DPS FRAMEWORK SCHEDULE 4: LETTER OF APPOINTMENT AND CONTRACT TERMS

Part 1: Letter of Appointment

UCL Consultants Limited
The Network Building,
97 Tottenham Court Road,
London,
United Kingdom,
W1T 4TP

[redacted]

Letter of Appointment

This letter of Appointment dated Thursday 18th March 2021, is issued in accordance with the provisions of the DPS Agreement (RM6018) between CCS and the Supplier.

Capitalised terms and expressions used in this letter have the same meanings as in the Contract Terms unless the context otherwise requires.

Order Number:	CR20113
From:	**The Department for Business, Energy and Industrial Strategy**, 1 Victoria Street, Westminster, London, SW1H 0ET("Customer")
To:	**UCL Consultants Limited**, The Network Building, 97 Tottenham Court Road, London, United Kingdom, W1T 4TP ("Supplier")

Effective Date:	Monday, 22nd March 2021
Expiry Date:	Monday, 28th June 2021

Services required:	Set out in Section 2, Part B (Specification) of the DPS Agreement and refined by: · the Customer's Project Specification attached at Annex A and the Supplier's Proposal attached at Annex B; and
Key Individuals:	[redacted]

Contract Charges (including any applicable discount(s), but excluding VAT):	As per AW5.2 Price Schedule response highlighted within the RM6018 Contract Terms, section; Annex 1 – Contract Charges. The total value of this contract shall not exceed £48,592.90 Excluding VAT.
Insurance Requirements	Additional public liability insurance to cover all risks in the performance of the Contract, with a minimum limit of £5 million for each individual claim. Additional employers' liability insurance with a minimum limit of £5 million indemnity. Additional professional indemnity insurance adequate to cover all risks in the performance of the Contract with a minimum limit of indemnity of £2 million for each individual claim. Product liability insurance cover all risks in the provision of Deliverables under the Contract, with a minimum limit of £5 million for each individual claim.
Liability Requirements	**Suppliers limitation of Liability** (Clause 18.2 of the Contract Terms)
GDPR	Please see Contract Terms Schedule 7 (Processing, Personal Data and Data Subjects)

FORMATION OF CONTRACT

BY SIGNING AND RETURNING THIS LETTER OF APPOINTMENT (which may be done by electronic means) the Supplier agrees to enter a Contract with the Customer to provide the Services in accordance with the terms of this letter and the Contract Terms.

The Parties hereby acknowledge and agree that they have read this letter and the Contract Terms.

The Parties hereby acknowledge and agree that this Contract shall be formed when the Customer acknowledges (which may be done by electronic means) the receipt of the signed copy of this letter from the Supplier within two (2) Working Days from such receipt

[redacted]

ANNEX A

Customer Project Specification

1. Background

On 1st June 2020, the UK Government and the Devolved Administrations jointly published a response to the government consultation on the future of UK carbon pricing. This set out a government proposal to set up a UK Emissions Trading Scheme (ETS) to replace the UK's participation in the EU ETS when that came to an end on 31st December 2020. On 14th December 2020, the government confirmed that a UK ETS would be in place from 1st January 2021.

The design and introduction of the UK ETS is providing for the continuation of emissions trading for businesses since the end of the Transition Period. Its scope is initially the same as that of the EU ETS. The UK is also open to linking the UK ETS internationally in principle and we are considering a range of options.

The UK ETS aims to be more ambitious than the EU system it replaces - from day one the cap is reduced by 5%, and following advice from the CCC in December 2020 on the UK's sixth carbon budgets, there will be a consultation in due course on aligning it with the UK's world-leading net zero target. This will make the UK ETS the world's first net zero cap and trade system.

The new UK ETS is a strategically crucial policy. It initially covers 33% of UK emissions and we have committed to exploring expanding the UK ETS to the two thirds of uncovered emissions, and will set out our aspirations to continue to lead the world on carbon pricing in the run up to COP26. The UK ETS will underlie important parts of the policy landscape for incentivising deployment of key technologies such as CCUS and low-carbon hydrogen. It is therefore important that a strategy is put in place at the earliest opportunity to ensure that the effectiveness of the UK ETS, and its interaction with other policies, is monitored and evaluated.

The EU ETS – to which the UK has historically been a part - is a joint EU-level policy implemented by Members States but designed, administered, and evaluated at an EU level. Though aspects of ETS implementation in the UK have been evaluated by BEIS (or previously DECC), such as the assessments of the admin costs borne by UK participants in 2010 & 2016[1], or the evidence review on industrial abatement in 2012[2], no comprehensive evaluation of the impact of the UK's carbon pricing policy has yet been conducted by or on behalf of HMG. Consequently, the institutional expertise to evaluate an emissions trading system in a UK context does not currently exist within BEIS and will have to be built.

[1] Talbot (2016) "Assessment of costs to UK participants of compliance with Phase III of the EU Emissions Trading System", BEIS https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/799575/Cost_of_Compliance_Report.pdf; King et al (2010) "Assessing the cost to UK operators of compliance with the EU Emissions Trading System", DECC https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/47953/8955-cost-euets-uk-operators-compliance.PDF

[2] Martin et al (2012) "An evidence review of the EU Emissions Trading System, focussing on effectiveness of the system in driving industrial abatement", DECC https://www.gov.uk/government/publications/review-of-the-eu-emissions-trading-system

Some steps have already been taken in this direction, such as mapping expected UK ETS benefits[3], as well as the BEIS-commissioned and recently published framework for assessing the impact of carbon pricing policy on business competitiveness.[4] However, these steps only partially fill the evidence gap and further work is required, which we are seeking to commission from an external research provider with appropriate expertise.

Findings from this research will be used as the basis of a future specification, written by the UK ETS Authority (a partnership consisting of the UK Government and the three devolved administrations), for commissioning the delivery of a full evaluation following the launch of the UK ETS in 2021.

To build this capability to scope the evaluation requirements for the UK ETS, independent evaluation expertise is required. The aim is to ensure that there is a high-quality evaluation plan in place that enables the UK ETS Authority to proceed with tendering a future robust, cost-effective evaluation.

We are open to recommendations around the exact form that the full evaluation should take. However, we would expect, as per Magenta Book[5] guidance, for this to be split into three parts:

- **A value-for-money evaluation,** informed by this scoping piece, will test the cost-benefit assessment of the UK ETS provided by the "Future of Carbon Pricing Impact Assessment", published in June 2020 alongside the government response to the consultation on the future of carbon pricing.
- **An impact evaluation**, informed by this scoping piece, will be used to inform the first whole system review of the UK ETS, scheduled for 2023.
- **A process evaluation,** informed partially by the scoping piece (in particular part 1 – see below) and partially by internal scoping work, to evaluate the implementation of the scheme and possible impacts that might have on delivery.

A summary of any learning and findings of developmental work on the evaluation plan will be published and shared with potential contractors for any future evaluation project.

2. Aims and Objectives of the Project

To build this capability to scope the evaluation requirements for the UK ETS, independent evaluation expertise is required. This externally delivered project will ensure that there is a high-quality evaluation plan in place that enables the UK ETS Authority to proceed with tendering a future robust, cost-effective evaluation.

To achieve this aim, the commissioned evaluation expert(s) will:

- Set out a detailed theory of change for the UK ETS through a review of existing academic literature on ETSs, consultation with key stakeholders, an assessment of the broader decarbonisation policy landscape of UK traded sector, and building on BEIS's UK ETS policy map (see annex 1 below).
- Using the theory of change and working with the evaluation lead and policy lead, scope and set out a structure for a full set of evaluation and analytical questions for evaluating the new UK ETS scheme.
- Provide a critical appraisal of the methodological approaches that have been taken by academics in evaluations of other equivalent cap-and-trade systems around the

[3] See Annex 1 below.
[4] https://www.gov.uk/government/publications/business-competitiveness-in-industrial-sectors-and-the-role-of-carbon-pricing-policy-in-the-uk
[5] https://www.gov.uk/government/publications/the-magenta-book

world, including the EU ETS, of which the UK was a member between 2005 and 2020. The purpose of this is to assess whether any of these approaches could be used for evaluation of the UK ETS scheme.

The approach of commissioning a scoping piece prior to inform the design of a subsequent evaluation has been used successfully a number of times in the energy evaluation space, including the following evaluation projects:

- **Climate Change Agreements (CCA)** evaluation
  - Conducted between 2018 & 2020, based on a scoping study conducted by CAG Consultants in 2015.
  - https://www.gov.uk/government/publications/second-climate-change-agreements-scheme-evaluation
- **Energy Savings Opportunity Scheme (ESOS)** evaluation
  - Conducted between 2015 & 2017, based on a scoping study which was conducted by Ipsos MORI & UCL on 2015.
  - https://www.gov.uk/government/publications/energy-savings-opportunity-scheme-esos-evaluation-of-the-scheme
- **Public Sector Energy Efficiency Loan Scheme** evaluation
  - Scoping phase commissioned as part of the wider evaluation delivered by a consortium Winning Moves, CAG Consultants, University College London, and Regeneris. Scoping phase took place August to October 2017. Interim report published in 2018.
  - https://www.gov.uk/government/publications/public-sector-energy-efficiency-loans-scheme-evaluation

Research Questions

We suggest that this research is split into two parts, with the first part focussing on developing the UK ETS theory of change and the implications of that for process, impact and value-for-money (VfM) evaluation question; and the second part focusing on developing a recommendation for an appropriate impact and VfM evaluation methodology.

Part 1 – Theory of Change & evaluation question development

1. What does a detailed theory of change for the UK ETS look like? To what extent are the benefits / disbenefits in the UK ETS Benefits Map achievable? How does the theory of change vary by sector (power, industry, aviation)?

2. Based on the theory of change, what are the most important factors that the UK ETS Authority should be monitoring as part of a process evaluation to ensure the system is functioning as intended? (E.g. liquidity, volatility, IT functionality.)

3. Are BEIS' draft evaluation questions based on the UK ETS logic map the right questions? How can these be improved?

Part 2 – Assessment of methodology options for an impact and VfM evaluation

4. What research method(s) are most appropriate and deliverable in practice for these evaluation questions?

5. How feasible/proportionate are each of these approaches given the theory of change and the data available? What are the resource/cost implications of each? How do costs break down by evaluation element? How does this compare to the cost of previous evaluations of large-scale energy and climate policies?

6. What metrics can we and should we monitor to understand whether the UK ETS is delivering expected benefits and avoiding potential disbenefits?

7. What are the data sources available to monitor and evaluate the UK ETS (e.g. administrative data, secondary survey data)? What additional data is needed?

8. What are the key challenges for any future potential contractor(s) and how would these be overcome? What are the risks involved and how should these be managed?

Draft evaluation questions

As mentioned, the successful contractor should, through the development of a theory of change, assess the suitability and proportionality of BEIS's draft evaluation questions and, where possible suggest improvements. Draft questions for proposed impact, value-for-money and process evaluations are given below:

Impact evaluation questions

***Primary Objective**: decarbonisation through incentivising abatement*

Impact evaluation questions focus on the extent to which the following UK ETS policy objective is achieved:

> **Delivery of cost effective abatement within covered sectors in line with the UK's pathway to achieving the Sixth Carbon Budget, the UK's Nationally Determined Contribution under the Paris Agreement, and ultimately Net Zero emissions by 2050.**

The mechanisms by which the UK ETS is expected to achieve this objective are:

a) Ensuring that greenhouse gas (GHG) emissions are appropriately priced within the value chain of covered sectors, shifting the incentive towards:
   - Production and consumption of products which generate less GHG emissions.
   - Less GHG intensive forms of electricity generation.
   - Fewer GHG intensive miles travelled.

b) Providing a long-term decarbonisation signal through a transparent downward cap trajectory, incentivising firms in covered sectors to invest in new processes and technologies to reduce their GHG emissions.

***Secondary objective:** effective mitigation of competitiveness distortions and potentially heightened carbon leakage risk introduced by the carbon price*

At the same time it is theorised that carbon pricing, when applied unevenly around the world, can distort international trade flows, giving installations operating in jurisdictions with a lower carbon price or no carbon price a significant competitive advantage. Such trade distortion, if realised, would be a negative outcome for UK ETS for two reasons:

1. This would be unfair to UK producers, forced to compete in domestic and international markets with producers overseas who do not face acomparable carbon price.
2. This would incentivise the consumption of goods produced outside of the UK in jurisdictions with less ambitious carbon pricing regimes. This could potentially lead to an increase in UK consumption emissions as a greater share of goods in the UK would be produced by more carbon intensive producers operating in low environmental ambition jurisdictions. It could also increase global emissions if, for example, UK producers lost market share to more carbon intensive international producers. This is known as carbon leakage.

To counteract the risk of unfair international competitiveness distortions and the related risk of carbon leakage, the UK ETS has a system of carbon leakage protection in the form of free allocation of allowances to energy-intensive industry and aviation operators so these operators do not have to pay the full cost of their compliance obligations. The level of free allocation given is determined by a formula which targets free allocation based on need and carbon leakage risk. Providing free allocation should in theory still incentivise abatement as firms receiving free allocation still face an opportunity cost for not decarbonising in the form of foregone revenue from selling their free allocation on the carbon market.

The UK ETS impact evaluation should also evaluate the effectiveness of free allocation in mitigating carbon leakage and competitiveness distortions, as well as assessing any impact free allocation might have on the central objective of decarbonisation.

	1. Decarbonisation / Abatement of emissions	2. Mitigating UK competitiveness and carbon leakage risk
UK ETS objective overview *UK ETS will …*	Contribute towards the decarbonisation of the UK traded sector (power generation, energy-intensive industry & in-scope aviation) in line with the cost-effective pathway to Net Zero by: • Ensuring that greenhouse gas (GHG) emissions are appropriately priced within the value chain of covered sectors, shifting incentives towards decarbonisation.	• Ensure our carbon pricing policy does not significantly distort the international competitiveness[6] of UK-based industry and hub airports, risking carbon leakage.

[6] 'Competitiveness' defined in terms of BEIS' published business competitiveness framework: https://www.gov.uk/government/publications/business-competitiveness-in-industrial-sectors-and-the-role-of-carbon-pricing-policy-in-the-uk

	• Providing a long-term decarbonisation signal through a transparent downward cap trajectory, incentivising firms in covered sectors to invest in new processes and technologies to reduce their GHG emissions.	
Expected Outcomes	*Shifting market incentives towards decarbonisation* • ETS participants reduce their emissions and cut costs through greater deployment of energy efficiency, resource efficiency & deep decarbonisation technologies. *Providing a long-term decarbonisation signal* • Greater investment in new low carbon technologies, processes & products in the UK. • Lower carbon products and generation become more competitive[7] in the UK market relative to carbon intensive alternatives, driving sustainable economic growth. • For aviation, an ETS could aid the competitiveness of less emission-intensive aircraft operators relative to more emission-intensive ones.	*Effective protection against carbon leakage* • Potential distortions to international competitiveness of energy intensive UK manufacturers and UK hub airports mitigated through free allocation and indirect cost compensation on electricity costs.
Did the intervention achieve the expected outcomes? *(Example impact assessment questions)*	*Shifting market incentives towards decarbonisation* • Have overall **emissions in the traded sector** fallen as a result of the ETS? • Have UK participants in the ETS become more carbon efficient through the **deployment of energy efficiency or resource efficiency measures, and/or deep decarbonisation technologies** (e.g. CCUS)? *Providing a long-term decarbonisation signal*	*Effective protection against carbon leakage* • Has the **international competitiveness of UK energy-intensive industries and UK hub airports** been maintained or is there evidence that it has been weakened?

[7] As above.

	• Has **R&D investment** in developing new decarbonisation technologies and low carbon products increased in the UK as a result of the UK ETS? • Has the UK ETS resulted in an increase in the **competitiveness of lower carbon products, flights, and generation** (either through increasing the costs of carbon-intensive products and generation or through driving innovation in, and reducing the costs of, low carbon alternatives)?	
To what extent? *(Example impact assessment questions)*	*Shifting market incentives towards decarbonisation* • How many **tonnes of CO2 equivalent reduction** in the UK traded sector can be attributed to the UK ETS from the beginning of the intervention to the time of the evaluation? • How much **investment in new energy or resource efficiency deployment, or decarbonisation technology deployment** has there been over the evaluation period? How much of that can be attributed to the functioning of the UK ETS, either in isolation or in conjunction with other policies? *Providing a long-term decarbonisation signal* • How much **additional Research and Development investment in £GBP** has been incentivised through the UK ETS? • How much has the **market share for low carbon products and generation** covered by the ETS changed in the evaluation period? How much of that can be attributed to the functioning of the UK ETS, either in isolation or in conjunction with other policies? • To what extent can any changes in patterns of employment be attributed to the existence of the UK ETS?	*Effective protection against carbon leakage* • To what extent have free allocation and indirect cost compensation protected UK industry and UK hub airports' competitiveness? How have these impacted on decarbonisation in these sectors.

Value-for-money evaluation questions

A UK ETS value for money evaluation should assess:

- Which observable costs to business, consumers, taxpayers, the UK economy as a whole can be attributed to the UK ETS.
- Which observable benefits to the same groups can be attributed to the UK ETS.
- How the ratio of costs to benefits achieved by the UK ETS intervention compares to that of alternative interventions which the same objectives.

More information on expected costs and benefits of the UK ETS can be found in the impact assessment, accompanying the government response to the consultation on the future of UK carbon pricing:
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/889038/The_future_of_UK_carbon_pricing_impact_assessment.pdf

Process evaluation questions

These questions focus on the extent to which the following UK ETS delivery objectives are achieved:

1. Facilitate a viable carbon market, which is sufficiently accessible to participants and sufficiently liquid to enable the policy objectives of the UK ETS to be delivered.
2. Ensure a smooth continuation of emissions trading for covered UK emitters.
3. Ensure the scheme is administered efficiently and effectively.

For each of these objectives it should be considered:

- Was the UK ETS delivered as intended?
- What worked well, or less well, for whom and why?
- What could be improved?
- What can be learned from the delivery methods used?
- How has the context influenced delivery?

3. Suggested Methodology

Total number of Focus Groups **Total number of Case Studies**	**Insert numbers:** 1-2 (or workshop for part 1 engagement work) 3-4 (for part 2 methodology assessment
Any other specific requirements	We expect that part 1 of the research, looking at developing a UK ETS theory of change, would involve some form of stakeholder engagement with UK participants of the existing EU ETS who will continue be covered under the UK ETS.

	This may take the form of a focus group discussion or workshop, though we are open to other or combined approaches (e.g. qualitative interviews, or involvement in a theory of change workshop). Participant numbers and the range of participants involved should be sufficient to facilitate a representative range of views to be captured on how participants behave within the ETS, which can then be reflected in theory of change development. BEIS is happy to work with the successful bidder on a list of relevant stakeholders to approach to be involved in this work, though we would also expect bidders with relevant expertise in this policy space to be able to complement BEIS's suggested stakeholder list with their own suggestions.

We propose the work be conducted in two parts.

<u>Part 1 – development of theory of change, and process, value-for-money and impact evaluation questions</u>

- **A theory-focused and evidence literature review** is required to develop a detailed theoretical understanding of the causal mechanisms underlying cap-and-trade, which will feed into the development of a comprehensive theory of change. It is expected to examine literature from different sources, including that published in relation to any similar scheme in the UK and other countries.

- **Stakeholder engagement** with former participants of the EU ETS who will be covered under the UK ETS will shed light on participant behaviour under an ETS, which is one of the key evidence gaps under a theory of change. Bidders are expected to set out what kinds of stakeholders they would engage with (e.g. electricity generators, industry participants, airline operators, traders) and how. This may take the form of focus group discussions or workshops, though other or combined approaches are possible (e.g. qualitative interviews, or involvement in a theory of change workshop).

- **Theory of Change development -** A detailed theory of change is required in order to develop an understanding of how the scheme is intended to work and the different steps involved.

  As a starting point, this strand of work should look to synthesise and build on the existing benefits map, combined with evidence from a literature review, understanding of the UK decarbonisation policy landscape, and logical insights and input from relevant stakeholders.

  The theory of change will help us identify:

  a. Areas where evidence of causal linkages is weak and where determining the additionality of the UK ETS compared to other policies may be challenging. This in turn can help us refine our impact evaluation questions.
  b. The most important causal mechanisms contributing to the realisation of scheme benefits. This should be useful in refining process evaluation questions for assessing whether the system is functioning as intended in early years.

  Bidders are expected to identify how they will develop the theory of change, noting that they will have access to input from policy and analytical colleagues in BEIS.

- **Evaluation question development** – Using the theory of change and working with BEIS policy and analyst leads to critique and refine the draft process, value-for-money and impact evaluation question provided by BEIS.

Part 2 – providing a methodology recommendation for an impact and (where relevant) a value-for-money evaluation

The Impact/VfM evaluation is expected to be the most methodologically challenging aspect of a full evaluation, owing to the difficulties inherent in quantitatively assessing a large scale, complex and cross-cutting policy like the ETS. Challenges include: 1) the lack of an empirically observable counterfactual, 2) the large number of environmental factors that can impact on emissions, e.g. economic growth, economic restructuring, 3) the large number of other decarbonisation policies covering the same economic sectors. These factors mean that attributing policy outcomes to the UK ETS will be difficult. This part of the research aims to assess how this challenge might be overcome.

- **A methodology-focussed literature review**, exploring previous evaluations of cap-and-trade systems. The review should focus on providing a critical assessment of the methodologies underpinning previous cap-and-trade evaluations, e.g. theory-based vs. quasi-experiment approaches and different methods used within these approaches. We would expect at least 3-4 case studies of evaluations of cap and trade systems using different approaches focussing on the methodology used These should include:
    - A justification as to why each case study was chosen, e.g. representative of a particularly common or particularly successful approach.
    - Each methodology's advantages and disadvantages and ways they could be improved upon.
    - The extent to which each approach could be applied (or not) to tackle the evaluation questions set out in part one.
    - Data that would need to be collected to facilitate each methodology. To aid the contractor, BEIS would provide the contractor with a list of data variables which would be collected as part of the administration of the system, which could also be used for monitoring and evaluation.
    - The resource and cost implications of each methodology.

- **A review of the draft report by BEIS's Evaluation Peer Review Group** (PRG). This extra independent scrutiny by the PRG provides assurance of quality and increases the credibility of the commissioned work. The contractor would be expected to engage in this review and respond to its findings.

- **A recommendation on the methodological approach for the UK ETSevaluation** provided by the contractor based on the theory of change, evaluation questions and assessment of methodology options.

4. Deliverables

Expected outputs of this project include:

Substantive Outputs

- A theory of change for the UK ETS, building on the internally developed Benefits Map. (April 202)

- A suggested list of evaluation questions for an impact, VfM and process evaluation, which could be feasibility addressed. (April 2021)

- A systematic review of evaluations of international ETS's, including the EU ETS. To include an assessment of the methodologies used, their relative strengths and weaknesses, and the feasibility and value of replicating the assessed methodologies for the UK ETS evaluation. (May 2021)

- An assessment of the data that would need to be collected to facilitate appraised methodologies. (May 2021)

- A recommendation for evaluation framework for the UK ETS. (May 2021)

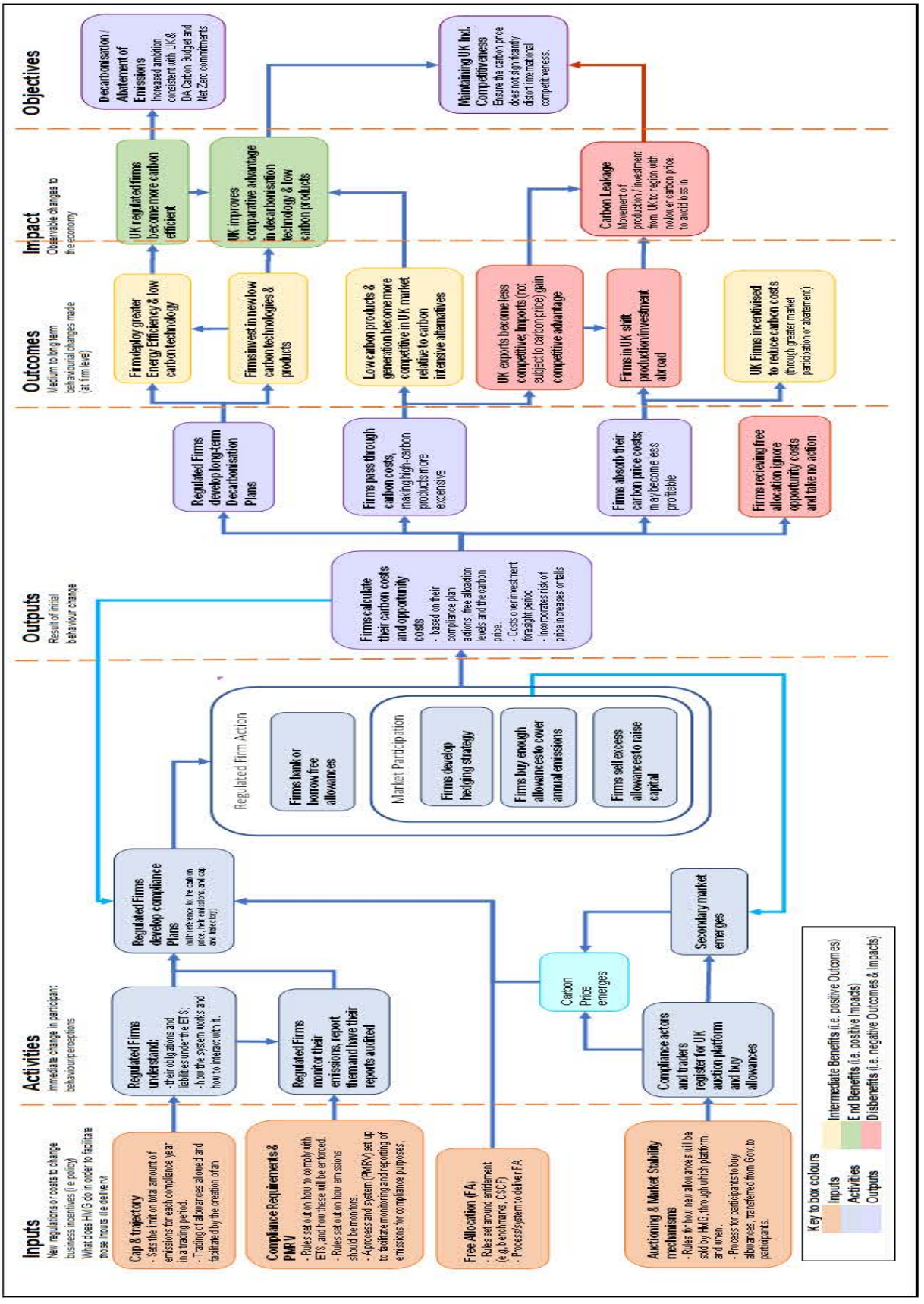
Reporting and dissemination

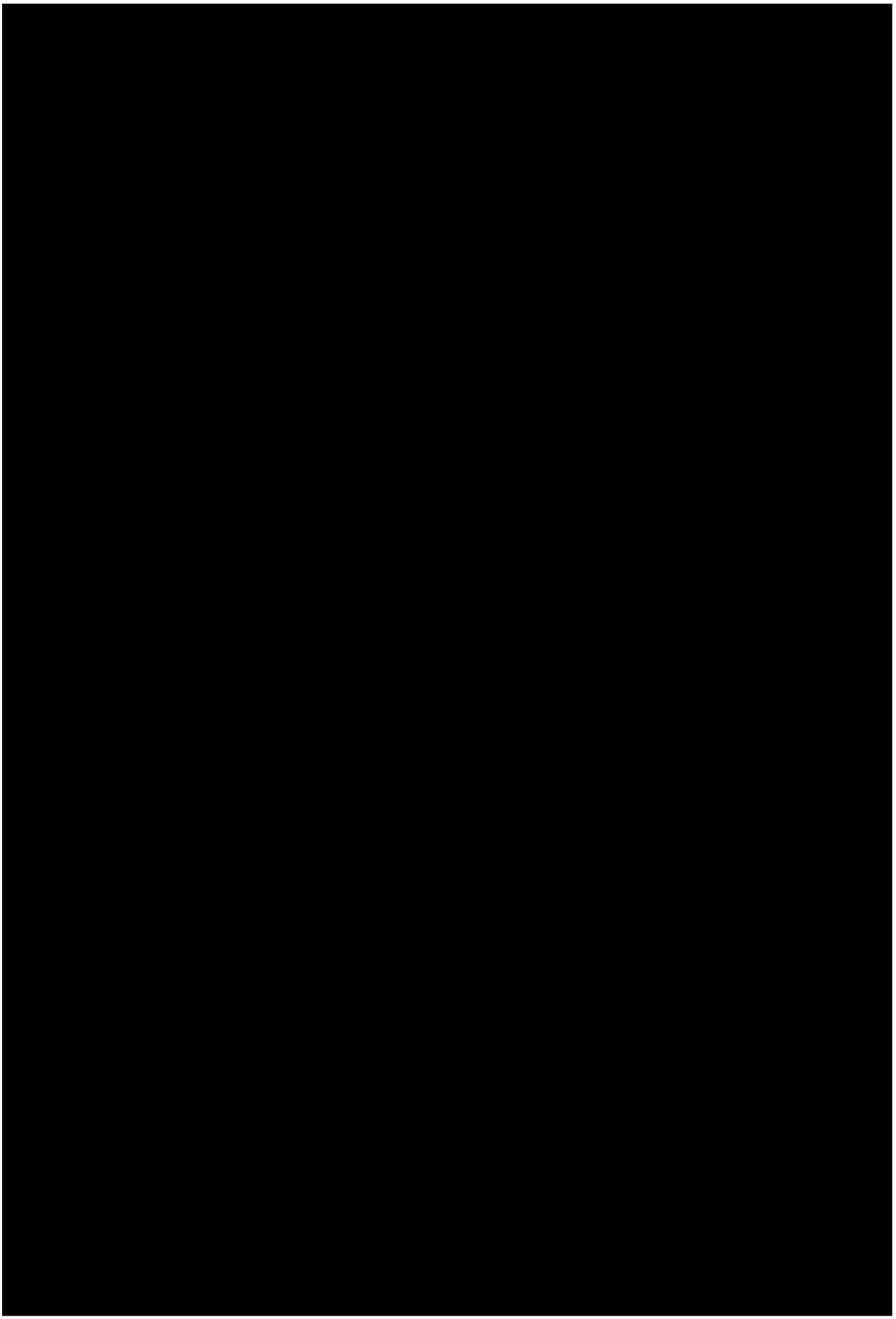
- Two presentations followed by Q&A – to be delivered via video conference – to the UK ETS Joint Working Group (JWG): the first presenting early findings from part 1 of the research; the second presenting early finding from part 2. Findings should be presented with enough time to allow feedback from the JWG to be incorporated into research outputs.

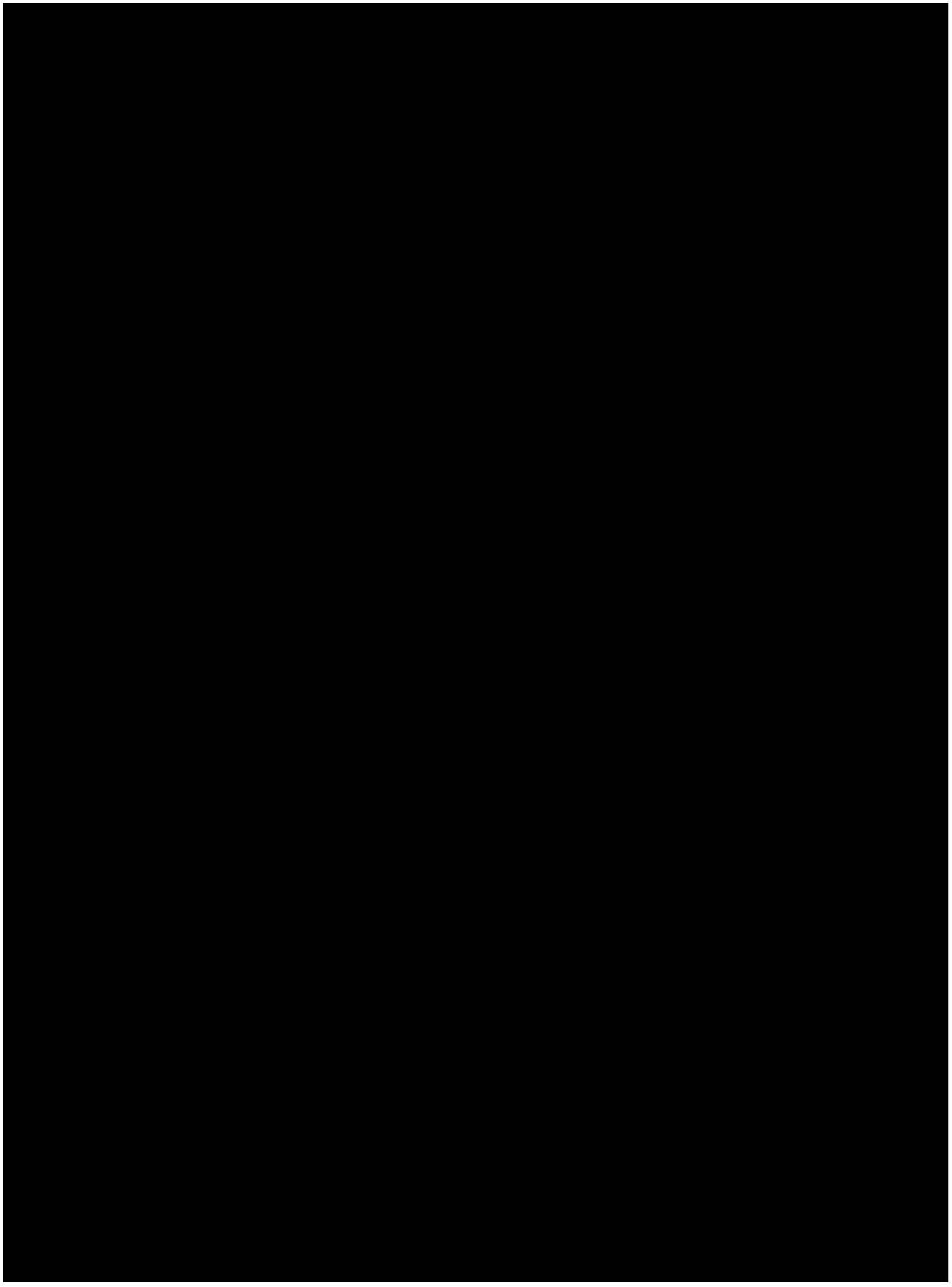
- A report – to be published – summarising the above, including proposed costs and timelines of the work. The report should be submitted using the standard BEIS template, which will be shared with the successful contractor.

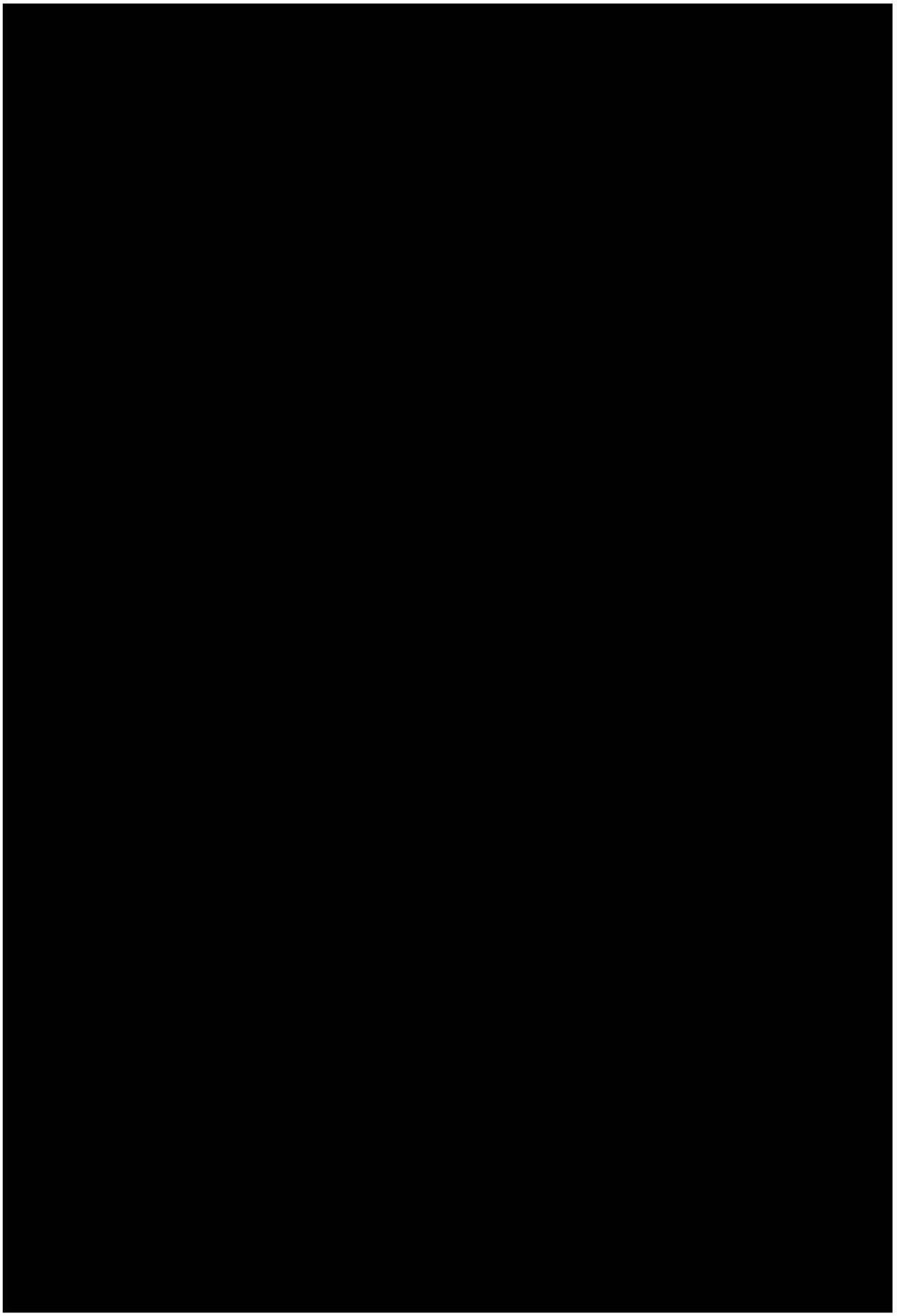
We expect this project to be delivered within three months of the contract being signed

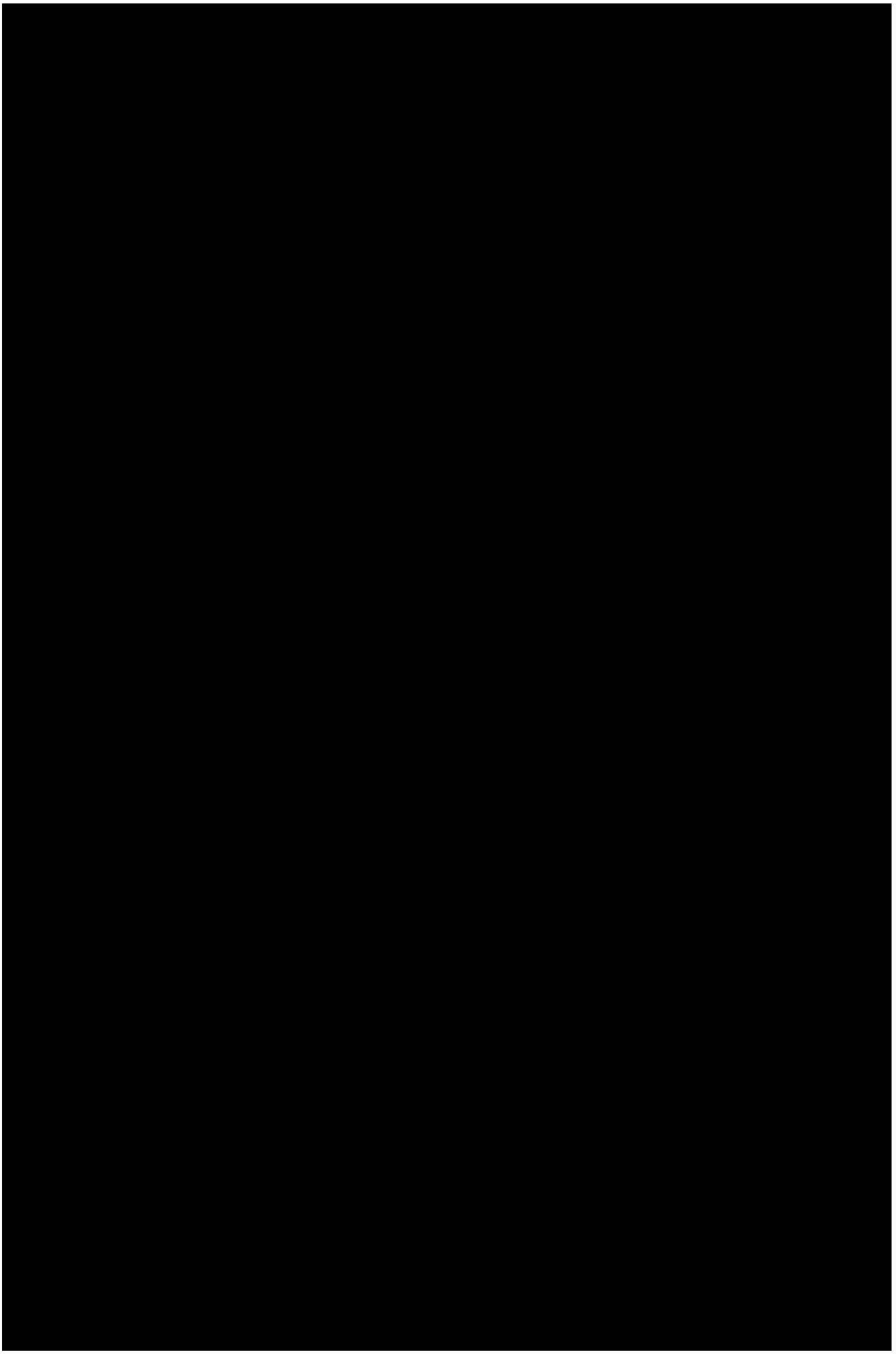
Annex 1 – UK ETS Benefits Map

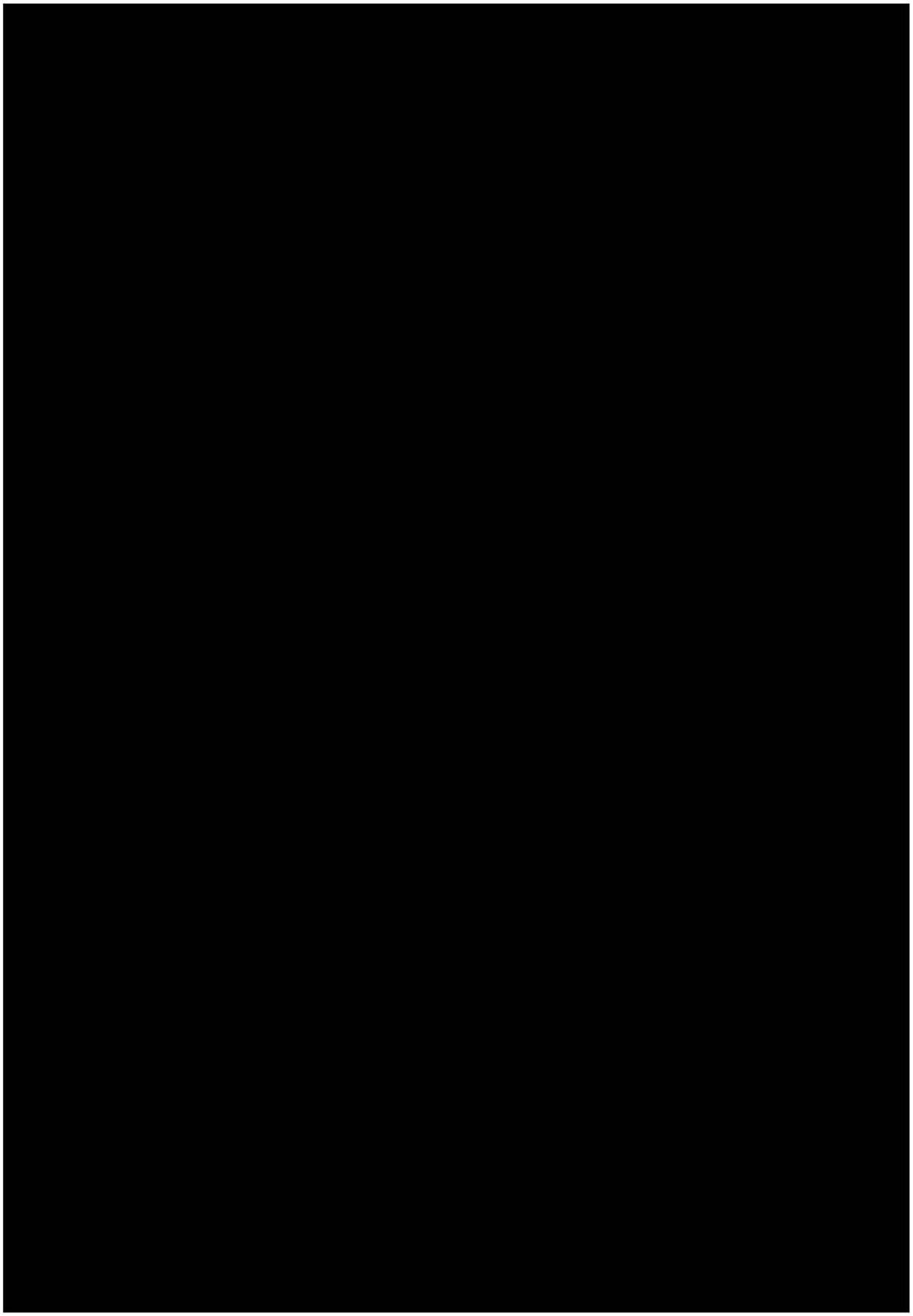


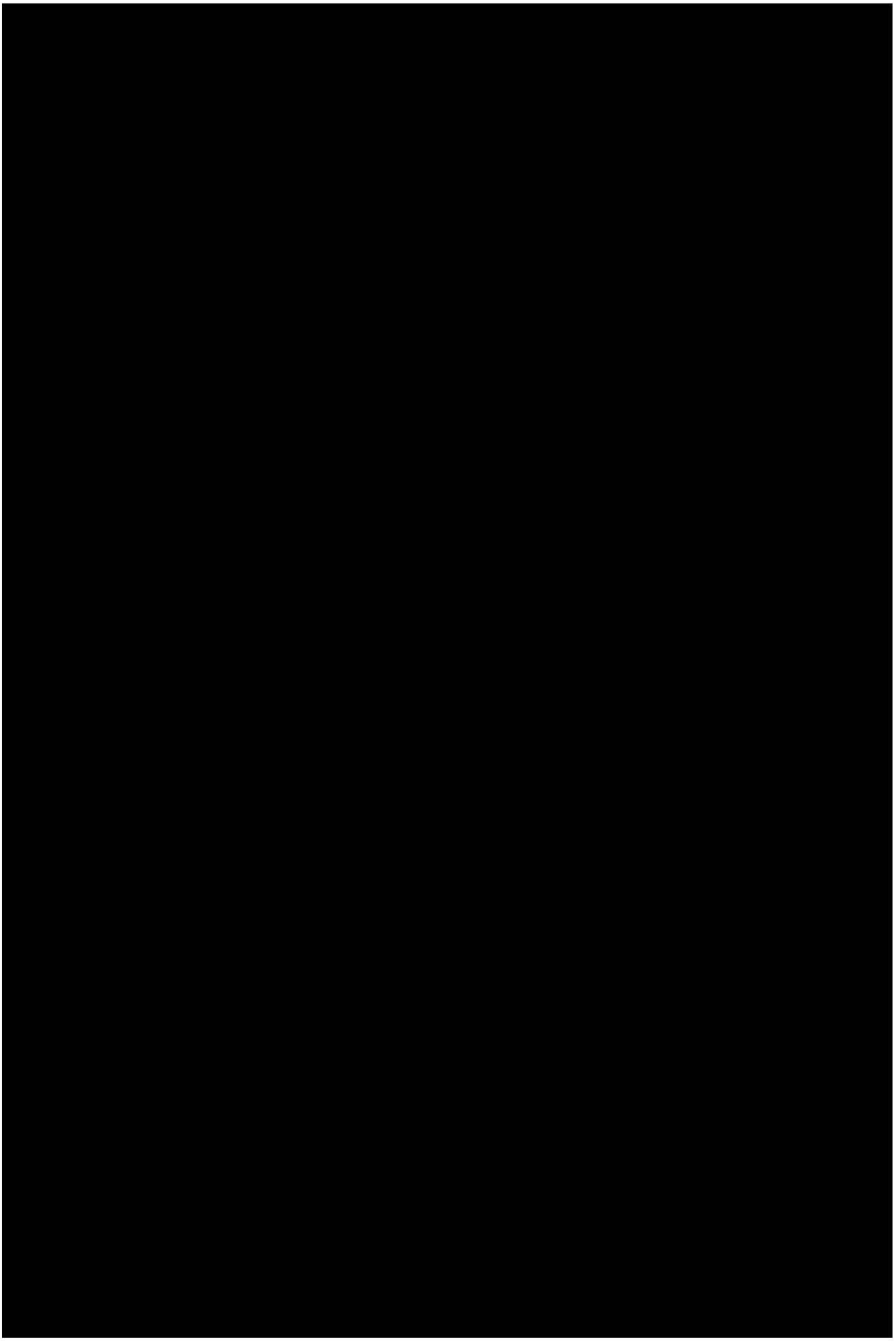


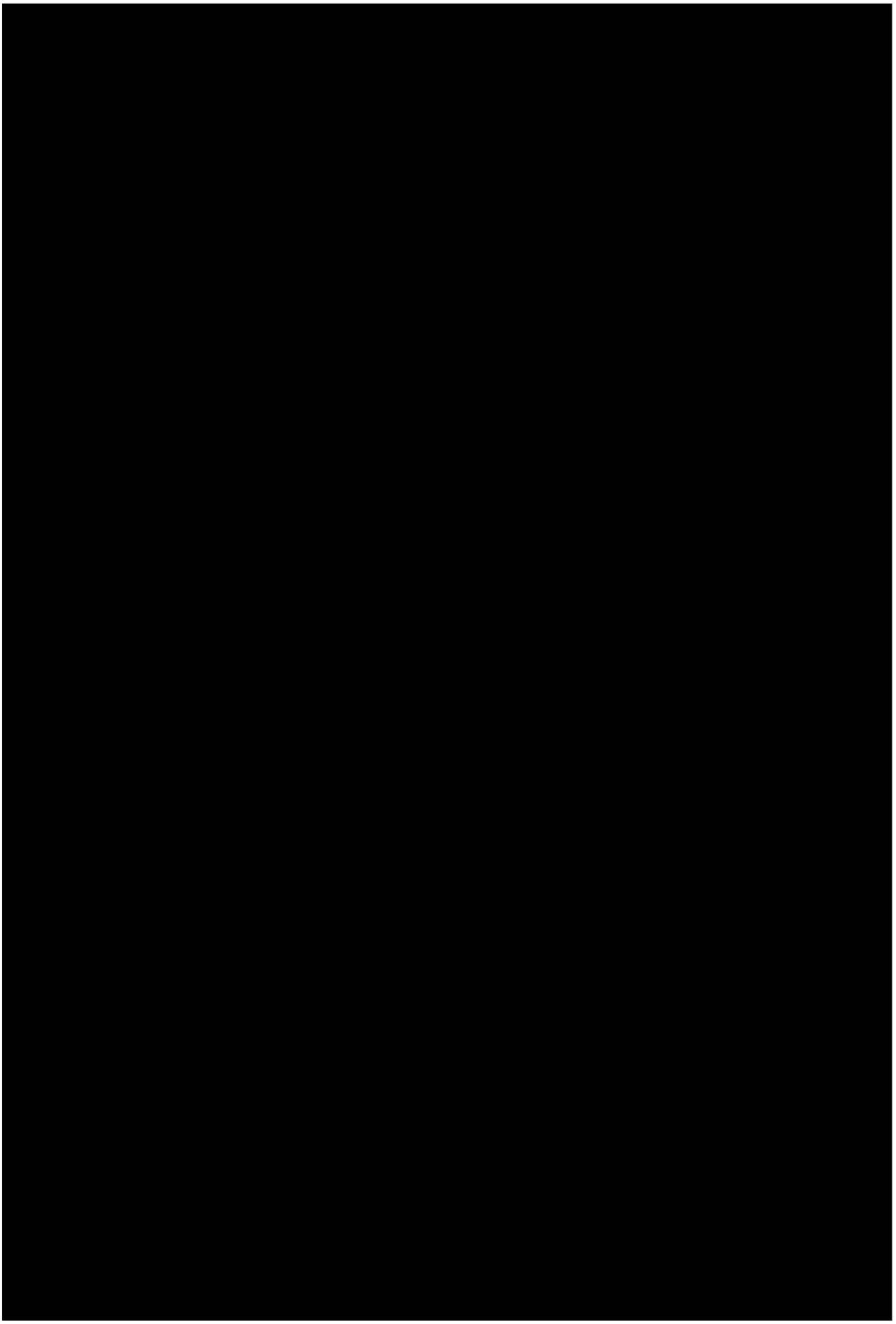


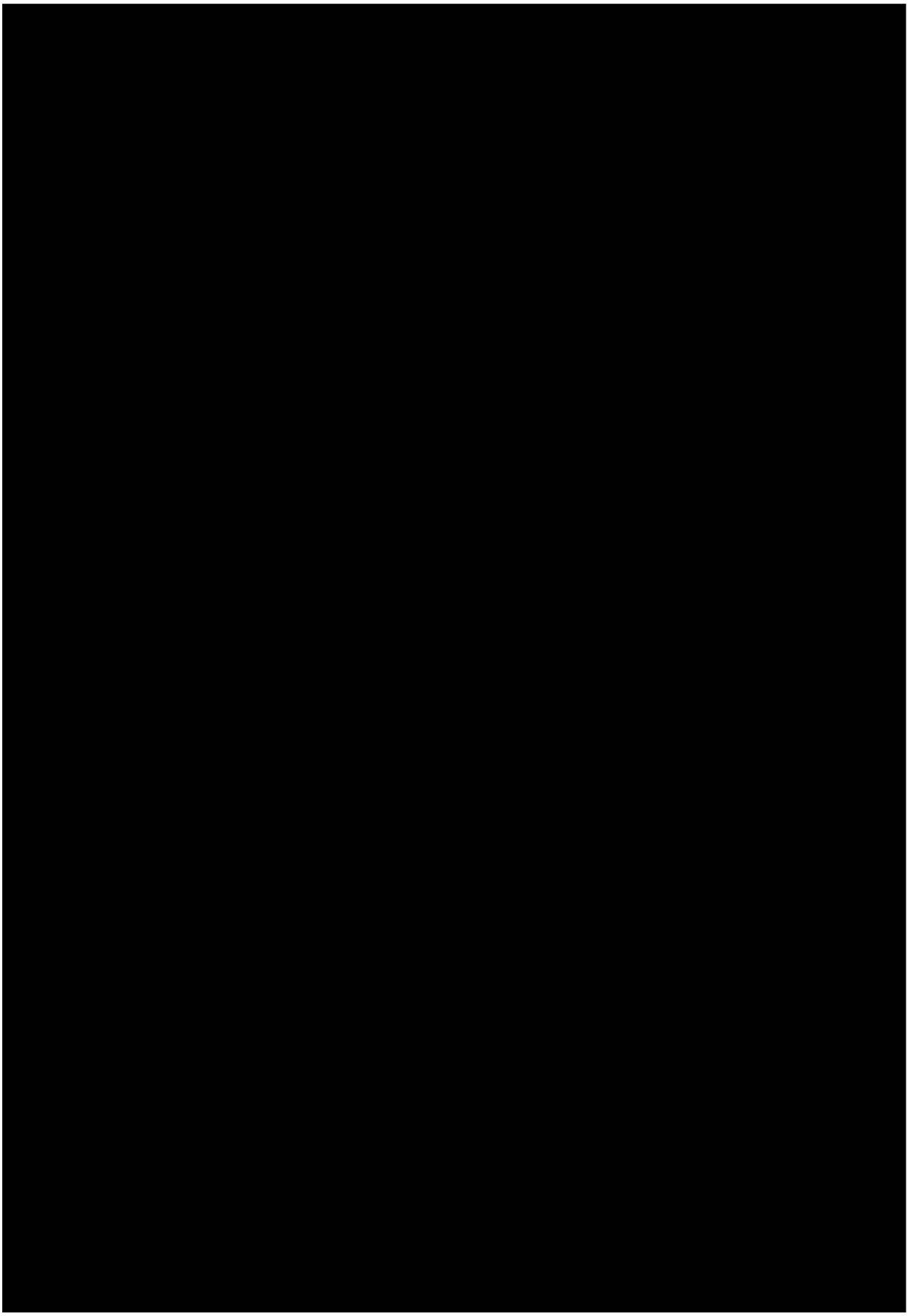


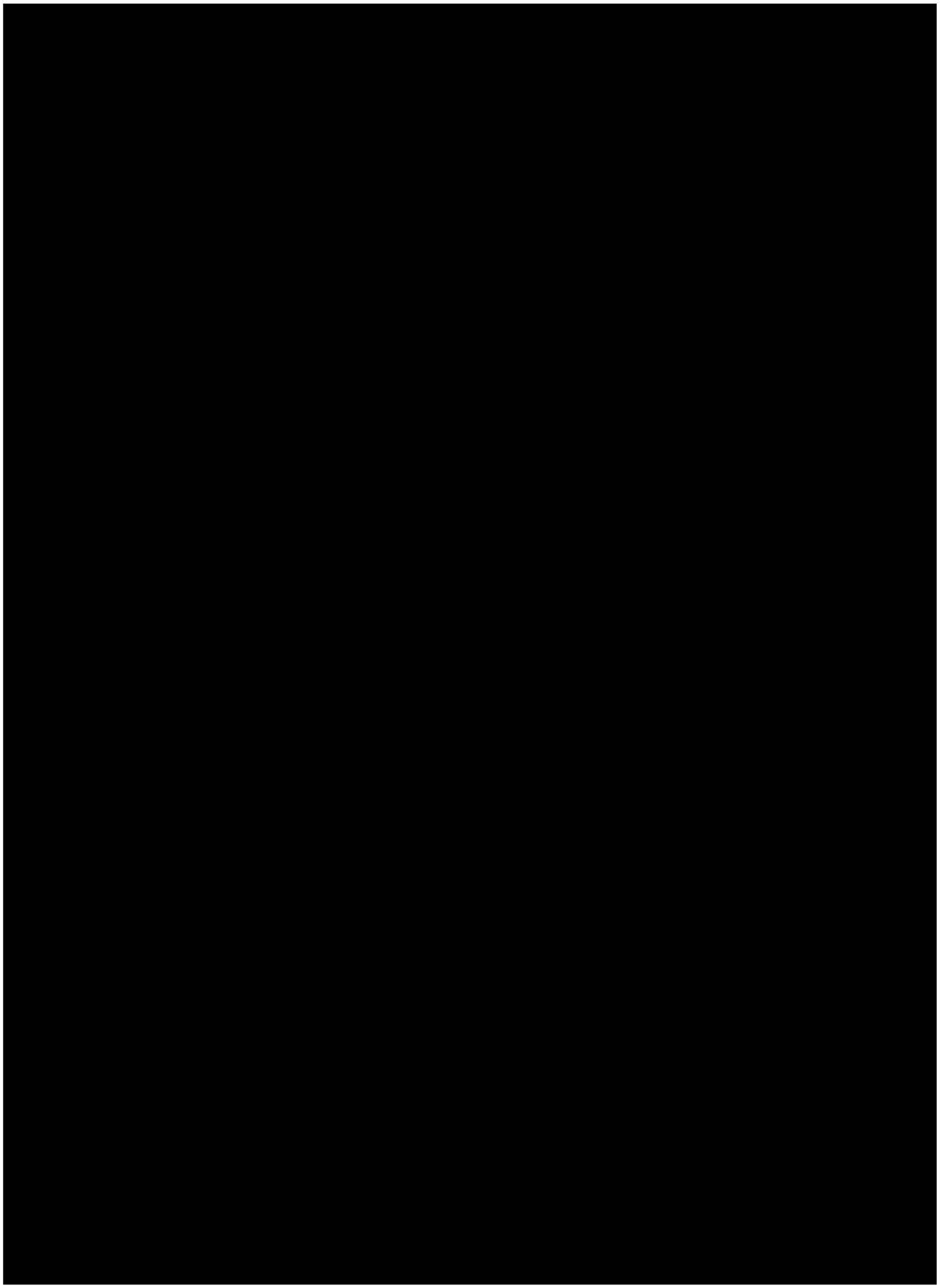


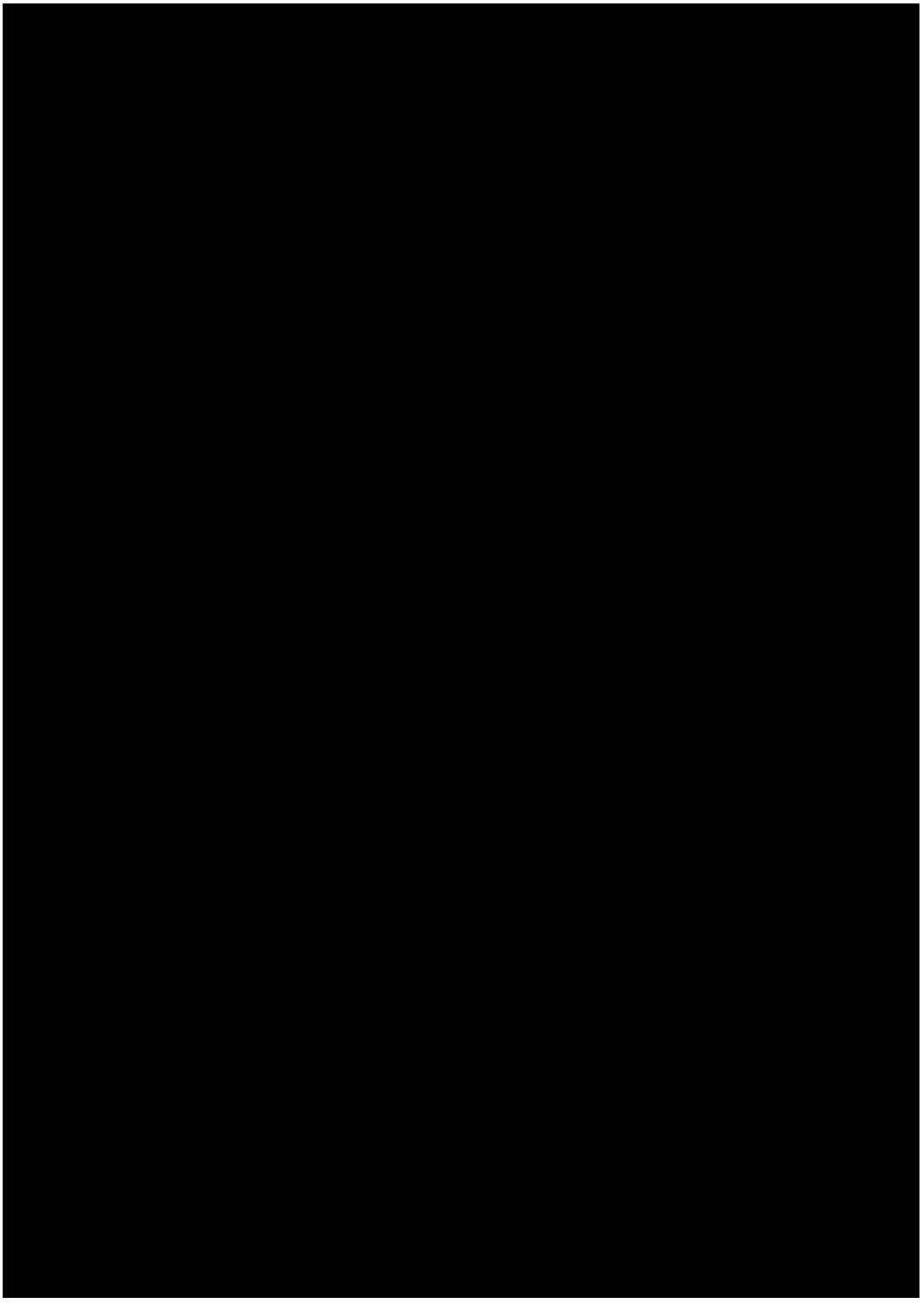


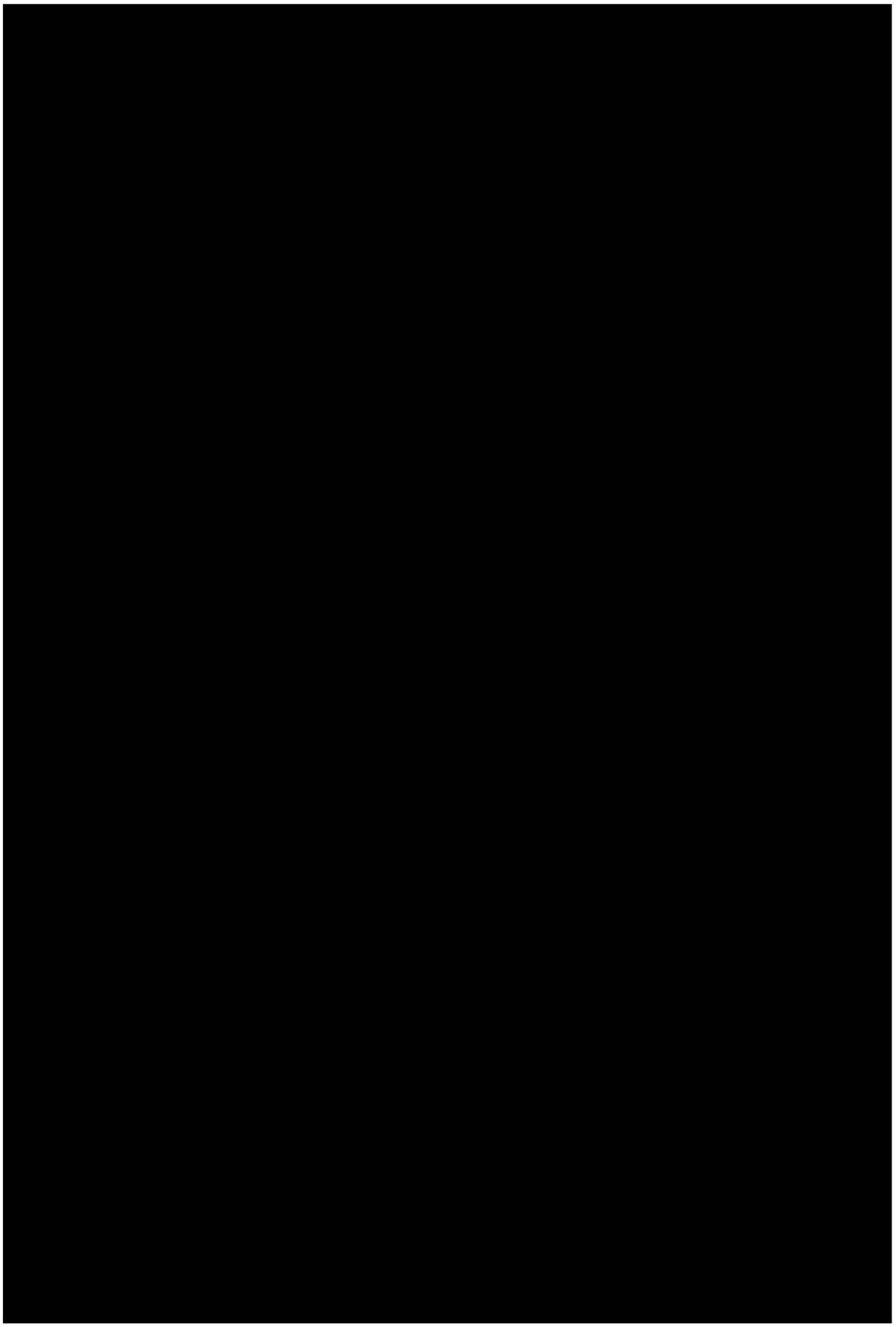


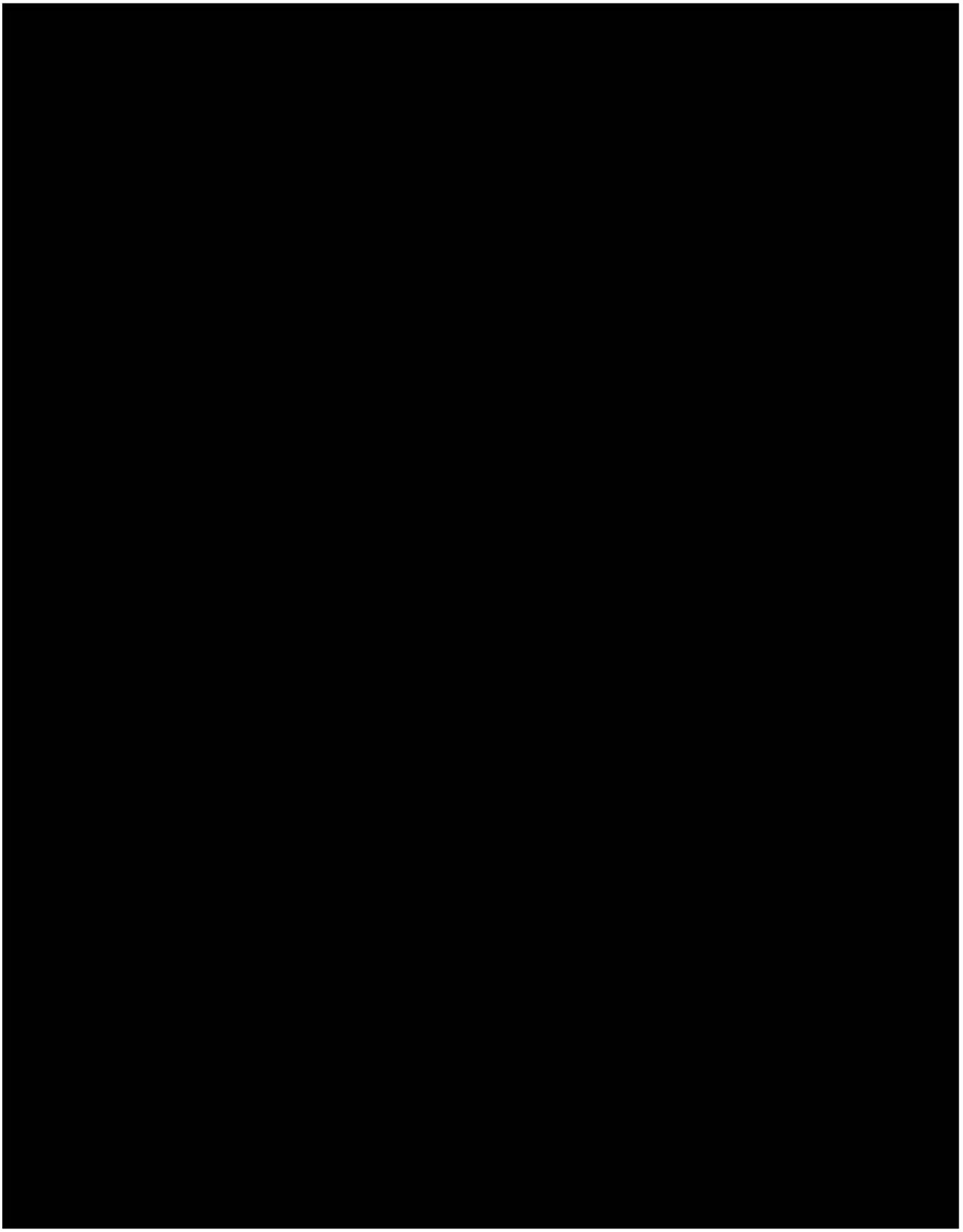


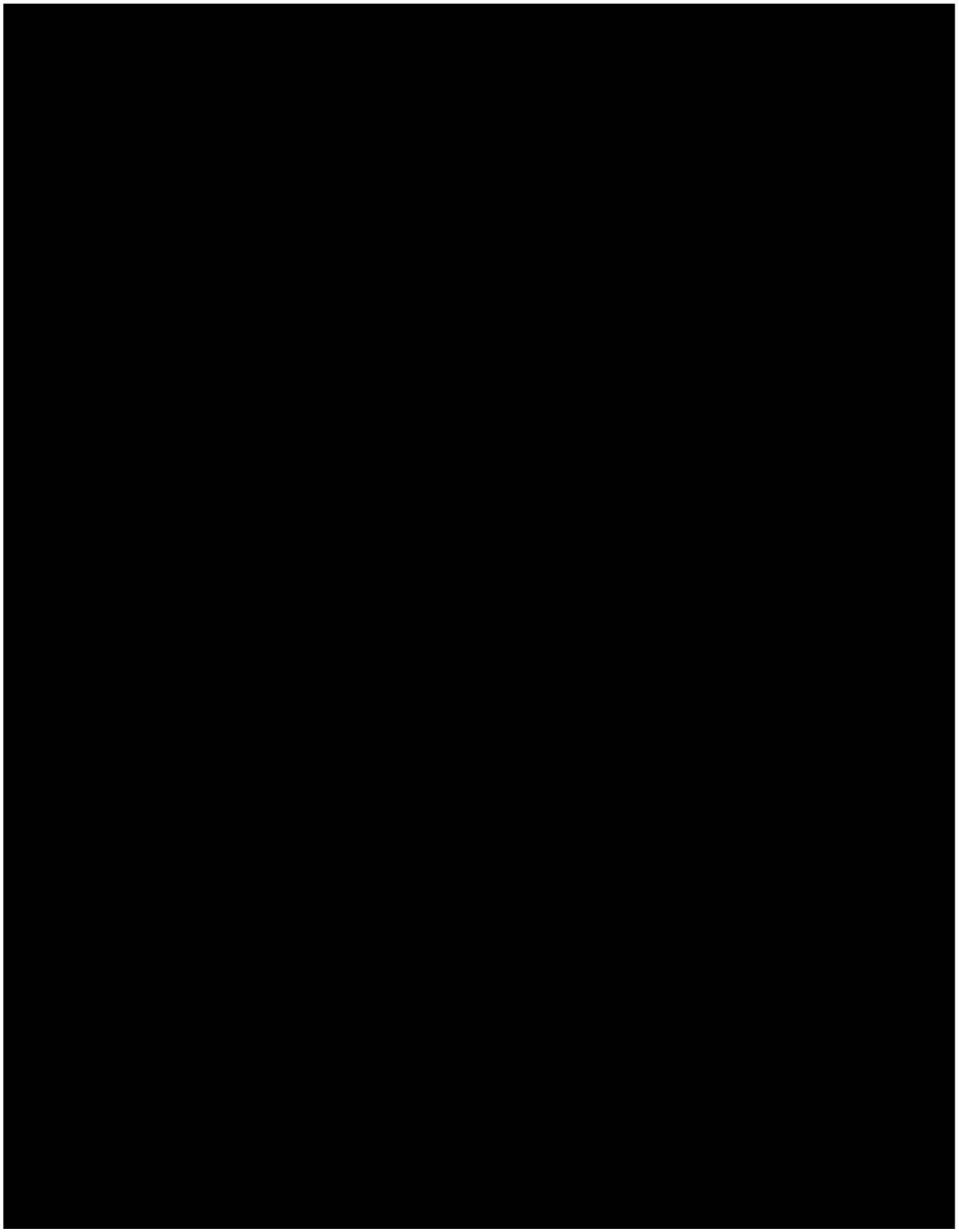


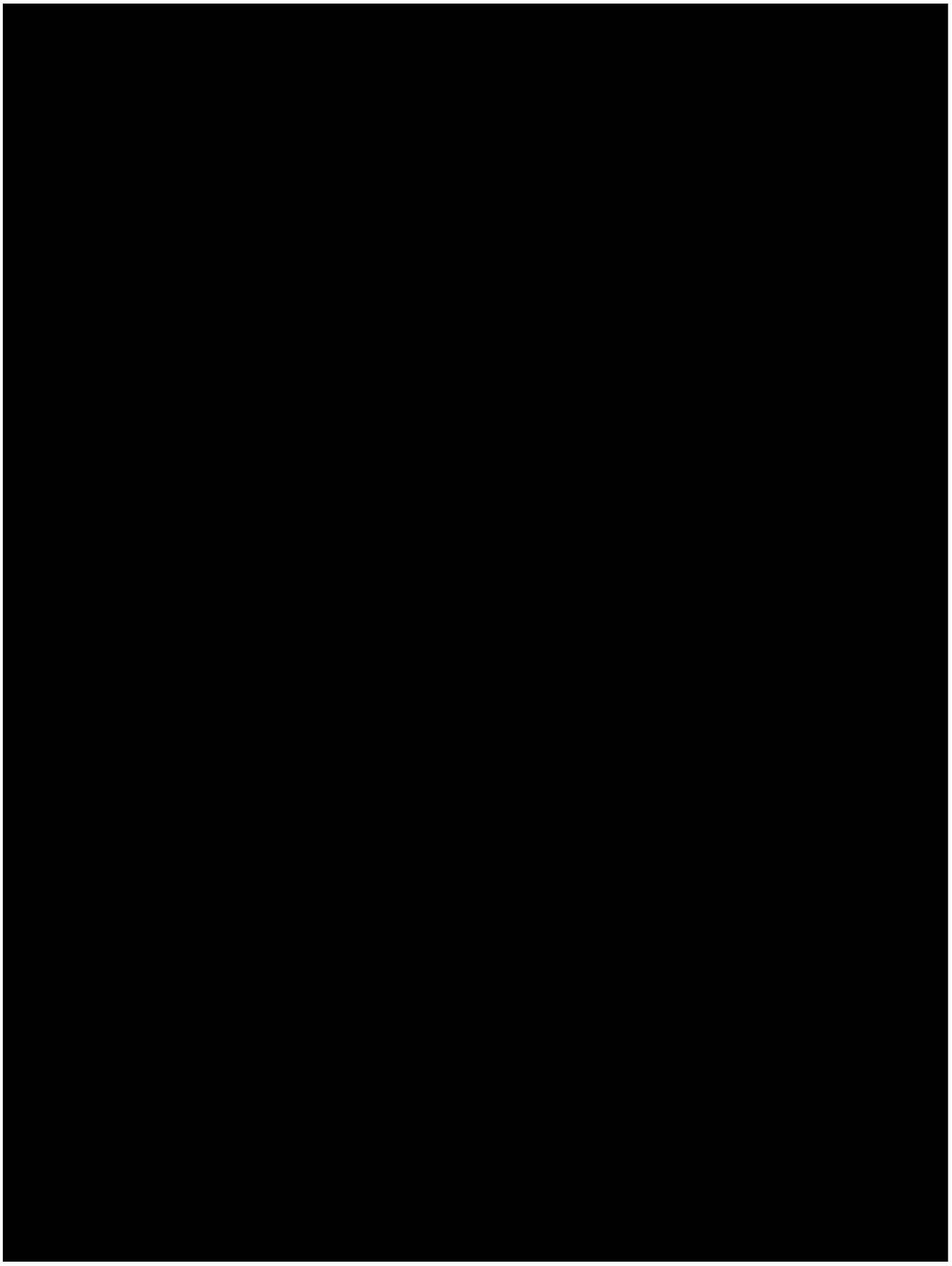












Part 2: Contract Terms

Contract Terms v6.0