BEFORE HEARING COMMISSIONERS
IN THE WESTERN BAY OF PLENTY DISTRICT

UNDER THE	Resource Management Act 1991 ("**Act**")
IN THE MATTER OF	an application for resource consent to authorise four existing industrial activities within part of the Te Puna Business Park structure plan area, for a term of two years
BETWEEN	**TINEX GROUP LIMITED**
	Applicant
AND	**WESTERN BAY OF BAY OF PLENTY DISTRICT COUNCIL**
	Consent authority

STATEMENT OF EVIDENCE OF STEPHEN BOS

Before a Hearing Panel: Rob van Voorthuysen (Chair),
James Whetu (Commissioner)

INTRODUCTION

Background, qualifications and experience

1. My full name is Stephen John Bos.

2. I am a Director and Senior Civil Engineer at Stratum Consultants Limited, which is a leading, multi-disciplinary, land development and land utilisation consultant based in the Bay of Plenty. I have been employed as a Civil Engineer since graduating From Auckland University in 1991 and have worked for Stratum Consultants Limited (or its former counterparts) in the Bay of Plenty since 2002.

3. I have a wide range of experience in civil works (three waters, roading, earthworks) design and management from large scale residential

developments, industrial and commercial developments, and rural developments.

4. My primary and initial involvement with this resource consent application has been to investigate and confirm the suitability of the existing stormwater disposal from the site as it relates to stormwater volumes and flows (i.e., water quantity). More recently, due to the departure of a staff member previously working on the project I have also become involved with the proposed vehicle access design and upgrade for the site.

Purpose and scope of evidence

5. The purpose of this evidence is to:

   (a) provide my assessment of the stormwater related effects associated with the existing onsite activities occurring at 245 Te Puna Station Road; and

   (b) comment on the vehicle access earthworks and construction related matters that have been raised in the Council's s42A Report prepared by Ms Heather Perring.

6. I note that water quality issues have been raised by Ms Perring, however I understand that Mr Crossan will address these in his evidence along with water supply requirements around firefighting. It is anticipated that there will also be some water sampling analysis provided by the time of the hearing. I also note that Ms Perring has raised the matter of hydrological effects associated with a larger culvert under the site accessway. I understand that this will be addressed by Dr Steven Joynes in his evidence.

7. I understand there is no debate as to what is proposed with respect to wastewater.

Expert witness code of conduct

8. I have been provided with a copy of the Code of Conduct for Expert Witnesses contained in the Environment Court's 2023 Practice Note. While this is not an Environment Court hearing, I have read and agree to comply with that Code. This evidence is within my area of expertise, except where I state that I am relying upon the specified evidence of another

person. I have not omitted to consider material facts known to me that might alter or detract from the opinions that I express.

EVIDENCE

Stormwater Quantity

9. I prepared a brief Stormwater Assessment report dated 24 November 2022 to support the existing activities application. I have further provided an additional assessment to stormwater related queries, as part of the s92 response to the exiting use consent application. Copies of each of these assessments are included within the original application and s92 information.

10. The material I have prepared addresses overland flow of stormwater and has provided calculations to confirm the statements made in my assessment. I understand from Ms Perring's s42A Report that the findings of those assessments are accepted by Council's Land Development Engineer Mr Samuel Olatunbosun.

11. I note that my assessments for the existing activities have focused on the localised effects of the existing activities, and not the wider structure plan stormwater and flooding matters that have been subject to expert witness conferencing and further discussion. That overall flooding work is being undertaken by Dr Steven Joynes while I am involved with the overall internal site stormwater solution.

12. I am satisfied that the stormwater from the existing industrial activities has very minimal overall stormwater effects and that the stormwater from the areas is dispersed via overland flow. I believe the existing activities generate no more stormwater than would be generated by an equivalent permitted metalled area across the site. Or in other words, they generate no more stormwater than if they had not been established and the land was left as filled (that part of the site, and much of it to the north, having been lawfully filled).

13. Whilst there has been concern raised in submissions around flooding within the catchment and surrounding area, it is my view that the overall stormwater control measures proposed as part of the wider Te Puna

Business Park are not required to mitigate stormwater or flooding effects of the existing activities currently operating on site.

Vehicle Access Upgrade, Culvert & Earthworks

14. As I have stated above, I did not prepare the vehicle access design drawing initially submitted to Council and included in the reporting of Mr Harrison, as that was prepared by one of our staff members who has since moved companies. I have, however, more recently become involved with this matter in assessing earthworks volumes and culvert sizes in discussions with Mr Crossan.

15. With regards to the accessway culvert, I have briefly discussed resource consenting requirements with Mr Crossan although I understand that he will address those directly in his evidence.

16. I understand that as part of the stormwater modelling for the overall catchment undertaken by Dr Joynes, an 1800mmØ culvert under the current accessway to the site is proposed as part of the overall stormwater solution for the Te Puna Business Park.

17. As such, I have updated the entranceway drawing to reflect this 1800mm diameter culvert in a revised location within the property boundaries of the subject site. This addresses the point raised in paragraph [280] of Ms Perring's s42A report. The updated drawing is **Attachment 1** to this evidence.

18. As recorded in Ms Perring's Report (paragraphs [192] and [193]), she states that she requires further information with respect to the earthworks and culvert construction methodology in order to conclude her assessment of the effects of these activities. While Mr Joynes will cover hydrological effects, I will address the remaining matters around construction methodology and erosion and sediment control.

19. In terms of sediment control, I agree that a condition of consent could be imposed requiring an erosion and sediment control plan. I disagree that a construction methodology condition is necessary as part of a resource consent condition due to the following reasons.

20. The area of works is a discrete area and the volume of earthworks relatively small (ie, in the order of 200m³). In practical terms the works would be undertaken during a forecast dry period of weather and when there is a low flow or water volume within the roadside drain. It is inevitable that access will not be available to the site whilst the existing culverts are replaced, and new culvert installed, and the applicant will need to advise the existing tenants of this. Whilst it will be contractor dependant, in my opinion the works to construct the new culvert and remove the existing culverts should only take in the order of 2-4 days. Overall, I would expect that the access upgrading would take no longer than one week, with final sealing pending compaction and weather.

21. The methodology would be to leave the existing culverts in place so they can continue to convey the drain flow unimpeded. As the proposed new culvert is located clear of the existing, the new drain can be excavated and laid into the new pipe alignment with minimal risk of sediment release into the adjacent waterway. Once the new culvert is installed, then water can be diverted to this culvert and the existing culverts removed. This will ensure there can always be flow in the drain and reduce the amount of open and exposed working area at any one time.

22. Works within the road reserve will require a Corridor Access Request and Road Opening Notice to be approved by WBOPDC, including traffic management approval. This will be contractor specific and is a standard process outside the normal resource consent process when working within the public road reserve.

23. Given the short timeframe and the fact works would need to be undertaken during daytime hours, I do not foresee any unusual activity that would give rise to adverse noise effects over and above standard construction noise associated with an activity of this kind, and compliance with NZS 6803:1999 is required in any case.

24. Overall, in my opinion there is nothing unusual or untoward involved with the earthworks or construction of the proposed accessway and effects of these activities can be manged or mitigated to an acceptable level.

CONCLUSION

25. In terms of stormwater quantity and flows from the site, in my opinion these are no greater than an undeveloped site and therefore have little to no adverse effect beyond the site.

26. With regard to construction related and earthworks effects, it is my opinion that for the reasons outlined above these can be effectively mitigated and are not unusual. Traffic management and roading related matters for construction are specifically addressed as part of standard Council procedure when working within the public road reserve.

25 September 2023
Stephen Bos

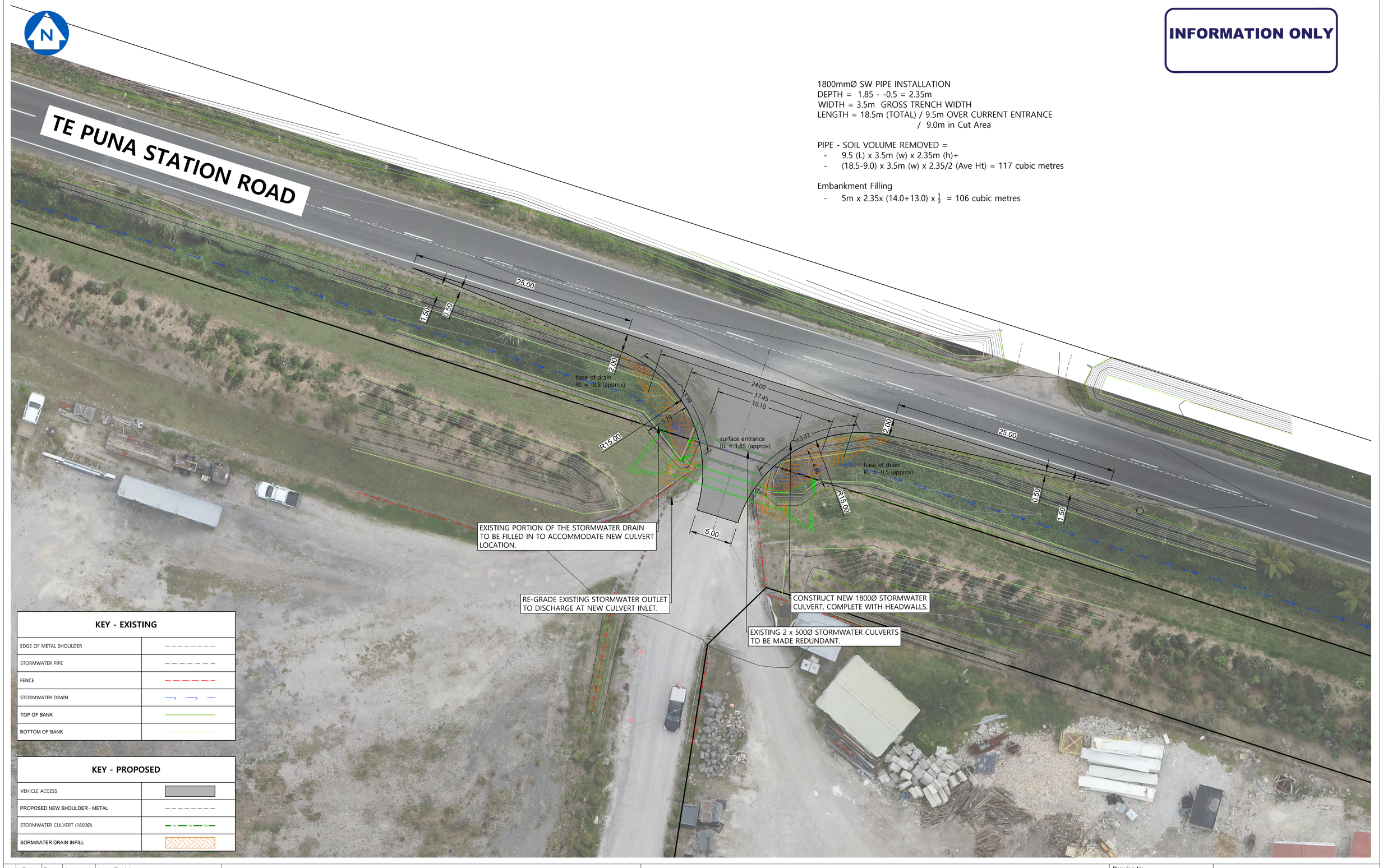
Attachment 1

INFORMATION ONLY

1800mmØ SW PIPE INSTALLATION
DEPTH = 1.85 - -0.5 = 2.35m
WIDTH = 3.5m GROSS TRENCH WIDTH
LENGTH = 18.5m (TOTAL) / 9.5m OVER CURRENT ENTRANCE
/ 9.0m in Cut Area

PIPE - SOIL VOLUME REMOVED =
- 9.5 (L) x 3.5m (w) x 2.35m (h)+
- (18.5-9.0) x 3.5m (w) x 2.35/2 (Ave Ht) = 117 cubic metres

Embankment Filling
- 5m x 2.35x (14.0+13.0) x $\frac{1}{3}$ = 106 cubic metres



KEY - EXISTING	
EDGE OF METAL SHOULDER	
STORMWATER PIPE	
FENCE	
STORMWATER DRAIN	
TOP OF BANK	
BOTTOM OF BANK	

KEY - PROPOSED	
VEHICLE ACCESS	
PROPOSED NEW SHOULDER - METAL	
STORMWATER CULVERT (1800Ø)	
SORMWATER DRAIN INFILL	

No.	Date	Drawn	Approved	Issue/Revision
A	29.05.23	JB	TH	FOR INFORMATION ONLY
B	AUG 23	SB	SB	CULVERT / BATTER VOLUMES ADDED
C	SEP 23	SB	SB	1800mm DIA CULVERT RELOCATED

TINEX GROUP Ltd
245 TE PUNA STATION ROAD
TE PUNA

INDUSTRIAL DEVELOPMENT
LOT 2 DP22158
SITE ACCESS AND REVISED ROAD DRAINAGE CULVERT

Drawing No. 423022 - CIV - D001
Sheet No. 02
Issue C
A1 SCALE: 1:200

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