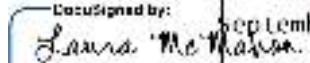
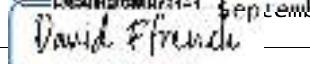


ESSO PIPELINE REPLACEMENT PROJECT	ANNUAL COMPLIANCE REPORT	
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ESSO PIPELINE REPLACEMENT PROJECT (EPBC 2014/7202)

ANNUAL COMPLIANCE REPORT # 3

EMEL-RPT-355-EN203

	Title	Name	Signature	Date
Prepared	Senior Environmental Consultant	Kim Stewart		06/09/19
Reviewed	Pipelines Risk, Environment and Regulatory Advisor	Laura McMahon	 DocuSigned by: Laura McMahon	September 10, 2019
Approved	Project Manager	David Ffrench	 DocuSigned by: David Ffrench	September 19, 2019

Revision History:

Rev	Date	Description
0	06/09/2019	Issued for Internal Review

NOTE: This report must not be removed from this website until the lapse of 12 months from the date of posting



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GLOSSARY OF TERMS

Term	Definition
CROW	Construction Right of Way. Established to facilitate construction of the replacement pipeline.
DoEE	Commonwealth Department of Environment and Energy (formerly Department of Environment)
Esso	Esso Australia Resources Pty Ltd.
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999.</i>
GIS	Geographic Information System.
KP	Kilometre Point. Represents the replacement pipeline alignment where KP0 is at the Longford Plant and KP186 is at the Long Island Point Plant.
Minister	Australian Government Minister administering the EPBC Act and includes a delegate of the Minister.
NACP	NACP Australia Pty Ltd (Pipeline Construction Contractor)
Project Area	The location of construction activities and temporary workspace areas including but not limited to vegetation clearance, soil disturbance, travel of pipe laying equipment, light and heavy vehicle travel, directional drilling set-up areas, pipe laydown areas, truck turning areas and soil storage areas identified and mapped in the referral information and attachments submitted to the Department on 8 May 2014 and Final Preliminary Documentation submitted to the Department on 23 April 2015.
Southern Brown Bandicoot / SBB	Endangered listed Southern Brown Bandicoot (<i>Isoodon obesulus</i>).
Southern Brown Bandicoot Habitat	Areas identified and mapped as Southern Brown Bandicoot Habitat in the Flora and Fauna Survey and Impact Mitigation Report prepared by Biosis for WorleyParsons in February 2014.

1 BACKGROUND

1.1 Summary of the Project

Esso Australia Resources Pty Ltd (Esso) has completed construction of the Esso Pipeline Replacement Project (Project). The Project involved installing a 350 mm diameter replacement pipeline between Longford (Kilometre Point (KP) 0) and Long Island Point (KP 186), Victoria, adjacent to existing pipelines and located within existing easements, leases and licences held by Esso.

A Construction Right of Way (CROW) was established to facilitate the construction of the replacement pipeline. The CROW includes the existing easement, approximately 25 m in width, and an additional temporary workspace area, immediately adjacent to the easement.

Season 1 construction by NACAP commenced on the Project on 19 January 2016 and continued until 7 August 2016. During this period, the pipeline was installed from Longford (KP 0) and Modella (KP 130). Season 2 NACAP construction commenced on 1 December 2016 and continued until 11 June 2017 from Modella (KP130) to Long Island Point (KP186).

Post-construction, prescribed areas of habitat were revegetated, with works completed on 11 August 2017. This was followed by a two-year revegetation maintenance period, finishing on 11 August 2019.

1.2 EPBC Approval

Esso submitted a referral for the Project to the Department of Environment (DoE) in May 2014 and additional information in April 2015 (EPBC Referral Final Preliminary Documentation). On the 30 June 2015, DoE granted approval under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) subject to conditions. DoE's approval and conditions are included in Appendix 1.

2 PURPOSE OF THE REPORT

EPBC compliance reports were prepared and published annually during the project construction period. These reports were prepared to address Condition 13 of the EPBC Act approval and assessed compliance with each of the conditions of the EPBC Act approval (see Table 1).

This report is the third and final EPBC compliance report and its preparation has been timed to cover the post-construction revegetation period from 19 January 2018 to its completion on the 11 August 2019.

3 PROJECT COMPLIANCE SUMMARY

Revegetation of Southern Brown Bandicoot habitat did not achieve the survival and coverage targets at every site:

EPBC Act approval condition	Target not achieved at:
4a 80% survival of planted stock at 6 months from planting	5 of 27 habitat locations (see Annual Compliance Report #2)
4b 60% vegetation cover over 90% of the area within one year of planting	9 of 27 habitat locations (DoEE notified 12/10/2018)
4c 90% survivorship of plants after two years, post planting	1 of 27 habitat locations (DoEE notified 27/08/2019)

Corrective actions were developed and implemented following each milestone, including replanting and fencing sites to exclude rabbits. Compliance with revegetation targets had improved significantly by two-year post planting milestone.

There have been no other instances of non-compliance with the conditions of the EPBC Act approval.

Table 1 provides the approval conditions and compliance status, and identifies where further details can be found in either this report.

Table 1 EPBC Act conditions and compliance

Detailed condition	Status	Section of this report documenting compliance
1. Not clear more than 18.05 hectares of Southern Brown Bandicoot habitat at the Project Area.	-	Not applicable for this report period. Refer to Annual Compliance Report #1.
2. Ensure there is no mortality of the Southern Brown Bandicoot at the Project Area as a result of the proposed action.	-	Not applicable for this report period. Refer to Annual Compliance Report #2.
3. Maintain connectivity of Southern Brown Bandicoot habitat at the Project area during construction.	-	Not applicable for this report period. Refer to Annual Compliance Report #1.
4. Revegetate Southern Brown Bandicoot habitat that is lost as a result of the proposed action, and demonstrate this by meeting the following milestones as proposed by the person taking the action: a. 80% survival of planted stock at 6 months from planting; b. 60% vegetation cover over 90% of the area within one year of planting; and c. 90% survivorship of plants after two years, post planting.	- Cover previously below target at 9 locations Survival below target at 1 location	- 4a - Not applicable for this report period. Refer to Annual Compliance Report #2. - 4b and 4c – Refer to Section 5, and Appendix 3.
5. Not clear more than 16 Strzelecki Gum at the Project Area.	-	Not applicable for this report period. Refer to Annual Compliance Report #1.

Detailed condition	Status	Section of this report documenting compliance
6. Ensure no net loss of the Strzelecki Gum, and demonstrate this by: a. Submitting a report for the Minister's approval demonstrating there will be no net loss of the Strzelecki Gum as a result of the proposed action, prior to the clearance of any Strzelecki Gum. b. After receiving the report under condition 6a, if the Minister is not satisfied that condition 6 has been met; the Minister may instruct the person taking the action to provide further compensation for the impacts to the Strzelecki Gum.	-	Not applicable for this report period. Refer to Annual Compliance Report #1.
7. Ensure there is no disturbance to Giant Gippsland Earthworm habitat the Project Area, as proposed by the person taking the action.	-	Not applicable for this report period. Refer to Annual Compliance Report #1.
8. The person taking the action must ensure adequate data is collected to determine if the milestones and outcomes in conditions 1-7 are being achieved.	Compliant	Section 5 and Appendix 3
9. The person taking the action must make monitoring results and data publicly available on their website under an open licence.	Compliant	Compliance Report made available on the website.
10. If monitoring results indicate that milestones or outcomes in conditions 1-7 have not been achieved, or are not likely to be achieved, the person taking the action must: a. advise the Department within 14 days of receiving the monitoring results; and b. develop and implement corrective actions, revised management measures and/or compensation measures in consultation with a suitably qualified expert and the Department.	Compliant	Section 6.2
11. Within 30 days after the commencement of construction, the person taking the action must advise the Department in writing of the actual date of commencement of construction.	-	Not applicable for this report period. Refer to Annual Compliance Report #1.
12. The person taking the action must maintain accurate records substantiating all activities associated with or relevant to the conditions of approval. Such records may be subject to audit by the Department or an independent auditor in accordance with section 458 of the EPBC Act, or used to verify compliance with the conditions of approval. Summaries of audits will be posted on the Department's website. The results of audits may also be publicised through the general media.	Compliant to date	Appendices 3-4.

Detailed condition	Status	Section of this report documenting compliance
13. Within three months of every 12 month anniversary of the commencement of construction, the person taking the action must publish a report on their website addressing compliance with each of the conditions of this approval over the previous 12 months. Documentary evidence providing proof of the date of publication must be provided to the Department at the same time as the compliance report is published. The compliance reports must remain on the website for 12 months from the date of publishing. Potential or actual contraventions of the conditions of the approval must be reported to the Department in writing within 2 business days of the person taking the action becoming aware of the actual or potential contravention. All contraventions must also be included in the compliance reports.	Compliant to date	Compliance Reports #1 and #2 made available on the website.
14. Upon the direction of the Minister, the person taking the action must ensure that an independent audit of compliance with the conditions of approval is conducted and a report submitted to the Minister. The independent auditor must be approved by the Minister prior to the commencement of the audit. Audit criteria must be agreed to by the Minister and the audit report must address the criteria to the satisfaction of the Minister.	No direction given	
15. If, at any time after 5 years from the date of this approval, the person taking the action has not substantially commenced the action, then the person taking the action must not substantially commence the action without the written agreement of the Minister.	Not applicable	
16. The person taking the action must provide the Department with details of any offset areas, including written evidence that a protection mechanism is in place, offset attributes, shapefiles, textual descriptions and maps to clearly define the location and boundaries of each offset area.	-	Not applicable for this report period. Refer to Annual Compliance Report #1.

4 DECLARATION OF ACCURACY

The declaration of accuracy is contained within Appendix 5.

5 COMPLIANCE WITH EPBC CONDITION 4

To protect the Southern Brown Bandicoot, the person taking the action must:

4. Revegetate Southern Brown Bandicoot habitat that is lost as a result of the proposed action, and demonstrate this by meeting the following milestones as proposed by the person taking the action:
 - a. 80% survival of planted stock at 6 months from planting;
 - b. 60% vegetation cover over 90% of the area within one year of planting; and
 - c. 90% survivorship of plants after two years, post planting.

5.1 Background

Twenty-seven areas of Southern Brown Bandicoot (SBB) habitat were mapped in the Project area and revegetated between 12 March 2017 and 11 August 2017.

Specialist sub-consultants Biosis prepared a Southern Brown Bandicoot (SBB) Management Plan (dated 14 November 2014) in which they identified priority areas for habitat restoration. Sub-contractor Ecodynamics was engaged to revegetate these priority areas. The remaining areas were revegetated by construction contractor NACP, unless prior agreements had been made for the landowner to complete revegetation.

As per agreements with landowners, pre-existing internal access tracks were reinstated post construction and not revegetated.

The locations in which revegetation was undertaken, and by whom, is shown in Figures 1 – 27 (Appendix 2). Ecodynamics and NACP completed like-for-like habitat revegetation, while landowner revegetation was in line with existing land uses.

In this reporting period, monitoring was completed to confirm growth and survivorship in accordance with EPBC condition 4(b) and 4(c), at approximately 1 year and 2 years post planting respectively.

Revegetation monitoring sheets of the 27 SBB habitat areas are attached in Appendix 3. Table 2 below provides a summary of the monitoring data.

5.2 Monitoring results – Cover at one year

The 1-year post planting monitoring of revegetation was completed on 13-14 September 2018.

Monitoring results (Appendix 3; Table 2) show that the target 60% vegetation cover over 90% of the area was not achieved at nine sites.

The results for each of these nine sites are summarised below, along with the remedial action taken for each site. Generally, a combination of environmental conditions (particularly low rainfall over the previous summer and autumn), rabbit browsing and winter dormancy of planted grasses all appear to have contributed to low coverage.

1. Westernport Road

The revegetation area consists of two road verges, on the eastern (0.056 ha) and western side (0.062 ha) of Westernport Rd. On the eastern roadside, cover was estimated at 60 %.

On the western roadside, cover was ~0 %, as this area had been replanted following low survival at 6 months, but plants were not yet established enough to provide measurable cover.

Esso installed rabbit exclusion fencing, undertook supplementary planting and continued routine vegetation maintenance of the site.

2. Chambers Road

This very small revegetation area (0.002 ha) is in the road reserve on the southern side of Chambers road. It is 2-3 m wide from the road edge to the fence line and adjoins undisturbed habitat.

One year from planting, survival remained at ~80 %. There had been little apparent growth of planted grasses. Some creepers had begun to establish cover. Overall, cover was assessed as less than 50%.

Esso installed rabbit exclusion fencing, undertook supplementary planting and continued routine vegetation maintenance of the site.

3. Bridge Road

The revegetation area covers the east and west road verges and adjacent paddocks. On the eastern side, the revegetation area is half the width of the construction right of way (RoW). On the western side it is the full width of the RoW.

At one year from planting, survival on the western roadside was high (~95%) and substantial growth was observed, with cover >75%. However, survival on the eastern roadside had decreased in the preceding 6 months, estimated at 66%-75% and cover was estimated at less than 50%. Phragmites reeds had died back seasonally. The remaining plants were predominantly Juncus rushes, which have an upright growth form and do not provide extensive area coverage.

Esso undertook supplementary planting and continued routine vegetation maintenance of the site.

4. Caldermeade Road

The revegetation area includes two road verges and adjacent pasture. On the eastern roadside this includes a formed drain. The mapped area includes a maintained access track adjacent to the drain that was not included in the revegetation.

At one year from planting, survival and growth on the western roadside was satisfactory. On the eastern roadside, survival had decreased to ~ 50 %, there had been little growth in remaining plants and the Phragmites reeds had died back seasonally. The remaining plants were predominantly Juncus rushes, which did not provide extensive coverage. Coverage was assessed as 60% over 50% of the site, and <50% cover over the remainder.

Esso installed rabbit exclusion fencing on the western roadside, undertook supplementary planting and continued routine vegetation maintenance of the site.

5. McColls Road

The tubestock revegetation area is at the crossing of the Malcolm's Rd extension drain. It covers the eastern bank of the drain to the property boundary (0.013 ha). This area was fenced and replanted following rabbit damage of the initial damage.

At one year from planting, survival of the replanting was good, but plants have not yet grown enough to provide any measurable cover (<10% over the site).

Esso undertook supplementary planting with a revised species selection and continued routine vegetation maintenance of the site.

6. O'Briens Road

The revegetation area includes both road verges and adjacent pasture. The revegetation area is approximately half the width of the RoW (northern half).

One year from planting, survival was good on the eastern roadside, although there had been only modest growth. Survival of the original planting was low on the western roadside. The area had been recently replanted, but this had not yet established any assessable cover.

Esso installed rabbit exclusion fencing on the western roadside, undertook supplementary planting and continued routine vegetation maintenance of the site.

7. Peers Road A

This revegetation area is within a rural block, previously containing scattered trees with an understorey of long grasses and only occasionally grazed. Rabbit exclusion fencing was installed in conjunction with the initial planting.

There was no apparent survival of shrubs or small tree species at 6 months from planting and any remaining native grasses were difficult to distinguish from pasture.

One year from planting, the area has been recently replanted, but this had not yet established any assessable cover.

Esso undertook mulching, supplementary planting and continued routine vegetation maintenance of the site.

8. South Boundary Road East

The revegetation area includes both road verges and pasture in the adjacent land to the south.

At one year from planting, survival and growth on the southern roadside was low, with cover less than 50%. Roadside mowing (possibly by adjacent landowner or council as part of maintenance of the roadside) appeared to have significantly impacted the growth and survival of the planted stock.

Esso installed rabbit exclusion fencing, undertook supplementary planting and continued routine vegetation maintenance of the site.

9. Bungower Road

The revegetation area includes the southern road verge and the adjacent area between the boundary and paddock fences.

One year from planting, survival of planted stock was patchy and low. Remaining plants were predominantly Juncus rushes, which have an upright growth form and provide little cover. With the seasonal dieback of the Phragmites reeds, overall cover was estimated at less than 50%.

Esso installed rabbit exclusion fencing, undertook supplementary planting and continued routine vegetation maintenance of the site.

5.3 Monitoring results – Survival at two years

The 2-year post planting monitoring of revegetation was completed on 08 August 2019.

Monitoring results (Appendix 3; Table 2) show that the final revegetation target of 90% survivorship of plants after two years was achieved at all sites but one— Caldermeade Road. This is a significant improvement in revegetation outcomes since the one-year milestone.

1. Caldermeade Road

At 2-year post planting the western roadside has, with the maintenance planting completed, 100% of the expected plant density within the revegetation area. Cover remains low as plants are still establishing, but with rabbit protection now installed, this is expected to increase significantly over spring.

Survival of the original and supplementary planting on the eastern roadside is ~0%. It appears that a combination of environmental conditions (initially low rainfall) and rabbit browsing have contributed to low survival. Third party slashing to clear the drainage ditch has removed all plated tubestock on the banks.

Esso will install rabbit exclusion fencing on the eastern roadside, undertake supplementary planting and continue routine vegetation maintenance of the site until plants are established.

Table 2 Summary of 1 and 2 year monitoring of SBB habitat areas revegetated with planted stock.

Location	KP	Figure reference (Appendix 2)	Tubestock revegetation area (ha)	1 Year Milestone: 60% cover	2 Year Milestone: 90% survival
1. Saxton Swamp	KP 100	Figure 1	NA - pasture revegetation only		
2. Westernport Road	KP 125	Figure 2	0.118	Not achieved	Achieved
3. Chambers Road	KP 131	Figure 3	0.002	Not achieved	Achieved
4. Bridge Road	KP 131.1	Figure 4	0.035	Not achieved	Achieved
5. Caldermeade Road	KP 134	Figure 5	0.074	Not achieved	Not achieved
6. McColls Road	KP 134.5	Figure 6	0.013	Not achieved	Achieved
7. Hall Road	KP 141	Figure 7	0.036	Achieved	Achieved
8. O'Briens Road	KP 141.5	Figure 8	0.035	Not achieved	Achieved
9. Southern Gippsland Railway Reserve crossing	KP 150	Figure 9	0.193	Achieved	Achieved
10.Bunyip River complex	KP 153	Figure 10	NA – not disturbed		
11.Railway Road & Disused Southern Gippsland Rail Reserve (parallel to)	KP 153.1 – 159	Figure 11	2.635	Achieved	Achieved
12.Deep Creek, Toomuc Creek, Cardinia Creek complex	KP 156	Figure 12	NA – not disturbed		
13.Peers Road A	KP 159.5	Figure 13	0.147	Not achieved	Achieved
14.Peers Road B	KP159.9	Figure 14	0.067	Achieved	Achieved
15.Tooradin Station Road	KP 160.5	Figure 15	NA - pasture revegetation only		
16.Landale Road	KP 161.5	Figure 16	0.07	Achieved	Achieved
17.Lynes Road	KP 163	Figure 17	0.031	Achieved	Achieved
18.South Gippsland Highway	KP 164.5	Figure 18	NA – not disturbed		
19.Fisheries Road	KP 168	Figure 19	0.077	Achieved	Achieved
20.Baxter-Tooradin Road	KP 170	Figure 20	NA – not disturbed		
21.Callanans Lane	KP 173.5	Figure 21	0.149	Achieved	Achieved
22.South Boundary Road East	KP 174.5	Figure 22	0.034	Not achieved	Achieved
23.Watson Creek	KP 175.5	Figure 23	NA – not disturbed		
24.Bungower Road	KP 176.5	Figure 24	0.04	Not achieved	Achieved
25.Pikes Road	KP 178.5	Figure 25	0.375	Achieved	Achieved
26.Land owned by BlueScope Steel	KP 179.5 – 180.5	Figure 26	2.162	Achieved	Achieved
27.Thornells Road	KP 181.5	Figure 27	0.1	Achieved	Achieved

6 COMPLIANCE WITH EPBC CONDITION 10

Monitoring

10. If monitoring results indicate that milestones or outcomes in conditions 1-7 have not been achieved, or are unlikely to be achieved, the person taking the action must:

- a. advise the Department within 14 days of receiving the monitoring results; and
- b. develop and implement corrective actions, revised management measures and/or compensation measures in consultation with a suitably qualified expert and the Department.

6.1 Background

The only milestones not achieved by the Project in this reporting period are the 1 and 2-year revegetation targets (EPBC conditions 4b and 4c) as reported in Section 5.

6.2 Evidence of Compliance

The 1-year post planting monitoring of revegetation was completed on 13-14 September 2018, with summary monitoring results provided to Esso on 03 October 2018.

Esso advised DoEE via email on 12 October 2018 that the 1-year milestone had not been achieved at 5 sites, 9 days from receiving the monitoring results, with a follow up letter on 08 November 2018.

The 2-year post planting monitoring of revegetation was completed on 08 August 2019, with summary monitoring results provided to Esso on 19 August 2019.

Esso advised DoEE via letter on 27 August 2019 that the 2-year milestone had not been achieved at 1 site, 8 days from receiving the monitoring results.

Monitoring records are included in Appendix 3.

The letters of notification (EAPL-DOE-LTR-00015 and EAPL-DOE-LTR-00016) are included in Appendix 4.

7 REFERENCES

Biosis (2014) *Esso Pipeline Replacement Project – Southern Brown Bandicoot management plan.*
Report to Esso Australia Pty Ltd (WP-RPT-355-EN006).



Appendix 1 EPBC REFERRAL APPROVAL AND CONDITIONS

EPBC Approval 2014/7202 dated 30/6/15.



Australian Government
Department of the Environment

Approval

Esso Pipeline Replacement Project, Victoria (EPBC 2014/7202)

This decision is made under sections 130(1) and 133 of the *Environment Protection and Biodiversity Conservation Act 1999*.

Proposed action

Person to whom the approval is granted Esso Australia Resources Pty Ltd

Proponent's ABN 62 091 829 819

Proposed action To install a 350mm diameter replacement pipeline between Longford and Long Island Point, Victoria, including the construction of associated infrastructure and the use of lay down areas [See EPBC Act referral 2014/7202].

Approval decision

Controlling Provision	Decision
Listed threatened species and communities (sections 18 & 18A)	Approved

Conditions of approval

This approval is subject to the conditions specified below.

Expiry date of approval

This approval has effect until 1 July 2025.

Decision-maker

Name and position Paula Stagg
Acting Assistant Secretary
South-Eastern Australia Environment Assessments Branch

Signature

Date of decision

30/6/15

Conditions attached to the approval

To protect the **Southern Brown Bandicoot**, the person taking the action must:

1. not clear more than 18.05 hectares of **Southern Brown Bandicoot habitat** at the project area.
2. ensure there is no mortality of the **Southern Brown Bandicoot** at the project area as a result of the proposed action.
3. maintain **connectivity of Southern Brown Bandicoot habitat** at the project area during construction.
4. revegetate **Southern Brown Bandicoot habitat** that is lost as a result of the proposed action, and demonstrate this by meeting the following milestones as proposed by the person taking the action:
 - a. 80% survival of planted stock at 6 months from planting;
 - b. 60% vegetated cover over 90% of the area within one year of planting; and
 - c. 90% survivorship of plants after two years, post planting.

To protect the **Strzelecki Gum**, the person taking the action must:

5. not clear more than 16 **Strzelecki Gum** at the project area.
6. ensure **no net loss** of the **Strzelecki Gum**, and demonstrate this by:
 - a. submitting a report for the **Minister's** approval demonstrating there will be **no net loss** of the **Strzelecki Gum** as a result of the proposed action, prior to the clearance of any **Strzelecki Gum**.
 - b. After receiving the report under condition 6a, if the **Minister** is not satisfied that condition 6 has been met, the **Minister** may instruct the person taking the action to provide further compensation for the impacts to the **Strzelecki Gum**.

To protect the **Giant Gippsland Earthworm**, the person taking the action must:

7. ensure there is no disturbance to **Giant Gippsland Earthworm habitat** at the project area, as proposed by the person taking the action.

Monitoring

8. The person taking the action must ensure adequate data is collected to determine if the milestones and outcomes in conditions 1-7 are being achieved.
9. The person taking the action must make monitoring results and data publicly available on their website under an open licence.
10. If monitoring results indicate that milestones or outcomes in conditions 1-7 have not been achieved, or are not likely to be achieved, the person taking the action must:
 - a. advise the **Department** within 14 days of receiving the monitoring results; and
 - b. develop and implement corrective actions, revised management measures and/or compensation measures in consultation with a **suitably qualified expert** and the **Department**.

Administrative

11. Within 30 days after the **commencement of construction**, the person taking the action must advise the **Department** in writing of the actual date of **commencement of construction**.
12. The person taking the action must maintain accurate records substantiating all activities associated with or relevant to the conditions of approval. Such records may be subject to audit by the **Department** or an independent auditor in accordance with section 458 of the EPBC Act, or used to verify compliance with the conditions of approval. Summaries of audits will be posted on the **Department's** website. The results of audits may also be publicised through the general media.
13. Within three months of every 12 month anniversary of the **commencement of construction**, the person taking the action must publish a report on their website addressing compliance with each of the conditions of this approval over the previous 12 months. Documentary evidence providing proof of the date of publication must be provided to the **Department** at the same time as the compliance report is published. The compliance reports must remain on the website for 12 months from the date of publishing. Potential or actual contraventions of the conditions of the approval must be reported to the **Department** in writing within 2 business days of the person taking the action becoming aware of the actual or potential contravention. All contraventions must also be included in the compliance reports.
14. Upon the direction of the **Minister**, the person taking the action must ensure that an independent audit of compliance with the conditions of approval is conducted and a report submitted to the **Minister**. The independent auditor must be approved by the **Minister** prior to the commencement of the audit. Audit criteria must be agreed to by the **Minister** and the audit report must address the criteria to the satisfaction of the **Minister**.
15. If, at any time after 5 years from the date of this approval, the person taking the action has not **substantially commenced** the action, then the person taking the action must not **substantially commence** the action without the written agreement of the **Minister**.
16. The person taking the action must provide the **Department** with details of any offset areas, including written evidence that a **protection mechanism** is in place, **offset attributes**, **shapefiles**, textual descriptions and maps to clearly define the location and boundaries of each offset area.

Definitions

Commencement of construction is the date that preparatory works are first undertaken, including but not limited to clearing of vegetation, the erection of any onsite temporary structures and the use of heavy duty equipment for the purpose of breaking the ground for infrastructure or earthworks. This does not include investigative activities such as accessing the site for surveying or planning purposes.

Connectivity means retaining strips of vegetation at least 20 metres wide where construction is parallel to **Southern Brown Bandicoot habitat** and limiting breaks of vegetation to no more than 50 metres where construction is perpendicular to **Southern Brown Bandicoot habitat**.

Department means the Australian Government Department administering the *Environment Protection and Biodiversity Conservation Act 1999*.

EPBC Act Offsets Policy means the Australian Government policy documents titled: *Environment Protection and Biodiversity Conservation Act 1999 environmental offsets policy* and *Offsets Assessment Guide*, Department of the Environment, 2012.

Giant Gippsland Earthworm means the vulnerable listed species *Megascolides australis*.

Giant Gippsland Earthworm habitat means the areas identified and mapped as habitat for the Giant Gippsland Earthworm in the *Giant Gippsland Earthworm Survey Report* prepared in January 2014 by Dr. Beverley Van Praagh.

Minister means the Australian Government Minister administering the *Environment Protection and Biodiversity Conservation Act 1999* and includes a delegate of the Minister.

No net loss means an overall outcome that improves or maintains the viability of the **Strzelecki Gum** as a result of the proposed action by securing offsets for any impacts to the **Strzelecki Gum** which meet the requirements of the **EPBC Act Offset Policy**.

Offset attributes is an '.xls' file capturing relevant attributes of the offset site, including the EPBC reference ID number, the physical address of the offset site, coordinates of the boundary points in decimal degrees, the EPBC protected matters that the offset compensates for, any additional EPBC protected matters that are benefiting from the offset, and the size of the offset in hectares.

Project area means the location of construction activities and temporary workspace areas including but not limited to vegetation clearance, soil disturbance, travel of pipe laying equipment, light and heavy vehicle travel, directional drilling set-up areas, pipe laydown areas, truck turning areas and soil storage areas identified and mapped in the referral information and attachments submitted to the Department on 8 May 2014 and Final Preliminary Documentation submitted to the Department on 23 April 2015.

Protection mechanism means an in perpetuity covenant or agreement on title protecting the land for conservation purposes.

Shapefile is an ESRI Shapefile containing '.shp', '.shx' and '.dbf' files and other files capturing attributes including at least the EPBC reference ID number and EPBC protected matters present at the relevant site. Attributes should also be captured in '.xls' format. A geographically referenced raster 'img' file/s must be provided to provide context for the shapefiles.

Southern Brown Bandicoot means the endangered listed species *Isoodon obesulus obesulus*.

Southern Brown Bandicoot habitat means the areas identified and mapped as Southern Brown Bandicoot habitat in the *Flora and Fauna Survey and Impact Mitigation report* prepared by Biosis for WorleyParsons in February 2014.

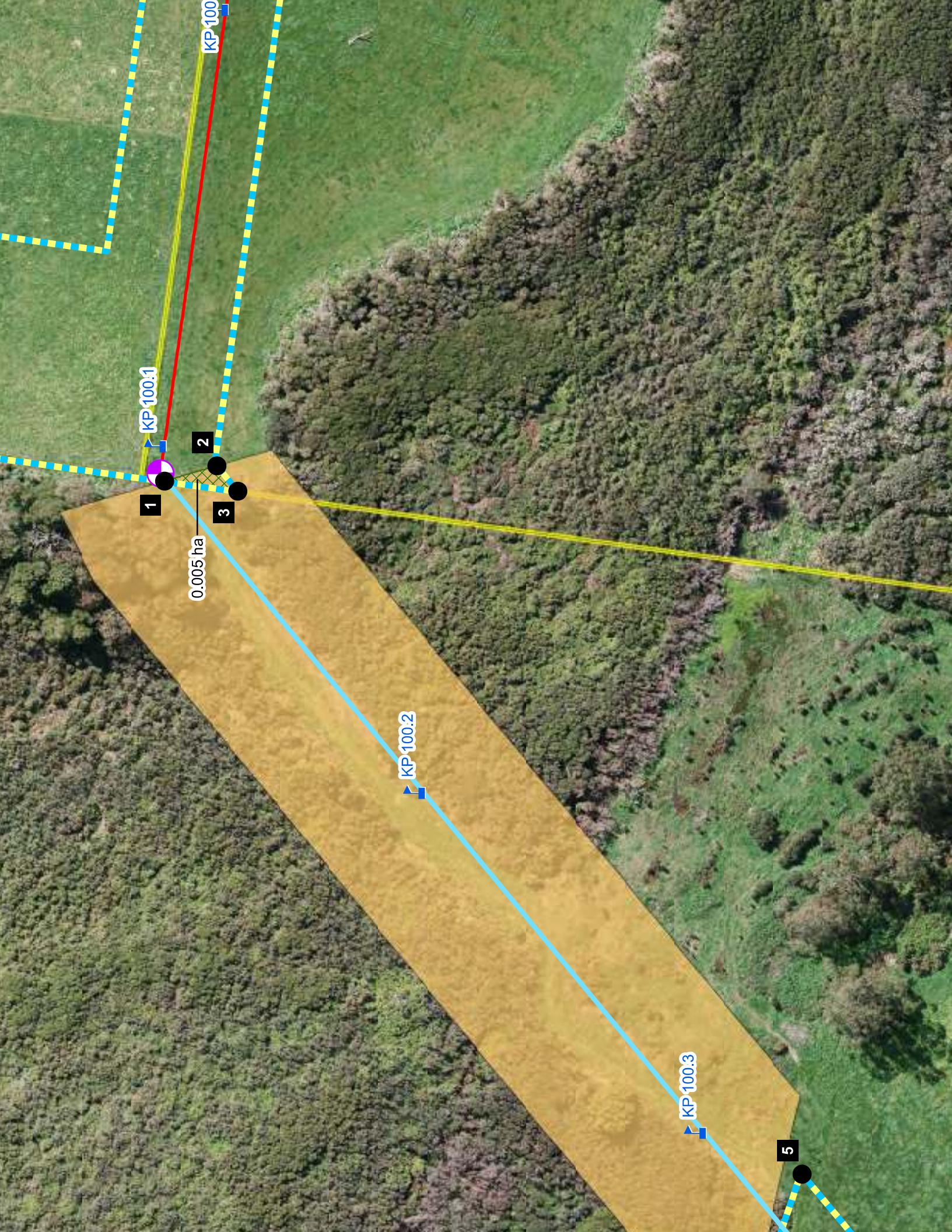
Strzelecki Gum means the vulnerable listed species *Eucalyptus strzeleckii*.

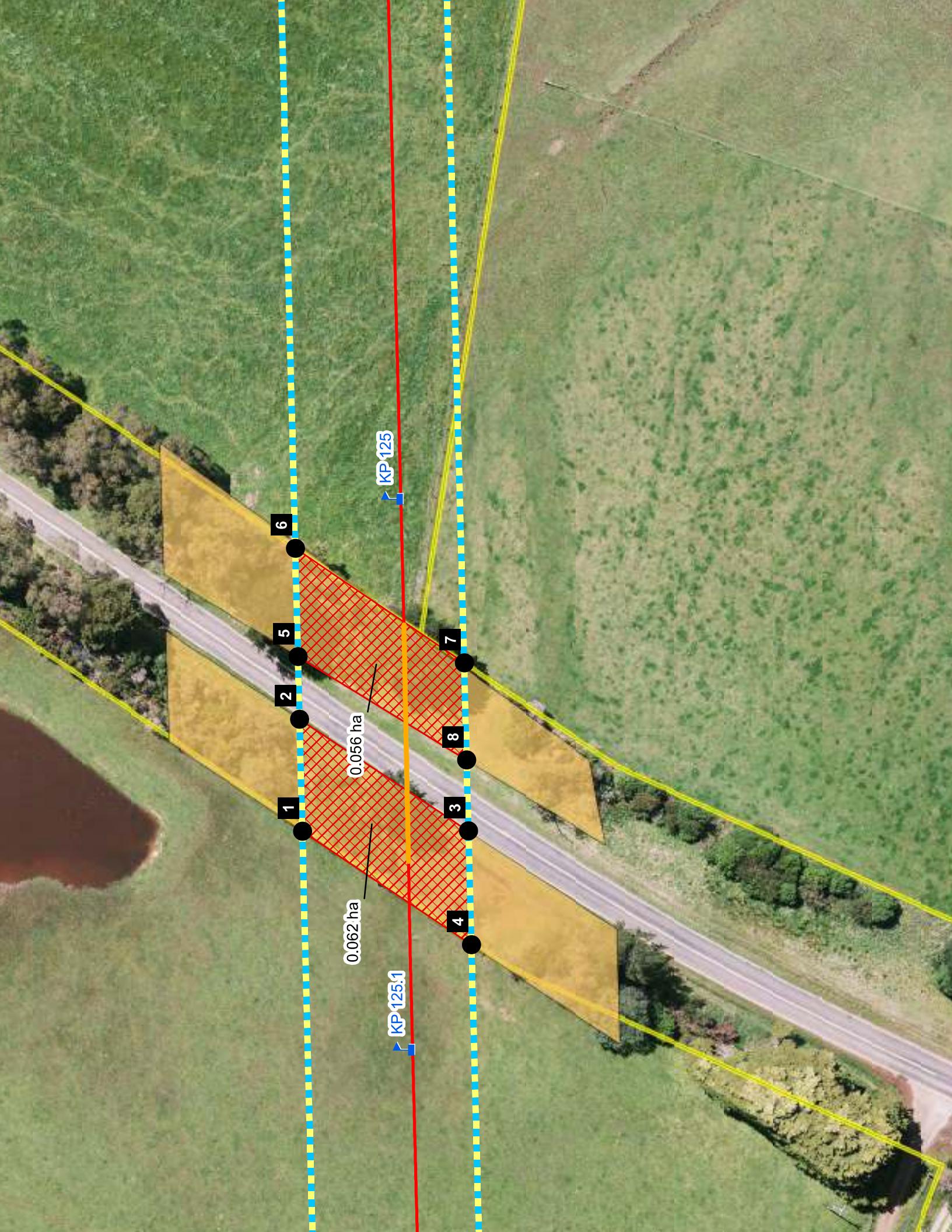
Substantially commence/d means the installation of any permanent infrastructure associated with the action excluding signage and fences.

Suitably qualified expert means an ecologist with relevant tertiary qualifications and at least 5 years of experience relevant to the EPBC listed species.

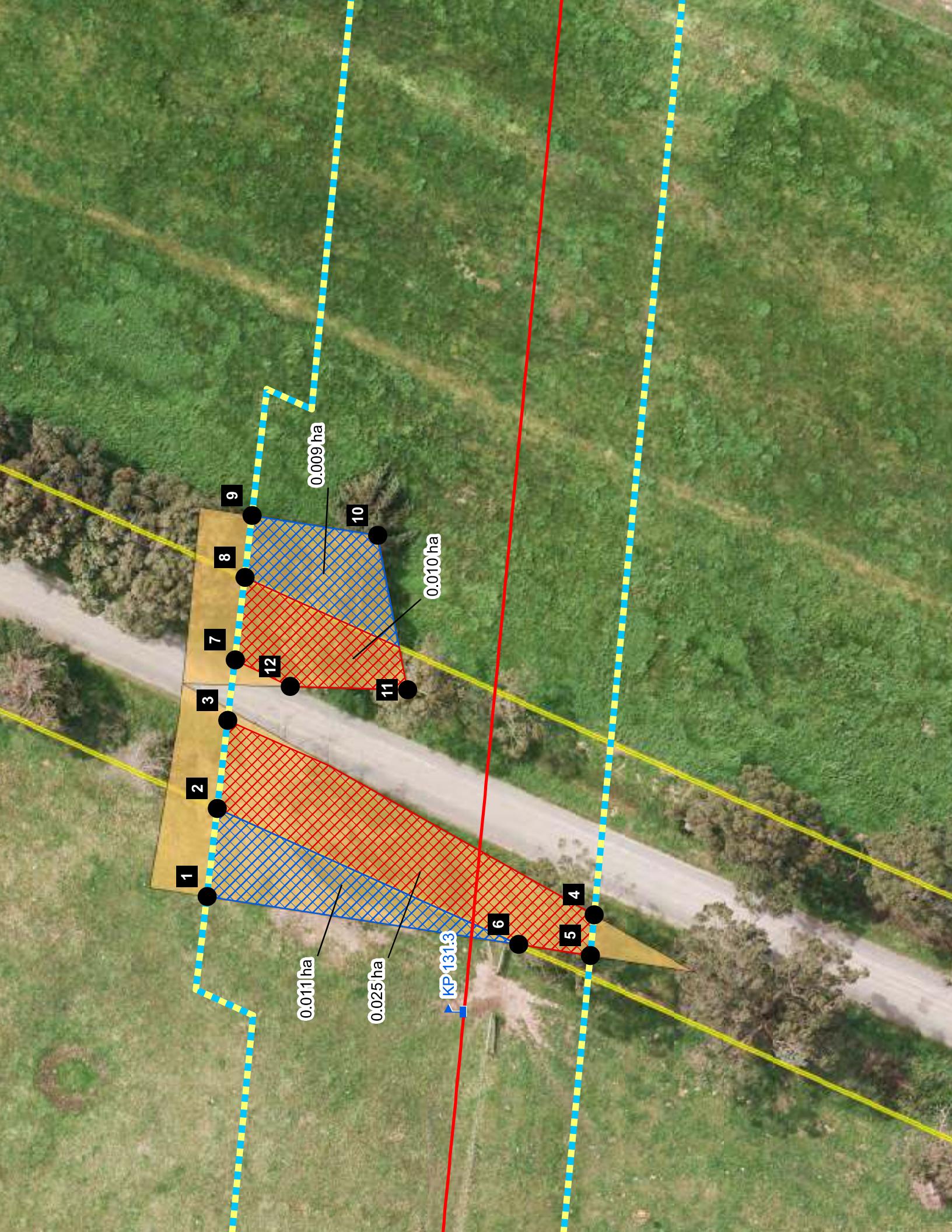


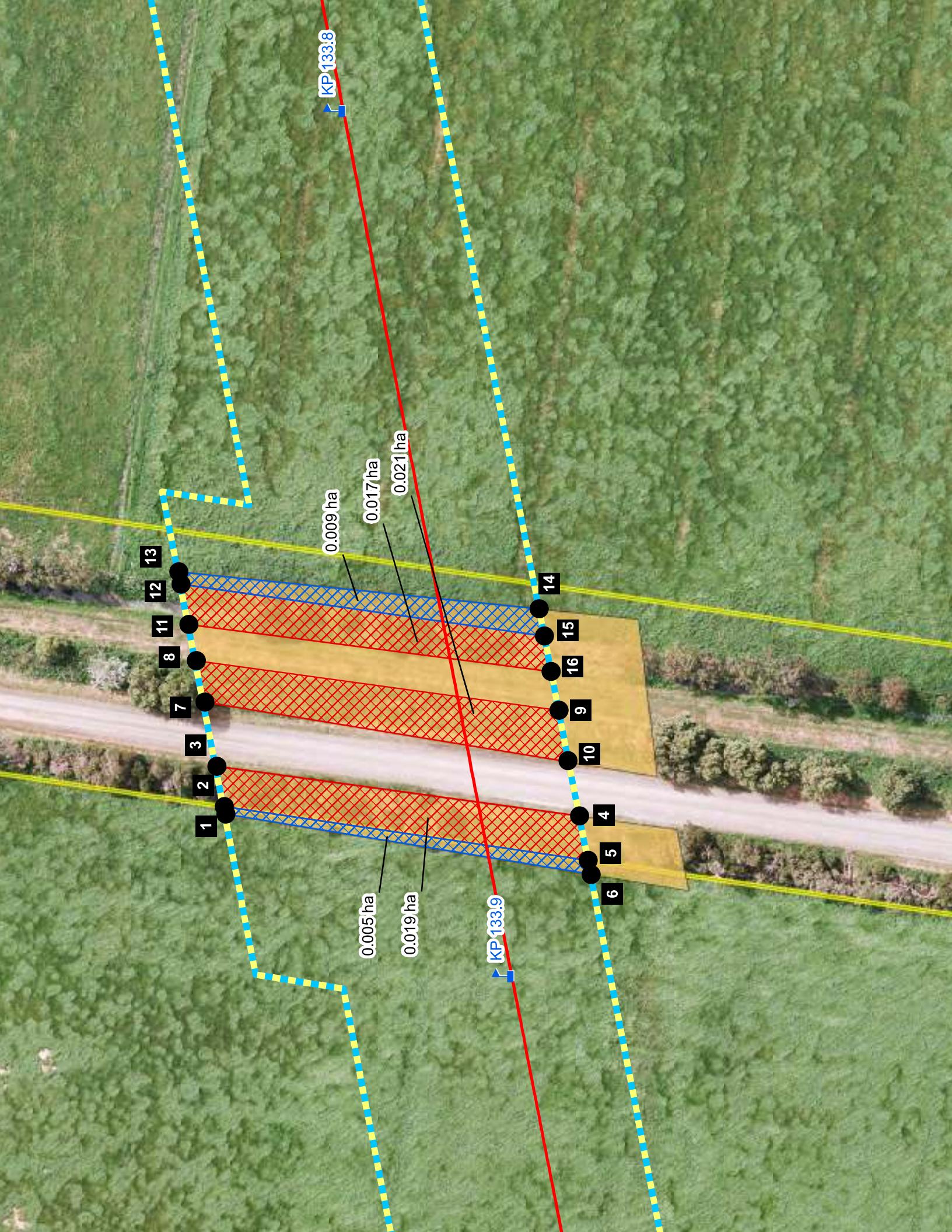
Appendix 2 REVEGETATION FIGURES 1-27

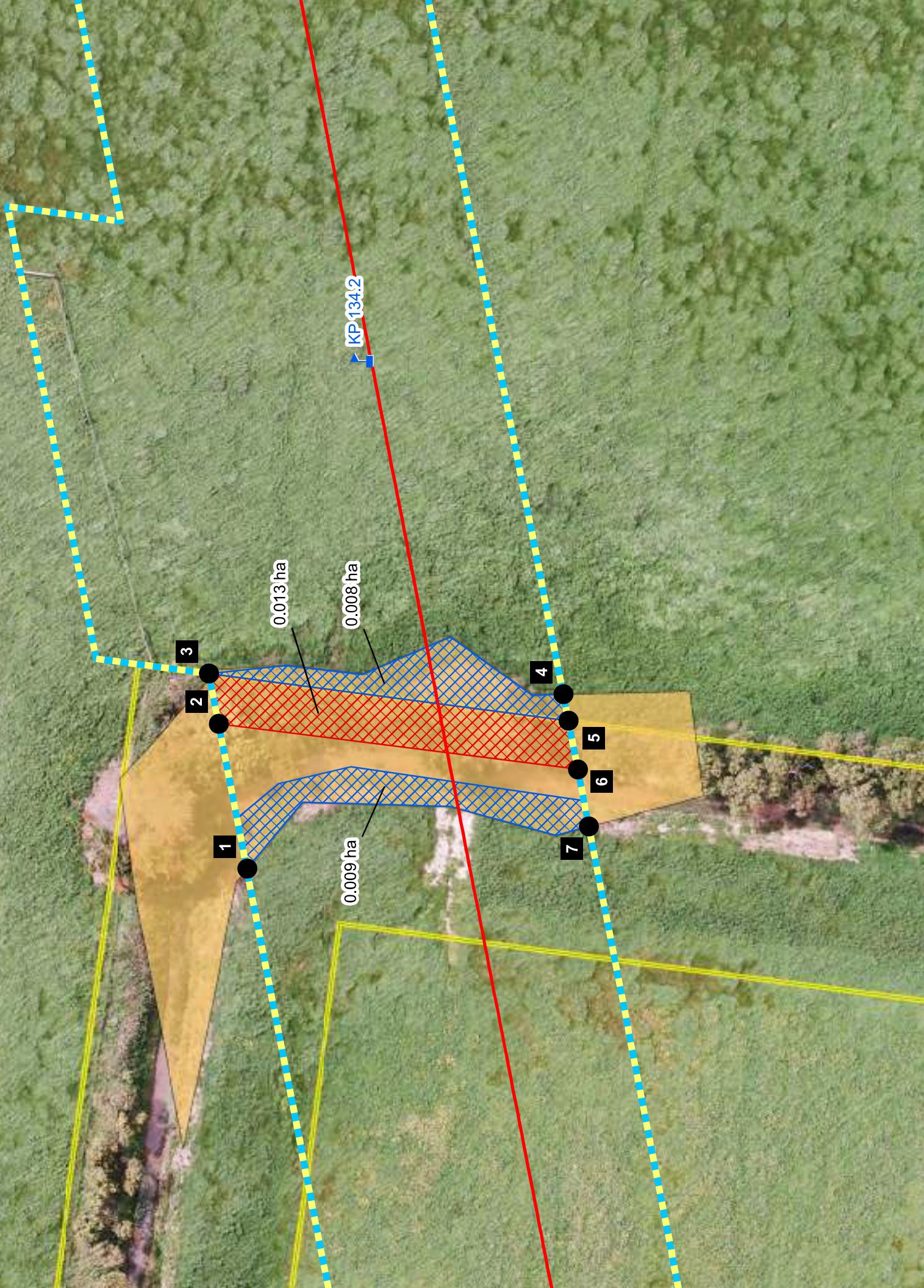


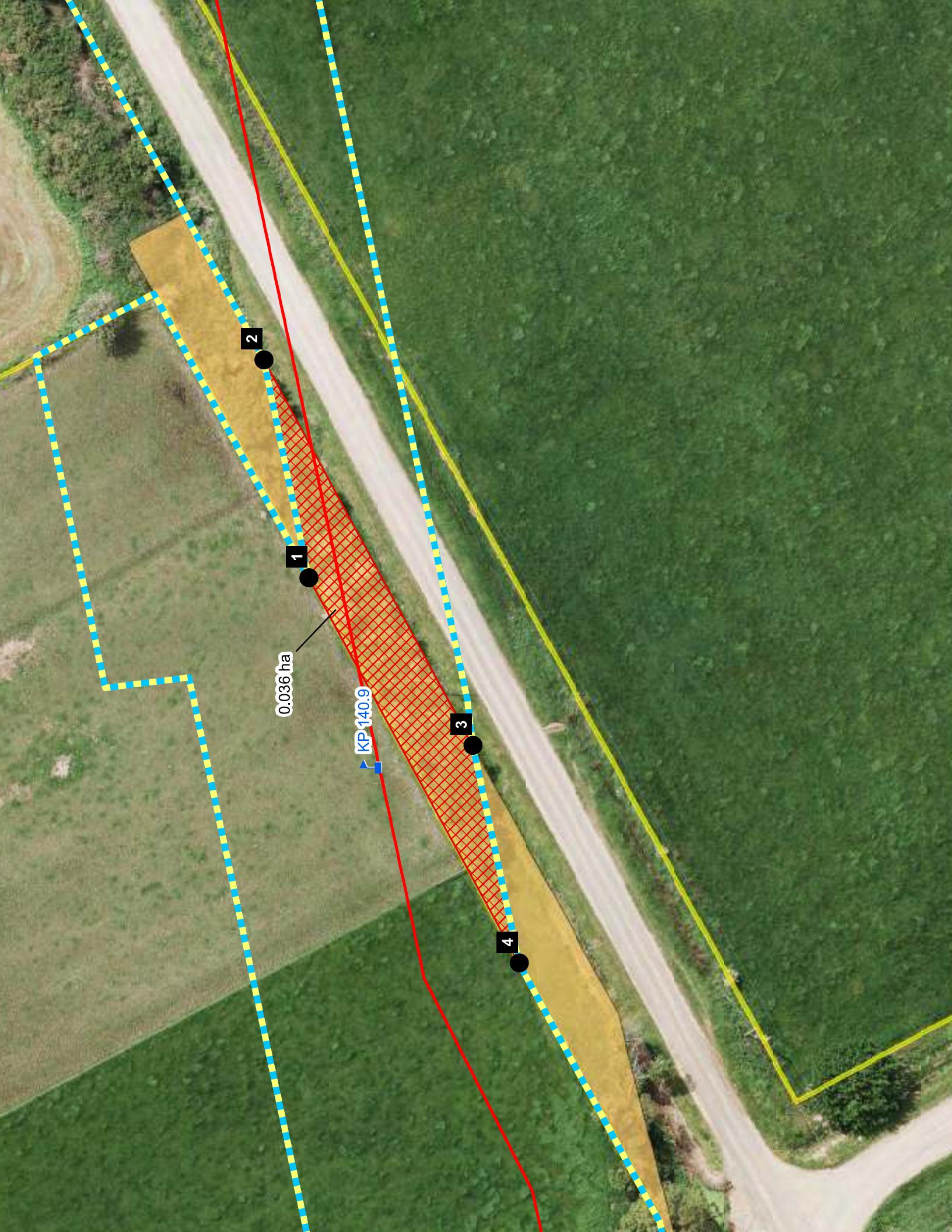






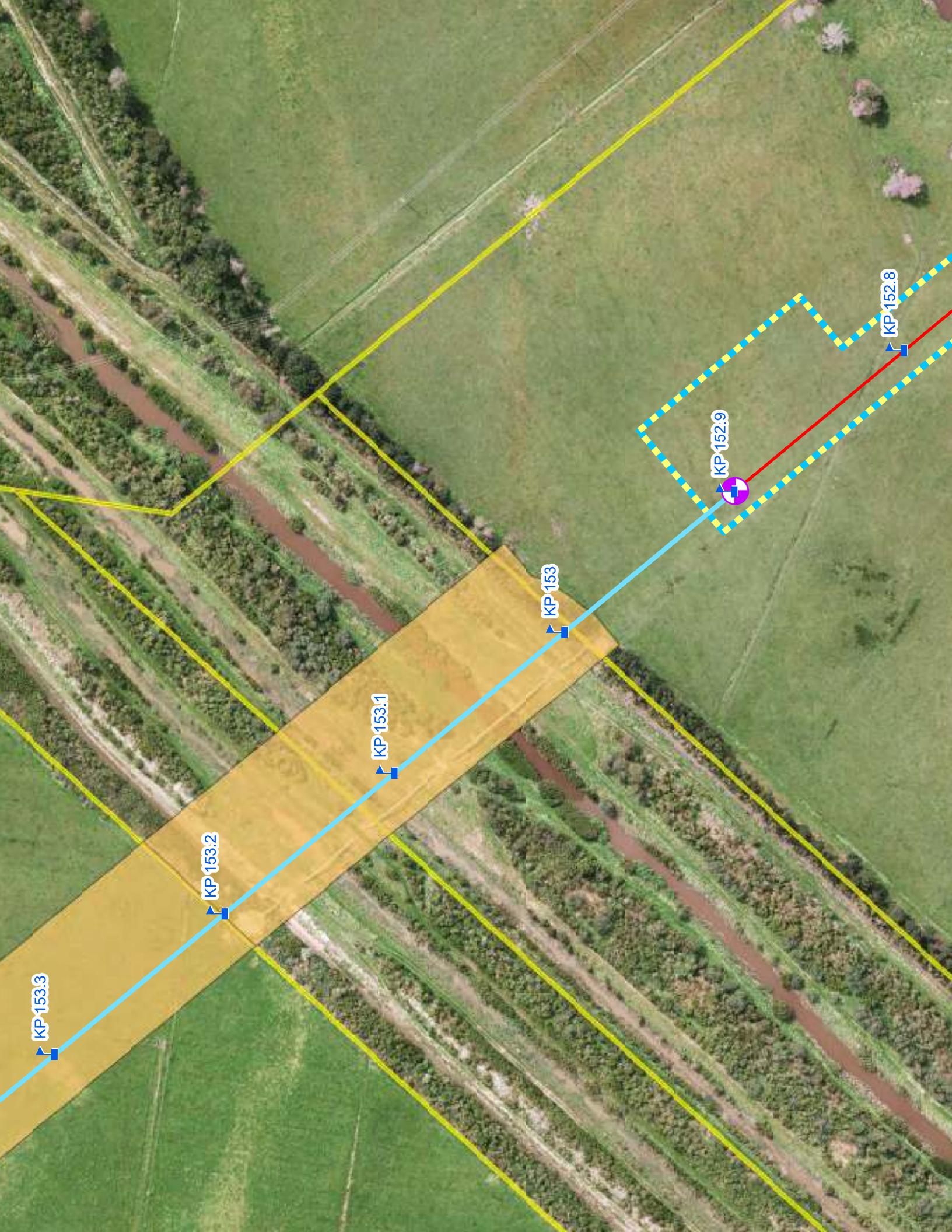


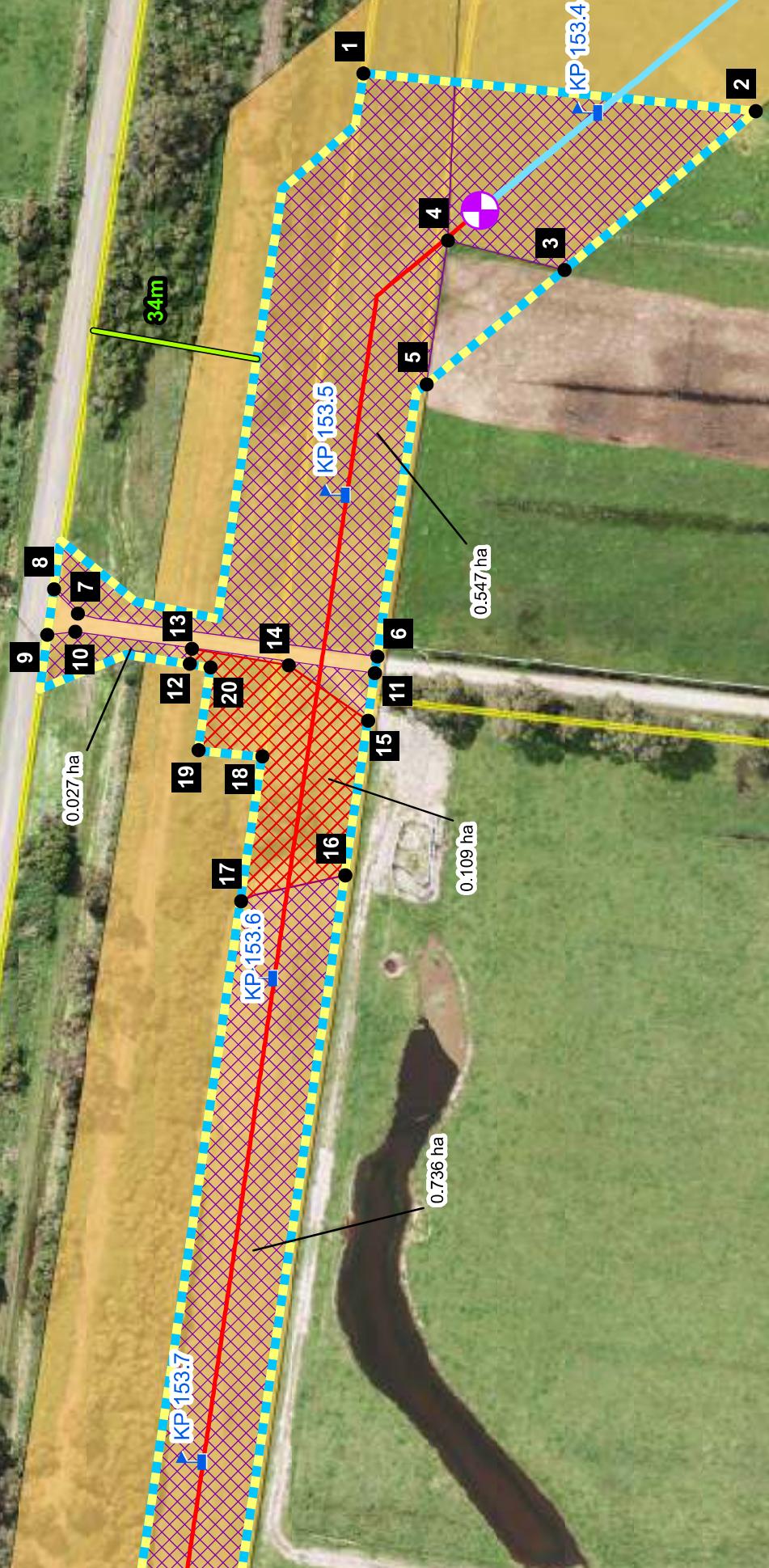


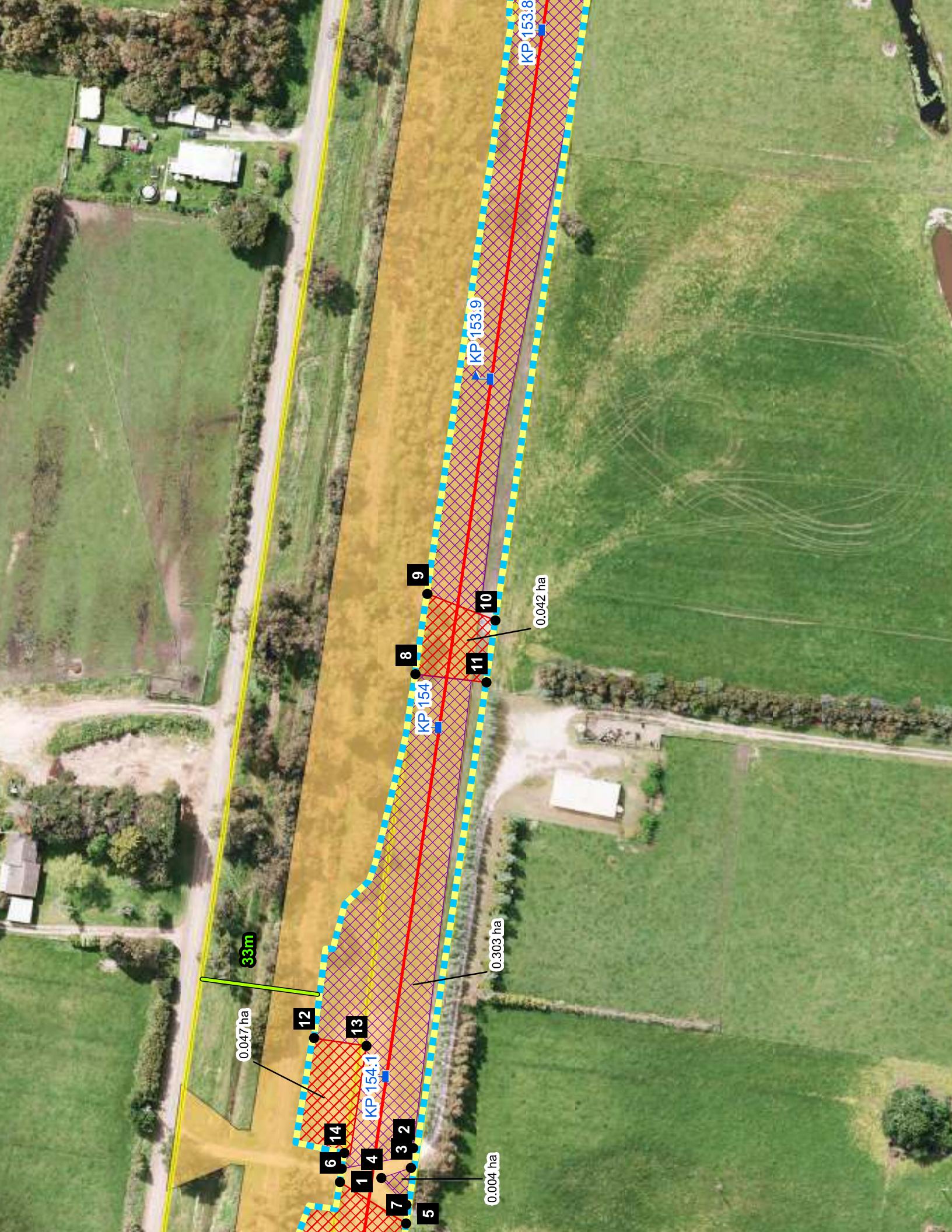






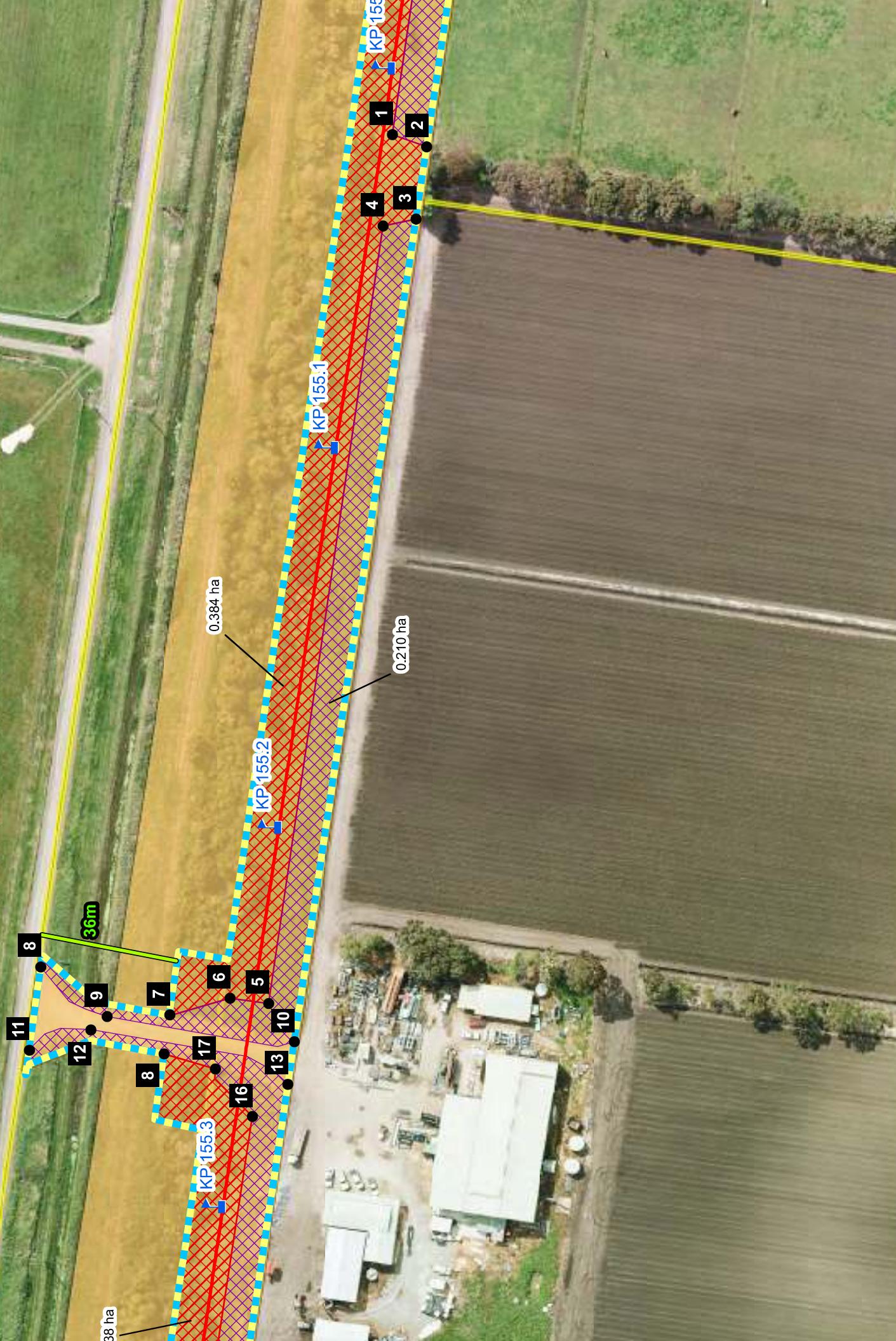




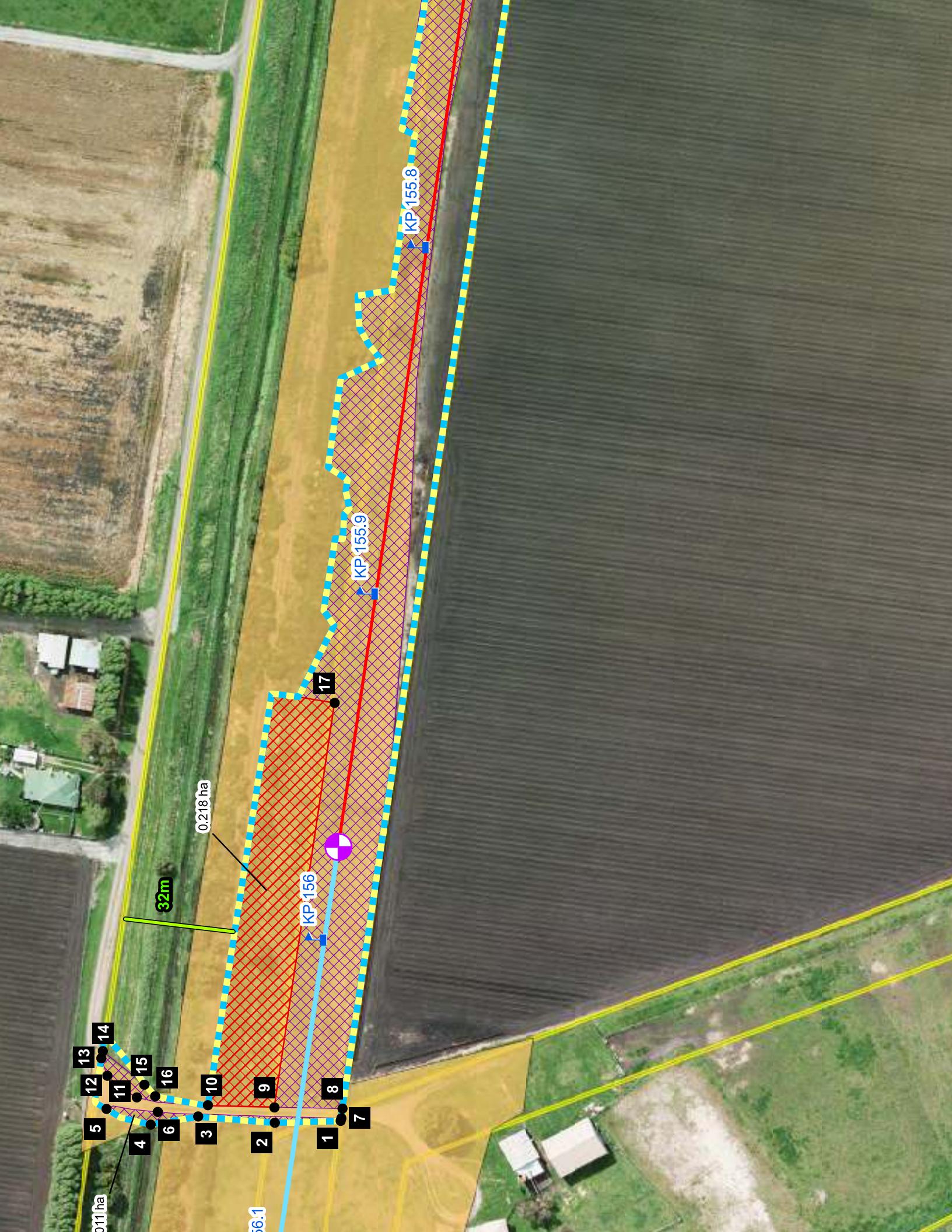












LEGEND

- HDU Entry & Exit
HDU Profile
DN350 Pipeline
Priority Threshold
Revegetation Area
(Ecological priority)
Priority Future Grass
Revegetation Area
(Ecosystems)
Residual Revetment Area
(Landowner)
Salu Habits
CROW
Cadastral Boundary

NOTES:

1. 360040 3E, 577110 14N
2. 360040 1E, 5771020 1N
3. 360040 2E, 5771022 5Y

36003



36004

ESSO PIPELINE HEP ALIGNMENT PROJECT	
FIGURE 11b SEB HABITAT REVETMENT AT RAILWAY ROAD & D-SUSED STHN GIPPS RAIL	
SECTION	DATE
SECTION 1	20/03/17
SECTION 2	20/03/17
SECTION 3	20/03/17

36005



LOCATOR MAP

FIGURE 11b
SEB HABITAT REVETMENT AT
RAILWAY ROAD & D-SUSED STHN GIPPS RAIL

SECTION 1	20/03/17
SECTION 2	20/03/17
SECTION 3	20/03/17

33210



FIGURE 111	FIGURE 111-1	FIGURE 111-2	FIGURE 111-3	FIGURE 111-4
ESSO PIPELINE REPLACEMENT PROJECT	SUE HALL & REVEGETATION AREA	VALLEY ROAD & LIVESTOCK STAIN (S-P) ROW		



WorleyParsons
In association with
OneWay

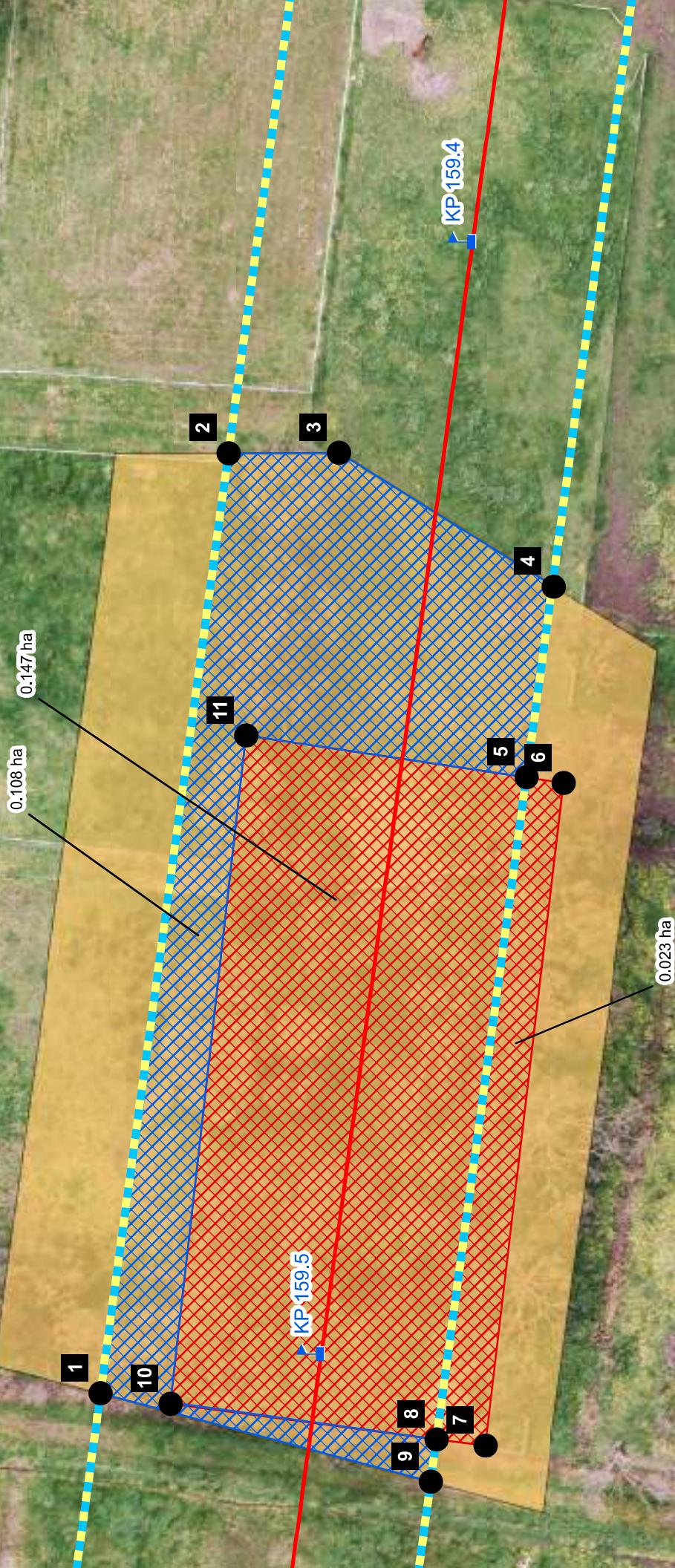


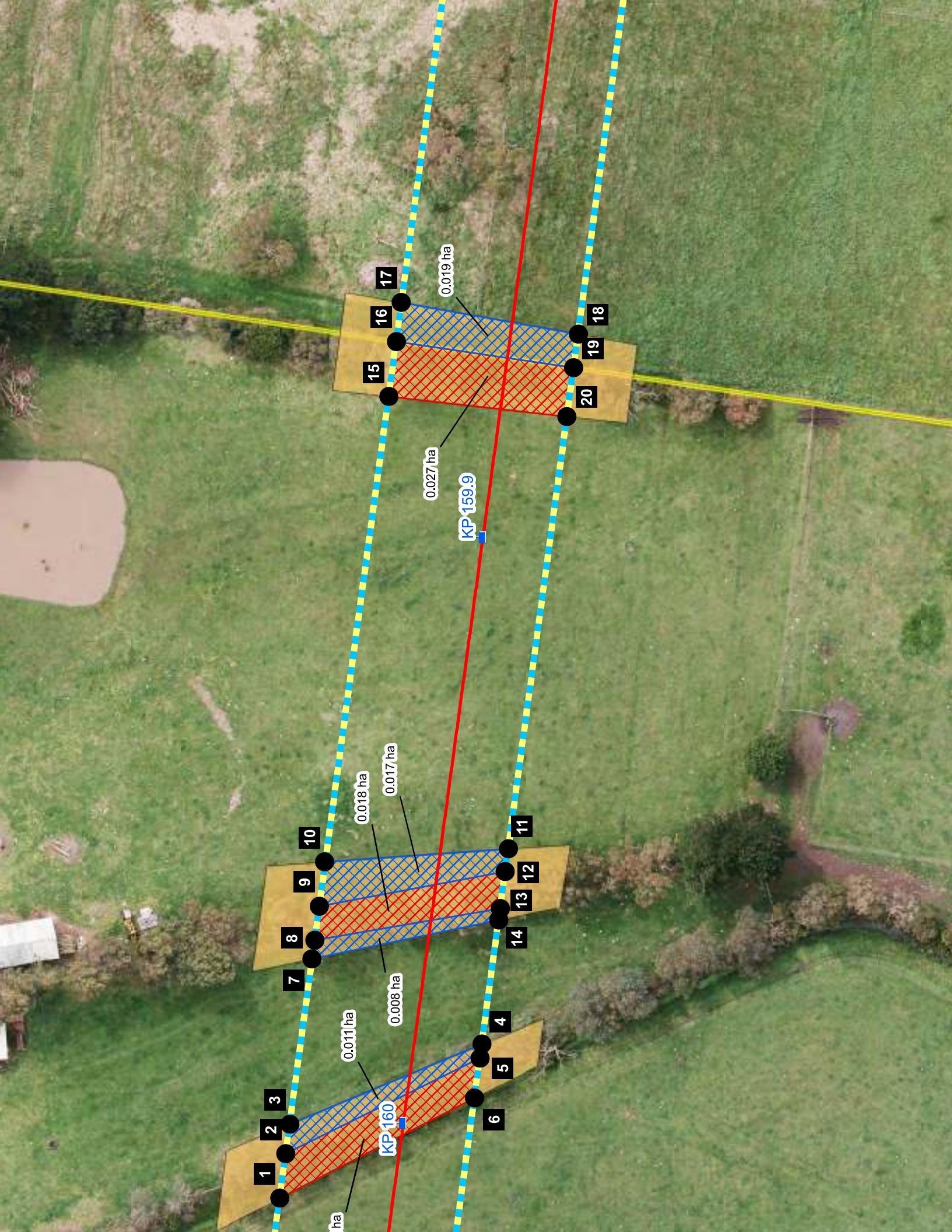




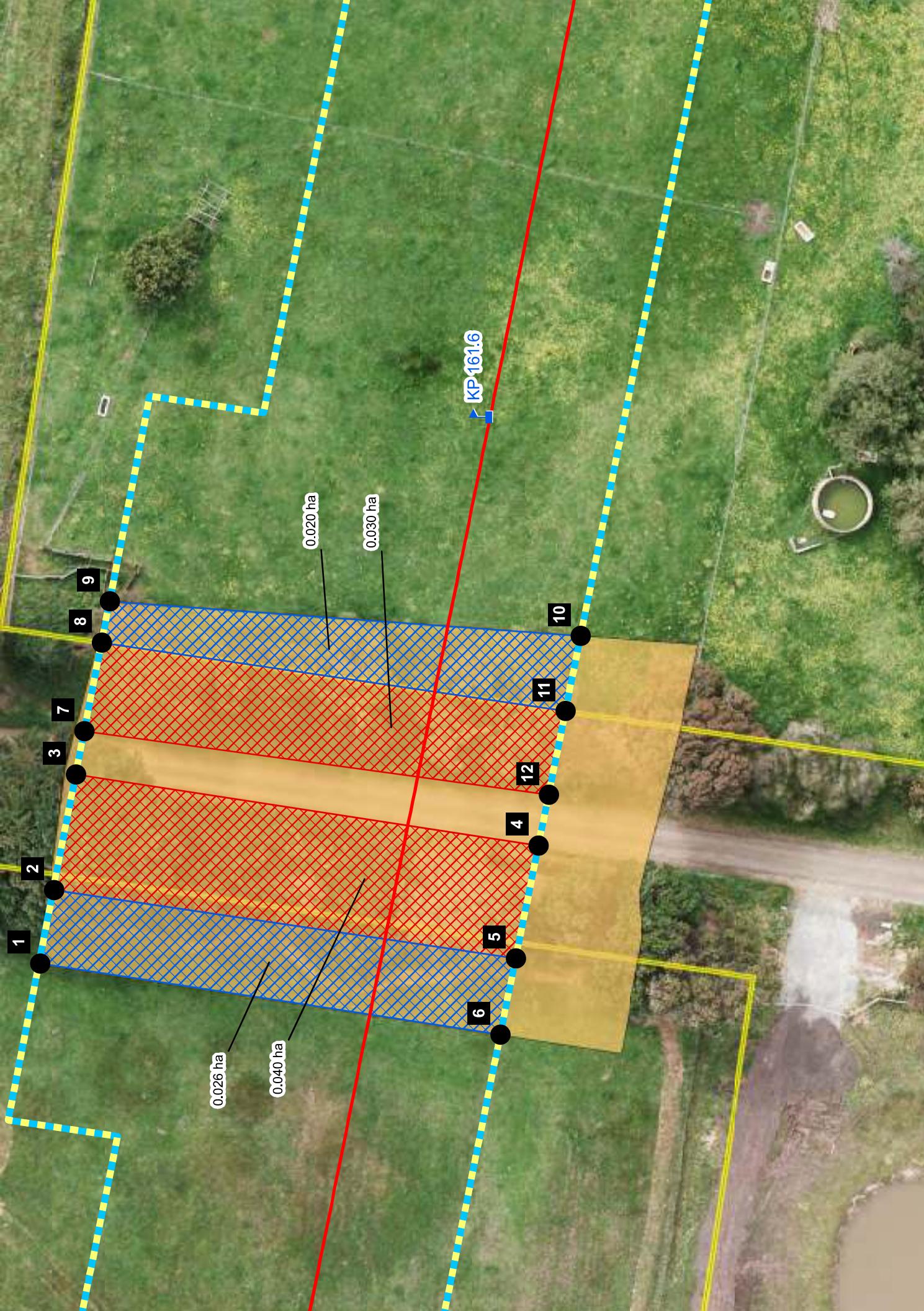






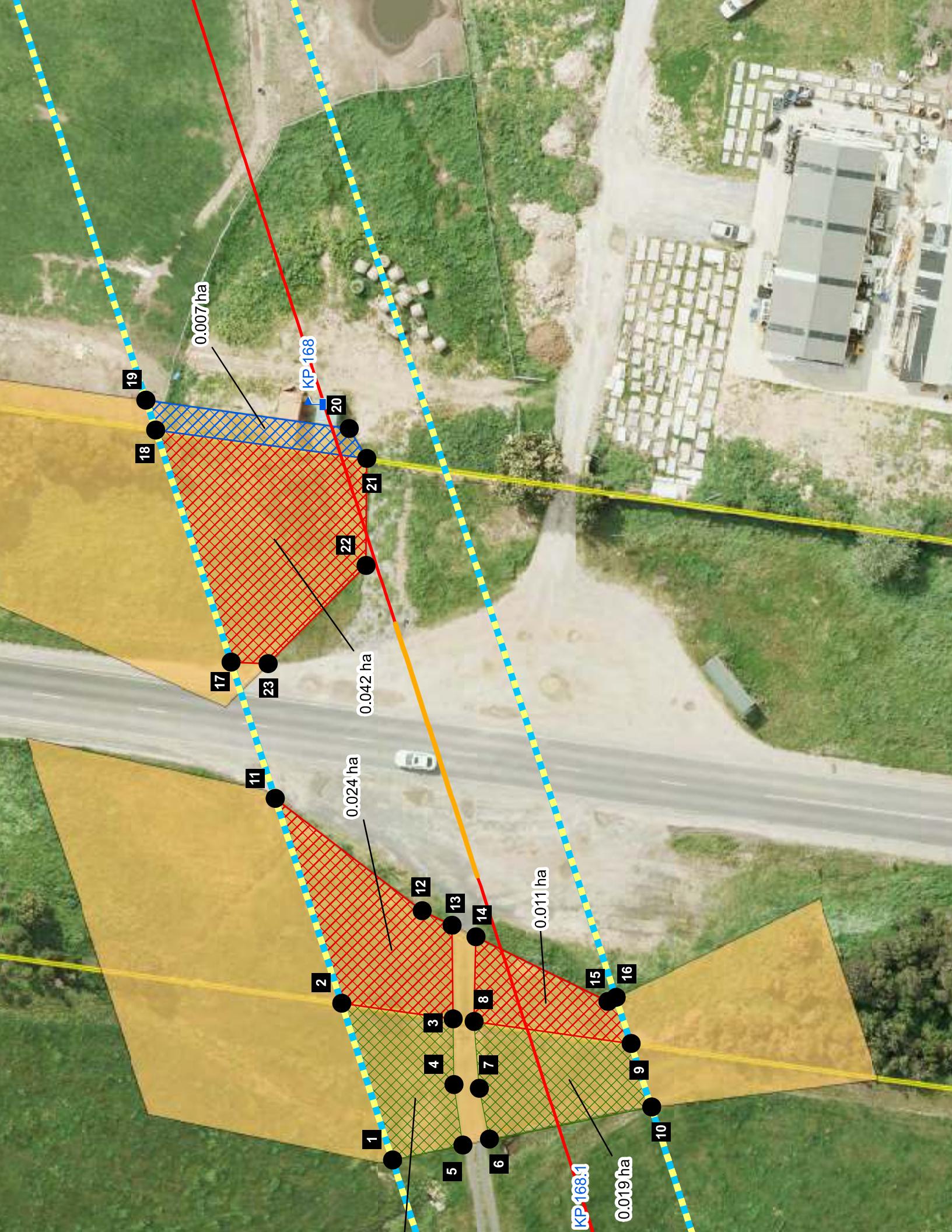


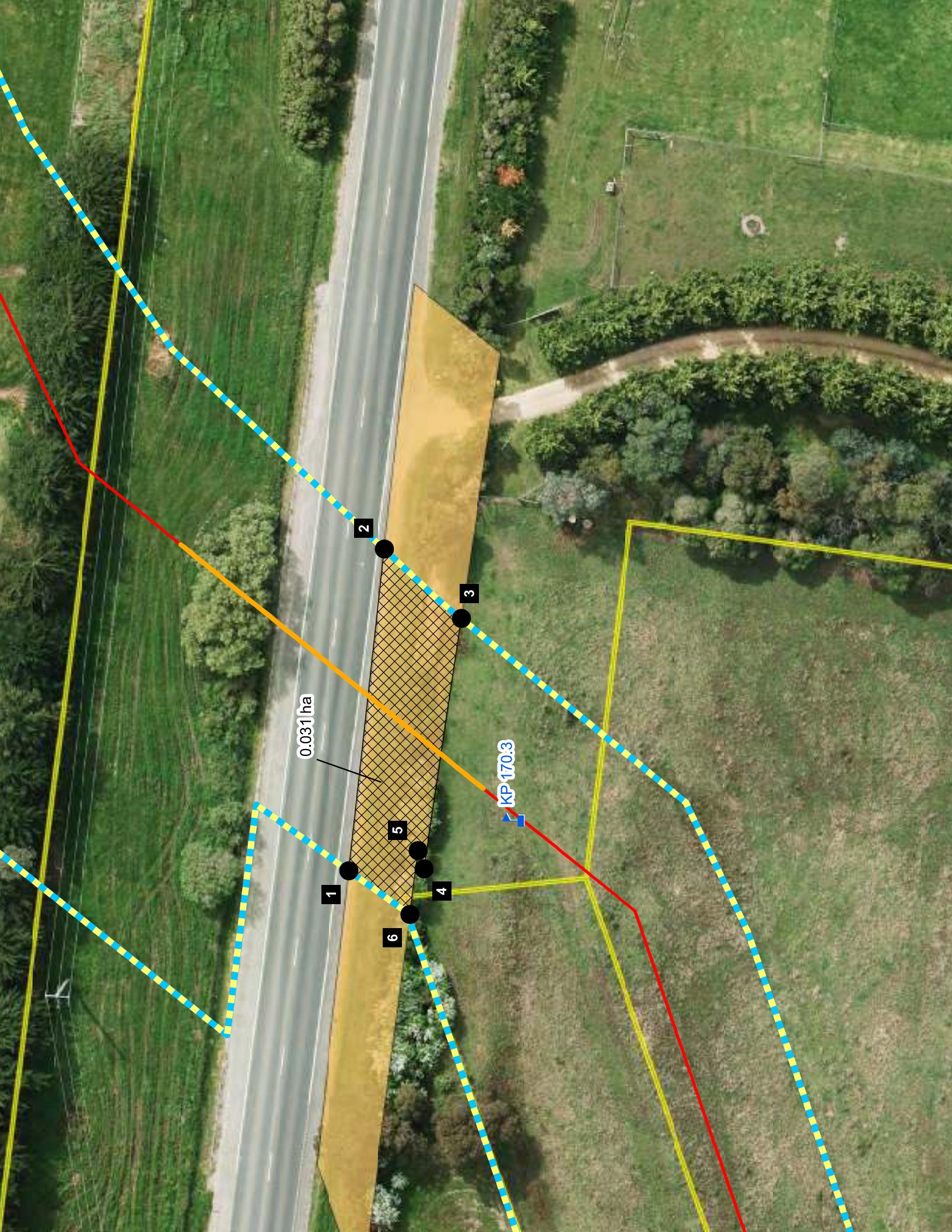


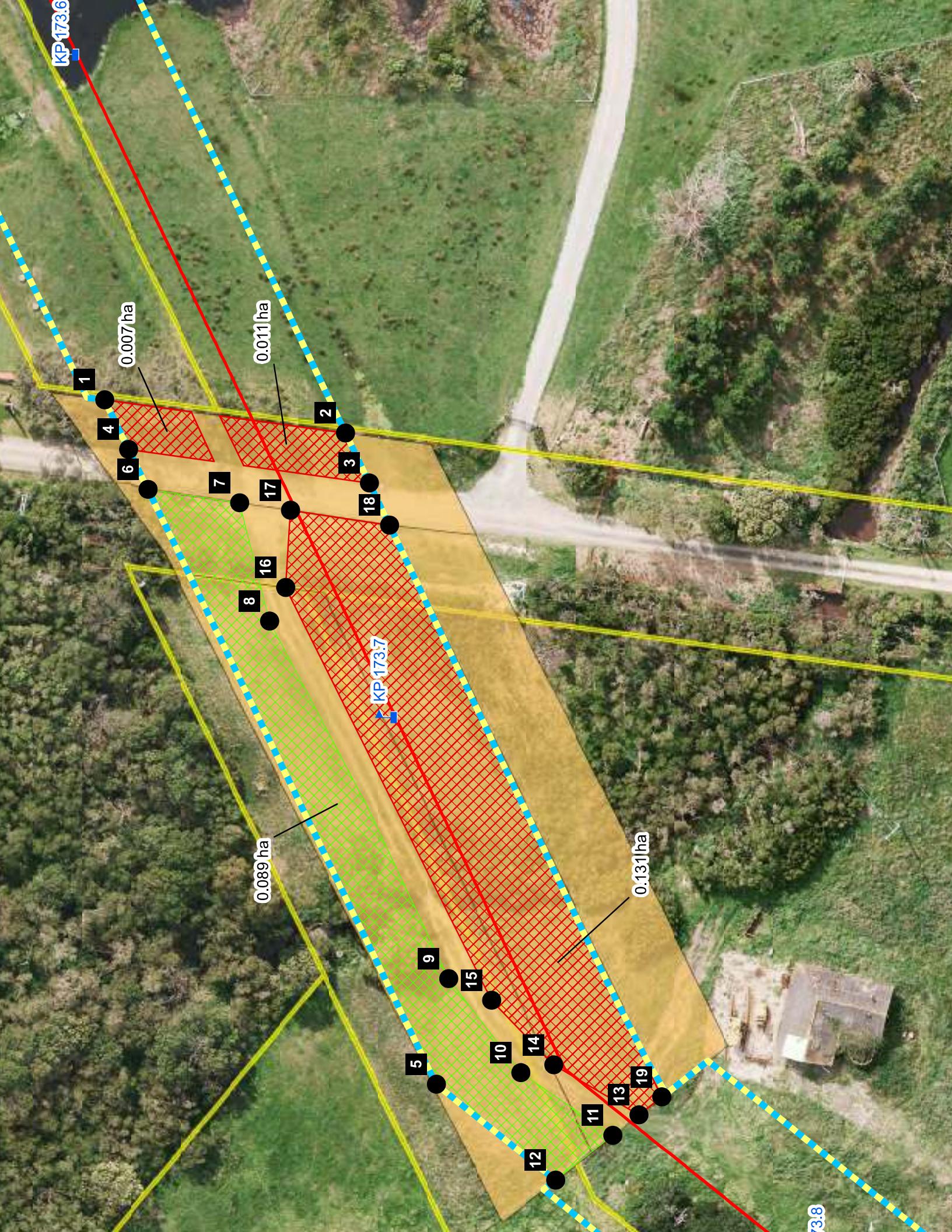


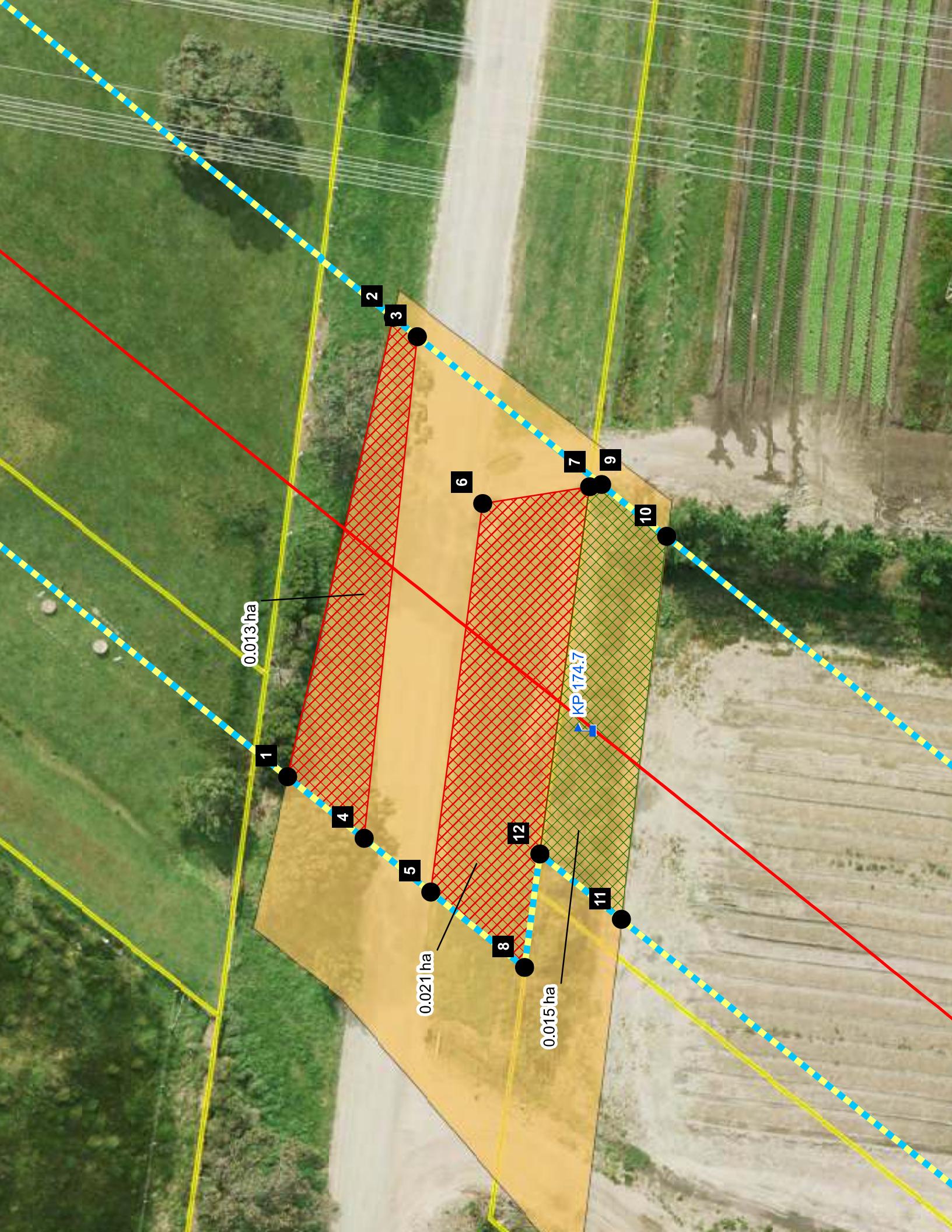


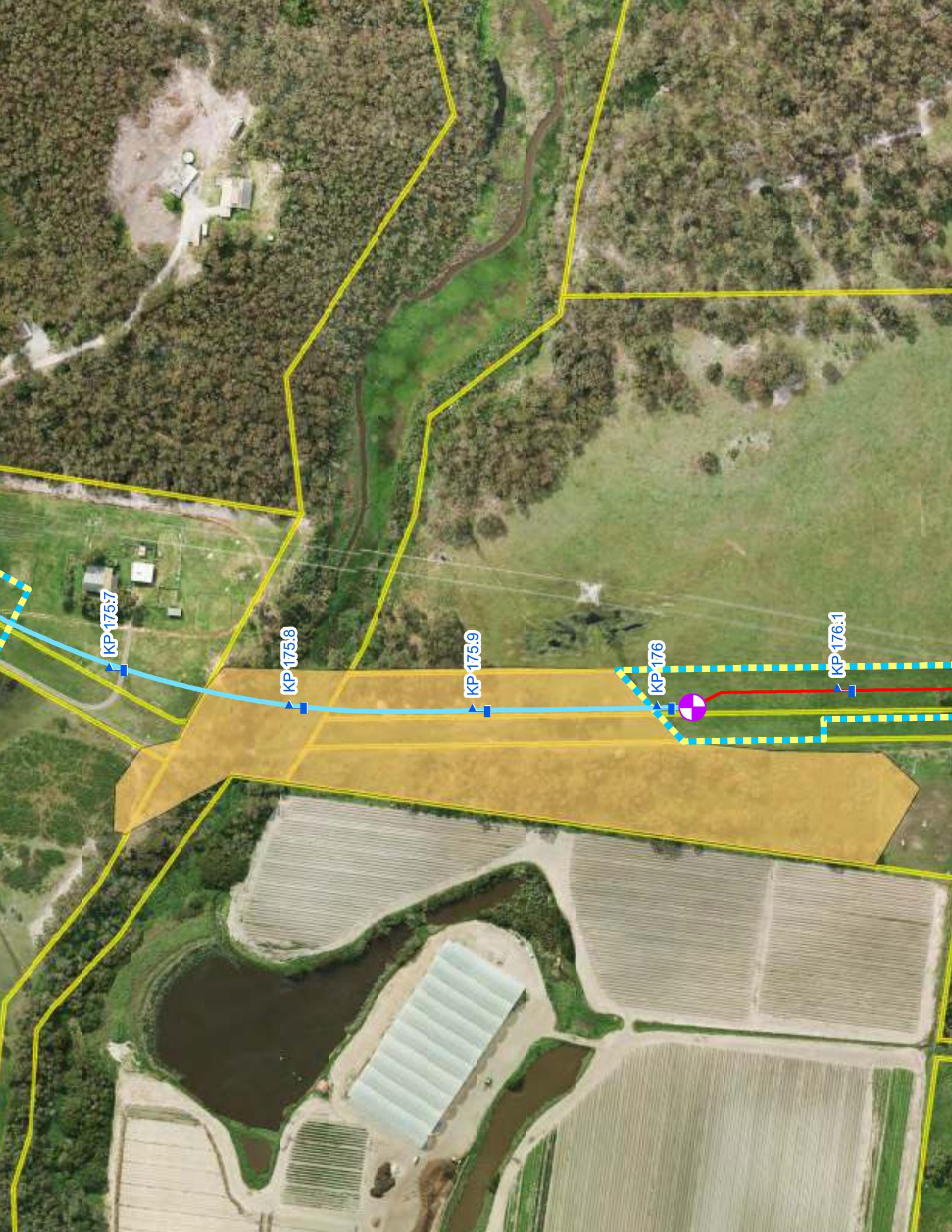




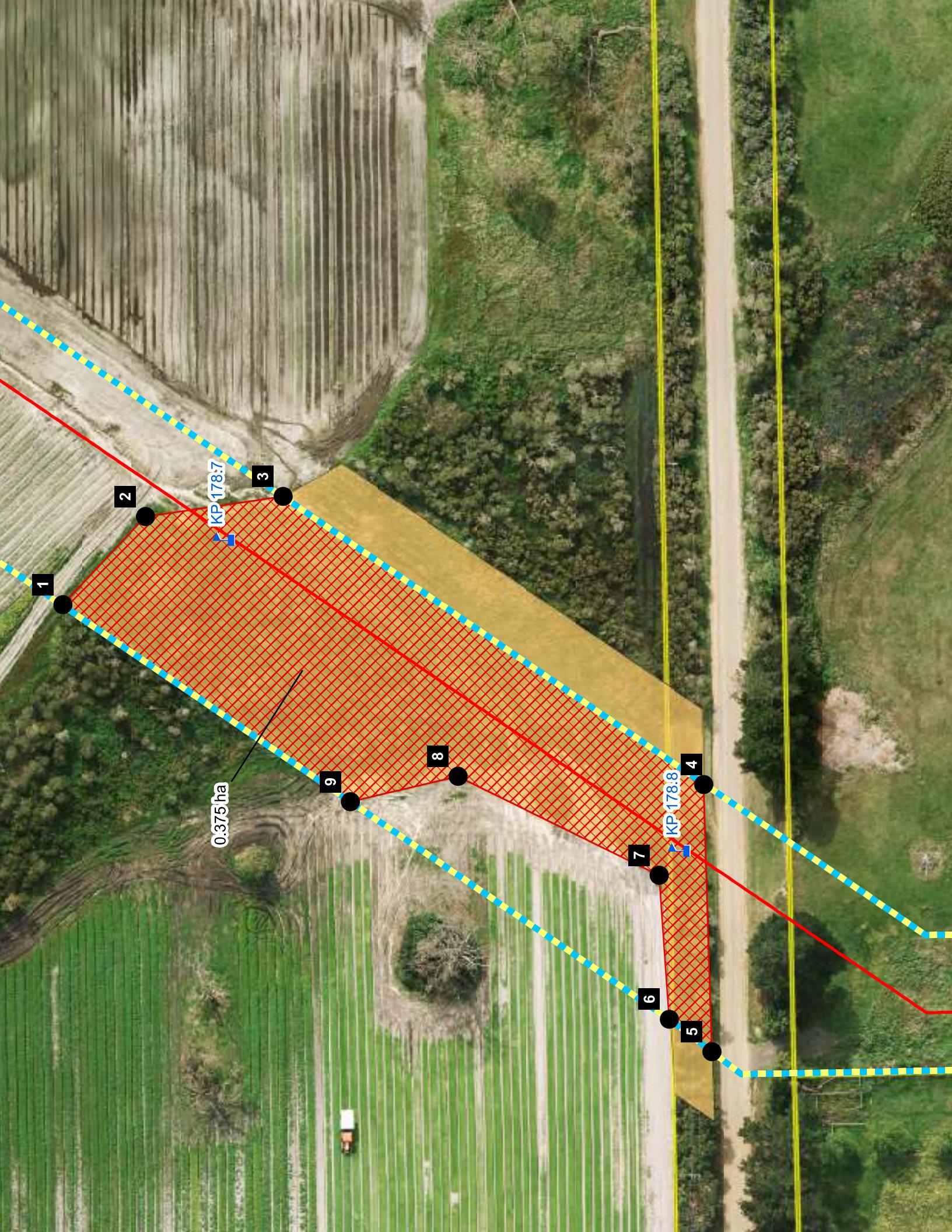




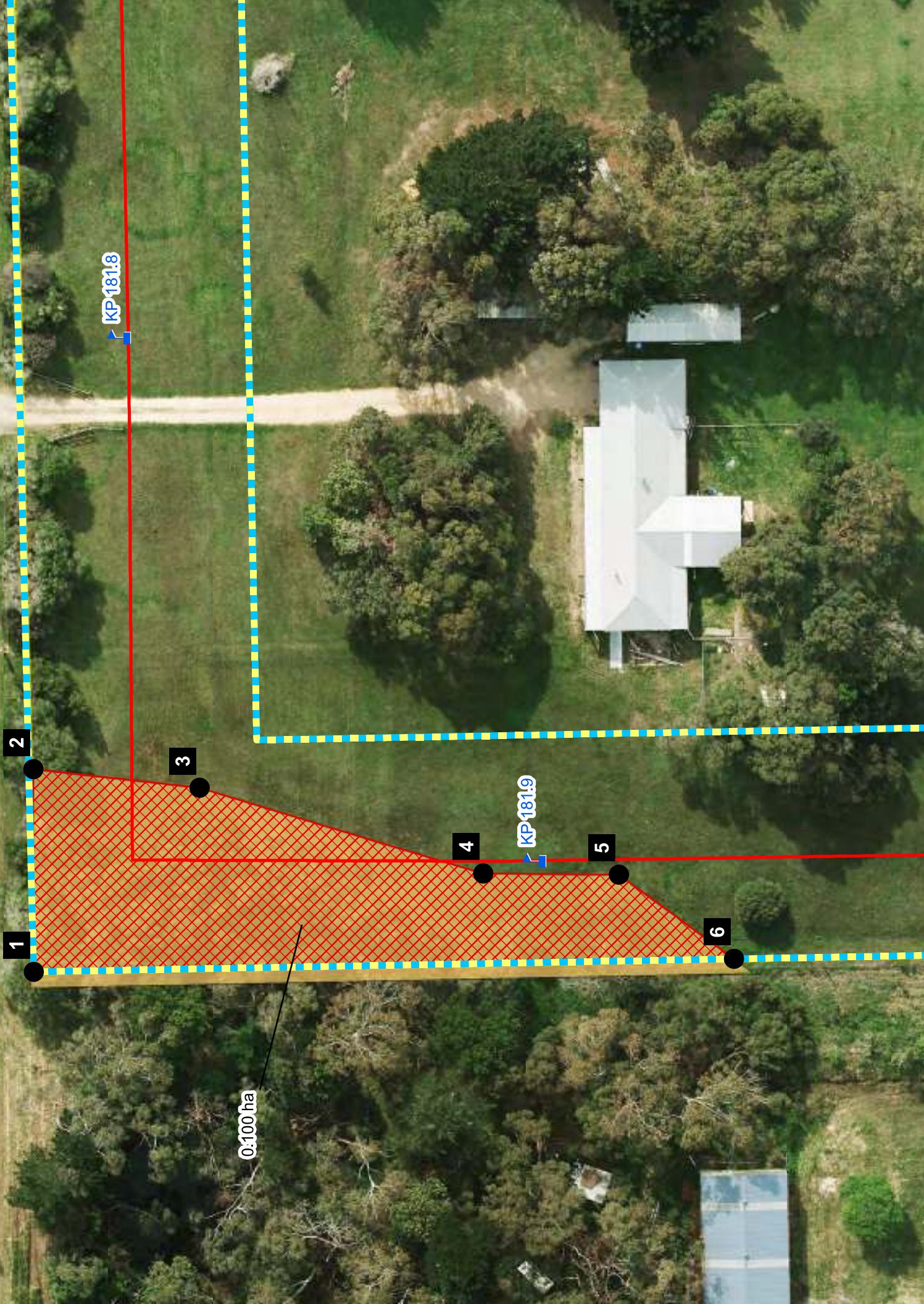












Appendix 3 EVIDENCE OF COMPLIANCE WITH EPBC CONDITION 4 – REVEGETATION RECORDS

Revegetation Monitoring Records (6, 12 and 24 months post-planting), including photos, for the 22 sites where SBB habitat was disturbed during construction (Note: SBB habitat was entirely avoided at 5 locations during construction and no revegetation was required).

ESSO PIPELINE REPLACEMENT PROJECT		REVEGETATION RECORD	ESSO
VEGETATION			
Location	Saxton Swamp, KP100		
Sensitivity	Southern Brown Bandicoot Habitat		
Approval	EPBC Referral 2014/77202		
Date	Prior to 15/05/2016		
Area	0.005 ha – pasture (land owner)		
Photo details		 <p>Photo 1: Triangular area between fence and two poles represents undisturbed Southern Brown Bandicoot habitat. Photo looking west.</p>	
Notes	Limited construction disturbance to this area. Pasture reinstatement only. Figure 1.		

ESSO PIPELINE REPLACEMENT PROJECT		REVEGETATION RECORD	ESSO
MONITORING POST PLANTING			
Milestone: 6 months Target: N/A – pasture only	Date: 08/03/2018	Area of undisturbed vegetation (primarily weed species) identified as SBB habitat remains, with additional growth. Pasture grasses established with ~100% coverage across reinstated RoW.	 <p>Photo 1: Photo looking west.</p>
Milestone: 12 months Target: 60% cover over 90% area Date: 24/09/2018		Site not revisited - area identified as SBB was not disturbed by construction and revegetation not required, as per findings of 6-month inspection - Pasture grasses established with ~100% coverage across 100% of reinstated RoW area.	
Milestone: 2 years Target: 90% survival Date: N/A		Site not revisited - area identified as SBB was not disturbed by construction and revegetation not required, as per findings of 6-month inspection	

ESSO PIPELINE REPLACEMENT PROJECT	REVEGETATION RECORD	ESSO
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Record completed by:	
Name	Kim Stewart
Position	Senior Environmental Consultant, CNC Project Management
Phone	0422 574 101
Date	08 Aug 2010
Signature	

ESSO PIPELINE REPLACEMENT PROJECT		REVEGETATION RECORD	ESSO
VEGETATION			
Location	Westernport Rd, KP125		
Sensitivity	Southern Brown Bandicoot Habitat		
Approval	EPBC Referral 2014/77202		
VEGETATION			
Date	26/07/2017		
Area	0.118 ha – tubestock		
Notes	<p>The revegetation area on two road verges, the eastern (0.056 ha) and western side (0.062 ha) of Westernport Rd.</p> <p>The eastern roadside sits below road level at the bottom of a short bank.</p> <p>The western side includes a wide shoulder used as an informal vehicle turn in and powerline infrastructure present on fence line.</p> <p>The planting area was the full width of the construction Right of Way, from the road shoulder to the property boundary.</p>		

ESSO PIPELINE REPLACEMENT PROJECT	REVEGETATION RECORD	
MONITORING POST PLANTING <p>Milestone: 6 months Target: 80% survival Date:</p> <p>The western roadside has been vehicles during the installation of new power poles since planting.</p> <p>This area is also very dry, with no reestablishment of grasses or weed species. On the western roadside, survival is <10 %.</p> <p>The eastern roadside is more shelter and is not impacted by vehicle traffic. Overall survival is high, with a 3 m x 3m patch over the installed pipe requiring replanting. Survival is estimated at 80 % -90 %, with a patch approximately 2 m x 3 m requiring replanting.</p>	<p>Photo 1: Westerport Road – western roadside (facing north)</p> 	<p>Photo 2: Westerport Road – eastern roadside (facing east)</p> 

ESSO PIPELINE REPLACEMENT PROJECT	REVEGETATION RECORD
MONITORING POST PLANTING	

Milestone: 12 months**Target:** 60% cover over 90% area**Date:** 13/09/2018

The area on the western roadside has been recently worked to loosen the soil and replanted with tubestock, following low survival of the original planting. Plants have yet to establish any assessable cover. Conditions remain very dry, despite the season.

On the eastern roadside survival remains at ~80%. Grasses have not grown substantially over winter. Shrubs and creepers have grown, with cover estimated at 60% over this half of the site.



Photo 3:
Westernport Road – western
roadside (facing south)

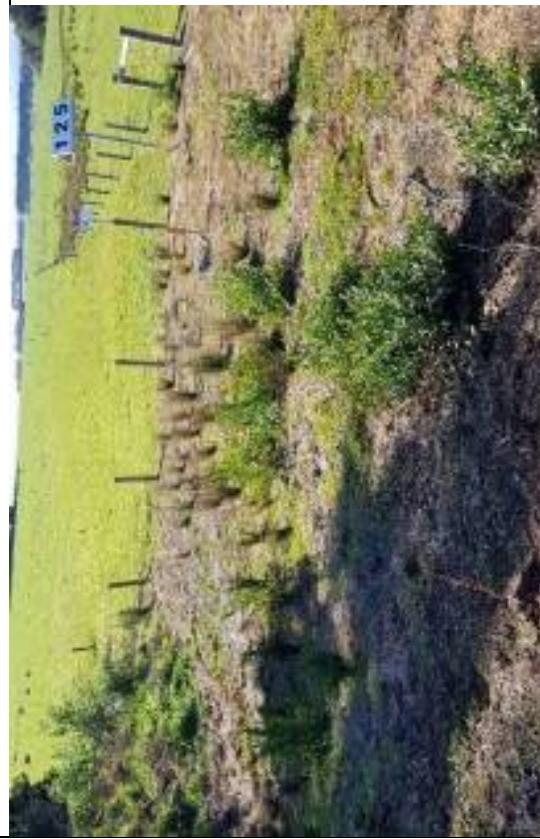
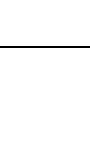


Photo 4:
Westernport Road – eastern
roadside (facing east)

ESSO PIPELINE REPLACEMENT PROJECT	REVEGETATION RECORD
MONITORING POST PLANTING <p>Milestone: 2 years Target: 90% survival Date: 08/08/2019</p>	 <p>The area on the western roadside 100% of expected plant density within the revegetation area. This is primarily 12-month-old replanting following low survival of the original planting. Cover remains low as plants are establishing, but is expected to increase significantly with spring growth.</p>

Photo 5: Westernport Road – western roadside (facing southeast)	 <p>On the eastern roadside the survival of original plants remains at ~80%. With maintenance planting, this area has >90% of the expected plant density within the revegetation area. Grasses and rushes have undergone seasonal senescence and winter dormancy, but will increase coverage in spring.</p>
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ESSO PIPELINE REPLACEMENT PROJECT	REVEGETATION RECORD
	

Record completed by:	
Name	Kim Stewart
Position	Senior Environmental Consultant, CNC Project Management
Phone	0422 574 101
Date	08/08/2019
Signature	

ESSO PIPELINE REPLACEMENT PROJECT	REVEGETATION RECORD	
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Location	Chambers Rd, KP131
Sensitivity	Southern Brown Bandicoot Habitat
Approval	EPBC Referral 2014/77202

VEGETATION	
Date	11/07/2017
Area	0.002 ha tubestock
Notes	Majority of SBB habitat area not disturbed. Only small area on turn in on south side of road requiring replanting with tubestock.

ESSO PIPELINE REPLACEMENT PROJECT	MONITORING POST PLANTING	REVEGETATION RECORD
 Milestone: 6 months Target: 80% survival Date: 06/03/2018	<p>Survival within the designated habitat area is estimated at 80%. Plants appear water stressed and have not grown significantly since planting.</p>  <p>Photo 1: Chambers Rd, south side, facing south west. Yellow shows approximate reveg area boundaries.</p>	<p>Milestone: 12 months Target: 60% cover over 90% area Date: 13/09/2018</p> <p>Survival remains at an estimated 80%. Little or no growth observed in grasses over winter. Some creepers beginning to establish. Cover assessed as less than 50%. Bare ground between plants a result of suppression of weeds and pasture grasses by weed control spraying.</p>  <p>Photo 2: Chambers Rd, south side, facing south west.</p>

ESSO PIPELINE REPLACEMENT PROJECT	REVEGETATION RECORD
<p>Milestone: 2 years Target: 90% survival Date: 08/08/2019</p> <p>The survival of original plants remains at ~80%. With maintenance planting, this area has 100% of the expected plant density within the revegetation area.</p> <p>Cover remains low as plants are still establishing, but with rabbit protection now installed, this is expected to increase significantly over spring.</p>	<p>Photo 3: Chambers Rd, south side, facing south.</p> 

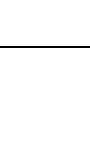
ESSO PIPELINE REPLACEMENT PROJECT	REVEGETATION RECORD	
Record completed by:		
Name	Kim Stewart	
Position	Senior Environmental Consultant, CNC Project Management	
Phone	0422 574 101	
Date	08 August 2019	
Signature		

ESSO PIPELINE REPLACEMENT PROJECT		REVEGETATION RECORD	ESSO
VEGETATION			
Location		Bridge Rd, KP131.1	
Sensitivity		Southern Brown Bandicoot Habitat	
Approval		EPBC Referral 2014/77202	
VEGETATION			
Date	11/07/2017		
Area	0.020 ha pasture 0.035 ha tubestock		
Notes	Reveg area covers east and west road verges and adjacent pasture. On the eastern side, reveg is half the width of the RoW. On the western side it is full width of the RoW.		

ESSO PIPELINE REPLACEMENT PROJECT 	REVEGETATION RECORD 
MONITORING POST PLANTING <p>Milestone: 6 months Target: 80% survival Date: 06/03/2018</p> <p>Good survival of planted stock, estimated at 95%, with additional reestablishment of native reeds (<i>Phragmites australis</i>) on the eastern roadside.</p>	<p>Photo 1: Bridge Road. Eastern side, facing north.</p> 
	<p>Photo 2: Bridge Road. Western side, facing north.</p> 

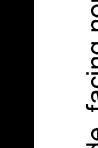
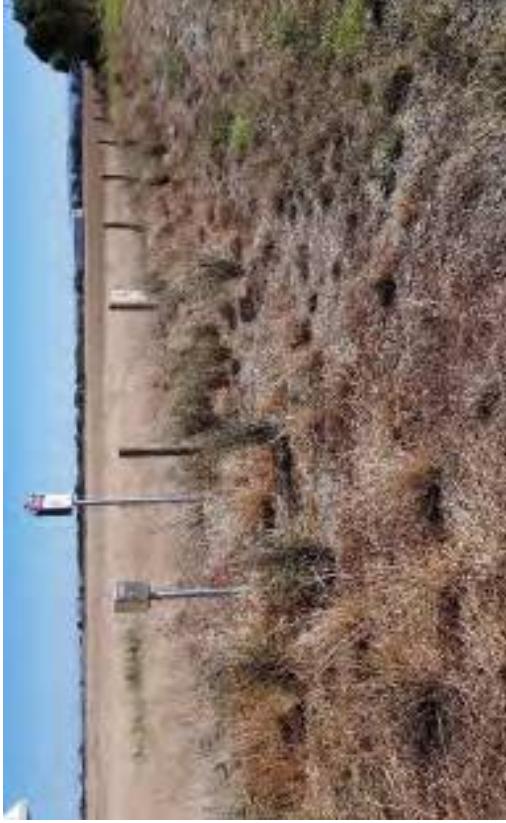
ESSO PIPELINE REPLACEMENT PROJECT 	REVEGETATION RECORD 
<p>MONITORING POST PLANTING</p> <p>Milestone: 12 months Target: 60% cover over 90% area Date: 13/09/2018</p> <p>Survival on the eastern roadside has decreased, estimated at 66%-75% and phragmites has seasonally died back. Little growth of planted tubestock. Cover less than 50%.</p> <p>Survival on the western roadside is high (~95%) and substantial growth observed. Cover >75%.</p>	<p>Photo 3: Bridge Road. Eastern side, facing north.</p>  <p>Photo 4: Bridge Road. Western side, facing north.</p> 

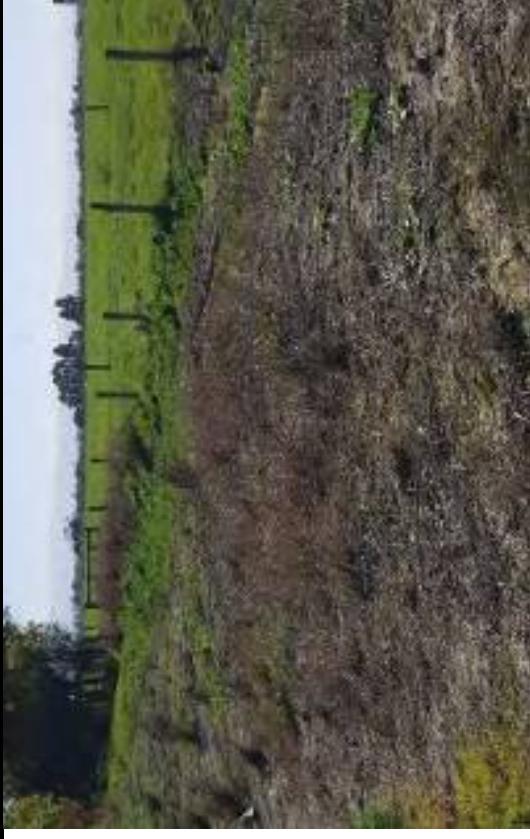
ESSO PIPELINE REPLACEMENT PROJECT	REVEGETATION RECORD	
MONITORING POST PLANTING		
Milestone: 2 years Target: 90% survival Date: 08/08/2019	<p>Survival on both roadsides is good and with maintenance planting, this area has ~95% of the expected plant density within the revegetation area.</p> <p>Phragmites in the drain has seasonally died back.</p> <p>Grasses and rushes on the edge of the drain appear to have been slashed, most likely during council vegetation maintenance work on the drain.</p> <p>Grasses and rushes have undergone seasonal senescence and winter dormancy, but will increase coverage in spring.</p>  <p>Photo 5: Bridge Road. Eastern side, facing north.</p>	 <p>Photo 6: Bridge Road. Western side, facing south.</p>

ESSO PIPELINE REPLACEMENT PROJECT	REVEGETATION RECORD
	

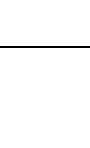
Record completed by:	
Name	Kim Stewart
Position	Senior Environmental Consultant, CNC Project Management
Phone	0422 574 101
Date	08 August 2019
Signature	

ESSO PIPELINE REPLACEMENT PROJECT		REVEGETATION RECORD	ESSO
Location	Caldermeade Rd, KP134		
Sensitivity	Southern Brown Bandicoot Habitat		
Approval	EPBC Referral 2014/77202		
VEGETATION			
Date	10/07/2017		
Area	0.014 Nacap (pasture) 0.074 Ecodynamics (tubestock)		
Notes	Two road verges and adjacent pasture. On eastern roadside this includes a formed drain. Mapped area includes a maintained access track adjacent to the drain that was not replanted (surplus plants included in remaining area).		

ESSO PIPELINE REPLACEMENT PROJECT 	REVEGETATION RECORD 
MONITORING POST PLANTING Milestone: 6 months Target: 80% survival Date: 06/03/2018	<p>Photo 1: Caldermeade Road. Eastern side, facing north. Shows slashed access track.</p> 
MONITORING POST PLANTING Milestone: 6 months Target: 80% survival Date: 06/03/2018	<p>Photo 2: Caldermeade Road. Western side, facing north.</p> 

ESSO PIPELINE REPLACEMENT PROJECT	REVEGETATION RECORD	ESSO
<p>MONITORING POST PLANTING</p> <p>Milestone: 12 months Target: 60% cover over 90% area Date: 13/09/2018</p> <p>Survival on the eastern roadside is low (~50%) there has been little growth and phragmites has died back. Some supplementary planting is evident but has not yet established any assessable cover. Cover is less than 50%.</p> <p>Survival on the western roadside is ~80% and there has been moderate growth of plants. Cover is ~60%.</p>	 <p>Photo 3: Caldermeade Road. Eastern side, facing north. Shows slashed access track.</p>	 <p>Photo 4: Caldermeade Road. Western side, facing north.</p>

ESSO PIPELINE REPLACEMENT PROJECT	MONITORING POST PLANTING	REVEGETATION RECORD
 Milestone: 2 years Target: 90% survival Date: 08/08/2019	<p>Survival of the original and supplementary planting on the eastern roadside is ~0%. Further replanting is required.</p> <p>With maintenance planting, the western roadside has 100% of the expected plant density within the revegetation area.</p> <p>Cover remains low as plants are still establishing, but with rabbit protection now installed, this is expected to increase significantly over spring.</p>	<p>Photo 5: Caldermeade Road. Eastern side, facing north.</p>  <p>Photo 6: Caldermeade Road. Western side, facing north.</p> 

ESSO PIPELINE REPLACEMENT PROJECT	REVEGETATION RECORD
	

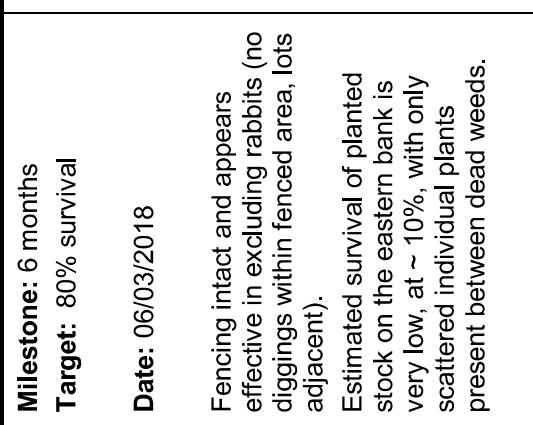
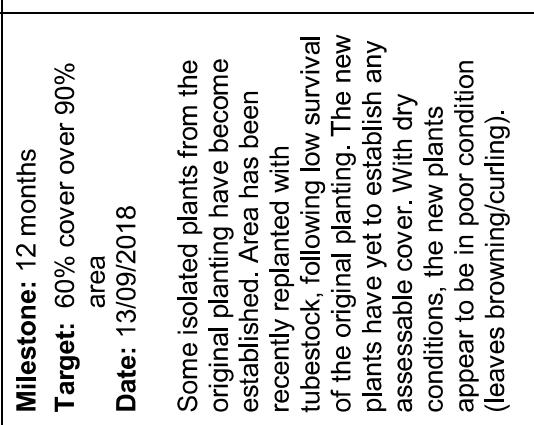
Record completed by:	
Name	Kim Stewart
Position	Senior Environmental Consultant, CNC Project Management
Phone	0422 574 101
Date	08 August 2019
Signature	

ESSO PIPELINE REPLACEMENT PROJECT		REVEGETATION RECORD	ESSO
Location	McColls Rd, KP134.5		

Sensitivity	Southern Brown Bandicoot Habitat
Approval	EPBC Referral 2014/77202

VEGETATION	
Date	11/07/2017
Area	0.017 Nacap (pasture) 0.013 Ecodynamics (tubestock)
Notes	The revegetation area is at the crossing of the Malcolm's Rd extension drain. Tubestock planting of the eastern bank to the property boundary (0.013 ha). This area was initially planted in July 2017, following rabbit damage, it was fenced and replanted in November 2017. Pasture sowing to the property boundary on the eastern side and to the top-of-bank on the western side.

ESSO PIPELINE REPLACEMENT PROJECT	REVEGETATION RECORD
MONITORING POST PLANTING	

Milestone: 6 months Target: 80% survival Date: 06/03/2018	<p>Fencing intact and appears effective in excluding rabbits (no diggings within fenced area, lots adjacent).</p> <p>Estimated survival of planted stock on the eastern bank is very low, at ~ 10%, with only scattered individual plants present between dead weeds.</p> 	<p>Photo 1: Malcolm's Rd extension drain, looking north across to the eastern bank.</p> 
Milestone: 12 months Target: 60% cover over 90% area Date: 13/09/2018	<p>Some isolated plants from the original planting have become established. Area has been recently replanted with tubestock, following low survival of the original planting. The new plants have yet to establish any assessable cover. With dry conditions, the new plants appear to be in poor condition (leaves browning/curling).</p> 	<p>Photo 2: Malcolm's Rd extension drain, looking north across to the eastern bank.</p> 

ESSO PIPELINE REPLACEMENT PROJECT	REVEGETATION RECORD
MONITORING POST PLANTING	

Milestone: 2 years	
Target: 90% survival	
Date: 08/08/2019	
Replanting with drought resilient species has been successful.	
With maintenance planting, this area has ~90% of the expected plant density within the revegetation area.	
Cover remains low as plants are still establishing, but with rabbit protection now installed and revised species composition, this is expected to increase significantly over spring.	

Record completed by:	
Name	Kim Stewart
Position	Senior Environmental Consultant, CNC Project Management
Phone	0422 574 101
Date	08 Aug 2019
Signature	

ESSO PIPELINE REPLACEMENT PROJECT		REVEGETATION RECORD	ESSO
VEGETATION			
Location	Hall Rd, KP141		
Sensitivity	Southern Brown Bandicoot Habitat		
Approval	EPBC Referral 2014/77202		
VEGETATION			
Date	21/07/2017		
Area	0.036 ha tubestock		
Notes	North roadside only, from drain to fence line and full width of the RoW.		
MONITORING POST PLANTING			
Milestone: 6 months			
Target: 80% survival			
Date: 06/03/2018			
	Very good survival and growth across the site. Estimated survival is 95%.		
			Photo 1: Hall Rd, north side, looking west.

ESSO PIPELINE REPLACEMENT PROJECT	REVEGETATION RECORD
<p>Milestone: 12 months Target: 60% cover over 90% area Date: 13/09/2018</p> <p>Survival has decreased since the 6-month survey and there has been little growth over winter. Cover is estimated to be at least 60% across the site.</p>	 <p>Photo 2: Hall Rd, north side, looking west.</p>

<p>Milestone: 2 years Target: 90% survival Date: 08/08/2019</p> <p>Grasses and rushes planted along the edge of the drain appear to have been slashed, most likely during council maintenance of vegetation in the drain. Survival of original planting is estimated to be ~60%. With maintenance planting, this area has 90% of the expected plant density within the revegetation area. Grasses and rushes have undergone seasonal senescence and winter dormancy, but will increase coverage in spring.</p>	 <p>Photo 3: Hall Rd, north side, looking west.</p>
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ESSO PIPELINE REPLACEMENT PROJECT	REVEGETATION RECORD	ESSO
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Record completed by:	
Name	Kim Stewart
Position	Senior Environmental Consultant, CNC Project Management
Phone	0422 574 101
Date	08 Aug 2019
Signature	

ESSO PIPELINE REPLACEMENT PROJECT		REVEGETATION RECORD	ESSO
VEGETATION			
Location	O'Brien's Rd, KP141.5		
Sensitivity	Southern Brown Bandicoot Habitat		
Approval	EPBC Referral 2014/77202		
VEGETATION			
Date	10/07/2017		
Area	0.021 Nacap (pasture) 0.035 Ecodynamics (tubestock)		
Notes	Revegetation area includes both road verges and adjacent pasture. Half the width of the RoW (northern half).		

ESSO PIPELINE REPLACEMENT PROJECT	REVEGETATION RECORD
MONITORING POST PLANTING	

MONITORING POST PLANTING**Milestone:** 6 months**Target:** 80% survival**Date:** 06/03/2018

Survival is very good on the eastern roadside, and acceptable on the western roadside. Less growth is also apparent on western side.

Overall estimated survival is 95%.

**Photo 1:**

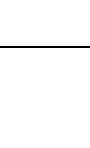
O'Briens Rd. Western side, facing north.

Photo 2:

O'Briens Rd. Eastern side, facing north.

ESSO PIPELINE REPLACEMENT PROJECT	REVEGETATION RECORD	
<p>MONITORING POST PLANTING</p> <p>Milestone: 12 months Target: 60% cover over 90% area Date: 13/09/2018</p> <p>Survival of the original planting is now low on the western roadside, the area has been recently replanted, but this has not yet established any assessable cover. Survival is good on the eastern roadside, although there has been only modest growth. Cover is less than 50% across the site.</p>	<p>Photo 3: O'Briens Rd. Western side, facing south.</p> 	<p>Photo 4: O'Briens Rd. Eastern side, facing north.</p> 

ESSO PIPELINE REPLACEMENT PROJECT 	REVEGETATION RECORD 
<p>MONITORING POST PLANTING</p> <p>Milestone: 2 years Target: 90% survival Date: 08/08/2019</p> <p>The area on the western roadside has been recently replanted with tube stock, following low survival of the earlier plantings. The density of plants is 100% of expected density, however they have yet to establish any assessable cover.</p> <p>The eastern roadside has >90% of the expected plant density within the revegetation area.</p>	<p>Photo 5: O'Briens Rd. Western side, facing north.</p>  <p>Photo 6: O'Briens Rd. Eastern side, facing north.</p> 

ESSO PIPELINE REPLACEMENT PROJECT	REVEGETATION RECORD
	

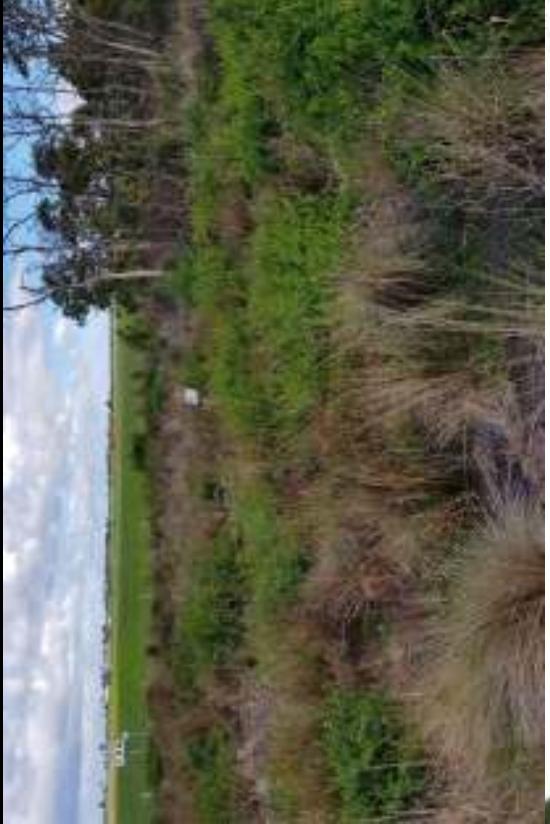
Record completed by:	
Name	Kim Stewart
Position	Senior Environmental Consultant, CNC Project Management
Phone	0422 574 101
Date	08 Aug 2019
Signature	

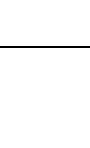
ESSO PIPELINE REPLACEMENT PROJECT	REVEGETATION RECORD	
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Location	South Gippsland Rail Reserve crossing, KP150
Sensitivity	Southern Brown Bandicoot Habitat
Approval	EPBC Referral 2014/77202
VEGETATION	
Date	03/07/2017
Area	0.044 Nacap (pasture) 0.193 Ecodynamics (tubestock)
Notes	Reduced width RoW at crossing. Full width replanted and adjacent pasture.

ESSO PIPELINE REPLACEMENT PROJECT 	REVEGETATION RECORD 
<p>MONITORING POST PLANTING</p> <p>Milestone: 6 months Target: 80% survival</p> <p>Date:</p> <p>High survival and strong growth across the site. Additional reestablishment of native reeds (<i>Phragmites australis</i>) in low areas. Estimated survival is 95%.</p>  <p>Photo 1: South Gippsland Rail Reserve crossing, facing southwest.</p>  <p>Photo 2: South Gippsland Rail Reserve crossing, facing northwest.</p>	

ESSO PIPELINE REPLACEMENT PROJECT	REVEGETATION RECORD	
MONITORING POST PLANTING		
Milestone: 12 months Target: 60% cover over 90% area Date: 13/09/2018	<p>Survival remains very high and, although there has been little growth over winter and the phragmites has died back (seasonal), cover is estimated to be ~70-80% across the site.</p>  <p>Photo 3: South Gippsland Rail Reserve crossing, facing southwest.</p>	 <p>Photo 4: South Gippsland Rail Reserve crossing, facing northwest.</p>

ESSO PIPELINE REPLACEMENT PROJECT	REVEGETATION RECORD	
<p>MONITORING POST PLANTING</p> <p>Milestone: 2 years Target: 90% survival Date: 08/08/2019</p> <p>Survival is very high, with close to 100% of the expected plant density within the revegetation area. Plants are well established and provide 95-100% cover.</p>	<p>Photo 5: South Gippsland Rail Reserve crossing, facing southwest.</p> 	<p>Photo 6: South Gippsland Rail Reserve crossing, facing north.</p> 

ESSO PIPELINE REPLACEMENT PROJECT	REVEGETATION RECORD
	

Record completed by:	
Name	Kim Stewart
Position	Senior Environmental Consultant, CNC Project Management
Phone	0422 574 101
Date	08 Aug 2019
Signature	

ESSO PIPELINE REPLACEMENT PROJECT		REVEGETATION RECORD	ESSO
Location	Railway Road		

Sensitivity	Southern Brown Bandicoot Habitat
Approval	EPBC Referral 2014/77202

VEGETATION	
Date	20/06/2017
Area	4.598 ha pasture 2.635 ha tubestock 3.065 ha crop
Notes	<p>A linear strip of land adjacent to the disused Southern Gippsland Railway Line and primarily within the rail reserve. The construction Right of Way (ROW) extends for ~5.5 km along the railway line.</p> <p>Koo Wee Rup Bypass to Deep Creek Drain Complex (KP153.4 to KP156.05) – tubestock reveg along sections of northern Row and connecting to southern veg corridors at fence lines. Remaining width of RoW re-established as pasture.</p> <p>Deep Creek Drain Complex to Dalmore Rd (Kp156.6 to KP158.03) – tubestock planting in 0.951 ha area of disused rail siding, 0.41 ha of habitat adjacent to tea tree swamp was not disturbed as anticipated. KP156.61 and KP157.4 sown with cover crop by adjacent LO.</p> <p>Dalmore Rd to Peers Rd (KP158.03 to KP159.1) sown with cover crop.</p>

MONITORING POST PLANTING	
Milestone: 6 months	Koo Wee Rup Bypass to Deep Creek Drain Complex (KP153.4 to KP156.05) – survival >90 % in 0.109 ha patch at KP153.5.
Target: 80% survival	In the remainder of the area, survival is <5 %, with only scattered plants remaining. Between KP153.9 and KP155 adjacent land owners have grazed cattle. Between KP155 and 156 the adjacent land owner has mowed the RoW. This is consistent with prior land management, but has resulted in > 90% loss of planted stock.

Deep Creek Drain Complex to Dalmore Rd (Kp156.6 to KP158.03) – survival of planted stock ~90 %.

KP156.61 and KP157.4 – cover crop has been slashed.

Dalmore Rd to Peers Rd (KP158.03 to KP159.1) – cover crop remains, land ~ fallow.

<p>ESSO PIPELINE REPLACEMENT PROJECT</p>	<p>REVEGETATION RECORD</p>	<p>MONITORING POST PLANTING</p>
	<p>Photo 1: Railway Rd. KP153.5. facing west. Successful replanting.</p> 	<p>Photo 2: Railway Rd. KP154.8, facing east. Grazed RoW.</p> 

<p>ESSO PIPELINE REPLACEMENT PROJECT</p>	<p>REVEGETATION RECORD</p>	<p>MONITORING POST PLANTING</p>
		<p>Photo 3: Railway Rd. KP156, facing east. Mowed RoW.</p>  <p>Photo 4: Rail Reserve near Dalmore Rd. KP157.7, facing west. Successful replanting.</p> 

ESSO PIPELINE REPLACEMENT PROJECT	REVEGETATION RECORD	ESSO
MONITORING POST PLANTING	 <p>Photo 5: Rail Reserve adjacent to Peers Rd. KP158, facing west. Cover crop to be resown with lucerne.</p>	

ESSO PIPELINE REPLACEMENT PROJECT 	REVEGETATION RECORD	
<p>MONITORING POST PLANTING</p> <p>Milestone: 12 months Target: 60% cover over 90% area</p> <p>Date: 13/09/2018</p> <p>Overall cover is assessed as greater than 60% cover over 90% area.</p> <p>Koo Wee Rup Bypass to Deep Creek Drain Complex (KP153.4 to KP156.05) – remaining tubestock patch at KP153.5 – good survival and growth, cover greater than 60%. Some planted grasses remain at KP156, but majority is pasture. Elsewhere pasture well established.</p>		<p>Photo 1: Railway Rd. KP153.5, facing west.</p>



Photo 2:
Railway Rd. KP154.8, facing east. Grazed RoW.

<p>ESSO PIPELINE REPLACEMENT PROJECT</p>	<p>REVEGETATION RECORD</p>	<p>MONITORING POST PLANTING</p>
		<p>Photo 3: Railway Rd. KP156, facing east. Mowed RoW. Some planted native grasses remain, but majority is pasture</p>  <p>Photo 4: Rail Reserve near Dalmore Rd. KP157.7. facing west.</p>  <p>Deep Creek Drain Complex to Dalmore Rd (Kp156.6 to KP158.03) – very good survival and growth of planted stock, cover greater than 60%.</p>

ESSO PIPELINE REPLACEMENT PROJECT	REVEGETATION RECORD
MONITORING POST PLANTING	 <p>Photo 5: Rail Reserve adjacent to Peers Rd. KP158, facing west.</p>

MONITORING POST PLANTING	<p>Dalmore Rd to Peers Rd (KP158.03 to KP159.1) – cover crop remains, land ~ fallow.</p>
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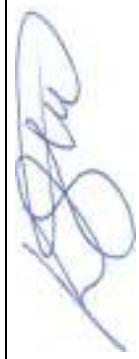
ESSO PIPELINE REPLACEMENT PROJECT	REVEGETATION RECORD	
MONITORING POST PLANTING	<p>Milestone: 2 years Target: 90% survival Date: 08/08/2019</p> <p>Overall, there is >90% of the expected plant density within the remaining tubestock revegetation areas.</p>	<p>Photo 1: Railway Rd. KP153.5. facing west.</p> 
	<p>Koo Wee Rup Bypass to Deep Creek Drain Complex (KP153.4 to KP156.05):</p> <p>The remaining tubestock patch at KP153.5 has ~90% survival of original planting. Grasses and rushes have undergone seasonal senescence and winter dormancy, but will increase coverage in spring.</p> <p>Some planted grasses remain at KP156, but majority is pasture. Elsewhere pasture well established.</p>	<p>Photo 2: Railway Rd. KP154.8, facing east. Grazed RoW.</p> 

ESSO PIPELINE REPLACEMENT PROJECT	REVEGETATION RECORD
MONITORING POST PLANTING	<p>Photo 3: Railway Rd. KP156, facing east. Mowed RoW. Some planted native grasses remain, but majority is pasture, but they are difficult to distinguish from the pasture (see below).</p> 

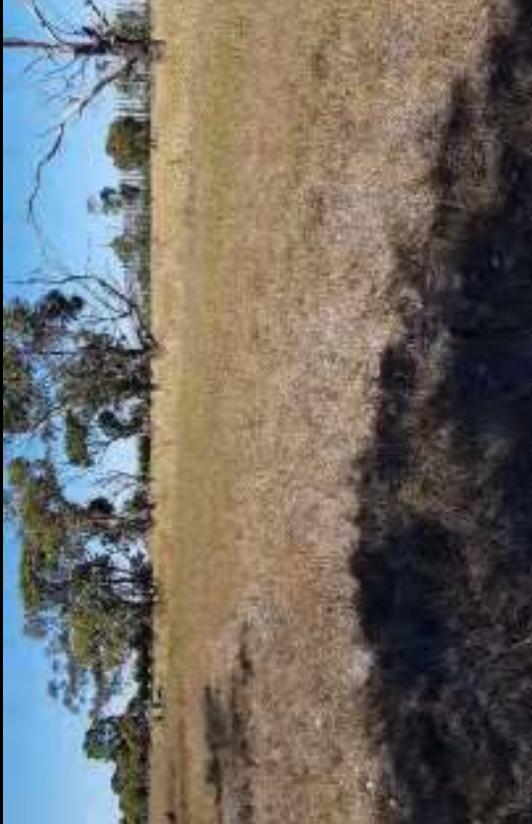
MONITORING POST PLANTING	<p>Photo 3: Railway Rd. KP156, facing east. Mowed RoW. Some planted native grasses remain, but majority is pasture, but they are difficult to distinguish from the pasture (see below).</p> 	<p>Photo 4: Rail Reserve near Dalmore Rd. KP157.7. facing west.</p> 	<p>Deep Creek Drain Complex to Dalmore Rd (Kp156.6 to KP158.03) – the largest revegetation area at this location. It has very good survival and growth of original planted stock, estimated to be ~95 % of the expected plant density.</p>
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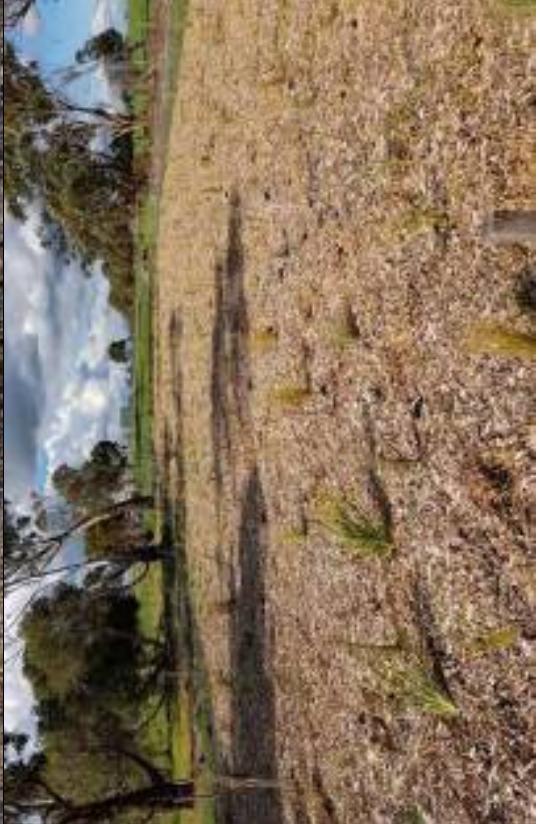
ESSO PIPELINE REPLACEMENT PROJECT	REVEGETATION RECORD	
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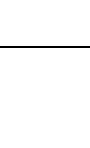
MONITORING POST PLANTING		Photo 5: Rail Reserve adjacent to Peers Rd. KP159, facing east.
Dalmore Rd to Peers Rd (KP158.03 to KP159.1) – land occupier to resow crops, currently fallow.		

Record completed by:	
Name	Kim Stewart
Position	Senior Environmental Consultant, CNC Project Management
Phone	0422 574 101
Date	08 Aug 2019
Signature	

ESSO PIPELINE REPLACEMENT PROJECT		REVEGETATION RECORD	ESSO
Location	Peers Rd A, KP159.5		
Sensitivity	Southern Brown Bandicoot Habitat		
Approval	EPBC Referral 2014/77202		
VEGETATION			
Date	30/06/2017		
Area	0.108 Nacap (pasture) 0.147 Ecodynamics (tubestock)		
Notes	Rural block, previously scattered trees with an understorey of long grasses, only occasionally grazed. Ground level is slightly lower and soils darker and damper than immediate surrounds. Following reinstatement, pasture grasses established quickly.		

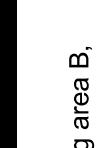
ESSO PIPELINE REPLACEMENT PROJECT	REVEGETATION RECORD	
MONITORING POST PLANTING	<p>Photo 1: Peers Rd, reveg area A, facing southeast.</p> 	<p>Photo 2: Peers Rd, reveg area A, facing west.</p> 
<p>Milestone: 6 months Target: 80% survival Date: 08/03/2018</p> <p>Grasses established across the site. No apparent survival of shrubs or small tree species. Individual native grasses difficult to distinguish from pasture. Estimated survival is <20 %.</p> <p>Soils are damper than surrounding areas. Rabbits are present in the area, but the revegetation area is fenced effectively. The landowner has excluded stock up to the time of the inspection and not mowed or otherwise disturbed the area.</p>		

ESSO PIPELINE REPLACEMENT PROJECT		REVEGETATION RECORD	ESSO
MONITORING POST PLANTING			
Milestone: 12 months Target: 60% cover over 90% area Date: 14/09/2018	<p>The whole area has been recently worked to loosen the soil and replanted with tubestock, following low survival of the original planting. Plants have yet to establish any assessable cover.</p> 	<p>Photo 3: Peers Rd, reveg area A, facing west.</p>	
Milestone: 2 years Target: 90% survival Date: 08/08/2019	<p>The whole area has been replanted relatively recently following low survival of earlier plantings.</p> <p>The area has been mulched and rabbit protections improved.</p> <p>The maintenance planting has 100% of the expected plant density.</p>	<p>Photo 4: Peers Rd, reveg area A, facing east.</p>	

ESSO PIPELINE REPLACEMENT PROJECT	REVEGETATION RECORD
	

Record completed by:	
Name	Kim Stewart
Position	Senior Environmental Consultant, CNC Project Management
Phone	0422 574 101
Date	08 Aug 2019
Signature	

ESSO PIPELINE REPLACEMENT PROJECT		REVEGETATION RECORD	ESSO
Location	Peers Rd B, KP159.9		
Sensitivity	Southern Brown Bandicoot Habitat		
Approval	EPBC Referral 2014/77202		
VEGETATION			
Date	27/06/2017		
Area	0.055 Nacap (pasture) 0.067 Ecodynamics (tubestock)		
Notes	Revegetation of three fence line windbreaks and adjacent pasture. Rabbit fencing installed.		
MONITORING POST PLANTING			
Milestone: 6 months Target: 80% survival		Photo 1: Peers Rd reveg area B, eastern windbreak, facing south	
Date: 08/03/2018		Good survival and growth. Estimated survival is 95 %.	

ESSO PIPELINE REPLACEMENT PROJECT 	REVEGETATION RECORD 
MONITORING POST PLANTING	<p>Photo 2: Peers Rd reveg area B, middle windbreak, facing south</p> 
	<p>Photo 3: Peers Rd reveg area B, western windbreak, facing north.</p> 

ESSO PIPELINE REPLACEMENT PROJECT 	REVEGETATION RECORD 
MONITORING POST PLANTING <p>Milestone: 12 months Target: 60% cover over 90% area Date: 14/09/2018</p> <p>Survival and growth are high on the eastern and middle windbreaks, which both have more than 60% cover.</p> <p>Survival is good, but growth lower on the western windbreak, which has an estimated 50% cover.</p>	<p>Photo 4: Peers Rd reveg area B, eastern windbreak, facing north</p>  <p>Photo 5: Peers Rd reveg area B, middle windbreak, facing south</p> 

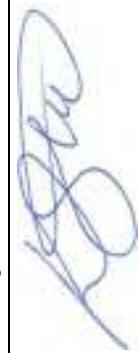
ESSO PIPELINE REPLACEMENT PROJECT	REVEGETATION RECORD
MONITORING POST PLANTING	 <p>Photo 6: Peers Rd reveg area B, western windbreak, facing north.</p>

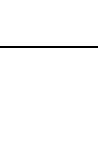
MONITORING POST PLANTING	 <p>Photo 6: Peers Rd reveg area B, western windbreak, facing north.</p>
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ESSO PIPELINE REPLACEMENT PROJECT	REVEGETATION RECORD	
MONITORING POST PLANTING		
<p>Milestone: 2 years Target: 90% survival Date: 08/08/2019</p> <p>Overall, this site has >90% of the expected plant density.</p> <p>Survival and growth are high on the eastern and middle windbreaks.</p> <p>Survival is good, but growth lower on the western windbreak, which has an estimated 50% cover. With maintenance planting, this area has ~85% of the expected plant density within the revegetation area.</p>	 <p>Photo 7: Peers Rd reveg area B, eastern windbreak, facing north</p>	 <p>Photo 8: Peers Rd reveg area B, middle windbreak, facing south</p>

ESSO PIPELINE REPLACEMENT PROJECT	REVEGETATION RECORD
MONITORING POST PLANTING	

MONITORING POST PLANTING	<p>Photo 9: Peers Rd reveg area B, western windbreak, facing north.</p> 
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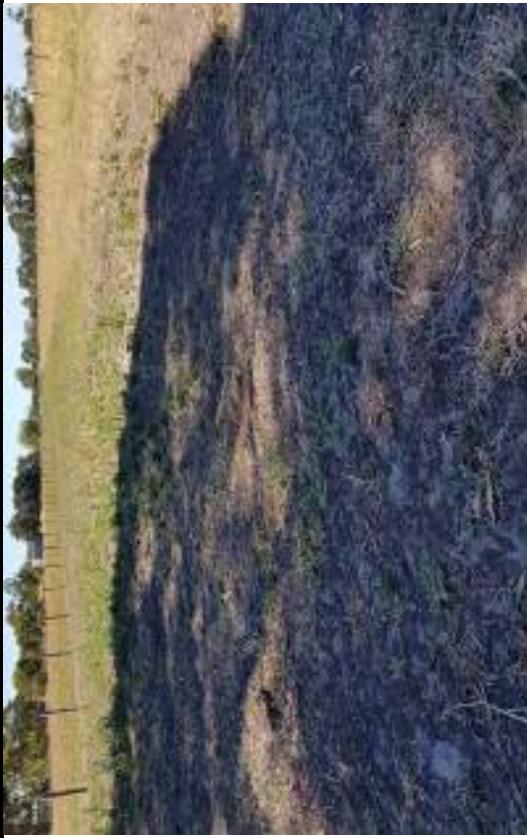
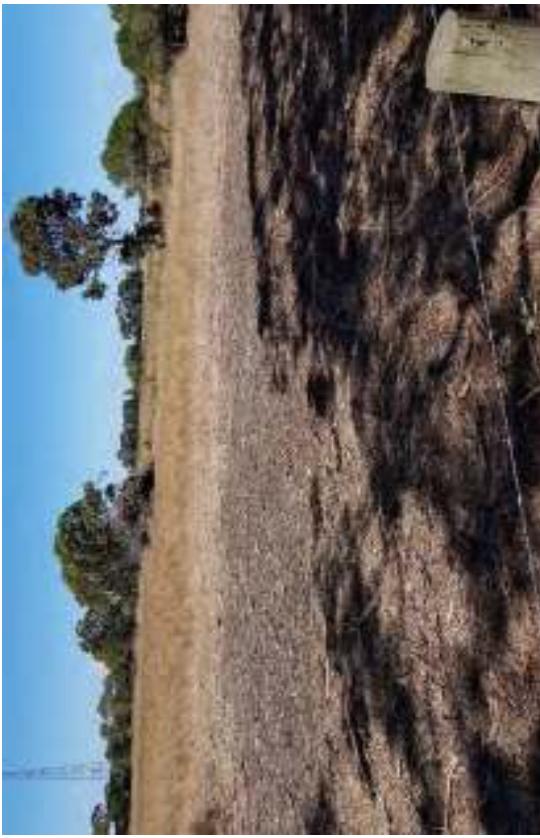
Record completed by:	
Name	Kim Stewart
Position	Senior Environmental Consultant, CNC Project Management
Phone	0422 574 101
Date	08 Aug 2019
Signature	

<p>ESSO PIPELINE REPLACEMENT PROJECT</p>	<p>REVEGETATION RECORD</p>
	

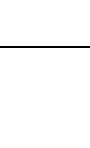
ESSO PIPELINE REPLACEMENT PROJECT	REVEGETATION RECORD	
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Location	Tooradin Station Rd; KP160.5
Sensitivity	Southern Brown Bandicoot Habitat
Approval	EPBC Referral 2014/77202

VEGETATION	
Date	02/04/2017
Area	0.068 ha pasture
Notes	Pasture area adjacent to undisturbed roadside vegetation on the eastern roadside. The western roadside was undisturbed.

ESSO PIPELINE REPLACEMENT PROJECT	REVEGETATION RECORD	
MONITORING POST PLANTING		
<p>Milestone: 6 months Target: N/A- pasture only Date: 06/03/2018</p> <p>Pasture is currently in summer senescence, however there was minimal evidence of pasture having established prior to summer within the reinstated area, particularly in the area adjacent to the roadside row of large Eucalyptus. Ground conditions are very dry and the roadside vegetation appears to be causing a small localised rain shadow.</p> <p>Note: similar bare ground is present adjacent to roadside vegetation outside the reinstated RoW, suggesting this is more broad than just an issue with reinstatement.</p>	 <p>Photo 1: Tooradin Station Road revegetation area (facing east)</p>	 <p>Photo 2: Tooradin Station Road <u>outside</u> RoW (facing east)</p>

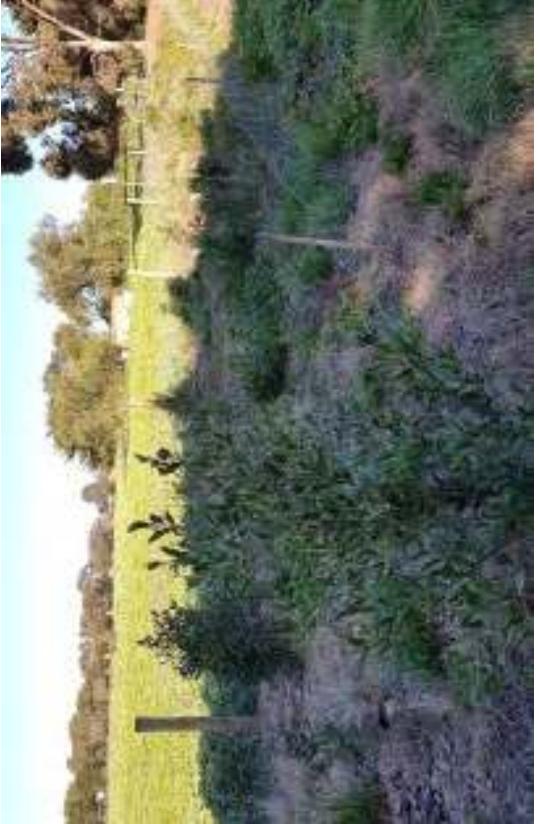
ESSO PIPELINE REPLACEMENT PROJECT	REVEGETATION RECORD	
ESSO	Photo 3: Tooradin Station Road revegetation area (facing east)	Photo 4: Tooradin Station Road revegetation area (facing north east)
MONITORING POST PLANTING <p>Milestone: 12 months Target: 60% cover over 90% area Date: 13/09/2018</p> <p>Pasture has established across the disturbed construction right of way, although interspersed with capeweed. Overall cover is greater than 60%.</p>		

ESSO PIPELINE REPLACEMENT PROJECT	REVEGETATION RECORD
	

Record completed by:	
Name	Kim Stewart
Position	Senior Environmental Consultant, CNC Project Management
Phone	0422 574 101
Date	08 Aug 2019
Signature	

ESSO PIPELINE REPLACEMENT PROJECT		REVEGETATION RECORD	ESSO
VEGETATION			
Location	Landale Rd; KP161.5		
Sensitivity	Southern Brown Bandicoot Habitat		
Approval	EPBC Referral 2014/77202		
Date	23/06/2017		
Area	0.046 Nacap (pasture) 0.070 Ecodynamics (tubestock)		
Notes	Both road verges and adjacent pasture. Full width of ROW.		
MONITORING POST PLANTING			Photo 1: Landale Rd, east side, facing south.
Milestone: 6 months	Target: 80% survival		
	Date: 06/03/2018		
		Generally good survival and moderate growth. An area (9 m x 5 m) above the pipe alignment has only 50 % survival and requires replanting. Estimated survival is 95 %.	

 REVEGETATION RECORD	
<p>Photo 2: Landale Rd, east side, facing south, area requiring replanting.</p> 	<p>Photo 3: Landale Rd, west side, facing south</p> 

ESSO PIPELINE REPLACEMENT PROJECT	REVEGETATION RECORD
<p>Milestone: 12 months Target: 60% cover over 90% area Date: 13/09/2018</p> <p>Survival on both roadsides is good, with significant growth observed. Cover is greater than 60% across the site.</p>	 <p>Photo 4: Landale Rd, east side, facing south.</p>  <p>Photo 5: Landale Rd, west side, facing south</p>

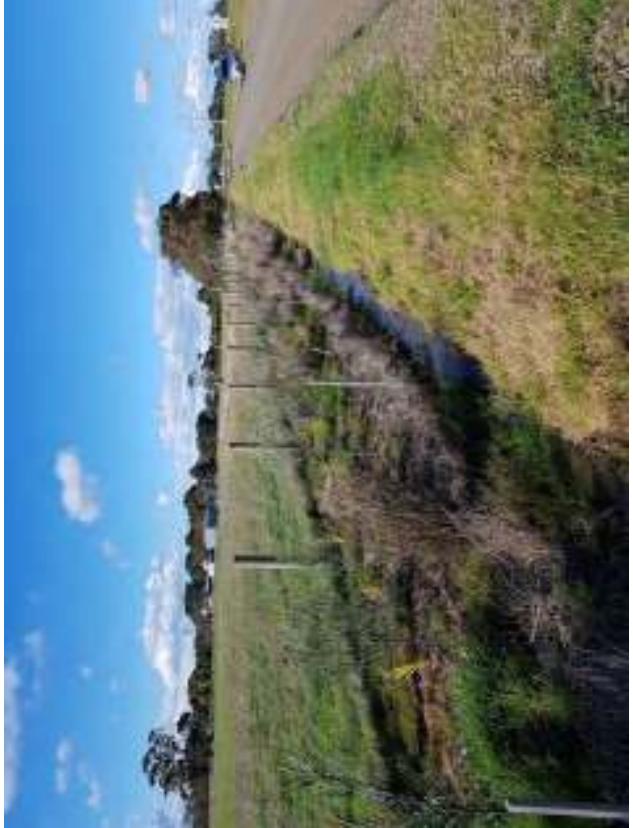
ESSO PIPELINE REPLACEMENT PROJECT	REVEGETATION RECORD
<p>Milestone: 2 years Target: 90% survival Date: 08/08/2019</p> <p>Survival on both roadsides is good, with >90% of the expected plant density within the revegetation area.</p>	 <p>Photo 6: Landale Rd, east side, facing south.</p>  <p>Photo 7: Landale Rd, west side, facing south</p>

ESSO PIPELINE REPLACEMENT PROJECT	REVEGETATION RECORD	ESSO
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Record completed by:	
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Position	Senior Environmental Consultant, CNC Project Management
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Date	08 Aug 2019
Signature	

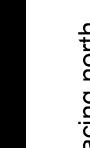
ESSO PIPELINE REPLACEMENT PROJECT		REVEGETATION RECORD	ESSO
Location	Lynes Rd; KP163		
Sensitivity	Southern Brown Bandicoot Habitat		
Approval	EPBC Referral 2014/77202		
VEGETATION			
Date	06/06/2017		
Area	0.253 Nacap (pasture) 0.031 Ecodynamics (tubestock)		
Notes	Tubestock replanting of the northern road verge. Reinstated pasture on southern road verge, adjacent to northern road verge and adjacent to undisturbed channel.		
MONITORING POST PLANTING			
Milestone: 6 months Target: 80% survival	Photo 1: 		
Date: 06/03/2018	Pasture well established. Generally good survival of planted stock, an area (2.5 m x 3 m) at eastern end requires replanting. Estimated survival of planted stock is 90%. Rabbit fencing in place.		

ESSO PIPELINE REPLACEMENT PROJECT	REVEGETATION RECORD	Photo 2: Lynes Rd. southern roadside, facing southwest.	Milestone: 12 months Target: 60% cover over 90% area Date: 13/09/2018 Pasture well established. Planted tubestock, has generally good survival and growth. Overall cover is greater than 60%.
			

ESSO PIPELINE REPLACEMENT PROJECT	REVEGETATION RECORD	Photo 4: Lynes Rd. southern roadside, facing southwest.	Photo 5: Lynes Rd. Northern roadside, facing east. <p>Milestone: 2 years Target: 90% survival Date: 08/08/2019</p> <p>Planted tubestock has generally good survival and growth. With maintenance planting, this area has >90% of the expected plant density within the revegetation area.</p> <p>Adjacent pasture well established.</p>
			

ESSO PIPELINE REPLACEMENT PROJECT	REVEGETATION RECORD	
Record completed by:		
Name	Kim Stewart	
Position	Senior Environmental Consultant, CNC Project Management	
Phone	0422 574 101	
Date	08 Aug 2019	
Signature		

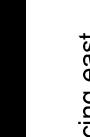
ESSO PIPELINE REPLACEMENT PROJECT		REVEGETATION RECORD	ESSO
Location	Fisheries Rd, KP168		
Sensitivity	Southern Brown Bandicoot Habitat		
Approval	EPBC Referral 2014/77202		
VEGETATION			
Date	12/07/2017		
Area	0.007 ha Nacap (pasture) 0.077 ha Ecodynamics (tubestock) 0.035 ha Landowner (pasture)		
Notes	Tubestock planting on both roadsides. Eastern farm access track relocated during construction and replanting area adjusted to ensure no loss of area. Adjacent pasture reinstated by Nacap (to the east) and landowner (to the west).		

ESSO PIPELINE REPLACEMENT PROJECT 	REVEGETATION RECORD 
MONITORING POST PLANTING Milestone: 6 months Target: 80% survival Date: 06/03/2018	<p>Photo 1: Fisheries Rd. East side, facing north</p> 
	<p>Photo 2: Fisheries Rd. East side, facing south</p> 

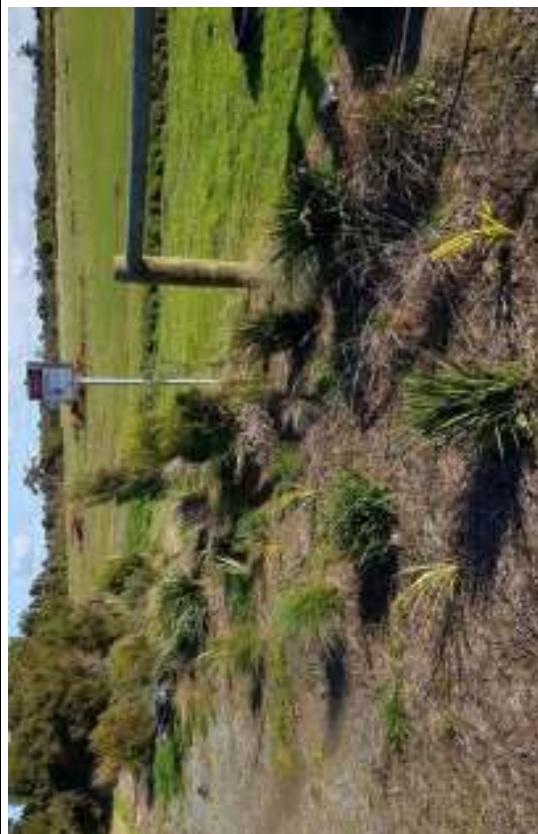
<p>ESSO PIPELINE REPLACEMENT PROJECT</p>	<p>MONITORING POST PLANTING</p>	<p>REVEGETATION RECORD</p>	<p>ESSO</p>
		<p>Photo 3: Fisheries Rd. west side, facing north</p> 	<p>Photo 4: Fisheries Rd. west side, facing south</p> 

ESSO PIPELINE REPLACEMENT PROJECT 	REVEGETATION RECORD	
<p>MONITORING POST PLANTING</p> <p>Milestone: 12 months Target: 60% cover over 90% area Date: 13/09/2018</p> <p>Generally good survival and growth, particularly on the eastern roadside. Overall cover estimated at ~60%.</p>	<p>Photo 5: Fisheries Rd. East side, facing north</p> 	<p>Photo 6: Fisheries Rd. East side, facing south</p> 

ESSO PIPELINE REPLACEMENT PROJECT	REVEGETATION RECORD
MONITORING POST PLANTING	 <p>Photo 7: Fisheries Rd. west side, facing south</p>

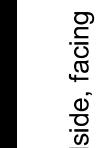
ESSO PIPELINE REPLACEMENT PROJECT 	REVEGETATION RECORD 
MONITORING POST PLANTING Milestone: 2 years Target: 90% survival Date: 08/08/2019	<p>The survival of original plants is ~80-90%. With maintenance planting, this area has >90% of the expected plant density within the revegetation area.</p> <div style="display: flex; align-items: center; justify-content: space-between;"> <div style="flex: 1;">  </div> <div> Photo 8: Fisheries Rd. East side, facing east </div> </div> <div style="display: flex; align-items: center; justify-content: space-between;"> <div style="flex: 1;">  </div> <div> Photo 9: Fisheries Rd. west side, facing north </div> </div>

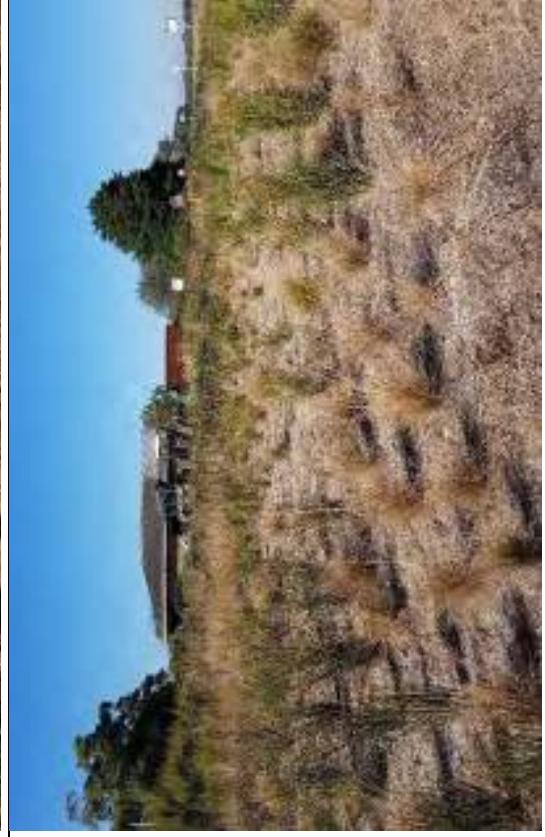
ESSO PIPELINE REPLACEMENT PROJECT	REVEGETATION RECORD	
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MONITORING POST PLANTING	 Photo 10: Fisheries Rd. west side, facing south
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Record completed by:	
Name	Kim Stewart
Position	Senior Environmental Consultant, CNC Project Management
Phone	0422 574 101
Date	08 Aug 2019
Signature	

ESSO PIPELINE REPLACEMENT PROJECT		REVEGETATION RECORD	ESSO
VEGETATION			
Location	Callanans Ln; KP173.5		
Sensitivity	Southern Brown Bandicoot Habitat		
Approval	EPBC Referral 2014/77202		
Date	05/06/2017		
Area	0.089 Natural regeneration 0.149 Ecodynamics (tubestock)		
Notes	Tubestock replanting of the eastern roadside, to the property fence line, and on the western roadside to 100 m into the adjacent property. The Melbourne Water easement to the west of Callanan's Lane was not pruned/mowed rather than cleared and graded. This area was allowed to regenerate naturally to avoid further disturbance. Rabbit fencing installed.		

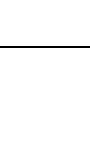
ESSO PIPELINE REPLACEMENT PROJECT 	REVEGETATION RECORD 
MONITORING POST PLANTING <p>Milestone: 6 months Target: 80% survival Date: 09/03/2018</p> <p>Very high survival of planted stock, especially west to the of Callanan's Lane. Estimated survival is 95%. Melbourne Water easement to the west of Callanan's Lane has again been mowed, presumably as part of their routine easement maintenance.</p>	<p>Photo 1: Callanan's Lane. Eastern roadside, facing south.</p>  <p>Photo 2: Callanan's Lane. Western roadside, facing west.</p> 

<p>ESSO PIPELINE REPLACEMENT PROJECT</p>	<p>REVEGETATION RECORD</p>	<p>ESSO</p>
<p>MONITORING POST PLANTING</p>	<p>Photo 3: Callanan's Lane. Western roadside, mowed Melbourne Water easement, facing northwest.</p> 	<p>Photo 4: 50 m west of Callanan's Lane, facing southwest.</p> 

ESSO PIPELINE REPLACEMENT PROJECT	MONITORING POST PLANTING	REVEGETATION RECORD
	<p>Milestone: 12 months Target: 60% cover over 90% area Date: 13/09/2018</p> <p>Survival on both sides of Callamans Lane is high, with plants on the eastern side having grown more. Overall cover is greater than 60% across the site.</p> 	<p>Photo 5: Callanan's Lane. Eastern roadside, facing south.</p> <p>Photo 6: Callanan's Lane. Western roadside, facing west.</p> 

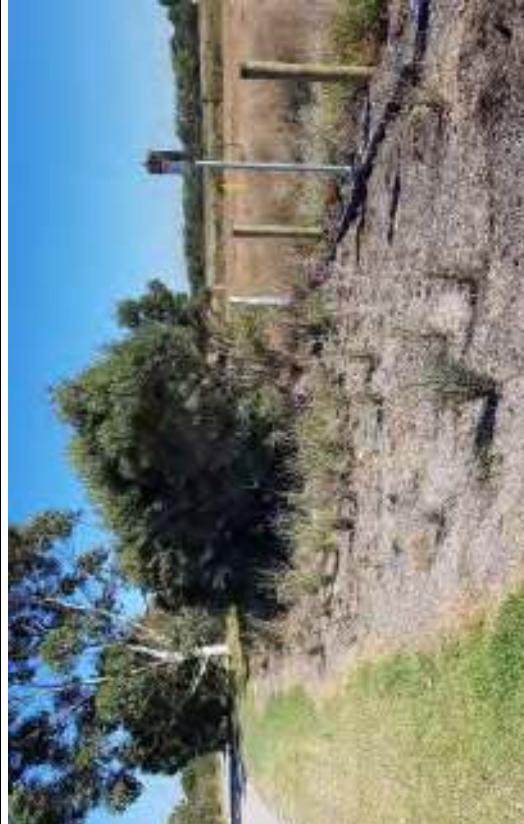
ESSO PIPELINE REPLACEMENT PROJECT	REVEGETATION RECORD
MONITORING POST PLANTING	

Milestone: 2 years Target: 90% survival Date: 08/08/2019	<p>Photo 7: Callanan's Lane. Eastern roadside, facing south.</p> 	<p>Photo 8: Callanan's Lane. Western roadside, facing west.</p> 
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ESSO PIPELINE REPLACEMENT PROJECT	REVEGETATION RECORD
	

Record completed by:	
Name	Kim Stewart
Position	Senior Environmental Consultant, CNC Project Management
Phone	0422 574 101
Date	08 Aug 2019
Signature	

ESSO PIPELINE REPLACEMENT PROJECT		REVEGETATION RECORD	ESSO
VEGETATION			
Location	South Boundary Road East, KP174.5		
Sensitivity	Southern Brown Bandicoot Habitat		
Approval	EPBC Referral 2014/77202		
Date	05/06/2017		
Area	0.015 ha Nacap (pasture) 0.034 ha Ecodynamics (tubestock)		
Notes	Tubestock revegetation of both roadsides and residual revegetation in the market garden to the south (Nacap seeded with pasture as a cover crop)		

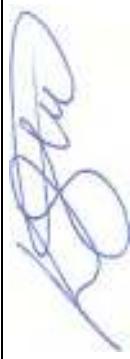
ESSO PIPELINE REPLACEMENT PROJECT	MONITORING POST PLANTING	REVEGETATION RECORD
 Milestone: 6 months Target: 80% survival Date: 09/03/2018	<p>Market garden remains fallow.</p> <p>Generally good survival of planted stock, overall estimated at 85%.</p> <p>Small area (2 m x 2 m) of rabbit damage on the northern roadside.</p> <p>Southern roadside has been mowed (possibly by adjacent landowner or council as part of maintenance of roadside) although mowed planted grasses persist.</p> 	<p>Photo 1: South Boundary Rd. Northern roadside, facing west. Area of rabbit damage in foreground.</p> <p>Photo 2: South Boundary Rd. southern roadside. Mowed area to the left of picture.</p> 

ESSO PIPELINE REPLACEMENT PROJECT	MONITORING POST PLANTING	REVEGETATION RECORD
 Milestone: 12 months Target: 60% cover over 90% area Date: 13/09/2018	<p>Pasture has begun to establish within the former market garden to the south. Survival and growth on the southern roadside is low, with pasture grasses beginning to encroach. Cover is less than 50%. On the northern roadside, survival is generally good, with estimated cover at ~ 60%.</p>  <p>Photo 3: South Boundary Rd. Northern roadside, facing west.</p>	 <p>Photo 4: South Boundary Rd. southern roadside.</p>

ESSO PIPELINE REPLACEMENT PROJECT		REVEGETATION RECORD	ESSO
MONITORING POST PLANTING			
Milestone: 2 years Target: 90% survival Date: 08/08/2019	Revegetation on the southern roadside is much improved following the installation of rabbit fencing. With maintenance planting, this area has >90% of the expected plant density within the revegetation area. Grasses and rushes have undergone seasonal senescence and winter dormancy, but will increase coverage in spring.	 Photo 5: South Boundary Rd. Northern roadside, facing west.	 Photo 6: South Boundary Rd. Northern roadside, facing east.

ESSO PIPELINE REPLACEMENT PROJECT	REVEGETATION RECORD	
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MONITORING POST PLANTING	Photo 7: South Boundary Rd. southern roadside.
	

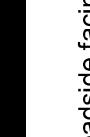
Record completed by:	
Name	Kim Stewart
Position	Senior Environmental Consultant, CNC Project Management
Phone	0422 574 101
Date	08 Aug 2019
Signature	

ESSO PIPELINE REPLACEMENT PROJECT		REVEGETATION RECORD	ESSO
Location	Bungower Rd; KP176.5		

Sensitivity	Southern Brown Bandicoot Habitat
Approval	EPBC Referral 2014/77202

VEGETATION	
Date	22/05/2017
Area	0.009 ha Nacap (pasture) 0.040 ha Ecodynamics (tubestock)
Notes	Revegetation of southern roadside and adjacent property boundary and pasture.

ESSO PIPELINE REPLACEMENT PROJECT	REVEGETATION RECORD	
MONITORING POST PLANTING	<p>Milestone: 6 months Target: 80% survival</p> <p>Date: 09/03/2018</p> <p>Pasture established. Patchy survival of planted stock, overall estimated at 80%, with additional reestablishment of native reeds (<i>Phragmites australis</i>).</p>	 <p>Photo 1: Bungower Rd. Southern roadside facing west.</p>  <p>Photo 2: Bungower Rd. Southern side property boundary, facing west.</p>

ESSO PIPELINE REPLACEMENT PROJECT 	REVEGETATION RECORD 
<p>MONITORING POST PLANTING</p> <p>Milestone: 12 months Target: 60% cover over 90% area Date: 13/09/2018</p> <p>Survival of planted stock remains low and patchy. With seasonal dieback of the phragmites reeds, overall cover is estimated at less than 50%.</p>	<p>Photo 3: Bungower Rd. Southern roadside facing southwest.</p>  <p>Photo 4: Bungower Rd. Southern side property boundary, facing west.</p> 

ESSO PIPELINE REPLACEMENT PROJECT	REVEGETATION RECORD
MONITORING POST PLANTING	

Milestone: 2 years Target: 90% survival Date: 08/08/2019	<p>Cover remains low, however, with maintenance planting, this area has >90% of the expected plant density within the revegetation area. Grasses, rushes and reeds have undergone seasonal senescence and winter dormancy, but will increase coverage in spring.</p> 	<p>Photo 5: Bungower Rd. Southern roadside facing southwest.</p> 
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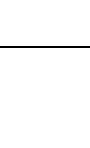
ESSO PIPELINE REPLACEMENT PROJECT	REVEGETATION RECORD	
Record completed by:		
Name	Kim Stewart	
Position	Senior Environmental Consultant, CNC Project Management	
Phone	0422 574 101	
Date	08 Aug 2019	
Signature		

ESSO PIPELINE REPLACEMENT PROJECT		REVEGETATION RECORD	ESSO
Location	Pikes Rd; KP178.5		
Sensitivity	Southern Brown Bandicoot Habitat		
Approval	EPBC Referral 2014/77202		
VEGETATION			
Date	12/07/2017		
Area	0.375 ha tubestock		
Notes	Tubestock revegetation of northern roadside and 100m into adjacent property across swampy low-lying area. Rabbit fencing in place.		

ESSO PIPELINE REPLACEMENT PROJECT 	REVEGETATION RECORD 
<p>MONITORING POST PLANTING</p> <p>Milestone: 6 months Target: 80% survival</p> <p>Date: 09/03/2018</p> <p>Good survival and strong growth across the site. Estimated survival is 95 %.</p> 	<p>Photo 1: Pikes Rd, northern roadside, facing west..</p>  <p>Photo 2: Pikes Rd. Northern side, adjacent property, facing north.</p>

ESSO PIPELINE REPLACEMENT PROJECT	REVEGETATION RECORD	
MONITORING POST PLANTING		
Milestone: 12 months Target: 60% cover over 90% area Date: 14/09/2018	<p>Good survival and growth, particularly away from the roadside. Overall cover is assessed as greater than 60 %.</p> 	<p>Photo 3: Pikes Rd, northern roadside, facing east.</p>  <p>Photo 4: Pikes Rd. Northern side, adjacent property, facing north.</p>

ESSO PIPELINE REPLACEMENT PROJECT	MONITORING POST PLANTING	REVEGETATION RECORD
	<p>Milestone: 2 years Target: 90% survival Date: 08/08/2019</p> <p>Good survival and growth across the site, with >90% of the expected plant density.</p>	<p>Photo 5: Pikes Rd, northern roadside, facing east.</p>  <p>Photo 6: Pikes Rd. Northern side, adjacent property, facing north.</p> 

ESSO PIPELINE REPLACEMENT PROJECT	REVEGETATION RECORD
	

Record completed by:	
Name	Kim Stewart
Position	Senior Environmental Consultant, CNC Project Management
Phone	0422 574 101
Date	08 Aug 2019
Signature	

ESSO PIPELINE REPLACEMENT PROJECT		REVEGETATION RECORD	ESSO
Location	BlueScope; KP179.5 to KP180.5		
Sensitivity	Southern Brown Bandicoot Habitat		
Approval	EPBC Referral 2014/7202		
VEGETATION			
Date	22/05/2017		
Area	0.380 pasture 2.162 tubestock		
Notes	Full width of RoW replanted between KP179.4 and KP180.05 (ex access track). Partial width of RoW between KP180.2 and KP180.36, with adjacent pasture. Partial width of RoW from KP180.53 to KP180.6, with adjacent pasture.		

ESSO PIPELINE REPLACEMENT PROJECT		REVEGETATION RECORD	ESSO
MONITORING POST PLANTING			
Milestone: 6 months Target: 80% survival Date: 09/03/2018	 <p>Overall survival is very high, estimated at 95%. A low area (~50 m²) at KP179.7 appears to be periodically inundated and tubestock has not survived. Subsidence repair from KP179.4 to KP180.05 has disturbed a 1 m to 1.5 m wide strip of revegetation. It appears to be primarily topsoil fill rather than reworking of the surface, so many partially buried plants are expected to survive and overall the work will not significantly reduce survival.</p> <p>Growth is reduced under the pine trees at KP180.3 due to smothering and chemical suppression from pine needles. This would have occurred pre-construction.</p>	 <p>Photo 1: BlueScope revegetation. KP179.4</p> <p>Photo 2: BlueScope revegetation. KP179.75, subsidence repair with partially buried tubestock.</p>	

ESSO PIPELINE REPLACEMENT PROJECT	REVEGETATION RECORD
	 <p>Photo 3: BlueScope revegetation. KP180.35, planting adjacent to pine trees.</p>

 <p>Photo 3: BlueScope revegetation. KP180.35, planting adjacent to pine trees.</p>	 <p>Photo 4: BlueScope revegetation. KP180.55, partial width of Row</p>

ESSO PIPELINE REPLACEMENT PROJECT	REVEGETATION RECORD
<p>Milestone: 12 months Target: 60% cover over 90% area Date: 14/09/2018</p> <p>Overall survival remains very high. Growth is variable across the different areas of site.</p> <p>KP179.4 – 179.8 – good growth, particularly at the margins of drainage lines, excluding the ephemeral wetland where tubestock has not survived.</p>	 <p>Photo 5: BlueScope revegetation. KP179.5</p> <p>KP179.8 to 180.08 – good survival but limited growth, plants appear to have been browsed, and a swamp wallaby was observed feeding on replanting during the survey.</p> <p>KP180.2 to 180.35 – good survival and growth.</p>

<p>Milestone: 12 months Target: 60% cover over 90% area Date: 14/09/2018</p> <p>Overall survival remains very high. Growth is variable across the different areas of site.</p> <p>KP179.4 – 179.8 – good growth, particularly at the margins of drainage lines, excluding the ephemeral wetland where tubestock has not survived.</p>	 <p>Photo 5: BlueScope revegetation. KP179.5</p> <p>KP179.8 to 180.08 – good survival but limited growth, plants appear to have been browsed, and a swamp wallaby was observed feeding on replanting during the survey.</p> <p>KP180.2 to 180.35 – good survival and growth.</p>	 <p>Photo 6: BlueScope revegetation. KP180.</p> <p>Swamp wallaby browsing on reveg area.</p>
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ESSO PIPELINE REPLACEMENT PROJECT	REVEGETATION RECORD	
	 <p data-bbox="283 185 376 614">Photo 7: BlueScope revegetation. KP180.35, planting adjacent to pine trees.</p>	
		 <p data-bbox="838 185 931 614">Photo 8: BlueScope revegetation. KP180.55, partial width of RoW Podding and grazing by cattle</p>

ESSO PIPELINE REPLACEMENT PROJECT	REVEGETATION RECORD
Milestone: 2 years Target: 90% survival Date: Overall this site has >90% of the expected plant density. Growth is variable across the different areas of site. KP179.4 – 179.8 – initial strong growth in this area appears to have been grazed back (wallabies and rabbits). Most plants still surviving, with grasses and rushes in winter dormancy, and will increase coverage in spring.	 <p>Photo 9: BlueScope revegetation. KP179.5</p>

Milestone: 2 years Target: 90% survival Date: Overall this site has >90% of the expected plant density. Growth is variable across the different areas of site. KP179.4 – 179.8 – initial strong growth in this area appears to have been grazed back (wallabies and rabbits). Most plants still surviving, with grasses and rushes in winter dormancy, and will increase coverage in spring.	 <p>Photo 10: BlueScope revegetation. KP180.</p>
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ESSO PIPELINE REPLACEMENT PROJECT	REVEGETATION RECORD	
ESSO	Photo 11: BlueScope revegetation. KP180.35, planting adjacent to pine trees.	Photo 12: BlueScope revegetation. KP180.55, partial width of RoW Area previously grazed by cattle has been replanted
cover until the plants become more established over spring.		

ESSO PIPELINE REPLACEMENT PROJECT	REVEGETATION RECORD	
Record completed by:		
Name	Kim Stewart	
Position	Senior Environmental Consultant, CNC Project Management	
Phone	0422 574 101	
Date	08 Aug 2019	
Signature		

ESSO PIPELINE REPLACEMENT PROJECT		REVEGETATION RECORD	ESSO
Location	Thornells Rd; KP181.5		
Sensitivity	Southern Brown Bandicoot Habitat		
Approval	EPBC Referral 2014/77202		
VEGETATION			
Date	22/06/2017		
Area	0.100 ha tubestock		
Notes	The corner front yard of a semi-rural residential property, adjacent to roadside and remnant vegetation patch		
MONITORING POST PLANTING			
Milestone: 6 months			Photo 1: Thornells Rd revegetation area, facing south
Target: 80% survival			
Date: 09/03/2018			
<p>Recent subsidence repair has partially disturbed the revegetation area; however, the land owner had evidently already mowed the area.</p> <p>Estimated survival is <20%, with grasses in summer senescence, they are indistinguishable from pasture regrowth.</p>			

ESSO PIPELINE REPLACEMENT PROJECT	REVEGETATION RECORD
<p>Milestone: 12 months Target: 60% cover over 90% area Date: 14/09/2018</p> <p>Pasture has been established across the site with greater than 60% cover</p>	 <p>Photo 2: Thornells Rd revegetation area, facing south</p>

<p>Milestone: 2 years Target: 90% survival Date: 08/08/2019</p> <p>Pasture has been established across the site with ~100% cover</p>	 <p>Photo 3: Thornells Rd revegetation area, facing south</p>
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ESSO PIPELINE REPLACEMENT PROJECT	REVEGETATION RECORD	ESSO
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Record completed by:	
Name	Kim Stewart
Position	Senior Environmental Consultant, CNC Project Management
Phone	0422 574 101
Date	08 Aug 2019
Signature	

**Appendix 4 EVIDENCE OF COMPLIANCE WITH EPBC CONDITION 10 – LETTER OF
NOTIFICATION**

Email notification to DoEE, 12 October 2018

Letter of Notification to DOEE, 08 November 2018 (EAPL-DOEE-LTR-00015)

Letter of Notification to DOEE, 27 August 2019 (EAPL-DOEE-LTR-00016)

From: Ffrench, David [REDACTED]
Sent: Friday, 12 October 2018 12:52 PM
To: epbcmonitoring@environment.gov.au
Cc: [REDACTED]
Subject: Esso Pipeline Replacement Project (EPBC 2014/7202)

Ref Esso Pipeline Replacement Project, Victoria
EPBC Approval Condition 10 (EPBC 2014/7202)

All Monitoring Assurance Section
Department of the Environment and Energy

Pursuant to EPBC Approval Condition 10, Esso Australia Resources Pty Ltd (Esso) wishes to advise the Department that monitoring results, received on 3 October 2018, indicate the revegetation milestone described in Condition 4b has not been achieved at 9 of the 22 Southern Brown Bandicoot habitat locations disturbed by the Esso Pipeline Replacement Project (Project).

Condition 4b specifies a Southern Brown Bandicoot habitat target of 60% vegetation cover over 90% of the area within one year of planting. The reasons for lower tubestock survival rates at these 9 locations are lower than anticipated rainfall, consumption of the tubestock by native and introduced species and potentially stock grazing and road reserve mowing.

We will provide a letter by November 15, 2018 describing the site assessments in more detail and the proposed measures to be implemented to improve habitat survival rates.

Regards

David Ffrench
Manager Longford Liquids Pipeline Project
CCS Coordinator
M +61 [REDACTED]
O +61 [REDACTED]



EPBC Ref: 2014/7202
Our Ref: EAPL-DOE-LTR-00015

8 November 2018

Via email to epbcmonitoring@environment.gov.au

Monitoring Assurance Section

Department of the Environment and Energy

Dear Sir/Madam,

**Re: Esso Pipeline Replacement Project, Victoria
EPBC Approval Condition 10 (EPBC 2014/7202)**

Pursuant to EPBC Approval Condition 10, Esso Australia Resources Pty Ltd (Esso) wishes to advise the Department that monitoring results, received on 03 October 2018, indicate the revegetation milestone described in Condition 4b has not been achieved at 9 of the 22 Southern Brown Bandicoot habitat locations disturbed by the Esso Pipeline Replacement Project (the Project).

Background

Esso's first Annual Compliance Report, submitted to the Department in April 2017, demonstrates compliance with EPBC approval conditions 1-3, and 5-7.

Following submission of this report, Esso completed construction of the Project in June 2017 and engaged Ecodynamics, a revegetation specialist, to undertake tubestock planting within areas identified as disturbed Southern Brown Bandicoot habitat. This was completed in August 2017.

Condition 4 of the Project's EPBC approval specifies the following:

4. Revegetate Southern Brown Bandicoot habitat that is lost as a result of the proposed action, and demonstrate this by meeting the following milestones as proposed by the person taking the action:
- 80% survival of planted stock at 6 months from planting;
 - 60% vegetation cover over 90% of the area within one year of planting; and
 - 90% survivorship of plants after two years, post planting.

Compliance monitoring at 6 months from planting showed that the target of 80% survival of planted stock (4a) has not been achieved at five sites, due to a combination of third party interference and environmental factors. Details of this occurrence were provided to the Department in a letter (23 March 2018) and the Project's second Annual Compliance Report, submitted to the Department in April 2018. Corrective measures, including replanting, have since been implemented.

One Year Compliance Assessment

Monitoring results at one year from planting show that the target 60% vegetation cover over 90% of the area has not been achieved at nine sites, representing a total of 0.498 ha of Southern Brown Bandicoot habitat. An environmental specialist has assessed all revegetation sites. There does not appear to be one consistent cause of the observed low cover, but rather a combination of contributing factors:

- Environmental conditions** – rainfall has been below average during the rehabilitation, particularly

during an extended period in Autumn, 2018. It is considered likely to have significantly impacted both survival and growth of planted stock.

- **Establishment of replanting work** – three sites required replanting due to low survival at the 6-month compliance milestone. This work has been completed, but plants have not yet grown enough to provide significant cover.
- **Slow growth** – sites with low cover generally had significantly smaller plants compared to other revegetation sites. Observations indicate this may be due to environmental conditions (above), browsing (rabbits, wallabies and cattle), and roadside mowing.
- **Growth forms** – many of the selected species (e.g. Pale rush *Juncus pallidus*), although appropriate local natives, have an upright growth form less suited to meeting the cover target.
- **Seasonal dormancy and senescence** – the monitoring assessment one year from the completion of planting occurred in late winter. At this time of year many species, particularly the tussock grasses used, are dormant with senescent crowns. The native reed *Phragmites australis* has reestablished at sites associated with drains and low-lying areas. The above ground structures of this species dieback completely over winter. Cover will be reduced compared to the end of the spring growing period.

Table 1. Sites where planted stock has not achieved 60% vegetation cover over 90% of the area at one year from planting

Location	KP	Attachment 2 Map Figure reference	Attachment 1 Photo No. reference	Tubestock Revegetation Area (ha)	Estimated Cover	Cause
Westernport Road	KP 125	Figure 2	1	0.118	60% over 50% of the site, 0% over the remainder	Low survival (third party interference) prior to the 6-month monitoring milestone. Replanted, but has not yet established cover.
Chambers Road	KP 131	Figure 3	2	0.002	<50% over the site	Low growth rates
Bridge Road	KP 131.1	Figure 4	3	0.035	75% over 50% of the site, <50% cover over the remainder	Low growth rates. Seasonal dieback of phragmites reeds.
Caldermeade Road	KP 134	Figure 5	4	0.074	60% over 50% of the site, <50% cover over the remainder	Low growth rates. Seasonal dieback of phragmites reeds.
McColls Road	KP 134.5	Figure 6	5	0.013	<10% over the site	Low survival (rabbit browsing and environmental conditions) prior to the 6-month monitoring milestone. Replanted, but has not yet established cover.
O'Briens Road	KP 141.5	Figure 8	6	0.035	60% over 50% of the site, <20% cover over the remainder	Patchy survival and low growth rates.

Location	KP	Attachment 2 Map Figure reference	Attachment 1 Photo No. reference	Tubestock Revegetation Area (ha)	Estimated Cover	Cause
Peers Road A	KP 159.5	Figure 13	7	0.147	0% over the site	Low survival prior to the 6-month monitoring milestone. Replanted, but has not yet established cover.
South Boundary Road East	KP 174.5	Figure 22	8	0.034	60% over 50% of the site, <20% cover over the remainder	Third party mowing of roadside planting has reduced survival and prevented the establishment of significant cover.
Bungower Road	KP 176.5	Figure 24	9	0.04	<50% over the site	Patchy survival and low growth rates. Seasonal dieback of phragmites reeds.

, below, summarises the status of tubestock revegetation at these nine sites.

A detailed, site by site assessment including proposed corrective measures is provided in Attachment 1.

Site maps are provided in Attachment 2, for each of the nine sites.

Table 1. Sites where planted stock has not achieved 60% vegetation cover over 90% of the area at one year from planting

Location	KP	Attachment 2 Map Figure reference	Attachment 1 Photo No. reference	Tubestock Revegetation Area (ha)	Estimated Cover	Cause
Westernport Road	KP 125	Figure 2	1	0.118	60% over 50% of the site, 0% over the remainder	Low survival (third party interference) prior to the 6-month monitoring milestone. Replanted, but has not yet established cover.
Chambers Road	KP 131	Figure 3	2	0.002	<50% over the site	Low growth rates
Bridge Road	KP 131.1	Figure 4	3	0.035	75% over 50% of the site, <50% cover over the remainder	Low growth rates. Seasonal dieback of phragmites reeds.
Caldermeade Road	KP 134	Figure 5	4	0.074	60% over 50% of the site, <50% cover over the remainder	Low growth rates. Seasonal dieback of phragmites reeds.

Location	KP	Attachment 2 Map Figure reference	Attachment 1 Photo No. reference	Tubestock Revegetation Area (ha)	Estimated Cover	Cause
McColls Road	KP 134.5	Figure 6	5	0.013	<10% over the site	Low survival (rabbit browsing and environmental conditions) prior to the 6-month monitoring milestone. Replanted, but has not yet established cover.
O'Briens Road	KP 141.5	Figure 8	6	0.035	60% over 50% of the site, <20% cover over the remainder	Patchy survival and low growth rates.
Peers Road A	KP 159.5	Figure 13	7	0.147	0% over the site	Low survival prior to the 6-month monitoring milestone. Replanted, but has not yet established cover.
South Boundary Road East	KP 174.5	Figure 22	8	0.034	60% over 50% of the site, <20% cover over the remainder	Third party mowing of roadside planting has reduced survival and prevented the establishment of significant cover.
Bungower Road	KP 176.5	Figure 24	9	0.04	<50% over the site	Patchy survival and low growth rates. Seasonal dieback of phragmites reeds.

Summary

Esso have endeavoured to fulfil the Southern Brown Bandicoot habitat revegetation requirements of the Project's EPBC approval. Unfortunately, due to a combination of factors, planted tubestock has not grown as well as anticipated at 9 of the 22 habitat locations.

Esso will undertake to address the low coverage at these sites with the following measures:

- continue replanting with tubestock at sites were survival is low;
- review the species selection for replanting, with more focus on drought tolerance and spreading/prostrate growth forms; and
- watering of replanted areas over summer until plants become established.

Please do not hesitate to contact David Ffrench on 03 9261 0759 or david.g.ffrench@exxonmobil.com if you require further information.

Yours sincerely,

David Ffrench

Manager

Esso Pipeline Replacement Project

Attachment 1 – Compliance Assessment details for each of the 9 Sites

Attachment 2 – Site maps

Esso Australia Resources Pty Ltd

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EPBC Ref: 2014/7202
Our Ref: EAPL-DOE-LTR-00016

27 August 2019

Via email to epbcmonitoring@environment.gov.au

Monitoring Assurance Section

Department of the Environment and Energy

Dear Sir/Madam,

**Re: Esso Pipeline Replacement Project, Victoria
EPBC Approval Condition 10 (EPBC 2014/7202)**

Pursuant to EPBC Approval Condition 10, Esso Australia Resources Pty Ltd (Esso) wishes to advise the Department that monitoring results, received on 19 August 2019, indicate the revegetation milestone described in Condition 4c has not been achieved at one of the 22 Southern Brown Bandicoot habitat locations disturbed by the Esso Pipeline Replacement Project (the Project).

Background

Condition 4 of the Project's EPBC approval specifies the following:

4. Revegetate Southern Brown Bandicoot habitat that is lost as a result of the proposed action, and demonstrate this by meeting the following milestones as proposed by the person taking the action:
- 80% survival of planted stock at 6 months from planting;
 - 60% vegetation cover over 90% of the area within one year of planting; and
 - 90% survivorship of plants after two years, post planting.

Esso completed construction of the Project in June 2017 and engaged Ecodynamics, a revegetation specialist, to undertake tubestock planting within areas identified as disturbed Southern Brown Bandicoot habitat. This was completed in August 2017.

Compliance monitoring at 6 months from planting showed that the target of 80% survival of planted stock (**4a**) had not been achieved at five sites, due to a combination of third party interference and environmental factors. Details of this occurrence were provided to the Department in a letter (23 March 2018) and the Project's second Annual Compliance Report, submitted to the Department in April 2018. Corrective measures were then implemented, including replanting.

Compliance monitoring at one year from planting showed that the target of 60% vegetation cover over 90% of the area (**4b**) had not been achieved at nine sites. This was again due to a combination of factors, primarily environmental conditions, slow establishment following earlier replanting, rabbit browsing and species selection. This occurrence was reported to the Department in a letter (08 November 2018). Corrective measures were subsequently implemented, including replanting and the installation of rabbit exclusion fences at some locations.

Two Year Compliance Assessment

Monitoring results at two years from planting show that the target 90% survivorship of plants has not been achieved at one site, Caldermeade Road, representing 0.074 ha of Southern Brown Bandicoot habitat.

Within this site there are two pasture areas and three tubestock revegetation areas (see the site map provided in Attachment 2). Table 1, below, summarises the status of tubestock revegetation within this area.

The primary causes of the low survival are:

- Third party slashing as part of routine maintenance of the drain at the east of the site; and
- Rabbit browsing in the areas east of Caldermeade Road, noting that there is good survival west of Caldermeade Road, where a rabbit exclusion fence has been installed.

A detailed assessment, including corrective measures, is provided in Attachment 1.

Table 1. Sites where planted stock has not achieved 90% survivorship of plants at two years from planting

Location	KP	Attachment 2 Map Figure reference	Area (mapped corner points)	Tubestock Revegetation Area (ha)	Survival	Cause
Caldermeade Road	134	Figure 5	1-2-5-6	pasture	complete	-
			2-3-4-5	0.019	>90%	-
			7-8-9-10	0.021	0%	Rabbit browsing
			11-12-15-16	0.017	0%	Third party slashing for drain maintenance
			12-13-14-15	pasture	complete	-

Summary

Esso have endeavoured to fulfil the Southern Brown Bandicoot habitat revegetation requirements of the Project's EPBC approval. Unfortunately, planted tubestock has not survived as well as anticipated at one of the 22 habitat locations.

Esso will undertake to address the low coverage at these sites with the following measures:

- replanting with tubestock;
- installation of rabbit exclusion fencing.

Please do not hesitate to contact David Ffrench on 03 9261 0759 or david.g.ffrench@exxonmobil.com if you require further information.

Yours sincerely,

David Ffrench

Manager
Esso Pipeline Replacement Project

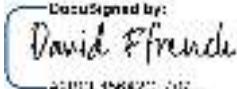
Attachment 1 – Compliance Assessment details for the site

Attachment 2 – Site map

ESSO PIPELINE REPLACEMENT PROJECT	ANNUAL COMPLIANCE REPORT	
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Appendix 5 DECLARATION OF ACCURACY

In making this declaration, I am aware that sections 490 and 491 of the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act) make it an offence in certain circumstances to knowingly provide false or misleading information or documents. The offence is punishable on conviction by imprisonment or a fine, or both. I declare that all the information and documentation supporting this compliance report is true and correct in every particular. I am authorised to bind the approval holder to this declaration and that I have no knowledge of that authorisation being revoked at the time of making this declaration.

Signed: 
David Ffrench
Project Manager, Esso Australia Resources Pty Ltd.

Full name (please print): David Ffrench

Position (please print): PROJECT MANGER, LONGFORD LIQUIDS PIPELINE (LLP) PROJECT

Organisation (please print including ABN/CAN if applicable): ESSO AUSTRALIA RESOURCES PTY LTD.

Date: September 19, 2019