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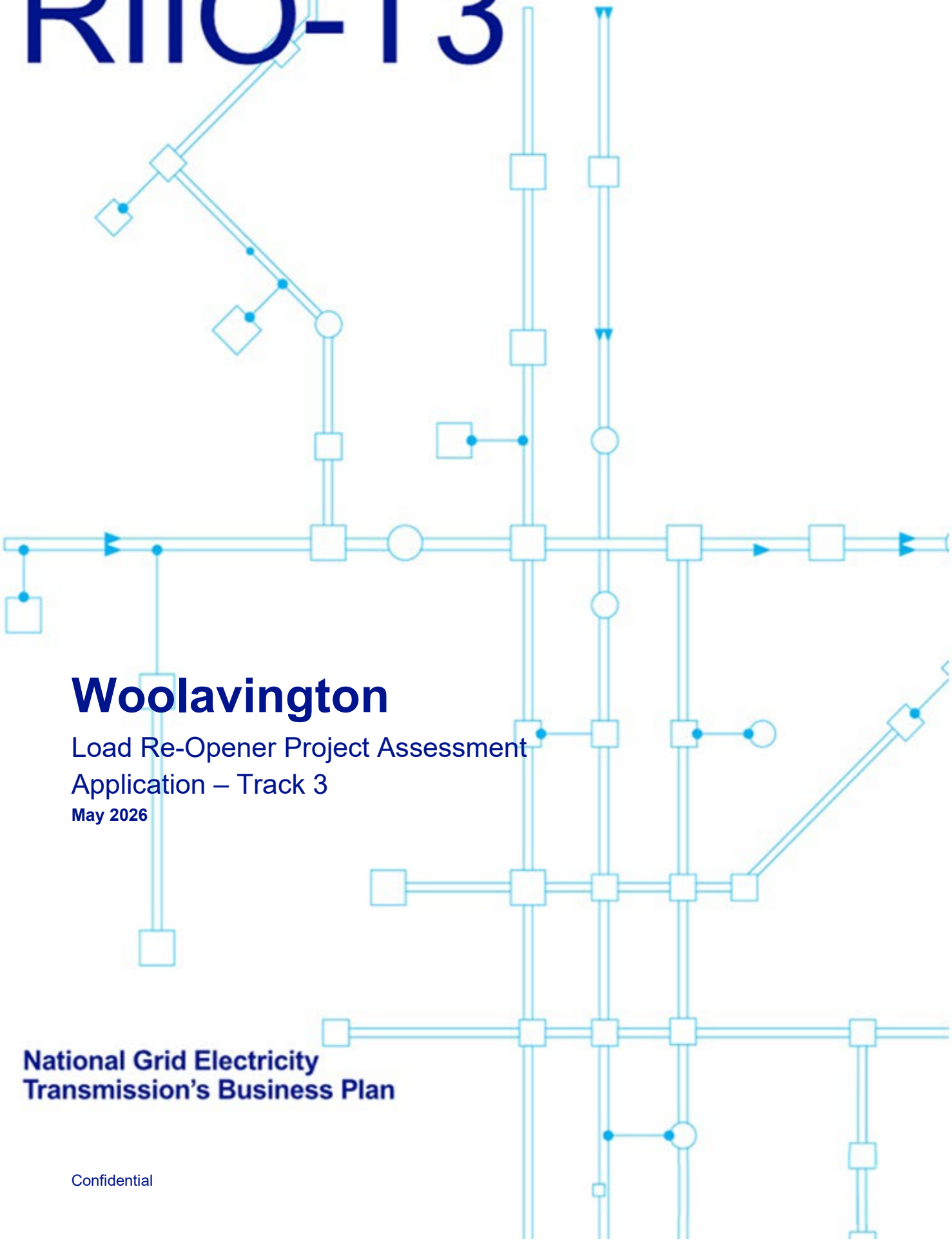

Woolavington

Load Re-Opener Project Assessment Application – Track 3

May 2026

National Grid Electricity Transmission's Business Plan

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Contents

Reference and Summary Table

Topic	Description
Name of Project	Woolavington (Apollo)
TO's preferred re-opener track	Track 3 Project Assessment (PA)
RRP References	NGT500547
BPDT / Project Reference Number	NGT500547
Load Board Reference	NGT500547
Investment Driver	Customer Connections: 1 x EV battery manufacturing facility & 1 x Data centre. [redacted]
PASE alignment	Not applicable; the investment was developed prior to PASE.
Outputs	A new SF_6 free 400kV GIS substation [redacted] at Woolavington, including [redacted] nd a shared NGET owned 132kV GIS substation [redacted] enabling connection of major industrial and data centre customers, with anticipatory capacity and security infrastructure to support future demand growth.
Costs (23/24 prices)	**Total:** [redacted] **Allowance request:** [redacted]
Delivery Year	[redacted]
Extension cost (applicable only to substations)	Not applicable – new substation.
Applicable Reporting Tables	BPDT 10.5 ET Pipeline log and RRP 2024-25 E1.11_ET Pipeline Log
Historic Funding interactions	N/A - This project has not received any historic funding. There are no early asset write-offs (EAWOs) associated with this project.
Interactive Projects	• [redacted] route energisation (Woolavington turn-in, gantry works sequencing, dependency on ZGA energisation windows). • [redacted]. The Woolavington project works assume completion of those changes in [redacted]. • [redacted]

Spend Apportionment of Total Project cost (£m 23/24 prices)	T2 (FY 2022-2026)	T3 (FY 2027-2031)	T4+ (FY 2032- 2037+)
	[redacted]	[redacted]	[redacted]

Executive Summary

Project summary

Woolavington (Apollo) will deliver a new SF_6-free 400/132kV connection substation at the Gravity Enterprise Zone, providing firm capacity for Agratas' [redacted] battery manufacturing facility and a [redacted] data centre [redacted] The project comprises a 400kV GIS substation [redacted] a shared 132kV GIS substation [redacted] [redacted] Super Grid Transformers and associated overhead line interface works, with provision for future expansion. [redacted], the investment supports UK industrial strategy and Net Zero objectives, unlocks up to 4,000 skilled jobs, and delivers long-term consumer value through a coordinated, future-proofed connection node that reduces whole-system cost and disruption.

Submission purpose

To seek Ofgem's Project Assessment Decision for the Woolavington (Apollo) 400kV and 132kV substation investment under Special Licence Condition 3.18 (Load Re-Opener and Price Control Deliverable). The submission is made in anticipation of the formal confirmation of Final Needs Case (FNC) approval in Summer 2026.

The submission provides:

- A summary of material changes since FNC submission,
- Evidence that the preferred technical solution remains appropriate and efficient,
- A final view of costs, risks and benchmarking,
- An explanation of the procurement and delivery strategy.

Description of the investment

A new SF_6 free 400kV GIS substation [redacted] and a shared SF_6 free 132kV GIS substation [redacted] at Woolavington. There will be [redacted] Super Grid Transformers (SGT) and [redacted] Full Line Tension (FLT) gantries to connect to the ZGA OHL route. Space provision for additional GIS bays and two additional transformers has been allowed for within the overall design.

Main changes since the Final Needs Case submission

Since FNC, the project is progressing through detailed design, procurement and early construction, resulting in material, but justified, developments. Collectively, these changes are consistent with normal project development and, as we evidence in this submission, do not undermine the consumer or system case established at FNC. These changes include:

- Updated delivery programme with staged ACL dates now concluding in 2029, compared to earlier assumptions at FNC of 2027. Agratas have been regularly updated on progress and anticipated timelines and have raised no objections. [redacted] We have conducted an updated CBA reflecting the updated timings, which confirms that the project remains in the best interests of consumers.
- Additional customer connections leading to incorporation of additional bays that were defined as 'anticipatory' within the FNC.
- Security requirements and associated investments.

Costs, risk and value for consumers

The total project cost (23/24 prices) is [redacted] There is strong cost certainty supported by awarded main works and transformer contracts. A structured risk management and Quantitative Risk Analysis approach has been applied, with contingency levels appropriate for delivery of this strategically important substation project.

Cost increases since FNC are attributable to scope clarification, security requirements, programme extension and market conditions, rather than cost inefficiency. Our updated Cost Benefit Analysis confirms that the preferred option continues to deliver positive net benefits for consumers. Additionally, cost assurance activities through formal bilateral engagement with suppliers, together with internal benchmarking, support our confidence in cost efficiencies for consumers.

Procurement and delivery strategy

Woolavington is being delivered through a two stage Early Contractor Involvement (ECI) model, with [redacted] appointed under the RIIO2 Electricity Construction Framework enabling competitive market testing to ensure efficient pricing. This approach also allows for:

- Early market engagement to secure constrained SF_6 free GIS manufacturing capacity and other long lead equipment,
- Continuity between design and construction, reducing interface risk and re-work,
- A [redacted] main works contract.
- De-risking the programme due to the interface with existing OHL T-pylons [redacted]

Benchmarking and efficiency assurance

This analysis demonstrates that Woolavington's costs are comparable to similar projects of equivalent scope and complexity, providing confidence that the investment represents efficient expenditure and good value for consumers.

1. Introduction

1.1 Context

This submission details any material changes since Final Needs Case (FNC), efficient costs, risks, as well as the investments procurement and delivery arrangements to support Ofgem's assessment of the requested allowance.

The investment, subject to formal FNC approval anticipated in Summer 2026, is required to meet customer connection requirements at the Gravity Enterprise Zone. Since FNC submission (September 2024), the project is progressing through detailed design, procurement and early construction activities, including appointment of the Main Works Contractor (MWC) [redacted]. We have placed orders for the necessary long lead equipment and the scheme has commenced construction works. The Project Assessment reflects developments since FNC, including confirmed customer connections, design refinements and updated delivery timelines.

This submission is made under Special Licence Condition 3.18 – Load Re-Opener and Price Control Deliverable (LRt) and in accordance with Ofgem's RIIO-T3 Load Re-Opener Guidance and application requirements.

1.2 Drivers

The driver for the investment is to enable connection of the following customers:

- [redacted] demand connection - EV battery manufacturing facility
- [redacted] demand connection - Data centre

The investment is also designed to enable further customer connections as a future-proofed connection node through anticipatory capacity and a single, shared 132kV downstream connection hub.

Connecting [redacted] will enable connection of the UK's largest battery cell manufacturing facility, representing a c.£4bn investment into the UK, expected to create up to 4,000 skilled jobs. The project is regarded as a [redacted] timely delivery of key projects like this.

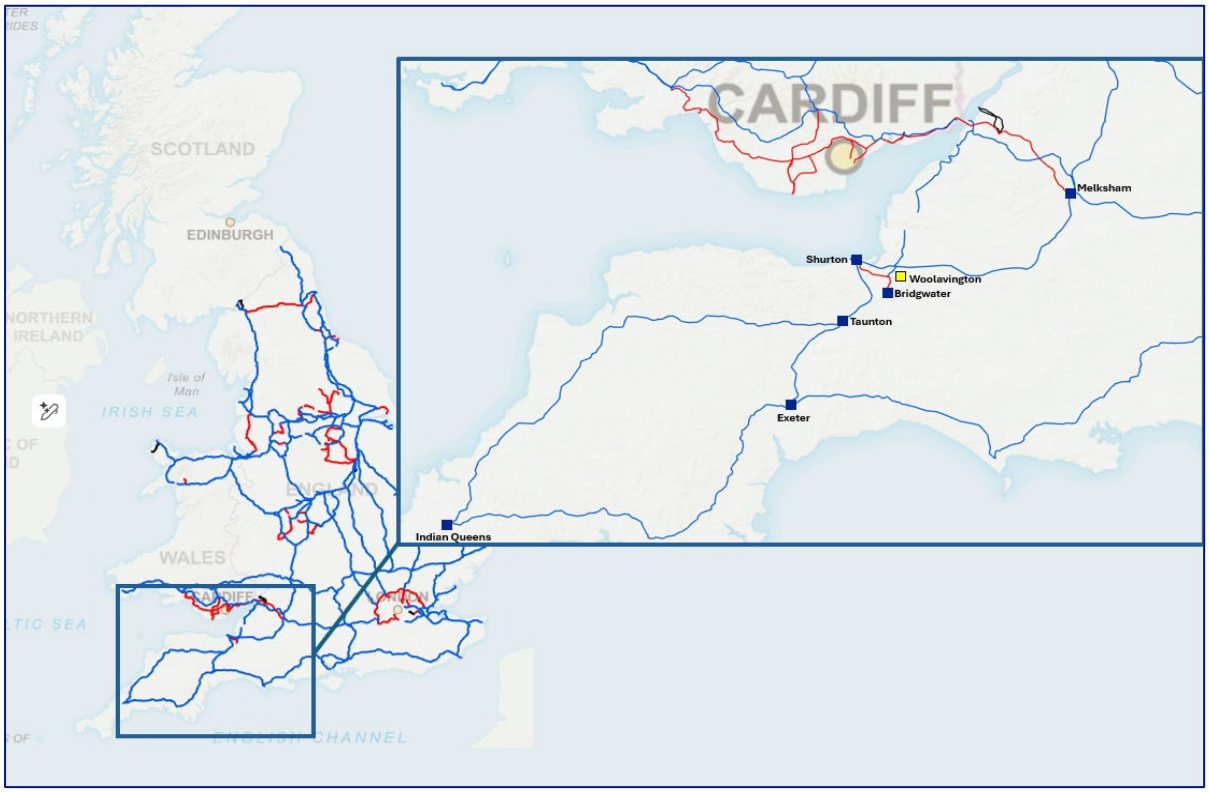
1.3 Output of investment

The main investment outputs that will be delivered are:

- A new SF_6 free 400kV Gas Insulated Switchgear (GIS) substation [redacted] and SF_6 free 132kV GIS substation [redacted] at Woolavington.
- [redacted] Super Grid Transformers (SGTs) initially (total installed transformer rating of [redacted] to provide an SQSS-compliant [redacted] connection arrangement [redacted] [redacted] Full Line Tension (FLT) gantries to integrate the new substation with the existing [redacted] 400kV route.
- For future proofing purposes, [redacted] additional spare bays in the 400kV and [redacted] additional spare bays in the 132kV have been designed for to ensure capacity within the GIS buildings.

Woolavington is being constructed in the Southwest of England near junction 23 of the M5. Please refer to Figure 1 for its location on the transmission network. This is also shown in Appendix 1 along with a road map showing the location of Woolavington.

Figure 1 - Transmission route map



1.4 Changes since FNC

Since FNC submission, the project scope and delivery assumptions have evolved as per the normal course of a project's development.

Confirmed additional customer connections

Two additional data centre customers, [redacted], signed connection agreements in January 2025 and March 2025 respectively. The latter has a 2036 connection date and will be delivered by a follow-on scheme. However, the design communicated within this PA allows for these anticipatory bays. Both of these connections provide increased certainty in the long-term demand case for Woolavington and continue to validate the need for the investment.

Scope refinements arising from additional customers

As anticipated at FNC, additional customers have resulted in scope additions, including:

- 400kV and 132kV [redacted] bays for the future provision for a [redacted] (the transformer itself is not in scope of this PA);
- [redacted] additional 132kV connection bays to facilitate the confirmed [redacted] demand connection.

Security scope

The completion of a security assessment has triggered the requirement to incorporate security arrangements into the project scope, in line with statutory and regulatory obligations.

Design development following FEED

Completion of OHL Front-End Engineering Design (FEED) by [redacted], identified constraints associated with the existing overhead line corridor. As a result, the OHL gantries have been repositioned further south, requiring consequential changes to:

- the substation fenceline; and
- the Gas Insulated Busbar (GIB) layout.

These changes refine the detailed configuration of the scheme but do not alter the fundamental design philosophy established at FNC.

Procurement and contracting progress

To enable the delivery of the investment, we have:

- appointed [redacted] as Stage 1 Early Contractor Involvement (ECI) contractor in October 2024;
- [redacted] the Stage 2 main works contract under [redacted] contract in December 2025, providing increased cost certainty and delivery confidence.

Updated delivery programme

[redacted] will now conclude in [redacted], compared to the [redacted] delivery assumption. This is driven by a refined programme plan from [redacted] and later than anticipated platform handover from the customer who was providing this, caused by ecological constraints and utilities diversions. [redacted]

1.5 Cost

The total project costs for delivery of Woolavington is [redacted] (23/24 prices), [redacted]

Table 1 - Cost breakdown summary (23/24 prices)

Cost Category	Cost (£m) (23/24 prices)
Contractors	[redacted]
National Grid	[redacted]
Other (Inflation/Risk)	[redacted]
TOTAL	[redacted]

1.6 Risk approach

The Pmean risk cost for Woolavington is £[redacted] (23/24 prices) constituting [redacted] of total underlying project costs. The top 5 factored Pmean risks are included below along with their values in 24/25 prices. Further detail is supplied in Section 3.6 and Appendices referenced there.

Table 2 - Factored Pmean - Top 5 risks

Title	Factored Pmean (£) (24/25 prices)
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]

Woolavington provides a cost efficient, consumer orientated investment supporting current and future demand. The new 400kV and 132kV SF_6 free GIS substations enable timely connections for [redacted] EV battery factory, supported by HMG, and the [redacted] data centre, meeting both licence requirements as well as UK decarbonisation and economic growth initiatives. Cost efficiency has been secured through a mature, assured cost base supported by internal challenge and benchmarking, and an efficient procurement strategy combining early contractor involvement, market-tested frameworks and fixed-price delivery. This is designed to ensure the successful completion of this project, further supported by a risk provision commensurate with this project's strategic importance.

2. Detailed Developments

Headlines
Overall, there is principal design continuity since FNC with refinements reflective of, among other things, updated customer connections and security requirements. Changes required are to comply with legislation or customer connection obligations and do not materially impact the consumer benefit of the investment. Construction of the substation at Woolavington has now begun.

The design, a SF_6 free 400/132kV GIS substation with a futureproofed, expandable design remains consistent with FNC. [redacted] The changes since FNC are the result of developments to the number of customer connections, security requirements, proximity to substation fencelines, ecological considerations, utilities and updated programme plans. They do not materially change the option presented at FNC. Please refer to the detail below and Section 3.3 for an updated Cost Benefit Analysis demonstrating this.

[redacted]

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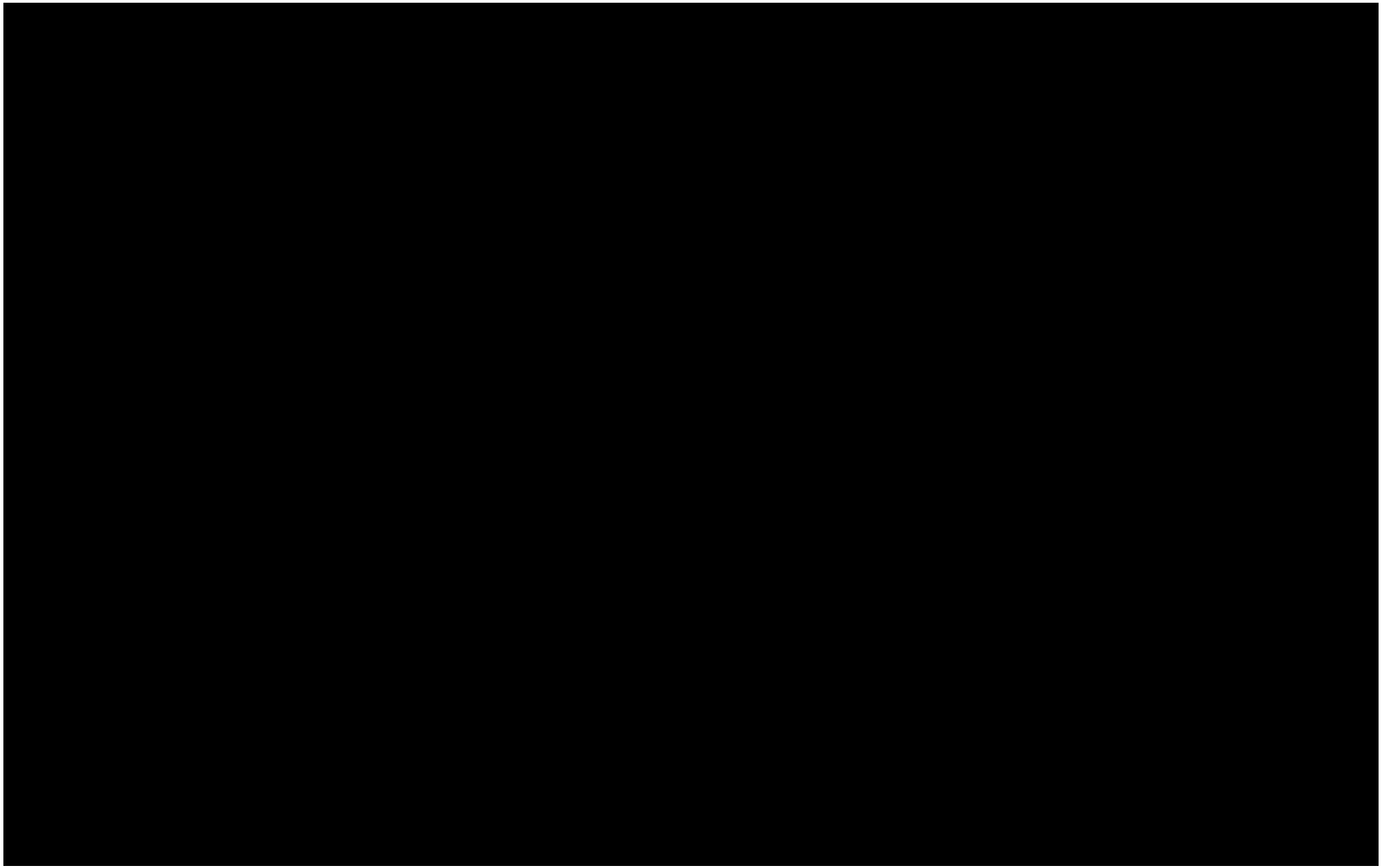

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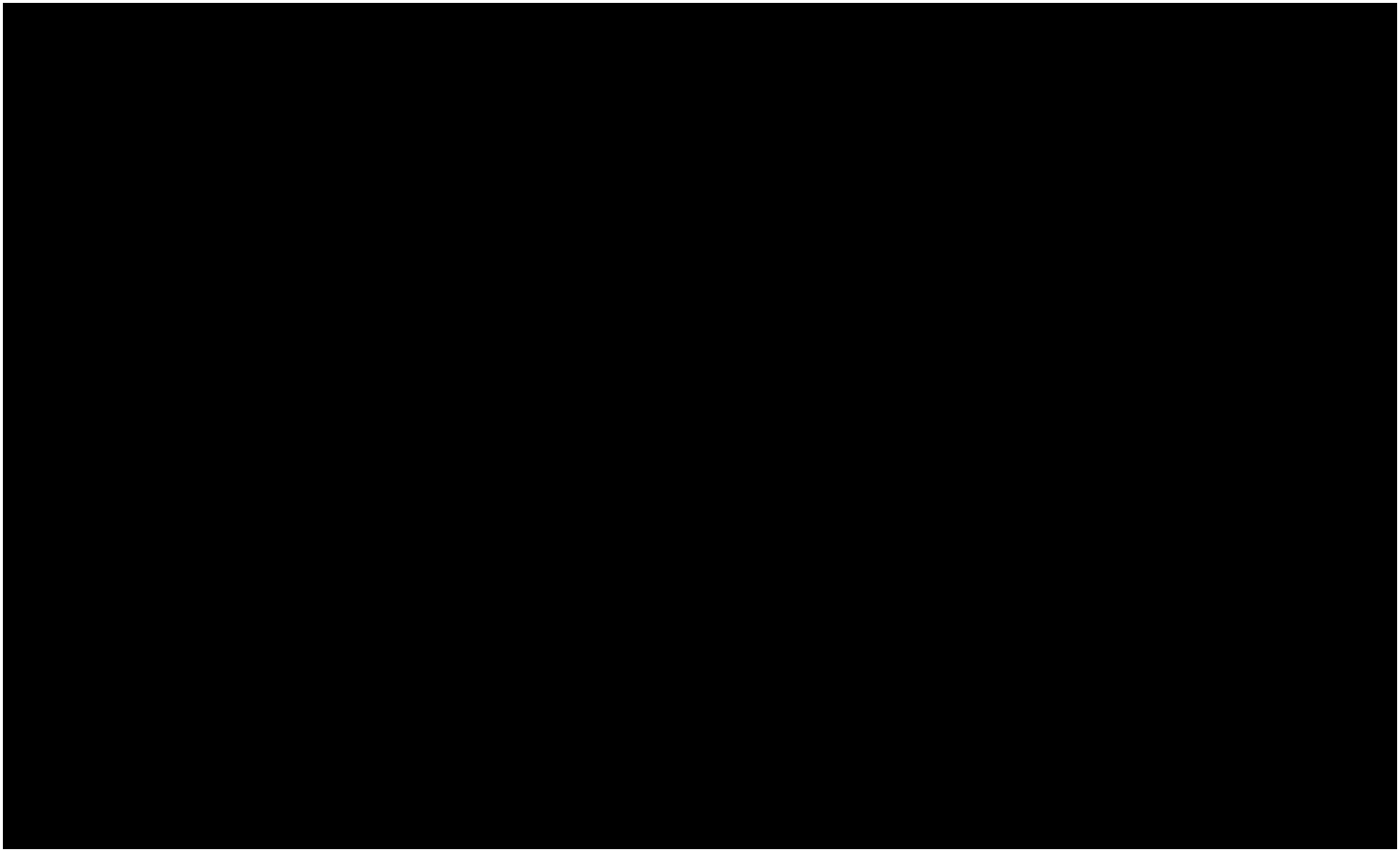

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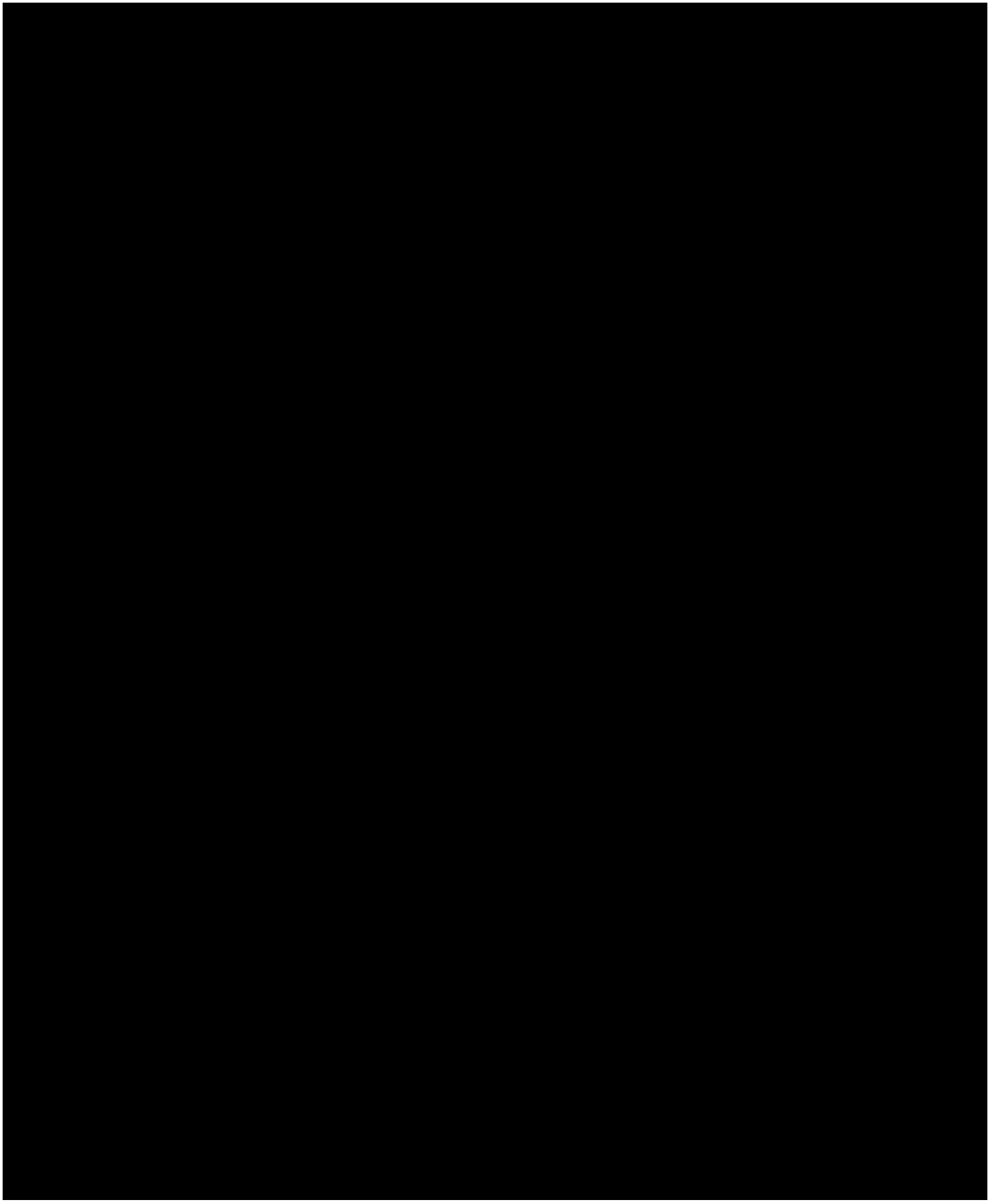

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2.1 Customer Connections

					[redacted]

2.2 Strategic Investment

Table 4 was contained within the FNC submission and set out the number and type of GIS bays, including bays identified as 'anticipatory' at that stage [redacted]

[redacted]

[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]

Following confirmation of [redacted] connection, we have brought forward the associated GIS bays into the scope of this Project Assessment: [redacted]

Including these additional bays now reduces future delivery risk and whole-life cost by securing long-lead SF_6 free GIS equipment within the current procurement window, minimising the need for future site access and system outages, and avoiding potential future retrofits to civils and cable containment. Procuring the bays as part of a larger order also delivers economies of scale and better use of construction and installation resources, supporting Government objectives to deliver enabling transmission infrastructure at pace (including for data-centre and AI growth).

2.3 Security Solution

The National Security and Investment Act 2021 and the Network and Information Systems Regulations 2018, require National Grid to implement proportionate security measures to safeguard system resilience. In June 2025, a security assessment was completed for the Woolavington site. The conclusion of this assessment confirmed the need for additional investments which now form part of the project scope.

2.4 OHL Gantry Locations

Following FEED completion, it was identified that the existing gantry design was located too close to the substation fence line and would not provide the 5-meter distance required for Mobile Elevated Working Platform (MEWP) access. Therefore, the gantries were moved further south, their location was constrained due to the minimal lateral movement of OHL gantries, requiring them to be positioned under the existing OHL route. For assurance, the loadings on the T-pylons have been restudied and confirmed acceptable in the new design and we have [redacted] to study the impact of the 400kV FLT gantries on the existing T pylon route. This study confirmed the T pylons remain within their design limits, with the FLT gantries installed and during construction. The revised gantry locations have meant fenceline modifications and changes to the GIB arrangement to ensure clearances are maintained.

2.5 [redacted]

The inclusion of an [redacted] is required to maintain compliance with National Grid security of supply and system operability standards. Detailed protection and network security reviews identified that, without [redacted] The change, identified during detailed design, is essential to ensure safe, resilient, and compliant operation of the 400 kV substation.

2.6 Construction works

Work at site has progressed since FNC, with further details provided in Appendix 3.

[redacted] construct and handover two finished working platforms to NGET has been fulfilled. Handover of the 'Southern' platform [redacted] occurred in September 2025 [redacted] Handover of the 'Northern' platform [redacted] was delayed from October 2025 to March 2026 [redacted] due to a [redacted] surface drain and a nesting barn owl exclusion zone. The ecology assessment for the latter was conducted by our customer, and it impacted their scope of work, both of which we had minimal control over. Since taking over the site, we have moved the bat house, within which the owl nested, north of the substation area to mitigate future issues.

As a result of these factors, construction activities on the substation prior to March 2026 were not possible. However, we sought to accelerate other aspects of the programme, such as the OHL works to connect the FLT gantries [redacted] before the planned energisation [redacted], to mitigate some of the issues experienced. In the case of the OHL works, doing so has reduced the length of future outages required, enabling more efficient use of resources and which minimises Health and Safety risks. The first works on the substation will include groundworks, building foundations for the 400 and 132kV GIS Buildings, pipework, ducting and internal roads.

2.7 Land Rights

All construction activities for the new substation are located on a single title holding [redacted] in the freehold ownership of This is [redacted] the company behind the [redacted]

Unlike the other shortlisted options at FNC (E-1 and E-5), the substation is to be built on land owned by This is [redacted] (our customer), avoiding additional, incremental land acquisition and associated costs beyond these boundaries. It remains within the existing Local Development Order (LDO) streamlining planning processes.

Under Licence Condition B9 paragraph 1(a)ii in relation to 'normal commercial terms' it was understood that the leasing of land from TiG for the substation would need to be deemed fair and reasonable. However, the determination of final purchase values could not be fully forecast until design maturity, and the extent of the land take had been finalised.

The extent of the necessary permanent and temporary land and land rights reflect the construction and future operational requirements of the scheme. As with all works, National Grid's Land Rights Strategy is in place to provide a clear and consistent approach to securing the necessary rights.

Negotiations with the freeholder have been successful and the voluntary acquisition of the land and land rights are on track to be delivered without the need to resort to any reserved statutory powers of Compulsory Purchase. The benefit of this purchase is it avoids the need for us to deliver wider work scope, such as access roads and drainage systems, which would be necessary should land be purchased at another location.

Further details regarding the types and lengths of rights as well as consents is provided within Appendix 4.

2.8 GIS Storage

Since FNC submission, refinement of the construction programme and supplier manufacturing timelines has meant secure, third party GIS storage is required for a longer period. As the project has progressed, [redacted] have confirmed that GIS equipment manufacture is forecast to complete in advance of site availability, necessitating extended third party storage. This has crystallised as a cost since the FNC submission, with the requirement for secure, insured warehousing [redacted] over an extended duration.

2.9 Delivery Date - [redacted]

The [redacted], as stated in FNC, was an ambitious target agreed to support [redacted] decision to construct their facility within the UK, and with it, provide the benefits for the UK economy. As work on the project has progressed, we have engaged with our Main Works Contractor to develop a robust delivery plan, factoring in the development of the design, programmes from subcontractors, lead times based on suppliers' quotations, and a more detailed programme. This review resulted in a revised completion date, which has also been significantly impacted by Agratas handing over the Northern platform later than expected. Main construction of the substation could not start before completion of this platform, which took place in March 2026.

To minimise the impact of this on the delivery of [redacted] connection, and by extension realising the associated consumer benefits, [redacted] has been kept informed and has not raised any concerns. [redacted] However, this temporary solution is not an enduring one. To achieve [redacted] for [redacted] and connect [redacted] in [redacted] with the necessary MVA capacity, the proposed 400/132kV substation is essential.

To ensure that we are developing and delivering the best overall solution for consumers, we conducted an updated CBA to reflect these new timings. The results of this are summarised in section 3.3 below,

together with a comparison of delivery timelines of the solution as compared with the shortlisted AIS option. This updated analysis supports the solution being progressed. If we were to continue using the temporary [redacted] connection while switching to deliver an AIS substation, this would not enable [redacted] nor allow for [redacted] connection in the same year. As outlined later in section 3.4, shifting from a SF_6 free GIS to an AIS, following FNC submission and receipt of final tender delivery, would mean the earliest possible connection date is [redacted] Further details on other delays and mitigation measures, including using Somerset Council's informal Early Work Notification (EWN) process to advance certain overhead line (OHL) elements, can be found in Appendix 3 and 5.

3. Costs

Headlines

Total project costs for Woolavington are [redacted] (23/24 prices). Costs are firm, with [redacted] Our benchmarking (section 3.5) demonstrates the costs are comparable to projects of similar size and scope.

An updated CBA has been produced to incorporate developments since FNC submission. The CBA demonstrates the continued consumer case for this investment along with programme impacts to demonstrate the delays associated with pivoting to an alternative solution.

The Pmean risk allowance required is [redacted] of the total project costs excluding risk and contingency.

3.1 Investment costs

The cost to deliver the Woolavington project in line with the proposed scope is [redacted] (23/24 prices). The [redacted] and a cost summary is provided in Table 5. [redacted]

This section provides a description of the overall costs, the price base, a detailed overview of the 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 from initial project development through to the completion of construction and commissioning. All costs are presented in 2023/24 prices, unless otherwise stated.

The FNC estimate of approximately [redacted] (18/19 prices – c.[redacted] in 23/24 prices) was based on early-stage cost book estimates prior to detailed design, procurement, or contractor engagement. The higher PA cost of [redacted] (23/24 prices) primarily reflects:

- market-tested contractor pricing replacing cost-book estimates; and
- programme extension from 2027 to 2029.

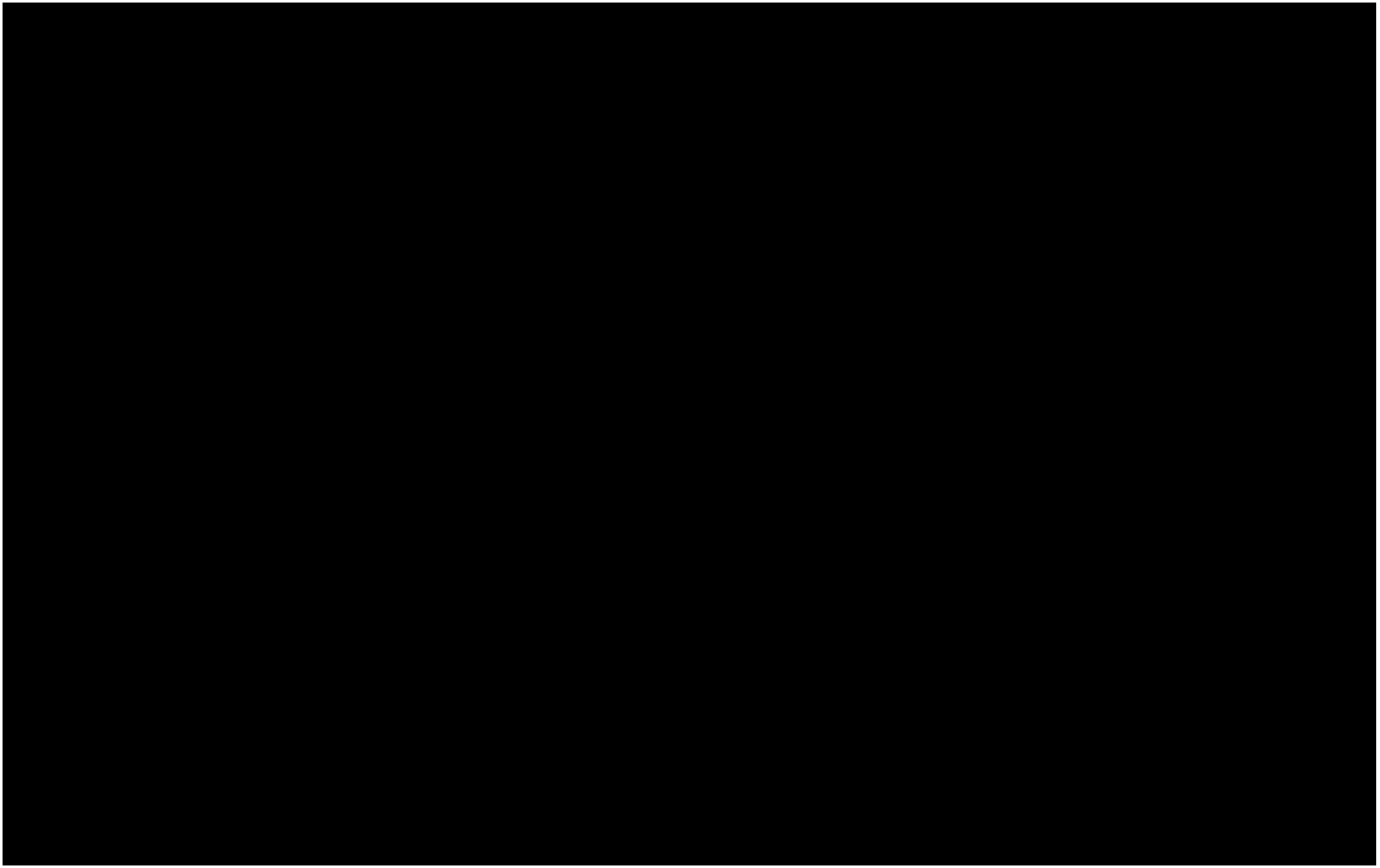
Our internal assurance supports these costs as efficient and robust, corroborated by benchmarking against comparable projects as detailed in Section 3.5. We also note the cost uplift remains within the material change threshold specified in the Load Re-Opener Guidance, ensuring compliance with Ofgem requirements.

Cost assurance

Costs have been subject to internal assurance to confirm efficiency and value for consumers. Under the [redacted] contract (further details on procurement approach is contained in Section 4), the Contractor has submitted regular evidence of costs incurred, including timesheets and invoices which have been reviewed by experienced project Quantity Surveyors prior to payment. The [redacted] has also been subject to detailed internal review and commercial negotiation, during which we have robustly challenged the Contractor's price build-up. This has included review of supporting evidence for supplier quotations, detailed resource schedules, and the Contractor's risk assessments and risk allocation. [redacted]

Our projected costs have been benchmarked against investments of similar scope, nature and complexity based on our extensive experience of electricity transmission construction programmes. Our

benchmarking analysis, summarised in Section 3.5, shows the Woolavington costs to be aligned with other, similar projects giving us confidence that costs are efficient and aligned to industry comparators.



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3.2 Cost Drivers

Table 6 provides narrative defining the key cost drivers in the Woolavington investment linked to the activity.

Table 6 – Cost drivers for each cost category

Activity	Description
Main Works Contractor [redacted]	• Contractor Project Management and Design resource for the completion of all designs ready for the Design Intent Document. • Site Surveys – Acting as Principal Contractor and Principal Designer. • Hazard and design review meetings. • Project coordination. • Risk identification. • Support with LDO through provision of designs, construction methodology and management plans for informal early works notifications and compliance application, as well as Overhead Line Exemption Reg Notification. • HV layout detailed design packages. • Civils detailed design packages. • Critica[redacted] Protection & Control design package • Design, procurement, manufacturing, delivery and storage of GIS equipment • Site establishment. • Welfare establishment. • Site running costs from September 2025 to December 2025. • Subcontractor costs for the construction of foundations for FLT gantries and [redacted] AIS equipment foundation bases under the OHL route.
Main Works Contractor [redacted]	• Detailed design completion. • 400Kv GIS (G3) Substation. • 132Kv GIS (G3) Substation. • Substation infrastructure. • Overhead line works. • Remote ends works. [redacted] • Cable Works. • Protection and Control. • Site Services. • Commissioning. • All associated preliminaries. • Ongoing welfare and demobilisation costs. • Preparation and submission of Secondary Consents applications (e.g. Environmental Permits, Section 61 prior notification) etc.
SGT procurement and install contract	• Design and manufacture. • Delivery. • Installation and Stage 1 Commissioning of [redacted] SGTs.
Third Party Costs	Costs linked to the following contractors or activities, further detailed in Table 10: • [redacted] Diversions and Temporary Welfare Electricity Supply • 11kV [redacted] Substation • Operational Tripping Scheme (OTS) [redacted]

	[redacted]
Legal & Consents	• Planning Performance Agreement (PPA) between Somerset Council and NGET to provide discretionary pre-application advice, handling of informal early works notifications and general planning advice. • Preparation of planning application deliverables by environmental services framework suppliers to support LDO Compliance Application submission. • Fee associated with LDO Compliance Application Submission. • Biodiversity Net Gain and landscaping measures to meet LDO mitigation and corporate environmental commitments.
Project Management	• National Grid Staff Costs associated with project delivery.
Project Services	Covering National Grid Staff Costs associated with project services: • Health & Safety Compliance Support. • Quality Advisory Support. • External Affairs Support to manage and enable effective local stakeholder engagement to minimise potential project disruption. • Woolavington Substation Community Benefit Funding for new substations which enter construction after March 2025. • Commissioning panel chair support,
Land Acquisition	• Price for the land • NG professional contractors such as legal and surveyor services and third-party professional costs. As well as any additional taxation (VAT SDLT) as relevant.
ET Ops	• National Grid Staff Costs associated with project commissioning, support through design and delivery.
NGET Portfolio Costs	• National Grid non-direct project costs.
Inflation	• Forecast of cost increase over project duration.
Risk	• Costs associated with identified project risks.

Main Works Contractor costs are the most significant element, making up [redacted] of total project costs. Table 7 presents the split of these costs into Preliminary Stage 1 and Main Works Stage 2.

Table 7 - Preliminary and Main Works Costs

[redacted]

The following tables provide a breakdown of the activities within these two stages aligned to our project scope document, part of our contract with [redacted]. Tables below also set out other contractor elements beyond [redacted] scope. [redacted]

Contractor costs

[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]

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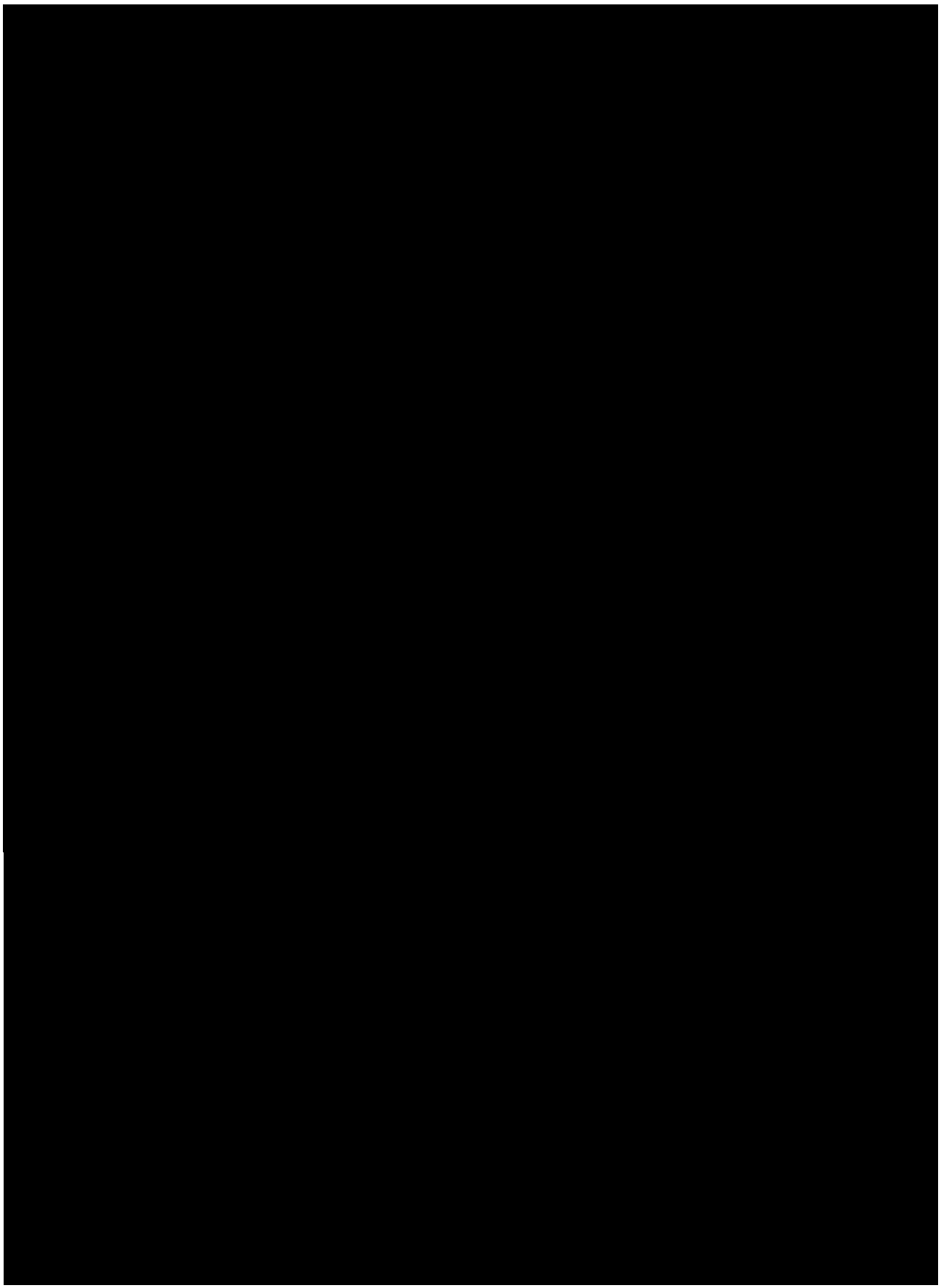


Table 10 - SGT procurement and install

[redacted]

Table 11 - Third Party Costs

[redacted]

[redacted]

3.3 Updated Cost Benefit Analysis

Table 12 provides the outputs of the updated Cost Benefit Analysis (CBA) for this investment. In conducting this analysis, we have refreshed cost estimates for the FNC shortlisted Option E-1 and E-5, in line with current market trends, and included updated land costs.

The analysis shows Option E-7 (our preferred option at FNC) and the subject of this PA, to have a higher Net Present Value (NPV) than the shortlisted AIS FNC options, Options E-1 and E-5. Option E-7 delivers an NPV of [redacted], higher than Option E-5 ([redacted]) and Option E-1 ([redacted]). [redacted] This assessment confirms the consumer benefit obtained by this investment compared to other credible options we assessed at FNC stage.

Table 12 - Lifetime CBA by Price Control period (23/24 base prices, central carbon pricing, discounted values)

Option	Costs (Discounted)	Benefits (Discounted)	NPV
Option E-1 (AIS on ZG Route)	[redacted]	[redacted]	[redacted]
Option E-5 (AIS Wrap Around)	[redacted]	[redacted]	[redacted]
Option E-7 (GIS - subject of PA)	[redacted]	[redacted]	[redacted]

3.4 Programme Impacts

In light of the refreshed [redacted] we have also reassessed the qualitative optioneering conducted at FNC with a specific focus on the key benefit of the preferred Option E-7: its timelier delivery and therefore connection of an important strategic customer.

Our analysis considered 3 scenarios, set out in Table 13. [redacted]. As can be seen, in all scenarios our current design delivers the shortest, most certain path to energisation. This holds even when considering a scenario where we had sought to deliver an alternative (AIS) option from the outset, which would have resulted in customer connection in 2031 at the earliest, well beyond the revised 2029 completion date - this delay would also have resulted in a

corresponding delay to the realisation of the associated consumer benefits. We chose not to consider the scenario of shifting from the preferred GIS solution to an AIS solution in May 2026 as this would be later than Scenario 3.

On the basis of the CBA and these programme scenarios, our assessment is that the preferred GIS option remains the best overall solution to deliver the connection in the fastest time frame, to the benefit of consumers.

Table 13 - Alternative completion date scenarios

Scenario	Scenario Description	Completion date
1	Continue with our current approach without any deviation.	[redacted]
2	Progress with FNC Option E-1 or E-5 (AIS) from 2023.	[redacted]
3	Transition from the preferred GIS solution to an AIS solution following FNC submission and receipt of final tender delivery programme.	[redacted]

3.5 Benchmarking

To ensure we are delivering the best value for money and maintaining efficient costs for consumers, we have carried out benchmarking analysis against similar projects.

This analysis indicates that, overall and across most categories, the total cost forecast for Woolavington aligns closely with expectations for comparable projects and activities. Considering the project's context and complexity, this indicates that the costs associated with the project are efficient. A summary of the benchmark findings is provided below. [redacted]

PA submission cost element	Benchmark Findings
Indirect costs (PM and specialist staff) – external sources	Within forecasted industry sector range
Indirect costs (PM and specialist staff) – internal dataset Construction & power projects	Aligned to NGET internal benchmarks
Indirect costs (PM and specialist staff) – internal dataset substation projects	Aligned to NGET internal benchmarks
Design costs – external sources	Below forecasted industry sector range
Design costs – internal dataset	Aligned to NGET internal benchmarks
Substation Elements	
Transformer installation costs – external	Below [redacted] MSIP benchmarks.
Substation cable costs - external	Below IET benchmark range
Substation – cost per bay metric - external	Below external TO benchmarks.
Substation – cost per bay metric - internal	Aligned with NGET internal benchmarks.
Cable costs - external	Below IET benchmark range

OHL cost - external	Aligned to IET benchmark range
Substation total costs - internal	Aligned with NGET internal cost assurance & cost intelligence benchmarks. Within the AACE estimate classification range.

3.6 Risk

3.6.1. Risk Identification

As a portfolio of work, both nationally and regionally, delivery on this scale must be balanced to ensure we can deliver across a diverse range of investment that enables the UK's ambitious growth plans. The scale, concurrency and technical complexity of the proposed programme is expected to place material pressure on the supply chain, creating a risk that constrained availability of specialist systems and testing resources and installation capability could adversely affect delivery certainty, cost and schedule.

Mitigations are in place to reduce both the likelihood and impact of these constraints; however, a residual risk remains given the finite availability of specialist capability across the sector.

These risks have not been quantified or included within individual project submissions, as they are expected to manifest at portfolio level rather than being attributable to a single project. We would welcome a discussion on how best to manage and reflect these risks in a way that appropriately protects consumers and supports delivery for the network.

[redacted] In total, 56 individual risks have been identified as part of our risk management activities related to the delivery of the Woolavington project.

Risks identified are a result of a series of workshops involving the Woolavington Project Team, discussions and negotiations on risk allocation with the MWC, and through lessons learnt from similar projects. We considered the risks that are likely to cause time, cost, or reputational impact arising from internal project challenges, wider business challenges, and the external environment.

A summary of the risks by theme, with percentages denoting the P-mean risk amount as a proportion of the overall risk sum, are ranked in descending percentage order, the themes are:

- Implementation (35%),
- Design / Planning (29%),
- Commissioning & Deployment (10%),
- Operating Environment (10%)
- Procurement (9%),
- Commercial (5%),
- Natural Environment (1%),
- Financial Environment (1%)

3.6.2 Quantitative Risk Analysis

Our risk management approach estimates the indicative cost risk values through Quantitative Risk Analysis (QRA), namely the development of detailed costed risk registers and Monte Carlo simulation of the range of potential outcomes. The QRA calculates the potential financial impact of risks enabling the project to forecast its financial outturn as risks materialise in construction. It is a core part of the projects risk management process. Through consultation in regular risk assessment workshops with Subject Matter Experts (SMEs), we collated the minimum, most likely and maximum cost and time impacts associated with the project's risks. These decisions quantify the anticipated best, likely, and

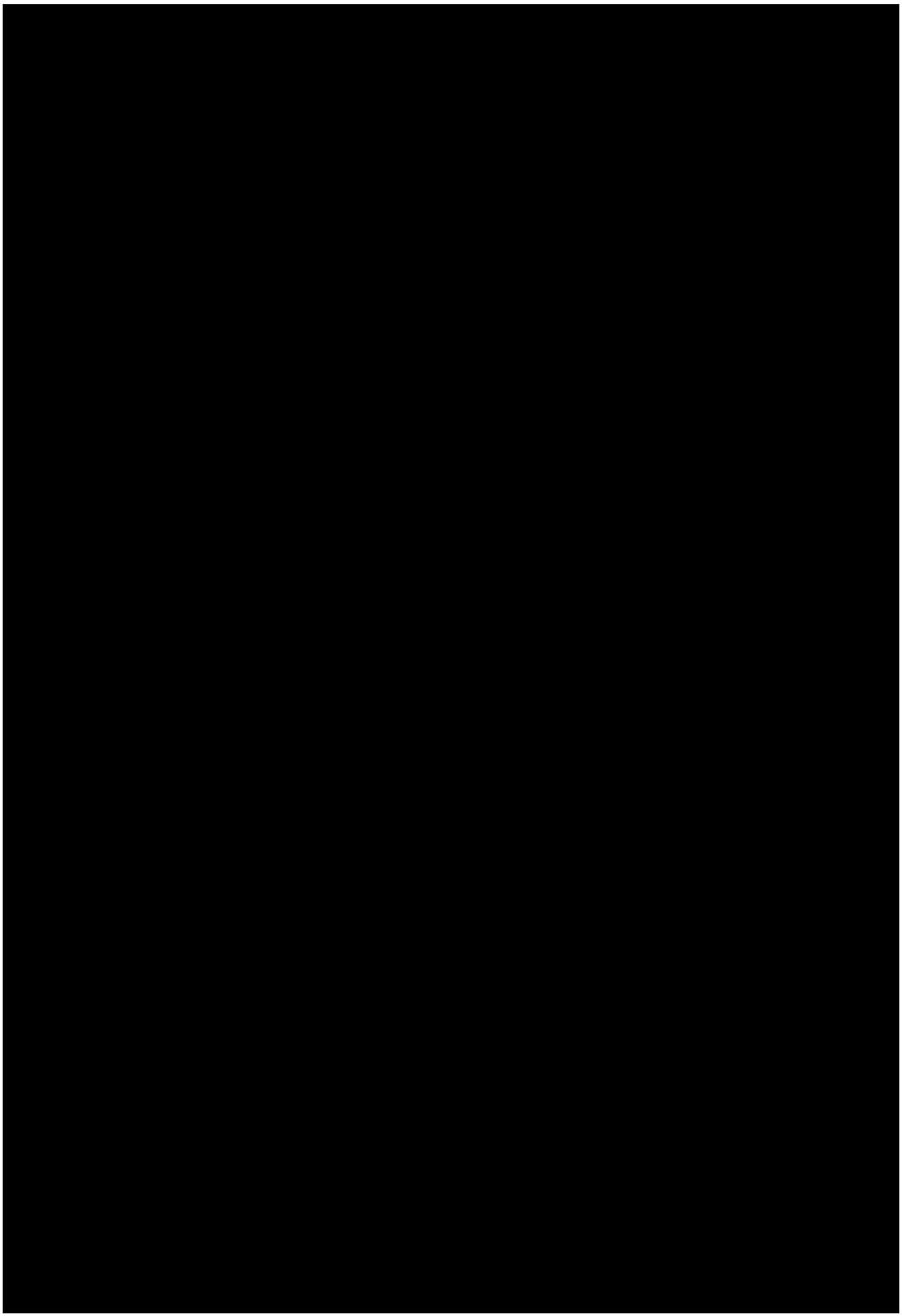
worst-case scenario impacts in terms of cost and duration. Through this activity a comprehensive risk register for the project is available providing details on all 56 risks identified as well as a total risk contingency value.

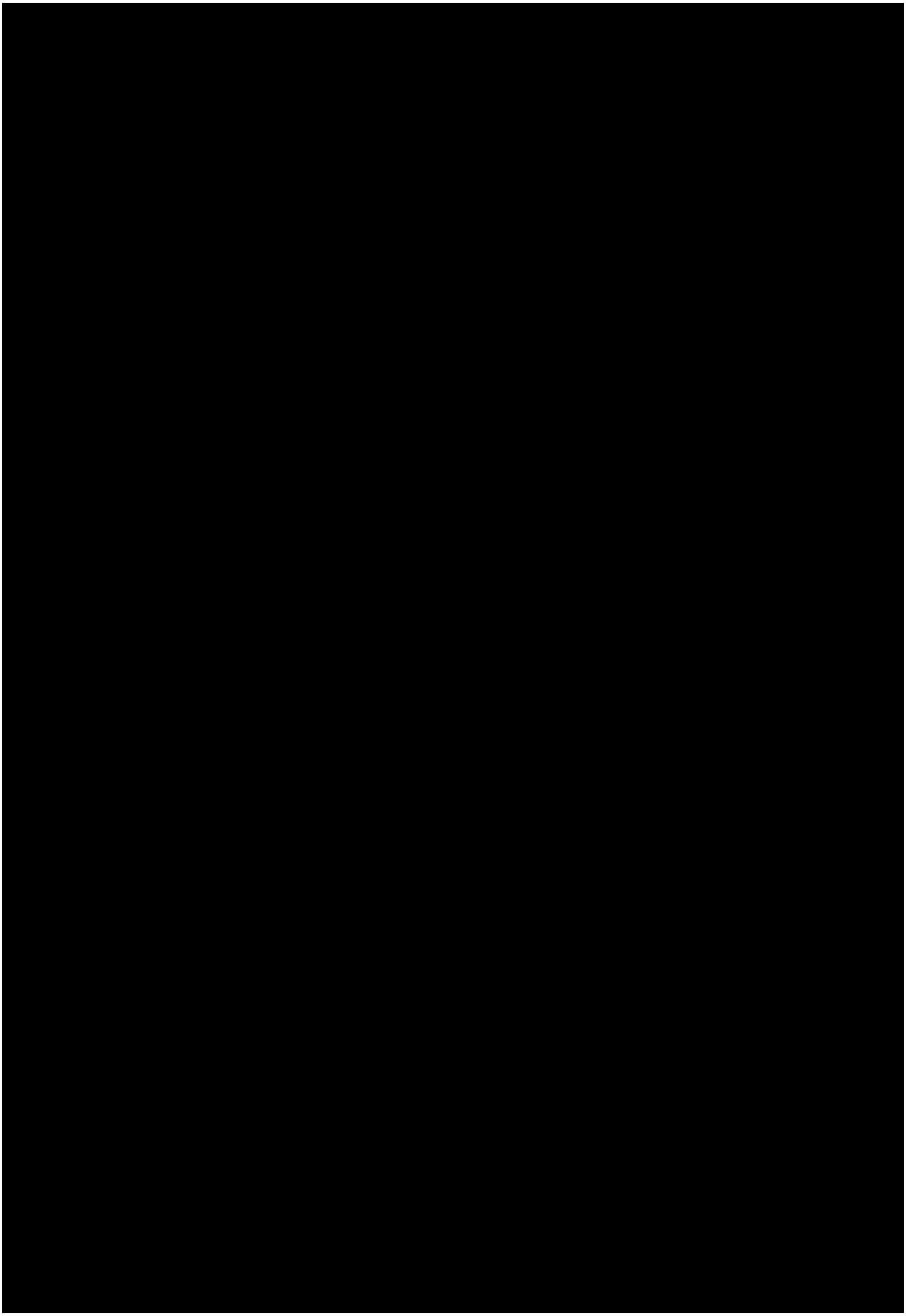
3.6.3 Risk and contingency value

The scope of the investment is the delivery of a new 400/132kV substation. The substation works have been competitively tendered on an NEC Option A (lump sum) basis (see Procurement section). The risk register has therefore been developed on the basis that the contractor has taken pricing risk on the known scope of works and therefore the register itself provides cover for National Grid carried risks (contractor owned risks are not captured or priced in this register).

At point of this submission, the cost factored P-mean, the most likely cost impact of the risks identified, is [redacted] in a 23/24 price base, accounting for [redacted] of project base costs excluding risk and contingency. This is the cost value (£) average of all iterations of risks attributable to the investment reflecting a balanced approach to risk allocation. This risk provision is designed to ensure deliverability of this strategically important substation, and with it, the benefits to the wider UK economy.

The risk management process and framework for the project aims to provide controls to identify, analyse, allocate and mitigate risks proactively. The top 5 quantified risks are set out within Table 14, including mitigations completed or planned. Risk values in are shown in 24/25 price base to reflect the detailed submission; this is then converted to 23/24 price base for the basis of submission.





[redacted]

3.6.4 Risk Benchmarking

We have conducted a benchmarking exercise for Woolavington, comparing the risk allowance, expressed as a proportion of base cost, against relevant risk and contingency levels. Since this investment is being delivered within RIIO-3, historical benchmarks from previous price controls do not offer a realistic comparison, as they do not reflect the current delivery environment. Accordingly, we have considered the risk allowance for this investment in relation to the risk and contingency values set out in Ofgem's RIIO-ET3 Final Determinations.[1] This is the most appropriate comparator given that the scheme is being delivered within RIIO-3.

This benchmarking indicates Woolavington's risk allowance is marginally higher than RIIO-3 FD [redacted] This reflects the principle that risk allowances should be set with reference to the characteristics of the individual project and wider delivery context, not a simple historic average. Ofgem's policy position as stated at FD was to consider the evidence on a project basis and not to apply a blanket percentage as became a de facto approach in RIIO-2.

Our primary basis for the proposed allowance is the project's detailed risk register and the quantified risk analysis derived from it. Furthermore, during the RIIO-3 Business Plan review process, we presented NGET and industry benchmarked data to Ofgem which showed that risk and contingency allowances in excess of 10% are justifiable.[2] It included an industry publication review to substantiate and benchmark this further. For reopener submissions, however, such as Woolavington, we consider it is important that the allowance is determined principally on scheme-specific evidence.

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[1] Para 5.31, RIIO-T3 Final Determinations – Electricity Transmission, 4 December 2025

[2] NGET T3 Business Plan Appendix_A14 Cost Assessment and Benchmarking Approach, Section 6.2, and RIIO-ET3 Draft Determination response to ETQ50 by NGET RIIO-3 Draft Determinations for the Electricity Transmission, Gas Distribution and Gas Transmission sectors | Ofgem

Woolavington faces a distinct set of delivery risks, including the scale and complexity of a new 400/132 kV node, land and planning constraints, non-SF_6 technology requirements and certification, multiple third-party interfaces, and a more challenging market and procurement environment. These drivers are evidenced in the risk log and underpin the proposed risk allowance. [redacted]

[redacted]

[redacted]

[redacted]

3.7 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 Woolavington Project Assessment.

[3] NGET T3 Business Plan Appendix_A08 ET Load Strategy
[4] RIIO-3 Final Determinations Overview Document Section 6.5

3.7.1 OE

We consider that OE should not be applied to the Woolavington Project Assessment.

In determining the contracting strategy for Woolavington, and against a backdrop of significant market volatility, we took explicit decisions to fix costs wherever possible in order to protect consumers. This resulted in the use of [redacted] These arrangements reflect the optimal and most efficient cost build achievable at the point of contract award and materially limit scope for further post award efficiency extraction.

For [redacted] contract structure fixes both scope and price. At tender stage we drove efficiencies through assurance activities and through value engineering due to having the [redacted] Under this arrangement, delivery efficiencies are primarily realised ex ante rather than ex post during delivery. Once the contract is awarded, we have limited ability to drive further efficiencies without either changing scope or introducing delivery risk.

Quantitatively, approximately [redacted] of total project costs are now either fixed or agreed as measurable through contract, with the remaining balance largely comprising risk allowances and estimated internal costs. As a result, there is limited scope for material efficiencies to be realised following the re-opener determination through traditional ongoing efficiency levers, such as further supply chain engagement or scope optimisation.

Applying OE adjustments in this context would therefore risk double counting efficiencies that have already been secured through procurement and contracting strategies deliberately adopted in consumers' interests. On this basis, NGET considers that the application of OE to the Woolavington Project Assessment would not be appropriate.

3.7.2 RPEs

RPEs should be applicable for Woolavington because it is a multi-year project where costs might move differently from general CPIH inflation.

Applying RPEs for Woolavington would also be consistent with the RIIO-T3 Final Determination, where Ofgem stated that RPEs would be considered where a project is a network infrastructure investment with construction phases expected to span 3 or more regulatory years.

As set out in Appendix 3, construction activity at Woolavington commenced in 2025 and is forecast to complete in [redacted] resulting in a construction phase that spans more than three years. In addition, the project utilises [redacted], under which costs incurred and paid by NGET are subject to annual inflation adjustment.

4. Deliverability & Procurement

Headlines
Delivery is managed through an integrated programme, providing clear accountability, proportionate assurance, and effective coordination across NGET, contractors, customers, and third parties. Since FNC, key milestones have been achieved and the programme refined resulting in a revised [redacted] Our Main Works Contractor (MWC) procurement approach delivers cost certainty, early market access and deign and delivery efficiencies.

4.1 Delivery strategy

The delivery strategy covers the following areas, with further detail provided in Appendix 5:

- delivery approach and context;
- delivery programme, including developments since the FNC;
- delivery team roles, responsibilities, and programme structure; and governance arrangements for delivery by NGET and its subcontractors.

The programme management approach for Woolavington 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. This includes [redacted]

The delivery approach incorporates structured stakeholder engagement as is demonstrated through our interactions with the customers and which supports effective interface management and minimise risk during construction.

A key aspect of the programme management strategy is the implementation of an integrated programme that brings together activities of various responsible parties such as NGET, 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.

[redacted]

[redacted]

4.2 Programme structure and milestones

Progressing detailed design, appointment of the MWC and key suppliers has meant a refinement of the programme and durations in line with the latest information. The programme has also been updated to reflect the latest customer interface requirements and dependencies, as well as proposed outage dates. The result is a more accurate projection of construction works, equipment delivery sequences, installation and commissioning durations.

As a consequence of the above and challenges preventing earlier platform handover explained earlier, connection date [redacted]

Agratas have been kept informed of the construction progress and new forecasted connection dates and have not raised an objection. [redacted]

[redacted]

[redacted] the programme timeline supplied within the FNC can be viewed within that earlier submission for comparison.

Please note: [redacted]

[redacted]

4.3 Supply chain capacity and outage planning

At the time of project development, supply chain capacity for SF_6 free Gas Insulated Switchgear (GIS) was constrained, with only a limited number of suppliers able to offer compliant non-SF_6 technology at the required voltage levels and within the project timescales.

We undertook early engagement with the available suppliers to understand manufacturing capacity, lead times, and delivery risks. These discussions were carried out in parallel with the appointed Main Works Contractor, [redacted], to assess the most efficient and deliverable procurement route. Based on this assessment, we instructed [redacted] to procure the GIS equipment on our behalf, reflecting their established market experience, supplier relationships, and capability to secure manufacturing slots for non-SF_6 technology. This approach will reduce interface risk compared with NG purchasing and free-issuing, while supporting the timely progression of detailed design and early equipment orders through inclusion [redacted] of the contract.

Outage planning considerations were integrated to ensure the overall delivery strategy minimised system disruption and programme risk. Early coordination with adjacent projects and network operations [redacted] enabled us to align works with planned outages where possible, particularly in relation to overhead line interfaces [redacted]

4.4 Procurement

We adopted a Direct Allocation approach to appoint [redacted] from the RIIO-2 Electricity Construction EPC Framework Agreement, recognising their proven technical expertise and prior involvement in the T-Pylon aspects of the [redacted] - a strategically linked investment. This method retains the robust competitive benefits of the framework, as contractors must first satisfy stringent assessment criteria to join, ensuring only those with the highest technical competence are eligible. Once on the framework, contractors compete for project work through NEC contracts, with 'Best for Task' scoring further driving value, innovation, and risk management. By selecting Direct Allocation, we accelerated the procurement process, reducing both the timescales and costs associated with traditional tendering, which ultimately delivers value for consumers by speeding up project delivery and minimising unnecessary expenditure. This approach ensures that competition is embedded at key stages, while enabling us to respond swiftly and efficiently to consumer and system needs.

The 'Best for Task' approach is an assessment-based selection process used to decide which supplier is the most suitable for a particular contract/project, using criteria that are already defined in the framework agreement. [redacted] performed well in our assessment which covered technical capability, experience, geographical advantages for their supply chains and the ability to advise us of any project acceleration opportunities. The contractors engaged, which included [redacted] cited limited resource, were not interested in other ET tenders or suggested project de-scope favouring part but not all of the investment scope.

In order to accelerate delivery to enable the economic benefits this investment facilitates, [redacted] This enables [redacted] accelerating the design/scheme and the ability of early procurement of GIS equipment. We engaged [redacted] at an early stage to ensure continuity across design and delivery, reducing risks of re-design or delays and embedding an element of [redacted]

[redacted] Specifically, the [redacted] contract provides consumer benefits in projects where there is defined scope. This is because costs are only paid following the completion of defined activities in an activity schedule. Furthermore, agreed risks are managed by the contractor against an agreed price, transferred away from being directly paid by consumers. Given greater financial jeopardy on contractors by virtue of the fixed price, [redacted] contracts impose greater incentive on contractors to engage in collaborative behaviours and find innovations to ensure costs align with the fixed price.

[redacted] also awarded then following cost assurance activities as referenced in [redacted] We have confidence in the efficiency of these costs following our cost benchmarking analysis we have undertaken [redacted]

Appendix 14 provides further details as to our procurement and contracting approach, timelines, and outcomes, which aims to ensure consumer cost efficiency while balancing the interests of programme delivery.

5. Conclusion

This submission seeks to provide Ofgem with the necessary cost information and evidence to enable it to make a Project Assessment Decision for the Woolavington 400/132kV investment.

The total project costs of the solution are [redacted] (23/24) and will provide a strategically important connection node enabling the connection of immediate and future customers. The investment, along with our updated delivery programme, continues to provide consumer values as evidenced through a refreshed CBA, timeline scenario modelling, cost benchmarking and internal cost assurance activities.

We therefore request Ofgem to confirm the Project Assessment Decision for this investment aligned to our request under Special Licence Condition 3.18 in a timely manner enabling us to have confidence in progressing with the proposed delivery strategy.

Appendix 1 – Location

Figure 2 - Woolavington location – transmission route map

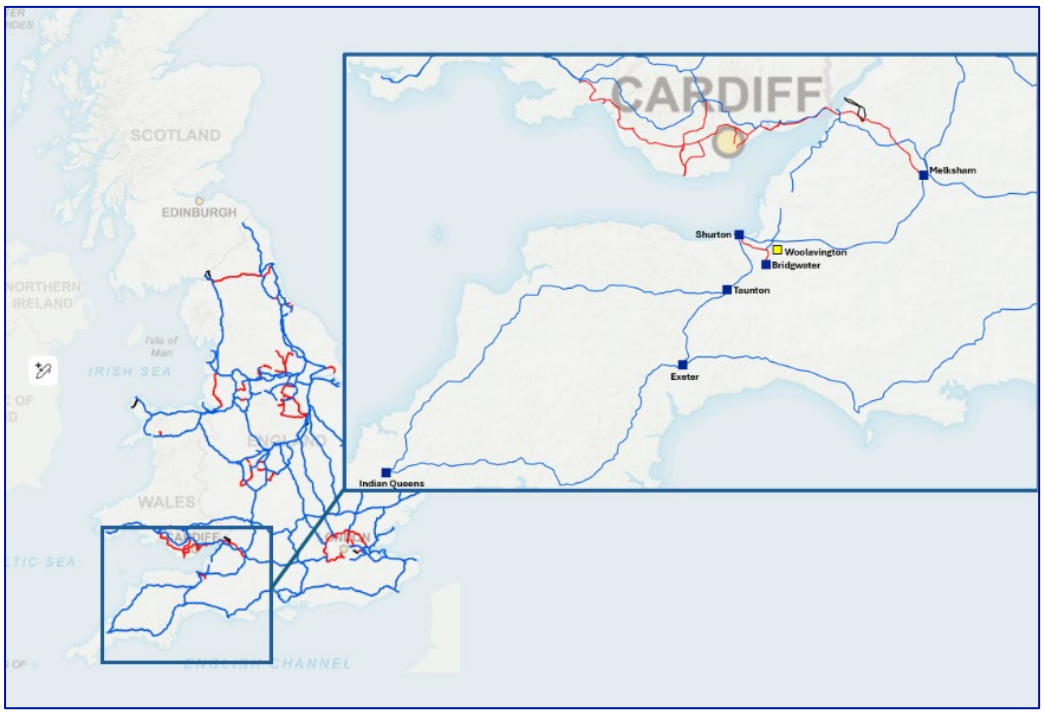
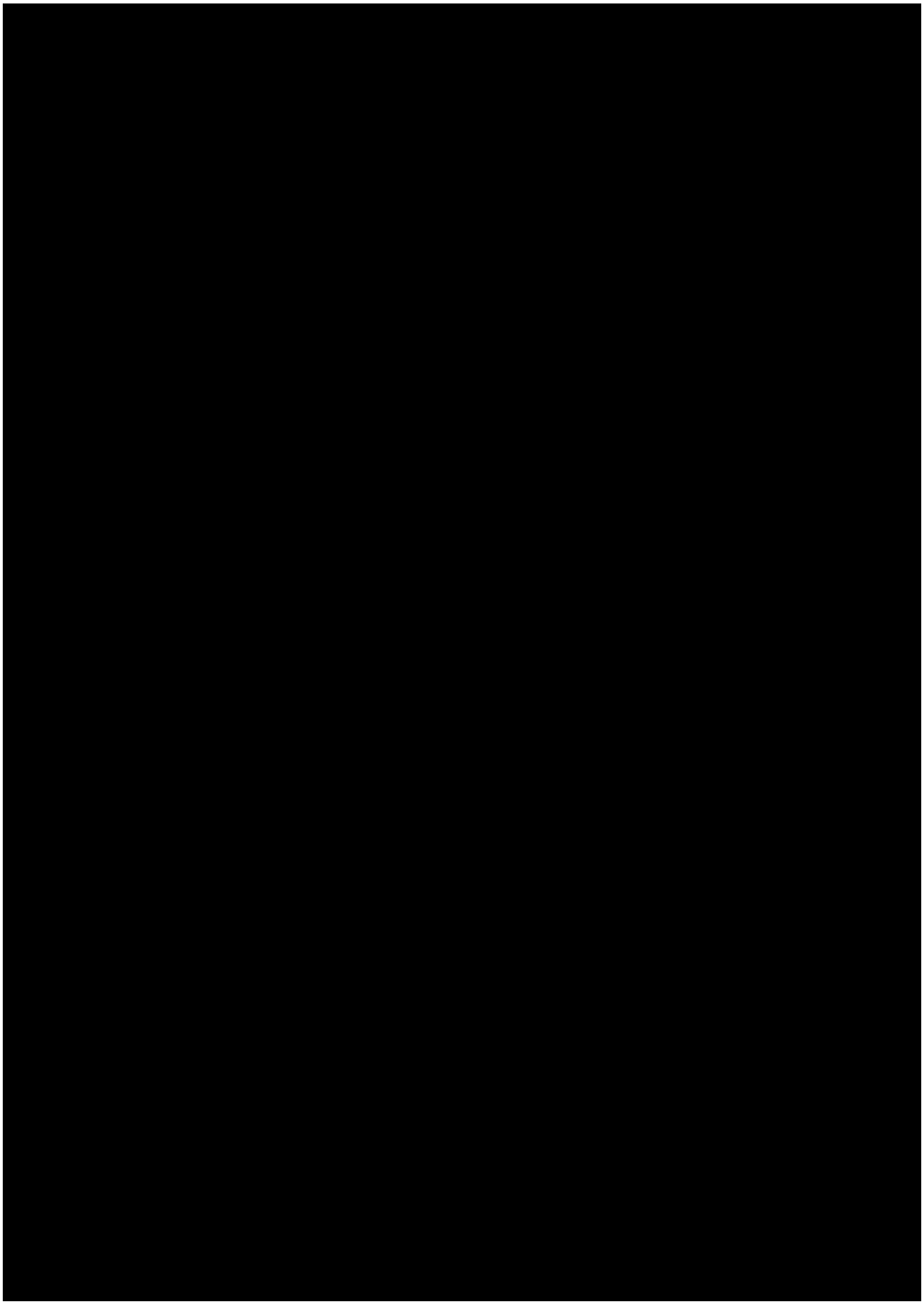
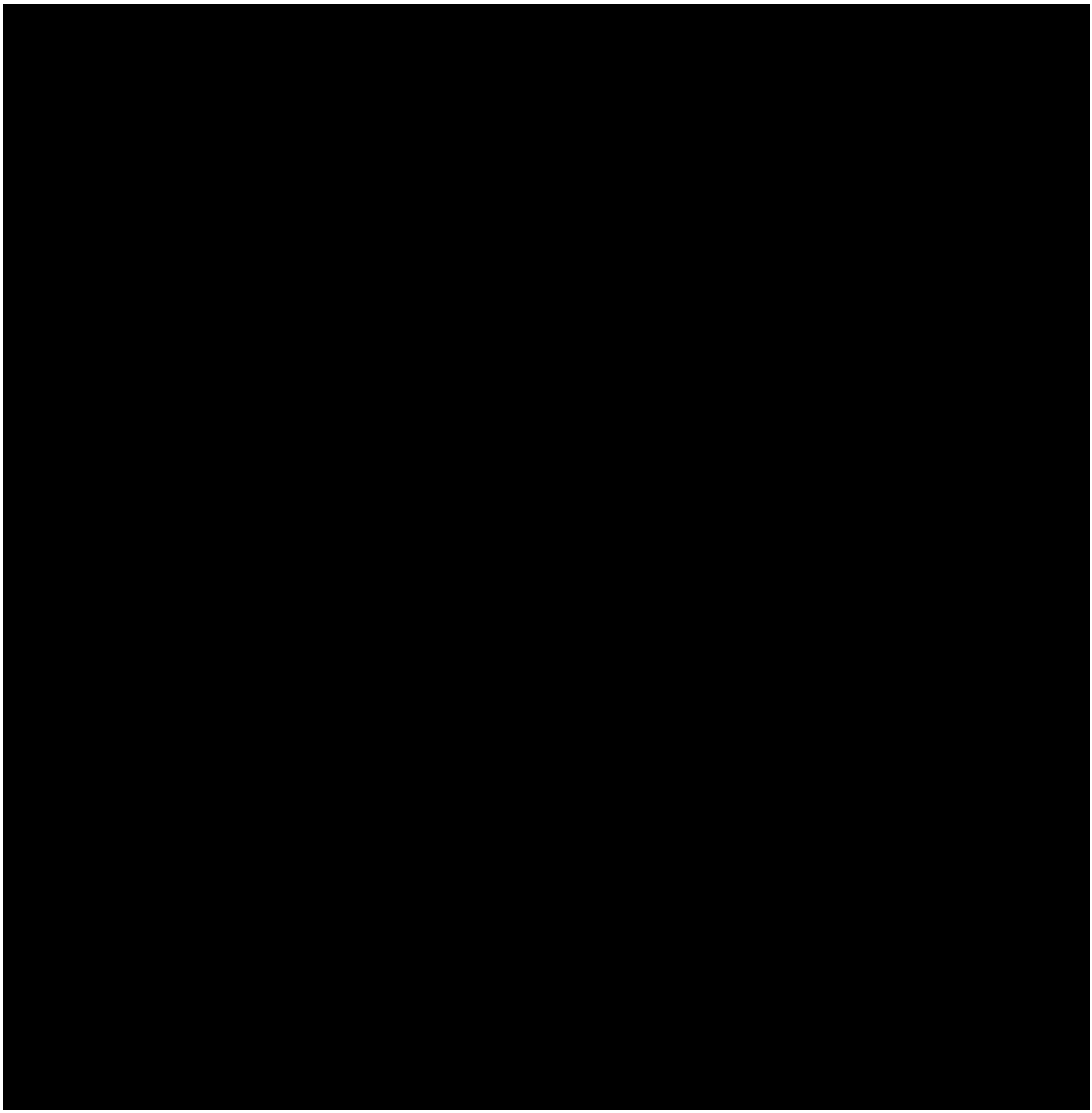


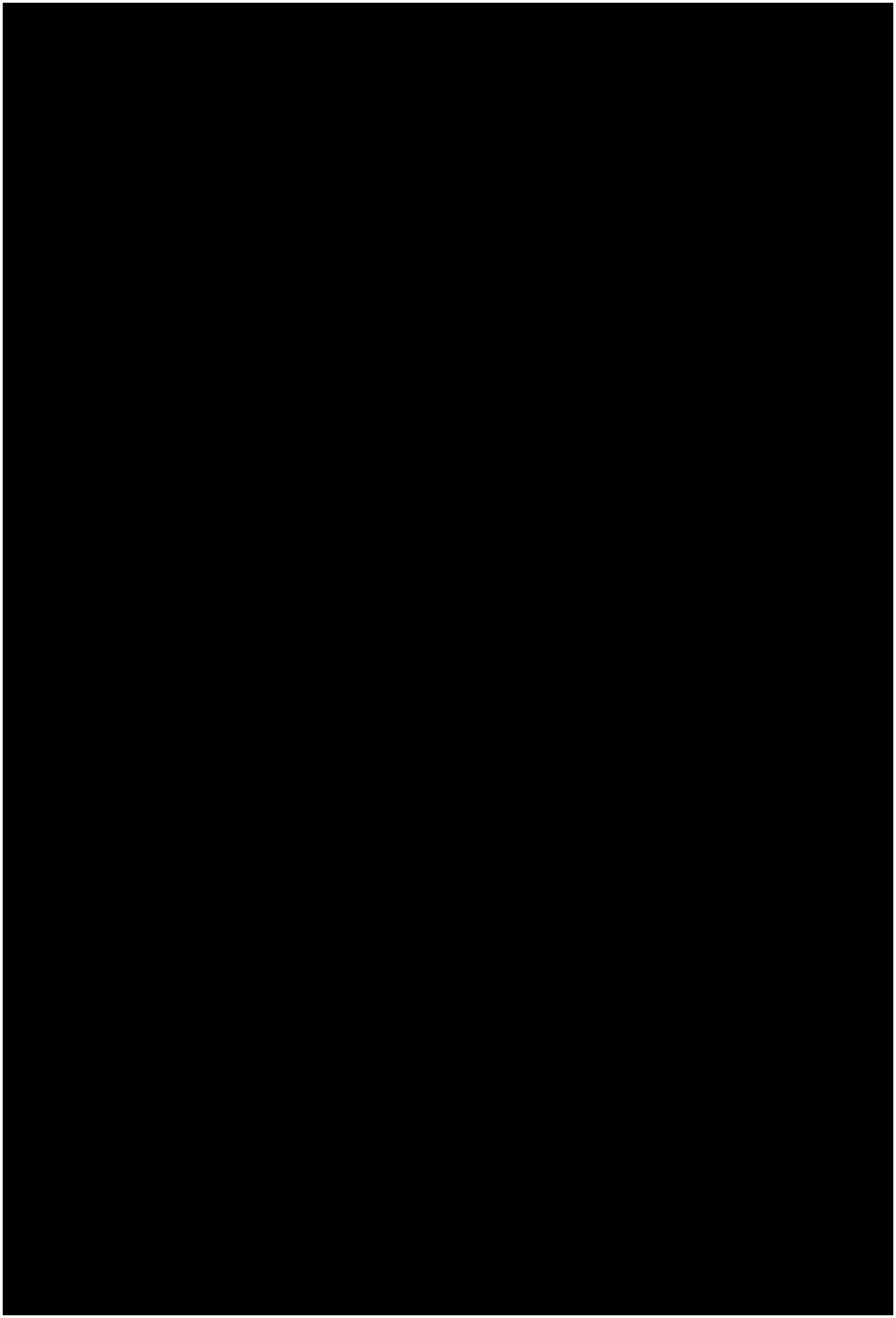
Figure 3 - Woolavington location - road map

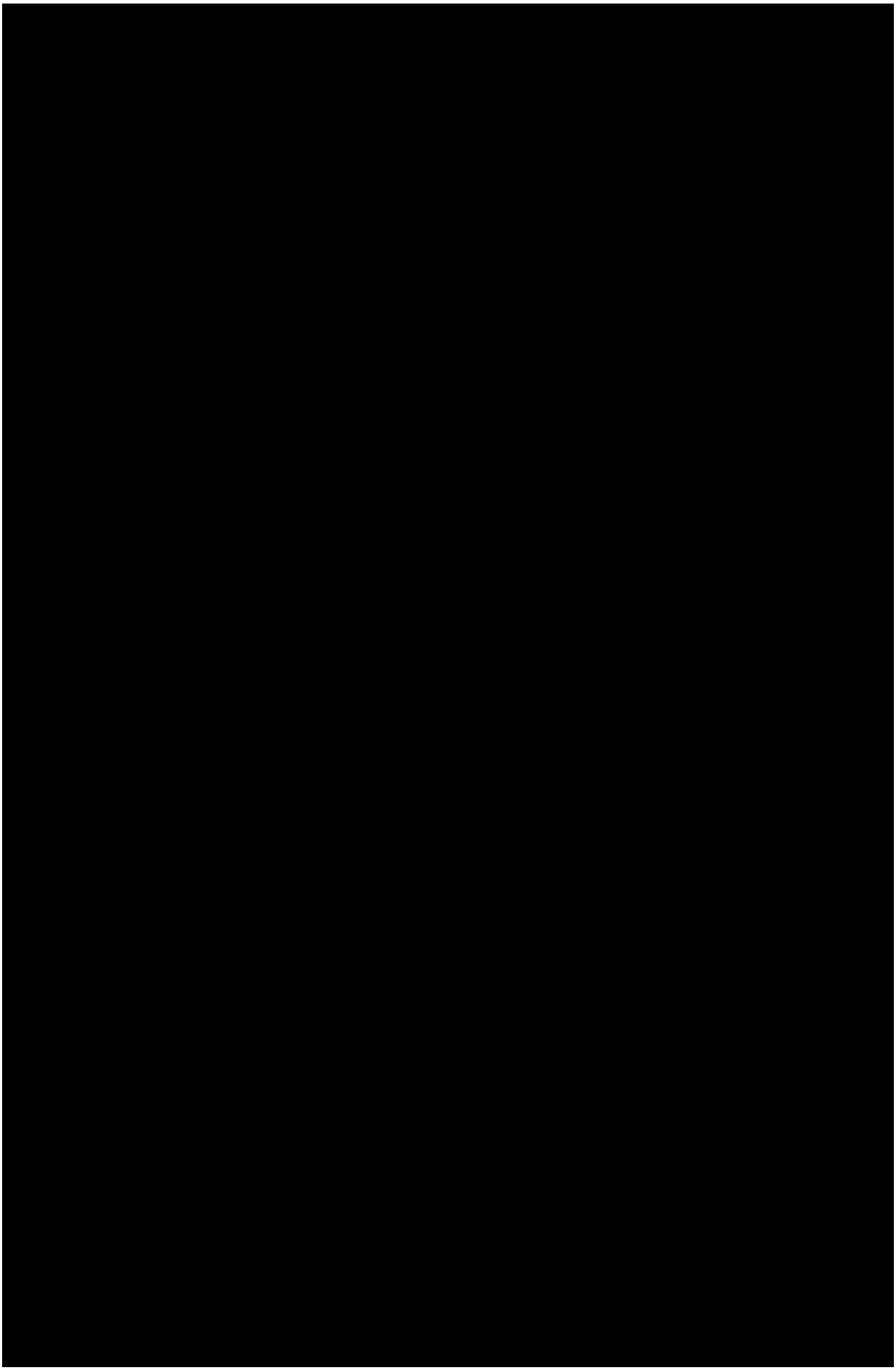
[redacted]

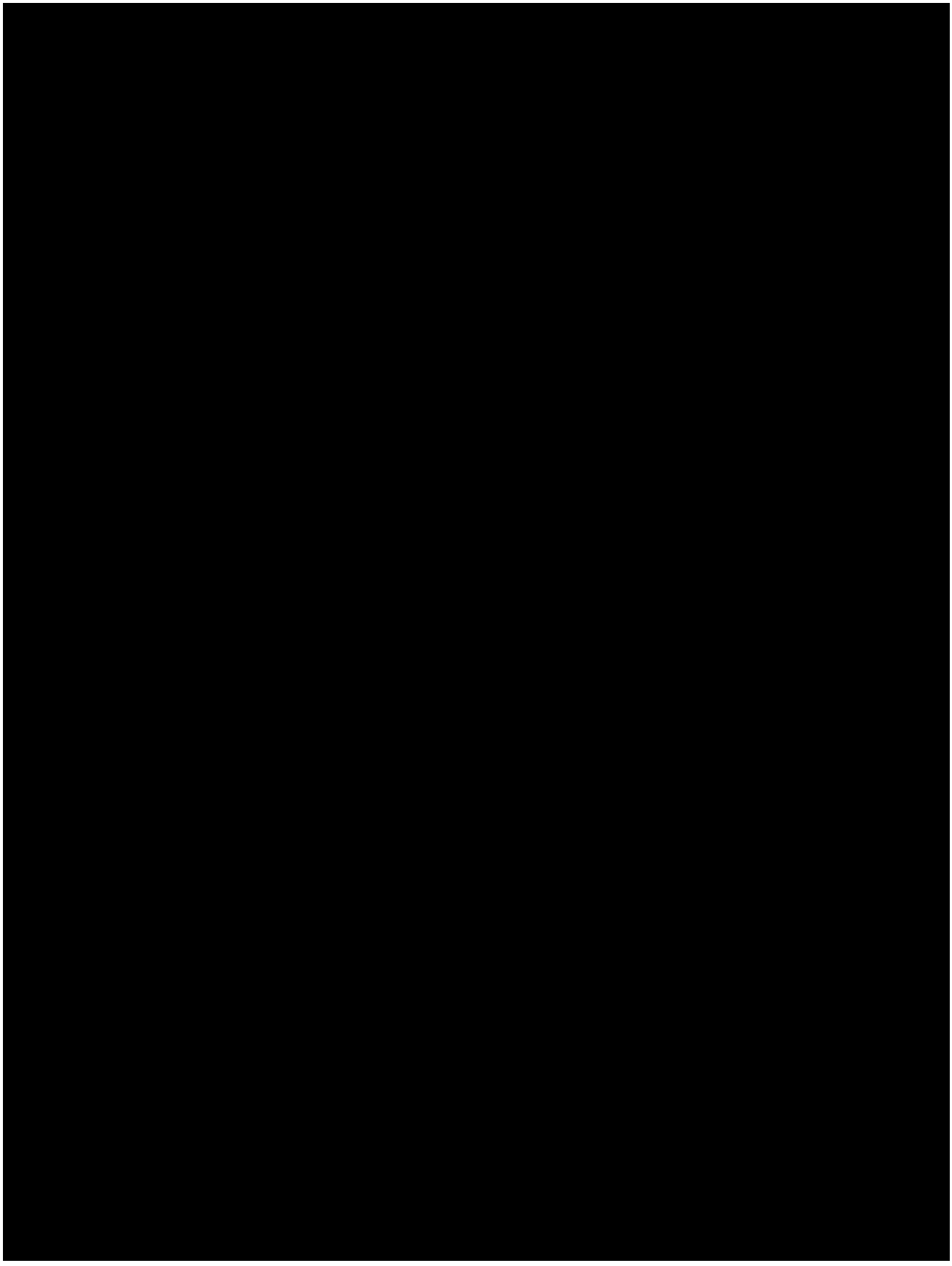
[redacted]











Appendix 5 – Delivery Strategy

This appendix provides additional narrative in support of details within the Woolavington: Project Assessment. It covers our delivery philosophy, programme management strategy as well as programme delays and mitigations.

Our philosophy is to ensure that all legal and licence requirements are met throughout project delivery. This includes safeguarding the health and safety of people and property, protecting the environment, complying with all obligations under the Local Development Order (LDO), meeting applicable technical standards, fulfilling statutory and regulatory reporting commitments, and delivering an economic and efficient outcome for consumers.

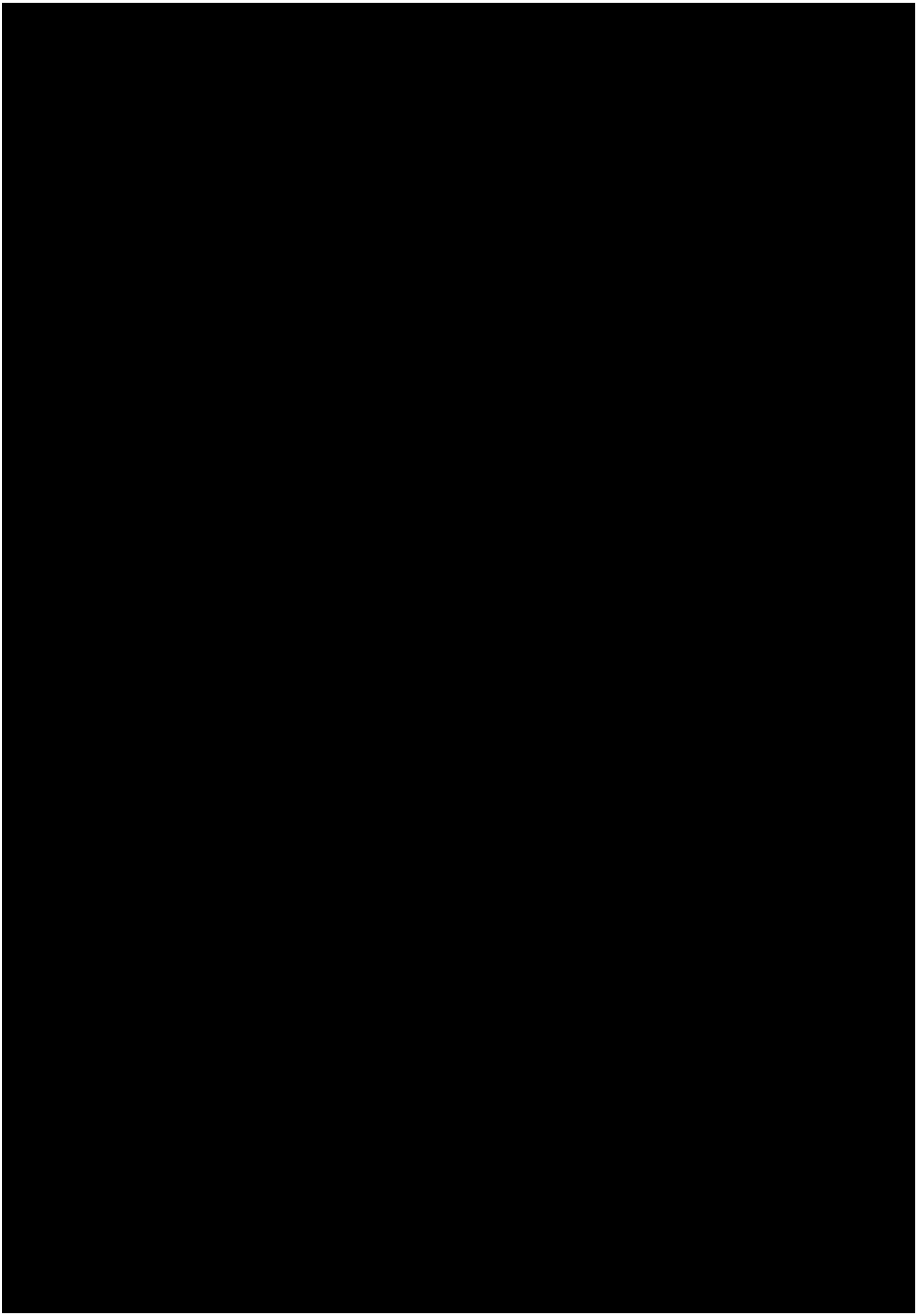
For the Woolavington substation project, this philosophy translates into a structured and accountable approach aligned with our internal governance framework, ensuring disciplined decision making across each project phase. The project team has applied established programme and risk management processes to maintain cost, schedule, and quality performance, supported by early procurement of long lead items and coordination with key stakeholders including Agratas, This is Gravity (TiG), and Somerset Council.

Contractors have been, and will continue to be, held firmly to account through clear performance expectations, rigorous assurance, and commercial mechanisms that incentivise timely and high-quality delivery while ensuring risks are efficiently allocated and managed. [redacted]

Given the project's strategic significance, providing new demand connections and supporting major industrial investment in the South West, the delivery approach also places strong emphasis on stakeholder engagement. This includes regular liaison with community representatives, landowners, and statutory bodies to ensure transparency, responsiveness, and effective management of interfaces throughout construction.

Our Woolavington project organisational structure is described in Table 1.

[redacted]



[redacted]

Our programme management strategy

The programme management philosophy for the project is centred on delivering a safe, timely, and efficient infrastructure solution that meets National Grid's legal, licence, technical, and consumer value obligations. A key aspect of the programme management strategy is the implementation of an integrated programme that brings together activities of various responsible parties such as ourselves, 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.

Programme prolongation

The programme has experienced some prolongation due to the interfaces with the wider [redacted].

Platform readiness

[redacted] The intention was that this would accelerate delivery (having civil works contractor on site available) and reduce ecology risk during our earthworks. [redacted] platform readiness and subsequent handover were postponed to March 2026 from October 2025.

Along with [redacted] we considered the possibility of partial handover of the substation area to enable start of the construction. [redacted]

[redacted] the risk of taking over part of an incomplete platform to speed up the programme was deemed too high due to potential quality issues that could arise and impact overall asset integrity. Therefore, we decided to wait until the whole platform was finished and all quality documents and test results are ready and reviewed before starting construction works on the substation.

Mitigations for programme prolongation

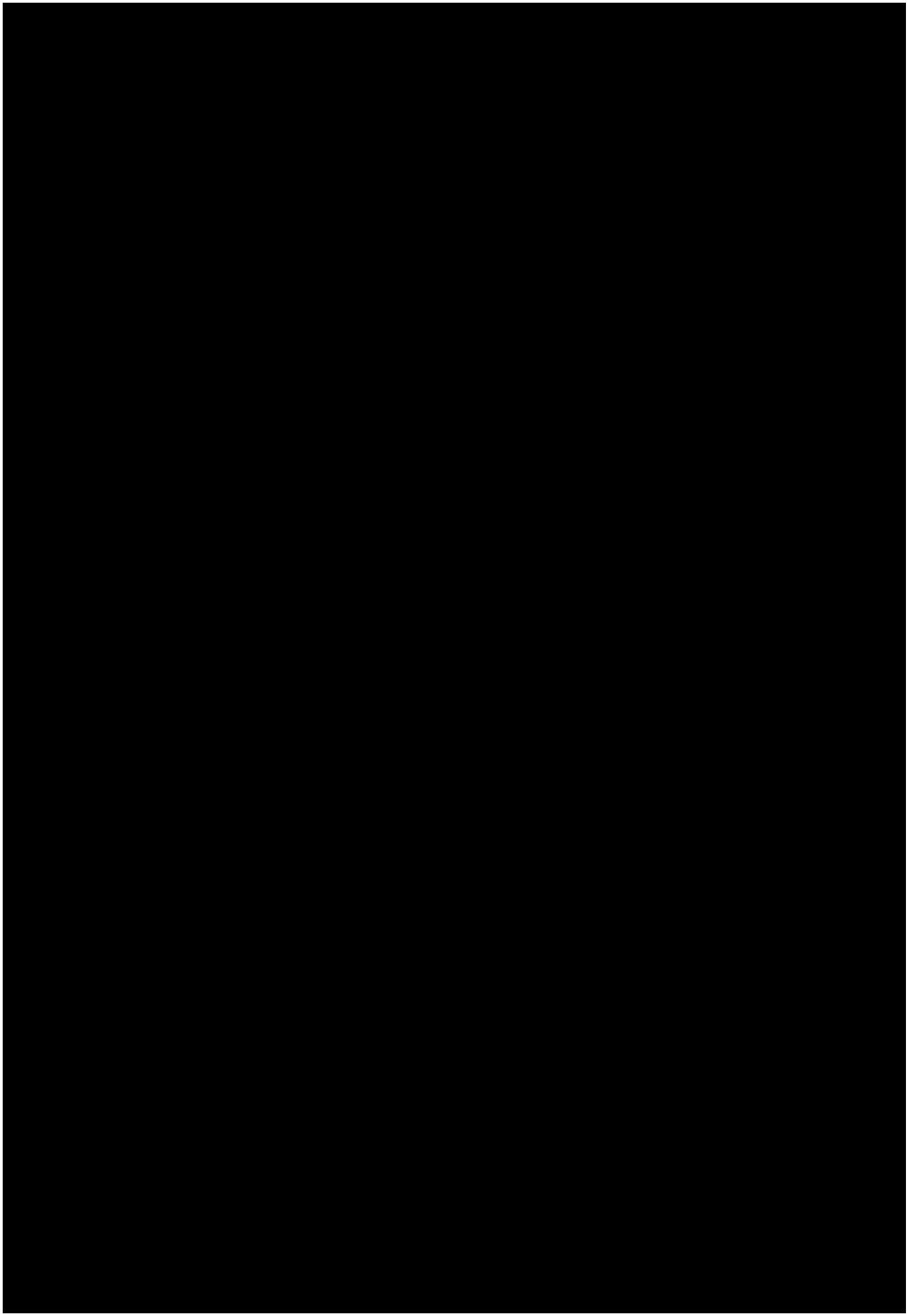
OHL Works

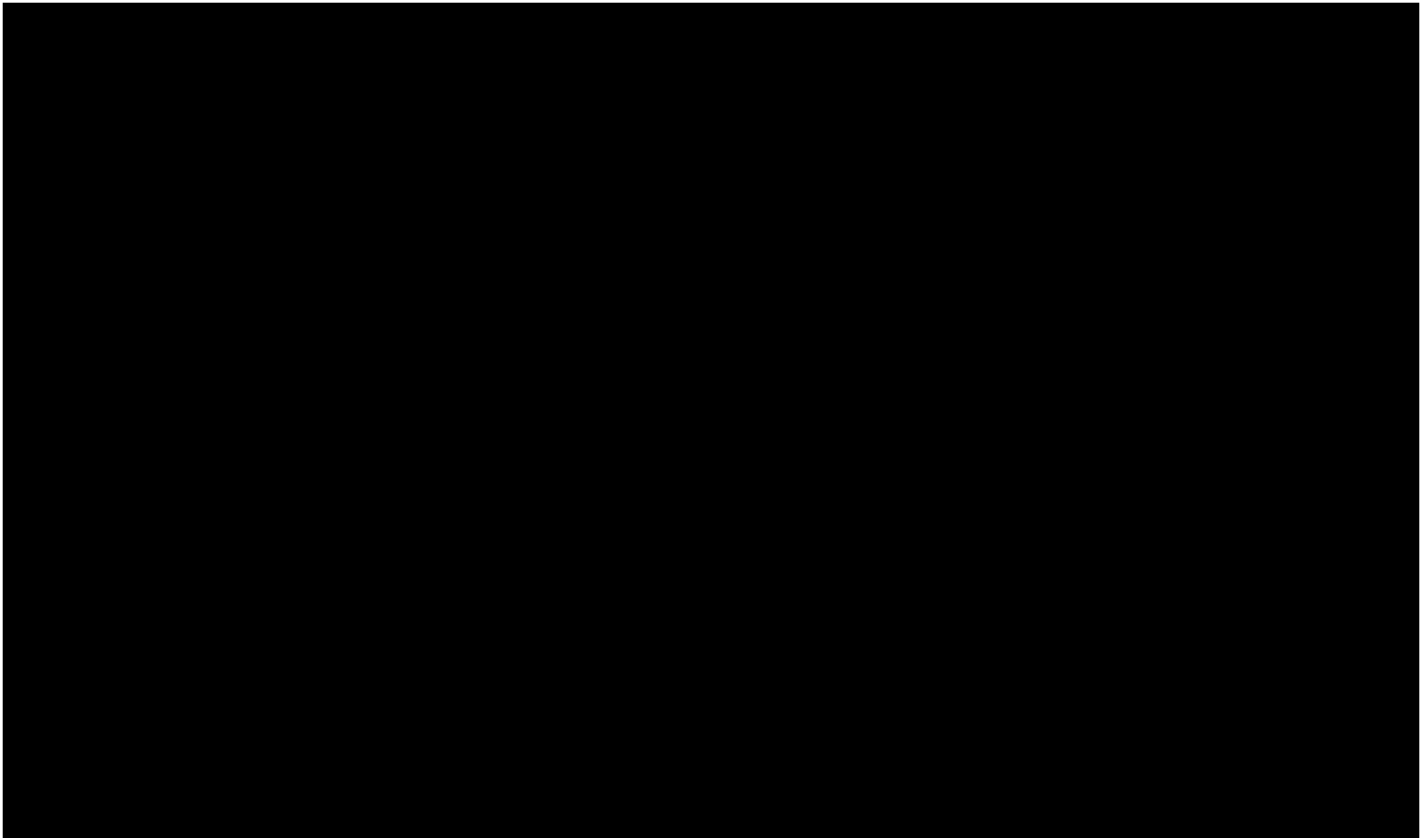
Although we could not start the works on the substation until March 2026, we were able to accept [redacted] completed earthworks in the area where OHL equipment and gantries will be located. This area was ready first and wasn't impacted by [redacted] diversion. After receipt and review of all quality documentation we have proceeded with installation of [redacted] new gantries and foundations [redacted] The [redacted] line is currently not energised due to outage delays on the [redacted]. The Woolavington project has successfully coordinated these works with [redacted] to ensure completion of these works before the forecasted energisation date of the [redacted] line [redacted] is realised. This enables shorter outage durations later in the programme.

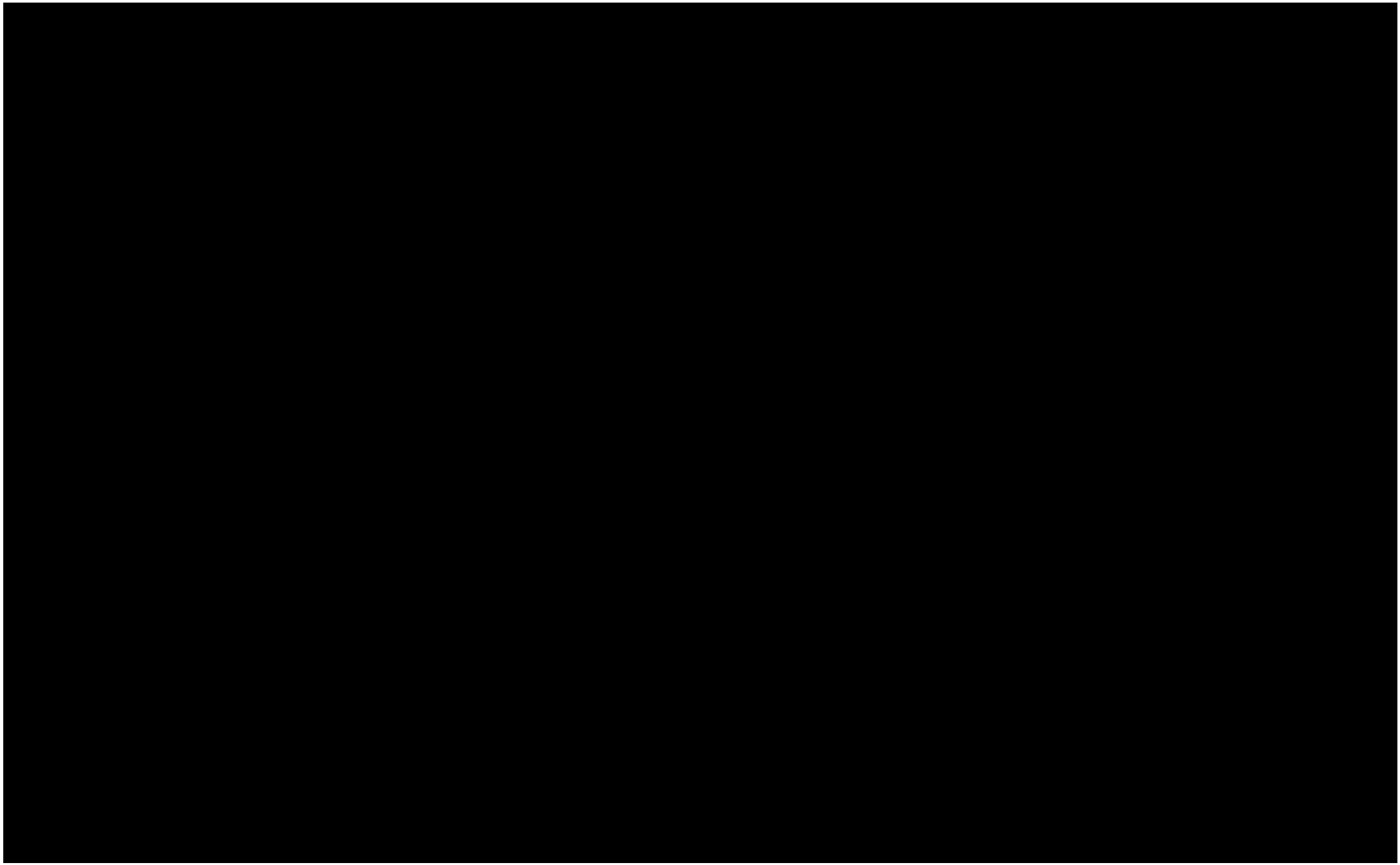
LDO Informal Early Work Notifications

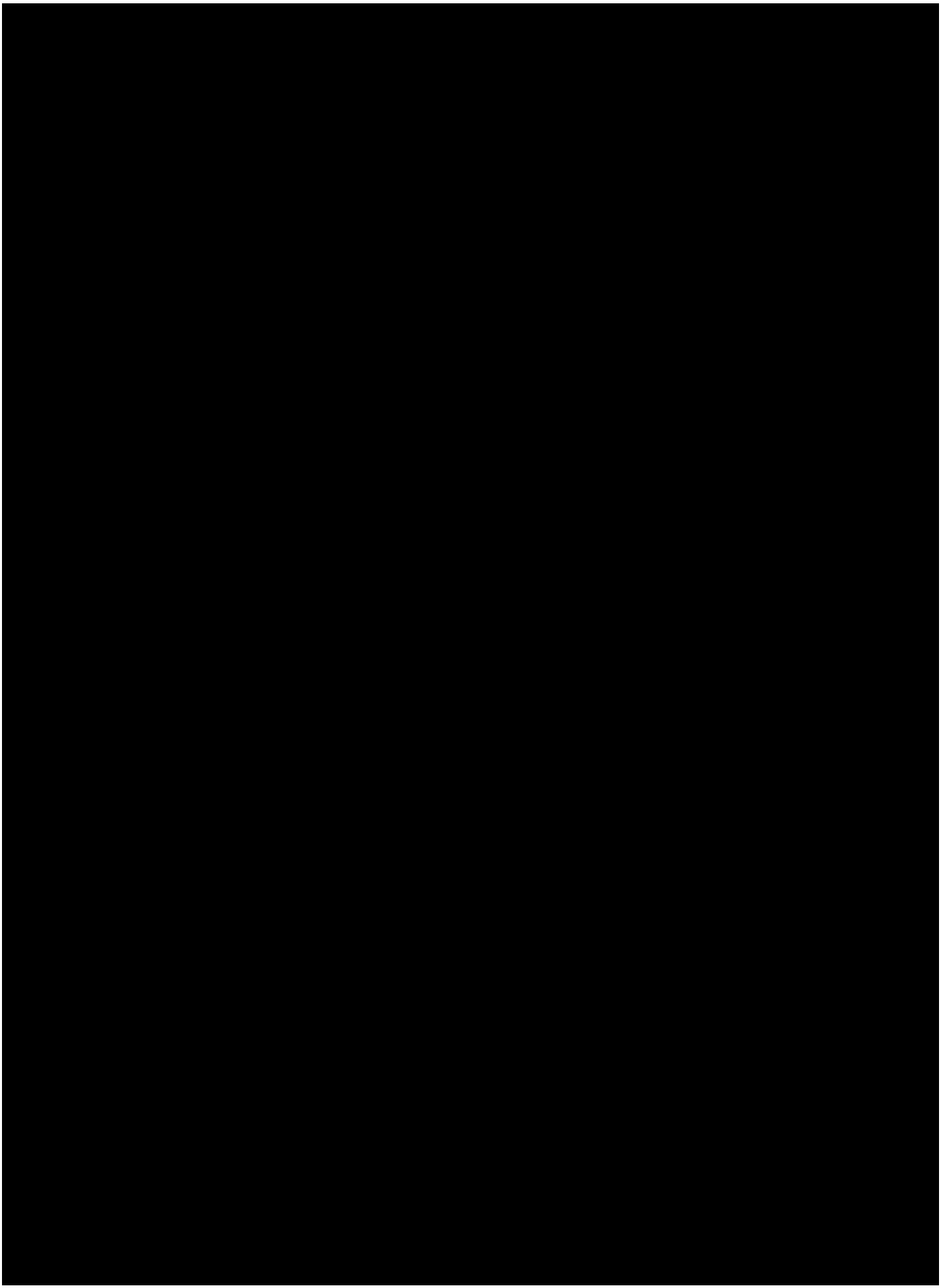
Although the LDO compliance check application will be submitted [redacted], we have been able to use the informal Early Work Notification (EWN) process established by Somerset Council to assist with programme delivery. The Section 106 agreement associated with the adopted Gravity LDO makes provision for certain works to be undertaken prior to formal commencement of development (i.e. works which would require a Certificate of Compliance to be issued by the Local Planning Authority) subject to the written agreement of the Local Planning Authority.

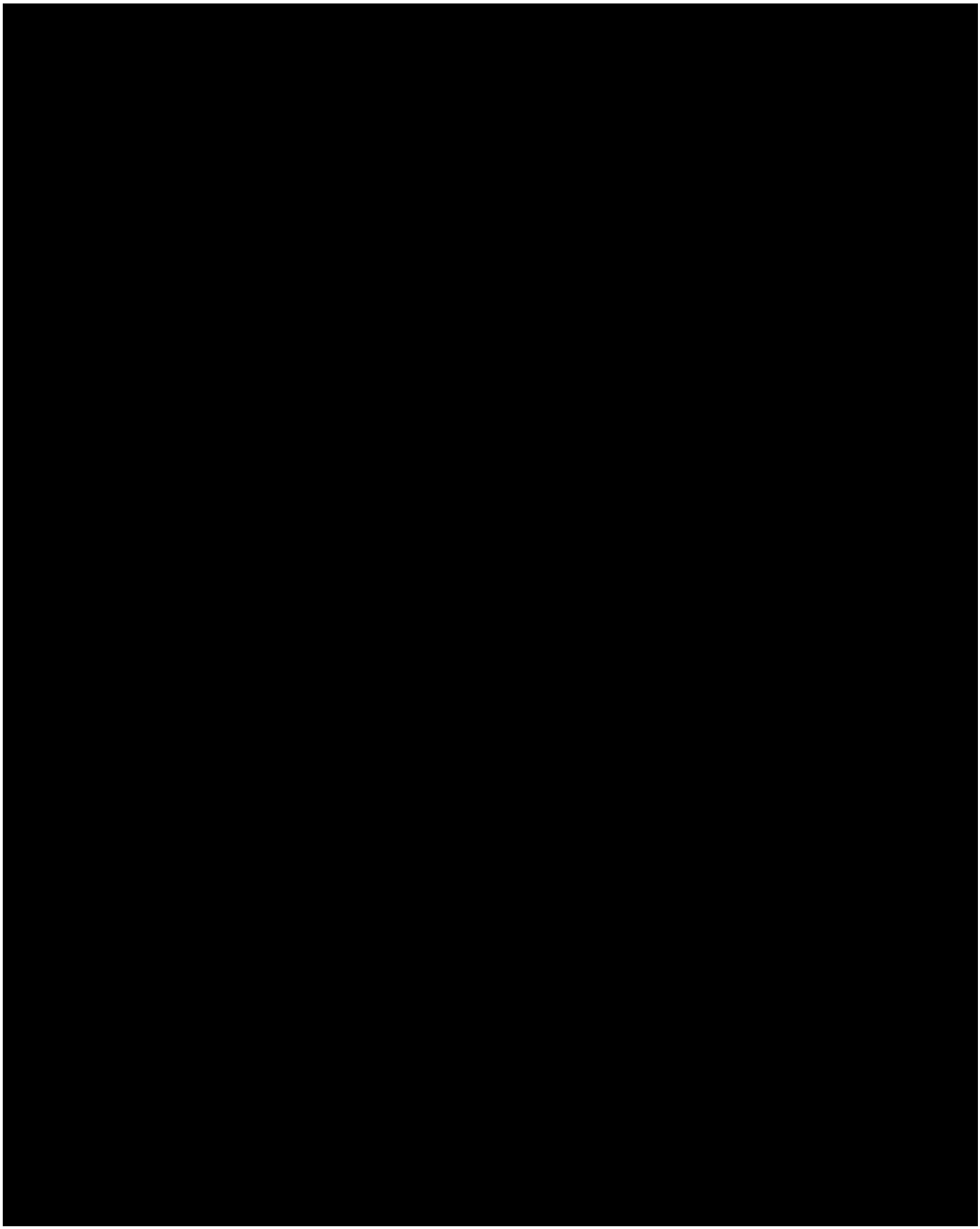
We have submitted several informal notifications for various 'early works packages' This has facilitated mobilisation to site, set up of welfare area and FLT Gantry installation and commencement of civil works have agreed by the Local Planning Authority, through this informal process allowing us to continue key enabling activities prior to the full LDO compliance approval.

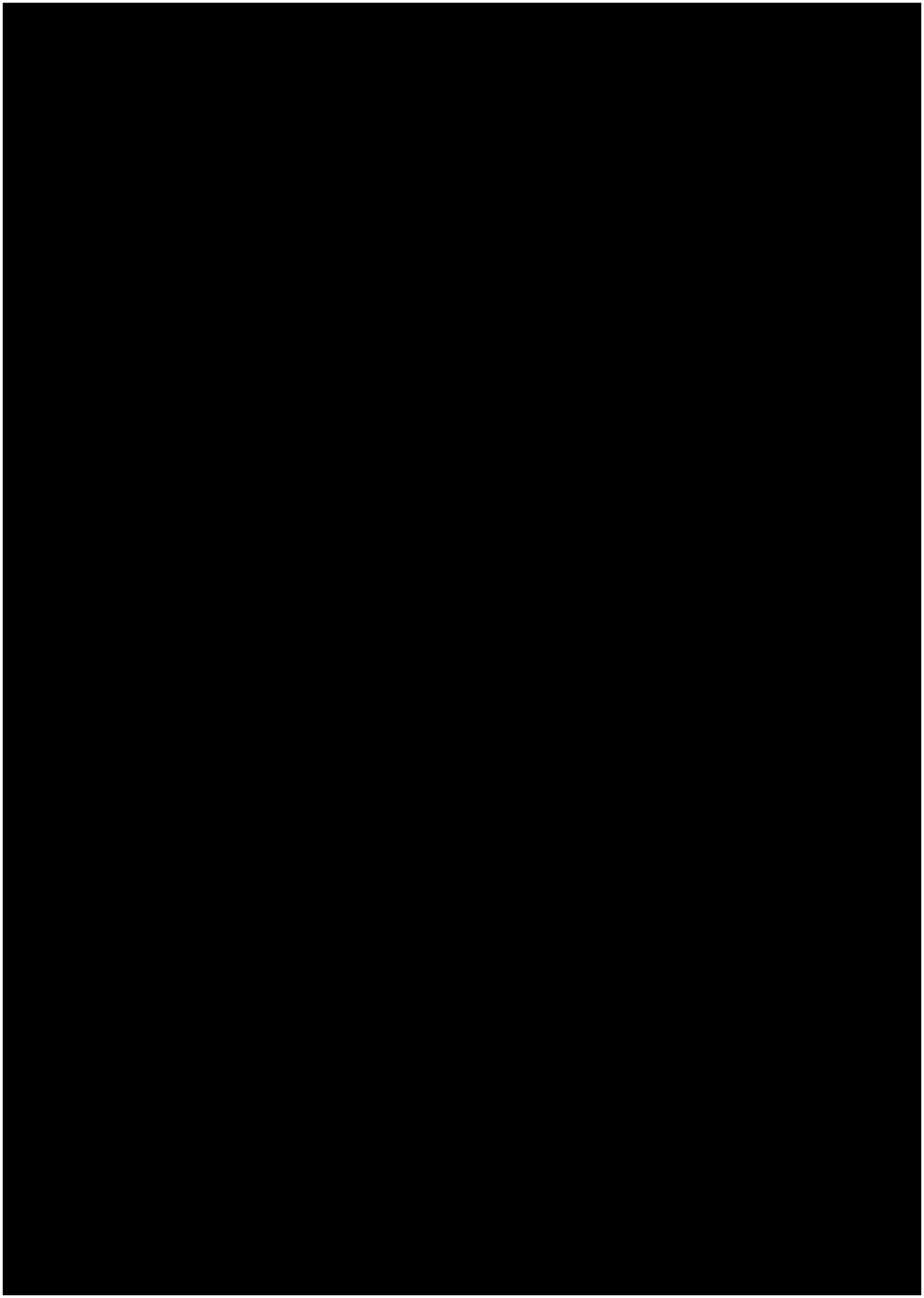


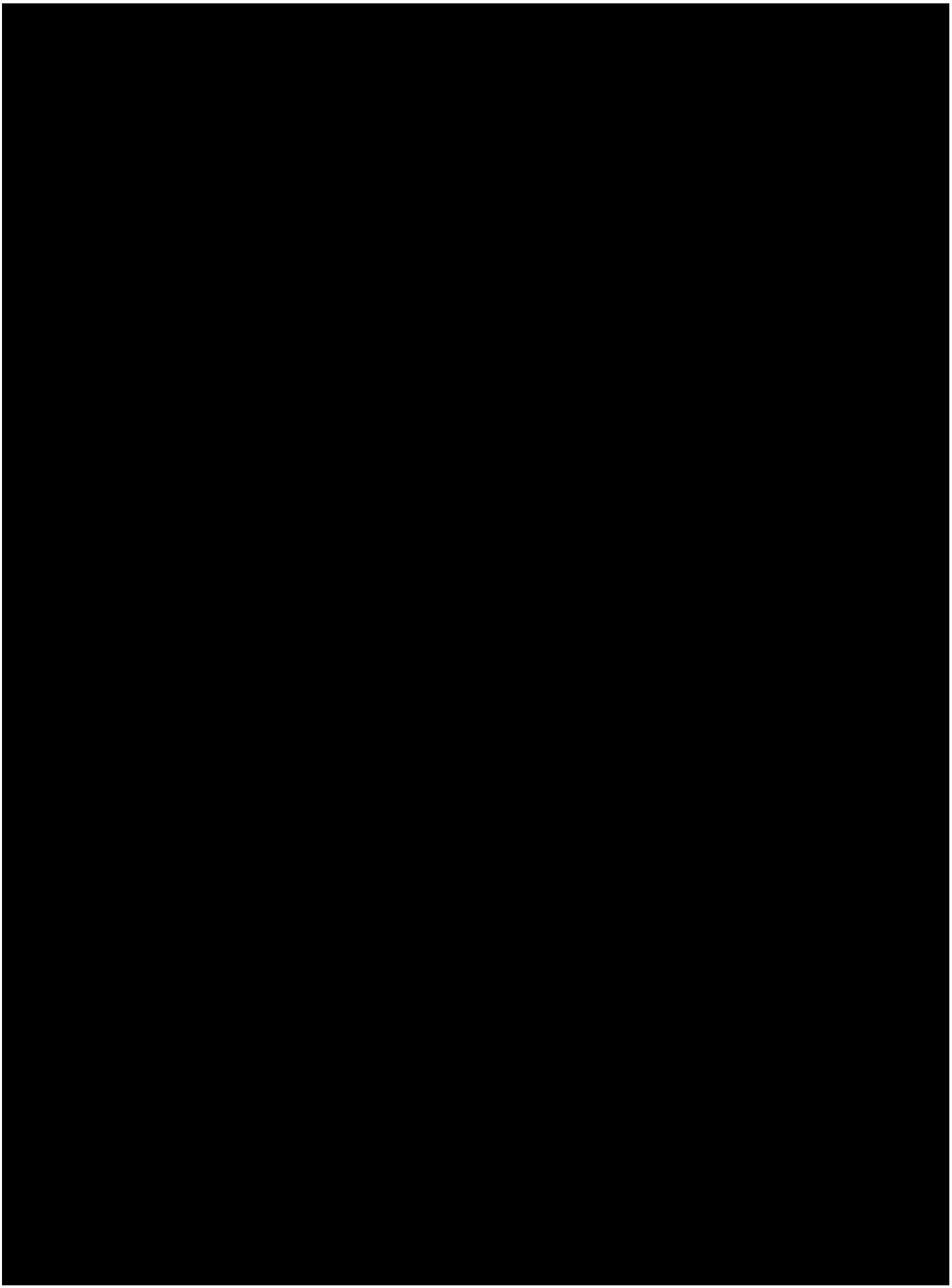












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