1.0 APPLICATION DESCRIPTION

Application and property details

Fast-Track project name:	Auckland Surf Park Community, Stage 2
Fast-Track application number:	FTAA-2606-1246
Council reference numbers:	LUC60467824, BUN60467823

2.0 Technical Specialist Memo - Earthworks & Erosion and Sediment Control

To:	Brooke Dales – Lead Planner Warwick Pascoe – Principal Project Lead
From:	Matthew Byrne – Erosion & Sediment Control Consultant to Earth, Streams and Trees Team
Qualifications & Relevant Experience:	I hold the qualifications of: Bachelor of Environmental Studies and have over 22 years of experience in the field of earthworks and streamworks assessment, and earthworks and streamworks environmental compliance monitoring. I am a member of the International Erosion and Sediment Control Association (Australasia). I have prepared expert evidence and technical assessments for resource consent applications, plan changes, notices of requirement for designation and fast-track applications, and have appeared as an expert witness before consent authorities and the Environment Court on multiple occasions.
Preparation in Accordance with the Code of Conduct:	I confirm that I have read the Environment Court Practice Note 2023 – Code of Conduct for Expert Witnesses and have complied with it in the preparation of this memorandum. I also agree to follow the Code when participating in any subsequent processes, such as expert conferencing directed by the Panel. I confirm that the opinions I have expressed are within my area of expertise and are my own, except where I have stated that I am relying on the work or evidence of others, which I have specified.
Signature:	

Date:	30 September 2026

3.0 Executive Summary / Principal Issues

The following memorandum assesses the applicant's proposal to undertake approximately 558,500m^3 of earthworks over 51.3ha, associated with development of Stage 2 of the Auckland Surf Park Community at Dairy Flat, expanding the previously consented Stage 1 development into a comprehensively planned community. Importantly, the application documents describe Stage 2 as an expansion of the Auckland Surf Park Community and confirm that the application also seeks variations to Stage 1. However, from an earthworks and ESC perspective, the application does not provide sufficient detail explaining how concurrent Stage 1 and Stage 2 earthworks will be integrated and managed as a single earthworks operation, including how exposed areas, ESC staging, monitoring and adaptive-management responses will be coordinated across the two consent packages.

Earthworks for Stage 2 are intended to expand, revise and integrate with Stage 1 to form one overall Auckland Surf Park Community development. However, the applicant's proposal is that Stage 1 and Stage 2 continue to be authorised through distinct, but interrelated, consent and condition packages.

Earthworks for Stage 2 are proposed to prepare the site for development of artificial-intelligence data-centre campus, residential neighbourhoods providing 486 residential units, a village centre, a solar farm, water and wastewater treatment facilities, roads and three-waters infrastructure, a surf lagoon, an amenity precinct, landscaping and riparian restoration, and staged subdivision.

Earthworks will be staged and progressively stabilised, with runoff managed through 13 ESC catchments using ESC measures in accordance with Auckland Council guideline document number 5, Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region, June 2016 (GD05).

The following measures are proposed:

- Sediment retention ponds (SRPs) are proposed as the primary method of treatment for sediment laden runoff generated during the earthworks. Areas that cannot drain to an SRP because of site grades will be treated by decanting earth bunds (DEBs).
- SRPs and DEBs will be chemically treated with provision of a chemical treatment management plan (ChTMP) to be provided ahead of earthworks commencing.
- Super silt fencing (SSF) is proposed along the margins of the site's central stream. SSF is intended to remain in place throughout the duration of the bulk earthworks and civil earthworks.
- Standard silt fences (SF), clean-water diversion bunds (CWD), dirty-water diversion bunds (DWD), stabilised construction entrances (SCE), and stabilised haul roads (SHR) are proposed.
- Progressive stabilisation and monitoring and maintenance of all ESC measures throughout the duration of earthworks is proposed.

The application documents include erosion and sediment control plans (ESCPs) designed to provide a "proof of concept" that the earthworks can be managed as proposed. The applicant's assessment concludes that provided the earthworks are undertaken in accordance with the application documents,

including provision of final ESCPs ahead of earthworks commencing, and earthworks related conditions of consent, the potential effects associated with the proposed land disturbance will be less than minor.

Overall, I do not support the applicant's proposal as it currently stands. The applicant has not proposed an open area restriction, nor have they proposed the preparation of an ESC Adaptive Management Plan (ESCAMP) and implementation of this plan throughout the duration of earthworks. These two measures, both of which are required under the existing Stage 1 consent, have not been proposed under the current Fast Track application. Given the nature and scale of earthworks proposed, I consider an open area restriction and ESCAMP is warranted in this case.

4.0 Documents Reviewed

The following documents have been reviewed in preparing this memorandum:

- "Auckland Surf Park Community - Stage 2, 1320 and 1350 Dairy Flat Highway, 89 and 105 Lascelles Drive, 237 and 253 Postman Road, Dairy Flat, Assessment of Environmental Effects and Statutory Analysis", dated 8 June 2026, by Barker & Associates Limited. (AEE)
- "ENGINEERING INFRASTRUCTURE REPORT, Auckland Surf Park Community, Stage 2 Development", Revision F, dated 08/06/2026, by McKenzie & Co. (Infrastructure Report)
- "AUCKLAND SURF PARK, AW HOLDINGS 2021 LTD, RESOURCE CONSENT MCK PROJECT NO. | 3325 -2", dated April 2026, by McKenzie & Co. (Civil Drawings)
- "ASP BEI LAND CO, AUCKLAND SURF PARK COMMUNITY, GEOTECHNICAL FACTUAL REPORT", Revision G, dated April 2026, by Initia Geotechnical Specialists.
- "Auckland Surf Park Community - Stage 2 Development, Ecological Impact Assessment", dated June 2026, by Viridis Limited 2026. (EIA)

5.0 Reasons for consent relevant to earthworks

Section 9.2 of the AEE identifies the reasons for consent relating to earthworks under chapter E11 of the Auckland Unitary Plan (AUP). I concur with those reasons for consent.

6.0 Specialist Assessment

6.1 - Site Description & Existing Environment

Section 7 of the applicant's AEE contains a description of the site and its surrounding area. I have accepted and adopted these descriptions during completion of my assessment below.

Potential sediment discharges associated with the earthworks, will be to unnamed freshwater tributaries of the Rangitopouni Stream that flow along the site's northwestern boundary from north to south and then west, through the central portion of the site from east to west, and from north to south within the southern portion of the site. All of these freshwater tributaries drain towards the west and converge with the main branch of the Rangitopouni Stream which is located on the western side of Dairy Flat Hwy, and which flows in a southerly direction and eventually emptying into the coastal marine area (CMA) at Riverhead, approximately 12 kilometres southwest of the site.

6.2 - Assessment of Effects on the Environment - Earthworks

The potential environmental effects of the proposed earthworks are primarily associated with erosion of exposed surfaces at the site and the subsequent sedimentation of the receiving environment, being unnamed freshwater tributaries of the Rangitopouni Stream, and ultimately, the CMA of the inner Waitemata Harbour and the Hauraki Gulf.

Sediment can degrade aquatic values such as water quality, smother habitat for aquatic fauna within these receiving environments, and directly impact aquatic fauna by blocking their breathing apparatus. The applicant has stated that the project will utilise ESC measures, designed in accordance with GD05, to help ensure the earthworks are appropriately managed.

Earthworks in brief:

- Approximately 558,500m^3 of cut and fill over approximately 51.3ha are proposed.
- Earthworks have been split into 13 ESC catchments.
- The application documents include a set of indicative erosion and sediment control plans (ESCPs) in general accordance with GD05.
- The ESCPs provide details of a range of ESC measures proposed for each of the 13 catchments.

The ESCPs have been provided to confirm a "proof-of-concept" from an earthworks and ESC point of view, and the applicant has proposed the provision of a final set of ESCPs ahead of earthworks commencing. This is not uncommon, particularly given the significant area of earthworks proposed. Provision of finalised ESCPs allow the indicative controls to be refined to reflect detailed staging and changes to the earthworks methodology and site conditions, provided any changes remain within the scope of the consent and achieve an equivalent or higher level of ESC performance.

Regardless, the indicative ESCPs propose a range of ESC measures in accordance with GD05, and it is the applicant's intention that the final ESCPs will specify the exact controls required, having regard to the earthworks' volume and area for the relevant season in which they are proposed, and having regard to any staging that is proposed.

I support the applicant's proposal to provide finalised ESCPs for any given area of the site ahead of earthworks commencing.

6.3 – Erosion and Sediment Controls

The application documents break up the site into 13 separate ESC catchments, each managed by a chemically treated SRP as the main method of sediment control. Utilising SRPs as the main method of

sediment control is considered industry best practice for an earthworks operation of this size and will help ensure that sediment removal efficiencies are maximised within each respective device. I support the applicant's proposal in this regard.

Three chemically treated DEBs have also been proposed to manage small areas where runoff cannot be directed to an SRP. Each of these three devices have been proposed in the central portion of the site, downgradient of SRPs and adjacent to the central stream that flows through the site from east to west. The indicative ESCPs also show SSFs along either side of this stream channel and the proposal is for these devices to remain in place throughout the duration that earthworks are undertaken. Utilising DEBs in combination with SSF for smaller areas of the site that cannot be treated by SRPs, is considered best practice and I support the applicant's proposal in this regard.

I also support the applicant's proposal to install SSF along the true left bank of the stream channel located along the site's northwestern boundary, and the installation of SSF along the true right bank of the southern stream channel. Utilising SSF as a secondary control measure in combination with DEBs and/or SRPs is considered best practice.

Other ESC measures proposed include appropriately located CWD to divert clean runoff from upgradient of each respective catchment, around exposed areas to reduce the amount of runoff requiring treatment, and appropriately located DWDs to direct sediment laden runoff to a respective SRP or DEB. These measures are in accordance with best practice and the guidance contained in GD05, and I support the applicant's proposal in this regard.

The remaining structural measures proposed include the establishment of SCEs at the ingress and egress points of the earthworks areas as the works are completed. Based on the indicative plans provided, SCEs will be connected to stabilised haul roads that generally run through the central portion of the site, designed to provide construction machinery access to the individual ESC catchments. Provided these structures are constructed, operated and maintained in accordance with GD05, I support the applicant's proposal in this regard.

Non-structural ESC measures include progressive stabilisation of earthworks areas as they reach the desired gradients, and regular monitoring and maintenance of all controls in accordance with the guidance contained in GD05. These measures are considered industry best practice and are in accordance with the guidance contained in GD05. I support the applicant's proposal in this regard.

6.4 – Timing & Seasonal Restriction

The applicant has stated that site-wide bulk earthworks are proposed to commence in the 4th quarter of 2026, alongside site-wide infrastructure and construction of the project's Surf Lagoon and Amenity Precinct. A second season of bulk earthworks is proposed to commence in the 4th quarter of 2027, to achieve the desired gradients across the site, and to enable civil earthworks associated with subdivision to commence.

The applicant has proposed a seasonal restriction for the earthworks which is consistent with the requirements of the existing Stage 1 earthworks permit. The intention of this condition is to minimise the overall duration that bare earth is exposed, and to reduce the potential effects of sedimentation on the

receiving environment during Auckland's wetter winter months. I support the applicant's proposal in this regard.

6.5 – Conclusion

Regarding the proposed earthworks, the applicant states that best practice ESC measures will be utilised to ensure the proper management of any potential sediment related effects, and that any resulting effects will be less than minor. An assessment of the technical aspects of the earthworks and sediment control methodology has been undertaken and provided the earthworks are completed in accordance with the application documents and all supporting information, including any additional recommendations noted below, I concur with the applicant's assessment and consider that the potential effects associated with sediment discharge will be appropriately managed.

7.0 Section 67 Information Gap

At the time of writing this Memo I have identified the following information gaps:

Description of Missing Information

7.1 - Erosion and Sediment Control Adaptive Management Plan (ESCAMP)

The application documents do not include an Erosion and Sediment Control Adaptive Management Plan (ESCAMP) for review and/or assessment, nor do they include any acknowledgement that a plan in this regard will be required and provided ahead of earthworks commencing. A condition to this effect is required under the existing consents associated with Stage 1 of the development and I consider that in order for the potential effects of the earthworks associated with the current application for Stage 2 to be managed appropriately and in accordance with best practice, a plan in this regard must be provided ahead of earthworks commencing and implemented throughout the duration of earthworks at the site.

An ESCAMP does not replace the day-to-day ESC management recommended in GD05, nor does it apply to compliance with consented ESC methodologies. Its purpose is to address the management of sediment-related effects that may still occur when full compliance with a consent is maintained in order to avoid or minimise adverse effects on the receiving environment.

For adaptive management to be successful, an earthworks regime must rely heavily on setting appropriate threshold trigger levels as part of a monitoring program and must detail the types of responses and actions that will be undertaken as part of a feedback loop that goes above and beyond any standard maintenance measures such as those detailed in GD05. An ESCAMP must include appropriate trigger level thresholds for when adaptive management is required, include baseline data from the receiving environment, include processes for increasing or decreasing open areas, and include measures to improve ESC practices and/or earthworks methodologies to keep any potential adverse effects within a given range anticipated by a given consent.

7.2 – Open Area Restriction

The application documents do not include any comment or recommendations for an open area restriction, and whilst staging has been proposed, any staging requirements have been tied to the overall project's construction staging or sub-staging. That is to say, the staging is construction related and not necessarily earthworks related. The nature of the cut and fill earthworks proposed will likely require that an area greater than any specific construction stage to be exposed at any one time and the applicant has not specified an open area restriction to help manage the effects of the earthworks in this regard. A condition to this effect is required under the existing consents associated with Stage 1 of the development and I consider that in order for the potential effects of the earthworks to be managed appropriately and in accordance with best practice, a similar condition must be included for the current Stage 2 earthworks proposal.

Under the current Stage 1 consents, a maximum open area limit of 30ha has been applied, and whilst I consider that 30ha represents the upper limit of what can be managed appropriately, I consider that this level of exposure will be manageable in this case. The existing and proposed gradients are not steep, and my experience with earthworks of a similar nature on sites with a similar topography, is that with proper ESC measures constructed and operated in accordance with GD05, and with a robust ESCAMP program in place, the sediment generating potential of earthworks is reduced, and the potential effects of sediment discharge are able to be managed appropriately and in accordance with best practice.

I also note that as it is the applicant's intention that Stage 1 and Stage 2 of the development be integrated to form one overall Auckland Surf Park Community development, the 30ha limit must be applied in a manner that restricts the open area to no more than 30ha across both Stage 1 and Stage 2 combined.

8.0 Recommendation

The AEE and its accompanying earthworks and erosion and sediment control related documents state that proposed ESC measures will ensure the proper management of any potential sediment related effects and that any resulting effects will be less than minor. An assessment of the technical aspects of the earthworks and sediment control methodology has been undertaken and whilst I support the applicant's proposed ESC related measures, I have identified two critical information gaps. These information gaps are:

- Provision and implementation of an ESCAMP ahead of earthworks commencing, or acceptance of conditions to that effect. I have provided recommended conditions to this effect in section 9 below.

- Acknowledgment and/or acceptance of recommended conditions that restrict the open area of earthworks associated with Stage 1 and Stage 2 combined, to no more than 30ha at any one time. I have provided recommended conditions to this effect in section 9 below.

Provided the applicant accepts and/or adopts these recommendations, I support the applicant's Stage 2 proposal, including its integration with Stage 1.

If the applicant declines to support my recommendations, I do not support the proposal.

9.0 Proposed Conditions

I consider the applicant's proposed earthworks and ESC related conditions to be appropriate. However, I have recommended additional conditions below that, if accepted by the applicant, would allow me to support the applicant's overall proposal.

Table 1 –Recommended Additional Conditions

1	**Erosion and Sediment Control Adaptive Management Plan (ESCAMP)** No less than 20 working days prior to the commencement of any earthworks at the subject site authorised by the granting of this consent, an Erosion and Sediment Control Adaptive Management Plan (ESCAMP) must be prepared in general accordance with Auckland Council's guideline document "Erosion and Sediment Control Adaptive Management Plan Discussion Document", July 2020, and provided to the Council for written certification. The ESCAMP must address monitoring requirements and changes to management procedures in response to the results of monitoring, and must include but is not limited to, the following details: (a)- Preparation and provision of a Freshwater Baseline Report prepared by a suitably qualified and experienced Ecologist and/or Water Quality Scientist and provided to the Council for written certification, no less than 20 working days prior to any earthworks or streamworks commencing. The purpose of the Freshwater Baseline Report is to confirm pre-construction baseline environmental conditions of the receiving environment and include pre-construction in stream monitoring results. The Freshwater Baseline Report must include as a minimum, information on the following matters: • Sediment quality such as description of sediment inputs, transport, substrate composition and embeddedness. • Water quality measurements such as total suspended solids (TSS) and turbidity. • Actual and potential inanga (Galaxias maculatus) spawning habitat. • Identification of the pre-construction condition of any Erosion Prone Streams against which to measure construction effects and possible mitigation measures. • The presence of any threatened aquatic species or habitat, susceptible to sediment discharge.

	(b)- Details of weather forecasting and monitoring, including implementation of an onsite rain gauge with a telemetered system that provides text and email notifications; (c)- Trigger levels for water quality and rainfall events (actual and forecasted events); (d)- Details of an ongoing monitoring and sampling regime for the receiving environment, including turbidity and / or TSS monitoring downstream within the receiving environment; (e)- An automated monitoring regime (inlet and outlet TSS and / or turbidity) on at least one sediment retention pond throughout the duration of earthworks at the site, and a manual sampling regime for all remaining sediment retention ponds and decanting earth bunds; (f)- Management responses when a trigger level is exceeded, including the ability to reduce exposed area; and (g)- Reporting to Council. *Advice Note: Turbidity results can be substituted providing a correlation between TSS and turbidity has been established.* *Any proposed revisions to the ESCAMP must be submitted to the Council for written certification prior to formalising and implementing the revised Plan.*
2	An appropriate efficiency of sediment retention ponds and/or decanting earth bunds must be established where efficiency measurements are only activated when inlet samples indicate high sediment loadings. i.e., the efficiency of a pond need not be scrutinised when both inlet and outlet samples show low TSS / NTU. *Advice Note: Further guidance on preparation of an Adaptive Management Plan can be found in Auckland Council guidance document - Erosion and Sediment Control Adaptive Management Plan Guidance Document, Report to support preparation of Adaptive Management Plans, RC 3.2.22, July 2020.*
3	All monitoring and management procedures as detailed within the certified ESCAMP required by condition 1, and any subsequent revisions, must be implemented on an ongoing basis throughout the duration of all earthworks activities on site. *Advice Note: The ESCAMP is a live document, and updates are expected to address unforeseen circumstances or changes in the earthworks methodology as the site responds though its adaptive monitoring regime, to ensure sediment discharges are minimised and the potential for significant adverse effects are avoided.*
4	An earthworks area which has been stabilised as a result of a trigger level exceedance or a management response as defined and required by the certified ESCAMP (required under

	condition 1) and any subsequent revisions approved by the Council, can only be re-opened for earthworks on the written approval of the Council.
5	As a result of observed inefficiencies upon site inspection or identified within the site reporting, Council may request that the ESCAMP be updated to address those inefficiencies. If such a request is made by the Council, the revised plan must be submitted to the Council within 5 working days of the request. The updated ESCAMP must not be implemented without the Council's approval.
6	**Open Area Restriction** Earthworks must be managed in accordance with the certified Erosion and Sediment Control Adaptive Management Plan (ESCAMP) and must be managed to ensure that no greater than 30ha of earth is exposed at any one time, across both Stage 1 and Stage 2 combined.