Attachment 8 to Item 10.1.1.

Preliminary Ecological Assessment

Date of meeting: 11 June 2024
Location: Council Chambers
Time: 6:30pm

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22 December 2022

Matthew Causley
Director
SEED PROJECTS

Dear Matt

Preliminary Ecological Assessment, 35 Grose River Road, Grose Wold NSW 2753 (Belmont Park).
FINAL REPORT

Introduction

Sclerophyll Flora Surveys and Research Pty Ltd (Sclerophyll) was requested by SEED Projects to provide a Preliminary Ecological Assessment as part of residential subdivision Masterplanning investigations for 35 Grose River Road, Grose Wold, NSW. The objective of the assessment was to identify and highlight any significant potential ecological constraints to development through a desktop review supplemented with a preliminary site walkover to produce a draft vegetation map. Results of the site walkover were used to run a 'dummy' development scenario in the BAM Calculator (BAM-C) to determine preliminary, indicative offset requirements associated with the proposed subdivision. No detailed or formal biodiversity surveys, impact assessment or BAM offsetting investigations were undertaken as part of the assessment.

A review of the Concept Plan for the site (urbanco, August 2022) revealed the proposed subdivision comprises residential lots in the northern and central portions of the site, 5 rural residential lots in the south-western portion of the site on lot 14 as well as the retention of the Steading Creek riparian corridor on lots 6 and 14. The restoration of the lower lying parts of the Hawkesbury floodplain in parts of the southern portion of the site is also proposed, although this is yet to be defined in any detail.

Environmental Setting

The subject site is comprised of the following 4 contiguous lots:

- Lot 6 DP703300 (10 hectares);
- Lot 7 DP703300 (10 hectares);
- Lot 8 DP703300 (10 hectares); and
- Lot 14 DP 703300 (89 hectares).

The subject site is located on the Cumberland Plain in western Sydney, within the Sydney Basin IBRA bioregion, Cumberland IBRA sub-region, Central Coast botanical sub-region and Hawkesbury City Council LGA.

The site is mapped as being underlain by the Luddenham and Freemans Reach soil landscape groups. The lower lying river floodplain in the southern part of the site (as well as the extent of Steading Creek on lots 6 and 14) is characterised by Quaternary alluvium. The more elevated hills in the northern and central portion of the site are

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characterised by Wianamatta Group Bringelly Shale comprised of shale, sandstone-lithic and siltstone/mudstone (eSPADE v2.2). The shale bedrock typically weathers to a clay topsoil based on site observations.

All 4 lots drain to Steading Creek which flows south to the Hawkesbury River via subsurface and surface flows. The subject site slopes from a maximum elevation of approximately 80 AHD in the far northern corner of Lot 8 (at the intersection of Grose River Rd and Grose Vale Rd) southward to Steading Creek at approximately 20m AHD, ultimately flowing into the Hawkesbury River around 10m AHD in the lower lying floodplain portion of thew site (six map viewer).

The subject site presently supports 2 residences, substantially cleared grazing pasture grasslands with improved pasture, disused grazing sheds, an intact woodland riparian corridor along Steading Creek and small isolated patches of elevated grassy woodland primarily along the western boundary fencelines of lots 7 and 8.

Scope of Works/Methodology

The following scope of works was undertaken as part of the Preliminary Ecological Assessment:

- Desktop review of relevant ecological datasets, including Bionet atlas search (November 2022), EPBC Protected Matters Search (December 2022), western Sydney Cumberland Plain Woodland (CPW) remnant vegetation mapping (Tozer 2008; Tozer 2013; VIS 2221/2222), 2013 Sydney Metropolitan vegetation mapping (VIS 4489) as well as the recently released State Type Vegetation Map (STVM June 2022). A review of the Hawkesbury Development Control Plan (2002) was also undertaken to identify local planning controls in relation to biodiversity. The Cumberland Plain Conservation Plan (CPCP 2020) and associated spatial web viewer tool was also reviewed to identify any mapped biodiversity constraints within the CPCP area. The 2019 Biosis Biodiversity Assessment Report that was prepared as part of the CPCP was also reviewed. Discussions were also held with the NSW DPE to confirm Final CPCP map implications for site development;
- A 2 day site walkover was undertaken by Sclerophyll botanist, Isaac Mamott, on 8 and 15 August 2022 to identify and map areas of extant native vegetation, including woodland patches as well as any areas deemed to be possible derived native grassland (ie. cleared woodland with at least some intact native groundcover). Farm dams and paddock trees were also inspected. The site walkover was heavily biased towards those areas proposed for development. The riparian woodland along Steading Creek was not inspected as this corridor would be retained and protected as part of the proposed subdivision (this corridor was briefly inspected by Sclerophyll in a rapid drive-by assessment in 2020). Mapping was undertaken using a rapid data point (RDP) methodology, wherein the following attributes were digitally collected onto a field tablet using the Avenza Maps Pro GIS application: dominant floristics of each strata, slope, aspect, elevation, topsoil texture, condition/degree of disturbance and draft PCT type. Field data was exported to a cloud database and subsequently imported into our desktop GIS (QGIS 3.20) to produce a Draft PCT, Draft TEC and Constraints map. No detailed baseline or targeted Threatened flora and fauna surveys were undertaken;
- A single development scenario was run through the BAM Calculator (BAM-C) using ‘dummy’ plot data, based on extant areas of mapped native woodland. Landscape attribute values (% native vegetation cover and patch size) were estimated (not GIS mapped) and entered into the BAM-C. Both Part 4 Development and Scattered (Paddock) Tree modules were run in the BAM-C to reflect proposed removal of woodland patches and single paddock trees; and

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- Preparation of a letter report detailing the methods and results of the desktop review and site walkover, highlighting any site areas deemed to have significant ecological constraint to development. A Biodiversity Credit Report was generated in the BAM-C to provide an indicative offset requirement for the proposed subdivision.

Results

Plant Community Types (PCTs)

The following Plant Community Types (PCTs) were recorded on the subject site:

1. **Cumberland Shale Plains Woodland** (**PCT ID 849 – 5.2 ha**). This PCT was recorded as small, open woodland patches along the western and north-western boundary fencelines of lots 6, 7 and 8 as well as on the south facing hillslopes on Lots 8 and 14. Canopy species comprised Grey Box (*Eucalyptus moluccana*), Forest Red Gum (*Eucalyptus tereticornis*), Thin leaved Stringybark (*Eucalyptus eugenioides*) and Narrow leaved Ironbark (*Eucalyptus crebra*). Most open woodland patches supported a sparse shrub stratum dominated by *Bursaria spinosa* and *Acacia implexa*, as well as a grassy/herbaceous groundcover dominated by native grasses such as *Themeda triandra*, *Microlaena stipoides*, *Echinopogon caespitosus*, *Dichelachne micrantha, Oplismenus aemulus, Rytidosperma racemosa* along with native climbers/ herbs such as *Caesia parviflora* var. *vittata*, *Dichondra repens, Sigesbeckia orientalis*, *Lobelia pedunculata*, and *Desmodium varians*. Exotic grasses and herbs included *Bromus hordeaceus, Paspalum dilatatum, Plantago lanceolata, Verbena bonariensis, Lolium perenne, Dactylis glomerata, Setaria sp., Erhrarta erecta, Senecio madagascariensis, Sida rhombifolia, Taraxacum officinale, Hypochaeris radicata*, *Conyza sp., and Bidens pilosa.* The PCT open woodland patches were mapped as being in poor condition with a sparse to absent shrub stratum and an exotic or mixed native/exotic groundcover. This PCT is analagous to 'Cumberland Plain Woodland (CPW) in the Sydney Basin Bioregion' Critically Endangered Ecological Community (CEEC) listing under the NSW *Biodiversity Conservation Act* 2016 (BC Act). The PCT would also be analagous to the 'Cumberland Plain Shale Woodlands and Shale Gravel Transition Forest Critically Endangered Ecological Community (CEEC) listing under the Commonwealth *Environment Protection and Biodiversity Conservation Act* 1999 (EPBC Act) as some of the woodland patch occurrences would meet the EPBC listing's key diagnostic characteristics, requiring a native shrub and groundcover component to be present as well as meeting the EPBC listing's prescribed condition thresholds (eg. >0.5 ha patch size).
2. **Cumberland Shale Plains Woodland** (**PCT ID 849**). A total of 4 Grey Box and Forest Red Gum 'paddock' trees were recorded on Lots 7 and 14. These paddock trees would likely be captured under the Cumberland Plain Woodland CEEC listing under the NSW BC Act;
3. **Riverflat Eucalypt Forest on Coastal Floodplains (PCT ID 835 – 0.75ha).** This PCT was recorded along minor (1st stream order) gully lines that drain the site hillslopes and was characterised by canopy species Broad leaved Apple (*Angophora subvelutina*) and Forest Red Gum. The PCT open woodland patches were mapped as being in poor condition with a sparse to absent shrub stratum and an exotic or

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mixed native/exotic groundcover. This PCT is analagous to 'Riverflat Eucalypt Forest on Coastal Floodplains of the NSW North Coast, Sydney Basin and SE Corner Bioregions' Endangered Ecological Community (CEEC) listing under the NSW *Biodiversity Conservation Act* 2016 (BC Act).

4. **Cumberland Moist Shale Woodland (PCT ID 830 – 0.33 ha**). This PCT was recorded on steep, sheltered hillslopes on Lot 14 sharing canopy species similarity with PCT 849 but having a more mesic understorey than PCT 849. Mesic shrubs such as Breynia oblongifolia were observed to be regenerating on the sheltered slopes, which is typically a good indicator of this PCT. The PCT open woodland patch was mapped as being in poor condition with a sparse to absent shrub stratum and an exotic or mixed native/exotic groundcover.
5. **Phragmites australis and Typha orientalis coastal freshwater wetlands of the Sydney Basin Bioregion (PCT ID 1071 – 0.25ha estimate)**. Some of the farm dams on lots 7 and 8 were colonised by narrow 1-2 metre wide bands of native aquatic plants, including *Ludwigia peploides, Ottelia ovalifolia, Paspalum distichum, Juncus usitatus and Cycnogeton procerum*. Farm dams created artificially on the subject lots' previous 'dry lands' (that would have once likely supported Shale Plains Woodlands) do not form part of the 'Freshwater wetlands on coastal floodplains of the NSW North Coast, Sydney Basin and South East Corner Bioregions' EEC listing under the BC Act, based on a review of the Identification Guidelines for Coastal Floodplain Freshwater Wetlands (DECC 2008) as well as the Scientific Committee Final Determination for the EEC. The guidelines and EEC Final Determination clearly state that artificial wetlands created on previously dry land for purposes such as sewerage treatment, stormwater management and farm production are not regarded as part of this EEC. Nevertheless, even though the dams that support areas of native aquatics are not considered a naturally occurring PCT by the author, our experience on other projects suggests that some consent authorities require them to be mapped and assessed as a native PCT. Due to the water level of the dams, we were not able to accurately map their extent during the site walkover. These areas will need to be mapped as part of any future BAM assessment and Biodiversity Development Assessment Report (BDAR) associated with a subdivision DA (possibly using a drone or small rubber dinghy if dam levels remain high). For the purposes of the preliminary BAM assessment undertaken as part of this commission, we have conservatively assumed an extent of this PCT as 0.25 ha on the site.

Remaining vegetation on the subject site recorded during the site walkover comprised:

- Low Condition Derived Native Grasslands (DNG) which supported a mix of native and exotic pasture grasses and forbs, dominated by *Paspalum dilatatum*, Bromus hordeaceus*, Dichelachne micrantha, Themeda triandra, Microlaena stipoides, Senecio madagascariensis*, Plantago lanceolata*, Verbena bonariensis*, Dactylis glomerata*, Cynodon dactylon*, Lolium perenne*, Trifolium repens* and Sporobolus indicus**. These areas would have once supported intact occurrences of PCT 849 but have long since been cleared for stock grazing and pasture improvement. Sclerophyll typically recommend that mapped DNG areas be subject to limited detailed BAM plots and an initial run through the BAM-C to determine whether these DNG areas exceed the vegetation integrity score (VIS) threshold which

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would require them to be mapped, assessed and offset in the BAM/BDAR as a native PCT (in this case likley PCT ID 849). Should the plots yield a VIS below the relevant offset threshold, these DNG areas can then be excluded from a future BDAR/BAM assessment and offsetting. Sclerophyll usually suggest the DNG exploratory plots be undertaken early in the Masterplanning process (pre BDAR) to get an accurate picture of total biodiversity offsetting areas and costs as early as possible. For the purposes of this commission, we have not undertaken any exploratory BAM plots and thus have not included the mapped DNG as areas requring offsetting;

- Exotic (improved) pasture containing little or no native species. Exotic grasses and forbs are similar to those listed for the DNG community above. A small number of detailed BAM plots would need to be undertaken as part of a future BDAR to justify excluding these areas from a BAM assessment; and
- Native landscape plantings were recorded along the driveway into the residence on lot 7. The plantings comprised 2 rows of mature River Oak trees (*Casuarina cunninghamiana* subsp. *cunninghamiana)*. Native vegetation plantings must be subject to a decision key in Appendix D of the BAM in order to determine if they need to be included in the BAM offsetting calculations. Based on an initial review of the decision key, it is our view that the plantings would not require inclusion and offsetting in the BAM 2020 unless they were planted as part of a conservation obligation which we assume was not the case on the site.

Threatened Flora Species

Following a review of the desktop database searches, we consider the Threatened flora species known to occur and previously recorded in the locality associated with Cumberland Plain Woodland (CPW) habitat (eg. *Pimelea spicata, Marsdenia viridiflora* subsp. *viridiflora; Acacia pubescens*) as all having a low potential likelihood of occurrence on the subject site, given the current and historical landuse (ie. cleared grazing lands and the replacement of the native pasture with exotic weeds and improved pasture species). The cleared pasture dominated areas of the subject site are considered to be too highly modified to have a reasonable chance of supporting Threatened plant populations given the past and present landuse. None of the Threatened flora species typically associated with the Castlereagh Woodland complex (eg. *Dillwynia tenuifolia, Grevillea juniperina, Pultenaea parviflora, Persoonia nutans*) are considered as potential occurrences within site habitats based on the absence of suitable soil/geology.

No Threatened flora records are known from the subject site or adjoining lands.

Targeted surveys for a small suite of flora ‘species credit species’ listed in the BAM Threatened flora database may be required as part of any future BDAR where a development proposal is captured under the BOS.

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Threatened Fauna Species

Following a review of the desktop searches, we consider the following Threatened fauna species as having the potential to occur within the identified site habitats based on their life cycle requirements and known local occurrences:

- Cumberland Plain Land Snail (*Meridolum corneovirens)* - listed as Endangered under BC Act. This species may occur in PCT 849;
- Suite of microbats (eg. Greater Broad nosed Bat, Southern Myotis, Eastern Freetail-bat, Eastern False Pipistrelle, Eastern Bentwing-bat (listed as Vulnerable under BC Act). These species may forage across PCT 849, the pasture grasslands, farm dams and Steading Creek riparian corridor;
- Grey headed Flying Fox - listed as Vulnerable under the BC and EPBC Acts. This species may forage in CPW woodland patches and along the Steading Creek corridor;
- Woodland birds such as Varied Sitella (Vulnerable - BC Act), Dusky Woodswallow (Vulnerable - BC Act), White bellied Sea Eagle (Vulnerable - BC/EPBC Acts) which may forage over the pasture grasslands, farm dams, PCT 849 and along the Steading Creek corridor; and
- Green and Golden Bell Frog which may shelter and breed in some of the farm dams (PCT 1071) supporting aquatic vegetation.

Targeted surveys for a small suite of fauna 'species credit species' listed in the BAM Threatened fauna database may be required as part of any future BDAR where a development proposal is captured under the BOS.

BOS Triggers Biodiversity Offsets Scheme (BOS)

A future development proposal for the subject site (presumably under Part 4 of the NSW *Environmental Planning and Assessment Act* 1979) would trigger the Biodiversity Offset Scheme (BOS) under Part 7.2 of the *Biodiversity Conservation Regulation* 2017 (BC Regulation) if it involves clearing of native vegetation on land included on the published Biodiversity Values Map (BV Map).

A review of the BV Map (https://www.lmbc.nsw.gov.au/Maps/index.html?viewer=BOSETMap) that was imported into our GIS software confirmed that all the Cumberland Plain Woodland patches and riparian woodland along Steading Creek on all 4 lots are mapped on the BV Map as supporting biodiversity values. The BV Mapping Classes (BOSET Class) for the site's mapped BV polygons include 'Threatened species or communities with potential for serious and irreversible impacts' (referring to the CPW patches) as well as 'Biodiversity Riparian Land' (referring to riparian woodland along Steading Creek). As such, removal of any of these areas would trigger the BOS.

The BOS can also be triggered through exceeding prescribed clearing thresholds listed in the BC Regulation based on minimum lot sizes. We can advise further on this BOS trigger once Council confirm minimum lot sizes for the subject lots on their LEP minimum lot size maps.

Triggering the BOS would require a formal BAM Assessment and BDAR as supporting documentation for a future subdivision DA. BAM plots in the pasture grasslands and CPW woodlands, a scattered (paddock) tree

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assessment as well as Targeted Threatened species surveys (with a focus on Threatened flora and fauna species credit species considered as possible occurrences on the subject site) would be required as part of a BAM assessment.

Preliminary BAM Assessment

An Ecosystem Credit Summary generated by running the BAM-C development scenario for the site is provided below in Table 1.

Table 1 Ecosystem Credit Summary

PCT ID	PCT Name	Area of PCT Proposed for Clearing (ha)	Total Credits to be Retired
849	Cumberland Shale Plains Woodland	5.2	59
835	Cumberland Riverflat Eucalypt Forest	0.8	9
830	Cumberland Moist Shale Woodland	0.3	3
Total		**6.3 ha**	**71 ecosystem credits**

Table 1 shows an indicative offset requirement of 71 ecosystem credits for the combined removal of 6.3 ha of PCT 849, 835 and 830 on the subject lots.

Results from the scattered (paddock) tree assessment module in the BAM-C revealed that a total of 2 Cumberland Plain Woodland (CPW) ecosystem credits would be required to be purchased and retired to offset the removal of 4 paddock trees mapped for the subject lots.

Technical difficulties (ie. glitch/bug) associated with the current version of the BAM-C has prohibited Sclerophyll from obtaining a credit requirement for the removal of an estimated 0.25 ha of PCT 1071 (associated with portions of some of the farm dams supporting 'freshwater wetland' type communities). We estimate the BAM-C would calculate approximately 3 credits to offset the loss of this PCT on the site.

We have assumed that no Threatened species credit species occur on the site (as their presence would require additional offset payments). This would require confirmation through targeted survey work as part of a future BDAR.

The preliminary BAM Credit Reports are provided as **Attachment A**.

Serious and Irreversible Impacts (SAII)

Section 9.1.1 of the BAM (2020) lists a series of Serious and Irreversible impacts (SAII) assessment criteria that must be addressed in a BDAR to assist the consent authority in determining the extent and severity of a proposed development impact on an entity at risk of an SAII. It is noted that Cumberland Plain Woodland CEEC is listed as a Candidate SAII under the BAM and thus an SAII assessment would need to be undertaken

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as part of a BDAR for a future subdivision DA if it involves the proposed removal of any CPW remnants on the subject site.

We consider that there is a reasonably strong argument to be made in a BDAR that the proposed removal of the small CPW patches along the northern and western boundary fencelines of the subject site would not result in an 'actual' SAII based on their poor condition and extent relative to the extent of CPW in the Hawkesbury LGA. It should be noted that only the consent authority can make a decision as to whether a proposal is likely or unlikely to result in an actual SAII based on their review of the SAII assessment in the BDAR. Should a consent authority conclude that a proposal will likely result in an actual SAII, they are obliged to refuse a Part 4 development. As such, the proposed removal of the CPW remnants on the site must be considered a relatively high constraint to development, although this doesn't necessarily mean that approval won't be granted for their removal. We emphasise that there is no guarantee that Council would agree with a future SAII assessment should that assessment by the Proponent's ecological consultant conclude that the proposed subdivision would not result in an actual SAII, no matter how robustly reasoned the argument is. Hawkesbury Council do regard the remaining CPW remnants in their LGA very highly and have mapped most of them as an Environmental Constraint Area (ECA) in the DCP (although CPW remnants on the subject site have not been included in the DCP 2012 ECA map, although we are seeking confirmation from this from Council).

Cumberland Plain Conservation Plan (CPCP 2022)

The NSW Department of Planning and Environment (DPE) has prepared, exhibited and finalised the Cumberland Plain Conservation Plan (CPCP 2020) that has comprised a strategic level bio-certification of high growth parts of western Sydney. The strategic bio-certification process has mapped and zoned 'bio-certified' high quality biodiversity lands on the Cumberland Plain to be established as permanent conservation biodiversity stewardship sites as an offset for the development of lower quality habitats that are mapped as 'Certified-Urban Capable' on the CPCP maps. Lands mapped as 'Certified- Urban Capable' can be developed without requiring any further biodiversity approvals under the BC Act. As such, no biodiversity offsetting (BAM assessment, Biodiversity Development Assessment Report) under the BOS nor 5 Part Test assessments would be required for the removal of any native vegetation on 'Certified- Urban Capable' mapped lands.

Whilst the Grose Wold/North Richmond area is included in the CPCP, it is not subject to CPCP bio-certification provisions which are restricted, at present, to the higher growth areas of the Cumberland Plain. As a result, the CPCP bio-certification mapping and associated provisions do not apply to the site (ie. proposed removal of native vegetation is not exempt from biodiversity approvals).

EPBC Act

To achieve streamlining benefits for NSW proponents that use the Biodiversity Offsets Scheme (BOS) and need approval under the EPBC Act, the Australian Government has endorsed the BOS under the EPBC Condition Setting Policy. This means any NSW proponent who needs an EPBC Act approval can use the NSW BOS to assess and meet their biodiversity offset requirements. Our understanding is that this would mean that

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no additional Commonwealth EPBC approvals would be needed to remove any EPBC-captured Cumberland Plain Woodland remnants on the subject site over and above those required by the BOS. Legal advice is recommended to confirm this is the case.

Limitations

This report was intended to be a Preliminary Ecological Assessment to identify potential significant ecological constraints (eg. Threatened species habitats; EEC/CEEs) from a desktop review and initial site walkover in order to inform the subdivision Masterplanning process. The report was not meant to scope a detailed suite of ecological surveys, impact assessment (eg. 5 part tests) nor biodiversity offsetting investigations associated with a BAM/BDAR.

Yours sincerely

Isaac Mamott
Director, Principal Botanist

Attachment A	BAM-C Credit Reports
Attachment B	Figures
Attachment C	Photographic Record

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Attachment A

BAM-C Credit Reports

BAM Biodiversity Credit Report (Like for like)

Proposal Details

Assessment Id
00037351/BAAS18008/22/00037352

Proposal Name
SEED Grose Wold Preliminary Assessment

BAM data last updated *
14/10/2022

Assessor Name
Isaac Mamott

Assessor Number
BAAS18008

BAM Data version *
55

Proponent Names

Report Created
18/12/2022

BAM Case Status
Open

Assessment Revision
0

Assessment Type
Part 4 Developments (General)

Date Finalised
To be finalised

BOS entry trigger
BOS Threshold: Biodiversity Values Map

* Disclaimer: BAM data last updated may indicate either complete or partial update of the BAM calculator database. BAM calculator database may not be completely aligned with Bionet.

Potential Serious and Irreversible Impacts

Name of threatened ecological community	Listing status	Name of Plant Community Type/ID
Cumberland Plain Woodland in the Sydney Basin Bioregion	Critically Endangered Ecological Community	849-Cumberland shale plains woodland

Species
Nil

Additional Information for Approval

BAM Biodiversity Credit Report (Like for like)

PCT Outside Ibra Added

None added

PCTs With Customized Benchmarks

PCT
No Changes

Predicted Threatened Species Not On Site

Name
Grantiella picta / Painted Honeyeater

Ecosystem Credit Summary (Number and class of biodiversity credits to be retired)

Name of Plant Community Type/ID	Name of threatened ecological community	Area of impact	HBT Cr	No HBT Cr	Total credits to be retired
849-Cumberland shale plains woodland	Cumberland Plain Woodland in the Sydney Basin Bioregion	5.2	0	59	59
835-Cumberland riverflat forest	River-Flat Eucalypt Forest on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions	0.8	0	9	9
830-Cumberland moist shale woodland	Moist Shale Woodland in the Sydney Basin Bioregion	0.3	0	3	3

BAM Biodiversity Credit Report (Like for like)

830-Cumberland moist shale woodland

Like-for-like credit retirement options

Name of offset trading group	Trading group	Zone	HBT	Credits	IBRA region
Moist Shale Woodland in the Sydney Basin Bioregion This includes PCT's: 830	-	830_Poor	No	3	Cumberland, Burragorang, Pittwater, Sydney Cataract, Wollemi and Yengo. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.

835-Cumberland riverflat forest

Like-for-like credit retirement options

Name of offset trading group	Trading group	Zone	HBT	Credits	IBRA region

	River-Flat Eucalypt Forest on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions This includes PCT's: 686, 828, 835, 941, 1108, 1109, 1212, 1228, 1293, 1318, 1326, 1386, 1504, 1556, 1594, 1618, 1720, 1794	-	835_Poor	No	9	Cumberland, Burragorang, Pittwater, Sydney Cataract, Wollemi and Yengo. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.

849-Cumberland shale plains woodland	**Like-for-like credit retirement options**					
	Name of offset trading group	Trading group	Zone	HBT	Credits	IBRA region
	Cumberland Plain Woodland in the Sydney Basin Bioregion This includes PCT's: 849, 850	-	849_PoorClass name1	No	59	Cumberland, Burragorang, Pittwater, Sydney Cataract, Wollemi and Yengo. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.

BAM Biodiversity Credit Report (Like for like)

Species Credit Summary

No Species Credit Data

Credit Retirement Options

Like-for-like credit retirement options

BAM Biodiversity Credit Report (Like for like)

Proposal Details

Assessment Id
00037351/BAAS18008/22/00037353

Proposal Name
SEED Grose Wold Preliminary Assessment

BAM data last updated *
14/10/2022

Assessor Name
Isaac Mamott

Assessor Number
BAAS18008

BAM Data version *
55

Proponent Names

Report Created
19/12/2022

Date Finalised
To be finalised

Assessment Revision
0

Assessment Type
Scattered Trees

BAM Case Status
Open

BOS entry trigger
BOS Threshold: Biodiversity Values Map

* Disclaimer: BAM data last updated may indicate either complete or partial update of the BAM calculator database. BAM calculator database may not be completely aligned with Bionet.

Potential Serious and Irreversible Impacts

Nil

Additional Information for Approval

PCTs With Customized Benchmarks

No Changes

Ecosystem Credit Summary

BAM Biodiversity Credit Report (Like for like)

PCT	TEC	HBT Cr	No HBT Cr	Credits
849-Cumberland shale plains woodland	Cumberland Plain Woodland in the Sydney Basin Bioregion	0	2	2

Credit classes for 849

Like-for-like options

TEC	Trading group	HBT	Credits	IBRA region
Cumberland Plain Woodland in the Sydney Basin Bioregion	-	No	2	Cumberland, Burragorang, Pittwater, Sydney Cataract, Wollemi and Yengo. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.

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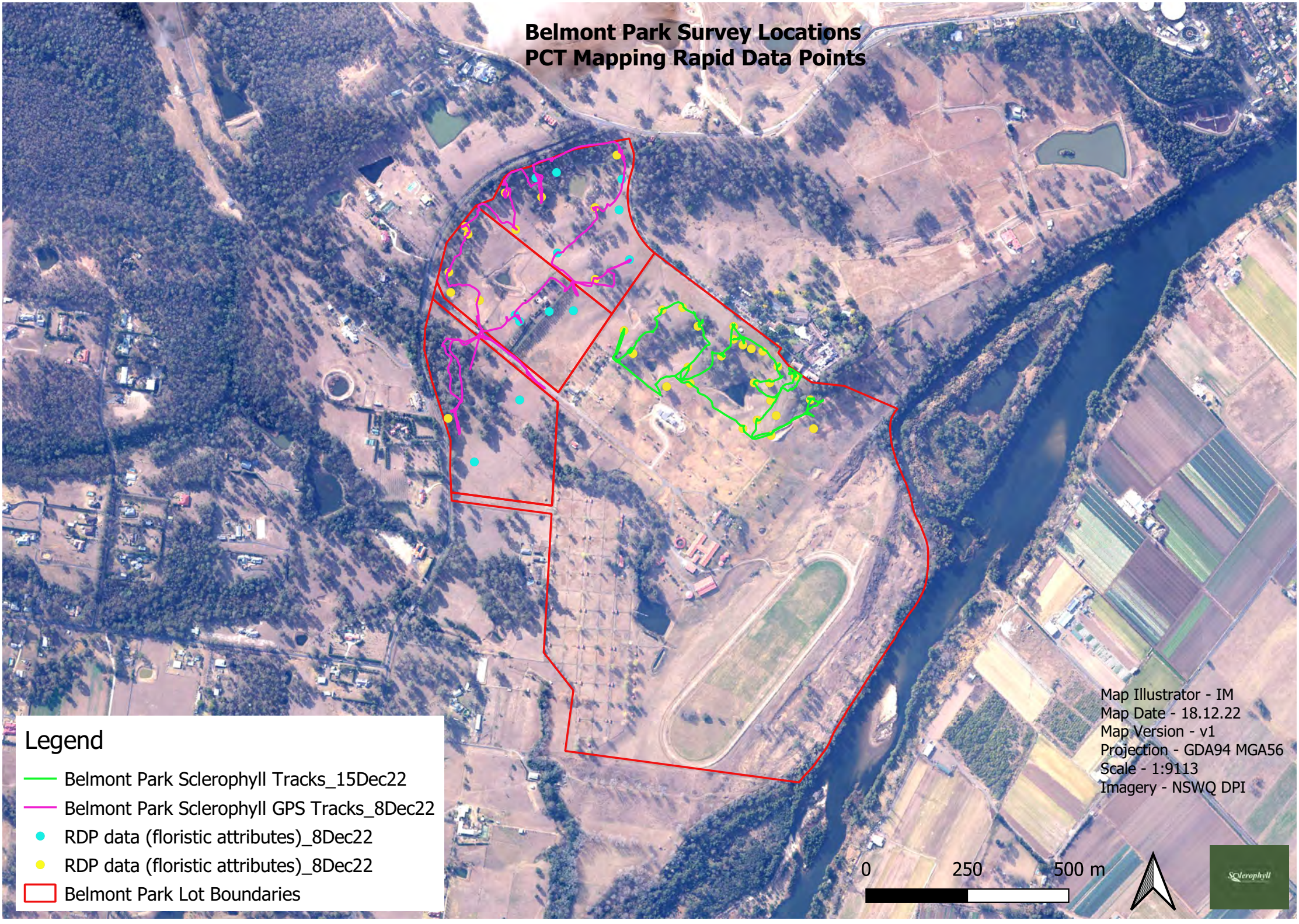
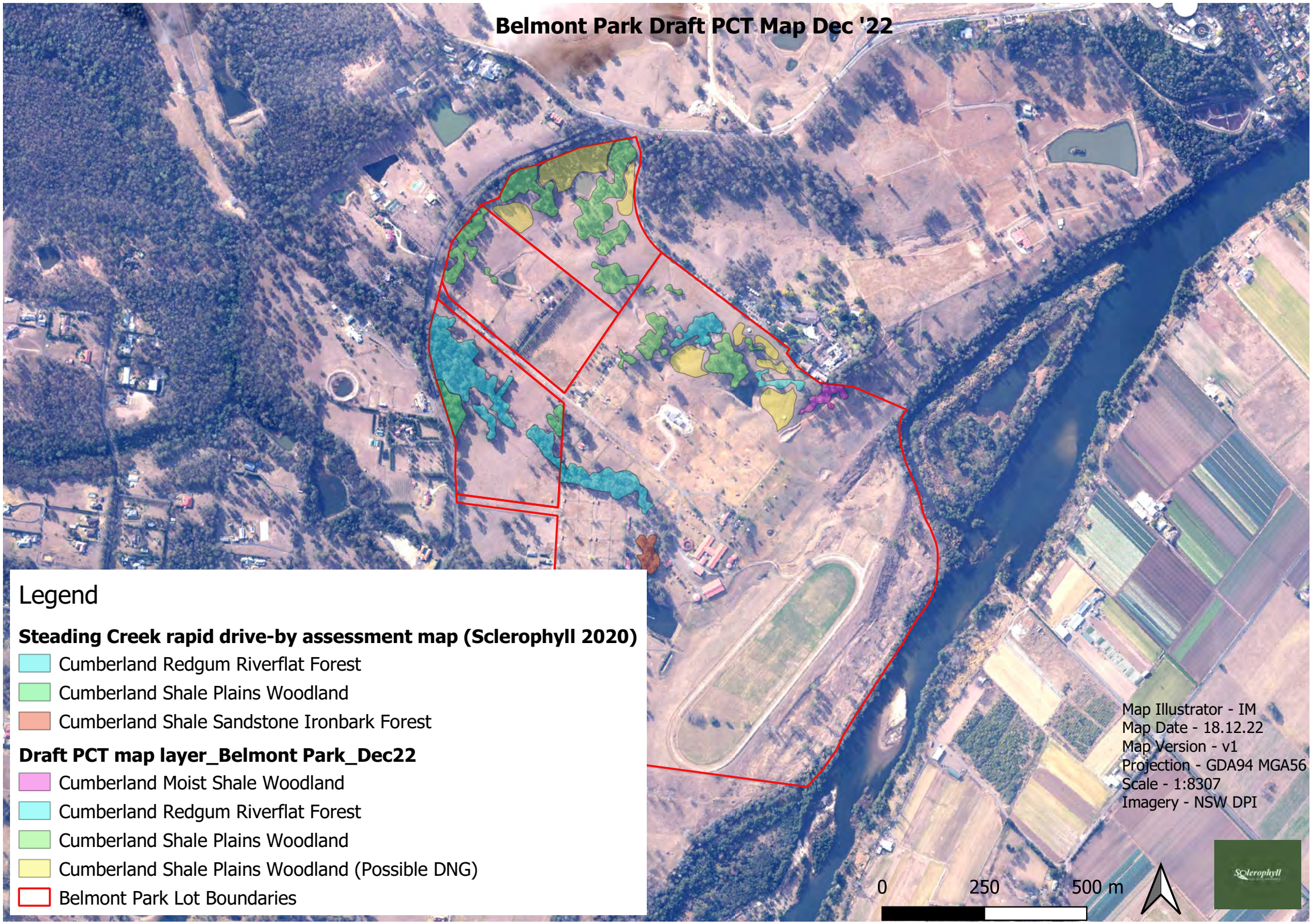
Attachment B

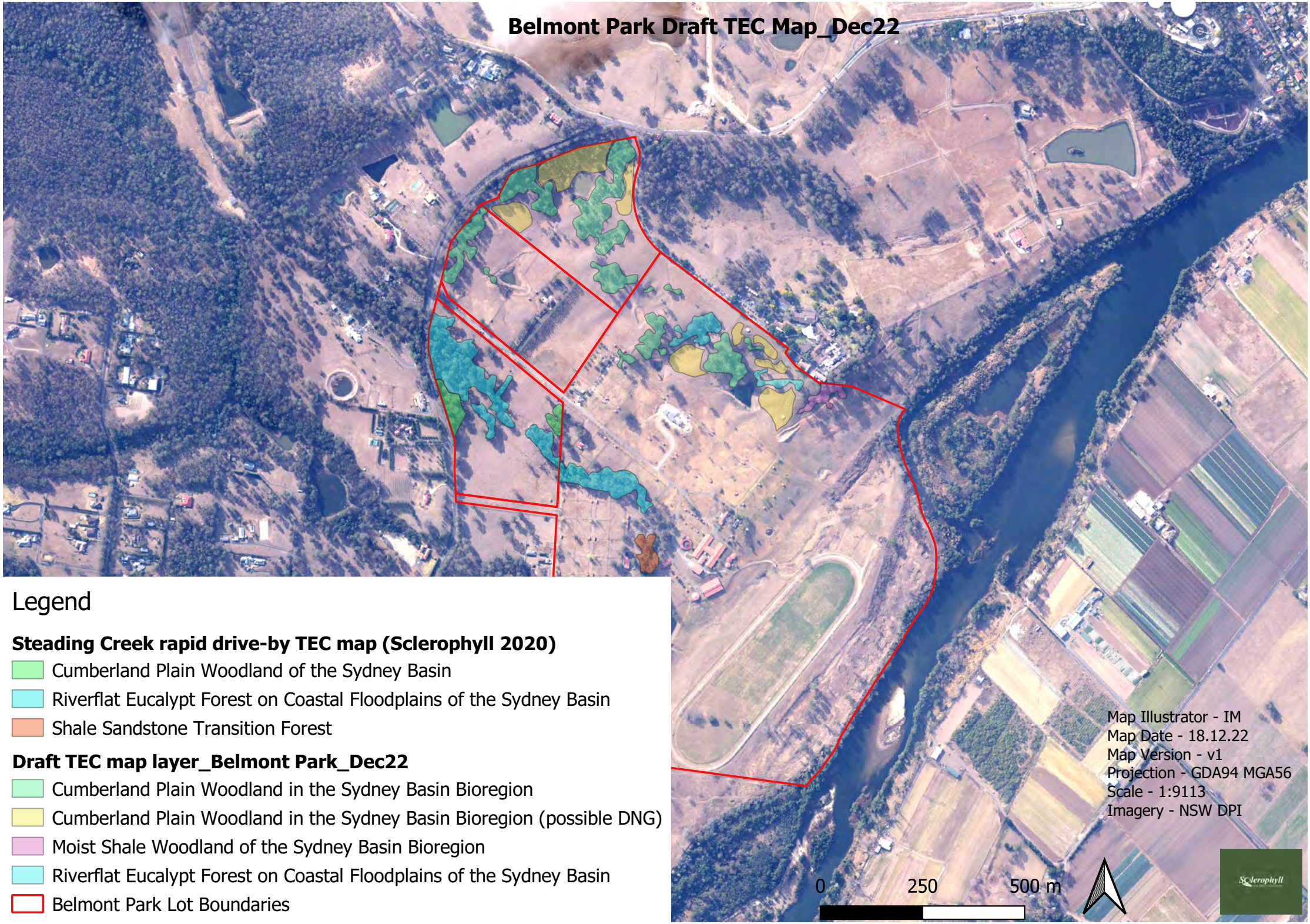
Figures

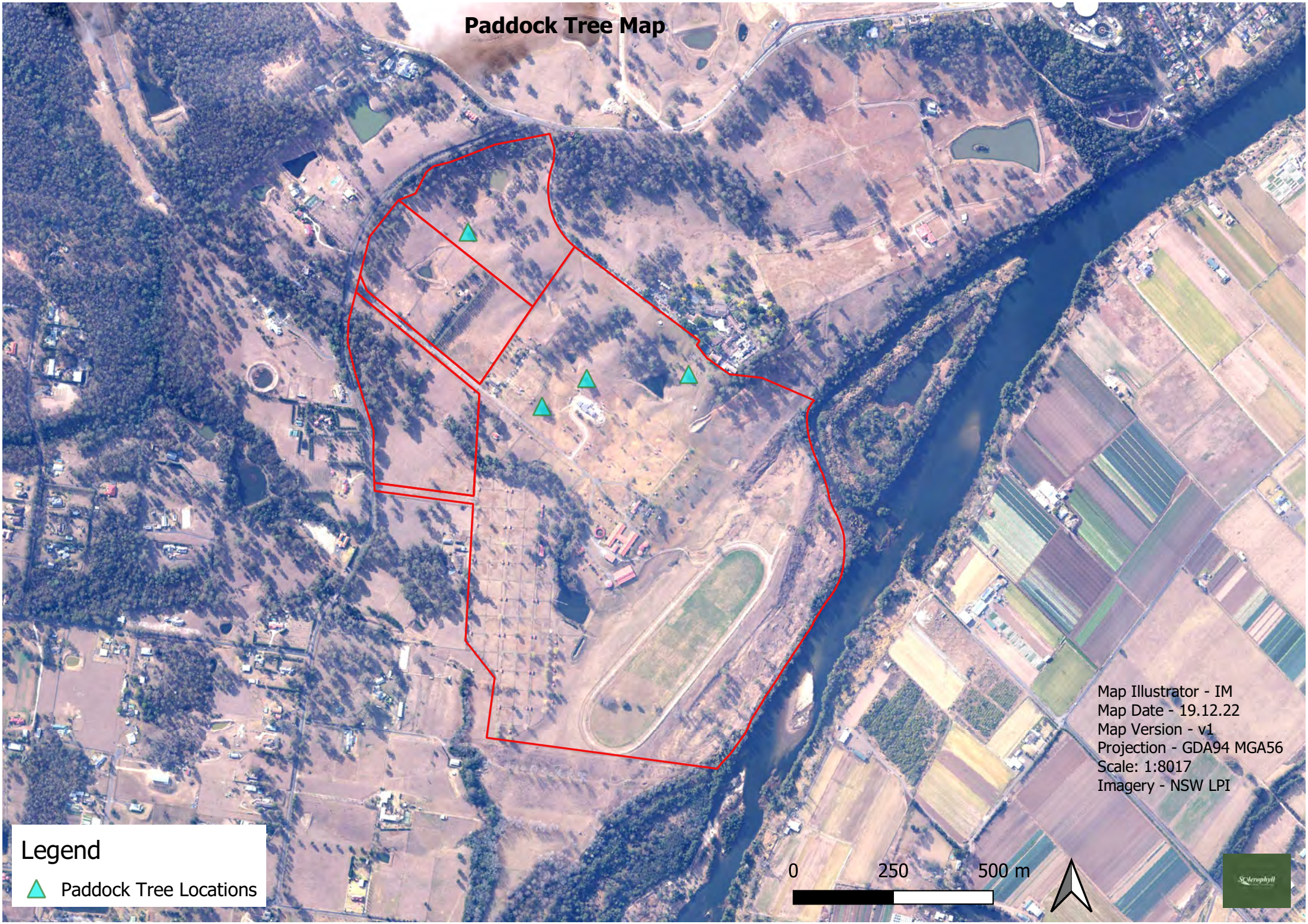

Belmont Park Survey Locations
PCT Mapping Rapid Data Points
Legend
Belmont Park Sclerophyll Tracks_15Dec22
Belmont Park Sclerophyll GPS Tracks_8Dec22
RDP data (floristic attributes)_8Dec22
RDP data (floristic attributes)_8Dec22
Belmont Park Lot Boundaries
Map Illustrator - IM
Map Date - 18.12.22
Map Version - v1
Projection - GDA94 MGA56
Scale - 1:9113
Imagery - NSWQ DPI
0
250
500 m
Sclerophyll

Belmont Park Draft PCT Map Dec '22

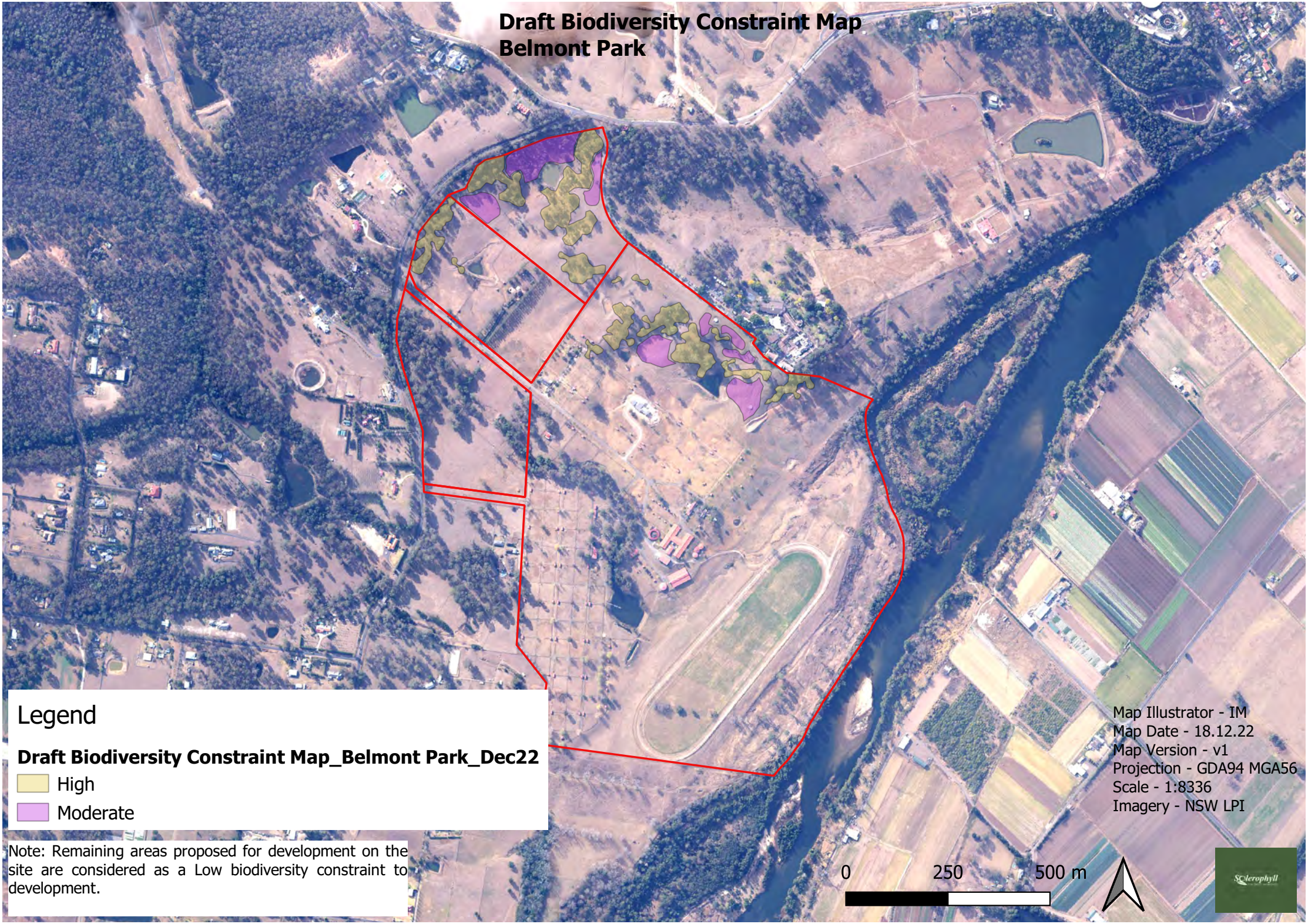


Belmont Park Draft TEC Map_Dec22




Paddock Tree Map
Legend
Paddock Tree Locations
0
250
500 m
Map Illustrator - IM
Map Date - 19.12.22
Map Version - v1
Projection - GDA94 MGA56
Scale: 1:8017
Imagery - NSW LPI

Draft Biodiversity Constraint Map
Belmont Park



Legend

Draft Biodiversity Constraint Map_Belmont Park_Dec22

- High
- Moderate

Note: Remaining areas proposed for development on the site are considered as a Low biodiversity constraint to development.

Map Illustrator - IM
Map Date - 18.12.22
Map Version - v1
Projection - GDA94 MGA56
Scale - 1:8336
Imagery - NSW LPI

0 250 500 m

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Attachment C

Photographic Record

Photographic Record – 35 Grose River Road, Grose Wold NSW, Dec 2022

Plate 1 – Patch of Cumberland Shale Plains Open Woodland on Lot 7

Plate 2 – Possible Derived Native Grassland (DNG) on Lot 14

Plate 3 – Improved (exotic) Pasture on Lot 8

Plate 4 – Farm dam colonised with fringing native aquatic plants on Lot 7

Plate 5 – Patch of Moist Shale Open Woodland on steep slopes on Lot 14

Plate 6 – Patch of Riverflat Eucalypt Open Forest along a gully line on Lot 14