




# **Ancillary Facilities Management Plan**

## **Albion Park Rail bypass (Stage 2 – Princes Highway between Yallah and Oak Flats)**


July 2019

## Document control

### Approval

<b>Title</b>	Ancillary Facilities Management Plan Albion Park Rail bypass (Stage 2 – Princes Highway between Yallah and Oak Flats)
<b>Approved on behalf of NSW Roads and Maritime Services by</b>	Peter Hawkins
<b>Signed</b>	
<b>Dated</b>	29/07/19

### Endorsement

<b>Endorsed by the Environmental Representative</b>	Toby Hobbs
<b>Signed</b>	
<b>Dated</b>	29/07/19

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## Glossary/ Abbreviations

Abbreviation	Expanded text
Ancillary facility	<p>A temporary facility for construction of the project including an office and amenities compound, construction compound, material crushing and screening plant, materials storage compound, maintenance workshop, testing laboratory and material stockpile area.</p> <p>Note: Where an approved Construction Environmental Management Plan contains a stockpile management protocol, a material stockpile area located within the construction footprints not considered to be an ancillary facility.</p>
ACM	Asbestos contaminated material
CEMP	Construction Environmental Management Plan
CoA	Conditions of approval (State and Federal). State CoA are the NSW Minister for Planning's conditions of approval. Federal CoA are the Federal Minister for the Environment and Energy's conditions of approval.
CRM	Community Relations Manager
DECC	NSW Department of Environment and Climate Change
DP&E	Department of Planning and Environment
EIS	Environmental Impact Statement
EPA	NSW Environment Protection Authority
EP&A Act	Environmental Planning and Assessment Act 1979 (NSW)
EPL	Environment Protection Licence
ER	Environmental Representative
EWMS	Environmental Work Method Statements
FM Act	Fisheries Management Act 1994
MoWP	Method of Working Plan
OEH	Office of Environment and Heritage
PESCP	Progressive Erosion and Sediment Control Plan
POEO Act	Protection of the Environment Operations Act 1997 (NSW)
Roads and Maritime	Roads and Maritime Services
Secretary	Secretary of the Department of Planning and Environment
SWMP	Soil and Water Management Sub-plan
WEMP	Waste and Energy Management Sub-plan

# 1 Introduction

## 1.1 Purpose and scope

Roads and Maritime Services (Roads and Maritime) are extending the M1 Princes Motorway between Yallah and Oak Flats to bypass Albion Park Rail. The motorway would complete the 'missing link' for a high standard road between Sydney and Bomaderry.

The project, known as the Albion Park Rail bypass (Stage 2 – Princes Motorway between Yallah and Oak Flats) (the Project), has been assessed under Part 5.1 (State Significant Infrastructure) of the *NSW Environmental Planning and Assessment Act 1979 (EP&A Act)*. The NSW Department of Planning and Environment (DP&E) placed the 'Albion Park Rail bypass Environmental Impact Statement' (Roads and Maritime, October 2015) (EIS) on public exhibition between 28 October and 27 November 2015.

Submissions received and issues raised during the exhibition were responded to in the 'Albion Park Rail Bypass Submissions and Preferred Infrastructure Report' (Roads and Maritime, 2017) (SPIR). The report also assessed changes to the project from the EIS.

The EIS identified thirteen (13) ancillary sites for the project. Four (4) ancillary sites were removed in the SPIR design. Subsequently during construction an additional ancillary site for the project was identified and proposed by Fulton Hogan. The site proposed is a commercial premises with direct access to the Illawarra highway. This new facility is required to provide additional storage space and to support construction. The ancillary sites will be essential to deliver the project and will involve activities such as machinery launch, earthworks, drainage and bridge construction support, laydown, and workforce amenities. An assessment has been made to determine compliance with Condition A16(b) and is attached at Appendix H.

In accordance with Condition of Approval (CoA) A17, establishment of each ancillary facility will be carried out following Secretary's approval of the Ancillary Facilities Management Plan (AFMP).

This AFMP describes how Fulton Hogan will manage the environmental impacts resulting from the establishment and operation of any ancillary facility.

This AFMP has been prepared to address the requirements of the Ministers' Conditions of Approval (CoA) A16 to A20 and the EIS, as amended by the SPIR.

The sporting facilities at the Croom Regional Sporting Complex impacted by the Project (including the sporting fields and associated amenities) will not form part of the scope of this plan as they form part of Stage 1 and will be relocated and/ or replaced under a separate contract managed by Roads and Maritime.

## 1.2 Approved Ancillary Facilities

Temporary ancillary facility sites will be required to enable delivery of the project. An ancillary facility is defined in the project Approval as:

*'A temporary facility for construction of the project including an office and amenities compound, construction compound, material crushing and screening plant, materials storage compound, maintenance workshop, testing laboratory and material stockpile area'*

*Note: Where an approved Construction Environmental Management Plan contains a stockpile management protocol, a material stockpile area located within the construction footprint is not considered to be an ancillary facility'.*

The EIS identified 13 potential locations for ancillary facilities. However, the number of potential locations was reduced to nine within the SPIR. Table 1-1 details these changes and the potential uses of each ancillary facility.

Table 1-1 Approved ancillary facility sites as amended by the SPIR, and their locations and potential uses

Ancillary site ID - EIS	Ancillary site ID - SPIR	Location description	Potential uses
AS01	AS01	West of the interchange at Yallah	Material stockpile
AS02*	Not included in current design	East of the interchange at Yallah	Material stockpile
AS03	AS03	Near Yallah Bay Road	Material stockpile
AS04	AS04	Near the existing Princes Highway and South Coast Rail Line	Bridge construction support
AS05*	Not included in current design	West of Illawarra Highway intersection	Bridge construction support
AS06	AS06	East of Illawarra Highway intersection	Material stockpile Main project offices Possible workshop for plant servicing
AS07*	Not included in current design	Near interchange at Albion Park	Bridge construction support Double-handling laydown
AS08	AS08	Near Tongarra Road bridge	Bridge construction support Double-handling laydown
AS09	AS09	At Croom Regional Sporting Complex	Bridge construction support
AS10	AS10	Near Croom Regional Sporting Complex	Works associated with Croom Regional Sporting Complex only (refer to CoA A21)
AS11	AS11	Near East West Link	Bridge construction support Proximity to intensive work zone between Croome Road and Oak Flats

Ancillary site ID - EIS	Ancillary site ID - SPIR	Location description	Potential uses
AS12*	Not included in current design	Near East West Link	Bridge construction support Proximity to intensive work zone between Croome Road and Oak Flats
AS13	AS13	Near East West Link	Double-handling laydown

\*Note: Sites shaded grey no longer identified as ancillary facility sites in the EIS as amended by the SPIR

### 1.3 Proposed Ancillary Facilities

Fulton Hogan proposes to use six (6) out of nine (9) approved ancillary sites to support the Project. These include:

- AS04 Near the existing Princes Highway and South Coast Rail Line
- AS06 East of Illawarra Highway intersection (main site compound)
- AS08 Near Tongarra Road bridge
- AS09 At Croom Regional Sporting Complex
- AS11 Near East West Link
- AS13 Near East West Link.

It is noted that all of the above proposed ancillary facilities are located within the approved project boundary, and also that AS 10 will not be used for this stage (2) of the project in accordance with CoA A21 nor will AS01 and AS03.

Fulton Hogan has identified an additional location for establishment of an ancillary site. The proposed ancillary facility is located on commercial premises (existing hardstanding) and is located off the southbound lane of the Illawarra Highway, north of Croome Lane, Albion Park Rail. This site is listed as AS14. The new facility is required to compensate for storage space lost at the main site compound (AS06) through development of permanent infrastructure associated with the project. As the new facility was not originally assessed under the EIS as amended by the SPIR, in accordance with the approval pathway outlined in Figure 1-2, AS14 has been determined compliant under CoA A16(b). The assessment made to determine compliance is attached at Appendix H.

The locations of the main site compound and other ancillary facilities selected by Fulton Hogan for use are shown in Figure 1-1. The layouts for each proposed ancillary facility are provided in Appendix A.



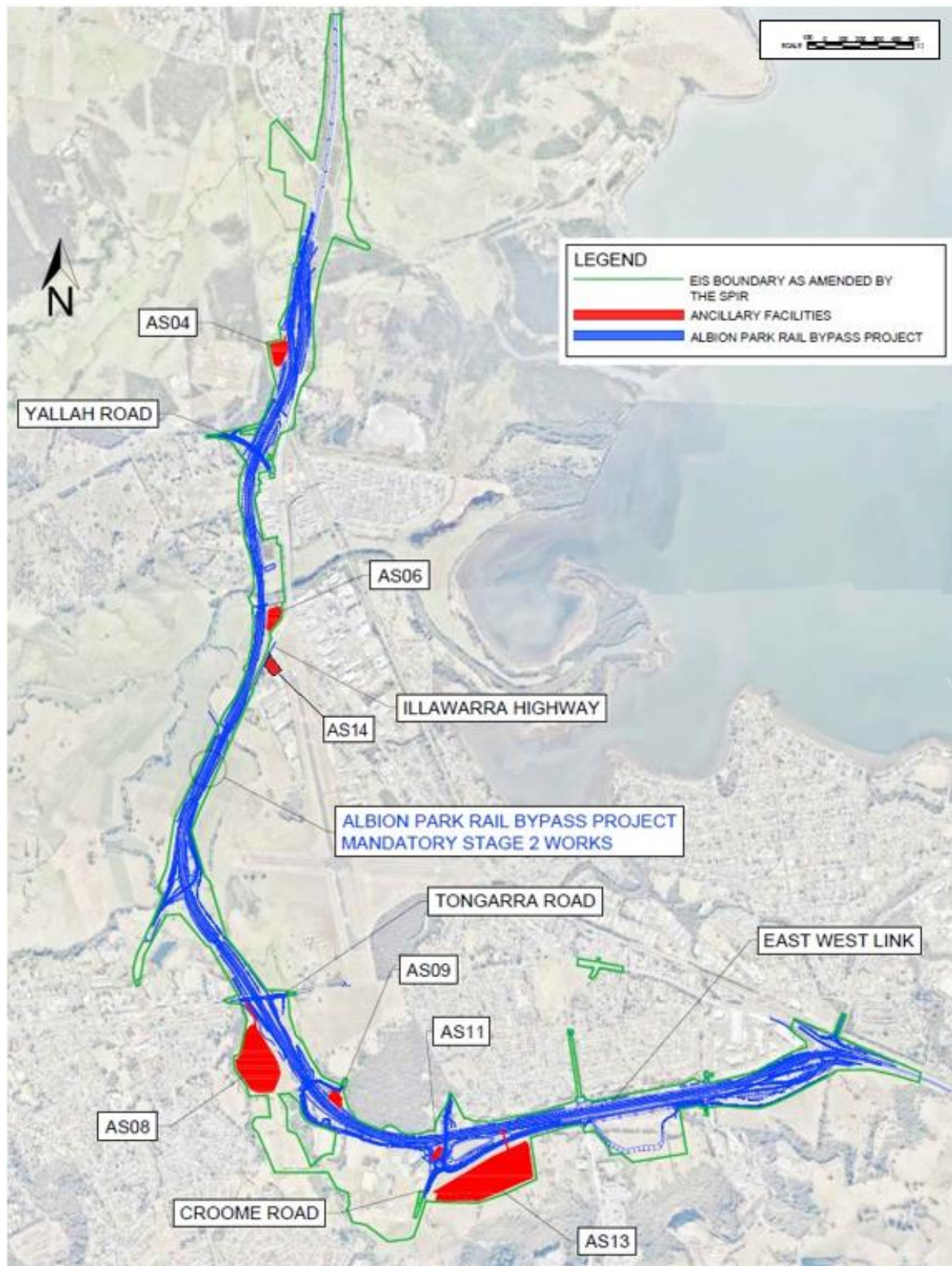


Figure 1-1 Location of the proposed ancillary facilities

## 1.4 Additional Ancillary Facilities

Ancillary facilities that are not identified by description and location in the EIS as amended by the SPIR are permitted provided they meet the following criteria detailed in CoA A16 and a checklist (See Appendix G) will be used on site to show compliance with these points:

- (a) *the facility is development of a type that would, if it were not for the purpose of the SSI, otherwise be exempt or -complying development; or*
- (b) *the facility is located as follows:*
  - i. *at least 50 metres from any waterway unless an erosion and sediment control plan is prepared and implemented so as not to adversely affect water quality in the waterway in accordance with Managing Urban Stormwater series;*
  - ii. *within or adjacent to land upon which the SSI is being carried out unless it can be demonstrated that performance criteria established in this approval can be met and that there will be a reduction in impact at other sites and a reduction in the construction program;*
  - iii. *with ready access to a road network;*
  - iv. *to prevent heavy vehicles travelling on local streets or through residential areas in order to access the facility, except as identified in the EIS as amended by the SPIR;*
  - v. *so as to be in accordance with the Interim Construction Noise Guideline (DECC 2009) or as otherwise agreed in writing with affected landowners and occupiers;*
  - vi. *so as not to require vegetation clearing beyond the extent of clearing approved under other teRoads and Maritime of this approval except as approved by the ER as minor clearing;*
  - vii. *so as not to have any impact on heritage items (including areas of archaeological sensitivity) beyond the impacts identified, assessed and approved under other terms of this approval;*
  - viii. *so as not to unreasonably interfere with lawful uses of adjacent properties that are being carried out at the date upon which establishment of the facility is to commence;*
  - ix. *to enable operation of the ancillary facility during flood events and to avoid or minimise, to the greatest extent practicable, adverse flood impacts on the surrounding environment and other properties and infrastructure; and*
  - x. *so as to have sufficient area for the storage of raw materials to minimise, to the greatest extent practicable, the number of deliveries required outside standard construction hours*

Minor ancillary facilities comprising lunch sheds, office sheds, and portable toilet facilities, that are not identified in the EIS as amended by the SPIR and which do not satisfy the criteria set out in CoA A16 will be assessed against the criteria in CoA A18:

- (a) *have no greater environmental and amenity impacts than those that can be managed through the implementation of environmental measures detailed in the CEMP required under Condition C1 of this approval; and*
- (b) *have been assessed by the ER to have:*
  - i. *minimal amenity impacts to surrounding residences and businesses, after consideration of matters such as compliance with the ICNG, traffic and access impacts, dust and odour impacts, and visual (including light spill) impacts;*
  - ii. *minimal environmental impact with respect to waste management and flooding; and*
  - iii. *no impacts on biodiversity, soil and water, and heritage beyond those already approved under other terms of this approval.*

Following consideration of the above, the ER would make a determination in relation to each nominated minor ancillary site.

Should a need for additional ancillary facility be identified, the planning approval pathway shown in Figure 1-2 will be followed. In accordance with the Department's advice within the AFMP approval letter (condition A17, 16/11/18), if additional ancillary facilities are required, this AFMP must be updated to detail the management of the ancillary facilities prior to construction (minor ancillary sites excluded). The ancillary facilities checklist (Appendix G)

must be completed for all ancillary sites (including minor sites) and will be kept on file. These records must be available for review at all times for the duration of construction.

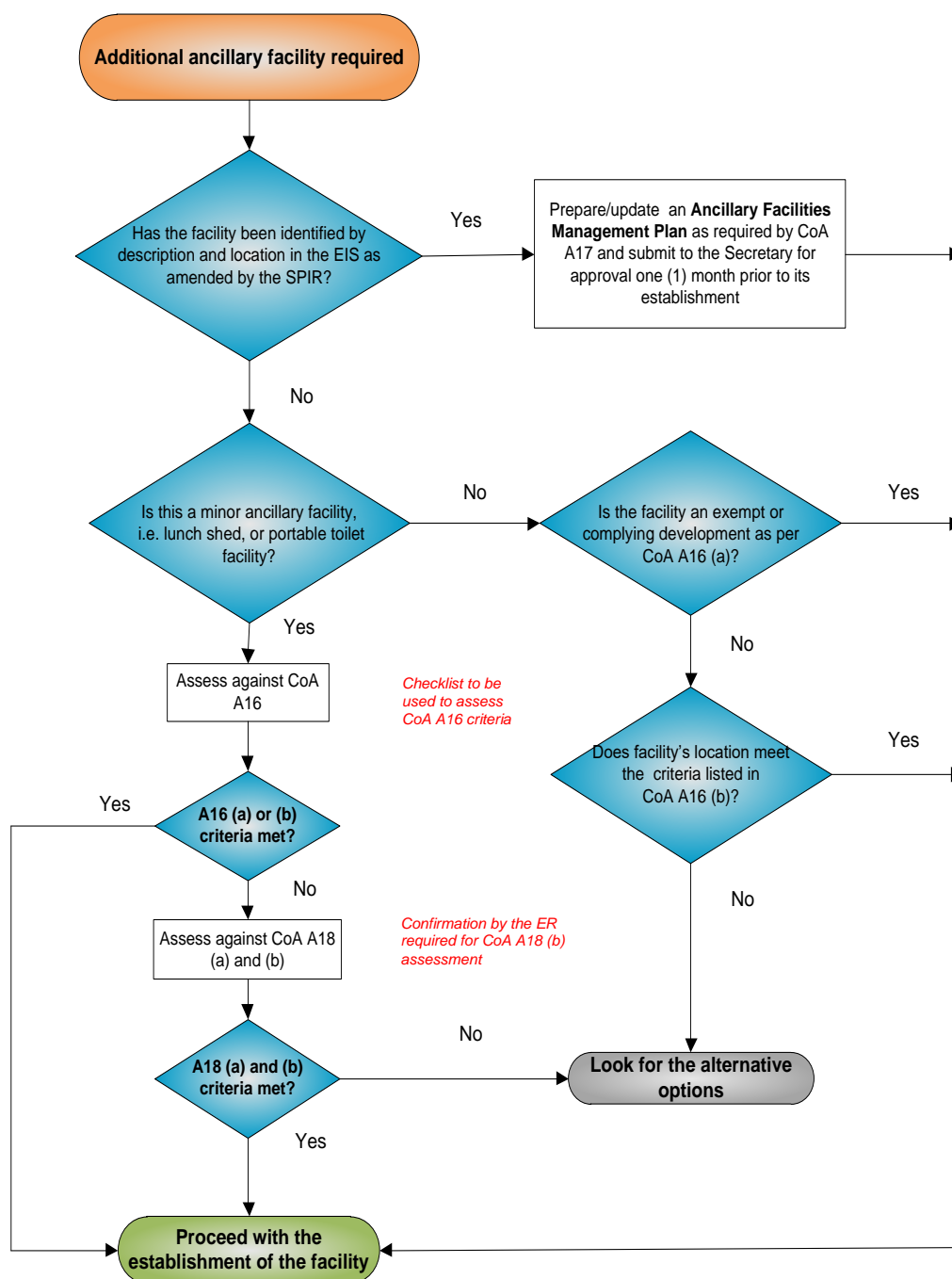


Figure 1-2 Approval pathway for ancillary facilities

## 1.5 Consultation for preparation of the AFMP

In accordance with the requirements of CoA A17 of the project approval, this AFMP has been prepared in consultation with the relevant government agencies. A brief summary of the consultation is provided below:

- Wollongong City Council - No response was received, however notification was provided as a courtesy only as AS14 is located solely within Shellharbour City.
- Shellharbour City Council - Provided several observations and confirmed Fulton Hogan's responses were appropriate and supported. In relation to the additional site AS14,

Council indicated satisfaction with the measures and actions taken by Fulton Hogan. Council requested notification if any changes occurred to the proposed traffic arrangements on the Illawarra Highway.

- Environment Protection Authority (EPA) - Acknowledged receipt of the AFMP and advised it would be kept for record purposes. When consulted on the establishment of AS14, EPA advised they had no objections and would further discuss potential licencing arrangements with Fulton Hogan.
- Department of Primary Industries Fisheries - Advised the AFMP has been completed to the satisfaction of DPI Fisheries and that they had no objection to the additional establishment of AS14
- Department of Primary Industries Water (Natural Resource Access Regulator - NRAR) - . Regarding AS14, NRAR confirmed: "the area is not within waterfront land as defined by the Water Management act 2000 i.e. within 40m from any mapped watercourse. NRAR therefore has no specific comment regarding the subject hardstand space."
- Office of Environment and Heritage (OEH) – No comments in relation to the ancillary sites proposed through the EIS phase. Both the Biodiversity and Heritage Divisions advised that there were no known constraints at the site of AS14 and offered no objection to the proposal.
- Registered Aboriginal Parties – Consulted regarding AS08 during the AFG held 20 August 2018, no issues were raised. Further information regarding AS14 was sought via OEH (Heritage) and the Chief Executive's Office of Illawarra Local Aboriginal Land Council with no concerns or objections raised. The well established hardstanding proposed to be used as AS14 will be identified to all attendees at the next project Aboriginal Focus Group (AFG) which is scheduled to occur in August 2019.

The comments and issues raised during the consultation as well as the cross-references to where the issues raised are addressed in this AFMP (where relevant) are provided in Appendix B.

## 1.6 Environmental Performance Outcomes

Table 1-2 identifies the environmental performance outcomes related to ancillary sites identified in the EIS as amended by the SPIR and how these will be achieved.

Table 1-2 Environmental performance outcomes

EIS reference	Environmental Performance Outcome	How achieved
Section 10.5 p312	The project would where feasible and reasonable, avoid and minimise impacts to Aboriginal and non-Aboriginal heritage items and archaeology.	AFMM92-98
Section 10.5 AH05, p313	Salvage of Aboriginal heritage site YTOF AS 5 would occur if impacts are unavoidable.	Table 4-1 (AS08)
Technical Paper 4 – Biodiversity Assessment Report Section 5.2.2, p121	Prevent weed encroachment into vegetation adjoining the project.	AFMM66-68



EIS reference	Environmental Performance Outcome	How achieved
Section 18.3.1, p540	Significant air quality effects on sensitive receivers would be prevented through the use of effective mitigation measures.	Table 4-1
Section 16.2.1 p495	Unexpected contamination would be managed in accordance with an unexpected finds protocol.	AFMM55
Section 9.5 SW02, p299	Potential impacts on soils and receiving watercourses from refuelling and accidental spills would be minimised.	Table 4-1 AFMM50-54
Section 8.3.1 p224	Where possible ancillary sites should be located above the 20 year ARI flood extent.	Table 4-1 (AS08) Appendix A
Section 12.3.1 p332	Noise levels would be minimised with the aim of achieving the Interim Construction Noise Guideline (Department of Environment and Climate Change, 2009) noise management levels where feasible and reasonable.	Table 4-1 AFMM69-91 Section 4.2
Section 16.3.1 p501	Erosion and sediment controls during construction would be implemented in accordance with Managing Urban Stormwater: Soils and Construction Volume 1 (Landcom, 2004)	AFMM3
Section 16.5 SW02, p510	The project would prevent/ minimise pollution of waterways from refuelling of vehicles and other equipment and accidental spills.	AFMM50-54
Section 20.2.1 p557	Recycling of office and construction compound wastes would be prioritised over disposal to landfill.	AFMM127, 131, 132, 137, 142 and 145.
SPIR section 5.20.4 p106	Minimise clearing of remnant vegetation for temporary work areas.	Table 4-1 (AS08 and AS09)
SPIR section 5.20.4 p106	Where practical temporary ancillary sites would be progressively rehabilitated.	Section 4.3
SPIR Table 6-1 TT01 p298	Traffic control plans showing the access arrangements to ancillary sites and the location of required signs and devices.	AFMM59 and 89.

## 2 Environmental Management System Overview

Fulton Hogan operates an Environmental Management System (EMS) certified to ISO 14001:2015 Environmental Management Systems – Requirements with guidance for use. The EMS manages and controls the environmental impacts during delivery of the Project. The EMS provides an overall framework for the systems and procedures to minimise the environmental aspects and impacts and to meet legislative and other requirements.

This AFMP for an integral part of the project-specific EMS. It establishes the system of processes, procedures and mitigation measures aimed at minimising environmental impacts associated with the establishment, operation and decommissioning of the ancillary facilities.

### 2.1 Construction Environmental Management Plan

In accordance with CoA C3 a Construction Environmental Management Plan (CEMP) has been prepared and was approved by the Secretary prior to the commencement of construction on 7 December 2018. The CEMP and sub-plans identify a range of mitigation and management measures that must be employed for the Project throughout construction.

Establishment and operation of the ancillary facilities will be managed in accordance with this AFMP and other supporting documentation such as the CEMP, Environmental Work Method Statements (EWMS) and Erosion and Sediment Control Plans.

### 2.2 Sensitive Areas Plans

The Project traverses a diversity of environmental and socially sensitive areas/sites. To assist planning and on-site management, these site constraints are consolidated on series of map-based sheets that extend the length of the Project. Sensitive area plans include information pertaining, but not limited to:

- Noise sensitive receivers' e.g. residential dwellings, educational institutions
- Flora features, including threatened species and threatened ecological communities
- Aboriginal and non-Aboriginal heritage sites, including items, places, objects and sites
- Local waterways
- Conservation areas / nature reserves.

The sensitive area plans will be revised throughout construction to reflect true ground conditions and the most up-to-date information available on sensitive sites. Sensitive area plans will be used in conjunction with EWMS to help identify key risk areas and to promote ongoing communication to construction personnel during the Project.

Sensitive Area Plans are contained within Appendix F and Appendix A6 of the approved CEMP.

### 2.3 Environmental Work Method Statements

EWMS are prepared to manage and control all high risk activities and others that have the potential to negatively impact on the environment. EWMS will be prepared prior to the commencement of relevant pre-construction and construction activities and will incorporate relevant mitigation measures and controls, including those from relevant management sub-plans. They also identify key procedures to be used concurrently with the EWMS. EWMS are specifically designed to communicate requirements, actions, processes and controls to construction personnel using plans, diagrams and simply written instructions.

EWMS will be prepared progressively in the lead up to and throughout construction in consultation with relevant members from the Project team, and concurrence provided by the Roads and Maritime Environment Manager.

EWMS for activities identified as having high environmental risk, i.e. establishment of an ancillary facility, will undergo a period of consultation with stakeholders and authorities prior to approval. An example of a EWMS for site establishment can be found in Appendix C of this Plan.

## **2.4 Erosion and Sediment Control Plans**

Erosion and Sediment Control Plans (ESCPs) have been prepared for all proposed ancillary facilities and are provided in Appendix D. The plans have been prepared by a qualified soil conservationist in accordance with *Managing Urban Stormwater; Soils and Construction Volume 1 (Landcom 2006) (the Blue Book)* and *Volume 2D Main Roads Construction (DECCW 2008)*.

## **2.5 Environmental risk assessment**

The potential environmental impacts of the project's activities, including establishment and operation of the ancillary facilities, were initially identified in the EIS. Fulton Hogan has identified specific environmental constraints and risks and potential environmental impacts associated with establishment and operation of the proposed ancillary sites. These are provided in Table 4-1.

In accordance with CoA A17(b) a program of ongoing analysis of the key environmental risks arising from the activities will be implemented and will include:

- Six monthly reviews of the key environmental risks associated with operation of the ancillary facilities
- Risk review and analysis following any major changes to the operation of any ancillary facilities
- Risk review and analysis following a significant environmental incident at any of the ancillary sites
- Risk review and analysis following a complaint received in the relation to the operation of any ancillary sites, and
- Ongoing monitoring of the potential impacts as part of the weekly site environmental inspections as described in Section 6.4 of this AFMP.

## 3 Environmental requirements

### 3.1 Relevant legislation and guidelines

Legislation relevant to the construction and operation of ancillary facilities under this approval includes:

- *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act)
- *Protection of the Environment Operations Act 1997*
- *Environmental Planning and Assessment Act 1979*
- *National Parks and Wildlife Act 1974*
- *Contaminated Lands Management Act 1997*
- *Heritage Act 1977*
- *Pesticides Act 1999*
- *Biodiversity Conservation Act 2017*
- *Biosecurity Act 2015*.

The main guidelines, specifications and policy documents relevant to this AFMP include:

- State Environmental Planning Policy (Exempt and Complying Development Codes) 2008
- Roads and Maritime QA Specification G36 – Environmental Protection (Management System)
- Managing Urban Stormwater: Soils and Construction. Volume 2D: Main Road Construction, DECC (2008)
- Managing Urban Stormwater: Soils and Construction. Volume 1: 'Blue Book', Landcom (2004)
- Technical Guideline Environmental Management of Construction Site Dewatering (Roads and Maritime, 2011d)
- Roads and Maritime Biodiversity Guidelines 2011, and
- Roads and Maritime Construction Noise and Vibration Guideline 2016.

### 3.2 Conditions of Approval

The CoA relevant to this AFMP are listed in Table 3-1. A cross reference is also provided to indicate where each condition is addressed in this AFMP or other project / environmental management documents.

Table 3-1 CoA relevant to this AFMP

CoA	Requirement	Reference
A16	<p>Ancillary facilities that are not identified by description and location in the EIS as amended by the SPIR must meet the following criteria, unless otherwise approved by the Secretary:</p> <p>(a) the facility is development of a type that would, if it were not for the purpose of the SSI, otherwise be exempt or complying development; or</p> <p>(b) the facility is located as follows:</p> <p>i. at least 50 metres from any waterway unless an erosion and sediment control plan is prepared and implemented so as not to adversely affect water quality in the waterway in accordance with Managing Urban Stormwater series;</p> <p>ii. within or adjacent to land upon which the SSI is being carried out unless it can be demonstrated that performance criteria</p>	Chapter 3, Section 1.4, Appendix G



CoA	Requirement	Reference
	<p>established in this approval can be met and that there will be a reduction in impact at other sites and a reduction in the construction program;</p> <p>iii. with ready access to a road network;</p> <p>iv. to prevent heavy vehicles travelling on local streets or through residential areas in order to access the facility, except as identified in the EIS as amended by the SPIR;</p> <p>v. so as to be in accordance with the Interim Construction Noise Guideline (DECC 2009) or as otherwise agreed in writing with affected landowners and occupiers;</p> <p>vi. so as not to require vegetation clearing beyond the extent of clearing approved under other terms of this approval except as approved by the ER as minor clearing;</p> <p>vii. so as not to have any impact on heritage items (including areas of archaeological sensitivity) beyond the impacts identified, assessed and approved under other terms of this approval;</p> <p>viii. so as not to unreasonably interfere with lawful uses of adjacent properties that are being carried out at the date upon which establishment of the facility is to commence;</p> <p>ix. to enable operation of the ancillary facility during flood events and to avoid or minimise, to the greatest extent practicable, adverse flood impacts on the surrounding environment and other properties and infrastructure; and</p> <p>x. so as to have sufficient area for the storage of raw materials to minimise, to the greatest extent practicable, the number of deliveries required outside standard construction hours.</p>	
A17	<p>Before establishment of any ancillary facility, except in relation to the delivery of the Croom Regional Sporting Complex, the Proponent must prepare an Ancillary Facilities Management Plan which details the management of the ancillary facilities. The Ancillary Facilities Management Plan must be prepared in consultation with relevant government agencies and the Relevant Council(s) and submitted to the Secretary for approval one month prior its establishment. The Ancillary Facilities Management Plan must include:</p> <p>(a) a description of activities to be undertaken during construction, operational and decommissioning (including scheduling of construction);</p> <p>(b) a program for ongoing analysis of the key environmental risks arising from the activities described in subsection (a) of this condition, including an initial risk assessment undertaken prior to the commencement of construction of the SSI; and</p> <p>(c) details of how the activities described in subsection (a) of this condition will be carried out to:</p> <p>i. meet the performance outcomes stated in the EIS as amended by the SPIR; and</p>	<p>This AFMP</p> <p>Table 4-1</p> <p>Section 2.5</p> <p>Table 4-1</p>

CoA	Requirement	Reference
	ii. manage the risks identified in the risk analysis undertaken in subsection (b) of this condition.	
A18	<p>Minor ancillary facilities comprising lunch sheds, office sheds, and portable toilet facilities, that are not identified in the EIS as amended by the SPIR and which do not satisfy the criteria set out in Condition A16 of this approval must satisfy the following criteria:</p> <p>(a) have no greater environmental and amenity impacts than those that can be managed through the implementation of environmental measures detailed in the CEMP required under Condition C1 of this approval; and</p> <p>(b) have been assessed by the ER to have:</p> <p>i. minimal amenity impacts to surrounding residences and businesses, after consideration of matters such as compliance with the ICNG, traffic and access impacts, dust and odour impacts, and visual (including light spill) impacts;</p> <p>ii. minimal environmental impact with respect to waste management and flooding; and</p> <p>iii. no impacts on biodiversity, soil and water, and heritage beyond those already approved under other terms of this approval.</p>	Chapter 3, Appendix G
A19	Boundary fencing must be erected around ancillary facilities that are adjacent to sensitive receivers for the duration of construction unless otherwise agreed with the affected receiver(s).	Table 4-1
A20	Boundary fencing required under Condition A19 of this approval must minimise visual, noise and air quality impacts on adjacent sensitive receivers.	Table 4-1
A21	Ancillary facility AS10 must only be used for works associated with the Croom Regional Sporting Complex, and must be rehabilitated on the completion of those works. The construction access road near Swansea Farm House must be rehabilitated to its pre-construction condition, unless otherwise agreed with Shellharbour City Council.	Section 1.3

Where a new minor ancillary facility which can be managed via the mitigation measures in the CEMP but does not meet the requirements of CoA A16 is proposed, the ER will carry out an assessment of that minor ancillary facility using the requirements of CoA A18(b) which would be recorded on the Ancillary Facility Checklist (Appendix G).

### 3.3 Environment Protection Licence

Environment Protection Licence (EPL) No. 21139 was issued by NSW Environment Protection Authority (EPA) on 13 November 2018 for the construction of the Project as the project triggers activities listed in Schedule 1 (clause 35: road construction) of the *Protection of the Environment Operations Act 1997*. The EPL references a premises location map that incorporates ancillary facilities. Where ancillary facilities may be proposed in an area that is not already included within the EPL licenced premises boundary, an EPL variation will be sought prior to establishment of the site, pending discussions with the EPA.

No other licences would be required for ancillary facility establishment or operation.

## 4 Key activities

### 4.1 Key pre-construction, construction and operation activities

Fulton Hogan has identified specific environmental constraints and risks and potential environmental impacts associated with establishment and operation of the proposed ancillary sites. In accordance with CoA A17(a) and (c), Table 4-1 describes the activities to be undertaken during pre-construction, construction, operation and decommissioning of the proposed ancillary sites. It also provides scheduling of construction and outlines the details of how the activities will be carried out, including risk analysis and mitigation measures to achieve performance outcomes stated in the EIS as amended by the SPIR.

Table 4-1 Key pre-construction, construction, operation and decommissioning activities

Facility ID	Proposed establishment timeframe	Activities and structures	Site access, number of parking spaces and vehicle movements per day	Key environmental constraints and risks	Potential environmental impacts	Environmental management and mitigation measures
AS04	Commencement of construction, operating until project completion.	<ul style="list-style-type: none"> <li>Bridge construction support including steel structures and pre-cast concrete laydown</li> <li>General purpose storage containers</li> <li>A crib shed, a generator and the amenities</li> </ul>	<p>This site will provide 20 parking spaces and will have up to 10 heavy and 30 light vehicle movements per day.</p> <p>The access will be from Princes Highway northbound.</p>	Potential for dust emissions during site establishment (stripping of topsoil)	Annoyance due to dust deposition (soiling of surfaces) and visible dust plumes, and exhaust emissions from diesel-powered construction equipment.	Refer Table 5-1 Standard mitigation measures AFMM 99-115.  Carpark would be sealed to minimise air quality impacts.
				The site is located 34m from the nearest residence	Potential noise impacts, initially during site establishment and later from the night works during construction	Refer Table 5-1 Standard mitigation measures AFMM 69-91.
				General waste from construction sites including building materials, packaging, pallets, cartons, etc.	Poor housekeeping and inappropriate disposal of waste	Refer Table 5-1 Standard mitigation measures AFMM 127-151.
				Uncontrolled erosion and sedimentation, particularly during site establishment	Potential water quality impacts	Refer Table 5-1 Standard mitigation measures AFMM 01-44.
				Spills (chemicals, fuel, etc.)	Potential water quality impacts	Refer Table 5-1 Standard mitigation measures AFMM 45-56.
				Temporary loss of amenity	Visual impact	Fencing where adjacent to sensitive receivers, unless otherwise agreed with affected receiver(s) to minimise visual, noise and air quality impacts.
				Light spillage from night works	General nuisance and complaints from the affected residents	
AS06 (main construction compound)	Upon approval of this AFMP, operating until project completion.	<ul style="list-style-type: none"> <li>Main Roads and Maritime and Fulton Hogan office buildings including meetings rooms, reception, administrative and construction areas, community relation building, training room, change rooms, amenities, kitchen area, first aid and toilet facilities</li> </ul>	<p>This site will provide 210 parking spaces and will have up to 30 heavy and up to 300 light vehicle movements per day.</p> <p>The access will be from East of Illawarra Highway and Council road.</p>	The site is located 180m from nearest residence.	Potential noise impacts, initially during site establishment and later from the night works during construction	Refer Table 5-1 Standard mitigation measures AFMM 69-91.
				Potential for dust emissions, initially during site establishment, and later due to materials handling and stockpile management	Annoyance due to dust deposition (soiling of surfaces) and visible dust plumes, and exhaust emissions from diesel-powered construction equipment.	Refer Table 5-1 Standard mitigation measures AFMM 99-115.  Stockpile height will be no greater than 4m. Any long term (more than two weeks) stockpiles will be

Facility ID	Proposed establishment timeframe	Activities and structures	Site access, number of parking spaces and vehicle movements per day	Key environmental constraints and risks	Potential environmental impacts	Environmental management and mitigation measures
		<ul style="list-style-type: none"> <li>Bridge construction support</li> <li>Store laydown</li> <li>Minor demolition of existing shade structures</li> <li>Materials stockpiling and processing including imported fill and stripped topsoil</li> <li>One (1) self-bunded container to store small quantities (up to 20L) of chemicals such as diesel, curing compounds, paint, etc.</li> <li>General purpose containers (4) for storing equipment and tools, i.e. pumps, saws, drills, generators and</li> <li>Equipment, i.e. compressors, bobcats and rollers</li> <li>Sand bag filler</li> <li>Oxygen bottles in cages (for welding).</li> </ul>				stabilised by applying soil binder or hydromulch to minimise dust.
				General waste from demolition and construction sites including building materials, packaging, pallets, cartons, etc.	Poor housekeeping and inappropriate disposal of waste	Refer Table 5-1 Standard mitigation measures AFMM 127-151.
				Uncontrolled erosion and sedimentation, particularly during site establishment	Potential water quality impacts	Refer Table 5-1 Standard mitigation measures AFMM 01-44.
				Spills (chemicals, fuel, etc.)	Potential water quality impacts	Refer Table 5-1 Standard mitigation measures AFMM 45-56.
				Temporary loss of amenity	Visual impact	Fencing where adjacent to sensitive receivers, unless otherwise agreed with affected receiver(s) to minimise visual, noise and air quality impacts.
				Light spillage from night works	General nuisance and complaints from the affected residents	
AS08	Upon approval of this AFMP, operating until project completion.	<ul style="list-style-type: none"> <li>Double-handling laydown areas</li> <li>Bridge construction support including pipes and formwork laydown, formwork assembly area</li> <li>NJB barrier laydown</li> <li>A sediment basin</li> <li>2 x crib sheds and amenities</li> <li>One (1) self-bunded container to store small quantities (up to 20L) of chemicals such as diesel,</li> </ul>	<p>This site will provide approximately 50 parking spaces and will have up to 150 heavy and up to 50 light vehicle movements per day.</p> <p>The access will be westbound of Tongarra Rd.</p>	The site is located 140m from nearest residence.	Potential noise impacts, initially during site establishment and later from the night works during construction	Refer Table 5-1 Standard mitigation measures AFMM 69-91.
				Flooding immunity is < 20 year ARI in the far northern corner (<1% of AS08).	Potential for flooding	<p>Site boundary and layout were adjusted so that available work areas are positioned away from the portion of the site located within &lt;20yr ARI.</p> <p>Refer AS08 Site Layout in Appendix A.</p>
				Aboriginal heritage item YTOF AS 5 is located within the site.	Potential for damage to aboriginal heritage item YTOF AS 5.	<p>Refer Table 5-1 Standard mitigation measures AFMM 87, 92 &amp; 93.</p> <p>Exclusion zone to be installed – see Appendix A for AS08 layout.</p>

Facility ID	Proposed establishment timeframe	Activities and structures	Site access, number of parking spaces and vehicle movements per day	Key environmental constraints and risks	Potential environmental impacts	Environmental management and mitigation measures
		curing compounds, paint, etc. <ul style="list-style-type: none"> <li>A generator</li> <li>General purpose containers for storing equipment and tools</li> </ul>		Potential for dust emissions, initially during site establishment, and later due to materials handling	Annoyance due to dust deposition (soiling of surfaces) and visible dust plumes, and exhaust emissions from diesel-powered construction equipment.	Refer Table 5-1 Standard mitigation measures AFMM 99-115.
				General waste from construction sites including building materials, packaging, pallets, cartons, etc.	Poor housekeeping and inappropriate disposal of waste	Refer Table 5-1 Standard mitigation measures AFMM 127-151.
				Uncontrolled erosion and sedimentation, particularly during site establishment.	Potential water quality impacts	Refer Table 5-1 Standard mitigation measures AFMM 01-44.
				Spills (chemicals, fuel, etc.)	Potential water quality impacts	Refer Table 5-1 Standard mitigation measures AFMM 45-56.
				Temporary loss of amenity	Visual impact	Fencing where adjacent to sensitive receivers, unless otherwise agreed with affected receiver(s) to minimise visual, noise and air quality impacts.
				Light spillage from night works	General nuisance and complaints from the affected residents	
				Loss of vegetation	Loss of mature vegetation	Trees within AS08 to be retained through establishment and operation of AS08, vegetation to be retained will be protected using paraweb fencing and signage.
AS09	Commencement of construction, operating until project completion.	<ul style="list-style-type: none"> <li>Bridge construction support</li> <li>General purpose storage containers for storing equipment and tools</li> <li>A crib shed, a generator and the amenities</li> </ul>	This site will provide 20 parking spaces and will have up to 10 heavy and up to 50 light vehicle movements per day.  The access will be off Croome Road and Council road. Light Vehicles only will use the main access through the Croom Regional Sporting Complex. Heavy Vehicles will access from the Northern access only.	Potential for dust emissions, initially during site establishment, and later due to materials handling	Annoyance due to dust deposition (soiling of surfaces) and visible dust plumes, and exhaust emissions from diesel-powered construction equipment.	Refer Table 5-1 Standard mitigation measures AFMM 99-115.
				General waste from construction sites including building materials, packaging, pallets, cartons, etc.	Poor housekeeping and inappropriate disposal of waste	Refer Table 5-1 Standard mitigation measures AFMM 127-151.
				Uncontrolled erosion and sedimentation, particularly during site establishment.	Potential water quality impacts	Refer Table 5-1 Standard mitigation measures AFMM 01-44.
				Spills (chemicals, fuel, etc.)	Potential water quality impacts	Refer Table 5-1 Standard mitigation measures AFMM 45-56.



Facility ID	Proposed establishment timeframe	Activities and structures	Site access, number of parking spaces and vehicle movements per day	Key environmental constraints and risks	Potential environmental impacts	Environmental management and mitigation measures
				Temporary loss of amenity	Visual impact	Fencing where adjacent to sensitive receivers, unless otherwise agreed with affected receiver(s) to minimise visual, noise and air quality impacts. AS09 fencing will be constructed using 1.8m chain link fencing with shade clothe.
				Light spillage from night works	General nuisance and complaints from the affected residents	
				Loss of vegetation	Loss of mature vegetation	There will be minimal removal (approx. 10) of trees and shrubs during establishment and operation of the facility. The grass and top soil will be stripped and pushed to the edges of the compound and the area will have road base placed to provide hardstand surface for material laydown. Vegetation to be retained will be protected during establishment and operation of the facility by installing paraweb fencing and signage.
AS11	Commencement of construction, operating until project completion.	<ul style="list-style-type: none"> <li>Bridge construction support</li> <li>General purpose storage containers for storing equipment and tools</li> <li>A crib shed, a generator and the amenities</li> </ul>	<p>This site will provide 12 parking spaces and will have up to 10 heavy and up to 50 light vehicle movements per day.</p> <p>The access will be off Croome Road.</p>	Potential for dust emissions, initially during site establishment, and later due to materials handling	Annoyance due to dust deposition (soiling of surfaces) and visible dust plumes, and exhaust emissions from diesel-powered construction equipment.	Refer Table 5-1 Standard mitigation measures AFMM 99-115.
				General waste from construction sites including building materials, packaging, pallets, cartons, etc.	Poor housekeeping and inappropriate disposal of waste	Refer Table 5-1 Standard mitigation measures AFMM 127-151.
				Uncontrolled erosion and sedimentation, particularly during site establishment.	Potential water quality impacts	Refer Table 5-1 Standard mitigation measures AFMM 01-44.
				Spills (chemicals, fuel, etc.)	Potential water quality impacts	Refer Table 5-1 Standard mitigation measures AFMM 45-56.
				Temporary loss of amenity	Visual impact	AS11 fencing will be constructed using 1.8m chain link fencing with shade clothe.
AS13	Upon approval of this AFMP, operating	<ul style="list-style-type: none"> <li>Double-handling laydown areas</li> </ul>	This site will provide 30 parking spaces and will have up to 150	The site is located 125m from the nearest residence.	Potential noise impacts during site establishment and later	Refer Table 5-1 Standard mitigation measures AFMM 69-91.

Facility ID	Proposed establishment timeframe	Activities and structures	Site access, number of parking spaces and vehicle movements per day	Key environmental constraints and risks	Potential environmental impacts	Environmental management and mitigation measures
	until project completion.	<ul style="list-style-type: none"> <li>One (1) self-bunded container to store small quantities (up to 20L) of chemicals such as diesel, curing compounds, paint</li> <li>General purpose containers for storing equipment and tools</li> <li>A crib shed, a generator and the amenities</li> </ul>	<p>heavy and up to 50 light vehicle movements per day.</p> <p>The access will be initially from East-West Link Rd and later during construction from Croome Road.</p>		from handling materials during construction	
				Located within the LEP curtilage of the "Swansea Dairy site, fig tree and silo" (Item No. 1182).	While AS13 is located within the LEP curtilage of "Swansea Dairy site, fig tree and silo" (Item No. 1182), the identified structures and fig tree will not be impacted.	Refer Table 5-1 Standard mitigation measures AFMM 92-98.
				Potential for dust emissions, initially during site establishment, and later due to materials handling	Annoyance due to dust deposition (soiling of surfaces) and visible dust plumes, and exhaust emissions from diesel-powered construction equipment.	Refer Table 5-1 Standard mitigation measures AFMM 99-115.
				General waste from construction sites including building materials, packaging, pallets, cartons, etc.	Poor housekeeping and inappropriate disposal of waste	Refer Table 5-1 Standard mitigation measures AFMM 127-151.
				Uncontrolled erosion and sedimentation, particularly during site establishment.	Potential water quality impacts	Refer Table 5-1 Standard mitigation measures AFMM 01-56.
				Spills (chemicals, fuel, etc.)	Potential water quality impacts	Refer Table 5-1 Standard mitigation measures AFMM 45-56.
				Temporary loss of amenity	Visual impact	Fencing where adjacent to sensitive receivers, unless otherwise agreed with affected receiver(s) to minimise visual, noise and air quality impacts.
AS14	Operating until project completion	<ul style="list-style-type: none"> <li>Pre-fabricated concrete bridge parapets</li> <li>Bridge construction supports</li> <li>Steel formwork</li> <li>Stores laydown</li> <li>Materials stockpiling (pipes, conduit, drainage elements etc)</li> <li>Self-bunded container to store small quantities (up to 20L) of chemicals such</li> </ul>	<p>This site will provide 10 parking spaces and have up to 60 heavy and 60 light vehicle movements per day</p> <p>The access will typically be from the Southbound lane of the Illawarra Highway, but is also accessible for right turn off the Illawarra Highway northbound lanes (depending on existing traffic volumes).</p>	The site is located within 10m from the nearest residence.	Potential noise impacts, initially during site establishment and during operation of the facility	Refer Table 5-1 Standard mitigation measures AFMM 69-91
				General waste from construction materials, including building material offcuts, packaging, pallets, cartons etc	Poor housekeeping and inappropriate disposal of waste	Refer Table 5-1 Standard mitigation measures AFMM 127-151
				Sediment impacted runoff from the ancillary site	Potential water quality impacts	Refer Table 5-1 Standard mitigation measures AFMM 01-44
				Spills (chemical, fuel etc)	Potential water quality impacts	Refer Table 5-1 Standard mitigation measures AFMM 45-56
				Temporary loss of amenity	Visual impact	



Facility ID	Proposed establishment timeframe	Activities and structures	Site access, number of parking spaces and vehicle movements per day	Key environmental constraints and risks	Potential environmental impacts	Environmental management and mitigation measures
		<p>as diesel, curing compounds, paint, etc.</p> <ul style="list-style-type: none"> <li>• General purpose containers for storing equipment and tools, i.e. pumps, saws, drills, generators</li> <li>• Portable Equipment, i.e. compressors, Oxygen bottles in cages (for welding).</li> <li>• Sand bag filler</li> </ul>		<p>Light spillage from night works</p> <p>Note: Works including deliveries outside of standard hours are not anticipated however if required, will have to comply with project EPL and obtain community agreement as necessary.”</p>	General nuisance and complaints from affected residents	Fencing where adjacent to sensitive receivers, unless otherwise agreed with affected receiver(s) to minimise visual, noise and air quality impacts.

## **4.2 Timing and duration**

In accordance with CoA E36 the ancillary facilities will be established and operate during the approved construction hours as follows:

Standard construction hours:

- 7.00am to 7.00pm, Monday to Friday, inclusive;
- 8.00am to 5.00pm on Saturdays; and
- at no time on Sundays or public holidays.

As per CoA E37, except as permitted by an EPL, activities resulting in impulsive or tonal noise emissions will only be undertaken:

- between the hours of 8.00am and 6.00pm, Monday to Friday;
- between the hours of 8.00am to 1.00pm on Saturdays, and
- in continuous blocks not exceeding three hours each with a minimum respite from those activities and works of not less than one hour between each block.

At times works will required to be carried out outside these hours which will only be undertaken if the requirements of CoA E38 are met, in particular, compliance with the projects Environment Protection Licence is required for works outside of standard construction hours.

## **4.3 Decommissioning and rehabilitation**

Decommissioning and rehabilitation of the main site compound and the ancillary facilities will be undertaken progressively as part of the finishing works towards the end of the construction program and include the following activities:

- Removal of all fencing, signage and temporary structures
- Site clean-up and disposal of all surplus materials, and
- Stabilisation and re-vegetation of the sites as per Urban Design and Landscape Character Strategy.
- Ancillary site AS14 will be returned to the control of the commercial realestate agent and will be left in a clean state as an unsealed hardstanding area with reference to a pre-use dilapidation assessment.

## 5 Environmental mitigation measures

Standard management and mitigation measures applicable to all proposed ancillary facilities are provided in Table 5-1.

Table 5-1 Standard mitigation measures

ID	Mitigation Measure	Responsibility
<b>SOIL AND WATER</b>		
AFMM1	Engage a soil conservationist selected from the Roads and Maritime' Registered Category of 'Soil Conservation Consultancy Services', to review erosion and sediment control plans where required.	Environmental Manager
AFMM2	Install erosion and sediment controls in all construction areas where soil disturbance is going to occur, prior to soil disturbance occurring.	Environmental Manager Project Engineers Foreman
AFMM3	Design, install and maintain all erosion and sediment controls in accordance with the Erosion and sediment control plan (ESCP) included in Appendix D of this plan. The ESCP has been prepared in accordance with the Blue Book (Landcom, 2004 and DECC, 2008) and includes relevant standard drawings and details from these texts.	Environmental Manager Project Engineers Foreman
AFMM4	Implement appropriate erosion and sediment control measures for each particular section of works in accordance with the PESCP, prior to the commencement of any clearing, stripping or earthworks.	Project Engineers Foreman
AFMM5	Install certain structures and controls (i.e. sediment basins, pipes and culverts) early (i.e. prior to clearing and stripping) to promote successful erosion and sediment control during pre-construction and construction (principally, during clearing, stripping and earthworks).	Project Engineers Foreman
AFMM6	Establish clearing limits and work boundaries that are well defined using barrier tape (or equivalent) prior to any clearing or stripping works commencing.	Environmental Manager Project Engineers Foreman
AFMM7	Minimise the extent of clearing and retain as much groundcover as possible.	Project Engineers Foreman
AFMM8	Clearly mark all vegetation that is to be retained.	Environmental Manager Foreman

ID	Mitigation Measure	Responsibility
AFMM9	Clear land progressively and clear the areas associated with the current section/stage of works only.	Project Engineers Foreman
AFMM10	Initially clear and grub leaving the soil surface in a reasonably rough condition with some surface vegetative cover.	Project Engineers Foreman
AFMM11	Maximise the separation of 'clean' (offsite) run-on water from 'dirty' (onsite) (e.g. turbid) construction area runoff as much as possible.	Environmental Manager Project Engineers Foreman
AFMM12	Maximise the diversion of turbid construction runoff into sediment basins.	Project Engineers Foreman
AFMM13	Use geotextile linings or other surface protection methods to provide temporary surface protection in areas where appropriate (e.g. batter drains, culvert construction).	Project Engineers Foreman
AFMM14	Locate stockpiles in approved Ancillary Sites (e.g. AS4, AS6, AS8, AS9, AS11 and AS13). Manage all stockpiles in accordance with the 'Blue Book' (Soils and Construction).	Project Engineers Foreman
AFMM15	Stabilise topsoil stockpiles that will be in place for longer than 4 weeks within 10 days using temporary methods such as geotextile fabric, mats, stabilised mulch, soil binders (e.g. Gluon polymer emulsion), compaction or cover crop species to control erosion and thus minimise sedimentation of waterways and impacts on fish during the delivery of the project. Use Rye Corn during the months of April to August or Japanese Millet during the months of September to March as required by R178.	Project Engineers Foreman
AFMM16	Stabilise stockpiles and batters progressively using temporary methods such as geotextile fabric, stabilised mulch, soil binders (e.g. Gluon polymer emulsion) or cover crop species. Use Rye Corn during the months of April to August or Japanese Millet during the months of September to March as required by R178.	Project Engineers Foreman
AFMM17	Control dust using methods such as water trucks, temporary stabilisation methods, soil binders, compaction, progressive revegetation techniques or other appropriate practices.	Project Engineers Foreman
AFMM18	Construct sediment control measures as close to the potential source of sediment as possible.	Environmental Manager

ID	Mitigation Measure	Responsibility
		Foreman
AFMM19	<p>Ensure sediment basin management of turbid water immediately after rain as required with one or a combination of:</p> <ul style="list-style-type: none"> <li>• flocculation with gypsum (or approved alternative flocculant), and</li> <li>• pump-out for construction purposes or dust control.</li> </ul>	<p>Environmental Manager</p> <p>Project Engineers</p> <p>Foreman</p>
AFMM20	Do not release water from sediment basins prior to achieving acceptable water-quality standards as specified in the EPL.	<p>Environmental Manager</p> <p>Project Engineers</p> <p>Foreman</p>
AFMM21	Control the tracking of mud and soil material onto local roads using shakers, rubble pads or washdown areas.	Foreman
AFMM22	Install sediment controls around stormwater inlet pits where appropriate and where they won't cause or exacerbate flooding.	<p>Environmental Manager</p> <p>Project Engineers</p> <p>Foreman</p>
AFMM23	Remove sediment controls only after works are complete and 70% stabilisation of disturbed surfaces is achieved.	<p>Environmental Manager</p> <p>Project Engineers</p> <p>Foreman</p>
AFMM24	Test sediment basins and, if required, treat, prior to discharge within 5 days of a rainfall event that causes runoff. Alternatively, pump sediment basins out for construction or dust control purposes to ensure the required capacities remain available for future rainfall.	<p>Environmental Manager</p> <p>Project Engineers</p> <p>Foreman</p>
AFMM25	Carry out dust suppression whenever necessary to minimise sediments becoming air borne due to wind erosion.	Foreman
AFMM26	Complete any vegetation clearing and removal of topsoil near the waterways in accordance with a Clearing and Grubbing EWMS; minimise removal of native riparian vegetation, where practical.	<p>Environmental Manager</p> <p>Project Engineers</p> <p>Foreman</p>
AFMM27	Undertake permanent replanting/revegetation with local native species in accordance with the Urban Design and Landscape Character Strategy, as soon as practicable.	Project Engineers

ID	Mitigation Measure	Responsibility
		Foreman
AFMM28	Design all sediment basins in accordance with the requirements of Roads and Maritime Specifications G36 and G38 and in accordance with the Blue Book (Landcom, 2004 and DECC, 2008).	Environmental Manager Project Engineers Foreman
AFMM29	Provide suitable access into sediment basin locations to allow for safe removal of sediment and maintenance operations.	Environmental Manager Project Engineers Foreman
AFMM30	Inspect all sedimentation basins at least weekly and following any rainfall event causing runoff.	Environmental Manager Project Engineers Foreman
AFMM31	Immediately schedule de-silting and water treatment if sediment accumulates to a level above 30% of the sediment storage zone marker.	Environmental Manager Project Engineers Foreman
AFMM32	Apply flocculant to settle sediments within 24 hours of the conclusion of the last rainfall event causing runoff.	Environmental Manager Project Engineers Foreman
AFMM33	Include the following items on sediment basins: <ul style="list-style-type: none"> <li>• a spillway constructed and stabilised to the 100-year ARI event</li> <li>• a marker peg (or equivalent) showing the boundary between the Sediment (Storage) and Water (Settling) zones of the basin</li> <li>• a sediment basin ID</li> <li>• lined inlets to minimise scour, and</li> <li>• measures to minimise the safety risk for site workers.</li> </ul>	Environmental Manager Project Engineers Foreman
AFMM34	Adequately compact and stabilise sediment basin walls with appropriate protective ground cover. Provide freeboard of at least 600mm from the spillway invert to the top of any earth wall.	Environmental Manager Project Engineers

ID	Mitigation Measure	Responsibility
		Foreman
AFMM35	Source water for compaction and dust suppression preferentially from sediment basins.	Environmental Manager Project Engineers Foreman
AFMM36	Treat water in sediment basins and discharge within 5 days of a rainfall event that causes runoff.	Environmental Manager Project Engineers Foreman
AFMM37	Undertake all dewatering on site in accordance with the Blue Book and Roads and Maritime guideline titled Environmental Management of Construction Site Dewatering. Prepare and implement a Dewatering EWMS to ensure that the waters being discharged meet the water quality criteria.	Environmental Manager Project Engineers Foreman
AFMM38	Issue a Dewatering Permit prior to any dewatering on site.	Environmental Manager Project Engineers Foreman
AFMM39	<p>Test and, if required, treat water before it is released from any discharge points (e.g. from sediment basins). Then re-test (and, if required, re-treat) the water. Do not release until the following water quality criteria are met:</p> <ul style="list-style-type: none"> <li>• pH 6.5-8.5</li> <li>• Total suspended solids (TSS) &lt; 50mg/L</li> <li>• No visible oil or grease.</li> </ul> <p>Promptly distribute the results of water quality monitoring to relevant project staff for action and further investigate any exceedances. Where a discharge occurs solely as a result of rainfall exceeding the 5-day 85th percentile rainfall depth value of 41.9mm, the abovementioned pH and TSS criteria do not apply.</p>	Environmental Manager
AFMM40	<p>Fulton Hogan may develop:</p> <ul style="list-style-type: none"> <li>• a statistical correlation to identify the relationship between turbidity (NTU) and TSS, and</li> <li>• a statistical correlation methodology to detail the method to enable ongoing verification of the relationship between NTU and TSS.</li> </ul>	Environmental Manager

ID	Mitigation Measure	Responsibility
	Both the statistical correlation and statistical correlation methodology will be submitted to EPA and Roads and Maritime for approval prior to their use.	
AFMM41	If water is to be re-used for dust suppression or construction purposes, the above criteria do not apply providing water does not leave the site (either directly or indirectly via runoff).	Environmental Manager
AFMM42	Provide and maintain access to the sediment basins to permit: <ul style="list-style-type: none"> <li>• clear identification of each sediment basin and discharge point</li> <li>• easy collection of samples</li> <li>• collection of representative samples of water discharged from the sediment basin(s), and</li> <li>• access to the sampling point(s) at all times by an authorised officer of the EPA.</li> </ul>	Environmental Manager
AFMM43	Record and retain the results of any monitoring: <ul style="list-style-type: none"> <li>• in a legible form, or in a form that can readily be reduced to a legible form</li> <li>• for at least 4 years after the monitoring or recording event to which they relate took place, and</li> <li>• so that they can be produced in a legible form to any authorised officer of the EPA who asks to see them.</li> </ul>	Environmental Manager
AFMM44	Manage vegetation stockpiles to minimise the impact of tannins leaching into the surrounding environment in accordance with Roads and Maritime Environmental Direction: Management of Tannins from Vegetation Mulch.	Environmental Manager Project Engineers Foreman
AFMM45	Wash concrete mixers, pumps, concrete tools and other equipment at specially designated washout areas that are constructed in a manner that will prevent storm water surface run-off from being contaminated.	Environmental Manager Foreman
AFMM46	Locate washout areas within an area that is not subject to natural surface storm water run-off and away from drainage lines. Post signs to advise workers of their locations.	Environmental Manager Foreman
AFMM47	Construct the washout areas with an impermeable type material capable of retaining any contaminated water and concrete residue.	Environmental Manager Foreman



ID	Mitigation Measure	Responsibility
AFMM48	Monitor the washout areas to ensure that they are not getting over full and that the washing activity is not contaminating the surrounding area.	Environmental Manager Foreman
AFMM49	<p>As part of the project induction program, advise all personnel performing concreting or saw cutting activities of the concrete washout areas and their obligations to:</p> <ul style="list-style-type: none"> <li>• clean their plant, tools and equipment within the designated area</li> <li>• maintain the area in a clean condition, and</li> <li>• ensure that contaminated water associated with their activities is appropriately controlled and prevented from reaching natural storm water surface drainage areas.</li> </ul>	Environmental Manager
AFMM50	Promptly report all spills to the Environmental Manager.	Environmental Manager Foreman
AFMM51	Where practicable, do not locate chemical storage areas within 50 metres of natural surface drainage areas, storm drainage systems or poorly drained or flood prone areas or any area with a slope steeper than 10%.	Project Engineers Foreman
AFMM52	Keep liquid chemicals and fuels in bunded storage areas or sheds that have the capacity to contain spills from leaky containers or from an incident involving a decanting activity. Ensure the bunded capacity is at least 120% of the total capacity of all containers stored inside the bunded area or shed.	Foreman
AFMM53	<p>During site induction, advise all personnel of the following:</p> <ul style="list-style-type: none"> <li>• The location of bunded storage areas, liquid absorbent materials and other spill containment materials and kits.</li> <li>• Storage of large quantities of fuel for construction plant is not permitted. Licensed fuel trucks carrying emergency fuel spill kits must be used to service plant and equipment.</li> <li>• All drums and decanted containers must be labelled and stored within bunded areas whenever they are not in use. Whenever practical, all unattended drums/containers must be returned to the bunded storage area.</li> </ul>	Environmental Manager
AFMM54	Portable toilet block systems will be regularly serviced. All effluent facilities will be positioned with consideration of vicinity of water courses, sensitive flora/fauna habitats and residents.	Environmental Manager

ID	Mitigation Measure	Responsibility
		Project Engineers Foreman
AFMM55	In the event that unexpected contamination is identified implement the Unexpected discovery of contaminated land procedure.	Environmental Manager
AFMM56	Develop a remedial action plan, and a validation report upon completion of the remediation, if contamination is found to pose unacceptable risks to human health or the environment, in accordance with the OEH Guidelines for Consultants Reporting on Contaminated Sites. Undertake remediation works in consultation with the EPA.	Environmental Manager
<b>FLORA AND FAUNA</b>		
AFMM57	Clear vegetation in accordance with a <i>Clearing and Grubbing EWMS</i> . This will include the completion of pre-clearing inspections (under the guidance of the Project Ecologist) to confirm the location of any tree hollows/habitat, EECs, riparian vegetation, threatened flora and fauna species and associated habitat features.	Foreman Environmental Manager Environmental Officer
AFMM58	Where an EEC/ threatened species is unexpectedly identified during pre-clearing inspections or during construction, update Sensitive Area Plans with this new information.	Environmental Manager Environmental Officer
AFMM59	Restrict construction traffic to defined access tracks and construction works zone areas.	All
AFMM60	No materials are to be stockpiled or vehicles parked under the tree canopy.	Foreman Environmental Officer
AFMM61	No excavation or placing of fill within the canopy line of trees without ecologist/arborist approval.	Foreman Environmental Officer
AFMM62	Complete landscaping and rehabilitation in accordance with the UDLCS to ensure that local native species are used to enhance the area.	Foreman Environmental Officer
AFMM63	Where fauna is encountered that requires handling or rescue, follow the <i>Fauna handling and rescue procedure</i> .	Environmental Officer Environmental Manager
AFMM64	Locate all refuelling areas at least 50 metres away from waterways.	Project / Site Engineers

ID	Mitigation Measure	Responsibility
		Foreman
AFMM65	Progressively stabilise exposed ground surfaces using temporary methods such as soil binders, cover crop species, compaction or other appropriate practices.	Project / Site Engineers Foreman
AFMM66	During the operation of the ancillary site, the site grounds will be maintained to prevent the spread of weeds.	Project / Site Engineers Foreman
AFMM67	The Project Ecologist will identify areas of weed infestation and advise on the appropriate treatment method.	
AFMM68	Where weeds cannot be effectively destroyed prior to topsoil stripping, weed-contaminated topsoil will be isolated and either encapsulated by deep burying, or disposed of at an approved offsite licensed facility.	Environmental Manager
<b>NOISE AND VIBRATION</b>		
AFMM69	Undertake works during Standard Construction Hours. Where works must occur outside of these hours, assess Out of Hours works in accordance with an Out of Hours Work Approval Procedure.	Construction Manager
AFMM70	Maintain communication with third parties providing utility works to ensure that cumulative noise and vibration impacts on sensitive land uses are assessed and considered prior to works commencing.	Construction Manager
AFMM71	Prioritise noisier works to occur during Standard Hours rather than Out of Hours Work, including deliveries.	Construction Manager
AFMM72	Implement a hot line and complaints handling procedure for noise and other construction related complaints.	Community Relations Manager
AFMM73	Include noise and vibration management practice information in site induction training for staff and contractors. A one-page summary will be provided regarding noise and vibration management practices during all inductions	Construction Manager, Foreman
AFMM74	Ensure all mobile construction equipment on site for longer than two months have non-tonal reversing alarms.	Foreman, Operators
AFMM75	Plan and conduct works in a manner to minimise the reversing of vehicles with audible reversing alarms.	Construction Manager, Foreman

ID	Mitigation Measure	Responsibility
AFMM76	Site compounds, access points and roads will be positioned as far as practicable away from residential receivers. Equipment within site compounds will be oriented as positioned as far as possible from sensitive receivers, to take advantage of natural shielding and shielding provided by buildings. Enclose stationary noisy sources at compounds where practicable.	Foreman
AFMM77	Ensure that truck tailgates are cleared and locked at the point of unloading.	Foreman, Operators
AFMM78	Use two way radios at the minimum effective volume. Avoid slamming of doors, shouting and whistling. Reinforce behavioural practices such as no swearing and no unnecessary shouting.	Foreman, Operators
AFMM79	Use quieter work methods and equipment, including the use of mufflers and silencers, or hydraulic and electric-controlled units where practicable.	Construction Manager
AFMM80	Vehicle warning devices, such as horns, are not to be used as signalling devices.	Foreman, Operators
AFMM81	Undertake regular maintenance of plant and equipment, including silencers, to ensure that noise emissions do not increase over time. Servicing, refuelling and warm-up to be undertaken during standard construction hours.	Foreman, Operators
AFMM82	Throttle down equipment where practicable and turn vehicles and machinery off when not in use.	Foreman, Operators
AFMM83	Only necessary equipment, of an appropriate size and power, will be on site.	Construction Manager
AFMM84	The use of engine compression brakes near residential areas will be limited.	Foreman, Operators
AFMM85	Orient plant and equipment known to emit noise strongly in one direction so that noise is directed away from noise sensitive areas.	Foreman, Operators
AFMM86	Maximise the offset distance between noisy items of plant and sensitive receivers for each task and activity.	Foreman, Operators
AFMM87	A letterbox drop to adjacent sensitive receivers will be undertaken to inform about the establishment of each facility and expected hours of operation of the facility. The exact number and locations of the letterbox drops will be determined by the Environmental Manager in consultation with Community Relations Manager and will be based on the predicted noise levels as determined by noise modelling. The letter will include the project contact details for residents to provide feedback, comments and concerns.	Environmental Manager Community Manager

ID	Mitigation Measure	Responsibility
AFMM88	Provide parking with ancillary sites to avoid parking on neighbouring streets.	Foreman
AFMM89	A traffic control plan will be prepared showing the access arrangements to the ancillary facility and the location of required signs and devices.	Project / Site Engineers
AFMM90	Vibratory compaction will be minimised during construction of the hard stand areas of the sites.	Foreman, Operators
AFMM91	Sheds to be placed on the boundary between sites and sensitive receivers with doors of sheds to face away from receivers where possible to create an additional buffer.	Foreman Project / Site Engineers
<b>HERITAGE</b>		
AFMM92	Manage Aboriginal and non-Aboriginal sites identified to be retained and protected as 'environmentally sensitive areas'. In this regard, erect exclusion fencing and signage to ensure that environmentally sensitive areas are protected in accordance with the Roads and Maritime Biodiversity guidelines: Guide 2 – Exclusion Zones (RTA, 2011). Consider the heritage significance of each site and take care to not draw unnecessary attention to Aboriginal heritage sites.	Project / Site Engineers Foreman Environmental Manager Environmental Officer
AFMM93	Adopt and follow the Roads and Maritime Unexpected Heritage Finds and Human Remains Procedure in the event that unexpected Aboriginal and non-Aboriginal heritage finds are encountered during construction, including human skeletal remains.	Project / Site Engineers Foreman Environmental Manager Environmental Officer
AFMM94	Do not destroy, modify or otherwise physically affect any heritage items outside the approved Project footprint, unless otherwise agreed by the Secretary.	Project / Site Engineers Foreman Environmental Manager
AFMM95	Undertake ongoing consultation with the local Aboriginal community in accordance with the Procedure for Aboriginal Cultural Heritage Consultation and Investigation (PACHCI) (Roads and Maritime, 2012) and the Community Communication Strategy.	Environmental Manager
AFMM96	Ensure exclusion zone boundaries are practical and consider the topography or the intrusion of features of the landscape. Where practicable, a wider perimeter is preferred to a narrower one to ensure harm is avoided to the heritage sites/items identified.	Environmental Manager

ID	Mitigation Measure	Responsibility
AFMM97	Monitor effectiveness and condition of exclusion fencing through regular site inspections.	Environmental Officer
AFMM98	Remove exclusion fencing once construction activities have ceased in the vicinity and no further impacts are likely to occur. Seek approval to remove exclusion fencing from Environmental Manager.	Environmental Officer Foreman
<b>AIR QUALITY</b>		
AFMM99	Progressively stabilise all exposed ground surfaces and stockpiles to minimise wind-blown dust. Progressively stabilise exposed ground surfaces using temporary methods such as soil binders, cover crop species, compaction or other appropriate practices. Stabilise stockpiles (unused for longer than 4 weeks) with a suitable cover crop or other covering. Spray shorter term stockpiles with water or stabilising agent to reduce dust emissions within 10 days of establishing the stockpile. Alternatively, consider compaction stabilisation or covering.	Foreman Project / Site Engineers  Construction Manager
AFMM100	Water unsealed areas, including stockpiles and access points, during working hours to minimise wind-blown or traffic generated dust emissions.	Foreman
AFMM101	Control mud tracking on public roads by installing stabilised access (e.g. hardstand, rock, rumble grids, or wheel washes) at all access/egress points on site.	Foreman
AFMM102	Remove mud spilt by construction traffic from public roads as soon as practicable but no later than by the end of each working day.	Foreman
AFMM103	Maintain all vehicles and construction equipment in good working order to prevent excessive exhaust emissions in accordance with the manufacturer's specification to comply with all relevant legislation.	Procurement Manager Foreman
AFMM104	Turn machinery and vehicles off when not in use.	Subcontractors Foreman
AFMM105	Where practicable, ensure vehicles are fitted with pollution reduction devices.	Subcontractors Foreman
AFMM106	Cover all loads that enter or leave the site.	Subcontractors Foreman
AFMM107	Check that tyres and trailer draw bars are cleaned of sediment or debris that may be tracked onto public roads prior to leaving the site.	Subcontractors Foreman

ID	Mitigation Measure	Responsibility
AFMM108	Use dust suppressants (e.g. soil stabilisers, polymers) and temporary ground covers (e.g. hydromulch) as much as possible to progressively stabilise disturbed surface, such as batters and stockpiles.	Foreman Environmental Manager
AFMM109	Establish and operate temporary batching plants (in the unlikely event they are required on site) in accordance with a site specific Concrete batch plant establishment and operation EWMS (refer to G36 Cl 3.2.4(ii)).	Environmental Manager Project Engineers Foreman
AFMM110	Ensure temporary concrete batching plants (in the unlikely event they are required on site) are designed to include a partially enclosed load hopper (on three sides) when truck loading/delivery is in progress.	Project Engineers
AFMM111	Ensure temporary concrete batching plants (in the unlikely event they are required on site) are designed to include continual wetting operations to reduce emissions during all materials handling and along all exposed surfaces and stockpiles during unfavourable meteorological conditions (ie windy and dry conditions).	Project Engineers
AFMM112	Ensure temporary concrete batching plants (in the unlikely event they are required on site) are designed to store bulk cement in silos with fabric filters on the vents (filters to be designed to accommodate the maximum discharge from each on site concrete batch plant) (refer to G36 Cl 4.4.2 (w)).	Project Engineers
AFMM113	Ensure temporary concrete batching plants (in the unlikely event they are required on site) are designed to include a dry batch dust collector to extract dust during the transfer of the concrete product to the trucks and any emissions from the loading of the weigh hoppers (this system has a dust extraction efficiency of 99.9% for all particulates greater than 5 microns).	Project Engineers
AFMM114	Ensure temporary concrete batching plants are designed to include a fully enclosed conveyor	Project Engineers
AFMM115	Ensure temporary concrete batching plants are fitted with dust filters to minimise air quality impacts from batching operations (refer to G36 Cl 4.4.2 (z)).	Project Engineers
<b>CONTAMINATED LAND</b>		
AFMM116	In the event that unexpected contamination is identified implement the <i>Unexpected contaminated land and asbestos finds procedure</i> . The procedure applies throughout delivery of the project.	Environmental Manager Project Engineers Foreman



ID	Mitigation Measure	Responsibility
AFMM117	Manage identified asbestos locations in accordance with the Unexpected Contaminated Land and Asbestos Finds Procedure. This procedure includes a requirement for an asbestos register and asbestos removal plan. The procedure applies throughout delivery of the project.	Environmental Manager Project Engineers Foreman
AFMM118	If significant contamination is identified that requires management and/or remediation, evaluate potential remedial options based on the NSW EPA remediation hierarchy.	Environmental Manager Project Engineers
AFMM119	If unexpectd asbestos find is identified, engage an occupational hygienist to provide an asbestos clearance certificate for the site to confirm ACM has been adequately removed.	Occupational Hygienist Environmental Manager Project Engineers
AFMM120	Dispose of Asbestos Contaminated Material (ACM) offsite at a waste facility licenced to accept asbestos.	Environmental Manager Project Engineers
AFMM121	If unexpectd contaminated land is identified, divert surface runoff away from contaminated land. Capture and treat surface run off contaminated by exposure to contaminated land.	Environmental Manager Project Engineers
AFMM122	If wastewater infrastructure and coliform contaminated soils are disturbed or removed, undertake validation sampling on residual soils. Validation sampling should be undertaken in accordance with relevant regulatory guidance including the <i>National Environment Protection (Assessment of Site Contamination) Measure 1999</i> , as amended 2013. If validation sampling identifies risk to human health or the environment, it will be managed in accordance with the <i>Contaminated Land Management Act 1997</i> .	Environmental Manager Project Engineers Foreman
AFMM123	Infrastructure should be removed in accordance with relevant guidelines and industry best practice (e.g. Wollongong City Council's ' <i>Guidelines for the decommissioning, reuse, removal and relocation of septic tanks; collection wells and aerated wastewater treatment systems</i> '. <i>Guidelines for the decommissioning, reuse, removal and relocation of septic tanks, collection wells and aerated wastewater treatment systems</i> ').	Environmental Manager Project Engineers Foreman



ID	Mitigation Measure	Responsibility
AFMM124	Restrict access to areas prone to illegal public deposition where practicable (e.g. noise mounds situated on the northern side of the East West Link at Albion Park Rail).	Environmental Manager
AFMM125	Divert surface runoff away from contaminated land. Capture and treat surface run off contaminated by exposure to contaminated land.	Environmental Manager Project Engineers
AFMM126	Should Fulton Hogan generate contamination, refer to Incident and Emergency Response Plan.	Environmental Manager Project Engineers Foreman
<b>WASTE AND ENERGY MANAGEMENT</b>		
AFMM127	Adopt and promote the waste hierarchy (reduce or avoid waste, reuse waste, recycle waste, recover energy, treat waste, dispose of waste).	Environmental Manager Procurement Manager
AFMM128	Keep site free of litter and maintain good housekeeping.	Foreman
AFMM129	Do not allow waste generated outside the project to be received at the project for storage, treatment, processing, reprocessing, or disposal on the project, except as expressly permitted by a licence or waste exemption under the <i>Protection of the Environment Operations Act 1997</i> , if such a licence is required in relation to that waste (CoA E85).	Foreman
AFMM130	Calculate precise estimates of resource requirements prior to placing orders.	Project Engineers
AFMM131	Implement, where possible, agreements with suppliers to return excess construction materials or packaging for future reuse.	Contracts Manager
AFMM132	Establish a list of preferred suppliers for waste management services (e.g. waste oil recyclers, metal recyclers, etc.).	Contracts Manager Environmental Manager
AFMM133	Include in waste contractor subcontract agreements requirements to comply with statutory requirements, report quantities, types, dates and destination of material removed from site.	Contracts Manager
AFMM134	Classify all wastes generated on the site in accordance with the Waste Classification Guidelines (EPA, 2014) prior to transporting waste off site to a waste	Site/ Project Engineers

ID	Mitigation Measure	Responsibility
	management facility or premise lawfully permitted to accept the materials or in accordance with a Resource Recovery Exemption or Order issued under the Protection of the Environment Operations (Waste) Regulation 2014, or to any other place that can lawfully accept such waste.	
AFMM135	Obtain and provide receipts/dockets for waste removed from site to the Environmental Officer.	Foreman
AFMM136	Record all waste removed from site in the Waste Register.	Environmental Officer
AFMM137	Provide appropriate facilities to ensure that materials for recycling are separated from materials that are to be disposed of as wastes. Facilities are to be labelled for the various waste streams to ensure easy recognition.	Project Manager
AFMM138	Collect and store waste oil in suitable containers and store in a bunded area until collected for recycling. All permanent bunded storage areas must be covered.	Superintendent
AFMM139	Reuse excavated spoil generated onsite where possible, considering the following options: <ul style="list-style-type: none"> <li>• Construction of acoustic and visual earth mounds where there is a benefit to residents and other sensitive receivers</li> <li>• Flattening of road batters</li> <li>• Rehabilitation of borrow pits</li> <li>• Engineered fill</li> <li>• Improvements to flood prone land.</li> </ul>	Foreman
AFMM140	Reuse waste material generated onsite where possible, including topsoil and mulch.	Foreman
AFMM141	When transporting waste to premises other than EPA-licensed waste management facilities, ensure these premises can lawfully accept this waste; obtain a copy of the completed and signed 'Approved Notice under Section 143' form from the landholder to confirm this prior to transporting material to the premises.	Foreman Environmental Officer
AFMM142	Provide paper recycling bins/boxes in all site offices. All paper waste to be sent to recycling facility. Encourage all staff to separate paper waste.	Receptionist Environmental Officer
AFMM143	Use recycled products to reduce demand on resources, where the use of the material is cost and performance competitive and the Roads and Maritime specifications allow it. This may include the use of fly ash and slag	Project / Site Engineer

ID	Mitigation Measure	Responsibility
	within concrete mixes; re-use of existing pavement; recycled steel; guideposts and/ or signage.	
AFMM144	Set printers at the site office to default to double sided and black and white printing. Encourage all staff to minimise paper use through use of electronic media, re-use of paper etc. Refill or return printer cartridges for recycling.	Receptionist
AFMM145	Store construction wastes which cannot be recycled in separate skips. The skips will be collected by a licensed waste contractor on a regular basis and transported to a licensed landfill.	Superintendent
AFMM146	Ensure portable toilets are emptied regularly to prevent overflows and effluent is disposed of in accordance with the Waste Classification Guidelines (EPA, 2014). Connect toilets at the site compound to the sewerage network where feasible.	Superintendent
AFMM147	Select energy efficient plant, equipment and vehicles where feasible and reasonable to reduce greenhouse gas emissions, through consultation with subcontractors and suppliers.	Procurement Manager
AFMM148	Maintain all vehicles, including trucks entering and leaving the site, and construction equipment in accordance with the manufacturer's specification to comply with all relevant legislation.	Procurement Manager Foreman
AFMM149	Procure locally produced goods and services where feasible and cost effective to reduce transport fuel emissions.	Procurement Manager
AFMM150	Consider the procurement of renewable energy technologies (e.g. solar photovoltaic, wind power) for power generation onsite	Procurement Manager Project Manager
AFMM151	Turn machinery, vehicles and lights off when not in use.	Subcontractors Foreman
<b>GENERAL</b>		
AFMM152	Aviation Management Plan (incorporating MoWP) will be adhered to regarding any stockpile height, building height, etc.	Superintendent Foreman
AFMM153	All personnel and the subcontractors will be inducted to ensure the abovementioned mitigation measures are implemented at all times. In addition regular toolbox meetings will focus on language, noise, privacy and respect of neighbors.	Project Manager Environmental Manager

## 6 Compliance management

### 6.1 Roles and responsibilities

The key environmental management roles and responsibilities for the establishment and operation of the proposed ancillary sites are described below. The team structure is shown in Figure 6-1.

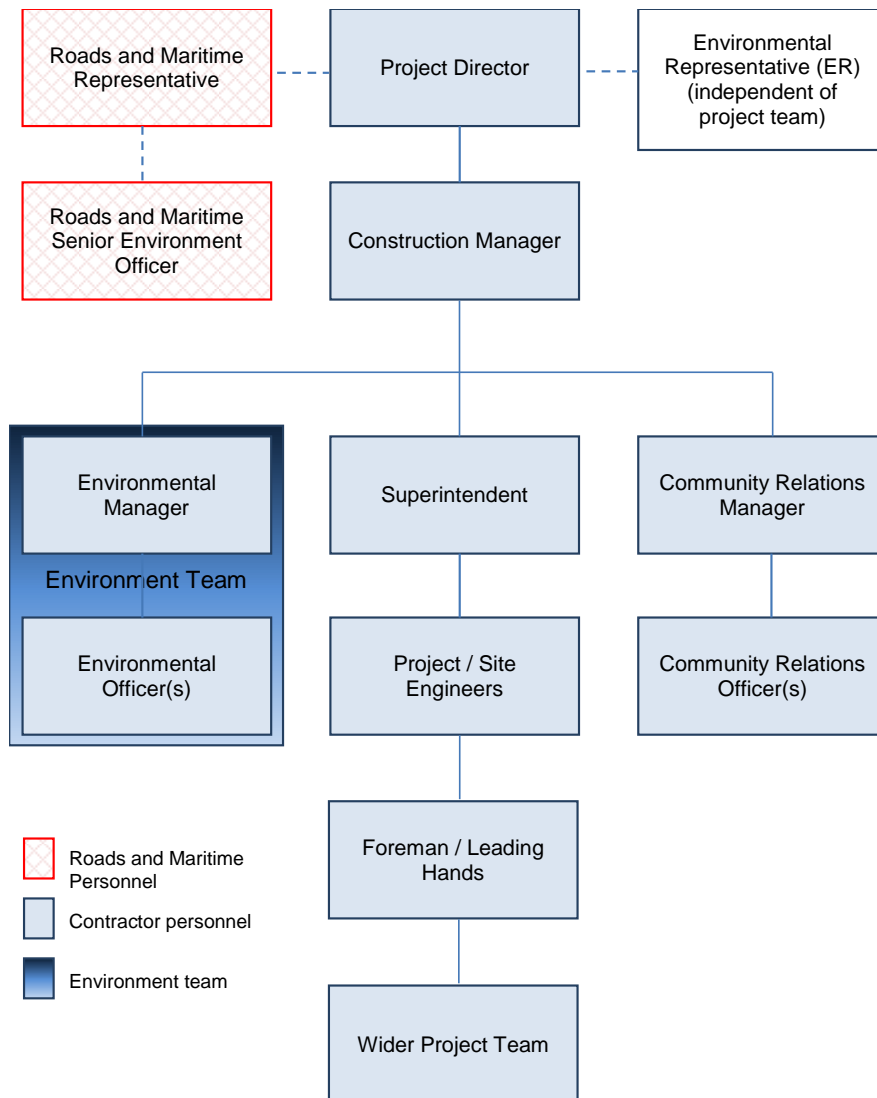


Figure 6-1 Project team management structure

#### Environmental Representative

The overall environmental responsibilities of the Environmental Representative, including those relevant to the establishment and operation of the ancillary facilities, are detailed in CoA A24 and include:

- receive and respond to communications from the Secretary in relation to the environmental performance of the SSI;
- consider and inform the Secretary on matters specified in the terms of this approval;
- consider and recommend any improvements that may be made to work practices to avoid or minimise adverse impact to the environment and to the community;
- review all work and construction related documents required to be prepared under the terms of this approval, ensure they address any requirements in or under this approval and if so, endorse them prior to submission to the Secretary (if required to be submitted to the Secretary) or prior to implementation (if not required to be submitted to the Secretary);

- (e) regularly monitor the implementation of all work and construction related documents required by the terms of this approval for implementation in accordance with what is stated in the document and the terms of this approval;
- (f) as may be requested by the Secretary, help plan, attend or undertake Department audits of the SSI, briefings, and site visits;
- (g) if conflict arises between the Proponent and the community in relation to the environmental performance of the SSI, follow the procedure in the Community Communication Strategy approved under Condition B2 of this approval to attempt to resolve the conflict, and if it cannot be resolved, notify the Secretary;
- (h) review any draft consistency assessment that may be carried out by the Proponent, and provide advice on any additional mitigation measures required to minimise the impact of the work;
- (i) consider any minor amendments to be made to the CEMP, CEMP sub-plans and monitoring programs that comprise updating or are of an administrative nature, and are consistent with the terms of this approval and the CEMP, CEMP sub-plans and monitoring programs approved by the Secretary and, if satisfied such amendment is necessary, approve the amendment. This does not include any modifications to the terms of this approval;
- (j) assess the impacts of minor ancillary facilities as required by Condition A18 of this approval; and
- (k) prepare and submit to the Secretary and other relevant regulatory agencies, for information, a monthly Environmental Representative Report detailing the ER's actions and decisions on matters for which the ER was responsible in the preceding month (or other timeframe agreed with the Secretary). The Environmental Representative Report must be submitted within seven (7) days after the end of each month for the duration of the delivery of the SSI, or as otherwise agreed with the Secretary.

## **Roads and Maritime Roles**

### **Roads and Maritime Senior Environment Officer**

The environmental responsibilities of the Roads and Maritime Senior Environment Officer include, but are not limited to, the following:

- Review any environmental management plans and related documents prepared for the Project
- Review minor Project refinements that are consistent with the Project environmental assessment and approval documentation and recommend they be approved to the relevant Roads and Maritime Director.
- Monitor the environmental performance of the Project in relation to Roads and Maritime requirements

### **Roads and Maritime Representative**

The environmental responsibilities of the Roads and Maritime Representative include (but are not limited to) the following:

- Evaluate and advise on compliance with Roads and Maritime environmental requirements
- Review and approve any environmental management plans for the Project or related activities that are not required to be approved by the Secretary of DP&E.

## **Fulton Hogan Roles**

### **Project Director**

The environmental responsibilities of the Project Director include (but are not limited to) the following:

- Ensure all works comply with relevant regulatory and Project requirements
- Ensure the requirements of this AFMP are fully implemented, and in particular, that environmental requirements are not secondary to other construction requirements
- Liaise with Roads and Maritime, Environmental Representative and other government authorities as required
- Participate and provide guidance in the regular review of this AFMP and supporting documentation
- Provide adequate resources (personnel, financial and technological) to ensure effective development, implementation and maintenance of this AFMP
- Ensure that all personnel receive appropriate induction training, including details of the environmental and community requirements
- Ensure that complaints are investigated to ensure effective resolution, and
- Stop work immediately if an unacceptable impact on the environment is likely to occur.

### **Construction Manager**

The environmental responsibilities of the Construction Manager include (but are not limited to) the following:

- Plan construction works in a manner that avoids or minimises impact to environment
- Ensure the requirements of this AFMP are fully implemented
- Ensure construction personnel manage all construction activities at the ancillary sites in accordance with statutory and approval requirements
- Ensure all Project personnel attend an induction prior to commencing any works at the ancillary sites
- Liaise with Roads and Maritime, Environmental Representative and other government authorities as required
- Stop work immediately if an unacceptable impact on the environment is likely to occur.

### **Superintendent**

The environmental responsibilities of the Superintendent include (but are not limited to) the following:

- Communicate with all personnel and sub-contractors regarding compliance with this AFMP and site-specific environmental issues
- Ensure all site workers attend an environmental induction prior to the start of any works at the ancillary sites
- Identify resources required for the implementation of this AFMP
- Report any activity that has resulted, or has the potential to result, in an environmental incident immediately to the Environmental Manager / Environmental Officers
- Co-ordinate action in emergency situations and allocate required resources
- Stop activities where there is an actual or immediate risk of harm to the environment and report to the Construction Manager and Environmental Manager.

## Environmental Manager

The environmental responsibilities of the Environmental Manager include, but are not limited to, the following:

- Prepare and oversee implementation of the EWMSs for establishing all ancillary sites
- Manage preparation of and review and approve the PESCPs for all ancillary sites
- Ensure environmental risks associated with the establishment and operation of the ancillary sites are identified and appropriate mitigation measures implemented
- Identify where environmental measures are not meeting the targets and where improvement can be achieved
- Obtain and update all environmental approvals and permits as required
- Lead liaison with Environmental Representative and approval authorities
- Manage environmental document control, reporting, inductions and training
- Manage environmental reporting to the Roads and Maritime and regulatory authorities
- Carry out ancillary sites inspections and audits
- Develop and facilitate induction, toolbox talks and other training programs regarding environmental requirements for all site personnel
- Report to Project Manager and other senior managers on the performance and implementation of this AFMP
- Ensure regular management reviews of the AFMP
- Notify Roads and Maritime and relevant authorities in the event of an environmental incident and manage close-out of these
- Stop activities where there is an actual or immediate risk of harm to the environment, or to prevent environmental non-conformities, and advise the Project Director, Construction Manager and Superintendent
- Help the Community Relations Manager to resolve environment-related complaints.

## Community Relations Manager

The environmental responsibilities of the Community Relations Manager include, but are not limited to, the following:

- Ensure that all community consultation activities related to the establishment and operation of the ancillary sites are carried out
- Report any environmental issues raised by stakeholders or members of the community in relation to the establishment and operation of the ancillary sites to the Environmental Manager
- Maintain the 24 hour complaints hotline

## Foreman

The environmental responsibilities of the Foreman include (but are not limited to) the following:

- Control all works at the ancillary sites and implement/maintain effective environmental controls as required by the relevant EWMSs and PESCPs.
- Where required, undertake environmental risk assessment of works prior to start
- Ensure all site workers are site inducted prior to start of works
- Attend to any spills or environmental incidents that may occur on-site
- Report any activity that has resulted, or has the potential to result, in an environmental incident immediately to the Superintendent
- Stop activities where there is an actual or immediate risk of harm to the environment and advise the Project Director, Construction Manager, Superintendent or Environmental Manager.



Wider project team (including sub-contractors)

The environmental responsibilities of the wider project team (including sub – contractors) include (but are not limited to) the following:

- Comply with the relevant requirements of this AFMP
- Attend mandatory site induction program
- Report any environmental incidents to the foreman immediately or as soon as practicable if reasonable steps can be adopted to control the incident
- Stop activities where there is an actual or immediate risk of harm to the environment and advise the Project Director, Construction Manager, Superintendent or Environmental Manager.

## **6.2 Training**

All employees, sub-contractors and utility staff working on the establishment of the ancillary facilities and on the Project as a whole will undergo site induction training relating to operation of the construction compound and ancillary facilities including:

- existence and requirements of this AFMP
- relevant legislation and consequences on non-compliance
- the environmental mitigation measures as outlined in this AFMP.

Targeted training in the form of toolbox talks or specific training will also be provided to personnel with a key role in establishment of the site ancillary facilities. Examples of training topics include:

- extended construction hours and OOHV
- spill response
- flood awareness training for the ancillary sites with flood immunity of less than 20 year ARI, including evacuation routes, warning times and monitoring requirements;
- mud tracking and dust management, and
- waste management and recycling.

## **6.3 Communication**

### **Internal Communication**

The environmental team will meet regularly to discuss any issues related to the environmental management of the ancillary sites. Regular meetings may also be scheduled with the ER and relevant Roads and Maritime environmental staff. The purpose of these meetings would be to communicate ongoing environmental performance and to identify any issues to be addressed.

In addition, environment team members will participate in toolbox talks on at least a weekly basis. This forum will provide an opportunity for the environment team members to communicate on environmental performance, to advise on any upcoming sensitive environmental matters and to receive feedback from on-site personnel.

### **Liaison with EPA and government authority consultation**

The Environmental Manager will be the main point of contact for external and government authorities. The Environmental Manager has the responsibility to report on the ongoing environmental performance of the Project to Roads and Maritime, the ER and external government agencies (e.g. EPA/OEH). The Environmental Manager will report regularly to Roads and Maritime on progress and any key environmental matters through monthly reports.



The following two project team members are nominated as 24 hour contacts for environmental regulatory authorities, with the authority to take immediate action to shut down any activity, or to affect any pollution control measure:

- Shannon Chisholm (Environmental Manager) 0400 459 769, and
- Matthew Saviana (Project Director), 0409 243 493

In the event of any visit to site by the EPA, the Roads and Maritime is to be immediately notified and a report prepared which notifies of the purpose and outcome of the EPA visit, and all actions taken by Fulton Hogan in response to the EPA visit. The report is to be submitted to Roads and Maritime within one (1) working day of the EPA site visit.

### **Community communication strategy**

A Community Communication Strategy (CCS) has been developed to provide an approach to stakeholder and community communications in accordance with the requirements of CoA B3. The strategy identifies opportunities for providing information and consulting with the community and stakeholders during the construction phase of the Project. The Community Communication Strategy was approved by DP&E on 14 November 2018 prior to the start of any physical activities to construct the SSI.

Affected noise sensitive receivers will be consulted and notified of works outside of standard construction hours as required to comply with the conditions of Environmental Protection Licence 21139.

### **Complaints management**

A Construction Complaints Management System, consistent with AS-ISO 10002-2006 Complaints Handling (which has superseded AS 4269 Complaints Handling) has been developed for the Project, in accordance with the requirements of CoA B6.

All community inquiries and complaints related to the project's activities will be referred to the 24-hour community information line (1800 822 486). A postal address (Albion Park Rail bypass, PO Box 1014, Albion Park Rail NSW 2527) and email address (APRbypass@fultonhogan.com.au) has been provided for receipt of complaints and enquiries. The telephone number, the postal address and the email address was published in newspapers circulating in the local area prior to the start of construction and is provided on the Project website.

Information on all complaints received, including the means by which they were addressed and whether resolution was reached and whether mediation was required or used, will be included in a complaints register. The information contained within the register will be made available to the Secretary on request. The Environmental Manager will apply an adaptive approach to ensure that corrective actions are applied in consultation with the appropriate construction staff to allow modifications and improvements in the management of any environmental issues which have resulted in community complaints.

### **Environmental Incident Planning**

All incidents and emergencies will be managed in accordance with the Incident and Emergency Response Plan (IERP). The Case and Action Management System software (CAMs) will be used to record all environment incidents.

Reporting of environmental incidents will be undertaken in accordance with the Roads and Maritime Environmental Incident Classification and Reporting Procedure. This procedure is provided in Appendix E.

Upon consultation with the NSW Environmental Manager and the NSW Operations Manager, Roads and Maritime will be notified verbally immediately and in writing within 24 hours of the occurrence of any environmental incident. Incident reports will include lessons learnt from each environmental incident and proposed measures to prevent the occurrence of a similar incident. All efforts will be

undertaken immediately to avoid and reduce impacts of incidents and suitable controls put in place. Incidents will be closed out as quickly as possible, taking all required action to resolve each environmental incident.

In accordance with Part 5.7 of the Protection of the Environment Operations Act 1997 (NSW) (POEO Act) immediate notification will be undertaken of any incident if (a) actual or potential harm to the health or safety of human beings or ecosystems is not trivial, or (b) actual or potential loss or property damage (including clean-up costs) associated with an environmental incident exceeds \$10,000, to the following organisations:

- EPA (via the EPA pollution line 131 555).
- Ministry of Health (via the Public Health Unit – 02 4221 6700).
- SafeWork NSW (via 131 050).
- Local Authority (Wollongong City Council via 02 4227 7111 and Shellharbour City Council via 02 4221 6247).
- Fire and Rescue NSW (via 000 or 1300 729 579).
- Secretary of the Department of Planning and Environment (via Compliance Team 02 4247 1851)

Where an incident involves an Aboriginal site, relevant NSW Office of Environment and Heritage will be contacted via 02 6229 7028 and Registered Aboriginal Parties will be notified and their input sought in closing out the incident.

## **6.4 Environmental inspections and audits**

### **Environmental inspections**

Weekly, pre- and post- rainfall site inspections will be undertaken on site by the Environmental Manager and site foremen / engineers.

The Environmental Manager and/or Environmental Officers will undertake weekly and daily inspections during periods of rainfall causing runoff (if safe to do so) to evaluate the effectiveness of environmental controls. Additionally, inspections will be undertaken in the event that forecasts indicate upcoming rainfall events. The Environmental Manager and/or Environmental Officers will record inspection findings on a standard inspection checklist form, or using a mobile software application, such as 'iAuditor'.

If any maintenance and/or deficiencies in environmental controls or in the standard of environmental performance are observed, they will be recorded on the standard checklist form or using the mobile software application checklist form. Records will also include details of any maintenance required, the nature of the deficiency, any actions required and an implementation priority.

### **Environmental Representative, Roads and Maritime and ERG inspections**

The Environmental Representative, Roads and Maritime staff and members of the ERG will undertake regular inspections of the ancillary sites as part of the overall inspection of the Project. Inspections by the Environmental Representative and Roads and Maritime Project staff would typically occur on a weekly or fortnightly basis and ERG inspections will typically be less frequent, more likely on a monthly or two-monthly basis.

A member of the Project environment team will participate in all Environmental Representative, client and ERG inspections. Deficiencies and required actions will be analysed and prioritised at the completion of each inspection and timeframes for implementation of corrective actions agreed.

### **Contractor internal audits**

The purpose of contractor internal audits is to verify compliance with:

- This AFMP
- Compliance with the CoA

- Any relevant legal and other requirements (e.g. licenses, permits, regulations)

An audit checklist will be developed and amended as necessary to reflect changes to this AFMP, subsequent approvals and changes to Acts, regulations or guidelines.

### **Independent external audits**

External auditing will be undertaken by an independent environment auditor in accordance with ISO 19011:2014 - Guidelines for Quality and/ or Environmental Management Systems Auditing, as required by CoA A33. Independent auditing will be undertaken annually, with the first audit being held six months after the start of construction.

## 7 Review and improvement of AFMP

The AFMP will be reviewed annually to ensure compliance with legislative requirements and its suitability and effectiveness for the project.

The review may be in the form of:

- A formal management review
- A second party audit, and/or
- An inclusion as a separate item at a site meeting.

The Environmental Manager will review and update the AFMP more regularly where:

- Significant changes in construction activities occur
- Where targets are not being achieved, or
- In response to audit findings and nonconformity reports.
- Following a significant incident similar to those listed in Section 2.5

Any additional site(s) identified and assessed as compliant with A16 would have the completed 'Ancillary Facility Checklist' and supporting documentation included as a further Appendix to this plan (excluding minor ancillary sites).

Minor changes to the AFMP will be reviewed and approved by Roads and Maritime and the Environmental Representative. Where the ER deems it necessary the amended AFMP will be forwarded to the Secretary of the DP&E for approval.

## **Appendix A**

### Site layouts





**NOT FOR CONSTRUCTION**

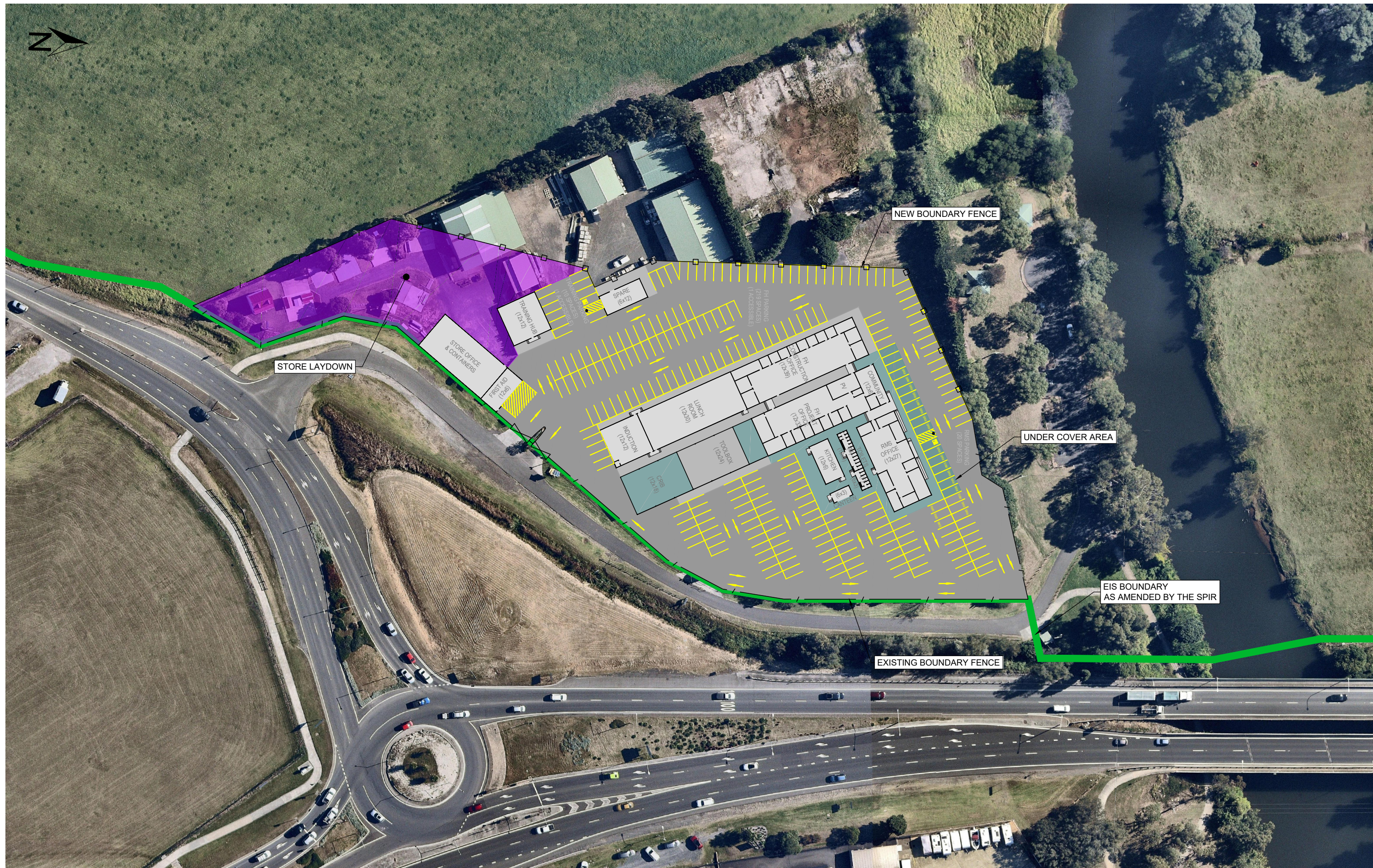
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ANCILLARY FACILITIES SITE LAYOUT  
ANCILLARY SITE 04**

**INFORMATION DOCUMENT**

**GE-AS04-LAYOUT\_[180920]**

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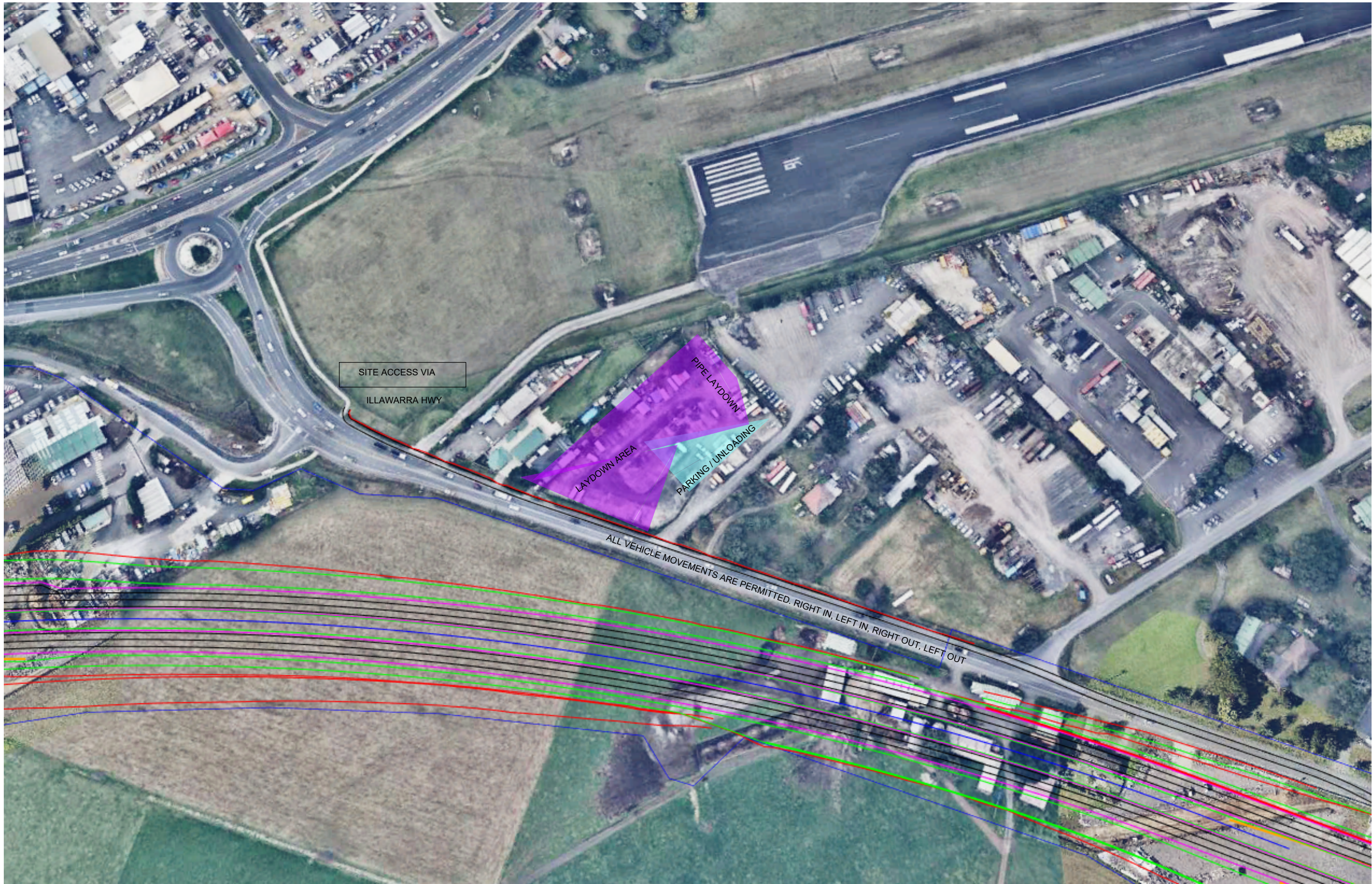
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**ALBION PARK RAILWAY BYPASS  
ANCILLARY FACILITIES SITE LAYOUT  
ANCILLARY SITE 06**

## INFORMATION DOCUMENT

**GE-AS06-LAYOUT\_[180920]**





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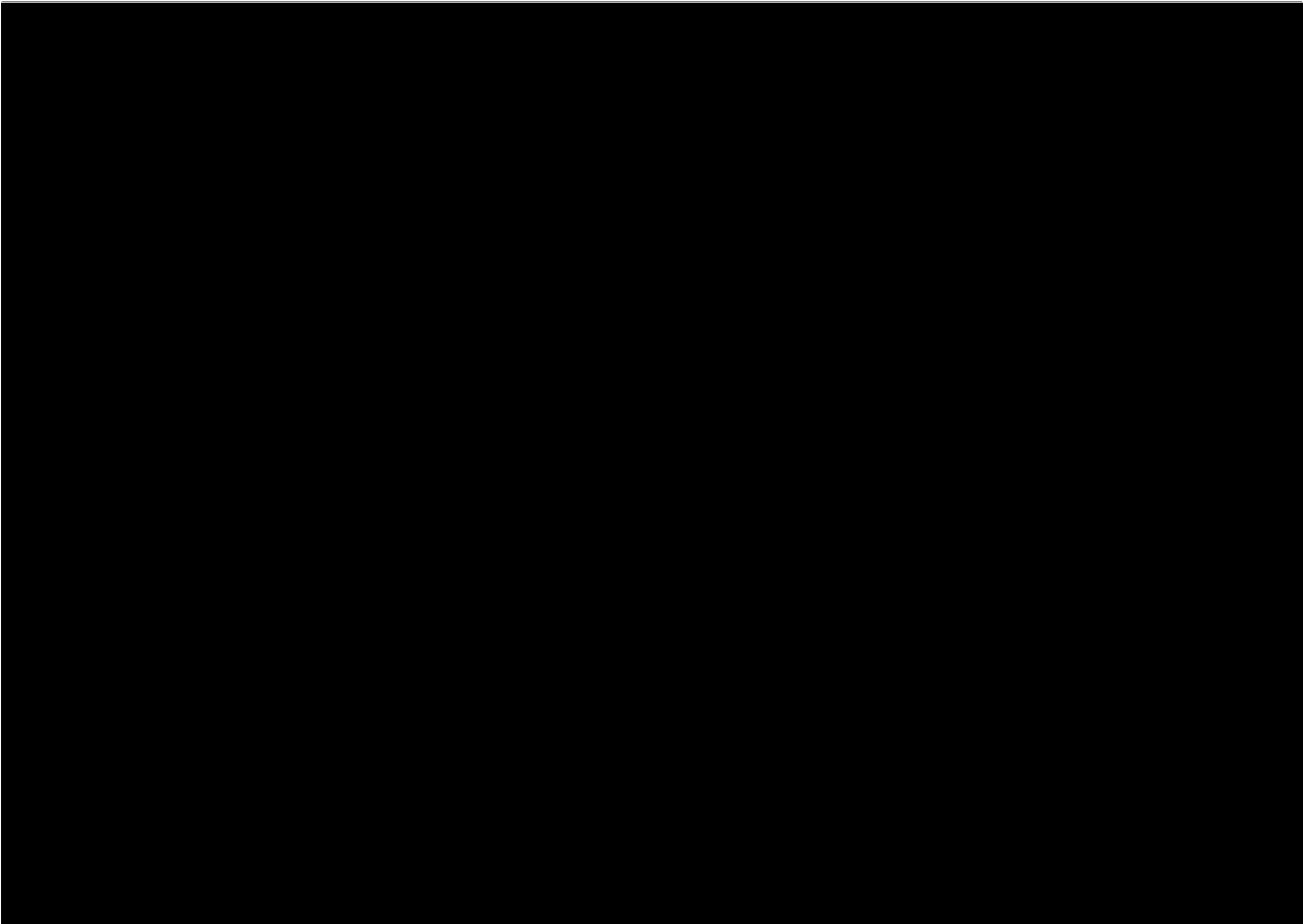
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ANCILLARY SITE 14**

**INFORMATION DOCUMENT**

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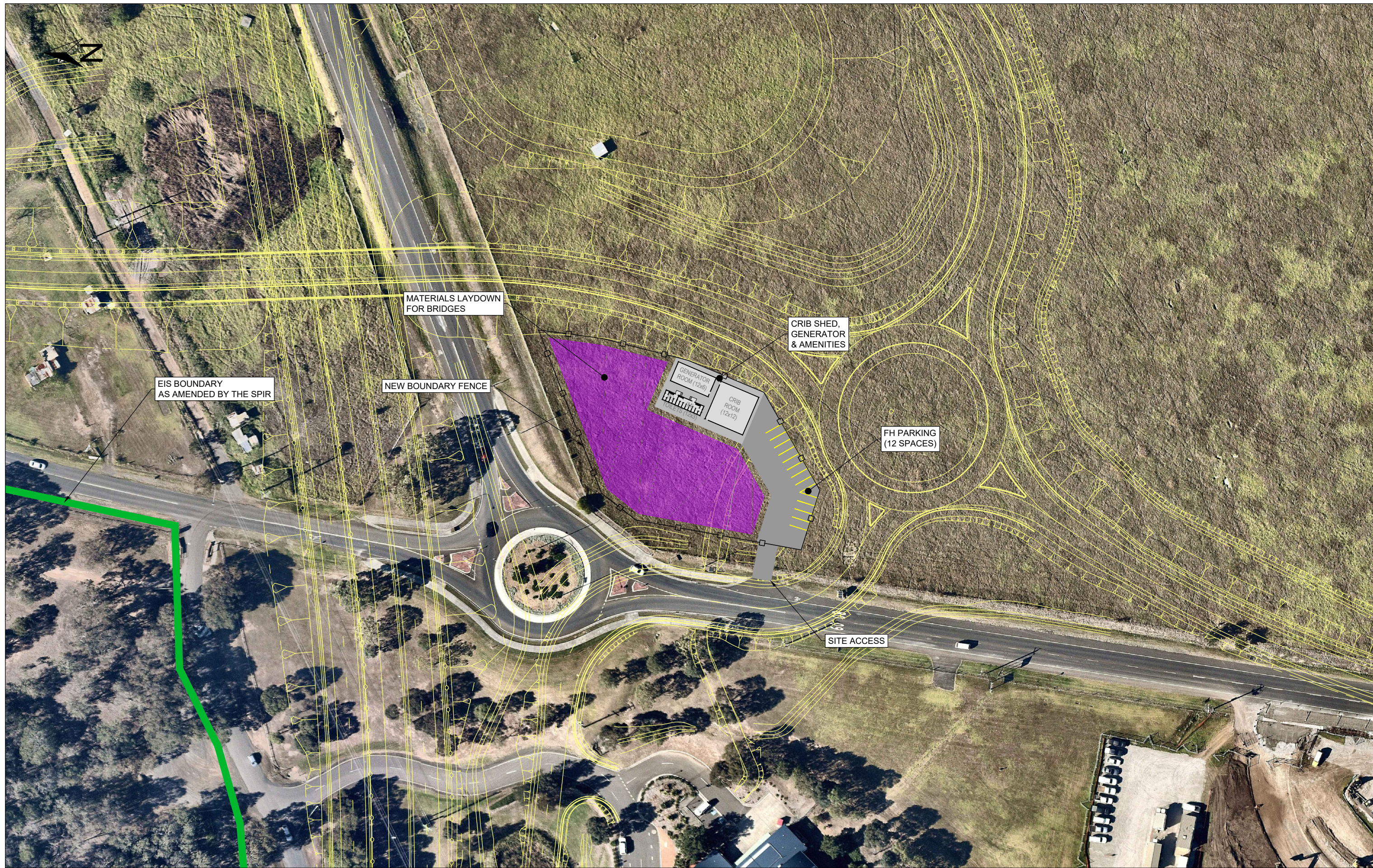
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ANCILLARY SITE 09**

**INFORMATION DOCUMENT**

**GE-AS09-LAYOUT\_[180920]**





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**ALBION PARK RAILWAY BYPASS  
ANCILLARY FACILITIES SITE LAYOUT  
ANCILLARY SITE 11**

**INFORMATION DOCUMENT**

**GE-AS11-LAYOUT\_[180920]**





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**ALBION PARK RAILWAY BYPASS  
ANCILLARY FACILITIES SITE LAYOUT  
ANCILLARY SITE 13**

**INFORMATION DOCUMENT**

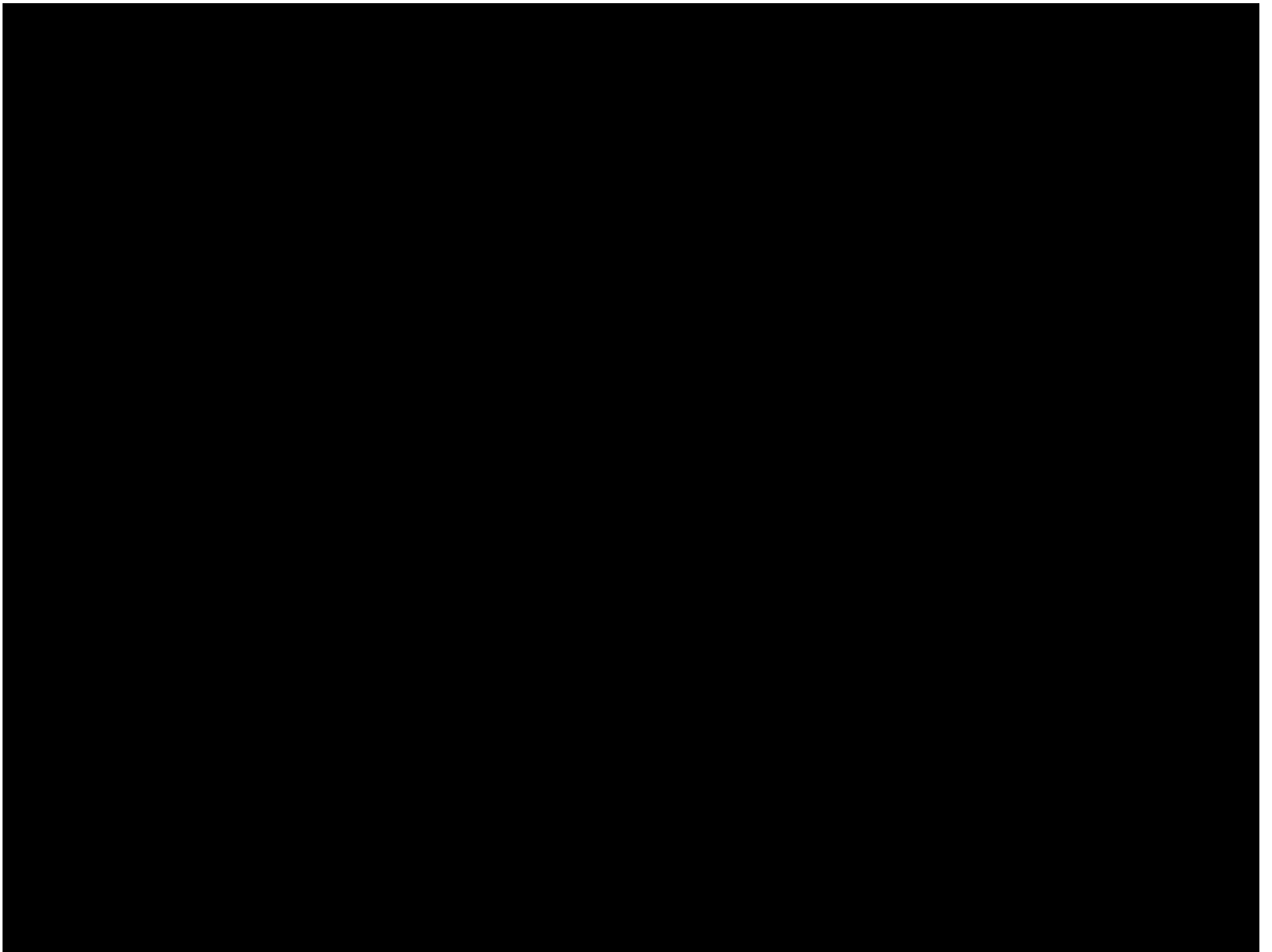
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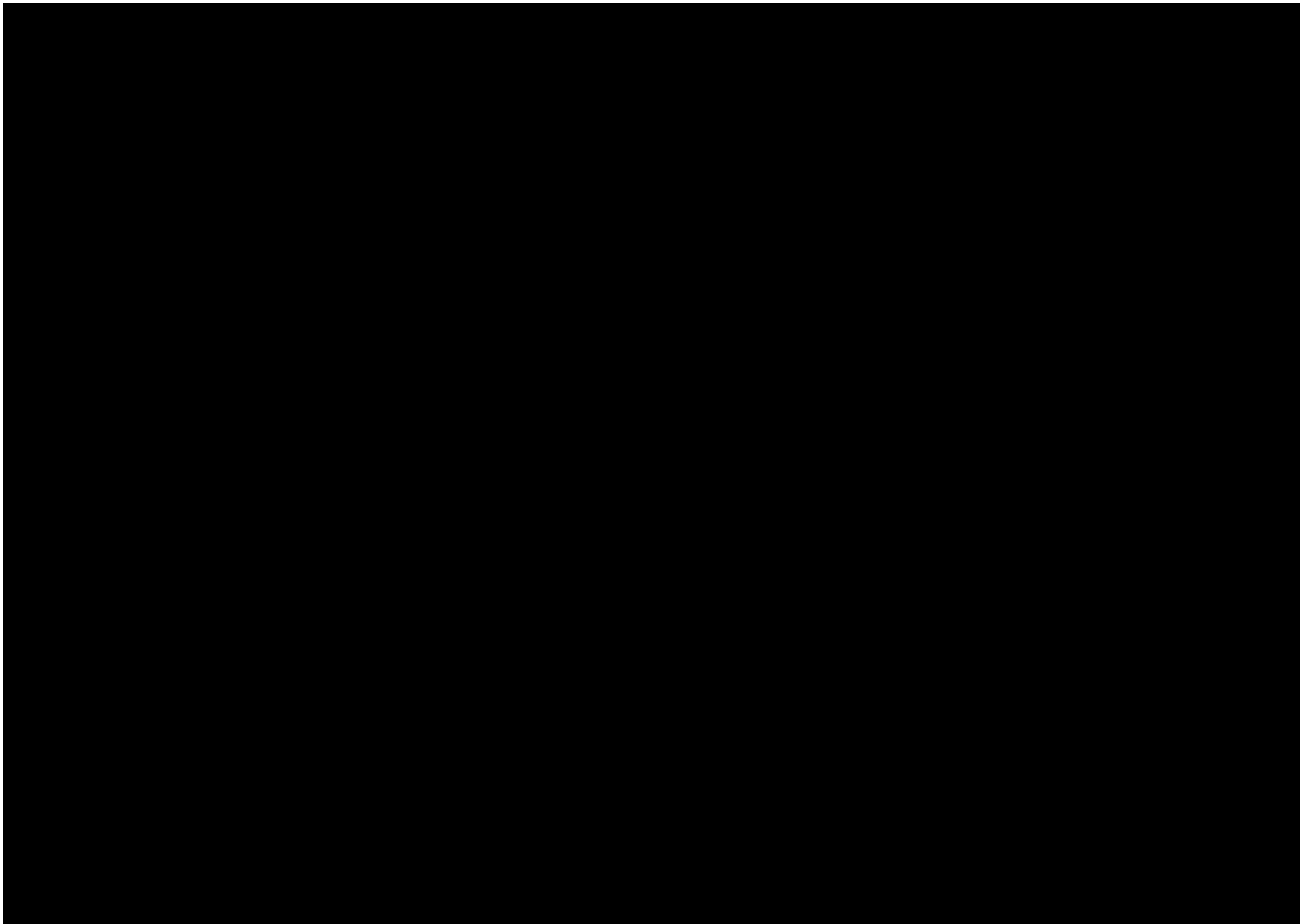


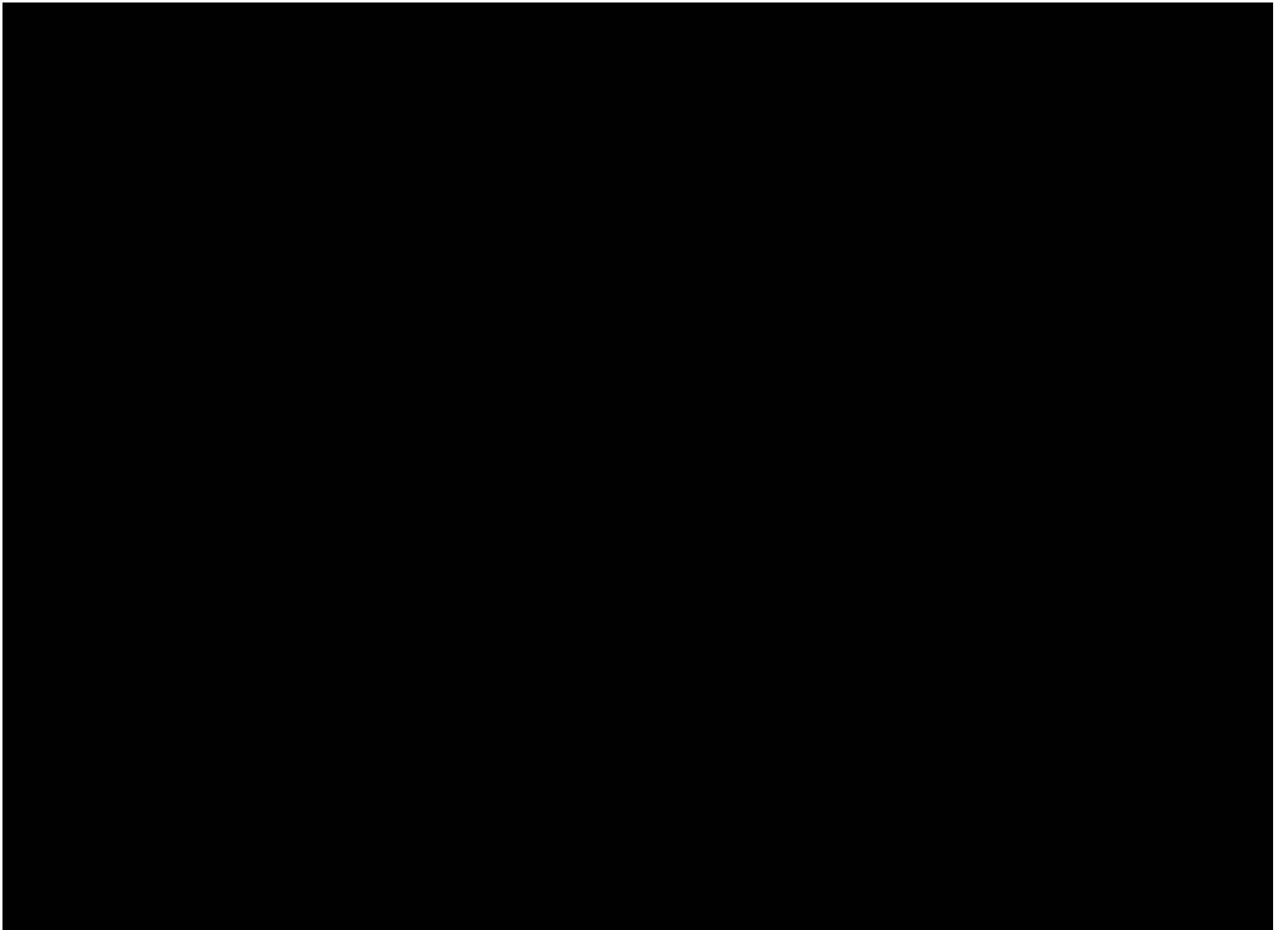
## **Appendix B**

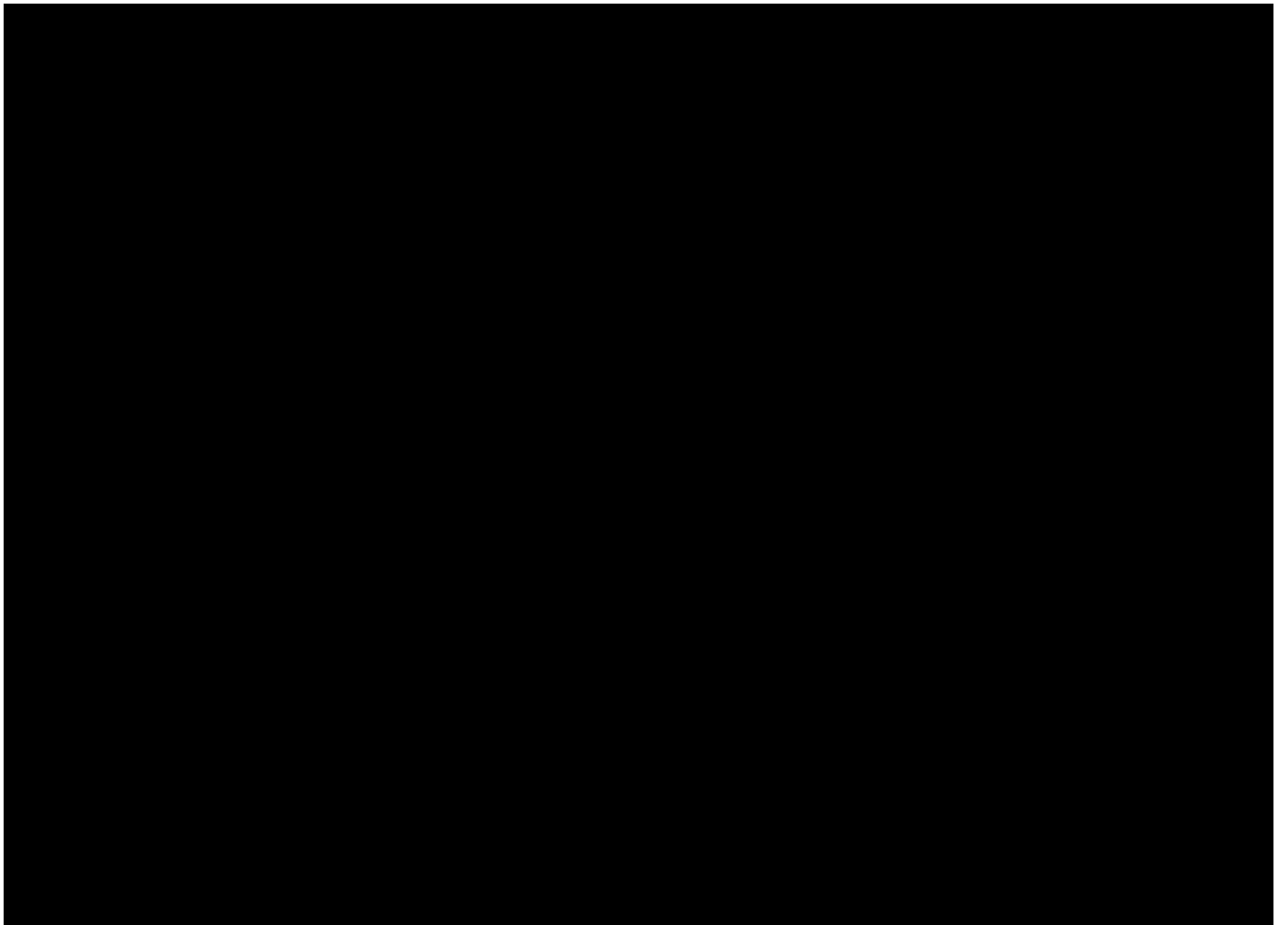
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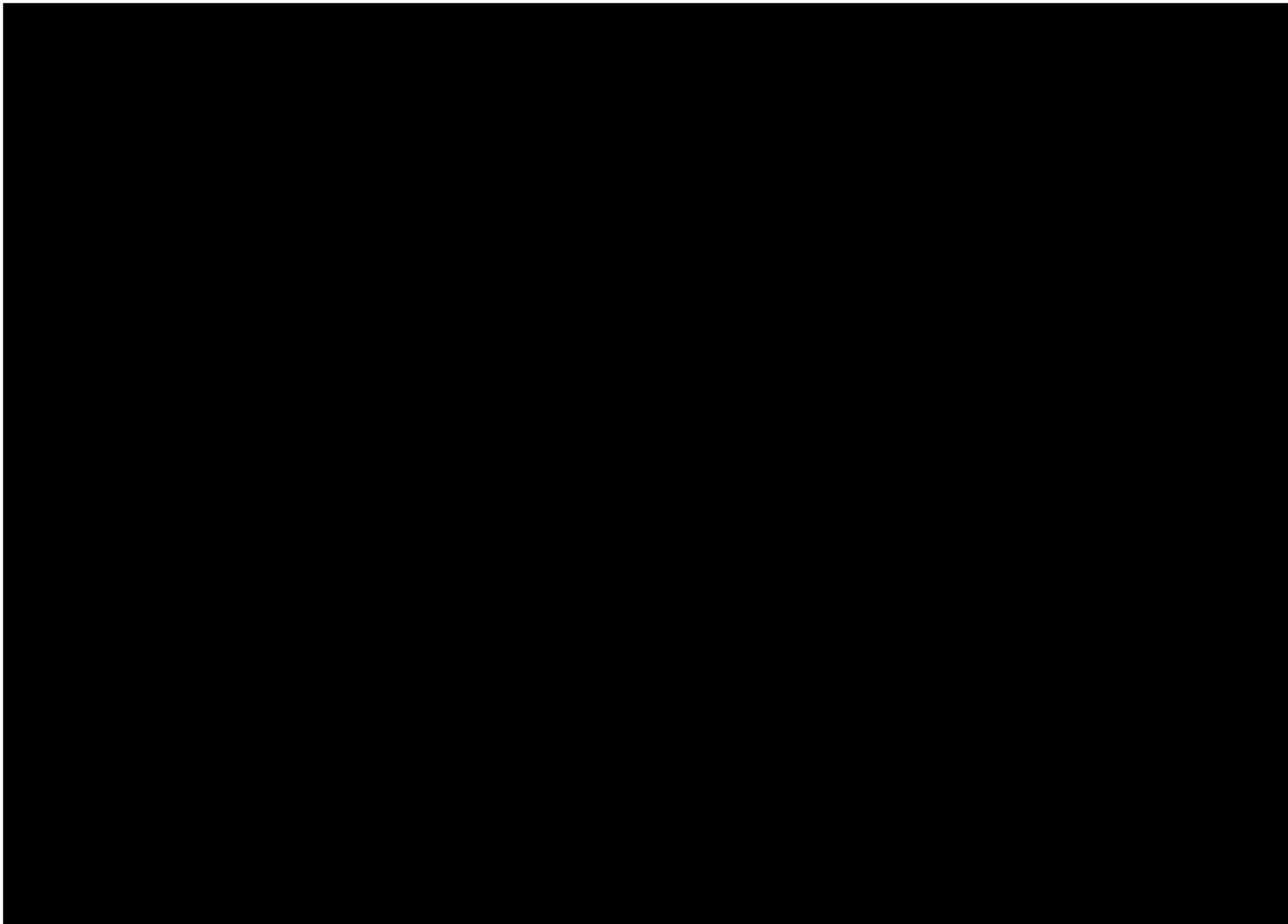


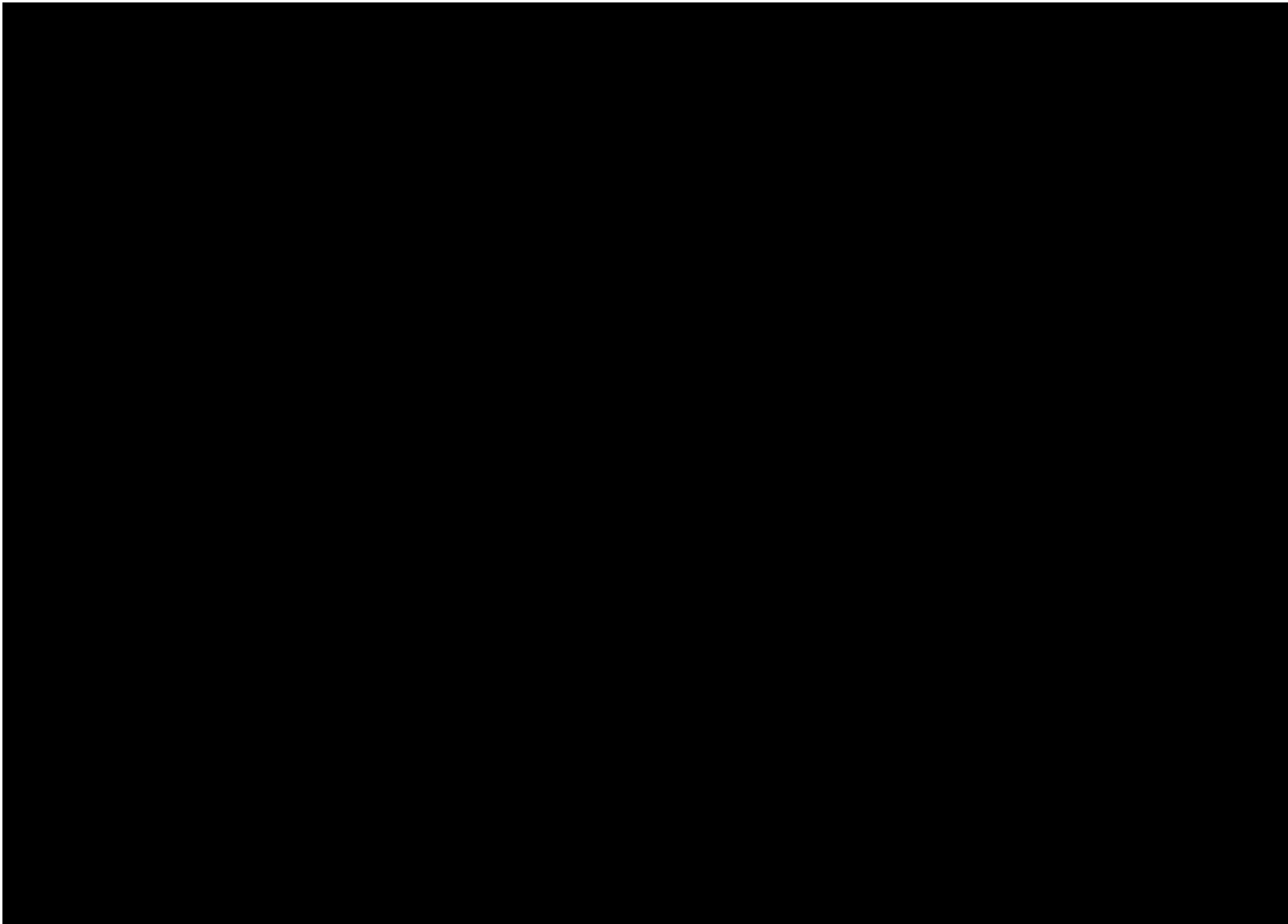


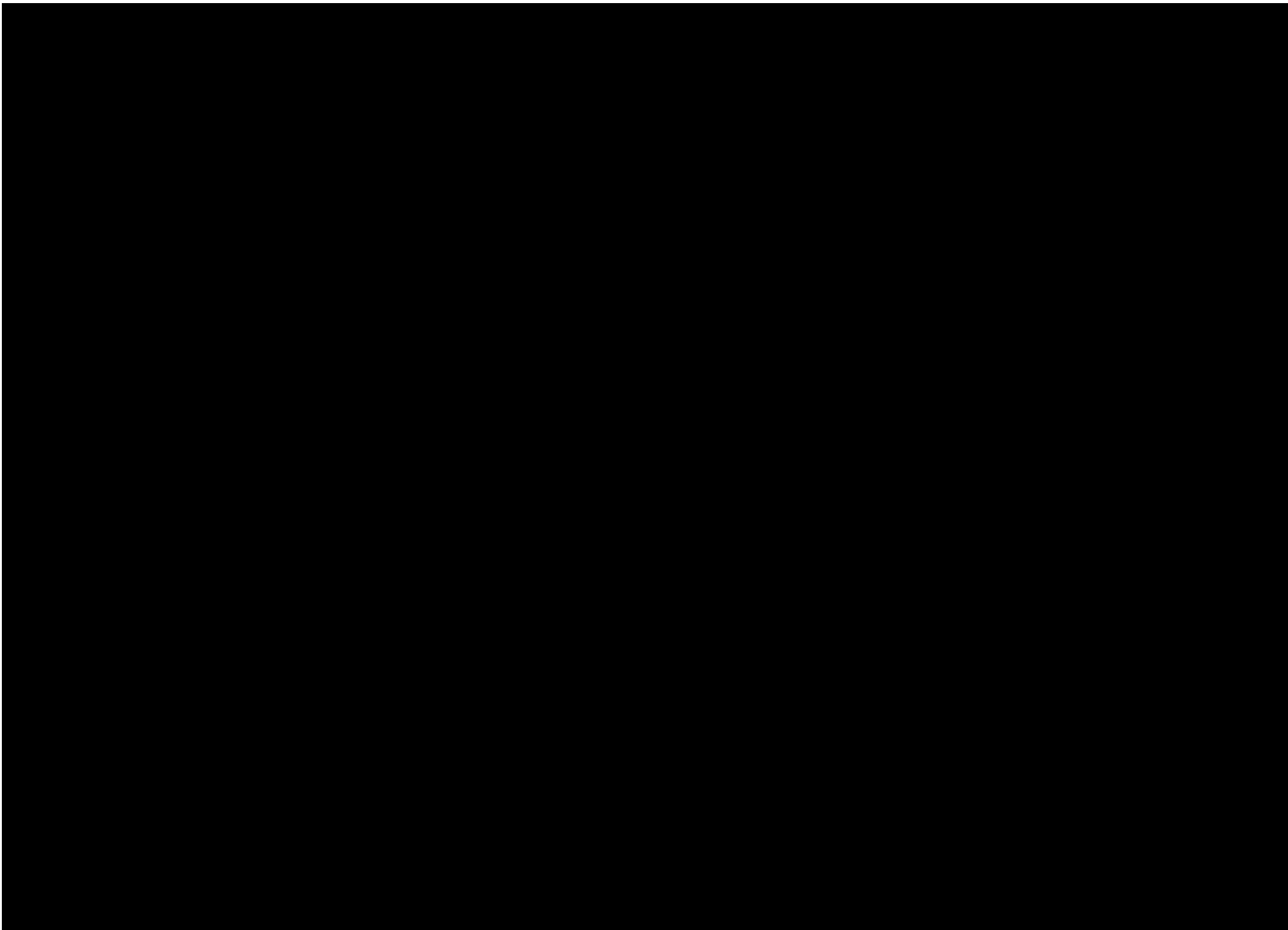


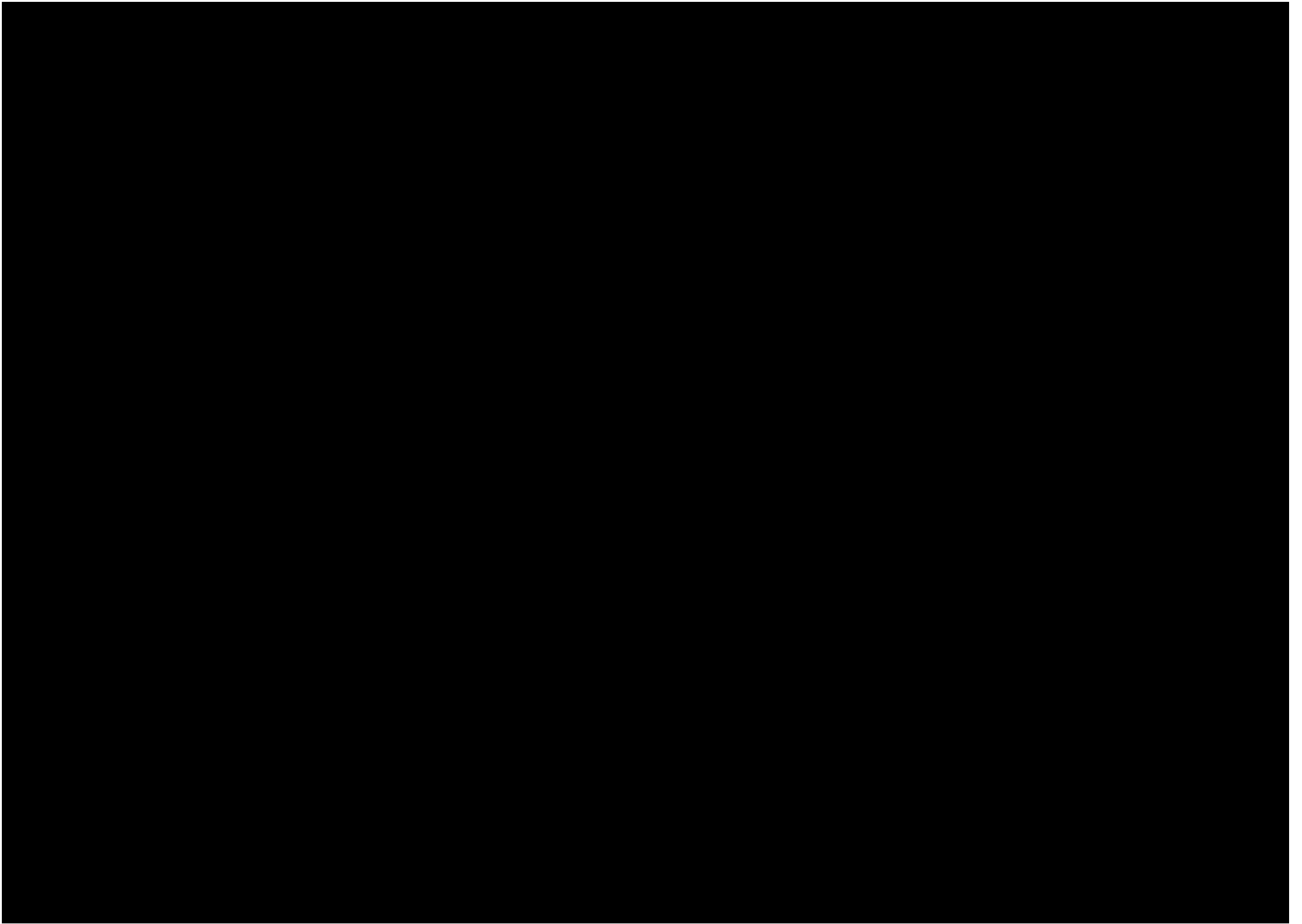




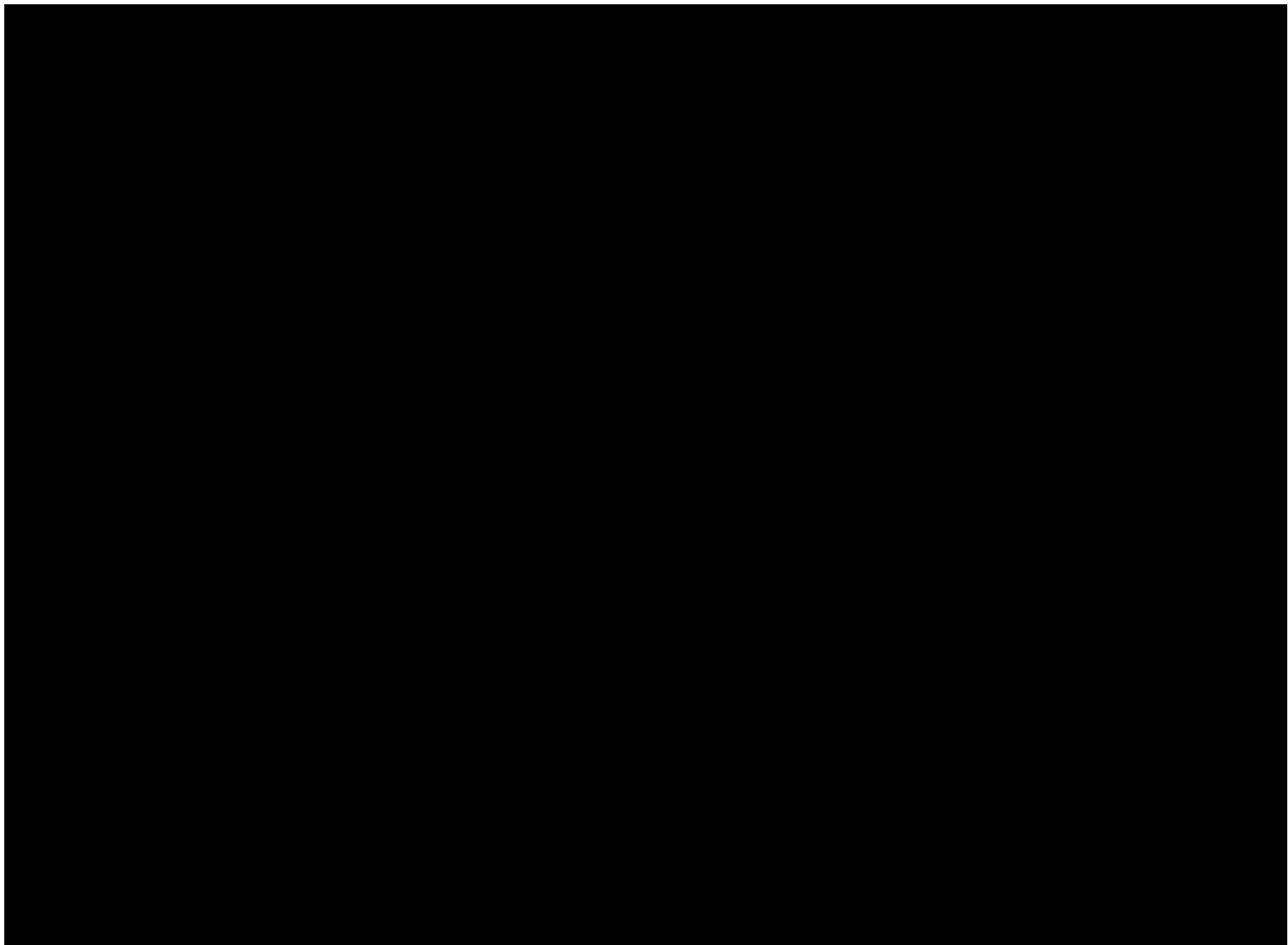


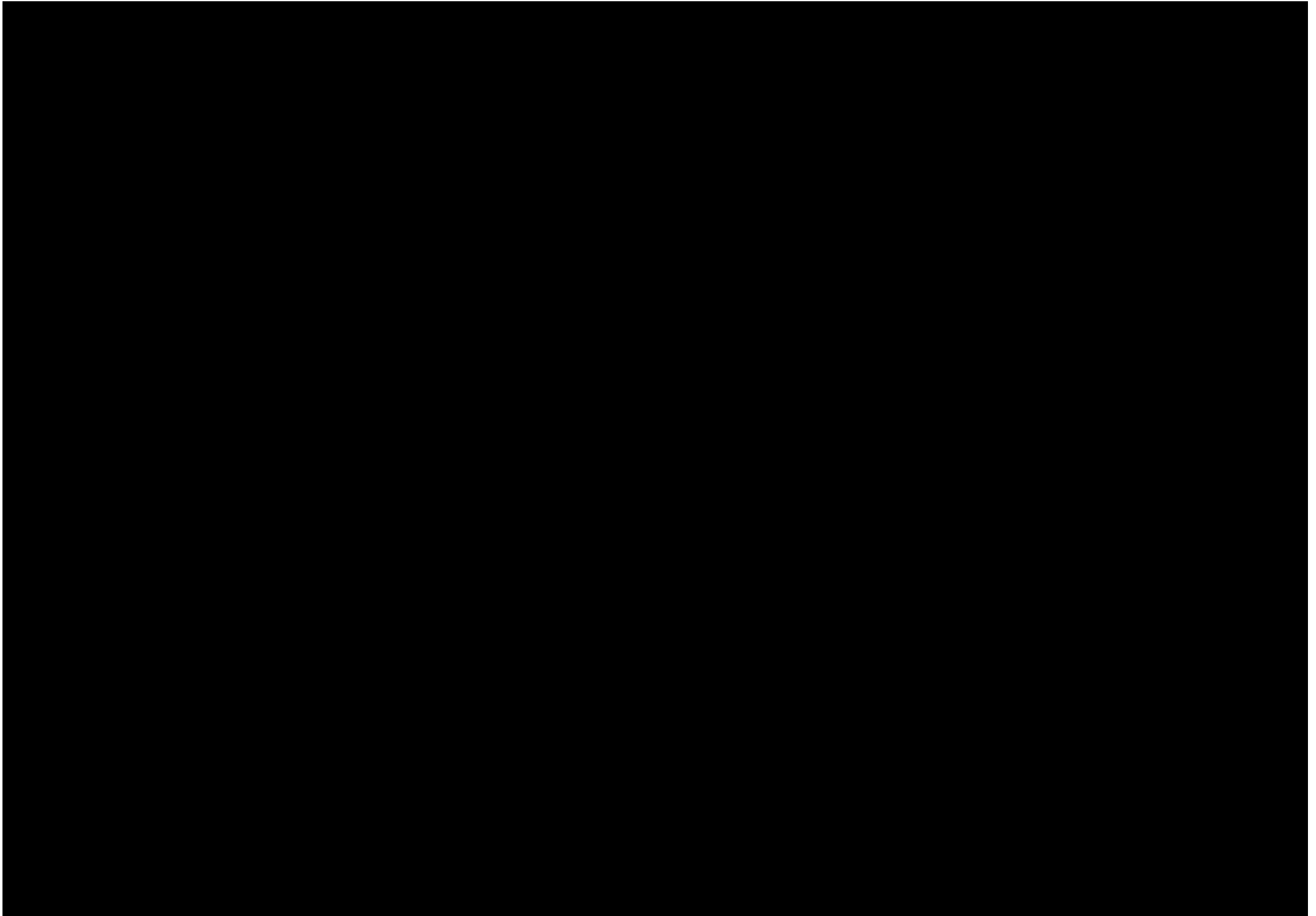


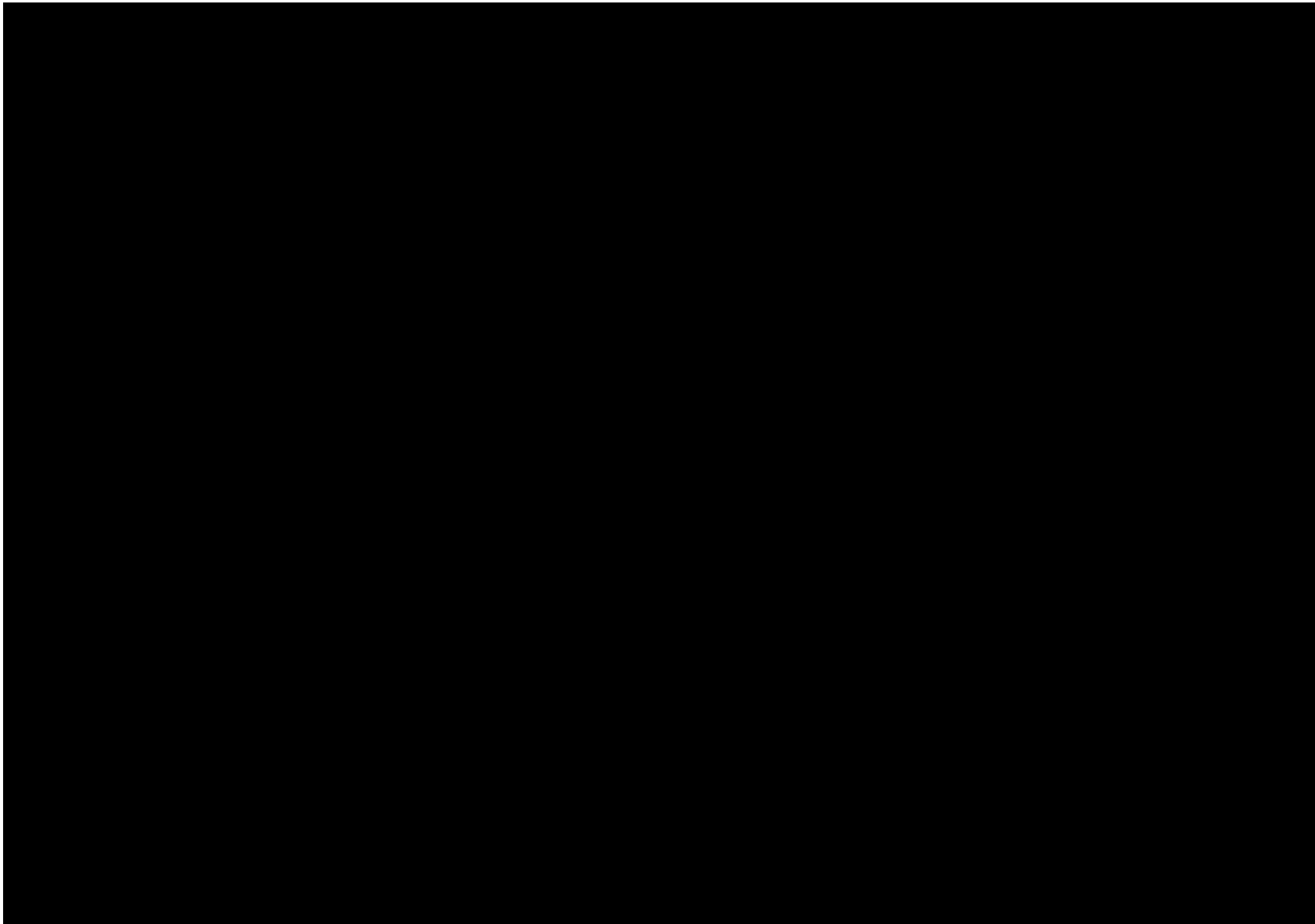


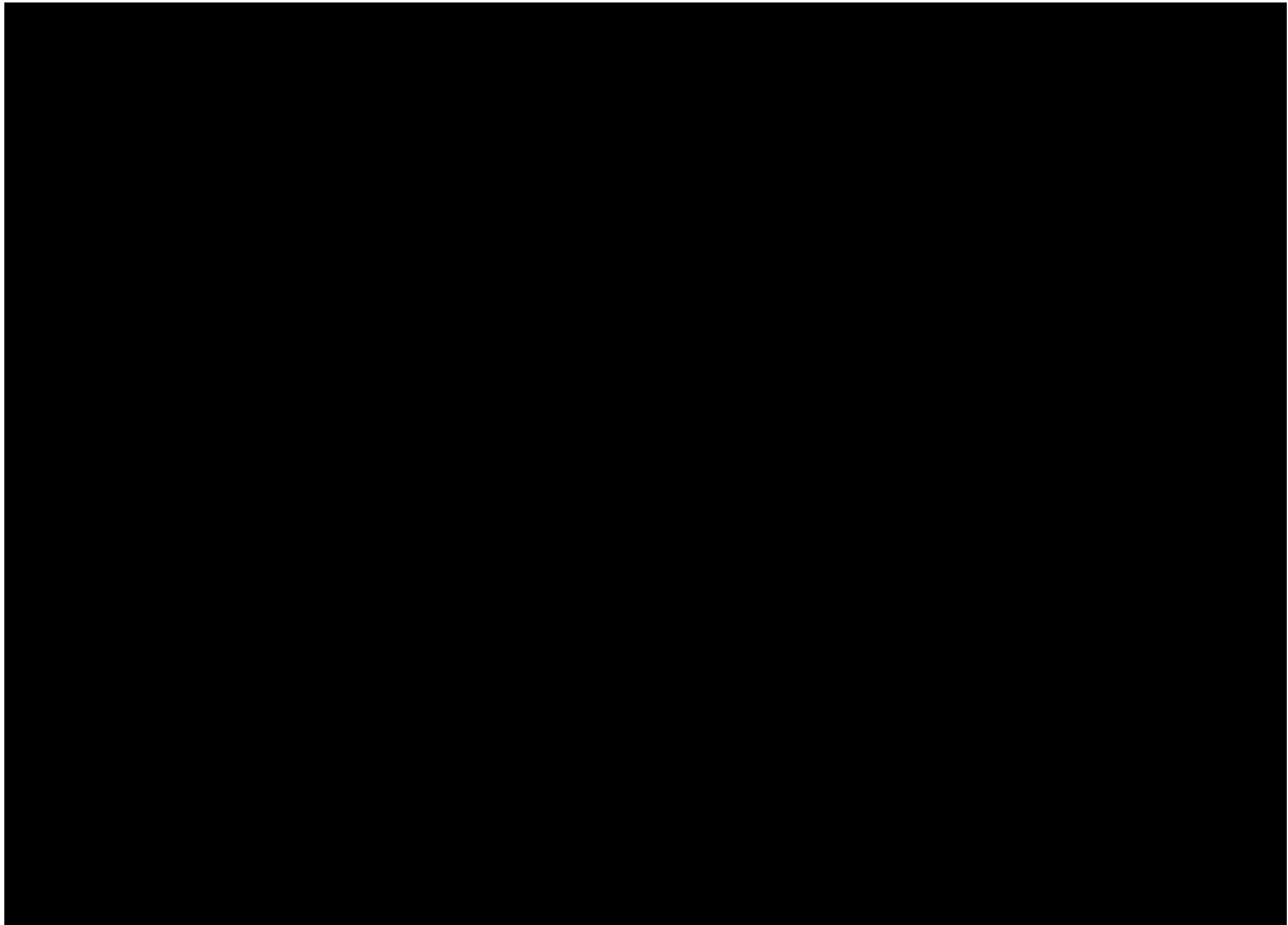


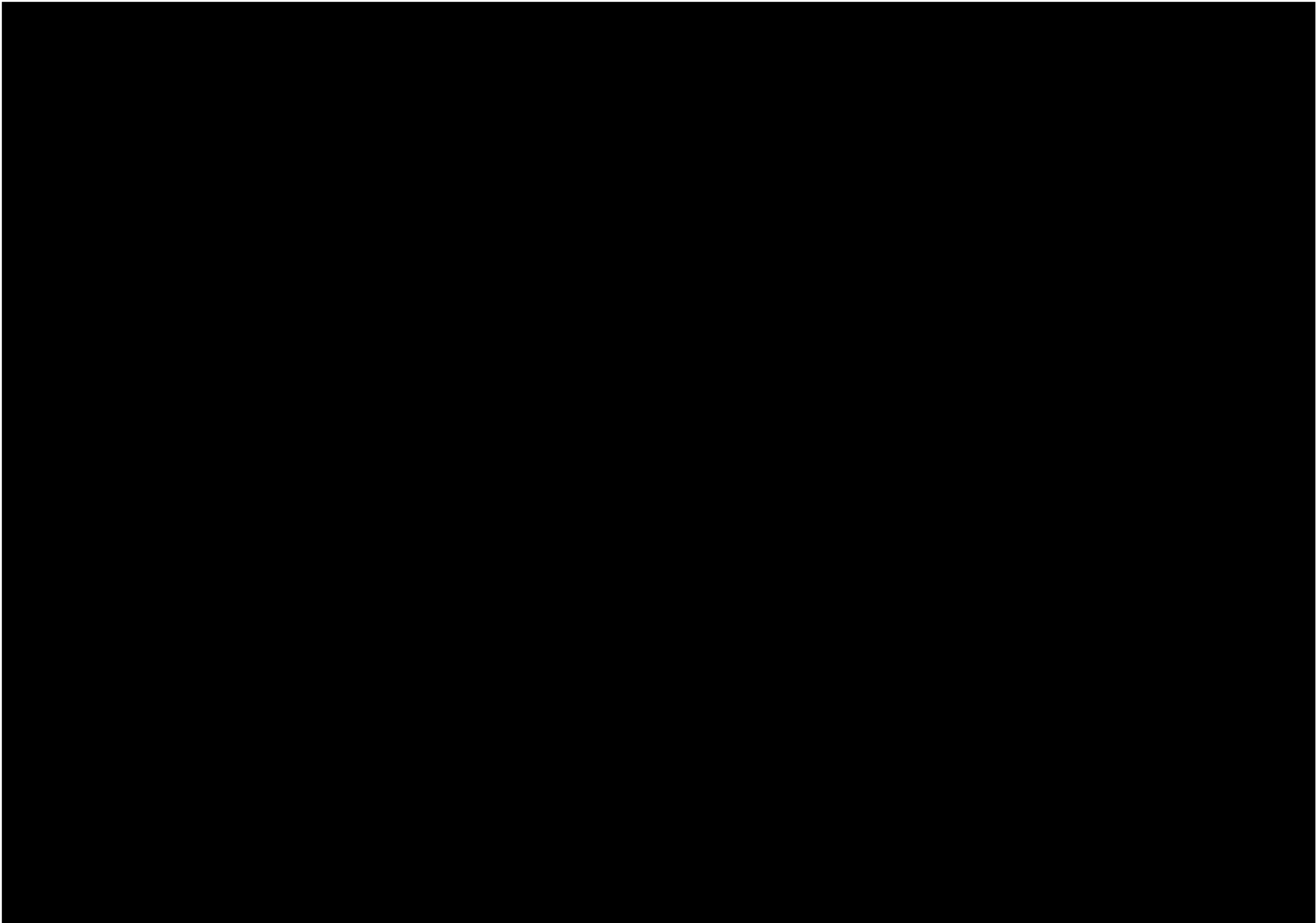


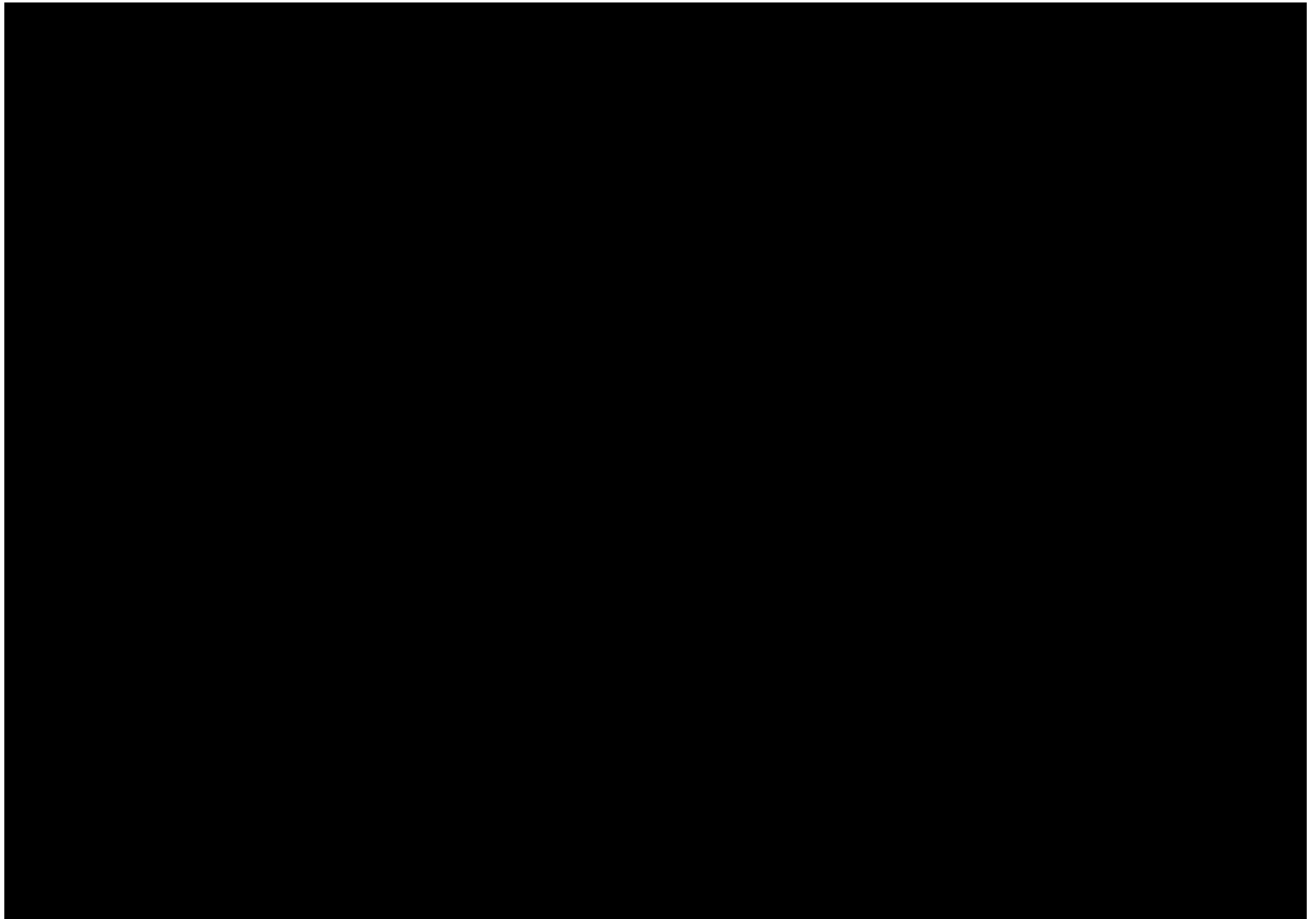


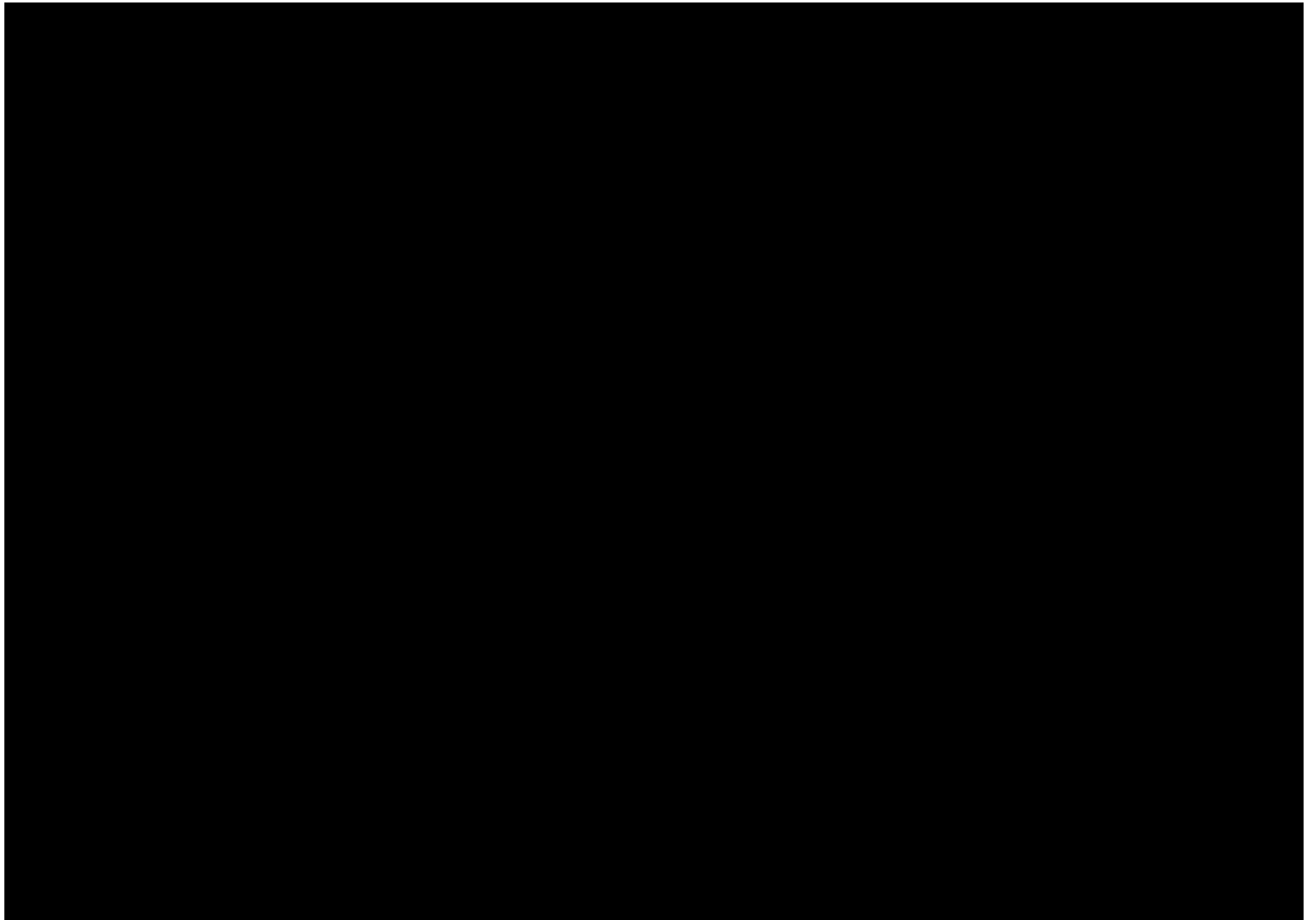


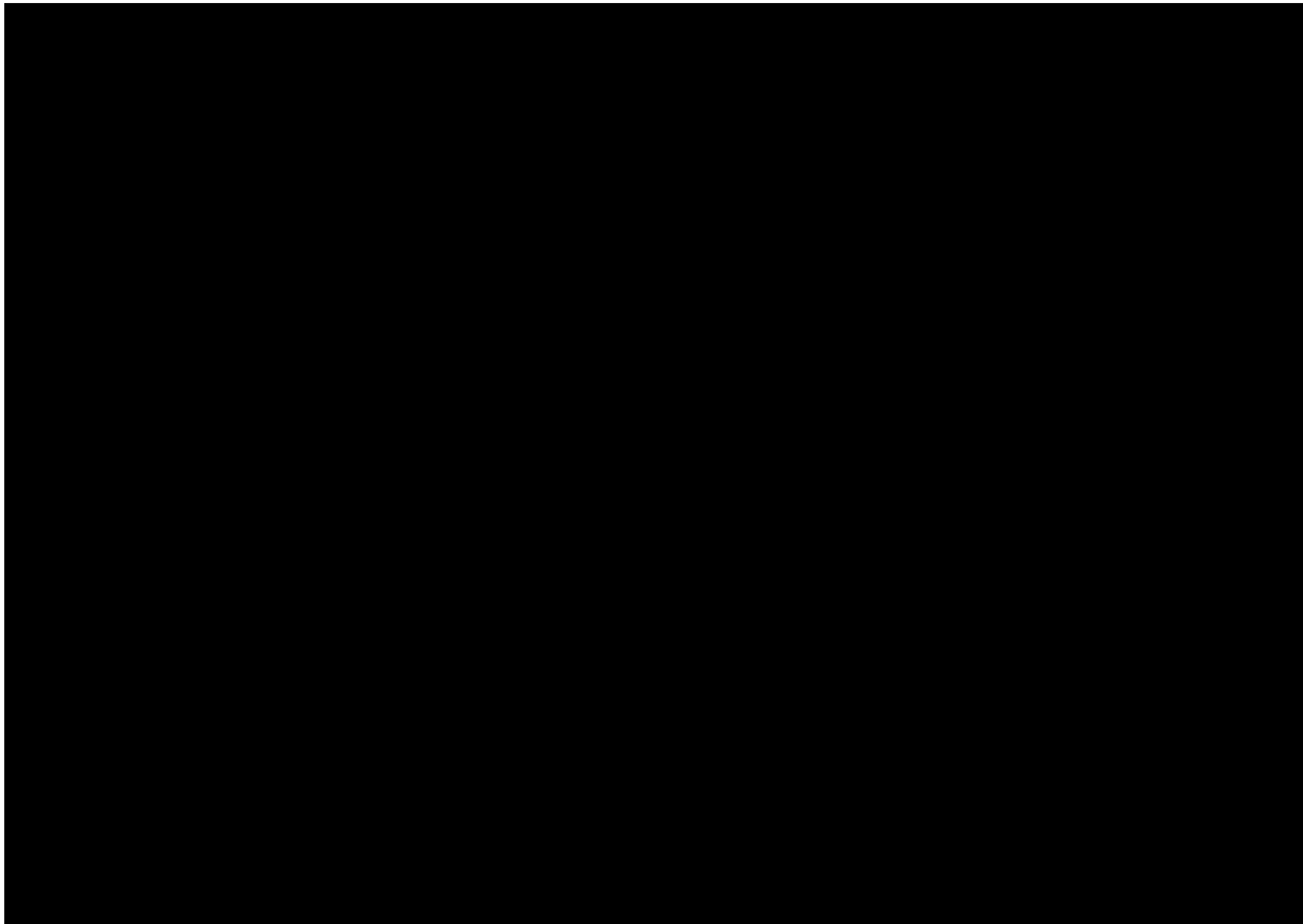




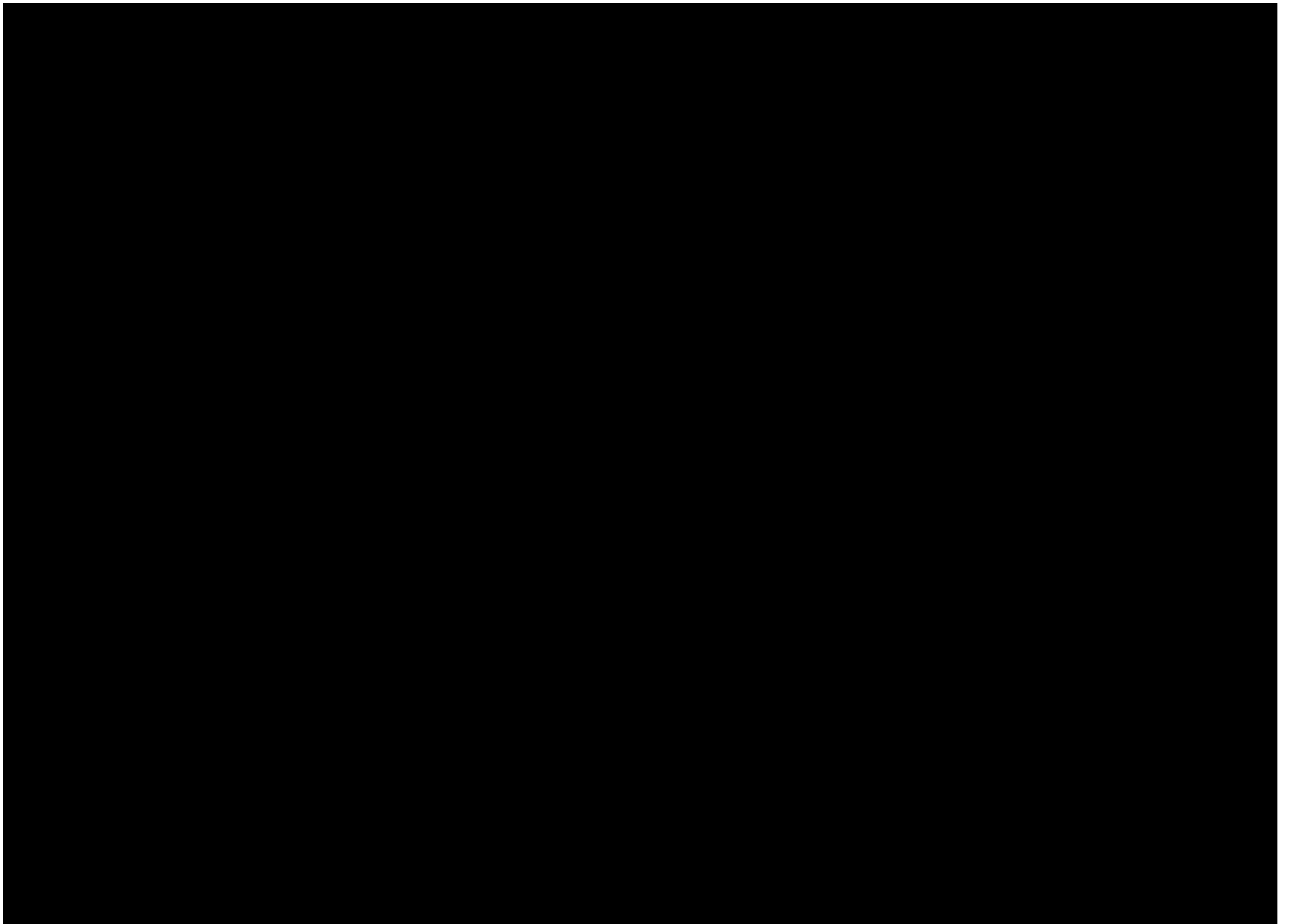


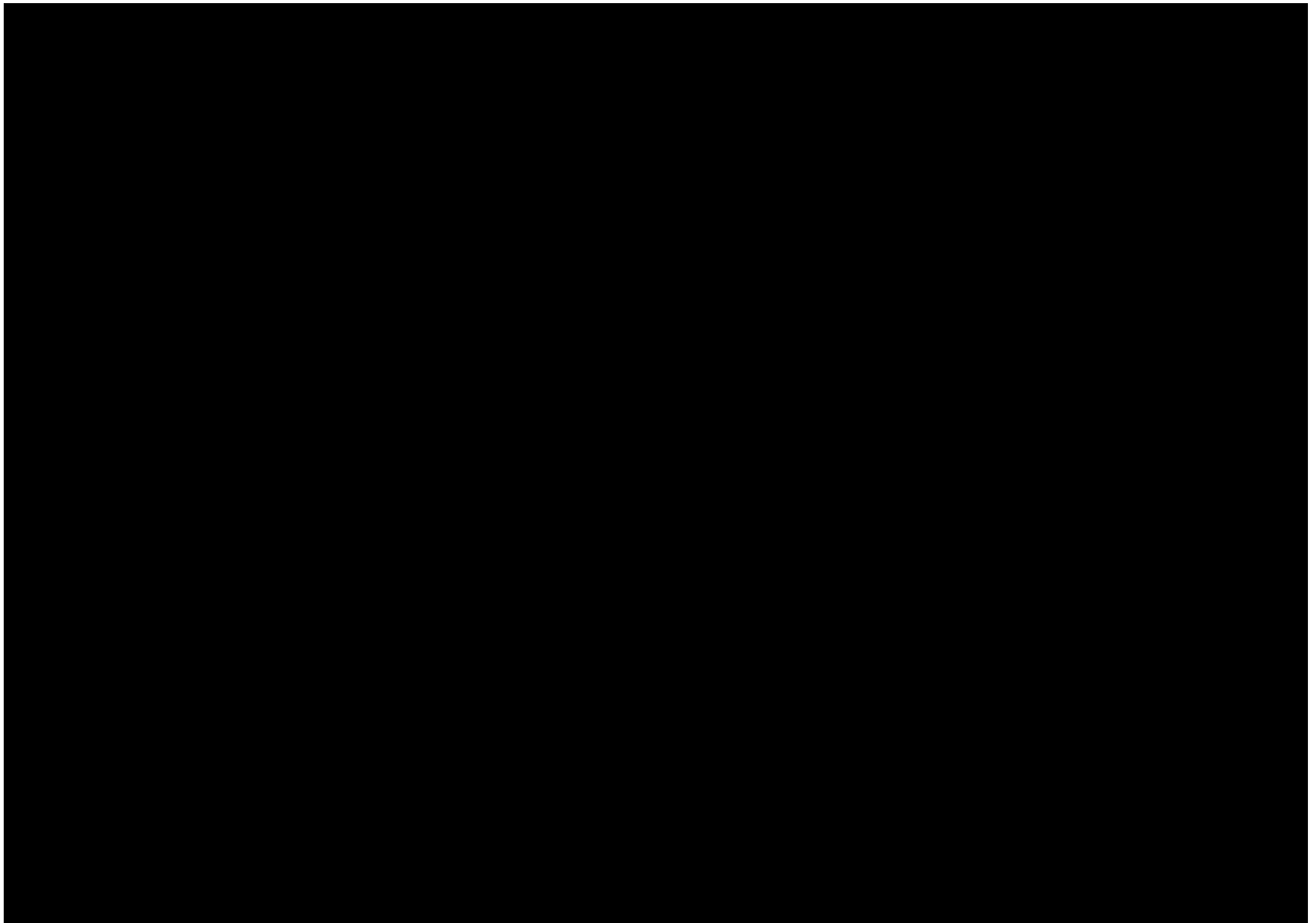


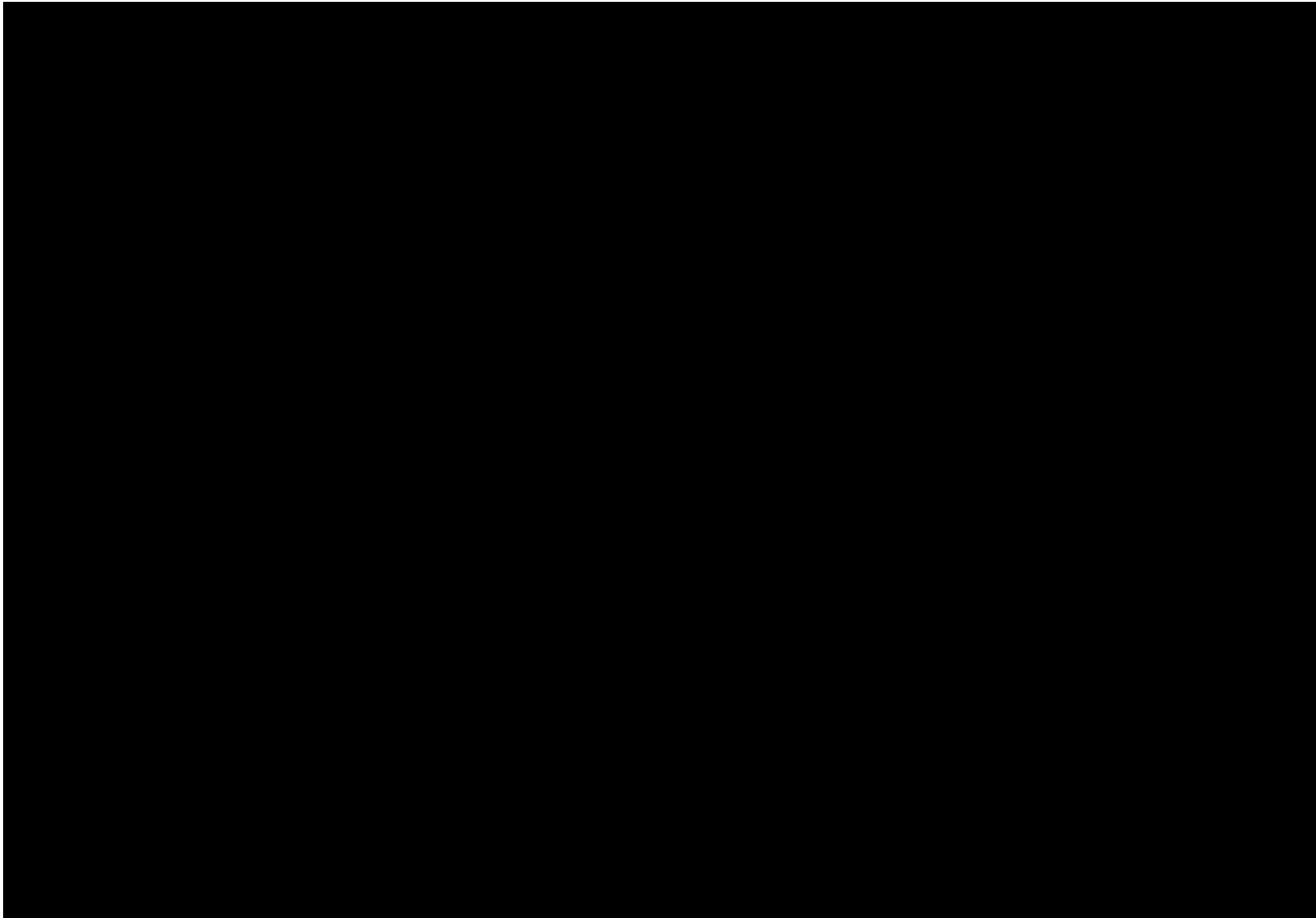


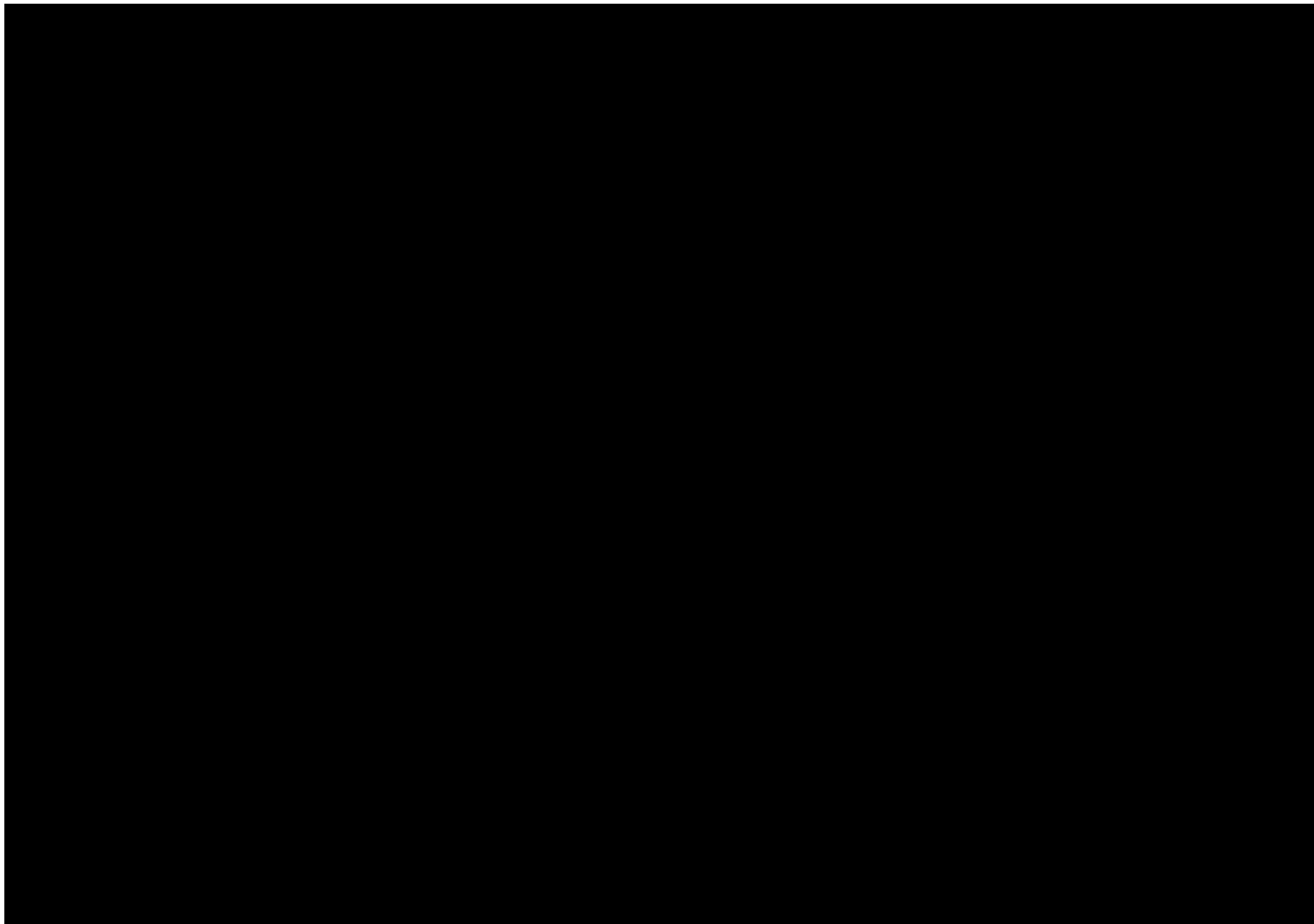


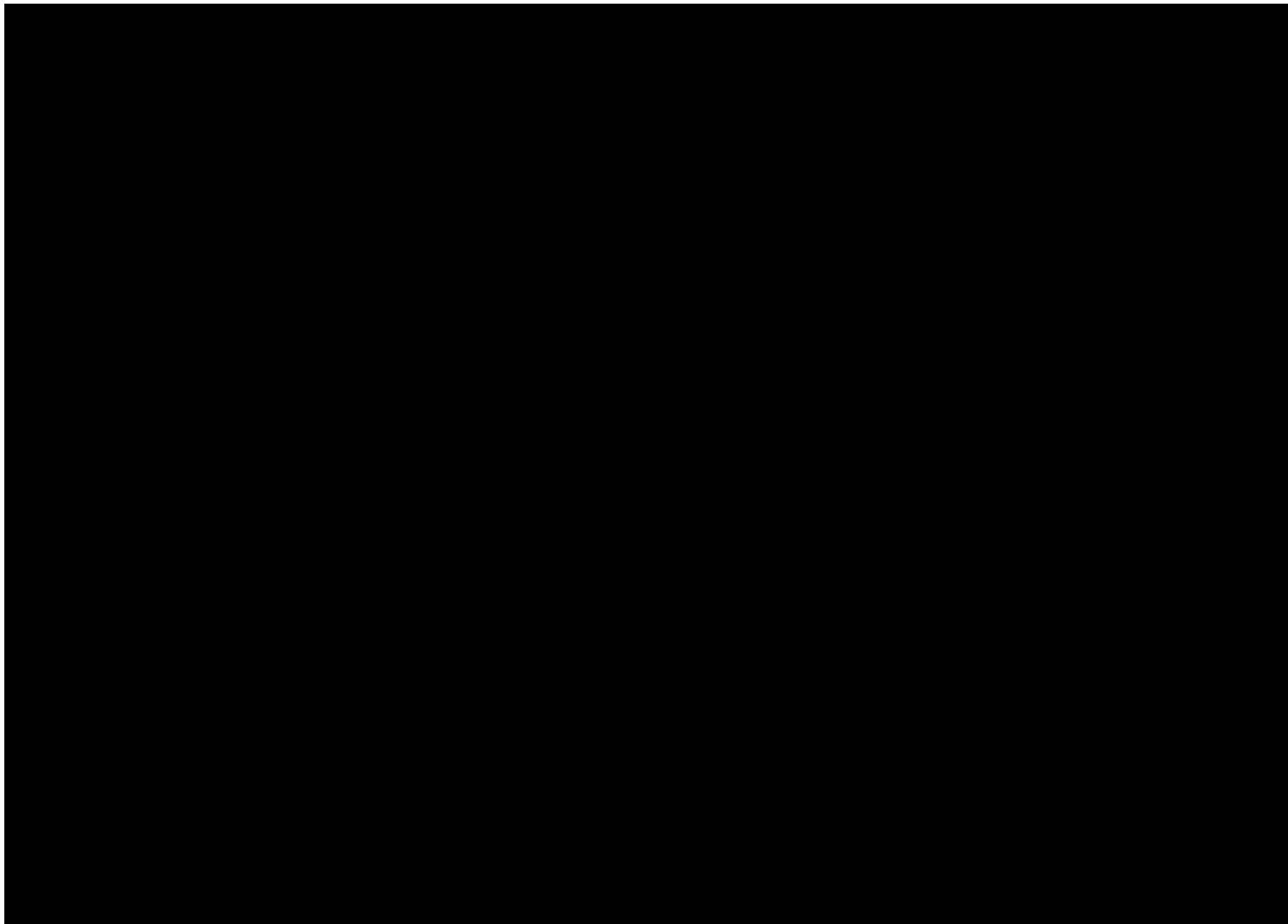












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In the 2010s, *S. flexneri* was reported as the most common serotype in children with acute bacterial dysentery in the United Kingdom [16]. In the 2020s, *S. flexneri* was reported as the most common serotype in children with acute bacterial dysentery in the United Kingdom [17].

In the 2030s, *S. flexneri* was reported as the most common serotype in children with acute bacterial dysentery in the United Kingdom [18]. In the 2040s, *S. flexneri* was reported as the most common serotype in children with acute bacterial dysentery in the United Kingdom [19].

In the 2050s, *S. flexneri* was reported as the most common serotype in children with acute bacterial dysentery in the United Kingdom [20]. In the 2060s, *S. flexneri* was reported as the most common serotype in children with acute bacterial dysentery in the United Kingdom [21].

In the 2070s, *S. flexneri* was reported as the most common serotype in children with acute bacterial dysentery in the United Kingdom [22]. In the 2080s, *S. flexneri* was reported as the most common serotype in children with acute bacterial dysentery in the United Kingdom [23].

In the 2090s, *S. flexneri* was reported as the most common serotype in children with acute bacterial dysentery in the United Kingdom [24]. In the 2100s, *S. flexneri* was reported as the most common serotype in children with acute bacterial dysentery in the United Kingdom [25].





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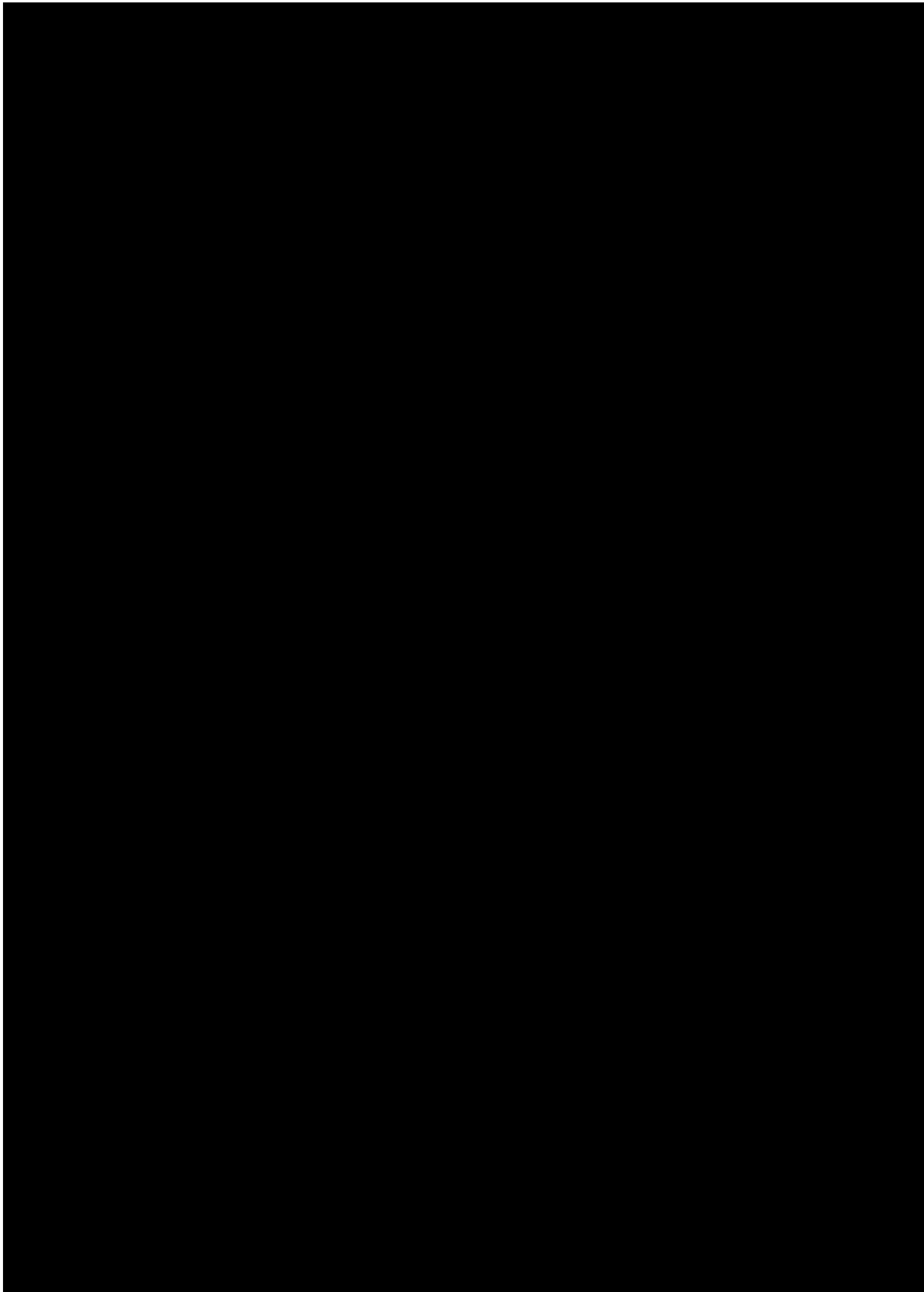
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the 1990s, the number of people in the UK who are aged 65 and over has increased by 1.5 million (1990–1999) and is projected to increase by a further 1.5 million by 2010 (Office of National Statistics 2000). The number of people aged 65 and over is projected to increase by 2.5 million by 2020 (Office of National Statistics 2000).

There is a growing awareness of the need to develop strategies to meet the needs of the ageing population. The Department of Health (1999) has published a strategy for the ageing population, which sets out the government's commitment to improve the health and well-being of older people. The strategy is based on the following principles: (1) to improve the health and well-being of older people; (2) to ensure that older people are able to live independently; (3) to ensure that older people are able to participate in society; and (4) to ensure that older people are able to live in their own homes.

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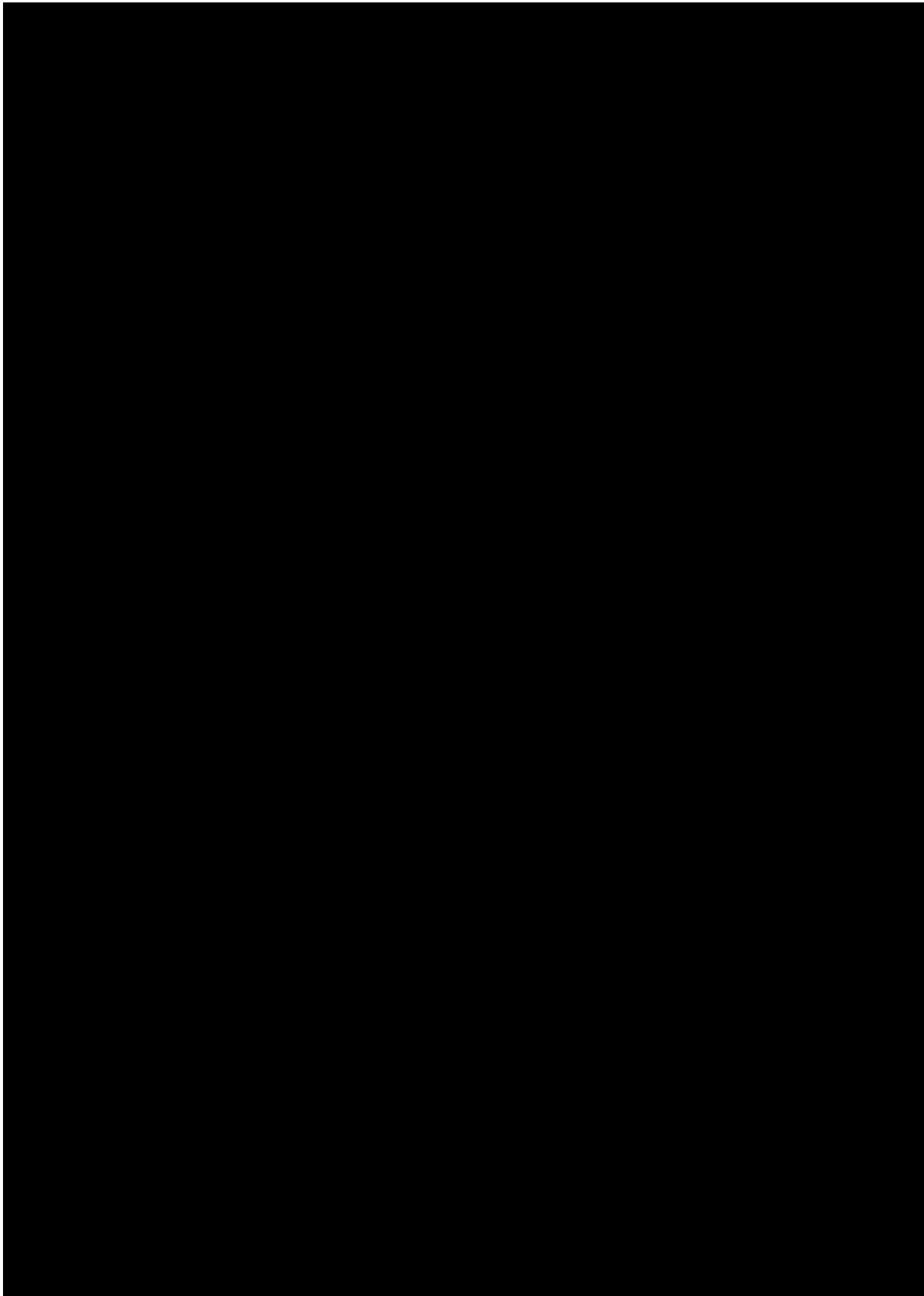
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The first of these is the *Journal of the American Medical Association* (JAMA), which has been a leading voice in the medical profession for over a century. It is a weekly publication that covers a wide range of topics, from clinical medicine to public health. The second is the *New England Journal of Medicine* (NEJM), which is a leading journal in the field of internal medicine. The third is the *Lancet*, which is a leading journal in the field of general practice. The fourth is the *British Medical Journal* (BMJ), which is a leading journal in the field of general practice. The fifth is the *Medical Record*, which is a leading journal in the field of general practice. The sixth is the *Medical Record*, which is a leading journal in the field of general practice. The seventh is the *Medical Record*, which is a leading journal in the field of general practice. The eighth is the *Medical Record*, which is a leading journal in the field of general practice. The ninth is the *Medical Record*, which is a leading journal in the field of general practice. The tenth is the *Medical Record*, which is a leading journal in the field of general practice.

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the 1990s, the number of people in the United States who are obese has increased by 100% (Flegal et al. 2002). In the United Kingdom, the prevalence of obesity has increased from 10% in 1980 to 15% in 1997 (Health Survey for England 1997). In the United States, the prevalence of obesity has increased from 15% in 1980 to 23% in 1994 (Flegal et al. 2002). In the United Kingdom, the prevalence of obesity has increased from 10% in 1980 to 15% in 1997 (Health Survey for England 1997).

Obesity is a major public health problem because it is a risk factor for a number of chronic diseases, including heart disease, stroke, diabetes, and certain types of cancer (Flegal et al. 2002). In the United States, obesity is the leading cause of death and disability (Flegal et al. 2002). In the United Kingdom, obesity is the leading cause of death and disability (Health Survey for England 1997). In the United States, obesity is the leading cause of death and disability (Flegal et al. 2002).

Obesity is a complex condition that is caused by a combination of genetic, environmental, and behavioral factors (Flegal et al. 2002). In the United States, obesity is the leading cause of death and disability (Flegal et al. 2002). In the United Kingdom, obesity is the leading cause of death and disability (Health Survey for England 1997). In the United States, obesity is the leading cause of death and disability (Flegal et al. 2002).

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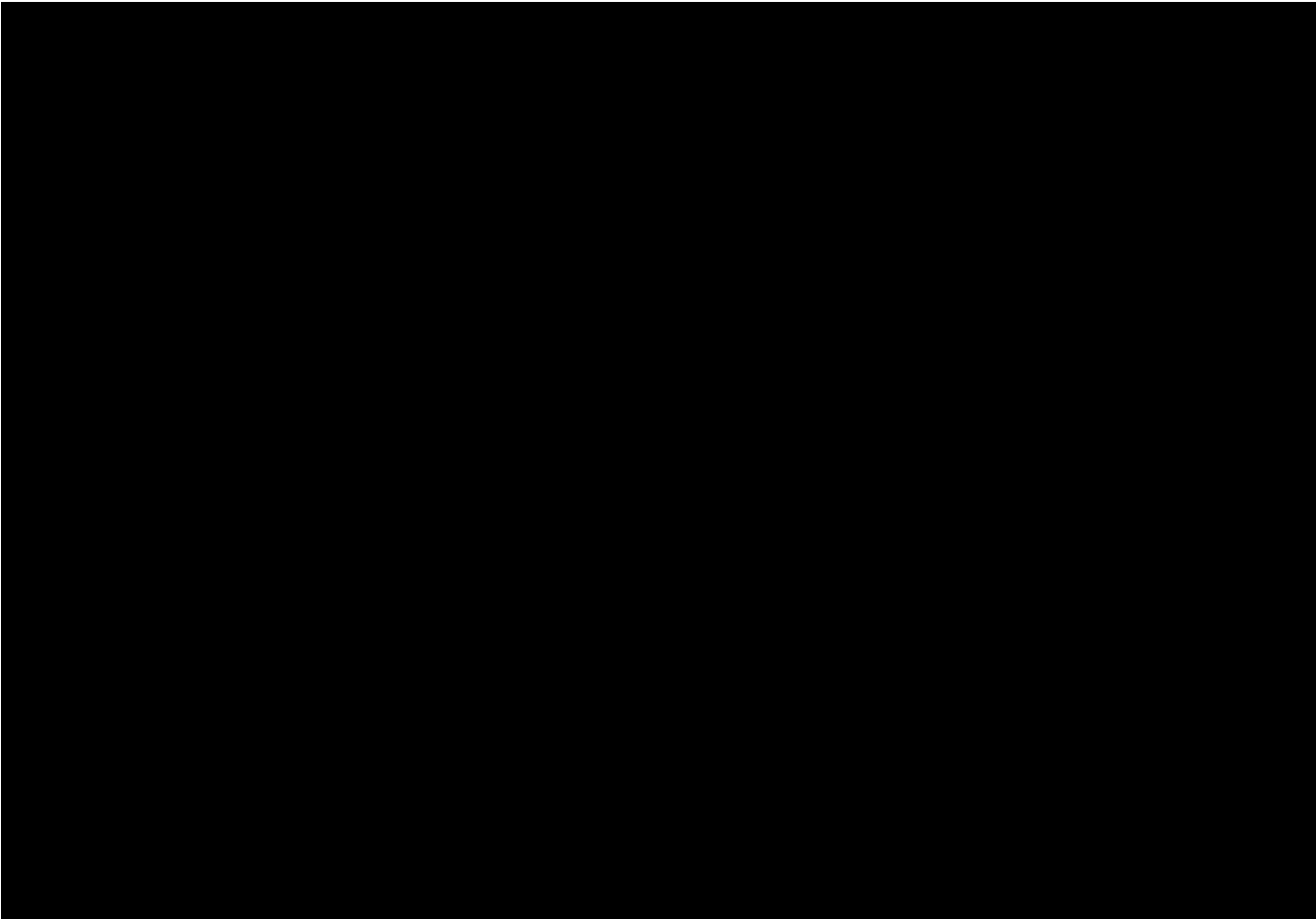
Obesity is a complex condition that is caused by a combination of genetic, environmental, and behavioral factors (Flegal et al. 2002). In the United States, obesity is the leading cause of death and disability (Flegal et al. 2002). In the United Kingdom, obesity is the leading cause of death and disability (Health Survey for England 1997). In the United States, obesity is the leading cause of death and disability (Flegal et al. 2002).

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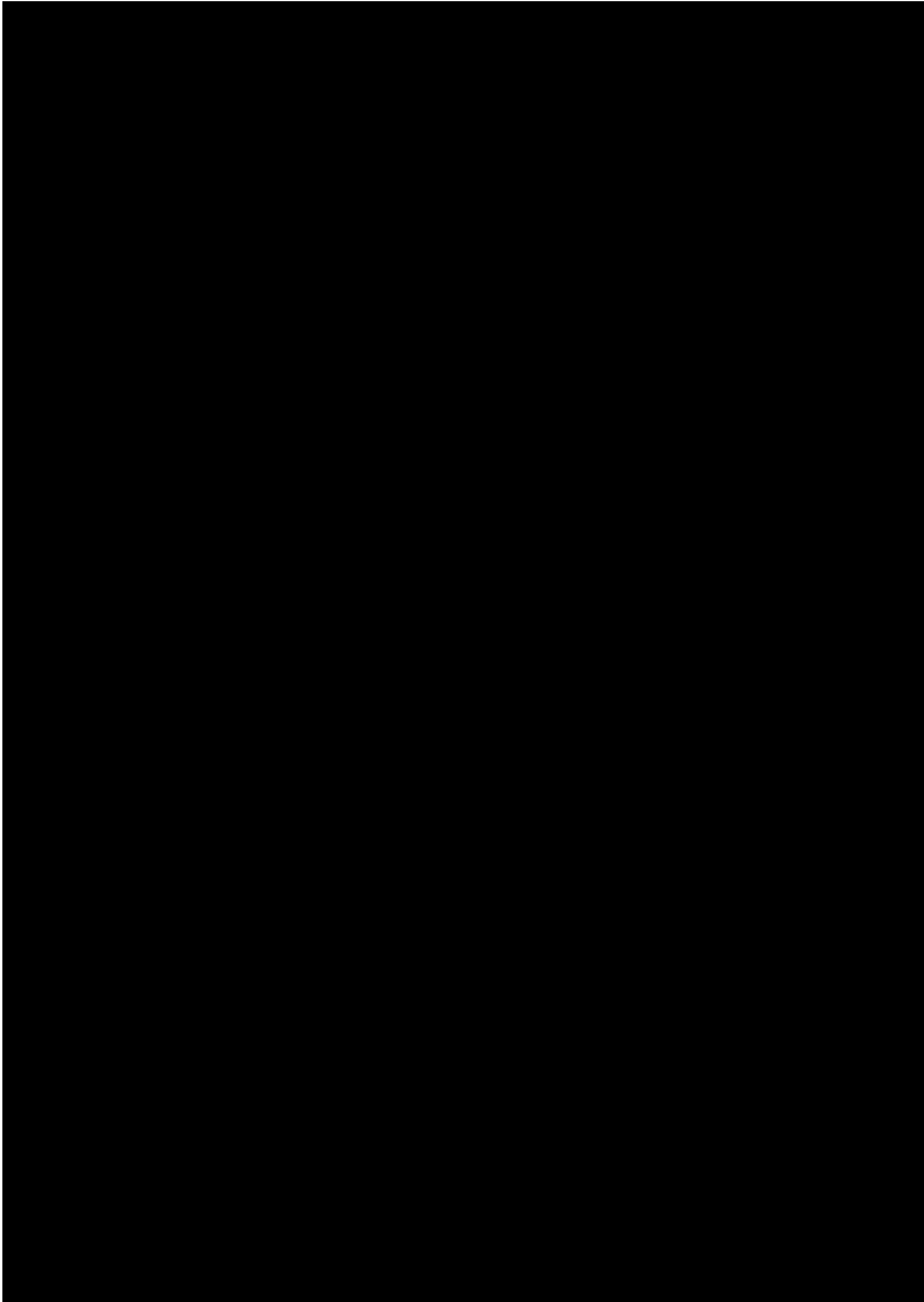


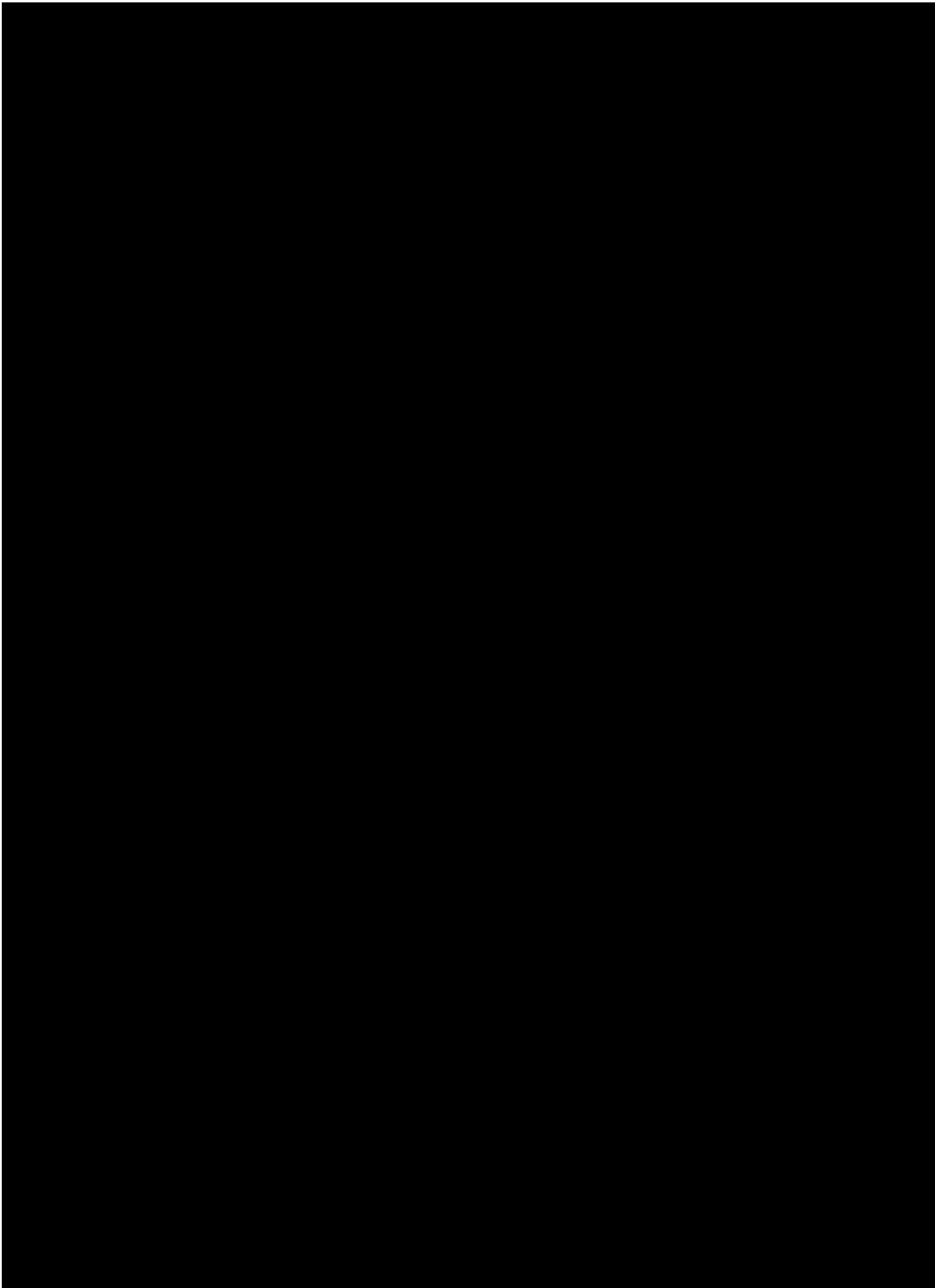






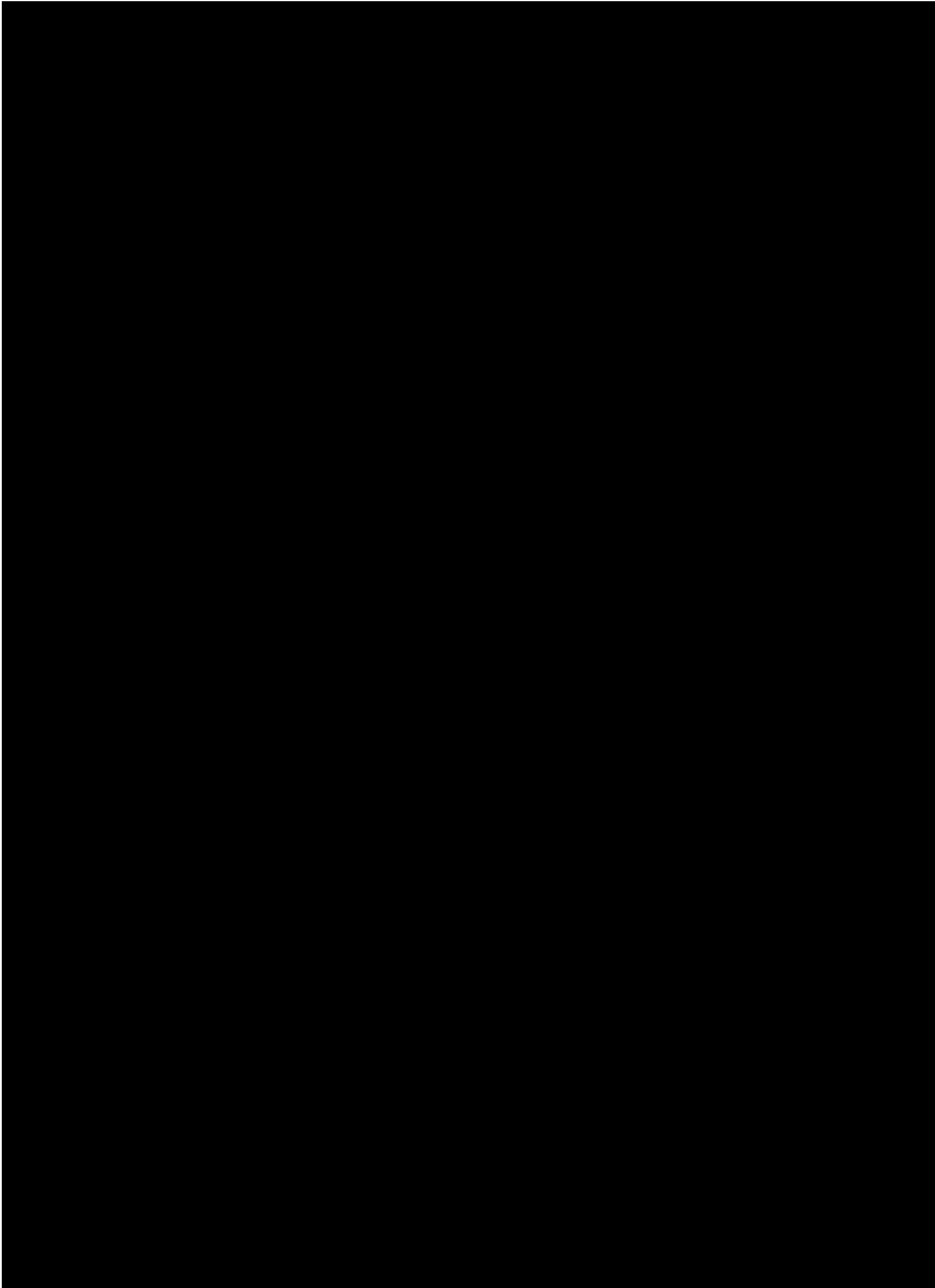


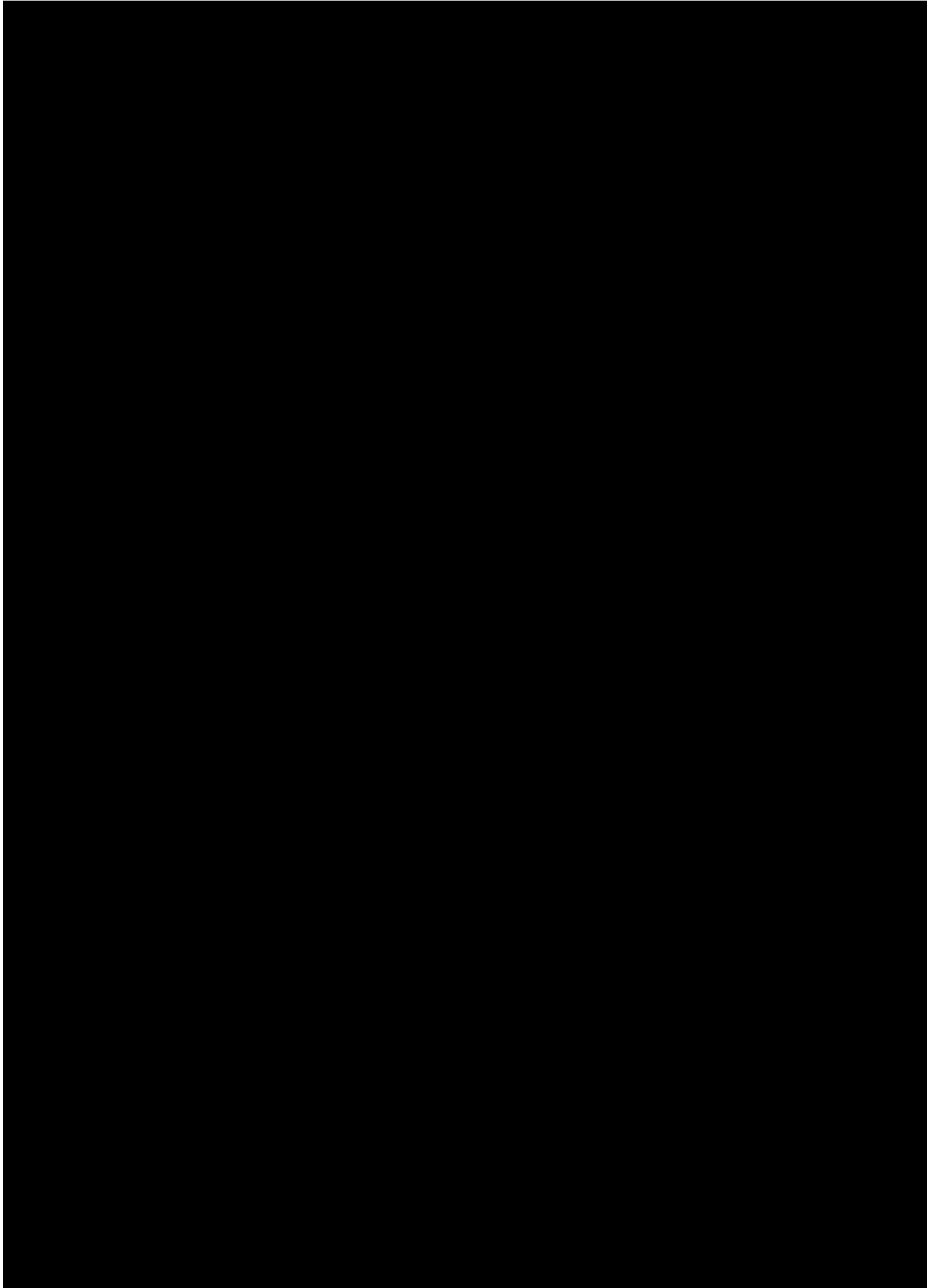












The first of these is the fact that the system is not a simple one. It is a complex system, and as such, it is not possible to understand it by looking at its parts in isolation. The system is a whole, and its behavior is determined by the interactions between its parts. This is a fundamental principle of systems thinking, and it is one that is often overlooked in traditional approaches to problem-solving.

The second of these is the fact that the system is dynamic. It is not a static system, and its behavior changes over time. This is another fundamental principle of systems thinking, and it is one that is often overlooked in traditional approaches to problem-solving.

The third of these is the fact that the system is open. It is not a closed system, and it interacts with its environment. This is another fundamental principle of systems thinking, and it is one that is often overlooked in traditional approaches to problem-solving.

The fourth of these is the fact that the system is self-organizing. It is not a system that is controlled from the outside, and it is not a system that is designed from the top down. It is a system that organizes itself, and its behavior emerges from the interactions between its parts. This is another fundamental principle of systems thinking, and it is one that is often overlooked in traditional approaches to problem-solving.

The fifth of these is the fact that the system is resilient. It is not a system that is fragile, and it is not a system that is easily disrupted. It is a system that is able to withstand change, and it is able to adapt to new circumstances. This is another fundamental principle of systems thinking, and it is one that is often overlooked in traditional approaches to problem-solving.

The sixth of these is the fact that the system is sustainable. It is not a system that is unsustainable, and it is not a system that is doomed to fail. It is a system that is able to continue to exist, and it is able to thrive in the face of change. This is another fundamental principle of systems thinking, and it is one that is often overlooked in traditional approaches to problem-solving.

The seventh of these is the fact that the system is equitable. It is not a system that is unfair, and it is not a system that is biased. It is a system that is able to provide for the needs of all its members, and it is able to ensure that everyone has a fair chance of success. This is another fundamental principle of systems thinking, and it is one that is often overlooked in traditional approaches to problem-solving.

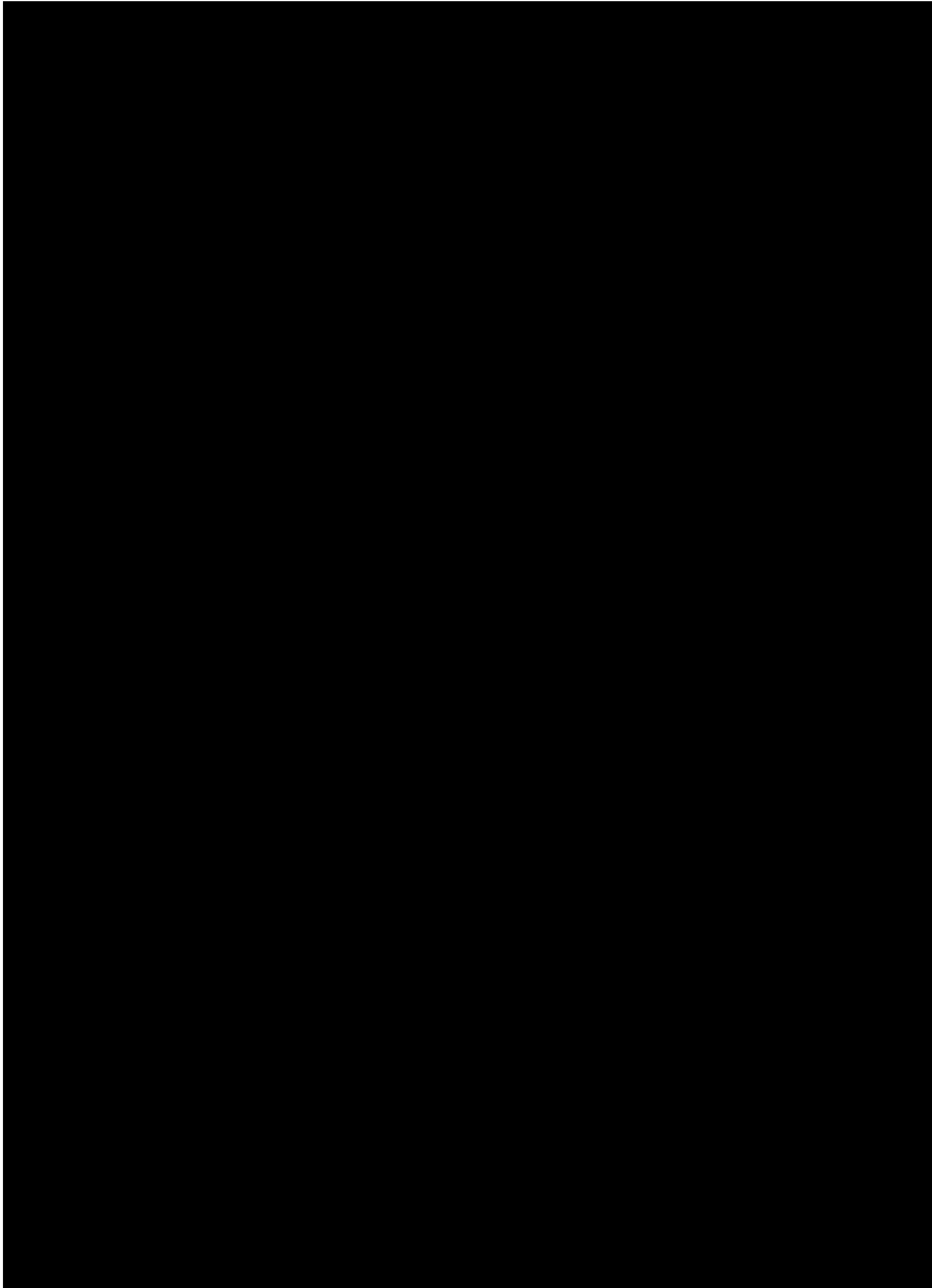
The eighth of these is the fact that the system is transparent. It is not a system that is opaque, and it is not a system that is hidden. It is a system that is able to be understood, and it is able to be managed. This is another fundamental principle of systems thinking, and it is one that is often overlooked in traditional approaches to problem-solving.

The ninth of these is the fact that the system is accountable. It is not a system that is irresponsible, and it is not a system that is unaccountable. It is a system that is able to be held responsible for its actions, and it is able to be held accountable for its results. This is another fundamental principle of systems thinking, and it is one that is often overlooked in traditional approaches to problem-solving.

The tenth of these is the fact that the system is effective. It is not a system that is ineffective, and it is not a system that is wasteful. It is a system that is able to achieve its goals, and it is able to use its resources efficiently. This is another fundamental principle of systems thinking, and it is one that is often overlooked in traditional approaches to problem-solving.









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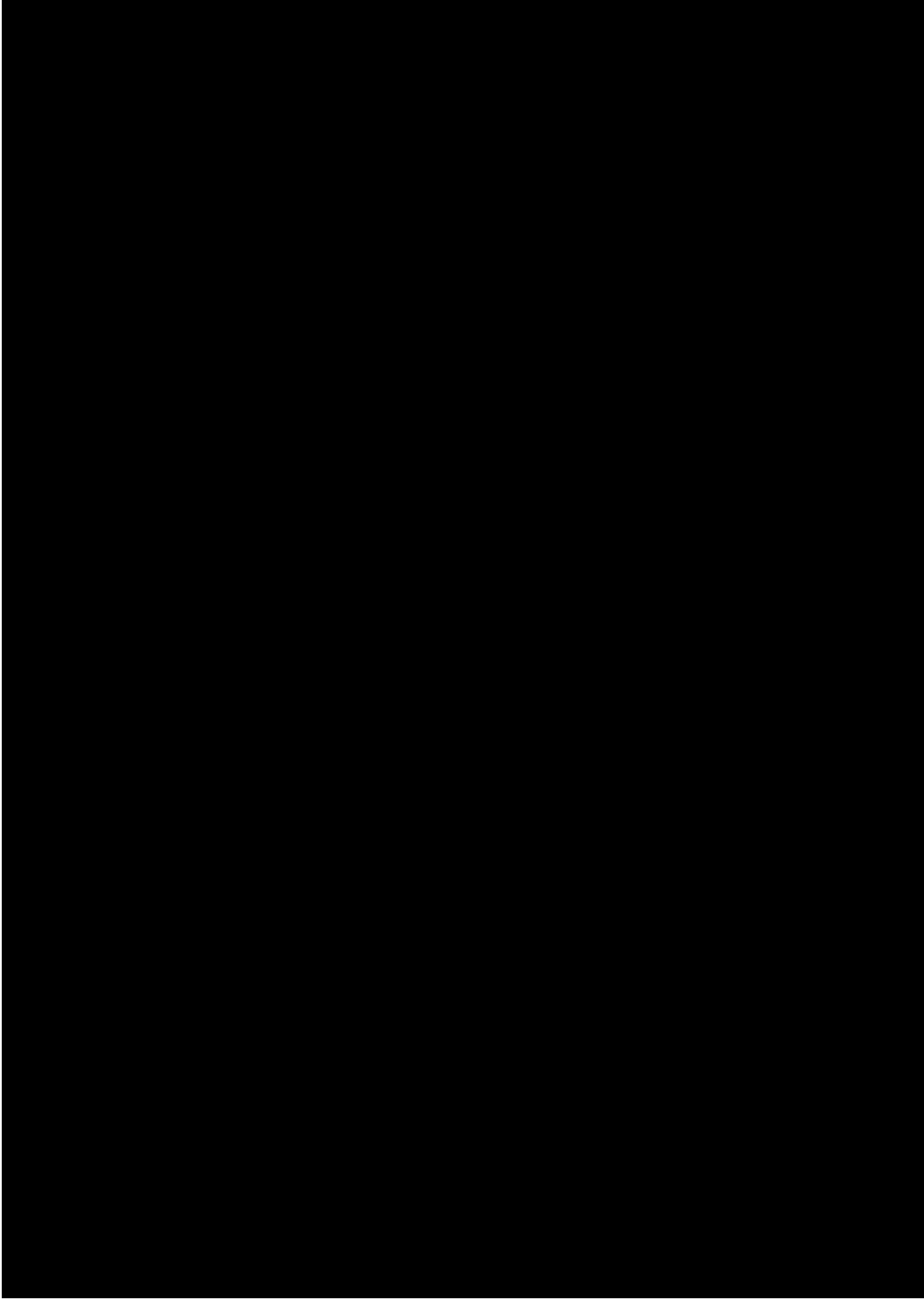
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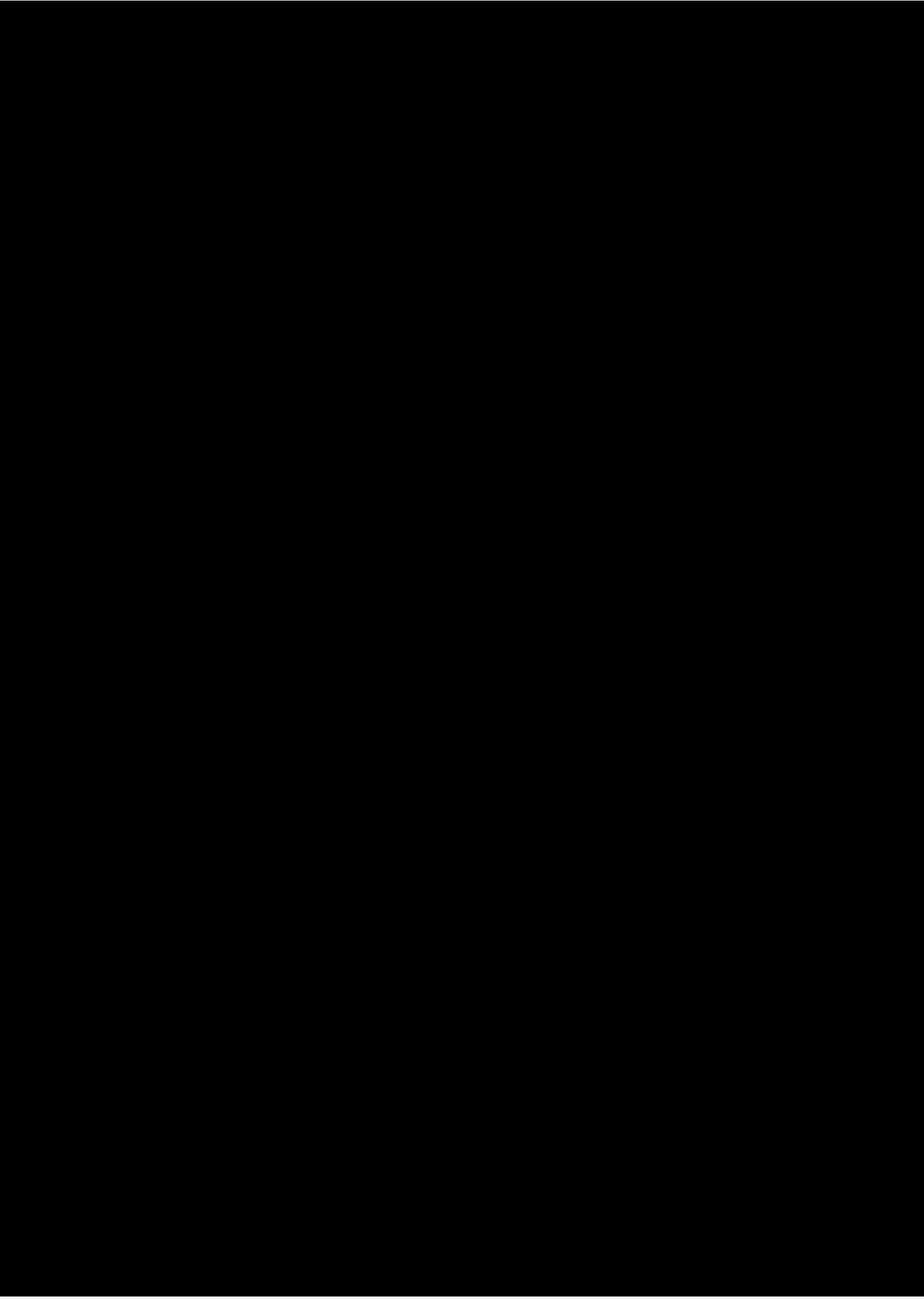
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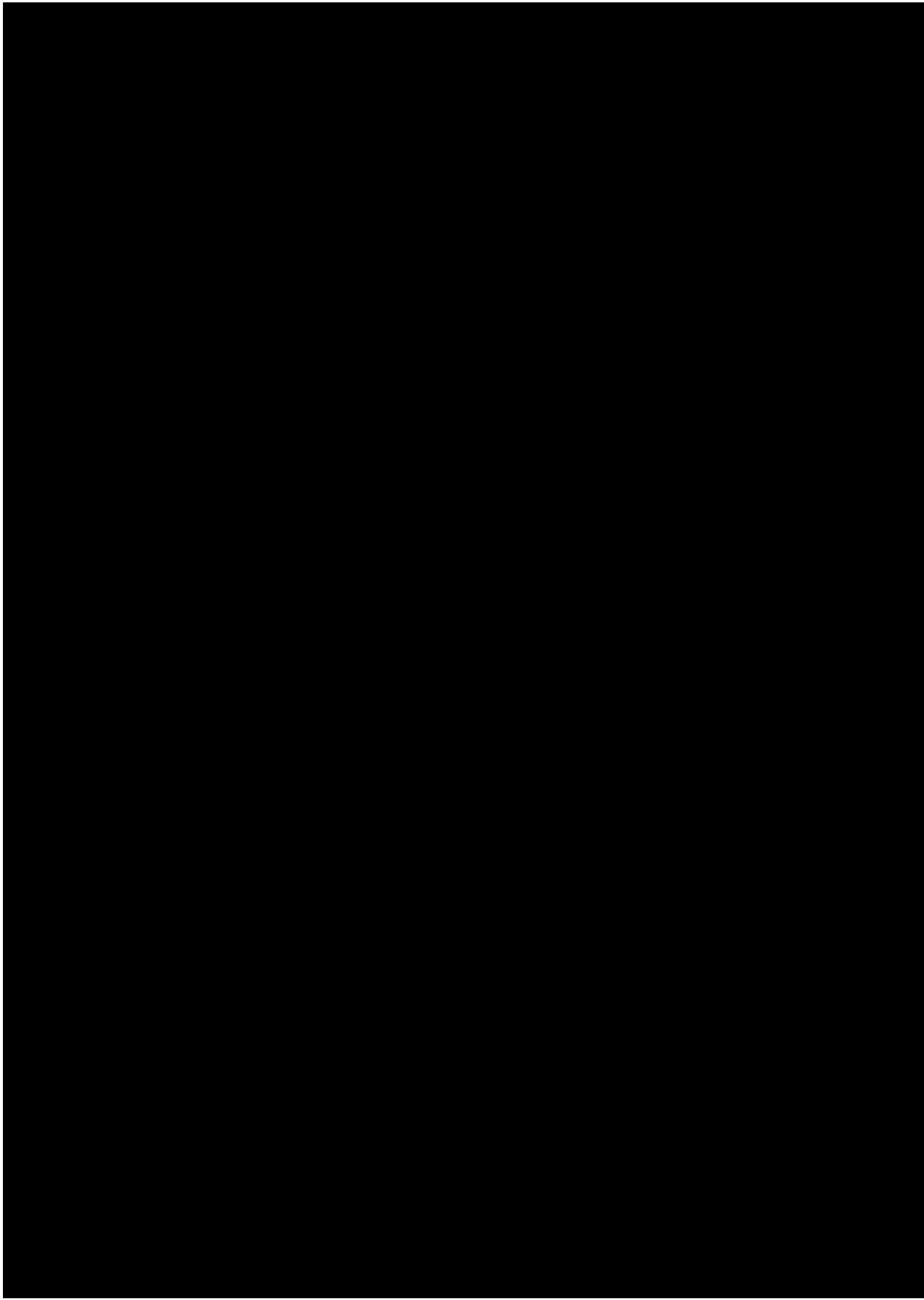
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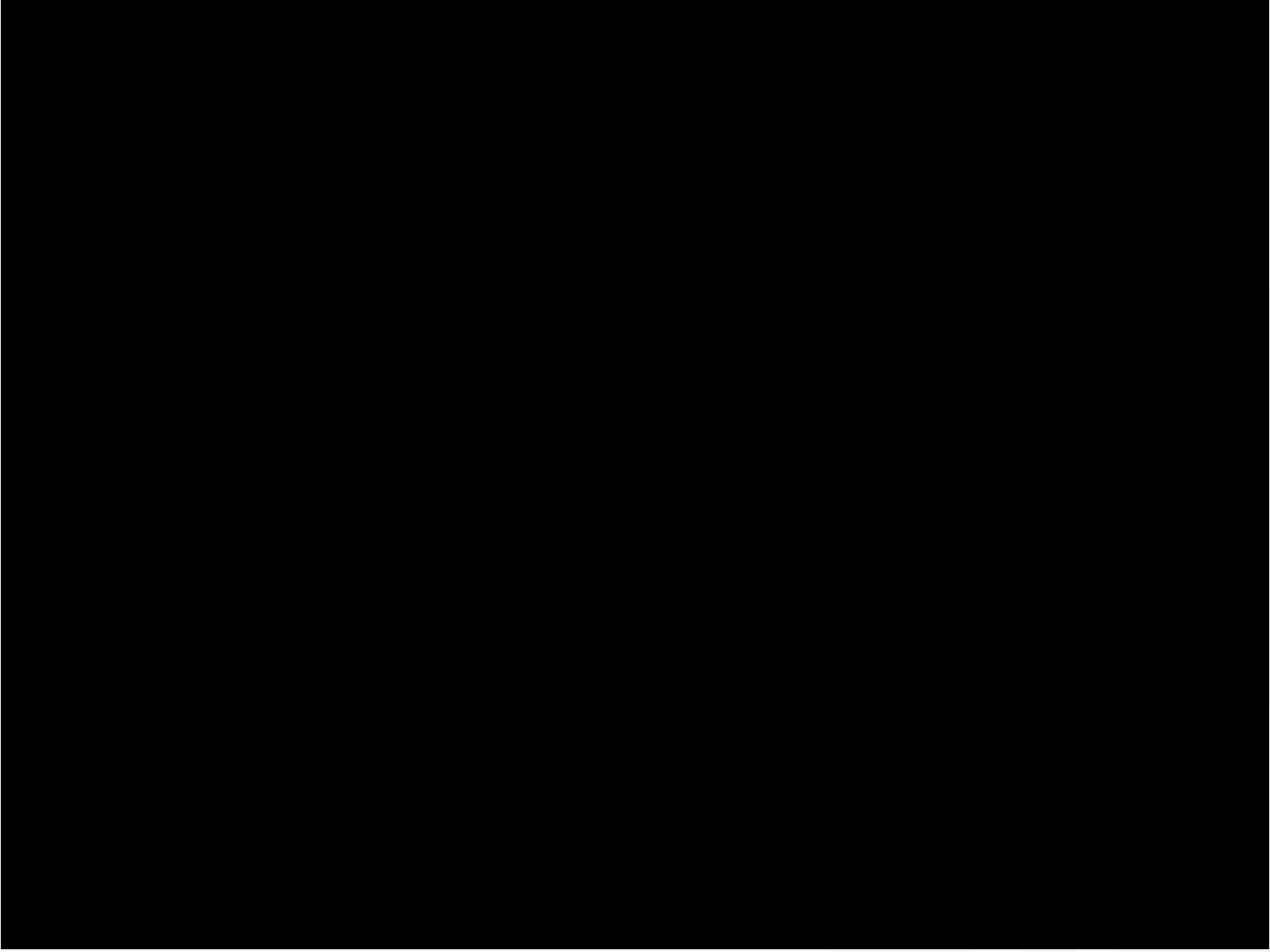
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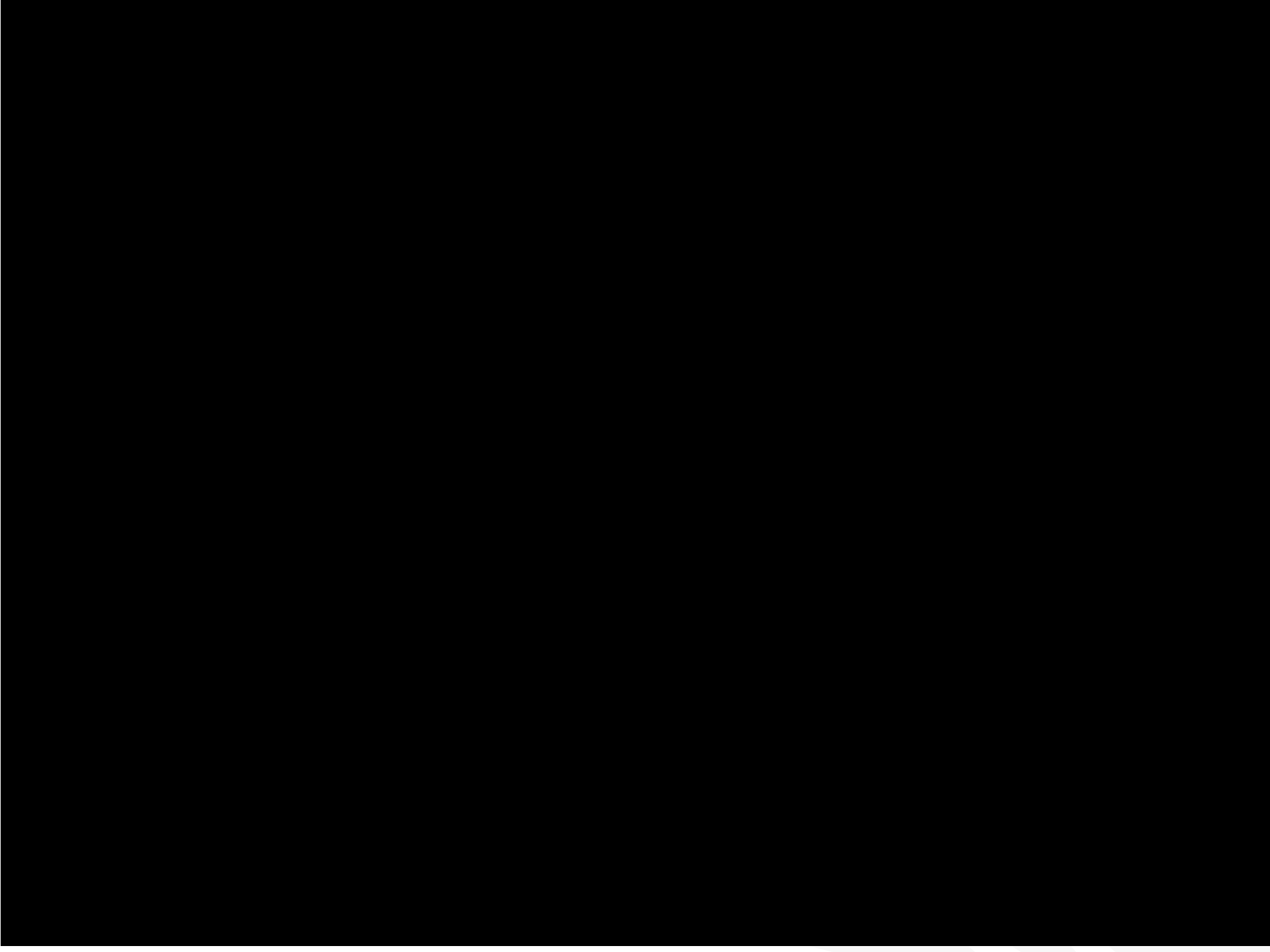




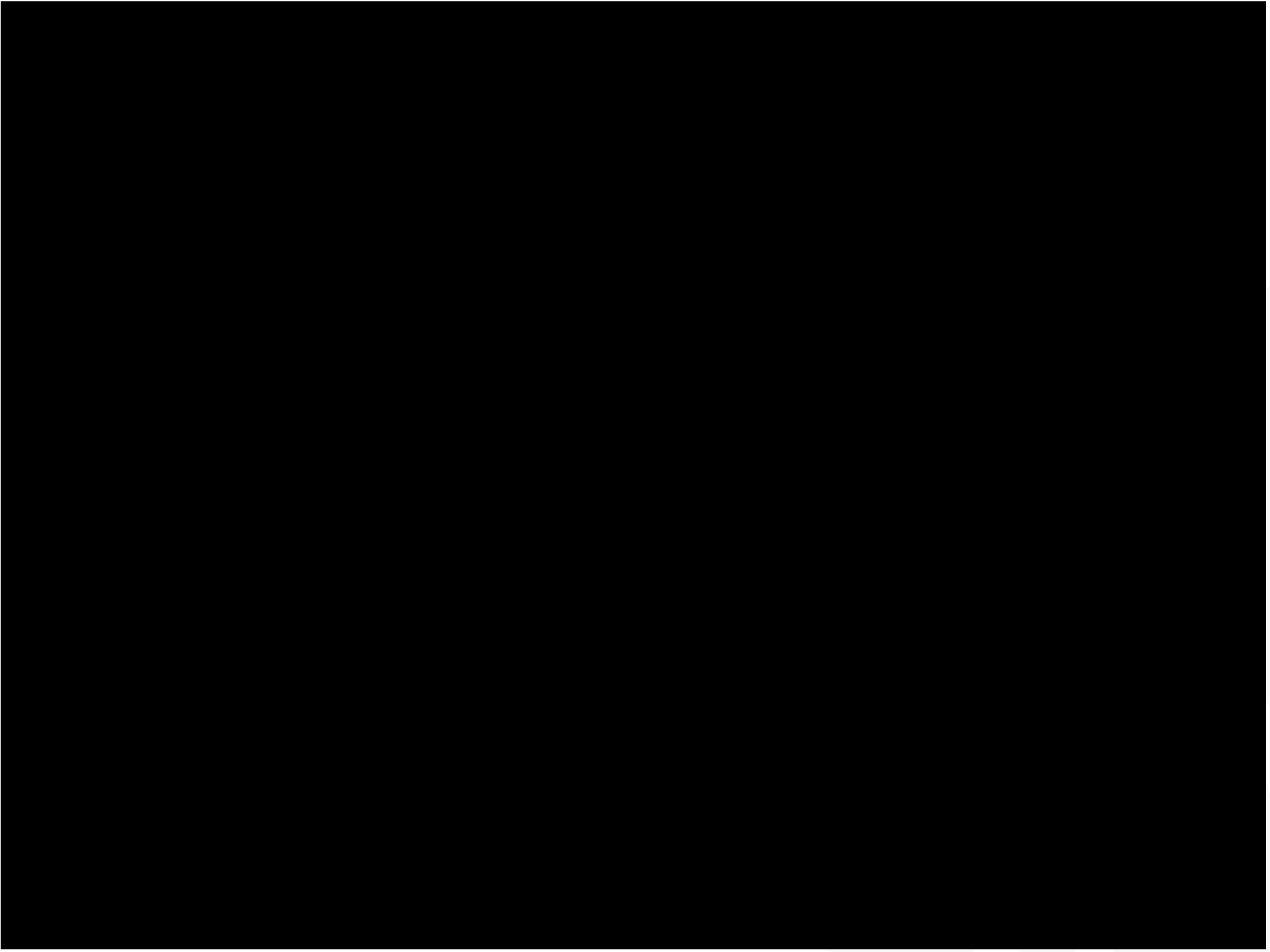


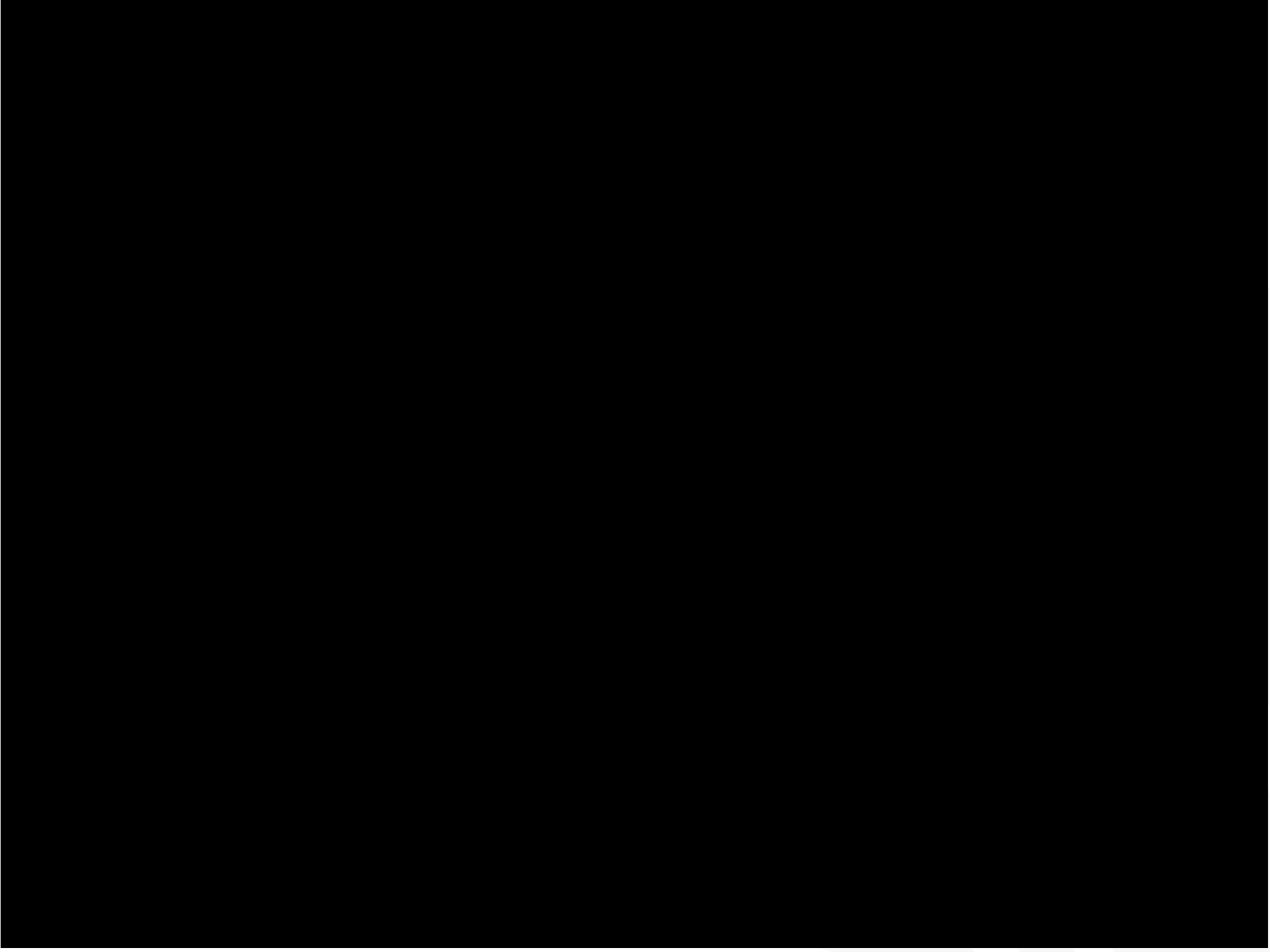




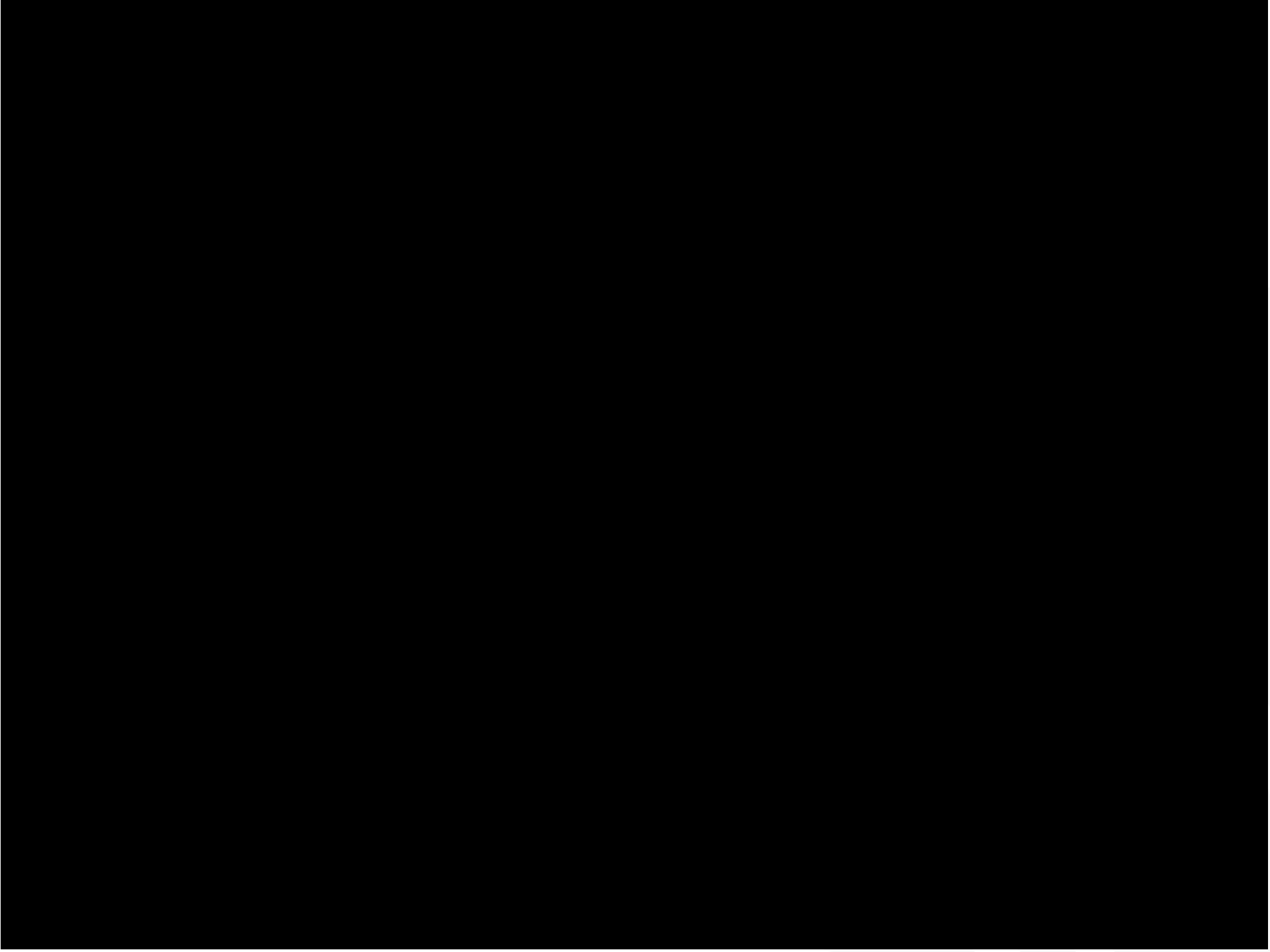


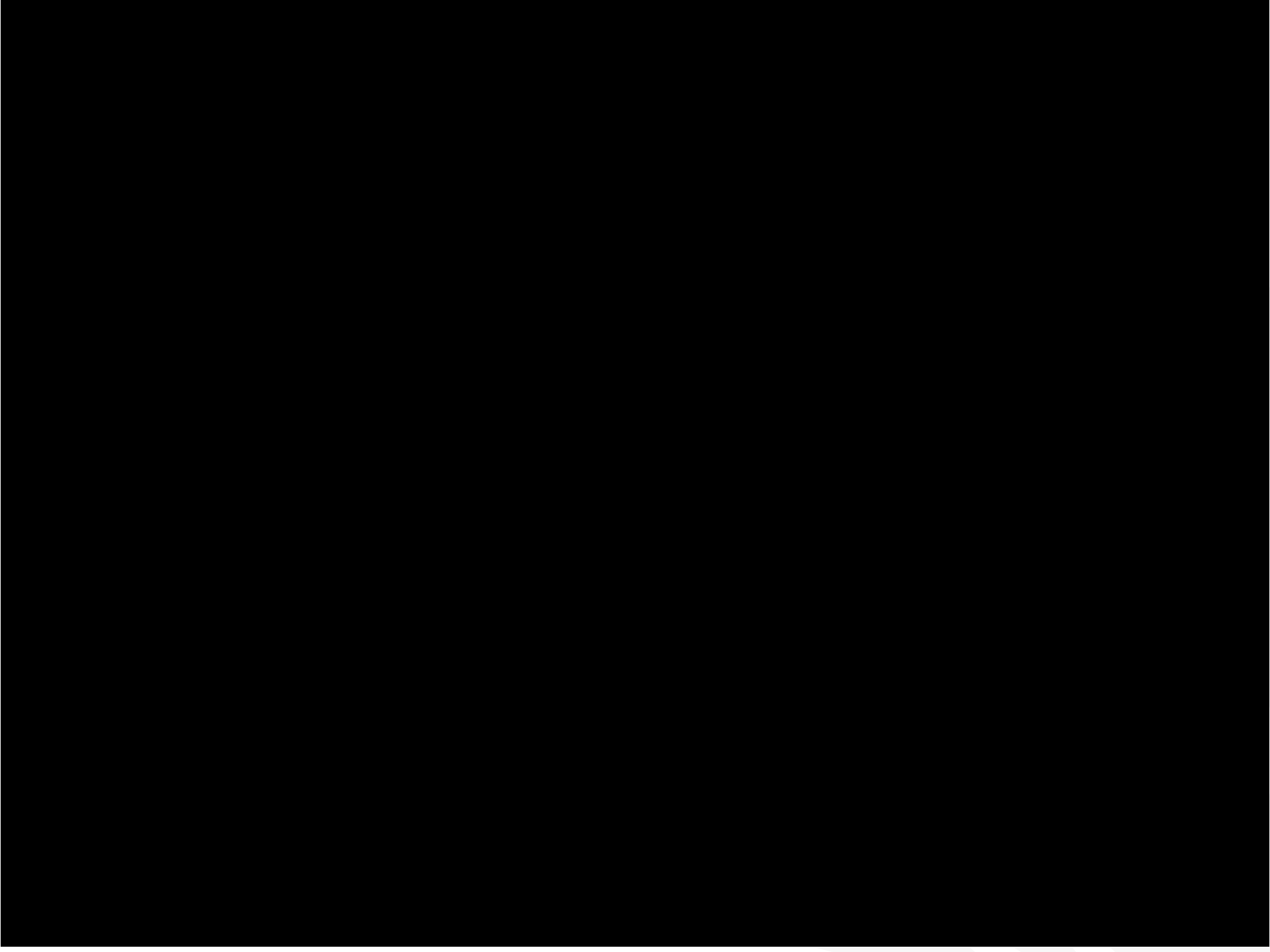


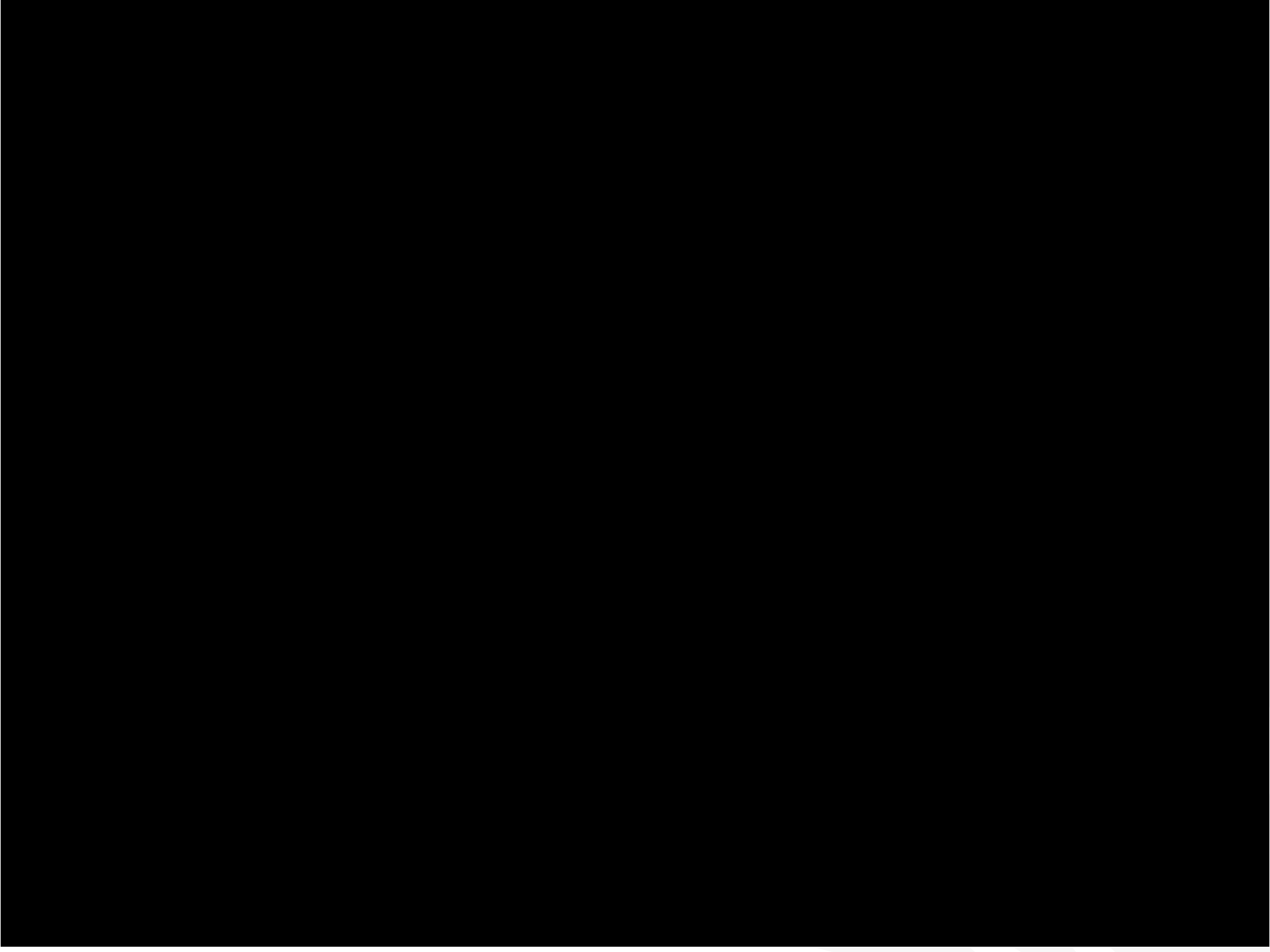


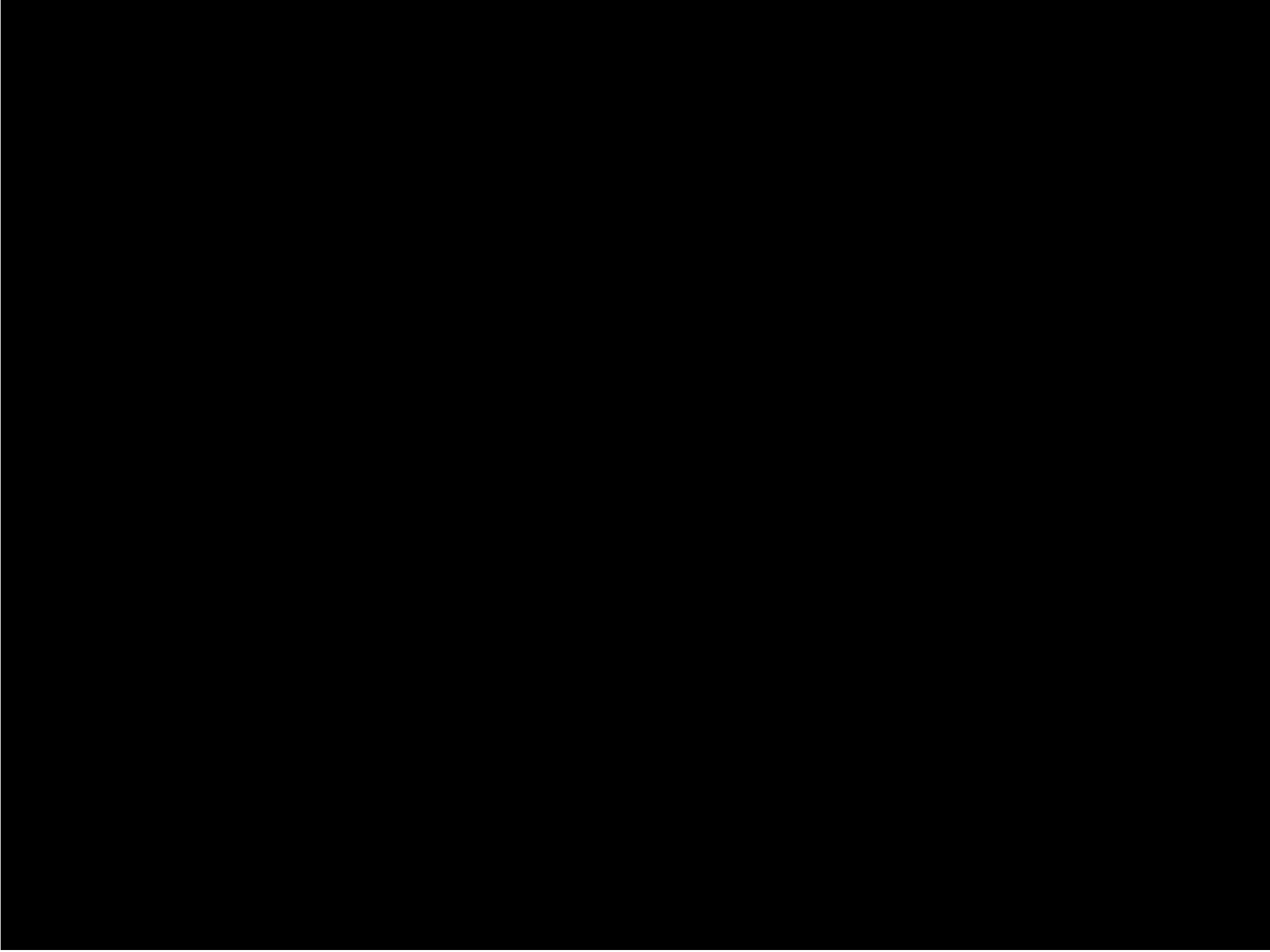


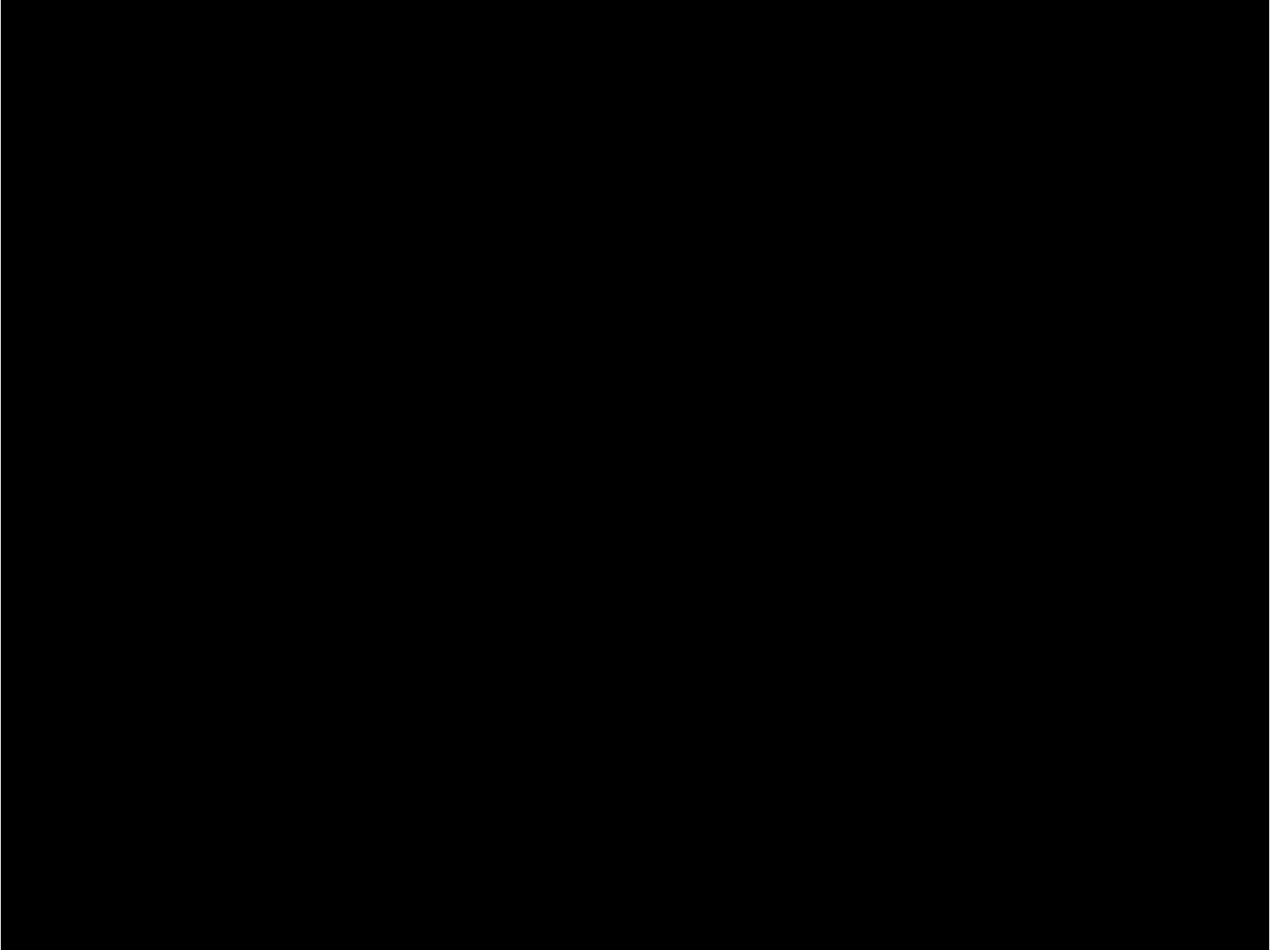




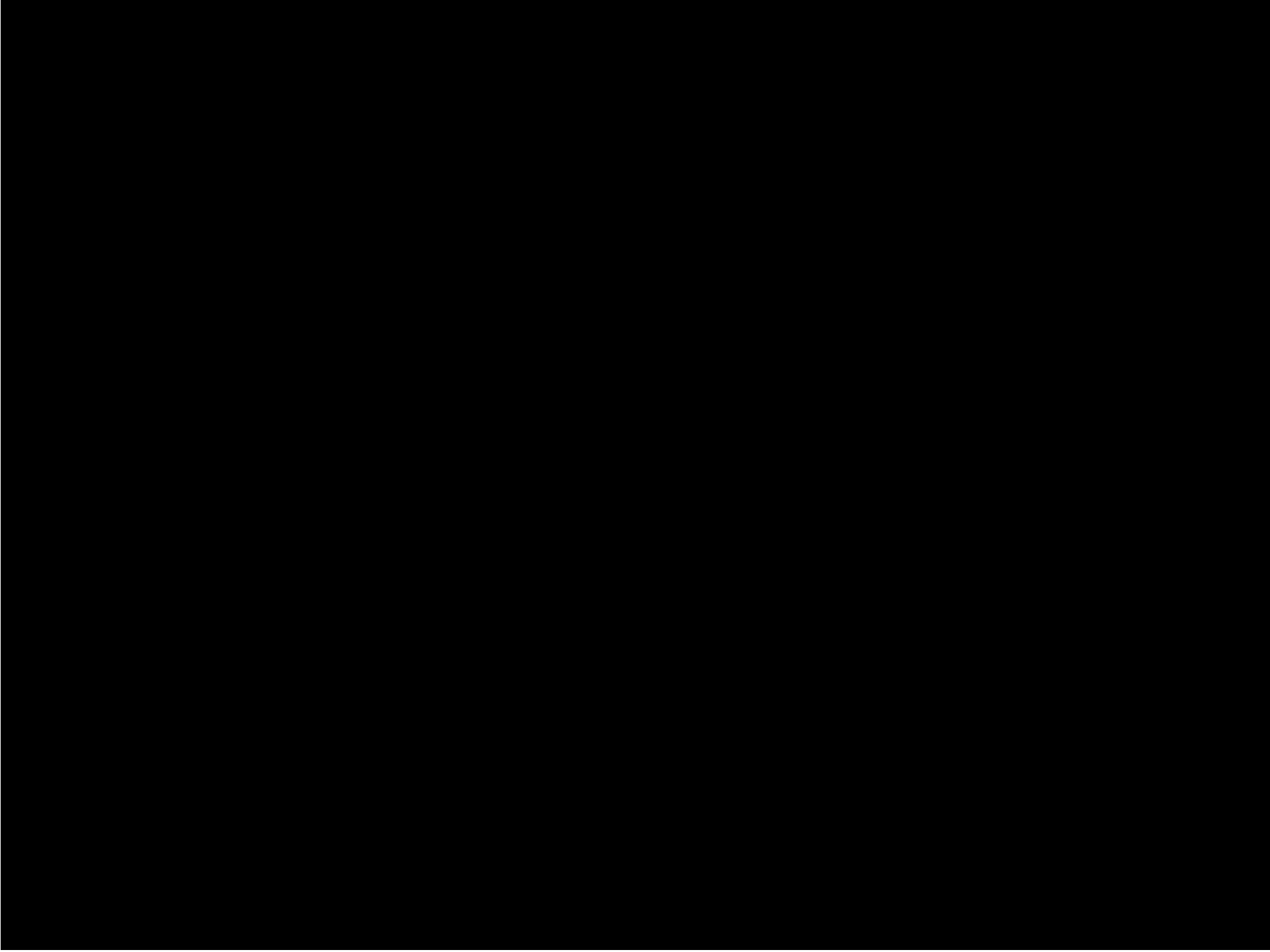




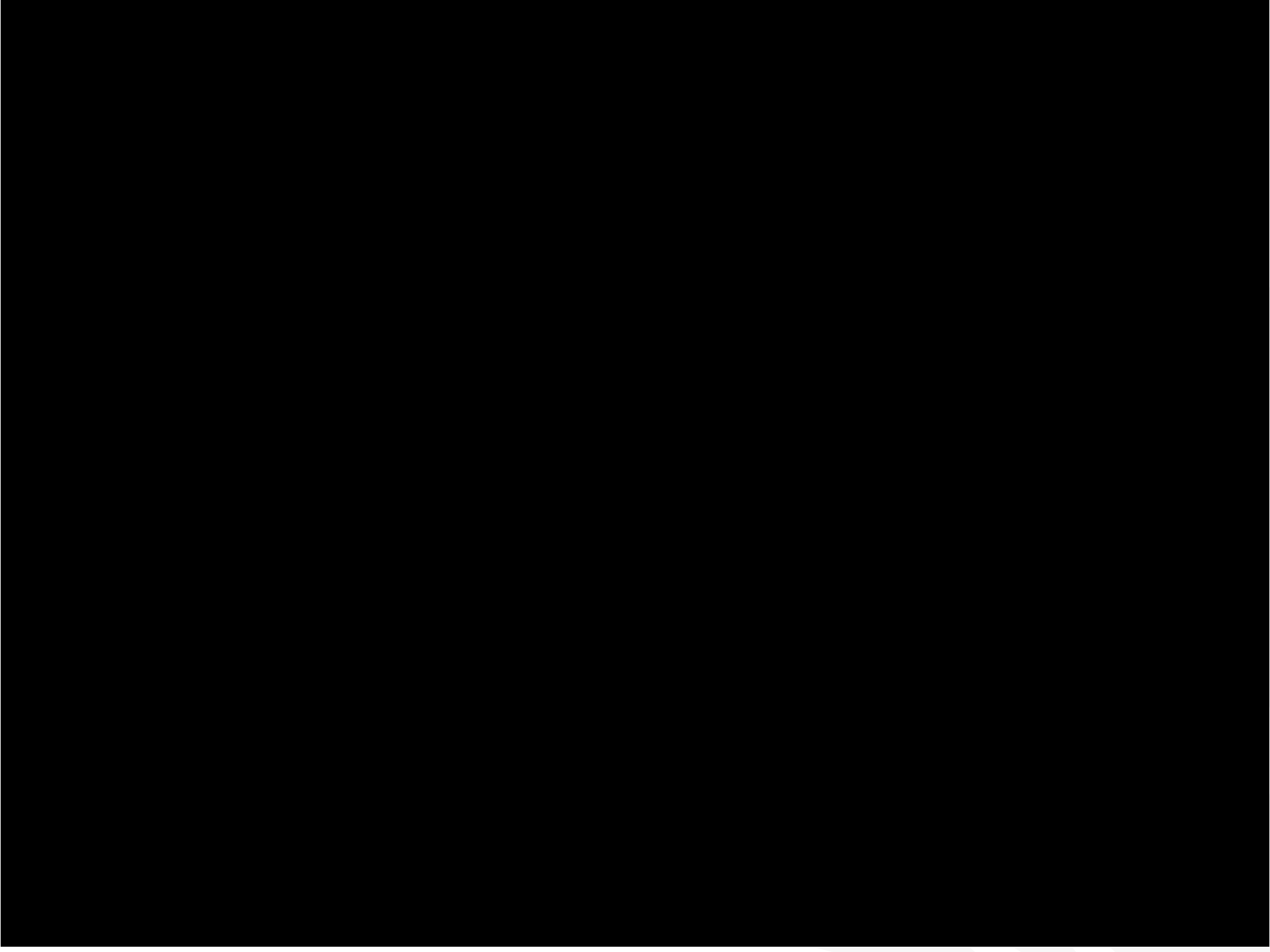


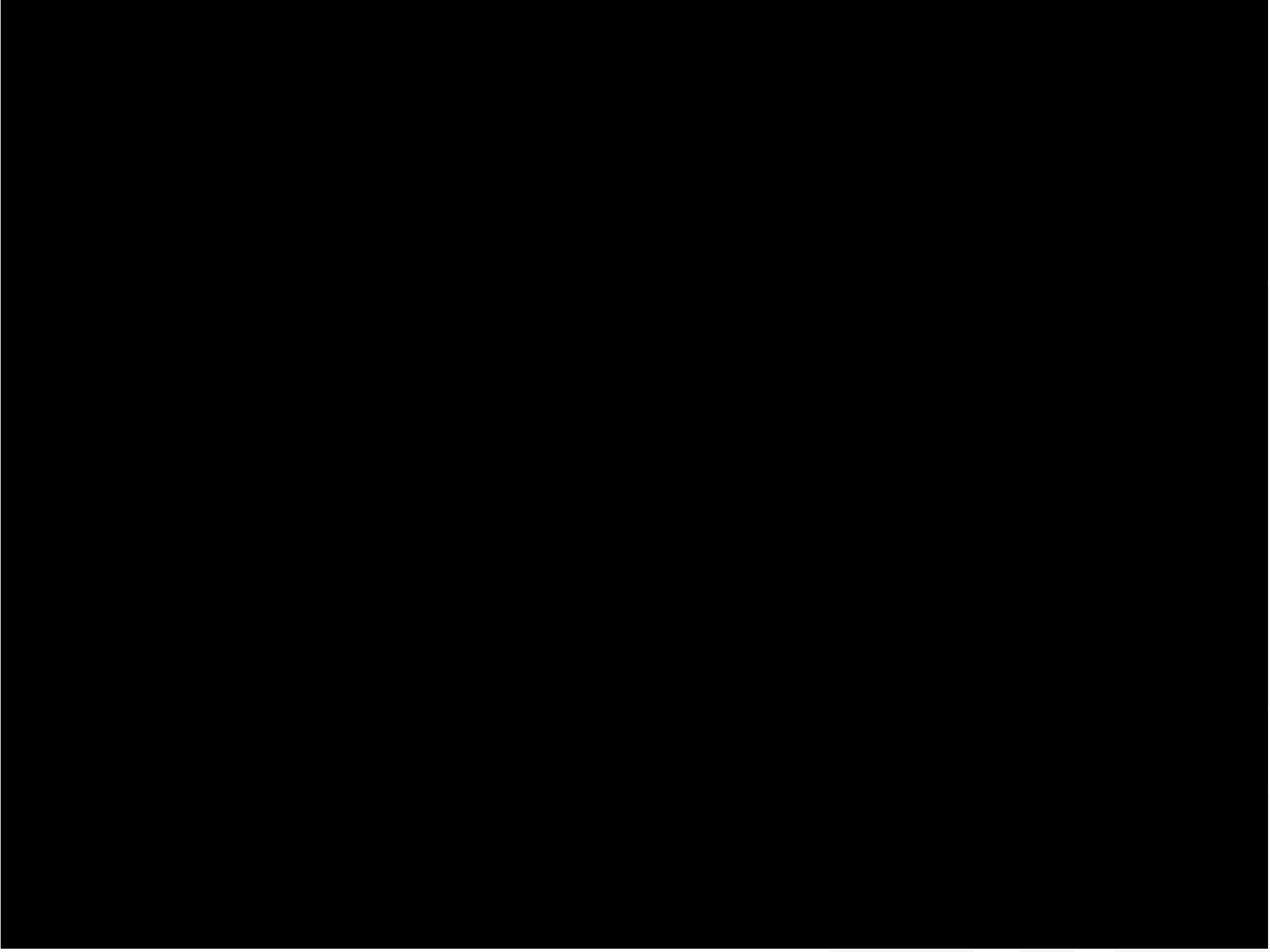


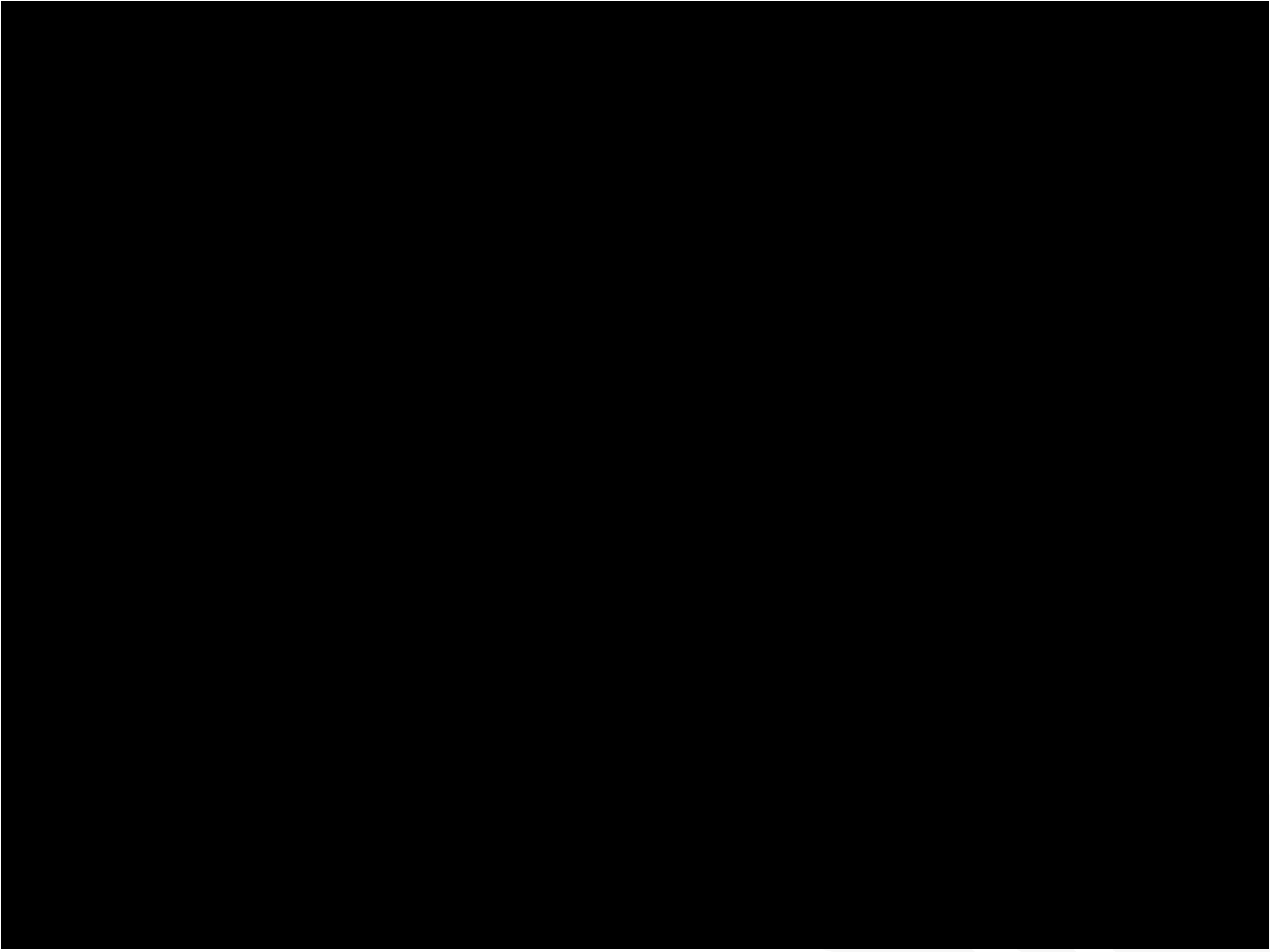


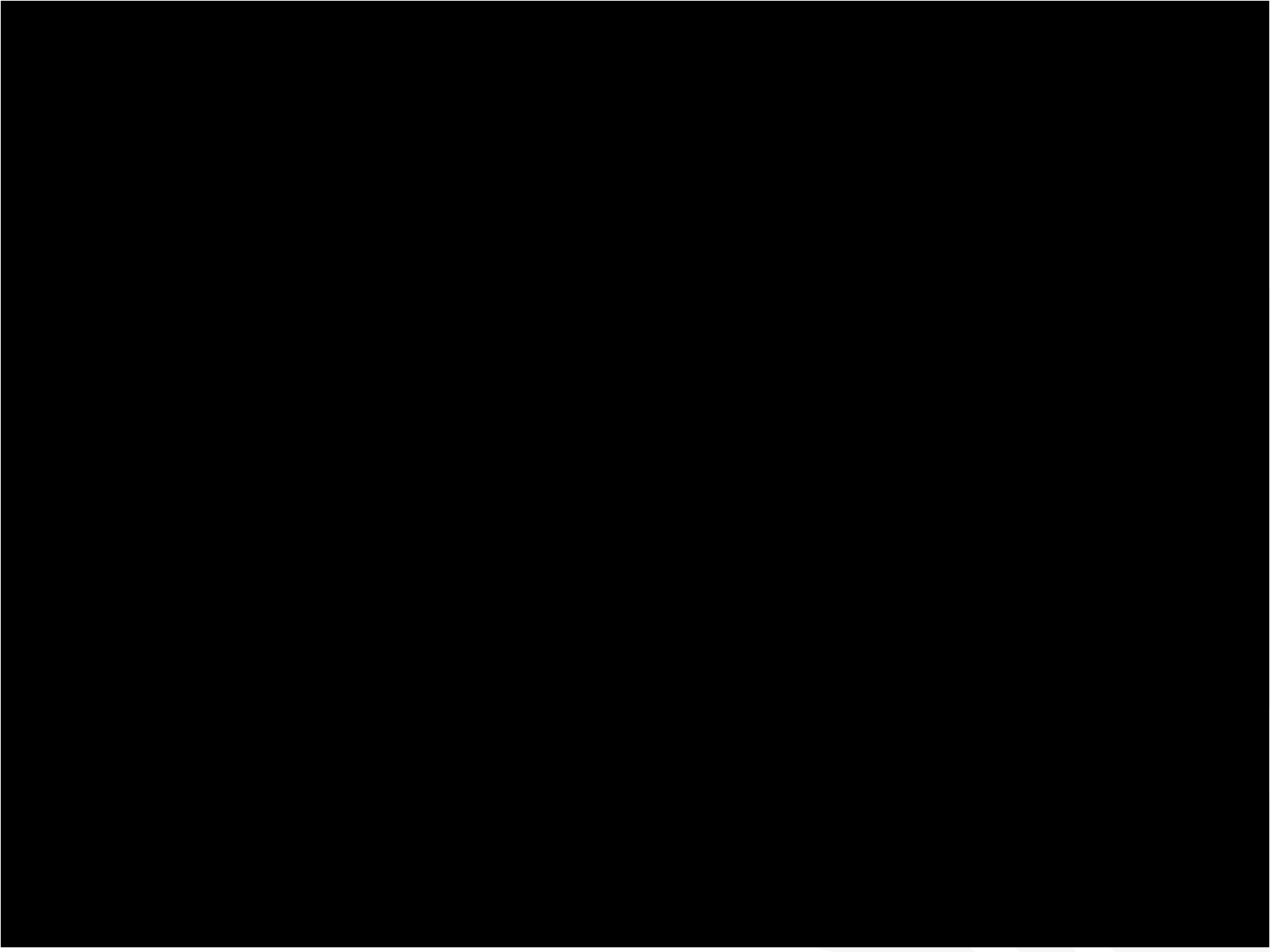
















## **Appendix C**

### Example Environmental Work Method Statement

# Albion Park Rail bypass Project

## ENVIRONMENTAL WORK METHOD STATEMENT (EWMS 3)

### Site Compound AS06 Establishment

#### Introduction

##### 1. Purpose

The purpose of this EWMS is to:

- ensure that all project personnel are aware of their environmental responsibilities and the environmental work method to be followed during site compound establishment, and
- identify key risks and the specific mitigations / control measures, procedures, checklists and permits to be implemented on site to manage environmental risks.

All subcontractors and Fulton Hogan personnel must adhere to the Work Method and associated mitigation measures listed in this EWMS.

##### 2. Scope

This EWMS covers the establishment of the main project site compound as described as AS06 in the Ancillary Facilities Management Plan, November 2018. AS06 will be established The main site compound will be established on the corner of the Illawarra Highway and the Princes Highway. The works being undertaken for this are illustrated in Appendix A.

##### 3. Equipment

Excavator, grader, rollers, truck and dogs will be used to construct a level pad for each compound structure and car parking areas. Mobile crane, franna and semi-trailers will be used to install site compound buildings. Refer to the relevant Safe Work Method Statement (SWMS) for a comprehensive list of plant and equipment.

##### 4. Timing of Works

Site compound establishment activities will commence in late November and are expected to take 6-8 weeks.

##### 5. Required Environmental Approvals

The following environmental approvals are required prior to commencement of site compound establishment activities:

- Ancillary Facilities Management Plan (AFMP) approval - NSW DP&E
- Community Communication Strategy (CCS) approval - NSW DP&E
- Environment Protection Licence - (NSW EPA)
- This EWMS - Environmental Representative (ER) and NSW RMS
- Progressive Erosion and Sediment Control Plan - (NSW RMS hold point release)
- Pre-clearing permit - (FH)

##### 6. Relevant Plans

- Appendix A – Sensitive Area Plan excerpt (indicating potential sensitive receivers, Aboriginal and non-Aboriginal / cultural heritage items, Endangered Ecological Communities, local waterways, habitat trees etc.)
- Appendix B – Progressive Erosion and Sediment Control Plan;
- Ancillary Facilities Management Plan (Rev 6), November 2018
- Unexpected Heritage Finds Procedure

##### 7. Monitoring

The Environmental Manager and/or Environmental Officer will undertake inspections of the work sites fortnightly during pre-construction or in accordance with the approved AFMP to evaluate the effectiveness of environmental controls. The results of the inspections will be recorded in the Environmental Inspection Checklist. If any maintenance and/or deficiencies in environmental controls or in the standard of environmental performance are observed, they will be recorded on the Checklist. Records will also include details of any maintenance required, the nature of the deficiency, any actions required and an implementation priority. The completion of the actions will be monitored to ensure they are implemented within the timeframes specified in the Checklist.

##### 8. Incident Response

In the event of an incident the Supervisor will give directions to stop work and immediately contact the Environmental Manager in accordance with the **Incident and Emergency Response Plan**.

In the event of an emergency:

- All efforts will be undertaken immediately to avoid and reduce impacts of incidents and suitable emergency response controls put in place
- RMS will be notified verbally immediately of an incident
- Fulton Hogan's Case and Action Management system (CAMs) software will be used to record all environment incidents
- Incident reports will be provided to RMS within 72 hours of Fulton Hogan becoming aware of the incident, including lessons learnt from each environmental incident and proposed measures to prevent the occurrence of a similar incident.
- RMS Environmental Incident Classification and Reporting Procedures will be implemented.

##### 9. Risk Assessment Methodology

The below risk assessment methodology was used to evaluate the risk level associated with each of the activities listed in the Work Method.

		Potential Consequence				
		Insignificant	Minor	Significant	Major	Catastrophic
Risk Type	Health and Safety	No treatment required	First Aid Treatment Injury	Medical Treatment Injury (MTI) OR Restricted Work Injury OR Lost Time Injury (LTI) 3 days or less	Lost Time Injury (LTI) 4 days or more OR Hospitalisation	Fatality OR Permanent disability
	Environment	No impact on or off site	On-site impact requiring routine internal remediation	Off-site impact requiring internal remediation OR on-site impact requiring substantial internal remediation	Impact on- or off-site requiring specialist external remediation	Impact on- or off-site with long term effect OR requiring immediate external response
	Quality	Accept as is OR Audit Recommendation	Minor Audit Finding (NCR)	Major Audit Finding (NCR)	Critical Audit Finding (NCR) OR Accreditation warning	Loss of accreditation
	Cost (Remedials, Plant or Property)	Less than \$1000	\$1,000 to \$10,000	\$10,000 to \$25,000	\$25,000 to \$100,000	Greater than \$100,000
	Community & Reputation	No community complaints	Isolated community complaint	Repeat community complaints OR negative local media	Frequent community complaints OR negative regional media OR Negative Social Media	Organized community opposition OR negative national media OR Viral Negative Social Media
	Regulatory	Notified / no response or Verbal directive	Verbal Warning / No Response Required	Written Warning / Cost Recovery / Response Required / Improvement Notice	Abatement Notice / Infringement Notice / Prohibition Notice	Prosecution / Enforcement Order
	Business Interruption	No interruption to work	Work interrupted	Temporary site closure (less than a day)	Temporary site closure (more than a day)	Permanent site closure or eviction

		Potential Consequence Level				
		Insignificant	Minor	Significant	Major	Catastrophic
Potential Likelihood Level	Almost Certain <i>The potential consequence is expected to occur in most circumstances</i>	Med 11	High 16	High 20	Ext 23	Ext 25
	Likely <i>The potential consequence will probably occur in most circumstances</i>	Med 7	Med 12	High 17	High 21	Ext 24
	Possible <i>The potential consequence is expected to occur at some time</i>	Low 4	Med 8	Med 13	High 18	High 22
	Unlikely <i>The potential consequence could occur at some time</i>	Low 2	Low 5	Med 9	Med 14	High 19
	Rare <i>The potential consequence may occur in exceptional circumstances</i>	Low 1	Low 3	Low 6	Med 10	Med 15

RISK LEVELS	SCORES	PARAMETERS
EXTREME	23 – 25	If the post-control risk is EXTREME the activity <b>MUST NOT</b> proceed. Elimination, substitution, isolation and/or engineering controls must be put in place to reduce the risk rating to LOW or MEDIUM
HIGH	16 – 22	If the post-control risk is High the activity <b>MUST NOT</b> proceed. Alternate controls must be put in place to reduce the risk rating to LOW or MEDIUM
MEDIUM	7 – 15	The activity can proceed so long as the highest level and most appropriate risk control measures have been identified and implemented
LOW	1 – 6	Activity may proceed with normal supervision after implementing control measures

Work Method

#	Sequence of Work Activities <i>How will the work be done?</i>	Potential Hazards <i>What harm can occur?</i>	Risk <i>High-Med-Low</i>	Mitigation measures <i>How can the risk be minimised?</i>	Responsibility <i>Who will ensure that controls are in place?</i>
Prior to Works Commencing					
1	Planning of Works	Works commencing without approval	High 17	• Identify all approvals, permits and licences required for the works, ensure they are in place and conditions adhered to.	Project Engineer / Foreman / EM/ EO
				• Review and implement measures set out in the Ancillary Facilities Management Plan (AFMP) and Community Communication Strategy (CCS)	Project Engineer / Environmental Manager (EM) / Community Relations Manager
				• Prepare a Progressive Erosion and Sediment Control Plan (PESCP – <b>Appendix C</b> ) and obtain sign off from the EO.	Project Engineer
				• Include a designated concrete wash-out area. Wash out concrete and tools only at designated wash points which contain all wash water and don't leak.	
		Community are exposed to impacts without prior notice	Medium 13	• Identify nearest sensitive receivers prior to works and plan works accordingly (SAP - <b>Appendix B</b> ).	Project Engineer
				• Notify the Community Relations Team (CRT) of the details and location of the required works and potential impacts on the community. A minimum of 5 days' notice to the CRT is required, where possible.	Project Engineer
				• Where works will potentially impact on sensitive receivers, prior to commencing the works, complete community consultation in accordance with the <b>Community Communication Strategy</b> (CCS), allowing between 5-14days notification in accordance with the EPL.	Community Relations Manager
				• Obtain permission to access private property prior to the commencement of works, where applicable.	Community Relations Manager
				• Implement warning signage for the general public regarding activities within public areas. Exclude access for the public to these areas whilst the works are carried out.	Foreman
		Works are not carried out within the approved hours	Medium 12	• Plan and undertake works during standard construction hours: Monday to Friday 7.00am to 7.00pm; and Saturday 8.00am to 5.00pm. Where works must occur outside of standard hours, assess Out of Hours works in accordance with the <b>project EPL</b> .	Environmental Manager (EM) / Foreman
		Environmentally sensitive areas i.e. Environmental 'No-Go' or exclusion areas not identified	High 17	• Undertake a pre-clearing survey to confirm the vegetation to be cleared (including presence of weeds, tree hollows, nesting structures, potential nesting sites, threatened flora or fauna species).	EO / Ecologist
				▪ Review Sensitive Area Plans (SAP - <b>Appendix B</b> ) and identify environmental 'No-Go' or exclusion areas prior to works commencing. Environmental 'No-Go' or exclusion areas include Endangered Ecological Communities (EECs), Aboriginal and non-Aboriginal heritage sites/items and threatened flora and fauna.	Project Engineer / EO
2	Provide training to personnel and subcontractors involved	Non-compliance with agreed work methods	Medium 8	▪ Toolbox Project Engineer, Foreman and working crew on the content of this EWMS, any specific procedures relevant for their work activity, ESCP's, clearing limits, 'No-Go' or exclusion areas and areas where residents are located close to the site compound establishment activities.	Environmental Manager (EM) / Environmental Officer (EO)
3	RMS Specifications compliance – hold points / quality control	Non-compliance or proceeding prior to RMS approval	Medium 13	▪ Submit appropriate hold points under RMS Specification G36 / G38 / G40 ▪ Review Aviation Method of Working in regard to OLS / CASA compliance issues	Project Engineer / EO
Access Site					
3	Install erosion and sediment controls	Erosion and sedimentation due to ground disturbance resulting in pollution of waterways	High 17	▪ Install erosion and sediment controls for each particular section of works in accordance with the PESCP ( <b>Appendix C</b> ), prior to the commencement of any clearing, or ground disturbance. ▪	Foreman
4	Install Environmental 'No-Go' signage or exclusion fencing	Damage to environmentally sensitive areas i.e. Environmental 'No-Go' or exclusion areas	Medium 13	▪ Erect exclusion fencing and signage to ensure that environmentally sensitive areas are protected	Foreman/ EO
Site Compound Establishment					
5	Establish site compound	Clearing beyond approved area	Medium 13	▪ Ensure the Pre-clearing Permit has been signed-off by the EO prior to clearing	Foreman
		Poorly maintained erosion and sediment controls result in pollution of waterways	High 18	▪ Divert offsite run-on water around the works site as much as possible. Use permanent cut-off drains to achieve this as much as possible.	Foreman
				▪ Construct sediment control measures as close to the potential source of sediment as possible (including stockpiles).	Foreman
				▪ Inspect and maintain erosion and sediment controls regularly and after rain to ensure that they remain effective.	Foreman / EO
		Impact to Air Quality	High 17	▪ stabilise all disturbed areas and long term stockpiles (unused for longer than 4 weeks) as soon as practicable to minimise wind-blown dust. Spray shorter term stockpiles with water or stabilising agent to reduce dust emissions.	Foreman
				▪ Cover unsealed roads with densely graded road base where practicable if dust is excessive.	Foreman
				▪ Restrict speeds of construction traffic.	Foreman
				▪ Restrict construction traffic to designated roadways.	Foreman
				▪ Prevent mud tracking on public roads by maintaining stabilised access (e.g. hardstand, rock, rumble grids, or wheel washes) at all access/egress points on site.	Foreman
				▪ Modify or stop construction activities during periods of strong wind (in excess of 40km/h) and in response to strong wind weather forecasts. Record this in the <b>Strong Wind Work Modification Record</b> .	Foreman
				▪ Maintain all vehicles and construction equipment in accordance with the manufacturer's specification to comply with all relevant legislation.	Foreman / Truck Driver/ Site Worker
				▪ Turn machinery and vehicles off when not in use.	Foreman / Truck Driver/ Site Worker
				▪ Cover all loads that enter or leave the site.	Foreman / Truck Driver/ Site Worker
		Fire Danger	Medium 9	▪ No burning or incineration of waste (including green waste) on site.	Foreman / Site Worker
				▪ Cease potential fire causing activities during designated "Total Fire Ban" days.	Foreman / Site Worker
		Damage to Flora / Injury to Fauna	Medium 9	▪ No admittance is allowed into Environmental 'No-Go' or exclusion areas (see SAP - <b>Appendix B</b> ). without prior approval of the Environmental Manager, this includes pedestrian traffic.	Foreman/ Site Worker
				▪ Deliver a Toolbox talk to raise Workers' awareness of nearby Environmental 'No-Go' or exclusion areas (one tree near Macquarie Rivulet)..	Foreman
				▪ Remind Workers of Environmental 'No-Go' or exclusion areas during pre-start meetings.	Foreman
				▪ Should threatened flora species be encountered during construction activities, follow the <b>Unexpected Threatened Species / TEC Finds Procedure</b> .	Foreman/ Site Worker
				▪ Report any nuisance, injured, sick or killed fauna to the Environmental Manager who will implement the <b>Fauna Handling and Rescue Procedure</b> .	Foreman/ Site Worker
				▪ Ensure the Pre-clearing Permit has been signed-off by the EO prior to clearing	Foreman
		Introduction/spread of noxious weeds	Medium 9	▪ Ensure the Pre-clearing Permit has been signed-off by the EO prior to clearing.	Foreman/ EO
				▪ Manage weeds in accordance with the <b>Weed Management Plan</b> .	Foreman/ EO
		Removal of fencing, gates, nursery related building fabric / equipment and demolition of existing structures within former Nursery boundary	Medium 8	▪ Remove and stockpile any salvageable material for 1) reuse on site or 2) disposal via a local salvage yard; Eg fence posts, rainwater tanks etc.	Foreman/ Site Worker
				▪ Segregate recyclable material such as metals for recycling	Foreman/ Site Worker
				▪ Provide waste receipts/dockets for all wastes removed from site to the EO.	Foreman / Truck Driver/ Site Worker
				▪ Engage a licensed liquid waste contractor to remove, transport and dispose of liquid waste to a licensed liquid wastedisposal facility.	Foreman/ EO
				▪ Break up or hole septic tanks, apply hydrated lime and back fill with clean fill in accordance with NSW Health Advisory Note 3 – Destruction, Removal or Reuse of Septic Tanks (January, 2017)	Foreman / Site Worker
				▪ Undertake works to minimise odour generation and impacts on community and workers. If nuisance odours are generated, undertake measures to prevent the odour. If this is not possible, suspend works and contact the Environmental Manager and Construction Manager.	Foreman / Site Worker
		Damage to Heritage	Medium 13	▪ If a suspected heritage item is found, stop work within the vicinity of the item and contact the Environmental Officer immediately. Refer to the <b>Unexpected Heritage Finds and Human Remains Procedure</b> ..	Forman / Site Worker
				▪ Deliver a Toolbox talk to raise Workers' awareness of nearby Environmental 'No-Go' or exclusion areas.	Foreman
				▪ Remind Workers of Environmental 'No-Go' or exclusion areas during pre-start meetings.	Foreman
		Impact to receivers due to noise and/or vibration	Medium 12	▪ Undertake works during standard construction hours: Monday to Friday 7.00am to 7.00pm; and Saturday 8.00am to 5.00pm.	Foreman
				▪ Ensure all mobile construction equipment have non-tonal reversing alarms.	Project Engineers / Foreman
				▪ Position site access points and roads as far as practicable away from residential receivers.	Project Manager
				▪ Plan and conduct works in a manner to minimise the reversing of vehicles with audible reversing alarms.	Project Engineer
				▪ Ensure that truck tailgates are cleared and locked at the point of unloading.	Foreman/ Truck Driver
				▪ Use two way radios at the minimum effective volume.	Foreman/ Truck Driver/ Site Worker
				▪ Do not use vehicle warning devices, such as horns, as signalling devices.	Foreman/ Truck Driver

#	Sequence of Work Activities <i>How will the work be done?</i>	Potential Hazards <i>What harm can occur?</i>	Risk <i>High-Med-Low</i>	Mitigation measures <i>How can the risk be minimised?</i>	Responsibility <i>Who will ensure that controls are in place?</i>
				▪ Undertake regular maintenance of plant and equipment, including silencers, to ensure that noise emissions do not increase over time.	Foreman/ Truck Driver/ Site Worker
				▪ Turn vehicles and machinery off when not in use.	Foreman/ Truck Driver/ Site Worker
				▪ Orient plant and equipment known to emit noise strongly in one direction so that the noise is directed away from noise sensitive areas.	Foreman/ Site Worker
				▪ Avoid metal-to-metal contact on equipment where feasible.	Foreman/ Truck Driver/ Site Worker
		Disturbance/exposure of ASS	Low 5	▪ Should the presence of ASS be confirmed, follow the <b>Acid Sulfate Soil Management Procedure</b> .	Foreman / Project Engineer/ EO
		Contamination risks to environment or human health	Medium 8	▪ In the event that contamination is identified, stop work within the vicinity of the suspected contamination and contact the Environmental Officer immediately. Refer to the <b>Unexpected Contaminated Land and Asbestos Finds Procedure</b> .	Foreman/ Site Worker
		Improper storage, use and spills of hazardous liquids and chemicals	Medium 13	▪ Keep liquid chemicals and fuels in bunded storage areas or sheds/containers that have the capacity to contain spills or leaks or from an incident involving a decanting activity. Ensure the bunded capacity is at least 120% of the total capacity of all containers stored inside the bunded area or facility.	Foreman/ Site Worker
				▪ Conduct refuelling, maintenance of equipment, vehicle servicing, washing construction plant and handling hazardous chemicals to impervious areas away from pits or stormwater drains and at least 50m from a natural waterway.	Foreman/ Truck Driver/ Site Worker
				▪ Provide spill kits at each fuel/chemical storage area.	Project Engineer/ EO/ Foreman
				▪ Promptly contain and collect any spills using spill kits.	Foreman/ Truck Driver/ Site Worker
		Poor housekeeping	Medium 13	▪ Keep site free of litter and maintain good housekeeping	Foreman / Site Worker
		Improper handling and disposal of waste materials	Medium 13	▪ Apply the waste hierarchy (reduce or avoid waste, reuse waste, recycle waste, recover energy, treat waste, dispose of waste).	Foreman / Project Engineer/ Site Worker
				▪ Provide appropriate facilities to ensure that materials for recycling are separated from materials that are to be disposed of as wastes where practical. Facilities to be labelled for the various waste streams to ensure easy recognition.	Foreman/ EO
				▪ Request and retain all waste receipts/dockets for all wastes removed from site.	Foreman/ Truck Driver
				▪ Maintain Waste Register	Finance Team / EO
		Runoff from spray seal compound results in water pollution	High 18	▪ Modify or stop sealing works during periods of strong wind (in excess of 40km/h) and in response to strong wind weather forecasts. Record this in the <b>Strong Wind Work Modification Record</b> .	Foreman/ Project Engineer
				▪ Check weather forecasts daily and DO NOT apply bitumen seal with non-coated aggregates if rainfall >3mm is imminent or predicted during the immediate 6 hour forecast.	Project Engineer / Foreman
				▪ If primer or pre-coated aggregate is to be used, DO NOT proceed with works if any rainfall is predicted within the immediate 24 hours.	
				▪ Protect/ cover drainage inlets to prevent the ingress of bitumen or wind drift from spraying compounds.	Foreman
				▪ Ensure spill kits in close proximity to sealing operations particularly when undertaking works in close proximity to stormwater infrastructure..	Foreman

Toolbox – Site Compound Establishment

The objective of this toolbox is to ensure that all project personnel are aware of their responsibilities and the environmental work method to be followed during site compound establishment.

KEY RISKS:

- Noise during site establishment and community complaints;
- General nuisance complaints from the public;
- Uncontrolled runoff potentially polluting the Macquarie Rivulet and Lake Illawarra;
- Potential Fuel or chemical spills or pollution resulting from spray seal operations;
- Dust generated by our works;
- Poor housekeeping and waste management resulting in litter;
- Unintended damage to areas of Aboriginal cultural significance.

SPECIFIC HIGH RISK CONTROL MEASURES:

- Work hours are Weekdays 7am-7pm and Saturday 8am – 5pm. No work outside of these hours without prior approval from the Environmental Manager. No work on Sundays.
- High noise or percussive noise generating activities are restricted to 3 hours on, 1hr off and working hours are further limited from 8am-6pm weekdays and 8am-1pm Saturdays.
- Be respectful to all members of the public. ANY complaints should be communicated to the Community Relations Team as soon as possible. Members of the public can contact the Community Hotline on **1800 708 727**.
- Know the location of the nearest noise sensitive receivers (people live in homes are across the Rivulet and also down the Illawarra Highway). Our nearest residential neighbour is 180m away.
- 
- A pre-clearing survey will be performed prior to works to confirm the vegetation to be cleared (including e.g. tree hollows, threatened flora species and riparian vegetation).
- We want to keep as many big trees on the boundary as possible to screen the site from the public.
- 
- The area along Macquarie Rivulet is a very significant place to local Aboriginal people. We need to be respectful and stay within the site compound boundary away from the Rivulet.
- Protect environmentally sensitive areas with 'No-Go' signage and or exclusion fencing (if required by the EM). There is one old growth Eucalypt that needs to be protected and generally we want to keep away from the Rivulet while the site compound is under construction.
- If a suspected heritage item is found, stop work within the vicinity of the item and contact the Environmental Manager immediately.
- 
- In the event that contamination (including possible asbestos containing material) is identified, stop work within the vicinity of the suspected contamination and contact the site supervisor immediately.
- 
- All runoff naturally flows to the Macquarie Rivulet and Lake Illawarra. It's very important to set-up erosion and sediment controls in accordance with the erosion plan attached (**Appendix C**).
- All controls must be inspected weekly or during rainfall and maintained as needs.
- Prevent mud tracking on public roads by keeping all vehicles on the existing stabilised access (i.e. concrete hardstand leading to the main gate). Any new access/egress points will need to be constructed with rock, rumble grids and the like to create stable ground.
- 
- Know the location of spill kits in the compound prior to commencing works.
- Report ALL SPILLS to the Site Supervisor and Environment Team.
- DO NOT start spray seal activities when rain is imminent.** Check weather forecast 3 days in advance prior to commencing and consult the Environment Manager and Superintendent. before proceeding.
- STOP activities where there is an actual or immediate risk of harm to the environment**

STANDARD MEASURES:

- Implement and maintain effective site controls as required by this EWMS and the Erosion and Sediment Control Plan.
- 
- Park only in approved work compounds, not in neighbouring streets.
- Turn machinery and vehicles off when not in use.
- Cover all loads that enter or leave the site.
- Check tyres before exiting site and make sure they are clean.
- 
- Wash out concrete and tools only at designated wash points which contain all wash water and don't leak. The designated concrete washout area must be signposted and built in a location so that any stormwater runoff doesn't get contaminated.
- Don't locate chemicals within 50m of a natural waterway. Keep liquid chemicals including fuel in properly labelled containers within a bunded storage area (container) as recommended in the product SDS.
- Runoff collected in sediment basins or other appropriate devices needs to be treated under direction of the Environment Team to meet strict EPA water quality limits.
- A permit to pump / discharge water must be issued before any pumping / dewatering can take place.
- 
- Bund around any vegetation stockpiles to ensure tannins are trapped.
- Stockpiles cannot be higher than 4metres.
- Carry out dust suppression whenever necessary.
- Modify or stop work activities during periods of strong wind.
- Ensure truck tail gates are cleared and clocked at the point of unloading.
- Do not litter. Manage waste by reducing the products ordered, recycle what can be including waste oils (stored in a bund). Use designated skips for recycling of steel, concrete and other recyclable materials.

Signoff

We the undersigned, confirm that the EWMS nominated above has been explained and its contents are clearly understood. We also clearly understand the controls in this EWMS must be applied as documented or as shown on the Drawings and Erosion Sediment Control Plans. These documents will be revised as required to reflect site conditions or to reflect advice received from relevant experts. Works will not proceed without changes being incorporated onto these documents.


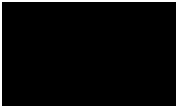

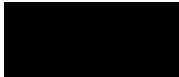

Name	Position	Employer	Signature	Induction No.	Date



[illegible]

## Document Control

## Phone Numbers

EWMS: Site Compound Establishment	EWMS 003		Revision No: 2
	Date: 16/11/2018		
Prepared By: 	Signature: 	Date: 15/11/2018	
Reviewed By: 	Signature: 	Date: 19/11/2018	
Accepted By: 	Signature:	Date:	

**Project Information Line: 1800 708 727**

<b>Environmental Manager</b>	
<b>Project Engineer</b>	
<b>Environmental Officer</b>	
<b>Community Relations Manager</b>	

## Review

Review No:	1	2	3	4
Name & Initials	█	█		
Date:	████	████		
Name & Initials				
Date:				
Description of change(s)	████████████████	████████████████████ ████████████████		



APPENDIX A: AS06 Proposed Site Plan



**NOT FOR CONSTRUCTION**

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**ALBION PARK RAILWAY BYPASS  
ANCILLARY FACILITIES SITE LAYOUT  
ANCILLARY SITE 06**

**INFORMATION DOCUMENT  
GE-AS06-LAYOUT\_[180920]**

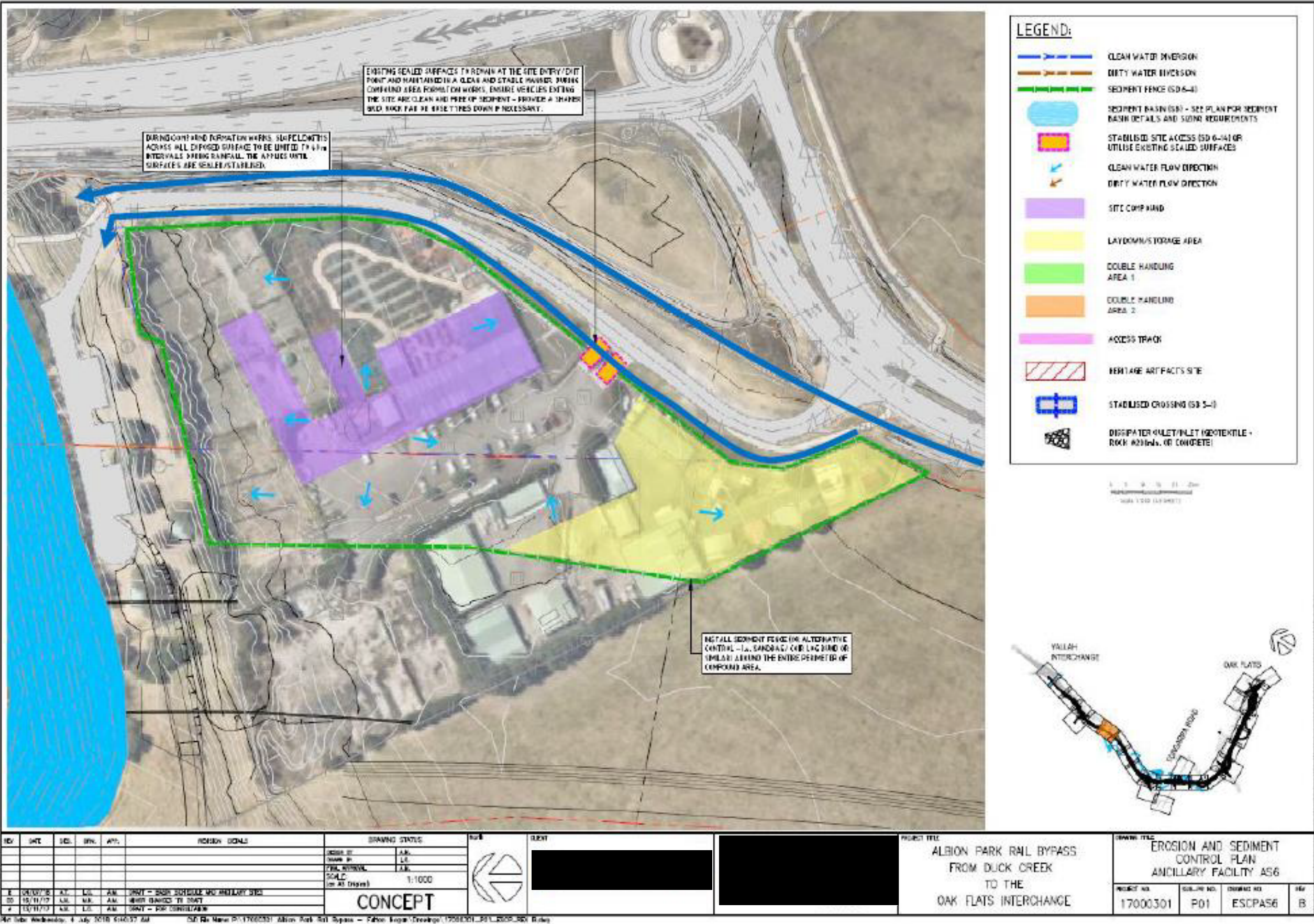
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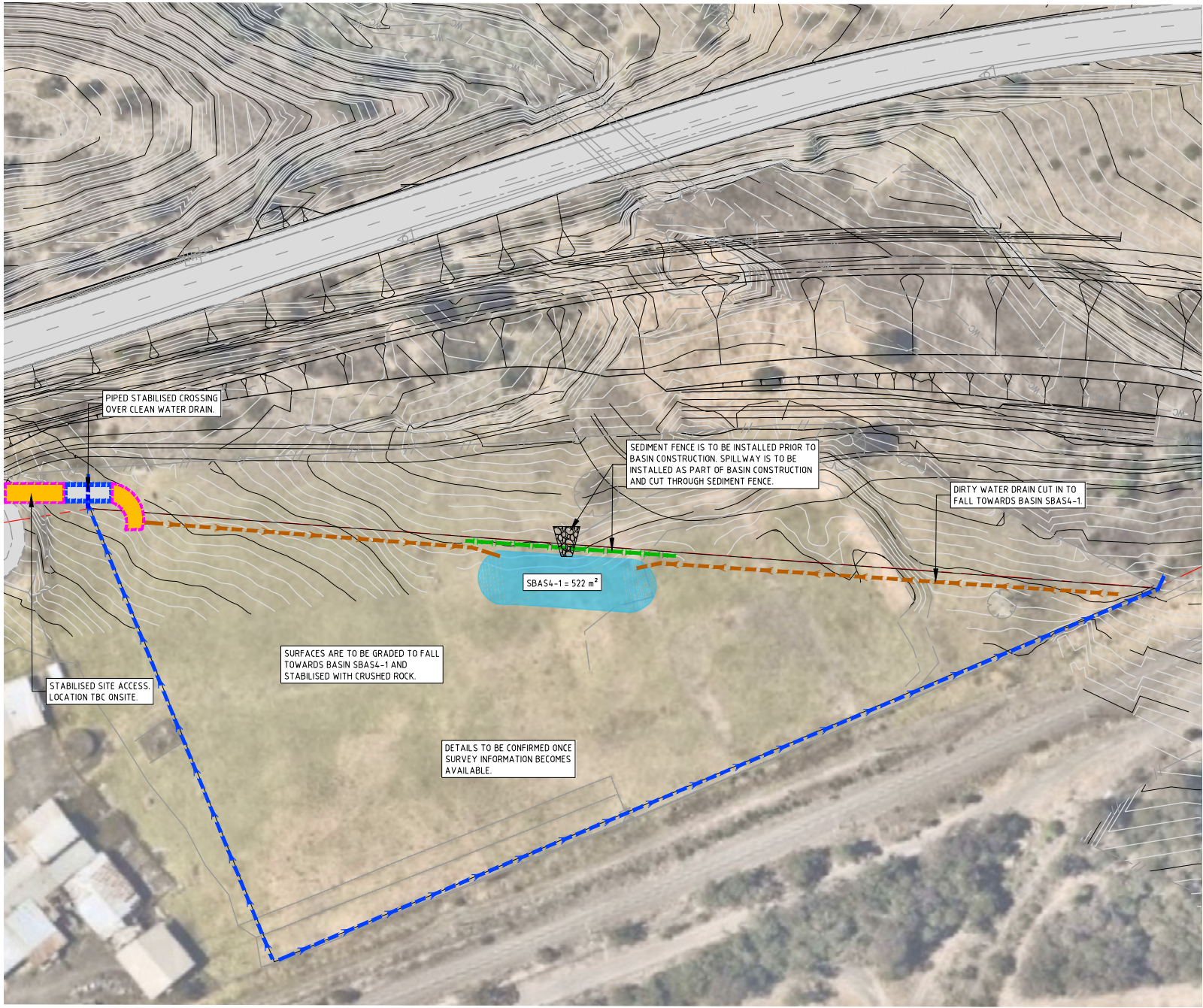
APPENDIX C: AS06 Progressive Erosion & Sediment Control Plan



## **Appendix D**

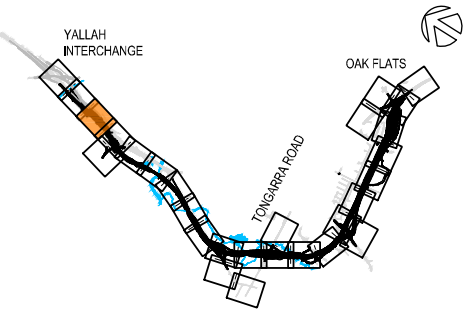
### **Progressive Erosion and Sediment Control Plans**





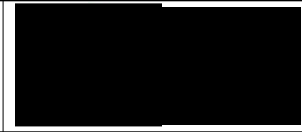
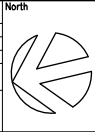
LEGEND:

- CLEAN WATER DIVERSION
- DIRTY WATER DIVERSION
- SEDIMENT FENCE (SD 6-8)
- SEDIMENT BASIN (SB) - SEE PLAN FOR SEDIMENT BASIN DETAILS AND SIZING REQUIREMENTS
- STABILISED SITE ACCESS (SD 6-14) OR UTILISE EXISTING SEALED SURFACES
- CLEAN WATER FLOW DIRECTION
- DIRTY WATER FLOW DIRECTION
- SITE COMPOUND
- LAYDOWN/STORAGE AREA
- DOUBLE HANDLING AREA 1
- DOUBLE HANDLING AREA 2
- ACCESS TRACK
- HERITAGE ARTIFACTS SITE
- STABILISED CROSSING (SD 5-1)
- DISSIPATER OULET/INLET (GEOTEXTILE + ROCK @200min. OR CONCRETE)



REV	DATE	DES.	DRN.	APP.	REVISION DETAILS
B	04/07/18	A.T.	L.O.	A.M.	DRAFT - BASIN SCHEDULE AND ANCILLARY SITES
00	16/11/17	A.M.	M.N.	A.M.	MINOR CHANGES TO DRAFT
A	13/11/17	A.M.	L.O.	A.M.	DRAFT - FOR CONSULTATION

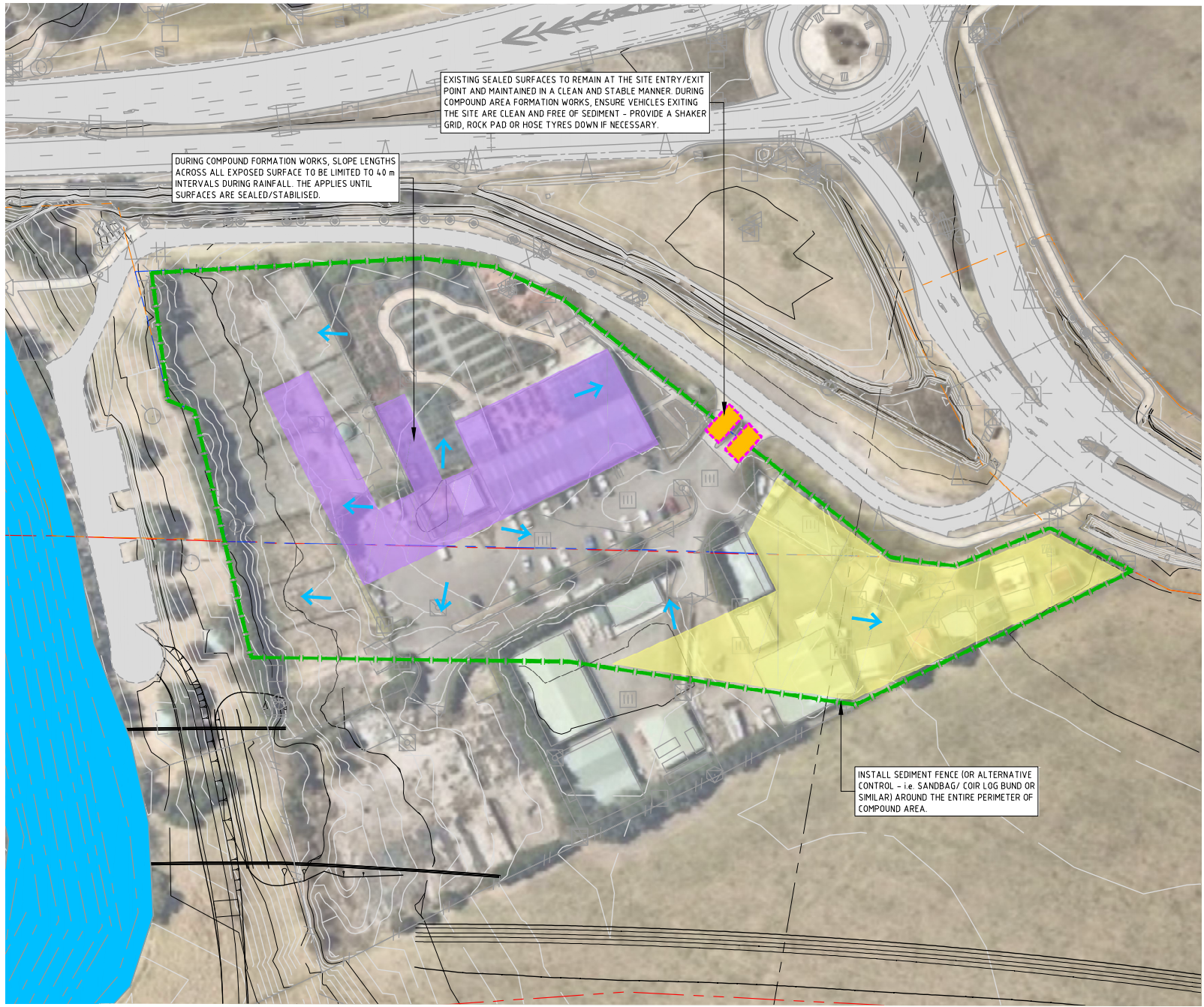
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DRAWN BY	L.O.
FINAL APPROVAL	A.M.
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CONCEPT	



PROJECT TITLE  
ALBION PARK RAIL BYPASS  
FROM DUCK CREEK  
TO THE  
OAK FLATS INTERCHANGE

DRAWING TITLE			
EROSION AND SEDIMENT CONTROL PLAN ANCILLARY FACILITY AS4			
PROJECT NO.	SUB-PR NO.	DRAWING NO.	REV
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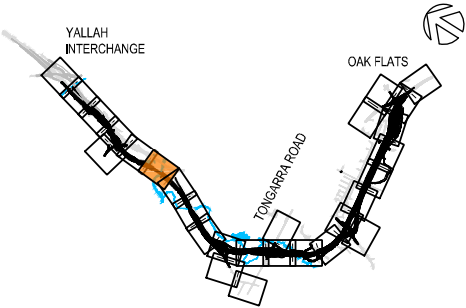
EXISTING SEALED SURFACES TO REMAIN AT THE SITE ENTRY/EXIT POINT AND MAINTAINED IN A CLEAN AND STABLE MANNER DURING COMPOUND AREA FORMATION WORKS, ENSURE VEHICLES EXITING THE SITE ARE CLEAN AND FREE OF SEDIMENT - PROVIDE A SHAKER GRID, ROCK PAD OR HOSE TYRES DOWN IF NECESSARY.

DURING COMPOUND FORMATION WORKS, SLOPE LENGTHS ACROSS ALL EXPOSED SURFACE TO BE LIMITED TO 4.0 m INTERVALS DURING RAINFALL. THE APPLIES UNTIL SURFACES ARE SEALED/STABILISED.

INSTALL SEDIMENT FENCE (OR ALTERNATIVE CONTROL - i.e. SANDBAG/ COIR LOG BUND OR SIMILAR) AROUND THE ENTIRE PERIMETER OF COMPOUND AREA.

**LEGEND:**

- CLEAN WATER DIVERSION
- DIRTY WATER DIVERSION
- SEDIMENT FENCE (SD 6-8)
- SEDIMENT BASIN (SB) - SEE PLAN FOR SEDIMENT BASIN DETAILS AND SIZING REQUIREMENTS
- STABILISED SITE ACCESS (SD 6-14) OR UTILISE EXISTING SEALED SURFACES
- CLEAN WATER FLOW DIRECTION
- DIRTY WATER FLOW DIRECTION
- SITE COMPOUND
- LAYDOWN/STORAGE AREA
- DOUBLE HANDLING AREA 1
- DOUBLE HANDLING AREA 2
- ACCESS TRACK
- HERITAGE ARTIFACTS SITE
- STABILISED CROSSING (SD 5-1)
- DISSIPATER OULET/INLET (GEOTEXTILE + ROCK Ø200mm. OR CONCRETE)



REV	DATE	DES.	DRN.	APP.	REVISION DETAILS
B	04/07/18	A.T.	L.O.	A.M.	DRAFT - BASIN SCHEDULE AND ANCILLARY SITES
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A	13/11/17	A.M.	L.O.	A.M.	DRAFT - FOR CONSULTATION

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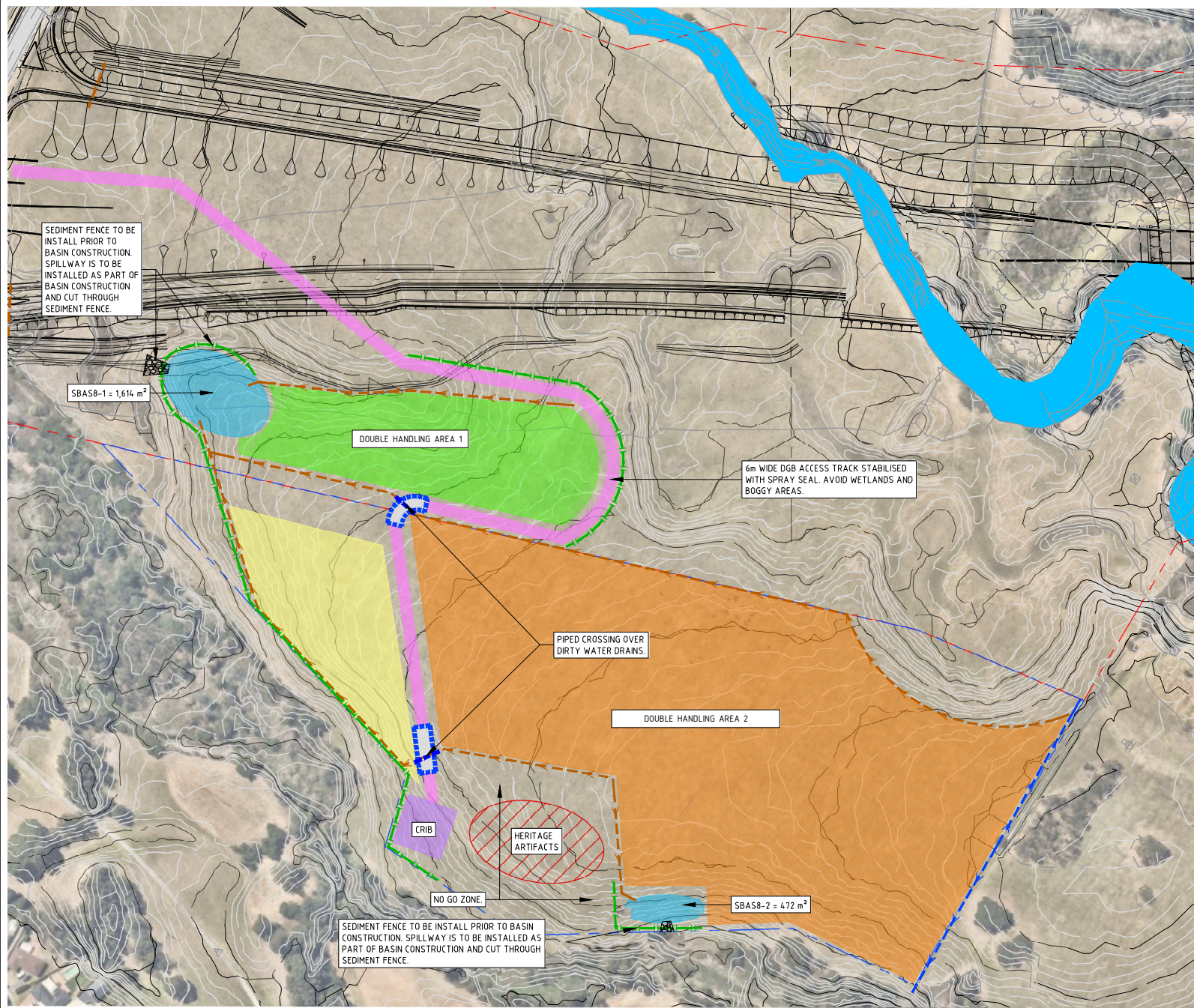
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ALBION PARK RAIL BYPASS  
FROM DUCK CREEK  
TO THE  
OAK FLATS INTERCHANGE

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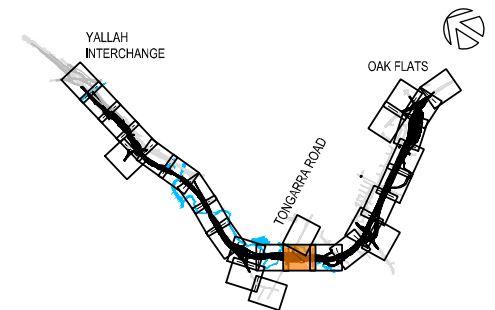




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- DIRTY WATER DIVERSION
- SEDIMENT FENCE (SD 6-8)
- SEDIMENT BASIN (SB) - SEE PLAN FOR SEDIMENT BASIN DETAILS AND SIZING REQUIREMENTS
- STABILISED SITE ACCESS (SD 6-14) OR UTILISE EXISTING SEALED SURFACES
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- DOUBLE HANDLING AREA 2
- ACCESS TRACK
- HERITAGE ARTIFACTS SITE
- STABILISED CROSSING (SD 5-1)
- DISSIPATER OULET/INLET (GEOTEXTILE + ROCK Ø200min. OR CONCRETE)

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A	13/11/17	A.M.	L.O.	A.M.	DRAFT - FOR CONSULTATION

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DRAWN BY	L.O.
FINAL APPROVAL	A.M.
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PROJECT TITLE  
ALBION PARK RAIL BYPASS  
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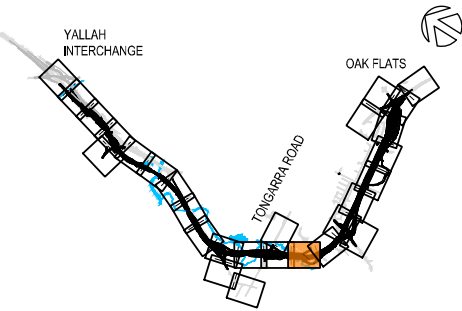




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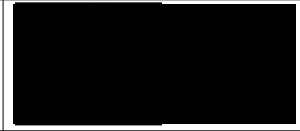
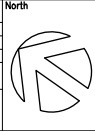
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- DIRTY WATER DIVERSION
- SEDIMENT FENCE (SD 6-8)
- SEDIMENT BASIN (SB) - SEE PLAN FOR SEDIMENT BASIN DETAILS AND SIZING REQUIREMENTS
- STABILISED SITE ACCESS (SD 6-14) OR UTILISE EXISTING SEALED SURFACES
- CLEAN WATER FLOW DIRECTION
- DIRTY WATER FLOW DIRECTION
- SITE COMPOUND AND PARKING AREA
- LAYDOWN/STORAGE AREA
- DOUBLE HANDLING AREA 1
- DOUBLE HANDLING AREA 2
- ACCESS TRACK
- HERITAGE ARTIFACTS SITE
- STABILISED CROSSING (SD 5-1)
- DISSIPATER OULET/INLET (GEOTEXTILE + ROCK  $\phi$ 200min. OR CONCRETE)

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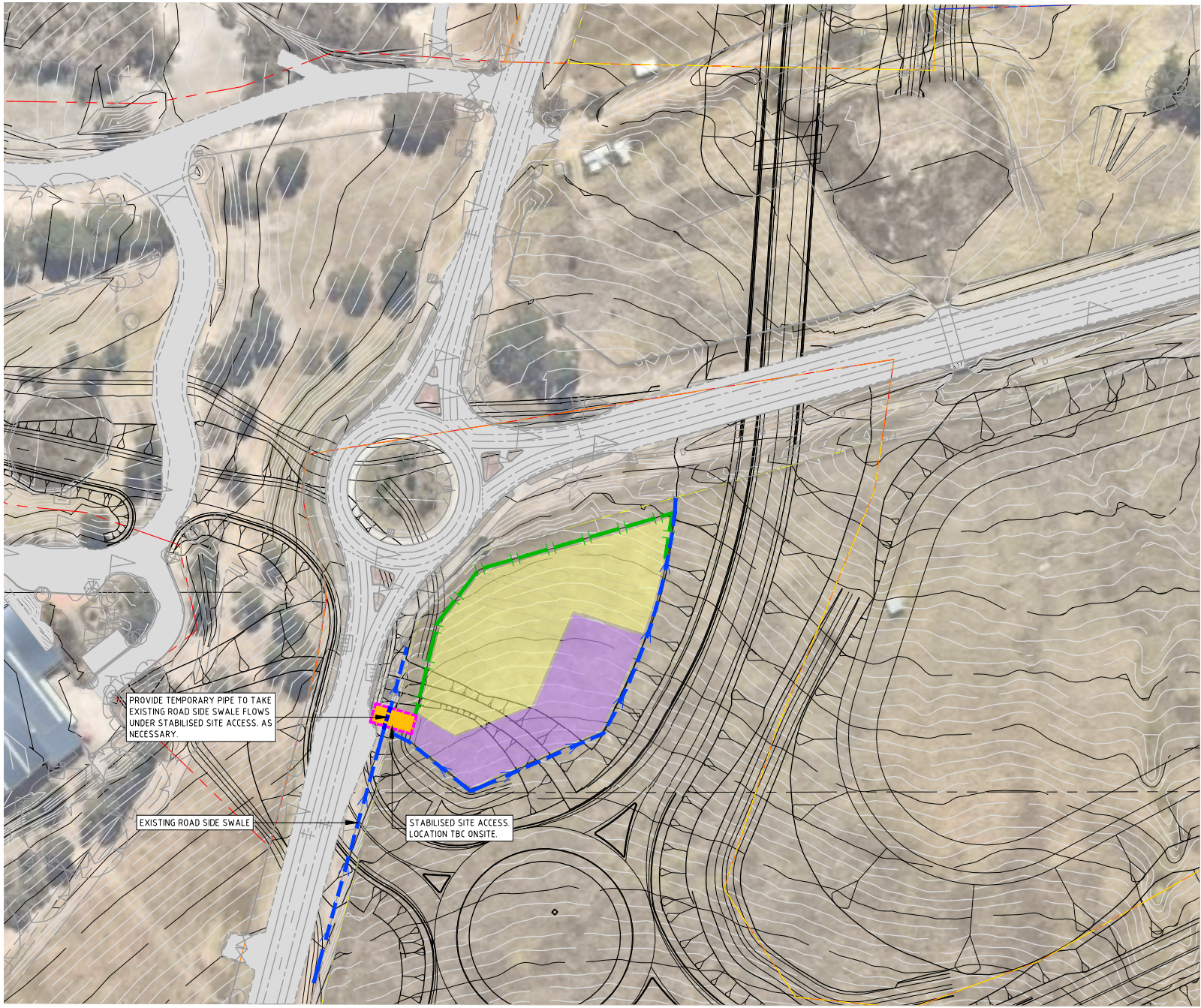
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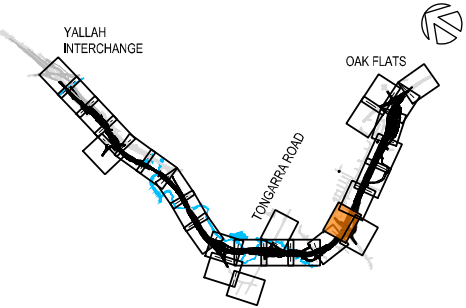
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**LEGEND:**

- CLEAN WATER DIVERSION
- DIRTY WATER DIVERSION
- SEDIMENT FENCE (SD 6-8)
- SEDIMENT BASIN (SBI) - SEE PLAN FOR SEDIMENT BASIN DETAILS AND SIZING REQUIREMENTS
- STABILISED SITE ACCESS (SD 6-14) OR UTILISE EXISTING SEALED SURFACES
- CLEAN WATER FLOW DIRECTION
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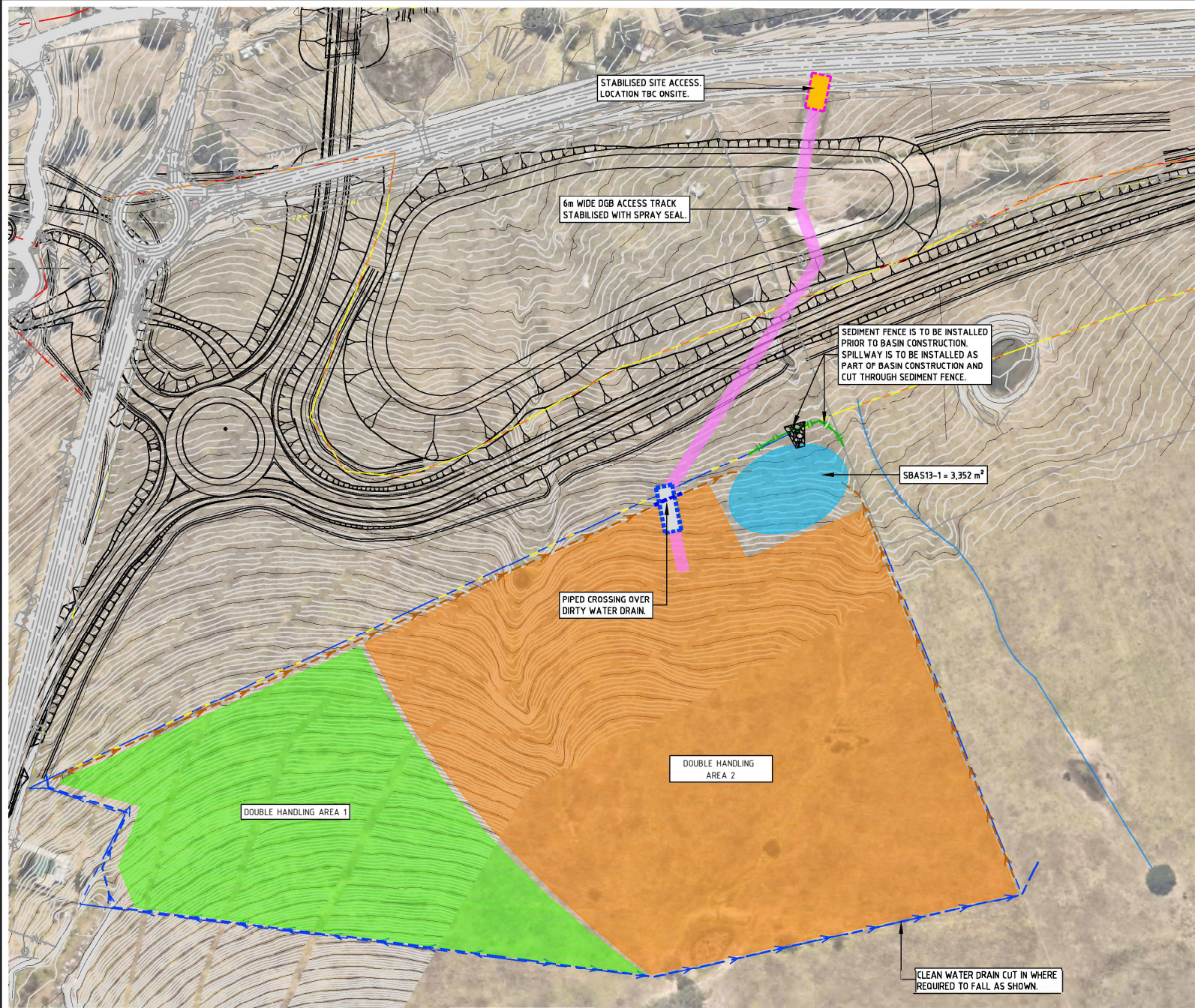
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DRAWING TITLE			
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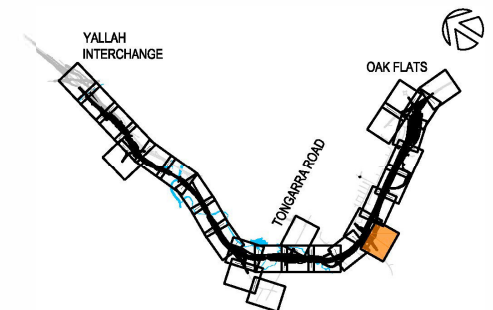




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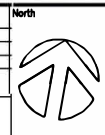
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- DISSIPATER OULET/INLET (GEOTEXTILE + ROCK Ø200mm. OR CONCRETE)

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FROM DUCK CREEK  
TO THE  
OAK FLATS INTERCHANGE

DRAWING TITLE			
EROSION AND SEDIMENT CONTROL PLAN ANCILLARY FACILITY AS13			
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17000301	P01	ESCPAS13	B



## **Appendix E**

Environmental incident classification and reporting procedure



Transport  
Roads & Maritime  
Services

# Environmental Incident Classification and Reporting Procedure

September 2017



## About this release

<b>Title</b>	Environmental Incident Classification and Reporting Procedure
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Acronyms and definitions	
Acronym	Definition
DE	(Roads and Maritime Services) Director Environment
DEO	(Roads and Maritime Services) Director Environment Operations
DPE	Department of Planning and Environment
Environmental harm	Any act that degrades or pollutes the environment
EPA	NSW Environment Protection Authority
EP&A Act	<i>Environmental Planning and Assessment Act 1997</i>
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
EPL	Environment Protection Licence
POEO Act	<i>Protection of the Environment Operations Act 1997</i>
REF	Review of Environmental Factors
Roads and Maritime	NSW Roads and Maritime Services
SEQC	(Roads and Maritime Services) Safety Environment and Quality Co-ordinator
SEQO	(Roads and Maritime Services) Safety Environment and Quality Officer

# 1. Introduction

## 1.1 Aim

The Environmental Incident Classification and Reporting Procedure (the Procedure) aims to ensure Roads and Maritime Services workers and contractors understand how to classify, respond to and report environmental incidents that occur as a result of Roads and Maritime managed activities.

## 1.2 Objectives

The objectives of the Procedure are to:

- Ensure all relevant Roads and Maritime workers, managers and contractors are made aware of environmental incidents promptly and can respond accordingly
- Ensure site workers understand the immediate environmental incident reporting requirements
- Ensure all workers understand reporting timeframes, including statutory requirements
- Ensure incidents are reported to enable monitoring, sharing of lessons learnt and response to emerging environmental incident trends
- Comply with statutory obligations to report certain environmental incidents to regulators and other relevant government agencies (see [section 5.1](#)).

## 1.3 Scope and coverage

This Procedure is applicable to all Roads and Maritime activities where environmental incidents may occur. This includes (but is not limited to):

- Temporary activities, such as preliminary investigations (e.g. geotechnical and environmental surveys) and the construction and maintenance of Roads and Maritime assets
- Activities at Roads and Maritime properties and facilities
- Vessels operated by Maritime division
- Activities undertaken by contractors on behalf of Roads and Maritime.

The requirements of this Procedure must be communicated to all Roads and Maritime workers and contractors (e.g. during inductions) who are undertaking activities where incidents may occur.

The Procedure is for internal reporting processes, except where incidents are identified that need to be notified to regulators, and other relevant authorities (see [section 5.1](#)).

The procedure does NOT cover environmental incidents caused by:

- Operational road and traffic activities of the general public (e.g. vehicle accidents, fires caused by discarded cigarette butts)
- Boating accidents (except those involving Roads and Maritime vessels)
- Dumping of materials by members of the public on Roads and Maritime roadsides or land (except where hazardous materials are unexpectedly found during road construction or maintenance activities). Illegal dumping should be reported to the [NSW Environment Protection Authority](#) (EPA)
- Marine oil and chemical spills covered by the [National Plan for Maritime Environmental Emergencies](#) (Australian Maritime Safety Authority, 2014).

## 2. Environmental incident classification

There are three categories of environmental incidents, as detailed in Table 2.

**Table 2: Environmental incident classification**

Category	Description	Examples	
Category 1	<p>Potential breaches of legislation or failures of process that result in actual off-site environmental harm, or residual on-site environmental harm</p> <p>or</p> <p>Works undertaken outside approved areas, without required approval or without environmental assessment</p> <p>or</p> <p>Any Material Harm pollution incident as defined by <a href="#">Part 5.7 of the Protection of the Environment Operations Act 1997</a> (POEO Act).</p>	Pollution Incidents	Discharge of waters from site not in accordance with any approval requirements (e.g. discharge criteria in an Review of Environmental Factors (REF) safeguard or Environment Protection Licence (EPL) condition)
			Pollution, or potential pollution, of waters
			Unmanaged vehicle tracking of materials or emissions of dust, offensive odours or noise beyond the site boundary that are not managed in accordance with approval requirements and/or might impact on nearby land users
			Pollution incidents that threaten harm to the health or safety of people (e.g. odours)
			Unauthorised or illegal disposal or transport of waste
			A spill or other incident that causes pollution to land
		Conservation Breaches	Unauthorised harm or damage to native flora and fauna (terrestrial or aquatic/marine)
			Unauthorised dredging or reclamation works within a watercourse
			A fire caused by Roads and Maritime activities that travels beyond the boundary causing or potentially causing harm to the environment or community
		Heritage Breaches	Unauthorised harm to Aboriginal objects and Aboriginal places
			Unauthorised damage to any State or locally significant relic or Heritage item, or item listed on the <a href="#">Roads and Maritime Section 170 register</a>

Table 2: Environmental incident classification

Category	Description	Examples	
		Planning and compliance breaches	<p>Failure to comply with the requirements of:</p> <ul style="list-style-type: none"> <li>The <i>Environmental Planning and Assessment Act 1997</i> (EP&amp;A Act), including exempt activities, Part 5 determinations and Part 5.1 approvals</li> <li>An <i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act) approval</li> <li>An EPL</li> <li>A CEMP or environmental work method statement</li> <li>A permit from a regulator (e.g. under the <i>Fisheries Management Act 1994</i>)</li> </ul>
Category 2	Failures of process or events that do not result in off-site environmental harm, or residual on-site environmental harm. These incidents may result in temporary on-site environmental harm that can be rectified to pre-existing conditions.	<p>A procedural, administrative or technical breach of environmental requirements, including:</p> <ul style="list-style-type: none"> <li>Failure to prepare or submit required documents, reports or other correspondence</li> <li>Failure to comply with the requirements of: <ul style="list-style-type: none"> <li>The <i>Environmental Planning and Assessment Act 1997</i> (EP&amp;A Act), including exempt activities, Part 5 determinations and Part 5.1 approvals</li> <li>An <i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act) approval</li> <li>An EPL</li> <li>A CEMP or environmental work method statement</li> <li>A permit from a regulator (e.g. under the <i>Fisheries Management Act 1994</i>).</li> </ul> </li> </ul>	
		Spills and discharges that do not leave a site boundary and are cleaned up without residual on-site environmental harm, and the area of temporary impact can be restored to pre-existing conditions	
		A fire that is contained on site and does not cause or potentially cause adverse impact to the environment or community	
Reportable Event	An event or unexpected find that occurs outside the scope of reasonable environmental controls and mitigation measures	<p>Sediment or site water travelling beyond a site boundary, and where it can be demonstrated that:</p> <ul style="list-style-type: none"> <li>Erosion and sediment controls were installed and maintained in accordance with an erosion and sediment control plan, and</li> <li>The cause of the incident was reasonably unforeseen or the weather (rain, wind etc) event exceeded the design capacity of controls.</li> </ul> <p>Note these events are considered to have occurred (and the response should commence in accordance with <a href="#">Section 3</a>) when sediment or site water first travels beyond the site boundary (e.g. when an appropriately sized and maintained sediment basin commences overtopping)</p>	
		An unexpected archaeological find that is being managed in accordance with the "Roads and Maritime	



Table 2: Environmental incident classification

Category	Description	Examples
		Standard Management Procedure - Unexpected Archaeological Finds”
		An unexpected threatened species find that is being managed in accordance with the “Roads and Maritime Biodiversity Guidelines – unexpected threatened species finds procedure”
		An unexpected find of contaminated soils, asbestos or other potentially hazardous substances during construction or maintenance works. Note that once a particular contaminant is identified or found for the first time (either during project planning or construction phases) it is then reasonably expected to be found, so additional finds need not be reported in this category.
Regulatory Action	Formal regulatory action from an environmental regulator (that has not already been reported in conjunction with another incident)	<p>Formal regulatory action from an environmental regulator includes, but is not limited to:</p> <ul style="list-style-type: none"> <li>• Penalty infringement notices (PINs)</li> <li>• Clean up notices</li> <li>• Prevention notices</li> <li>• Official cautions / warnings</li> <li>• EPA show cause notifications.</li> </ul>

**Note:** For any incident where there is associated formal regulatory action from an environmental regulator, copies of this correspondence must be forwarded to [envops@rms.nsw.gov.au](mailto:envops@rms.nsw.gov.au) in addition to the Environmental Incident Report (see [section 4](#)).

## 3. Environmental incident response

### 3.1 Considerations and steps for environmental incident response

The step-by-step response for Category 1 incidents, Category 2 incidents and Reportable Events is detailed in Table 3.1a (activities undertaken by contractors) and Table 3.1b (activities undertaken by Roads and Maritime Regional Maintenance). However, some key points apply throughout all stages of the response to any environmental incident:

- If in doubt, treat all incidents as Category 1 to ensure reporting timeframes can be met
- Strong consideration should be given to notifying:
  - Roads and Maritime Corporate Communications for any incidents that have potential for community or media attention (see [section 4.4](#))
  - Roads and Maritime Work Health and Safety Branch for any incidents that involve actual or potential risks to worker health and safety (see [section 4.4](#)).
- The person responsible for operational management of the site/activity shall assume responsibility for the response to the incident and direct actions as necessary and in accordance with this Procedure
- A Roads and Maritime Environment Manager can consult with the Director Environment Operations (DEO) to reclassify the category of an incident where appropriate.

Any Regulatory Action received (that has not already been reported in conjunction with another incident) should be immediately forwarded to the [envops@rms.nsw.gov.au](mailto:envops@rms.nsw.gov.au) mailbox, and followed by an immediate phone call to the relevant Roads and Maritime Environment Manager, who will immediately advise the DEO. Consideration should then be given as to whether an environmental incident has occurred (see [section 2](#)) that should be reported in accordance with this section.

**Table 3.1a: Environmental incident response activities undertaken by contractors**

Step	Action	Responsibility for completing action	Timeframe	
			Category 1 Incidents	Category 2 Incidents / Reportable Events
1	Stop work in relevant area (if necessary) and take actions to prevent adverse impact to human health or the environment. Note human health and safety is the primary concern, and no action should be taken if it is not safe to do so.	Person who identifies incident	Immediate	Immediate
2	Advise the contractor site management team.	Person who identifies incident	Immediate	Immediate
3	Advise the Roads and Maritime project management team and the relevant Roads and Maritime Environment Manager.	Contractor	Immediate	Day of the incident
4	Consider if the incident is a pollution incident that constitutes Material Harm in accordance with Part 5.7 of the POEO Act. For Material Harm pollution incidents, notify relevant agencies (see <a href="#">section 5.2</a> ). Sites with an EPL should implement their Pollution Incident Response Management Plan.	Contractor	Immediate	Immediate
5	Advise DEO by phone. The DEO may request photographs and a brief summary of known information via email. The following Roads and Maritime managers should also be notified by phone as relevant: <ul style="list-style-type: none"> <li>• Director Environment (Major Projects)</li> <li>• Director Environment (Motorways).</li> </ul>	Roads and Maritime Environment Manager	Immediately following advice of the incident	N/A
6	Where relevant, notify incident to appropriate regulatory agency (see <a href="#">section 5.1</a> ). Note this does not refer to the requirement to notify Material Harm pollutions incidents (see Step 4).	Contractor	As required by legislation	As required by legislation
7	Complete the incident report form (see <a href="#">section 4.2</a> ), including sign-off from Roads and Maritime Project Manager, and submit to Roads and Maritime Environment Manager* (see sections <a href="#">4.3</a> and <a href="#">4.4</a> ).	Contractor	Within 3 business days of the incident	Within 3 business days of the incident
8	Sign and submit incident report form to <a href="mailto:envops@rms.nsw.gov.au">envops@rms.nsw.gov.au</a> .	Roads and Maritime Environment Manager	On the day of receipt of the form	On the day of receipt of the form
9	For Material Harm pollution incidents, provide a written report to each relevant authority (see <a href="#">section 5.2</a> ).	Contractor	Within 7 days of the incident	N/A
10	Undertake incident investigation (level of investigation to be appropriate to the severity of the incident) to determine root cause and any necessary corrective actions. Summarise findings in 'Incident Lessons Learnt' template and submit to Environment Manager for review.	Contractor	Within 1 month of incident	N/A
11	Submit final Incident Lessons Learnt to <a href="mailto:envops@rms.nsw.gov.au">envops@rms.nsw.gov.au</a> .	Roads and Maritime Environment Manager	Within 1 week of receipt	N/A
12	Consider the need for any required corrective actions to be addressed through a management system (e.g. corrective action request).	Roads and Maritime Environment Manager and project team	As appropriate	As appropriate

\*Alternate workflow / signatory arrangements may be required for projects where a third party is involved (e.g. a delivery authority). These arrangements can be confirmed with the relevant Roads and Maritime Environment Manager.

**Table 3.1b: Environmental incident response activities undertaken by Regional Maintenance** (including contractors or RMCC on behalf of Regional Maintenance)

Step	Action	Responsibility for completing action	Timeframe	
			Category 1 Incidents	Category 2 Incidents / Reportable Events
1	Stop work in relevant area (if necessary) and take actions to prevent adverse impact to human health or the environment. Note human health and safety is the primary concern, and no action should be taken if it is not safe to do so.	Person who identifies incident	Immediate	Immediate
2	Advise the Roads and Maritime site management team and the relevant Roads and Maritime Environment Manager and Safety Environment Quality Officer (SEQO) / Safety Environment Quality Co-ordinator (SEQC).	Person who identifies incident	Immediate	Immediate
3	Advise DEO by phone. The DEO may request photographs and a brief summary of known information via email. The relevant Regional Maintenance Manager must also be notified.	Environment Manager	Immediate	N/A
4	Consider if the incident is a pollution incident that constitutes Material Harm in accordance with Part 5.7 of the POEO Act. For Material Harm pollution incidents, notify relevant agencies (see <a href="#">section 5.2</a> ). Sites with an EPL should implement their Pollution Incident Response Management Plan.	DEO	Immediately following advice of the incident	N/A
5	Where relevant, notify incident to appropriate regulatory agency (see <a href="#">section 5.1</a> ). Note this does not refer to the requirement to notify Material Harm pollutions incidents (see Step 4).	Environment Manager	As required by legislation	As required by legislation
6	Complete the incident report form (see <a href="#">section 4.2</a> ), including sign-off from Roads and Maritime Project Manager, and submit to SEQC (see <a href="#">section 4.3</a> ).	Relevant Roads and Maritime site representative	Within 3 business days of the incident	Within 3 business days of the incident
7	SEQC to sign and submit incident report form to relevant Environment Manager (see <a href="#">section 4.4</a> ).	SEQC	On the day of receipt of the form	On the day of receipt of the form
8	Sign and submit incident report form to <a href="mailto:envops@rms.nsw.gov.au">envops@rms.nsw.gov.au</a> .	Environment Manager	On the day of receipt of the form	On the day of receipt of the form
9	For Material Harm pollution incidents, provide a written report to each relevant authority (see <a href="#">section 5.2</a> ).	DEO	Within 7 days of the incident	N/A
10	Undertake incident investigation (level of investigation to be appropriate to the severity of the incident) to determine root cause and any necessary corrective actions. Summarise findings in 'Incident Lessons Learnt' template and submit both to Environment Manager for review. Consider the need for any required corrective actions to be addressed through a management system (e.g. corrective action request).	SEQC	Within 1 month of incident	N/A
11	Submit final Incident Lessons Learnt to <a href="mailto:envops@rms.nsw.gov.au">envops@rms.nsw.gov.au</a> .	Roads and Maritime Environment Manager	Within 1 week of receipt	N/A

Copies of formal regulatory action from an environmental regulator (that has not already been reported in conjunction with another incident) must be forwarded to the relevant Roads and Maritime Environment Manager (and SEQC/SEQO for Regional Maintenance projects) and [envops@rms.nsw.gov.au](mailto:envops@rms.nsw.gov.au) immediately upon receipt.

### **3.2 Critical incidents**

Some Category 1 incidents require escalation so relevant members of the Roads and Maritime Executive are aware of the incident and ready to respond as necessary. Category 1 incidents will be deemed 'Critical Incidents' for escalation to the Executive when they have the potential for:

- Regulatory action (e.g. EPA Penalty Infringement Notice) and/or
- Reputational damage (e.g. media coverage) and/or
- Significant environmental harm.

Guiding factors that will be considered when determining whether there has been 'significant' environmental harm include:

- When there has been actual or potential harm to the health or safety of people or to the environment that is not trivial
- Actions required to prevent, mitigate or make good the actual or potential environmental harm are likely to exceed \$10,000

When a potential 'Critical Incident' is reported, the DEO will immediately brief the Director Environment (DE) who will make a determination on whether it will be considered a 'Critical Incident'. The DE will then brief the Roads and Maritime Chief Executive and relevant Executive Director, as well as any other members of the Executive as appropriate. When the DE cannot be contacted, the DEO will make the determination and make the relevant Executive briefings.



## 4. Environmental incident reporting

### 4.1 Environmental incident report form

The Environmental Incident Report Form should be completed for Category 1 incidents, Category 2 incidents and Reportable Events, and is available on the [Roads and Maritime website](#).

### 4.2 Completing the incident report form

All parts of the Incident Report Form must be completed in accordance with this procedure and following the instructions within the form. The Form (and any subsequent reports) must only include factual information. Speculation about the causes and outcomes of incidents are not to be included.

The Form must be signed by the following:

Signatory	Reason
The person making the report	The person witnessed the incident or has the most knowledge of the incident, and can provide sufficient factual information.
The Roads and Maritime Project Manager	To ensure all relevant Roads and Maritime parties can be made aware of the incident, and appropriate resources can be allocated and/or approved to respond to the incident. This also ensures the project management team are aware of any environmental performance trends if multiple incidents occur.
Safety Environment and Quality Co-ordinator (Roads and Maritime Regional Maintenance only)	To ensure Regional Maintenance management system staff are aware of the incident, and any necessary management system changes can be made once corrective actions and lessons learnt are finalised.
The relevant Roads and Maritime Environment Manager	Concurrence that the incident is adequately described, and the immediate actions and corrective actions are appropriate.

As noted in [Table 3.1a](#), alternate signatory arrangements may be required for projects where a third party is involved (e.g. a delivery authority). These arrangements can be confirmed with the relevant Roads and Maritime Environment Manager.

### 4.3 Submitting the incident report form

All Incident Report Forms must be populated, signed and submitted electronically (never printed / signed / scanned etc.) to enable Roads and Maritime to electronically capture the information entered in the form.

Completed Incident Report Forms should be submitted by the Roads and Maritime Environment Manager to the Environment Operations mailbox:

- [envops@rms.nsw.gov.au](mailto:envops@rms.nsw.gov.au)

It is essential that a clear and consistent subject line convention is used to allow tracking of correspondence about each incident. All emails about an incident between all parties should structure the subject line as follows:

- Category X - project name / incident location - date
- For example, Category 1 – Main Road Upgrade – dd/mm/yy.

Where information cannot be gathered within the timeframes set out in this Procedure, the incident form should be submitted to the mailbox as a 'draft', whether or not the information contained is fully completed.

- For example, Category 1 – Main Road Upgrade – dd/mm/yy (DRAFT).

The Environment Manager should then request further information from the person making the report, and the final report should be submitted within the next 24 hours.

## 4.4 Roads and Maritime contacts

The relevant Environment Manager for each region and Project Office is the first point of contact for enquiries relating to environmental incidents. Current contacts for all Roads and Maritime Environment Managers can be found on the [Roads and Maritime website](#).

Environment Managers can also provide contact details for other relevant contacts during an incident, such as Communications or Work, Health and Safety.

The DEO oversees the application of this Procedure, and can be contacted in the absence of the relevant Environment Manager for Category 1 incidents:

- Phone - (02) 8843 3048

## 5. Regulatory agency notification

### 5.1 Notification of Material Harm pollution incidents

#### 5.1.1 Definition of Material Harm pollution incidents

Under Part 5.7 of the POEO Act, there is a duty to immediately notify (i.e. promptly and without delay) each relevant authority (see [section 5.1.3](#)) of a pollution incident where material harm to the environment is caused or threatened.

The POEO Act states that a pollution incident should be considered Material Harm if:

- “(i) it involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial, or*
- (ii) it results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding \$10,000”*

Material Harm only relates to pollution incidents. Other environmental incidents, such as conservation, heritage and planning breaches, are not included in the definition of a pollution incident.

#### 5.1.2 Determining if an incident should be considered Material Harm

As soon as a person becomes aware of a pollution incident that has the potential to cause Material Harm, the Category 1 incident response should be followed (see [Table 3.1a](#) and [Table 3.1b](#) above). The determination on whether a pollution incident should be considered Material Harm should be made in accordance with Table 5.1.2.

**Table 5.1.2: Determination of Material Harm pollution incidents**

Project delivery	Material Harm determination
Activities undertaken by Regional Maintenance	<p>The DEO should make the determination (and any associated notifications) on whether a pollution incident should be considered Material Harm.</p> <p>If the DEO is not available, the relevant Environment Manager should seek advice from other Roads and Maritime Environment Branch Directors, or make the material harm determination themselves.</p> <p>If no assistance can be obtained and it is suspected that a pollution incident should be considered Material Harm, the project should notify the relevant authorities in accordance with <a href="#">Table 5.1.3a</a> or <a href="#">Table 5.1.3b</a> (as relevant).</p>
Activities undertaken by contractors	<p>The contractor project team should make the determination (and any associated notifications) on whether a pollution incident should be considered Material Harm.</p> <p>The relevant Roads and Maritime Environment Manager or Environment Branch Director may contact the DEO to assist in making an assessment of the incident, to aid the contractor in determining if the pollution incident should be considered Material Harm.</p> <p>Where Roads and Maritime believes a pollution incident should be considered Material Harm but the contractor disagrees, Roads and Maritime is required by law to notify EPA and other relevant authorities. In this instance the DEO or DE would make a determination on whether the incident should be notified by Roads and Maritime as Material Harm. Roads and Maritime would provide details of any notifications made to the contractor.</p>

Even if only limited information is available for a pollution incident being considered Material Harm, each relevant authority must be immediately notified with the information available and updates provided as soon as further relevant information becomes available.

In circumstances where there is doubt about the need to notify a pollution incident as Material Harm, Roads and Maritime and its contractors should always err on the side of notification.

### When in doubt, communicate!

Note: Roads and Maritime is not responsible for notifying a Material Harm pollution incident caused by a traffic or vehicle accident where notification has already occurred by someone at the scene. However, if it is believed notification has not been undertaken, Roads and Maritime should undertake notification in accordance with [section 5.1.3](#). Environment Branch can provide advice in this instance (see [section 4.4](#)).

### 5.1.3 Relevant authorities to notify

The relevant authorities that must be notified for a Material Harm pollution incident are listed in tables [5.1.3a](#) and [5.1.3b](#) below. It is important to note the order of notification and phone numbers to use can vary depending on the nature of the pollution incident, as detailed in the two tables.

All of the authorities listed (whether considered relevant or not) must be contacted for each Material Harm pollution incident to satisfy POEO Act requirements. Serious penalties apply to both individuals and corporations for failing to notify Material Harm pollution incidents:

- Maximum penalty for individuals - \$500,000
- Maximum penalty for corporations - \$2,000,000.

**Table 5.1.3a: Authorities to notify for Material Harm pollution incidents that present an immediate threat to human health or property**

Order	Authority	Contact Number
1	Fire and Rescue NSW	000
2	NSW EPA environment line	131 555
3	Ministry of Health (via the local Public Health Unit)*	Contact 1300 066 055 to be directed to the local Public Health Unit, or visit the <a href="#">NSW Health Website</a>
4	SafeWork NSW	131 050
5	The Appropriate Regulatory Authority*, being either: <ul style="list-style-type: none"> <li>• Local council</li> <li>• Western Lands Commissioner for the Western Division (except any part of the Western Division within the area of a local council).</li> </ul>	Local council - contact Office of Local Government on 4428 4100, or visit the <a href="#">Office of Local Government website</a> Western Lands Commissioner – phone 6883 5400

**Table 5.1.3b: Authorities to notify for Material Harm pollution incidents that do NOT present an immediate threat to human health or property**

Order	Authority	Contact Number
1	NSW EPA environment line	131 555
2	The Appropriate Regulatory Authority*, being either: <ul style="list-style-type: none"> <li>• Local council</li> <li>• Western Lands Commissioner for the Western Division (except any part of the Western Division within the area of a local council).</li> </ul>	Local council - contact Office of Local Government on 4428 4100, or visit the <a href="#">Office of Local Government website</a> Western Lands Commissioner – phone 6883 5400
3	Ministry of Health (via the local Public Health Unit)*	Contact 1300 066 055 to be directed to the local Public Health Unit, or visit the <a href="#">NSW Health Website</a>

4	SafeWork NSW	131 050
5	Fire and Rescue NSW	1300 729 579

\* The appropriate contact for the Appropriate Regulatory Authority and Public Health Unit will vary according to the geographic location of the activity. These contact numbers should be found in advance and stored for immediate access (e.g. in a project's Construction Environmental Management Plan and/or on site notice boards) should a pollution incident need to be notified.

#### 5.1.4 The relevant information to provide

It is important to avoid speculation on origin, causes or outcomes of a pollution incident in discussions with the authorities. Section 150 of the POEO Act provides the information that needs to be notified, being:

- The time, date, nature, duration and location of the incident
- The location of the place where pollution is occurring or is likely to occur, the nature, the estimated quantity or volume and the concentration of any pollutants involved, if known
- The circumstances in which the incident occurred (including the cause of the incident, if known)
- The action taken or proposed to be taken to deal with the incident and any resulting pollution or threatened pollution, if known
- Other information prescribed by the regulations.

Only known information should be provided when notifying of a Material Harm pollution incident. If further information becomes known after the initial notification, that information must immediately be notified to all authorities in accordance with Section 150 (see above). The immediate verbal notification is to be followed by written notification to each relevant authority within seven days of the date on which the incident occurred.

Complying with these notification requirements does not remove the need to comply with any other legislative requirements for incident notification (e.g. requirements under EPL conditions or the Work Health and Safety Act 2011).

## 5.2 Summary of other regulatory agency notification requirements

Specific statutory requirements relating to the notification of environmental incidents to relevant regulatory agencies are summarised in Table 5.2. Additional requirements adopted by Roads and Maritime are indicated in *italics*. Any notification to regulatory agencies should be indicated in the Environmental Incident Report Form to confirm that any required notifications have been initiated.

**Table 5.2: Regulatory agency notification requirements**

Legislation / issue	Regulating authority	Section / requirement
<i>Commonwealth Aboriginal and Torres Strait Islanders Heritage Protection Act 1984</i>	<a href="#">Department of the Environment and Energy</a>	Section 20 – requirement to notify the Minister of the discovery of Aboriginal remains.
<i>Contaminated Land Management Act 1997</i>	<a href="#">EPA</a>	Section 60 – requirement to notify if Roads and Maritime activities have contaminated land or if Roads and Maritime owns land that has been contaminated.
<i>Heritage Act 1977</i>	<a href="#">Office of Environment and Heritage</a>	Section 146 – requirement to notify the Heritage Council of the location of the relic once a relic has been discovered or located.
<i>National Parks and Wildlife Act 1974</i>	<a href="#">Office of Environment and Heritage</a>	Section 89A – requirement to notify the location of an Aboriginal object that is the property of the Crown.
<i>Protection of the Environment Operations Act 1997</i>	<a href="#">EPA</a> and other relevant authorities	Section 148 – requirement to immediately notify pollution incidents that cause or threaten Material Harm to the environment (see <a href="#">Section 5.1</a> )

	<a href="#">EPA</a>	<i>Pro-active reporting to the local EPA officer of offsite pollution incidents that occur as a result of Roads and Maritime activities is encouraged as soon as practicable after the pollution incident occurs.</i>
<i>Rural Fires Act 1997</i>	<a href="#">NSW Rural Fire Service</a>	Section 64 – requirement to notify an appropriate fire officer of the inability to extinguish any fire burning during a bush fire danger period applicable to the land.
Breach of Conditions of Approval (projects approved under Part 5.1 of the EP&A Act)	<a href="#">Department of Planning and Environment</a> (DPE)	DPE should be notified by the project proponent when there has been a breach of a Condition of Approval (CoA). There may also be other notification requirements included in the CoA.
<i>Water supply catchment areas</i>	<i>Local water supply authority</i>	<i>If an environmental incident has the potential for unapproved impacts on a drinking water supply, the relevant water supply authority must be advised.</i>

### 5.3 Requests for written reports from regulatory authorities (activities delivered internally by Roads and Maritime)

Should Roads and Maritime directly receive a request from a regulatory authority for a written report regarding an environmental incident, Environment Branch and Legal Branch must be immediately contacted for advice. No further correspondence (including email) about the incident should be distributed either internally or externally until advice is received. Environment Branch will coordinate with Legal Branch to:

- Assist in the investigation of the incident
- Provide legal advice to the project
- Co-ordinate the preparation of the written response to the regulatory authority.



the 'information' and 'communication' fields. The 'information' field is defined as:

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The 'communication' field is defined as:

...the study of the processes of communication, the social, cultural, economic and political contexts in which these processes take place, and the impact of communication on society. (p. 1)

The 'information science' field is defined as:

...the study of the processes of information creation, organisation, storage, retrieval, dissemination and use, and the social, cultural, economic and political contexts in which these processes take place, and the impact of information science on society. (p. 1)

The 'information studies' field is defined as:

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The 'information management' field is defined as:

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The 'information policy' field is defined as:

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The 'information law' field is defined as:

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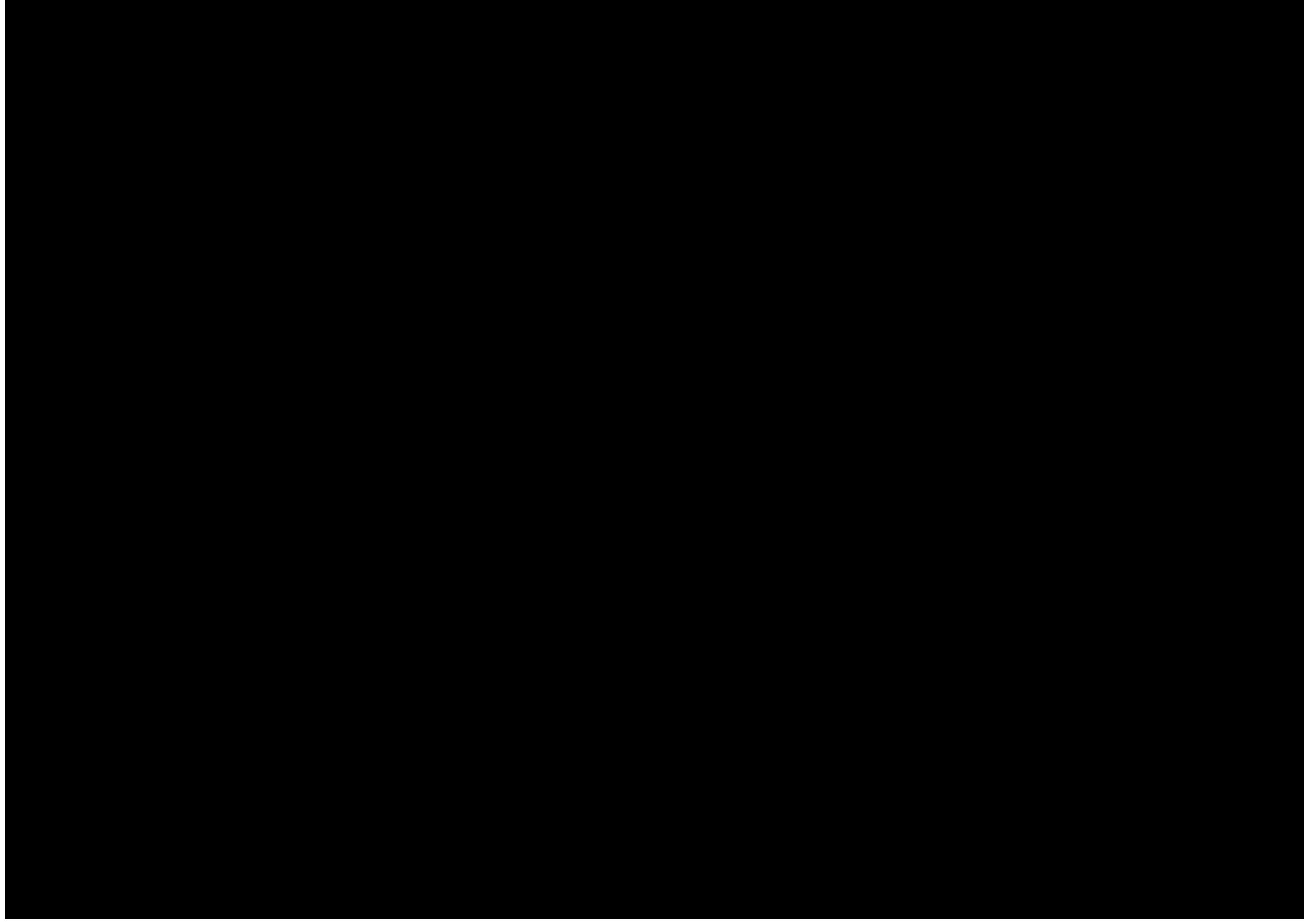
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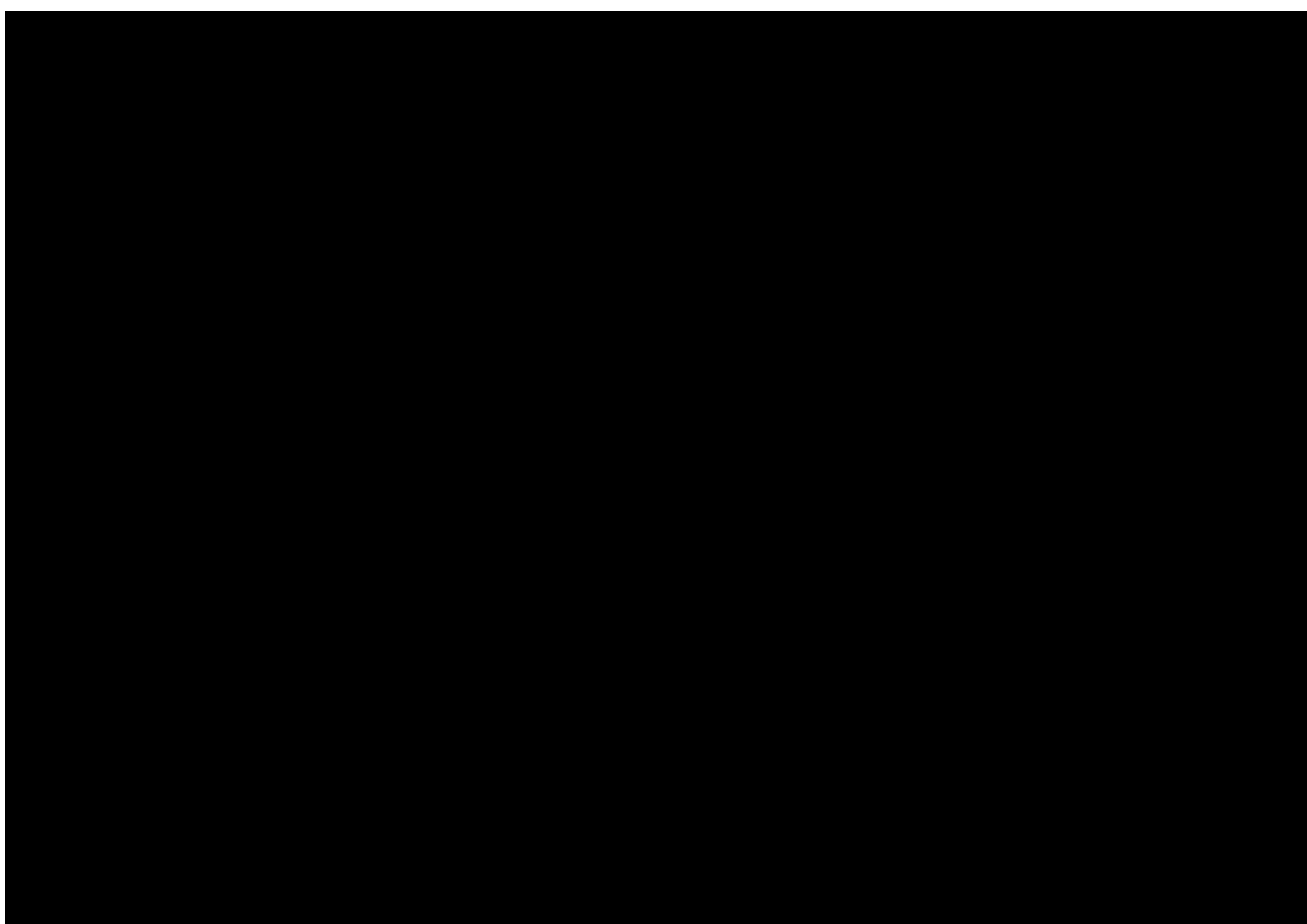






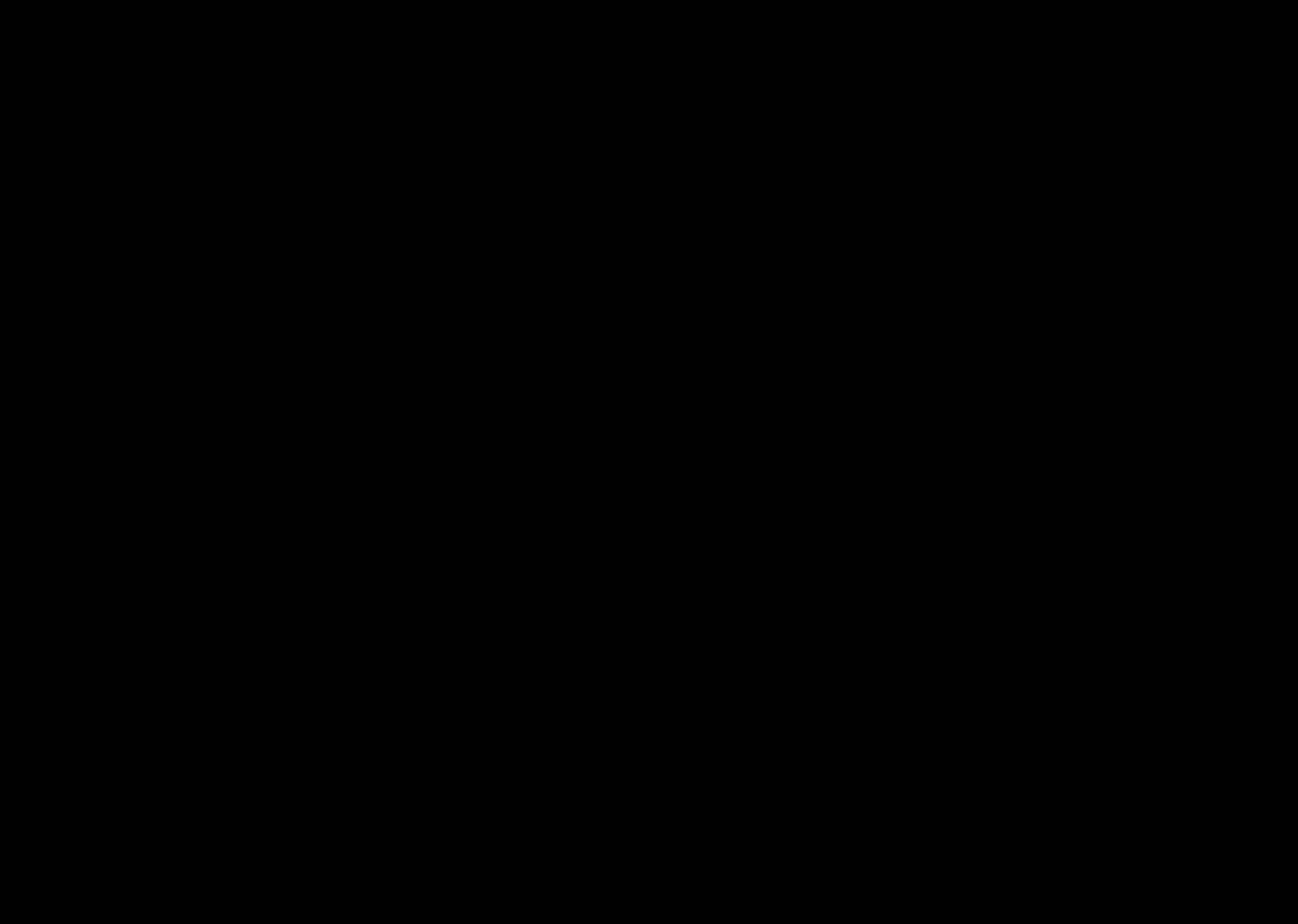


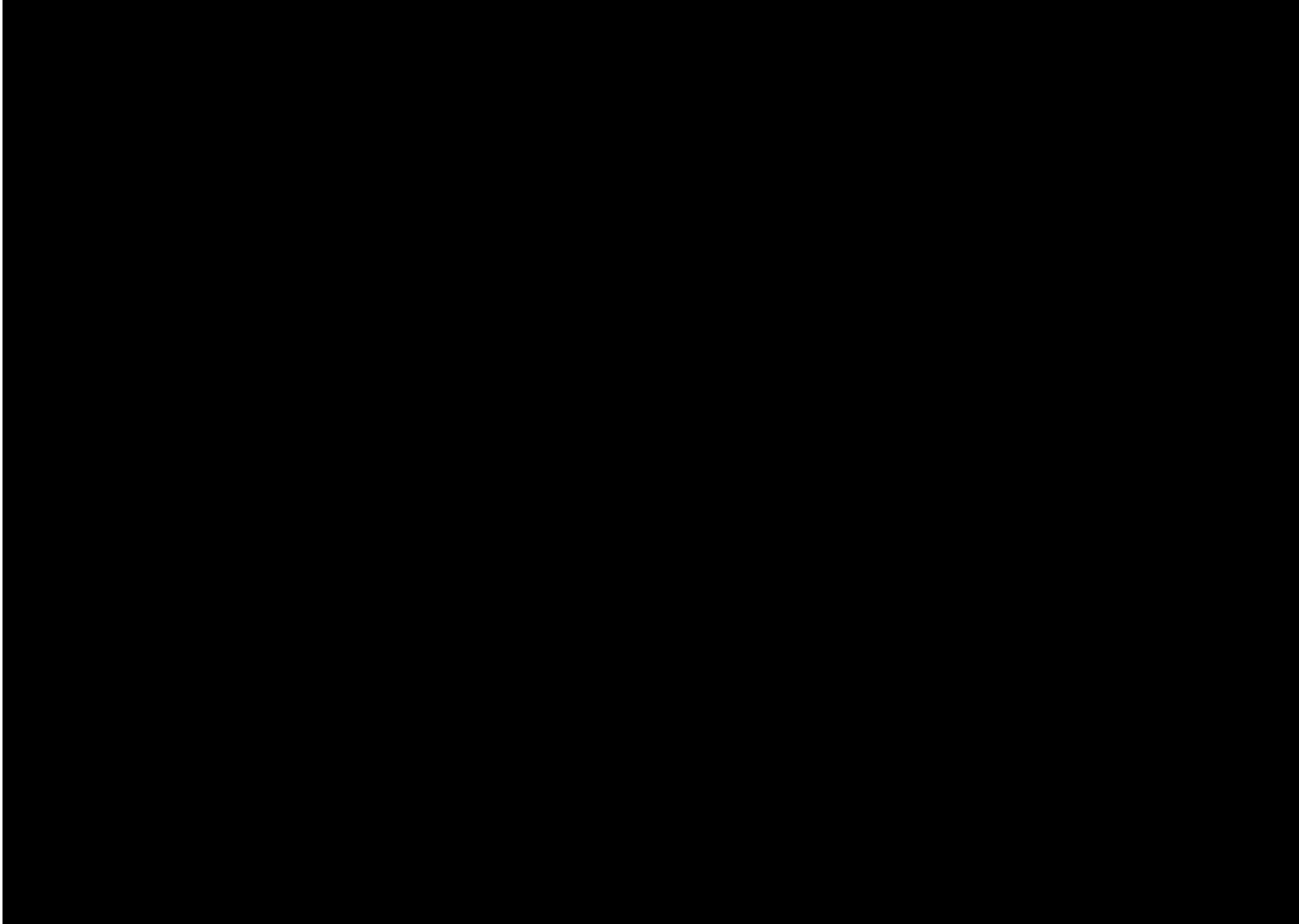






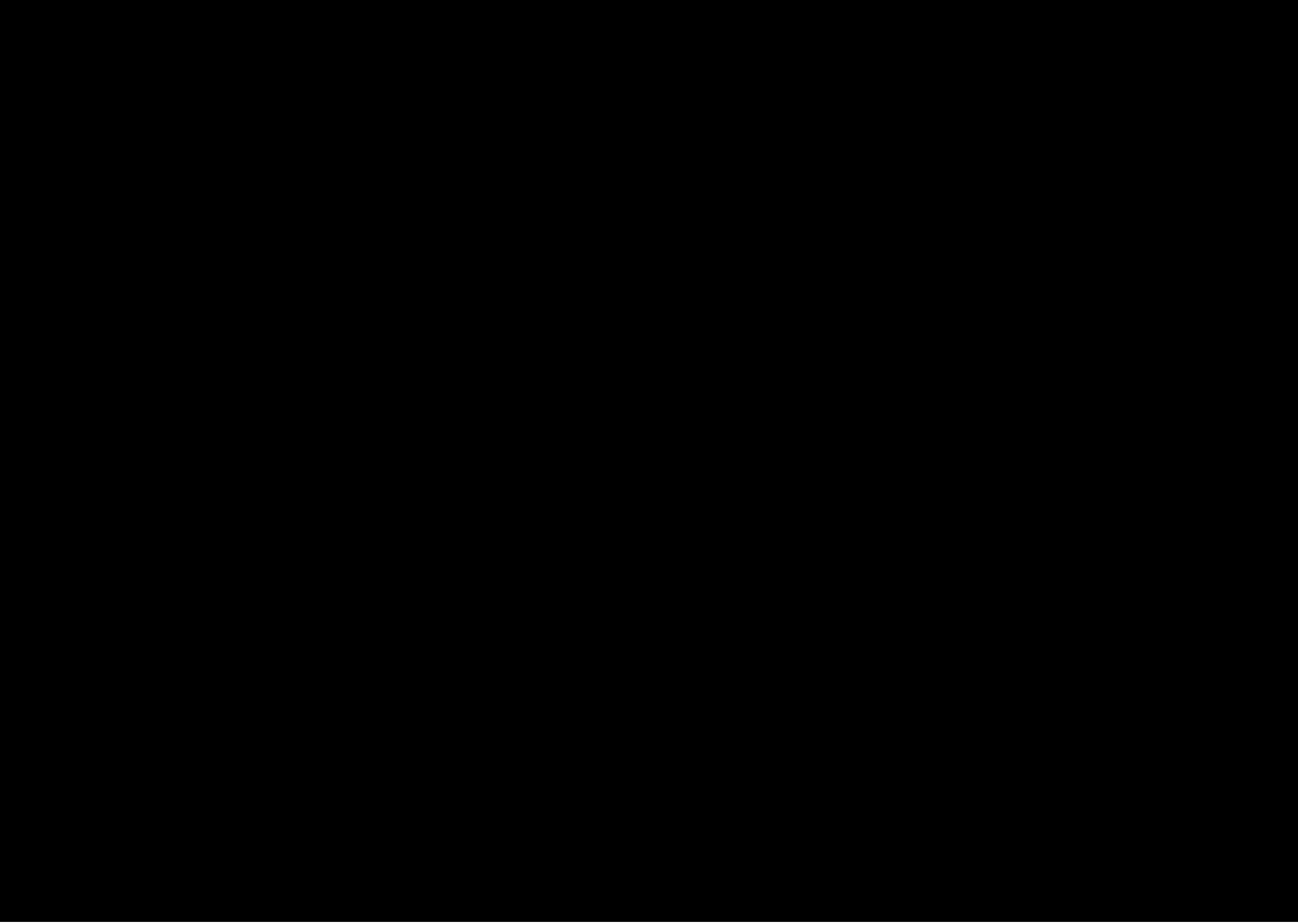












## **Appendix G**

### Ancillary Facility Checklist

## Ancillary Facility Checklist

<b>Site Location:</b>		<b>Area:</b>
<b>Date:</b>	<b>Date to Occupy Site:</b>	<b>Date to Decommission Site:</b>
<b>List activities to be undertaken at the Ancillary Facility:</b>		
<b>Complete the following checklist to determine compliance with CoA A16 for Ancillary facilities not identified in the EIS as amended by the SPIR:</b>		
	<b>Yes/No</b>	<b>Comments / if 'Yes' is dependent on additional controls, list the required controls.</b>
<b>CoA A16 a)</b> the facility is development of a type that would, if it were not for the purpose of the SSI, otherwise be exempt or complying development; <u>or</u>		
<b>CoA A16 b)</b> the facility is located as follows:		
i. at least 50 metres from any waterway unless an erosion and sediment control plan is prepared and implemented so as not to adversely affect water quality in the waterway in accordance with Managing Urban Stormwater series;		
ii. within or adjacent to land upon which the SSI is being carried out unless it can be demonstrated that performance criteria established in this approval can be met and that there will be a reduction in impact at other sites and a reduction in the construction program;		
iii. with ready access to a road network;		
iv. to prevent heavy vehicles travelling on local streets or through residential areas in order to access the facility, except as identified in the EIS as amended by the SPIR;		
v. so as to be in accordance with the Interim Construction Noise Guideline (DECC 2009) or as otherwise agreed in writing with affected landowners and occupiers;		
vi. so as not to require vegetation clearing beyond the extent of clearing approved under other terms of this approval except as approved by the ER as minor clearing;		
vii. so as not to have any impact on heritage items (including areas of archaeological sensitivity) beyond the impacts identified, assessed and approved under other terms of this approval;		

viii. so as not to unreasonably interfere with lawful uses of adjacent properties that are being carried out at the date upon which establishment of the facility is to commence;		
ix. to enable operation of the ancillary facility during flood events and to avoid or minimise, to the greatest extent practicable, adverse flood impacts on the surrounding environment and other properties and infrastructure; and		
x. so as to have sufficient area for the storage of raw materials to minimise, to the greatest extent practicable, the number of deliveries required outside standard construction hours.		
<b>If the ancillary facility does not comply with either CoA A16a) OR CoA A16b) complete assessment of compliance with CoA A18 below:</b>	<b>Yes/No</b>	<b>Comments / if 'Yes' is dependent on additional controls, list the required controls.</b>
Is the ancillary facility considered minor, comprising lunch sheds, office sheds and portable toilet facilities?		
<b>CoA A18 a)</b> Would the ancillary facility have no greater environmental and amenity impacts than those that can be managed through the implementation of environmental measures detailed in the CEMP required under Condition C1 of the CoA; and		
<b>CoA A18 b)</b> Has the ancillary facility been assessed by the ER to have: (TO BE COMPLETED BY THE ER)		
i. minimal amenity impacts to surrounding residences and businesses, after consideration of matters such as compliance with the ICNG, traffic and access impacts, dust and odour impacts, and visual (including light spill) impacts;		
ii. minimal environmental impact with respect to waste management and flooding; and		
iii. no impacts on biodiversity, soil and water, and heritage beyond those already approved under other terms of the CoA.		

Attach drawings and other supporting information prior to submission to the Environmental Manager and Environmental Representative for approval.



The Ancillary Facility is compliant with (tick relevant condition):

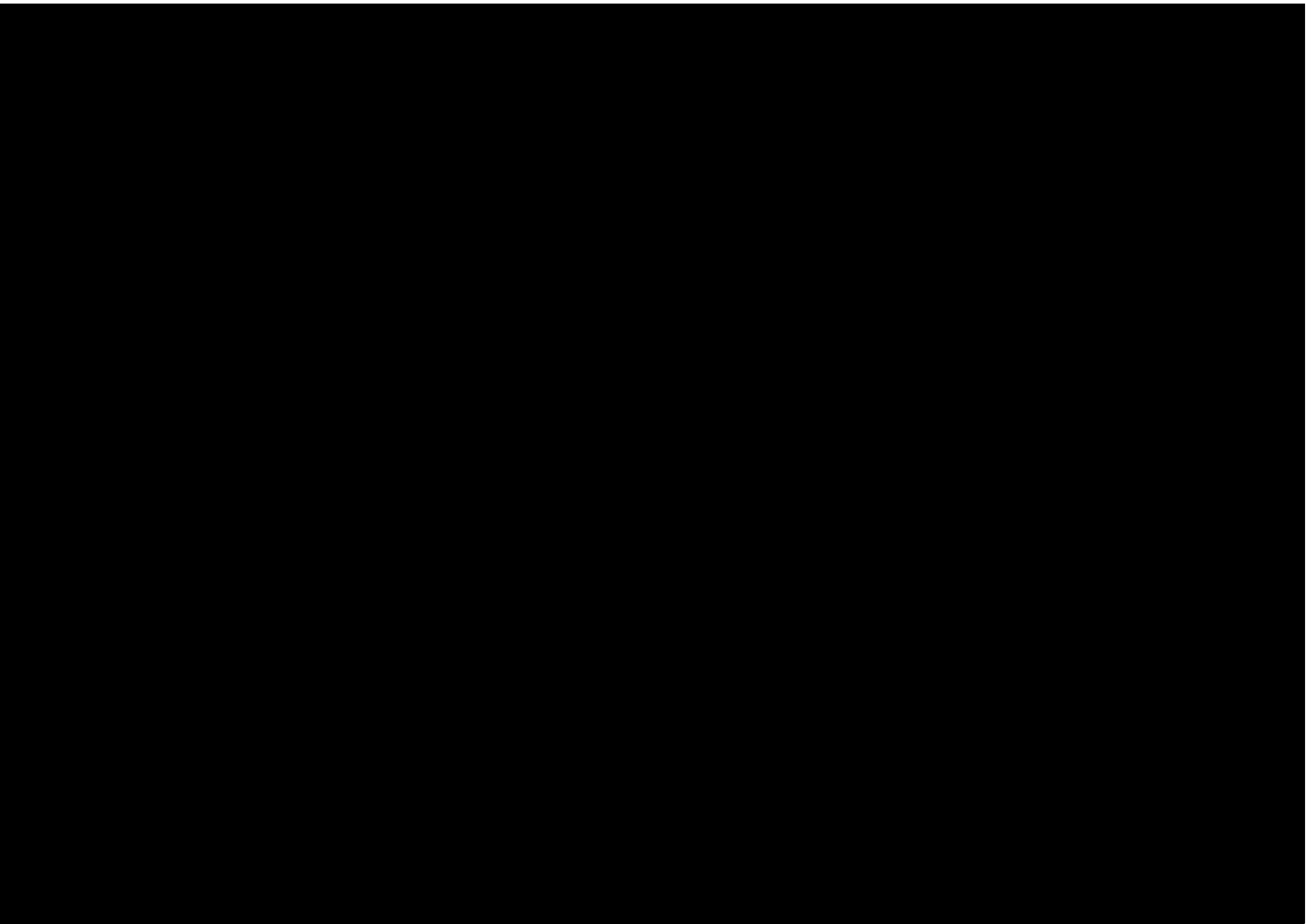
CoA A16a) ☐

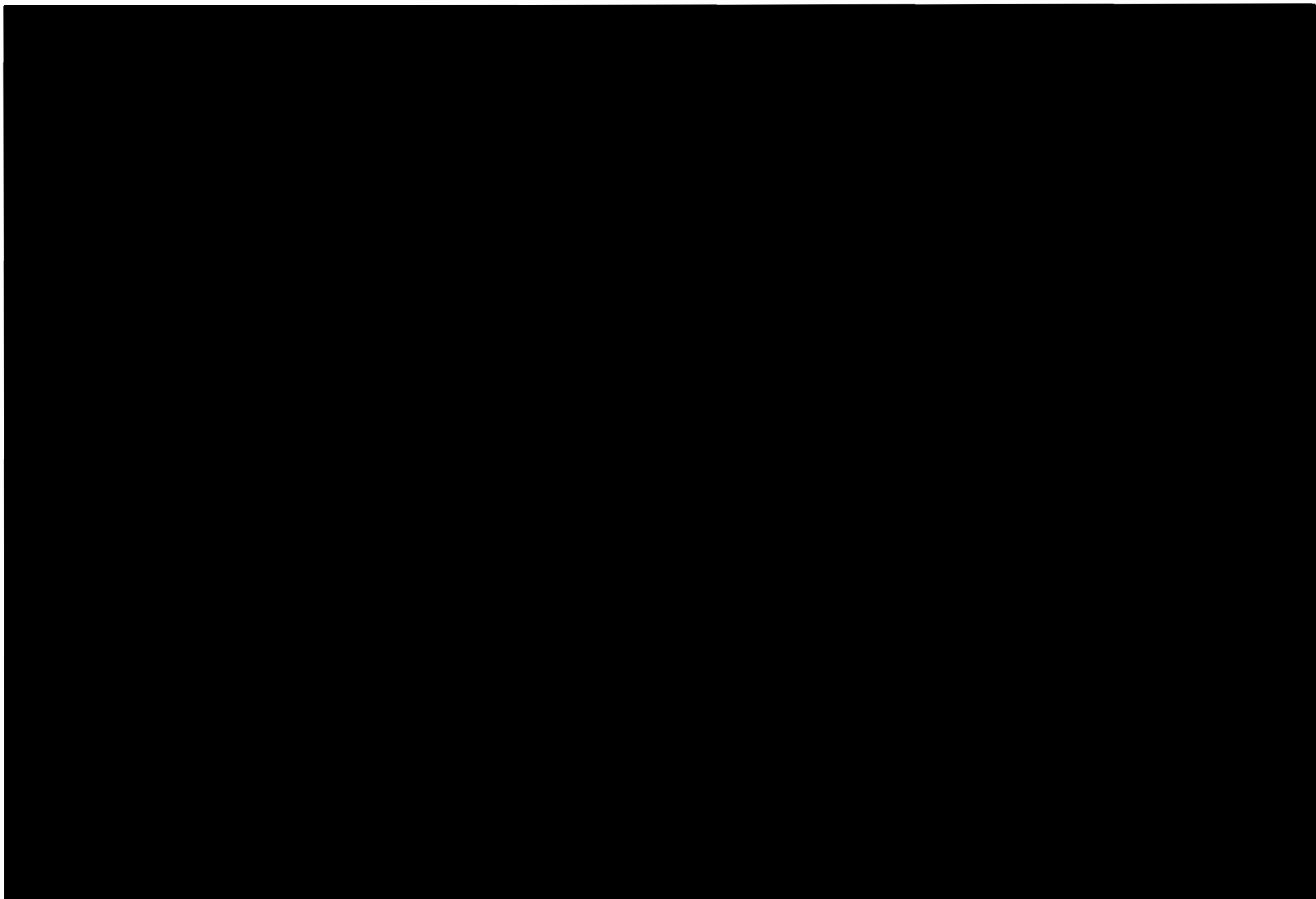
CoA A16b) ☐

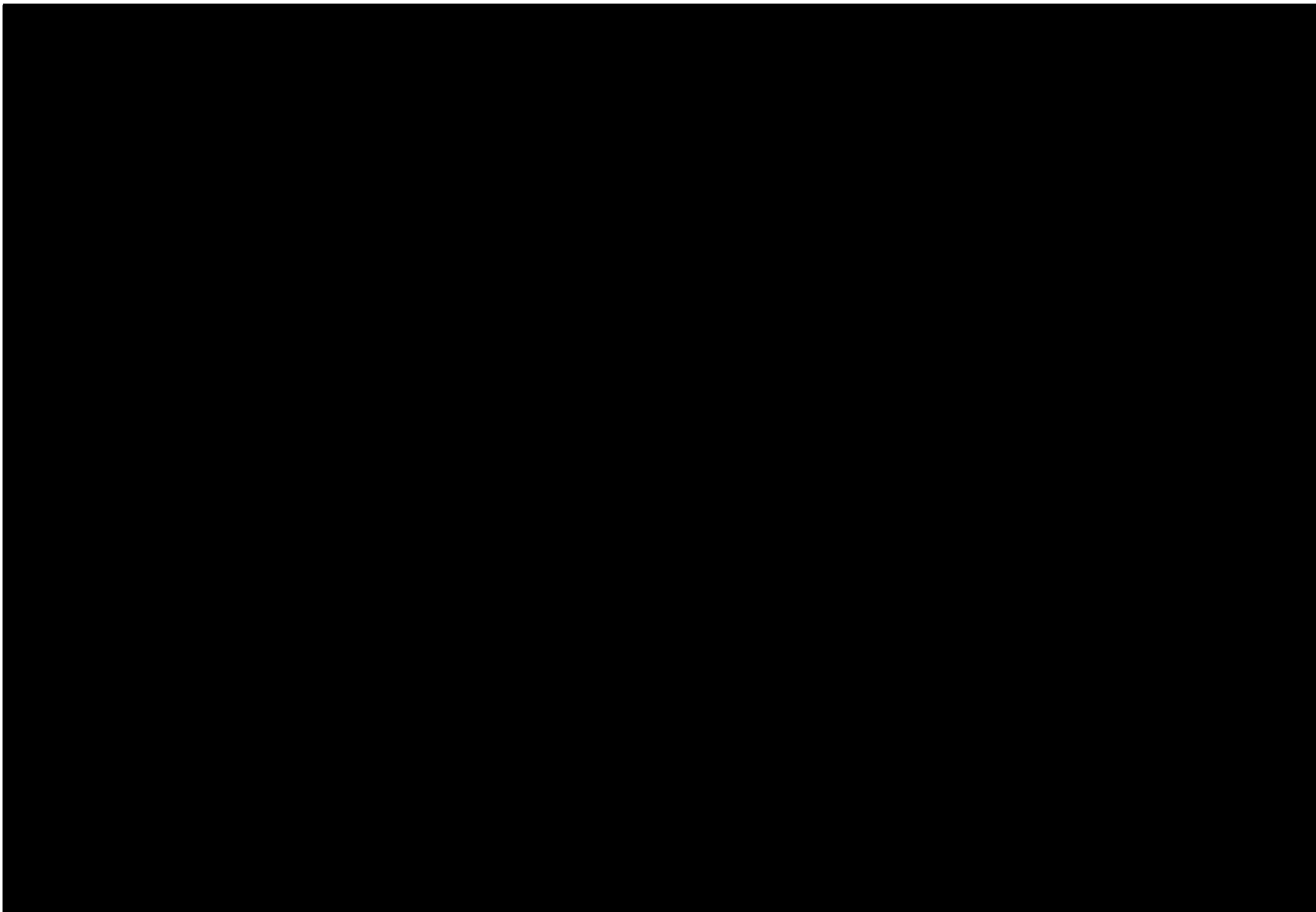
CoA A18 ☐

Environmental Manager Approval	Signature	Date
Notes/Comments		

Environmental Representative Approval	Signature	Date
Notes/Comments		

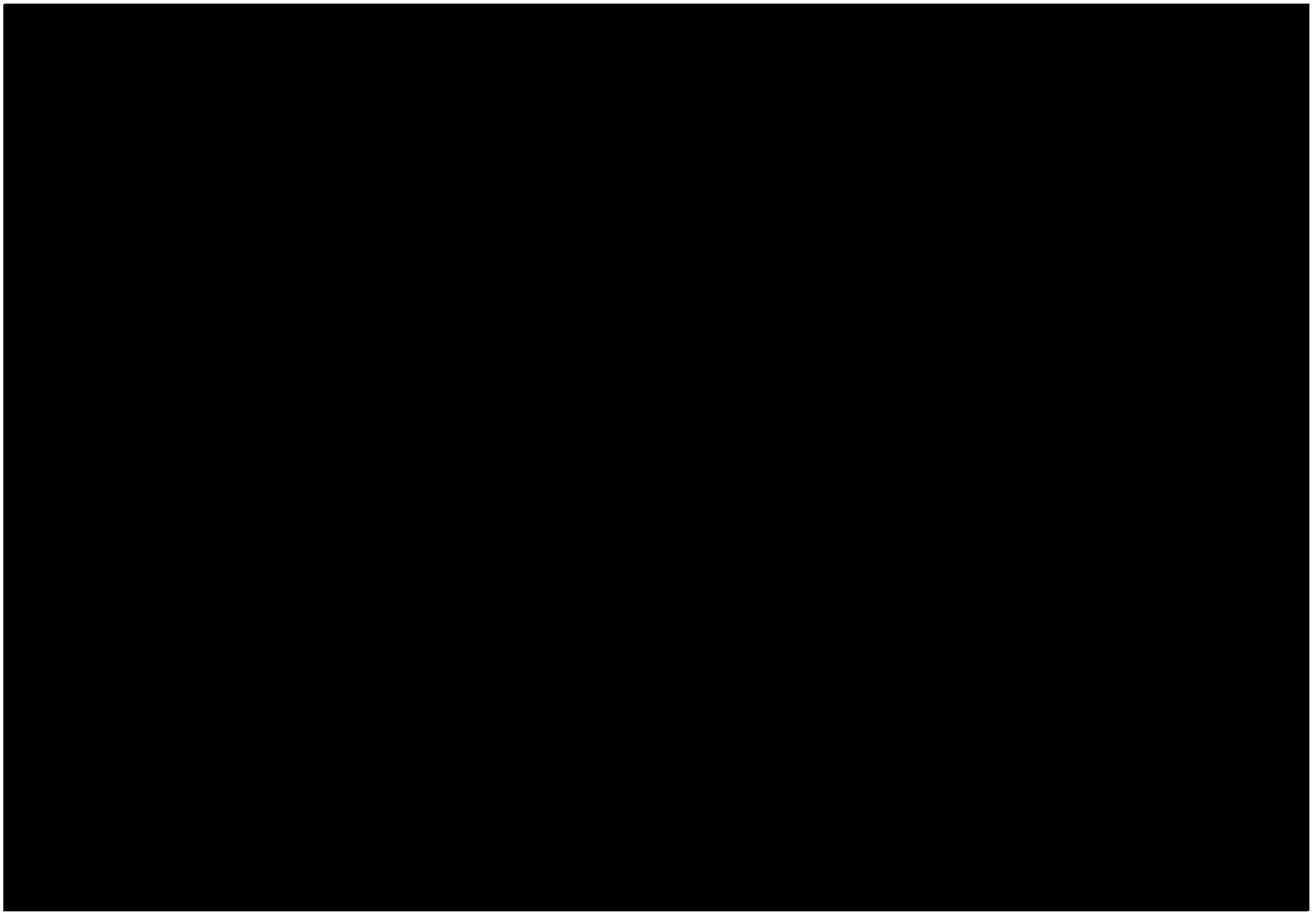


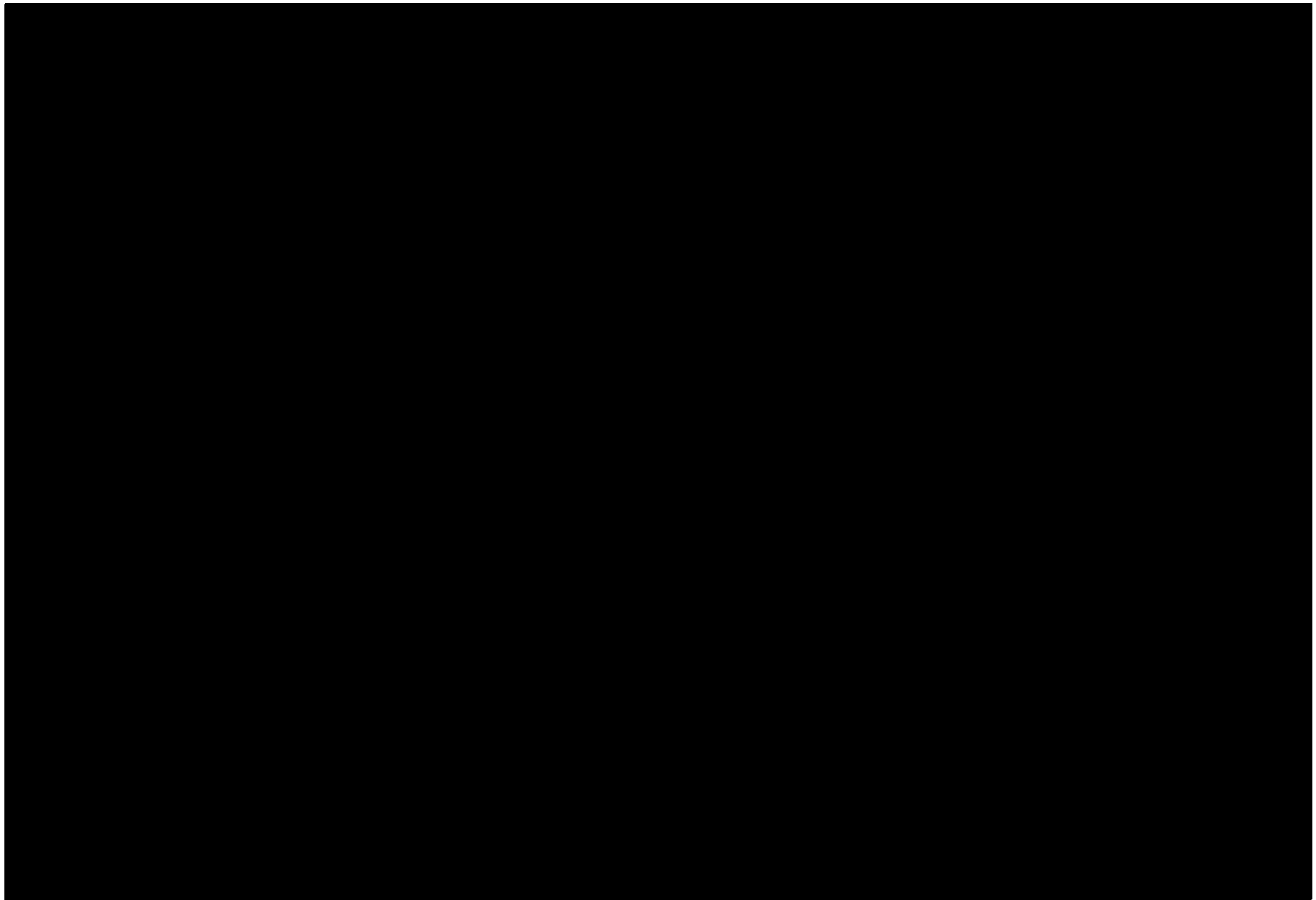




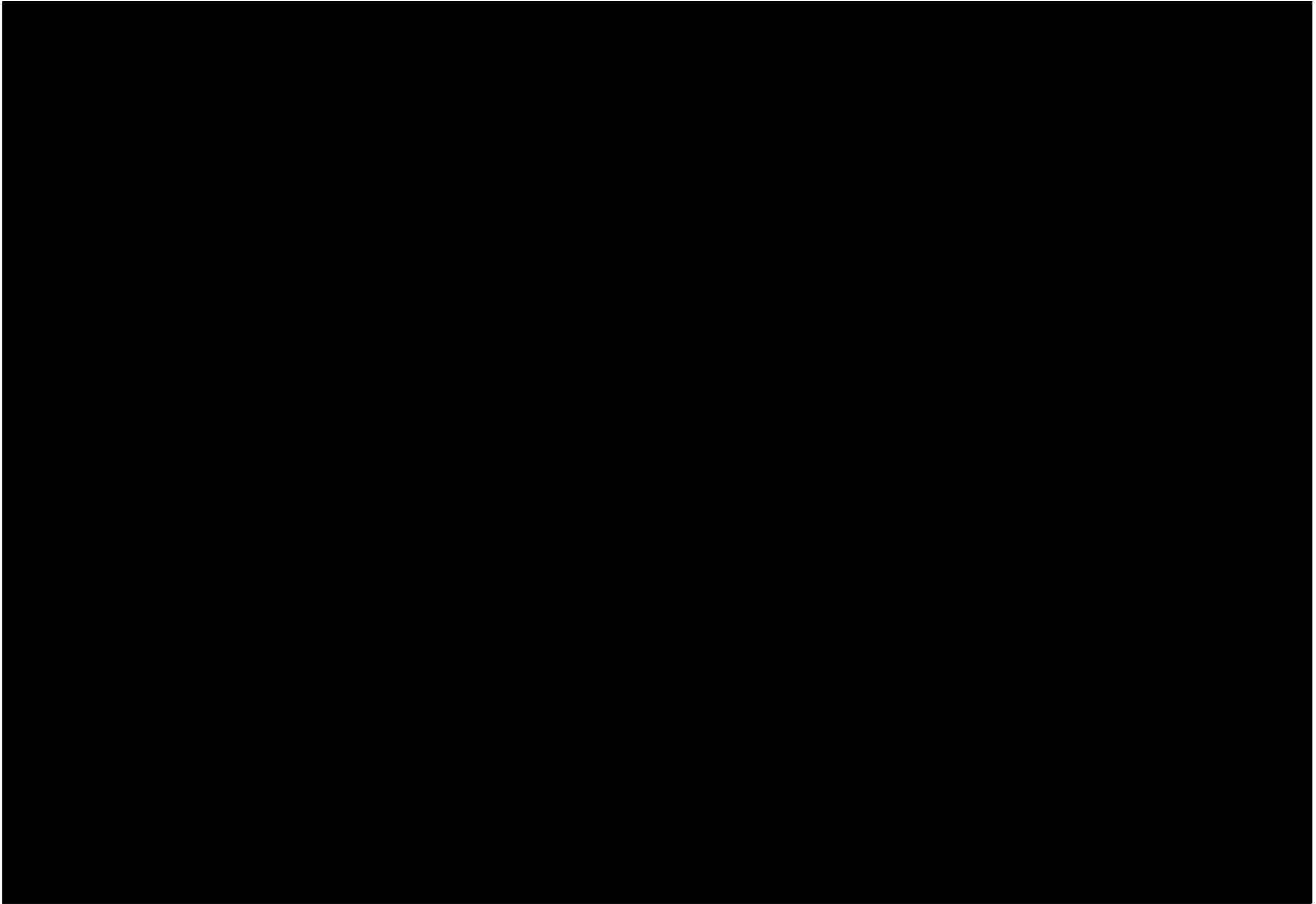


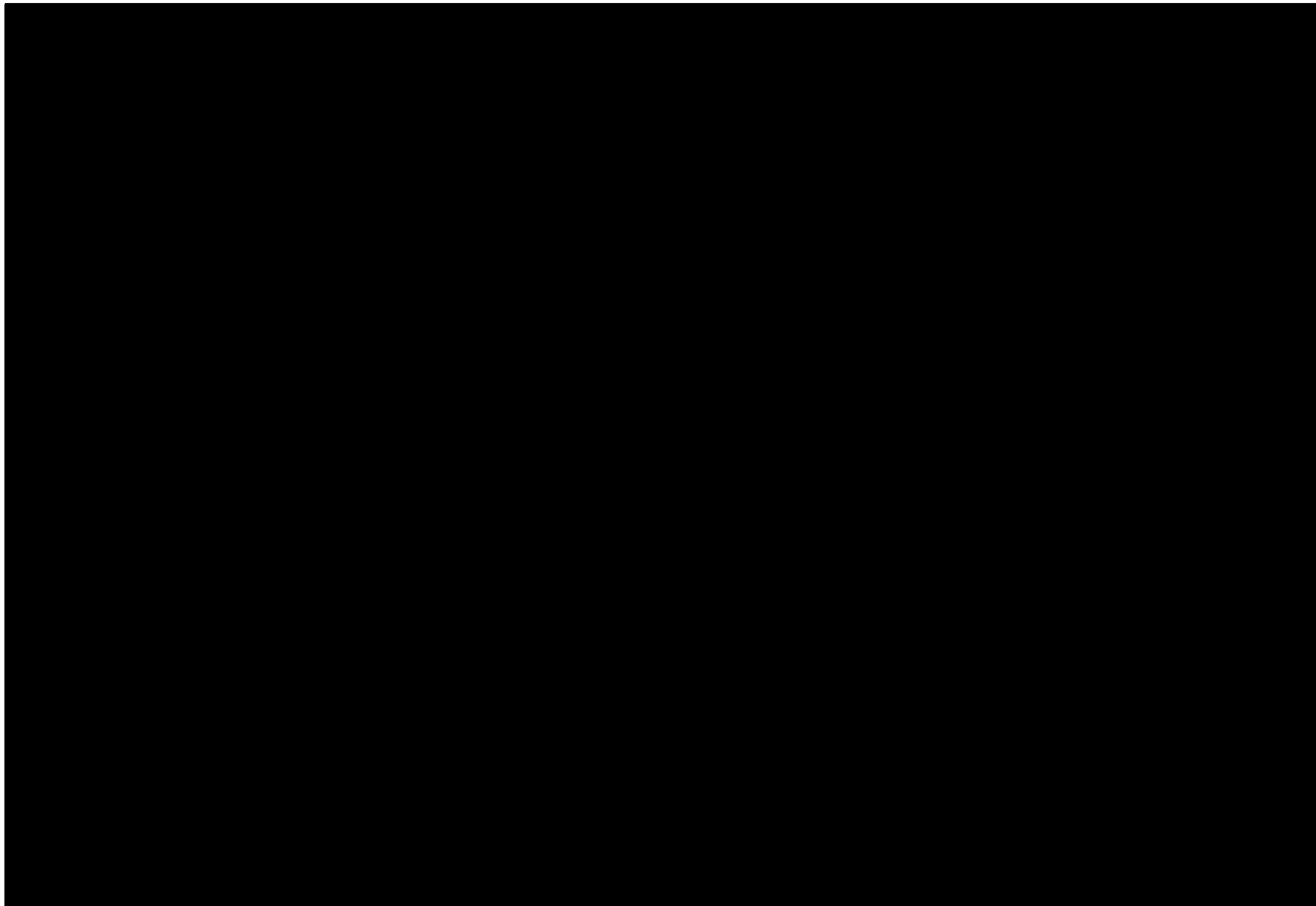




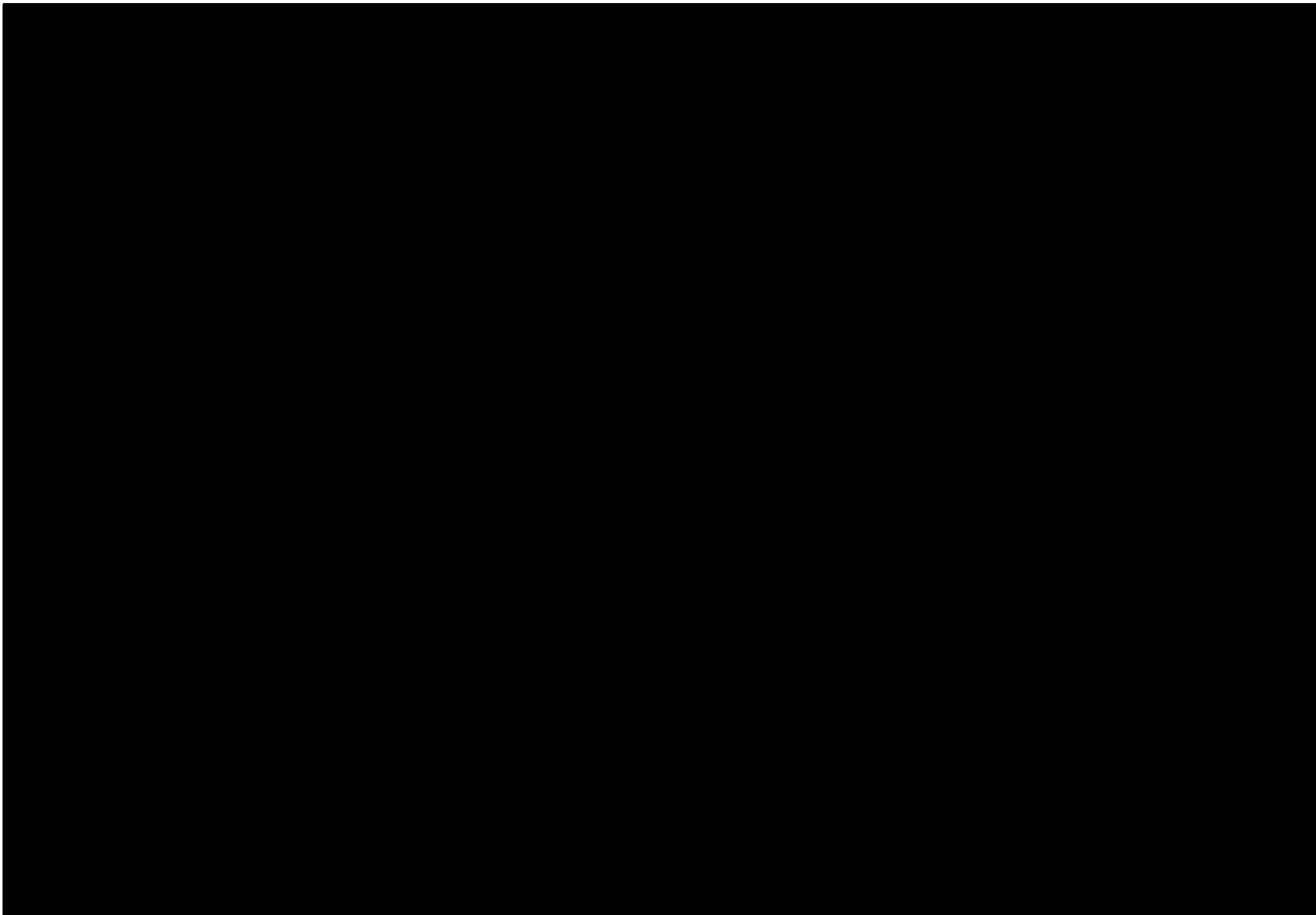


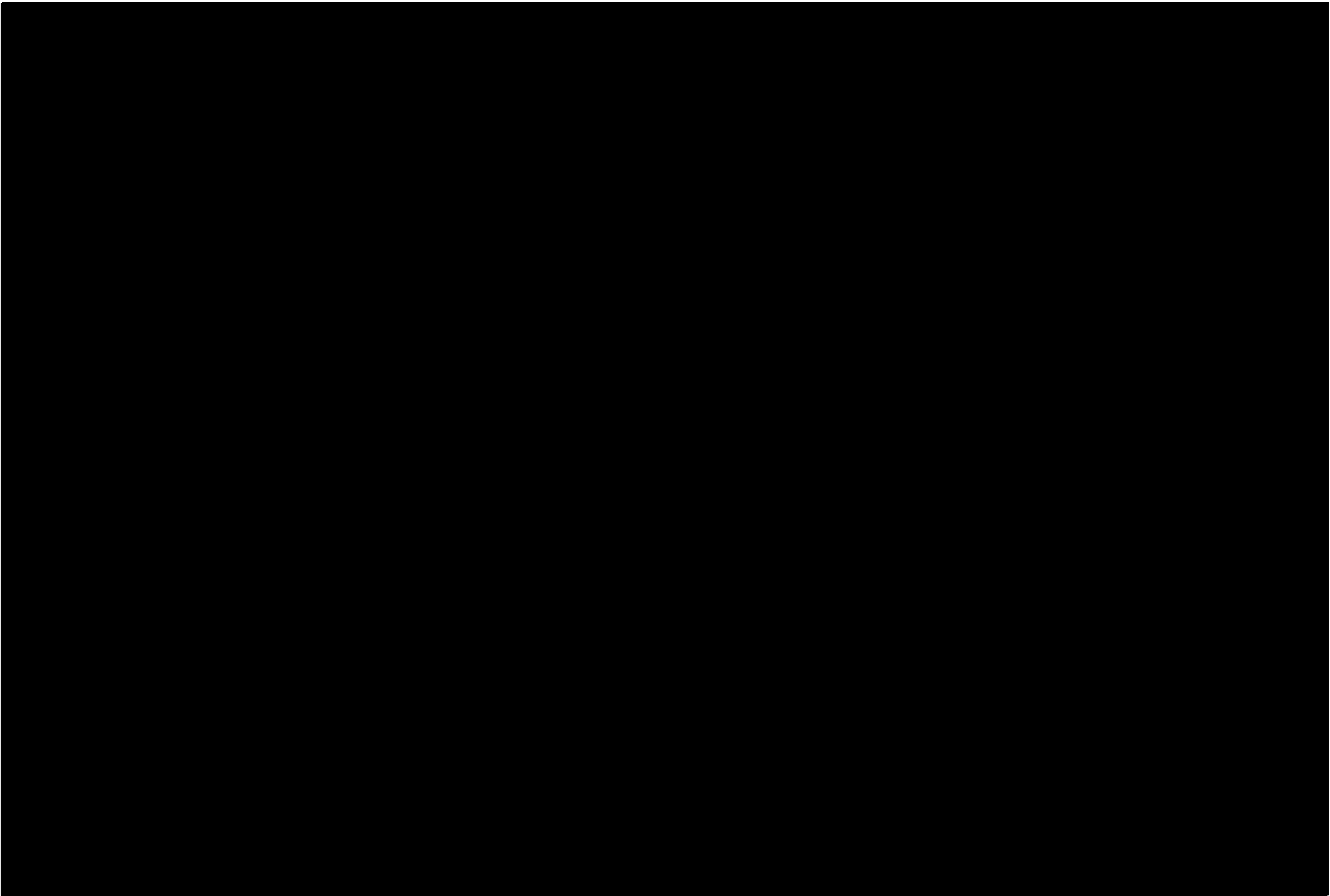


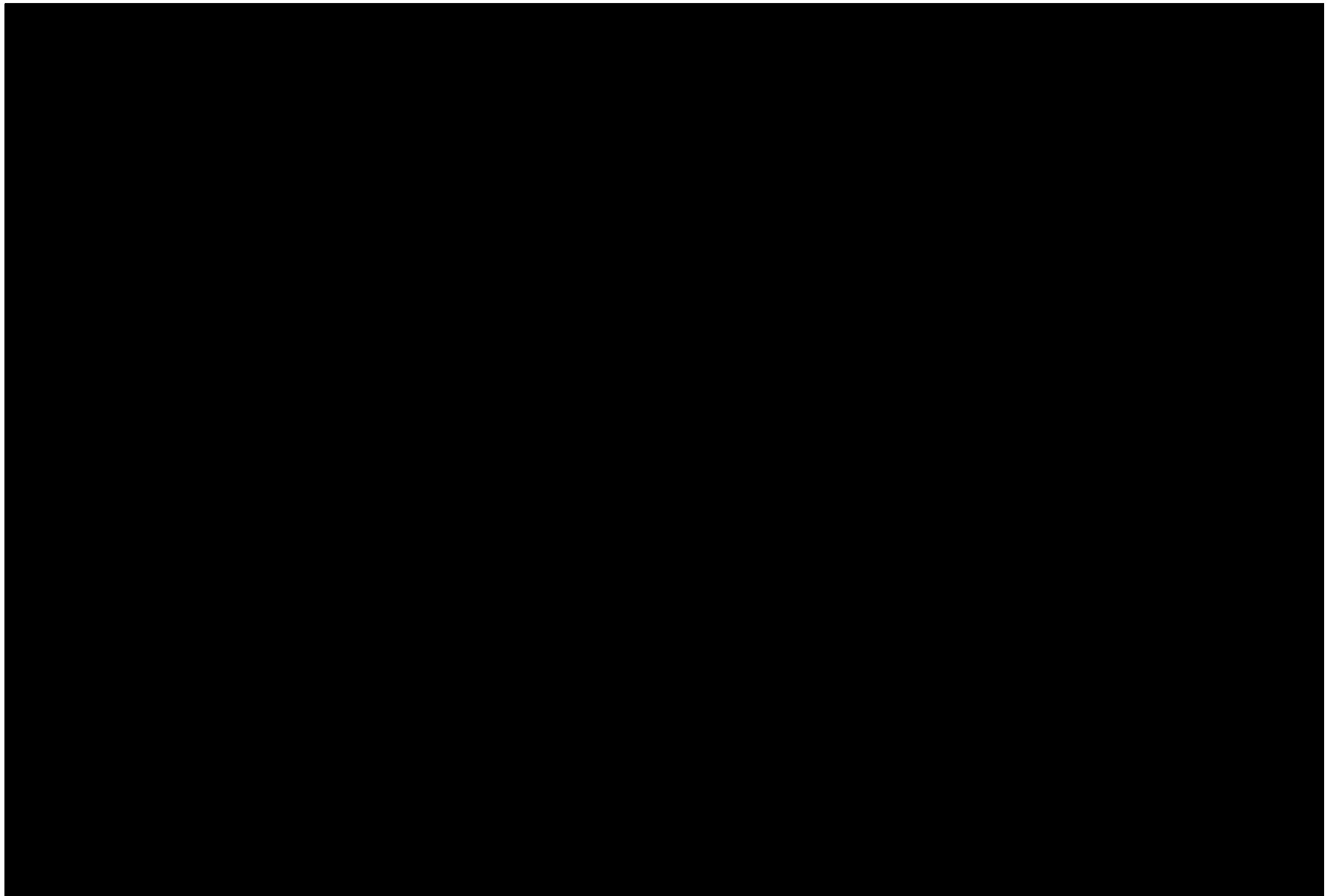


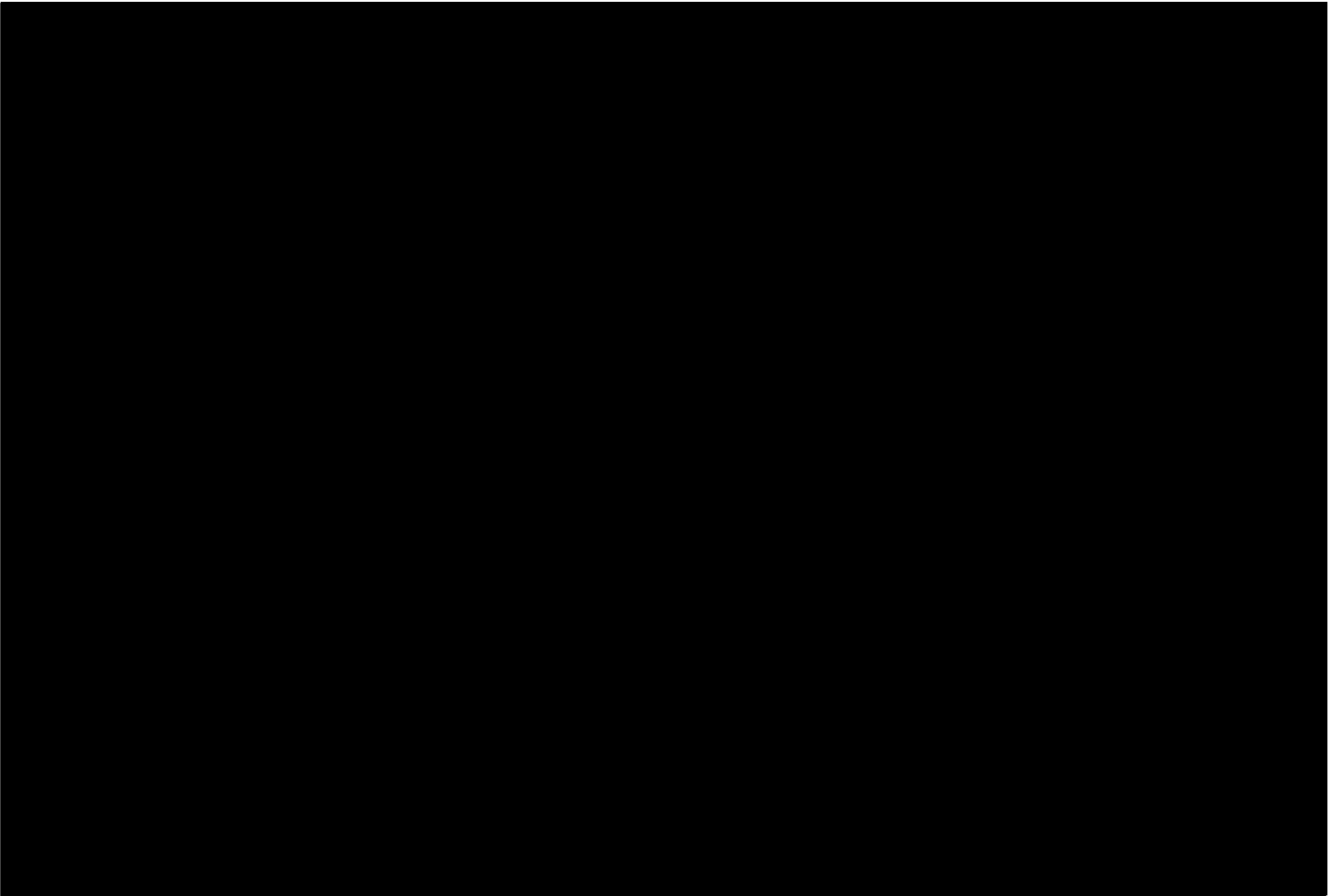


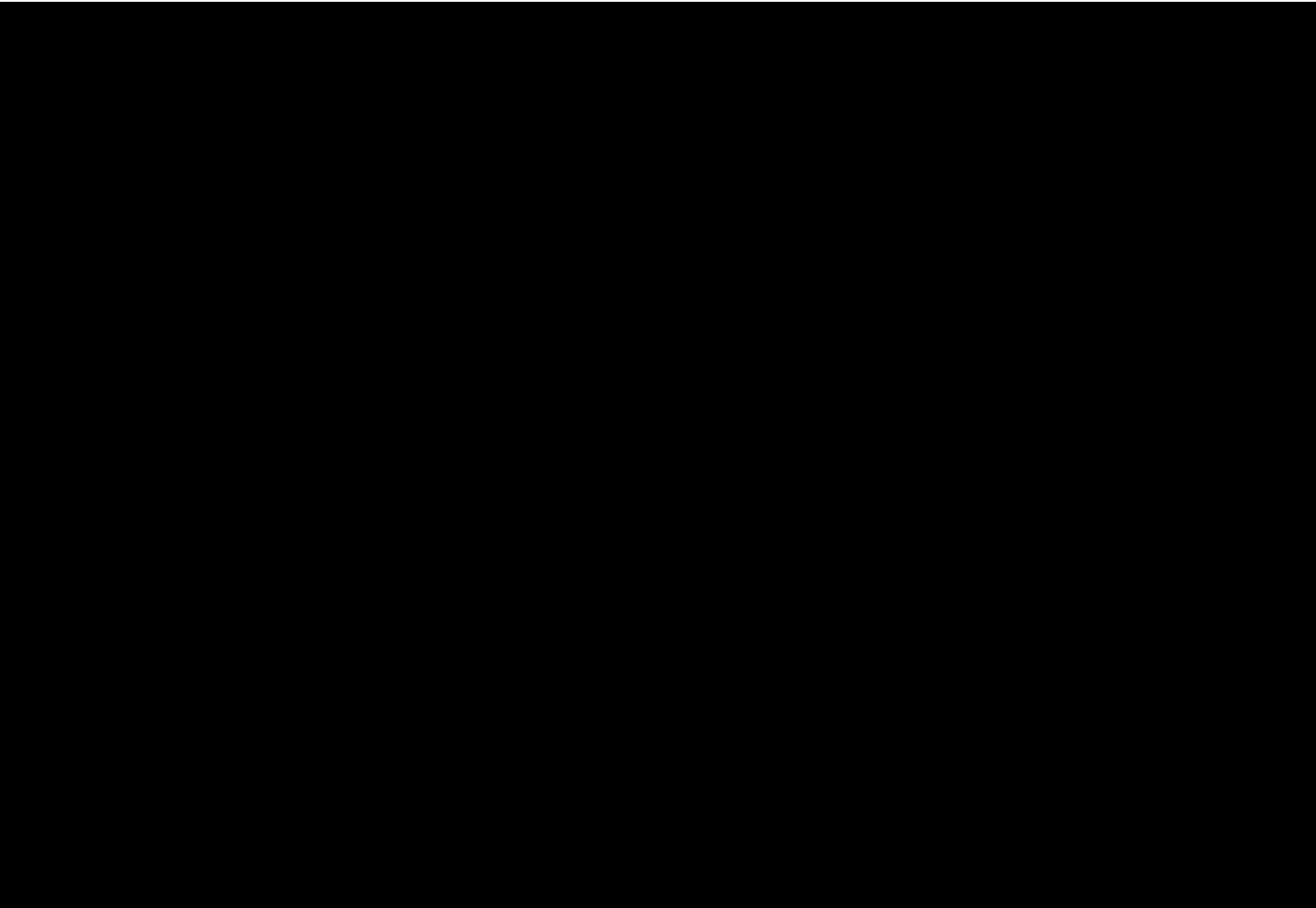


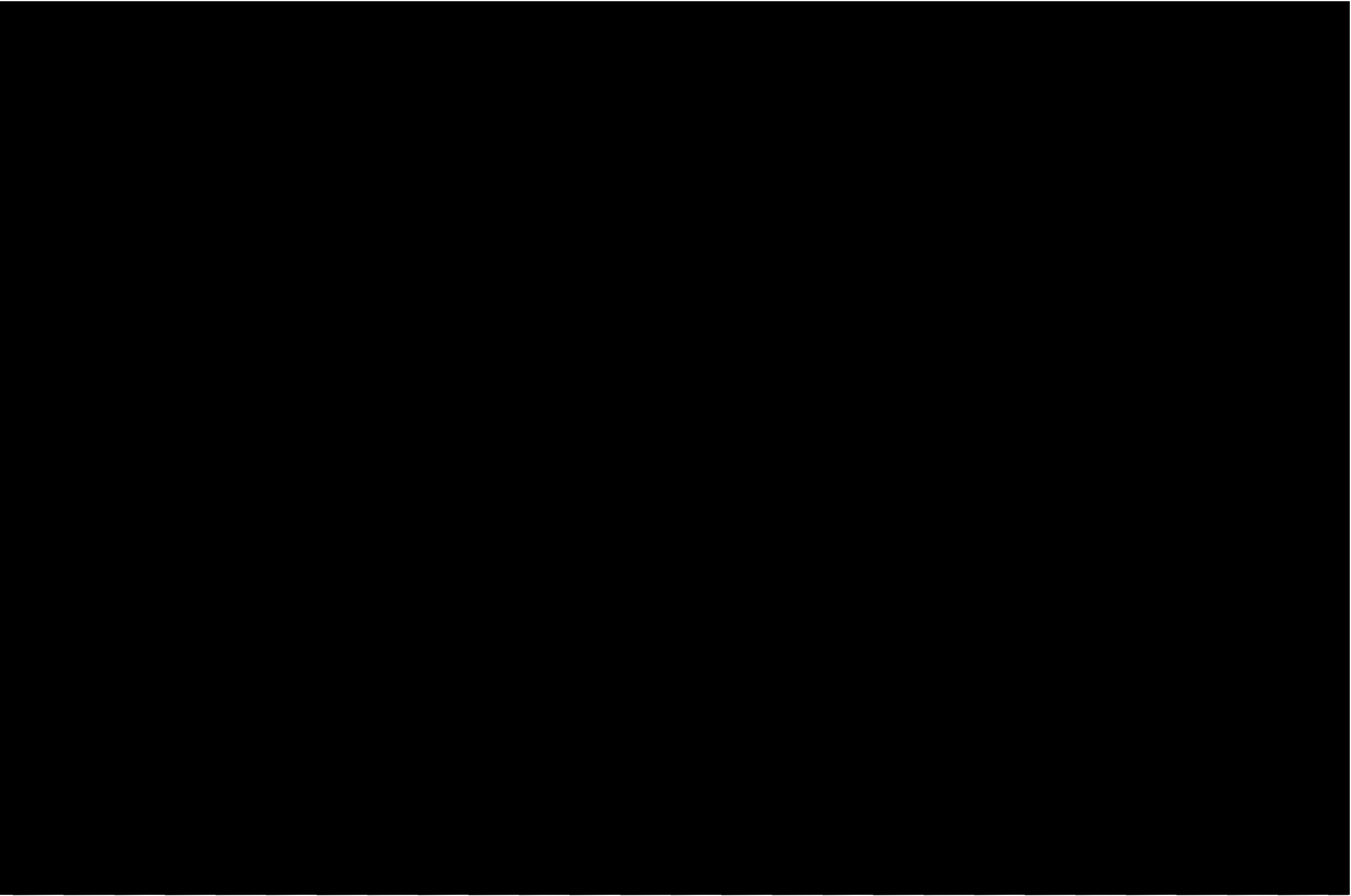














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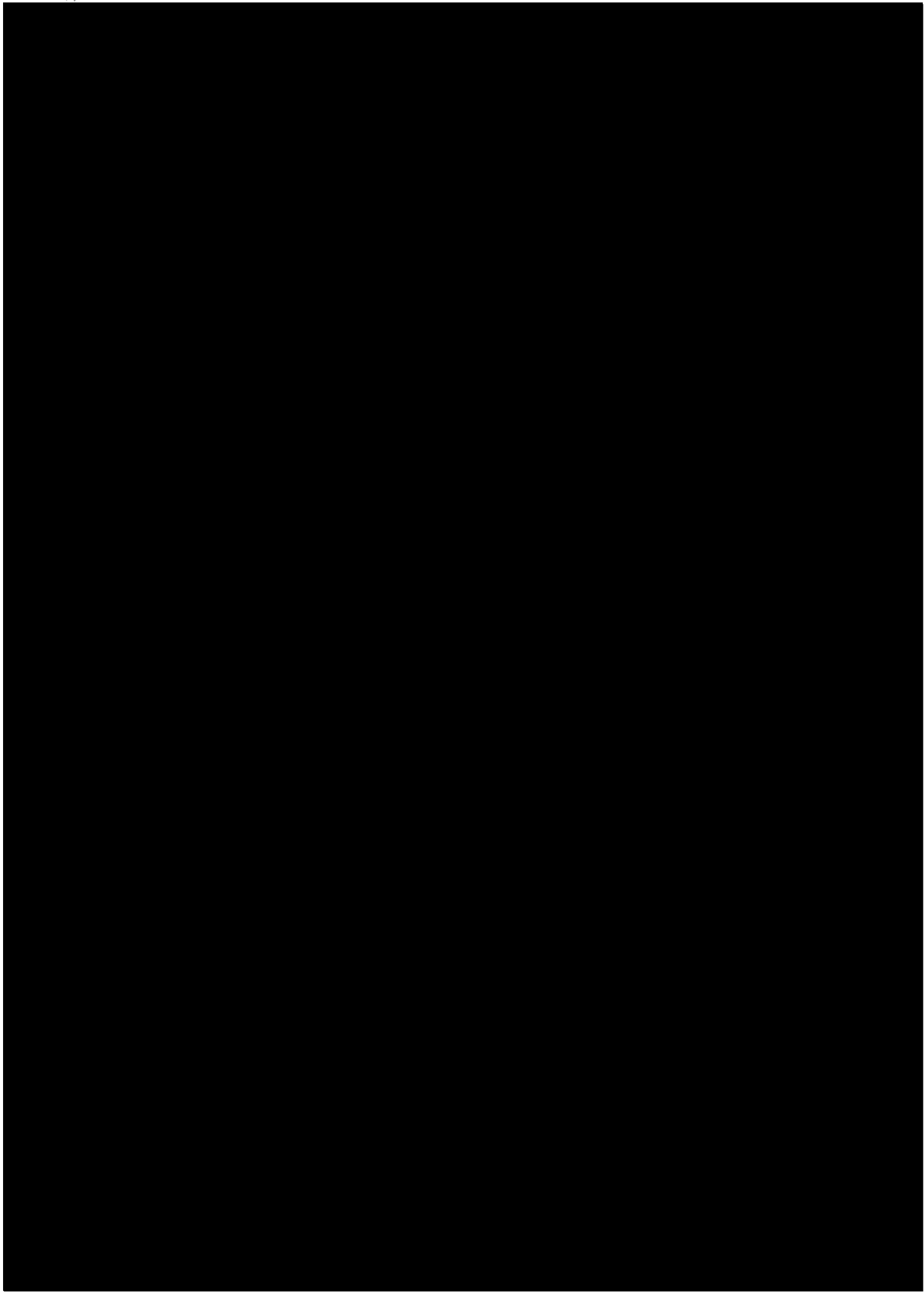
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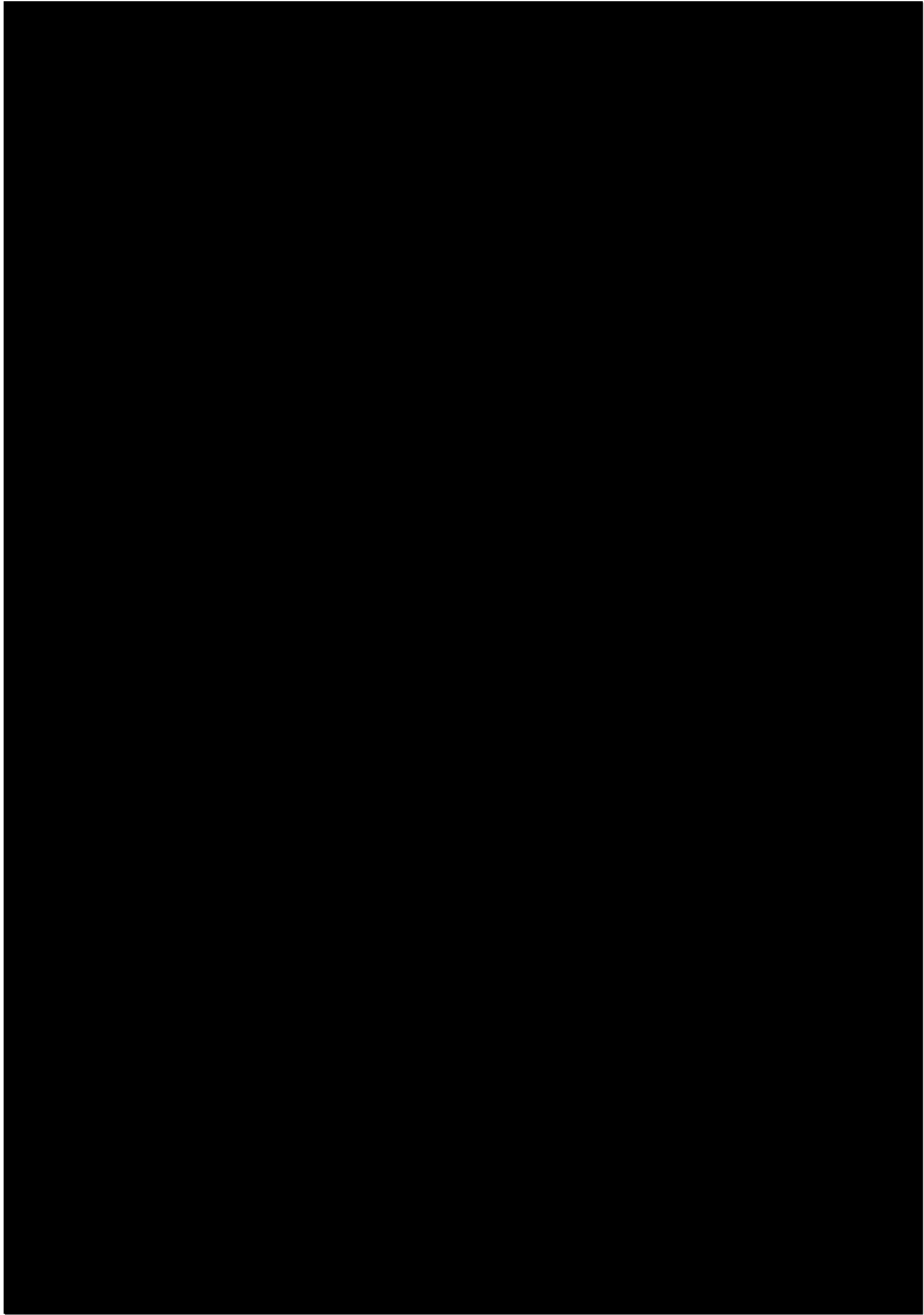
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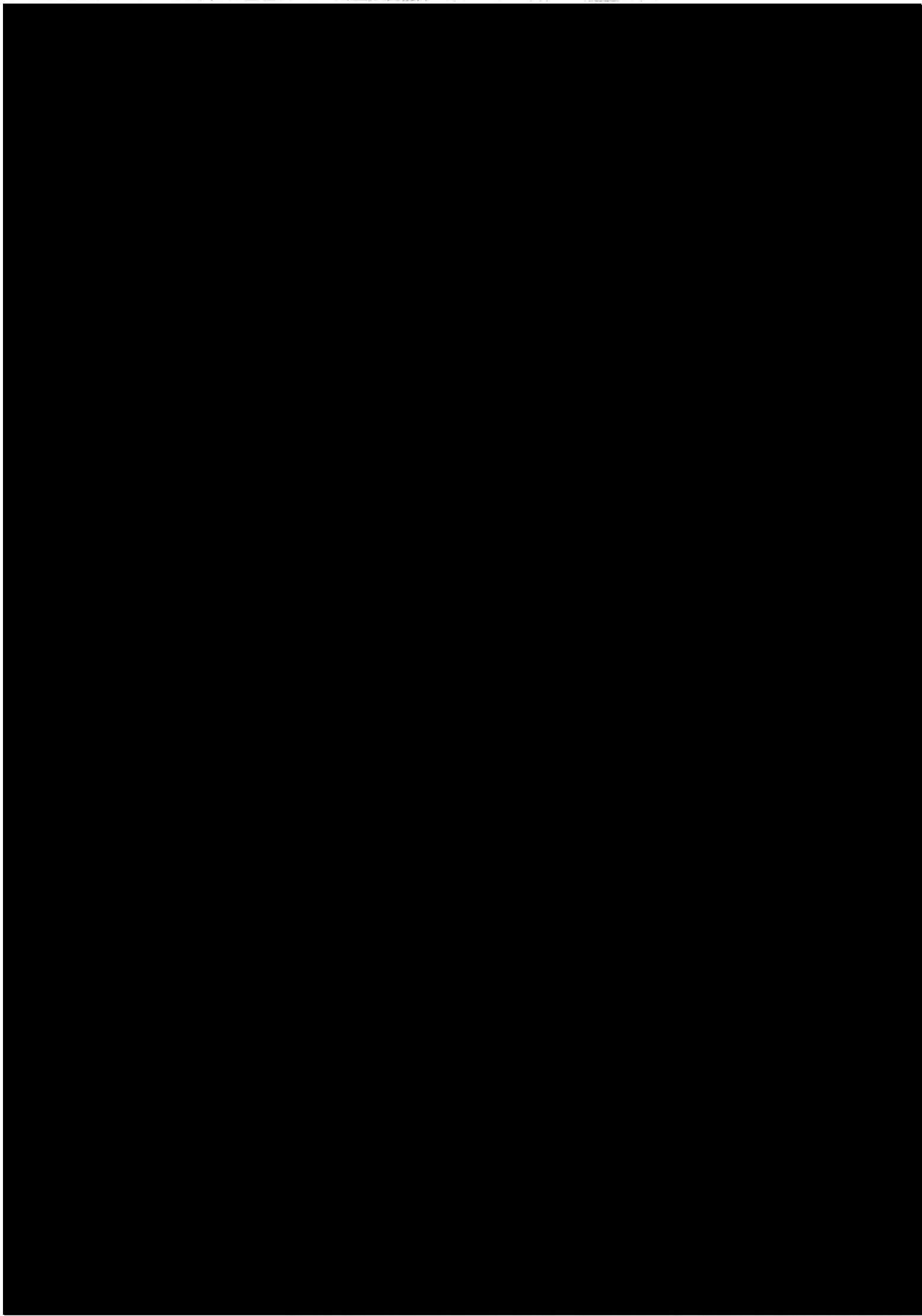


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