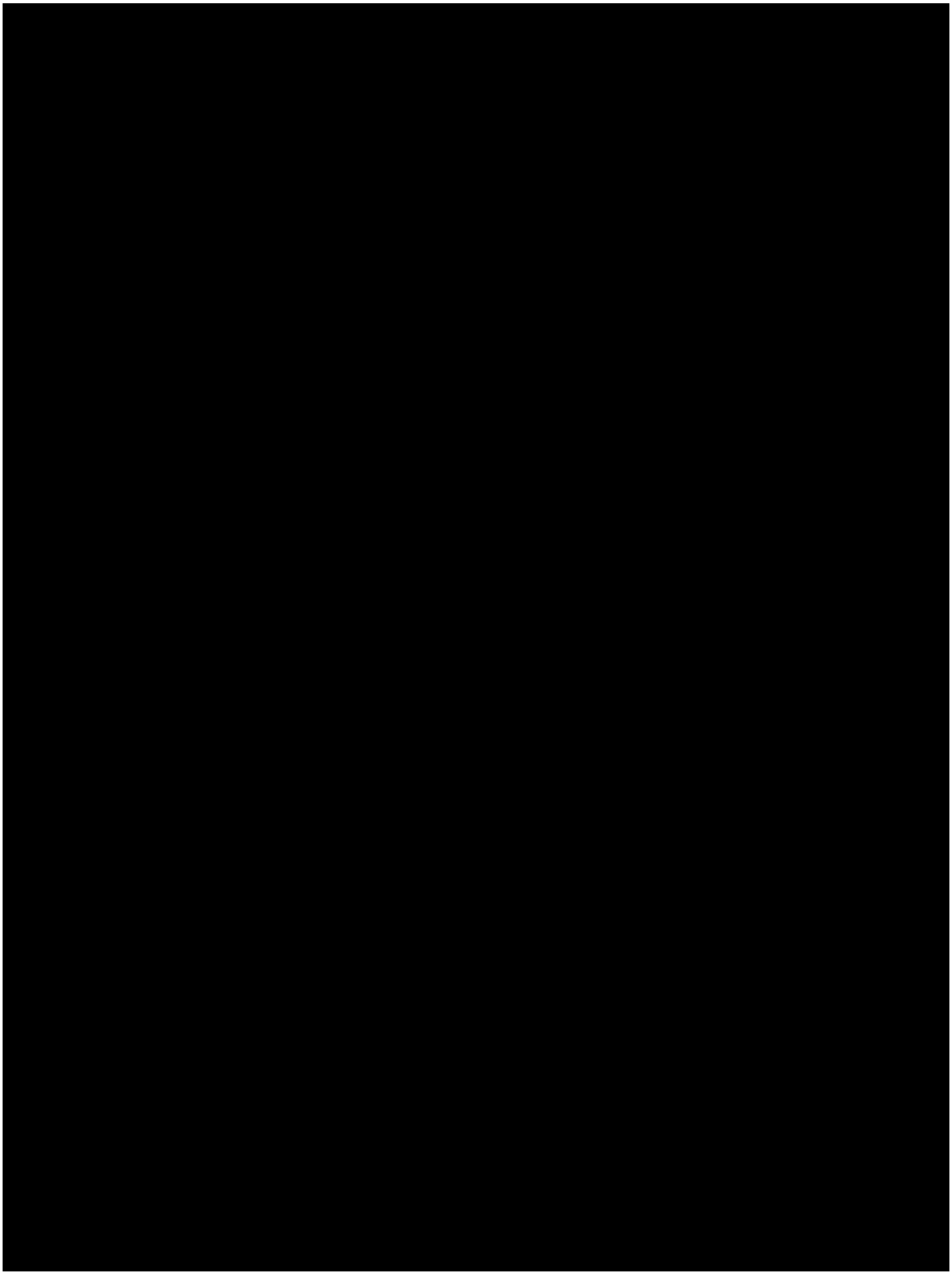
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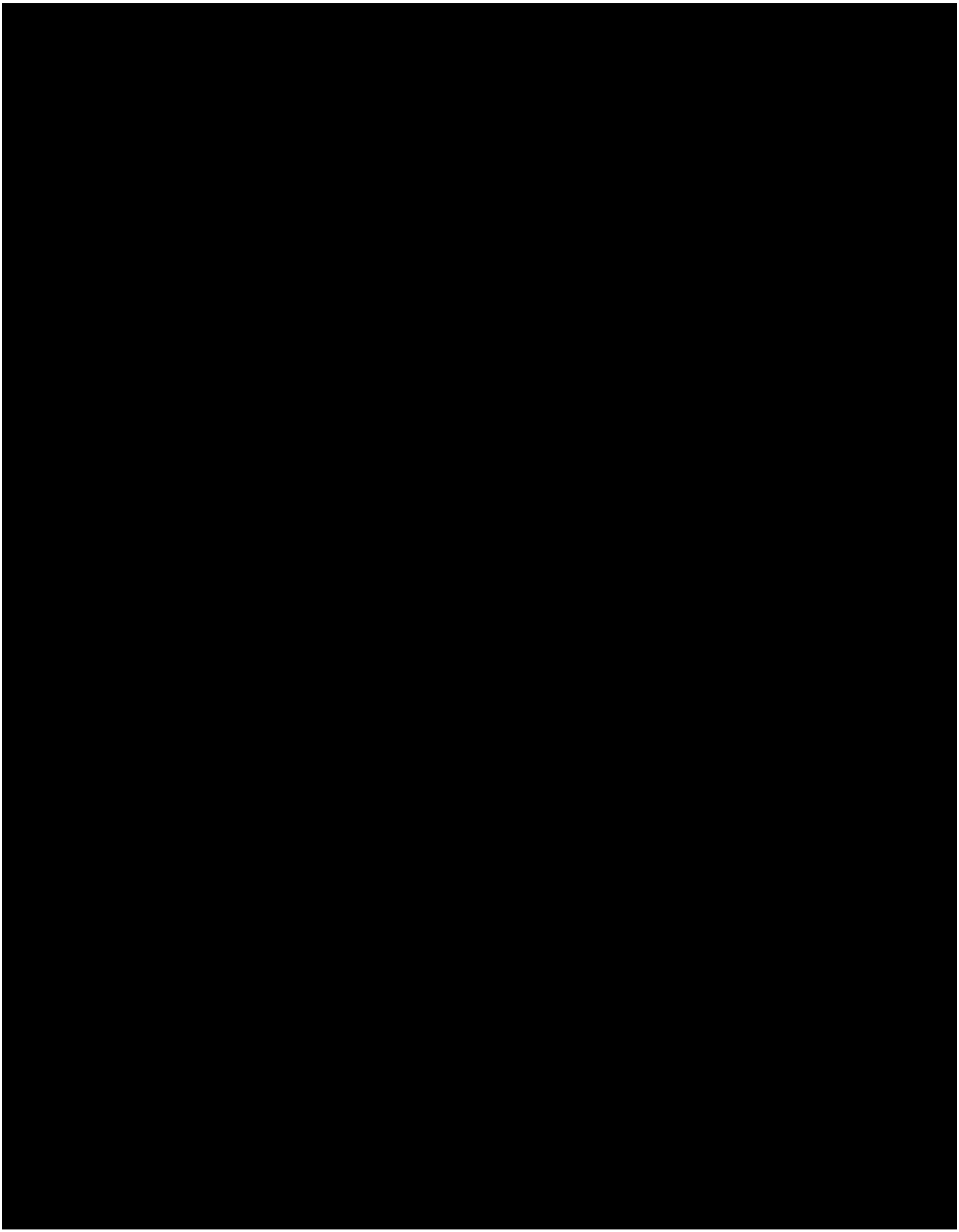
Appendix O
Procurement

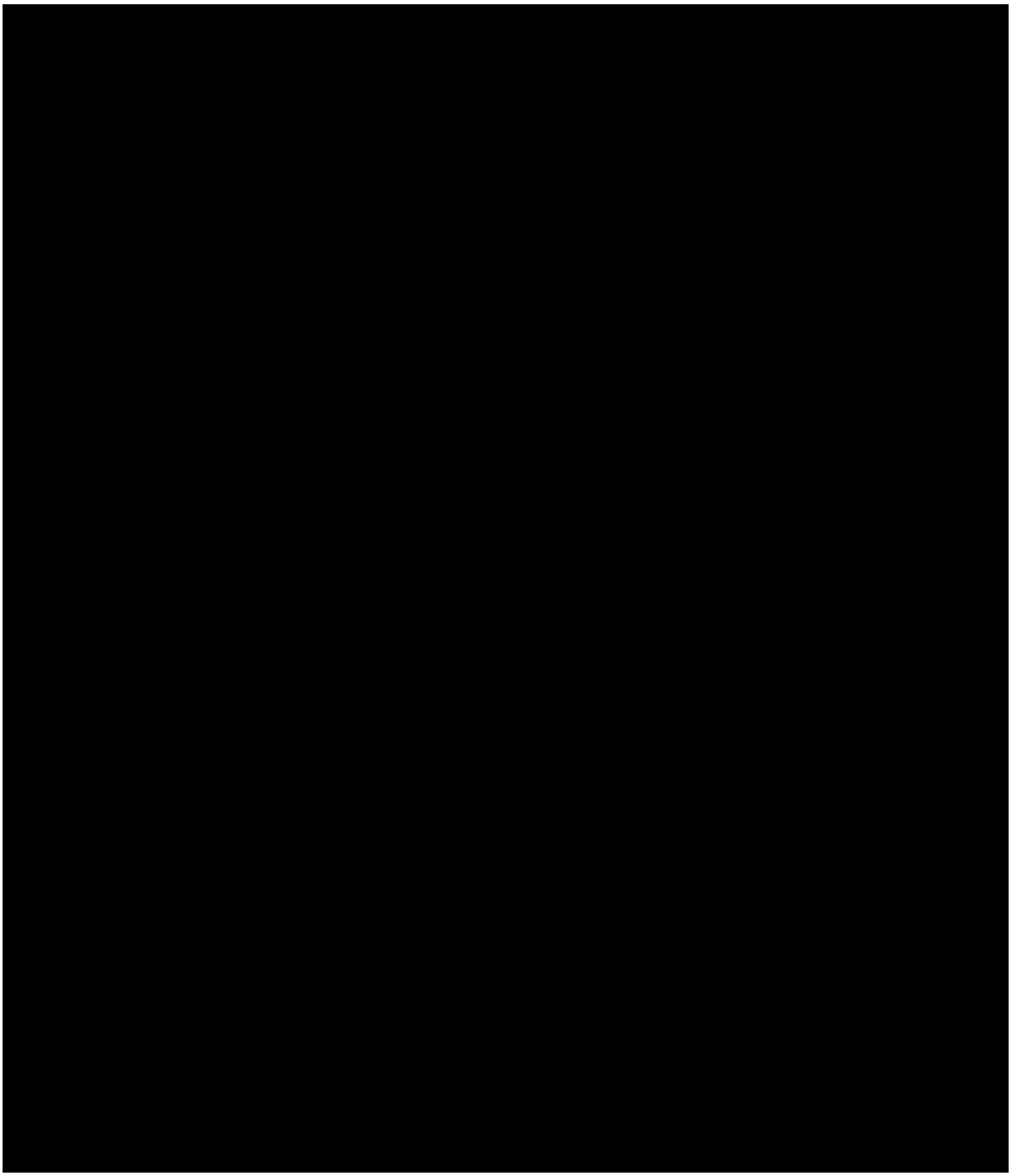












Appendix P
RRP Tables

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