



9 October 2020

Department of Planning, Industry and Environment
Green and Resilient Places Division
Locked Bag 5022
Parramatta NSW 2124

Sent via NSW Planning Portal.

DRAFT CUMBERLAND PLAIN CONSERVATION PLAN SUBMISSION

1.0 INTRODUCTION

[REDACTED]

The Walker land comprises cleared land used for grazing and bushland gorges with native vegetation and habitat.

Walker supports the objectives of the Draft Cumberland Plain Conservation Plan (CPCP) including the regional approach to conservation and the focus on retaining threatened ecological communities.

However, Walker does have a number of concerns which we request the Department of Planning Industry and Environment (DPIE) to address.

The concerns are summarised as follows:

1. Proposed E2 zones along creek lines are inappropriate where there is minimal riparian or ecological functionality;
2. Proposed *Strategic Conservation Area* designation over cleared land at [REDACTED] Road is inconsistent with the selection criteria used in the CPCP and the proposed controls under the SEPP would have a significant economic impact on Walker and neighbouring landholders;
3. The delivery of future State Infrastructure at Appin and Wilton will be arbitrarily constrained by the 20 hectare limit imposed for additional vegetation loss and this will ultimately reduce the capacity of the Macarthur Growth Area;
4. Koala setbacks along the perimeter of the conservation lands should be included within any necessary Asset Protection Zones;
5. The proposed E2 zones within Walker owned land at Wilton disregards the South East Wilton Precinct Plan within the *State Environmental Planning Policy (Sydney Region Growth Centres) 2006*; and
6. Figure 5 within the Koala Plan contradicts the CPCP Spatial Viewer and is inconsistent with the South East Wilton Precinct Plan within *State Environmental Planning Policy (Sydney Region Growth Centres) 2006*.

We detail these concerns below with supporting evidence from technical studies undertaken by **J.Wyndham Prince** (JWP) and **Niche Environment and Heritage** (Niche) provided in the Appendices.

2.0 REMOVAL OF E2 ENVIRONMENTAL CONSERVATION ZONE FROM CLEARED RIPARIAN AREAS

The Plan proposes to establish E2 Environmental Conservation zoning over mapped Strahler 2, 3 and 4 riparian corridors.

Walker engaged consultants JWP and Niche to undertake ground surveys of riparian and ecological function along eight proposed E2 corridors – refer **Appendix 1**.

The surveys found that only two of these corridors have sufficient riparian and ecological function to justify an E2 zoning. The remaining six corridors do not, as they provide minimal conservation value.

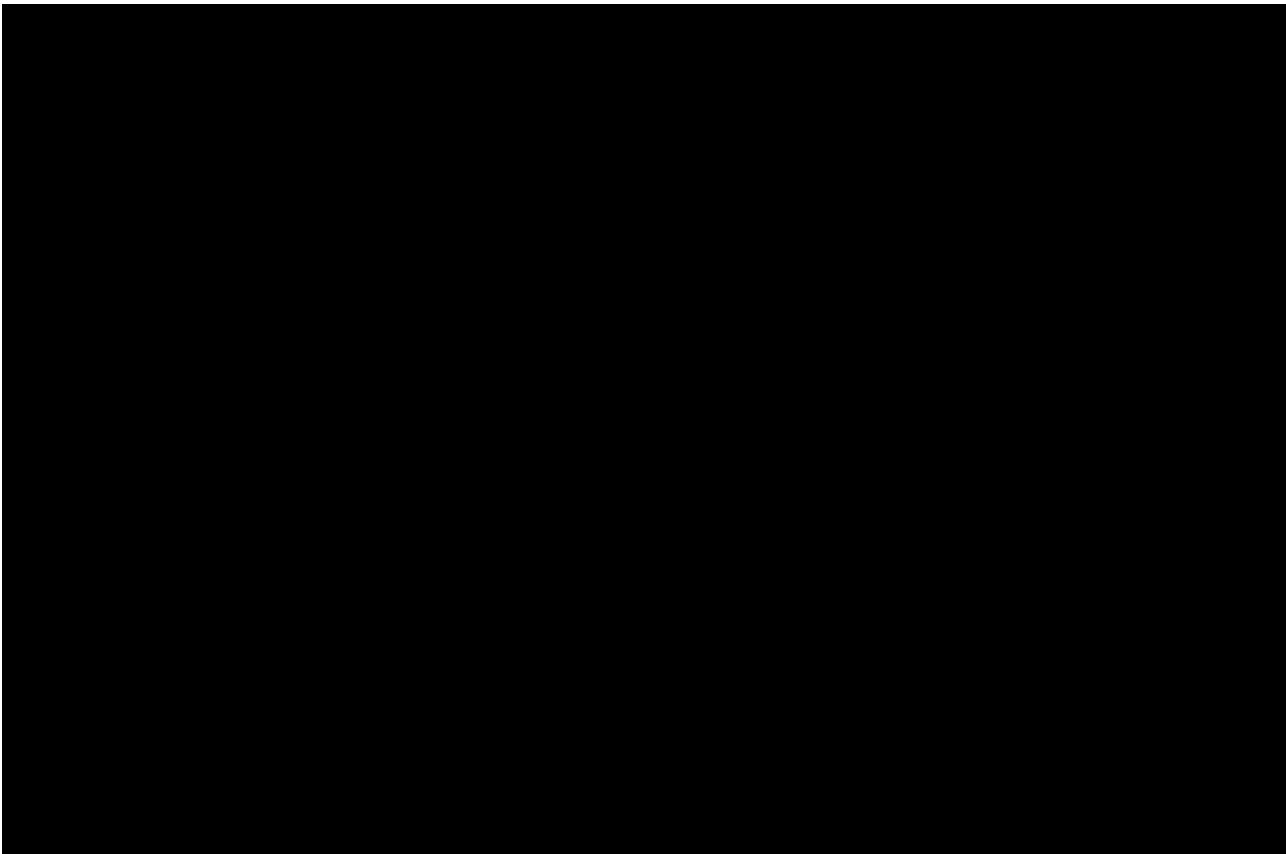
The proposed E2 zoning is a novel approach to the management of riparian corridors. The E2 zoning proposed in the draft SEPP are inflexible and more onerous than any other E2 zone across western Sydney and will pose a significant barrier to development even in locations where there is no vegetation to protect.

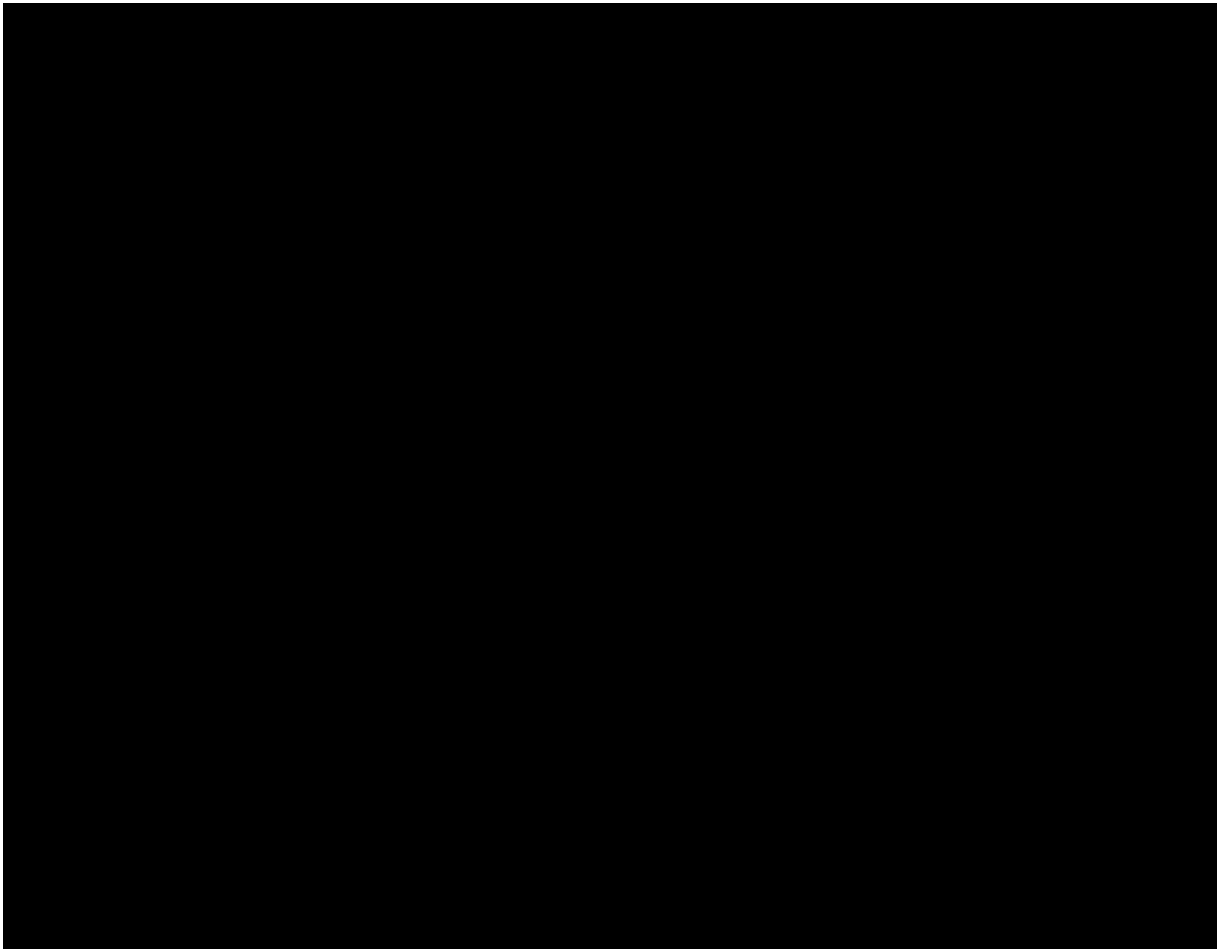
It is worth noting that these riparian corridors are already protected under the *Water Management Act 2000* and can be appropriately managed to ensure any latent ecological function is maintained.

The approach adopted by the Resources Regulator when regulating uses within Strahler 2, 3 and 4 riparian areas via a Controlled Activity Permit balances good environmental outcomes with the delivery of urban infrastructure, which ultimately is what is envisaged within the proposed Certified – *Urban Capable* area. As a result we strongly urge the Department to remove the proposed E2 zonings from the areas identified in Appendix 1 and located in Figure 1 and Figure 2 below. In accordance with the recommendations made by JWP these areas should also be mostly mapped as urban capable and be bio certified.

OBJECTION 1

Walker requests proposed E2 zoning be removed for sites 2-8 identified in Figures 1 & 2 below as recommended by JWP in Appendix 1, and the resultant lands included as bio-certified land.





3.0 REMOVAL OF STRATEGIC CONSERVATION AREA FROM [REDACTED]

Walker has several concerns regarding the *strategic conservation area* designation over our land at [REDACTED] Douglas Park.

Firstly, we submit the selection of the site is based upon a mistaken assessment of the biodiversity value of the land. To demonstrate this we engaged Niche to undertake a ground survey and apply this data to the selection criteria proposed under the CPCP – refer **Appendix 2**.

The ground survey by Niche found much of the site has little biodiversity value because it has been cleared and is dominated by exotic pasture grasses and herbaceous weeds which would be costly and difficult to restore as native vegetation.

Niche concluded the cleared areas in the site do not meet the CPCP's principles for establishing strategic conservation lands. Nor are they consistent with the conservation lands selection steps or the objectives of the *strategic conservation area* policy.

Secondly, we submit most of the level cleared land has no corridor or connectivity value.

Connectivity along the Nepean River can be maintained by securing the existing intact bushland along the river bank. The cleared land will remain cleared given its degraded state so its inclusion does not add habitat or make it easier for fauna to move along the river corridor.

The inclusion of cleared land at [REDACTED] is also puzzling because there does not appear to be a shortage of strategic conservation area. Under the CPCP some 28,000 hectares have been identified

which is significantly more than the 5,475 hectares of impacted native vegetation that the CPCP states are needed.

Finally, the inclusion of land east of [REDACTED] (including Walker owned land) as *strategic conservation area* ignores the Macarthur 2040 Growth Plan which identified our land and adjoining properties as potential employment land. This was done because of the precinct's strategic location at the intersection of the Hume Highway, Outer Sydney Orbital Phase 1 and 2 and the Southern Rail line.

The *strategic conservation area* status under the CPCP means this area could not be considered as future employment because as confirmed in the *Statement of Intent* future planning controls for the *strategic conservation areas* will require the consent authority to be satisfied that:

"...development will avoid or minimise or mitigate threatening processes and actions that would impact an area's strategic biodiversity value."

It will not be possible for a consent authority to align these outcomes with a future employment/industrial area.

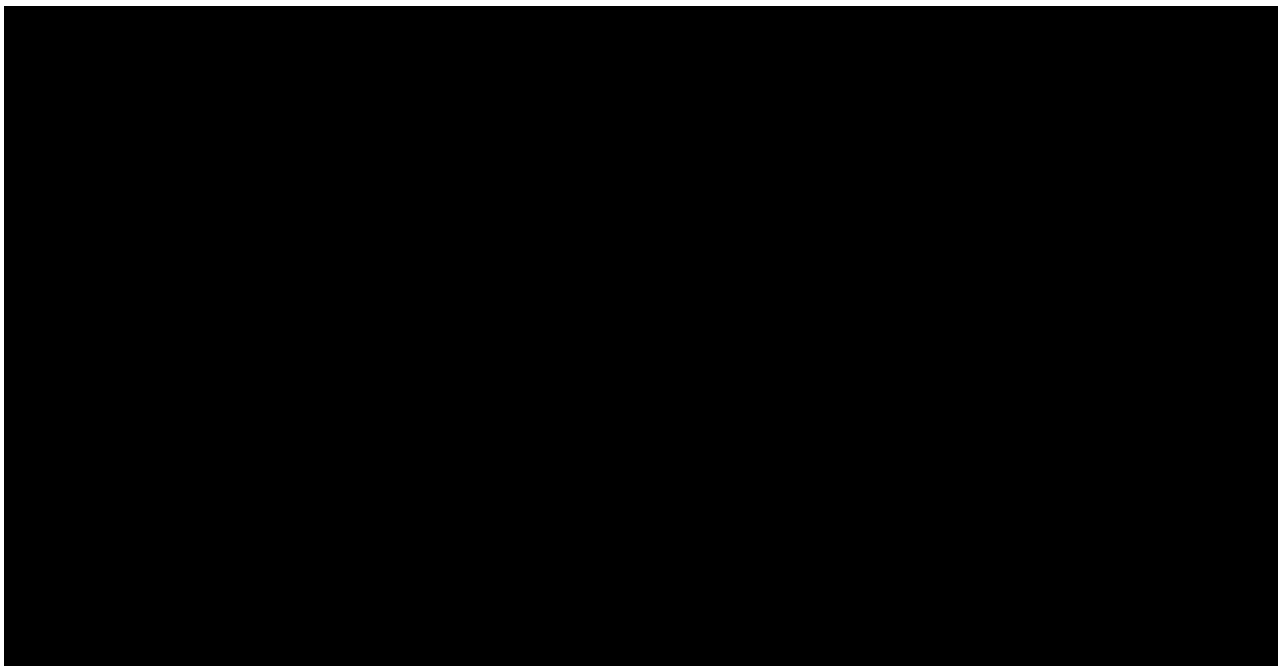
This prohibition over land east of [REDACTED] will mean the entire Employment Precinct will be unviable for development because the remaining land will not generate sufficient revenue to fund the costs of interchanges onto the arterial road network. This is regrettable because increasing locally based employment is a critical need for both existing and future communities in Macarthur.

Walker suggests the CPCP be amended so it does not override another state planning instrument and does not remove the opportunity to create a significant employment hub at the intersection of two of the most strategic arterial roads in Sydney – the Hume Highway and the future Outer Sydney Orbital.

We believe the envisaged [REDACTED] employment area can be delivered at the same time as conserving *strategic conservation areas*, provided the conservation areas are limited to the intact bushland only as recommended by our ecologists.

OBJECTION 2

Walker requests the strategic conservation area designation be removed from the land identified in Figure 3 below.



4.0 20 HA MAXIMUM VEGETATION LOSS FOR INFRASTRUCTURE AT APPIN UNREASONABLE

Commitment 2.3 within the CPCP provides a limit of 20 hectares to impacts from essential infrastructure at Appin within non-certified land on Shale Sandstone Transition Forest TEC.

Walker submits this metric is not numerically justified and as a result it represents an arbitrary impediment not based on rational assessment. This is especially critical for Appin as it will most likely need to accommodate impacts from the construction of the Outer Sydney Orbital Phase 2.

On the other hand Wilton does not have similar major road infrastructure yet it has the same arbitrary metric of 20 hectares.

Given the comprehensive assessment methodology under which essential infrastructure is assessed a 20 hectares limit is unnecessary and should be removed from the CPCP.

The need to balance impacts against the offset commitments for essential infrastructure can still occur without the need for an arbitrary 20 hectare ceiling at Appin and Wilton. This was not required for the South West and North West Growth Centres so it is suggested there may be an alternate approach available that could be used in the CPCP.

OBJECTION 3

Commitment 2.3 be amended to remove the 20 hectare upper limit for essential infrastructure at Appin.

5.0 KOALA SETBACKS SHOULD BE INCLUDED WITHIN ASSET PROTECTION ZONES

Sub Plan B Koalas references the Chief Scientist Koala Report.

The Chief Scientist report includes a reference to a 30 metre setback from proposed koala corridors in addition to any required Asset Protection Zones required under *Planning for Bushfire Protection 2019*.

Walker submits this is unnecessary because Asset Protection Zones are often 30 metres or greater and so the imposition of a further 30 metre setback will create an unmanaged land area which will be expensive to maintain and will attract dumping and vandalism.

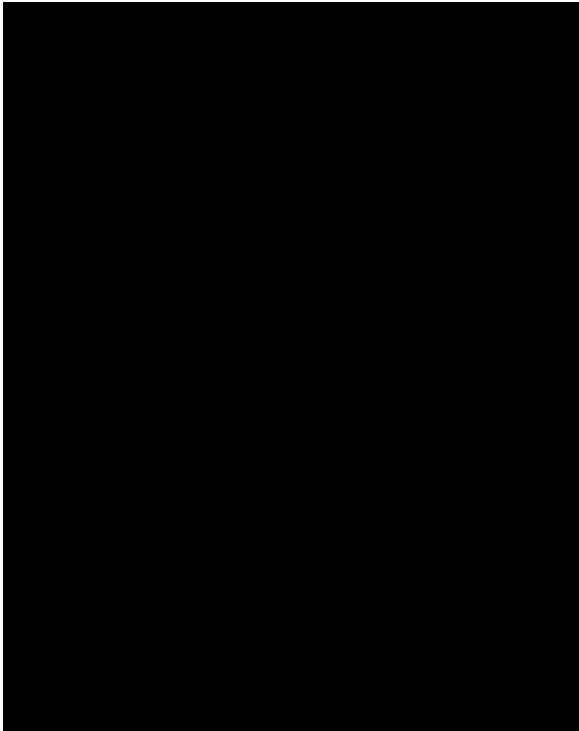
We suggest the proposed koala buffer can coexist with asset protection areas provided the 30 metre minimum dimension proposed by the Chief Scientist is provided.

OBJECTION 4:

*A minimum buffer of 30 metres adjacent to identified Koala habitat corridors within the urban capable footprint be provided in coexistence with any required Asset Protection Zones under *Planning for Bushfire Protection 2019*. The buffer to allow low impact uses including a local residential perimeter road, drainage structures, and shared pathways.*

6.0 PROPOSED ENVIRONMENTAL CONSERVATION ZONE DISREGARDS SOUTH EAST WILTON PRECINCT PLAN

There are three areas within the Walker land at South East Wilton that have been identified as E2 Environmental Conservation Zone, despite the land in question being already zoned for **UDZ** Urban Development – refer to Figure 4.



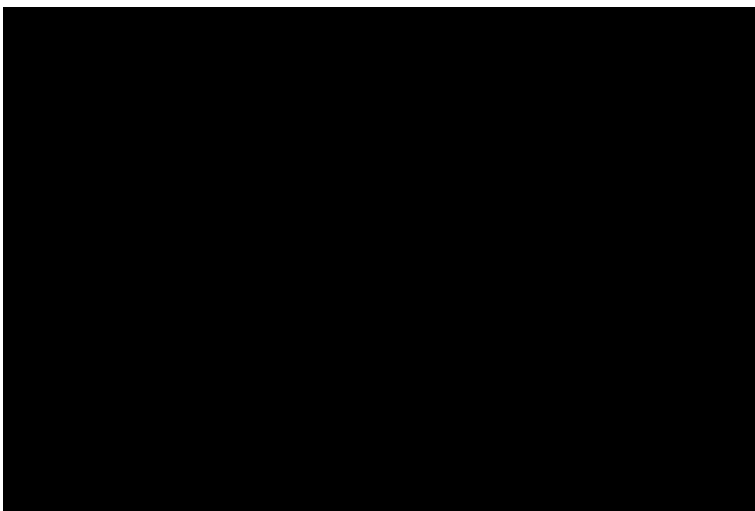
Walker submits it is inappropriate to *back zone* land to E2 when it has already been assessed and approved for development as explained below.

AREA 1

This location was previously examined by the Department of Primary Industry (DPI Water) when the land was being rezoned.

Walker provided detailed survey data which showed this area did not function as a stream with riparian ecology and defined bed and bank.

DPI Water subsequently confirmed they supported the watercourse mapping undertaken for the Wilton South East Precinct and the determination of 'rivers' under the *Water Management Act 2000*. As a result the land was zoned **UDZ** Urban Development and the Structure Plan included Area 1 within an area set aside for stormwater management and open space (refer Figure 5).



Walker submits there has already been extensive agency examination of Area 1 and a planning outcome has been achieved which has been approved by planning and water agencies.

It is therefore totally inappropriate for the CPCP to contradict this previous work without evidence to the contrary. As a result this land should be shown *Certified Urban Capable*, not as an E2 zone by the CPCP.

AREAS 2 AND 3

These areas have recently been zoned UDZ Urban Development Zone under the South East Wilton Precinct Plan pursuant to *State Environmental Planning Policy (Sydney Region Growth Centres) 2006*.

This zoning reflects an exhaustive investigation involving DPIE including staff from Environment, Energy and Science (formerly Office of Environment and Heritage) and various other State agencies.

The zoning included approximately 164 hectares zoned E2 Environmental Conservation which was determined as necessary to protect threatened vegetation and habitat.

Walker submits the planning process associated with defining the conservation lands was exhaustive and included extensive ground surveys, agency consultations and site visits.

The zoning has recently been gazetted. It is totally inappropriate and unreasonable to revisit this decision under the CPCP.

Walker also signed a Voluntary Planning Agreement with the Minister committing to deliver \$60 million in infrastructure based upon the footprint of the zoned UDZ land.

Zoning of Areas 1, 2 and 3 to E2 Environmental Conservation will reduce this footprint and contradict the Instrument change that was the basis for the Agreement.

OBJECTION 5:

Walker requests:

- (i) The existing UDZ Urban Development zoning be retained for Areas 1, 2 and 3; and*
- (ii) Areas 1, 2 and 3 be shown as Certified-Urban Capable reflecting the extensive planning work and agency decisions that have proceeded the draft Plan*

7.0 FIG. 5 IN SUB-PLAN B: KOALAS CONTRADICTS SPATIAL VIEWER AND IS INCONSISTENT WITH SE WILTON PRECINCT PLAN

The spatial viewer correctly shows land identified for habitat restoration within E2 Conservation lands in the Wilton South East Precinct. However, Figure 5 within Sub-Plan B shows habitat restoration extending beyond the E2 Conservation areas into the zoned **UDZ** lands.

DPIE confirmed by email that Figure 5 is an error and the mapping shown in the spatial viewer is correct.

However, we raise the concern again, notwithstanding email confirmation, because of the very significant impact this would have upon Walker if Figure 5 was applied.

The impact would arise because Figure 5 would imply the development of approximately 1,000 homes would be removed from this Precinct notwithstanding the extensive planning investigations that were undertaken by Government over 2 years prior to the land being rezoned in 2018.

Figure 5 would also contradict the Voluntary Planning Agreement with the Minister, the gazetted Structure Plan and various plans associated with servicing, road design, the provision of the new primary school and the scale and amenity of the proposed local centre.

OBJECTION 6:

Walker requests that Figure 5 in Sub-Plan B: Koalas be corrected and that koala habitat restoration be limited to lands currently zoned Environmental Conservation E2.

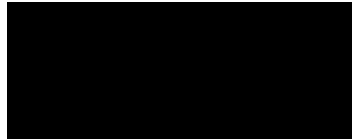
8.0 CONCLUSION

Walker supports a regional approach to conservation planning and we congratulate the DPIE for developing the CPCP. The CPCP by and large balances the competing pressures for conservation and growth.

We also appreciate the opportunity to raise various matters of concern which we have explained above and which we would ask the DPIE to consider closely.

Please do not hesitate to call Gerry Beasley on [REDACTED] if you have any questions.

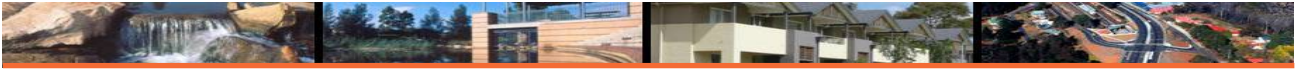
Yours faithfully



Gerry Beasley
Executive Planner
Walker Corporation Pty Limited
Walker Group Holdings Pty Limited

Appendix 1

**SUBMISSION BY J WYNDHAM PRINCE
RIPARIAN ASSESSMENT- WEST APPIN PRECINCT**



Our Ref: 110668-02-CPCP Letter.docx Rev C

8 October 2020

Walker Corporation
Level 21, Governor Macquarie Tower
1 Farrer Place, Sydney NSW 2000

Attn: Mr Gerry Beasley

Subject: Riparian Assessment - Cumberland Plain Conservation Plan (CPCP) – West Appin Precinct

Dear Gerry,

Thank you for giving J. Wyndham Prince the opportunity to assist Walker's with the review of the *'Draft Cumberland Plain Conservation Plan'* (CPCP). We have undertaken a detailed riparian assessment of the various mapped watercourses within the proposed West Appin Precinct. This includes eight (8) key locations (hereby referred to as the subject areas) across the precinct which have been identified as future Environmental Conservation (E2) zoned lands in the *'Draft Cumberland Plain Conservation Plan'* (August 2020).

This riparian assessment and the supporting biodiversity assessment completed by Niche Environment & Heritage aims to assess the riparian characteristics of the subject areas to check the presence of "rivers" under the Water Management Act 2000 (WM Act) and whether the existing vegetation have significant value. The riparian characteristics have been assessed in accordance with the Natural Resources Access Regulator (NRAR) *'Guidelines for controlled activities on waterfront land – Riparian corridors'* (May 2018), the *'Waterfront land tool'* (May 2020) together with the various environmental acts referenced by Niche.

The eight (8) key locations that form part of this investigation are illustrated in Plate 1-1 below.

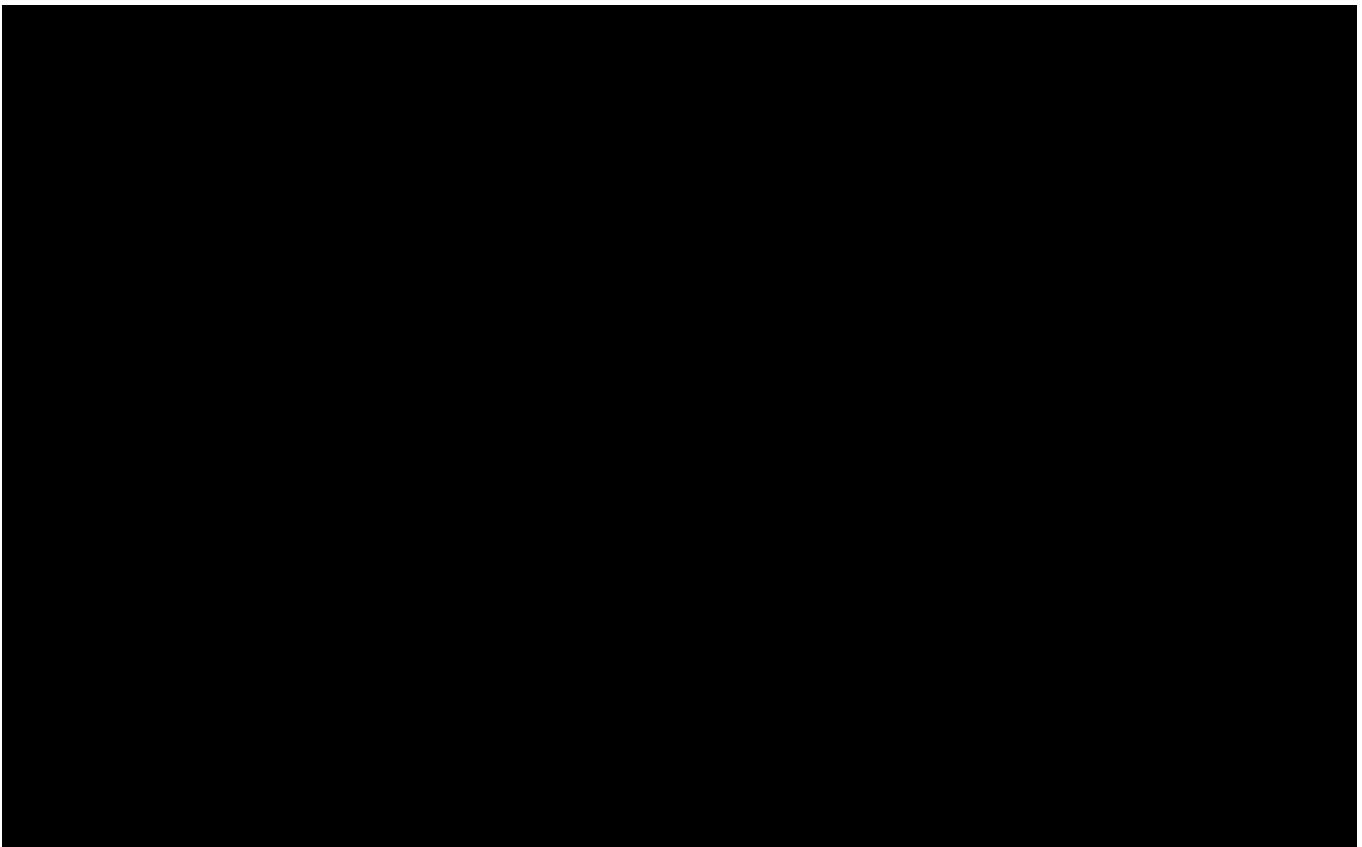


Plate 1-1 – Subject Areas

The following sections of the report discuss the findings of the biodiversity and riparian assessment with considerations of the suitability of the proposed environmental conservation (E2) zoning.

1. DRAFT CUMBERLAND PLAIN CONSERVATION PLAN 2020

The Draft Cumberland Plain Conservation Plan (CPCP) has been developed by the NSW Department of Planning, Industry and Environment (DPIE) to provide a framework for the conservation of biodiversity values across four (4) major growth areas in Western Sydney (referred to as the plan area). The CPCP aims to provide biodiversity certification for future urban capable land to streamline the delivery of infrastructure and housing in the various growth precincts within the plan area. A series of avoidance criteria has been developed to determine the 'avoided land' within the nominated areas including land identified as non-certified because it has:

- Areas of high-value biodiversity, which are avoided for biodiversity purposes in the CPCP; and
- Riparian corridors and steep slopes, which are avoided for other purposes in the CPCP.

The avoidance criteria has been prepared in accordance with the NSW Biodiversity Assessment Method to provide a means of identifying areas containing high value biodiversity. A site specific biodiversity assessment has been prepared for the subject areas in West Appin Precinct which is summarised in Section 2 below. For further details of the assessment, refer to the '*Biodiversity Assessment, Cumberland Plain Conservation Plan (CPCP) Land Use Classifications*' (Niche, 2020) in Attachment A.

Land has also been earmarked to be avoided from the certification process because it is not suitable for development because it is a "riparian corridor" and is regulated under *Water Management Act 2000* or it is too steep for future development (any land with a slope greater than 18 degrees). The definition of a riparian corridor is not elaborated in the CPCP, however, it is evident in the proposed E2 zoning that all watercourses with a 2nd order (or greater) Strahler classification has been considered a riparian corridor under the WM Act. This is explored further in Section 3 of this letter which further investigates the riparian characteristics of the subject areas to determine whether riparian function exists in the mapped watercourses.

2. BIODIVERSITY ASSESSMENT

Niche Environment and Heritage (Niche) were commissioned by Walker Corporation to prepare a biodiversity assessment of the subject areas in the West Appin Precinct. This study analyses the biodiversity values that are present in each of the eight (8) key areas to determine the suitability of the proposed E2 zoning in the CPCP. The assessment considers the avoidance criteria as outlined in Appendix B of the CPCP.

The assessment identifies that the eight (8) locations have each been subject to historic clearing and grazing which has resulted in limited definition of riparian watercourses. Four (4) of the locations contain no biodiversity value meaning that no native Plant Community Type (PCT), threatened species or ecological processes are evident. The remaining four (4) key sites contain portions of native PCTs and threatened species (Koala habitats). Table 2-1 below shows how the avoidance criteria applies to each of the key location.

Table 2-1 – Biodiversity Assessment (Source: Niche, 2020)

Avoided land		Applicable to the study area?							
		Site 1	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7	Site 8
High biodiversity value	(a) TECs and PCTs 1. CEECs or PCTs ≥90% cleared in large patches and in good condition; or serious and irreversible impact (SAII) entities (TECs) 2. EECs or PCTs ≥70% to <90% cleared in large patches and in good condition 3. PCTs ≥50% to <70% cleared in large patches and in good condition 4. PCTs <50% cleared in large patches and in good condition	SSTF (Thinned and Derived Native Grassland condition) occurring in the west of the canal, with connectivity to riparian vegetation along Elladale Creek.	NA	NA	NA	Mostly cleared, with small, scattered patches of CPW and SSTF (Intact and Scattered Trees condition).	Mostly cleared, with small patch of CPW and SSTF in the north-west (Thinned and Scattered Trees condition).	Mostly cleared, with small patch of SSTF in the north-west (Thinned and Derived Native Grassland condition).	NA
	(b) Threatened species 1. Known habitat for critically endangered species, SAI entities (species), Saving Our Species (SOS) species polygons (where species-specific habitat is present), or large populations of threatened species (relative to typical size for that species); or known primary koala habitat 2. Known habitat for endangered species or known secondary koala habitat 3. Known habitat for vulnerable species	Primary Koala habitat mapped to the west of the canal.	NA	NA	NA	Primary Koala habitat mapped in the west of the site.	Primary Koala habitat mapped in the west of the site.	Secondary Koala habitat mapped in the north-west of the site.	NA
	(c) Ecological processes 1. Land identified as priority conservation lands, BIO Map core areas, or important local habitat corridors for key species including koalas 2. Land identified as BIO Map regional corridors or as areas that provide significant opportunities to support important local habitat corridors for key species, including koalas 3. Areas identified on the Biodiversity Values Map	Vegetation in the west included on the BV map.	Riparian corridor included on BV map.	Riparian corridor included on BV map.	NA	Watercourse and native vegetation included on BV map.	Native vegetation in the north-west included on BV map.	Vegetation in north-west included on BV map.	Riparian corridor included on BV map.
Not suitable for development because it is a riparian corridor and is regulated under <i>Water Management Act 2000</i> or it is too steep for development (any land with a slope greater than 18 degrees)	First (10 m buffer) and second order (20 m buffer) streams.	First (10 m buffer) and second order (20 m buffer) streams.	First (10 m buffer) and second order (20 m buffer) streams.	First (10 m buffer) and second (20 m buffer) order streams.	First (10 m buffer), second (20 m buffer) and third (30 m buffer) order streams.	First (10 m buffer), second (20 m buffer) and third (30 m buffer) order streams.	First (10 m buffer) and second (20 m buffer) order streams.	First (10 m buffer), second (20 m buffer) and third (30 m buffer) order streams.	
Excluded from the area covered under the Plan (excluded land) including because it is existing protected land, is Commonwealth land, or is land that is already developed (e.g. existing urban areas).	NA	NA	NA	NA	NA	NA	NA	NA	
In the nominated areas and already assessed as part of another development approval (such as Bingara Gorge), or is progressing through an alternative development assessment (such as Mount Gilead and Menangle Park).	NA	NA	NA	NA	NA	NA	NA	NA	

The biodiversity assessment concludes that rehabilitation is not viable for majority of the subject areas. Majority of the subject areas display poor resilience and would require time, money and management intervention that would be better suited to other, more resilient, areas with higher biodiversity value. The inclusion of Sites 2, 3, 4, 6, 7 and 8 in the CPCP is questionable due to the lack of biodiversity value, particularly where they “do not exhibit features of a defined channel with bed and banks.” However, two (2) of the site locations (Site 1 and Site 5) have been identified as beneficial areas of rehabilitation, specifically in the areas of native threatened ecological communities (Shale Sandstone Transition Forest SSTF and Cumberland Plain Woodland CPW). This includes the area downstream of the upper Sydney Water Canal in Site 1 and the area immediately upstream of the strategic conservation area in Site 5.

3. RIPARIAN ASSESSMENT

The CPCP identifies riparian corridors of 2nd order watercourses (or greater) as ‘avoided land’ that is not biodiversity certified for future urban development. NRAR’s ‘Guidelines for controlled activities on waterfront land – Riparian corridors’ (May 2018) states that where a watercourse does not exhibit the features of a defined channel with bed and banks, the NRAR may determine that the watercourse is not waterfront land for the purposes of the WM Act. NRAR has recently developed the ‘Waterfront land tool’ (May 2020) to aid urban developers in identifying the presence of a riparian corridor on their lands.

A detailed riparian assessment has been undertaken which investigates all watercourses within the West Appin rezoning area. A site inspection was undertaken on 23rd of July 2020 by the project team which involved recording observed riparian characteristics and taking site photos at each of the visited watercourses. A further site inspection of was undertaken on 1st of October 2020 to gather information at Site 8. A full copy of the riparian assessment for the eight (8) sites is included in Attachment B.

The various watercourses have been assessed against the criteria within the ‘Waterfront land tool’ (NRAR, 2020) with the aim of identifying watercourses that do and don’t display evidence of riparian function (i.e. are “rivers”) under the WM Act. The outcomes of these criteria for the eight (8) subject areas of this letter are summarised in Table 3-1 below.

Table 3-1 – Riparian Assessment Summary

Subject Area	Watercourse Description	Strahler Order	River under the WM Act? (Y/N)
Site 1	Upstream of canal - No defined creek bed and banks. Minimal riparian vegetation. Mostly grassed grazing land with natural depressions / ditches.	1 st / 2 nd Order	No
	Downstream of canal – dense vegetation / bushland.	2 nd Order	Yes
Site 2	No defined creek bed and banks. Minimal riparian vegetation. Mostly grassed grazing land with natural depressions / ditches.	2 nd Order	No
Site 3	No defined creek bed and banks. Minimal riparian vegetation. Mostly grassed grazing land with natural depressions / ditches.	2 nd Order	No
Site 4	No defined creek bed and banks. Minimal riparian vegetation. Mostly grassed grazing land with natural depressions / ditches.	2 nd Order	No
Site 5A	Visible erosion / exposed rock in various locations along watercourse. Minimal vegetation.	3 rd Order	No
Site 5B	Visible erosion / exposed rock in various locations along watercourse. Minimal vegetation. No connectivity between upstream and downstream environment.	3 rd Order	No
	Exposed rock in various locations along water course. Minimal vegetation in bed. Depression with no defined banks.	2 nd Order	No

Subject Area	Watercourse Description	Strahler Order	River under the WM Act? (Y/N)
	Exposed rock and visible erosion in various locations along watercourse. Permanent pools in bed. Debris/tree branches in creek bed.	3 rd Order	Yes
Site 5C	No defined creek bed or banks. Poor connectivity between farm dams. No riparian vegetation or features.	1 st / 2 nd Order	No
Site 6	No defined creek bed and banks. Minimal riparian vegetation. Mostly grassed grazing land with natural depressions / ditches.	2 nd / 3 rd Order	No
Site 7	Upper portion - No defined creek bed and banks. Minimal riparian vegetation. Mostly grassed grazing land with natural depressions / ditches.	2 nd Order	No
	Lower portion - defined banks with permanent water pool.	2 nd Order	Yes
Site 8	No defined creek bed and banks. Minimal riparian vegetation. Mostly grassed grazing land with natural depressions / ditches.	3 rd Order	No

The riparian assessment, utilising the ‘*Waterfront land tool*’ (NRAR), concludes that many of the proposed E2 zoned lands in the subject areas are not what would be considered “rivers” under the WM Act. Majority of the watercourses do not display riparian characteristics with no defined creek bed and banks.

Therefore, it is evident that the requirement for riparian buffers to be maintained as part of the CPCP is largely due to the presence of a mapped watercourse rather than the existence of riparian function or preservable vegetation.

It is suggested that the Natural Resources and Access Regulator (NRAR) is consulted on the findings of this riparian assessment (as well as the biodiversity assessment by Niche) to gain advice and endorsement of the removal of the subject watercourses from needing any waterfront land approval.

4. CONCLUSION

The project team have undertaken a series of detailed site inspections across the subject sites to determine the existence riparian corridors and ecological communities that need to be preserved. The investigations by J. Wyndham Prince and Niche have concluded that the majority of subject areas that the Draft CPCP looks to protect are not functioning riparian corridors nor do they contain ecological communities in which protection is warranted.

Therefore, based on these findings the Draft Cumberland Plain Conservation Plan needs to be amended to remove any reference to sites 2, 3, 4, 6, 7 and 8 needing protection under this plan and any zoning that suggests protection (i.e. Environmental Conservation E2) is unjustified and unnecessary. Refer to Plate 4-1 for an illustration of the E2 zones proposed to be removed.

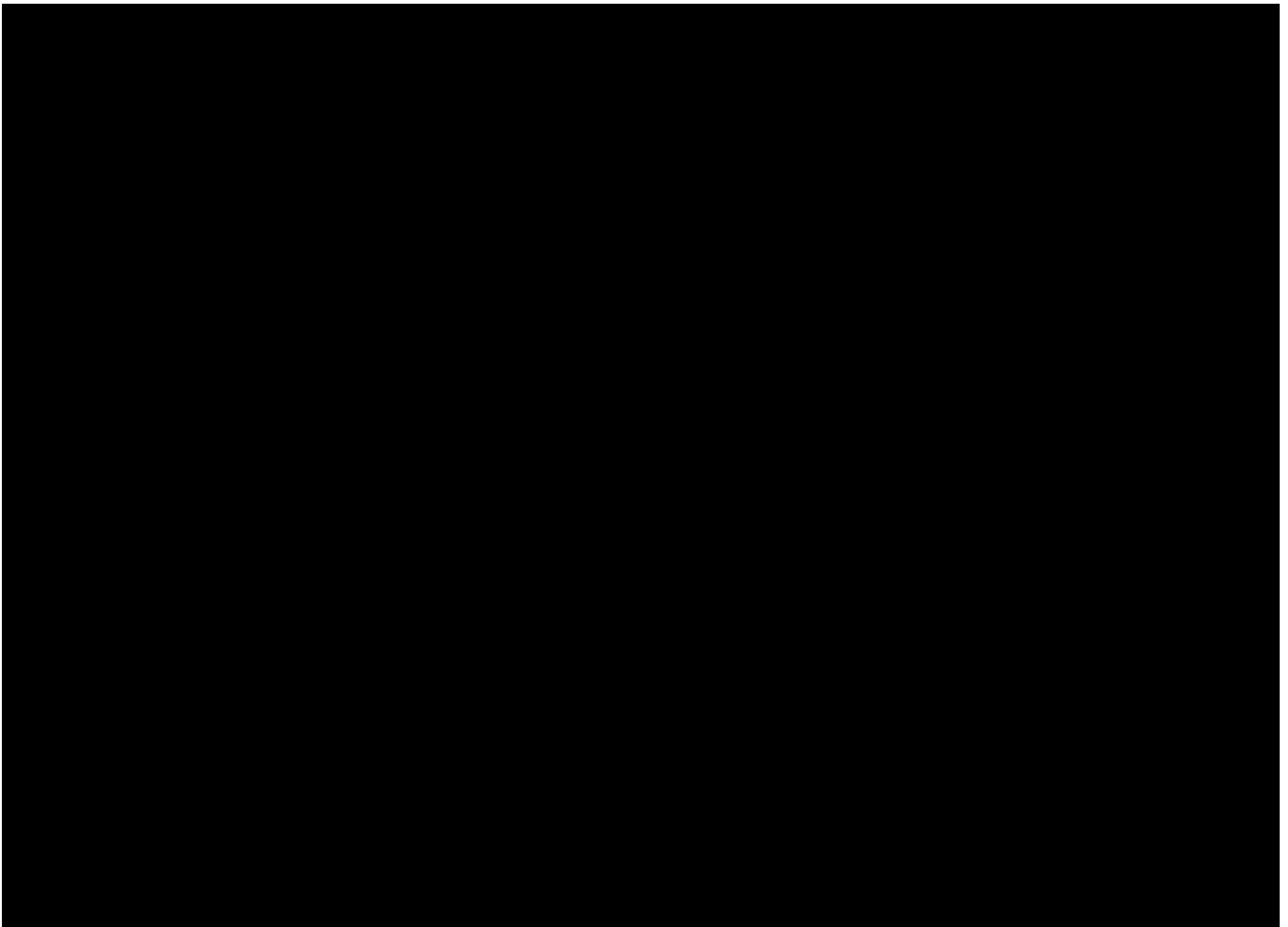
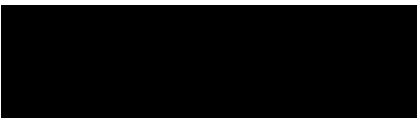


Plate 4-1 – E2 zones to be removed

If you have any questions in relation to the investigation undertaken, please do not hesitate to contact us at your earliest convenience.

Yours faithfully,



David Crompton
Manager – Stormwater and Environment Group

ATTACHMENT A
BIODIVERSITY ASSESSMENT (NICHE, 2020)

8 October 2020

Gerry Beasley
Executive Planner
Walker Corporation
Level 21, Governor Macquarie Tower
1 Farrer Place, Sydney NSW 2000
Via email: gerry.beasley@walkercorp.com.au

Dear Gerry,

Re: Biodiversity Assessment, Cumberland Plain Conservation Plan (CPCP) Land Use Classifications (Niche ref: #6209)

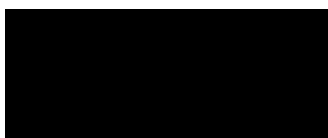
Niche were commissioned by Walker Corporation to prepare a biodiversity assessment associated with eight mapped riparian areas within Walker Corporation Landholdings in the West Appin Precinct, which have been zoned in the Draft Cumberland Conservation Plan (CPCP) as 'Environmental Conservation'. The purpose of the biodiversity assessment is to determine the condition of the riparian areas from a biodiversity value perspective and discuss the suitability of the 'Environmental Conservation' zoning in such areas.

We have attached a detailed assessment which includes the results of a field inspection on the eight mapped riparian areas. In summary, we conclude that the inclusion of each of the eight riparian areas to an environmental conservation zoning is due primarily to the presence of a mapped watercourse rather than any biodiversity value (i.e. does not consist of native vegetation and important fauna habitat). Riparian corridors are identified as one of the CPCP avoidance criteria, which are consequently zoned for the Environmental Conservation.

Each of the eight riparian areas have been subject to historic clearing, and grazing, and as such are not well-defined watercourses. Given the lack of biodiversity values throughout four of the eight areas (all predominately grazed paddocks), inclusion of these areas within environmental conservation zoning is questionable. Rehabilitation of the historically cleared riparian areas would involve considerable cost and management intervention to restore to a native Plant Community Type (PCT). Such management funding may be better spent in areas that support greater resilience and biodiversity values.

Conversely, there would be benefit in including the areas of native vegetation in the study area within the environmental conservation zoning, given the existence of biodiversity values, inherent resilience, reduced management requirements and direct connection with the riparian vegetation along the Nepean River.

Yours sincerely,



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Draft Cumberland Plain Conservation Plan

The NSW Government has developed a strategic conservation plan for Western Sydney, titled The Draft Cumberland Plain Conservation Plan (CPCP, DPIE 2020), covering 200,000 hectares of Western Sydney from Wilton in the south to Windsor and Kurrajong in the north. The CPCP meets requirements for strategic biodiversity certification under the NSW *Biodiversity Conservation Act 2016* (BC Act) and strategic assessment under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The CPCP will support planned and strategic delivery of infrastructure, housing and jobs for Western Sydney while protecting and maintaining important biodiversity areas, taking a landscape-scale approach to conservation. The CPCP identifies strategically important biodiversity areas within the Cumberland subregion to offset the biodiversity impacts of future urban development (DPIE 2020). The Draft CPCP was released for public comment on 26 August 2020.

Environmental Conservation Zoning

The CPCP applied avoidance criteria to identify areas of high biodiversity value to avoid from development and to designate urban capable land to be biodiversity certified. Land has been avoided from development and not subject to biodiversity certification (the 'avoided land') because it is (DPIE 2020):

- of high biodiversity value (large patches of TECs in good condition, threatened species habitat, ecological processes)
- not suitable for development because it is a riparian corridor and is regulated under *Water Management Act 2000* (WM Act) or it is too steep for development (any land with a slope greater than 18 degrees)
- excluded from the area covered under the Plan (excluded land) including because it is existing protected land, is Commonwealth land, or is land that is already developed (e.g. existing urban areas)
- in the nominated areas and already assessed as part of another development approval (such as Bingara Gorge), or is progressing through an alternative development assessment (such as Mount Gilead and Menangle Park).

Environmental conservation (E2) zoning will protect or manage land of important environmental value and can be applied to land where the primary focus for that land is the conservation and/or management of environmental values. Environmental conservation zones will be applied to protect lands with high biodiversity value. This includes areas avoided for biodiversity purposes or that have other environmental constraints, such as riparian corridors or steep slopes (DPIE 2020).

The CPCP applies environmental conservation zoning (E2) to 4,745 hectares of 'avoided land', including 3,670 hectares of native vegetation, and 935 hectares within riparian corridors and steep slopes. Avoided land also includes some non-vegetated land such as small wetlands and waterbodies, land that is strategically important to protect or enhance corridors, or small enclosed clearings that are surrounded by native vegetation (DPIE 2020).

During public exhibition, landholders may seek to have the urban capable boundary amended prior to the finalisation of the CPCP. The urban capable land boundary will only be updated in line with the following criteria (DPIE 2020):

- creeks and water features are mapped incorrectly, in which case they must be updated to match the topography and vegetation indicating movement of water through the landscape
- on-site data collected by accredited assessors supports updating the boundaries

- there is no net change to impact of threatened ecological communities, SAI entities or vegetation in an intact condition state
- there is no impact on an identified landscape corridor
- authorised clearing has occurred.

Site inspection

Portions of the study area have been zoned in the Draft Cumberland Conservation Plan (CPCP) as Environmental Conservation (E2) (Figure 1). The areas as shown on Figure 1 (collectively referred to as the study area) were the focus of the site inspection in order to ascertain the condition of the vegetation, and other important habitat/biodiversity values that may align to the Environmental Conservation zoning. Site 8 was not able to be surveyed during the site inspection, however was assessed using available desktop mapping, photographs of the site provided to Niche from J. Wyndham Prince, and knowledge of the site from previous Niche site surveys. The site inspection was undertaken by Niche Senior Ecologist and Accredited Assessor Sian Griffiths, on the 11th September 2020.

The site inspection was habitat-based, with a total of 15 Rapid Data Points (RDPs) taken to assist in validating vegetation mapping and determining condition and resilience, recording the following:

- GPS location
- Species composition: dominant species in overstorey, midstorey, understorey and groundlayer
- Structure: height and cover of each vegetation layer.
- Condition, including presence of weeds.
- Habitat features present, such as hollow-bearing trees, water bodies
- Threatened species habitat search
- Photo.

The field survey effort is shown in Figure 2.

Plant Community Types (PCTs), condition and resilience

The results of the site inspection are detailed in Table 1, which includes the PCTs (including condition and resilience) at each of the seven sites within the Walker Corporation landholdings (Figure 3).

The site inspection found the vegetation at each of the eight sites, to be generally consistent with the CPCP vegetation mapping (Biosis 2019), with the majority of the study area not consisting of a native PCT (i.e. is cleared land), or partially supports scattered patches of Plant Community Type (PCT) (Figure 3, Biosis 2019, DPIE 2020):

- 1395 Narrow-leaved Ironbark - Broad-leaved Ironbark - Grey Gum open forest in Intact, Thinned and Derived Native Grassland condition
- 849 Grey Box - Forest Red Gum grassy woodland in Intact, Scattered Trees and Derived Native Grassland condition.

PCT 1395 is equivalent to the critically endangered ecological community (CEEC) Shale Sandstone Transition Forest (SSTF), listed on both the BC and EPBC Acts. PCT 849 is equivalent to the CEEC Cumberland Plain Woodland (CPW), listed on both the BC and EPBC Acts. Both are listed amongst the most impacted threatened ecological communities (TECs) in the CPCP and as key Matter of National Environmental Significance (MNES) in the CPCP.

The riparian areas at each of the eight sites were generally mapped by DPIE (2020) as being 'cleared' and were dominated by exotic pasture grasses and herbaceous weeds (Figure 3). This was supported by the field survey that confirmed that the dominant species in the cleared paddocks included pasture grasses *Paspalum dilatatum*, *Eragrostis curvula*, *Chloris gayana*, *Sporobolus indicus* var. *capensis* and *Pennisetum clandestinum*, and exotic herbaceous species *Senecio madagascariensis*, *Rubus fruticosus*, *Hypochaeris radicata*, *Trifolium repens* and *Plantago lanceolata*. Native species were generally absent from the cleared areas. The cleared areas did not contain any resilience, given the lack of native species present and the history of clearing and grazing in this area.

Sites 1, 5, 6 and 7 have been partially mapped as containing PCT1395 and/or PCT 849 (Table 1) as shown on Figure 3, with native vegetation was generally found occurring in association with waterways and riparian corridors.

PCT 1395 supported a canopy of *Eucalyptus punctata* and *E. tereticornis*. The shrub layer was dominated by *Kunzea ambigua* and *Melaleuca styphelioides*. The groundlayer supported native species *Microlaena stipoides*, *Wahlenbergia gracilis*, *Eragrostis leptostachya*, *Digitaria parviflora*, *Gahnia aspera*, *Dichondra repens* and *Solanum prinophyllum*, as well as exotic species *Eragrostis curvula*, *Senecio madagascariensis* and *Sida rhombifolia*. The SSTF in the study area varied in condition from Intact, Thinned and Derived Native Grassland.

PCT 849 supported a canopy of *Eucalyptus tereticornis* and *E. crebra*, with *Olea euopea* and *Bursaria spinosa* dominating the midstorey and understorey. Exotic species *Senecio madagascariensis*, *Pennisetum clandestinum* and *Paspalum dilatatum* dominated the groundlayer, with native species *Microlaena stipoides* also occurring. Areas deemed in Intact condition supported a relatively natural structure, with a native canopy, shrub layer and groundlayer all present, however weed species still occurred in the groundlayer. Areas deemed in Scattered trees or Derived Native Grassland condition supported a native canopy over a groundlayer dominated by exotic species.

Areas supporting Intact and Thinned condition native vegetation are considered to have good resilience, given the relatively natural structure and presence of native species in all structural layers. Areas mapped as supporting Scattered trees or Derived Native Grassland condition native vegetation are considered to have moderate resilience, given the presence of a native canopy and some native species in the understorey. However, given the lack of a natural structure and low species diversity, considerable management intervention would be required to regenerate Scattered Trees and Derived Native Grassland condition areas to their natural state.

Biodiversity values

Biodiversity values include areas of native vegetation, important fauna habitat (including mapped corridors) and biodiversity which are protected under the BC Act and EPBC Act. Table 1 details the biodiversity values within the eight Walker Corporation landholdings of the study area (Figure 3).

The majority of the study area (cleared areas) supports limited biodiversity values. The biodiversity values in the study area are restricted to the patches of native vegetation (Figure 3), all of which correspond to TECs listed on both the BC and EPBC Acts: SSTF and CPW (Table 1). These values were recorded partially at sites 1, 5, 6 and 7.

Areas of “Important Koala Habitat” (corridors) have been mapped at sites 1, 5, 6 and 7, all in association with areas of SSTF and CPW, where there is some connectivity to larger expanses of native vegetation (Table 1, Figure 4). However, “Important Koala Habitat” mapping only partially covers the areas where native vegetation occurs at these sites, with the sites mostly cleared and devoid of native vegetation.

Riparian corridors

Guidelines accompanying the WM Act defines the width of required riparian corridors, which vary depending on the strahler stream order as follows (NSW Department of Industry 2018):

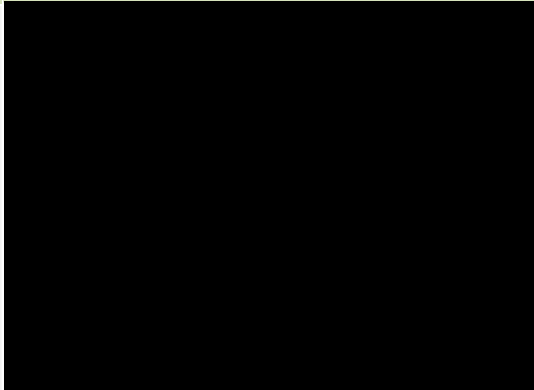
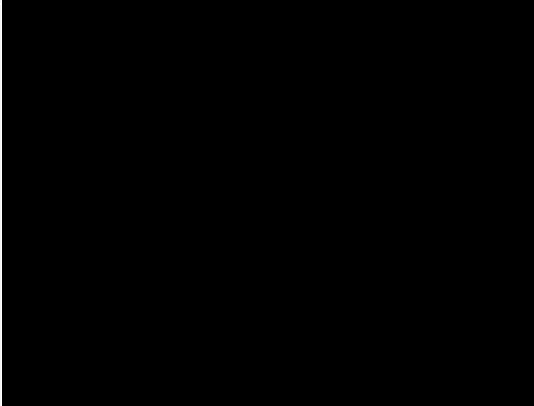
- First order stream – 10 m buffer each side of the watercourse
- Second order stream – 20 m buffer each side of the watercourse
- Third order stream – 30 m buffer each side of the watercourse.

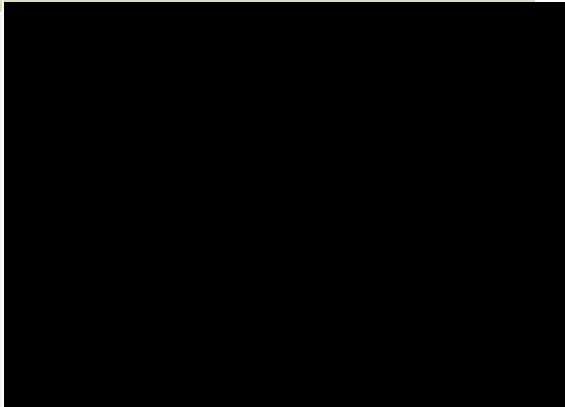

Where a watercourse does not exhibit the features of a defined channel with bed and banks, the Natural Resources Access Regulator may determine that the watercourse is not waterfront land for the purposes of the WM Act (NSW Department of Industry 2018).

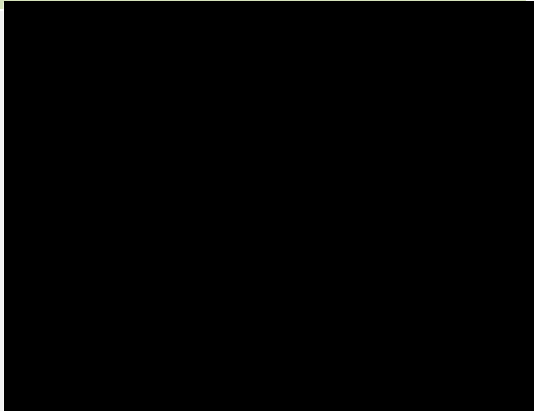
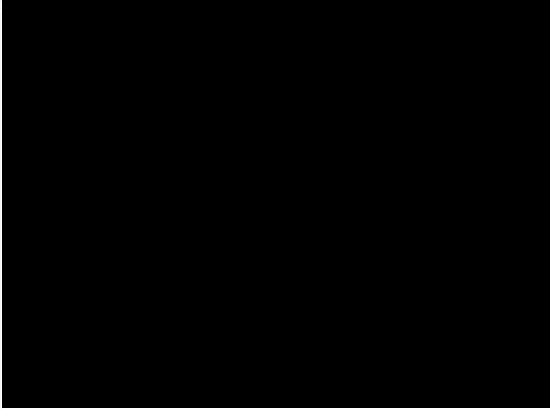
Table 1 details the strahler stream order and associated buffer (in accordance with the WM Act) of each of the watercourses within the study area (Figure 1). Based on the Strahler mapping the study area supports first, second and third order streams as shown in Figure 1. However, the majority of the watercourses in the study area are predominately dry grassy drainage depressions with a dam and no defined channel.

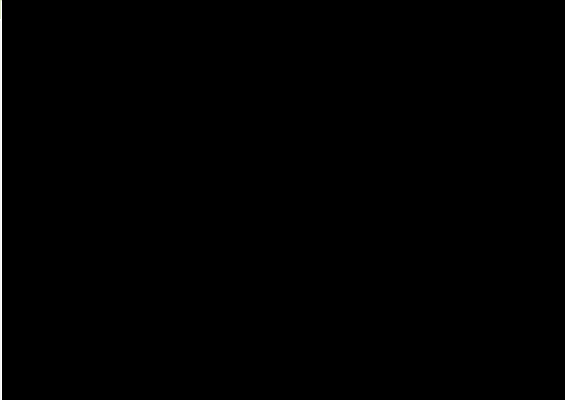
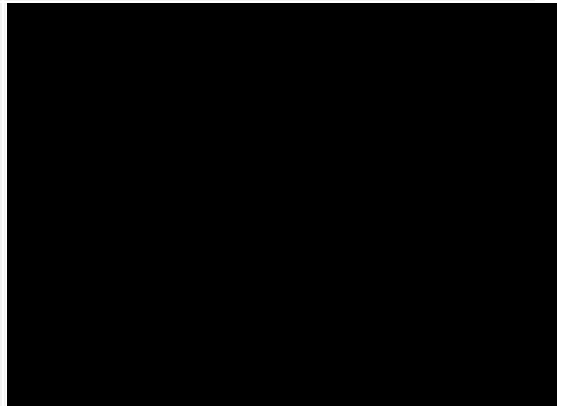
Table 1: PCT and biodiversity values of the study area

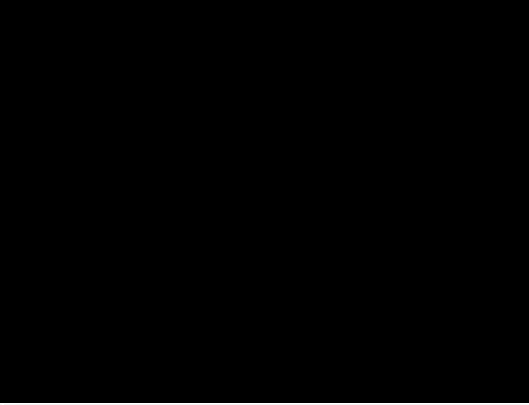
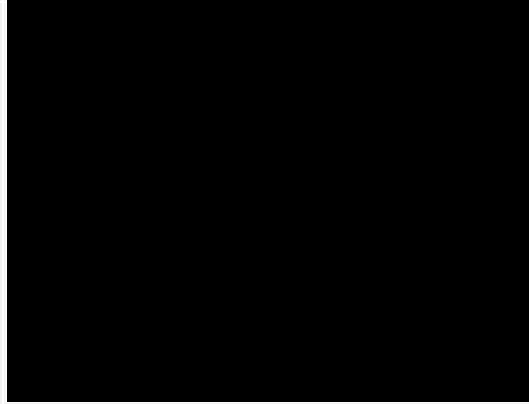
Site	PCT, condition and resilience	Mapped Strahler stream order and buffer	Biodiversity values	Photo
1	<p>The portion of site 1 that occurs to the east of the canal is a mapped 1st order stream. This area consists of a cleared paddock as shown in photo 1.</p> <p>No resilience.</p>	<p>First (10 m buffer) and second order (20 m buffer) streams.</p> <p>Dry, grassy drainage depression. Watercourse does not exhibit the features of a defined channel with bed and banks.</p> <p>Dam along watercourse.</p>	None	 <p>Photo 1. Eastern portion of mapped riparian area. Devoid of native vegetation, and currently used as grazed paddock.</p>
	<p>The portion of site 1 that occurs to the west of the canal supports PCT 1395 in Thinned and Derived Native Grassland (Photo 2), with direct connection to riparian vegetation along Elladale Creek and Nepean River.</p> <p>Good resilience.</p>	<p>Second order (20 m buffer) stream.</p> <p>Defined channel with sandstone outcropping and pools of water. Ephemeral watercourse, not flowing at time of survey.</p>	<p>TEC SSTF occurring in Thinned and Derived Native Grassland, with connectivity to a riparian corridor.</p> <p>Primary Koala corridor.</p>	 <p>Photo 2. Western portion of mapped riparian zone (west of canal). Biodiversity values present, including SSTF and defined riparian channel</p>

Site	PCT, condition and resilience	Mapped Strahler stream order and buffer	Biodiversity values	Photo
2	<p>Cleared paddock and farm dam with drainage depression covered in pasture grasses and herbaceous weeds (photo 3).</p> <p>No resilience.</p>	<p>First (10 m buffer) and second order (20 m buffer) streams.</p> <p>Dry, grassy drainage depression. Watercourse does not exhibit the features of a defined channel with bed and banks.</p> <p>Dams along watercourse.</p>	None	 <p>Photo 3. Mapped riparian area. Devoid of native vegetation, and currently used as grazed paddock.</p>
3	<p>Cleared paddock and farm dam with drainage depression covered in pasture grasses and herbaceous weeds (Photo 4).</p> <p>No resilience.</p>	<p>First (10 m buffer) and second order (20 m buffer) streams.</p> <p>Dry, grassy drainage depression. Watercourse does not exhibit the features of a defined channel with bed and banks.</p> <p>Dams along watercourse.</p>	None	 <p>Photo 4. Mapped riparian area. Devoid of native vegetation, and currently used as grazed paddock</p>


Site	PCT, condition and resilience	Mapped Strahler stream order and buffer	Biodiversity values	Photo
4	<p>Cleared paddock and farm dam with drainage depression covered in pasture grasses and herbaceous weeds (Photo 5).</p> <p>No resilience.</p>	<p>First (10 m buffer) and second (20 m buffer) order streams.</p> <p>Grassy drainage depression. Watercourse does not exhibit the features of a defined channel with bed and banks.</p> <p>Evidence of water, including dams and boggy areas.</p>	None	 <p>Photo 5. Mapped riparian area. Devoid of native vegetation, and currently used as grazed paddock.</p>
5	<p>Majority of site supports cleared paddock and farm dam with drainage depression covered in pasture grasses and herbaceous weeds (Photo 6).</p> <p>No resilience.</p>	<p>First (10 m buffer), second (20 m buffer) and third (30 m buffer) order streams.</p> <p>Grassy, drainage depression with evidence of water, including dams and boggy areas.</p> <p>Watercourse does not exhibit the features of a defined channel with bed and banks.</p>	None	 <p>Photo 6. Mapped riparian area. Devoid of native vegetation, and currently used as grazed paddock</p>

Site	PCT, condition and resilience	Mapped Strahler stream order and buffer	Biodiversity values	Photo
	<p>██████████ in Intact condition occurring along the upper reaches of the riparian corridors within the site (Photo 7).</p> <p>Good resilience.</p>	<p>First (10 m buffer), second (20 m buffer) and third (30 m buffer) order streams.</p> <p>Surveyed from adjoining land due to access restrictions.</p>	<p>TECs SSTF and CPW. CPW occurring as scattered patches along the mapped riparian area. SSTF occurring with connectivity to the riparian vegetation along Rocky Pond Creek and Cataract River.</p> <p>Primary Koala corridor.</p>	 <p>Photo 7. Intact CPW occurring along mapped riparian area.</p>
	<p>PCT849 in Scattered Trees condition, occurring along riparian corridor, with defined riparian channel (Photo 8).</p> <p>Moderate resilience.</p>	<p>Second (20 m buffer) and third (30 m buffer) order streams.</p> <p>Defined watercourse, with pools of water. Erosion evident.</p>	<p>TEC CPW occurring as Scattered Trees along defined watercourse.</p>	 <p>Photo 8. Scattered Trees CPW occurring along mapped riparian area, defined riparian channel present.</p>

Site	PCT, condition and resilience	Mapped Strahler stream order and buffer	Biodiversity values	Photo
6	<p>Cleared paddock and farm dam with drainage depression covered in pasture grasses and herbaceous weeds (Photo 9).</p> <p>No resilience.</p>	<p>First (10 m buffer), second (20 m buffer) and third (30 m buffer) order streams.</p> <p>Grassy drainage depression. Watercourse does not exhibit the features of a defined channel with bed and banks.</p> <p>Evidence of water, including dams and boggy areas.</p>	None	 <p>Photo 9. Mapped riparian area. Devoid of native vegetation, and currently used as grazed paddock.</p>
	<p>PCT1395 and PCT849 in Thinned and Scattered Trees condition (Photo 10), occurring along upper reaches of riparian channel.</p> <p>Moderate resilience.</p>	<p>Third (30 m buffer) order stream.</p> <p>Surveyed from adjoining land due to access restrictions.</p>	<p>TEC CPW occurring as Thinned and Scattered Trees along tributary of Cataract River, with direct connection to large expanse of riparian vegetation.</p> <p>Primary Koala corridor.</p>	 <p>Photo 10. Scattered Trees condition CPW occurring along mapped riparian area.</p>

Site	PCT, condition and resilience	Mapped Strahler stream order and buffer	Biodiversity values	Photo
7	<p>Cleared paddock and farm dam with drainage depression covered in pasture grasses and herbaceous weeds (Photo 11).</p> <p>No resilience.</p>	<p>First (10 m buffer) and second (20 m buffer) order streams.</p> <p>Grassy drainage depression. Watercourse does not exhibit the features of a defined channel with bed and banks.</p> <p>Evidence of water, including dams and boggy areas.</p>	None	 <p>Photo 11. Mapped riparian area. Devoid of native vegetation, and currently used as grazed paddock.</p>
	<p>PCT1395 Thinned and Derived Native Grassland condition, occurring along defined drainage channel in the north-west.</p> <p>Moderate resilience.</p>	<p>Second (20 m buffer) order stream.</p> <p>Surveyed from adjoining land due to access restrictions.</p>	<p>TEC SSTF, directly connected to riparian vegetation along Ousedale Creek.</p> <p>Secondary Koala corridor.</p>	 <p>Photo 12. Thinned and Scattered Trees condition SSTF occurring along mapped riparian area.</p>

Site	PCT, condition and resilience	Mapped Strahler stream order and buffer	Biodiversity values	Photo
8	<p>Cleared paddock with drainage depression covered in pasture grasses and herbaceous weeds (Photo 12).</p> <p>Highly likely to have no resilience.</p>	<p>Third (30 m buffer) order stream.</p> <p>Grassy drainage depression. Watercourse does not exhibit the features of a defined channel with bed and banks.</p> <p>Evidence of water, including dams and boggy areas.</p>	<p>None</p> <p>No Koala corridor mapped.</p>	<div data-bbox="1447 248 1865 767" data-label="Image">  </div> <p data-bbox="1451 791 1935 850">Photo 13. Eastern end of the site – dominated by introduced ground cover.</p> <div data-bbox="1447 874 1975 1272" data-label="Image">  </div> <p data-bbox="1451 1295 1921 1355">Photo 14. Dam within the middle portion of the site</p>

Site	PCT, condition and resilience	Mapped Strahler stream order and buffer	Biodiversity values	Photo
				 <p data-bbox="1442 662 1968 758">Photo 15. Western end of the site – no defined riparian channel, and ground cover dominated by introduced species.</p>

Management requirements

Given the low biodiversity values and lack of resilience of the cleared areas within each of the seven sites, the management effort that would be required to enhance the grassland areas to a native PCT would be extensive. Based on historical disturbances and likely low vegetation integrity, management cost would be high.

Management requirements would likely include extensive planting/direct seeding of all structural layers, replacement of unsuccessful plantings, watering of plantings, intensive weed removal and maintenance periods, sedimentation and erosion controls, pest control and monitoring. The time, cost and effort to regenerate the cleared areas to benchmark condition PCT may be better spent on areas with higher resilience.

However, areas mapped as supporting native vegetation within portions of sites 1, 5, 6 and 7 (Figure 3) are likely to be suitable for rehabilitation, particularly areas that exhibit connectivity to larger corridors of vegetation along the major watercourses such as Elladale Creek (Site 1) and Rocky Ponds Creek (Site 5). Given that these areas support a relatively natural structure and native species diversity, the cost of management required to regenerate these areas would be much less than the adjoining cleared areas. Management within these areas would likely be focused on weed removal and maintenance and pest control. The portions where such rehabilitation suitability occurs, is only partial to the area of each site that has been mapped as E2.

CPCP in relation to the vegetation of the study area

Environmental Conservation zoning

As detailed above, the CPCP applied avoidance criteria to identify areas of high biodiversity value to avoid from development and to designate urban capable land to be biodiversity certified. The CPCP avoidance criteria has been applied to the properties in the study area in Table 2. It is clear from the analysis in Table 2, the sites have been mapped as environmental conservation zoning is due to the presence of mapped watercourses and the resulting riparian corridor requirements, as per the WM Act.

The biodiversity values of each site are generally related to the presence of a riparian corridor, rather than the presence of native vegetation or habitat features.

With the exception of site 1, with a Thinned condition patch of SSTF with good connectivity to the riparian corridor along Elladale Creek and Nepean River, the remaining sites are either completely cleared or have scattered patches of native vegetation in varying condition. Further the sites generally support watercourses that do not exhibit the features of a defined channel with bed and banks (the only exception being the western extent of site 1 and parts of the mapped watercourse on site 5). Given the definition of waterfront land within the guidelines associated with the WM Act (as detailed above), many of the watercourses in the study area may not be defined as waterfront land for the purposes of the WM Act, and therefore would not require riparian buffers.

Table 2: Environmental Conservation zoning: CPCP avoidance criteria and its application to the study area

Avoided land		Applicable to the study area?							
		Site 1	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7	Site 8
High biodiversity value	(a) TECs and PCTs 1. CEECs or PCTs ≥90% cleared in large patches and in good condition; or serious and irreversible impact (SAII) entities (TECs) 2. EECs or PCTs ≥70% to <90% cleared in large patches and in good condition 3. PCTs ≥50% to <70% cleared in large patches and in good condition 4. PCTs <50% cleared in large patches and in good condition	SSTF (Thinned and Derived Native Grassland condition) occurring in the west of the canal, with connectivity to riparian vegetation along Elladale Creek.	NA	NA	NA	Mostly cleared, with small, scattered patches of CPW and SSTF (Intact and Scattered Trees condition).	Mostly cleared, with small patch of CPW and SSTF in the north-west (Thinned and Scattered Trees condition).	Mostly cleared, with small patch of SSTF in the north-west (Thinned and Derived Native Grassland condition).	NA
	(b) Threatened species 1. Known habitat for critically endangered species, SAI entities (species), Saving Our Species (SOS) species polygons (where species-specific habitat is present), or large populations of threatened species (relative to typical size for that species); or known primary koala habitat 2. Known habitat for endangered species or known secondary koala habitat 3. Known habitat for vulnerable species	Primary Koala habitat mapped to the west of the canal.	NA	NA	NA	Primary Koala habitat mapped in the west of the site.	Primary Koala habitat mapped in the west of the site.	Secondary Koala habitat mapped in the north-west of the site.	NA
	(c) Ecological processes 1. Land identified as priority conservation lands, BIO Map core areas, or important local habitat corridors for key species including koalas	Vegetation in the west included on the BV map.	Riparian corridor included on BV map.	Riparian corridor included on BV map.	NA	Watercourse and native vegetation included on BV map.	Native vegetation in the north-west included on BV map.	Vegetation in north-west included on BV map.	Riparian corridor included on BV map.

Avoided land		Applicable to the study area?							
		Site 1	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7	Site 8
	2. Land identified as BIO Map regional corridors or as areas that provide significant opportunities to support important local habitat corridors for key species, including koalas 3. Areas identified on the Biodiversity Values Map								
Not suitable for development because it is a riparian corridor and is regulated under <i>Water Management Act 2000</i> or it is too steep for development (any land with a slope greater than 18 degrees)		First (10 m buffer) and second order (20 m buffer) streams.	First (10 m buffer) and second order (20 m buffer) streams.	First (10 m buffer) and second order (20 m buffer) streams.	First (10 m buffer) and second (20 m buffer) order streams.	First (10 m buffer), second (20 m buffer) and third (30 m buffer) order streams.	First (10 m buffer), second (20 m buffer) and third (30 m buffer) order streams.	First (10 m buffer) and second (20 m buffer) order streams.	First (10 m buffer), second (20 m buffer) and third (30 m buffer) order streams.
Excluded from the area covered under the Plan (excluded land) including because it is existing protected land, is Commonwealth land, or is land that is already developed (e.g. existing urban areas).	NA	NA	NA	NA	NA	NA	NA	NA	NA
In the nominated areas and already assessed as part of another development approval (such as Bingara Gorge), or is progressing through an alternative development assessment (such as Mount Gilead and Menangle Park).	NA	NA	NA	NA	NA	NA	NA	NA	NA

Recommendations and conclusion

It is evident that the inclusion of the majority of the study area within the environmental conservation zoning is due to the presence of a mapped watercourse. Given the lack of biodiversity values of the cleared portions of the study area, inclusion of these areas within environmental conservation zoning is questionable, particularly for watercourses that do not exhibit the features of a defined channel with bed and banks and therefore may not meet the WM Act definition of waterfront land.

Rehabilitation of the cleared watercourses would involve considerable time, cost and management intervention to restore to a native PCT. Time and money that would be better spent on an area that supports some biodiversity values and maintains some resilience.

Conversely, there would be benefit in including the areas of native vegetation in the study area within the environmental conservation zoning, particularly the SSTF in Site 1 and the patches of SSTF and CPW in Site 5, given the existence of biodiversity values, inherent resilience, reduced management requirements and direct connection with the riparian vegetation along the Nepean River.

References

Biosis (2019) The Cumberland Plan Conversation Plan Spatial viewer, Biosis vegetation map 2019. Department of Planning, Industry and Environment.

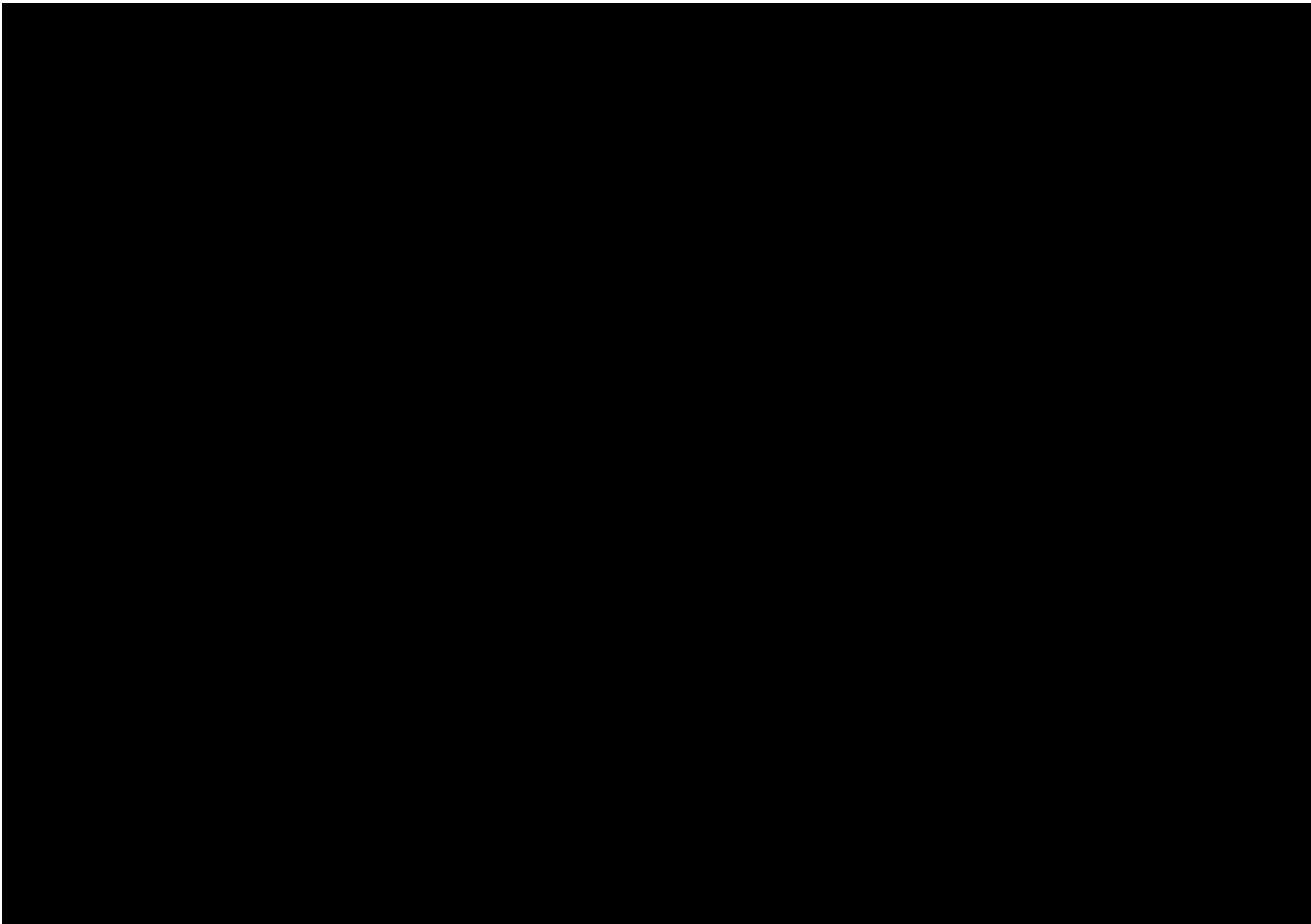
DPIE (2020) Draft Cumberland Plain Conservation Plan 2020. First published: August 2020. Published by NSW Department of Planning, Industry and Environment.

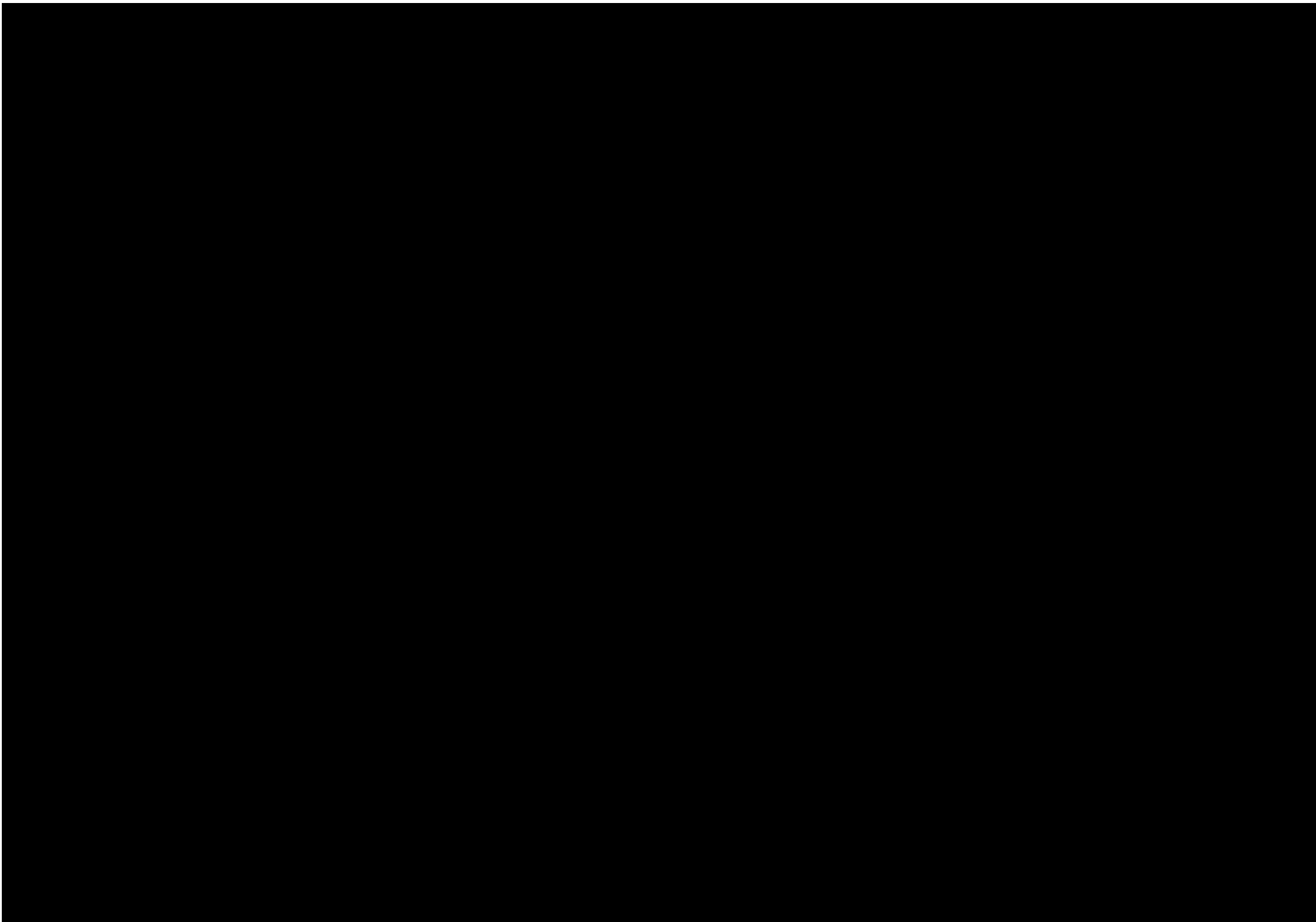
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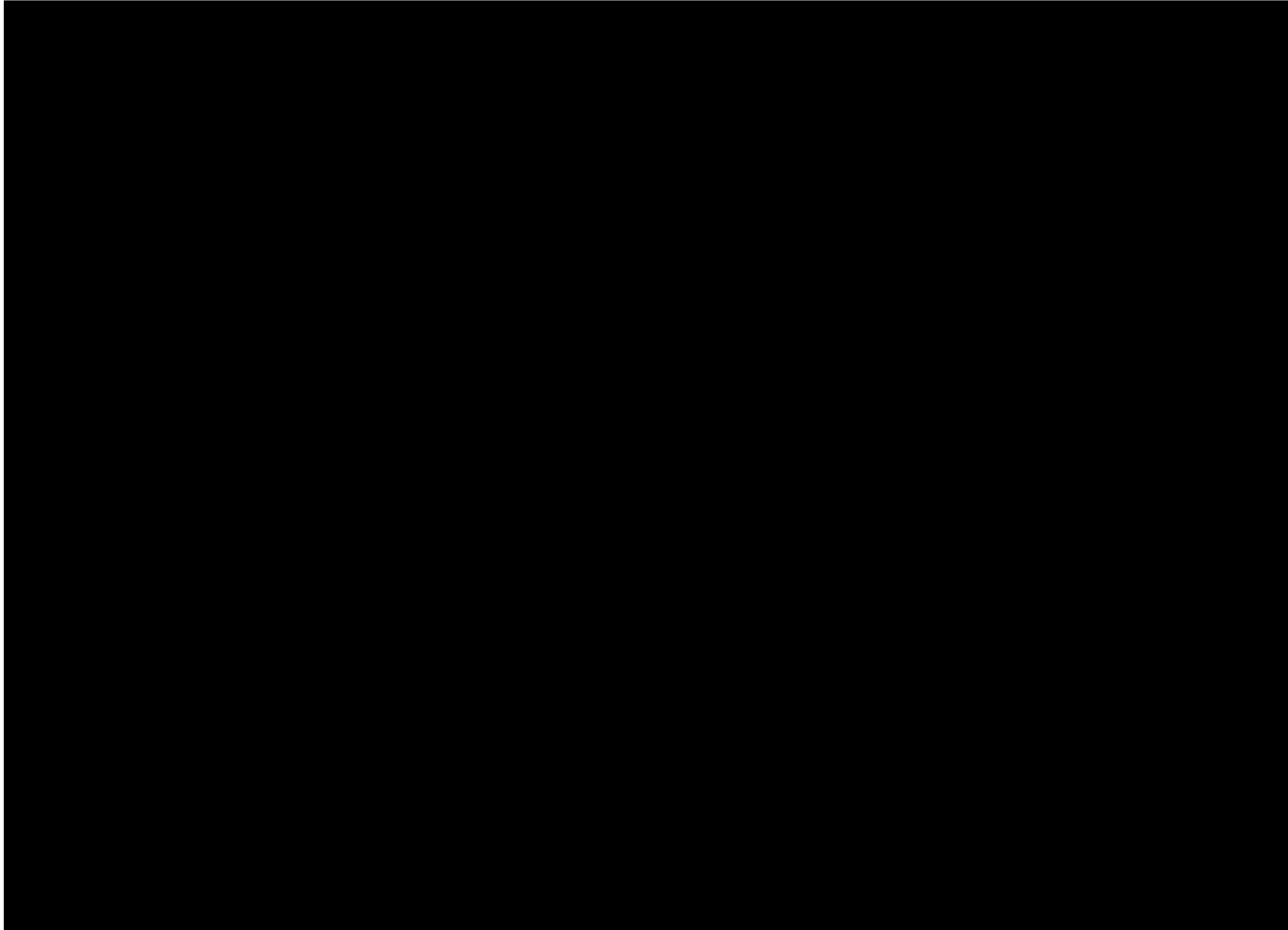


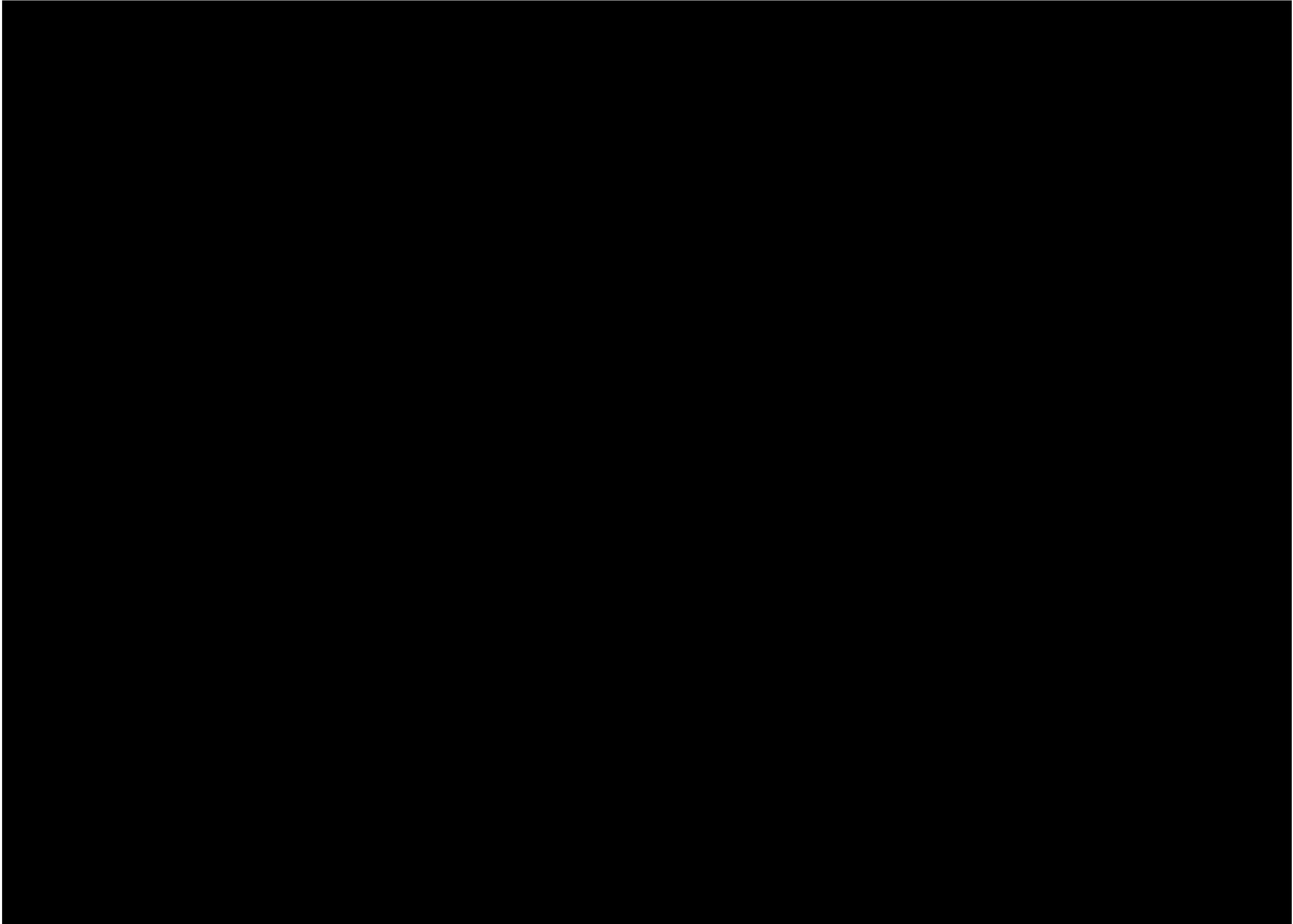


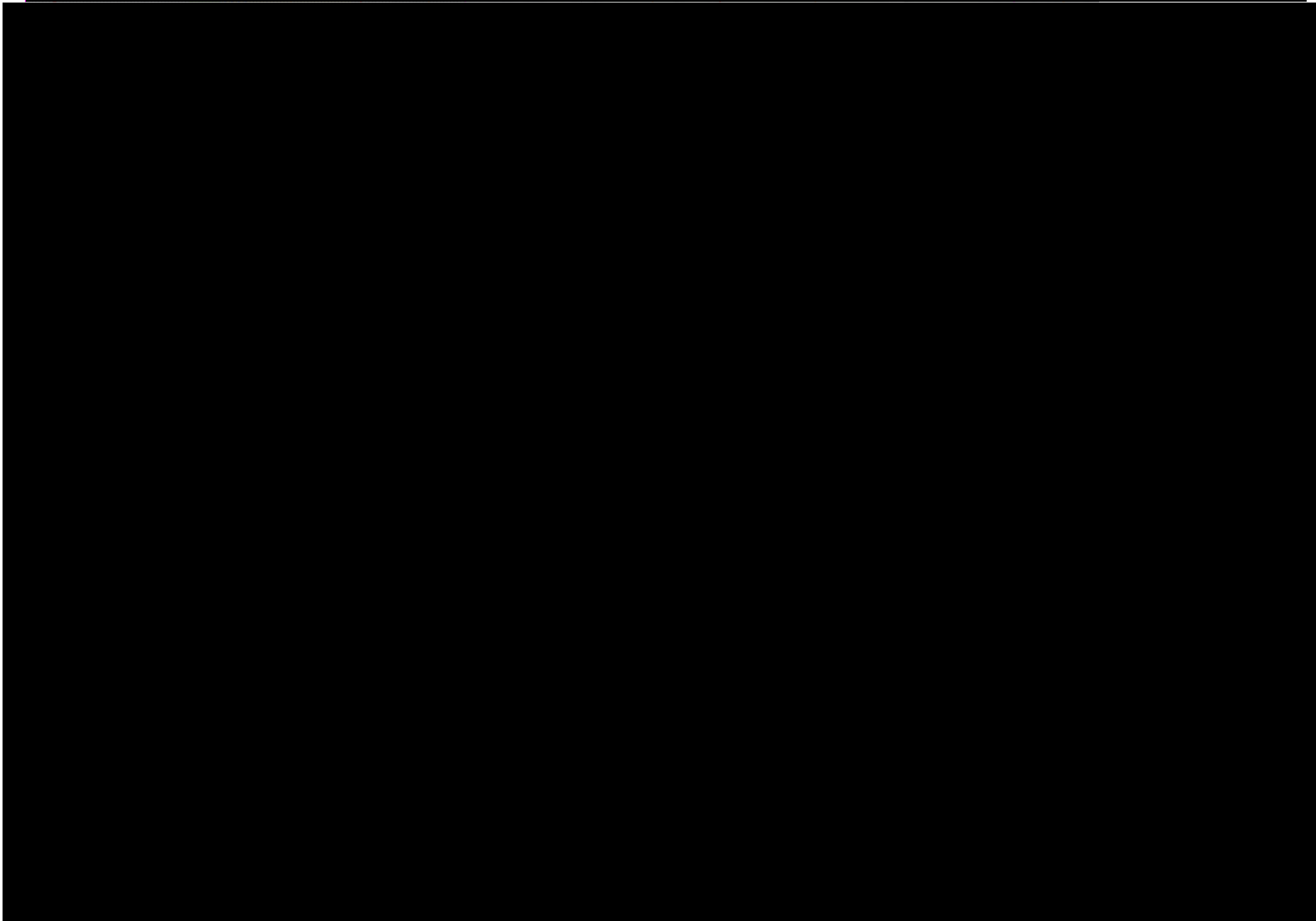




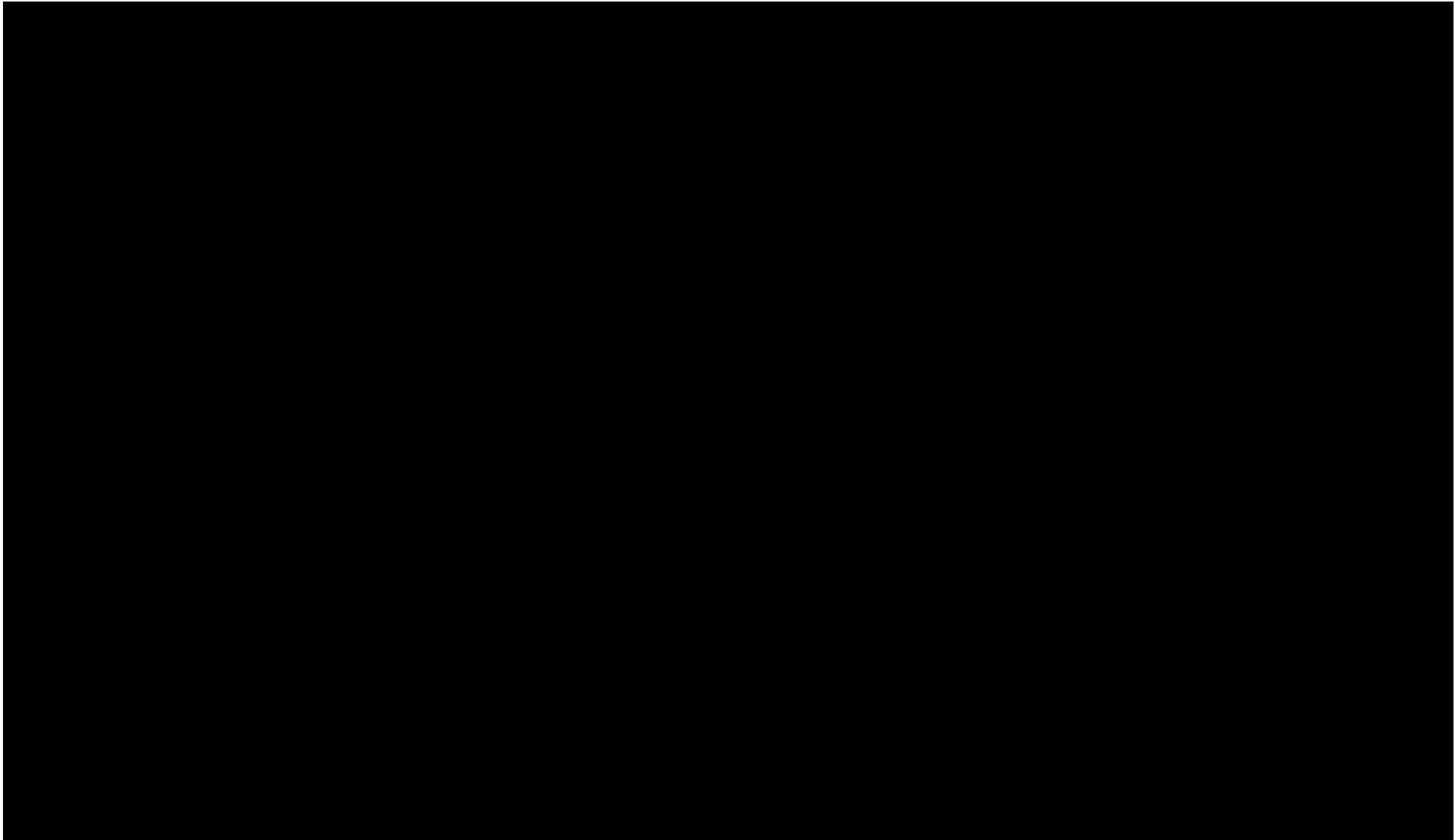
ATTACHMENT B
RIPARIAN ASSESSMENT







SITE 1



Description	Upstream of canal - No defined creek bed and banks. Minimal riparian vegetation. Mostly grassed grazing land with natural depressions / ditches.
Watercourse order	1 st / 2 nd order
Does the watercourse have a defined bed or bank?	No
Watercourse Features (NRAR Waterfront Land Tool – Appendix 6)	Farm Dam

Result: Controlled activity approval not required – No watercourse, lake or wetland present

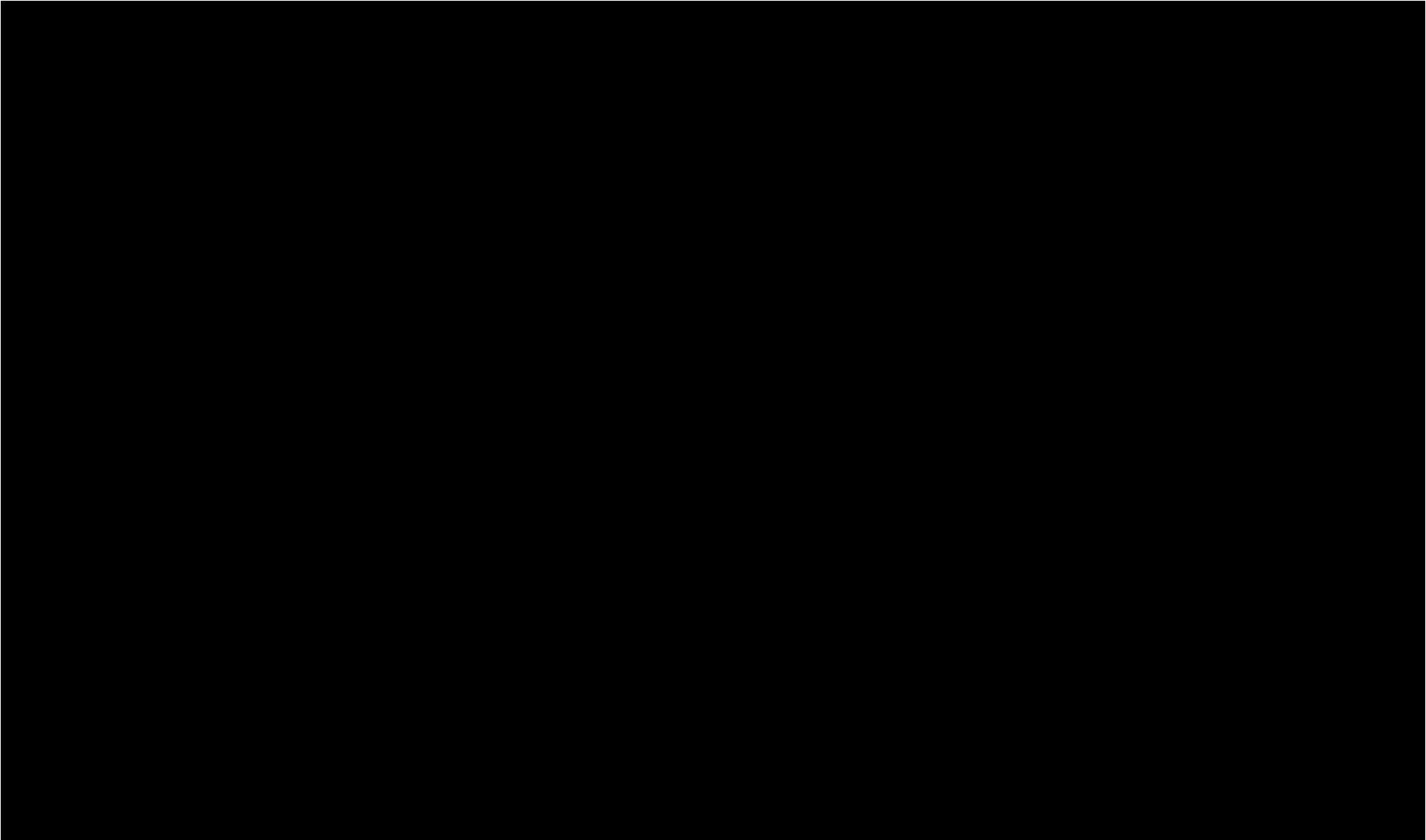
Description	Downstream of canal – dense vegetation / bushland.
Watercourse order	2 nd order
Does the watercourse have a defined bed or bank?	Yes
Watercourse type (NRAR Waterfront Land Tool – Appendix 5)	Type 1 – Confined Valley Headwater
Watercourse Features (NRAR Waterfront Land Tool – Appendix 6)	Nil
High bank of the watercourse (NRAR Waterfront Land Tool – Appendix 8)	Type 1 – Confined Valley Headwater
Are the proposed works located within 40 metres of the high bank?	Yes

Result: Controlled activity approval is required

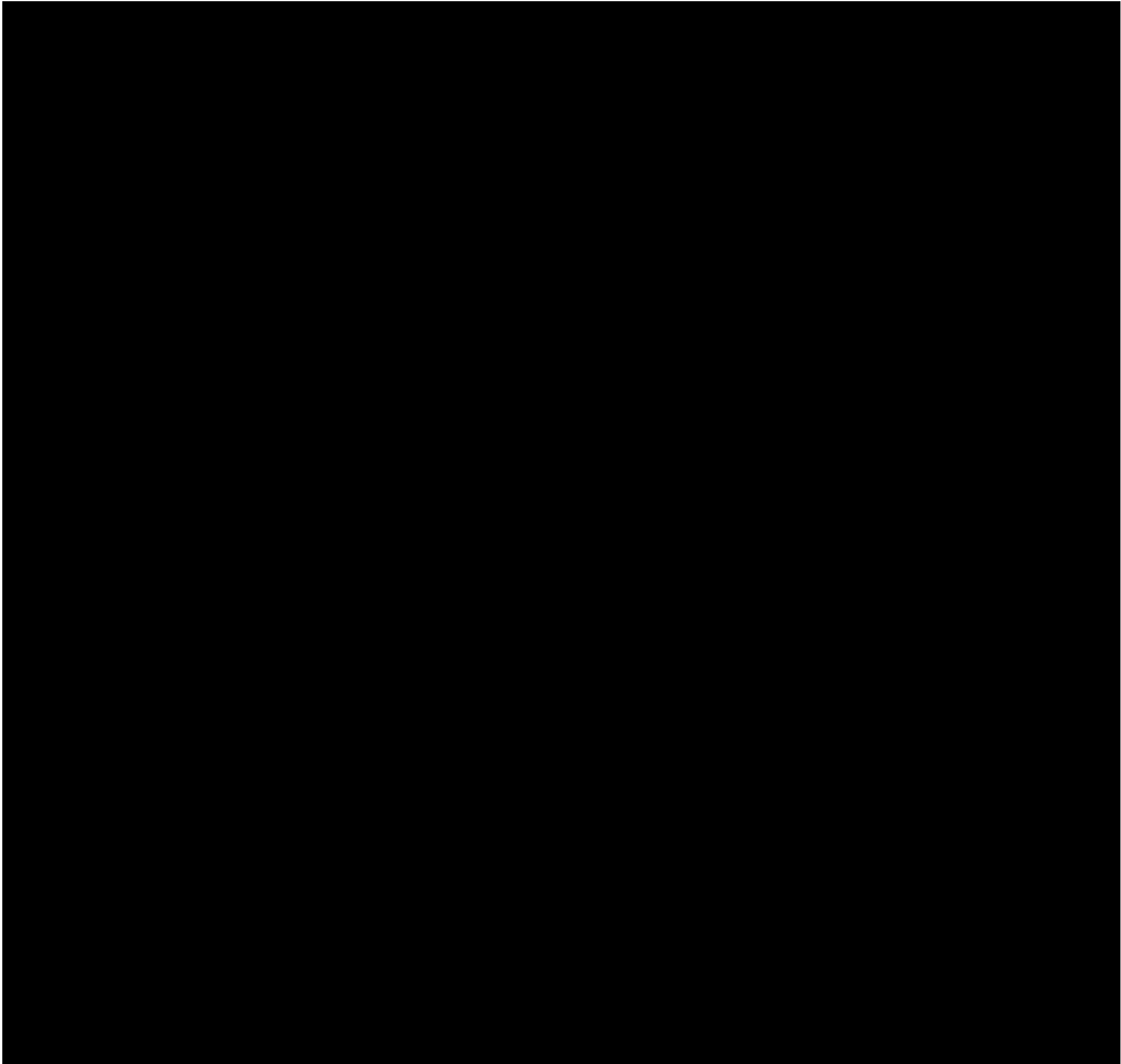
SITE 2

Description
No defined creek bed and banks. Minimal riparian vegetation. Mostly grassed grazing land with natural depressions / ditches.
Watercourse order
1 st order
Does the watercourse have a defined bed or bank?
No
Watercourse Features (NRAR Waterfront Land Tool – Appendix 6)
No arm dams
Result: Controlled activity approval not required – No watercourse, lake or wetland present

SITE 3



Description	No defined creek bed and banks. Minimal riparian vegetation. Mostly grassed grazing land with natural depressions / ditches.
Watercourse order	2 nd order
Does the watercourse have a defined bed or bank?	No
Watercourse Features (NRAR Waterfront Land Tool – Appendix 6)	Farm dam
Result: Controlled activity approval not required – No watercourse, lake or wetland present	

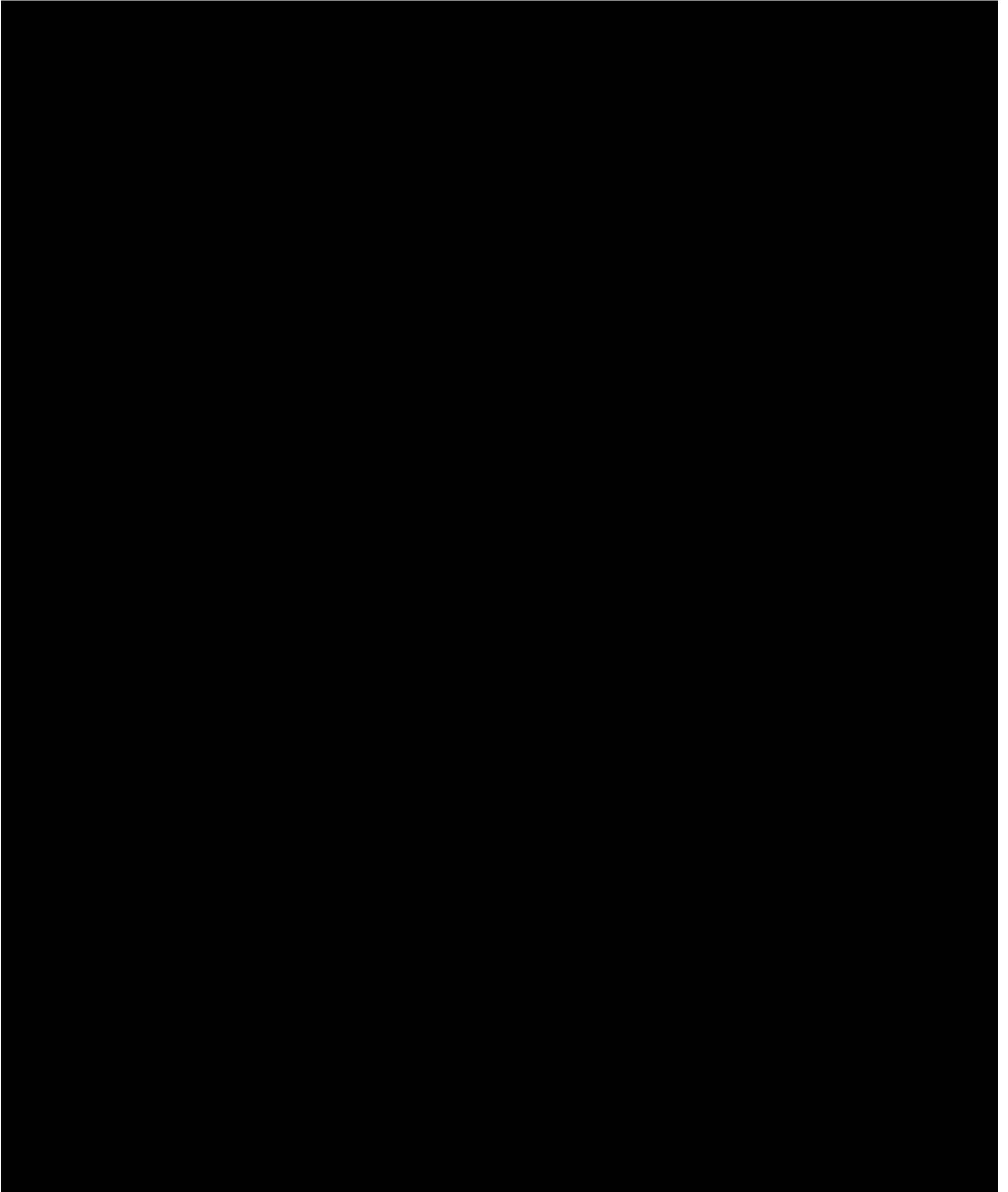


Location 1 (Looking downstream)

Location 1 (Looking downstream)

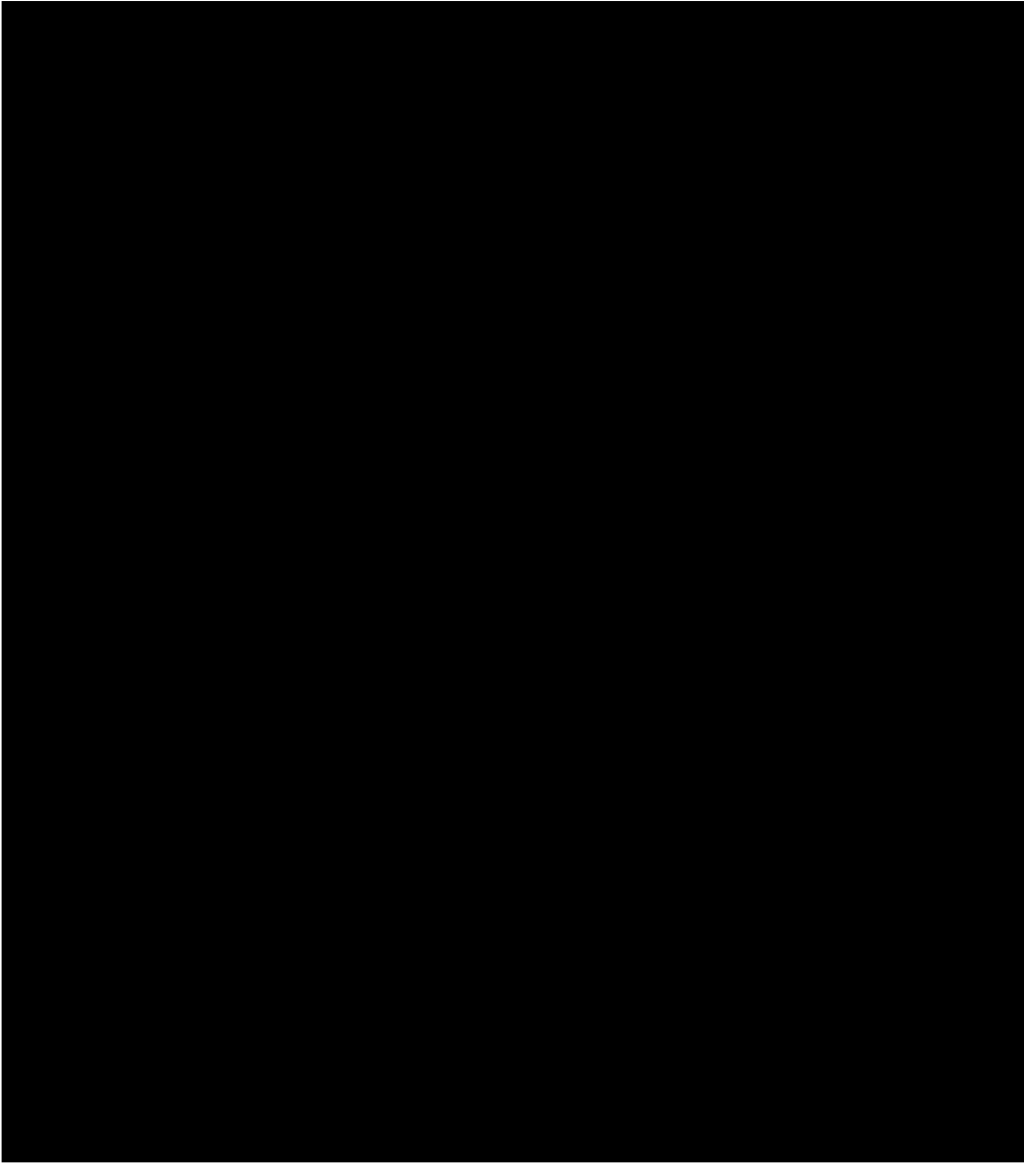
Description	Defined banks and bed with visible erosion leaving rock riffles. Discharges to farm dam. Change of vegetation evident in area surrounding farm dam.
Watercourse order	2 nd order
Does the watercourse have a defined bed or bank?	No
Watercourse Features (NRAR Waterfront Land Tool – Appendix 6)	Farm dam

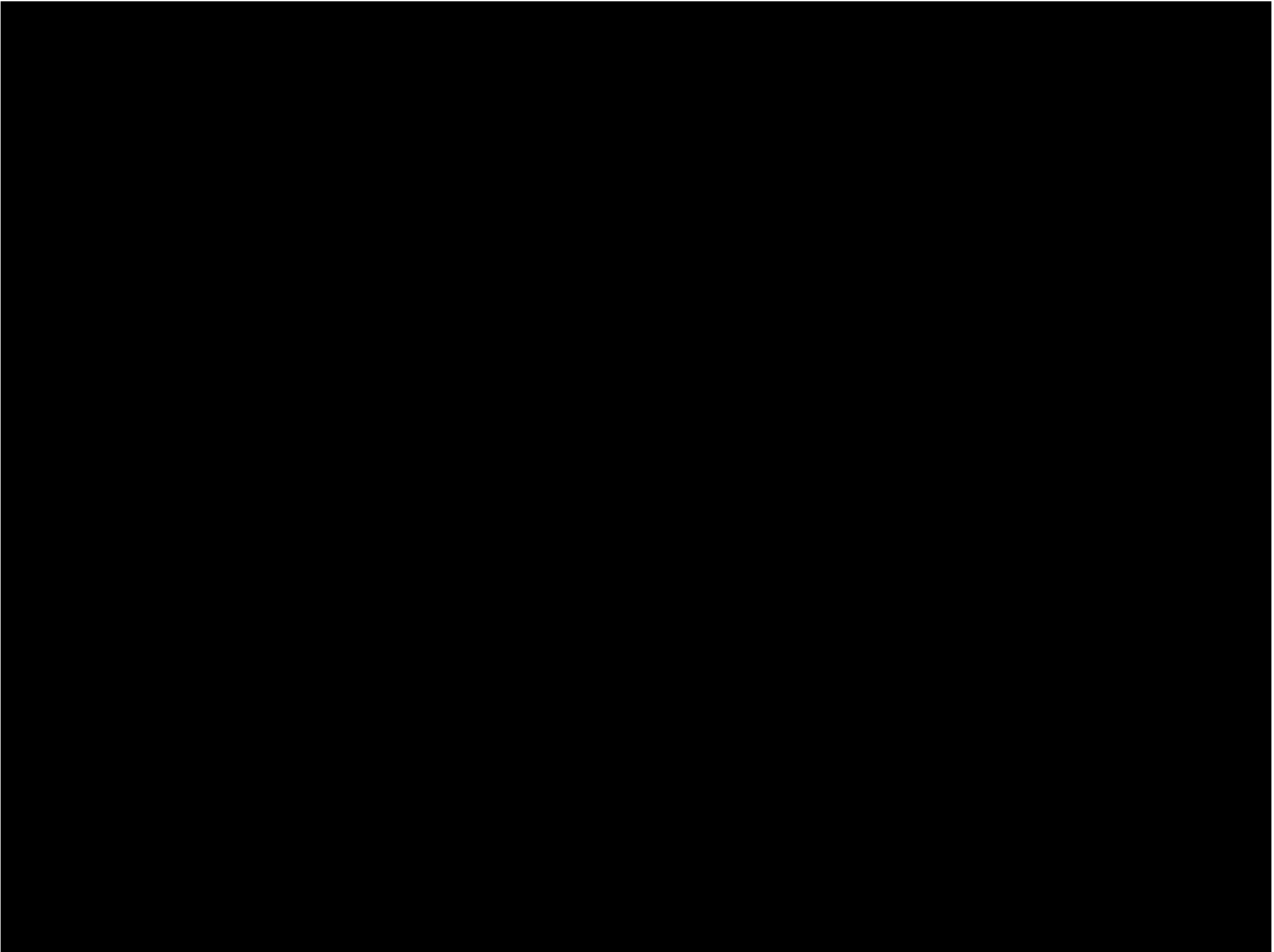
Result: Controlled activity approval not required – No watercourse, lake or wetland present



Location 2 (Looking downstream)

Location 3 (Looking downstream)

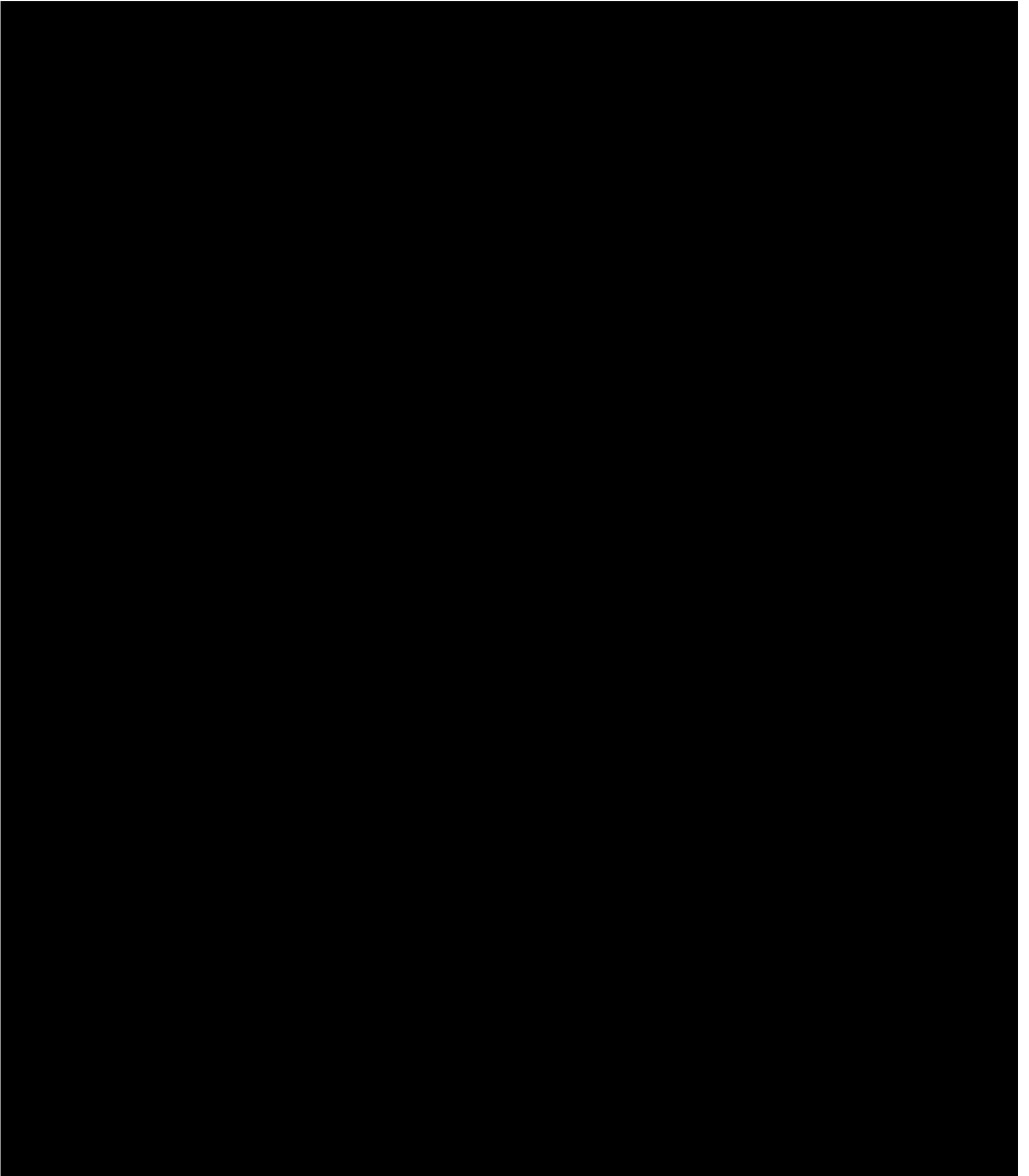


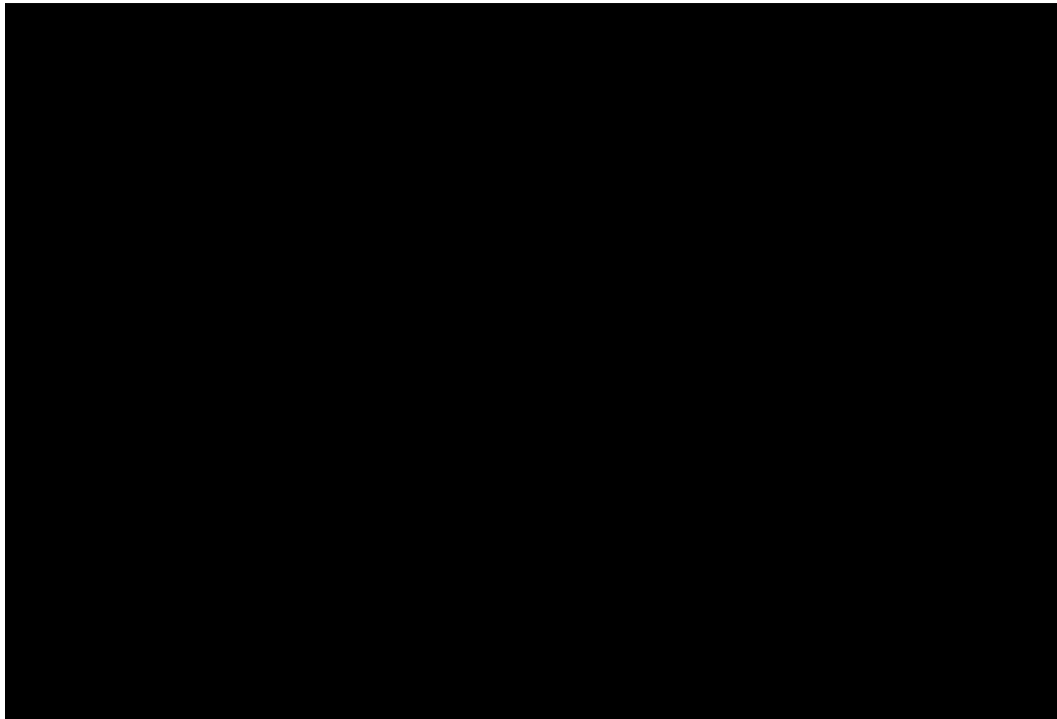


Description	Visible erosion / exposed rock in various locations along water course. Minimal vegetation.
Watercourse order	3 rd order
Does the watercourse have a defined bed or bank?	No
Watercourse Features (NRAR Waterfront Land Tool – Appendix 6)	Pool, Riffle, Erosion

Result: Controlled activity approval not required – No watercourse, lake or wetland present

SITE 5B

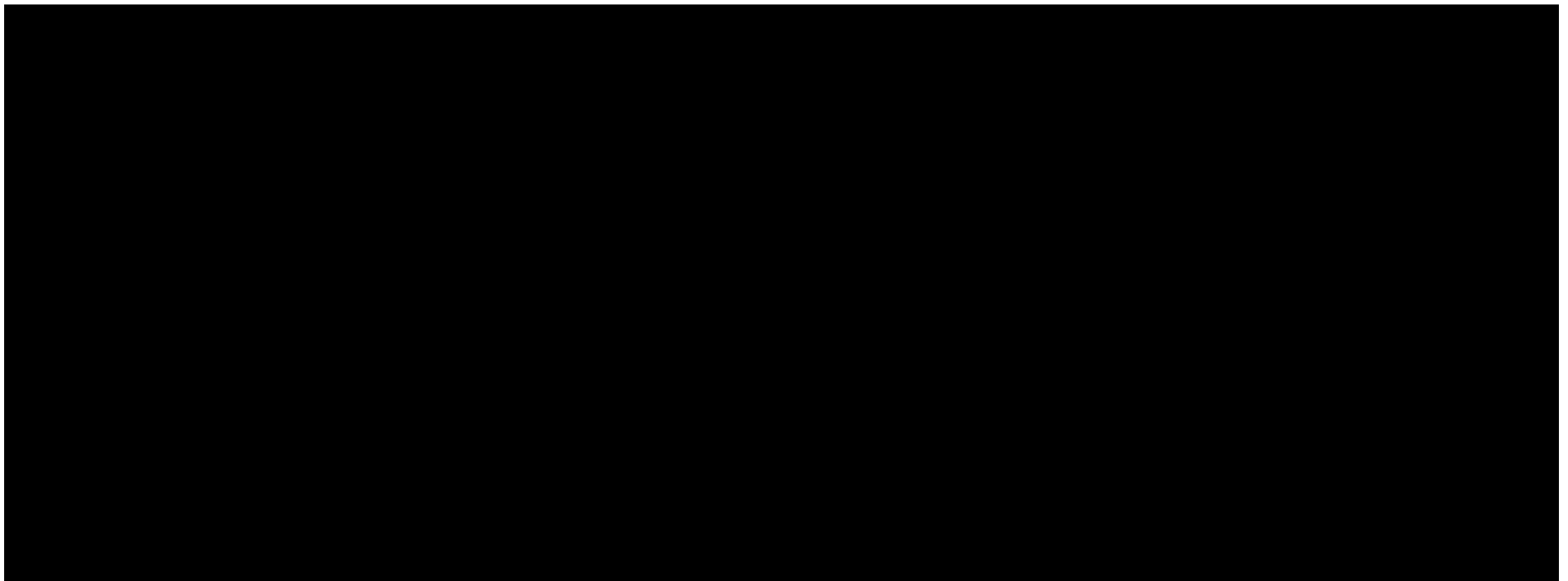




Location 2 (Looking upstream)

Description	Visible erosion / exposed rock in various locations along water course. Minimal vegetation. No connectivity between upstream and downstream environment.
Watercourse order	3 rd order
Does the watercourse have a defined bed or bank?	No
Watercourse Features (NRAR Waterfront Land Tool – Appendix 6)	Erosion

Result: Controlled activity approval not required – No watercourse, lake or wetland present

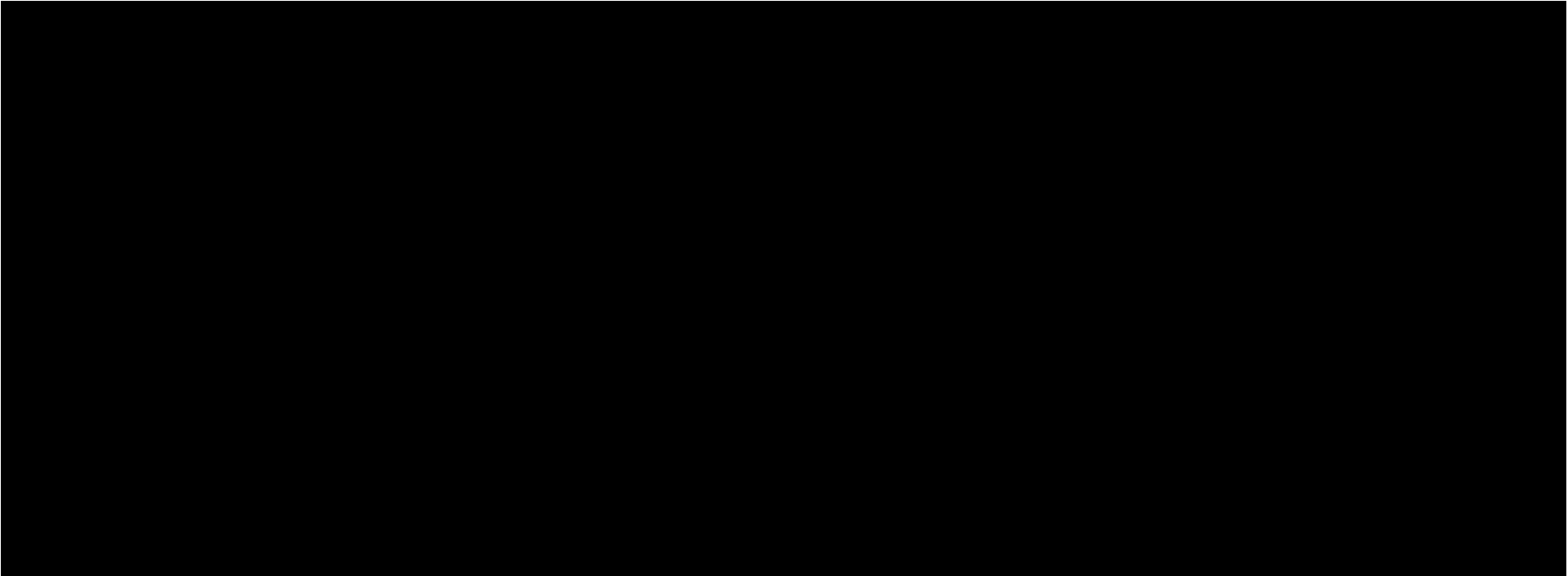


Location 3 (Looking downstream)

Location 3 (Looking upstream)

Description	Exposed rock in various locations along water course. Minimal vegetation in bed. Depression with no defined banks.
Watercourse order	2 nd order
Does the watercourse have a defined bed or bank?	No
Watercourse Features (NRAR Waterfront Land Tool – Appendix 6)	Erosion

Result: Controlled activity approval not required – No watercourse, lake or wetland present



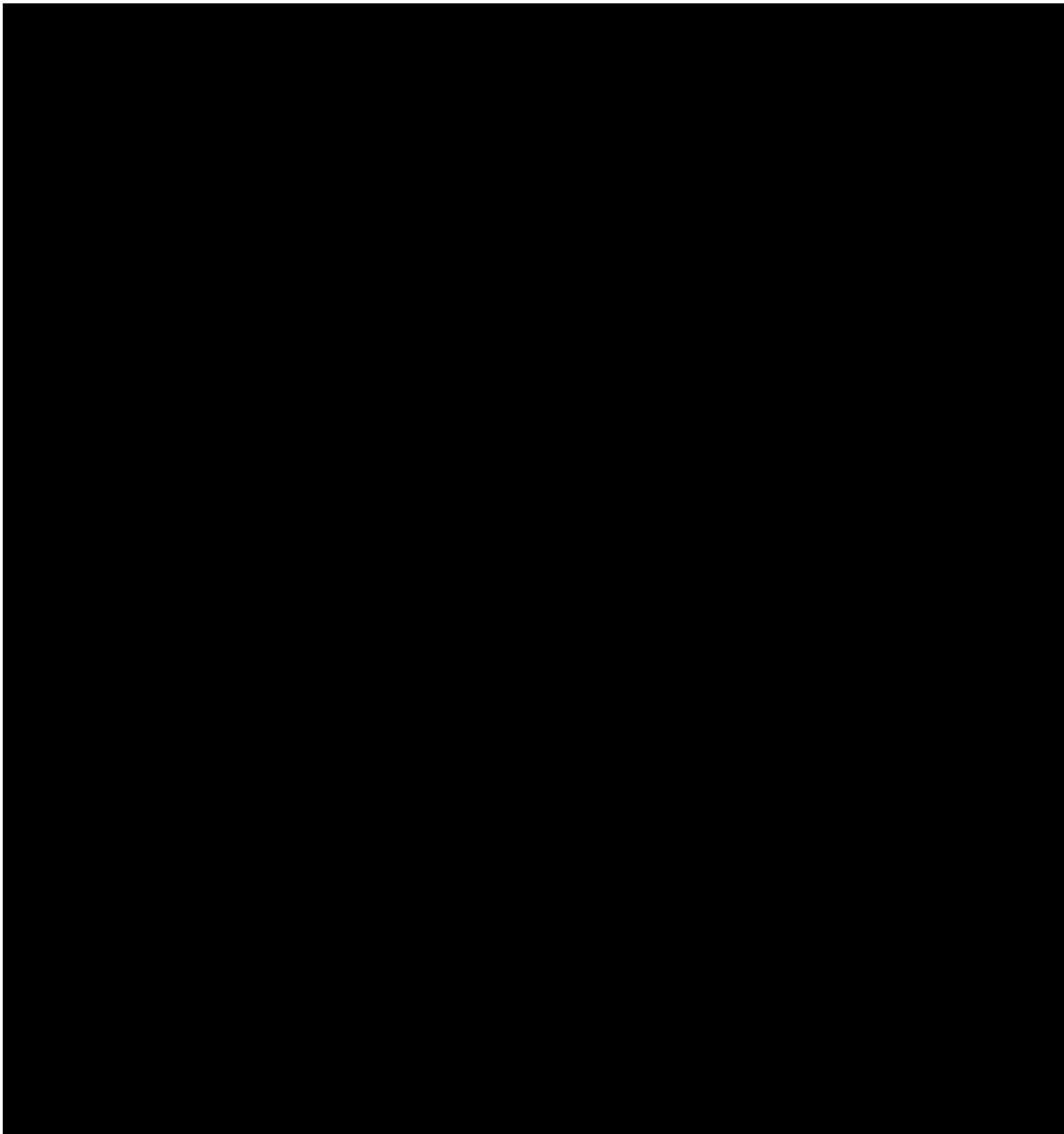
Location 4 (Looking upstream)

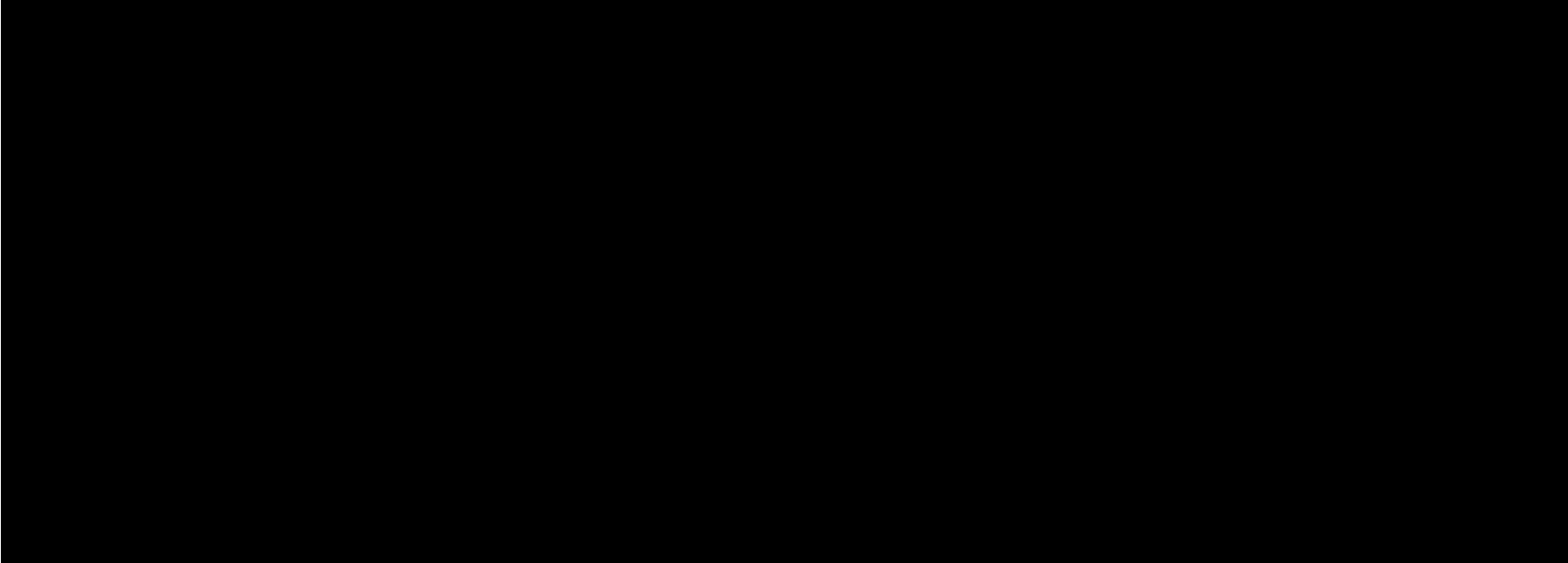
Location 4 (Looking upstream)

Description	Exposed rock and visible erosion in various locations along water course. Permanent pools in bed. Debris/tree branches in creek bed.
Watercourse order	3 rd order
Does the watercourse have a defined bed or bank?	Yes
Watercourse type (NRAR Waterfront Land Tool – Appendix 5)	Type 1 – Confined Valley Headwater
Watercourse Features (NRAR Waterfront Land Tool – Appendix 6)	Riffle, Pool, Erosion
High bank of the watercourse (NRAR Waterfront Land Tool – Appendix 8)	Type 1 – Confined Valley Headwater
Are the proposed works located within 40 metres of the high bank?	Yes

Result: Controlled activity approval is required

SITE 5C





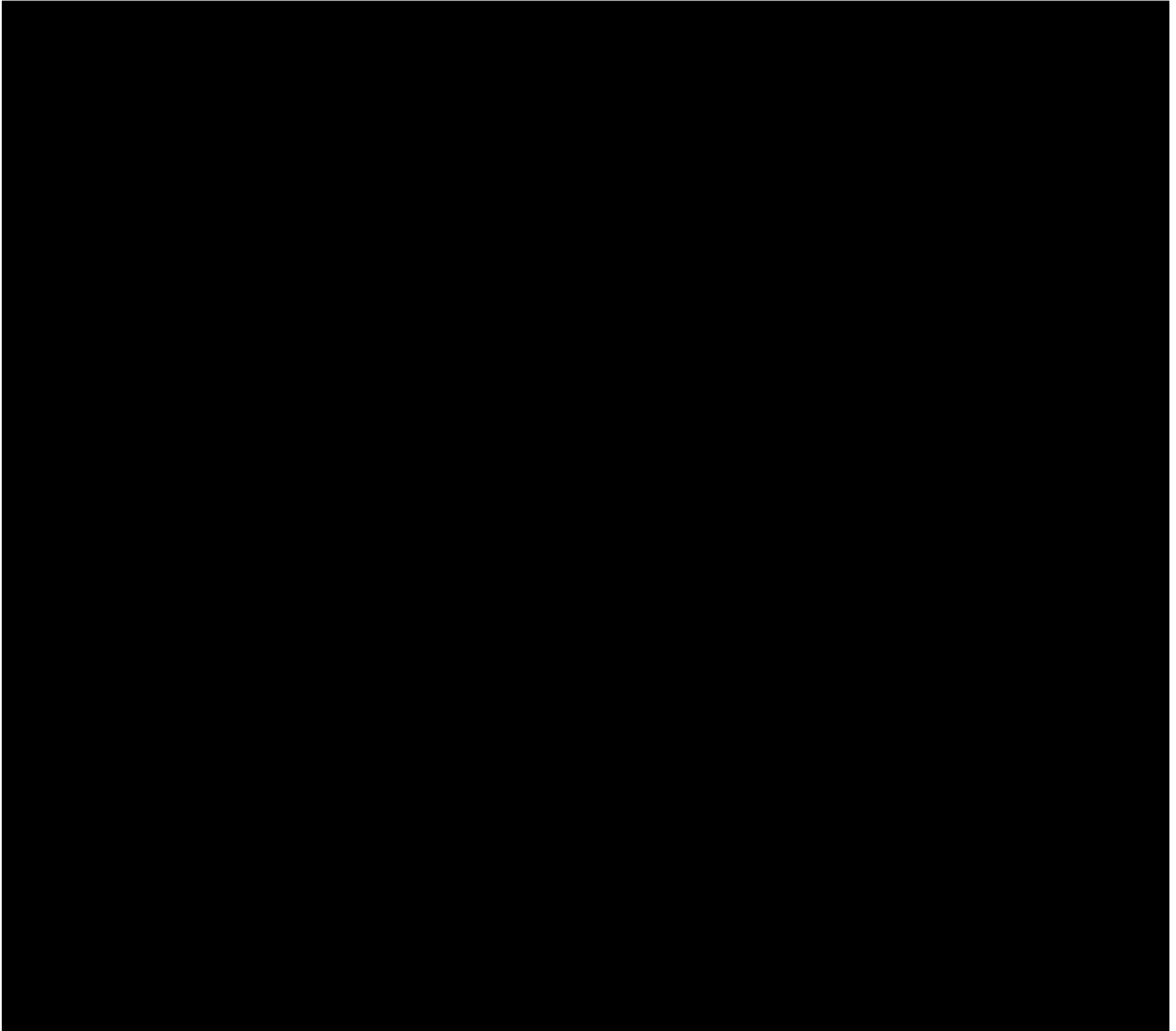
Location 2 (Looking downstream)

Location 2 (Looking upstream)

Description	No defined creek bed or banks. Poor connectivity between farm dams. No riparian vegetation or features.
Watercourse order	1 st / 2 nd order
Does the watercourse have a defined bed or bank?	No
Watercourse Features (NRAR Waterfront Land Tool – Appendix 6)	Farm dam

Result: Controlled activity approval not required – No watercourse, lake or wetland present

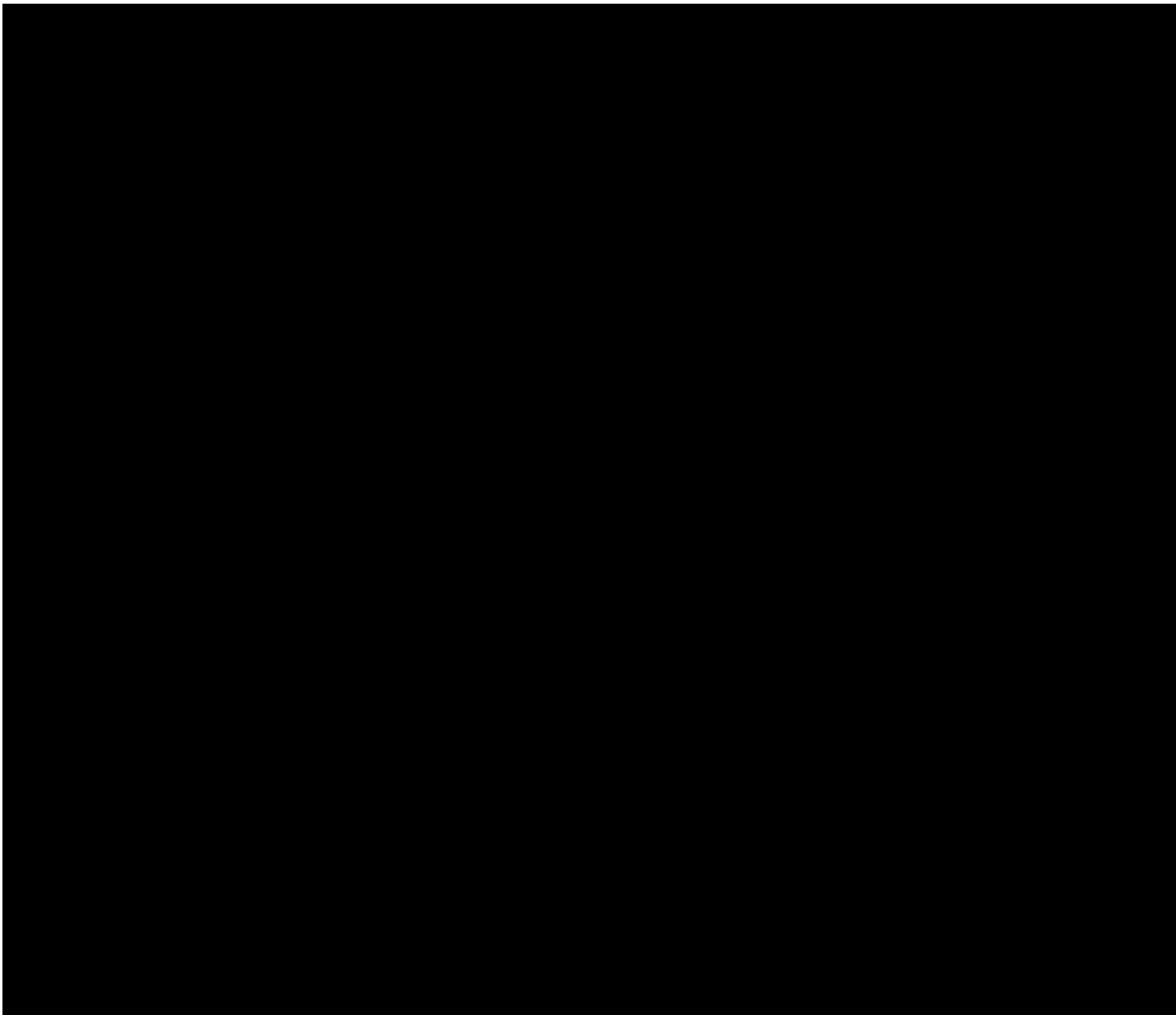
SITE 6



Description	No defined creek bed and banks. Minimal riparian vegetation. Mostly grassed grazing land with natural depressions / ditches.
Watercourse order	2 nd / 3 rd order
Does the watercourse have a defined bed or bank?	No
Watercourse Features (NRAR Waterfront Land Tool – Appendix 6)	Farm dams

Result: Controlled activity approval not required – No watercourse, lake or wetland present

SITE 7



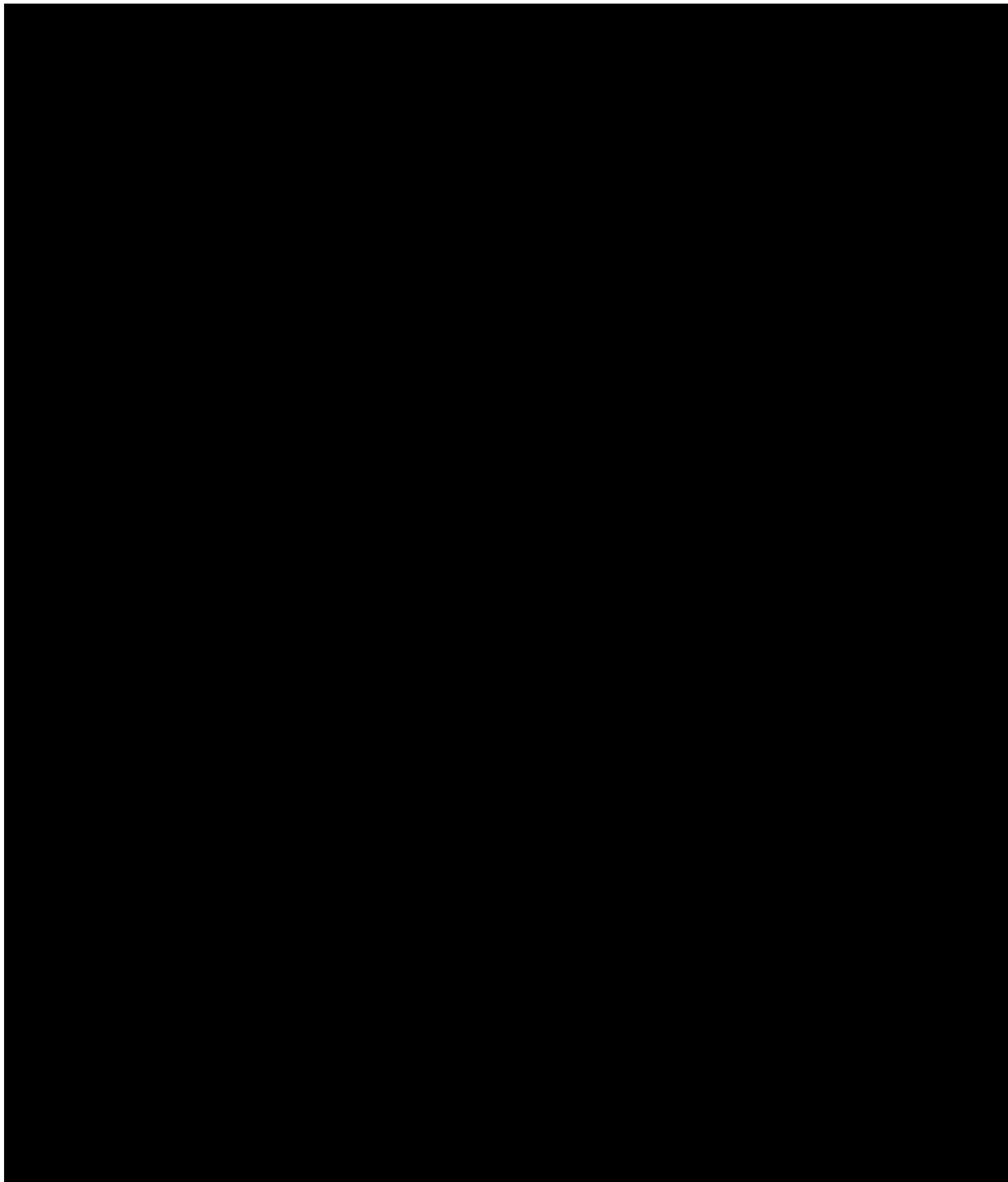
Description	Upper portion - No defined creek bed and banks. Minimal riparian vegetation. Mostly grassed grazing land with natural depressions / ditches.
Watercourse order	2 nd order
Does the watercourse have a defined bed or bank?	No
Watercourse Features (NRAR Waterfront Land Tool – Appendix 6)	Farm dams

Result: Controlled activity approval not required – No watercourse, lake or wetland present

Description	Lower portion – defined banks with permanent water pool.
Watercourse order	2 nd order
Does the watercourse have a defined bed or bank?	Yes
Watercourse type (NRAR Waterfront Land Tool – Appendix 5)	N/A
Watercourse Features (NRAR Waterfront Land Tool – Appendix 6)	Pool, Erosion
High bank of the watercourse (NRAR Waterfront Land Tool – Appendix 8)	N/A
Are the proposed works located within 40 metres of the high bank?	Yes

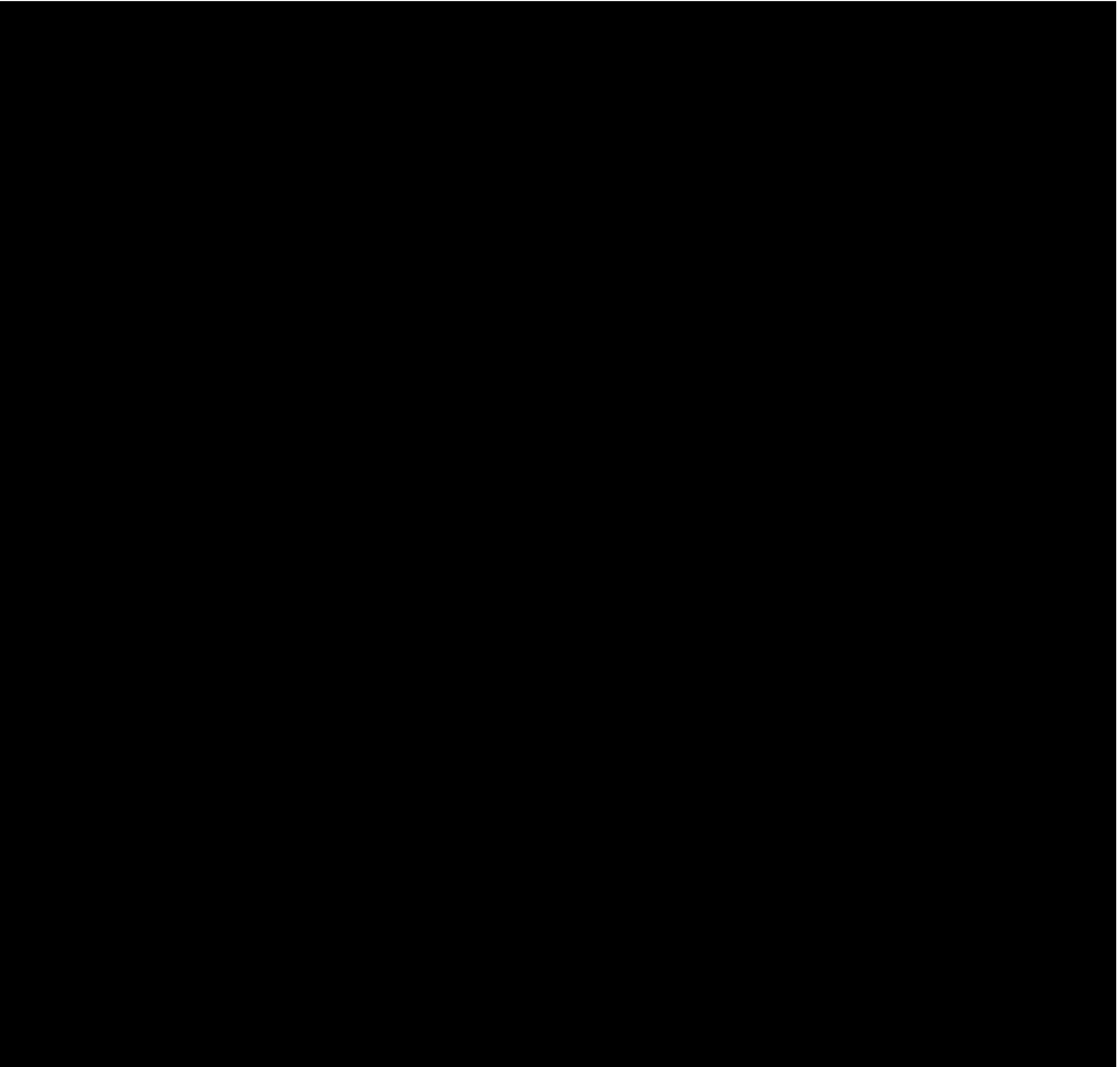
Result: Controlled activity approval is required

SITE 8



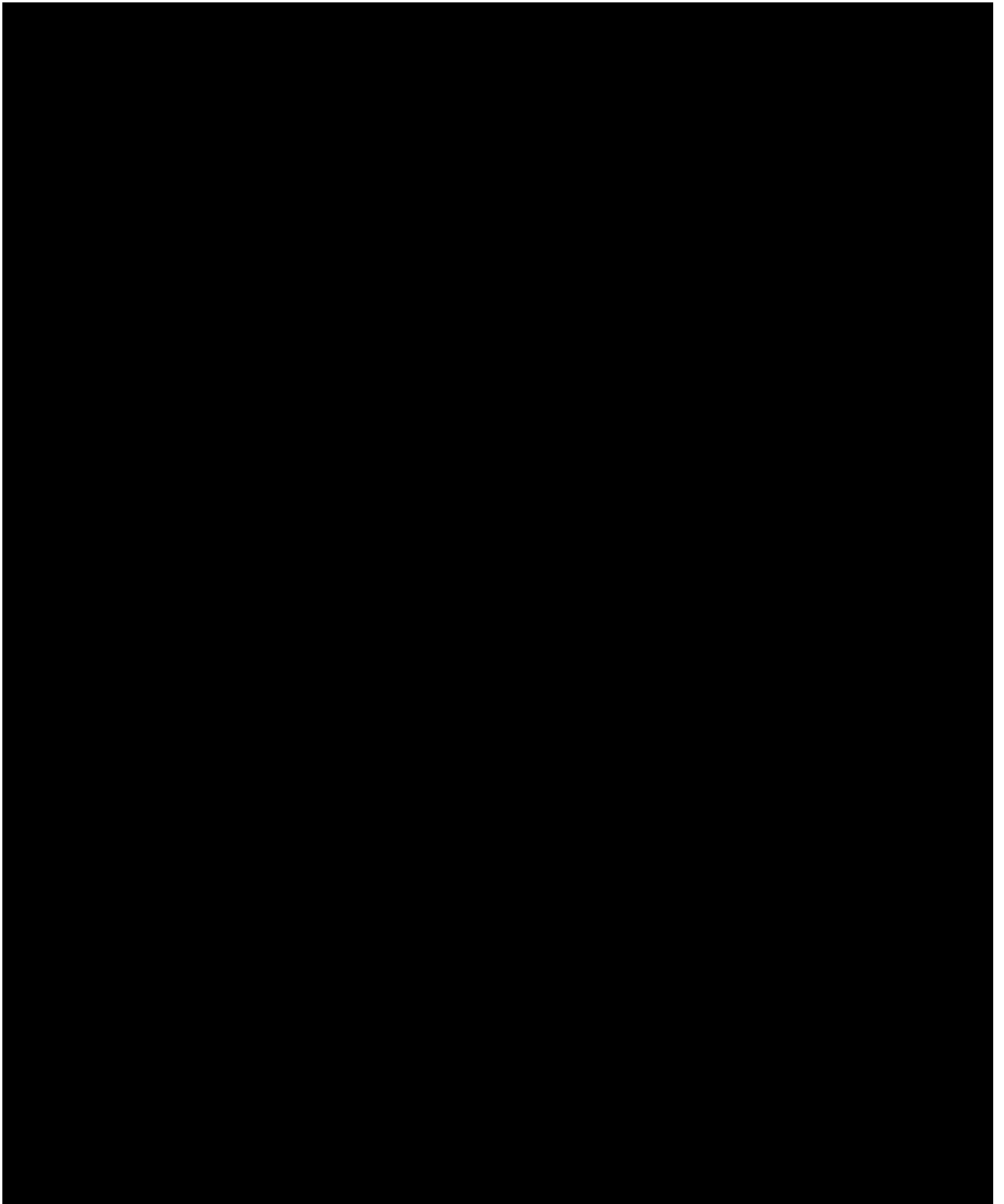
Location 1 (Looking downstream)

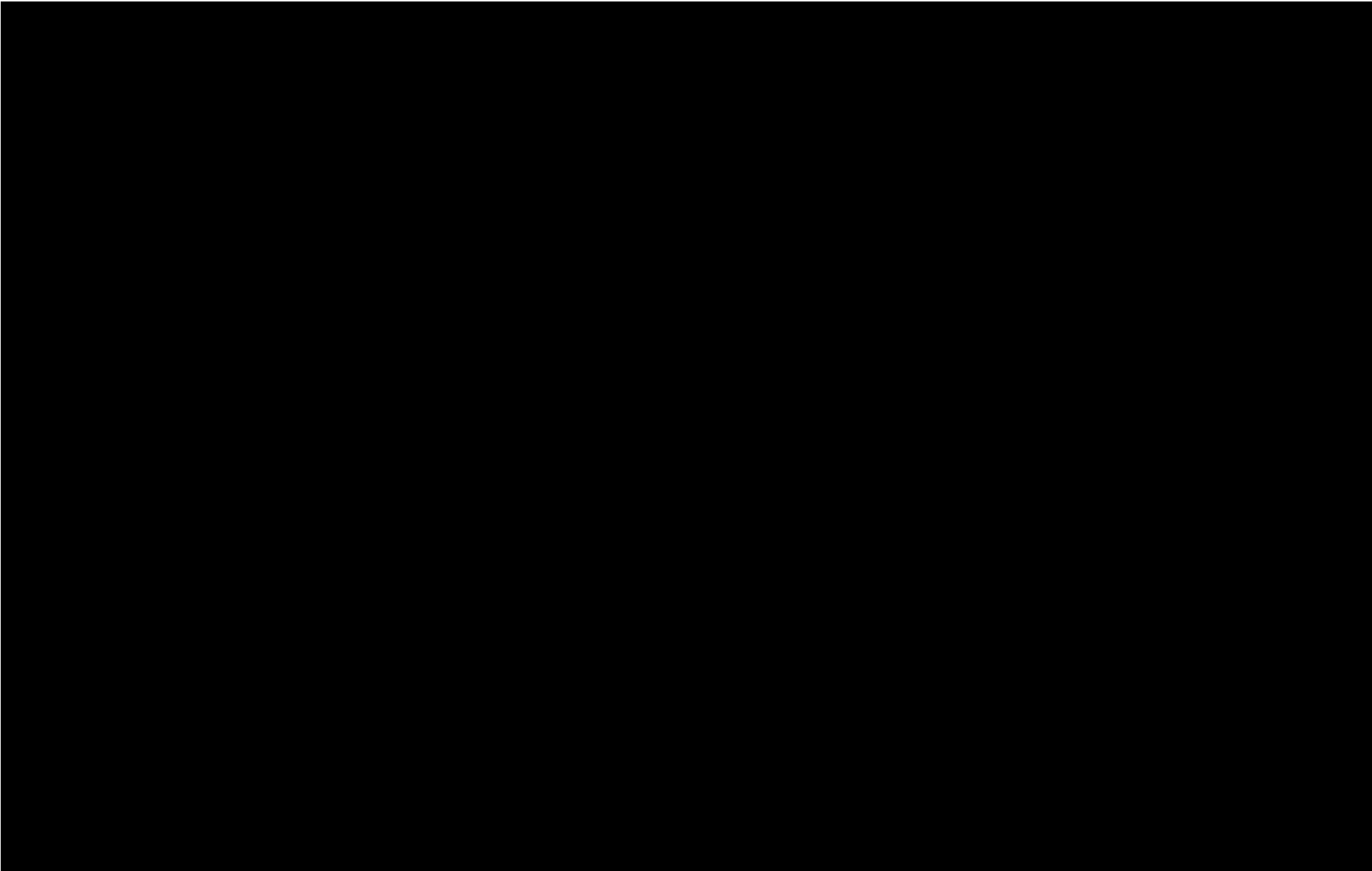
Location 1 (Looking upstream)



Location 3 (Looking upstream)

Location 4 (Looking downstream)





Description	No defined creek bed and banks. Minimal riparian vegetation. Mostly grassed grazing land with natural depressions / ditches.
Watercourse order	3 rd order
Does the watercourse have a defined bed or bank?	No
Watercourse Features (NRAR Waterfront Land Tool – Appendix 6)	Pools, Farm dam

Result: Controlled activity approval not required – No watercourse, lake or wetland present

Appendix 2

SUBMISSION BY NICHE ENVIRONMENT AND HERITAGE
BIODIVERSITY ASSESSMENT - [REDACTED] DOUGLAS
PARK

9 October 2020

Gerry Beasley
Executive Planner
Walker Corporation
Level 21, Governor Macquarie Tower
1 Farrer Place, Sydney NSW 2000
Via email: gerry.beasley@walkercorp.com.au

Dear Gerry,

**Re: Biodiversity Assessment, Cumberland Plain Conservation Plan (CPCP) Land Use Classifications - [REDACTED]
[REDACTED] Douglas Park (Niche ref: #6209)**

Niche were commissioned by Walker Corporation to prepare a biodiversity assessment associated with the suitability of one of Walker Corporation Landholdings, which has been identified in the Draft Cumberland Conservation Plan (CPCP) as 'Strategic Conservation Areas'. This report refers to the Walker Corporation property situated at [REDACTED] Douglas Park (the study area).

Our analysis has concluded that a significant portion (approx. 36ha) of the study area has been historically cleared, and does not provide the relevant biodiversity values that are associated with 'Strategic Conservation Areas,' as per the CPCP. To the immediate north of the study area, the land also consists of a historically cleared paddock. Walker Corporation should consider discussing the areas with the Department Planning and Industry, to amend from a 'Strategic Conservation Area'.

Conversely, areas of the property that contain native vegetation, which predominately occur towards the eastern portion of the property along the Nepean River, are of greater conservation value compared to the cleared lands. The native vegetation in this portion of the study area consists of Shale Sandstone Transition Forest, and River-Flat Eucalypt Forest, both Threatened Ecological Communities (TEC) under State and/or Commonwealth legislation. The vegetated area has been identified as a primary Koala corridor and is part of a direct connection with the riparian vegetation along the Nepean River.

Based on the outcome of our more detailed assessment, DPIE should reconsider whether the study area meets definition of Strategic Conservation Lands, as per the CPCP.

Yours sincerely,

[REDACTED]

Sian Griffiths
Senior Ecologist and Accredited Assessor
Niche Environment and Heritage

Draft Cumberland Plain Conservation Plan

The NSW Government has developed a strategic conservation plan for Western Sydney, titled The Draft Cumberland Plain Conservation Plan (CPCP, DPIE 2020), covering 200,000 hectares of Western Sydney from Wilton in the south to Windsor and Kurrajong in the north. The CPCP meets requirements for strategic biodiversity certification under the NSW *Biodiversity Conservation Act 2016* (BC Act) and strategic assessment under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The CPCP will support planned and strategic delivery of infrastructure, housing and jobs for Western Sydney while protecting and maintaining important biodiversity areas, taking a landscape-scale approach to conservation. The CPCP identifies strategically important biodiversity areas within the Cumberland subregion to offset the biodiversity impacts of future urban development (DPIE 2020). The Draft CPCP was released for public comment on 26 August 2020.

Strategic Conservation Area

The CPCP has used the conservation priorities method to identify and map high-value conservation lands that (DPIE 2020):

- best support an ecologically functioning, connected landscape, and
- can simultaneously offset for direct, indirect, prescribed and cumulative impacts on biodiversity, in line with the statutory requirements of the EPBC Act and the BC Act.

The output of this process resulted in the identification of the Strategic Conservation Area. The CPCPs Strategic Conservation Area are areas of regional biodiversity significance identified to have the greatest potential to deliver long-term conservation outcomes for biodiversity within the Cumberland subregion (DPIE 2020). The Strategic Conservation Area represents areas of important biodiversity value, including large remnants of native vegetation, areas with important connectivity across the landscape, and some areas with ecological restoration potential (DPIE 2020). The Strategic Conservation Area has been identified as the area of greatest strategic value to deliver long-term conservation outcomes in the Cumberland subregion and which can offset for biodiversity impacts (DPIE 2020). The strategic conservation area includes 28,300 hectares of the CPCP area, supporting (DPIE 2020):

- Approximately 18,300 hectares of native vegetation, classified into plant community types (PCTs)
- Potential habitat for 49 threatened flora and fauna species and eight EPBC Act and/or BC Act-listed TECs impacted by development facilitated through the Plan.
- Cleared land with the potential for restoration of the Plan's targeted threatened ecological communities.

The Strategic Conservation Area will be used to identify and prioritise suitable conservation lands as offsets for biodiversity impacts over the life of the CPCP. New conservation lands will include new national parks or additions to national parks, public reserves and biodiversity stewardship sites on private and public land. Ecological restoration of degraded habitat will play an important role in new conservation lands, expanding the area of native vegetation, creating new habitat for threatened species and maximising ecological connectivity. New conservation lands will be selected from the Strategic Conservation Area in accordance with the CPCP's conservation lands selection steps and implementation strategy (detailed in Table 3).

Not all of the mapped strategic conservation area will be established as conservation land under the CPCP. New conservation lands will be acquired on a voluntary basis, in consultation with landowners. Compulsory acquisition is proposed to be used in limited circumstances to acquire land that is critical for creating a

proposed conservation reserve when voluntary acquisition has not been otherwise successful and the Plan's adaptive management steps for offsets have been triggered (when the total offsets secured are less than 80% of the total offset liability to that time).

Study area

The study area includes a portion of the property owned by Walker Corporation [REDACTED] as shown on Figure 1, that has been identified in the Draft Cumberland Conservation Plan (CPCP) as 'Strategic Conservation Area'. From Figure 19 of the CPCP, it appears that the study area has been identified as a 'Potential restoration area', defined in the CPCP as "areas of cleared or more degraded land that have the potential to be restored through reconstruction, to expand the extent of over-cleared vegetation communities, including threatened ecological communities" (DPIE 2020).

The study area is mapped in the spatial viewer accompanying the CPCP as mostly cleared, supporting patches of Plant Community Type (PCT) 1395 Narrow-leaved Ironbark - Broad-leaved Ironbark - Grey Gum open forest, adjoining PCT 835 Forest Red Gum - Rough-barked Apple grassy woodland on alluvial flats along the banks of the Nepean River (Biosis 2019, DPIE 2020).

PCT 1395 is equivalent to the Threatened Ecological Community (TEC) Shale Sandstone Transition Forest, which is listed as Critically Endangered on both the BC and EPBC Acts. It is also listed as a key Matter of National Environmental Significance (MNES) in the CPCP.

PCT 835 is equivalent to the TEC River-flat Eucalypt Forest, which is listed as Endangered on the BC Act

Site inspection

A site inspection of the study area was undertaken on 11 September 2020, by Niche Senior Ecologist Sian Griffiths. The site inspection was habitat based, with a total of 10 Rapid Data Points (RDPs) taken to assist in validating vegetation mapping and determining condition and resilience, recording the following:

- GPS location
- Species composition: dominant species in overstorey, midstorey, understorey and groundlayer
- Structure: height and cover of each vegetation layer.
- Condition, including presence of weeds.
- Habitat features present, such as hollow-bearing trees, water bodies
- Threatened species habitat search
- Photo.

Field survey effort is shown in Figure 2. The survey concentrated on the cleared areas (as shown on Figure 2), rather than the vegetated areas. The DPIE vegetation mapping (Biosis 2019) has been relied upon for the vegetation corridor along the Nepean River side of the property and has not been validated.

PCTs, condition and resilience

Based on the site assessment, it was determined that the majority of the study area (approx. 30 hectares) was found to be cleared and dominated by exotic pasture grasses and herbaceous weeds (Figure 3). Similarly, land to the immediate north of the study area consisted of paddock vegetation.

Small patches of native vegetation were also recorded in the study area, adjoining the riparian vegetation along the Nepean River (which was outside the area of investigation). Two PCTs were identified as occurring in the study area (Figure 3):

- PCT 1395 Narrow-leaved Ironbark - Broad-leaved Ironbark - Grey Gum open forest, in Thinned (Photo 2) and Scattered Trees condition (Photo 3), equivalent to TEC Shale Sandstone Transition Forest.
- PCT 877 Grey Myrtle dry rainforest in Thinned condition (Photo 4), equivalent to TEC Western Sydney Dry Rainforest.

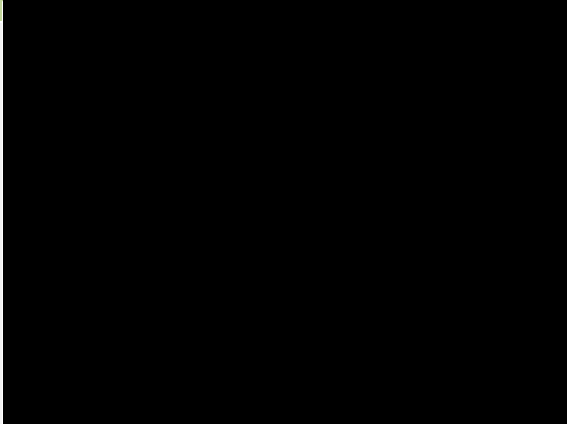

Table 1 details the PCTs recorded in the study area, including condition and area.

Areas mapped as supporting Thinned condition native vegetation (Figure 3) are considered to have good resilience, given the relatively natural structure and presence of native species in all structural layers.

Areas mapped as supporting Scattered Trees condition native vegetation are considered to have moderate resilience, given the presence of a native canopy and some native species in the understorey. However, given the lack of a natural structure and low species diversity, considerable management intervention would be required to regenerate these areas to their natural state.

Table 1: PCTs recorded in the study area

PCT	Description	Condition	Status	Area (ha)	Photo
Cleared	Dominant species recorded in the cleared paddocks included pasture grasses <i>Paspalum dilatatum</i> , <i>Eragrostis curvula</i> , <i>Sporobolus indicus</i> var. <i>capensis</i> and <i>Pennisetum clandestinum</i> , and exotic herbaceous species <i>Senecio madagascariensis</i> , <i>Hypochaeris radicata</i> , <i>Trifolium repens</i> and <i>Plantago lanceolata</i> . Native species recorded in the cleared areas were restricted to a few scattered paddock trees of <i>Eucalyptus crebra</i> and <i>E. globoidea</i> . The cleared areas were considered to have no resilience, given the lack of native species present and the history of clearing and grazing in this area (Photo 1).	NA	-	30.6	 <p>Photo 1: cleared paddock</p>
PCT 1395 Narrow-leaved Ironbark - Broad-leaved Ironbark - Grey Gum open forest	Canopy of <i>Eucalyptus punctata</i> , <i>Angophora floriunda</i> , <i>Eucalyptus crebra</i> and <i>E. globoidea</i> . Shrub layer dominated by <i>Kunzea ambigua</i> , with <i>Bursaria spinosa</i> , <i>Olearia viscidula</i> and <i>Leucopogon juniperinus</i> also occurring. Groundlayer supported native species <i>Microlaena stipoides</i> , <i>Cymbopogon refractus</i> , <i>Lomandra multiflora</i> subsp. <i>multiflora</i> , <i>Gahnia aspera</i> , <i>Solanum prinophyllum</i> and <i>Einadia hastata</i> , as well as exotic species <i>Eragrostis curvula</i> , <i>Senecio madagascariensis</i> , <i>Sida rhombifolia</i> and <i>Modiola carolineana</i> . Areas deemed in.	<p>Thinned and Scattered Trees condition.</p> <p>Areas deemed in Thinned condition (Photo 2) supported a relatively natural structure, with a native canopy, shrub layer and groundlayer all present, however weed species still occurred in the groundlayer.</p> <p>Areas deemed in Scattered Trees condition (Photo 3)</p>	Shale Sandstone Transition Forest Critically Endangered Ecological community listed under BC and EPBC Acts	<p>Thinned condition – 1.6 ha.</p> <p>Scattered Trees condition- 2.9 ha</p>	 <p>Photo 2: PCT 1395 in Thinned condition</p>

PCT	Description	Condition	Status	Area (ha)	Photo
		supported a native canopy over a groundlayer dominated by exotic species			 Photo 3: PCT 1395 in Scattered Trees condition
PCT 877 Grey Myrtle dry rainforest	Canopy of <i>Angophora floribunda</i> , with <i>Melaleuca styphelioides</i> and <i>Backhousea myrtifolia</i> dominating the midstorey. The understorey supported native species <i>Solanum prinophyllum</i> , <i>Sigesbeckia orientalis</i> subsp. <i>orientalis</i> , <i>Dichondra repens</i> and <i>Adiantum aethiopicum</i> .	Thinned condition (Photo 4)	Western Sydney Dry Rainforest, EEC listed under BC and CEEC listed under EPBC Acts	1.2 ha	 Photo 4: PCT 877 in Thinned condition.
PCT 835 Forest Red Gum - Rough-barked Apple grassy woodland on alluvial flats along the banks of the Nepean River	Not surveyed as part of this assessment Mapped as occurring along Nepean River riparian corridor.	Intact	River-flat Eucalypt Forest listed under the BC Act.	Outside of study area.	Not surveyed as part of this assessment.

Biodiversity values

The majority of the study area (cleared areas) supports limited biodiversity values. The biodiversity values in the study area are restricted to the patches of native vegetation (Figure 3), all of which correspond to TECs listed on both the BC and EPBC Acts: Shale Sandstone Transition Forest and Western Sydney Dry Rainforest (Table 1). Further, the native vegetation in the study area is mapped as a primary Koala corridor (Figure 4).

The study area supports four first order and one second order creeklines (Figure 1). The second order creekline was the only one in the study area to support pools of water at the time of survey (Plate 4). The first order creeklines were present in the study area as minor depressions dominated by exotic pasture grasses and herbaceous weeds within the cleared areas.

Management requirements

Given the low biodiversity values and lack of resilience of the cleared areas, the management effort that would be required to enhance the grassland areas to a native PCT would be extensive. Based on historical disturbances and likely low vegetation integrity, credit generation in the cleared areas is likely to be minimal and the management cost would be high. Management requirements would likely include extensive planting/direct seeding of all structural layers, replacement of unsuccessful plantings, watering of plantings, intensive weed removal and maintenance periods, sedimentation and erosion controls, pest control and monitoring. The time, cost and effort to regenerate the cleared areas to benchmark condition PCT would be better spent on areas with higher resilience.

However, areas mapped as supporting native vegetation (Figure 3) are likely to be suitable for rehabilitation, particularly given their connectivity to the riparian vegetation along the Nepean River and identification as a primary Koala corridor. Given that these areas support a relatively natural structure and native species diversity, credit generation would be higher, and the cost of management required to regenerate these areas would be much less than the adjoining cleared areas. Management within these areas would likely be focused on weed removal and maintenance and pest control.

CPCP in relation to the vegetation of the study area

CPCP Principles for establishing conservation lands

The overarching principles to guide implementation decisions for acquiring conservation lands through the CPCP's reserve program or establishing biodiversity stewardship sites through the biodiversity stewardship agreement program are detailed in Table 2, with an assessment of the cleared and vegetated areas in the study area against these principles. It is clear that the cleared portions of the study area are not consistent with many of the CPCPs principles for establishing conservation lands, however the areas of native vegetation are consistent with the majority of the principles for establishing conservation lands (Table 2).

Table 1: Principles for establishing conservation lands

Principle for establishing Conservation lands	Study area	
	Cleared areas	Native vegetation
1. Conservation lands protect the large patches of vegetation that are in better or the best available condition.	The cleared areas are not considered to be large patch of vegetation in better or best available condition.	Native vegetation in the study area could be considered a large patch, given the connectivity to the riparian vegetation along the Nepean River. The condition of the native vegetation in the study area varies, but is not considered to be the best available condition.
2. Conservation lands work efficiently together at site, local and regional scales to enhance ecological connectivity and landscape function in the long term and in a changing climate.	Cleared lands do not meet this principle and would require extensive cost and time to rehabilitate to a condition that would enhance ecological connectivity and landscape function.	Native vegetation in the study area would meet this principle due to the connectivity to the Nepean River and adjoining riparian vegetation.
3. Work on conservation lands includes active ecological restoration of degraded areas of the landscape to provide a biodiversity gain. Effort should focus on protecting and restoring corridors, enhancing ecological connectivity and providing vegetative buffers to core patches of intact vegetation.	Cleared areas in the study area do not support any biodiversity values and are considered to have no resilience. Restoration of the cleared areas would involve extensive cost, time and management intervention to rehabilitate to a condition that would result in biodiversity gain. Time and money that would be better spent on enhancement of areas that already support some biodiversity values and maintain some resilience.	Native vegetation in the study area is consistent with this principle due to the connectivity to the Nepean River and adjoining riparian vegetation and the inclusion of these areas in Koala corridor mapping. Further, the inherent resilience in the areas of native vegetation of the study area would enable time and cost-efficient biodiversity gains from management.
4. Conservation lands protect and manage habitat for impacted threatened species and TECs in accordance with commitments and actions (direct offsets).	The cleared areas do not support potential habitat for threatened species or TECs.	Native vegetation in the study area does support potential habitat for threatened species and TECs.
5. The selection of new reserves is informed by species adaptation needs in a changing climate, including consideration of changing distribution patterns and habitat requirements.	Restoration of the cleared areas would involve extensive cost and time to rehabilitate to a condition that would support biodiversity habitat. Time and money that would be better spent on enhancement of areas that already support biodiversity values and maintain some resilience.	Native vegetation in the study area is consistent with this principle due to the connectivity to the Nepean River and adjoining riparian vegetation and the inclusion of these areas in Koala corridor mapping. .
6. Biodiversity resilience is improved through early implementation of conservation lands, including acquiring available reserve sites or through securing biodiversity stewardship agreements with willing landowners prior to impacts.	Incorporation of the cleared areas as part of the conservation lands would not meet this principle, as biodiversity resilience would not be improved prior to impacts, given there would be a significant lag time between establishment of the conservation area and the time it would take to restore	Given the inherent resilience and presence of existing biodiversity values, the inclusion of the areas of native vegetation in the study area within the conservation lands would enable improvement of biodiversity

Principle for establishing Conservation lands	Study area	
	Cleared areas	Native vegetation
	the cleared areas to a native PCT that would improve biodiversity resilience.	resilience prior to impacts and would therefore meet this principle.
7. Data underpinning the Plan’s strategic conservation area is reviewed every five years to ensure that decision-making is supported by up-to-date and accurate information.	NA	NA
8. The implementation of conservation lands is timely and demonstrates value for money	Restoration of the cleared areas would involve extensive cost and time to rehabilitate to a condition that would support biodiversity habitat. Time and money that would be better spent on enhancement of degraded areas that already support some biodiversity values.	Given the existing biodiversity values of the native vegetation of the study area, these areas are consistent with this principle, as time and cost to manage these lands is likely to be relatively small.

CPCP Conservation lands selection steps

The conservation land selection steps detailed in Table 3 will be used to identify, select and secure offsets by establishing new conservation lands through the CPCP’s reserve or biodiversity stewardship site program. The order of these steps reflects spatial and ecological priorities to meet the CPCP’s offset targets and secure a strategic conservation outcome in the Plan Area within the Cumberland subregion (DPIE 2020).

Table 3 assessed the cleared and vegetation portions of the study area against the conservation lands selection steps. It is clear that the cleared portions of the study area are not consistent with many of the CPCPs conservation lands selection steps, however the areas of native vegetation are consistent with the majority of the conservation lands selection steps (Table 3).

Table 2: Conservation lands selection steps

Conservation lands selection steps		Study area	
		Cleared	Native vegetation
1) Secure offsets from priority areas within the Plan’s strategic conservation area, with a preference for (in order):	a) target TECs with the greatest impact, based on the 2019 impact assessment (Cumberland Plain Woodland, Shale Sandstone Transition Forest, River-Flat Eucalypt Forest)	Cleared areas do not support the target TECs.	The native vegetation in the study area includes the target TEC, Shale Sandstone Transition Forest.
	b) target TECs that have the highest percentage cleared status (as identified in the BioNet Vegetation Classification database for the corresponding PCTs)	Cleared areas do not support TECs.	Percentage cleared status for PCT 1395 is 80%. Percentage cleared status for PCT 877 is 25%.

Conservation lands selection steps		Study area	
		Cleared	Native vegetation
	c) target TECs or species habitat where there is a shortfall, based on offset reconciliation accounting (this includes sites with restoration potential)	Cleared areas do not support TECs.	The native vegetation in the study area includes the target TEC, Shale Sandstone Transition Forest.
	d) areas that provide potential habitat for target species (identified in the Plan) or for the following EPBC Act-listed key species: i) Grey headed flying fox ii) Regent honeyeater iii) Green and Golden Bell Frog	Cleared areas are not likely to support potential habitat for any threatened species.	The native vegetation in the study area may support potential habitat for targeted species.
	e) areas with additional conservation benefits (that is, connectivity; riparian habitat; refugia for threatened species; and adjacency to existing protected areas).	Cleared areas do not support additional conservation benefits.	The native vegetation in the study area may support additional conservation benefits, including connectivity, riparian habitat, refugia for threatened species.
2) Secure offsets from elsewhere within the Plan's strategic conservation area following the same ecological criteria specified in Step 1. Priority areas will be determined during implementation and will include:	• presence of target PCTs	Cleared areas do not support TECs	Native vegetation in the study area supports the target TEC, Shale Sandstone Transition Forest.
	• presence of larger areas of remnant native vegetation	Cleared areas in the study area do not support any native vegetation, with the exception of a few scattered paddock trees.	The native vegetation in the study area is directly connected to a large area of remnant riparian vegetation adjoining Nepean River.
	• presence of species habitat hotspots	Cleared areas do not support species habitat hotspots.	Native vegetation in the study area is not known to support species habitat hotspots. Targeted surveys have not been undertaken in this area to confirm.
	• presence of important species populations	Cleared areas in the study area do not support important species populations.	Native vegetation in the study area is not known to support important species populations. Targeted surveys have not been

Conservation lands selection steps		Study area	
		Cleared	Native vegetation
			undertaken in this area to confirm.
	<ul style="list-style-type: none"> presence of habitat for most impacted species 	Cleared areas in the study area do not support habitat for most impacted species.	Native vegetation in the study area is not known to support habitat for most impacted species. Targeted surveys have not been undertaken in this area to confirm.
	<ul style="list-style-type: none"> areas avoided for biodiversity within the nominated areas 	Unknown	Unknown
	<ul style="list-style-type: none"> areas owned by Office of Strategic Lands, the NSW Government or local government 	The study area is not owned by the Office of Strategic Lands, the NSW Government or local government.	
	<ul style="list-style-type: none"> areas adjacent to already protected land (for example, biobanking sites and reserves for biodiversity purposes such as national parks or for other existing offsets) 	The study area is not adjacent to already protected land.	
	<ul style="list-style-type: none"> land that enables connectivity through the landscape. 	Cleared lands do not support connectivity.	Native vegetation in the study area does support connectivity, given its direct connection to the riparian vegetation along the Nepean River.

Recommendations and conclusion

Given the lack of biodiversity values of the cleared portions of the study area, inclusion of this area within the conservation lands would involve considerable time, cost and management intervention to restore to a native PCT. This funding and management effort may be better spent on areas that support some biodiversity values and maintains some resilience. Similarly, the land to the immediate north of the study area (as shown on Figure 5) also would require extensive management effort to restore to a native PCT.

The cleared areas in the study area do not meet the CPCP’s principles for establishing conservation lands, nor are they consistent with the conservation lands selection steps. Therefore, it is considered that these lands are inconsistent with the objectives of the Strategic Conservation Area.

Conversely, there would be benefit in including the areas of native vegetation in the study area within the Strategic Conservation Area, given the existence of biodiversity values, inherent resilience, reduced management requirements, inclusion in a primary Koala corridor and direct connection with the riparian vegetation along the Nepean River.

Based on the outcome of our more detailed assessment, DPIE should reconsider whether the study area and the portion of land to the immediate north of the study area, meets the definition of Strategic Conservation Lands, as per the CPCP. As a result of consultation with Walker Corporation and for consideration by DPIE, Figure 5 represents a boundary that would be more suitable for the Strategic Conservation Area on [REDACTED], and the land to the immediate north, to enable integration with future land use.

References

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