

Before Independent Hearings Commissioners
appointed by the Northland Regional Council

under: the Resource Management Act 1991

in the matter of: an application by Meridian Energy Limited for resource consents for earthworks, associated stormwater diversion and discharges, vegetation clearance, and wetland removal for the construction of a solar farm at Ruakākā, Northland (APP.045356.01.01)

between: **Meridian Energy Limited**
Applicant

and: **Northland Regional Council**
Consent Authority

Statement of Evidence of Brett Hood (Planning)

Dated: 19 July 2024

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STATEMENT OF EVIDENCE OF BRETT HOOD

INTRODUCTION

- 1 My full name is Brett Lewis Hood.
- 2 I am a Director at Reyburn and Bryant with over 26 years' experience as a planning consultant in the Northland and Auckland regions.
- 3 I hold a Bachelor of Social Science (Geography) from the University of Waikato and a Master of Philosophy (Resources and Environmental Planning) from Massey University. I am a full member of the New Zealand Planning Institute.
- 4 My role as a planning consultant has typically been to lead project teams through various resource consent, notice of requirement, and plan change processes, and to provide environmental and strategic planning advice for these projects.
- 5 Most of my work has been in the Northland Region, and so I am very familiar with the planning framework and Northland environment.
- 6 I was engaged to work on this project (the *Proposal*) in October 2021. I prepared the resource consent application, and have subsequently assisted with the coordination of experts in responding to Council requests for information. I have visited the site on several occasions, the most recent being 27 June 2024.

CODE OF CONDUCT

- 7 Whilst this is a Council hearing, I acknowledge that I have read and agree to comply with the Environment Court's Code of Conduct for Expert Witnesses, contained in the Environment Court Practice Note 2023. My qualifications as an expert are set out above. Other than where I state that I am relying on the advice of another person, I confirm that the issues addressed in this statement of evidence are within my area of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions that I express.

SCOPE OF EVIDENCE

- 8 My evidence will address:
 - 8.1 The site and existing environment;
 - 8.2 Proposal description;
 - 8.3 District consents;

- 8.4 Regional consents required;
 - 8.5 Assessment of effects;
 - 8.6 Statutory planning assessment;
 - 8.7 Proposed conditions (including any updates);
 - 8.8 Response to submissions; and
 - 8.9 Response to Section 42A report.
- 9 In preparing this evidence, I have reviewed:
- 9.1 The Section 42A report.
 - 9.2 Technical and company evidence filed on behalf of Meridian Energy Limited (*MEL*).

SUMMARY OF EVIDENCE

- 10 This statement of planning evidence considers the evidence of other experts, including in relation to effects on the environment, and provides a detailed assessment of the Proposal against the relevant statutory planning framework.

Relevant statutory plans

- 11 My evidence identifies the relevant statutory planning documents, being the National Policy Statement for Renewable Energy Generation (*NPS-REG*), National Policy Statement for Freshwater Management (*NPSFM*), National Environmental Standards for Freshwater Regulations (*NESFM*), Regional Policy Statement for Northland (*RPS*) and the Proposed Regional Plan (*PRP*).

Key matters addressed in statutory planning documents

- 12 While the consents sought from the Northland Regional Council (*NRC*) relate to a range of matters associated with site preparation, my evidence is primarily focussed on the proposed removal of natural inland wetlands from Site 1, this being the key matter in contention.
- 13 My evidence identifies and addresses the enabling provisions in the *NPS-REG*, *RPS*, and *PRP*, including those that support renewable energy generation, security of energy supply, Regionally Significant Infrastructure, and economic wellbeing. I also identify and address the provisions relating to indigenous biodiversity and natural wetlands in the *RPS* and *PRP*.
- 14 My evidence also identifies and addresses the requisite requirements under the *NESFM*, and the overarching provisions in the *NPSFM*.

Key conclusions

- 15 My evidence concludes that resource consent can be granted under both the PRP and NESFM for the following reasons:
- 15.1 The Proposal is consistent with the enabling provisions of the overarching NPS-REG.
 - 15.2 The Proposal aligns with the objectives and policies of the RPS and PRP when read overall, including the enabling provisions for Regionally Significant Infrastructure, economic development, and renewable energy generation, and the directive provisions for managing adverse effects on indigenous biodiversity.
 - 15.3 The Proposal aligns with the requirements of Regulation 45 of the NESFM, including application of the effects management hierarchy, noting also that there is an alternative pathway to consent under Regulation 45C.
 - 15.4 The approach taken by MEL in respect to the effects management hierarchy under the NESFM, including careful consideration of alternatives, and efficiency/optimisation analysis has been robust and consistent with best practice.
 - 15.5 The approach taken by Boffa Miskell Limited (*Boffa Miskell*) (as described in detail in the evidence of **Ms Cook**) in determining the natural inland wetland extents on Site 1 aligns with best practice.
 - 15.6 The proposed conditions of consent encapsulate the effects management proposed by the various MEL experts, and adherence to the conditions will result in the outcomes contemplated under the various planning documents.
 - 15.7 To extent that it is relevant, the Proposal is consistent with Part 2 of the RMA.

SITE AND EXISTING ENVIRONMENT

- 16 The physical characteristics of the site and existing environment are described in the resource consent application. There are several important site features, and features in the surrounding environment that have relevance to the consents being sought. These are shown on the plan in **Exhibit 1** and are described further below.

Whangarei District Plan zoning

- 17 The Proposal is located on three different sites (Sites 1-3). The wetlands in contention are located on Site 1.

- 18 The three sites have different zones under the Whangarei District Plan (*WDP*), specifically:
- 18.1 Site 1: Heavy Industrial Zone (*HIZ*);
 - 18.2 Site 2: Light Industrial Zone (*LIZ*); and
 - 18.3 Site 3: Rural Production Zone (*RPROZ*).
- 19 Solar farms are a permitted activity in the HIZ and LIZ, and a discretionary activity in the RPROZ.

Whangarei District Council resource consent

- 20 On 8 February 2024 the Whangarei District Council (*WDC*) granted resource consent for the solar farm across the three sites under the *WDP*. The main reason for the *WDC* resource consent was the *RPROZ* zoning of Site 3 where solar farms are a discretionary activity, but consent was also required for exceeding the permitted activity impervious surface area on Sites 1 and 2, and under several rules in the *LIZ* zone applicable to Site 2 only.¹

Historic and current land use

- 21 All three sites have historically been used for cattle grazing. They continue to be used for this purpose except for Site 1A which is now a combination of rank grass, gorse, remnant wetlands, and the *kānuka* forest.

Soil type

- 22 The soil type on Site 1 (and most of Site 2) is identified as 3s4 on the New Zealand Land Resource Inventory Worksheets,² described as "*well drained coastal sand plains*". The Beca geotechnical report submitted with the application concurs with this description but further states that "*peat lenses are found within the interdune sequence where natural wetlands have developed in the troughs between the dunes*".³
- 23 Site 3 has 3w4 class soils. These soils are described as "*Flat to undulating alluvial floodplains, low terraces, interdune and estuarine flats below 100 m asl with poorly drained Organic (organic) and/or peaty soils*"
- 24 As shown on the plan in **Exhibit 1**, 3s4 and 3w4 class soils are prevalent throughout the Marsden Point/Ruakākā area. I note that

¹ Security fencing, boundary screen planting, and a continuation of farming activities under the panels.

² <https://iris.scinfo.org.nz/layer/48076-nzlri-land-use-capability-2021/>

³ Beca Limited, 'Preliminary Geotechnical Assessment Report' dated 7 July 2023 (Section 5, Page 8) (Appendix 20, Application AEE).

Ms Cook considers peat soils can be relict wetland soils of historic wetlands⁴ and the soil alone is not indicative of a natural inland wetland.

Wetlands

- 25 Site 1 contains 18.78ha of 'natural inland wetlands' as defined under the NPSFM⁵, and 'natural wetlands'⁶ and 'significant wetlands'⁷ as defined under the PRP. There is also 0.33ha of 'natural inland wetlands' on Sites 2 and 3. None of the wetlands are mapped in either the District Plan or Regional Plan. All of the wetlands have been identified by field assessment in accordance with the relevant MfE delineation protocols and/or assessment criteria.⁸
- 26 I understand from the evidence of **Ms Cook** that wetlands of this nature are dynamic, constantly expanding and contracting for a variety of seasonal (groundwater) and weather-based (high rainfall) factors.⁹

Kānuka Forest

- 27 There is a 5ha (approximately) area of kānuka forest located in the north-eastern corner of Site 1. The kānuka is part of a larger kānuka remnant (approximately 15ha) located on the adjoining Department of Conservation reserve. The Boffa Miskell ecological assessment submitted with the application describes the kānuka forest as having high ecological value, particularly due to its rarity/distinctiveness.¹⁰

Drains

- 28 A large man-made drain known locally as the 'Bercich Drain' runs in a north-easterly direction through the centre of Site 1. The northern

⁴ Cook EIC, Paragraph 43

⁵ Section 3.21 - NPSFM

⁶ Natural wetland - Any wetland including an induced wetland and a reverted wetland, regardless of whether it is dominated by indigenous vegetation, but does not include:

- 1) a constructed wetland, or
- 2) wet pasture, damp gully heads, or
- 3) areas where water temporarily ponds after rain, or
- 4) pasture containing patches of rushes, or
- 5) artificial water storage facilities; detention dams; reservoirs for firefighting, irrigation, domestic or community water supply; engineered soil conservation structures including sediment traps; and roadside drainage channels.

⁷ Significant Wetland – A wetland that meets the significance criteria in the Regional Policy Statement, Appendix 5 –“Areas of significant indigenous vegetation and significant habitats of indigenous fauna in terrestrial, freshwater and marine environments” (Part B 'Definitions' Proposed Regional Plan)

⁸ Cook EIC, Paragraph 32

⁹ Cook EIC, Paragraph 52

¹⁰ Boffa Miskell, *Ecological Effects Assessment*, dated 28 August 2023 - Appendix 13 of the Application AEE

part of this drain is protected by an easement in favour of the WDC. A series of drains run parallel and perpendicular to the main Bercich Drain.

- 29 There are numerous man-made drains on Site 3, generally draining to an Unnamed Drain on the western boundary and ultimately to the Ruakaka River via a culvert under McCathie Road. The Unnamed Drain is covered by an easement in gross in favour of the WDC.
- 30 All the watercourses on the three sites are man-made drainage channels, typically constructed before the 1950's. Despite being man-made, the Bercich Drain (within Site 1) and the Unnamed Drain on the western boundary of Site 3 meet three of the criteria for an 'intermittently flowing river or stream' under the PRP¹¹ and are therefore classified as a 'river' under the PRP and the RMA.
- 31 The smaller drains only meet one of the criteria for an 'intermittently flowing river or stream' and are therefore not classified as a 'river'¹² under the PRP or the RMA.

Flood Hazard Areas

- 32 Portions of all three sites are within the 10, 50, and 100 year River Flood Hazard Zones shown on the NRC flood maps.¹³
- 33 The highest flood depths are experienced on Site 3, with most of this site inundated with 1.0m-2.0m deep flood waters in a 100-year ARI storm event.

BESS

- 34 The 100-megawatt Meridian Battery Energy Storage System (BESS) facility is located on Site 1 on the corner of Rama Road and SH15. The facility is consented, currently under construction and nearing completion (due to be commissioned in December 2024). The BESS will connect to the National Grid via the existing Transpower Bream Bay substation on the northern side of Rama Road. This substation is the northernmost point of the 220 kV network. I understand from

¹¹ Intermittently flowing river or stream means river that is naturally dry at certain times of the year and has two or more of the following characteristics:

- 1) it has natural pools, and
- 2) it has a well-defined channel, such that the bed and banks can be distinguished, and
- 3) it contains surface water more than 48 hours after a rain event which results in river flow, and
- 4) rooted terrestrial vegetation is not established across the entire cross-sectional width of the channel, and
- 5) it appears as a blue line on topographical maps at 1:50,000 scale.

¹² river means a continually or intermittently flowing body of fresh water; and includes a stream and modified watercourse; but does not include any artificial watercourse (including an irrigation canal, water supply race, canal for the supply of water for electricity power generation, and farm drainage canal)

¹³ <https://nrcgis.maps.arcgis.com/apps/webappviewer/index.html>

the evidence of **Mr Sherman** that this is one of only five Transpower substations in Northland, and the only substation with a 33kV connection and suitably sized transformers that would allow the connection of a grid scale solar farm.¹⁴

National Grid

- 35 Two National Grid Transmission Lines traverse the southern part of Site 3. These lines run in a north-easterly direction and exit the site midway along the Marsden Point Road frontage on route to the Transpower substations at Rama Road and Sime Road. The two lines are supported by four transmission towers located within Site 3.

Other electricity infrastructure

- 36 There is a range of other electricity infrastructure in the surrounding environment, including a Northpower substation at Rama Road (next to the Transpower substation), a dedicated but now largely redundant substation within the Channel Infrastructure New Zealand (CINZ) site, and Northpower owned distribution lines (including 11Kv 'Critical Electricity Lines' (CELs) within the adjacent SH15, in the adjoining WDC reserve land to the east, and within Rama Road).

Whangarei District Council wastewater disposal

- 37 The WDC owns the land adjoining the eastern boundary of Site 1. This land is used for wastewater disposal associated with the Ruakaka wastewater system, with the treatment plant located around 500m to the south of Site 1.

Availability of land in the surrounding environment

- 38 The Marsden Point area is synonymous with heavy industry, largely due to the (recently decommissioned) oil refinery (est. 1964), Marsden A oil-fired power station (decommissioned in the 1990s), Marsden B (built but never commissioned), and Northport (est. 2002). It is also the location of around 64% of the industrial land in the Whangarei District.¹⁵ The presence of these major industrial installations (past and present) and the extent of industrial land in the area explains the extent of significant national and district electricity infrastructure present in the surrounding environment.
- 39 The plan in **Exhibit 1** shows the spatial extent of land uses in the wider Marsden Point/Ruakākā area. The ability to utilise the significant electricity infrastructure in the area for grid-scale solar electricity generation activities is limited due to a range of factors including:

¹⁴ Sherman EIC, Paragraph 29.4

¹⁵ WDC Policy Team

- 39.1 Site contamination and ownership issues for the CINZ land.
 - 39.2 Ownership and zoning issues for the Marsden Maritime Holdings Ltd (*MMH*) land.¹⁶
 - 39.3 Ownership issues on the HKRS Holdings Ltd land, including an existing sand mine and industrial subdivision.
 - 39.4 Existing fragmentation of industrial land to the south of Site 1.
 - 39.5 Lifestyle subdivision and residential development.
 - 39.6 Commercial and residential zoning at Marsden City.
- 40 I note that additional 'unique' attributes of Site 1 regarding its suitability for grid-scale solar generation are outlined in the evidence of **Mr Sherman**.¹⁷

THE PROPOSAL

- 41 The Proposal is to establish a grid-scale 100-150 MW solar energy farm consisting of approximately 200,000 photovoltaic solar panels across an area of approximately 172ha, and other ancillary buildings and structures. The solar farm is estimated to produce 150-200 GWh of electricity per year. The overall construction cost is estimated at \$185-200 million with around \$20 million of this estimated to be spent in the local economy.¹⁸
- 42 The aspects of the Proposal that are relevant to the resource consents sought from the NRC are summarised below.

Vegetation retention and removal

- 43 The 5.0ha (approx.) kānuka forest and shrubland in the north-eastern corner of Site 1 will be retained. The Proposal accordingly avoids effects on this area.
- 44 Riparian vegetation will be removed from the Bercich Drain on Site 1 and the Unnamed Drain on Site 3 to improve the hydraulic efficiency of these drains. Maintenance of these drains will then continue in accordance with the permitted activity river maintenance rule in the PRP.¹⁹

¹⁶ The majority of the MMH land is zoned 'Port Zone' in the WDP.

¹⁷ Sherman EIC, Paragraph 29

¹⁸ Sherman EIC, Paragraph 43, Telfer EIC, Paragraph 14, 69

¹⁹ Rule C.2.1.3 'Maintenance of the free flow of water in rivers and mitigating bank erosion'

- 45 Several trees scattered across all three sites will also be removed.

Wetland removal and offset

- 46 As previously identified in this evidence, a total of 18.78ha of natural inland wetlands have been identified on the 105ha Site 1.²⁰
- 47 A total of 16.73ha of natural inland wetlands will be removed from Site 1 to facilitate the solar farm on Site 1, and a further 0.33ha will be removed from Sites 2 and 3 (17.06ha across all three sites). 2.05ha of open water in the south-eastern part of Site 1 will be retained.
- 48 The Proposal accordingly avoids adverse effects on the 2.05ha open water area, which will also be enhanced as part of a wider ecological package. Retention of the open water feature will also provide immediate mitigation of effects on indigenous fauna, particularly avifauna, as outlined in **Dr Shapiro's** evidence. The wider ecological package also includes pest control, as outlined by **Dr Shapiro**.
- 49 To offset the residual effects of the proposed wetland removal from Sites 1-3, an 11.73ha wetland will be constructed in the low-lying southern end of Site 3, this being a historical wetland prior to drainage for the current pastoral use. An additional 7.05ha wetland will be constructed in Site 1 in the area adjoining the open water resulting in a total wetland offset of 18.78ha.
- 50 As outlined in the evidence of **Dr Flynn**, the Department of Conservation's Biodiversity Offset Accounting Model (*BOAM*) was used to confirm the adequacy of the proposed offset relative to the impacted wetlands,²¹ and they were also assessed against the principles for aquatic offsetting and compensation in Appendix 6 of the NPSFM.²²
- 51 A Wetland Restoration Plan is proposed as a condition of consent. The objectives and information requirements are included in the draft conditions in **Exhibit 2**.

Earthworks

- 52 Bulk earthworks are required across all three sites to enable suitable finished ground for the solar panels and associated infrastructure. Earthworks are also required to create the wetland on Site 3. The proposed earthworks area is approximately 190ha across the three sites.

²⁰ Cook EIC, Paragraph 55

²¹ Flynn EIC Paragraph 147

²² Flynn EIC Paragraph 152

- 53 The earthworks will be carried out in accordance with an erosion and sediment control plan approved by the NRC as a condition of consent.

Construction effects management

- 54 To manage effects during the construction phase, several management plans are proposed. This includes a Construction Environmental Management Plan (*CEMP*), Native Avifauna Management and Monitoring Plan (*AMP*), Bat Management Plan (*BMP*), Lizard Management Plan (*LMP*) and a Native Fish Capture and Relocation Plan (*FCRP*). The objectives and information requirements for these plans are included in the draft conditions of consent in **Exhibit 2**.
- 55 An additional Avifauna Collision Risk Monitoring Plan (*ACRMP*) is also proposed. This plan will require two years of post-construction surveillance to detect any impact on avifauna. If the monitoring indicates that collisions are occurring, an ACRMP is required to detail ongoing management measures.

Functional need

- 56 The legal context for “functional need” is outlined in the opinion prepared by Chapman Tripp.²³ Within this context, the functional need for the solar farm is reinforced in the evidence of **Mr Telfar** and **Mr Sherman**.²⁴ Based on this, there is a clear functional need for the solar farm to be located on Site 1, noting also the constraints that exist for grid-scale solar elsewhere in the Ruakākā/Marsden Point area.

Consideration of alternatives

- 57 I have provided planning advice to MEL since October 2021. Accordingly, I am aware of the complex, multi-faceted and multi-disciplinary process that was followed to avoid, minimise, and remedy wetland loss on Site 1 to the greatest extent practicable as required under (a)-(c) of the definition of “effects management hierarchy” in the NPSFW – ultimately encapsulated in the ‘Alternatives and Optimisation Report’ prepared by Beca and included with the application.²⁵

DISTRICT CONSENTS

- 58 The necessary resource consent has been obtained from the WDC. This consent is attached in **Exhibit 3**.

²³ Referred to in Paragraph 15 of the Section 42A report

²⁴ Sherman EIC, Paragraphs 17-36, Telfar EIC, Paragraph 54

²⁵ Beca Limited, *Engineering Alternatives and Optimisation Report*, dated 30 August 2023 - Appendix 3 of Application AEE

REGIONAL CONSENTS

- 59 The Section 42A Report identifies the specific PRP rules under which consent is required and the associated activity status²⁶. I agree with the assessment, except that I consider that consent is also required to divert water from the Unnamed Drain through the proposed wetland on Site 3. This was signalled to be a permitted activity in the application AEE under Rule C.3.1.1. However, I now consider this to require discretionary consent under rule C.3.1.8.²⁷
- 60 I note that the overall non-complying status under the PRP is due to the removal of a 0.57ha area of wetland that fits the significance criteria in Appendix 5 of the RPS.²⁸ The remaining consents required under the PRP are discretionary activities.
- 61 A discretionary activity consent is also required under Regulation 45 of the NESFM²⁹ for vegetation clearance and earthworks within, and in proximity to, a natural inland wetland.

ASSESSMENT OF EFFECTS

- 62 The actual and potential effects on the environment are assessed comprehensively in the application AEE and in the evidence of the MEL technical witnesses. I have read the various statements of expert evidence filed on behalf of MEL and consider the conclusions in respect to effects on the environment to be generally consistent with the conclusions contained in the relevant technical reports submitted with the application AEE. I do not intend to repeat the assessments of the various experts, other than to briefly summarise their conclusions to the extent that they are relevant to my planning assessment.

Ecological effects

Wetland loss & aquatic offsetting

- 63 As described in paragraphs 43-48 of this evidence, the Proposal involves the loss of around 17ha of natural inland wetlands on Site 1. The effects of this wetland loss are addressed in the evidence of **Dr Flynn**, further supported by **Dr Shapiro** (avifauna) and **Mr Fuller** (wetland restoration).

²⁶ Section 42A report, Page 6

²⁷ Diversion of the Unnamed Drain through the proposed wetland on Site 3 requires the prior approval of the WDC because the drain is subject to a WDC Drainage easement. This diversion is not critical to the proposed wetland, but consent under this rule is included so that diversion is not precluded if considered desirable at the detailed design stage.

²⁸ Flynn EIC, Paragraph 16

²⁹ Construction of specified infrastructure

- 64 The proposed wetland loss that is unable to be practicably avoided, minimised or remedied is proposed to be offset through both wetland construction and restoration on Site 1 and wetland construction on Site 3 as per the effects management hierarchy requirements of the NPSFM, NESFM, and PRP.
- 65 A detailed Wetland Restoration Management Plan is proposed as a condition of consent with the objectives of ensuring the offset of the loss of wetland extent and improving wetland values overall. As confirmed in the evidence of **Dr Flynn**, supported by the evidence of **Mr Fuller**, the proposed wetland construction and restoration on Sites 1 and 3 will successfully offset the loss of ecological values associated with the proposed removal of the wetlands on Site 1.³⁰

Terrestrial vegetation

- 66 The effects of the proposal on terrestrial vegetation are addressed in the evidence of **Dr Flynn**.
- 67 Regarding the kānuka forest on Site 1, this will be retained in its entirety. The Proposal will accordingly avoid effects on this feature. As this feature will be located outside the security fence where livestock will not have access to it, and it will be subject to ongoing pest control, the effects on this feature will also be positive.
- 68 Regarding the patches of exotic and native shrubs, hedgerows/shelterbelts and individual mature native and exotic trees that will be removed during construction, as covered later in this evidence the potential effects of this vegetation removal on birds, bats, and lizards can be adequately mitigated.³¹
- 69 Based on the evidence of **Dr Flynn** I understand the effects of the proposed terrestrial vegetation removal will be no more than minor.

Fish

- 70 The effects of the proposal on native fish are addressed in the evidence of **Dr Flynn**.
- 71 As described in the evidence of **Ms Cook**³² and **Ms Flynn**³³, no mudfish and only shortfin eels were detected in the drains on Site 1 during the fish survey carried out by Wildlands in 2020, and the only potential mudfish habitat is in the open water areas that are to be retained.

³⁰ Flynn EIC, Paragraph 152, Table 3

³¹ Flynn EIC Paragraph 139, Table 2

³² Cook EIC, Paragraphs 115-116

³³ Flynn EIC, Paragraph 101

- 72 As described in the evidence of **Dr Flynn**, the Unnamed Drain on Site 3 has a better hydrological connection with the Ruakākā River, and inanga were observed during the 2020 survey. To mitigate this, a Native Fish Capture and Relocation Plan will be developed and implemented as a condition of consent. This plan will restrict earthworks in the drains to dry periods when there is less water and require relocation of native fish where drains provide native fish habitat. It will also set out best ecological practice for drain maintenance activities (notwithstanding drain maintenance is a permitted activity under the PRP). Therefore, any adverse effects associated with maintaining the drains will be the same or less than what is provided for under the permitted activity standards of the PRP.
- 73 I note the evidence of **Dr Flynn** is that there are a range of positive effects management measures for the Bercich Drain and Unnamed Drain.³⁴

Avifauna

- 74 The potential effects on threatened and at-risk avifauna resulting from the Proposal are identified in the evidence of **Dr Shapiro**.³⁵
- 75 **Dr Shapiro** notes that while Bittern have been recorded booming on the stormwater ponds between Sites 2 and 3, Site 2 in the bird survey(s) carried out in Spring 2023 no booming was recorded on Site 1.³⁶ The use of Site 1 by Bittern appears to be for intermittent foraging rather than breeding.
- 76 A range of mitigation measures are proposed to avoid adverse effects on avifauna during construction, with these to be developed and implemented under a proposed Native Bird Management and Monitoring Plan included in the proposed conditions of consent in **Exhibit 2**.
- 77 In addition to effects associated with construction, I understand there is a low risk of avifauna colliding with the solar panels once they are constructed. Accordingly, avifauna collision risk monitoring will be included in the Native Avifauna Management Plan, and adaptive measures could stem from this as required, including the preparation and implementation of a Native Avifauna Collision Management Plan. Potential collision management responses and the associated likelihood of success is discussed in the evidence of **Dr Shapiro**.³⁷

³⁴ Flynn EIC, Paragraph 139, Table 2

³⁵ Shapiro EIC, Paragraph 57

³⁶ Shapiro EIC, Paragraph 44

³⁷ Shapiro EIC, Paragraphs 66-73

- 78 I note that **Dr Shapiro** considers that the proposed recreation, enhancement and restoration, pest control, and avifauna collision measures are sufficient to mitigate and offset the loss of wetland habitat and potential effects on at risk and threatened avifauna, and as a result the adverse effects of the Proposal on avifauna (including Bittern) will be low, equating to no more than minor.³⁸

Herpetofauna

- 79 The effects of the proposal on herpetofauna are addressed in the evidence of **Dr Flynn**. As described in her evidence, no evidence of native lizard habitation on the site was detected during the 2022/2023 and 2024 surveys carried out for this proposal, although one elegant gecko was found on the coastal side of the Kanuka (outside of the site boundary).³⁹
- 80 Out of an abundance of caution, a LMP is included in the draft conditions of consent in **Exhibit 2**.
- 81 I note the conclusion of **Dr Flynn** that there is a low likelihood that a small number of lizards will be killed or displaced during the works, and that protection, enhancement, pest control of the kanuka forest and shrubland and associated duneland will improve habitat values for pacific gecko and other species that may be present, and adherence to the LMP will further ensure that any native lizards found will be relocated to suitable habitat elsewhere.⁴⁰

Bats

- 82 The effects of the Proposal on long-tailed bats are addressed in the evidence of **Dr Flynn**. As described in her evidence, while there is some potential bat habitat on Site 1, no evidence of bat habitation was recorded during recent surveys carried out for this Proposal.⁴¹
- 83 I note **Dr Flynn** considers that there is a low likelihood that birds or bats will be killed or displaced during felling works, but recommends pre-clearance checks of trees for bats and nesting birds prior to felling as per bat roost and bird nesting protocols.⁴² Therefore, out of an abundance of caution, a BMP has been included in the proposed conditions of consent in **Exhibit 2**.

³⁸ Shapiro EIC, Paragraph 75

³⁹ Flynn EIC, Paragraphs 106-109

⁴⁰ Flynn EIC, Paragraph 139, Table 2

⁴¹ Flynn EIC, Paragraph 114

⁴² Flynn EIC, Paragraph 139, Table 2

Cultural effects

- 84 The application AEE includes cultural effects assessments prepared by both Te Patuharakeke Iwi Trust Board (*Patuharakeke*) and Coastal Te Parawhau Hapu.
- 85 The Patuharakeke report contains several recommendations, the majority of which have been included in the proposed conditions of consent. Patuharakeke have subsequently filed a supporting submission.
- 86 The Coastal Te Parawhau Hapu report is pitched at a high level and contains some recommendations which are difficult to achieve through the resource consent process. I note that the report author (Dr Kepa) has also filed a personal submission which I address later in this evidence.

Flood hazard

- 87 The flood hazard risk on the sites was assessed by Beca and a flood modelling report was included with the application AEE.⁴³ The report makes the following conclusions:
- 87.1 Earthworks on Site 1 will increase water levels by roughly 1mm which is within the margin for error.
- 87.2 Earthworks will make it easier for water to reach the Bercich Drain.
- 87.3 The bund and outlet structures proposed on the downstream (north-eastern) boundary will attenuate flows to ensure that they do not exceed pre-development levels.
- 87.4 Earthworks on Site 2 are a mixture of cut and fill, and therefore do not substantially change the flow paths or storage.
- 87.5 Earthworks on Site 3 are predominantly cut and so there will be an increase in the available flood attenuation storage on this site.
- 88 The Beca flood report and associated modelling concludes that the proposed solar farm will have a negligible effect on flooding.

⁴³ Application AEE, Appendix 7

Positive effects

- 89 The Proposal will facilitate a range of positive effects. These include:
- 89.1 Improving security of electricity supply (resilience) for the Northland Region.
 - 89.2 Potential reduction in electricity prices in Northland due to alleviation of existing high nodal pricing.
 - 89.3 Supporting the New Zealand Government strategies of 100% renewable electricity generation by 2030, and a net zero carbon future by 2050.
 - 89.4 Significant investment in the local economy and work force during the design, consenting, construction, operational and maintenance phases.
 - 89.5 The combining of solar and agricultural use on Site 3 maximises the productivity and sustainable use of available resources, on land that is otherwise marginal due to its susceptibility to flooding.
 - 89.6 A net improvement in wetland values, including both ecological and amenity values. Amenity values are improved due to proximity to the Ruakākā town centre and improved accessibility.
 - 89.7 Improved water quality in the Ruakākā River through wetland filtering and the replacement (removal) of cattle from all three sites with sheep.
 - 89.8 Excluding livestock access to restored and created wetland habitat, and fencing of ~~the~~ Bercich ~~Drain~~ with a 2.0 m setback will improve local water quality and aquatic ecosystem values and reduce inputs of sediment and nutrients with related positive effects on water quality within the site and for visual foragers including matuku and weweia.⁴⁴
 - 89.9 Enhancement of the 2.05ha open water area on Site 1 (not part of the offset).
 - 89.10 Mammalian pest control across all three sites.⁴⁵

⁴⁴ Shapiro EIC, Paragraph 62

⁴⁵ Shapiro EIC, Paragraph 74

STATUTORY PLANNING ASSESSMENT

Planning framework

- 90 The statutory plans relevant to determining the NRC consents under Section 104(1)(a) of the RMA are:⁴⁶
- 90.1 National Policy Statement for Renewable Electricity Generation 2011 (NPS-REG).
 - 90.2 National Policy Statement for Freshwater Management 2020 (NPS-FM).
 - 90.3 Resource Management (National Environmental Standard for Freshwater) Regulations 2020 (NES-FM).
 - 90.4 Proposed Regional Plan (PRP).

NPS-REG objectives and policies

- 91 Section 45(1) states that the purpose of national policy statements is *“to state objectives and policies for matters of national significance that are relevant to achieving the purpose of this Act”*.
- 92 The stated purpose of the NPS-REG is to enable the sustainable management of renewable electricity generation under the RMA.
- 93 The stated matters of national significance to which the NPS-REG applies are:
- a) *the need to develop, operate, maintain and upgrade renewable electricity generation activities throughout New Zealand; and*
 - b) *the benefits of renewable electricity generation.*
- 94 The NPS-REG contains a single objective⁴⁷ and a range of multi-faceted policies A-H. The policies that are directly relevant to the proposal are A-C.

⁴⁶ The NPS-IB is not relevant to the proposal as it does not apply to the *“development, operation, maintenance or upgrade of renewable electricity generation assets and activities and electricity transmission network assets and activities”* as per Section 1.3(3).

⁴⁷ To recognise the national significance of renewable electricity generation activities by providing for the development, operation, maintenance and upgrading of new and existing renewable electricity generation activities, such that the proportion of New Zealand’s electricity generated from renewable energy sources increases to a level that meets or exceeds the New Zealand Government’s national target for renewable electricity generation.

- 95 Policy A is that decision-makers shall recognise the benefits and provide for the national significance of renewable electricity generation activities, including by increasing electricity generation capacity, increasing security of electricity supply, and using renewable natural resources rather than finite resources. The Proposal is in complete alignment with this policy.
- 96 Policy B is to acknowledge the practical limitations of achieving New Zealand's target for electricity generation from renewable resources where decision makers shall have regard to *inter alia* the need for significant development of renewable electricity generation activities to meet the New Zealand Governments national target for the generation of electricity from renewable resources. The Proposal is in complete alignment with this policy.
- 97 Policy C1 requires decision-makers to have regard to the practical constraints associated with the development, operation, maintenance and upgrading of new and existing renewable electricity generation activities, including the need to locate where the resource is available, logistical and practical matters, and the location of existing infrastructure (including the national grid). The policy also requires regard to be had to the incorporation of mitigation opportunities and adaptive management. The Proposal aligns with this policy for a range of reasons including the proximity to the BESS, Transpower and Northpower substations, and associated transmission and distribution lines, and the effects management measures to be employed.
- 98 Policy C2 requires decision makers to have regard to the offsetting and/or compensation of residual environmental effects that cannot be avoided, remedied, or mitigated. The Proposal aligns with this policy with the offsetting of effects being a fundamental response to residual environmental effects.
- 99 In summary, the NPS-REG provides overarching and enabling context for consideration of the application under Section 104 of the RMA. The Proposal fully aligns with the NPS-REG provisions, which also permeate through the RPS and PRP.⁴⁸

NPSFM objectives and policies

- 100 The NPSFM provides useful and relevant context for consideration of the NESFM regulations.
- 101 There is a single objective and 15 policies in the NPSFM, with policies 4, 6 and 15 (below) of most relevance to this application due to the proposed removal of wetlands.

⁴⁸ As is required under Section 61(1)(da) and Section 67(3)(a) of the RMA.

Policy 4: Freshwater is managed as part of New Zealand's integrated response to climate change.

Policy 6: There is no further loss of extent of natural inland wetlands, their values are protected, and their restoration is promoted.

Policy 15: Communities are enabled to provide for their social, economic, and cultural wellbeing in a way that is consistent with this National Policy Statement.

- 102 The Proposal aligns with Policy 4 because the proposed solar farm is part of New Zealand's response to climate change, and specifically the move towards zero carbon. This aspect is addressed in detail in **Mr Telfar's** evidence.
- 103 The proposal aligns with Policy 6 as the proposed aquatic offsetting for the loss of natural inland wetlands in Site 1 will result in no loss of wetland values and extent and the restoration of wetlands has been promoted.⁴⁹
- 104 The proposal aligns with Policy 15 due to the associated economic and resilience benefits of the solar farm, as described by **Mr Telfar** and **Mr Sherman**. There are also social and cultural benefits associated with the proposed offset wetland on Site 3 with these highlighted in the Patuharakeke CEA, specifically:

We consider the offset wetland will have significant benefit from a cultural landscape (sic) in essentially recreating part of the traditional "Lake Ruakākā" wetland and do not foresee any impacts on viewshafts to, from or between our tūtohu or cultural landmarks.⁵⁰

- 105 In addition to Policies 4, 6 and 15 the NPSFM also has an implementation section, with Clause 3.22 of Subpart 3 containing a specific policy requirement for natural inland wetlands, being that the loss of natural inland wetland extent be avoided except where *inter alia*:

.....

(b) *the regional council is satisfied that:*

- (i) *the activity is necessary for the purpose of the construction or upgrade of specified infrastructure; and*
- (ii) *the specified infrastructure will provide significant national or regional benefits; and*

⁴⁹ Flynn EIC, Paragraph 152, Table 3

⁵⁰ Patuharakeke Te Iwi Trust Board, Cultural Effects Assessment Report, dated 26 September 2023 – Appendix 11 of the Application AEE.

(iii) *there is a functional need for the specified infrastructure in that location; and*

(iv) *the effects of the activity are managed through applying the effects management hierarchy;*

.....

106 I consider that the Proposal has been demonstrated to meet all the Clause 3.22 requirements.

NESFM assessment

107 While the proposal could equally have been advanced under Regulation 45C 'Urban development', the application has been advanced under Regulation 45 'Construction of Specified Infrastructure'.

108 Clause (6) of Regulation 45 states that:

(6) A resource consent for a discretionary activity under this regulation must not be granted unless the consent authority has first—

(a) satisfied itself that the specified infrastructure will provide significant national or regional benefits; and

(b) satisfied itself that there is a functional need for the specified infrastructure in that location; and

(c) applied the effects management hierarchy.

109 I consider that the Proposal is consistent with 45(6)(a)-(c) as it is 'specified infrastructure' that will have significant regional benefits, most notably an improved and more resilient energy supply for the Northland Region, and potentially national benefits, there is an established functional need for the solar farm to be in this location, and the effects management hierarchy has been applied.

110 The effects management hierarchy is defined in the NPSFM.⁵¹ Being a hierarchy, it requires a top down, step by step approach to

⁵¹ effects management hierarchy, in relation to natural inland wetlands and rivers, means an approach to managing the adverse effects of an activity on the extent or values of a wetland or river (including cumulative effects and loss of potential value) that requires that:

- (a) adverse effects are avoided where practicable; then
- (b) where adverse effects cannot be avoided, they are minimised where practicable; then
- (c) where adverse effects cannot be minimised, they are remedied where practicable; then
- (d) where more than minor residual adverse effects cannot be avoided, minimised, or remedied, aquatic offsetting is provided where possible; then
- (e) if aquatic offsetting of more than minor residual adverse effects is not possible, aquatic compensation is provided; then
- (f) if aquatic compensation is not appropriate, the activity itself is avoided

managing adverse effects, with avoidance “where practicable” being the first consideration, then minimisation and remediation, then aquatic offsetting, and finally aquatic compensation, and if none of this is possible the activity should be avoided.

- 111 Chapman Tripp has provided advice on what is meant by the word “practicable” with reference to *Royal Forest & Bird Protection Society of New Zealand Inc v Whakatane District Council [2017] NZEnvC 51* where the Court noted that:

Practicable” has been held to mean “possible to be accomplished with known means or resources” and synonymous with “feasible”, being more than merely a possibility and including consideration of the context of the proceeding, the costs involved and other matters of practical convenience (Union Steam Ship Co of NZ Ltd v Wenlock [1959] 1 NZLR 173 (CA). Conversely, “not reasonably practicable” should not be equated with “virtually impossible” as the obligation to do something which is “reasonably practicable” is not absolute, but is an objective test which must be considered in relation to the purpose of the requirement and the problems involved in complying with it, such that a weighing exercise is involved with the weight of the considerations varying according to the circumstances.

- 112 In my opinion, informed by the legal advice from Chapman Tripp and the evidence of **Mr Sherman** and **Dr Flynn**, the multi-faceted⁵² and multi-disciplinary approach taken by MEL to avoiding the removal of wetlands to the extent practicable is consistent with the expectations of the effects management hierarchy in the NPSFM and NESFM, and also in Policy D.4.23 of the PRP covered later in my evidence.

RPS Objectives and Policies

- 113 The RPS was prepared after the NPS-REG came into effect, and so it has “given effect to” this higher order document as required by the legislation.
- 114 The RPS contains policy guidance on several matters that are relevant to the proposed solar farm.⁵³ However, while the RPS has overarching relevance to the consideration of resource consent applications made under the PRP, in my opinion it has been given effect to by the PRP. I note the Council reporting officer holds a similar view.⁵⁴ However, for completeness the relevant RPS provisions are addressed below.

⁵² Practical/buildability, environmental factors, cultural values, and economic criteria.

⁵³ Objective 3.4 ‘Indigenous Ecosystems and Biodiversity’ and Policies 4.4.1 and 4.7.1, Objective 3.5 ‘Enabling Economic Development’, Objective 3.7 ‘Regionally Significant Infrastructure’ and Policy 5.3.1, Objective 3.9 ‘Security of Energy Supply’, and Objective 3.12 ‘Mana whenua role in decision making’.

⁵⁴ Section 42A report, Paragraph 112

Enabling economic wellbeing

- 115 As emphasised in Objective 3.5, the RPS has a focus on improving the economic wellbeing and resilience of Northland and its communities. This objective is supported by policies throughout the RPS that seek to enable the sustainable use of natural and physical resources.
- 116 The Proposal is important to economic well-being and resilience, primarily because it decreases reliance on electricity generated outside the region. This will increase the security of electricity supply within the region. It will also attract significant investment into the region, create jobs for the local economy, and help to lower electricity prices.

Regionally Significant Infrastructure

- 117 Related to the enabling economic wellbeing provisions, the RPS also contains enabling provisions for Regionally Significant Infrastructure which elevate its importance over other activities.⁵⁵ The proposed solar farm, being Regionally Significant Infrastructure, is consistent with these provisions, including the management of effects under Policy 5.3.3(1) and (3).

Security of energy supply

- 118 Objective 3.9 together with Policy 5.4.1 seek to reduce reliance on outside sources of electricity by encouraging renewable electricity generation activities within the region. These provisions elevate the importance of renewable electricity generation activities by directing that they be “recognised and provided for”. This direction is also consistent with, and gives effect to the NPS-REG. These provisions provide further enabling context to the determination of the application under Section 104(1) of the RMA.

Indigenous Ecosystems and Biodiversity

- 119 The relevant provisions are Objective 3.4 and 4.4.1, both of which have been given effect to with equivalent provisions in the PRP (addressed later in my evidence).
- 120 Objective 3.4 seeks to safeguard the ecological integrity of the Region by protecting areas of significant indigenous vegetation and habitats, and maintaining or enhancing the extent, diversity and integrity of indigenous ecosystems and habitats.
- 121 Policy 4.4.1 seeks to achieve Objective 3.4 by avoiding, remedying or mitigating adverse effects on significant indigenous vegetation and habitats of indigenous fauna, and avoiding, remedying,

⁵⁵ Objective 3.7 3.8 and Policy 5.3.1, 5.3.2, 5.3.3

mitigating, offsetting or compensating for adverse effects that cannot be reasonably avoided, remedied or mitigated.

- 122 In my opinion the Proposal aligns with the relevant RPS provisions for the following reasons:

122.1 Effects on the (ecologically significant) kanuka forest in the north-eastern corner of the site will be avoided, and pest control will result in positive effects for this feature.

122.2 Effects on significant or at-risk flora and fauna will be avoided, remedied, and mitigated, such that they are no more than minor.

122.3 Other effects that cannot be remedied or mitigated are being offset in accordance with Policy 4.4.1(5).

Mana whenua

- 123 Objective 3.12 is to recognise and provide for the tangata whenua kaitiaki role in decision-making. This is being achieved through the relationship (*MOU*) that has formed between MEL and Patuharakeke, the subsequent conditions of consent, and other commitments with tangata whenua through the MOU.

- 124 Overall, I consider the Proposal is consistent with the relevant objectives and policies of the RPS.

PRP objectives and policies

- 125 The PRP objectives and policies relevant to the proposed solar farm are those relating to effects on tangata whenua⁵⁶, social, cultural and economic benefits of activities⁵⁷, Regionally Significant Infrastructure⁵⁸, renewable energy⁵⁹, land preparation, earthworks and vegetation clearance⁶⁰, natural wetlands,⁶¹ and indigenous biodiversity.⁶²

Social, cultural and economic benefits and Regionally Significant Infrastructure

- 126 Policies D.2.2, D.2.5, and D.2.9 require the consideration of the benefits associated with Regionally Significant Infrastructure, with D.2.9 also requiring effects to be avoided, remedied, or mitigated.

⁵⁶ Objective F.1.9, F.1.2, and Policies D.1.1-D.1.5

⁵⁷ Policy D.2.2

⁵⁸ Policies D.2.5 and D.2.9

⁵⁹ Policy D.2.12

⁶⁰ Policy D.4.27

⁶¹ Policies D.4.22 and D.4.23

⁶² Objective F.1.3 and Policy D.2.18

These provisions place heightened importance on the benefits of the Proposal in the overall determination of the application under Section 104 of the RMA.

Renewable energy

- 127 When considering activities associated with renewable energy, Policy D.2.12 requires that “particular regard” be had to the local, regional, and national benefits of renewable energy. It also requires that regard be had to the practical constraints on large scale renewable energy generation, including the need to locate where the resource exists⁶³ and the fundamental need to connect to the transmission and distribution networks.⁶⁴ These matters are all directly applicable to the consideration of the Proposal, and similarly to the NESFM covered later in this evidence.

Land preparation, earthworks and vegetation clearance

- 128 The implementation of an erosion and sediment control plan in accordance with GD05 and best practice, together with the aquatic offsetting package will ensure that the Proposal is consistent with the outcomes sought in Policy D.4.27

Natural wetlands

- 129 The PRP policies relating to natural wetlands (D.4.22-D.4.24) give effect to the NPSFM, and so they are the most relevant and specific policies relating to the removal of natural wetlands from Site 1.
- 130 Policy D.4.22 requires activities to avoid, remedy, or mitigate adverse effects on important wetland functions and values so they are not significant, or they must provide biodiversity off-setting or environmental biodiversity compensation, so that residual adverse effects on the important functions and values of wetlands are no more than minor.
- 131 D.4.23 states that the loss of natural wetlands should be avoided except where:

.....

2) the regional council is satisfied that:

a) the activity is necessary for the construction or upgrade of specified infrastructure; and

b) the specified infrastructure will provide significant national or regional benefits; and

c) there is a functional need for the specified infrastructure in that location; and

d) the effects of the activity are managed through applying the effects management hierarchy.

⁶³ D.2.12(3)(a)

⁶⁴ D.2.12(3)(e)

-
- 132 These are the same criteria under Regulation 45(6) of the NESFM. For the same reasons outlined in paragraph 109 of this evidence, the Proposal aligns with these requisite matters and is overall consistent with this policy.

Indigenous biodiversity

- 133 Objective F.1.3 and Policy D.2.18, generally mirror Objective 3.4 and Policy 4.4.1 of the RPS, although Policy D.2.18 is a nuanced version.
- 134 Like RPS Policy 4.4.1, Policy D.2.18 directs that adverse effects on threatened/at-risk indigenous taxa, and areas of significant vegetation and habitats of indigenous fauna be avoided, remedied or mitigated so that they are no more than minor, together with other significant effects on indigenous vegetation, species and habitats (including wetlands). Furthermore, D.2.18(7) provides for the offset and compensation of significant residual adverse effects.
- 135 **Dr Shapiro** confirms that the effects on threatened (avifauna) species will be avoided and mitigated to be no more than minor through retention of the open water habitat on Site 1, the additional (replacement) habitat on Sites 1 and 3, and implementation of the AMP.
- 136 D.2.18(8) is to recognise the benefits of activities on biodiversity values, specifically:

8) recognising the benefits of activities on biodiversity values that:

a) restore, protect or enhance ecosystems, habitats and processes, ecological corridors and indigenous biodiversity, and

b) improve the public use, value or understanding of ecosystems, habitats and indigenous biodiversity.

- 137 Based on the evidence of **Dr Shapiro** and **Dr Flynn**, the proposed offset wetland and wider mitigation packages will restore, protect and enhance ecological values overall, and the Site 3 wetland in particular will improve public use, value and understanding of wetland ecosystems, habitats and biodiversity relative to the status quo wetlands on Site 1.
- 138 For the reasons outlined above, and in paragraph 122, I consider that the proposal aligns with the indigenous biodiversity provisions of the PRP.

Effects on tangata whenua

- 139 Objective F.1.9 is a process orientated provision that is a replica of Objective 3.12 of the RPS, being to recognise and provide for the

kaitiaki role of tangata whenua in decision-making. In my opinion, the process followed from project inception to lodgement (outlined in the evidence of **Mr Sherman**)⁶⁵ is consistent with the intent of the objective, and the supporting policies D.1.1 and D.1.2.

- 140 Objective F.1.12 deals more specifically with effects and seeks to protect places of significance to tāngata whenua from “*inappropriate use and development*”. Policy D.1.5 describes what constitutes a place of significance to tāngata whenua under the PRP. While there are no mapped places of significance to tāngata whenua in the Proposal footprint, there is an identified archaeological site which is being avoided.
- 141 Objective F.1.12 is supported by Policy D.1.4. The general support provided by Patuharakeke following extensive consultation with MEL aligns with the intent of these provisions.

Overall conclusion

- 142 The Proposal aligns with the suite of relevant objectives and policies in the PRP. Specifically, it achieves significant regional benefits (economic benefits and resilience) and manages effects on natural wetlands in accordance with the effects management hierarchy under Policies D.4.22 and D.4.23.

SECTION 104D AND SECTION 104(1) CONCLUSIONS

- 143 In my opinion the Proposal aligns with (and is not contrary to) the provisions of the relevant statutory plans (including the PRP) and the effects on the environment can be avoided, remedied, mitigated, and otherwise offset, such that they are no more than minor. Accordingly, it passes both ‘gateway’ tests in Section 104D and can be approved having regard to the matters in Section 104(1).

PROPOSED CONDITIONS

- 144 An updated version of proposed conditions of consent are included in **Exhibit 2** of this evidence. The conditions reflect the advice of the various MEL experts, commitments made to Patuharakeke, and responses to matters raised in the Section 42A Report. In particular, more detail has been included in respect of the proposed management plans, with specific input from MEL’s ecology experts.
- 145 For clarity, the conditions are structured under the following headings:

145.1 General conditions.

⁶⁵ Sherman EIC, Paragraphs 64-71

145.2 Pre-construction approvals.

145.3 Construction compliance.

145.4 Post construction compliance.

- 146 Fundamentally the pre-construction conditions set out the requirements for management plans, and detailed engineering design/modelling, while the construction compliance conditions require compliance with the pre-construction approvals/plans.
- 147 Post construction compliance is limited to ongoing monitoring of avifauna collisions and associated management actions, and maintenance and monitoring of the offset wetlands, and ongoing pest control across the three sites.

RESPONSE TO SUBMISSIONS

- 148 I have reviewed the submissions received by the NRC and comment briefly below.

Jesse Card, Forest and Bird, Mangawhai Ecology Inc.

- 149 These submitters oppose the proposed wetland removal from Site 1 for various reasons, including lack of clarity around the wetland extents, the appropriateness of replacing what they consider to be rare dune slack wetlands, and offsetting/compensation concerns.
- 150 It is unclear whether any of these submitters have been to the site – as I understand it no request to visit the site has been made to MEL and there is no indication of site-specific assessment. In any event, the concerns raised by these submitters appear to mirror those raised by Mr Warden in the Section 92 ecological peer reviews. Those concerns are addressed in the evidence of Ms Cook and Ms Flynn, and also Mr Shapiro in respect to avifauna. On the basis of this evidence, the concerns of these submitters have been addressed by the thorough project development process and assessment undertaken by MEL and its technical advisers.
- 151 I note that Mr Card also suggests ratios of 9:1 and 12:1 for the offset wetland. This is clearly inconsistent with best practice, as **Dr Flynn** has outlined. He is also concerned with the comparative quality of what he describes as “artificially engineering wetlands”. This concern is allayed in the evidence of **Mr Fuller**. It also ignores the information provided in the application about the degraded nature of the wetlands on Site 1.
- 152 I note that Forest and Bird refer to NZCPS provisions and sea-level rise, notwithstanding that the only part of the site that is located in the Coastal Environment (as mapped in the RPS and WDP) is the kānuka forest which is outside the development area, and no part of the site is shown as being subject to coastal inundation (flooding by

the sea) in a 1 in 100 year storm event, taking into account projected sea level rise over the next 100 years (rapid sea level rise scenario).⁶⁶

- 153 Forest and Bird and Mangawhai Ecology Inc. raise concerns about functional need, suggesting a more in-depth assessment of alternatives is required. Functional need is addressed in the Chapman Tripp legal opinion, and in paragraph 56 of my evidence. Regarding the assessment of alternatives, I consider that the assessment and associated optimisation analysis carried out by MEL is sufficiently robust. As described in the evidence of **Mr Sherman**, it is a complex, multi-faceted, multi-disciplinary analysis based on a range of factors, some of which are industry specific.
- 154 Mangawhai Ecology Inc. have raised concerns about the former fish survey being carried out by another entity (Wildlands Consultants). I note this is addressed in the evidence of **Ms Cook** where she considers that the fish survey findings are reflective of the aquatic habitats found on Site 1.⁶⁷ Specifically, she considers that the only suitable habitat for mudfish is the open water areas that are being retained.

Fish and Game New Zealand (late)

- 155 This submitter also raises concerns about the rarity of the wetlands (presumably also on the basis of the Warden reviews). They also raise concerns about bird strike, destroying the habitat of threatened birds, and *“placing whatever bird life that live there at risk or mortality”*. All of these matters are addressed in the evidence of **Dr Flynn** and **Dr Shapiro**.

Dr Mere Kepa

- 156 This submitter raises concerns about vulnerable habitat loss. She is also concerned about the effects of sea level rise and extreme weather events. These are matters addressed in the Beca Flood Modelling report included with the application,⁶⁸ noting also that the site is not shown to be inundated by the sea in the worst-case scenario on the NRC hazard maps.
- 157 There are some issues raised by Dr Kepa that are not within the scope of the consents sought by the NRC, most notably concerns about construction noise, landscape and visual amenity values, historic land confiscation, and the current coalition government.

⁶⁶ <https://nrcgis.maps.arcgis.com/apps/webappviewer/index.html>

⁶⁷ Cook EIC, Paragraphs 115-116

⁶⁸ Application AEE, Appendix 7

Shaun Erickson

- 158 This submitter opposes the application for several reasons, some of which are not within the scope of the consents sought from the NRC (i.e. effects on neighbours). The submission also raises concerns about heat island and micro-climatic effects. I note that this concern has been raised with other solar farms in New Zealand, most notably in the EPA fast-track decision for the Waerenga Solar Farm in the Waikato Region⁶⁹ where (in paragraph 5.67) the panel concluded that:

The Panel is satisfied that while a heat island effect has been observed in certain instances of solar farms in arid unvegetated environments, the explanation from the Applicants is that the pastoral environment at Waerenga Solar Farm does not require that conditions be imposed to address heat island effects.

Zach Woods

- 159 This submitter raises concerns about locating the solar farm on industrial zone land and the related adverse effects on economic growth (which I assume relates to opportunity costs). He also raises concerns about the adverse visual/aesthetic effects of solar panels being located on Sites 2 and 3, between the two urban areas of Marsden City and Ruakaka. These are all matters that are outside the scope of the consents being sought from the NRC.

John and Melodie O'Donnell and L & F Williams

- 160 These submitters raise concerns about traffic safety, noise, visual effects. These are all matters that are outside the scope of the consents being sought by the NRC.

Ross and Norma Scobie

- 161 This submitter raises a number of concerns that are outside the scope of the consents being sought by the NRC.
- 162 They also seek improvements to the current flood hazard risks and raise concerns in relation to dust and silt run-off.
- 163 Regarding the flood hazard risk, the applicant's obligation is to avoid effects associated with their development. Dust and silt run-off are valid concerns that will be addressed in the erosion and sediment control plan required as a condition of consent.

⁶⁹ <https://www.epa.govt.nz/assets/Uploads/Documents/Fast-track-consenting/Waerenga/Waerenga-Solar-Farm-decision-report.pdf>

RESPONSE TO MATTERS RAISED IN THE SECTION 42A REPORT

General

- 164 Having reviewed the Section 42A report, there is a substantial amount of consistency between the Council officer and I on the key planning matters, with the only substantive divergence related to the different ecological positions between the NRC and MEL experts in respect to wetland extent and offset.
- 165 My responses to relevant planning matters raised in the Section 42A report are set out below.

Default lapse and consent periods (paragraphs 19, 80-82)

- 166 Paragraph 19 of the Section 42A report notes that the application does not specify duration and lapse periods and assumes the default periods under Sections 123 and 125 will apply. However, in Paragraph 81 it states that *"The application seeks the maximum term of 35-years duration for this consent"*. I can confirm that the applicant is seeking a 5-year lapse date under Section 125 and a 35-year duration under Section 123. I note (in Paragraph 82) that the officer considers that these periods are appropriate.

Flood hazard effects (paragraphs 64 and 70)

- 167 I can confirm that the flood hazard conditions advanced by the applicant in the Section 92 response dated 15 November 2023 are included in the suite of proposed conditions of consent in **Exhibit 2** of my evidence.

Construction effects (paragraph 73)

- 168 I can confirm that a CEMP and associated requirement for an erosion and sediment control plan is included in the suite of proposed conditions of consent in **Exhibit 2** of my evidence.

NPSFM Section 1.6 requirements (paragraphs 87-89)

- 169 While I agree with the discussion in paragraphs 87-88 of the Section 42A report as to the information requirements under the NPSFM, regarding paragraph 89 I consider that the ecological evidence presented on behalf of MEL has allayed any uncertainty about the quality and quantity of information provided. In any event, I also consider that the proposal best gives effect to the NPSFM as per the direction in Section 1.6(3)(b), including the key policies 4, 6 and 15.

Relevance of NZCPS (paragraphs 93-94)

- 170 In my view the objectives and policies of the NZCPS are of limited relevance to this Proposal because only the kānuka forest is located

in the 'Coastal Environment'.⁷⁰ For completeness, I consider that the avoidance and protection of the kānuka forest aligns with Objective 1 and 2, and Policies 11, 13 and 15.

NES-REG (paragraph 97)

- 171 In addressing Policy C2 of the NPS-REG, the officer refers to Mr Warden's view that wetland removal should be avoided compared to the combination of avoidance and offset advanced by MEL but offers no further analysis.
- 172 In my view Policies C1 and C2 need to be read together. The provisions are included collectively under the heading "*Acknowledging the practical constraints associated with the development, operation, maintenance and upgrading of new and existing renewable electricity generation activities*" with Policy C2 acknowledging that due to the practical constraints and operational requirements in Policy C1, renewable electricity generation activities will often have effects that cannot be avoided, remedied or mitigated, and that in such instances decision makers should have regard to offsetting and compensation.
- 173 In my view Policies C1 and C2 neatly encapsulate the issues at play in the MEL application, with the proposed management of effects advanced by the various MEL experts being entirely consistent with the direction in Policy C2. A holistic consideration of these policies does not support the full avoidance of effects recommended by Mr Warden.

NPSFM – Policy 4 (paragraph 99)

- 174 In Paragraph 99 the officer expresses the view that Policy 4 of the NPSFM⁷¹ is not directly related to the application, and specifically that:

The Policy is considered to be more relevant to generation of hydroelectric power rather than loss of wetlands associated with construction of renewable energy sources such as solar farms.

- 175 When read overall the NPSFM does not distinguish hydroelectric generation over solar generation in relation to Policy 4. Accordingly, the Proposal is clearly a case of fresh water being managed as part of New Zealand's integrated response to climate change.

⁷⁰ As mapped in the RPS and District Plan.

⁷¹ Policy 4 'Freshwater is managed as part of New Zealand's integrated response to climate change'

Relevance of the RPS (paragraphs 112 and 117)

- 176 For completeness, I generally agree with the officer's conclusions in relation to the RPS set out in paragraphs 112 and 117.

RMA Part 2 (paragraph 135)

- 177 Based on the evidence advanced by the MEL witnesses, I do not consider there to be any need to have recourse back to Part 2 on the grounds of invalidity, incomplete coverage, or uncertainty of meaning in planning documents. However, given that Section 104(1) is subject to Part 2, in the event that the commissioners consider there are remaining areas of uncertainty such that recourse to Part 2 is appropriate, I consider the following matters to be relevant:

177.1 The Proposal manages natural and physical resources as part of New Zealand's integrated response to climate change, and in so doing helps to manage the associated risks from natural hazards.⁷²

177.2 The Proposal protects and enhances the higher value wetland habitat on Site 1 and offsets the loss of low value wetland habitat with additional high value habitat adjoining an area where Bittern are known to use, resulting in a better environmental outcome than the status quo.⁷³

177.3 The Proposal provides for the social, economic, and cultural wellbeing of the community by improving resilience, providing economic benefits, and contributing to New Zealand's integrated response to climate change.⁷⁴

177.4 The Proposal enables realisation of the benefits to be derived from the use and development of renewable energy.⁷⁵

177.5 The Proposal will provide for the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga through the enhancement of the quality of the environment.⁷⁶

177.6 The Proposal enables the use of Heavy Industrial Zone land and surrounding electricity infrastructure in a manner that is specifically contemplated and provided for under national

⁷² Section 5, 6(h), 7(i) RMA

⁷³ Section 5, 6(a), 6(c), 6(d), 7(f)

⁷⁴ Section 5, 7(i), 7(j),

⁷⁵ Section 7(j)

⁷⁶ Section 5, 6(e), 7(a), 7(aa)

planning documents prepared under Part 2 of the RMA, being the NPS-REG, NPSFM and NESFM.

- 178 While major renewable generation activities often involve a balancing of environmental impacts with benefits, in respect to both effects and policy, this is not the case here. Based on the MEL ecological evidence the effects of the Proposal are positive overall, including for wetland habitat and the quality of the environment. Furthermore, the Proposal aligns with the specific consent pathways provided for the activity in the NESFM and PRP, and with the overarching policy guidance in the NPS-REG, NPSFM, RPS and PRP.

Extent of Natural Inland Wetlands on Site 1

- 179 Mr Warden for the NRC considers that the spatial extent of natural inland wetlands on Site 1 is greater than that identified by **Dr Flynn** and **Ms Cook** on behalf of MEL. This has related implications for the aquatic offsetting proposal on Sites 1 and 3.

- 180 Having considered the evidence of all witnesses, I prefer the evidence of **Dr Flynn** and **Ms Cook** for the following reasons:

180.1 Boffa Miskell initially carried out seventy-two (72) test plots during 10 days of fieldwork spanning a 16-month period initially, and a further 38 plots (giving a total of 110 test plots) and 19 rapid assessments post receipt of the Warden review, while Mr Warden carried out only one test plot during a single site visit. The one test plot carried out by Mr Warden (which he considered to be a natural inland wetland) was recently⁷⁷ field checked by Ms Cook and determined not to be a wetland due to it failing the rapid assessment.

180.2 In addition to the single, erroneous test plot carried out by Mr Warden, his opinion appears to rely almost entirely on March 2023 Google Aerial Earth imagery captured at a time when the extent of water pooling on the site was the greatest captured in the last 22 years of Google Earth Imagery.⁷⁸ In addition to the March 2023 imagery not being representative of "normal" conditions, I understand that analysis of aerial imagery is only one of a range of matters that need to be considered under the MfE wetland delineation protocols.

- 181 Based on the evidence of **Ms Cook** and **Dr Flynn**, Boffa Miskell has followed accepted best practice in delineating the wetlands on Site 1, including appropriate analysis of aerial photographs, extensive in-field verification, and consideration of seasonal and weather conditions.

⁷⁷ During site visits dated 19th June, 21st June, and 4th July 2024

⁷⁸ Cook EIC, Paragraph 84

CONCLUSION

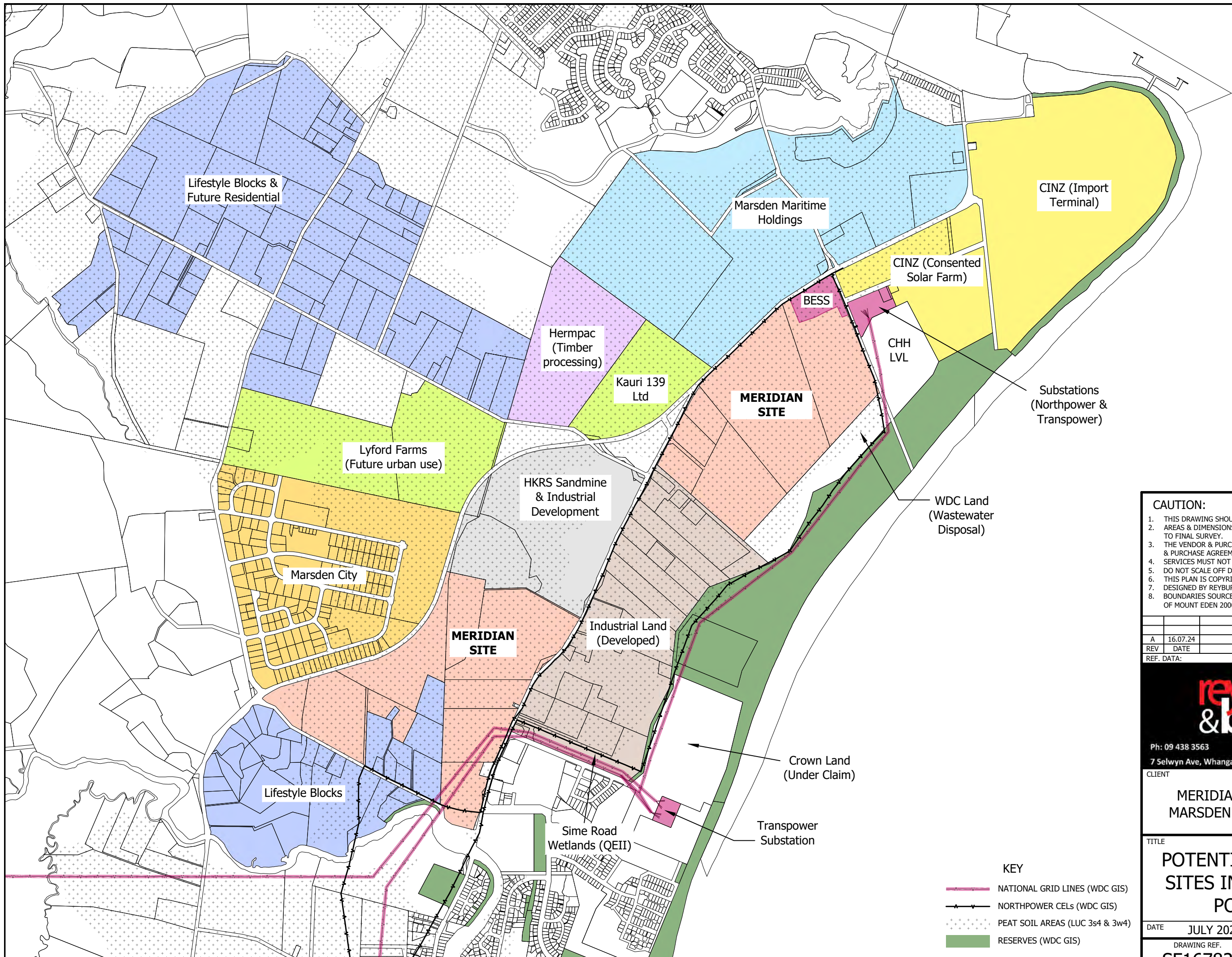
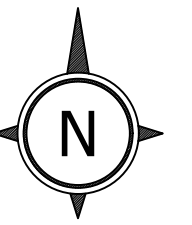
- 182 In my opinion resource consent can be granted under the PRP and NESFM for the following reasons:
- 182.1 The Proposal aligns with the requirements of Regulation 45 of the NESFM, including application of the effects management hierarchy.
- 182.2 The Proposal is consistent with the overarching provisions of the NPS-REG, NPSFM, and RPS.
- 182.3 The Proposal aligns with the objectives and policies of the PRP, including the enabling provisions for Regionally Significant Infrastructure, economic development, renewable energy generation, security of energy supply, and the provisions for managing adverse effects on indigenous biodiversity.
- 182.4 I consider the approach taken by MEL in respect to the effects management hierarchy under the NESFM, including the careful consideration of alternatives and efficiency/optimisation to be sufficiently robust, and in my experience consistent with best practice.
- 182.5 I rely on the evidence of **Ms Cook** and **Dr Flynn** in respect to the natural inland wetland extents, but consider the approach taken by Boffa Miskell to better align with best practice than the approach taken by the Council ecologist.
- 182.6 I consider that the proposed conditions of consent adequately encapsulate the effects management proposed by the various MEL experts, and that adherence to the conditions will achieve the outcomes contemplated under the various planning documents.

19 July 2024

Brett Lewis Hood

EXHIBIT 1

PLAN



- CAUTION:**
1. THIS DRAWING SHOULD NOT BE AMENDED MANUALLY.
 2. AREAS & DIMENSIONS ARE APPROXIMATE ONLY AND ARE SUBJECT TO FINAL SURVEY.
 3. THE VENDOR & PURCHASER MUST CONTACT THE SURVEYOR IF SALE & PURCHASE AGREEMENTS ARE ENTERED INTO USING THIS PLAN.
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A	16.07.24	FIRST ISSUE - BH/PD
REV	DATE	DESCRIPTION
REF. DATA:		



Ph: 09 438 3563 PO Box 191, Whangarei 0140
7 Selwyn Ave, Whangarei www.reyburnandbryant.co.nz

CLIENT
**MERIDIAN ENERGY LIMITED
MARSDEN POINT, WHANGAREI**

TITLE
**POTENTIAL SOLAR FARM
SITES IN THE MARSDEN
POINT AREA**

DATE **JULY 2024** SCALE **1:20,000 @A3**

DRAWING REF. SF16782	SHEET 01 OF 01	REV A
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- KEY**
- NATIONAL GRID LINES (WDC GIS)
 - NORTHPOWER CELs (WDC GIS)
 - PEAT SOIL AREAS (LUC 3s4 & 3w4)
 - RESERVES (WDC GIS)

EXHIBIT 2

PROPOSED CONDITIONS OF CONSENT

NORTHLAND REGIONAL COUNCIL – DRAFT CONDITIONS

To undertake the following activities on Lots 1-3 DP 419151 and Lots 1-3 DP 59354 (SH15 and Rama Road), Lot 1 DP 386730, Lot 1 DP 348043 and Lot 2 DP 325771, Lot 2 DP 348043, and Section 13 SO 32254 (Marsden Point Road and McCathie Road), and Lot 1 DP 406479, Pt Lot 1 DP 36288, Part Lot 1 Block VII Ruakaka SD, Part Section 11 Block VII Ruakaka SD, and Part Section 54, Sections 55-57 and Section 60 Block VII Ruakaka SD (SH15 and McCathie Road), Ruakaka.

- AUT.XXXX** **Earthworks for site development including within a ‘flood hazard area’, within a ‘high-risk flood hazard area’, within and within 10m of a ‘natural inland wetland’, and within a ‘significant wetland’.**
- AUT.XXXX** **Vegetation clearance within, and within 10 metres of a ‘natural inland wetland’, and within a ‘significant wetland’.**
- AUT.XXXX** **Divert stormwater during land disturbance activities.**
- AUT.XXXX** **Divert stormwater in a river (redirection of Unnamed Drain through wetland)**

Relevant permitted activities

- Rule C.2.2.1 Natural wetland maintenance and enhancement.
- Rule C.2.1.3 Maintenance of the free flow of water in rivers and mitigating bank erosion.

SUBJECT TO THE FOLLOWING CONDITIONS:

GENERAL CONDITIONS

- 1 At least two weeks prior to the commencement of any works authorised by these consents, the Consent Holder must notify the council’s assigned monitoring officer in writing of the date that the works are intended to commence. The Consent Holder must arrange for a site meeting between the Consent Holder’s principal earthworks contractor and the council’s assigned monitoring officer prior to any earthworks commencing.

Advice Note: Notification to the council may be made by email to info@nrc.govt.nz.

- 2 A copy of these consents must be provided to every person who is to carry out the works authorised by these consents, prior to any work commencing.

- 3 The consent holder must undertake all activities authorised by these consents in general accordance with the descriptions and plans submitted with the application or as modified through the decision process. In the event of any inconsistency between this information and these conditions, the conditions of consent must prevail.

PRE-CONSTRUCTION APPROVALS

- 4 At least twenty (20) working days prior to notice being given under Condition 1 the Consent Holder or its agent/contractor must submit the following management plans for certification by the council's assigned monitoring officer:
- (a) Construction Management Plan (CEMP)
 - (b) Native Avifauna Management Plan (NAMP)
 - (c) Native Fish Capture and Relocation Plan (NFCRP)
 - (d) Lizard Management Plan (LMP)
 - (e) Bat Management Plan (BMP)
 - (f) Wetland Restoration Management Plan (WRMP)
 - (g) Pest Management Plan (PMP)
- 5 The management plans submitted under Condition 4 must be:
- (a) In accordance with Conditions 6-21; and
 - (b) Prepared by a Suitably Qualified and Experienced person;
 - (c) Prepared in consultation with Hapu; and
 - (d) Certified in writing by the Council's Compliance Manager prior to construction works authorised by these consents first commencing.

Construction Environmental Management Plan

- 6 The objectives of the CEMP are:
- (a) To detail the environmental monitoring and management procedures to be implemented during the construction phase to ensure that appropriate

environmental management practices are followed, and adverse construction effects are minimised to the extent practicable; and

- (b) to ensure construction effects of the Project are in accordance with the assessments accompanying the resource consent applications.

7 As a minimum, the CEMP must include the following:

- (a) The expected duration (timing and staging) of earthworks, and details of locations of disposal sites for unsuitable materials, and clean water diversions if required;
- (b) Details of all erosion and sediment controls including diagrams and/or plans, of a scale suitable for on-site reference, showing the locations of the erosion and silt control structures/measures;
- (c) The commencement and completion dates for the implementation of the proposed erosion and sediment controls;
- (d) Details of surface revegetation of disturbed sites and other surface covering measures to minimise erosion and sediment runoff following construction;
- (e) Measures to minimise sediment being deposited on public roads;
- (f) Measures to ensure dust discharge from the earthwork's activity does not create a nuisance on neighbouring properties;
- (g) Measures to prevent spillage of fuel, oil and similar contaminants;
- (h) Contingency containment and clean-up provisions in the event of accidental spillage of hazardous substances;
- (i) Means of ensuring contractor compliance with the CEMP;
- (j) The name and contact telephone number of the person responsible for monitoring and maintaining all erosion and sediment control measures;
- (k) Contingency provisions for the potential effects of large/high intensity rain storm events.

8 The Consent Holder may amend the CEMP at any time and submit the amended plan to the council's assigned monitoring officer for certification. The most recent certified version of the CEMP must be used for compliance purposes.

Native Avifauna Management Plan (NAMP)

- 9 The objective of the NAMP is:
- (a) To minimise the adverse effects of construction works on native birds, including but not limited to matuku-hūrepo, tūturiwhatu and weweia.
- 10 As a minimum, the NAMP must include the following:
- (a) Management measures for minimising adverse effects of construction works on native birds, including but not limited to nesting bird checks required if vegetation clearance is undertaken during the main bird breeding season (August to March inclusive) and appropriate set back measures if active nests are located.
 - (b) Avifauna collision risk monitoring including two years of post-construction surveillance to detect and assess the impact (if any) on avifauna due to panel collision.

Native Fish Capture and Relocation Plan (NFCRP)

- 11 The objective of the NFCRP is to detail how native fish will be captured and relocated from wetlands, drains and river habitats prior to works.
- 12 As a minimum, the NFCRP must include the following:
- (a) Methodologies to capture fish;
 - (b) Specification that the fish capture and relocation will be undertaken by a suitably qualified and experienced ecologist;
 - (c) Details of the relocation site; and
 - (d) Storage and transport measures.
 - (e) Fish passage requirements during works (if required)
- 13 If native fish are relocated in accordance with the requirements of the approved NFCRP, the Consent Holder must provide information regarding the species and number of fish relocated to the consenting authority within 10 working days of completion of the fish relocation.

Lizard Management Plan (LMP)

- 14 The objectives of the LMP are:
- (a) To minimise the risk of injury or mortality to native lizards during construction.
 - (b) The habitat(s) that any lizards are transferred to (either on site or at an alternative site, as the case may be) will support viable native lizard populations for all species present predevelopment.
- 15 As a minimum, the LMP must include the following:
- (a) Timing of the implementation of the LMP.
 - (b) A description of methodology for survey, salvage and relocation of salvaged native lizards.
 - (c) A description of the relocation site; including discussion of:
 - (i) Provision for additional refugia, if required e.g. depositing salvaged logs, wood or debris for newly released lizards that have been rescued.
 - (ii) Any protection mechanisms (if required) to ensure the relocation site is maintained (e.g.) covenants, consent notices etc.
 - (iii) Any weed and mammalian pest management to ensure the relocation site is maintained as appropriate habitat.

Bat Management Plan (BMP)

- 16 The purpose of the BMP is to set out procedures to avoid, remedy or mitigate impacts on native long-tailed bats (*Chalinolobus tuberculatus*) that may be adversely affected by the construction of the proposed works.
- 17 As a minimum, the BMP must include the following:
- (a) Management actions, including bat roost protocols (Bat Recovery Group - Department of Conservation, 2021) to be implemented prior to vegetation clearance.
 - (b) Monitoring procedures to be implemented for the removal of any vegetation and/or trees that are identified as potential bat roost.

- (c) Proposals for minimising disturbance from construction activities near any discovery of active roosts;
- (d) Methods for the replacement of any actual bat roost trees that are removed as part of the proposal.

Wetland Restoration Management Plan (WRMP)

- 18 The purpose of the WRMP is to describe the site-specific methods and measures to be implemented to achieve the wetland restoration objectives outlined in the “Ecological Effects Assessment” dated 28 August 2023 (Appendix 13 to the Assessment of Ecological Effects).
- 19 As a minimum, the WRMP must include the following:
- (a) A record of consultation with Hapu and Transpower; and
 - (b) Data requirements, including but not limited to hydrological monitoring, to inform detailed design; and
 - (c) Detailed wetland design, including water depth, size, layout, catchment area and staging; and
 - (d) Wetland and riparian plant species to be planted, including density, size and layout, and including connections to adjacent habitat; and
 - (e) The creation of foraging, roosting/resting, breeding, and nesting habitat for the species known to use the sites currently, particularly matuku-hūrepo and weweia; and
 - (f) Maintenance and monitoring requirements, including but not limited to, a programme of establishment and post establishment plant pest control to minimise exotic plant cover in the wetland; and ongoing pest animal control; and
 - (g) The information required by Schedule 2 of the Resource Management (National Environmental Standards for Freshwater) Regulations 2020 (NES); and

- (h) Measures to protect the wetland from development so it is protected in perpetuity (such as covenants).

Pest Management Plan (PMP)

- 20 The purpose of the PMP is to improve the ecological integrity of forest, wetland and riparian habitats within Sites 1 – 3.
- 21 As a minimum the PMP must include the following:
 - (a) Target pest species and target thresholds to achieve the objectives of the PMP; and
 - (b) Methods to achieve target species outcomes, with a preference for physical controls over chemical wherever practicable. Methods may include descriptions of spatial configuration of bait lines and baiting and/or trapping details including types of baits/traps and frequency of baiting; and
 - (c) A description of monitoring/auditing proposed in accordance with standard accepted practice.

Kaitiaki Monitoring Programme

- 22 Prior to the start of bulk earthworks, a Kaitiaki Monitoring Programme must be developed in cooperation with Patuharakeke Te Iwi Management Trust. This programme must be developed to include provisions for cultural monitoring of effects associated with:
 - (a) Indigenous species habitat disturbance, including lizard, bird, and fish habitat;
 - (b) Accidental discovery of kōiwi and/or cultural artefacts during works; and
 - (c) Wetland regeneration and ongoing maintenance of ecological restoration areas within the site.
- 23 Written confirmation that the programme has been agreed between parties must be submitted to council's assigned monitoring officer prior to commencement of works.

Hydraulic modelling and attenuation

- 24 The consent holder shall achieve a flood level increase of not more than 5mm on any land outside the project site in the 100 year, 5 year and 2 year ARI rainfall events. This shall be demonstrated using a hydraulic model submitted to Council and approved 40 days prior to construction commencement. The flood model shall take earthworks, culverts, ground roughness and soil infiltration changes into account. Soil infiltration changes shall be calculated using the PV-SMaRT Solar Farm Runoff Calculator Version 3.0 tool from the University of Minnesota.
- 25 Peak flows discharged from the site shall be attenuated on site such that the 100-year, 5-year and 2-year ARI rainfall event post-development peak flows (with climate change) do not exceed 80% of the pre-development peak flowrate (with climate change). The on-site detention systems and comparison of peak flows shall be submitted to Council and approved 40 days prior to construction commencement.

CONSTRUCTION COMPLIANCE

- 26 The consent holder must undertake all activities authorised by these consents in accordance with the management plans certified under condition 5.
- 27 Prior to the commencement of earthworks on-site, a stabilised construction entrance to the site must be installed to minimise the tracking of spoil or debris onto off-site public road surfaces. All material tracked onto off-site surfaces as a result of the exercise of these consents must be removed as soon as possible, but at least daily. The stabilised construction entrance must be maintained throughout the duration of earthworks operations.
- 28 Erosion and sediment controls approved under Condition 7 must be installed prior to the commencement of earthworks.
- 29 No earthworks may be carried out between 1 May and 30 September in any year unless the prior written agreement of the council's Compliance Monitoring Manager has been obtained.
- 30 Any request to undertake works between 1 May and 30 September in any year must be in writing and must be made at least two weeks prior to the proposed date that the works are required to be undertaken. This written request must include an amended CEMP for the works that has been prepared in accordance with Condition 7.

- 31 All offsite stormwater must be directed away from earthworks areas and no drainage pathways must be constructed, or permitted to flow, over fill areas in a manner that creates erosion of the fill material.
- 32 Slash, soil, debris and detritus associated with the exercise of these consents must not be placed in a position where it may be washed into any water body.
- 33 All bare areas of land and fill must be covered with aggregate or topsoiled and established with a suitable grass/legume mixture to achieve an 80% groundcover within one month of the completion of earthworks. Temporary mulching or other suitable groundcover material must be applied to achieve total groundcover of any areas unable to achieve the above requirements.
- 34 The exercise of these consents must not give rise to any discharge of contaminants, including dust, which in the opinion of a monitoring officer of the council is noxious, dangerous, offensive or objectionable at or beyond the property boundary.
- 35 The exercise of these consents must not cause any of the following effects on the water quality of the Ruakaka River, as measured approximately 10 metres downstream of a discharge point into the stream, when compared to a site upstream of all land disturbance activities during the same sampling event:
- (a) The production of any conspicuous oil or grease films, scums or foams, floatable or suspended materials;
 - (b) A conspicuous change in colour or visual clarity;
 - (c) An emission of objectionable odour;
 - (d) An increase in suspended solids concentration greater than 100 grams per cubic metre.
- 36 The Consent Holder must, on becoming aware of any discharge associated with the Consent Holder's operations that is not authorised by these consents:
- (a) Immediately take such action, or execute such work as may be necessary, to stop and/or contain the discharge; and
 - (b) Immediately notify the council by telephone of the discharge; and
 - (c) Take all reasonable steps to remedy or mitigate any adverse effects on the environment resulting from the discharge; and

- (d) Report to the council's Compliance Manager in writing within one week on the cause of the discharge and the steps taken, or being taken, to effectively control or prevent the discharge.

For telephone notification during the council's opening hours, the council's assigned monitoring officer for these consents must be contacted. If that person cannot be spoken to directly, or it is outside of the council's opening hours, then the Environmental Hotline must be contacted.

Advice Note: *The Environmental Hotline is a 24 hour, seven day a week, service that is free to call on 0800 504 639.*

- 37 The design, installation and maintenance of culverts must be in accordance with:
 - (a) The recommendations in the New Zealand Fish Passage Guidelines (Franklin et al., 2018); and
 - (b) The permitted activity Rule C.2.1.8, and C.2.3 General conditions of the Proposed Regional Plan.

POST CONSTRUCTION COMPLIANCE

Native Avifauna Collision Management Plan (NACMP)

- 38 If the monitoring required under the NAMP approved under Condition 10(b) identifies that At Risk or Threatened birds are colliding with solar panels, the Consent Holder or its agent/contractor must submit a NACMP to the Council's assigned Monitoring Officer for certification.
- 39 The objective of the NACMP is to minimise and mitigate the risk on At Risk and Threatened avifauna as a result of collisions with solar panels based on observations made during the monitoring programme under Condition 10(b).
- 40 The NACMP must be:
 - (a) Prepared by a Suitably Qualified and Experienced Ornithologist; and
 - (b) Provided to the Council's Compliance Manager within 20 working days of the collision discovery; and
 - (c) Certified in writing by the Council's Compliance Manager.

- 41 Any actions arising under the NACMP approved under Condition 39 must be complied with to the satisfaction of the Council's assigned Monitoring Officer.

Site Pest Control

- 42 The pest control plan approved under conditions 5 and 20 must be implemented for the duration of this consent.

Wetland Maintenance and Monitoring

- 43 The post construction wetland maintenance and monitoring requirements of the WRMP under conditions 5, 18 and 19 must continue for the duration of this consent.

REVIEW CONDITION

- 44 The council may, in accordance with Section 128 of the Resource Management Act 1991, serve notice on the Consent Holder of its intention to review the conditions annually during the month of September for any one or more of the following purposes:

- (a) To deal with any adverse effects on the environment that may arise from the exercise of these consents and which it is appropriate to deal with at a later stage; or
- (b) To require the adoption of the best practicable option to remove or reduce any adverse effect on the environment.

The Consent Holder must meet all reasonable costs of any such review.

- **Lapse date:** 5 years
- **Duration:** 35 years

EXHIBIT 3

WDC RESOURCE CONSENT

Section 95 of the Resource Management Act 1991

Notification Decision – Discretionary Activity

1 Consent Application

Council Reference	LU2300093 and P123794		
Reporting Planner	A Hartstone, Consultant Planner		
Applicant	Meridian Energy Limited		
Application	Establish, operate, and maintain a solar energy farm with an approximate project size of 200ha across three sites, and any ancillary activities.		
Property Address	SH15/Rama Road/Marsden Point Road, being Lots 1 – 3 DP 419151 and Lots 1 – 3 DP 59354 ('Site 1')		
	SH15/McCathie Road, being Lot 1 DP 386730, Lot 1 DP 348043 and Lot 2 DP 325771, Lot 2 DP 348043, and Section 13 SO 32254 ('Site 2')		
	McCathie Road/Marsden Point Road, being Lot 1 DP 406479, Pt Lot 1 DP 36288, Pt Section 1 Blk VII Ruakaka SD, Pt Section 11 Blk VII Ruakaka SD, Pt Section 54 and Sections 55 – 57 and 60 Blk VII Ruakaka SD ('Site 3').		
Date Lodged	6 September 2023		
Site Visit	4 October 2023		
Environment	'Site 1' Heavy Industrial Zone		
	'Site 2' Light Industrial Zone		
	'Site 3' Rural Production Zone		
Resource Notations	Marsden Technology Park Precinct (MTPP) – PREC14		
	Critical Electricity Lines		
	Transpower National Grid Corridor		
	First Gas Limited designation FGL-D1		
	Channel Terminal Services Limited designation CTS-1		
	Rail and State Highway Noise Control Boundaries		
	Rail Vibration Alert Area		
	Coastal Environment		
Distributions			
Internal	Date sent	Amendments sent	Comments received
NTA	13/9/2023		20/9/2023
Dev Engineer			16/1/2024
External	Date sent	Amendments sent	Comments received
DoC	13/9/2023		27/11/2023
Heritage NZPT			12/12/2023 (rec of approved Authority)

2 Processing History

Scope of the Application

The scope of the application has not been amended since lodgement. However, a consent application is currently being processed by Northland Regional Council for activities associated with the construction of the solar farm, including bulk earthworks and removal of wetland, across Sites 1-3. The applicant has advised by way of email dated 5th December 2023 that *'MEL [applicant] has requested that you consider granting this independently of the NRC consents. They understand and accept the risk that utilisation of the WDC consent may be compromised if the NRC consent is not granted.'* The Council has accepted this request to determine the District Council consent separately from any consent that may be subsequently issued by the Northland Regional Council.

Section 92 – Further Information Request

Requested	Received
3 October 2023	Partial response 31 October 2023
regarding landscape, stormwater, roading, Section 176(1)(b) re designations, and permitted baseline / affected persons	Partial Response 3 November 2023
	Final response 15 November 2023

Draft Conditions

The applicant was sent an initial draft of the consent conditions on the 19th December 2023. Correspondence was then entered into regarding refining the conditions of consent, most notably those related to landscape effects, construction noise, and potential for road damage associated with construction traffic. Those matters have been addressed, resulting in agreement on the conditions that are now presented in this report and decision.

3 Description of Proposal

Section 4 of the application prepared by Reyburn and Bryant Limited dated September 2023 ('the application') provides a full description of the proposal.

The activity as proposed consists of preparatory site works and construction of 200,000 panels a footprint of 172ha. The works include bulk earthworks and drainage, formation of internal access tracks, landscape planting and screening, security fencing, and formation of a new wetland area. The solar farm will consist of the panel structures consisting of either fixed panel or single axis tilt panels. Inverters will be located adjacent to internal accessways throughout the solar farm layout. A satellite control room will be constructed on Site 3, with existing buildings on Site 3 used as an operation and maintenance centre. A number of existing structures and buildings across the three sites will be removed to accommodate the solar farm.

Plans are provided in Appendices 4 and 6 of the application and detail the general proposed layout, the site works required, the table structures which will hold the solar panels, and the location of access and ancillary structures across Sites 1 – 3.

For completeness, a Battery Energy Storage System ('BESS') has been consented on the corner of State Highway 15 and Rama Road (part of 'Site 1') in accordance with land use consent LU2300072. The proposed solar farm will be connected to the BESS via a 33kV overhead connection located within road reserve. Power will be introduced to the main grid from the BESS.

4 Site and Surroundings / Existing Environment

Section 3 of the application provides a description of the site and surrounding environment. That description is accepted and adopted for the purpose of this report. It is recorded that the consented BESS currently being constructed on part of Site 1 is considered to form part of the existing environment.

A solar farm has previously consented on land bounded by Rama Road, State Highway 15 and Mair Road, northeast of Site 1. That consent was granted to Refining New Zealand Limited in October 2019 and has not been given effect to as yet, and is due to lapse in October 2024. It is not known whether that project will proceed at this time.

5 Reasons for Consent

Section 1.5 of the application provides a summary of the rules applicable to the application across Sites 1 – 3, noting that each site is subject to different zone with numerous overlays and resource identified. Table 3 of the application sets out the specific infringements on each of the sites. It is noted that the solar farm is best defined as an ‘industrial activity’ based on the definition in the District Plan.

In summary, the infringements on each of the three sites are as follows:

‘Site 1’ Heavy Industrial Zone

- TWM-R6 Land use, where the impervious area on the site will increase beyond the permitted standard

‘Site 2’ Light Industrial Zone

- TWM-R6 Land use, where the impervious area on the site will increase beyond the permitted standard
- LIZ-R6 Fences, where the proposed security fence will be topped with barbed wire
- LIZ-R8 General Industry, where the boundary with the Rural Production Zone site will not comply with Clause 2. of the rule.
- LIZ-R14, where farming will occur but will not comply with Clause 2 where the site adjoins a Rural Production Zone site.

‘Site 3’ Rural Production Zone

- RPROZ-R5 Building and Major Structure Coverage, where the solar panels are deemed as major structures and will exceed the permitted standard.
- RPROZ-R20 Industrial Activities, where the proposal is defined as an industrial activity.

Two infringements were identified at the time of lodgement that the applicant has since advised are not required. Those infringements relate to earthworks in the Coastal Environment under Rule CE-R8, where the rule does not apply to Site 1 due to the underlying Heavy Industrial Zoning, and Rule NAV.7 Construction Noise, where the applicant has since advised that the proposal is intended to comply with this rule in all respects.

The application has been lodged on the basis that the activity will be undertaken across three sites in close proximity to one another, and is therefore treated as a bundled application. Based on the above identified infringements, the application is assessed as a discretionary activity.

The applicant is seeking consent from the Northland Regional Council for various Regional Plan and NES-FW infringements. At the time of preparing this report, a decision regarding notification has yet to be made on the Regional Council consent application. Careful consideration has been given to the ability to progress the consent before the Whangarei District Council to a decision while the Northland Regional Council application has yet to be determined. This is addressed further in this report.

Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011

Appendix 22 of the application includes confirmation of a search of the Council records. This confirms that none of the three sites are subject to current or previous activities that are included on the current version of the Hazardous Activities and Industries List (HAIL). Re Regulation therefore does not apply.

Effect of Designations under Section 176 of the RMA

A designation affects Site 3, where the Designation FGL-1 (being a gas transmission pipeline) runs the length of the site from north to south. The application is supported by correspondence from First Gas Limited provided as part of a Section 92 response dated 15th November 2023 identifying on-going discussions regarding an agreement in principle to the proposed solar farm as it affects the designation, That correspondence includes commentary from First Gas Limited that *‘Based on the level of information provided to date, Firstgas is happy to provide support in principle, subject to further assessment at detailed design stage.’*

While the statement is not explicit in terms of addressing Section 176 of the RMA, this is considered satisfactory to confirm that written consent has been given by the requiring authority (in this case First Gas Limited) to the proposed activity.

6 Notification Assessment (Sections 95A to 95F)

Section 95A Assessment

The criteria under Section 95A(3)(a)-(c) have been considered, and the application is not subject to mandatory public notification under these criteria. The applicant has not requested public notification, there is no outstanding information that will result in public notification under Section 95C, and the application does not include an application to exchange reserve land.

The criteria under Section 95A(5) have been considered as follows:

- Pursuant to Section 95A(5)(a), the application is not for an activity that is subject to a rule or a national environmental standard that precludes public notification.
- Pursuant to Section 95A(5)(b), the proposed activity is not an activity prescribed under clauses (i) or (iii) as being precluded from public notification.

Under Section 95A(8)(a), the application is not subject to a rule or NES standard that requires public notification.

Under Section 95A(8)(b), the application requires an assessment of adverse effects in accordance with Section 95D. That assessment is provided below. The determination is that any adverse effects associated with the proposed activity will be minor or less than minor.

While the application is a for a large scale activity, the activity itself, being the operation of solar panels, is a relatively benign activity, and Sites 1 and 2 are both zoned for industrial activities. Site 3 is rural and the Plan provisions allow for a wide variety of potential land uses. Therefore, there is no evidence of any unusual or exceptional matters associated with the site or proposal that would constitute special circumstances warranting public notification under Section 95A(9).

The application is not required to be publicly notified. Therefore, assessment against the provisions of Section 95B is required. That assessment follows.

Section 95B Assessment – Limited Notification

Sections 95B(2)(a) and (b) do not apply to the proposal as there are no affected protected customary rights groups nor any affected customary marine title groups.

Sections 95B(3)(a) and (b) do not apply to the proposed activity as it is not on or adjacent to, or may affect, land that is subject to any statutory acknowledgement. Hence, there are no persons to whom any statutory acknowledgement is made that may be affected.

The criteria under Section 95B(6) have been considered and are not relevant to the proposal. The application is not precluded from limited notification by any rule or national environmental standard, is not a controlled activity, and is not a prescribed activity.

Section 95B(7) is not relevant to the application, as the proposal is not a boundary activity nor a prescribed activity.

Section 95B(8) requires a determination as to whether any person is an affected person in accordance with Section 95E. That assessment is provided below and concludes that no persons will be adversely affected to a minor or more than minor extent by the granting of the consent.

Land excluded from public notification assessment – Section 95D(a)

Pursuant to Section 95D(a)(ii) it is considered that adverse effects on the following persons should be excluded from an assessment of the wider potential and actual effects on the environment across Sites 1 – 3 required for public notification:

- Lot 4 DP 419151 (Allis Bloy Place, Ruakaka)
- Whangarei District Council as administrator of Bercich Drain and Rama Road
- Lot 5 DP 436718 (77 Allis Bloy Place, Ruakaka)
- Lot 2 DP 436718 (Allis Bloy Place, Ruakaka)

- Lot 1 DP 436718 (Allis Bloy Place, Ruakaka)
- Lot 3 DP 436718 (Allis Bloy Place, Ruakaka)
- Lot 1 DP 560379 (30 Allis Bloy Place, Ruakaka)
- Lot 2 DP 560379 (18 Allis Bloy Place, Ruakaka)
- Lot 2 DP 406479 (Marsden Point Road, Ruakaka)
- Lot 2 DP 386730 (Marsden Point Road, Ruakaka)
- Lot 5 DP 146672 (79 McCathie Road, Ruakaka)
- Lot 2 DP 325771 (McCathie Road, Ruakaka)
- Lot 1 DP 67804 (87 McCathie Road, Ruakaka)
- Lot 1 DP 325771 (89 McCathie Road, Ruakaka)
- Lot 1 DP 308942 (107 McCathie Road, Ruakaka)
- Lot 2 DP 146672 (109 McCathie Road, Ruakaka)
- Lot 1 DP 146672 (McCathie Road, Ruakaka)
- Lot 2 DP 594153 (445 Marsden Point Road, Ruakaka)
- Part Lot 1 DP 36288 (Marsden Point Road, Ruakaka)
- Part Section 8 and Section 41 Blok VII Ruakaka SD (551 Marsden Point Road (Ruakaka))

Permitted baseline – Section 95D(b)

Pursuant to section 95D(b) of the Act a consent authority may disregard an adverse effect of an activity on the environment if the plan permits an activity with that effect (the ‘permitted baseline’ test).

As part of the partial Section 92 response dated 3rd November 2023, the applicant has provided a detailed assessment of the permitted baseline as it applies to Sites 1 – 3. That assessment identifies that solar farms such as that proposed are permitted activities in the Heavy Industrial and Light Industrial Zonings applying to Sites 1 and 2 respectively. The infringements identified as they relate to these two sites address matters such as impervious surfaces, interface with zone boundaries, and fencing.

The RPZ as it applies to Site 3 does not allow for industrial activities such as a solar farm. The assessment identifies that predominantly rural activities are permitted, but that includes horticulture, crop support structures, and similar rural-based activities.

The assessment of the permitted baseline provided with the application is accepted and adopted for the purpose of this report, to the extent that there is a credible and non-fanciful permitted baseline that can apply to the consideration of potential adverse effects on Sites 1 and 2. It is considered that there is no credible or non-fanciful permitted baseline that readily accounts for the potential adverse effects of the proposed activity on Site 3.

Written Approvals – Section 95D(e)

The application is not supported by any written approvals, noting that Section 10.2 of the application states that ‘*....effects on the environment can be managed such that effects on individual parties/entities are less than minor, reinforced by the permitted baseline.*’

For completeness, the application as lodged contains a statement entitled ‘Te Parawhau Hapu Korero’ as Appendix 12. Following lodgement of the application a document entitled ‘Cultural Effects Assessment Report: Meridian Energy – Ruakākā Energy Park’ prepared by Patuharakeke Te Iwi Trust Board was provided. While the contents of those statement and reports are acknowledged and relevant in making a decision, neither of them are considered to constitute a written approval.

Northland Transportation Alliance (‘NTA’) have confirmed that they have no concerns regarding the proposal. As addressed previously, First Gas Limited have provided an approval in principle to the proposal as it relates to the designation.

Assessment of wider environmental effects

Section 5 of the application addresses the adverse effects of the proposal. The adverse effects that are relevant to the scope of the Whangarei District Council application are identified and assessed in the application follows:

- Cultural Effects
- Ecological Effects
- Landscape, rural character, and visual effects
- Glint and Glare
- Effects on infrastructure
- Traffic effects (including construction)
- Noise and Vibration
- Amenity Values
- Stormwater
- Natural Hazards
- Effects on Historic Heritage (Archaeology)
- Effects on Productive Capacity of Soils
- Acid Sulphate Soils
- Geotechnical Suitability

In assessing the extent of adverse effects, it is recorded that the application to Northland Regional Council addresses bulk earthworks, earthworks affecting identified flood hazards, and ecological effects associated with the NES-FW. The extent of these adverse effects as they relate to the District Council application are relatively limited.

The assessment provided with the application inclusive of the conclusion '*....that effects on the environment will be avoided, mitigated, or offset, such that they are no more than minor*' is accepted and adopted for the purpose of this report, subject to the following comments.

The Council has engaged a landscape architect (Evolve Planning and Landscape Architecture Limited) to review the landscape, natural character and visual amenity assessment provided with the application. Following receipt of additional information as part of the Section 92 response, the Councils consultant landscape architect has confirmed by way of memo dated 16th November 2023 that '*....It is my opinion that subject to appropriately worded conditions of consent that the solar park will result in a low to very low effect in regard to landscape matters including landscape values, rural character and potential visual effects.*' In reaching that conclusion the Councils landscape architect has carefully consider the permitted baseline applicable to the sites, the extent of adverse effects on surrounding property owners/occupiers (including directly adjacent owners/occupiers) and has considered the mitigation and avoidance of effects offered by way of conditions.

The Council has engaged a consultant engineering firm (Metis Consultants Limited) to review the stormwater information as it relates to impervious surfaces and on-site stormwater management. Following receipt of additional information as part of the Section 92 response, the Councils consultant engineer has advised by way of Technical Review Statement dated 30 November 2023 that '*It is concluded that the proposed on-site stormwater mitigation activities duly enforced by the proposed land use resource consent conditions will likely result in less than minor adverse effects on stormwater quality and quantity on or off site because of the proposed development.*' A condition has been offered as part of the application to address on-site stormwater management, and the Councils consultant engineer has agreed to a condition with some amendments.

The cultural and any ecological effects associated with the impervious surfaces rule infringement are suitably addressed by way of provision of the CEA from Patuharakeke Te Iwi Trust Board and the fact that ecological effects associated with earthworks (which are not controlled by the District Plan) are to be addressed as part of the Regional Council application any decision.

Careful consideration has been given to the extent off ecological effects of the proposal. The application to the Northland Regional Council addresses bulk earthworks and associated effects on ecological values, notably on Site 1. The permitted baseline assessment as it relates to Sites 1 and 2 in particular provides for a broad level of activities and associated effects under the District Plan. It is therefore considered that any ecological effects associated with the activities seeking consent from the District Council will be less than minor. Any and all adverse ecological effects, particularly associated with works on Site 1, are to be addressed through the Northland Regional Council consent process.

NTA have considered the extent of adverse traffic effects associated with the proposal, notably construction traffic generated by the proposal. NTA have considered the information in the application and provided as part of the additional S92 response and have confirmed by way of email dated 2 November 2023 that they are

satisfied in all respects with the proposal. They have requested conditions addressing potential effects of construction traffic on the affected road surfaces which have been agreed to and included. In addition, NTA have advised that they may undertake their own monitoring of construction traffic effects in this case, in conjunction with the applicant, outside the resource consent process.

The Council has received an Archaeological Authority issued by Heritage New Zealand Pouhere Taonga dated 12 December 2023 (reference 2024/266). This Authority provides for earthworks across the three sites where it may affect unrecorded subsurface archaeological evidence. Condition 6 of the Authority refers to requirements to be met by the applicant in relation to engagement with Patuharakeke Te Iwi Trust Board.

The Council's Development Engineer has reviewed the information provided in terms of general compliance with engineering requirements under the District Plan. The report provided from the Development Engineer states that *'The Application has effects in regard to engineering aspects which are no more than minor as detailed above.'* Conditions are recommended which address traffic and access, stormwater management, construction management and provision of infrastructure based on the information provided with the application.

In summary, it is considered that the adverse effects of those aspects of the proposal requiring District Council consent on the environmental will be minor or less than minor in all respects. The majority of identified adverse effects are likely to arise during the construction phase across Sites 1 – 3, notably with traffic, noise, and changes to the landscape and visual amenity in the wider environment. However, these adverse effects are assessed as less than minor taking into account the permitted baseline applicable to Sites 1 and 2 in particular and the agreed conditions of consent. The adverse landscape, natural character, and visual amenity effects arising from the activity on Site 3 have been given careful consideration as the siting of a large solar farm on a RPROZ site will result in a notable change to the landscape. This matter has been addressed by the Council's consultant landscape architect.

It is considered that the extent of any adverse effects arising from the proposal will be minor or less than minor in all respects, subject to suitable conditions of consent.

Affected persons - sections 95B and 95E

The properties adjacent to the subject sites are identified under the Section 95D(a)(ii) assessment above. Adverse effects on those properties have been considered noting that there are a number of properties that adjoin Sites 1 – 3. Those adverse effects falling within the scope of the Whangarei District Council consent relate to construction activities, including traffic, noise and vibration, and visual amenity. The longer term potential adverse effects relate to landscape, natural character, and visual amenity matters, and stormwater water management.

Information has been provided with the application addressing all of these potential adverse effects. In particular, a Noise Effects assessment has been provided to consider both construction and operational noise associated with the proposal, noting that the applicant has advised the proposal will comply with these noise levels in all respects as a permitted activity. Further information had been sought and received by way of a Section 92 request resulting in advice dated 26th October 2023 specifically addressing the extent of adverse effects on receivers (adjacent owners) of construction noise in the event it may exceed the permitted standards in the District Plan. The advice recommends two conditions, one of which is to prepare and implement a Construction Noise and Vibration Management Plan. The purpose of this plan will be to specifically address effects on adjacent receivers *'...to limit any breach and to manage any construction noise and vibration effects to a reasonable level.'* Subsequent to a review of draft conditions, the applicant has since advised under cover of email dated 25th January 2024 that *'MEL intends to comply with the permitted activity standard for noise and vibration.'* The application therefore does not include consent for any infringement of the construction noise and vibration rule in the District Plan. However, the applicant has retained the offer of a Management Plan to suitably comply with the permitted noise and vibration standards.

Stormwater management associated with increased stormwater runoff from the solar panels has been addressed by Council's consultant engineer as recorded previously in this report. On this basis, no adverse off-site effects are anticipated to arise on adjacent owners subject to suitable conditions being imposed.

Council's consultant landscape architect has carefully considered the extent of potential adverse effects on adjacent owner/occupiers, where those adjacent owners/occupiers will be able to view or experience the change in landscape and visual amenity arising from the installation of the panels. In addition, some consideration is given to the extent of glint and glare that may arise from the panels and appropriate mitigation

that overlaps with landscape and visual amenity values. For completeness, reference is made to the memorandum prepared by Littoralis Landscape Architecture dated 31st October 2023 inclusive of attachments, which was provided as part of a Section 92 response. Council's consultant landscape architect is satisfied that adjacent owner/occupiers will not be adversely affected a minor or more than minor extent by the proposal based largely on that memorandum. Recommended conditions include extensive boundary planting, bunding, earth mounds, and synthetic screening as offered by the applicant.

Consideration has been given to potential cultural effects, noting that both Te Parawhau and Patuharakeke Te Iwi Trust Board have provided advice on cultural values and potential adverse effects. The advice from both Te Parawhau and Patuharakeke do not provide direct support for the proposal. There are concerns regarding the extent of ecological effects, but support for the creation of new wetland areas which is addressed by way of the application before the Northland Regional Council. However, there is no evidence recorded in the advice that the proposal as it relates to the Whangarei District Council application will result in more than minor cultural effects such that either Te Parawhau or Patuharakeke would be assessed as an adversely affected person under Section 95E.

On the basis of the information provided with the application, no persons are considered to be adversely affected to a minor or more than minor extent by the granting of consent.

7 Recommendation

That pursuant to Sections 95A- 95G of the Act, this application is recommended to proceed on a non-notified basis because:

- 1 Sufficient evidence has been provided in the application to confirm that the adverse effects of the proposal will be minor or less than minor in respects. Specific consideration has been given to the permitted baseline that applies on Sites 1 and 2, and the extent of the infringements that will arise from the proposal. For the reasons set out in this report, those adverse effects are considered to be less than minor.
- 2 No persons are considered to be adversely affected to a minor or more than minor extent by the granting of consent to the proposal.
- 3 There are no special circumstances to warrant public notification.



8 February 2024

A Hartstone, Consultant Planner

Date

As an Independent Commissioner I have: perused the relevant documentation; visited the site on Monday 19 February 2024, discussed the proposals and context with Council Officers; carefully considered the s42A Report; and concur with its findings. Accordingly I make this Decision on the basis of the s42 A Report Recommendation and attach my signature to this Decision.



23 February 2023

Alan Withy, Independent RMA Commissioner

Date

Notice of Decision

LU2300093 and P123794

IN THE MATTER of the Resource Management Act 1991

and

IN THE MATTER of an application under Section 88 of the Resource Management Act 1991 by Meridian Energy Limited

Section 104 of the Resource Management Act 1991

Decision –Discretionary Activity

1 Processing Details

Reporting Planner A Hartstone

Date of Report 8 February 2024

Section 37 Yes – An additional 53 working days have been required to process this consent (to 26 February 2024) given the complexities of the consent application processed concurrently with the Regional Council consent, amendments to the application by the applicant, a review of draft conditions, addressing a request to process and determine the application separately from the Regional Council consent and for consideration / decision by an independent RMA commissioner. The matters under Section 37A(1) have been given regard to in making this decision to extend the timeframe.

2 Application Details

The application details, including the proposal have been detailed in the attached Notification Assessment. In addition, the reasons for consent, and the application site and the surrounding environment have been detailed in Sections 4 and 5 respectively of the attached Notification Assessment report.

3 District Plan Zoning/Environment and other Notations

The District Plan zoning/environment and other notations affecting the site have been detailed in Section 1 of the attached Notification Assessment.

4 Statutory Context

Section 104 of the Act sets out those matters that, subject to Part 2, a consent authority must have regard to when considering an application for resource consent. These matters include any actual or potential effects on the environment of allowing the activity, any relevant provisions of a plan or proposed plan, and any other matter the consent authority considers relevant and reasonably necessary to determine the application.

Pursuant to Section 104B of the Act, a discretionary activity may be granted or refused. Where consent is granted, conditions may be imposed.

For the purposes of assessing this application, the relevant national and regional provisions have (or will be) addressed by way of the Northland Regional Council consent sought for the activity, which was lodged concurrently with this application lodged with Whangarei District Council.

5 Actual or Potential Effects on the Environment (Section 104(1)(a))

Section 104(2) of the Act allows the consent authority to disregard an adverse effect of the activity on the environment if the Plan permits an activity with that effect (i.e. the permitted baseline principle). This matter has been addressed in Section 6 of the Notification Assessment report, where an applicable permitted baseline has been identified and adopted as it relates to Sites 1 and 2, and also applies to this consideration.

Section 104(3)(a)(ii) of the Act requires that no consideration may be had of any effect on a person who has provided their written approval to the application. No written approvals have been provided with the application.

The adverse effects of this activity have been addressed in Section 6 of the Notification Assessment report. The application includes details regarding the expected positive effects associated with renewable energy generation for the wider community. Section 1.2 of the application provides some background to the project, while Section 5.3 summarises the positive effects of the proposal. The wider community benefits associated with increased resilience of power supply utilising a renewable energy source is considered to be a significant positive effect that weighs heavily in support of the grant of consent to the proposal.

Conditions of consent have been offered in the application, noting that some refinement of proposed conditions has been undertaken through the review of matters by Council, notably in terms of landscape, natural character and visual amenity, and stormwater management. Conditions have been identified to address construction noise and vibration for identified adjacent owners, noting that the applicant has advised the proposal will comply with the construction noise and vibration rules.

The applicant has offered a suite of conditions regarding compliance with matters associated with the Transpower National Grid transmission lines as they affect Site 3. No infringement of any District Plan rule has been identified as it relates to the transmission lines. Therefore, those matters have been addressed by way of an advice note specifying that it is the consent holder responsibility to comply with all regulations related to the transmission lines.

The extent of the adverse ecological effects associated with the proposal requiring consideration under this District Council consent are limited and assessed as less than minor for reasons set out in the Notification report. The assessment of those effects falls to be considered as part of the Northland Regional Council consent application. Therefore, no conditions are considered appropriate to include as part of a decision on this application.

The Council's Development Engineer has recommended a suite of conditions, some of which overlap with advice from NTA regarding roading and Metis Consultants Limited addressing stormwater. Regardless, these conditions can be included as part of a decision to grant consent with amendments where required.

Overall, the effects of the activity are considered to be acceptable in the receiving environment.

6 National Environmental Standards, Other Regulations and National Policy Statement (Section 104(1)(b)(i)-(iii))

Section 6.1.3 of the applications addresses the national planning documents which encompasses national environmental standards, other regulations, and national policy statements. Section 6.6 addresses the NPS-Renewable Energy Generation ('NPS-REG') objectives and policies in detail and concludes that the proposal is consistent with the NPS provisions relevant to the District Council application.

The application is excluded from assessment under the National Policy Statement for Highly Productive Land on the basis that the project provides for specified infrastructure.

The National Policy Statements relating to Freshwater Management and Indigenous Biodiversity are not directly relevant to the application and are addressed through the Regional Council consent application.

7 New Zealand Coastal Policy Statement (Section 104(1)(b)(iv))

A small portion of Site 1 where construction will be undertaken (including earthworks) and panels installed is located within the coastal environment overlay defined in the District Plan and is therefore within the scope of the NZCPS provisions. However, as the District Plan provisions have been prepared to give effect to the NZCPS, and recognising the heavy industrial zoning that applies to the site, it is considered that the proposal will generally be consistent with the NZCPS.

8 Relevant Provisions of the Regional Policy Statement (Section 104(1)(b)(v))

Section 6.8 of the application addresses the relevant Regional Policy Statement ('RPS') provisions. The assessment and conclusion reached that the proposal is consistent with the RPS, as it relates to the Whangarei District Council application, is accepted and adopted for the purpose of this report.

9 Relevant Provisions of Operative or Proposed Plans (Section 104(1)(b)(vi))

Section 6.10 of the application addresses the relevant provisions contained in the Whangarei District Plan Operative in Part 2022. The relevant Chapters considered in the assessment are listed at Section 6.15. The assessment and stated conclusion that *'Due to consistency with District Plan expectations, and the proposed effects management measures, the proposal is overall consistent with the overarching policy framework of the WDP'*. Having assessed the proposal this conclusion is accepted and adopted for the purpose of this report.

Notably, as the construction and operation of a solar farm on Sites 1 and 2 is a permitted activity then it is accepted that the proposal as it relates to those two sites is consistent with the relevant zone Chapter provisions. The scale of infringements associated with matters such as stormwater management, zone boundary interfaces, and fencing will generate less than minor effects and are consistent with the relevant provisions in the zone Chapters.

The relevant District-Wide Chapters, being the Three Waters Management and Transport Chapters, have been suitably addressed by way of the technical information addressing stormwater management and traffic respectively.

10 Other Relevant Matters (Section 104(1)(c))

Section 7 of the application identifies several other matters that are considered to be relevant and reasonably necessary in determining the application. Those identified matters all support the development of renewable energy as a response to climate change through reduction of emissions. It is noted that the NPS-REG has been developed and implemented as part of a response to New Zealand's international obligations addressing climate change.

11 Part 2 Matters

No detailed assessment of Part 2 matters is considered necessary in determining this application.

12 Conclusion and Recommendation

Having considered the application against the relevant provisions of the Act, the Council has discretion to grant consent to the proposal as a discretionary activity. Having undertaken an assessment of the relevant matters under Section 104, it is recommended that this application be granted, subject to the conditions identified in Part 5 of this report that will avoid, remedy or mitigate any adverse effects of the activity on the environment.

For completeness, it is recorded that a consent application is currently being processed by Northland Regional Council for activities associated with the construction of the solar farm, including bulk earthworks and removal of wetland, across Sites 1-3. The applicant has advised by way of email dated 5th December 2023 that *'MEL [applicant] has requested that you consider granting this independently of the NRC consents. They understand and accept the risk that utilisation of the WDC consent may be compromised if the NRC consent is not granted.'* The Council has accepted this request to issue the District Council consent separately from any consent that may be subsequently issued by the Northland Regional Council.

Pursuant to Sections 104, 104B, and 108 of the Resource Management Act 1991, and in accordance with delegated authority under section 34A, consent is granted to the resource consent application LU2300093 by Meridian Energy Limited to establish, operate, and maintain a solar energy farm with an approximate project size of 200ha across three sites, and any ancillary activities (including construction of drainage and access, fencing, and earthworks). The site locations are described as follows:

- SH15/Rama Road/Marsden Point Road, being Lots 1 – 3 DP 419151 and Lots 1 – 3 DP 59354 ('Site 1')
- SH15/McCathie Road, being Lot 1 DP 386730, Lot 1 DP 348043 and Lot 2 DP 325771, Lot 2 DP 348043, and Section 13 SO 32254 ('Site 2')
- McCathie Road/Marsden Point Road, being Lot 1 DP 406479, Pt Lot 1 DP 36288, Pt Section 1 Blk VII Ruakaka SD, Pt Section 11 Blk VII Ruakaka SD, Pt Section 54 and Sections 55 – 57 and 60 Blk VII Ruakaka SD ('Site 3').

Consent is granted subject to the conditions below and for the following summary reasons:

- 1 Sufficient evidence has been provided in the application to confirm that the adverse effects of the proposal will be acceptable in the receiving environment. Specific consideration has been

given to the permitted baseline that applies to the sites, and the extent of positive and adverse effects arising from the proposal. The positive effects arising from the proposal as set out in the application weigh heavily in favour of the grant of consent.

- 2 The proposal will be consistent with the National Policy Statement for Renewable Energy Generation 2011 and Regional Policy Statement for Northland.
- 3 The proposal will be consistent with the relevant objectives and policies of the Whangarei District Plan Operative in Part 2022.

10 Conditions

1. The activity shall be carried out and completed in general accordance with the application prepared by Reyburn and Bryant Limited dated 4th September 2019, and more particularly the following information:
 - The plans prepared by Beca Limited entitled 'Meridian Solar Farm - Civil' dated 2 August 2023 consisting of the following sheets:
 - 23184141-1-CA-1001 to 23184141-1-CA-1005 (Rev C).
 - 23184141-1-CA-2001 and 23184141-1-CA-2002 (Rev. C).
 - 23184141-1-CA-2010, 23184141-1-CA-3000, and 23184141-1-CA-2013 (Rev. C).
 - 23184141-2-CA-1000 to 23184141-2-CA-1004 (Rev. C).
 - 23184141-2-CA-2001, 23184141-2-CA-2002, 23184141-2-CA-2010, 23184141-2-CA-3000 and 23184141-2-CA-3001 (Rev. C).
 - 23184141-3-CA-1000 to 23184141-3-CA-1003 (Rev C).
 - 23184141-3-CA-2001, 23184141-3-CA-2002, 23184141-3-CA-2010 (Rev. C).
 - 23184141-3-CA-3000 and 23184141-3-CA-3001 (Rev. C).
 - 23184141-CA-3010 to 23184141-CA-3013 (Rev C).
 - The Planting Concept Plans prepared by Littoralis Landscape Architecture Limited referenced as Attachment Five to the Memorandum dated 31 October 2023, consisting of six (6) sheets referenced as 1338_PlantingConcept_20231030 updated 30 October 2023.

Prior to Commencement

2. Prior to commencement of any construction works (including earthworks) on Sites 1 – 3, the consent holder shall provide the following documentation for certification:
 - a) A Construction Management Plan prepared in accordance with Section 1.6.2 of the Councils Environmental Engineering Standards 2022 ('EES 2022') submitted to the Councils Development Engineer. The plan shall include a methodology for determining compliance with Conditions 5 a) – e) below.
 - b) A Stormwater Management Plan prepared by a suitably qualified engineer that specifically addresses on-site attenuation of peak flows discharged from the Sites 1 – 3 such that the 100 year, 5 year and 2 year ARI rainfall event post-development peak flows (with climate change) do not exceed 80% of the pre-development peak flowrate (with climate change), to be submitted to the Councils Development Engineer. Changes in peak flow shall be assessed using the PV-SMaRT Solar Farm Runoff Calculator Version 3.0 tool from the University of Minnesota using parameters agreed in correspondence resolving Section 92 queries.
 - c) A detailed Landscape Planting and Management Plan, including an establishment and maintenance schedule, shall be prepared by a qualified landscape architect and shall be submitted to the Councils Team Leader RMA Compliance and Approvals. The Landscape Planting and Management Plan shall be in general accordance with the landscape plan submitted as part of LU2300093 prepared by Littoralis Landscape Architecture updated 30 October 2023 and include, but may not be limited to, the following:
 - i. A description of the purpose and objectives of the planting and screening mitigation including screen mix A, B and C and synthetic fencing.

- ii. A plan of the planted areas detailing proposed plant species, plant sourcing, plant sizes at time of planting, plant locations, density of planting and timing of planting.
 - iii. A plan showing the areas and details of the synthetic fencing;
 - iv. The planting sizes for the balance of the plants shall be provided such that their intended purpose (screening) is achieved within 3-year period following initial planting.
 - v. Details of the proposed bund to be 2.5m in height with a gradient of 1:2.5
 - vi. A programme of establishment and post establishment protection and maintenance (e.g. planting implementation method, fertilising, weed removal / spraying, replacement of dead or poorly performing plants, watering, length of maintenance programme).
 - vii. Details of weed management.
- d) A Construction Noise and Vibration Management Plan (CNVMP) prepared by a suitably qualified and experienced acoustic consultant shall be submitted to the Councils Development Engineer. The objective of the CNVMP is to develop mechanisms and processes to manage and minimise the effects of noise and vibration caused by construction of the solar farm such that they comply with NAV.6.2 Construction Noise and NAV.6.15.2 Construction Vibration. The CNVMP must include (but may not be limited to):
- i. The relevant performance standards (noise and vibration)
 - ii. noise and vibration management and mitigation measures
 - iii. training of staff
 - iv. handling of complaints
 - v. monitoring
 - vi. timing and duration of works
 - vii. key construction equipment, including details of proposed piling methodology
 - viii. location of sensitive receivers
 - ix. a process of notification to neighbours, and a requirement to discuss timing of works to
 - x. reduce impacts where noise and vibration levels may be above the limits, and
 - xi. a map showing areas where works potentially risk breaching the noise and vibration limits, and any areas where drop hammer piling should not occur.
- e) A detailed set of engineering plans prepared in accordance with Council's Engineering Standards 2022 Edition. The engineering plans are to be submitted to the Development Engineer for approval and approval provided prior to the commencement of works.

It is to be noted that certain designs may only be carried out by Chartered Professional Engineer (CPEng) working within the bounds of their assessed competencies.

All work needing design/certification by a CPEng will require completion of a producer statement (design) (EES-PS1 or similar).

The Consent holder is to submit all documentation as required by Council "Quality Assurance/Quality Control Manual – Vested Assets". This will include nomination of a site Engineer and an "Inspection and Test Plan" for approval by the Development Engineer before any works commence.

Plans need to be prepared noting recommendations of the following documents outlined in Condition 1 unless an alternative prepared by a suitably experienced Chartered Professional Engineer is approved in writing by Council:

Plans are to include but are not limited to:

- i Design details of the upgrade or construction of vehicle crossing(s) for Sites 1, 2 and 3 in accordance with Sheet 21 Rural Type 1B – Heavy Vehicle or Type 2 – Crossing with Local Widening as applicable, also in accordance with Sheets 22 & 23 of Council's Engineering Standards 2022 Edition. Entrance crossings are to be designed and constructed in such a manner that will control stormwater run-off entering a property from the road, and that likewise prevent stormwater and detritus, including gravel, dirt and other materials, migrating onto the road reserve from a property. Where vegetation maintenance/removal is required to maintain sight visibility from the proposed vehicle crossing(s), the approximate location of this work shall be noted on the site plan.

- ii Design details of Low Pressure sewer connection for Site 3 in accordance with Section 5 of Council's Engineering Standards 2022 Edition.
 - iii Design details of water connection for the satellite control room in accordance with Sheet 46 of Council's Engineering Standards 2022.
- f) In conjunction with Condition 2 c) above as it relates to provision of a Landscape Planting and Management Plan, the consent holder shall provide to the Councils Team Leader RMA Compliance and Approvals written evidence that hapu have been provided with the Plan and the offer has been made to hapu to provide input into the contents of the Plan. The written evidence should specifically identify who has been invited to provide input, that a minimum of 20 working days has been provided to allow hapu to consider and advise, and record any outcomes of any input received from the hapu.
Note: This condition has been offered by the consent holder in order to address relevant matters raised in response received from Patuharakeke Te Iwi Truist Board and Te Parawhau.
3. In conjunction with the requirements under Condition 2(e) above, the consent holder must submit a Corridor Access Request application to Council's Road Corridor Co-ordinator and receive written approval for all works to be carried out within Council's Road Reserve in accordance with Council's Environmental Engineering Standards 2022 to the satisfaction of the Development Engineer or delegated representative (refer to the advisory clause below for the definition of a Corridor Access Request).
4. Notify the Councils Development Engineer, in writing, of their intention to begin works or any stage of works, a minimum of seven days prior to commencing works. Such notification shall be sent to the Development Engineering Officer and include the following details:
- a) Name and telephone number of the project manager.
 - b) Site address to which the consent relates.
 - c) Activities to which the consent relates.
 - d) Expected duration of works.

During Construction

5. During the construction process on Sites 1 - 3, the consent holder shall:
- a) Ensure that spoil from the site must not be tracked out onto Council or State Highway Road formations to the approval of the Council's Development Engineer.
 - b) Comply with the conditions specified by the Council's Road Corridor Co-Ordinator in the Corridor Access Request approval.
 - c) Reinstate Council's road carriageway formation, street berm and urban services at and within 100m of site construction entrance points where damage has been caused by the construction works (particularly accelerating/decelerating and turning) resulting from construction traffic associated with this consent. The assets shall be reinstated in accordance with Council's Environmental Engineering Standards 2022 Edition at the expense of the consent holder and to the satisfaction of the Development Engineer or delegated representative.
 - d) Adhere to all requirements specified in the Construction Management Plan and Construction Noise and Vibration Management Plan certified under Condition 2(a) and (d) above.
 - e) Ensure that dust nuisance is controlled onsite (by use of a water cart or similar) so as not to cause "offensive or objectionable" dust at or beyond the boundary of the development.

Prior to Commissioning

6. Prior to commencement of electricity generation on Sites 1 – 3, the consent holder shall provide the following documentation for certification:

- a) Suitable evidence to certify that all engineering works certified under Condition 2(b) and (e), 3, and 4 have been carried out and completed. That evidence shall be provided to the Councils Development Engineer and, as a minimum, shall consist of:
 - i. Site inspections undertaken as agreed in Council's engineering plan approval letter.
 - ii. PS4 and approval of supporting documentation provided by the developer's representative/s including evidence of inspections by those persons, and all other test certificates and statements required to confirm compliance of the works as required by Council's QA/QC Manual and the Council's Environmental Engineering Standards 2022.
 - iii. "Certificate of Completion of Development Works" from the Contractor.
 - iv. Provision of certified and dated 'as built' plans and RAMM data prepared by a suitably qualified person for the completed works and services in accordance with Council's Environmental Engineering Standards 2022 Edition.

- b) Suitable evidence to be submitted to the Councils Team Leader RMA Compliance and Approvals to confirm that all works identified on the Landscape Planting and Management Plan certified under Condition 2(c) above have been completed. That evidence should consist (as a minimum) of written certification from a qualified landscape architect supported by photographic evidence. The Council may choose to undertake a site visit to confirm compliance of its own volition.

- c) Suitable evidence to the Councils Team Leader RMA Compliance and Approvals to confirm that noise attenuation design/s for inverters within Site 2 (refer to Appendix B of the Marshall Day Report Rp 001 20230088 showing indicative location of the inverters requiring consideration) has been implemented and installed. The evidence shall be provided from a suitably qualified acoustician and must confirm that the implemented attenuation design shall achieve compliance with the night-time noise limits in Consent Condition 7 below.

On-going Conditions

7. The consent holder shall ensure that the following conditions are complied with on an on-going basis:
 - a) On Site 2, the consent holder shall ensure that all noise generated from the consented activities shall not exceed the permitted noise standard specified in the District Plan, being as follows:
 - i. Noise emitted from a site in the Light Industrial Zone and received in the Rural Production Zone: 55 dB LAeq 0700 to 2200 hours; 45 dB LAeq and 75 dB LAFmax 2200 to 0700 hours.
 - ii. Noise emitted from a site in the Light Industrial Zone and received in the Marsden Primary Centre – Noise Zone 1: 65 dB LAeq 0700 to 2200 hours; 65 dB LAeq and 70 dB LAFmax 2200 to 0700 hours.
 - iii. Noise emitted from a site in the Light Industrial Zone and received in the Marsden Primary Centre – Noise Zone 2/2A: 55 dB LAeq 0700 to 2200 hours; 45 dB LAeq and 70 dB LAFmax 2200 to 0700 hours.

Noise levels shall be measured and assessed in accordance with NZS 6801:2008 Acoustics – Measurement of Environmental Sound and NZS 6802:2008 Acoustics – Environmental Noise.

 - b) On Site 3, the consent holder shall ensure that all noise generated from the consented activities shall not exceed the permitted noise standard specified in the District Plan, being as follows:
 - i. Noise emitted from a site in the Rural Production Zone and received in the Rural Production Zone: 55 dB LAeq 0700 to 2200 hours; 40 dB LAeq and 70 dB LAFmax 2200 to 0700 hours.
 - ii. Noise emitted from a site in the Rural Production Zone and received in any Residential Zone: 50 dB LAeq 0700 to 2200 hours; 40 dB LAeq and 70 dB LAFmax 2200 to 0700 hours.
 - iii. Noise emitted from a site in the Rural Production Zone and received in the Local Centre Zone: 60 dB LAeq 0700 to 2200 hours; 50 dB LAeq and 75 dB LAFmax 2200 to 0700 hours.
 - iv. Noise emitted from a site in the Rural Production Zone and received in the Light Industrial Zone: 65 dB LAeq 0700 to 2200 hours; 60 dB LAeq and 80 dB LAFmax 2200 to 0700 hours.
 - v. Noise emitted from a site in the Rural Production Zone and received at a site in the Heavy Industrial Zone: 75 dB LAeq all hours.

Noise levels shall be measured and assessed in accordance with NZS 6801:2008 Acoustics – Measurement of Environmental Sound and NZS 6802:2008 Acoustics – Environmental Noise.

- c) All planting and associated works and screening structures identified and implemented as part of the Landscape Planting and Management Plan implemented under Condition 6 (b) above is to be maintained to ensure the effectiveness of the screening at all times. Where any planting or structure is damaged, removed, or otherwise destroyed, the consent holder shall replace the planting or structure as soon as practically possible with the same of similar planting or structure.
8. Pursuant to s128 of the RMA, the consent authority may at six monthly intervals from the date of the grant of consent serve notice on the consent holder of its intention to review the conditions of this consent to deal with an effect on the environment which arises after the date of the grant of the consent where such effect is contrary to, or is otherwise not in accordance with, the engineering and noise assessments provided with the application for the consent.

Advice Notes

- 1 This resource consent will lapse five years after the date of commencement of this consent (being the date of this decision) unless:
- It is given effect to before the end of that period; or
 - An application is made to Council to extend the period after which the consent lapses, and such application is granted prior to the lapse of consent. The statutory considerations which apply to extensions are set out in Section 125 of the Resource Management Act 1991.
- 2 Section 357 of the Resource Management Act 1991 provides a right of objection to this decision. An objection must be in writing, setting out the reasons for the objection and delivered to Council within 15 working days of the decision being notified to you. A fee may be payable to cover the costs of processing any objection.
- 3 All archaeological sites are protected under the provisions of the heritage New Zealand Pouhere Taonga Act 2014. It is an offence under that act to modify, damage or destroy any archaeological site, whether the site is recorded or not. Application must be made to the Heritage New Zealand for an authority to modify, damage or destroy an archaeological site(s) where avoidance of effect cannot be practised.
- 4 The application is supported by a Cultural Impact Assessment report prepared by Patuharakeke Te Iwi Trust Board and Te Parawhau. While some of the matters identified in this cultural advice cannot be addressed through this consent decision, it is expected that any Northland Regional Council consent will address some of the identified matters, notably the wetland offsetting / compensation.
- 5 Site 3 contains a portion of the Henderson – Marsden Point A (HEN-MDN-A) 220kV transmission line and the Marsden Point – Maungatapere A (MDN-MPE-A) 110 kV transmission line and associated support structures. The consent holder is responsible for ensuring compliance with any and all requirements associated with management of these lines, including any regulatory requirements that may apply to earthworks, stormwater management, vegetation or buildings. Transpower NZ Ltd has a right to access its existing assets under s23 of the Electricity Act 1992. Any development on must not preclude or obstruct this right of access. It is an offence under s163D of the Electricity Act 1992 to intentionally obstruct any person in the performance of any duty or in doing any work that the person has the lawful authority to do under s23 of the Electricity Act 1992.
- 6 Northland Transportation Alliance ('NTA') have advised that they may undertake independent monitoring of construction traffic and its effects on the road surfacing during construction works across Sites 1 – 3. This may inform compliance with Condition 5 a) – c) of this consent.
- 7 Pursuant to Section 102 of the Local Government Act 2002, Whangarei District Council has prepared and adopted a Development Contributions Policy. Under this policy, the activity to which this consent related is subject to Development Contributions. You will be advised of the assessment of the Development Contributions payable under separate cover in the near future. It is important to note that the Development Contributions must be paid prior to commencement

of the work or activity to which consent relates or, in the case of a subdivision, prior to the issue of a Section 224(c) Certificate. Further information regarding Councils Development Contributions Policy may be obtained from the Long Term Community Consultation Plan (LTCCP) or Council's web page at www.wdc.govt.nz.



8th February 2024

A Hartstone, Consultant Planner

Date

Pursuant to Sections 104, 104B and 108 of the Resource Management Act Consent is granted to this Application under delegated authority from the Whangarei District Council, and subject to the above Conditions.

It is noted this Consent cannot be fully implemented without consent being obtained to concurrent Applications being considered by the Northland Regional Council.

As an Independent Commissioner I have: perused the relevant documentation; visited the site on Monday 19 February 2024, discussed the proposals and context with Council Officers; and carefully considered the s42A Report, concurring with its findings.

Accordingly, I make this Decision granting consent on the basis of the s42 A Report recommendations and attach my signature to this Decision



23 February 2024

Alan Withy, Independent RMA Commissioner

Date

MERIDIAN SOLAR FARM

CIVIL

MERIDIAN ENERGY LTD (MERIDIAN)
 Beca Limited (Beca)
 Ruakaka, Whangarei, 0171, New Zealand

2318415
 02 AUGUST 2023
 RESOURCE CONSENT

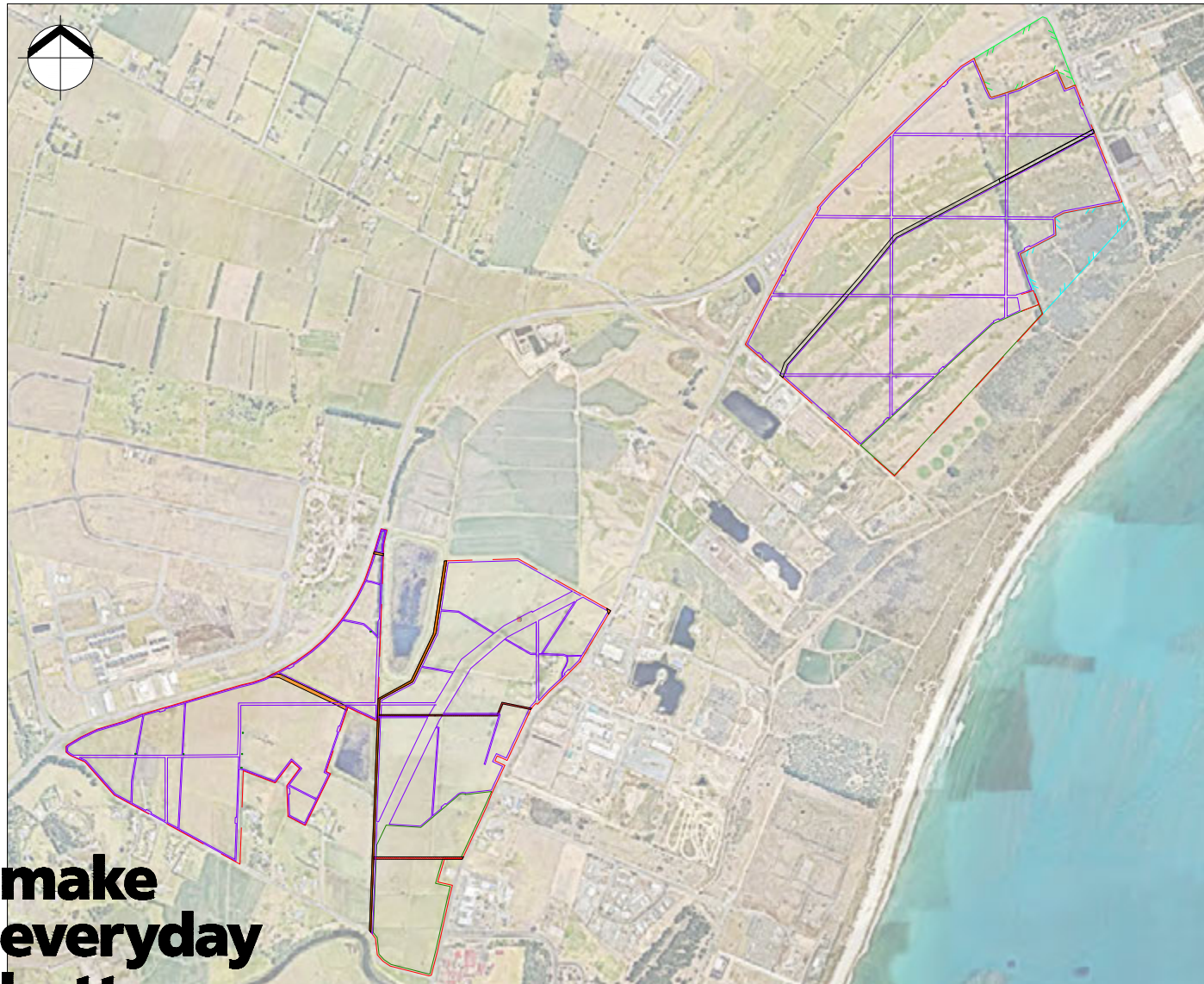
LU2300093

APPROVED

K Man TM

26 February 2024

FULL SET



make
 everyday
 better.

DRAWING LIST	
DRAWING No.	DRAWING TITLE
DWG No.	DRAWING TITLE
2318415-CA-0000	COVER SHEET
2318415-1-CA-1000	EXISTING SITE SERVICES, CLEARANCE AND DEMOLITION SHEET VIEWPORT LAYOUT PLAN
2318415-1-CA-1001	EXISTING SITE SERVICES CLEARANCE AND DEMOLITION PLAN SHEET 1
2318415-1-CA-1002	EXISTING SITE SERVICES CLEARANCE AND DEMOLITION PLAN SHEET 2
2318415-1-CA-1003	EXISTING SITE SERVICES CLEARANCE AND DEMOLITION PLAN SHEET 3
2318415-1-CA-1004	EXISTING SITE SERVICES CLEARANCE AND DEMOLITION PLAN SHEET 4
2318415-1-CA-1005	EXISTING SITE SERVICES CLEARANCE AND DEMOLITION PLAN SHEET 5
2318415-1-CA-2001	INDICATIVE FINISHED LEVEL PLAN
2318415-1-CA-2002	INDICATIVE EARTHWORK CUT AND FILL PLAN
2318415-1-CA-2010	INDICATIVE ROAD AND STORMWATER LAYOUT PLAN
2318415-1-CA-3000	INDICATIVE LONG SECTION SHEET 1
2318415-1-CA-3001	INDICATIVE LONG SECTION SHEET 2
2318415-2-CA-1000	EXISTING SITE SERVICES, CLEARANCE AND DEMOLITION SHEET VIEWPORT LAYOUT PLAN
2318415-2-CA-1001	EXISTING SITE SERVICES CLEARANCE AND DEMOLITION PLAN SHEET 1
2318415-2-CA-1002	EXISTING SITE SERVICES CLEARANCE AND DEMOLITION PLAN SHEET 2
2318415-2-CA-1003	EXISTING SITE SERVICES CLEARANCE AND DEMOLITION PLAN SHEET 3
2318415-2-CA-1004	EXISTING SITE SERVICES CLEARANCE AND DEMOLITION PLAN SHEET 4
2318415-2-CA-2001	INDICATIVE FINISHED LEVEL PLAN
2318415-2-CA-2002	INDICATIVE EARTHWORK CUT AND FILL PLAN
2318415-2-CA-2010	INDICATIVE ROAD AND STORMWATER LAYOUT PLAN
2318415-2-CA-3000	INDICATIVE LONG SECTION SHEET 1
2318415-2-CA-3001	INDICATIVE LONG SECTION SHEET 2
2318415-3-CA-1000	EXISTING SITE SERVICES, CLEARANCE AND DEMOLITION SHEET VIEWPORT LAYOUT PLAN
2318415-3-CA-1001	EXISTING SITE SERVICES CLEARANCE AND DEMOLITION PLAN SHEET 1
2318415-3-CA-1002	EXISTING SITE SERVICES CLEARANCE AND DEMOLITION PLAN SHEET 2
2318415-3-CA-1003	EXISTING SITE SERVICES CLEARANCE AND DEMOLITION PLAN SHEET 3
2318415-3-CA-2001	INDICATIVE FINISHED LEVEL PLAN
2318415-3-CA-2002	INDICATIVE EARTHWORK CUT AND FILL PLAN
2318415-3-CA-2010	INDICATIVE ROAD AND STORMWATER LAYOUT PLAN
2318415-3-CA-3000	INDICATIVE LONG SECTION SHEET 1
2318415-3-CA-3001	INDICATIVE LONG SECTION SHEET 2
2318415-CA-3010	TYPICAL DETAILS CULVERT STRUCTURES
2318415-CA-3011	TYPICAL DETAILS CULVERT CROSS-SECTION
2318415-CA-3012	TYPICAL DETAILS ROAD CROSS-SECTIONS
2318415-CA-3013	TYPICAL DETAILS WETLAND CROSS-SECTION



Drawing No. 2318415-CA-0000



LEGEND:

EXISTING

- GIU — GIU
- CCID — CCID
- SW — SW
- SS — SS
- W — W
- CCID — CCID
- BOUNDARY
- GAS
- COMMUNICATION
- TRANSPWER LINE
- STORMWATER PIPE
- STORMWATER OPEN DRAIN
- SANITARY SEWER
- WATER
- CHORUS CABLE
- 5m CONTOURS
- 1m CONTOURS
- FIRST GAS UNDERGROUND GAS PIPE
- COUNCIL DRAIN
- COUNCIL EASEMENT
- CROWN EASEMENT
- SS MANHOLE
- SW DEVICE
- SW CULVERT STRUCTURE
- TRANSPWER POLE
- WATER DEVICE

EXISTING NORTHPOWER

- 400v/O — 400V OVERHEAD
- 400v/U — 400V UNDERGROUND
- 11kv/O — 11KV OVERHEAD
- 11kv/U — 11KV UNDERGROUND
- 33kv/O — 33KV OVERHEAD
- P — P
- FOU — FIBRE UNDERGROUND
- FO — FIBRE OVERHEAD
- DUCT — FIBRE DUCT
- POWER POLE

PROPOSED

- SITE EXTENT BOUNDARY
- BUILDING TO BE REMOVED
- BATTERY ENERGY STORAGE SYSTEM (BESS) SITE
- KANUKA BLOCK
- TREE TO BE REMOVED-INDICATIVE LOCATION SHOWN

RESOURCE CONSENT
NOT FOR CONSTRUCTION

C	FOR RESOURCE CONSENT	VW		02.08.23
B	FOR RESOURCE CONSENT	VW	JS	10.07.23
A	DRAFT - FOR CLIENT REVIEW	VW	JS	01.06.23
No.	Revision	By	Chk	Appd

Original Scale (A1)	Design	V.WHYTE	15.03.23	Approved For Construction*
1:2500	Drawn	V.WHYTE	15.03.23	Date
Reduce Scale (A3)	Design Checker			
1:5000	Check			



Client: **RUAKĀKĀ SOLAR FARM SITE 1**

Title: **EXISTING SITE SERVICES, CLEARANCE AND DEMOLITION SHEET VIEWPORT LAYOUT PLAN**

Discipline	CIVIL
Drawing No.	2318415-1-CA-1000
Rev.	C



LEGEND:

EXISTING

- GIU — GIU
- CCID — CCID
- SW — SW
- SS — SS
- W — W
- CCID — CCID
- BOUNDARY
- GAS
- COMMUNICATION
- TRANSPOWER LINE
- STORMWATER PIPE
- STORMWATER OPEN DRAIN
- SANITARY SEWER
- WATER
- CHORUS CABLE
- 5 m CONTOURS
- 1 m CONTOURS
- FIRST GAS UNDERGROUND GAS PIPE
- COUNCIL DRAIN
- COUNCIL EASEMENT
- CROWN EASEMENT
- SS MANHOLE
- SW DEVICE
- TRANSPOWER POLE
- WATER DEVICE
- SW CULVERT STRUCTURE

EXISTING NORTHPOWER

- 400v/O — 400V OVERHEAD
- 400v/U — 400V UNDERGROUND
- 11kv/O — 11KV OVERHEAD
- 11kv/U — 11KV UNDERGROUND
- 33kv/O — 33KV OVERHEAD
- P — P
- FO/U — FIBRE UNDERGROUND
- FO — FIBRE OVERHEAD
- DUCT — FIBRE DUCT
- POWER POLE

PROPOSED

- SITE EXTENT BOUNDARY
- BUILDING TO BE REMOVED
- BATTERY ENERGY STORAGE SYSTEM (BESS) SITE
- KANUKA BLOCK
- TREE TO BE REMOVED-INDICATIVE LOCATION SHOWN

C	FOR RESOURCE CONSENT	VW		02.08.23
B	FOR RESOURCE CONSENT	VW	JS	10.07.23
A	DRAFT - FOR CLIENT REVIEW	VW	JS	01.06.23
No.	Revision	By	Chk	Appd

Original Scale (A1)	Design	V.WHYTE	15.03.23	Approved For Construction*
Reduced Scale (A3)	Drawn	V.WHYTE	15.03.23	Date
1:2000	Design Checker			
	Dwg Check			
	* Refer to Revision 1 for Original Signature			

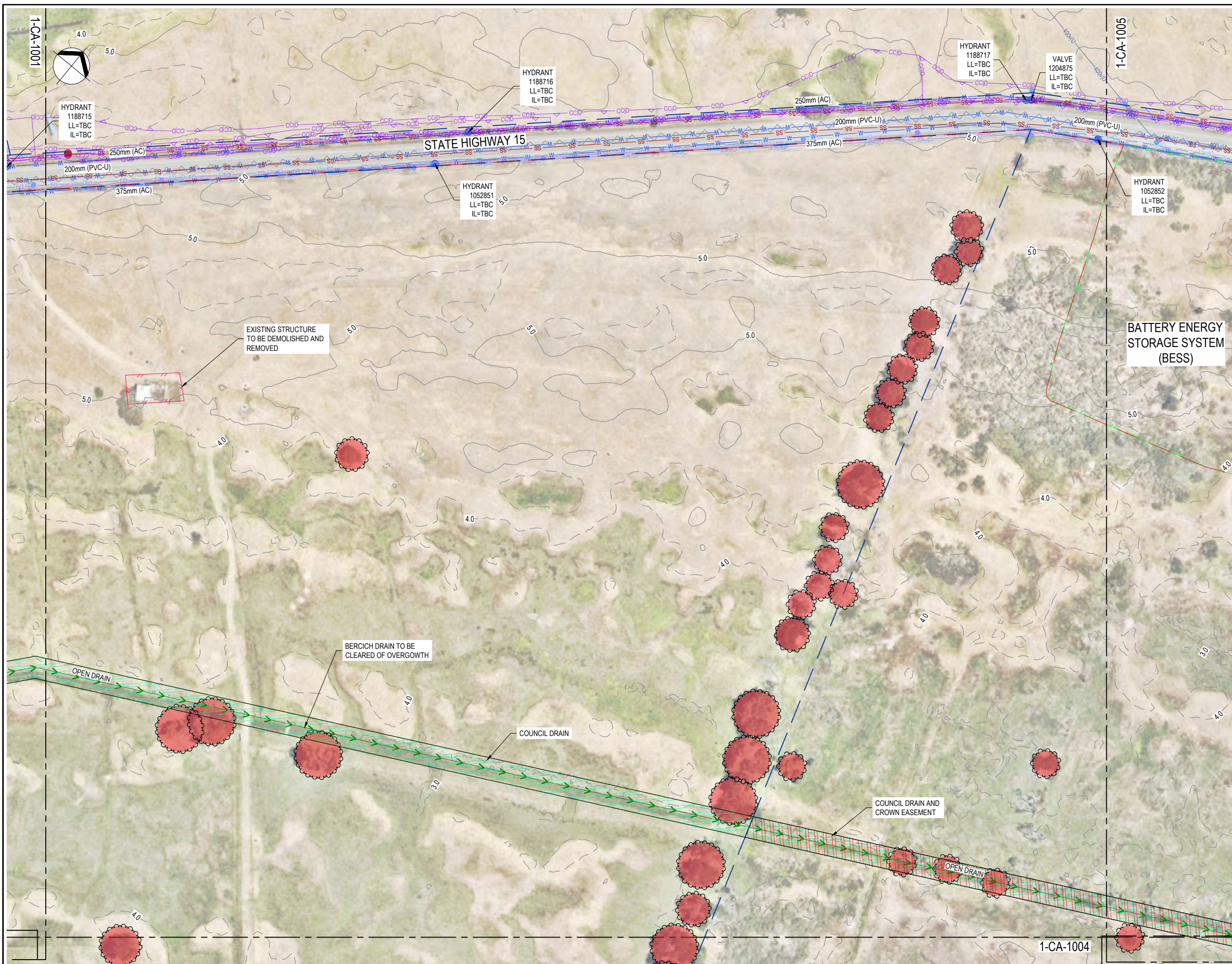


Client: **RUAKAKA SOLAR FARM SITE 1**

Title: **EXISTING SITE SERVICES CLEARANCE AND DEMOLITION PLAN SHEET 1**

Discipline	CIVIL
Drawing No.	2318415-1-CA-1001
Rev.	C

RESOURCE CONSENT NOT FOR CONSTRUCTION



LEGEND:

EXISTING

- GIU - GIU
- CCID - CCID
- SW - SW
- SS - SS
- W - W
- CCID - CCID
- BOUNDARY
- GAS
- COMMUNICATION
- TRANSPOWER LINE
- STORMWATER PIPE
- STORMWATER OPEN DRAIN
- SANITARY SEWER
- WATER
- CHORUS CABLE
- 5 m CONTOURS
- 1 m CONTOURS
- FIRST GAS UNDERGROUND GAS PIPE
- COUNCIL DRAIN
- COUNCIL EASEMENT
- CROWN EASEMENT
- SS MANHOLE
- SW DEVICE
- SW CULVERT STRUCTURE
- TRANSPOWER POLE
- WATER DEVICE

EXISTING NORTHPOWER

- 400v/O - 400V OVERHEAD
- 400v/U - 400V UNDERGROUND
- 11kv/O - 11KV OVERHEAD
- 11kv/U - 11KV UNDERGROUND
- 33kv/O - 33KV OVERHEAD
- P - P
- FO/U - FIBRE UNDERGROUND
- FO - FIBRE OVERHEAD
- DUCT - FIBRE DUCT
- POWER POLE

PROPOSED

- SITE EXTENT BOUNDARY
- BUILDING TO BE REMOVED
- BATTERY ENERGY STORAGE SYSTEM (BESS) SITE
- KANUKA BLOCK
- TREE TO BE REMOVED-INDICATIVE LOCATION SHOWN

RESOURCE CONSENT
NOT FOR CONSTRUCTION

C	FOR RESOURCE CONSENT	VW		02.08.23
B	FOR RESOURCE CONSENT	VW	JS	10.07.23
A	DRAFT - FOR CLIENT REVIEW	VW	JS	01.06.23
No.	Revision	By	Chk	Appd

Original Scale (A1)	Design	V.WHYTE	15.03.23	Approved For Construction*
Reduced Scale (A3)	Drawn	V.WHYTE	15.03.23	Date
1:2000	Day Verifier			
	Dtg Check			

* Refer to Revision 1 for Original Signature



Client: **RUAKĀKĀ SOLAR FARM SITE 1**

Title: **EXISTING SITE SERVICES CLEARANCE AND DEMOLITION PLAN SHEET 2**

Discipline	CIVIL
Drawing No.	2318415-1-CA-1002
Rev.	C



LEGEND:

EXISTING

- GIU — GIU
- CCID — CCID
- SW — SW
- SS — SS
- W — W
- CCID — CCID
- BOUNDARY
- GAS
- COMMUNICATION
- TRANSPOWER LINE
- STORMWATER PIPE
- STORMWATER OPEN DRAIN
- SANITARY SEWER
- WATER
- CHORUS CABLE
- 5 m CONTOURS
- 1 m CONTOURS
- FIRST GAS UNDERGROUND GAS PIPE
- COUNCIL DRAIN
- COUNCIL EASEMENT
- CROWN EASEMENT
- SS MANHOLE
- SW DEVICE
- SW CULVERT STRUCTURE
- TRANSPOWER POLE
- WATER DEVICE

EXISTING NORTHPOWER

- 400v/O — 400V OVERHEAD
- 400v/U — 400V UNDERGROUND
- 11kv/O — 11KV OVERHEAD
- 11kv/U — 11KV UNDERGROUND
- 33kv/O — 33KV OVERHEAD
- P — P
- FOU — FIBRE UNDERGROUND
- FO — FIBRE OVERHEAD
- DUCT — FIBRE DUCT
- POWER POLE

PROPOSED

- SITE EXTENT BOUNDARY
- BUILDING TO BE REMOVED
- BATTERY ENERGY STORAGE SYSTEM (BESS) SITE
- KANUKA BLOCK
- TREE TO BE REMOVED-INDICATIVE LOCATION SHOWN

**RESOURCE CONSENT
NOT FOR CONSTRUCTION**

C	FOR RESOURCE CONSENT	VW		02.08.23
B	FOR RESOURCE CONSENT	VW	JS	10.07.23
A	DRAFT - FOR CLIENT REVIEW	VW	JS	01.06.23
No.	Revision	By	Chk	Appd

Original Scale (A1)	Design	V.WHYTE	15.03.23	Approved For Construction*
Reduced Scale (A3)	Drawn	V.WHYTE	15.03.23	Date
1:2000	Design Verifier			
	Design Check			

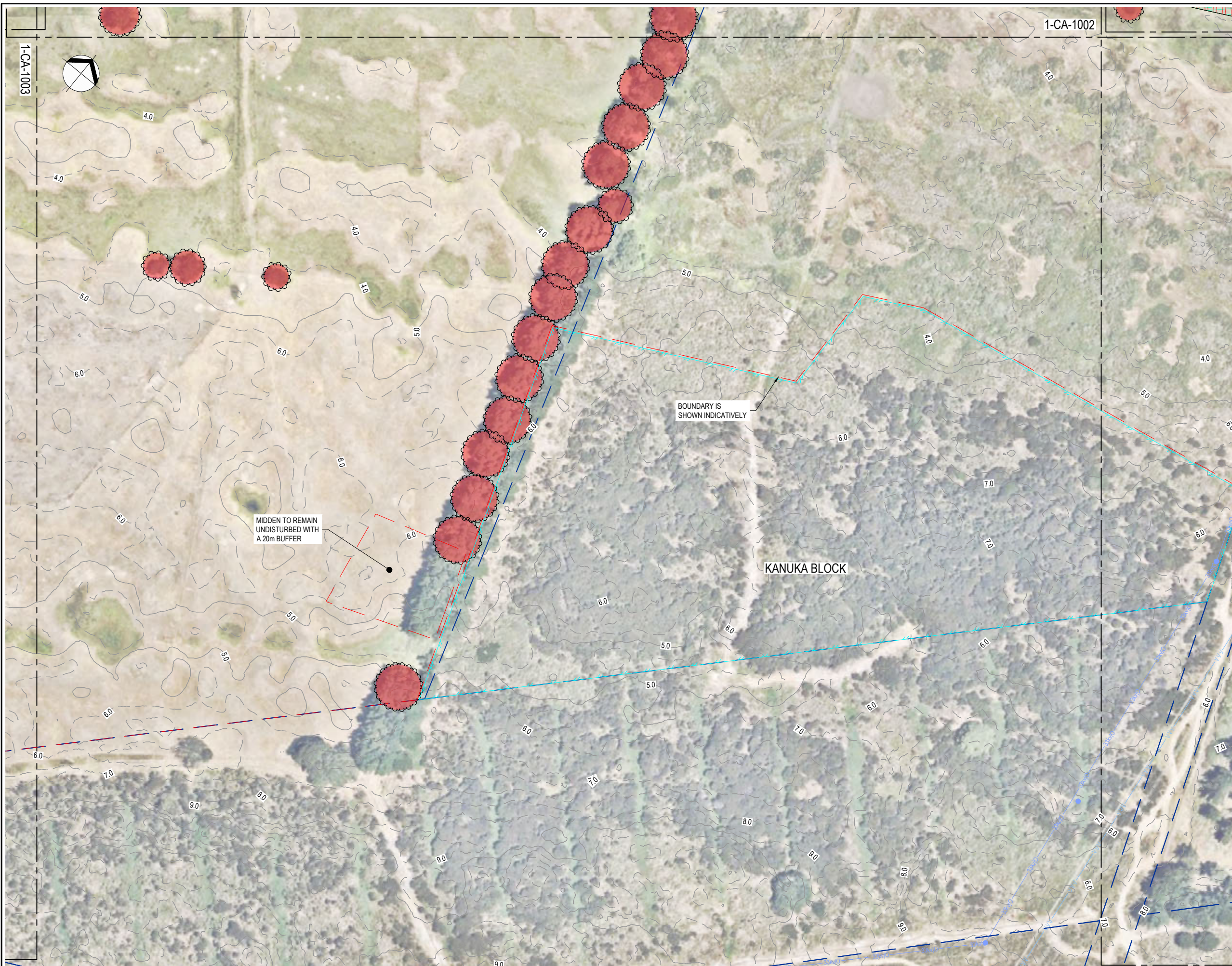
* Refer to Revision 1 for Original Signature



Client: **RUAKAKA SOLAR FARM SITE 1**

Title: **EXISTING SITE SERVICES CLEARANCE AND DEMOLITION PLAN SHEET 3**

Discipline	CIVIL
Drawing No.	2318415-1-CA-1003
Rev.	C



LEGEND:

EXISTING

- GIU — GIU — GAS
- CCID — CCID — COMMUNICATION
- AAA — TRANSPOWER LINE
- SW — SW — STORMWATER PIPE
- SW — SW — STORMWATER OPEN DRAIN
- SS — SS — SANITARY SEWER
- W — W — WATER
- CCID — CCID — CHORUS CABLE
- 5 m CONTOURS
- 1 m CONTOURS
- FIRST GAS UNDERGROUND GAS PIPE
- COUNCIL DRAIN
- COUNCIL EASEMENT
- CROWN EASEMENT
- SS MANHOLE
- SW DEVICE
- TRANSPOWER POLE
- WATER DEVICE
- SW CULVERT STRUCTURE

EXISTING NORTHPOWER

- 400v(O) — 400V OVERHEAD
- 400v(U) — 400V UNDERGROUND
- 11kv(O) — 11KV OVERHEAD
- 11kv(U) — 11KV UNDERGROUND
- 33kv(O) — 33KV OVERHEAD
- P — P — POWER DUCT
- FO(U) — FIBRE UNDERGROUND
- FO — FO — FIBRE OVERHEAD
- DUCT — FIBRE DUCT
- POWER POLE

PROPOSED

- SITE EXTENT BOUNDARY
- BUILDING TO BE REMOVED
- BATTERY ENERGY STORAGE SYSTEM (BESS) SITE
- KANUKA BLOCK
- TREE TO BE REMOVED-INDICATIVE LOCATION SHOWN

RESOURCE CONSENT
NOT FOR CONSTRUCTION

C	FOR RESOURCE CONSENT	VW		02.08.23
B	FOR RESOURCE CONSENT	VW	JS	10.07.23
A	DRAFT - FOR CLIENT REVIEW	VW	JS	01.06.23
No.	Revision	By	Chk	Appd

Original Scale (A1)	Design	V.WHYTE	15.03.23	Approved For Construction*
Reduced Scale (A3)	Drawn	V.WHYTE	15.03.23	Date
1:2000	Design Checker			
	Dwg Check			



Client: **RUAKĀKĀ SOLAR FARM SITE 1**

Title: **EXISTING SITE SERVICES CLEARANCE AND DEMOLITION PLAN SHEET 4**

Discipline	CIVIL
Drawing No.	2318415-1-CA-1004
Rev.	C



LEGEND:

EXISTING

- GIU — GIU
- CCID — CCID
- SW — SW
- SS — SS
- W — W
- CCID — CCID
- BOUNDARY
- GAS
- COMMUNICATION
- TRANSPOWER LINE
- STORMWATER PIPE
- STORMWATER OPEN DRAIN
- SANITARY SEWER
- WATER
- CHORUS CABLE
- 5 m CONTOURS
- 1 m CONTOURS
- FIRST GAS UNDERGROUND GAS PIPE
- COUNCIL DRAIN
- COUNCIL EASEMENT
- CROWN EASEMENT
- SS MANHOLE
- SW DEVICE
- TRANSPOWER POLE
- WATER DEVICE
- SW CULVERT STRUCTURE

EXISTING NORTHPOWER

- 400v/O — 400V OVERHEAD
- 400v/U — 400V UNDERGROUND
- 11kv/O — 11KV OVERHEAD
- 11kv/U — 11KV UNDERGROUND
- 33kv/O — 33KV OVERHEAD
- P — P
- FOU — FIBRE UNDERGROUND
- FO — FIBRE OVERHEAD
- DUCT — FIBRE DUCT
- POWER POLE

PROPOSED

- SITE EXTENT BOUNDARY
- BUILDING TO BE REMOVED
- BATTERY ENERGY STORAGE SYSTEM (BESS) SITE
- KANUKA BLOCK
- TREE TO BE REMOVED-INDICATIVE LOCATION SHOWN

C	FOR RESOURCE CONSENT	VW		02.08.23
B	FOR RESOURCE CONSENT	VW	JS	10.07.23
A	DRAFT - FOR CLIENT REVIEW	VW	JS	01.06.23
No.	Revision	By	Chk	Appd

Original Scale (A1)	Design	V.WHYTE	15.03.23	Approved For Construction*
Reduced Scale (A3)	Drawn	V.WHYTE	15.03.23	Date
1:2000	Design Checker			
	Design Checker			
	* Refer to Revision 1 for Original Signature			



Client: **RUAKĀKĀ SOLAR FARM SITE 1**

Title: **EXISTING SITE SERVICES CLEARANCE AND DEMOLITION PLAN SHEET 5**

Discipline	CIVIL
Drawing No.	2318415-1-CA-1005
Rev.	C

RESOURCE CONSENT NOT FOR CONSTRUCTION



LEGEND:

EXISTING	
	BOUNDARY
	VEGETATION
	GARDEN/GRASS
	EDGE OF SEAL
	GAS
	COMMUNICATION
	TRANSPWER LINE
	STORMWATER
	OPEN DRAIN
	STORMWATER DRAIN
	SANITARY SEWER
	WATER
	CHORUS CABLE
	FIRST GAS UNDERGROUND
	GAS PIPE
	COUNCIL DRAIN
	COUNCIL EASEMENT
	CROWN EASEMENT
	SS MANHOLE
	SW DEVICE
	TRANSPWER POLE
	WATER DEVICE
EXISTING NORTHPOWER	
	400V OVERHEAD
	400V UNDERGROUND
	11KV OVERHEAD
	11KV UNDERGROUND
	33KV OVERHEAD
	33KV UNDERGROUND
	POWER DUCT
	FIBRE UNDERGROUND
	FIBRE OVERHEAD
	FIBRE DUCT
	POWER POLE
PROPOSED	
	SITE EXTENT BOUNDARY
	BATTERY ENERGY STORAGE SYSTEM (BESS) SITE
	KANUKA BLOCK
	2.5 m INDICATIVE CONTOURS
	0.5 m INDICATIVE CONTOURS

NOTE:
 THE CONTOURS SHOWN ON THIS PLAN ARE DERIVED FROM A DIGITAL MODEL. FOR CONSTRUCTION PURPOSES, THESE WOULD BE MADE MORE REGULAR TO IMPROVED CONSTRUCTIONABILITY. THIS ADJUSTMENT WOULD NOT CHANGE THE EXPECTED EFFECTS FROM EARTHWORKS

**RESOURCE CONSENT
 NOT FOR CONSTRUCTION**

No.	Revision	By	Chk	Appd	Date
C	FOR RESOURCE CONSENT	VW			02.08.23
B	FOR RESOURCE CONSENT	VW	JS		10.07.23
A	DRAFT - FOR CLIENT REVIEW	VW	JS		01.06.23

Original Scale (A1)	Design	V.WHYTE	15.03.23	Approved For Construction*
1:2500	Drawn	V.WHYTE <td>15.03.23</td> <td>Date</td>	15.03.23	Date
Reduce Scale (A3)	Design Checker			
1:5000	Dwg Check			

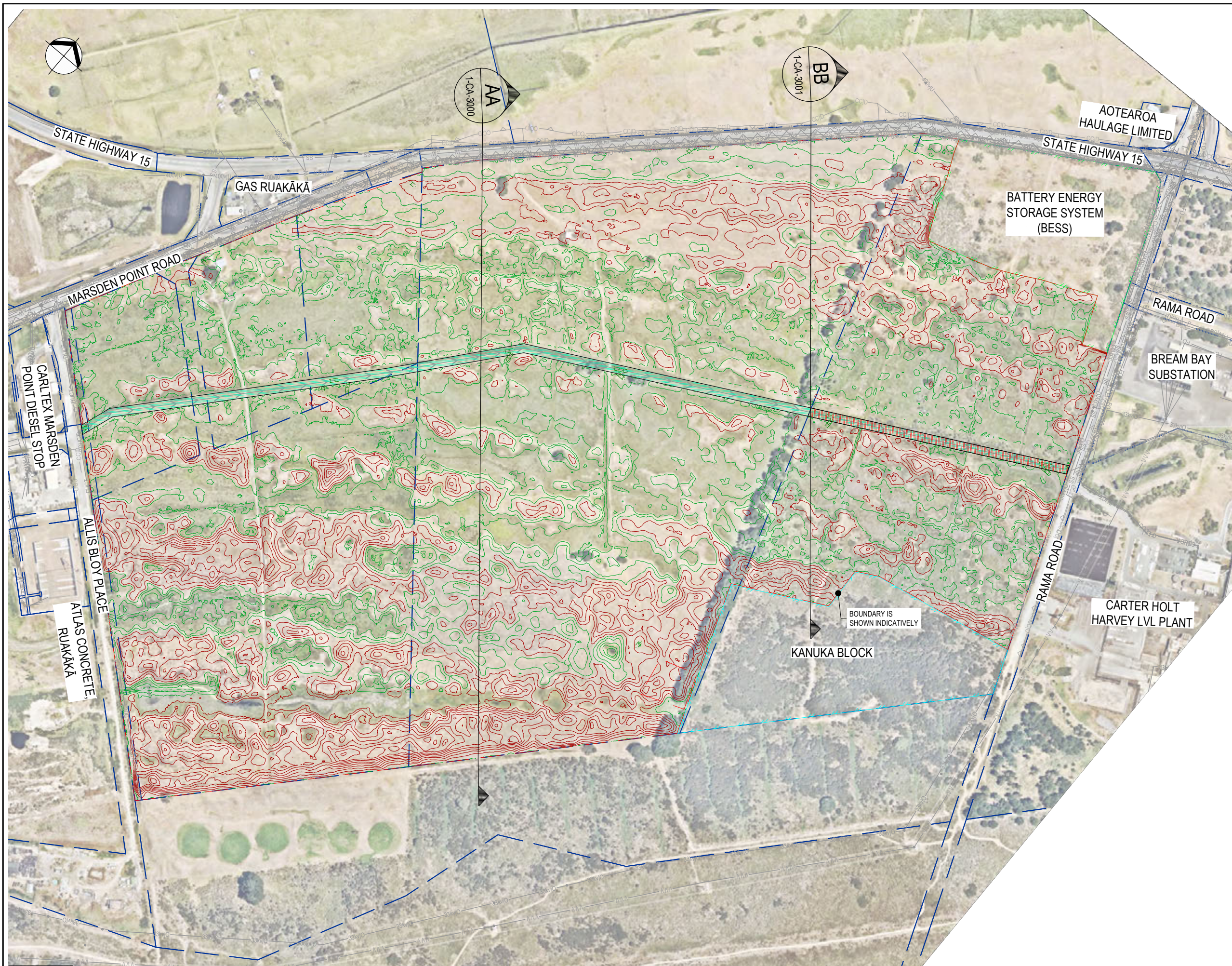
* Refer to Revision 1 for Original Signature



Client: **RUAKAKA SOLAR FARM SITE 1**

Title: **INDICATIVE FINISHED LEVEL PLAN**

Discipline	CIVIL
Drawing No.	2318415-1CA-2001
Rev.	C



LEGEND:

EXISTING	
	BOUNDARY
	GAS
	COMMUNICATION
	TRANSPOWER LINE
	STORMWATER
	OPEN DRAIN
	STORMWATER DRAIN
	SANITARY SEWER
	WATER
	CHORUS CABLE
	FIRST GAS UNDERGROUND GAS PIPE
	COUNCIL DRAIN
	COUNCIL EASEMENT
	CROWN EASEMENT
	SS MANHOLE
	SW DEVICE
	TRANSPOWER POLE
	WATER DEVICE
EXISTING NORTHPOWER	
	400V OVERHEAD
	400V UNDERGROUND
	11kV OVERHEAD
	11kV UNDERGROUND
	33kV OVERHEAD
	33kV UNDERGROUND
	POWER DUCT
	FIBRE UNDERGROUND
	FIBRE OVERHEAD
	FIBRE DUCT
	POWER POLE
PROPOSED	
	SITE EXTENT BOUNDARY
	BATTERY ENERGY STORAGE SYSTEM (BESS) SITE
	KANUKA BLOCK
	INDICATIVE AREA OF CUT
	INDICATIVE AREA OF FILL

RESOURCE CONSENT
NOT FOR CONSTRUCTION

No.	Revision	By	Chk	Appd	Date
C	FOR RESOURCE CONSENT	VW			02.08.23
B	FOR RESOURCE CONSENT	VW	JS		10.07.23
A	DRAFT - FOR CLIENT REVIEW	VW	JS		01.06.23

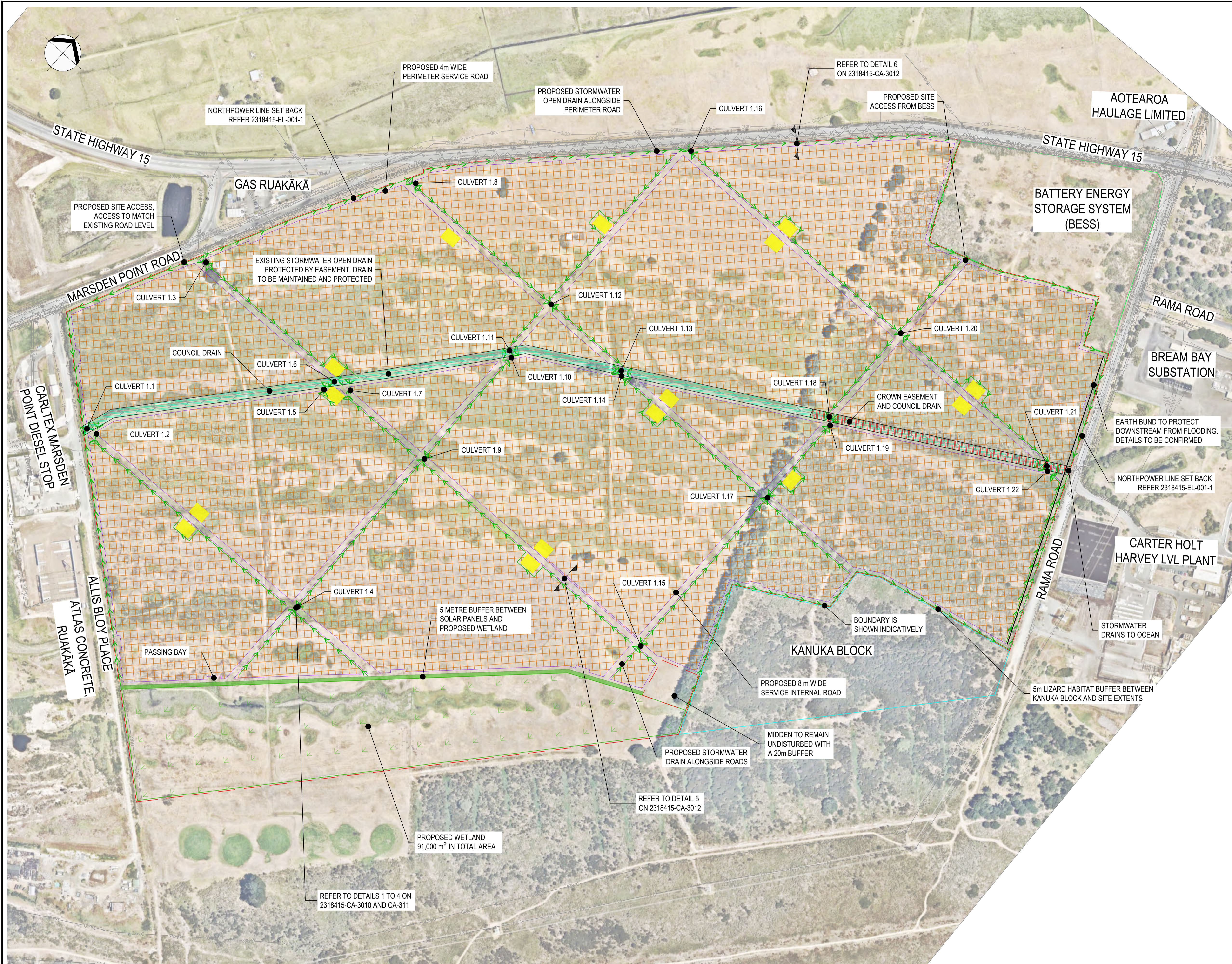
Original Scale (A1)	Design	Drawn	15.03.23	Approved For Construction*
1:2500	V.WHYTE	V.WHYTE	15.03.23	
Reduced Scale (A3)	Design	Drawn	15.03.23	Date
1:5000	V.WHYTE	V.WHYTE	15.03.23	



Client: **RUAKĀKĀ SOLAR FARM SITE 1**

Title: **INDICATIVE EARTHWORK CUT AND FILL PLAN**

Discipline	CIVIL
Drawing No.	2318415-1-CA-2002
Rev.	C



LEGEND:

EXISTING

- BOUNDARY
- GAS
- COMMUNICATION
- TRANSPOWER LINE
- STORMWATER
- OPEN DRAIN
- STORMWATER DRAIN
- SANITARY SEWER
- WATER
- CHORUS CABLE
- STORMWATER OPEN DRAIN
- FIRST GAS UNDERGROUND
- GAS PIPE
- COUNCIL DRAIN
- COUNCIL EASEMENT
- CROWN EASEMENT
- SS MANHOLE
- SW DEVICE
- TRANSPOWER POLE
- WATER DEVICE
- CULVERT STRUCTURE

EXISTING NORTHPOWER

- 400V OVERHEAD
- 400V UNDERGROUND
- 11kV OVERHEAD
- 11kV UNDERGROUND
- 33kV OVERHEAD
- POWER DUCT
- FIBRE UNDERGROUND
- FIBRE OVERHEAD
- FIBRE DUCT

PROPOSED

- SITE EXTENT BOUNDARY
- BATTERY ENERGY STORAGE SYSTEM (BESS) SITE
- KANUKA BLOCK
- SERVICE ROAD
- WETLAND EXTENT
- STORMWATER OPEN DRAIN
- STORMWATER CULVERT
- SOLAR PANEL ZONE
- WETLAND
- TRANSPOWER PYLON
- MAINTENANCE RESERVE
- CULVERT HEADWALL
- MEDIUM VOLTAGE POWER STATION

**RESOURCE CONSENT
NOT FOR CONSTRUCTION**

C	FOR RESOURCE CONSENT	VW		02.08.23
B	FOR RESOURCE CONSENT	VW	JS	10.07.23
A	DRAFT - FOR CLIENT REVIEW	VW	JS	01.06.23
No.	Revision	By	Chk	Appd

Original Scale (A1)	Design	V.WHYTE	27.04.23	Approved For Construction*
1:2500	Drawn	V.WHYTE	27.04.23	Date
Reduced Scale (A3)	Design Checker			
1:5000	Drwg Check			

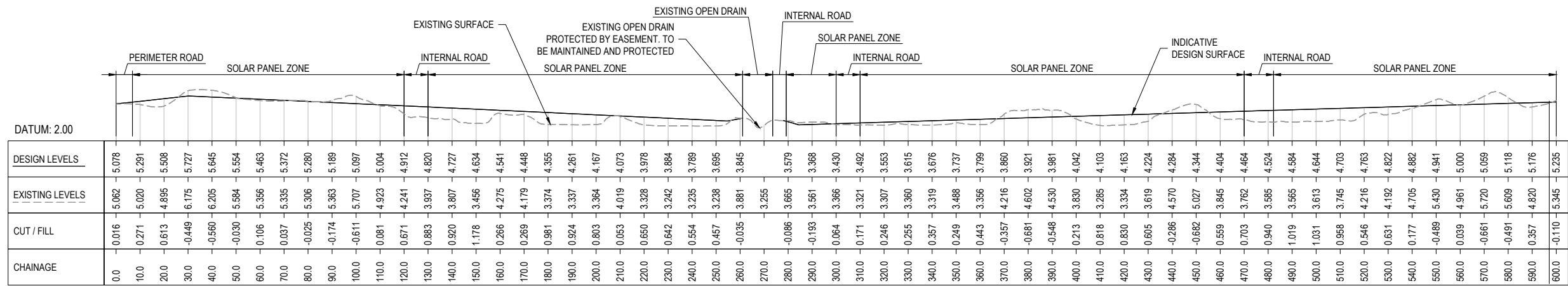
* Refer to Revision 1 for Original Signature



Client: **Meridian.**
Project: **RUAKAKA SOLAR FARM SITE 1**

Title: **INDICATIVE ROAD AND STORMWATER LAYOUT PLAN**

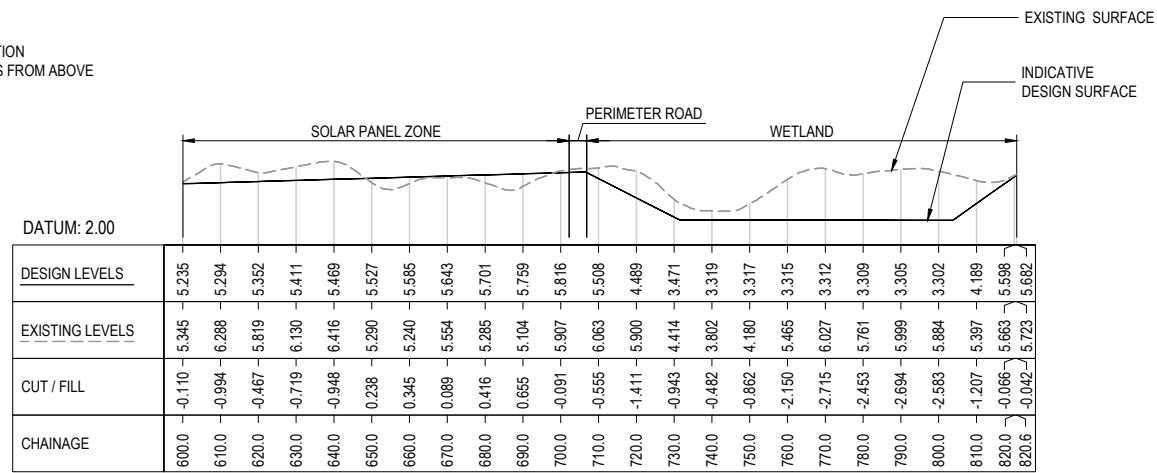
Discipline	CIVIL
Drawing No.	2318415-1-CA-2010
Rev.	C



LONGITUDINAL SECTION: ALIGNMENT AA
SCALE HORIZ= 1:1000; VERT= 1:200

LONG SECTION CONTINUES BELOW

LONG SECTION CONTINUES FROM ABOVE



LONGITUDINAL SECTION: ALIGNMENT AA
SCALE HORIZ= 1:1000; VERT= 1:200

**RESOURCE CONSENT
NOT FOR CONSTRUCTION**

No.	Revision	By	Chk	Appd	Date
C	FOR RESOURCE CONSENT	VW			02.08.23
B	FOR RESOURCE CONSENT	VW	JS		10.07.23
A	DRAFT - FOR CLIENT REVIEW	VW	JS		01.06.23

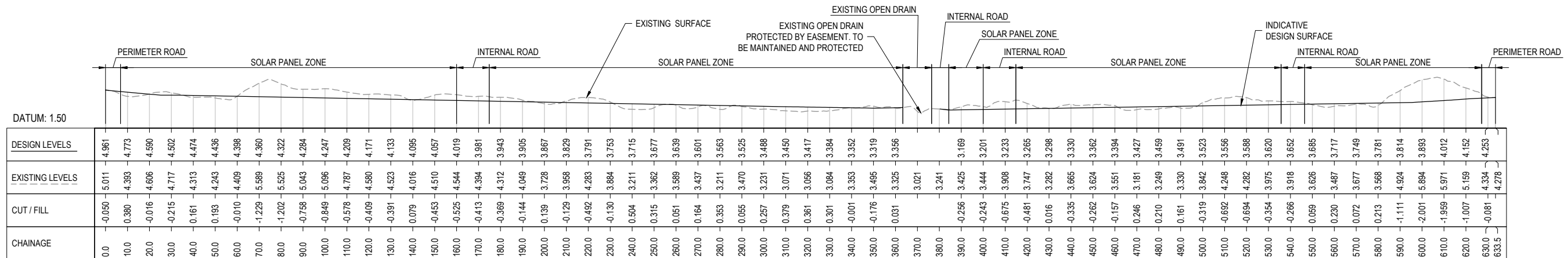
Original Scale (A1)	Design	V.WHYTE	15.03.23	Approved For Construction*
AS SHOWN	Drawn	V.WHYTE <td>15.03.23</td> <td></td>	15.03.23	
Reduction Scale (A3)	Design Checker			
HALF SHOWN	Refer to Revision 1 for Original Signature			



Client: **RUAKAKA SOLAR FARM SITE 1**

Title: **INDICATIVE LONG SECTION SHEET 1**

Discipline	CIVIL
Drawing No.	2318415-1-CA-3000
Rev.	C



LONGITUDINAL SECTION: ALIGNMENT BB
SCALE HORIZ= 1:1000; VERT= 1:200

C	FOR RESOURCE CONSENT	VW		02.08.23
B	FOR RESOURCE CONSENT	VW	JS	10.07.23
A	DRAFT - FOR CLIENT REVIEW	VW	JS	01.06.23
No.	Revision	By	Chk	Appd

Original Scale (A1)	Design	V.WHYTE	15.03.23	Approved For Construction*
AS SHOWN	Drawn	V.WHYTE	15.03.23	Date
Reduced Scale (A3)	Day Verifier			
HALF SHOWN	Day Check			

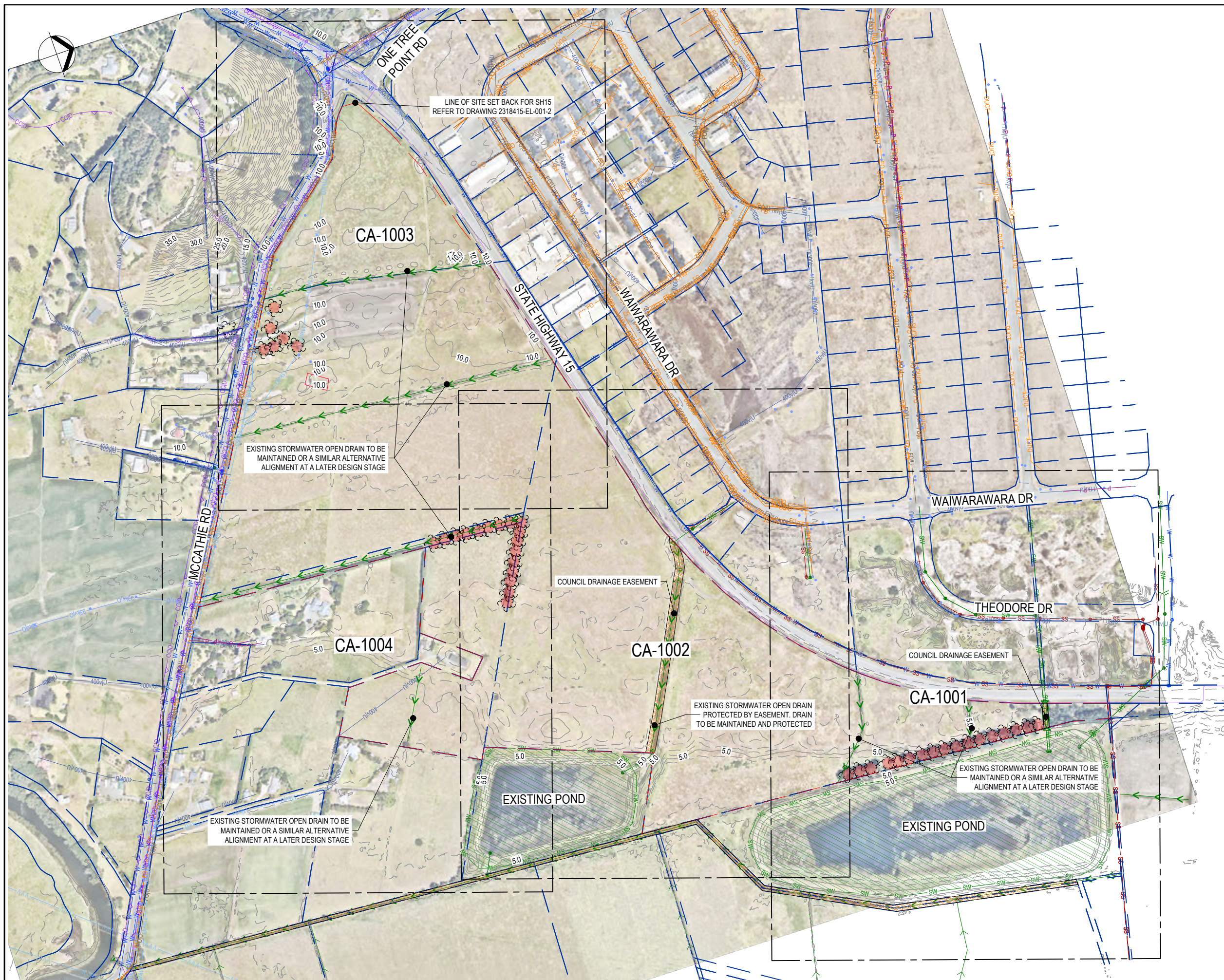


Client: RUAKAKA SOLAR FARM SITE 1

Title: INDICATIVE LONG SECTION SHEET 2

Discipline	CIVIL
Drawing No.	2318415-1-CA-3001
Rev.	C

RESOURCE CONSENT
NOT FOR CONSTRUCTION



LEGEND:

EXISTING

- BOUNDARY
- GIU GAS
- CCID COMMUNICATION
- AAA TRANSPOWER LINE
- SW STORMWATER PIPE
- SS STORMWATER OPEN DRAIN
- SS SANITARY SEWER
- W WATER
- CCID CHORUS CABLE
- 5 m CONTOURS
- 1 m CONTOURS
- FIRST GAS UNDERGROUND GAS PIPE
- COUNCIL DRAIN
- COUNCIL EASEMENT
- CROWN EASEMENT
- SS MANHOLE
- SW DEVICE
- TRANSPOWER POLE
- WATER DEVICE
- SW CULVERT STRUCTURE

EXISTING NORTHPOWER

- 400V(O) 400V OVERHEAD
- 400V(U) 400V UNDERGROUND
- 11kV(O) 11KV OVERHEAD
- 11kV(U) 11KV UNDERGROUND
- 33kV(O) 33KV OVERHEAD
- P POWER DUCT
- FO(U) FIBRE UNDERGROUND
- FO FIBRE OVERHEAD
- DUCT FIBRE DUCT
- POWER POLE

PROPOSED

- SITE EXTENT BOUNDARY
- BUILDING TO BE REMOVED
- BATTERY ENERGY STORAGE SYSTEM (BESS) SITE
- KANUKA BLOCK
- TREE TO BE REMOVED-INDICATIVE LOCATION SHOWN

C	FOR RESOURCE CONSENT	VW		02.08.23
B	FOR RESOURCE CONSENT	VW	JS	10.07.23
A	DRAFT - FOR CLIENT REVIEW	VW	JS	01.06.23
No.	Revision	By	Chk	Appd

Original Scale (A1)	Design	V.WHYTE	15.03.23	Approved For Construction*
1:2500	Drawn	V.WHYTE	15.03.23	Date
Reduce Scale (A3)	Design Checker			
1:5000	Drawn			

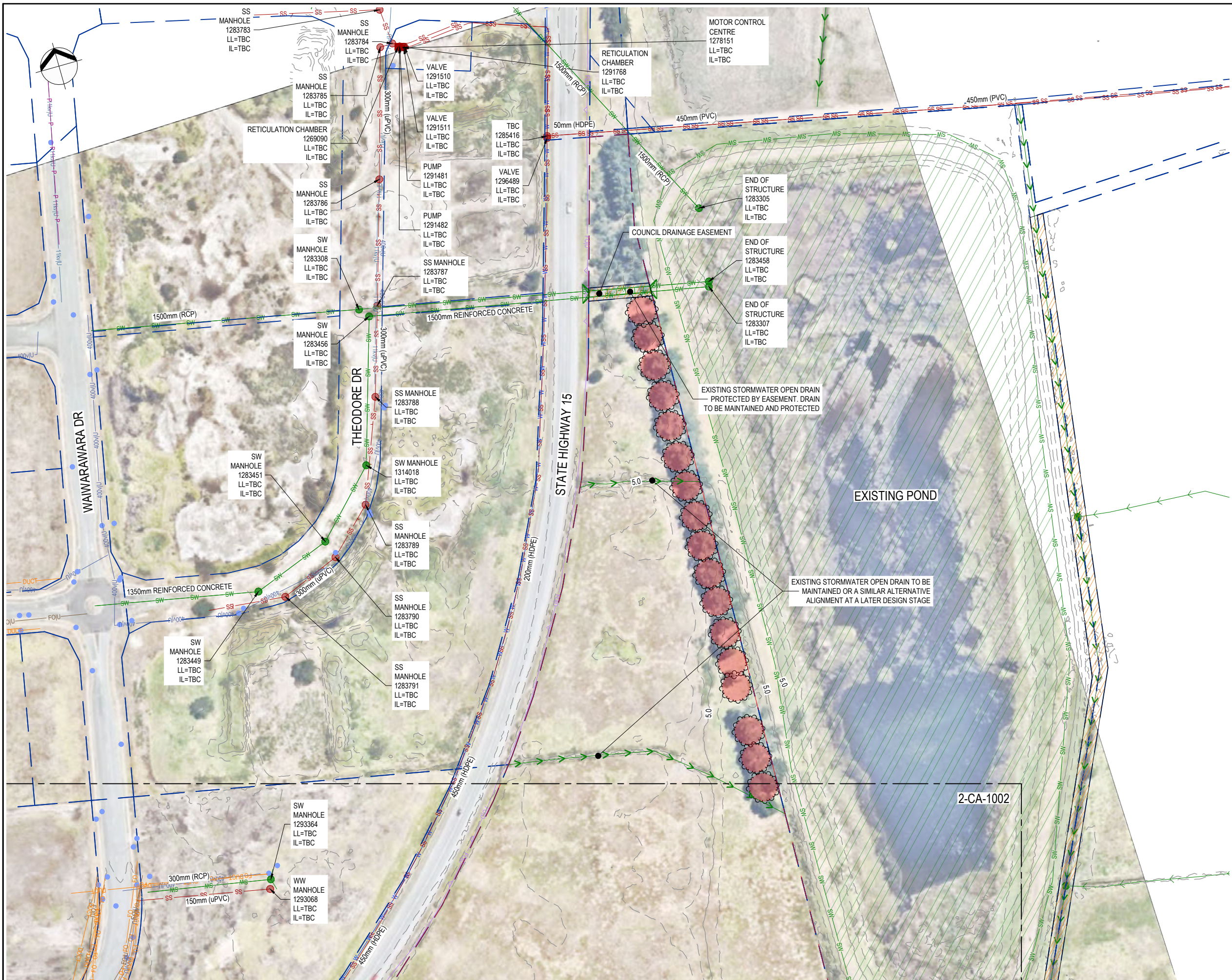


Client: Meridian
 Project: RUAKAKA SOLAR FARM SITE 2

Title: EXISTING SITE SERVICES, CLEARANCE AND DEMOLITION SHEET VIEWPORT LAYOUT PLAN

Discipline	CIVIL
Drawing No.	2318415-2CA-1000
Rev.	C

RESOURCE CONSENT
 NOT FOR CONSTRUCTION



LEGEND:

EXISTING

- BOUNDARY
- GAS
- COMMUNICATION
- TRANSPOWER LINE
- STORMWATER PIPE
- STORMWATER OPEN DRAIN
- SANITARY SEWER
- WATER
- CHORUS CABLE
- 5 m CONTOURS
- 1 m CONTOURS
- FIRST GAS UNDERGROUND GAS PIPE
- COUNCIL DRAIN
- COUNCIL EASEMENT
- CROWN EASEMENT
- SS MANHOLE
- SW DEVICE
- SW CULVERT STRUCTURE
- TRANSPOWER POLE
- WATER DEVICE

EXISTING NORTHPOWER

- 400V OVERHEAD
- 400V UNDERGROUND
- 11kV OVERHEAD
- 11kV UNDERGROUND
- 33kV OVERHEAD
- 33kV UNDERGROUND
- POWER DUCT
- FOIU FIBRE UNDERGROUND
- FO FIBRE OVERHEAD
- DUCT FIBRE DUCT
- POWER POLE

PROPOSED

- SITE EXTENT BOUNDARY
- BUILDING TO BE REMOVED
- BATTERY ENERGY STORAGE SYSTEM (BESS) SITE
- KANUKA BLOCK
- TREE TO BE REMOVED-INDICATIVE LOCATION SHOWN

RESOURCE CONSENT
NOT FOR CONSTRUCTION

C	FOR RESOURCE CONSENT	VW		02.08.23	Original Scale (A1)	Design	V.WHYTE	15.03.23	Approved For Construction*
B	FOR RESOURCE CONSENT	VW	JS	10.07.23	1:1000	Drawn	V.WHYTE	15.03.23	
A	DRAFT - FOR CLIENT REVIEW	VW	JS	01.06.23	Reduce Scale (A3)	Design Checker			Date
No.	Revision	By	Chk	Appd	Date	* Refer to Revision 1 for Original Signature			

Original Scale (A1)	Design	V.WHYTE	15.03.23	Approved For Construction*
1:1000	Drawn	V.WHYTE	15.03.23	
Reduce Scale (A3)	Design Checker			Date
1:2000	* Refer to Revision 1 for Original Signature			



Client: **Meridian.**
Project: **RUAKĀKĀ SOLAR FARM SITE 2**

Title: **EXISTING SITE SERVICES CLEARANCE AND DEMOLITION PLAN SHEET 1**

Discipline	CIVIL
Drawing No.	2318415-2CA-1001
Rev.	C



LEGEND:

EXISTING

- G/U — G/U — GAS
- CCID — CCID — COMMUNICATION
- TLL — TLL — TRANSPOWER LINE
- SW — SW — STORMWATER PIPE
- SS — SS — STORMWATER OPEN DRAIN
- SS — SS — SANITARY SEWER
- W — W — WATER
- CCID — CCID — CHORUS CABLE
- 5m — 5m — 5 m CONTOURS
- 1m — 1m — 1 m CONTOURS
- FUG — FUG — FIRST GAS UNDERGROUND GAS PIPE
- CD — CD — COUNCIL DRAIN
- CE — CE — COUNCIL EASEMENT
- CE — CE — CROWN EASEMENT
- SS MANHOLE ● TRANSPOWER POLE
- SW DEVICE ● WATER DEVICE
- SW — SW — SW CULVERT STRUCTURE

EXISTING NORTHPOWER

- 400v/O — 400V OVERHEAD
- 400v/U — 400V UNDERGROUND
- 11kv/O — 11KV OVERHEAD
- 11kv/U — 11KV UNDERGROUND
- 33kv/O — 33KV OVERHEAD
- P — P — POWER DUCT
- FOU — FOU — FIBRE UNDERGROUND
- FO — FO — FIBRE OVERHEAD
- DUCT — DUCT — FIBRE DUCT
- POWER POLE

PROPOSED

- SITE EXTENT BOUNDARY
- BUILDING TO BE REMOVED
- BATTERY ENERGY STORAGE SYSTEM (BESS) SITE
- KANUKA BLOCK
- TREE TO BE REMOVED-INDICATIVE LOCATION SHOWN

RESOURCE CONSENT
NOT FOR CONSTRUCTION

No.	Revision	By	Chk	Appd	Date
C	FOR RESOURCE CONSENT	VW			02.08.23
B	FOR RESOURCE CONSENT	VW	JS		10.07.23
A	DRAFT - FOR CLIENT REVIEW	VW	JS		01.06.23

Original Scale (A1)	Design	V.WHYTE	15.03.23	Approved For Construction*
1:1000	Drawn	V.WHYTE	15.03.23	Date
Reduced Scale (A3)	Design Checker			
1:2000	Design Checker			

* Refer to Revision 1 for Original Signature



Client: **RUAKAKA SOLAR FARM SITE 2**

Title: **EXISTING SITE SERVICES CLEARANCE AND DEMOLITION PLAN SHEET 2**

Discipline	CIVIL
Drawing No.	2318415-2CA-1002
Rev.	C



LEGEND:

EXISTING

- BOUNDARY
- GAS
- COMMUNICATION
- TRANSPOWER LINE
- STORMWATER PIPE
- STORMWATER OPEN DRAIN
- SANITARY SEWER
- WATER
- CHORUS CABLE
- 5 m CONTOURS
- 1 m CONTOURS
- FIRST GAS UNDERGROUND GAS PIPE
- COUNCIL DRAIN
- COUNCIL EASEMENT
- CROWN EASEMENT
- SS MANHOLE
- SW DEVICE
- TRANSPOWER POLE
- WATER DEVICE
- SW CULVERT STRUCTURE

EXISTING NORTHPOWER

- 400V OVERHEAD
- 400V UNDERGROUND
- 11kV OVERHEAD
- 11kV UNDERGROUND
- 33kV OVERHEAD
- POWER DUCT
- FOIU FIBRE UNDERGROUND
- FO FIBRE OVERHEAD
- DUCT FIBRE DUCT
- POWER POLE

PROPOSED

- SITE EXTENT BOUNDARY
- BUILDING TO BE REMOVED
- BATTERY ENERGY STORAGE SYSTEM (BESS) SITE
- KANUKA BLOCK
- TREE TO BE REMOVED-INDICATIVE LOCATION SHOWN

RESOURCE CONSENT
NOT FOR CONSTRUCTION

C	FOR RESOURCE CONSENT	VW		02.08.23	Original Scale (A1)	Design	V.WHYTE	15.03.23	Approved For Construction*
B	FOR RESOURCE CONSENT	VW	JS	10.07.23	1:1000	Drawn	V.WHYTE	15.03.23	Date
A	DRAFT - FOR CLIENT REVIEW	VW	JS	01.06.23	Reduce Scale (A3)	Design Checker			
No.	Revision	By	Chk	Appd	Date	* Refer to Revision 1 for Original Signature			

Original Scale (A1)	Design	V.WHYTE	15.03.23	Approved For Construction*
1:1000	Drawn	V.WHYTE	15.03.23	Date
Reduce Scale (A3)	Design Checker			
1:2000	* Refer to Revision 1 for Original Signature			



Client: **RUAKĀKĀ SOLAR FARM SITE 2**

Title: **EXISTING SITE SERVICES CLEARANCE AND DEMOLITION PLAN SHEET 3**

Discipline	CIVIL
Drawing No.	2318415-2-CA-1003
Rev.	C



LEGEND:

EXISTING

- BOUNDARY
- GAS
- COMMUNICATION
- TRANSPOWER LINE
- STORMWATER PIPE
- STORMWATER OPEN DRAIN
- SANITARY SEWER
- WATER
- CHORUS CABLE
- 5 m CONTOURS
- 1 m CONTOURS
- FIRST GAS UNDERGROUND GAS PIPE
- COUNCIL DRAIN
- COUNCIL EASEMENT
- CROWN EASEMENT
- SS MANHOLE
- SW DEVICE
- SW CULVERT STRUCTURE
- TRANSPOWER POLE
- WATER DEVICE

EXISTING NORTHPOWER

- 400V OVERHEAD
- 400V UNDERGROUND
- 11kV OVERHEAD
- 11kV UNDERGROUND
- 33kV OVERHEAD
- POWER DUCT
- FIBRE UNDERGROUND
- FIBRE OVERHEAD
- FIBRE DUCT
- POWER POLE

PROPOSED

- SITE EXTENT BOUNDARY
- BUILDING TO BE REMOVED
- BATTERY ENERGY STORAGE SYSTEM (BESS) SITE
- KANUKA BLOCK
- TREE TO BE REMOVED-INDICATIVE LOCATION SHOWN

C	FOR RESOURCE CONSENT	VW		02.08.23
B	FOR RESOURCE CONSENT	VW	JS	10.07.23
A	DRAFT - FOR CLIENT REVIEW	VW	JS	01.06.23
No.	Revision	By	Chk	Appd

Original Scale (A1)	Design	V.WHYTE	15.03.23	Approved For Construction*
1:1000	Drawn	V.WHYTE	15.03.23	Date
Reduce Scale (A3)	Design Checker			
1:2000	Dwg Check			

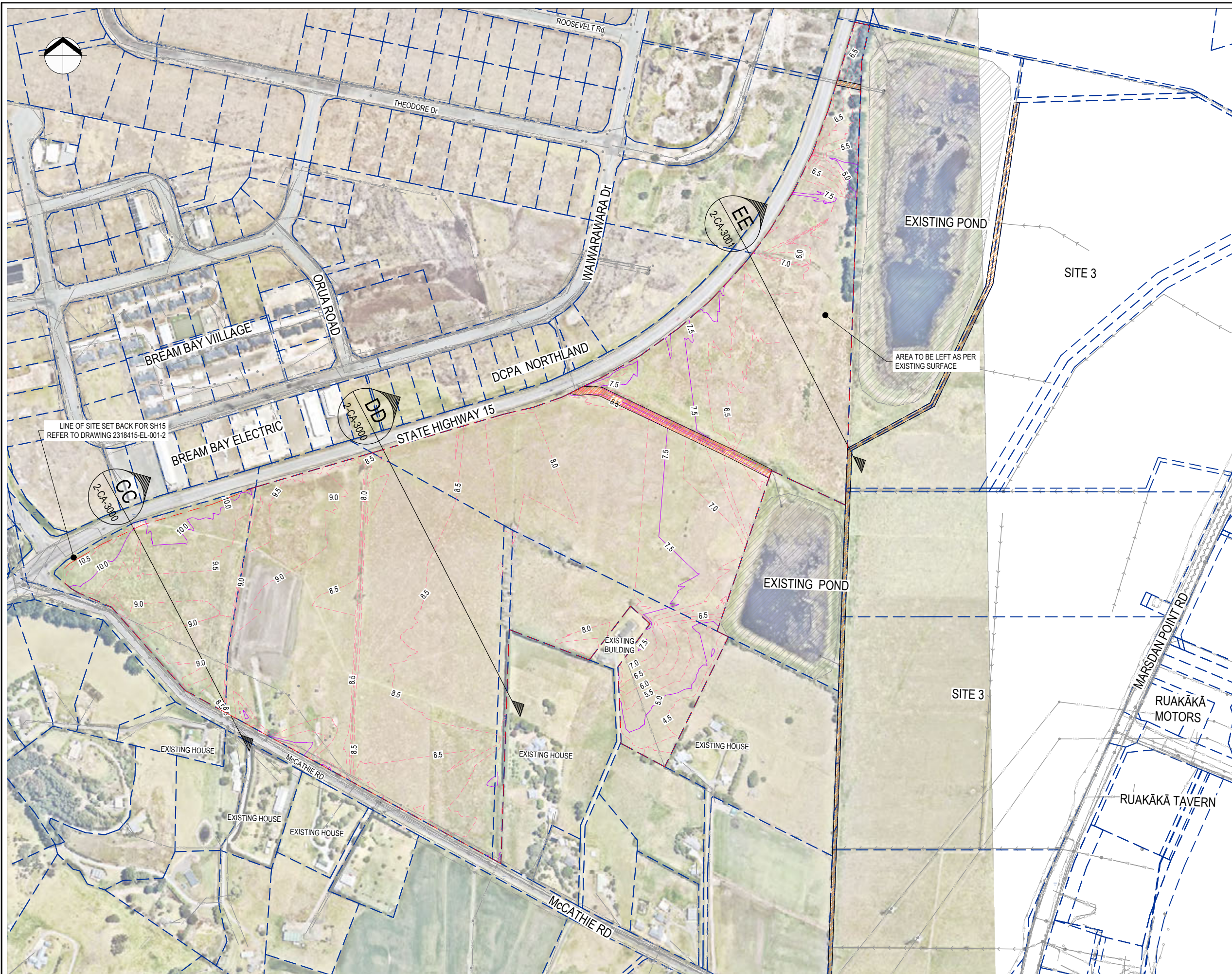


Client: **RUAKĀKĀ SOLAR FARM SITE 2**

Title: **EXISTING SITE SERVICES CLEARANCE AND DEMOLITION PLAN SHEET 4**

Discipline	CIVIL
Drawing No.	2318415-2CA-1004
Rev.	C

RESOURCE CONSENT NOT FOR CONSTRUCTION



LEGEND:

EXISTING	
	BOUNDARY
	VEGETATION
	GARDEN/GRASS
	EDGE OF SEAL
	GAS
	COMMUNICATION
	TRANSPWER LINE
	STORMWATER
	OPEN DRAIN
	STORMWATER DRAIN
	SANITARY SEWER
	WATER
	CHORUS CABLE
	FIRST GAS UNDERGROUND
	GAS PIPE
	COUNCIL DRAIN
	COUNCIL EASEMENT
	CROWN EASEMENT
	SS MANHOLE
	SW DEVICE
	TRANSPWER POLE
	WATER DEVICE
EXISTING NORTHPOWER	
	400V OVERHEAD
	400V UNDERGROUND
	11KV OVERHEAD
	11KV UNDERGROUND
	33KV OVERHEAD
	POWER DUCT
	FIBRE UNDERGROUND
	FIBRE OVERHEAD
	FIBRE DUCT
	POWER POLE
PROPOSED	
	SITE EXTENT BOUNDARY
	BATTERY ENERGY STORAGE SYSTEM (BESS) SITE
	KANUKA BLOCK
	2.5 m INDICATIVE CONTOURS
	0.5 m INDICATIVE CONTOURS

NOTE:
 THE CONTOURS SHOWN ON THIS PLAN ARE DERIVED FROM A DIGITAL MODEL. FOR CONSTRUCTION PURPOSES, THESE WOULD BE MADE MORE REGULAR TO IMPROVED CONSTRUCTABILITY. THIS ADJUSTMENT WOULD NOT CHANGE THE EXPECTED EFFECTS FROM EARTHWORKS

No.	Revision	By	Chk	Appd	Date
C	FOR RESOURCE CONSENT	VW			02.08.23
B	FOR RESOURCE CONSENT	VW	JS		10.07.23
A	DRAFT - FOR CLIENT REVIEW	VW	JS		01.06.23

Original Scale (A1)	Design	V.WHYTE	15.03.23	Approved For Construction*
1:2500 <td>Drawn</td> <td>V.WHYTE <td>15.03.23 <td>Date</td> </td></td>	Drawn	V.WHYTE <td>15.03.23 <td>Date</td> </td>	15.03.23 <td>Date</td>	Date
Reduce Scale (A3)	Design Verifier			
1:5000	Design Check			

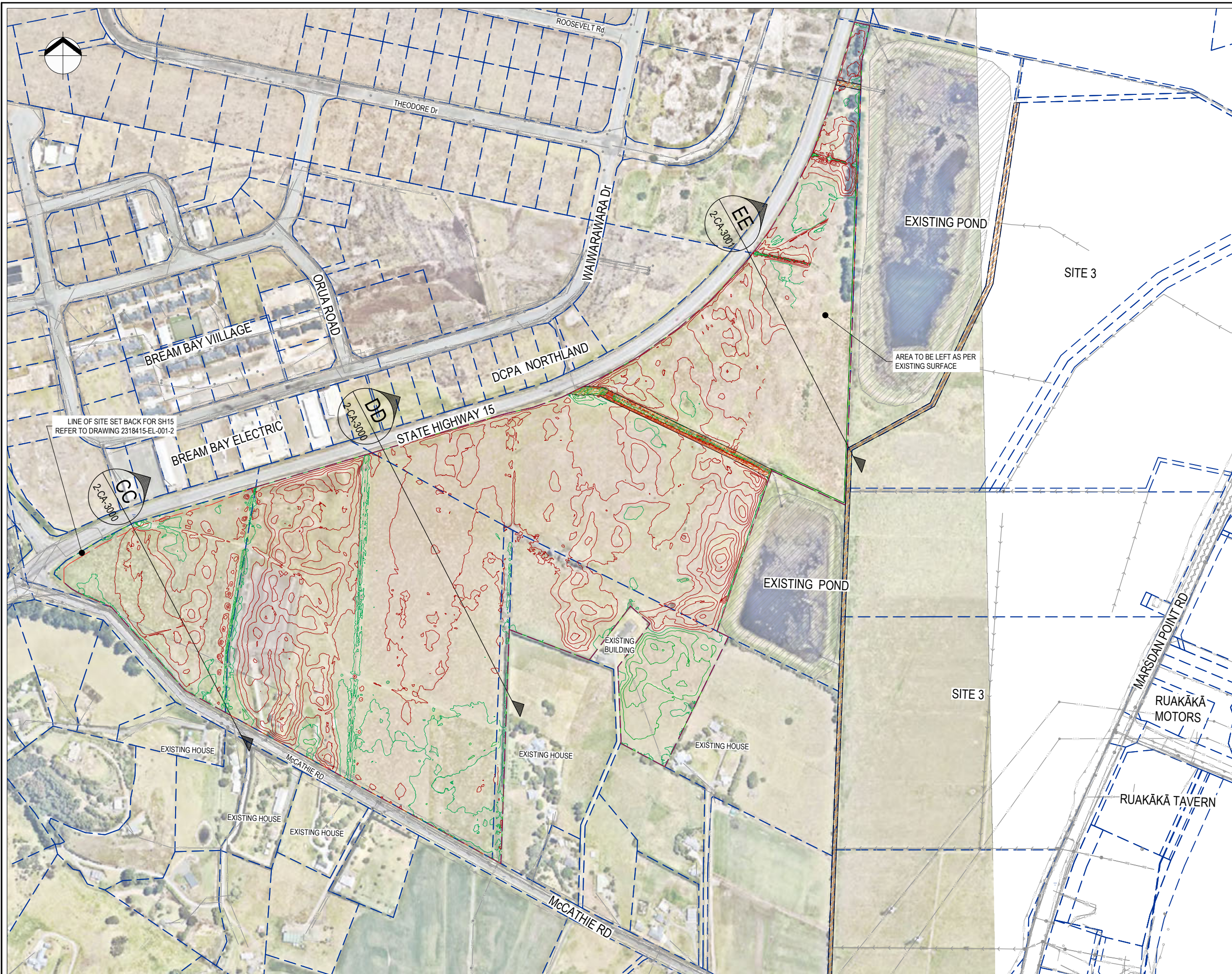
* Refer to Revision 1 for Original Signature



Client: **RUAKAKA SOLAR FARM SITE 2**

Title: **INDICATIVE FINISHED LEVEL PLAN**

Discipline	CIVIL
Drawing No.	2318415-2-CA-2001
Rev.	C



LEGEND:

EXISTING	
	BOUNDARY
	GAS
	COMMUNICATION
	TRANSPWER LINE
	STORMWATER
	OPEN DRAIN
	STORMWATER DRAIN
	SANITARY SEWER
	WATER
	CHORUS CABLE
	FIRST GAS UNDERGROUND
	GAS PIPE
	COUNCIL DRAIN
	COUNCIL EASEMENT
	CROWN EASEMENT
	SS MANHOLE
	SW DEVICE
	TRANSPWER POLE
	WATER DEVICE
EXISTING NORTHPOWER	
	400V OVERHEAD
	400V UNDERGROUND
	11KV OVERHEAD
	11KV UNDERGROUND
	33KV OVERHEAD
	POWER DUCT
	FIBRE UNDERGROUND
	FIBRE OVERHEAD
	FIBRE DUCT
	POWER POLE
PROPOSED	
	SITE EXTENT BOUNDARY
	BATTERY ENERGY STORAGE SYSTEM (BESS) SITE
	KANUKA BLOCK
	INDICATIVE AREA OF CUT
	INDICATIVE AREA OF FILL

No.	Revision	By	Chk	Appd	Date
C	FOR RESOURCE CONSENT	VW			02.08.23
B	FOR RESOURCE CONSENT	VW	JS		10.07.23
A	DRAFT - FOR CLIENT REVIEW	VW	JS		01.06.23

Original Scale (A1)	Design	V.WHYTE	15.03.23	Approved For Construction*
1:2500 <td>Drawn</td> <td>V.WHYTE <td>15.03.23 <td>Date</td> </td></td>	Drawn	V.WHYTE <td>15.03.23 <td>Date</td> </td>	15.03.23 <td>Date</td>	Date
Reduce Scale (A3)	Design Checker			
1:5000	Check			

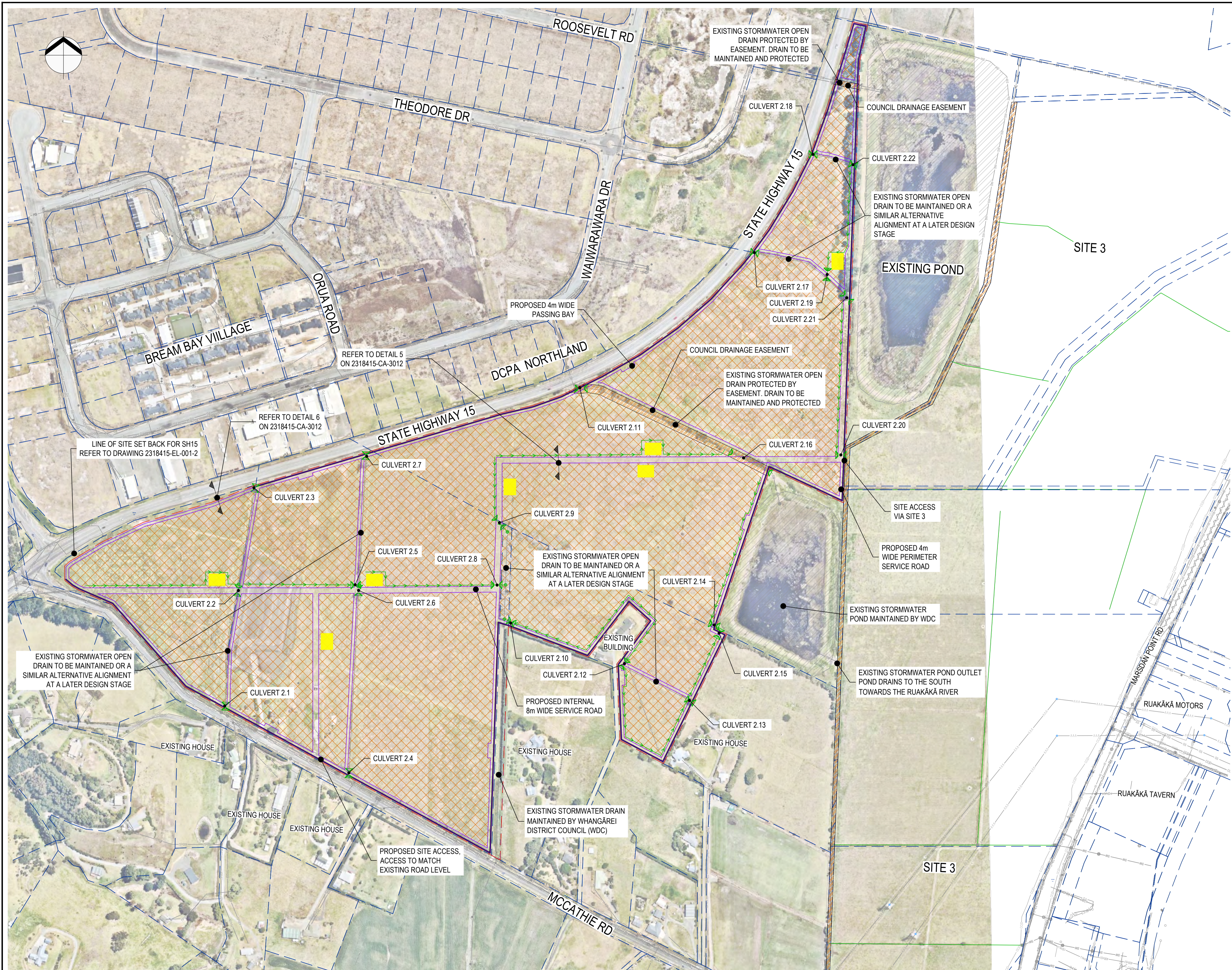


Client: **RUAKĀKĀ SOLAR FARM SITE 2**

Title: **INDICATIVE EARTHWORK CUT AND FILL PLAN**

Discipline	CIVIL
Drawing No.	2318415-2-CA-2002
Rev.	C

RESOURCE CONSENT NOT FOR CONSTRUCTION



LEGEND:

EXISTING

- BOUNDARY
- GAS
- COMMUNICATION
- TRANSPOWER LINE
- STORMWATER
- OPEN DRAIN
- STORMWATER DRAIN
- SANITARY SEWER
- WATER
- CHORUS CABLE
- STORMWATER OPEN DRAIN
- FIRST GAS UNDERGROUND
- GAS PIPE
- COUNCIL DRAIN
- COUNCIL EASEMENT
- CROWN EASEMENT
- SS MANHOLE
- SW DEVICE
- TRANSPOWER POLE
- WATER DEVICE
- CULVERT STRUCTURE

EXISTING NORTHPOWER

- 400V OVERHEAD
- 400V UNDERGROUND
- 11KV OVERHEAD
- 11KV UNDERGROUND
- 33KV OVERHEAD
- POWER DUCT
- FIBRE UNDERGROUND
- FIBRE OVERHEAD
- FIBRE DUCT

PROPOSED

- SITE EXTENT BOUNDARY
- BATTERY ENERGY STORAGE SYSTEM (BESS) SITE
- KANUKA BLOCK
- SERVICE ROAD
- WETLAND EXTENT
- STORMWATER OPEN DRAIN
- STORMWATER CULVERT
- SOLAR PANEL ZONE
- WETLAND
- TRANSPOWER PYLON
- MAINTENANCE RESERVE
- CULVERT HEADWALL
- MEDIUM VOLTAGE POWER STATION

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RESOURCE CONSENT
NOT FOR CONSTRUCTION

C	FOR RESOURCE CONSENT	VW		02.08.23
B	FOR RESOURCE CONSENT	VW	JS	10.07.23
A	DRAFT - FOR CLIENT REVIEW	VW	JS	01.06.23
No.	Revision	By	Chk	Appd

Original Scale (A1)	Design	V.WHYTE	15.03.23	Approved For Construction*
1:2500	Drawn	V.WHYTE	15.03.23	Date
Revised Scale (A3)	Dwg Verifier			
1:5000	Dwg Check			
	* Refer to Revision 1 for Original Signature			

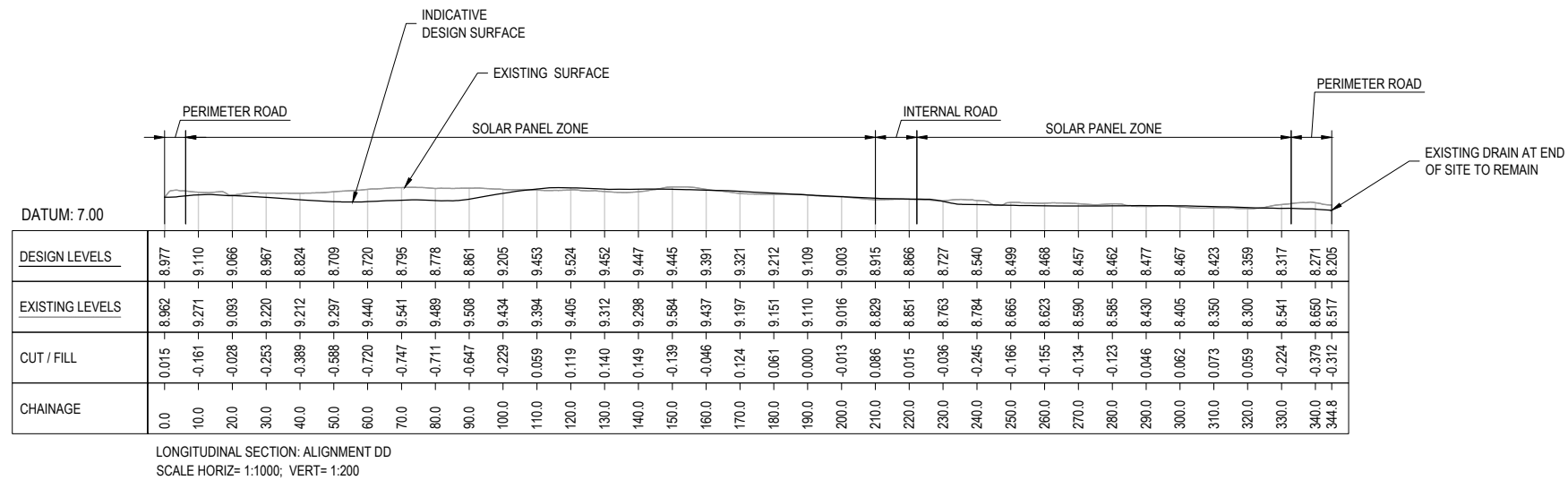
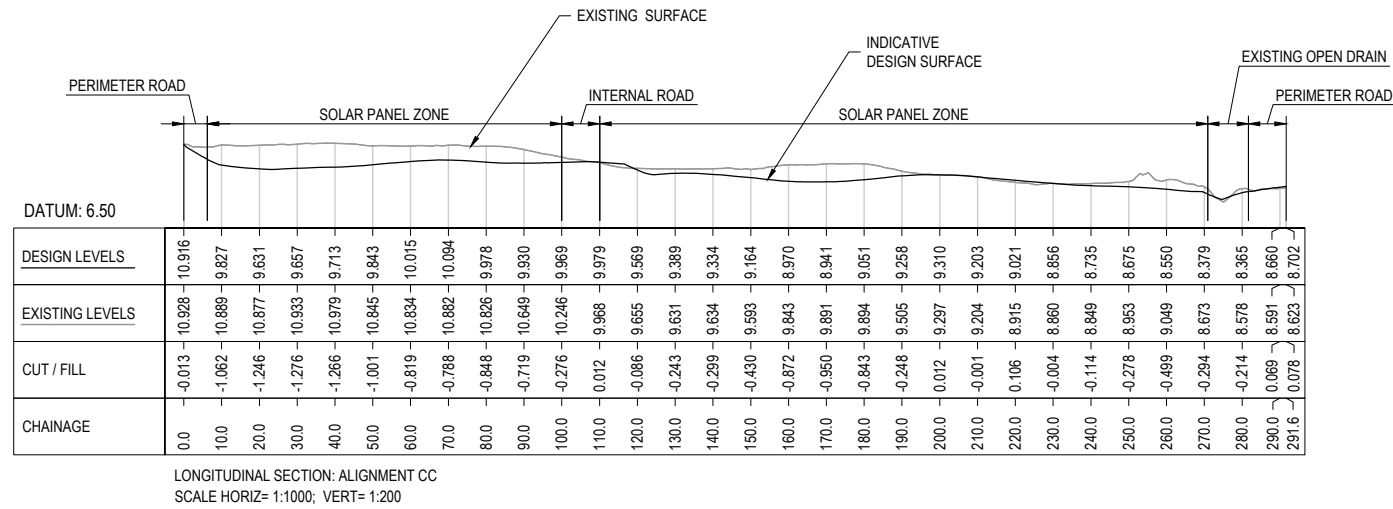


Client: _____

Project: **RUAKAKA SOLAR FARM SITE 2**

Title: **INDICATIVE ROAD AND STORMWATER LAYOUT PLAN**

Discipline	CIVIL
Drawing No.	2318415-2-CA-2010
Rev.	C



**RESOURCE CONSENT
NOT FOR CONSTRUCTION**

No.	Revision	By	Chk	Appd	Date
C	FOR RESOURCE CONSENT	VW			02.08.23
B	FOR RESOURCE CONSENT	VW	JS		10.07.23
A	DRAFT - FOR CLIENT REVIEW	VW	JS		01.06.23

Original Scale (A1)	Design	V.WHYTE	15.03.23	Approved For Construction*
AS SHOWN	Drawn	V.WHYTE	15.03.23	
Reduced Scale (A3)	Design Verifier			
HALF SHOWN	Dwg Check			

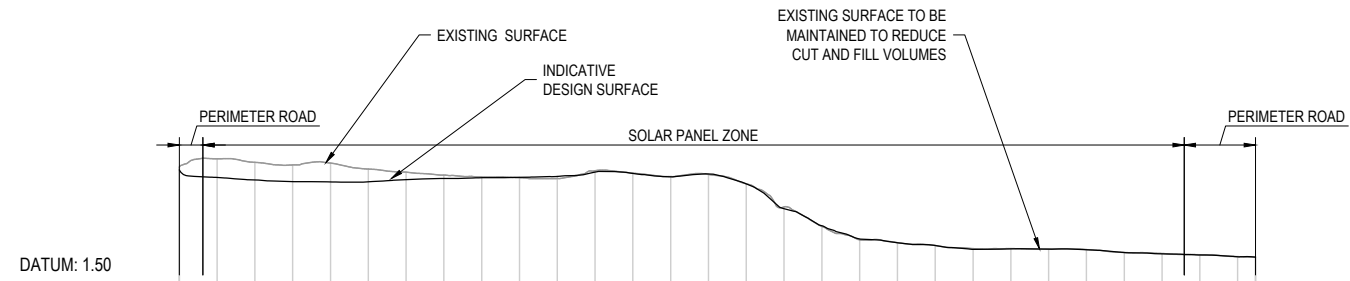
* Refer to Revision 1 for Original Signature



Project: RUAKAKA SOLAR FARM
SITE 2

Title: INDICATIVE LONG SECTION
SHEET 1

Discipline	CIVIL
Drawing No.	2318415-2-CA-3000
Rev.	C



DATUM: 1.50

CHAINAGE	0.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0	190.0	200.0	210.0	220.0	230.0	240.0	250.0	260.0	270.0	280.0	284.7
DESIGN LEVELS	7.459	7.061	6.925	6.840	6.820	6.828	6.941	7.002	7.044	7.067	7.114	7.345	7.273	7.089	7.242	6.721	5.409	4.504	3.805	3.602	3.457	3.258	3.281	3.262	3.234	3.088	3.021	2.958	2.865	2.841
EXISTING LEVELS	7.608	8.048	7.857	7.721	7.619	7.502	7.340	7.181	7.085	7.042	7.001	7.410	7.287	7.103	7.215	6.723	5.500	4.469	3.756	3.610	3.458	3.297	3.296	3.278	3.244	3.089	3.037	2.967	2.871	2.853
CUT / FILL	-0.149	-0.987	-0.933	-0.880	-0.999	-0.674	-0.399	-0.180	-0.041	-0.024	-0.113	-0.066	-0.014	-0.014	-0.026	-0.002	-0.090	-0.035	-0.049	-0.008	-0.001	-0.038	-0.015	-0.016	-0.010	-0.001	-0.017	-0.009	-0.006	-0.012

LONGITUDINAL SECTION: ALIGNMENT EE
SCALE HORIZ= 1:1000; VERT= 1:200

**RESOURCE CONSENT
NOT FOR CONSTRUCTION**

No.	Revision	By	Chk	Appd	Date
C	FOR RESOURCE CONSENT	VW			02.08.23
B	FOR RESOURCE CONSENT	VW	JS		10.07.23
A	DRAFT - FOR CLIENT REVIEW	VW	JS		01.06.23

Original Scale (A1)	Design	V.WHYTE	15.03.23	Approved For Construction*
AS SHOWN	Drawn	V.WHYTE	15.03.23	
Reduced Scale (A3)	Design Verifier			
HALF SHOWN	Dwg Check			

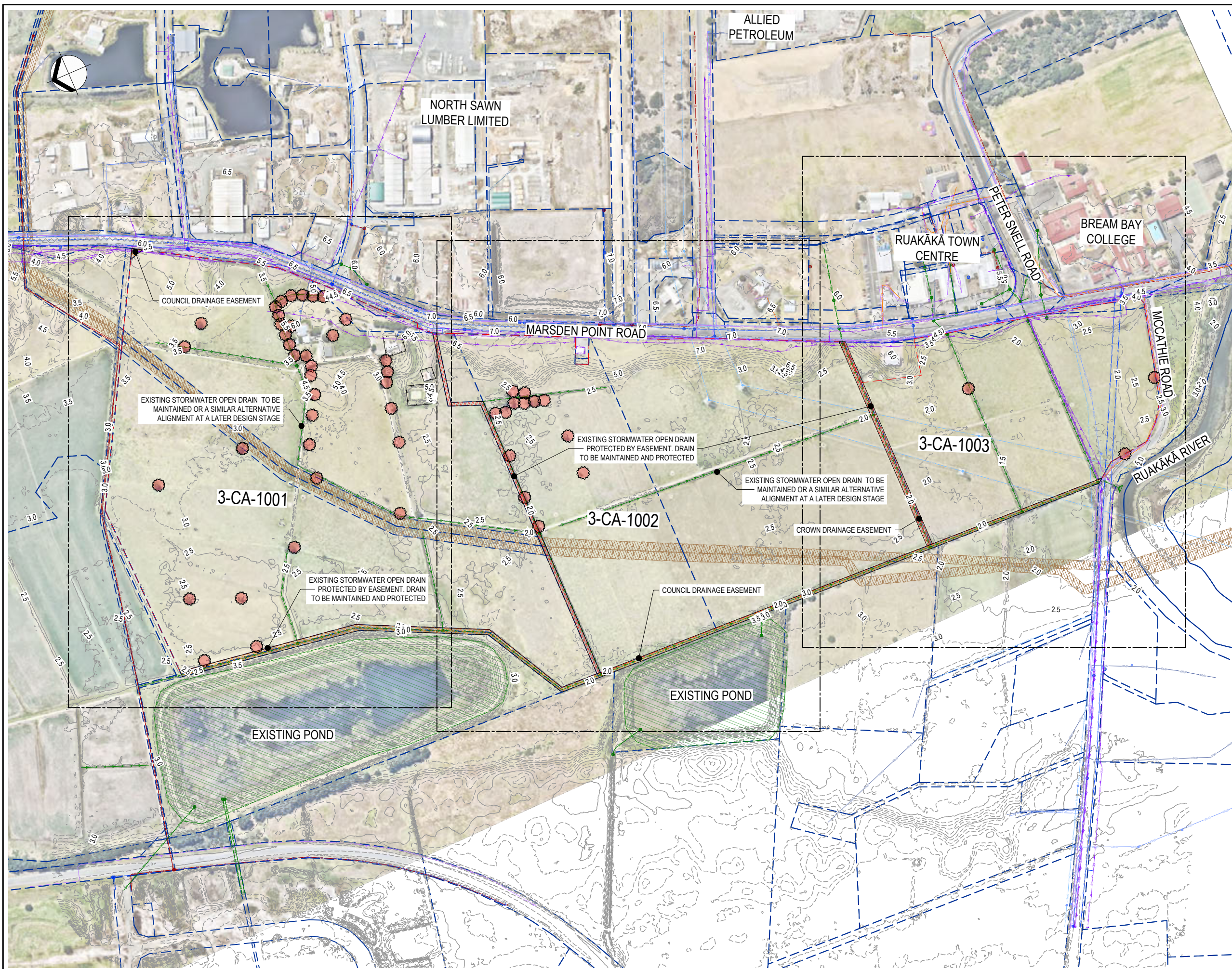
* Refer to Revision 1 for Original Signature



Project: RUAKAKA SOLAR FARM
SITE 2

Title: INDICATIVE LONG SECTION
SHEET 2

Discipline	CIVIL
Drawing No.	2318415-2-CA-3001
Rev.	C



LEGEND:

EXISTING

- GJU - GAS
- CCID - COMMUNICATION
- SW - STORMWATER PIPE
- SS - SANITARY SEWER
- W - WATER
- CCID - CHORUS CABLE
- 5m CONTOURS
- 1m CONTOURS
- FIRST GAS UNDERGROUND GAS PIPE
- COUNCIL DRAIN
- COUNCIL EASEMENT
- CROWN EASEMENT
- SS MANHOLE
- SW DEVICE
- SW CULVERT STRUCTURE
- BOUNDARY
- GAS
- COMMUNICATION
- TRANSPOWER LINE
- STORMWATER PIPE
- STORMWATER OPEN DRAIN
- SANITARY SEWER
- WATER
- CHORUS CABLE
- 5m CONTOURS
- 1m CONTOURS
- FIRST GAS UNDERGROUND GAS PIPE
- COUNCIL DRAIN
- COUNCIL EASEMENT
- CROWN EASEMENT
- SS MANHOLE
- SW DEVICE
- SW CULVERT STRUCTURE
- TRANSPOWER POLE
- WATER DEVICE

EXISTING NORTHPOWER

- 400V/O - 400V OVERHEAD
- 400V/U - 400V UNDERGROUND
- 11kv/O - 11KV OVERHEAD
- 11kv/U - 11KV UNDERGROUND
- 33kv/O - 33KV OVERHEAD
- P - POWER DUCT
- FO/U - FIBRE UNDERGROUND
- FO - FIBRE OVERHEAD
- DUCT - FIBRE DUCT
- POWER POLE

PROPOSED

- SITE EXTENT BOUNDARY
- BUILDING TO BE REMOVED
- BATTERY ENERGY STORAGE SYSTEM (BESS) SITE
- KANUKA BLOCK
- TREE TO BE REMOVED-INDICATIVE LOCATION SHOWN

C	FOR RESOURCE CONSENT	VW		02.08.23	Original Scale (A1)	Design	V.WHYTE	15.03.23	Approved For Construction*
B	FOR RESOURCE CONSENT	VW	JS	10.07.23	1:2500	Drawn	V.WHYTE	15.03.23	Date
A	DRAFT - FOR CLIENT REVIEW	VW	JS	01.06.23	Reduce Scale (A3)	Design Verifier			
No.	Revision	By	Chk	Appd	Date	Dtg Check			

Original Scale (A1)	Design	V.WHYTE	15.03.23	Approved For Construction*
1:2500	Drawn	V.WHYTE	15.03.23	Date
Reduce Scale (A3)	Design Verifier			
1:5000	Dtg Check			

* Refer to Revision 1 for Original Signature



Client: Meridian
 Project: RUAKAKA SOLAR FARM SITE 3

Title: EXISTING SITE SERVICES, CLEARANCE AND DEMOLITION SHEET VIEWPORT LAYOUT PLAN

Discipline	CIVIL
Drawing No.	2318415-3CA-1000
Rev.	C

RESOURCE CONSENT NOT FOR CONSTRUCTION



LEGEND:

EXISTING

- GJU — GAS
- CCID — COMMUNICATION
- AAA — TRANSPOWER LINE
- SW — STORMWATER PIPE
- SS — STORMWATER OPEN DRAIN
- W — SANITARY SEWER
- W — WATER
- CCID — CHORUS CABLE
- 5m — 5 m CONTOURS
- 1m — 1 m CONTOURS
- — FIRST GAS UNDERGROUND GAS PIPE
- — COUNCIL DRAIN
- — COUNCIL EASEMENT
- — CROWN EASEMENT
- SS MANHOLE
- SW DEVICE
- TRANSPOWER POLE
- WATER DEVICE
- SW CULVERT STRUCTURE

EXISTING NORTHPOWER

- 400V(O) — 400V OVERHEAD
- 400V(U) — 400V UNDERGROUND
- 11kv(O) — 11KV OVERHEAD
- 11kv(U) — 11KV UNDERGROUND
- 33kv(O) — 33KV OVERHEAD
- P — POWER DUCT
- FO(U) — FIBRE UNDERGROUND
- FO — FIBRE OVERHEAD
- DUCT — FIBRE DUCT
- POWER POLE

PROPOSED

- — SITE EXTENT BOUNDARY
- — BUILDING TO BE REMOVED
- — BATTERY ENERGY STORAGE SYSTEM (BESS) SITE
- — KANUKA BLOCK
- — TREE TO BE REMOVED-INDICATIVE LOCATION SHOWN

C	FOR RESOURCE CONSENT	VW		02.08.23
B	FOR RESOURCE CONSENT	VW	JS	10.07.23
A	DRAFT - FOR CLIENT REVIEW	VW	JS	01.06.23
No.	Revision	By	Chk	Appd

Original Scale (A1)	Design	V.WHYTE	15.03.23	Approved For Construction*
1:1000	Drawn	V.WHYTE	15.03.23	Date
Reduce Scale (A3)	Design Checker			
1:2000	Check			

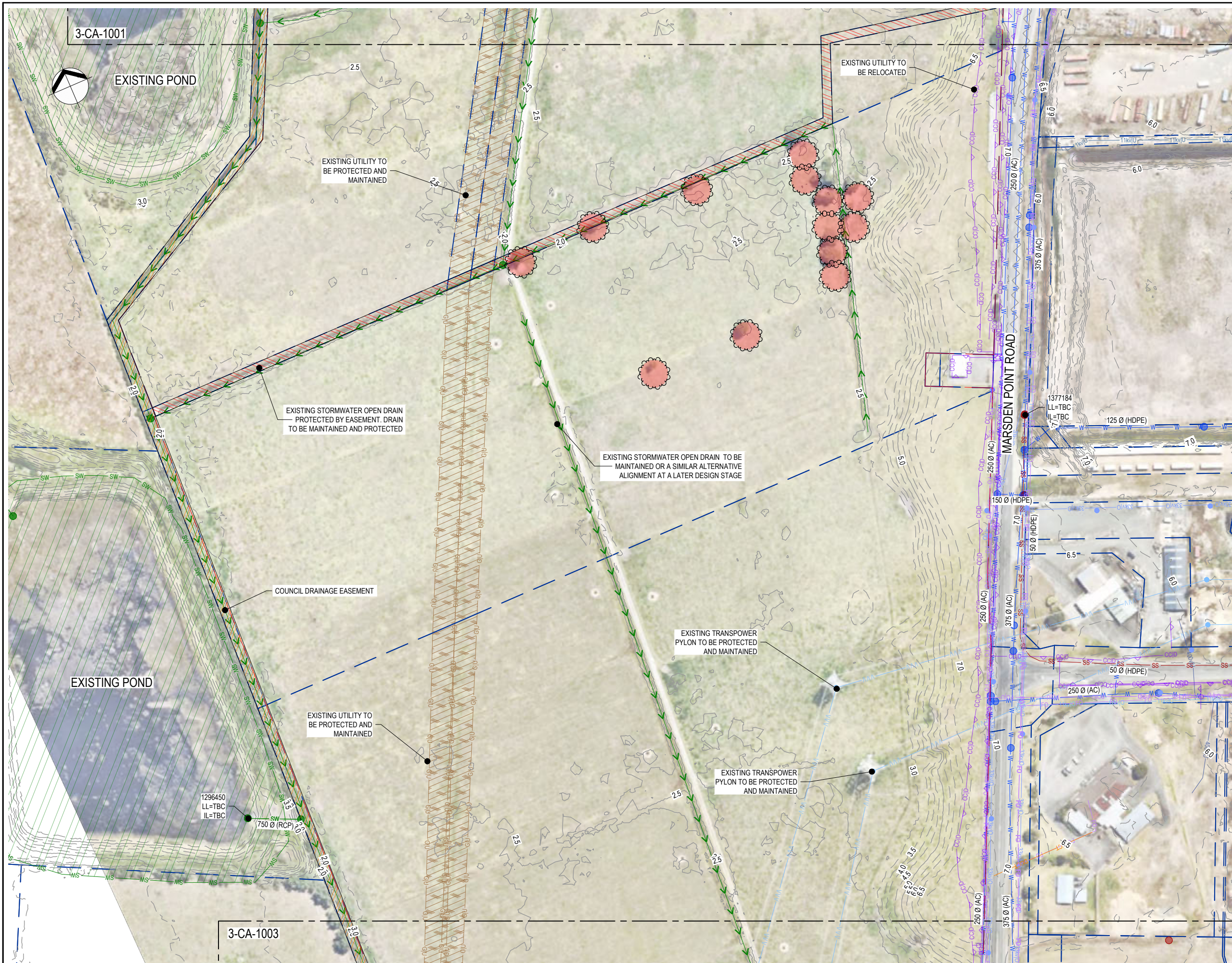


Client: **RUAKĀKĀ SOLAR FARM SITE 3**

Title: **EXISTING SITE SERVICES CLEARANCE AND DEMOLITION PLAN SHEET 1**

Discipline	CIVIL
Drawing No.	2318415-3CA-1001
Rev.	C

RESOURCE CONSENT NOT FOR CONSTRUCTION



LEGEND:

EXISTING

- GJU — GAS
- CCID — COMMUNICATION
- AAA — TRANSPOWER LINE
- SW — STORMWATER PIPE
- SS — SANITARY SEWER
- W — WATER
- CCID — CHORUS CABLE
- 5m — 5 m CONTOURS
- 1m — 1 m CONTOURS
- — FIRST GAS UNDERGROUND GAS PIPE
- — COUNCIL DRAIN
- — COUNCIL EASEMENT
- — CROWN EASEMENT
- SS MANHOLE
- SW DEVICE
- TRANSPOWER POLE
- WATER DEVICE
- SW CULVERT STRUCTURE

EXISTING NORTHPOWER

- 400V O — 400V OVERHEAD
- 400V U — 400V UNDERGROUND
- 11kV O — 11KV OVERHEAD
- 11kV U — 11KV UNDERGROUND
- 33kV O — 33KV OVERHEAD
- P — POWER DUCT
- FO U — FIBRE UNDERGROUND
- FO O — FIBRE OVERHEAD
- DUCT — FIBRE DUCT
- POWER POLE

PROPOSED

- — SITE EXTENT BOUNDARY
- — BUILDING TO BE REMOVED
- — BATTERY ENERGY STORAGE SYSTEM (BESS) SITE
- — KANUKA BLOCK
- — TREE TO BE REMOVED-INDICATIVE LOCATION SHOWN

RESOURCE CONSENT
NOT FOR CONSTRUCTION

C	FOR RESOURCE CONSENT	VW		02.08.23	Original Scale (A1)	Design	V.WHYTE	15.03.23	Approved For Construction*
B	FOR RESOURCE CONSENT	VW	JS	10.07.23	1:1000	Drawn	V.WHYTE	15.03.23	
A	DRAFT - FOR CLIENT REVIEW	VW	JS	01.06.23	Reduce Scale (A3)	Day Checker			Date
No.	Revision	By	Chk	Appd	Date	* Refer to Revision 1 for Original Signature			

Original Scale (A1)	Design	V.WHYTE	15.03.23	Approved For Construction*
1:1000	Drawn	V.WHYTE	15.03.23	
Reduce Scale (A3)	Day Checker			Date
1:2000	* Refer to Revision 1 for Original Signature			



Client: **RUAKĀKĀ SOLAR FARM SITE 3**

Title: **EXISTING SITE SERVICES CLEARANCE AND DEMOLITION PLAN SHEET 2**

Discipline	CIVIL
Drawing No.	2318415-3-CA-1002
Rev.	C



LEGEND:

EXISTING

- GJU — GAS
- CCID — COMMUNICATION
- SW — SW
- SS — SS
- W — W — WATER
- CCID — CHORUS CABLE
- 5m — 5 m CONTOURS
- 1m — 1 m CONTOURS
- — FIRST GAS UNDERGROUND GAS PIPE
- — COUNCIL DRAIN
- — COUNCIL EASEMENT
- — CROWN EASEMENT
- SS MANHOLE
- SW DEVICE
- TRANSPOWER POLE
- WATER DEVICE
- SW CULVERT STRUCTURE

EXISTING NORTHPOWER

- 400V/O — 400V OVERHEAD
- 400V/U — 400V UNDERGROUND
- 11kV/O — 11KV OVERHEAD
- 11kV/U — 11KV UNDERGROUND
- 33kV/O — 33KV OVERHEAD
- P — P — POWER DUCT
- FO/U — FIBRE UNDERGROUND
- FO — FIBRE OVERHEAD
- DUCT — FIBRE DUCT
- POWER POLE

PROPOSED

- — SITE EXTENT BOUNDARY
- — BUILDING TO BE REMOVED
- — BATTERY ENERGY STORAGE SYSTEM (BESS) SITE
- — KANUKA BLOCK
- — TREE TO BE REMOVED-INDICATIVE LOCATION SHOWN

C	FOR RESOURCE CONSENT	VW		02.08.23
B	FOR RESOURCE CONSENT	VW	JS	10.07.23
A	DRAFT - FOR CLIENT REVIEW	VW	JS	01.06.23
No.	Revision	By	Chk	Appd

Original Scale (A1)	Design	V.WHYTE	15.03.23	Approved For Construction*
1:1000	Drawn	V.WHYTE	15.03.23	Date
Reduce Scale (A3)	Dwg Check			
1:2000	Dwg Check			

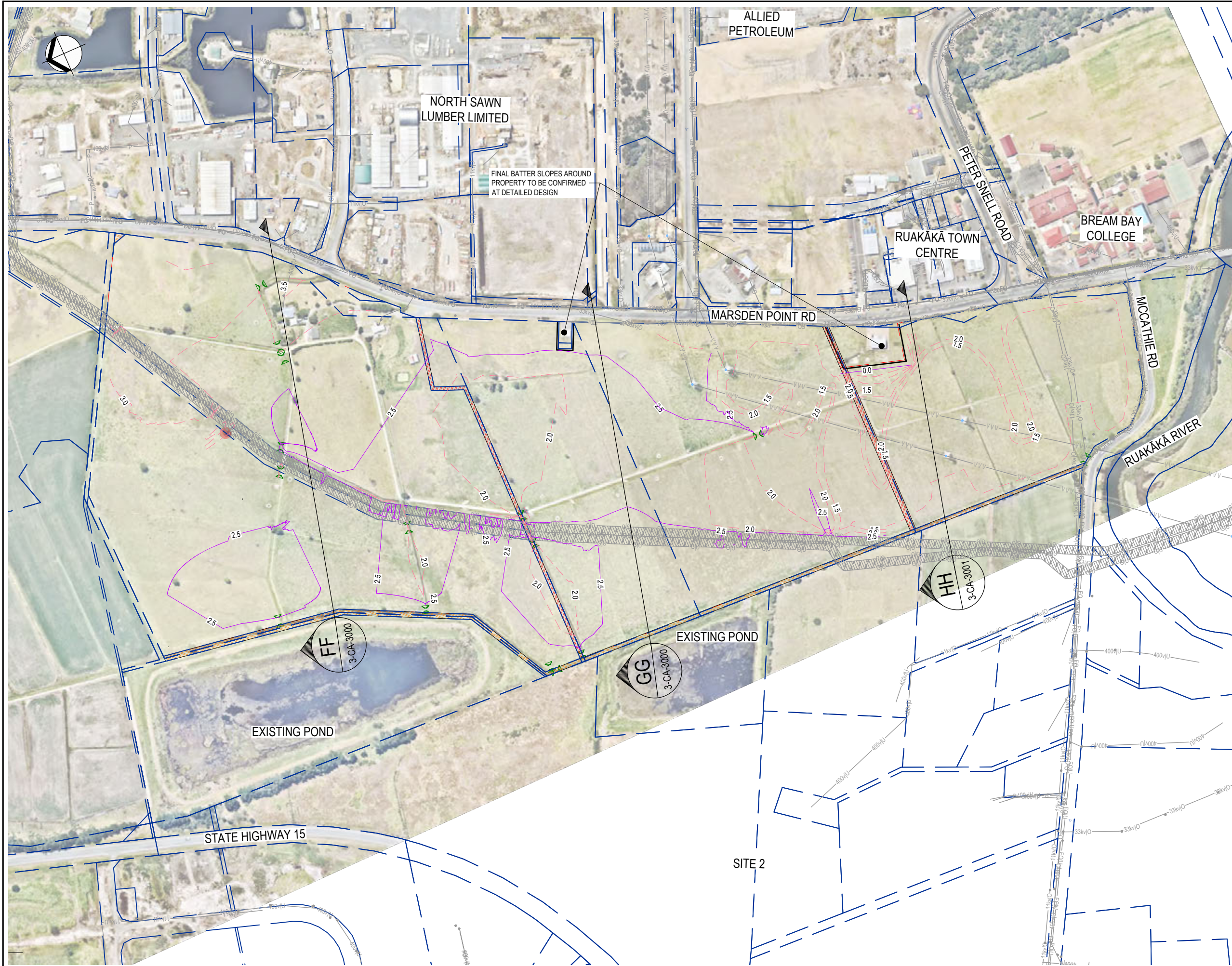


Client: **RUAKAKA SOLAR FARM SITE 3**

Title: **EXISTING SITE SERVICES CLEARANCE AND DEMOLITION PLAN SHEET 3**

Discipline	CIVIL
Document No.	2318415-3CA-1003
Rev.	C

RESOURCE CONSENT NOT FOR CONSTRUCTION



LEGEND:

EXISTING

- BOUNDARY
- VEGETATION
- GARDEN/GRASS
- EDGE OF SEAL
- GJU GJU GAS
- CCJD COMMUNICATION
- T T T T TRANSPWER LINE
- SW SW STORMWATER
- OPEN DRAIN
- D D D D STORMWATER DRAIN
- SS SS SANITARY SEWER
- W W W W WATER
- CCJD CHORUS CABLE
- FIRST GAS UNDERGROUND GAS PIPE
- COUNCIL DRAIN
- COUNCIL EASEMENT
- CROWN EASEMENT
- SS MANHOLE ● TRANSPWER POLE
- SW DEVICE ● WATER DEVICE

EXISTING NORTHPOWER

- 400v(O) 400V OVERHEAD
- 400v(U) 400V UNDERGROUND
- 11kv(O) 11KV OVERHEAD
- 11kv(U) 11KV UNDERGROUND
- 33kv(O) 33KV OVERHEAD
- P P P P POWER DUCT
- FO(U) FIBRE UNDERGROUND
- FO FIBRE OVERHEAD
- DUCT FIBRE DUCT
- POWER POLE

PROPOSED

- SITE EXTENT BOUNDARY
- BATTERY ENERGY STORAGE SYSTEM (BESS) SITE
- KANUKA BLOCK
- 2.5 m INDICATIVE CONTOURS
- 0.5 m INDICATIVE CONTOURS

NOTE:
 THE CONTOURS SHOWN ON THIS PLAN ARE DERIVED FROM A DIGITAL MODEL. FOR CONSTRUCTION PURPOSES, THESE WOULD BE MADE MORE REGULAR TO IMPROVED CONSTRUCTIONABILITY. THIS ADJUSTMENT WOULD NOT CHANGE THE EXPECTED EFFECTS FROM EARTHWORKS

C	FOR RESOURCE CONSENT	VW		02.08.23
B	FOR RESOURCE CONSENT	VW	JS	10.07.23
A	DRAFT - FOR CLIENT REVIEW	VW	JS	01.06.23
No.	Revision	By	Chk	Appd

Original Scale (A1)	Design	V.WHYTE	15.03.23	Approved For Construction*
1:2500	Drawn	V.WHYTE	15.03.23	Date
Reduce Scale (A3)	Day Verifier			
1:5000	Day Check			



Client: **RUAKAKA SOLAR FARM SITE 3**

Title: **INDICATIVE FINISHED LEVEL PLAN**

Discipline	CIVIL
Drawing No.	2318415-3-CA-2001
Rev.	C

RESOURCE CONSENT NOT FOR CONSTRUCTION



LEGEND:

EXISTING

- G/U — G/U — GAS
- C/C/D — C/C/D — COMMUNICATION
- A/A/A — A/A/A — TRANSPOWER LINE
- SW — SW — STORMWATER
- >>> —>>> — OPEN DRAIN
- D — D — D — STORMWATER DRAIN
- SS — SS — SANITARY SEWER
- W — W — W — WATER
- C/C/D — C/C/D — CHORUS CABLE
- >>> —>>> — FIRST GAS UNDERGROUND GAS PIPE
- >>> —>>> — COUNCIL DRAIN
- >>> —>>> — COUNCIL EASEMENT
- >>> —>>> — CROWN EASEMENT
- SS MANHOLE ● TRANSPOWER POLE
- SW DEVICE ● WATER DEVICE

EXISTING NORTHPOWER

- 400v/O — 400V OVERHEAD
- 400v/U — 400V UNDERGROUND
- 11kv/O — 11KV OVERHEAD
- 11kv/U — 11KV UNDERGROUND
- 33kv/O — 33KV OVERHEAD
- P — P — POWER DUCT
- FO/U — FO/U — FIBRE UNDERGROUND
- FO — FO — FIBRE OVERHEAD
- DUCT — DUCT — FIBRE DUCT
- POWER POLE

PROPOSED

- SITE EXTENT BOUNDARY
- BATTERY ENERGY STORAGE SYSTEM (BESS) SITE
- KANUKA BLOCK
- INDICATIVE AREA OF CUT
- INDICATIVE AREA OF FILL

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C	FOR RESOURCE CONSENT	VW		02.08.23	Original Scale (A1)	Design	V.WHYTE	15.03.23	Approved For Construction*
B	FOR RESOURCE CONSENT	VW	JS	10.07.23	1:2500	Drawn	V.WHYTE	15.03.23	Date
A	DRAFT - FOR CLIENT REVIEW	VW	JS	01.06.23	Reduced Scale (A3)	Design Checker			
No.	Revision	By	Chk	Appd	Date	1:5000	* Refer to Revision 1 for Original Signature		

Original Scale (A1)	Design	V.WHYTE	15.03.23	Approved For Construction*
1:2500	Drawn	V.WHYTE	15.03.23	Date
Reduced Scale (A3)	Design Checker			
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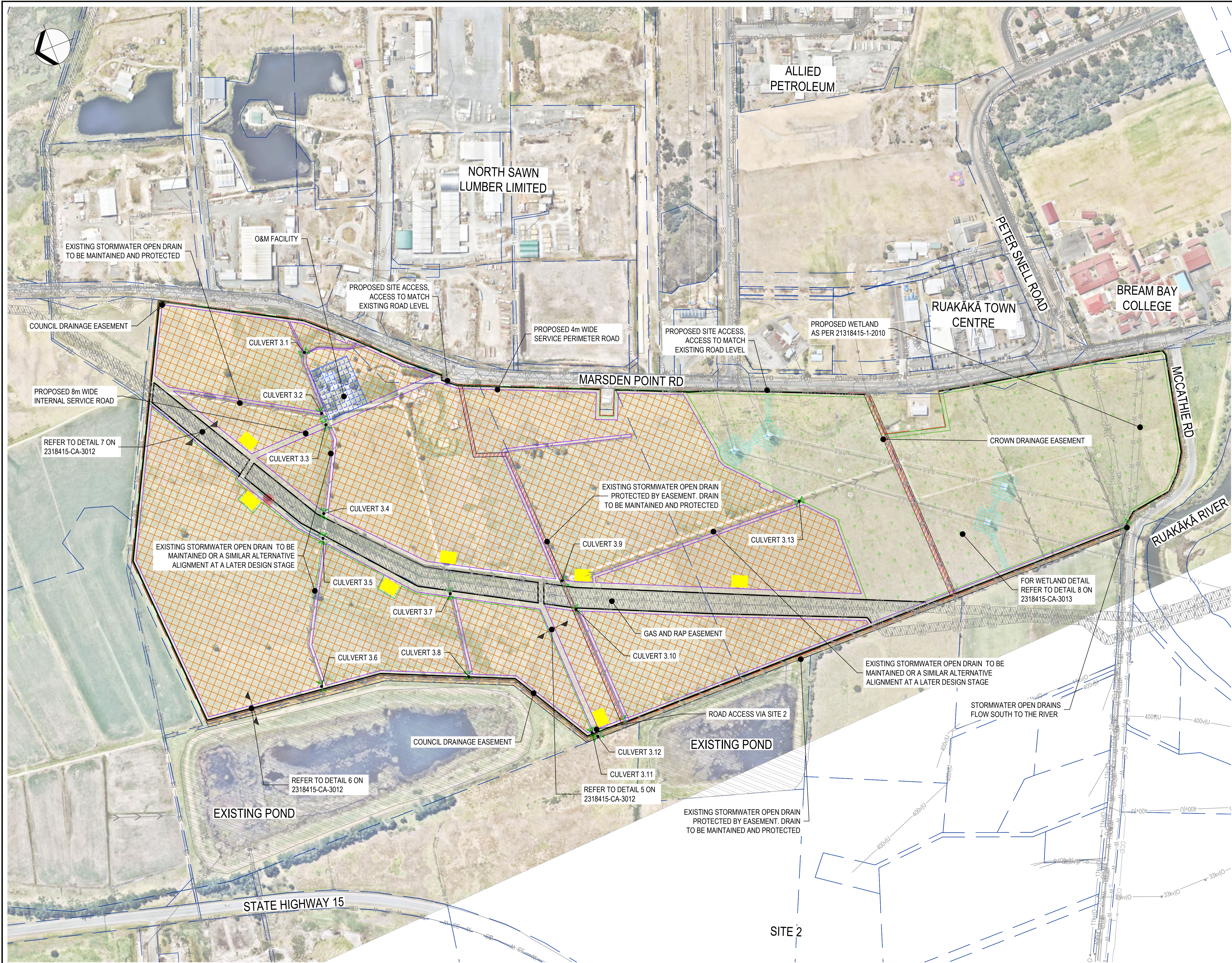


Client: Meridian
 Project: RUAKAKA SOLAR FARM SITE 3

Title: INDICATIVE EARTHWORK CUT AND FILL PLAN

Discipline	CIVIL
Drawing No.	2318415-3-CA-2002
Rev.	C

RESOURCE CONSENT
 NOT FOR CONSTRUCTION



LEGEND:

EXISTING

- G/U — G/U — BOUNDARY
- CC/D — CC/D — GAS
- A/A — A/A — COMMUNICATION
- SW — SW — TRANSPOWER LINE
- D — D — D — OPEN DRAIN
- SS — SS — D — STORMWATER DRAIN
- W — W — W — SANITARY SEWER
- CC/D — CC/D — WATER
- — — — CHORUS CABLE
- — — — STORMWATER OPEN DRAIN
- — — — FIRST GAS UNDERGROUND
- — — — GAS PIPE
- — — — COUNCIL DRAIN
- — — — COUNCIL EASEMENT
- — — — CROWN EASEMENT
- SS MANHOLE ● TRANSPOWER POLE
- SW DEVICE ● WATER DEVICE
- — — — CULVERT STRUCTURE

EXISTING NORTHPOWER

- 400v/O — 400V OVERHEAD
- 400v/U — 400V UNDERGROUND
- 11kv/O — 11KV OVERHEAD
- 11kv/U — 11KV UNDERGROUND
- 33kv/O — 33KV OVERHEAD
- P — P — P — POWER DUCT
- FO/U — FO/U — FIBRE UNDERGROUND
- FO — FO — FIBRE OVERHEAD
- DUCT — ● — FIBRE DUCT

PROPOSED

- — — — SITE EXTENT BOUNDARY
- — — — BATTERY ENERGY STORAGE SYSTEM (BESS) SITE
- — — — KANUKA BLOCK
- — — — SERVICE ROAD
- — — — WETLAND EXTENT
- — — — STORMWATER OPEN DRAIN
- — — — STORMWATER CULVERT
- — — — SOLAR PANEL ZONE
- — — — WETLAND
- — — — TRANSPOWER PYLON
- — — — MAINTENANCE RESERVE
- — — — CULVERT HEADWALL
- MEDIUM VOLTAGE POWER STATION

C	FOR RESOURCE CONSENT	VW		02.08.23	Original Scale (A1)	Design	V.WHYTE	15.03.23	Approved For Construction*
B	FOR RESOURCE CONSENT	VW	JS	10.07.23	1:2500	Drawn	V.WHYTE	15.03.23	Date
A	DRAFT - FOR CLIENT REVIEW	VW	JS	01.06.23	Reduced Scale (A3)	Drawn			
No.	Revision	By	Chk	Appd	Date	1:5000			* Refer to Revision 1 for Original Signature

Original Scale (A1)	Design	V.WHYTE	15.03.23	Approved For Construction*
1:2500	Drawn	V.WHYTE	15.03.23	Date
Reduced Scale (A3)	Drawn			
1:5000	Drawn			

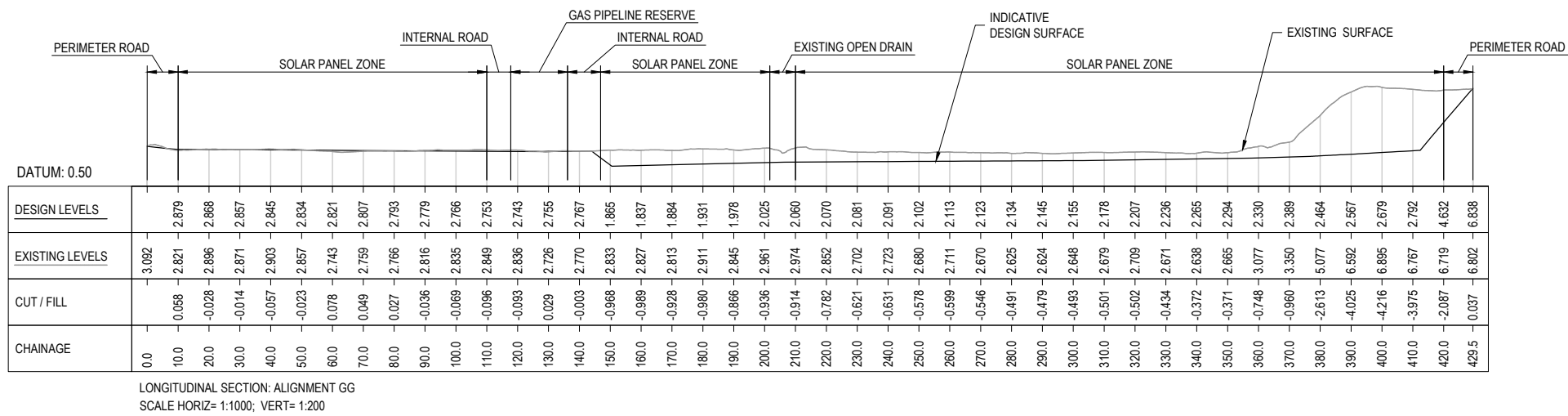
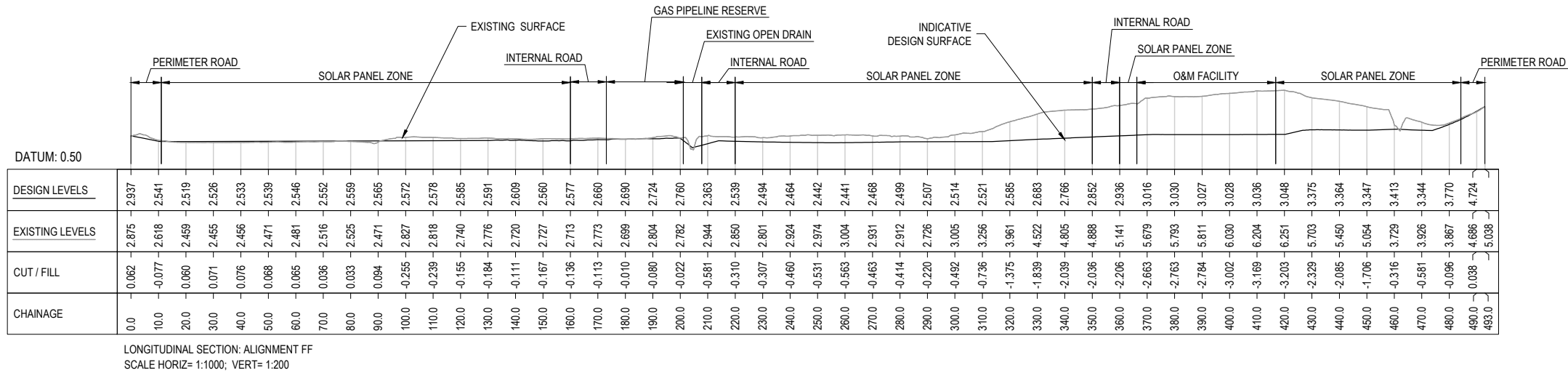


Client: Ruakākā Solar Farm
Project: SITE 3

Title: INDICATIVE ROAD AND STORMWATER LAYOUT PLAN

Discipline	CIVIL
Document No.	2318415-3CA-2010
Rev.	C

**RESOURCE CONSENT
NOT FOR CONSTRUCTION**



**RESOURCE CONSENT
NOT FOR CONSTRUCTION**

No.	Revision	By	Chk	Appd	Date
C	FOR RESOURCE CONSENT	VW			02.08.23
B	FOR RESOURCE CONSENT	VW	JS		10.07.23
A	DRAFT - FOR CLIENT REVIEW	VW	JS		01.06.23

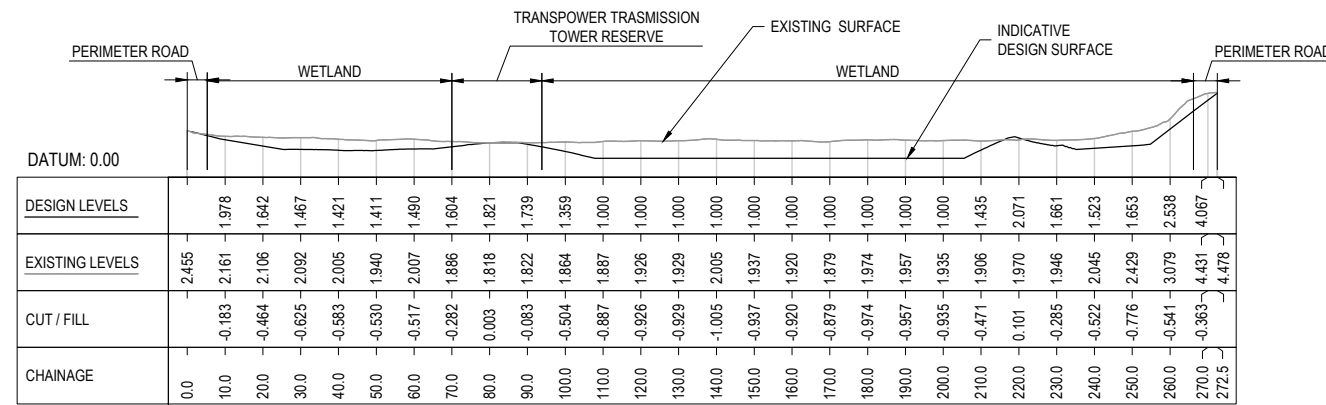
Original Scale (A1)	Design	V.WHYTE	15.03.23	Approved For Construction*
AS SHOWN	Drawn	V.WHYTE <td>15.03.23</td> <td></td>	15.03.23	
Reduced Scale (A3)	Design Checker			
HALF SHOWN	Refer to Revision 1 for Original Signature			



Client: **RUAKAKA SOLAR FARM SITE 3**

Title: **INDICATIVE LONG SECTION SHEET 1**

Discipline	CIVIL
Drawing No.	2318415-3-CA-3000
Rev.	C



LONGITUDINAL SECTION: ALIGNMENT HH
SCALE HORIZ= 1:1000; VERT= 1:200

RESOURCE CONSENT
NOT FOR CONSTRUCTION

No.	Revision	By	Chk	Appd	Date
C	FOR RESOURCE CONSENT	VW			02.08.23
B	FOR RESOURCE CONSENT	VW	JS		10.07.23
A	DRAFT - FOR CLIENT REVIEW	VW	JS		01.06.23

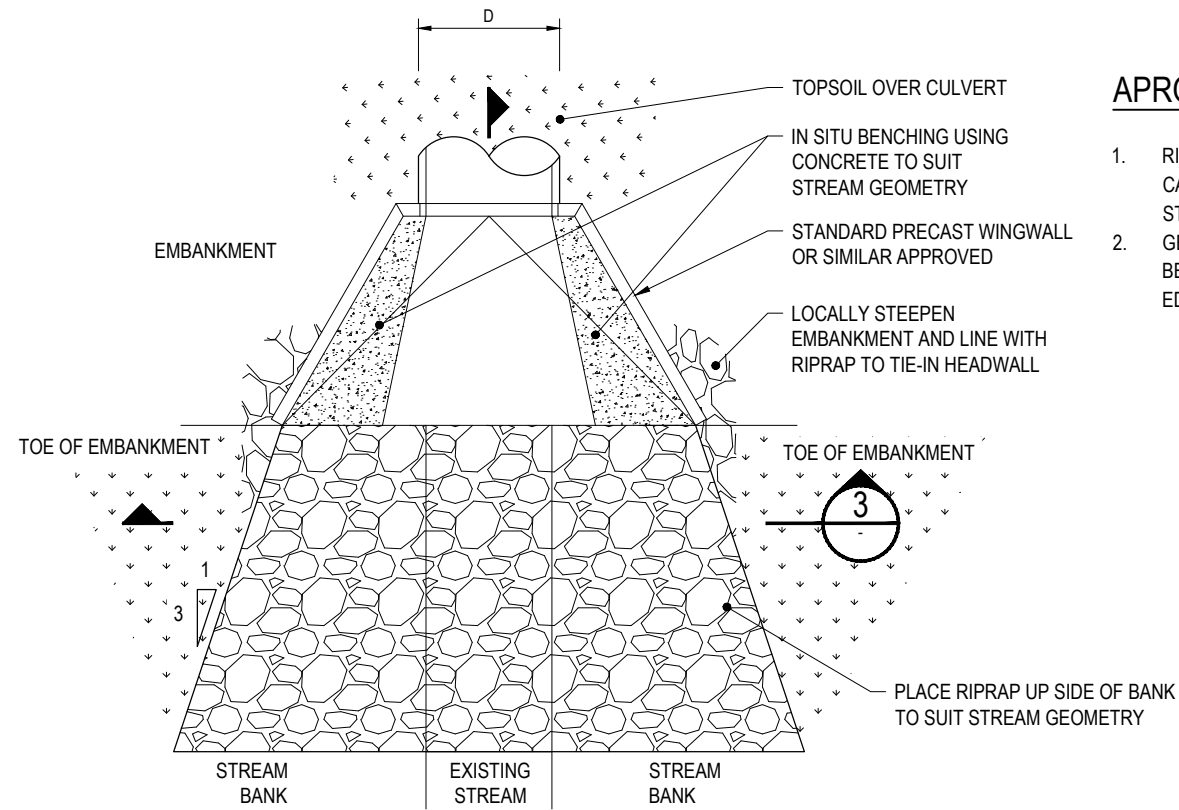
Original Scale (A1)	Design	V.WHYTE	15.03.23	Approved For Construction*
AS SHOWN	Drawn	V.WHYTE	15.03.23	
Reduced Scale (A3)	Design Checker			
HALF SHOWN	By			



Client: **RUAKĀKĀ SOLAR FARM SITE 3**

Title: **INDICATIVE LONG SECTION SHEET 2**

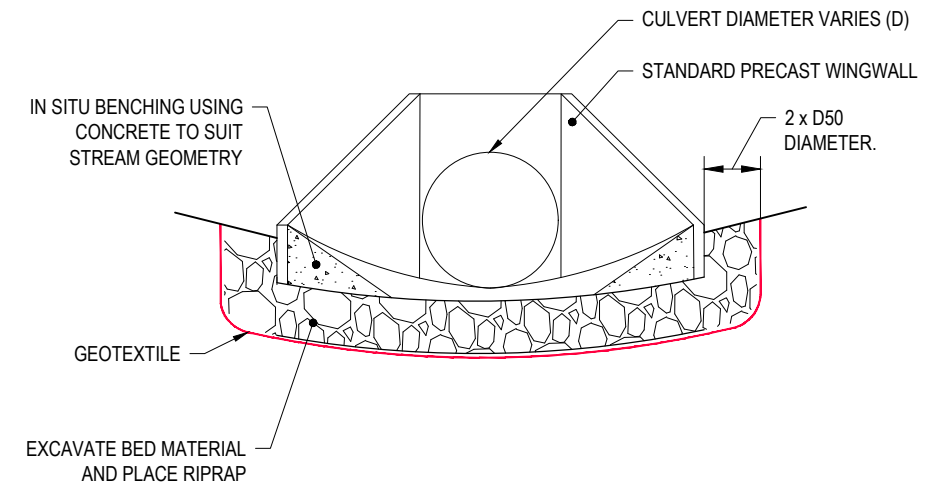
Discipline	CIVIL
Drawing No.	2318415-3-CA-3001
Rev.	C



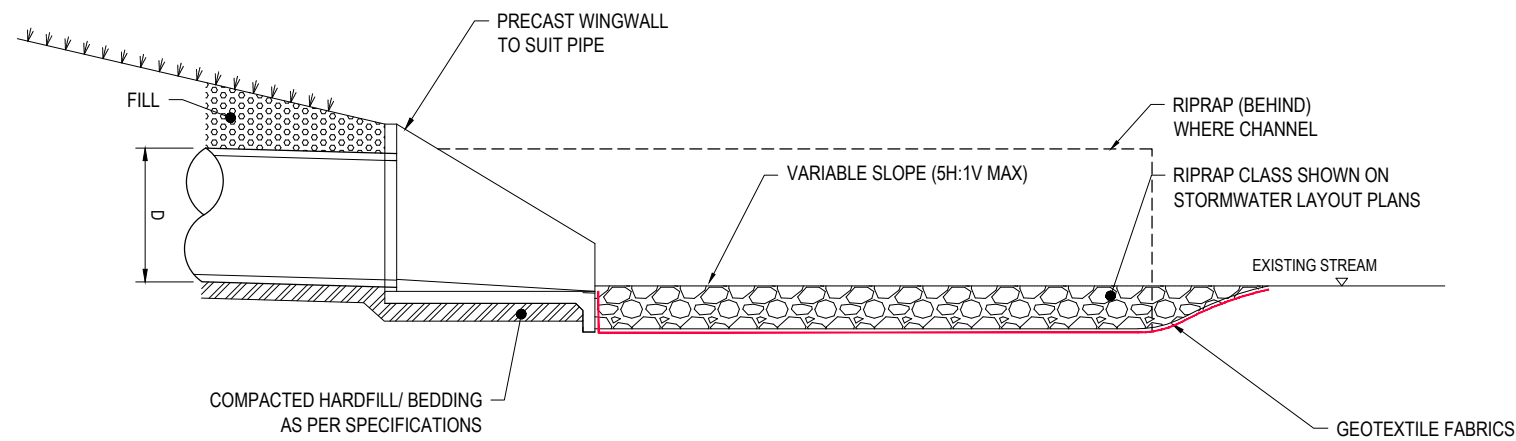
APRON NOTES:

1. RIPRAP APRON IS TO BE PLACED FLAT. WHERE THIS CANNOT BE ACHIEVED, THE APRON SHALL NOT BE STEEPER THAN 1.5H:1V
2. GEOTEXTILE MATERIAL TO OVERLAP AND EXTEND BEYOND ROCK. SECURE THE FILTER CLOTH AT THE EDGES VIA SECURE PINS

1 SINGLE BARREL PIPE - TYPICAL RIPRAP APRON
NTS



3 SINGLE BARREL PIPE - TYPICAL RIPRAP APRON
SCALE 1:50



2 TYPICAL RIPRAP SCOUR PROTECTION
SCALE 1:50

RESOURCE CONSENT
NOT FOR CONSTRUCTION

C	FOR RESOURCE CONSENT	VW		02.08.23
B	FOR RESOURCE CONSENT	VW	JS	10.07.23
A	DRAFT - FOR CLIENT REVIEW	VW	JS	01.06.23
No.	Revision	By	Chk	Appd

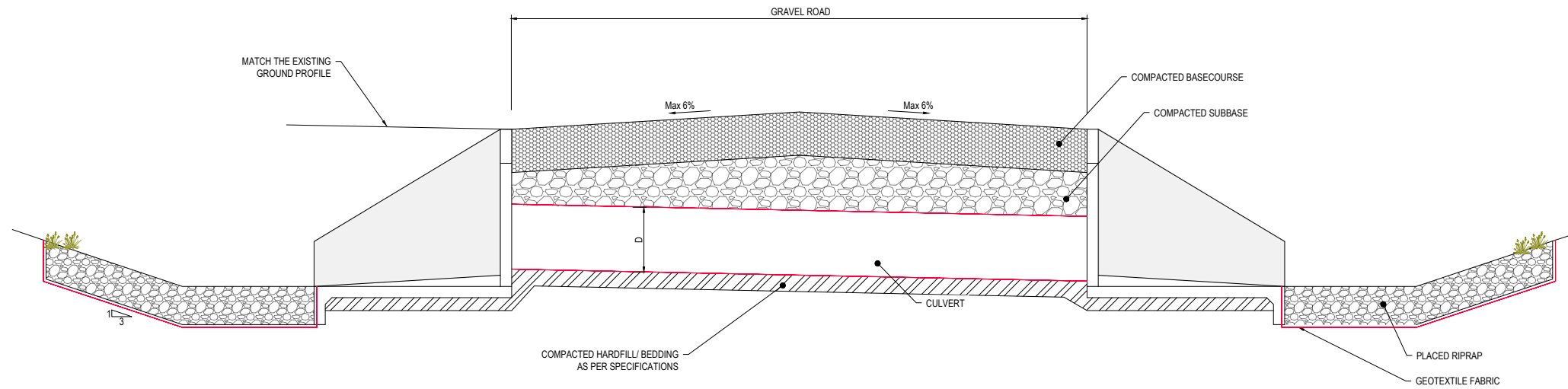
Original Scale (A1)	Design	V.WHYTE	15.03.23	Approved For Construction*
AS SHOWN	Drawn	V.WHYTE	15.03.23	Date
Reduced Scale (A3)	Design Checker			
HALF SHOWN	Drawn			



Client: **RUAKAKA SOLAR FARM**

Title: **TYPICAL DETAILS
CULVERT STRUCTURES**

Discipline	CIVIL
Drawing No.	2318415-CA-3010
Rev.	C



4 TYPICAL CULVERT UNDERNEATH ROAD DETAIL
SCALE NTS

**RESOURCE CONSENT
NOT FOR CONSTRUCTION**

No.	Revision	By	Chk	Appd	Date
C	FOR RESOURCE CONSENT	VW			02.08.23
B	FOR RESOURCE CONSENT	VW	JS		10.07.23
A	DRAFT - FOR CLIENT REVIEW	VW	JS		01.06.23

Original Scale (A1)	Design	Drawn	Design Date	Approved For Construction*
NTS	V.WHYTE	V.WHYTE	15.03.23	
Reduced Scale (A3)	Design	Design Date	Checked	Date
NTS	V.WHYTE	15.03.23		

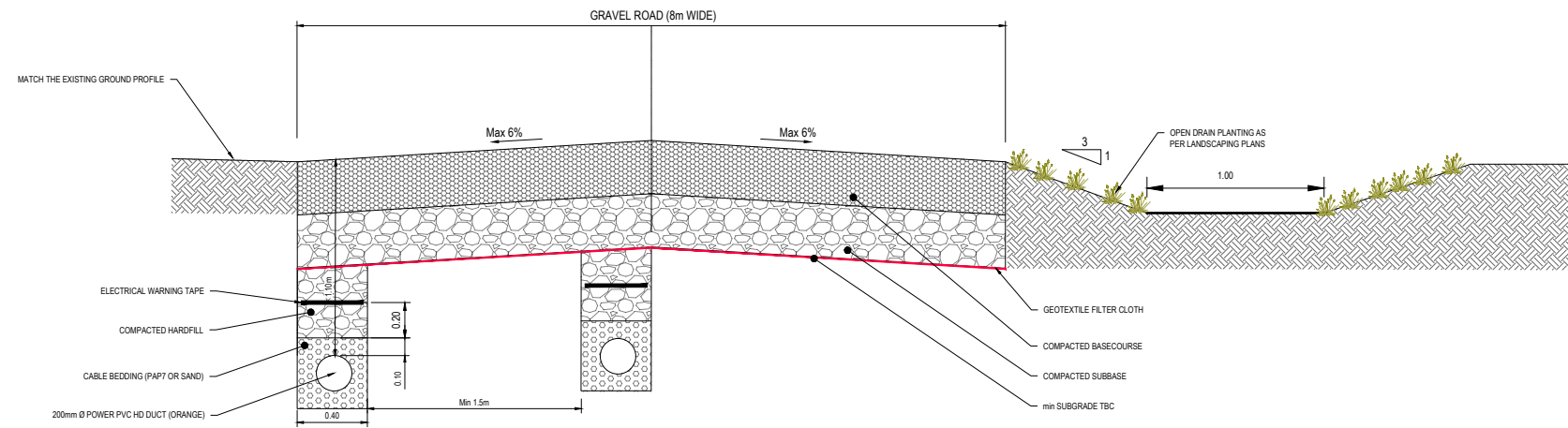
* Refer to Revision 1 for Original Signature



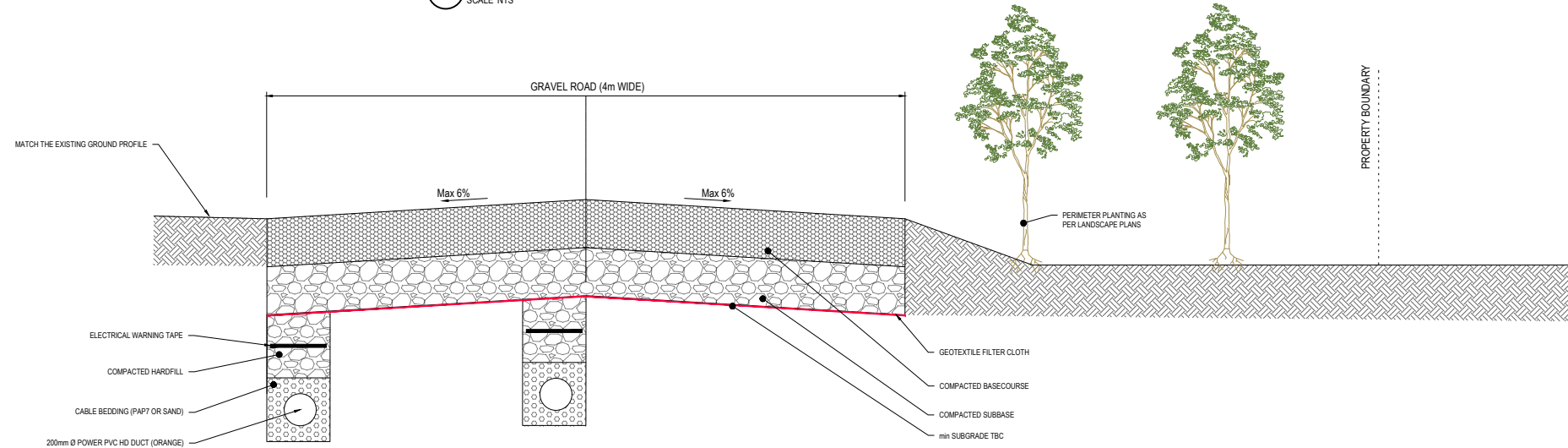
Client: Meridian.
Project: RUAKĀKĀ SOLAR FARM

Title: TYPICAL DETAILS
CULVERT CROSS-SECTION

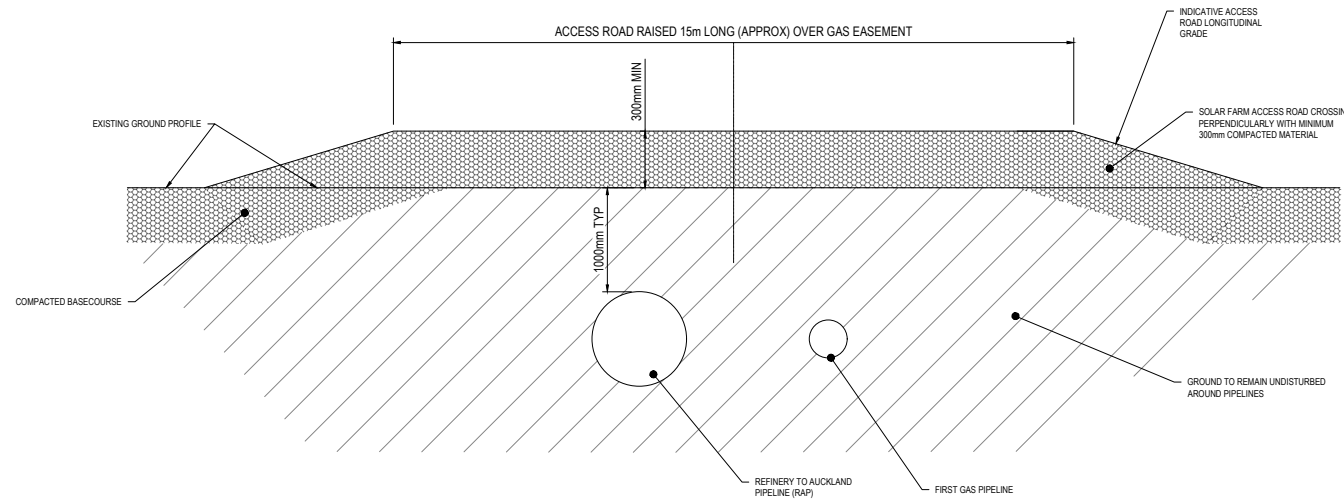
Discipline	Rev.
CIVIL	C
Drawing No.	2318415-CA-3011



5 TYPICAL INTERNAL ROAD SECTION
SCALE NTS



6 TYPICAL PERIMETER ROAD SECTION
SCALE NTS



7 TYPICAL PERPENDICULAR ROAD SECTION ACROSS FIRST GAS PIPELINE
SCALE NTS

**RESOURCE CONSENT
NOT FOR CONSTRUCTION**

No.	Revision	By	Chk	Appd	Date
C	FOR RESOURCE CONSENT	VW			02.08.23
B	FOR RESOURCE CONSENT	VW	JS		10.07.23
A	DRAFT - FOR CLIENT REVIEW	VW	JS		01.06.23

Original Scale (A1)	Design	V.WHYTE	15.03.23	Approved For Construction*
NTS	Drawn	V.WHYTE <td>15.03.23</td> <td>Date</td>	15.03.23	Date
Reduced Scale (A3)	Design Checker			
NTS	Dtg Check			

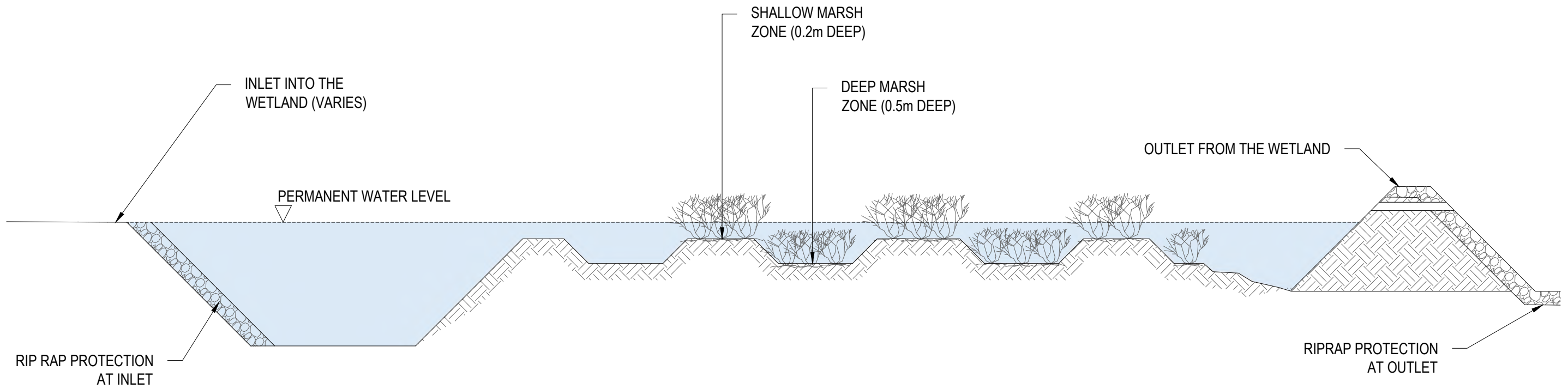
* Refer to Revision 1 for Original Signature



Client: **Meridian.** Project: **RUAKAKA SOLAR FARM**

Title: **TYPICAL DETAILS ROAD CROSS-SECTIONS**

Discipline	CIVIL
Drawing No.	2318415-CA-3012
Rev.	C



8 TYPICAL WETLAND CROSS SECTION
SCALE NTS

**RESOURCE CONSENT
NOT FOR CONSTRUCTION**

No.	Revision	By	Chk	Appd	Date
C	FOR RESOURCE CONSENT	VW			02.08.23
B	FOR RESOURCE CONSENT	VW	JS		10.07.23
A	DRAFT - FOR CLIENT REVIEW	VW	JS		01.06.23

Original Scale (A1)	Design	V.WHYTE	15.03.23	Approved For Construction*
NTS	Drawn	V.WHYTE	15.03.23	
Reduced Scale (A3)	Dwg Verifier			Date
NTS	Dwg Check			

* Refer to Revision 1 for Original Signature



Client: **Meridian.**
Project: **RUAKĀKĀ SOLAR FARM**

Title: **TYPICAL DETAILS
WETLAND CROSS-SECTION**

Discipline	CIVIL
Drawing No.	2318415-CA-3013
Rev.	C