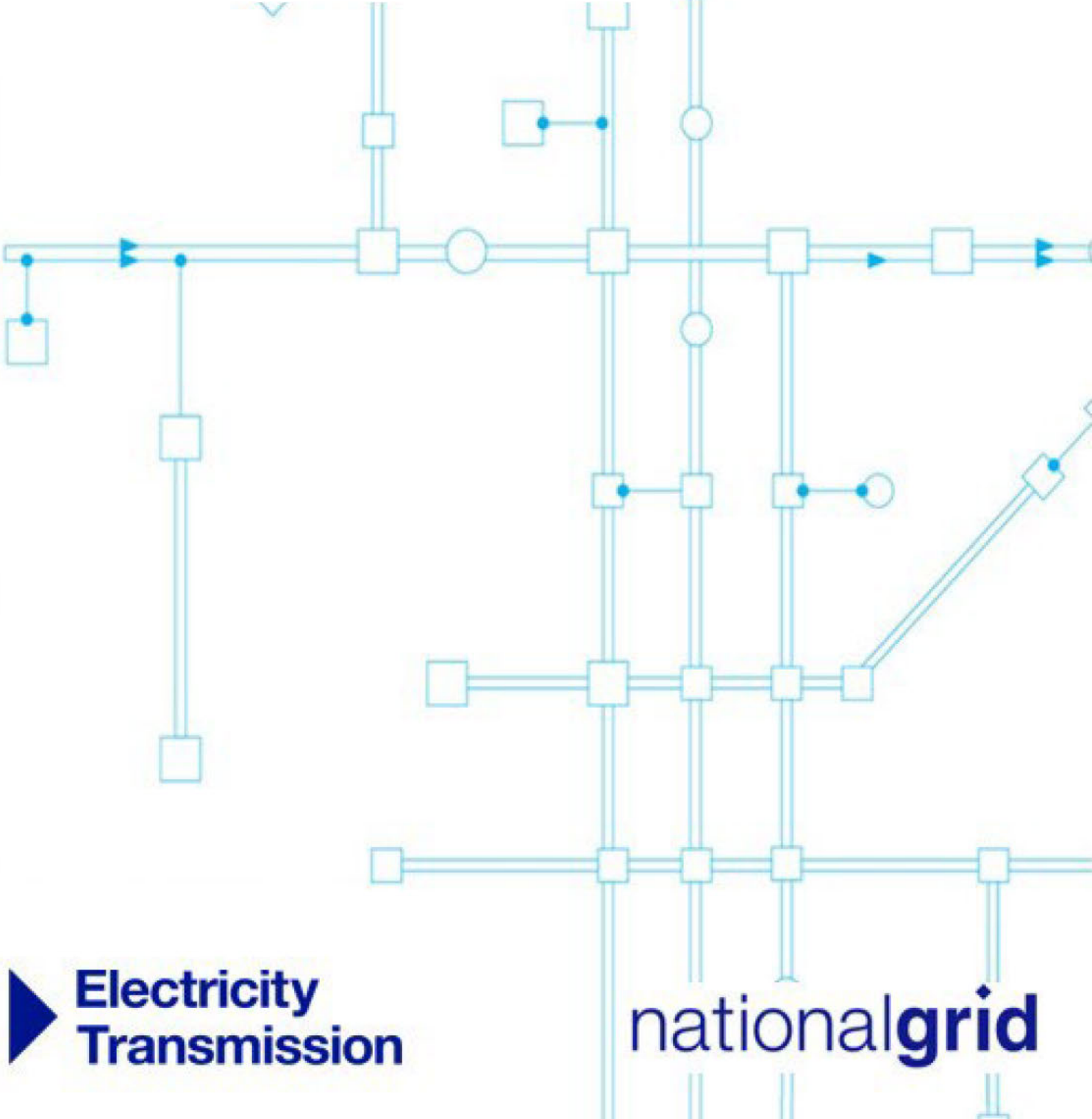
RIIO-T3

Didcot

Project Assessment Submission

October 2026



Electricity Transmission

nationalgrid

Contents

Reference and summary table iv

Executive summary vi

1. Introduction 1

1.1 Context 1
1.2 Drivers 1
1.3 Output of the investment 2
1.4 Changes since Final Needs Case (FNC) 3
1.5 Cost 5
1.6 Risk approach 6

2. Detailed developments 7

2.1 Customer connections and bay allocation 11
2.2 Security Requirements 13
2.3 Construction works 14
2.4 Land and consents 14

3. Costs 16

3.1 Investment costs 16
3.2 Cost drivers 20
3.3 Updated Cost Benefit Analysis 27
3.4 Benchmarking 28
3.5 Risk 29
3.6 Ongoing efficiency and real price effects 37

4. Deliverability and procurement 39

4.1 Delivery strategy 39
4.2 Programme structure and milestones 41
4.3 Supply chain capacity and outage planning 45
4.4 Procurement 46

5. Conclusion 48

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: Transmission route map, Didcot highlighted in Green box 3
Figure 2: 3D view of Didcot Substation 8
Figure 3: 3D view of 132kV GIS Substation at Didcot Substation 9
Figure 4: Key risk themes for Didcot by contingency values (23/24 prices) 30
Figure 5: Risk benchmarking – risk as a % of project base cost estimate (total cost less risk estimate) 36
Figure 6: Delivery team structure 41
Figure 7: Project location - transmission route map B1
Figure 8: Project location - road map B2
Figure 9: CDM plan of welfare area D2
Figure 10: CDM plan of the construction area D4
Figure 11: Project land rights required E1
Figure 12: Scenario 1 - Programme plan for preferred solution K2
Figure 13: National Grid procurement approach O2
Figure 14: [redacted] option differences O3

List of tables

Table 1: Cost breakdown summary (23/24 prices) 6
Table 2: Didcot risk allowance inputs 6
Table 3: Detailed development highlights 7
Table 4: Sequence of events 11
Table 5: Details of signed customer connections. 12
Table 6: FNC table detailing number and type of bays 13
Table 7: Costs headlines 16
Table 8: Overall project cost summary (£m, 23/24 prices) 19
Table 9:Cost drivers for each cost category 20
Table 10: Main Works Costs 22
Table 11: Main works contractor (23/24 prices) 23
Table 12: SGT procurement and install 25
Table 13: Third party costs 25
Table 14: Benchmarking 28
Table 15: Key risk themes identified for Didcot 30
Table 16: QSRA Summary against the deterministic programme forecast of [redacted] 32
Table 17:Key project risks for Didcot – top 5 by cost-factored current EMV, 23/24 prices 33

Table 18: Deliverability and procurement headlines 39
Table 19: Project delivery dates 42
Table 20: Planned Outage Windows and Durations 46
Table 21:Table of abbreviations and definitions A1
Table 22: Temporary interests E1
Table 23: Permanent rights E2
Table 24: Didcot organisational structure F1
Table 25: [redacted] O3
Table 26: [redacted] O4
Table 27: Procurement approach for the project O5
Table 28: Key deliverables [redacted] O5
Table 29: Procurement process timeline O6

Reference and summary table

Field	Description
Project Name	Didcot
TO's preferred re-opener track	Track 3 Project Assessment (PA)
RRP references	[redacted]
BPDT / Scheme reference number	[redacted]
Load Board reference	NGT500537 NGT300363 NGT300364
Investment driver(s)	Customer Connections: [redacted] Data Centres ([redacted]) and 1 x Battery Energy Storage System (BESS) ([redacted]) capacity.
Project outputs	• Extension of the existing Didcot 400kV substation, including [redacted] • A new [redacted] bay indoor SF6-free 132kV Gas Insulated Switchgear (GIS) substation, with design provision for expansion to [redacted] bays [redacted]
PASE alignment	The preferred Didcot solution is not aligned with PASE primary or variant options; however, it has been selected based on project-specific constraints and wider consumer benefits, including deliverability, land requirements, future operability and whole-life value
Costs (23/24 prices)	Total Project Cost: [redacted] Total Allowance Request: [redacted]
Delivery year	Available for Commercial Load (ACL) date: [redacted] Project completion: [redacted]
Extension cost	[redacted] per bay for additional 132kV bays within the space provision.

Field	Description
Applicable reporting tables	RRP E1.11 and BPDT 10.5 (Pipeline Log).
Interactive projects	• Uprating of the Cowley -Walham / Cowley Minety 400kV circuit cables [redacted]. • Uprate the Bramley - Melksham 400kV circuits 1 & 2 [redacted] Uprate A861 Walham-Cowley (future Walham-Botley West & Botley West –Cowley) 400kV circuit overhead line [redacted]
Historic funding interactions	T1 Load: NG-06632 / NG-06687 [redacted] NG-00202, NG-00077, NG-00068, NG-03857, NG-03858 [redacted] No historic funding relates to the load driver for this investment
Spend apportionment	**T2 (FY -2022-2026)** / **T3 (FY -2027-2031)** / **T4+ (FY -2032-2037+)** [redacted] / [redacted] / [redacted]

Executive summary

Project summary

The Didcot project extends the existing Didcot 400 kV Air-Insulated Switchgear (AIS) substation in South Oxfordshire and constructs a new 132 kV SF_6-free Gas-Insulated Switchgear (GIS) substation on the expanded site, providing capacity for contracted demand and generation customers in the region. The project comprises a [redacted] bay extension at 400kV, [redacted] a [redacted] bay 132kV GIS substation and a [redacted] control building, together with associated cabling, protection, control and civil works. The 132kV building includes space provision for a further [redacted] bays.

Submission purpose

This Project Assessment seeks Ofgem's approval of an allowance of [redacted] to deliver the Didcot 400kV substation extension and new 132kV GIS substation, and the setting of the outputs listed in the reference table, together with their delivery date, as a Price Control Deliverable. The submission is made under Special Condition 3.18 and in accordance with Ofgem's RIIO-ET3 Load Re-opener Guidance. It follows National Grid's LOTI Final Needs Case (FNC) of November 2024, which remains subject to Ofgem determination. Consistent with the ET2/ET3 crossover arrangements, the investment was originally progressed under Special Condition 3.13 and is brought forward for cost assessment through the RIIO-ET3 Load Re-opener.

Description of the investment

Extending the existing Didcot 400kV substation, constructing a new SF_6-free 132kV GIS substation [redacted] bays) on the expanded site. The building is constructed with space for a further [redacted] as a future extension, which are not delivered here. At 400kV, the works deliver a [redacted]-bay extension, connecting [redacted] associated cables (400kV and 132kV) and switch gear.

Main changes since the Final Needs Case submission

Since FNC, the project has progressed through procurement, detailed design and early construction, resulting in a number of changes to the detailed design. These are consistent with normal project development and do not alter the preferred solution established at FNC.

- Customer connections following Connections Reform – [redacted] battery storage connections included at FNC did not secure Gate 2 offers. The confirmed customers now driving the investment are [redacted]

- Additional enabling and temporary works – detailed design and stakeholder engagement identified enabling works [redacted] to provide separation from adjacent third-party land, part of which has been delivered through an existing framework contract.
- Tender price and programme – following contractor acceptance in [redacted], the cost and delivery programme have matured from the FNC estimates, with a number of consequential design and programme developments.
- Updated cost position – the FNC estimate was [redacted] in 18/19 prices, equivalent to [redacted] in 23/24 prices. The Project Assessment submission is [redacted] (23/24 prices). This represents an [redacted] relative to the equivalent FNC estimate.

Costs, risk and value for consumers

The total project cost (23/24 prices) is [redacted] Cost certainty is high: [redacted] of total project costs are fixed or agreed re-measurable, and [redacted] has already been incurred, with the project [redacted] into construction. We have applied a structured risk management and Quantitative Risk Analysis approach. Cost assurance activities – including a formal Tender Query challenge of the contractor's price build-up, reducing [redacted] cost by [redacted] – support our view that the costs are efficient for consumers.

Procurement and delivery strategy

The main works are delivered by [redacted] as Principal Contractor under a [redacted] contract, awarded in [redacted] through National Grid's competitively-let Substation Construction Engineering, Procurement and Construction (EPC) Framework. This approach allows for:

- Competition established at framework entry by open competitive tender;

[redacted]

- Early procurement of long-lead equipment – the [redacted], and the 132kV GIS and 400kV GIB ordered through [redacted];
and
- A [redacted] managing the technical interface across the 400kV extension and the 132kV GIS build.

Benchmarking and efficiency assurance

The majority of the investment comprises conventional scope – the 400kV substation extension, [redacted] civil works, cabling, protection and control, and project indirects – which we have benchmarked directly against comparable substation extension and construction projects. For the 132kV GIS itself, we have used a cost-per-bay comparison against conventional (SF_6) GIS of equivalent rating to test the underlying build cost, identifying the SF_6-free element separately rather than absorbing it into that comparison. Deployment of SF_6-free at 132kV remains limited, so directly comparable benchmark data is not yet available; the cost difference against conventional GIS reflects a market-tested price secured through the [redacted]

1. Introduction

1.1 Context

This Project Assessment (PA) submission, together with the associated Cost Model and supporting appendices, provides information to Ofgem to allow it to assess the proposed allowance for the extension of the Didcot 400 kV substation and the construction of a new 132 kV GIS substation – a project driven by customer connection requirements in South Oxfordshire. The works are delivered within National Grid's existing leasehold site and adjoining [redacted] under permitted development rights. Topics considered in this PA include changes since the FNC was submitted, costs, risks, procurement and delivery. Since submission of the FNC in November 2024, and while Ofgem's assessment has been ongoing, we have continued to progress delivery so that the customer connection dates are not put at risk:

- In [redacted] we awarded the main works contractor [redacted] under an [redacted] contract.
- Construction commenced in [redacted]
- Orders have been placed for all equipment, with manufacturing of the 400kV equipment and the 132kV GIS bays from [redacted] underway.

At the time of this submission, no FNC determination has been received since submission in November 2024 (c. 22 months), delivery had had to continue to protect contracted connection dates, and the PA is therefore brought forward now for cost assessment under Special Condition 3.18 (Load Re-opener and Price Control Deliverable) and in accordance with Ofgem's RIIO-T3 Load Re-opener Guidance and application requirements.

1.2 Drivers

The primary driver for the investment is National Grid's licence obligation to connect the following contracted Gate 2 customers:

[redacted]

- [redacted] – Battery Energy Storage System (BESS) at 400kV

Connection dates are set out in Table 4.

These connections sit within a significant concentration of digital and energy infrastructure at the former Didcot A power station site. [redacted]

The wider regional context is set out in Appendix F, drawing on National Grid's engagement with Oxfordshire stakeholders and on the Oxfordshire Growth Commission's published

forecasts, which identify infrastructure capacity as an enabler of planned housing, innovation and economic growth in the area.

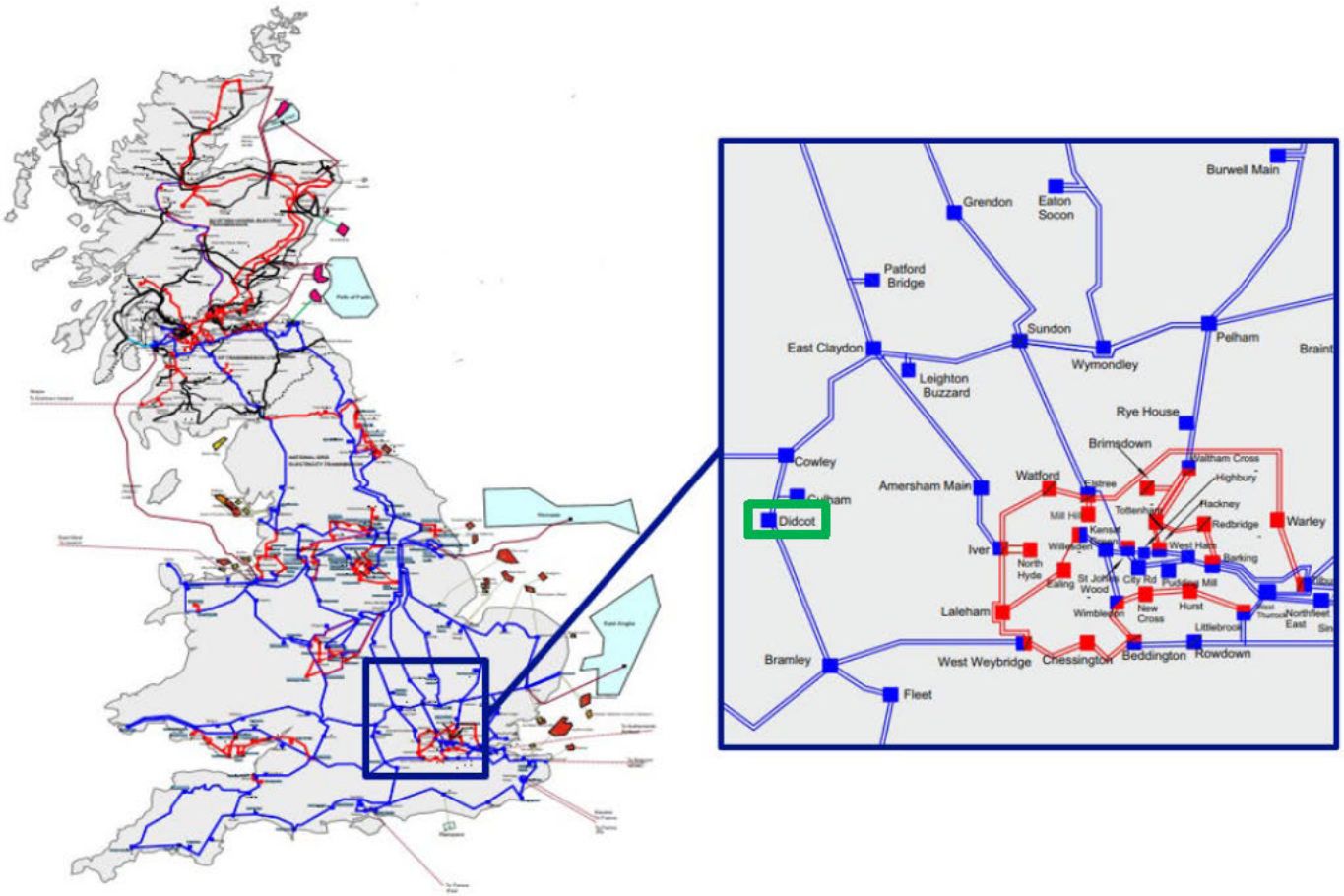
1.3 Output of the investment

The main investment outputs that will be delivered are:

- A [redacted] bay extension to the existing Didcot 400 kV substation, incorporating GIB connections to the series reactor and to [redacted] new [redacted] together with associated [redacted] works;
- [redacted] (supplied by National Grid), providing [redacted]
- A new double busbar SF_6-free 132 kV GIS substation [redacted] constructed to an ultimate design capacity of [redacted] bays, of which [redacted] are delivered within this investment: [redacted] bays [redacted] bays, [redacted] and [redacted]. The building provides space for a future [redacted] bay extension ([redacted] bay), not delivered within this investment (Section 2.1); and
- A [redacted] control building housing the [redacted]

Didcot is being constructed in South Oxfordshire near the A34. Please refer to Figure 1 for its location on the transmission network. This is also shown in Appendix B, along with a road map showing the location of Didcot.

Figure 1: Transmission route map, Didcot highlighted in Green box



1.4 Changes since Final Needs Case (FNC)

Since submission of the November 2024 FNC, the project scope and delivery assumptions have evolved as part of the normal course of project development, together with some changes to customer connections following Connections Reform. The preferred solution remains the extension of the Didcot 400 kV substation and the construction of a new 132 kV GIS substation (Option D-1). The changes described below arise from external policy change, customer contracting, design maturation and detailed stakeholder engagement; none materially alters the design or the consumer case established at FNC. Any additional works are captured within the current construction programme and secured access windows to avoid the materially greater cost, disruption and delay of undertaking them separately in the future. For each change, the detailed evidence, cost and programme impact are provided in Section 2 (Detailed developments) and Section 3 (Costs).

Connections Reform

[redacted] customers included at FNC did not secure Gate 2 offers under the NESO-led Connections Reform process and are no longer part of this investment [redacted]. The confirmed customers now driving the need are set out in Section 2.1. The [redacted] 132kV bays and [redacted] 400kV bay associated with those connections had already been manufactured against the FNC scope and are installed within this investment as unallocated feeder bays. This avoids leaving manufactured equipment unused and future-proofs the substation by providing feeder capacity that can be used for future connections without requiring further construction and outages on the operational substation.

Design review of the 132 kV GIS hall

Following confirmation of the Gate 2 customer contract, we ran a full design review of the GIS hall layout and bay configuration to confirm the solution remained right. The review resulted in additional detailed design and construction scope, refining the configuration to reflect confirmed customer requirements rather than the indicative assumptions available at FNC. The preferred solution is unchanged.



Additional enabling, temporary and interface works

Further scope developments have been identified through detailed design and stakeholder engagement:

- Additional temporary works to provide physical separation between National Grid's works and adjacent third-party land, managing interface and access risk during construction.
- Enabling works to the 400kV Substation Control System, the full scope of which was not known at FNC and has been defined through detailed design. Part of these works has been awarded to [redacted] – an efficient outcome for consumers.
- A requirement, identified through a survey of the existing surface water main, to [redacted]. This adds cost to the project but has been accommodated within the current programme with no prolongation.
- Detailed design and hazard reviews identified that cable support structures are required upfront for all 132 kV user connections. Once the initial user cables are installed, the remaining space would be insufficient to install further support structures safely. Installing the structures during the current works avoids later intervention within a constrained operational environment and supports safe, efficient delivery of the contracted connections.
- Engagement with the 132 kV users and review of the relevant connection agreements confirmed that [redacted] are required within National Grid's scope. Incorporating the [redacted] within the current works provides a coordinated [redacted] solution and avoids a subsequent interface with the completed installation.

- Following development of the detailed stage-by-stage outage plan, National Grid Planning and NESO agreed a revised outage strategy in [redacted]. The revised strategy uses [redacted] outage periods and requires a change in construction methodology to [redacted]. Subcontractor activities have been rescheduled and coordinated with the revised access windows, supporting safe construction while maintaining operation of the transmission system – further details on outages in Section 4.3.

Where the final cost or programme effect remains subject to detailed development, the submission includes the best available estimate at Project Assessment, with the relevant basis and assumptions identified in Section 3.

These are design-maturation and detailed engineering changes typical of progression from FNC to Project Assessment. Where they add cost, the works are being delivered within the existing programme and site mobilisation, avoiding the additional cost and disruption of returning to undertake them separately.

Phased delivery of [redacted]

Extending the 400kV substation required the diversion of an [redacted] that feeds the existing substation. Following engagement with [redacted] we agreed a phased diversions in line with our construction programme.

The phased approach costs more – it requires the civil works to be carried out in stages and a temporary generator arrangement for six months – but it allowed the works to be sequenced around the construction programme, avoiding any impact on the critical path or on the customer connection dates.

Procurement and contracting process

We awarded the main works contract to [redacted] in [redacted], under an [redacted] contract, through National Grid's substation Construction EPC Framework. The [redacted] were competitively tendered and [redacted], and the 132kV GIS and 400kV GIB were procured from [redacted]. Enabling works to the 400kV substation control system were awarded [redacted]. Further detail is provided in Section 4.4 and Appendix O.

Updated delivery programme

Stage 2 commissioning of the 132kV circuits is now forecast for [redacted] date assumed at FNC. The movement reflects a [redacted] to contract award, a further [redacted] added to the construction programme in the contractor's submitted programme, and subsequent developments during detailed design. The revised customer connection dates are set out in Table 5, and the programme is detailed in Section 4.2 and Appendix D.

1.5 Cost

The total project cost for delivery of Didcot is [redacted] (23/24 prices), with [redacted] of total project costs fixed or agreed re-measurable, meaning they are either fixed or subject to change through a clear and agreed variation process. Of this, [redacted] has been incurred as actual expenditure to date, as of [redacted], with [redacted] forecast to complete.

[redacted]

1.6 Risk approach

The Didcot project includes a risk allowance of [redacted] (23/24 prices), constituting [redacted] of total underlying project costs. The risk cost represents [redacted] of the remaining cost to go for this submission.

The risk allowance reflects the uncertainty associated with delivering a complex transmission infrastructure project and has been derived through the project's comprehensive QRA process. The project risk register captures [redacted] risks across nine themes: project management (including outage approvals and third-party interfaces), requirements and scope definition, design, procurement and supply chain, commissioning, implementation, and the operating, financial and natural environments (Table 15).

[redacted]

Didcot provides a cost efficient, consumer orientated investment supporting current and future demand. The extension of the existing 400kV substation and the new 132kV SF_6-free GIS substation enable timely connection of [redacted] meeting both licence requirements and UK decarbonisation and economic growth initiatives. Cost efficiency has been secured through a market-tested contractor price awarded under the [redacted] of the [redacted] transformers, and [redacted] contract providing full transparency of contractor costs. This is supported by a risk provision commensurate with the project's advanced stage of delivery, with [redacted] of costs already incurred and the associated risks retired.

2. Detailed developments

Table 3: Detailed development highlights

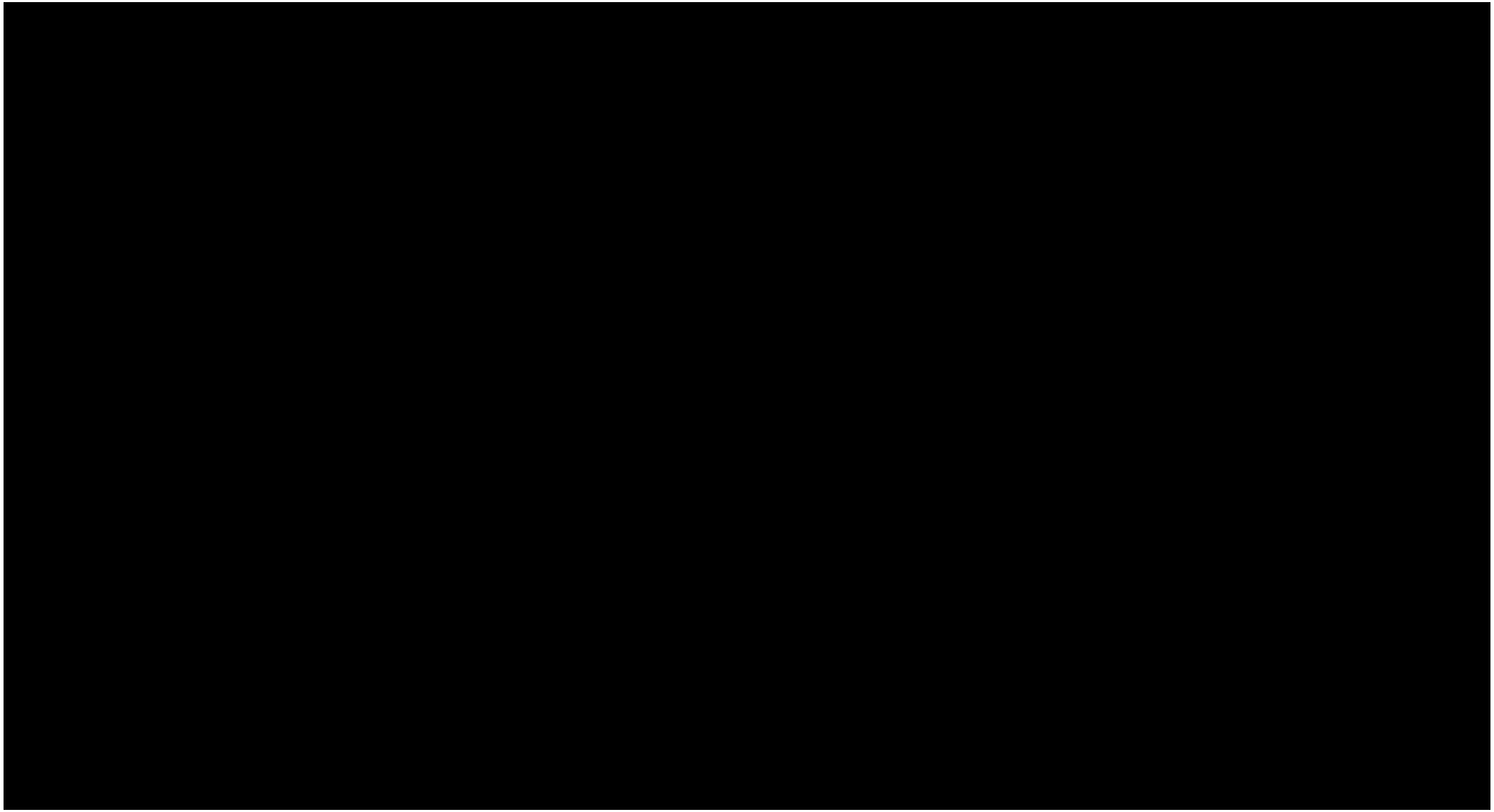
Headlines
Overall, the principal design concept has remained consistent since FNC, with refinements to reflect the revised customer connections following Connections Reform and [redacted] These changes are necessary to meet legislative and customer connection obligations and do not materially affect the consumer benefits of the investment. Construction commenced [redacted] and is well advanced, representing a substantially de-risked delivery position.

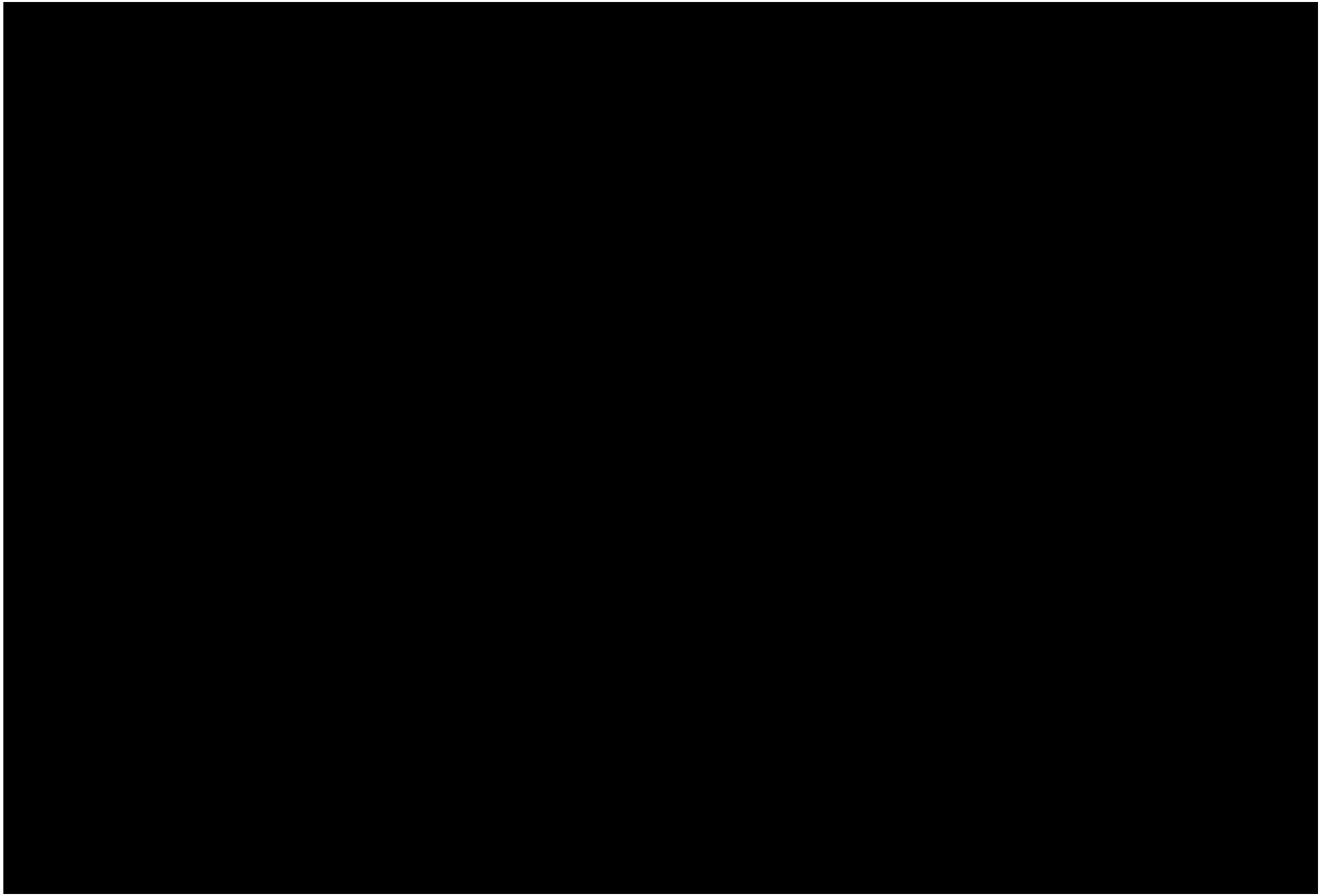
The investment remains fundamentally consistent with the solution established at FNC – an extension of the existing Didcot 400 kV substation incorporating [redacted] new [redacted] together with a new 132 kV SF_6-free GIS substation delivering [redacted] bays, with space in the building for a further [redacted]

Since FNC, the appointment of [redacted] has enabled the detailed design to be progressed and phased to support early construction, release of key equipment for manufacture and commencement of outages, prioritising the primary plant layout for the 400kV extension and 132kV GIS building alongside demolition, earthworks, and civils design.

The refinements arising through detailed design – principally the review of the 132kV GIS hall layout and bay configuration following Connections Reform, and the [redacted] – do not alter the design established at FNC. The final design is shown in the 3D views at Figures 2 and 3 and the substation layout at Figure 4, with the full technical scope provided in Appendix C.







2.1 Customer connections and bay allocation

At FNC the investment was underpinned by [redacted] signed connection agreements totalling [redacted] – [redacted] data centre demand connections ([redacted]) and [redacted] Battery Energy Storage System (BESS) generation connections ([redacted]). The preferred solution (Option D-1) was a [redacted]-bay extension of the existing 400kV substation [redacted], and a new [redacted]-bay 132kV SF_6-free GIS substation, with design provision for [redacted] and further 132kV headroom for an overall [redacted] bay configuration.

Table 4: Sequence of events

Key delivery date	Definition
November 2024	FNC submitted – [redacted] signed connection agreements [redacted]
[redacted]	Main works contract awarded to [redacted] detailed design commenced
[redacted]	132kV GIS bays purchase order issued
[redacted]	First Site Access; demolition and earthworks commenced
[redacted]	NESO published the confirmed Gate 2 list – [redacted] BESS did not receive offers
[redacted]	Customer re-engagement and revised GIS hall bay configuration

By the point the Gate 2 outcome was known, the scope had been designed and procured, [redacted] with no offsetting benefit. Installing them as [redacted] therefore delivers value for the cost already committed.

In December 2025 NESO published the confirmed Gate 2 list. [redacted] of the [redacted] FNC customers – [redacted] – did not receive Gate 2 offers and no longer form part of this investment.

The [redacted] customers holding confirmed Gate 2 positions, outlined in Table 5, are the driver for this investment and the sole basis of the allowance requested.

[redacted]

During [redacted] we engaged all remaining and prospective customers to confirm entry points, cable numbers and bay requirements, and revised the 132kV GIS hall layout and bay configuration accordingly once the Gate 2 outcome was known, as highlighted in Table 6.

Effect on scope and cost. Connections Reform has not resulted in abortive expenditure or a reduction in the core scope required at Didcot. Retaining the previously planned infrastructure provides value to consumers by making efficient use of already committed equipment and providing capacity for future connections, reducing the need for further construction and outages on the operational substation.

- [redacted] The connection was a user-build, so no National Grid cost was incurred against it. [redacted]
- [redacted] The GIS bays were already under contract when the Gate 2 outcome was known. [redacted] The same applies to the 400 kV bay previously allocated to [redacted], which is installed as [redacted] The cost of installing these bays is included within the allowance requested. No connection or one-off charges are recovered from the withdrawn connections.

[redacted] and the [redacted] were deemed terminated following the Gate 2 outcome in [redacted] No connection or one-off charges are recovered from the withdrawn connections.

Provision for future connections. The 132 kV building is constructed to an ultimate capacity of [redacted] with entry points and ducting installed for the [redacted] future positions while the building is under construction. Neither those bays nor the [redacted] identified at FNC are delivered within this investment. Further customers may connect at Didcot depending on the outcome of Connections Reform; any such works would be brought forward as a separate submission and assessed on their own merits.

[redacted]

2.2 [redacted]

[redacted]

[redacted]

2.3 Construction works

First Site Access (FSA) was achieved in [redacted], and construction is well advanced. [redacted] were completed to establish [redacted], followed by [redacted] By [redacted], ready for delivery of the SGTs to site. At the time of writing, [redacted] The remaining works – comprising the [redacted] – are scheduled through to completion in [redacted] The full construction sequence and programme are set out in Appendix D.

The achievement of [redacted], represents a significant de-risking of the project: the risks associated with contract award, mobilisation, enabling works and the [redacted] so that [redacted] of the submitted cost is incurred expenditure rather than forecast.

Construction has progressed largely as planned. Ground conditions have presented only limited issues, [redacted], which has been managed without material impact to the programme. A period of heavy rainfall in excess of the 10-year average in early 2026 required limited remobilisation; this was absorbed with no impact to the project programme, and the associated cost is captured within the cost model (Section 3 and Appendix G).

The principal cost and programme developments since FNC relate to the timing of contract award and the subsequent adjustments to customer connection dates, explained in Section 1.4 and detailed in Appendix D. These developments reflect the normal course of project development and do not alter the preferred solution or the consumer case for this investment.

2.4 Land and consents

The substation extension and new 132 kV GIS substation are delivered within National Grid's existing leasehold site at Didcot, together with adjoining land secured [redacted] through an eastward extension of National Grid's existing lease. The wider former power station site is largely flat and previously developed, but is not land available to National Grid: the existing substation sits on leasehold land within a [redacted] The only parcel able to take a larger footprint lies [redacted], is [redacted], over which National Grid holds no rights. It is additionally constrained by overhead line oversailing, a [redacted] and [redacted], and was assessed as adding approximately [redacted] to delivery.

As set out at FNC, Option D-1 was selected in part because it sites the works on land available to National Grid under permitted development rights. This removed land acquisition and consenting from the critical path: the site was available to build on without a separate planning application or the use of statutory powers. The alternative larger-footprint arrangement required a separately owned parcel to the east, with its own acquisition and consenting programme and resolution of overhead line, [redacted] assessed as

adding approximately [redacted]. A separate major planning application on the existing site could have delayed the connections by up to a year. Either route would have deferred the connection of [redacted] of contracted demand and generation capacity at Didcot, and the private investment and regional growth it supports (Section 1.2).

The permanent land interest was secured through a deed of variation to National Grid's existing 1990s lease, completed with all parties on [redacted] The land and rights were acquired voluntarily without recourse to statutory powers; compulsory purchase was not required or proportionate where the rights could be secured by agreement. Completing voluntarily, and ahead of FSA in [redacted], removed land tenure as a delivery risk. The rights secured relate to the scope delivered within this investment.

Primary consent was obtained under permitted development rights: National Grid notified the Local Authority on [redacted], and Vale of White Horse District Council confirmed approval of the design and external appearance on [redacted], allowing enabling works to proceed alongside detailed design. Secondary consents will be obtained by the Main Works Contractor and are not a constraint on the current programme. Further detail on temporary and permanent rights and associated consents is at Appendix E.

3. Costs

Table 7: Costs headlines

Headlines
Total project costs for Didcot are [redacted] (23/24 prices). Costs are firm, with [redacted] of costs fixed or agreed re-measurable, reflecting the awarded [redacted]. Benchmarking confirms costs are reasonable: the main works price is within [redacted] of NGET's independent estimate, and the unit rate of [redacted] (normalised to the [redacted]-bay GIS infrastructure is [redacted]. The PMean risk allowance required is [redacted] representing [redacted] of the total project costs [redacted].
An updated Cost Benefit Analysis (CBA) has not been produced, as the project has not triggered a Material Project Change: the cost of [redacted] above the [redacted], against a materiality threshold of [redacted]. There has also been no change to the preferred option or engineering design. There has also been no change to the preferred option or engineering design. The CBA produced at Final Needs Case therefore remains valid and continues to demonstrate the consumer case for this investment.

3.1 Investment costs

The cost to deliver the Didcot project in line with the proposed scope is [redacted] (23/24 prices). The cost model is available in Appendix G and a cost summary is provided in Table 8. Appendix P contains the Regulatory Reporting Pack (RRP)-compliant submission required by Ofgem's Load Re-opener Guidance.

This section provides a description of the overall costs, the price base, a detailed breakdown of costs and a summary of cost firmness. The costs provided include actual costs incurred to date and a forecast profile of future costs to complete. Costs cover all activities on the project, including development, design, procurement, construction, commissioning, land and access, consents, third-party costs, internal costs, inflation and risk. All costs are presented in 2023/24 prices unless stated otherwise. [redacted]. Expenditure is apportioned [redacted] in the RIIO-T2 period and [redacted] in RIIO-T3, with no expenditure falling beyond the T3 period.

The FNC baseline for the preferred option is [redacted] (23/24 prices), derived from the [redacted] (18/19 prices) market-engagement estimate. Two cost figures were presented at FNC: an [redacted] estimate of [redacted] (18/19 prices), and a [redacted] estimate of [redacted] (18/19 prices) obtained subsequently. The [redacted] figure is used as the baseline as it reflects actual supply chain pricing rather than cost-book assumptions. As an annual cost breakdown was not available for the market -engagement estimate, the FNC cost profile has been scaled to the [redacted] total.

The current PA cost of [redacted] (23/24 prices) reflects the maturing of estimate through detailed design, procurement and contractor award, and primarily comprises:

- Market-tested contractor and equipment pricing, replacing the earlier cost-book and supply chain engagement estimates;
- Scope developments since FNC, [redacted]
- Cost movements identified through detailed design, including enabling works to the 400 kV substation control system and additional temporary works (Section 2); and
- Programme and inflation-related movements over the extended delivery period, as described in the Introduction and Appendix D.

Delivery pace and Government growth priorities. Didcot is being delivered against a national expectation that electricity infrastructure keeps pace with growth. Oxfordshire is one of the UK's most significant innovation economies: the Oxfordshire Growth Commission forecasts economic growth from £38.4bn in 2023 to £64.9bn by 2050 and approximately 218,000 additional jobs, and identifies Didcot as one of 13 strategic growth opportunity areas, with capacity across those areas to support more than 100,000 homes. The Commission identifies infrastructure capacity as a key enabler of that growth. The cost position presented here reflects a project progressed at that pace.

Our internal assurance supports these costs as efficient and robust, corroborated by benchmarking against comparable projects as detailed in Section 3.4. The cost movement since FNC remains within the material change threshold set out in the Load Re-opener Guidance – the greater of 50% of forecast or £50m – and the investment therefore remains within the scope of the original approval.

Cost assurance

Costs have been subject to internal assurance to confirm efficiency and value for consumers. The procurement route and supplier allocation are explained in Section 4.4 and Appendix O. Following allocation [redacted] was subject to [redacted] challenge, including [redacted] and a Best and Final Offer. This reduced the resubmitted target cost by [redacted] before agreement.

As an [redacted], [redacted] gives National Grid [redacted]

The [redacted] also provides ongoing cost assurance throughout delivery. The [redacted]

[redacted]

Cost assurance has also been applied to the [redacted] and [redacted] equipment, which represents a significant proportion of project cost:

[redacted] The [redacted] were competitively tendered through [redacted]

- The 132 kV GIS and 400 kV GIB were procured from [redacted] via the main works contractor, which secured a cost reduction of [redacted] on the 132 kV GIS through tender negotiation – See Appendix O
- Enabling works to the 400 kV substation control system were awarded to [redacted] via an existing framework, delivering a cost and programme benefit relative to a standalone procurement.

More detail on the cost assurance process, together with evidence of key cost drivers, is provided in Appendix H. Our projected costs have been benchmarked against investments of similar scope, nature and complexity, drawing on our extensive experience of electricity transmission construction programmes. Our benchmarking analysis, summarised in Section 3.4, shows that Didcot's cost of [redacted] per installed bay is within the comparator range of [redacted] per bay. When normalised to reflect the infrastructure provided for the ultimate [redacted] configuration, Didcot's equivalent unit rate reduces to [redacted] per bay, approximately [redacted], giving us confidence that costs are efficient and aligned with industry comparators.

[redacted]

[1] [redacted] represents [redacted] as stated in the cost model

3.2 Cost drivers

Table 9 provides narrative defining the key cost drivers in the Didcot investment linked to the activity.

Table 9:Cost drivers for each cost category

Activity	Description
Main works contractor	Contractor site project management, supervision and preliminaries across the full construction period, including site establishment and welfare. Completion of detailed electrical and civils design following Front-End Engineering Design (FEED) Surveys and investigations: ground investigations, topographical, utility and asbestos surveys Enabling works [redacted] Civils: [redacted] SGT bunds and foundations, GIS hall and annex control building foundations, internal roads, drainage, ducting and cable containment [redacted] bay 400kV AIS extensions Installation of the 400kV GIB connections to [redacted] and to the series reactor New SF_6-free 132kV GIS substation Buildings: 132kV GIS hall and [redacted] annex control building Substation cabling, common electrical, LVAC/DC systems and batteries Feeder protection and Substation Control System works, including [redacted] Perimeter fencing and gates Temporary works, including physical separation from adjacent third-party land and works associated with the revised construction methodology Stage 1 and Stage 2 commissioning of the 400kV and 132kV circuits [redacted] Contractor compensation events arising since award Contractor-priced risk, excluded from the National Grid Quantitative Risk Analysis (QRA) to avoid double-counting Contractor fee

Activity	Description
Third party costs	Costs linked to the following procured activities, further detailed in Table 13: [redacted]
Direct procurement	Design, manufacture and Factory Acceptance Test (FAT) of [redacted] SGTs, procured directly from [redacted] Delivery and transhipment of the [redacted] Installation and Stage 1 commissioning of the SGTs and ancillary equipment
ET Ops	National Grid Staff Costs associated with project commissioning and Senior Authorised Persons managing safety from the system.
Project management	National Grid Staff Costs associated with project delivery
Project services[2]	Covering National Grid Staff Costs associated with project services: Health & Safety Compliance Support ([redacted] Quality Advisory Support ([redacted] External Affairs Support to manage and enable effective local stakeholder engagement to minimise potential project disruption ([redacted] Commissioning panel chair support ([redacted]
Lands	Price for the land – a deed of variation to National Grid's existing 1990s Didcot lease National Grid professional contractors such as legal and surveyor services and third-party professional costs. As well as any additional taxation (VAT SDLT) as relevant Temporary rights and access agreements with [redacted] and [redacted] for laydown and construction working space

[2] Note: the £[redacted] Community Fund is funded and administered separately and is not included within this allowance request (see Appendix F).

Activity	Description
Consents	Primary consent obtained under permitted development rights – Local Authority notification and Vale of White Horse District Council approval fees Secondary consents obtained by the Main Works Contractor Ecological and environmental survey work supporting the consenting position
Legal	External legal fees associated with the deed of variation to the Didcot lease and the associated land rights agreements with [redacted] Commercial and contractual legal support during the tender, negotiation and award of the main works contract
NGET portfolio costs	NGET'S share of portfolio and indirect costs associated with the shared organisational capability required to deliver the project, including programme leadership, engineering, consenting, commercial, governance, digital and finance support.
Inflation	Forecast of cost increase over project duration ([redacted]
Risk	Costs associated with identified project risks (factored PMean from the QRA, covering National Grid-retained risk only)

Main Works Contractor costs are the most significant element making up [redacted] (23/24 prices), equating to [redacted] of the [redacted] total project cost. Table 10 presents the breakdown of Main Works costs and share percentage relative to total project cost.

[redacted]

This tendered lump sum accounts for [redacted] of main works costs and [redacted] of total project cost, reflecting a [redacted] under the [redacted] contract. The two remaining components reflect scope developed since contract award.

[redacted] relate principally to design development and assurance activity, interfaces with third parties [redacted], site conditions encountered during construction and enabling works to the existing 400kV substation control system. These are typical of a project of this scale at this stage of delivery, where detailed design is being completed in parallel with construction. Values are assessed on a prudent basis pending contractual agreement, and events where costs have already been incurred and settled are excluded.

[redacted]

Together these account for [redacted] of main works costs. Both are actively managed through the contract's commercial governance, and the position will continue to firm up as assessments are agreed.

Contractor costs

The contractor cost breakdown below reflects the scope and cost categorisation presented in the benchmarking report, which assesses the project at the point of contract award. Costs arising after contract award as the design and delivery scope has developed represent the natural evolution of the project and therefore do not form part of the initial contract-award benchmark. These costs are separately identifiable within the contractor cost breakdown below.

Table 11: Main works contractor (23/24 prices)

Activity	Description	Cost (£)
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]

Activity	Description	Cost (£)
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]

Activity	Description	Cost (£)
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]

Table 12 [redacted] procurement and install

Activity	Description	Cost (£)
[redacted]	[redacted]	[redacted]

Table 13: Third party costs

Activity	Description	Cost (£)
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]

Activity	Description	Cost (£)
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]

Activity	Description	Cost (£)
[redacted]	[redacted]	[redacted]

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.

3.3 Updated Cost Benefit Analysis

An updated CBA has not been produced for this Project Assessment. Under the Load Re-opener Guidance, an updated CBA is required only where Ofgem directs one following a Material Project Change. Didcot has not triggered a Material Project Change against any of the three thresholds:

- **Engineering design** – the preferred solution remains Option D-1, as proposed at FNC. The design refinements described in Section 2 adjust the detailed configuration of the scheme but do not change the core design, technology selection or extendibility.
- **Cost** – the pre-risk cost of [redacted] (23/24 prices) is [redacted].
- **Delivery timing** - the first customer connection date has moved from [redacted] at FNC to [redacted], a movement of [redacted]. The subsequent [redacted] Available for Commercial Load (ACL) date is [redacted] reflecting [redacted] deferral of its final investment decision pending a revised NESO connection agreement, rather than a change to the project delivery programme.

The FNC CBA is provided at Appendix J for reference.

3.4 Benchmarking



Benchmarking assessed approximately [redacted] of forecast project costs through a combination of comparator benchmarking, independent estimating, supplier quotations and market-tested procurement evidence. The assessment did not identify any material area of expenditure that appears inconsistent with the scope, complexity or delivery requirements of the scheme.

The Main Works contract, representing the largest element of project expenditure, was compared against an independently developed estimate prepared separately from the procurement process. The contractor's final agreed pricing was within approximately [redacted] of the independent estimate. This should not be interpreted as a "should-cost" assessment; rather, the contractor pricing and independent estimate were developed independently using different information sources and methodologies before demonstrating a high degree of convergence. Achieved following competitive procurement and commercial challenge, this alignment provides assurance that the final contract value is broadly consistent with both market-tested pricing outcomes and independent assessment of the required scope.

Unit-rate benchmarking against comparable transmission projects demonstrated that, following [redacted], the Didcot cost position compares favourably with principal comparator schemes. The assessment identified legitimate cost drivers associated with the scheme, including [redacted], which differentiate the project from simpler comparator projects.

Design, project management and specialist resource costs were also assessed and found to be broadly consistent with the scale, complexity and delivery requirements of the project. Portfolio costs were reviewed separately through assessment of governance arrangements, cost allocation methodologies and expenditure composition, with no material concerns identified regarding cost allocation or double counting.

Overall, the benchmarking assessment demonstrates that forecast costs are supported by multiple independent sources of validation, including competitive procurement outcomes,

independent estimating, market evidence and comparison with relevant transmission infrastructure projects. The assessment did not identify any material cost category requiring adjustment and supports the overall project cost forecast presented within this submission.

3.5 Risk

The QRA identifies a project risk allowance of [redacted] (23/24 prices). The allowance forms the basis of the risk allowance included within the Didcot cost model. The PMean risk allowance contributes to the Estimated Cost of Completion (ECC), which represents the most likely risk-adjusted cost position and forms the basis of the PA funding request. The allowance is the quantified sum required to manage uncertainty arising from estimating uncertainty, schedule risk and quantified discrete risks. It represents [redacted] of the [redacted] and [redacted]

Effective risk management has been embedded throughout the development, design, procurement and delivery planning of Didcot. The latest review demonstrates that the project remains deliverable to the forecast completion date; however, successful delivery continues to depend on effective management of outage availability and NESO approval, equipment type registration and delivery, third-party interfaces ([redacted] and user-driven design definition. These themes consistently emerge as the principal contributors to both schedule and cost uncertainty. The allowance also reflects a project approximately one third of the way through delivery: [redacted] of total costs are already incurred and the risks associated with contract award, mobilisation, enabling works and transformer manufacture have largely been retired.

Risks have been identified through multidisciplinary workshops involving engineering, commercial, procurement, planning and project management specialists, supported by contractor engagement and lessons learned from comparable NGET substation delivery. The resulting project risk register forms the basis of both the Quantitative Schedule Risk Analysis (QSRA) and Quantitative Cost Risk Analysis (QCRA), ensuring qualitative and quantitative assessments remain aligned to a common baseline. The register is reviewed monthly.

Risk priced by the main works contractor is excluded from the quantitative assessment in full, with [redacted] register reviewed against the project register to confirm no overlap. Risks transferred into the baseline, closed, or moved to standalone projects have been removed at the latest refresh, and only the residual exposure retained by NGET under shared-risk mechanisms is carried forward, so the allowance reflects downside exposure retained by NGET only.

Risk identification

A total of [redacted] risks have been identified for Didcot and grouped into risk themes, as summarised in Table 15. A comprehensive risk register is provided in Appendix M and further information on the risk management strategy is in Appendix F.

Figure 4 shows the distribution of risk by contingency theme. [redacted] The key individual risks driving the overall position are summarised in Table 17 below.

[redacted]

Risk exposure is concentrated within a small number of individual risks. The [redacted] largest risks account for [redacted] of total factored value and the five largest [redacted] In particular [redacted]

[redacted]



risks are assessed as time-impact only and carry no discrete cost in the QCR heir cost consequence is captured through the schedule-related cost component rather than discretely, avoiding double-counting the same prolongation exposure.

A comprehensive risk register is provided at Appendix M, with an excerpt in the cost model.

Quantitative risk analysis

QRA has been undertaken to assess the impact of uncertainty on delivery and determine the appropriate programme and cost allowance. The analysis is based on the latest approved programme, cost estimate and refreshed risk register.

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 and applied using a nd
- Discrete project risks – quantified cost impacts of individual risks

These components are combined using Monte Carlo simulation to produce probabilistic forecasts of cost and schedule outcomes. The allowance is requested on the Current Position at PMean, which reflects the residual risk profile at the date of the analysis. The Target Position has not been requested, as it assumes closure of mitigation actions that remain open and, in several cases, depend on third parties.

Quantitative Schedule Risk Assessment (QSRA)

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 schedule uncertainty are:

[redacted]

Sensitivity falls away steeply beyond these, confirming that programme exposure is concentrated within a small number of delivery drivers.

[redacted]

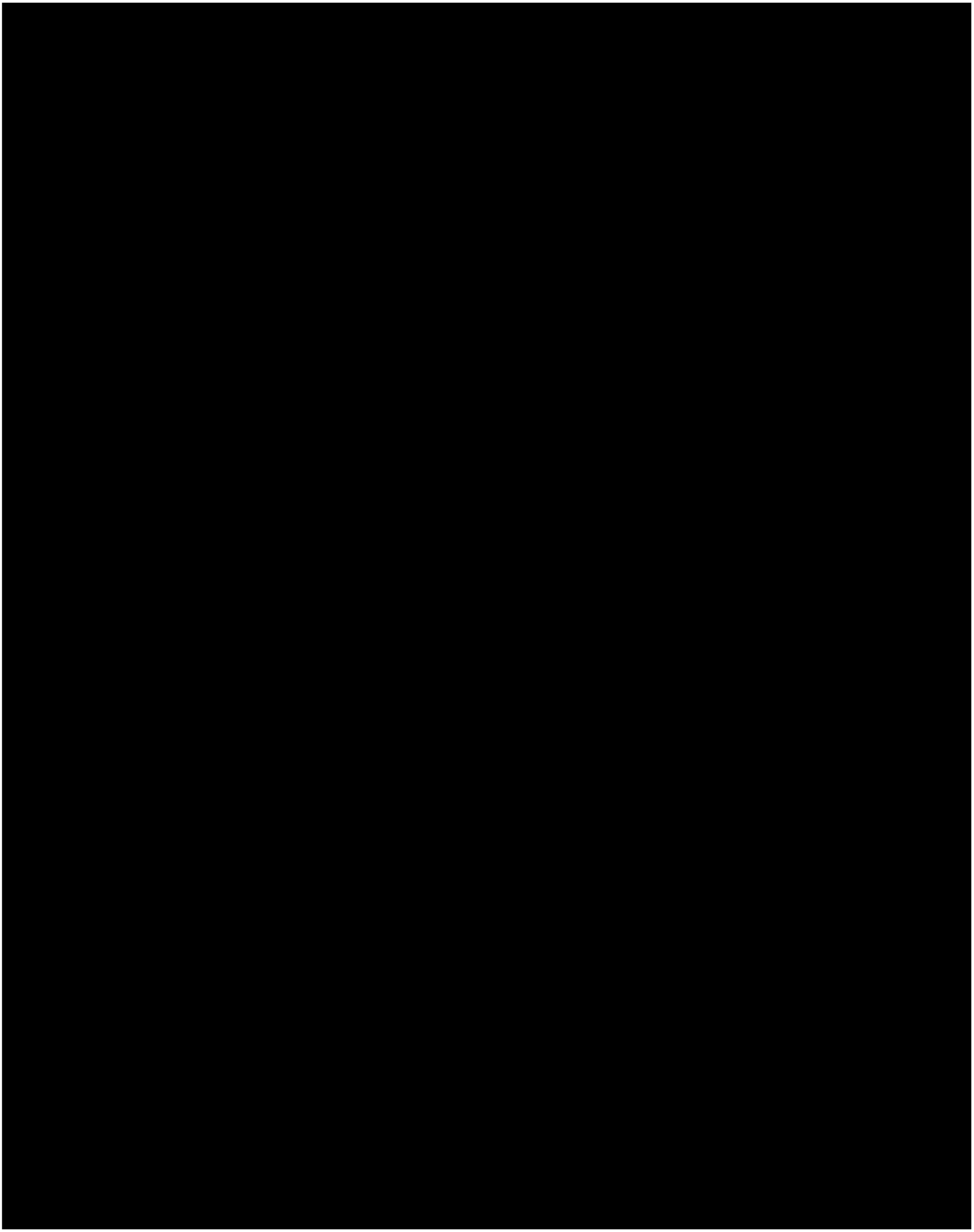
Quantitative Cost Risk Assessment (QSRA)

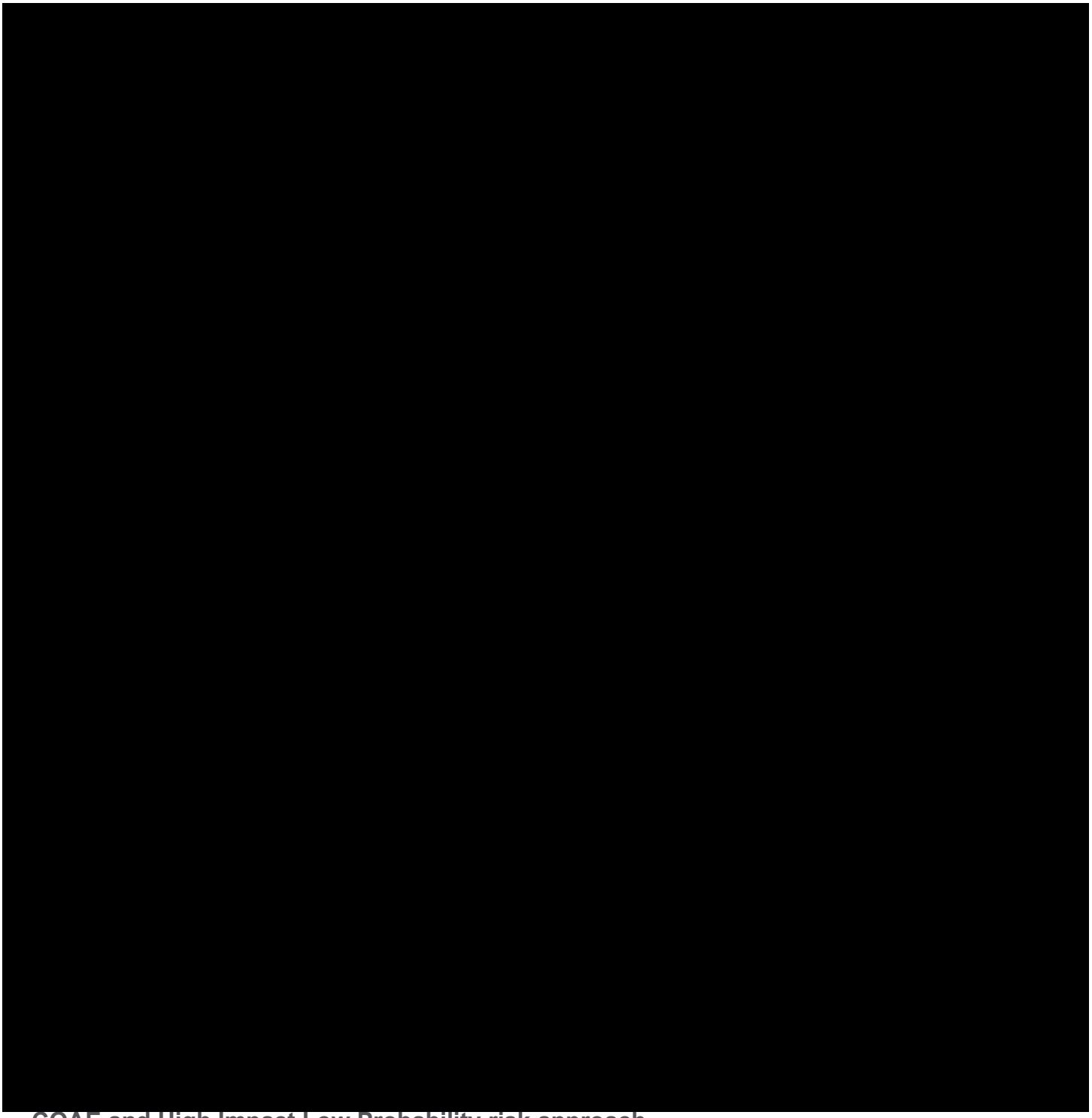
The QCRA forecasts a PMean risk allowance of [redacted] (23/24 prices), against a base cost of [redacted] comprising [redacted] This gives a Mean AFC of [redacted], consistent with the total funding request. Schedule-related cost is the largest component, consistent with the QSRA finding that programme exposure rather than discrete cost events is the dominant driver. The principal cost contributors align with the schedule drivers above, confirming that both share the same root causes.

[redacted]

Top 5 Quantified Discrete Project Risks by Cost-Factored EMV

The following table presents the five highest value discrete project risks in the Didcot risk register by Cost-Factored Expected Monetary Value (EMV) value, which represents the expected risk allowance based on the average outcome of the quantitative assessment.





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.

In addition, specific outage-related delays have been assessed and included in our modelled risk allowance, however, new risks may arise from events outside NGET's reasonable control and have material cost and schedule impacts. Where these occur, they should be treated as COAE qualifying delays, with a 0% reopener threshold applied in accordance with the approach set out above.

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 and that Ofgem should direct in order to provide for this as provided for in the relevant licence provisions[3], rather than being assessed in isolation.

Risk benchmarking

The Didcot risk allowance is [redacted]. We have benchmarked this against comparable NGET substation projects – [redacted] – selected on the basis of scope [redacted] delivery model, and use of a project-specific Quantitative Risk Analysis rather than a fixed percentage uplift.

[3] Licence condition 3.18.28



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. At Didcot, those risks have largely been retired: the main works contract and transformer orders are placed, [redacted] of costs have been incurred, [redacted] The remaining risk allowance at Didcot, therefore, covers residual exposure carried into the outage, commissioning and integration phases.

As the benchmarking provided relates to current live projects rather than historical outturns, we have undertaken a supplementary cross-check of the project's risk estimate against a reference class forecasting (RCF) model calibrated to Didcot'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.

Based on Didcot's assessed maturity, complexity and other relevant parameters, the RCF model indicates risk allowances of [redacted]. Didcot's project-specific risk allowance of [redacted] therefore sits between the modelled [redacted] and [redacted] values. This

close alignment provides supporting evidence for the reasonableness of the project estimate, while recognising that the proposed allowance remains grounded in the project-specific risk register and quantified risk assessment.

3.6 Ongoing efficiency and real price effects

Consistent with the case-by-case approach set out in Ofgem's RIIO-T3 Final Determination[4], this section sets out NGET's position in relation to the application of Ongoing Efficiency (OE) and Real Price Effects (RPEs) for the Didcot Project Assessment.

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 cause double-counting of 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.

[redacted] of total Didcot project costs fall within the fixed or agreed remeasurable classifications, reflecting the awarded [redacted] contract and [redacted] with the remaining balance largely comprising the risk allowance and estimated internal costs. As a result, there is limited scope for efficiencies to be realised following the re-opener determination through traditional ongoing efficiency levers, such as further supply chain engagement or scope optimisation.

In line with the approach described in NGET's RIIO-T3 Cost Assessment and Benchmarking methodology[5], the Didcot project has progressed through detailed design and procurement which has secured [redacted] of verified efficiencies and reflected within the submitted cost estimate, including:

[redacted]

[4] RIIO-3 Final Determinations Overview Document

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

[5] NGET, RIIO-T3 Cost Assessment and Benchmarking Approach, Annex 14, Section 3

[redacted]

Our procurement approach used a [redacted] This arrangement will drive efficiency as, [redacted]

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)

National Grid considers that RPEs should apply to the Didcot Project Assessment.

The RIIO-ET3 FDs confirm that RPEs will be applied to re-opener allowances where the typical investment is a network infrastructure project with a construction phase spanning three or more regulatory years, and that the Load Re-opener is one of the mechanisms meeting this criterion. Didcot is a major network infrastructure investment — [redacted] Construction commenced in [redacted] and is forecast to complete in [redacted], spanning [redacted] regulatory years.

Construction-specific indices have a different growth rate to Consumer Price Index (CPIH) and are more closely related to the nature of the work undertaken. Reliance on CPIH alone is therefore not appropriate, particularly given the [redacted] of Didcot's cost base. Ofgem's own RPE methodology recognises this exposure for the ET sector, including through the British Electrotechnical and Allied Manufacturer's Association (BEAMA) Large Power Transformers and BEAMA Industrial Electronics indices introduced for RIIO-3.

The project is delivered under an [redacted] within the cost model at Appendix G. [redacted]

Because construction commenced in [redacted], costs already incurred are not exposed to future price movements. RPEs are sought only on forecast costs still to be incurred.

National Grid notes that, when setting allowances through re-openers to which RPEs apply, Ofgem will ensure there is no double counting of cost input price inflation, and the RPE adjustment for this project should be applied on that basis.

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. The objective should be to ensure efficient inflation-related costs are recognised while avoiding any double counting of inflationary impacts that are already reflected in the submitted forecast.

4. Deliverability and procurement

Table 18: Deliverability and procurement headlines

Headlines
Delivery is managed through an integrated programme, providing clear accountability, proportionate assurance and effective coordination across NGET, the Principal Contractor, customers and third parties.
Since FNC, the programme has been refined and delivery is well advanced, with construction underway since [redacted] and the [redacted] — reflecting a significantly de-risked delivery position.
Our Main Works Contractor procurement approach, delivered through an [redacted]

4.1 Delivery strategy

The delivery strategy covers the following areas, with further detail provided in Appendix F:

- Delivery approach and overall project context;
- Delivery programme and key milestones;
- Governance, assurance and decision-making arrangements;
- Roles, responsibilities and programme organisation;
- Procurement and contractor management arrangements;
- Outage planning, winter working and ERTS requirements; and
- Stakeholder coordination, interface management and delivery risk management

The programme management approach for Didcot is focused on delivering a safe, timely and efficient investment that meets legal, licence, technical and consumer value requirements. Delivery is aligned with our internal governance frameworks, providing clear accountability, proportionate assurance and commercial controls to manage risk and support timely, high-quality delivery. These controls directly protect consumers by ensuring costs are scrutinised and challenged throughout delivery, and that the investment is delivered to the scope and standard for which funding is sought.

The main works are delivered by [redacted] under an [redacted] with [redacted] having undertaken the FEED. Delivery also includes progression of [redacted] contractual arrangements with [redacted] for the [redacted] Delivering the [redacted] through [redacted] avoids duplication and abortive works, securing better value for consumers than standalone delivery.

The delivery approach incorporates structured stakeholder engagement, demonstrated through our interactions with the connecting customers, which supports effective interface management and minimises risk during construction. Aligning delivery with customer connection programmes

reduces the risk of stranded assets or misaligned timescales, ensuring the network capacity funded by consumers is available when customers require it.

Stakeholder engagement is undertaken at two complementary levels. Project-specific engagement with customers, NESO, National Grid operations, the Principal Contractor and affected third parties is used to manage delivery interfaces, access, outages and connection dates. Wider strategic engagement with regional and energy-system stakeholders informs National Grid's understanding of longer-term demand drivers, network interdependencies and the relationship between electricity capacity and regional growth. The first supports efficient delivery of the defined project scope; the second provides context for the investment's wider strategic relevance.

Further detail on project stakeholder management is provided in Appendix F.

A key aspect of the programme management strategy is the implementation of an integrated programme that brings together the activities of the various responsible parties — NGET, the Principal Contractor, customers, suppliers and key third parties such as utilities. This approach ensures alignment across all delivery partners, enabling effective coordination of interdependent activities. By working to shared milestones and maintaining proactive communication, the integrated programme supports efficient delivery, reduces risk, and ensures minimal disruption to the existing network and surrounding communities.

National Grid's delivery team structure and governance arrangements are shown in Figure 6. The core delivery team, led by the [redacted] This clearly defined structure provides unambiguous accountability at every level, ensuring robust oversight of both cost and delivery on behalf of consumers.

[redacted]

4.2 Programme structure and milestones

The programme has been developed in accordance with National Grid governance requirements and the planned outage windows.

Since the FNC, the appointment of [redacted] and the progression of detailed design have enabled the programme to be refined and structured around confirmed outage windows, customer interface requirements and equipment delivery sequences, providing a more accurate projection of construction, installation and commissioning activities. Further detail, together with the P6 programme is provided in Appendix N.

The programme structure is based on a [redacted], which allowed [redacted] to proceed in parallel and shortened the overall programme. With the exception of the 400kV extension, the majority of the works are constructed away from the operational substation and therefore do not require system outages or Senior Authorised Person (SAP) supervision. This reduces both the number of outages needed and the operability risk to the existing network during construction.

The programme is phased as follows:

[redacted]

[redacted]

National Grid's delivery strategy is based on the deterministic programme presented in Figure 12 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]

National Grid considers the appropriate PCD to be aligned [redacted] commissioning of the [redacted], representing the point at which the principal project outputs have been delivered and the substation is available [redacted]

While certain project activities, costs and risks continue [redacted] these remain captured within the project's scope, schedule and costs and do not alter the point at which the core transmission infrastructure is delivered and made available for customer use.

P50 Delivery Date

National Grid has undertaken a 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 3.5.

For Didcot, the P50 completion date is [redacted]. This is the probabilistic date for the [redacted] milestone assessed through the QSRA, against a deterministic date of [redacted]. This represents the 50th percentile outcome derived from the QSRA and reflects the potential impact of residual programme uncertainty and quantified schedule risks on the deterministic programme. The deterministic programme remains the basis of National Grid's delivery strategy and reflects the milestones that the project team is actively managing to deliver the project. The P50 date is provided to support Ofgem's assessment of the need to apply the Major Project ODI-F, and broader project deliverability and programme risk, consistent with the Load Re-opener Guidance requirements.

The P6 deterministic date reflects our intention to deliver to an ambitious yet achievable programme date. However, for the purposes of setting the PCD delivery date, the P50 date is the correct basis: it reflects the central forecast outcome, incorporates project-specific schedule risks and uncertainties through the QSRA, and provides a commitment that is stretching but realistically deliverable.

The P50 date is provided to support Ofgem's assessment of project deliverability, programme risk and the potential application of the Major Projects ODI-F, consistent with the Load Re-opener Guidance requirements. 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.

Accordingly, whilst a P50 delivery date is the most appropriate basis for informing the setting of the ODI-F target delivery date, where applicable, it is not an appropriate benchmark for a Licence Obligation delivery date and should not be used for such purposes.

National Grid supports clear accountability for the delivery of funded outputs. However, PCDs and Licence Obligations serve different regulatory purposes, and associated delivery dates 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 a compliance standard, backed by potential enforcement, and should therefore be reserved for clear and significant delivery failure.

This is implicit in Ofgem's own justification in paragraph 4.75 of the ET Annex to the RIIO-ET3 Final Determinations that the outcome of the Project Assessment decision will be that the project is established in the licence both as a PCD and a Licence Obligation. This paragraph distinguishes between the role of the PCD in protecting consumers through funding accountability (and the ability to claw back allowances through the PCD) and the role of the Licence Obligation as an enforcement mechanism where consumer detriment arises as a result of non or late-delivery.

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.

Critical Path

Based on the programme phasing, the critical path is expected to run through the [redacted] and the sequencing of design, equipment delivery and commissioning, culminating in [redacted] commissioning of all circuits including [redacted].

Programme risk mitigation

The programme incorporates a number of measures to manage delivery risk and protect consumers from the cost of delay:

- Parallel enabling works and detailed design – commencing enabling works alongside detailed design enabled construction activities to progress without waiting for completion of the full detailed design, helping to contain the overall programme.
- Offline construction – undertaking the majority of construction outside the operational substation reduces reliance on 400kV outages and associated operational resources, while allowing offline works to continue if individual outage activities are delayed.
- Early procurement of long-lead equipment – [redacted] SF_6-free GIS/GIB was secured ahead of the relevant construction and installation activities, reducing exposure to constrained manufacturing capacity and equipment lead times.
- Contractual key dates and sectional completion – key delivery and handover points are incorporated into the [redacted], strengthening coordination between the Principal Contractor, equipment installation activities and connecting customers.
- Integrated outage planning – the 400kV works are planned through National Grid's outage-planning process, with stage-by-stage phasing coordinated between the contractor, project team, commissioning engineers and network planning.

Delivery remains subject to a number of key constraints that are actively monitored, including the [redacted]

4.3 Supply chain capacity and outage planning

At the time of project development, supply chain capacity for key long-lead equipment – [redacted] and the SF_6-free GIS – was constrained, with a worldwide surge in demand extending manufacturing lead times across the transmission supply chain. Securing production slots for this equipment ahead of the construction programme was therefore critical to protecting delivery certainty.

National Grid undertook early engagement with suppliers and with the appointed Main Works Contractor, [redacted] to understand manufacturing capacity, lead times and delivery risk, and adopted a procurement approach tailored to each equipment type to secure capacity efficiently:

- The [redacted] were procured from [redacted] using an [redacted] securing manufacturing slots early against the required delivery window. Procuring through [redacted], delivering both cost and programme value for consumers.
- The [redacted], were procured from [redacted] using an [redacted], delivering a cost and programme benefit relative to a standalone procurement.
- The 132 kV GIS/GIB and 400 kV GIB were procured from [redacted] via the Main Works Contractor, [redacted] – [redacted] and [redacted]. This route leveraged [redacted] relationship to secure a cost reduction on the 132 kV GIS and to manage the first-of-type technical interface efficiently, reducing delivery risk for consumers.
- [redacted] in order to manage technical alignment and delivery risk within a single delivery interface.

Taken together, this equipment strategy secured constrained supply chain capacity early, transferred technical interface risk to the party best placed to manage it, and locked in demonstrable cost efficiencies – protecting both the programme and consumer value. This [redacted] procurement is consistent with the position set out in the cost assurance (Section 3.1) and OE (Section 3.6) sections.

Outage Planning

Outage planning considerations were integrated from the outset to ensure the delivery strategy minimised system disruption and programme risk. The defining feature of Didcot's strategy is that [redacted]

This significantly reduces the number and duration of outages and the associated Senior Authorised Person (SAP) resource required, lowering both cost and network operability risk for consumers. System outages are required principally on the 400 kV substation, [redacted] The principal outage windows are summarised in Table 20, with the full stage-by-stage plan provided in Appendix D.



The outage windows have been arrived through a structured, evidence-based acquisition process by National Grid's internal [redacted] and [redacted] procedures. The contractor develops stage-by-stage phasing, reviewed by the project team and National Grid commissioning engineers, before the network planning team assesses network fit and engages NESO for final planning approval. [redacted] keep the plan aligned to the contractor's programme and any design changes.

The outage position is mature, and delivery to date provides strong evidence of confidence in the strategy. All outages from [redacted] to [redacted] have been secured ("planned in" in NESO terms), and the first outage commenced on programme [redacted]. National Grid's [redacted] further reduces risk of an outage being taken but not fully utilised.

4.4 Procurement

The Didcot main works were procured through National Grid's [redacted], which was itself let by open competitive tender. Framework members must satisfy technical, commercial and capability criteria to be appointed, so competition is established at the point of entry. Using the framework also avoided the time and cost of a standalone tender, which mattered here because the works had to align with NESO outage windows and long-lead equipment slots already secured.

[redacted] (as stated in Section 3.1). This challenge reduced the

[redacted] cost by [redacted] before agreement. Appendix O sets out the tender process and outcome in full.

The equipment strategy was tailored to secure constrained long-lead supply. The [redacted] were competitively tendered on the [redacted], which provided the most economic route for the required volumes and delivery windows. [redacted] was secured on [redacted]. The 132kV GIS/GIB and 400kV GIB were procured from [redacted], with the executed purchase orders [redacted] below the budgeted allowance; and the [redacted] works were awarded to [redacted]

Under the [redacted] National Grid and [redacted]

The [redacted] also allowed enabling works and detailed design to proceed in parallel, protecting the secured outage and equipment windows, and a single Principal Contractor manages the technical interface across the 400kV extension and the 132kV GIS build. Further detail on the route to market, governance gates and equipment procurement is at Appendix O.

5. Conclusion

National Grid requests Ofgem's approval of an allowance of [redacted] in 2023/24 prices to deliver the Didcot Project Assessment outputs under Special Licence Condition 3.18. The project extends the existing Didcot 400kV substation and constructs a new 132kV GIS substation, installing [redacted] and associated 400kV and 132kV plant, to provide the capacity required to connect significant contracted demand and generation customers in the Didcot area and to maintain SQSS-compliant network capability.

The investment remains required to enable timely, contracted customer connections and to maintain SQSS-compliant capability. The developments since the November 2024 FNC have not changed the fundamental preferred solution (Option D-1). The reshaping of the customer base through the NESO-led Connections Reform process does not change the scope being delivered and provides future-proofing that will reduce the construction, invasive works and outages required for future connections at Didcot. The maturation of the detailed design, [redacted] but the underlying need for the investment is unchanged. Where scope has been added, it has been progressed on a no-regret basis – captured within the current construction programme and secured to avoid the materially greater cost, disruption and delay of undertaking the works separately in the future.

This need is reinforced by engagement with regional energy-system stakeholders and by independent evidence identifying infrastructure capacity as an enabler of Oxfordshire's planned housing, innovation and economic growth. This wider context provides additional assurance that the project is consistent with credible long-term demand drivers, while the allowance request remains limited to the defined and evidenced scope required for the contracted connections.

The requested allowance is supported by [redacted] incurred or firmly contracted cost, project-specific benchmarking, [redacted] commercial challenge, cost assurance and a quantified allowance for National Grid-retained risk. The procurement and delivery strategy secured a capable framework contractor [redacted]

The project is at an advanced stage of delivery, with construction underway since [redacted], the transformer foundations complete [redacted]. This significantly de-risks delivery and gives consumers a high degree of certainty that the requested allowance is underpinned by works already substantially progressed rather than forecast.

Extending the existing operational substation and making efficient use of the existing site and infrastructure, avoids the additional land, consenting activity and delivery risk associated with equivalent new-build reinforcement. National Grid therefore requests that Ofgem confirms the Project Assessment allowance to enable the remaining procurement, construction and commissioning arrangements to proceed as scheduled, securing timely, SQSS-compliant connection of the contracted customers in the Didcot area.

Appendix A
Glossary

Table 21:Table of abbreviations and definitions

Abbreviation	Description
ACL	Available for Commercial Load
AIS	Air-Insulated Switchgear
[redacted]	[redacted]
BEAMA	British Electrotechnical and Allied Manufacturer's Association
BESS	Battery Energy Storage System
BP	Business Procedure
CAI	Closely Associated Indirect
CBA	Cost Benefit Analysis
CCTV	Closed Circuit Television
CDM	Construction and Design Management
CEN	Compensation Event Notification
CNI	Critical National Infrastructure
COAE	Cost and Output Adjustment Event
CPIH	Consumer Prices Index including owner occupiers' housing costs
DC	Direct Current
DNO	Distribution Network Operator
ECC	Estimated Cost of Completion
EMV	Expected Monetary Value
EPC	Engineering, Procurement and Construction
ERTS	Emergency Return to Service
FAT	Factory Acceptance Test

Abbreviation	Description
FEED	Front End Engineering Design
FNC	Final Needs Case
FSA	First Site Access
FY	Financial Year
GIB	Gas-Insulated Busbar
GIS	Gas-Insulated Switchgear
HV	High Voltage
HVAC	High Voltage Alternating Current
ISS	Integrated Security System
kV	Kilovolt
LVAC	Low Voltage Alternating Current
MBB	Main Busbar
MVA	Mega-Voltage-Ampere
MW	Megawatt
NEC	New Engineering Contract
NESO	National Energy System Operator
OE	Ongoing Efficiency
OTSN	Operational Technology Services Network
PA	Project Assessment
PCD	Price Control Deliverable
QCRA	Quantitative Cost Risk Analysis
QRA	Quantitative Risk Analysis
QSRA	Quantitative Schedule Risk Analysis
RBB	Reserve Busbar
RPE	Real Price Effects

Abbreviation	Description
RRP	Regulatory Reporting Pack
SAP	Senior Authorised Person
SCADA	Supervisory Control and Data Acquisition
SCS	Substation Control System
SF_6	Sulphur Hexafluoride
SGT	Super Grid Transformer
SSE/SSEN	Scottish and Southern Electricity Network
SSOR	Site-Specific Operational Requirements
TIM	Totex Incentive Mechanism
TQ	Tender Query
WAN	Wide Area Network

Appendix B
Location

Figure 7: Project location - transmission route map

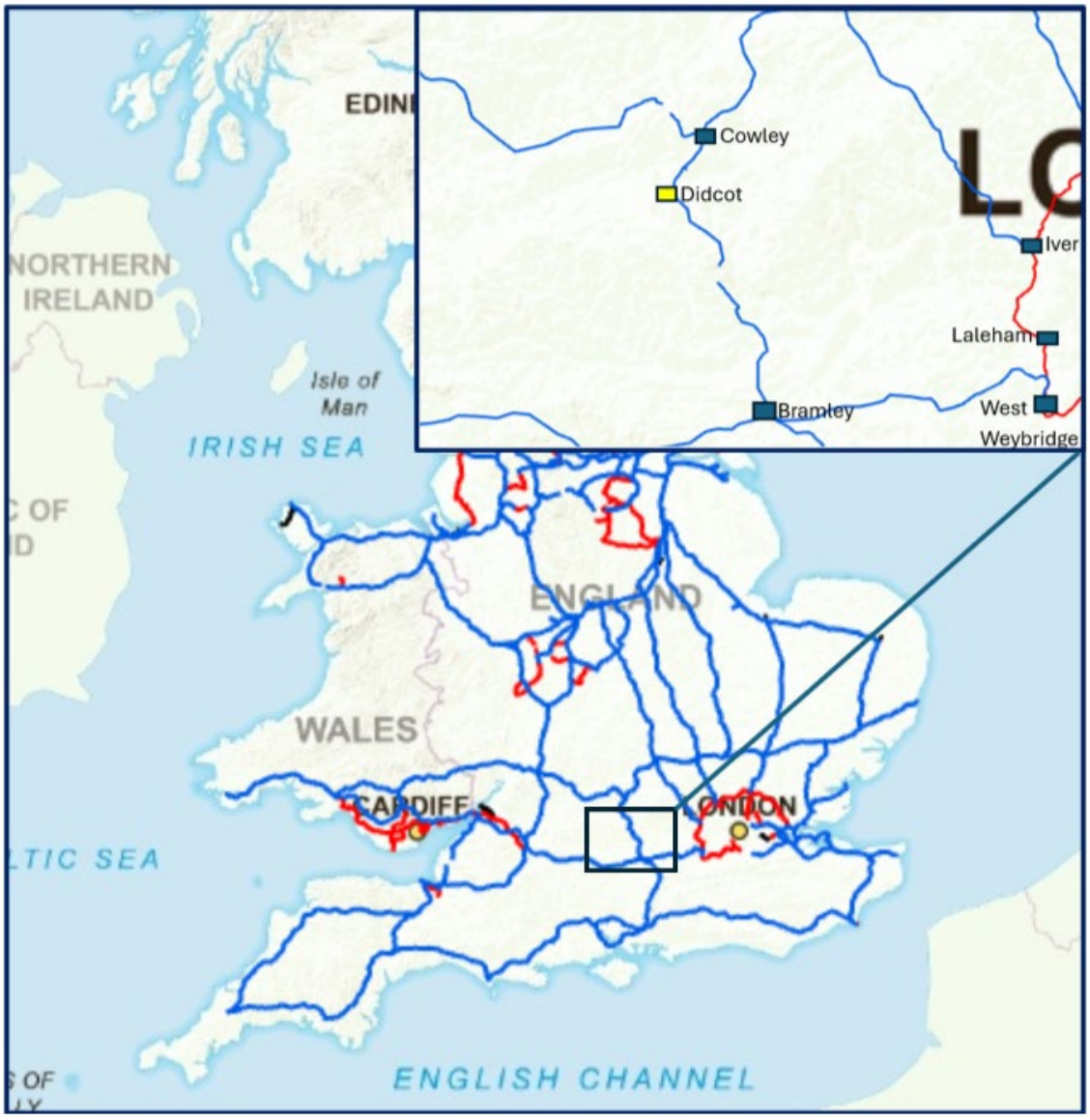
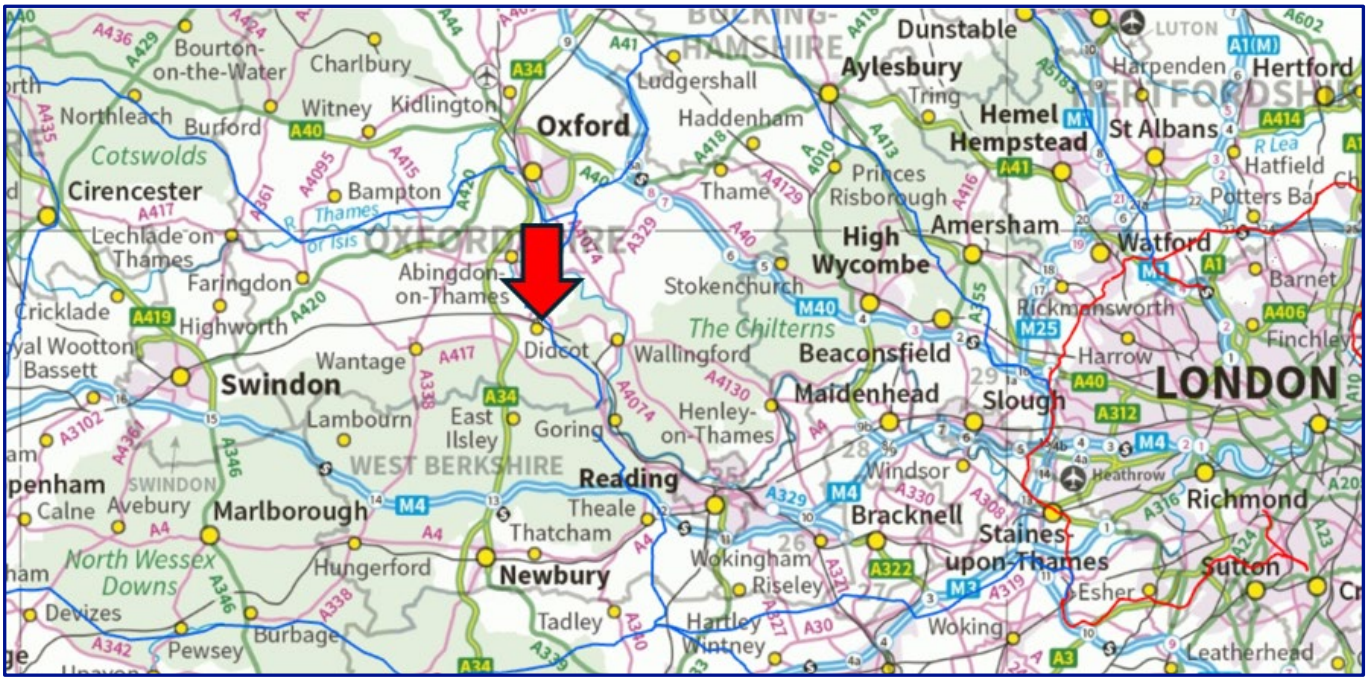


Figure 8: Project location - road map



Appendix C
Design

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Appendix D
Construction



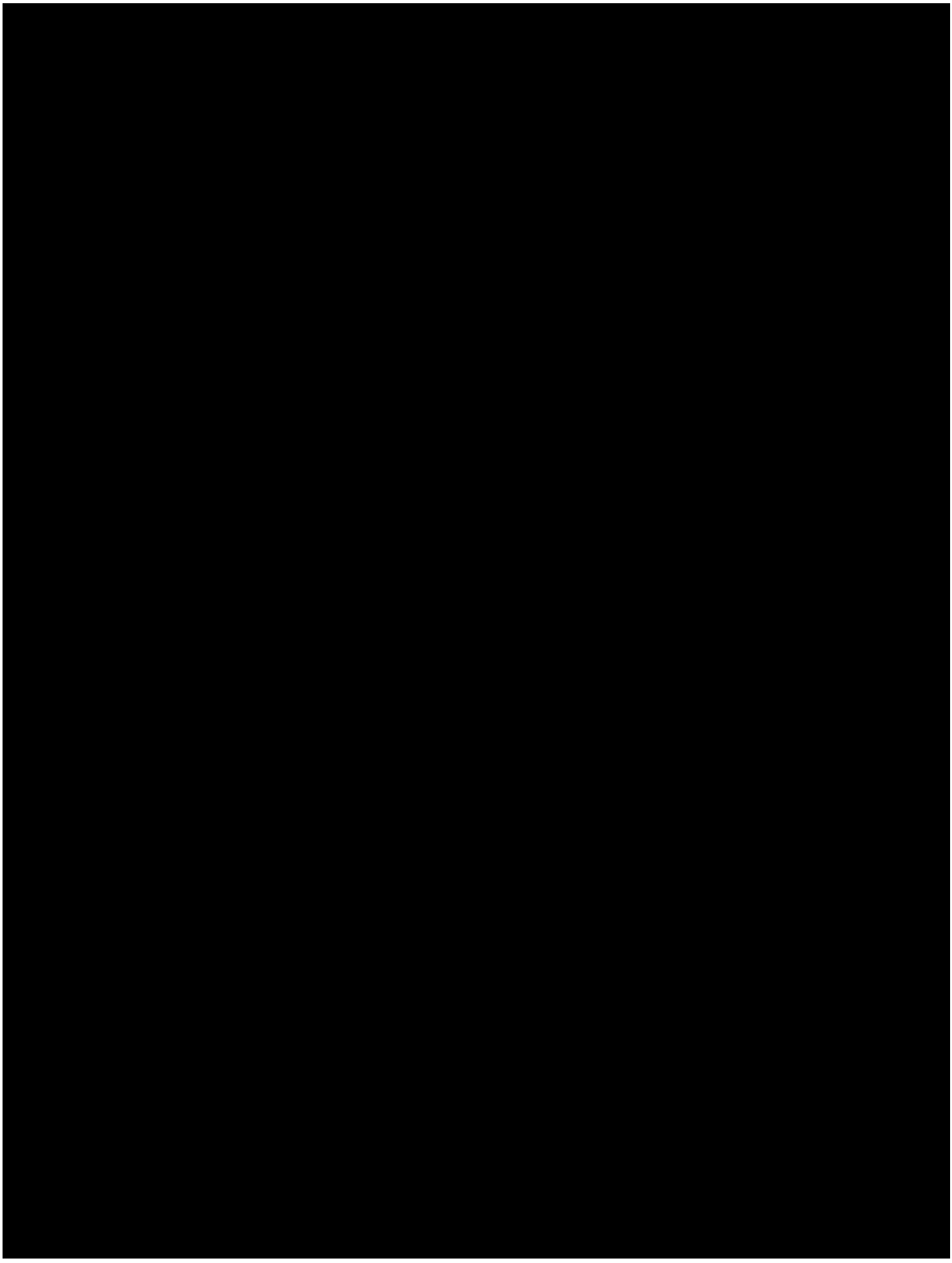




Appendix E
Land strategy and consent

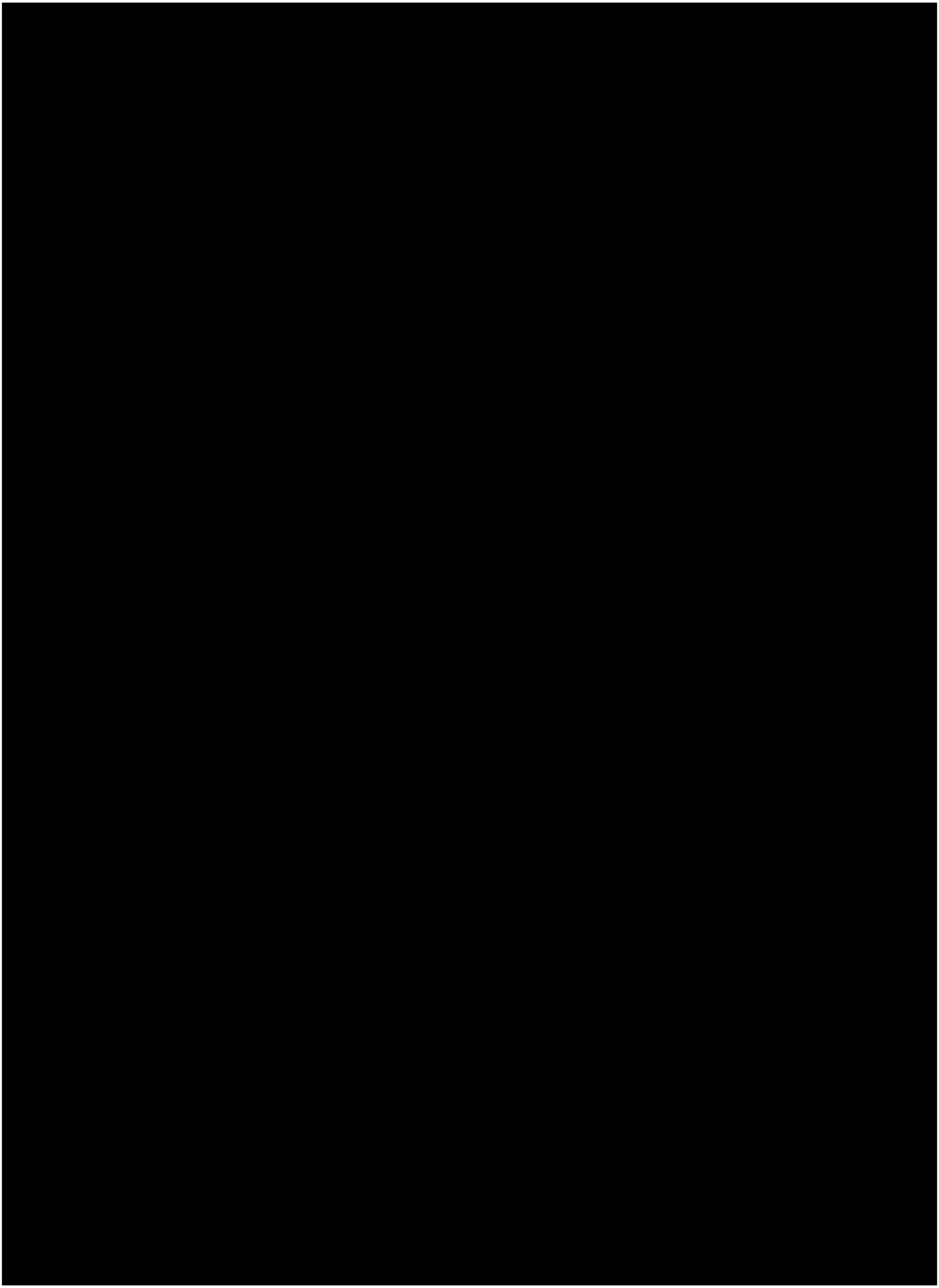
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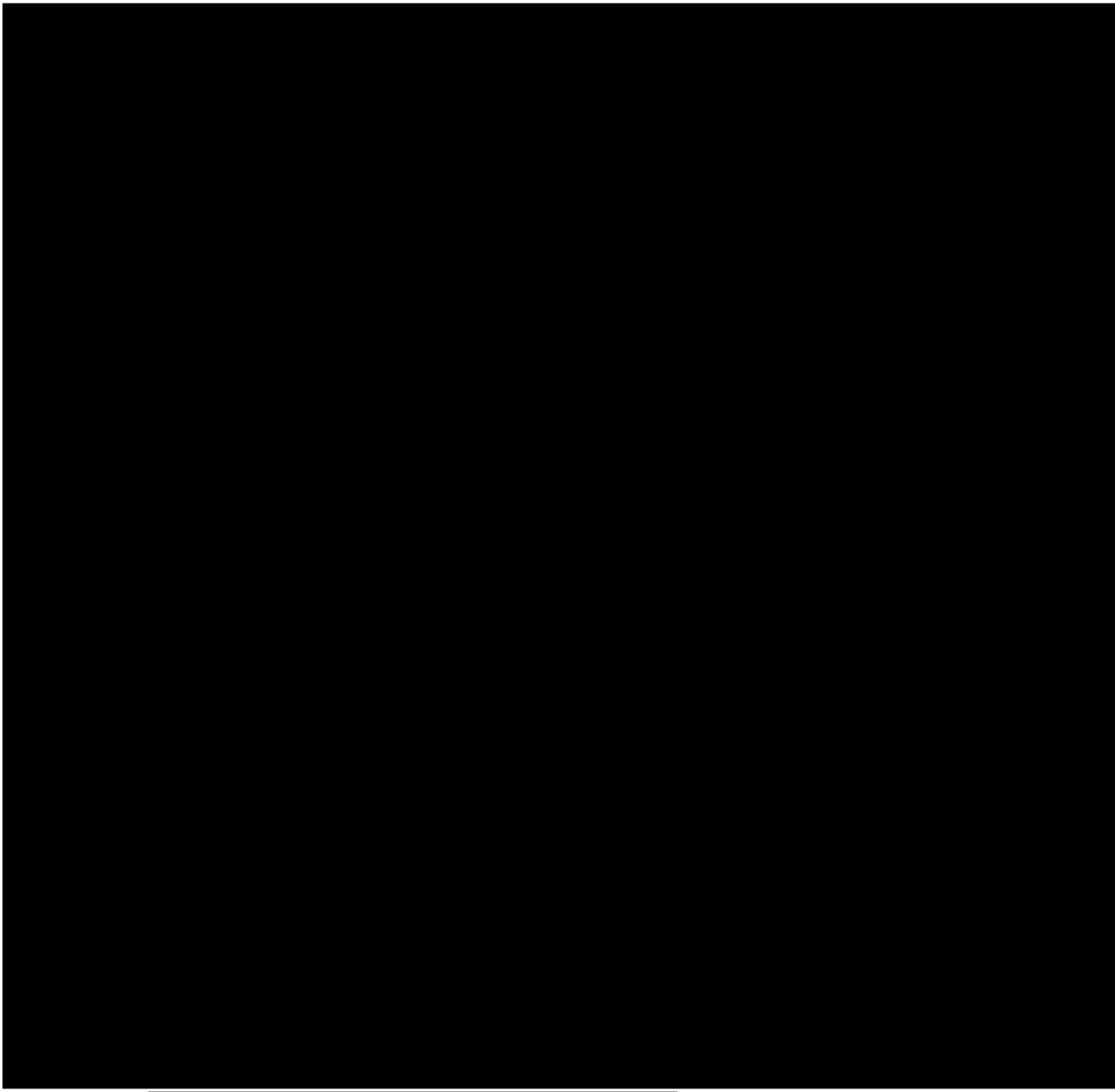




Appendix F
Delivery strategy

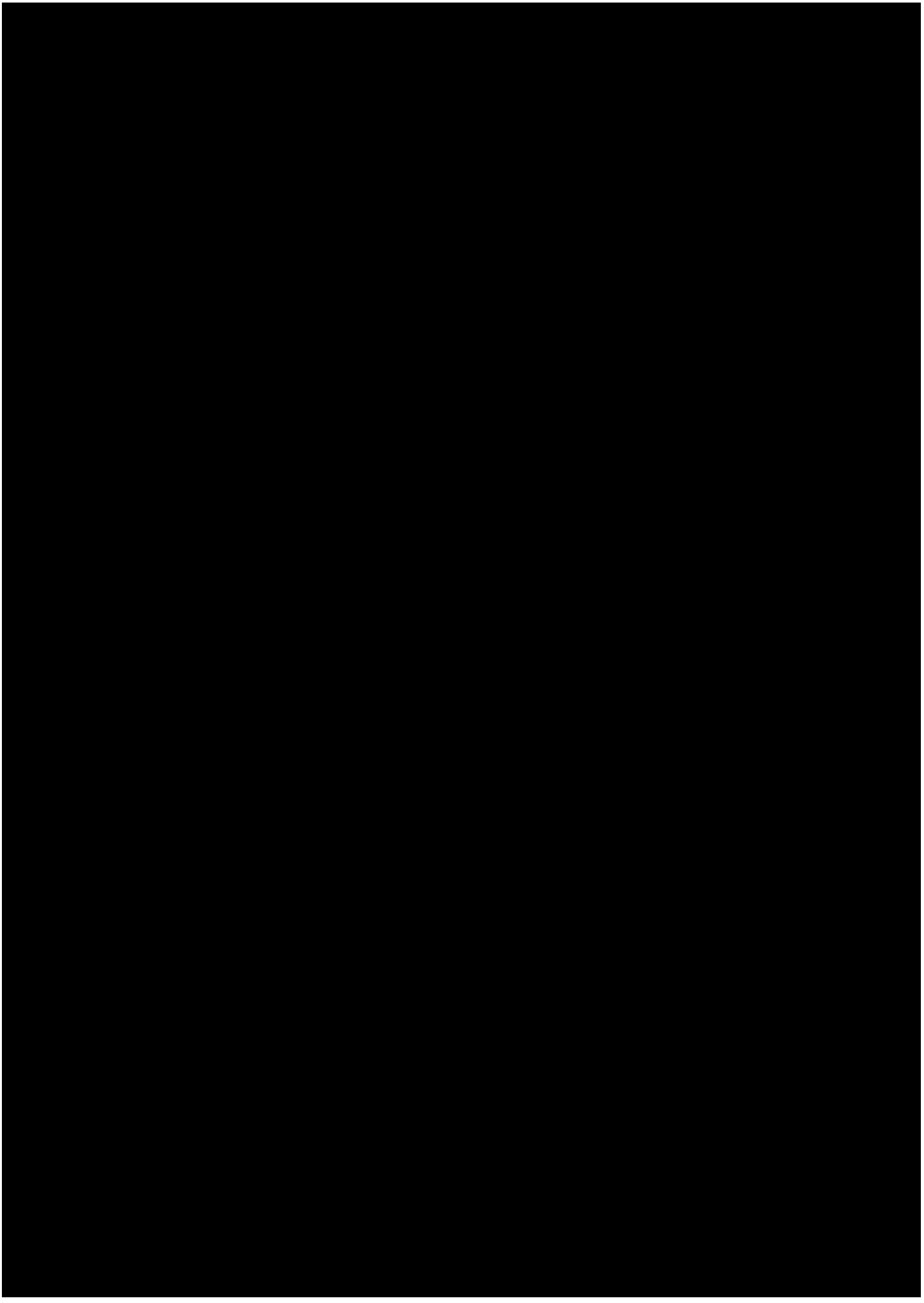
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[redacted]









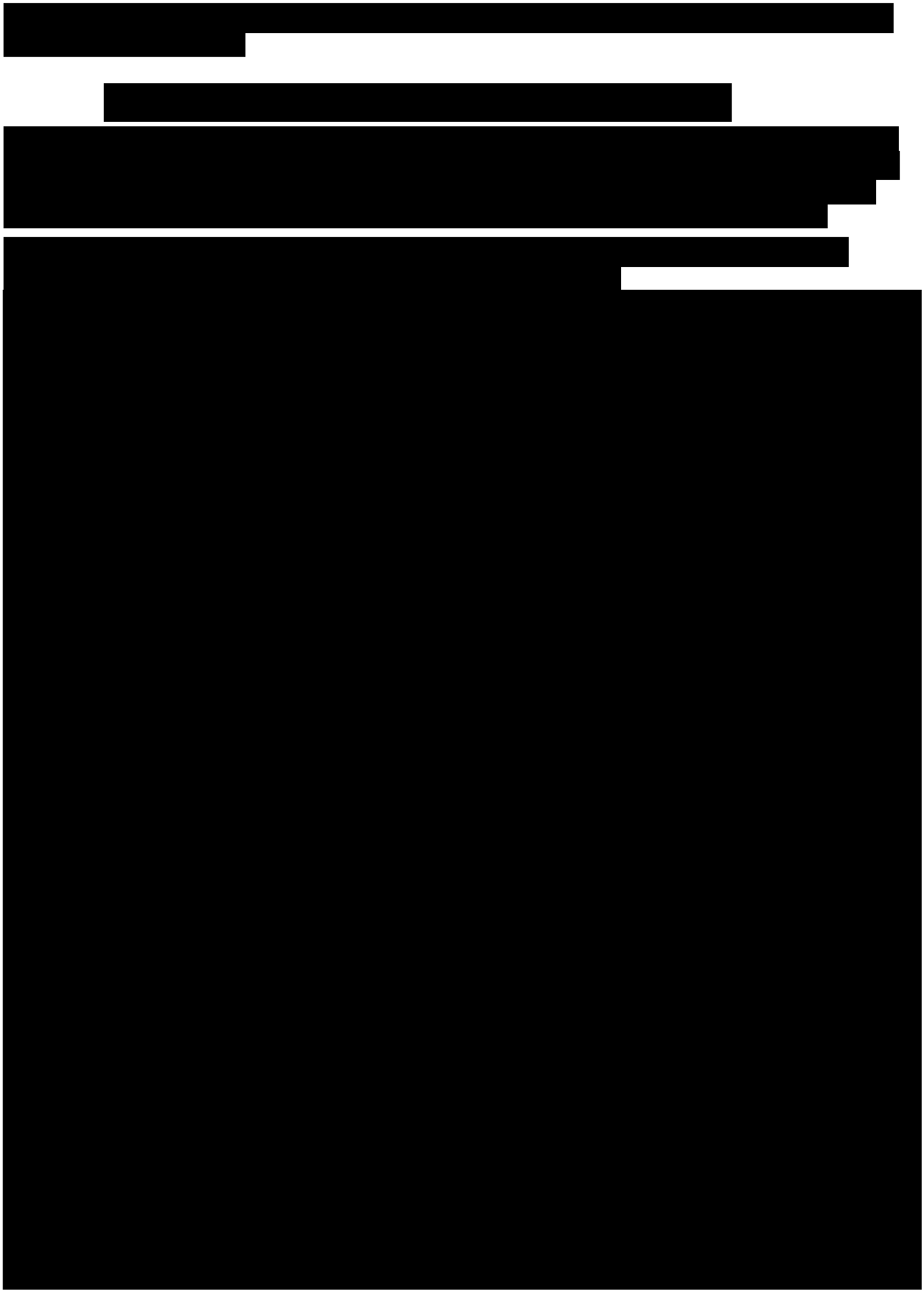


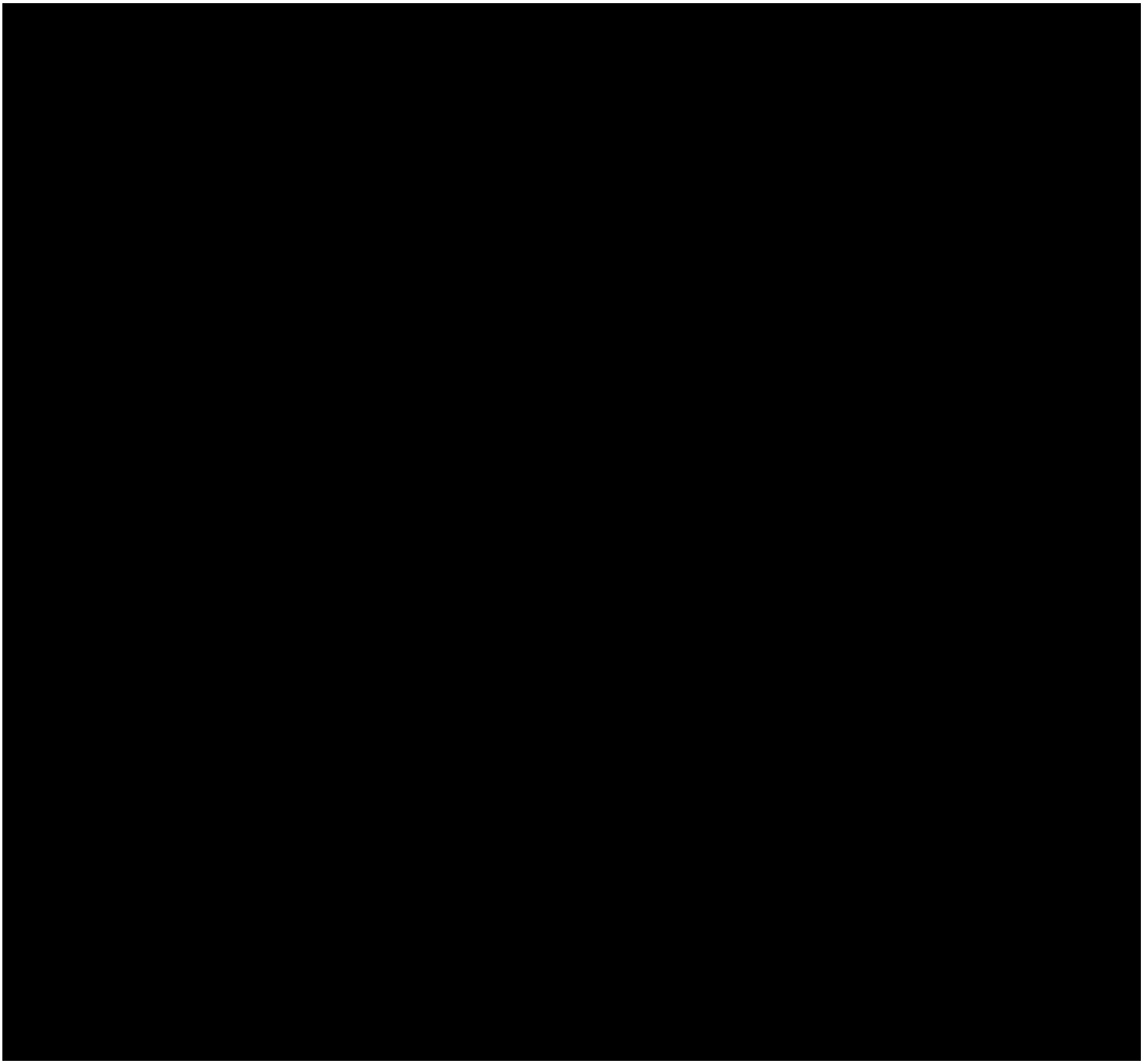
Appendix G
Cost model

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Appendix H
Cost assurance

[redacted]





Appendix I
National Grid costs

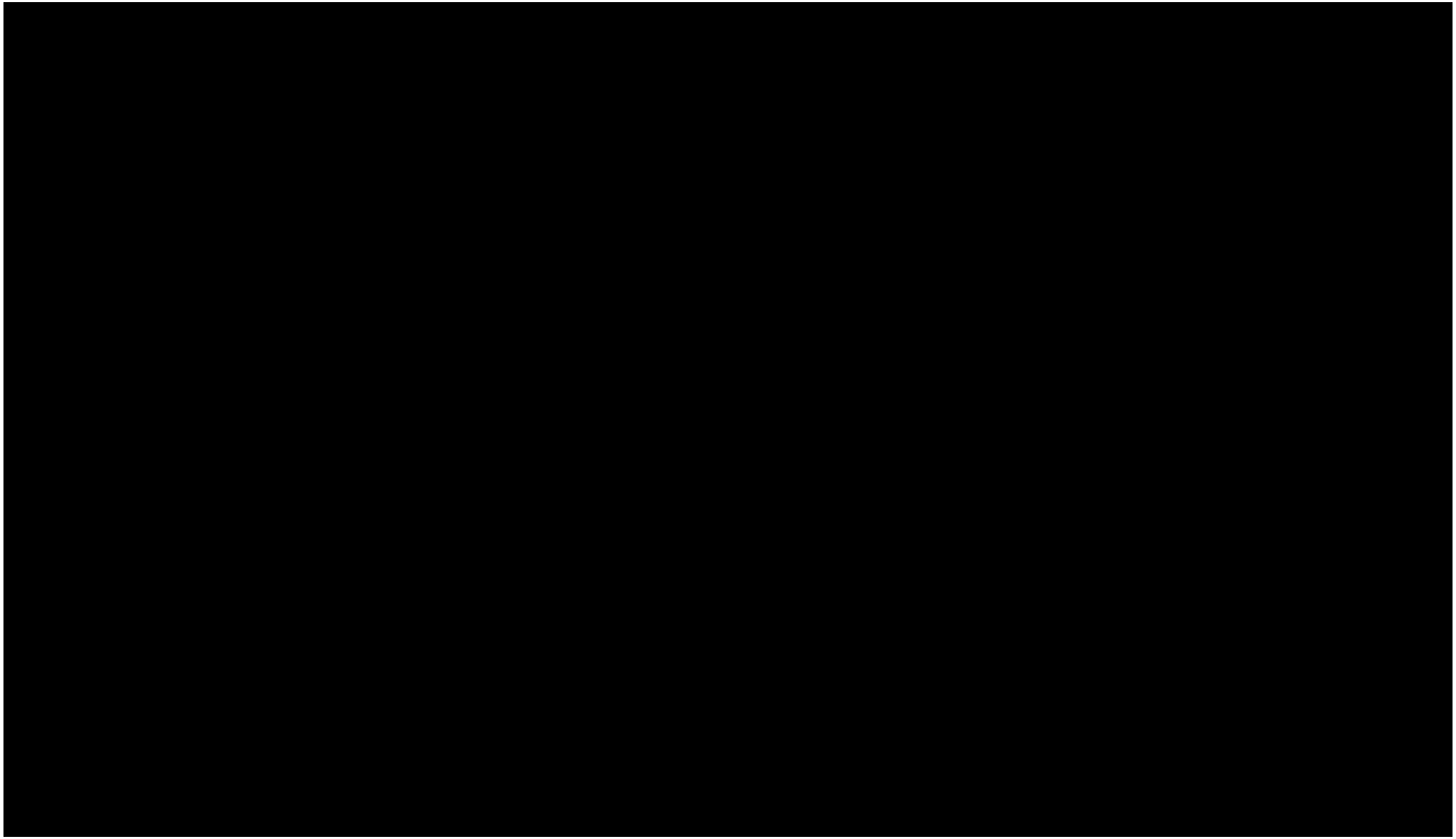
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Appendix J
Cost benefit analysis

No updated CBA has been produced for this Project Assessment. As set out in Section 3.3, the investment has not triggered a Material Project Change against the engineering design, cost or delivery timing thresholds in the Load Re-opener Guidance, and Ofgem has not directed an updated CBA.

Appendix K
Programme timelines

Our programme timeline for this project is shown in the figure below.



Appendix L
Benchmarking

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Appendix M
Risk register

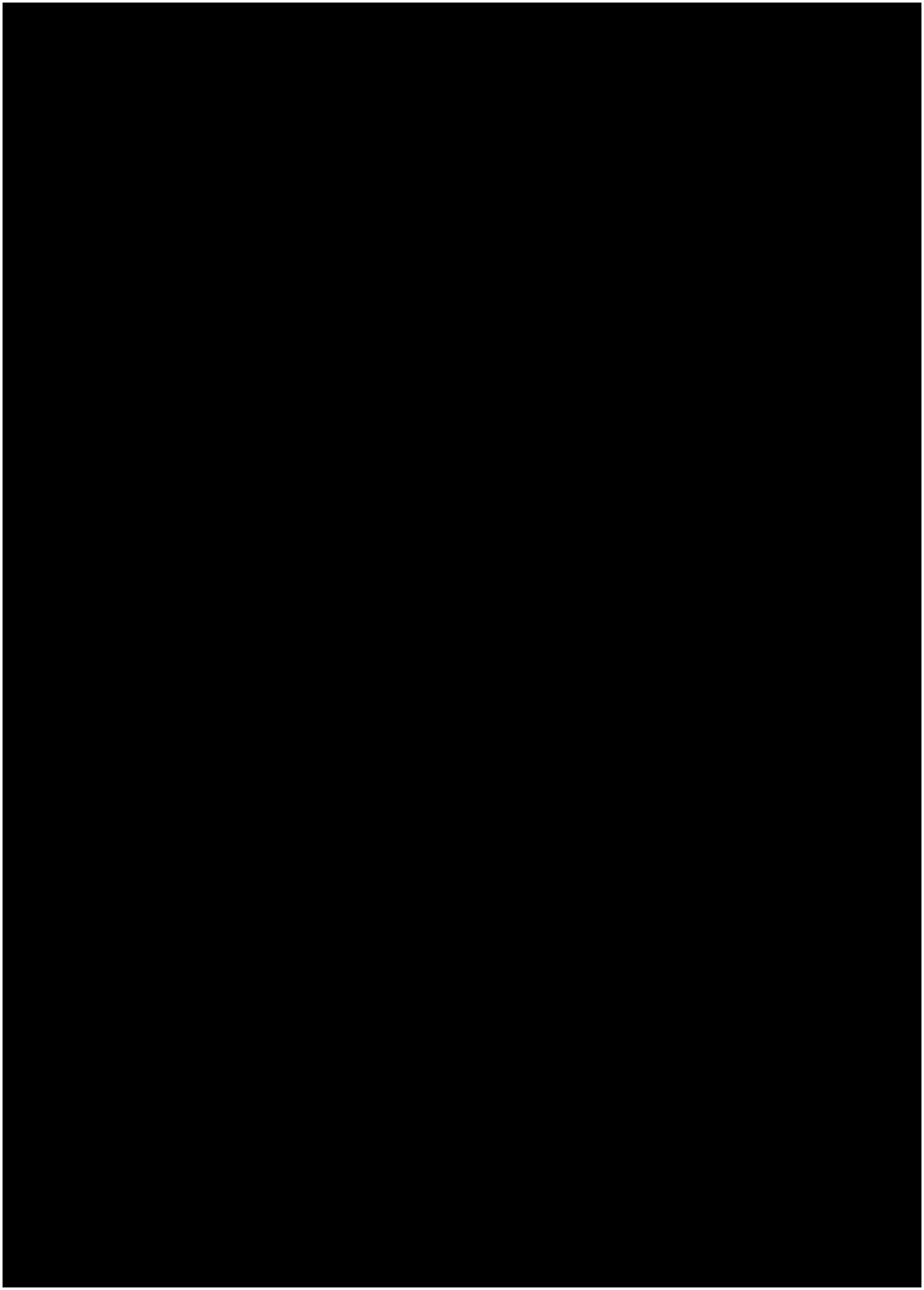
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Appendix N
P6 programme

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Appendix O
Procurement

[redacted]

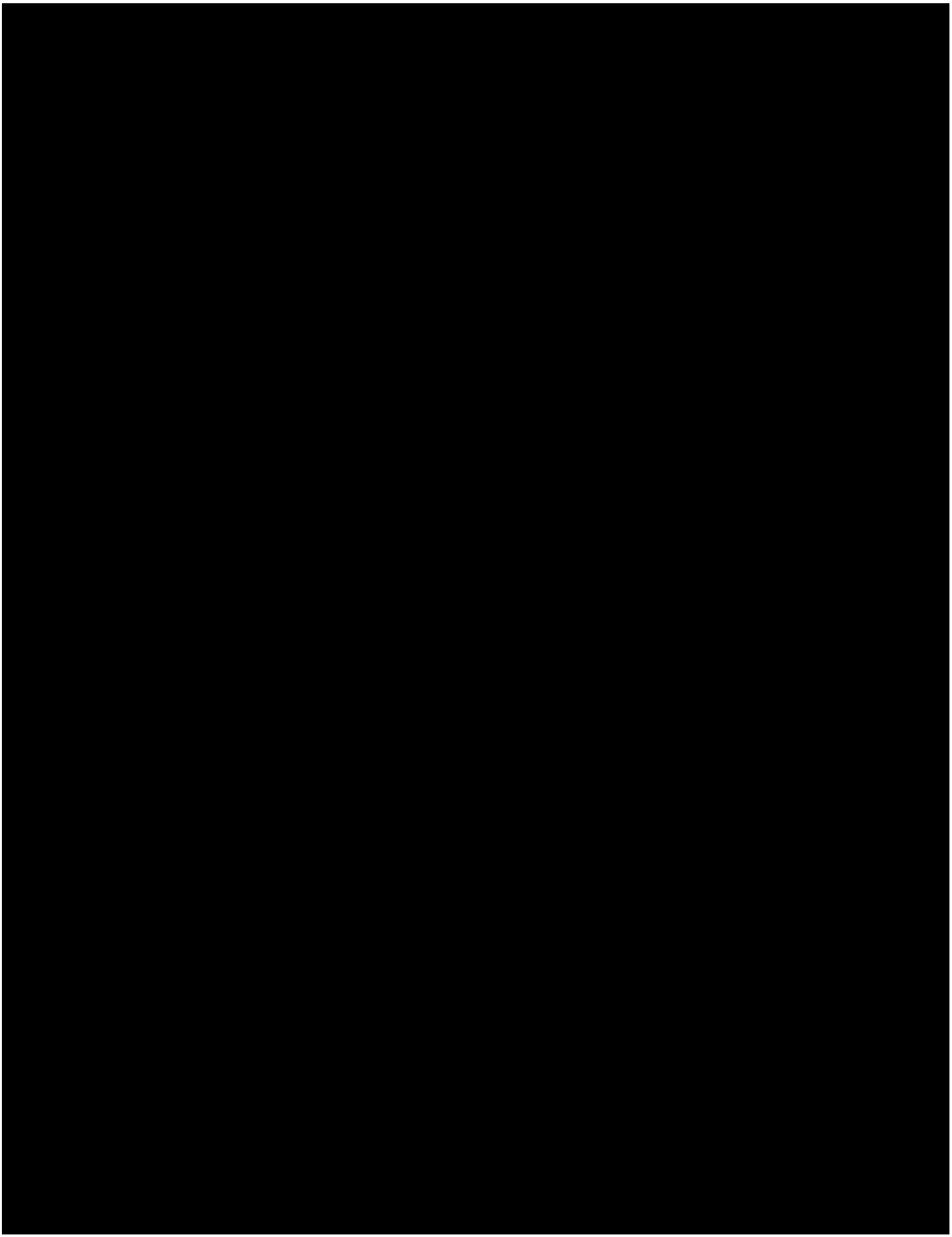


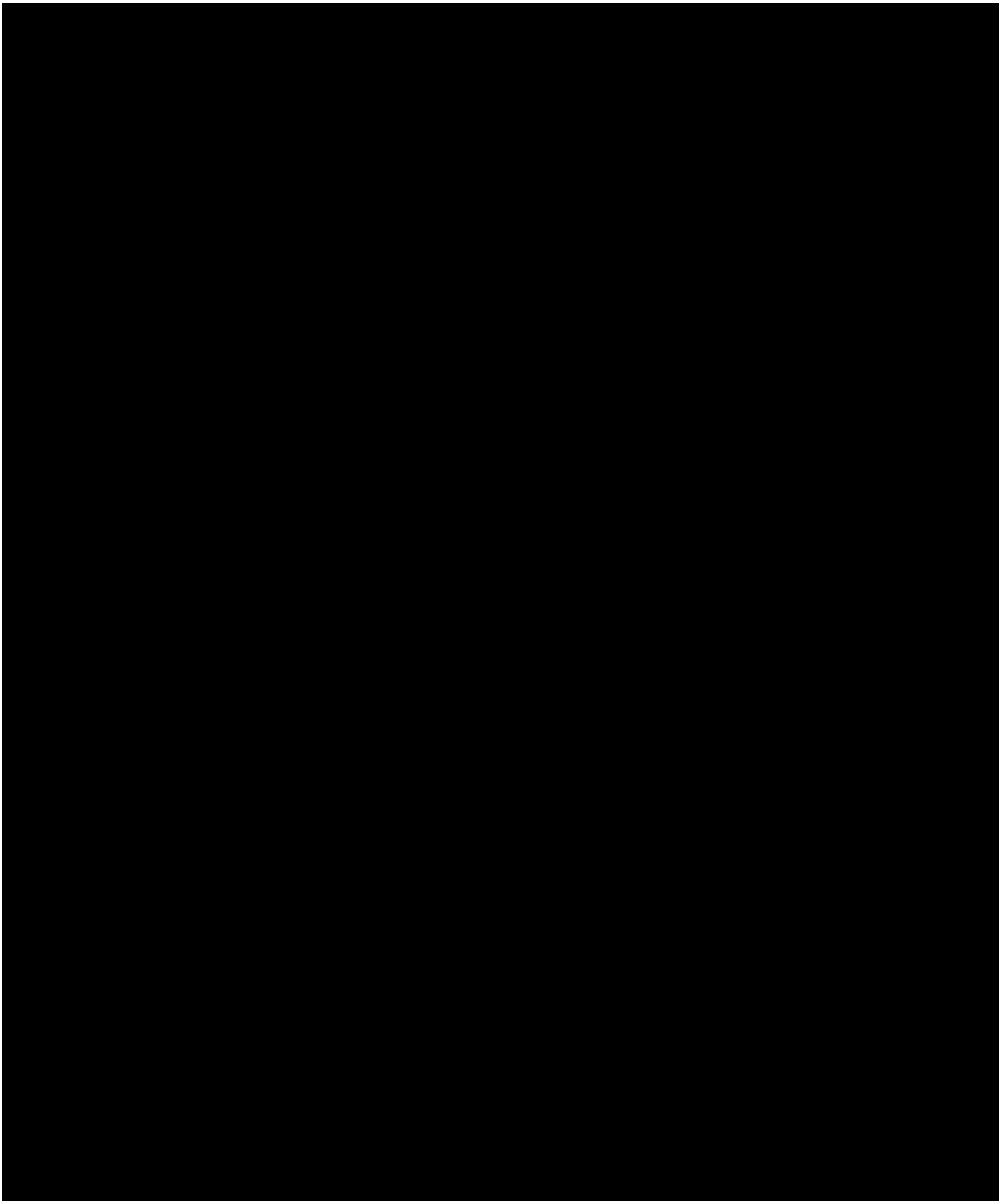












Appendix P
RRP tables

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