LANDWORKS
— CONSULTING ENGINEERS —

496 EAST COAST ROAD, WINDSORR PARK

INFRASTRUCTURE CAPACITY ASSESSMENT FOR PLAN CHANGE

JOB REF: P23-077

DATE: 26/03/2024

Report Prepared by:

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Landworks Ltd

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LIST OF FIGURES

LIMITATION

This report has been prepared for “Windsor Park Community & Multisport Hub INC”, according to their instructions, for the particular objectives described herein. Landworks Ltd accepts no responsibility for the content of this report if it is used by any other party or for any other objective. Any use of or reliance on the information contained in this report for decisions made by third parties is the responsibility of these third parties. Landworks Ltd accepts no responsibility for damage incurred by third parties resulting from the use of or reliance on this report, or if the report is used by any party for purposes other than the objectives described herein.

1 // INTRODUCTION

This report has been prepared on behalf of Windsor Park Community & Multisport Hub INC, for the purposes of a private plan change application. This report describes the engineering servicing requirements for a proposed redevelopment at the subject site, with the new residential dwellings.

2 // SITE DESCRIPTION

The proposed development site consists of one existing title with an area of 63,805m^2. However, the main area of development in the north of the site is only approximately 12,800m^2. The site is largely flat with an overall grade to the south. Large flat sports fields make up most of the site's area. There is an elevation difference of approximately 18m between the highest and lowest point on the site.

There are multiple formal overland flowpaths with catchment areas over 4000m^2 or floodplains on the site.

There are multiple large diameter (600mm, 750mm and 1050mm) concrete stormwater pipes throughout the site. These pipes enter from northern, eastern, and western boundaries respectively and serve the larger catchment.

There is a 150mm diameter public wastewater main and manhole that traverses the main development area through the centre of the site from north to south.

There are multiple public water main in the road outside the site as well as a public water main within the site used by the sports field. A hydrant is located within the carpark area west of the site.

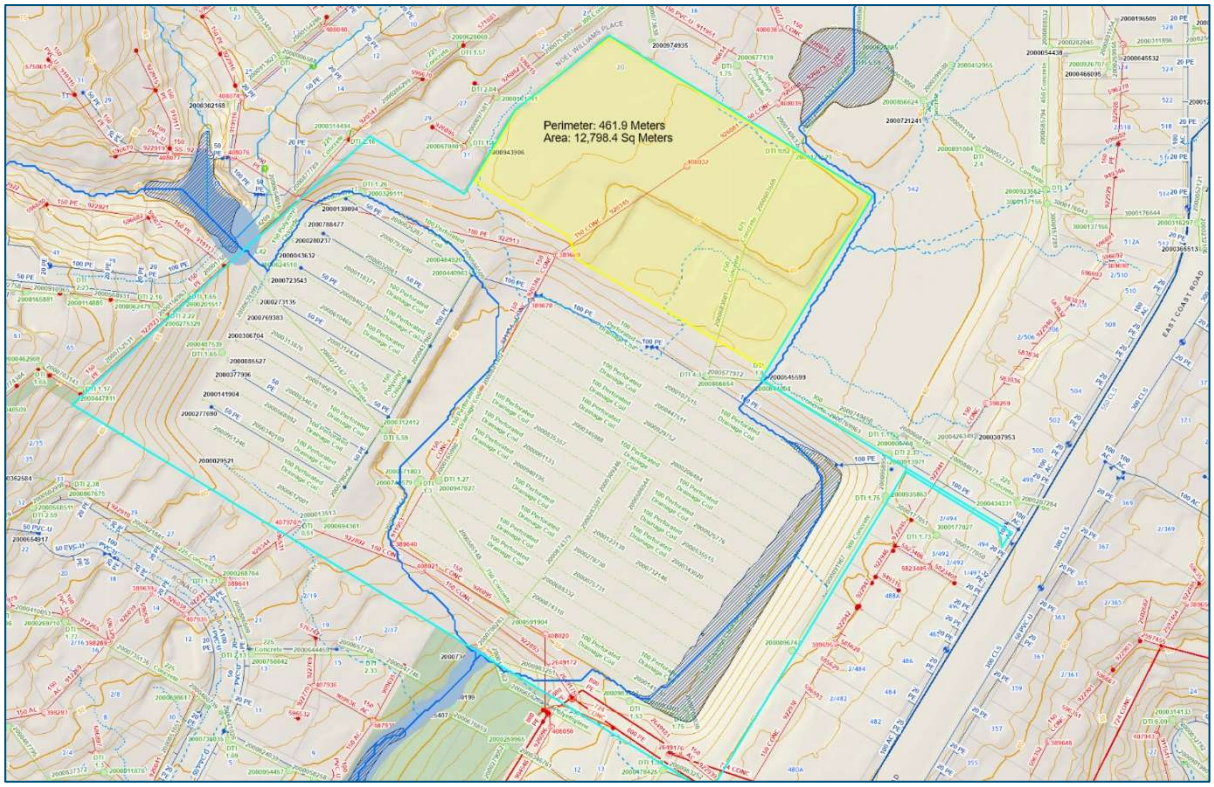


Figure 1 – Existing Public Services

3 // PROPOSAL

The proposal is to rezone part of the Active Recreation zoned parent site suitable for a residential development. The current illustrative proposal is to subdivide into 85 units as generally shown below with:

- 60 walk up apartments
- 21 Terraced, two-storey dwellings
- 4 Duplexed, two-storey dwellings

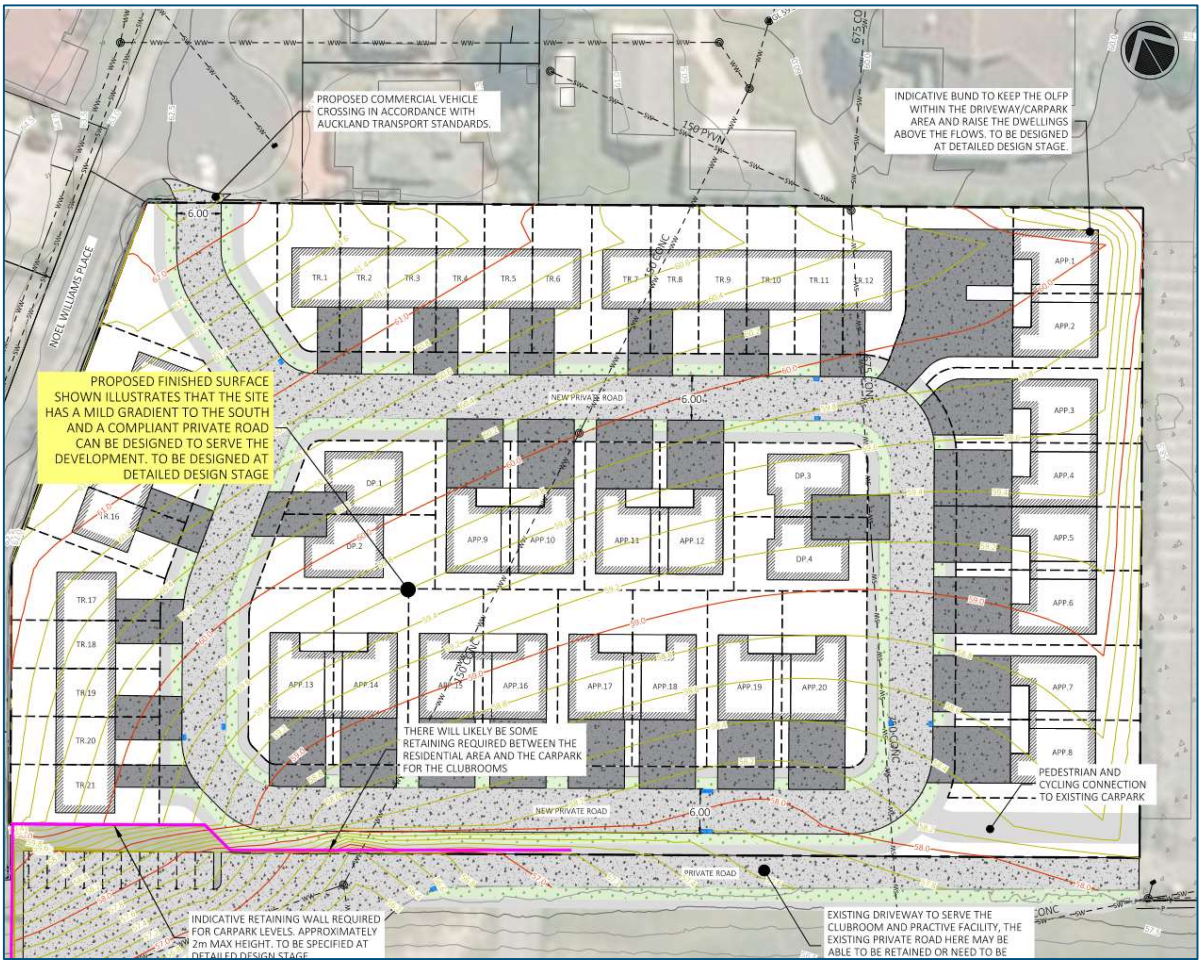


Figure 2 – Proposed layout

4 // EARTHWORKS

Earthworks for the site currently demonstrates that the site can be formed for use with compliant grades and is only indicative of what the site could look like. To generally grade the site to the south involves a total cut of approximately 9,000m^3 and fill of 1,000m^3 over an area of 15,000m2. This is subject to future detailed design. The cut and fill volumes are calculated to indicative finished levels.

Retaining walls may be required through the site to provide suitable access grades, building platforms and outdoor living areas.

Erosion and sediment control drawings have been provided on drawing #220, to demonstrate that suitable erosion and sediment control measures can be implemented, and works can be completed in accordance with Auckland Council GD05.

5 // ACCESS

Access to the development is proposed through a new vehicle crossing from the Noel Williams Place and a private road for the residents.

The vehicle crossing could be 6.0m wide at the boundary, which complies with the AUP Table E27.6.4.3.2.

The new access can be provided with a 4m platform at less than 5% directly inside the lot boundary in accordance with the AUP requirements.

The accessway will be formed with 175mm reinforced concrete or another suitable roading surface, drained with formed concrete kerbs, discharging to private catchpits. Details of this are shown on drawing #310.

Private portions of the accessway could be proposed in permeable paving to reduce the level of imperviousness for the site.

The access can be designed to have gradients compliant with AUP E27.6.4.4.1. All manoeuvring areas will have grades at or less than 12.5%. General dimensions of the access and vehicle crossing width are shown on drawings #200 - #202.

A pedestrian and cycling connection is proposed at the southeast corner of the site to connect to the existing carpark.

All private accessways and roadways will be designed at detailed design stage.

6 // STORMWATER MANAGEMENT AND DISPOSAL

Refer to the separate Stormwater management plan for all stormwater and Overland Flowpath related items.

7 // E36 - FLOODING AND OVERLAND FLOWPATH ASSESSMENT

Refer to the separate Stormwater management plan for all stormwater and Overland Flowpath related items.

8 // WASTEWATER

It is proposed to provide new lot connections through a public wastewater extension.

Watercares requirement for a level 1 capacity check is given from their wastewater code of practice under section 5.3.5.1.2, specifically below;

Threshold criteria for eliminating the need for checks must meet all of the following criteria:

(1) The site is outside Watercare's defined combined network area;
(2) The net change in Peak Design Flow from the site is less than 1.0 L/s, or is for less than 20 new dwellings, or the proposed development reduces the current number of residential dwellings (for commercial/industrial/other users, reducing the current discharge);
(3) There is no future upstream greenfield land that is required to gravitate through the site in order to connect into the existing wastewater network;
(4) Any proposed buildings are less than four storeys high;
(5) The development or area of connection will connect up to a wastewater main which is usually 300mm or larger.

Figure 3 - level 1 capacity check requirements for wastewater

As the site proposed more than 20 new dwellings, and the increase of peak flows from the additional dwellings is over 1.0 L/s, a level 1 capacity check down to the nearest 300mm network has been completed.

A full wastewater assessment is provided in Appendix B which demonstrates that the existing wastewater infrastructure has sufficient capacity for the additional new dwellings and the existing wastewater catchment.

9 // WATER

A new privately owned reticulated water supply system is proposed for the site, this will need to include a new 100mm private main to supply a hydrant for firefighting purposes.

A bulk water meter will supply the site at the boundary with the existing car park. Individual check meters will be installed for the new dwellings. A resident's association is proposed to managed finances for water meter billing.

Fire hydrant flowrate testing if required, will be supplied to demonstrate that the existing network has enough pressure and flow available to supply the development for domestic usage and firefighting purposes.

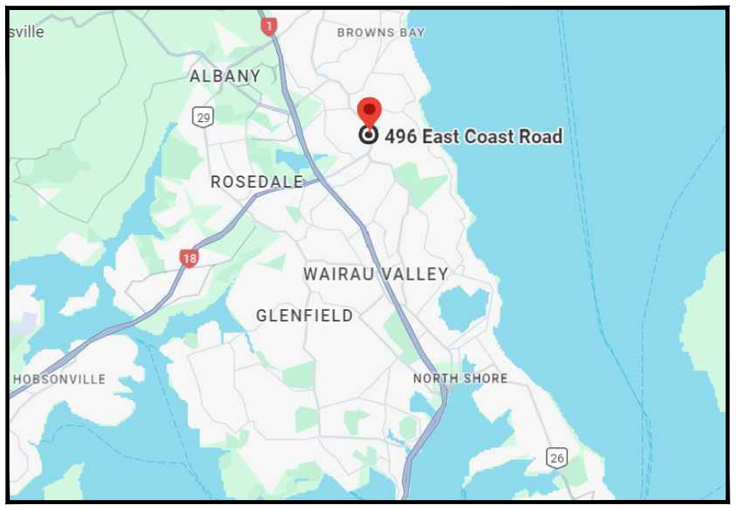
10 // POWER AND TELECOMS

Power and telecommunications are available in the street frontage, the development will need to arrange separate contracts for power and communication connections.

APPENDIX A – ENGINEERING DRAWINGS

PROPOSED RESIDENTIAL SUBDIVISION

496 EAST COAST ROAD, WINDSOR PARK, AUCKLAND



LOCATION MAP

DRAWING REVISION A FOR PLAN CHANGE

SHEET NO.	SHEET TITLE	26/03/2024
		Rev A
000	GENERAL NOTES	A
100	EXISTING FEATURES PLAN - OVERALL VIEW	A
101	EXISTING FEATURES PART PLAN - SHEET 1	A
102	EXISTING FEATURES PART PLAN - SHEET 2	A
200	ACCESSWAY LAYOUT PLAN - OVERALL VIEW	A
201	ACCESSWAY LAYOUT PART PLAN - SHEET 1	A
202	ACCESSWAY LAYOUT PART PLAN - SHEET 2	A
210	PROPOSED CUT & FILL PLAN	A
220	EROSION AND SEDIMENT CONTROL PLAN	A
221	EROSION AND SEDIMENT CONTROL DETAILS	A
223	PROPOSED EROSION AND SEDIMENT CONTROL POND DETAIL	A
310	PROPOSED ACCESSWAY TYPICAL CROSS SECTION	A
400	PROPOSED STORMWATER PLAN - OVERALL VIEW	A
401	PROPOSED STORMWATER PART PLAN - SHEET 1	A
402	PROPOSED STORMWATER PART PLAN - SHEET 2	A
410	EXISTING STORMWATER LONG SECTION	A
411	PROPOSED STORMWATER LONG SECTION - 1/3	A
412	PROPOSED STORMWATER LONG SECTION - 2/3	A
413	PROPOSED STORMWATER LONG SECTION - 3/3	A
420	PROPOSED OVERLAND FLOW PATH PLAN	A
500	PROPOSED WASTEWATER AND WATER SUPPLY PLAN - OVERALL VIEW	A
501	PROPOSED WASTEWATER AND WATER SUPPLY PART PLAN - SHEET 1	A
502	PROPOSED WASTEWATER AND WATER SUPPLY PART PLAN - SHEET 2	A
510	EXISTING WASTEWATER LONG SECTION	A
511	PROPOSED WASTEWATER LONG SECTION - 1/3	A
512	PROPOSED WASTEWATER LONG SECTION - 2/3	A
513	PROPOSED WASTEWATER LONG SECTION - 3/3	A

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GENERAL:

1. ALL WORK SHALL BE UNDERTAKEN IN ACCORDANCE WITH AUCKLAND COUNCIL, BUILDING CODE AND NEW ZEALAND STANDARDS AS/NZS REQUIREMENTS INCLUDING THE LATEST EDITIONS OF AUCKLAND COUNCIL, AUCKLAND TRANSPORT AND WATERCARE SERVICES CODES OF PRACTICE AND RELEVANT ENGINEERING STANDARDS, THE PROJECT SPECIFICATION AND ANY RESOURCE CONSENT, EPA & BUILDING CONSENT CONDITIONS RELATING TO THE SITE AND OTHER RELEVANT REQUIREMENTS.
2. THE AREAS WHERE WORKS ARE OCCURRING SHALL BE FENCED OFF. SIGNAGE SHALL ALSO BE ERECTED TO WARN THE PUBLIC OF POTENTIAL DANGERS AND ONLY PERSONNEL DIRECTLY INVOLVED IN THE DEVELOPMENT WORKS WILL BE ALLOWED ON SITE DURING THE WORKS.
3. IF DURING SETTING OUT OF THE WORKS A DISCREPANCY IS FOUND, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AS SOON AS THEY BECOME AWARE OF THE DISCREPANCY AND PRIOR TO PROCEEDING WITH THE WORK. FAILURE IN DOING SO MAY RESULT IN THE CONTRACTOR UNDERTAKING ANY REMEDIAL WORKS AT THEIR OWN COST.
4. THE WORK SHALL BE CONDUCTED IN STRICT ACCORDANCE WITH RELEVANT HOURS OF WORK AND NOISE LIMITS AS SET OUT IN THE CONSENT CONDITIONS.
5. ALL WORK IN PROXIMITY OR WITHIN THE DRIPLINE OF PROTECTED TREES SHALL BE SUPERVISED BY AN AUCKLAND COUNCIL APPROVED ARBORIST.
6. ALL COMMUNICATIONS, POWER AND GAS SERVICES ARE TO BE DISCONNECTED AND/OR INSTALLED BY APPROVED UTILITY SERVICES CONTRACTORS / TRADESMEN.
7. AS BUILT INFORMATION AND CCTV INFORMATION OF ALL NEW LINES SHALL BE PROVIDED TO THE ENGINEER. INFORMATION TO BE PROVIDED IN NZTM OR MOUNT EDEN 2000 COORDINATES IN PDF AND DWG.
8. SITE PROCEDURES AND HEALTH AND SAFETY INDUCTIONS WILL BE HELD FOR ALL WORKERS BY THE SITE MANAGER.

EARTHWORKS:

1. ALL EARTHWORKS AND THE CONSTRUCTION OF EROSION AND SEDIMENT CONTROL MEASURES SHALL BE UNDERTAKEN IN ACCORDANCE WITH GD-05 EROSION AND SEDIMENT CONTROL GUIDE FOR LAND DISTURBING ACTIVITIES IN THE AUCKLAND REGION (GD05). THE CONTRACTOR SHALL ARRANGE FOR AND ATTEND A PRE-CONSTRUCTION MEETING WITH THE ENGINEER AND AUCKLAND COUNCIL REPRESENTATIVES PRIOR TO STARTING ANY EARTHWORKS ON SITE.
2. CONSTRUCT STABILISED CONSTRUCTION ENTRANCE, CONTRACTOR LAY DOWN AREA AND EROSION AND SEDIMENT CONTROLS. STOCKPILE EXCESS SOIL AND TOPSOIL IN DESIGNATED AREAS AS AGREED WITH THE ENGINEER.
3. ALL MEASURES MUST BE FULLY OPERATIONAL PRIOR TO ANY EARTHWORKS COMMENCING, AND MUST BE MAINTAINED IN GOOD WORKING CONDITION THROUGHOUT THE OPERATION. OBTAIN APPROVAL FROM THE ENGINEER PRIOR TO COMMENCING ANY EARTHWORKS.
4. PROGRESSIVELY STABILISE EXPOSED AREAS AS FILLING OPERATION IS ADVANCED AND COMPLETED. STABILISATION TO BE ACHIEVED BY WAY OF EITHER TOPSOIL AND GRASSING OR THE CONSTRUCTION OF PAVEMENT SURFACES, DEPENDING ON THE AREA BEING WORKED.
5. ONCE THE STABILISATION MEASURES HAVE BECOME EFFECTIVE (I.E. INCLUDING THE COMPLETION OF PAVEMENTS AND 80% MINIMUM VEGETATION COVER), ACCUMULATED SEDIMENT WITHIN CONTROL DEVICES MAY BE REMOVED AND DISPOSED IN APPROVED LOCATIONS. THE EROSION AND SEDIMENT CONTROLS CAN THEN BE DECOMMISSIONED AND REMOVED.
6. WHERE POSSIBLE, CIRCULATION OF ROAD VEHICLES ACCESSING THE SITE SHALL BE STRICTLY CONFINED TO STABILISED ACCESS AND YARD AREAS. SIMILARLY, CIRCULATION OF EARTH MOVING MACHINERY AND OTHER OFF-ROAD VEHICLES SHALL BE KEPT TO WITHIN THE AREAS OF WORKS, AND CLEAR OF STABILISED ACCESS OR YARD AREAS.

STORMWATER AND WASTEWATER:

1. REFER TO THE AUCKLAND COUNCIL CODE OF PRACTICE FOR PUBLIC STORMWATER, AND WATERCARE CODE OF PRACTICE FOR PUBLIC WASTEWATER.
2. REFER TO THE NEW ZEALAND BUILDING CODE AND NZS STANDARDS FOR SPECIFICATIONS AND STANDARD DRAWINGS FOR THE CONSTRUCTION OF PRIVATE DRAINAGE WORKS. SHOULD A CONFLICT EXIST BETWEEN THE SPECIFICATIONS, THE HIGHER OF THEM STANDARDS SHALL APPLY.
3. THE MINIMUM CLEARANCE BETWEEN STORMWATER AND WASTEWATER DRAINAGE LINES AND OTHER SERVICES SHALL BE 150mm.
4. ALL SADDLE CONNECTIONS SHALL BE PROVIDED WITH APPROVED FLEXIBLE JOINTS.
5. WASTEWATER 100mm SERVICE CONNECTIONS TO BE 1.7% min GRADE AND FOLLOWING WW15 OF WATERCARE'S STANDARD. Y (WYE)-JUNCTION SHALL BE USED ORDINARILY. TEE JUNCTIONS ARE NOT ALLOWED
6. A WORKS OVER APPROVAL IS REQUIRED WITHIN 2 METRES OF A PUBLIC WATER OR WASTEWATER ASSET.
7. ALL STANDARD STORMWATER MANHOLES 1050mm DIAMETER WITH 600mm HEAVY DUTY LIDS. ALL PIPES UNDER TRAFFICABLE AREAS, ACCESSWAYS AND CARPARK SHALL BE BACKFILLED WITH SUITABLE, WELL GRADED & LOCALLY SOURCED GAP65 HARDFILL AS APPROVED BY THE ENGINEER.

EXISTING SERVICES:

1. THE EXISTING SERVICES SHOWN ARE INDICATIVE ONLY FROM AVILABLE RECORDS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING, VERIFYING & PROTECTING ALL EXISTING UNDERGROUND & ABOVE GROUND SERVICES & OTHER FEATURES FOR THE DURATION OF THE WORKS. NOTIFY THE ENGINEER IMMEDIATELY SHOULD ANY DISCREPANCIES BE FOUND.
3. THE CONTRACTOR SHALL LOCATE ALL EXISTING SERVICES, AND HAVE THEM MARKED ON THE GROUND TO IDENTIFY ANY POTENTIAL PIPE CLASHES, BEFORE UNDERTAKING ANY PIPE INSTALLS.

Notes:

REV:	DESCRIPTION:	BY:	DATE:
A	FOR PLAN CHANGE	BT	26.03.24

STATUS: PLAN CHANGE

LANDWORKS CONSULTING
PO Box 65595, Mairangi Bay, Auckland 0754
www.landworks.co.nz
Email:peter@landworks.co.nz

CLIENT: Windsor Park Community & multisport Hub INC

SITE: 496 East Coast Road, Mairangi Bay

TITLE: General Notes

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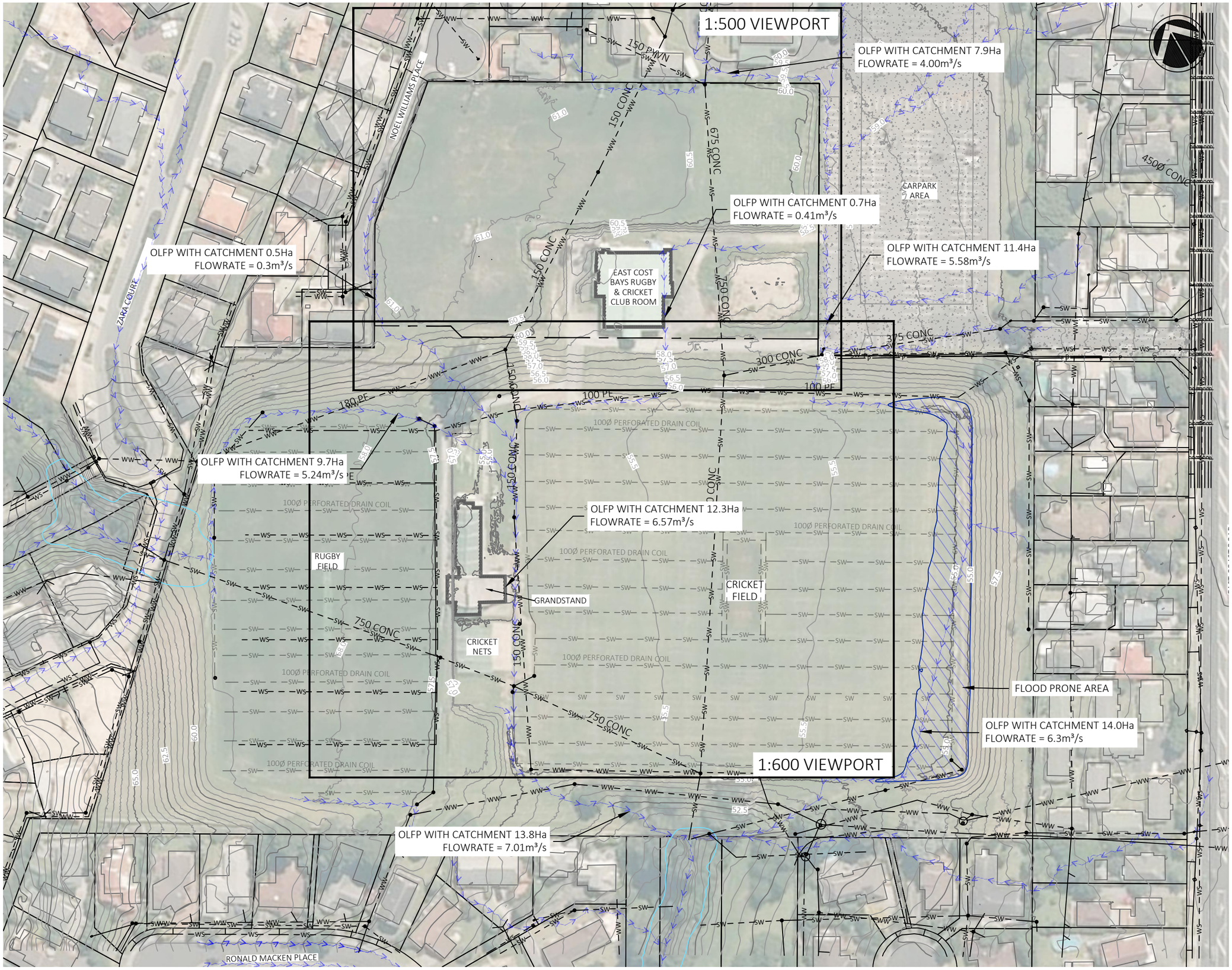
P23-077	000	A



Notes:

1. FOR INFORMATION PURPOSES ONLY WITH DATUM IN THE AUCKLAND 1946.

2. BOUNDARIES, SERVICES AND OTHER INFORMATION SHOWN IS INDICATIVE ONLY AND BASED ON TOPOGRAPHIC SURVEY FROM HAMPSON & ASSOCIATES LTD, RETRIEVED FEBRUARY 2024, AND AUCKLAND COUNCIL GIS DATA, RETRIEVED FEBRUARY 2024.

3. THE EXISTING SERVICES SHOWN ARE INDICATIVE ONLY. THE CONTRACTOR SHALL LOCATE, VERIFY & PROTECT ALL EXISTING UNDERGROUND & ABOVE GROUND SERVICES & OTHER FEATURES BEFORE STARTING WORKS AND FOR THE DURATION OF THE WORKS.

4. ALL WORKS AND STANDARD DETAILS SHALL COMPLY WITH THE FOLLOWING CODES OF PRACTICE:
   a. AUCKLAND COUNCIL CODE OF PRACTICE FOR LAND DEVELOPMENT AND SUBDIVISION, CHAPTER 4 STORMWATER, VERSION 3.0, DATED JAN 2022.
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   d. ANY CONDITIONS OF ASSOCIATED RESOURCE CONSENTS SHALL TAKE PRECEDENCE, AND SHALL BE COMPLIED WITH.

LEGEND

- EXISTING PROPERTY BOUNDARY
- SITE BOUNDARY
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- EXISTING PUBLIC STORMWATER
- EXISTING PUBLIC WASTEWATER
- EXISTING PUBLIC WATER SUPPLY
- EXISTING HYDRANT
- EXISTING POWER & POWER POLE
- EXISTING POWER POLE
- EXISTING STREET LIGHT
- EXISTING GAS
- EXISTING TELEPHONE LINE
- EXISTING CONCRETE SURFACE
- EXISTING OVERLAND FLOW PATH

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SITE: 496 East Coast Road, Mairangi Bay

TITLE: Existing Features Plan Overall View

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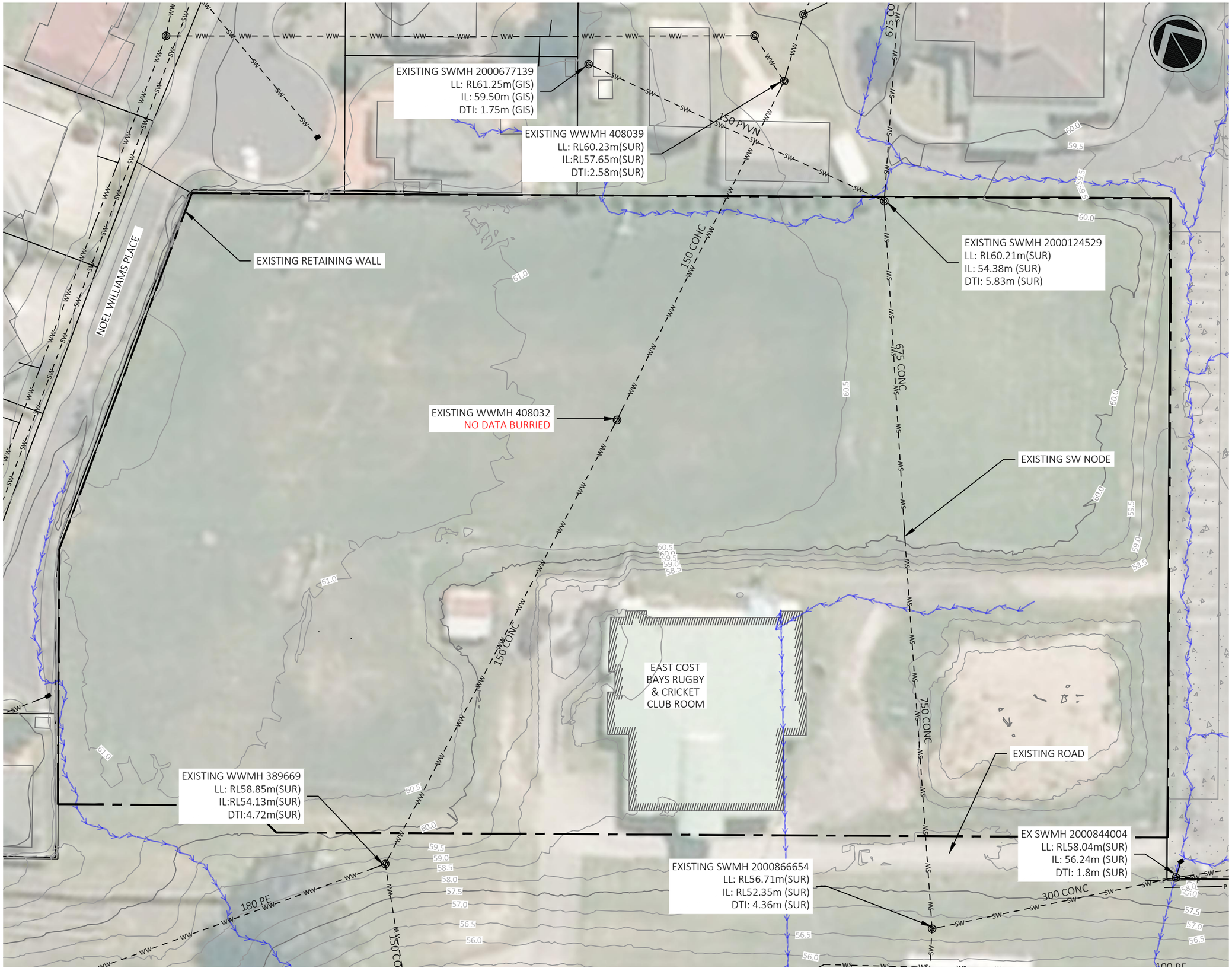

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TITLE: Existing Features Part Plan Sheet 1

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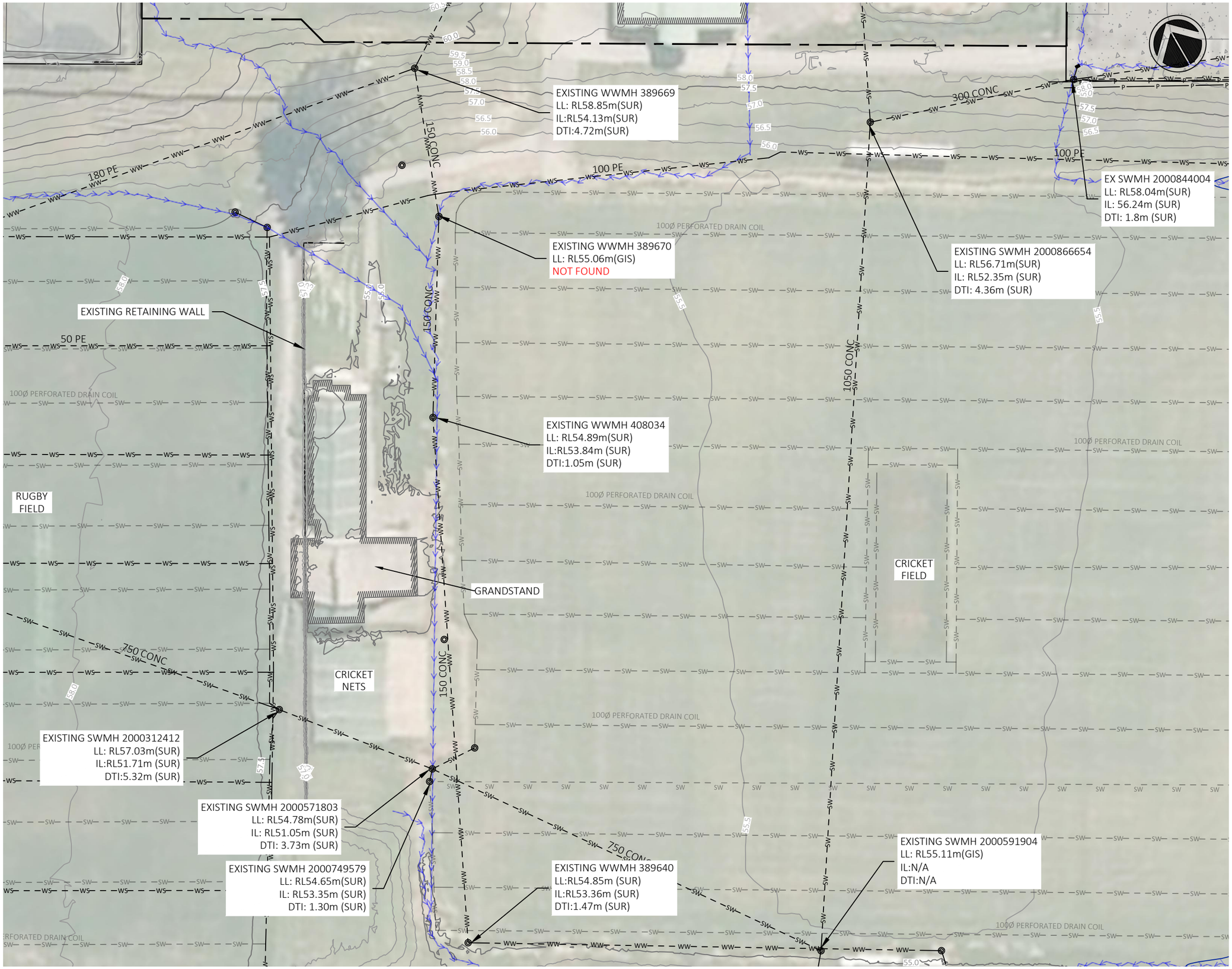

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CLIENT: Windsor Park Community & multisport Hub INC

SITE: 496 East Coast Road, Mairangi Bay

TITLE: Existing Features Part Plan Sheet 2

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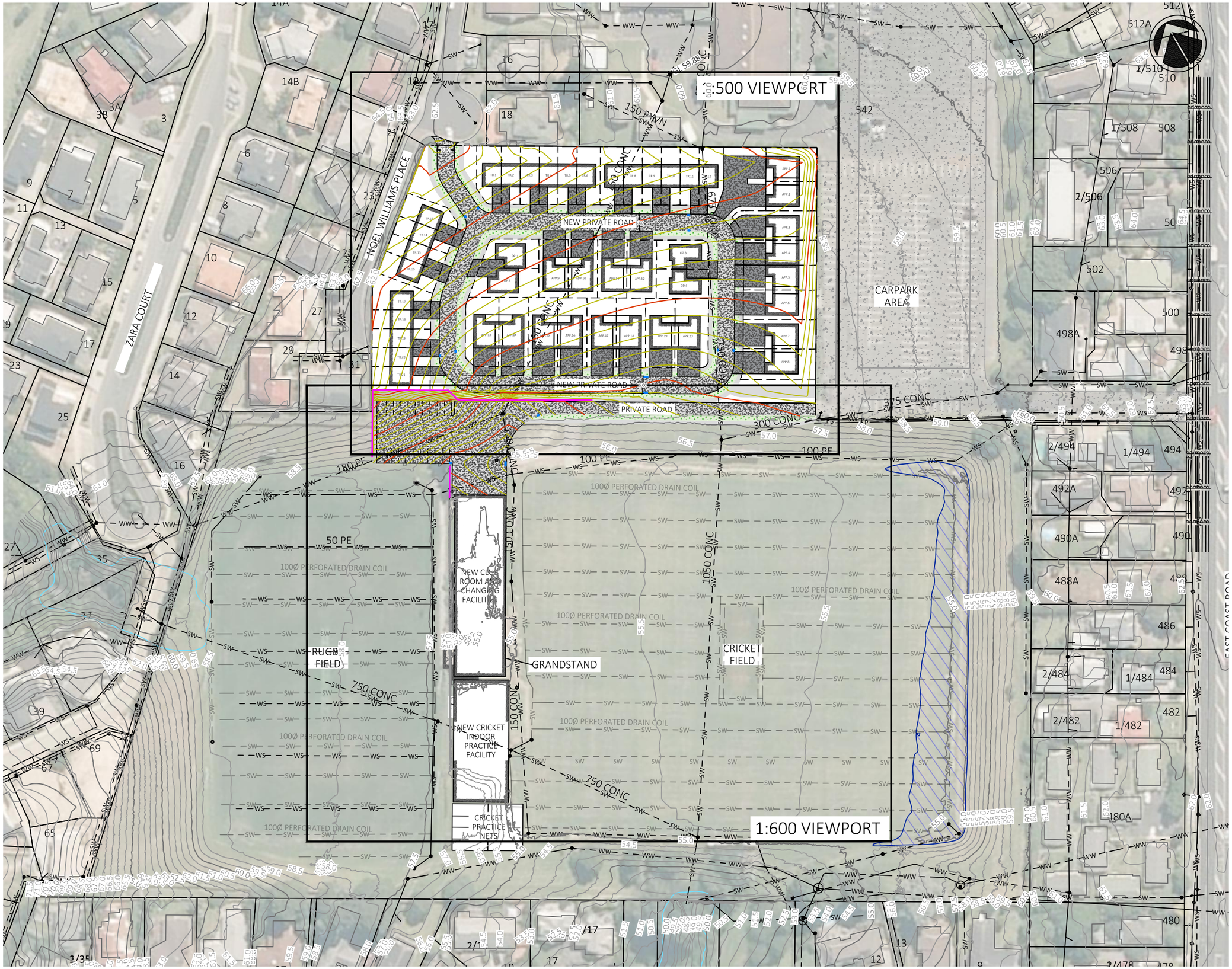

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- SITE BOUNDARY
- PROPOSED LOT BOUNDARY
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED DRIVEWAY (CONCRETE PAVING)
- PROPOSED FOOTPATH (CONCRETE)
- PROPOSED BERM
- PROPOSED COMMON ACCESSWAY PRIVATE CESSPIT
- PROPOSED RETAINING WALL
- PROPOSED DWELLING WITH EXTENT OF EAVES
- PROPOSED DISH CHANNEL
- PROPOSED SLIPFORM KERB
- PROPOSED MOUNTABLE KERB
- PROPOSED EDGE BEAM
- EXISTING PUBLIC STORMWATER
- EXISTING PUBLIC WASTEWATER
- EXISTING PUBLIC WATER SUPPLY
- EXISTING HYDRANT
- EXISTING OVERLAND FLOW PATH

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CLIENT: Windsor Park Community & multisport Hub INC

SITE: 496 East Coast Road, Mairangi Bay

TITLE: Accessway Layout Plan Overall View

SCALE AT A3:	DRAWN:	CHECKED:
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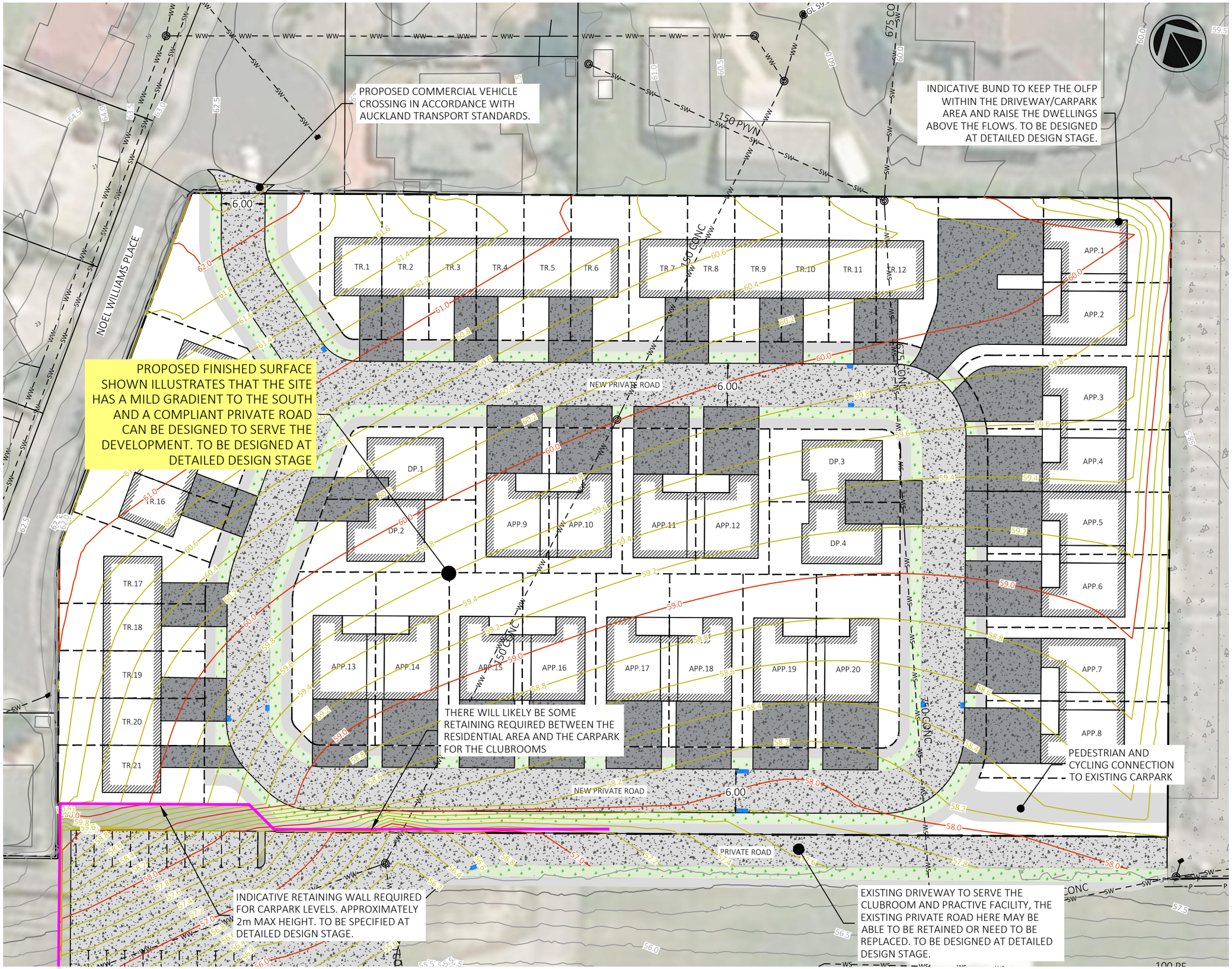
P23-077	200	A

PRINT DATE: 26/03/2024 4:48 pm



Notes:

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LEGEND

- EXISTING PROPERTY BOUNDARY
- SITE BOUNDARY
- PROPOSED LOT BOUNDARY
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED DRIVEWAY (CONCRETE PAVING)
- PROPOSED FOOTPATH (CONCRETE)
- PROPOSED BERM
- PROPOSED COMMON ACCESSWAY PRIVATE CESSPIT
- PROPOSED RETAINING WALL
- PROPOSED DWELLING WITH EXTENT OF EAVES
- PROPOSED DISH CHANNEL
- PROPOSED SLIPFORM KERB
- PROPOSED MOUNTABLE KERB
- PROPOSED EDGE BEAM
- EXISTING PUBLIC STORMWATER
- EXISTING PUBLIC WASTEWATER
- EXISTING PUBLIC WATER SUPPLY
- EXISTING HYDRANT
- EXISTING OVERLAND FLOW PATH

A	FOR PLAN CHANGE	BT	26.03.24

REV:	DESCRIPTION:	BY:	DATE:

STATUS: PLAN CHANGE

LANDWORKS CONSULTING
PO Box 65595, Mairangi Bay, Auckland 0754
www.landworks.co.nz
Email:peter@landworks.co.nz

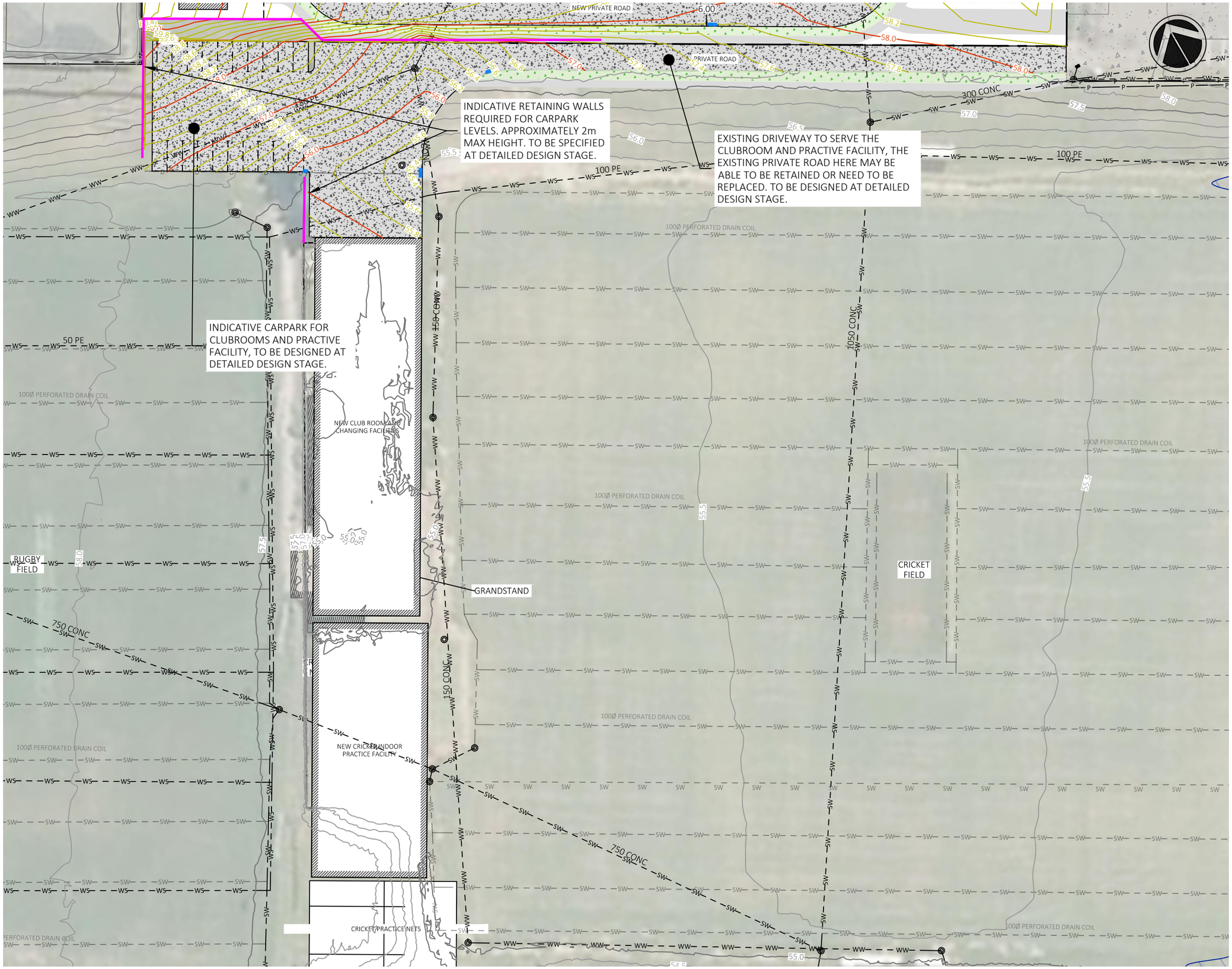
CLIENT: Windsor Park Community & multisport Hub INC

SITE: 496 East Coast Road, Mairangi Bay

TITLE: Accessway Layout Part Plan Sheet 1

SCALE AT A3:	DRAWN:	CHECKED:
1:500	BT	PL
PROJECT NO:	DRAWING NO:	REVISION:
P23-077	201	A

PRINT DATE: 26/03/2024 4:48 pm



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A	FOR PLAN CHANGE	BT	26.03.24

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STATUS: PLAN CHANGE

LANDWORKS CONSULTING

PO Box 65595, Mairangi Bay, Auckland 0754
www.landworks.co.nz
Email:peter@landworks.co.nz

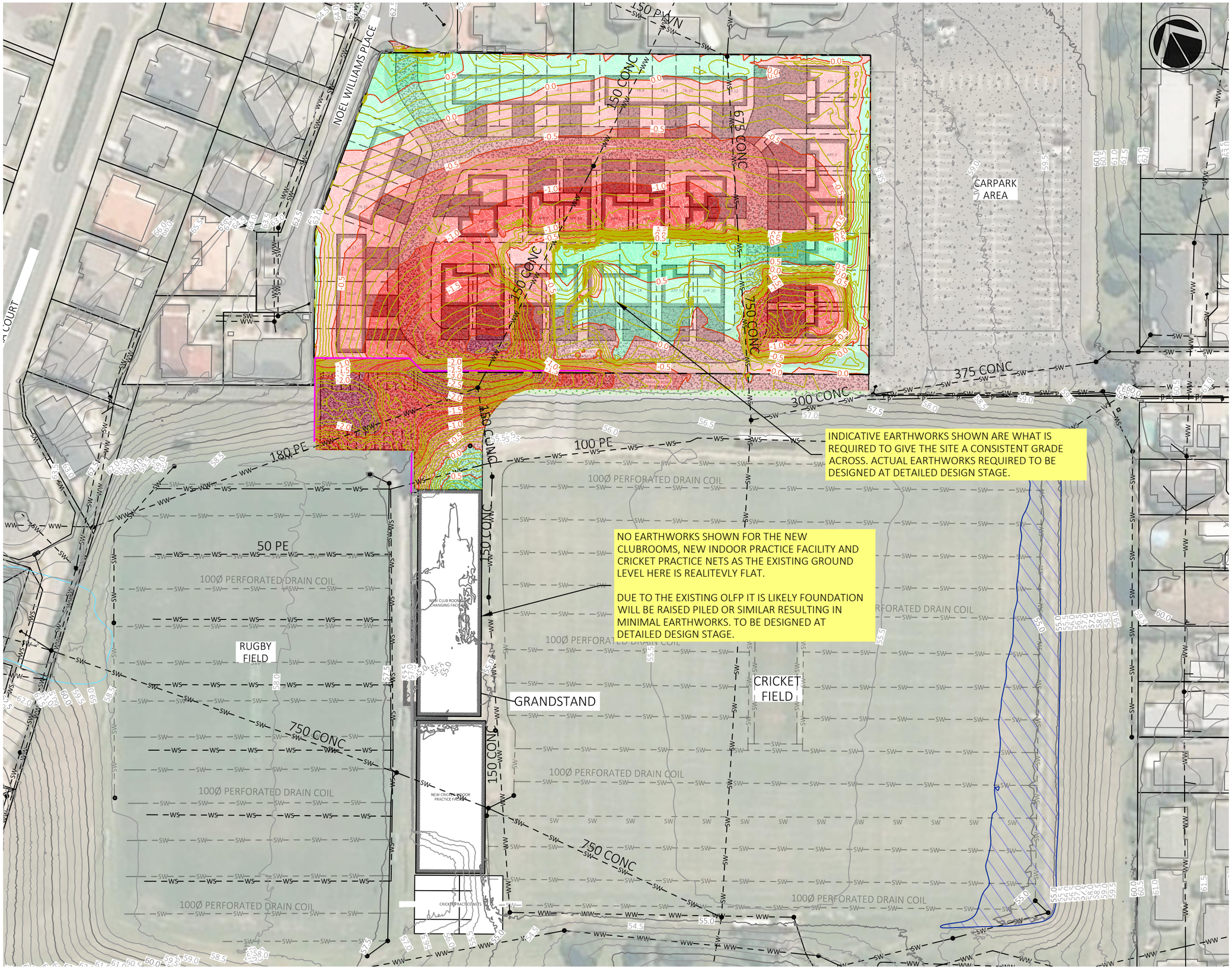
CLIENT: Windsor Park Community & multisport Hub INC

SITE: 496 East Coast Road, Mairangi Bay

TITLE: Accessway Layout Plan Part Plan - Sheet 2

SCALE AT A3:	DRAWN:	CHECKED:
1:600	BT	PL
PROJECT NO:	**DRAWING NO:**	**REVISION:**
P23-077	202	A

PRINT DATE: 26/03/2024 4:48 pm



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- EXISTING MINOR CONTOUR
- PROPOSED MAJOR ISOPACH
- PROPOSED MINOR ISOPACH

Surface Analysis: Elevation Ranges

Number	Color	Minimum Elevation (m)	Maximum Elevation (m)	2D Area (m²)	Volume (m ³)
1		-3.50	-2.00	610.2	209.4
2		-2.00	-1.00	3027.1	1755.3
3		-1.00	-0.50	3496.2	2684.4
4		-0.50	0.00	4043.0	4530.9
5		0.00	0.50	2615.8	916.0
6		0.50	1.00	906.0	144.0

THE CUT AND FILL VOLUMES IN ABOVE TABLE IS COMPARISON BETWEEN EXISTING GROUND LEVEL AND PROPOSED FINISHED LEVEL.

EXTENT OF EARTHWORKS: 14,700m²

TOTAL CUT VOLUME: 9,180m³

TOTAL FILL VOLUME: 1,060m³

NET CUT VOLUME: 8,120m³

REV:	DESCRIPTION:	BY:	DATE:
A	FOR PLAN CHANGE	BT	26.03.24

STATUS: PLAN CHANGE

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www.landworks.co.nz
Email:peter@landworks.co.nz

CLIENT: Windsor Park Community & multisport Hub INC

SITE: 496 East Coast Road, Mairangi Bay

TITLE: Proposed Cut and Fill Plan

SCALE AT A3:	DRAWN:	CHECKED:
1:1000	BT	PL
PROJECT NO:	DRAWING NO:	REVISION:
P23-077	210	A

PRINT DATE: 26/03/2024 4:49 pm

EROSION AND SEDIMENT CONTROL SHOWN IS INDICATIVE ONLY AND WILL BE DESIGNED AT DETAILED DESIGN STAGE

CLEAN WATER DIVERSION BUND

DIRTY WATER DIVERSION BUND

CARPARK AREA

SILT FENCE

INDICATIVE SEDIMENT RETENTION POND/DECANTING EARTH BUND FOR SITE EARTHWORKS RUNOFF. TO BE DESIGNED AT DETAIL DESIGN STAGE.

SILT FENCE

GRANDSTAND

CLEAN WATER DIVERSION BUND

RUGBY FIELD

CRICKET FIELD

NOEL WILLIAMS PLACE

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- PROPOSED MAJOR ISOPACH
- PROPOSED MINOR ISOPACH
- PROPOSED CLEAN WATER DIVERSION BUND
- PROPOSED SILT FENCE
- PROPOSED CONSTRUCTION ENTRANCE
- PROPOSED DIRTY WATER DIVERSION BUND

REV:	DESCRIPTION:	BY:	DATE:
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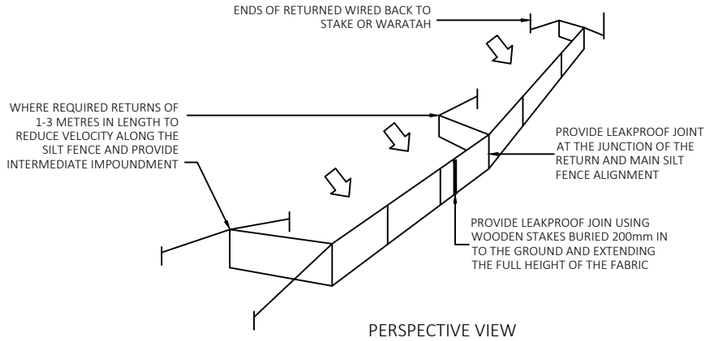
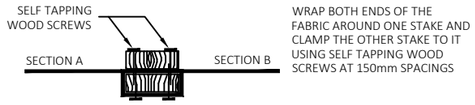
SITE: 496 East Coast Road, Mairangi Bay

TITLE: Proposed Erosion and Sediment Control Plan

SCALE AT A3:	DRAWN:	CHECKED:
1:1000	BT	PL
PROJECT NO:	DRAWING NO:	REVISION:
P23-077	220	A



PERSPECTIVE VIEW

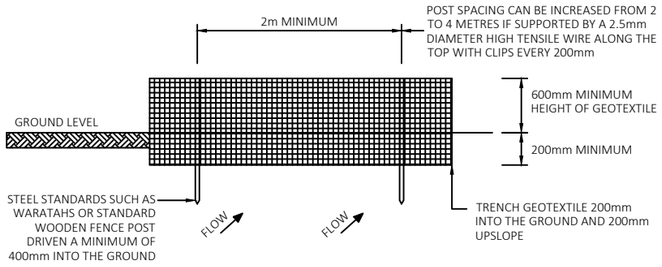


STANDARD FABRIC JOINT

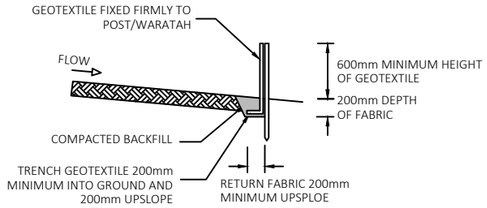
SILT FENCE DESIGN CRITERIA:

SLOPE STEEPNESS %	SLOPE LENGTH (m) (MAXIMUM)	SPACING OF RETURNS (m)
< 2%	N/A	UNLIMITED
2-10%	40	60
10-20%	30	50
20-33%	20	40
33-50%	15	30
>50%	6	20

GRAB TENSILE STRENGTH: >440N (ASTM D4632)
TENSILE MODULUS: 0.140 pa (MINIMUM)
APPARENT OPENING SIZE: 0.1-0.5mm (ASTM D4751)

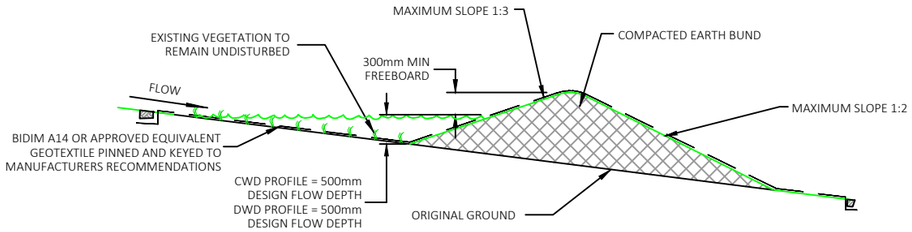


ELEVATION

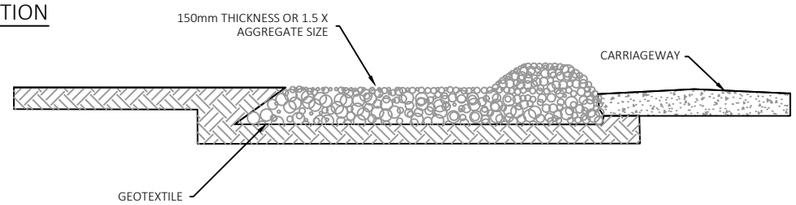


CROSS SECTION

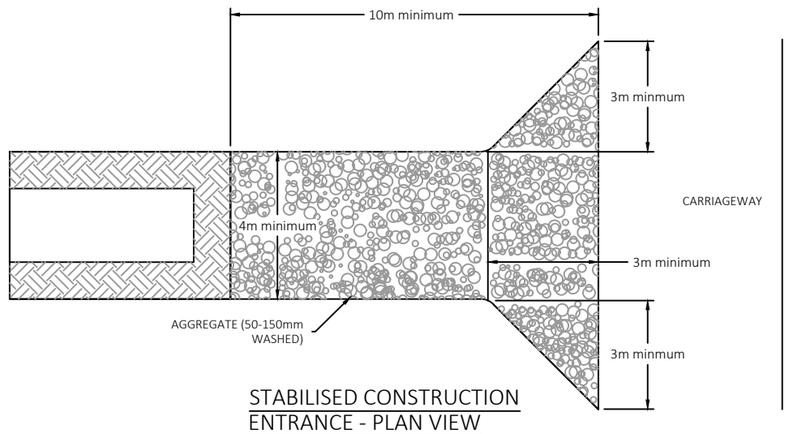
SILT FENCE CONSTRUCTION



CLEAN AND/OR DIRTY WATER RUNOFF DIVERSION BUND



STABILISED CONSTRUCTION ENTRANCE - SIDE ELEVATION



STABILISED CONSTRUCTION ENTRANCE - PLAN VIEW

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Email:peter@landworks.co.nz

CLIENT: Windsor Park Community & multisport Hub INC

SITE: 496 East Coast Road, Mairangi Bay

TITLE: Proposed Erosion and Sediment Control Details

SCALE AT A3:	DRAWN:	CHECKED:
NTS	BT	PL
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P23-077	221	A

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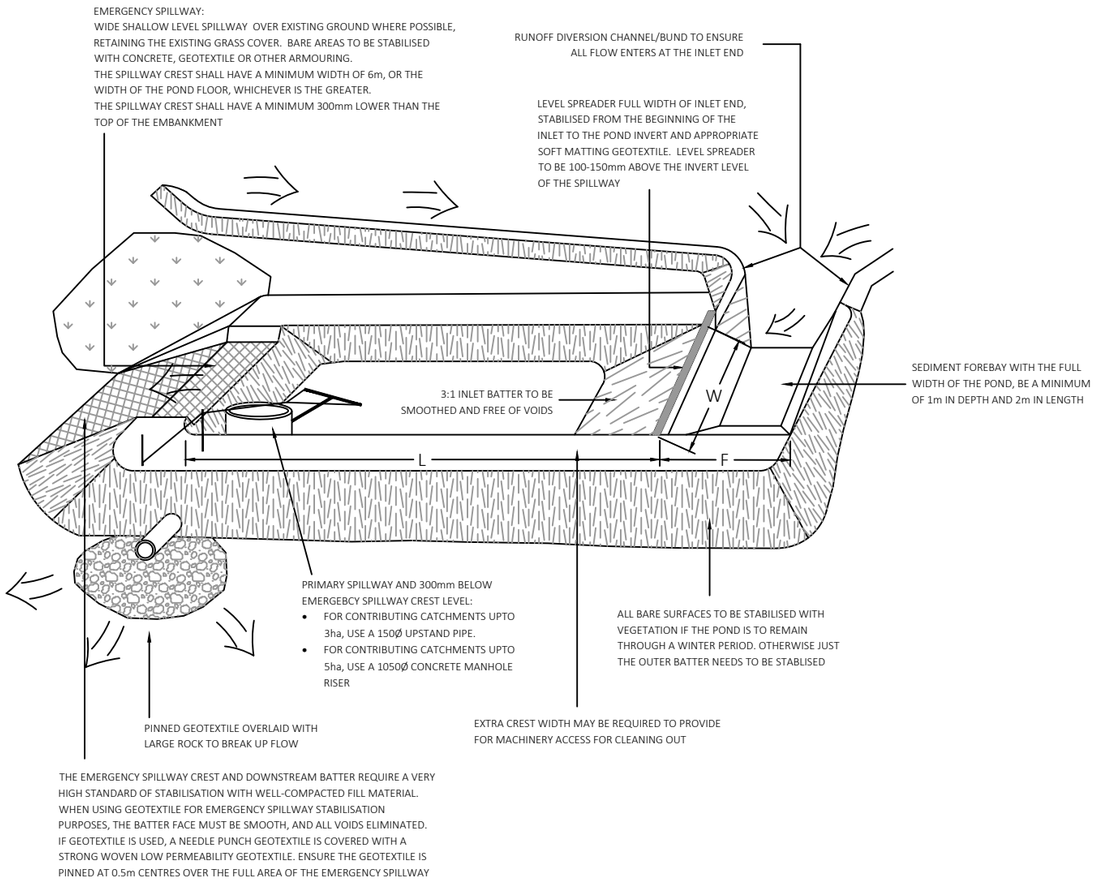
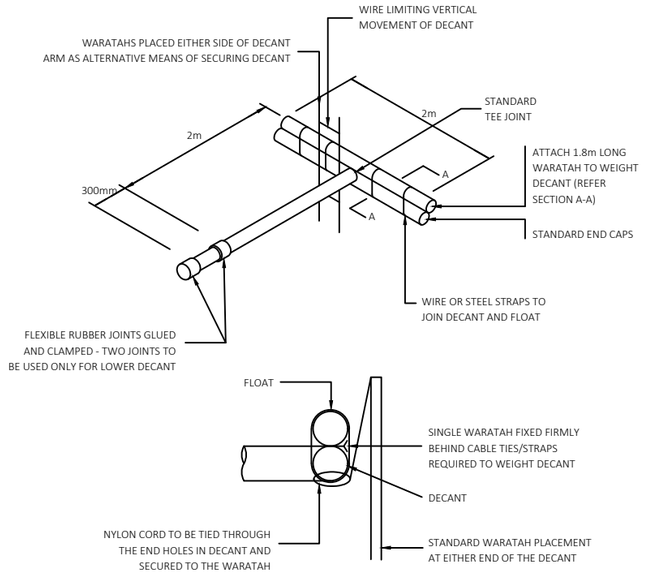


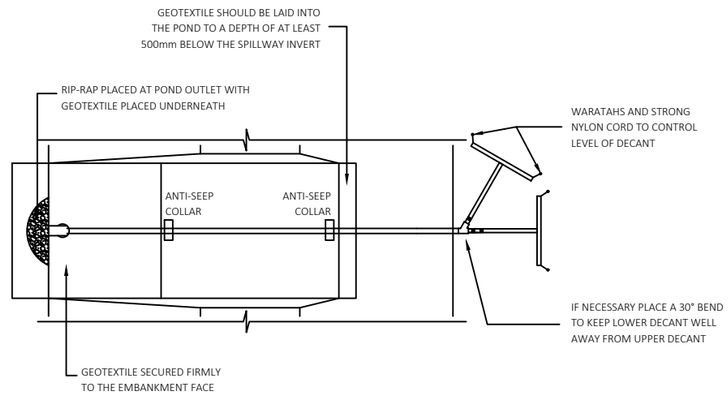
SEDIMENT RETENTION POND

SEDIMENT RETENTION POND SPECIFICATION

SRP CATCHMENT	1.95ha
POND/FOREBAY WIDTH (W)	13.9m
POND LENGTH (L)	36.9m
FOREBAY LENGTH (F)	6.2m
TOTAL LENGTH	43.1m
DEPTH FROM POND BASE TO EMBANKMENT	2.1m
DEPTH FROM FOREBAY BASE TO EMBANKMENT	1.6m
NUMBER OF DECANT BARS	2 T-BARS
HEIGHT OF FIRST DECANT FROM POND BASE	0.6m
OUTLET PIPE SIZE	150mm DIAMETER
PRIMARY SPILLWAY SIZE	150MM UPSTNAD
PRIMARY SPILLWAY LEVEL	1.5m FROM POND BASE
EMERGENCY SPILLWAY SIZE	11.5m CREST WIDTH
EMERGENCY SPILLWAY CREST LEVEL	1.8m FROM POND BASE



SEDIMENT RETENTION POND DECANT BAR DETAILS



SEDIMENT RETENTION POND DECANT OUTLET DETAIL

NUMBER OF DECANTS FOR EACH POND SHALL BE AS FOLLOWS:

I) UP TO 1.5HA CATCHMENT - 1 DECANT
II) 1.5-3.0HA CATCHMENT - 2 DECANTS
III) 3 TO 5 HA CATCHMENT - 3 DECANTS

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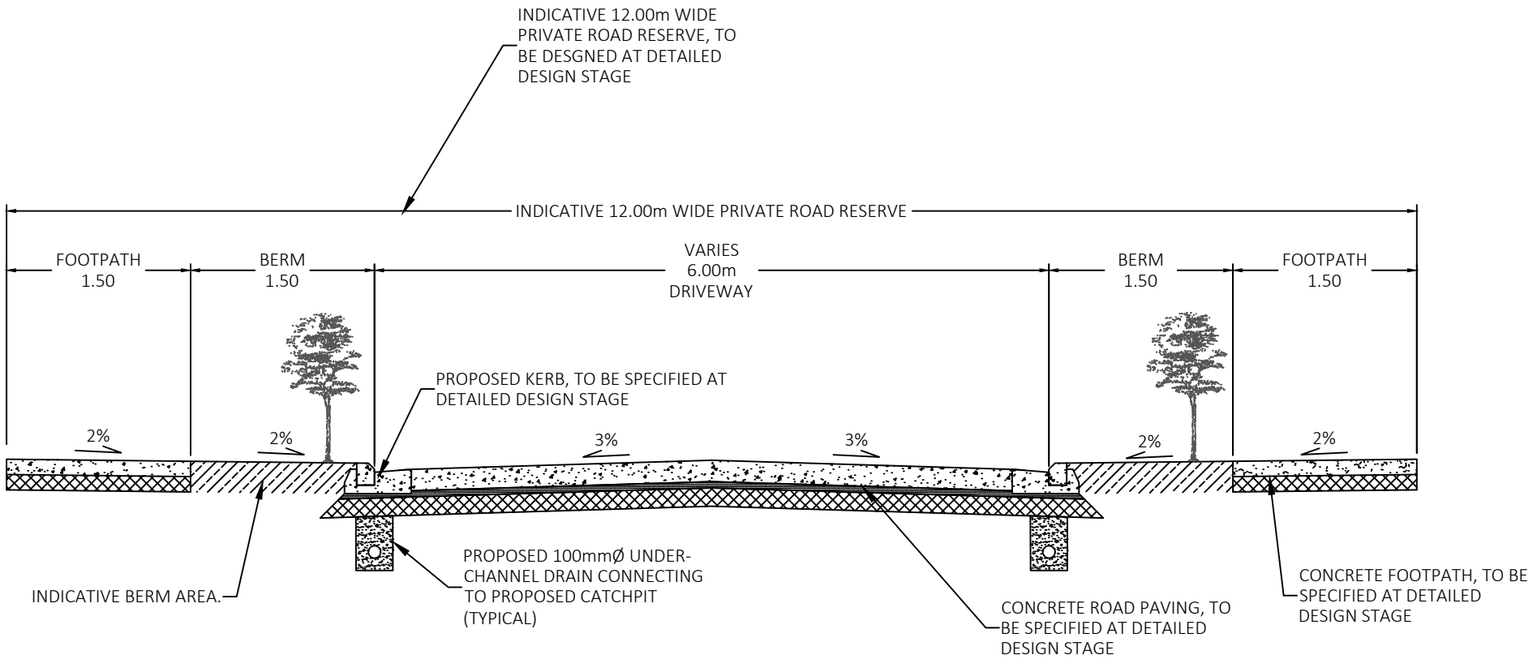
CLIENT: Windsor Park Community & multisport Hub INC

SITE: 496 East Coast Road, Mairangi Bay

TITLE: Proposed Erosion and Sediment Control Pond Detail

SCALE AT A3:	DRAWN:	CHECKED:
NTS	BT	PL
PROJECT NO:	DRAWING NO:	REVISION:
P23-077	223	A



DETAIL: - / 200 PROPOSED DRIVEWAY TYPICAL CROSS SECTION

SCALE: 1:50H, 1:50V(A3)

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5. FOR STANDARD CONCRETE PAVING :
- 175mm 20MPA CONCRETE WITH 665 REINFORCED MESH PLACED ON CENTER. SAWCUTS AT 5m INTERVAL
- 50mm COMPACTED GAP20 OR AP20 GRANULAR BASECOURSE
- 150mm COMPACTED GAP65 GRANULAR SUBBASE

6. FOR PERMEABLE PAVING:
- 80mm FIRTH FLOWPAVE WITH WPB7 CHIP FOR JOINTING. CONCRETE EDGE HAUNCH ON ALL OUTER EDGES.
- 20mm WPB7 LAYER
- 100mm WPB12 BASECOURSE FULLY WRAPPED IN GEOTEXTILE FILTER CLOTH
- 150mm GAP65 GRANULAR SUBBASE LAYER
- REFER FIRTH ECO PAVE INSTALLATION GUIDE

REV:	DESCRIPTION:	BY:	DATE:
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STATUS: PLAN CHANGE

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Email:peter@landworks.co.nz

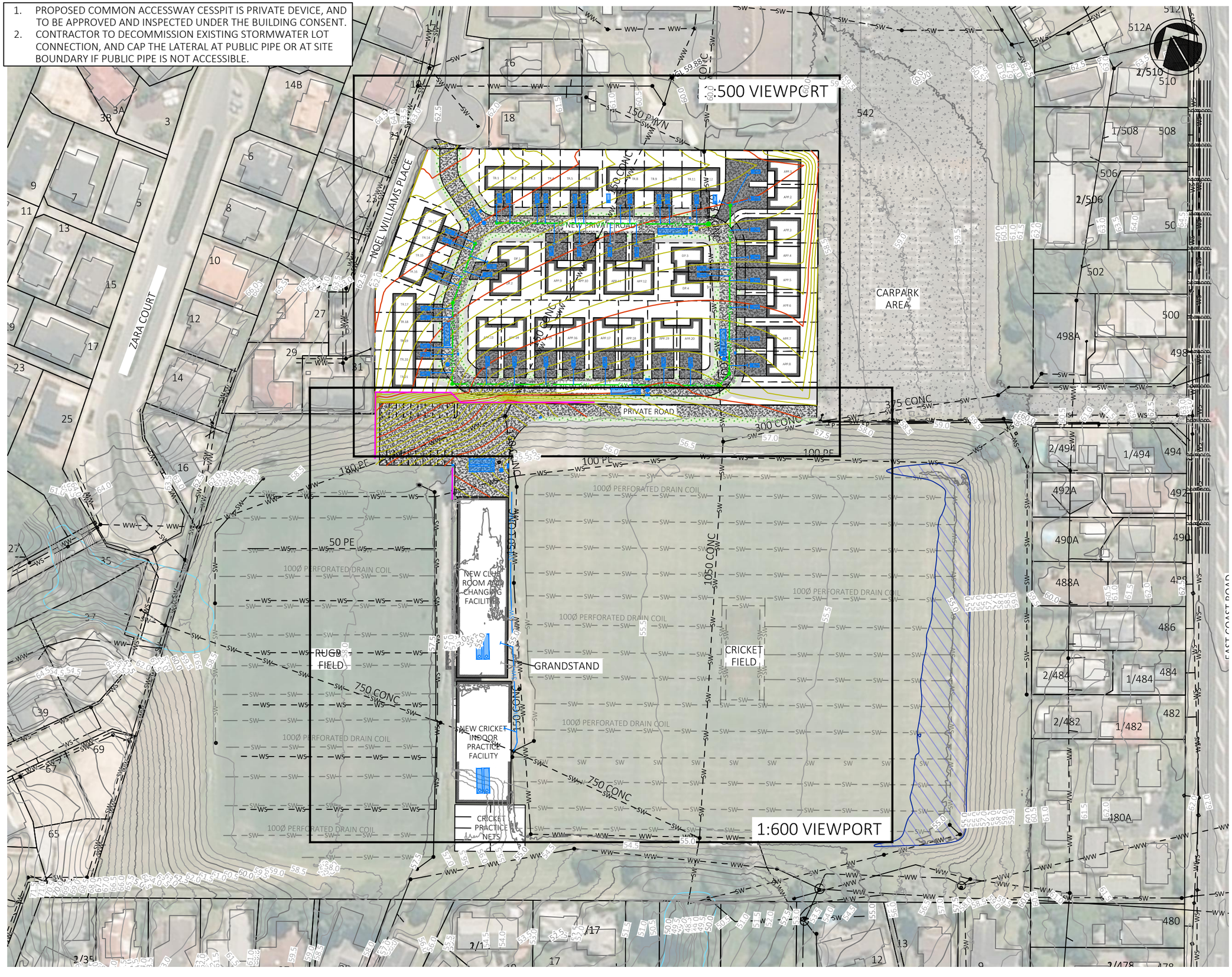
CLIENT: Windsor Park Community & multisport Hub INC

SITE: 496 East Coast Road, Mairangi Bay

TITLE: Proposed Accessway Typical Cross Section

SCALE AT A3:	DRAWN:	CHECKED:
As Shown	BT	PL
PROJECT NO:	DRAWING NO:	REVISION:
P23-077	310	A

1. PROPOSED COMMON ACCESSWAY CESSPIT IS PRIVATE DEVICE, AND TO BE APPROVED AND INSPECTED UNDER THE BUILDING CONSENT.
2. CONTRACTOR TO DECOMMISSION EXISTING STORMWATER LOT CONNECTION, AND CAP THE LATERAL AT PUBLIC PIPE OR AT SITE BOUNDARY IF PUBLIC PIPE IS NOT ACCESSIBLE.



Notes:

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   d. ANY CONDITIONS OF ASSOCIATED RESOURCE CONSENTS SHALL TAKE PRECEDENCE, AND SHALL BE COMPLIED WITH.

LEGEND

- EXISTING PROPERTY BOUNDARY
- SITE BOUNDARY
- PROPOSED LOT BOUNDARY
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED DRIVEWAY (CONCRETE PAVING)
- PROPOSED DRIVEWAY (PERMEABLE PAVING)
- PROPOSED RETAINING WALL
- PROPOSED DWELLING WITH EXTENT OF EAVES
- EXISTING PUBLIC STORMWATER
- EXISTING PUBLIC WASTEWATER
- EXISTING PUBLIC WATER SUPPLY
- EXISTING CONCRETE PAVE
- EXISTING OVERLAND FLOW PATH
- PROPOSED PUBLIC STORMWATER
- PROPOSED PRIVATE STORMWATER CONNECTION (100Ø uPVC)
- PROPOSED SLIPFORM DISH/KERB CHANNEL
- PROPOSED 675 X 450 PRIVATE CESSPITS WITH TETRA TRAP OR SIMILAR WITH 150mmØ uPVC SN16 LEAD.
- PROPOSED UNDERGROUND DETENTION TANK. TO BE DESIGNED AT DETAIL DESIGN STAGE.
- PROPOSED PRIVATE STORMFILTER

A	FOR PLAN CHANGE	BT	26.03.24

REV:	DESCRIPTION:	BY:	DATE:

STATUS: PLAN CHANGE

LANDWORKS CONSULTING

PO Box 65595, Mairangi Bay, Auckland 0754
www.landworks.co.nz
Email:peter@landworks.co.nz

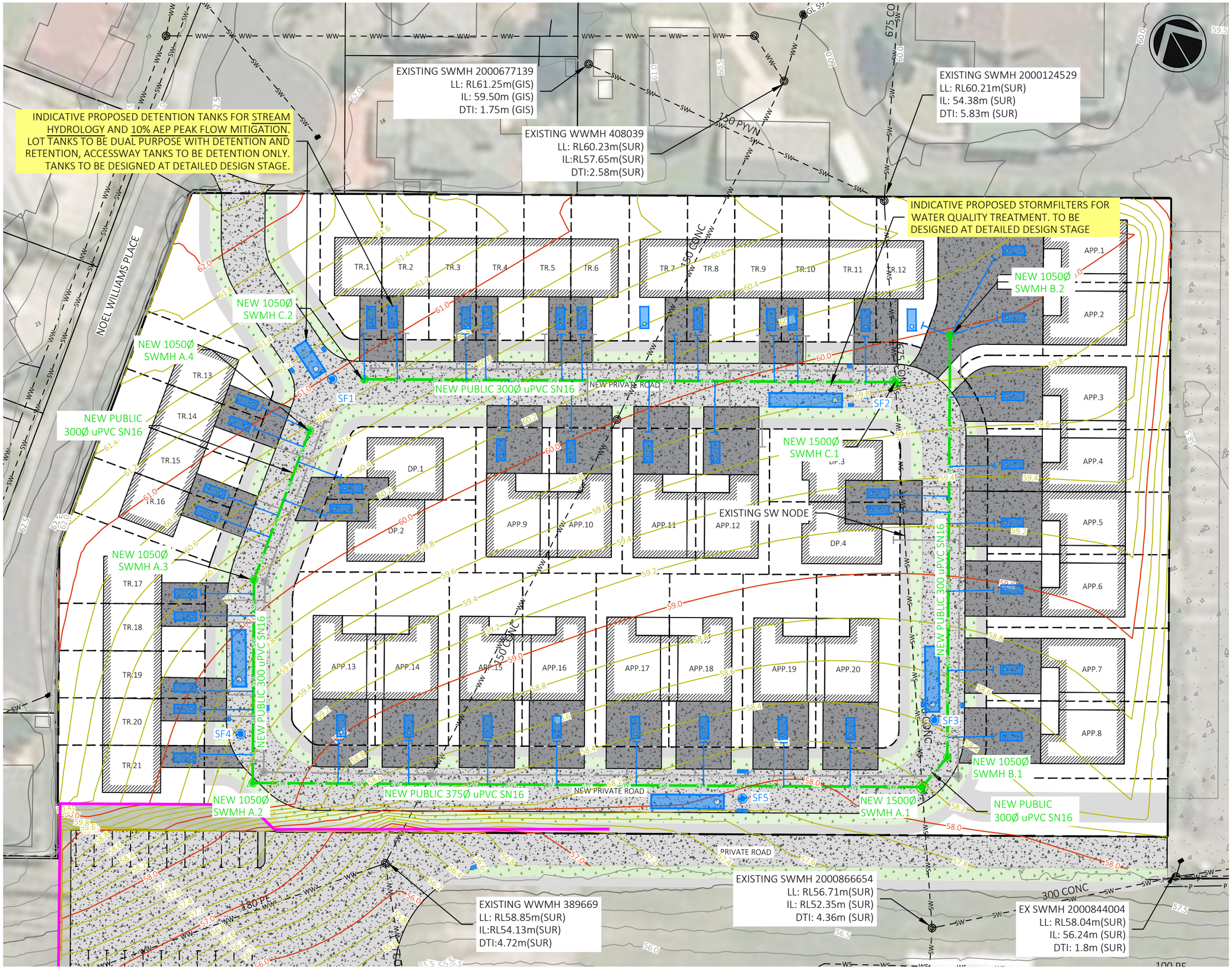
CLIENT: Windsor Park Community & multisport Hub INC

SITE: 496 East Coast Road, Mairangi Bay

TITLE: Proposed Stormwater Plan Overall View

SCALE AT A3:	DRAWN:	CHECKED:
1:1250	BT	PL
PROJECT NO:	DRAWING NO:	REVISION:
P23-077	400	A

PRINT DATE: 26/03/2024 4:49 pm



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LEGEND

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- SITE BOUNDARY
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- EXISTING MAJOR CONTOUR
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- EXISTING CONCRETE PAVE
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- PROPOSED UNDERGROUND DETENTION TANK. TO BE DESIGNED AT DETAIL DESIGN STAGE.
- PROPOSED PRIVATE STORMFILTER

A	FOR PLAN CHANGE	BT	26.03.24

REV:	DESCRIPTION:	BY:	DATE:

STATUS: PLAN CHANGE

LANDWORKS CONSULTING
PO Box 65595, Mairangi Bay, Auckland 0754
www.landworks.co.nz
Email:peter@landworks.co.nz

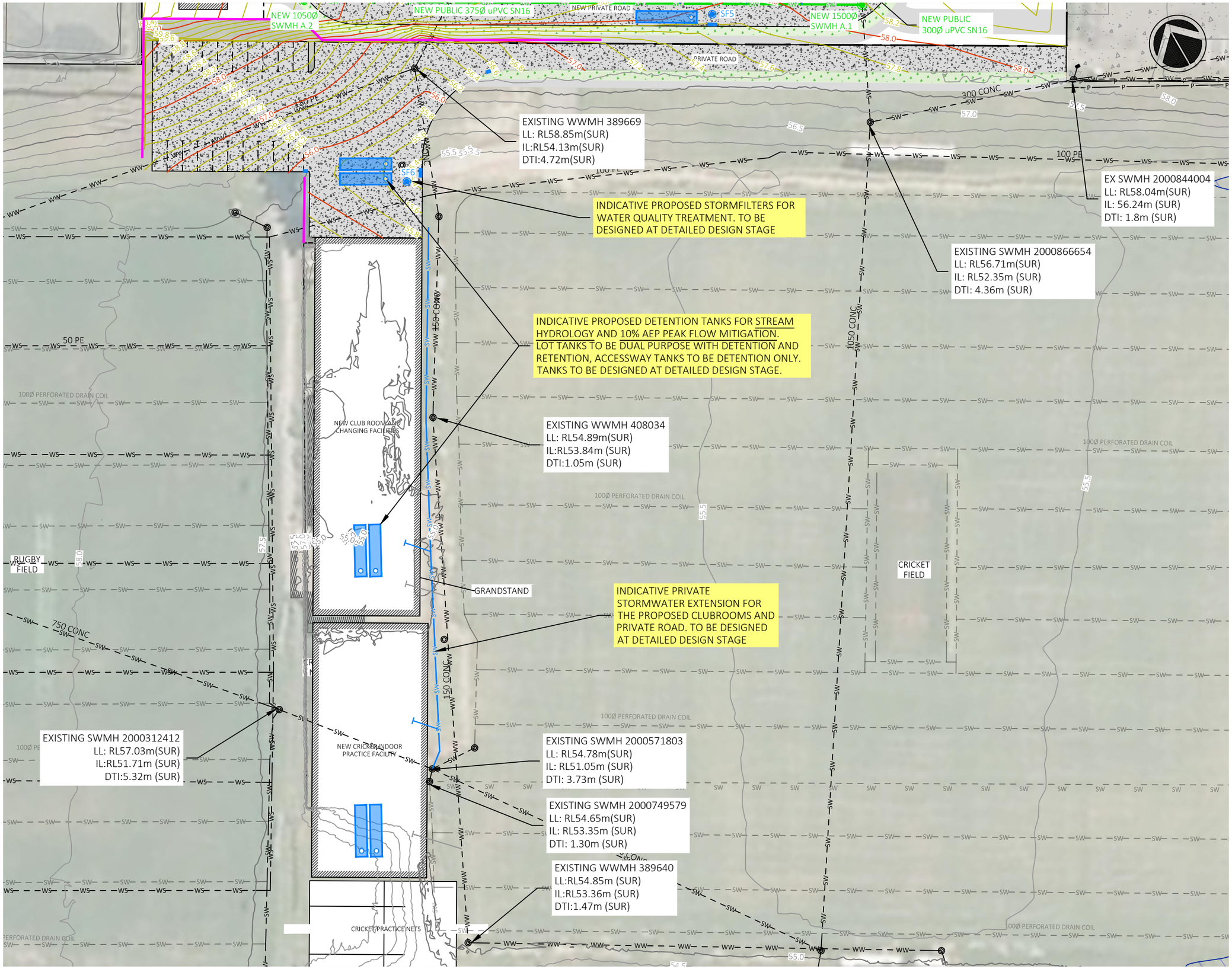
CLIENT: Windsor Park Community & multisport Hub INC

SITE: 496 East Coast Road, Mairangi Bay

TITLE: Proposed Stormwater Part Plan - Sheet 1

SCALE AT A3:	DRAWN:	CHECKED:
1:500	BT	PL
PROJECT NO:	DRAWING NO:	REVISION:
P23-077	401	A

PRINT DATE: 26/03/2024 4:49 pm



Notes:

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LEGEND

- EXISTING PROPERTY BOUNDARY
- SITE BOUNDARY
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REV:	DESCRIPTION:	BY:	DATE:
A	FOR PLAN CHANGE	BT	26.03.24

STATUS: PLAN CHANGE

LANDWORKS CONSULTING
PO Box 65595, Mairangi Bay, Auckland 0754
www.landworks.co.nz
Email:peter@landworks.co.nz

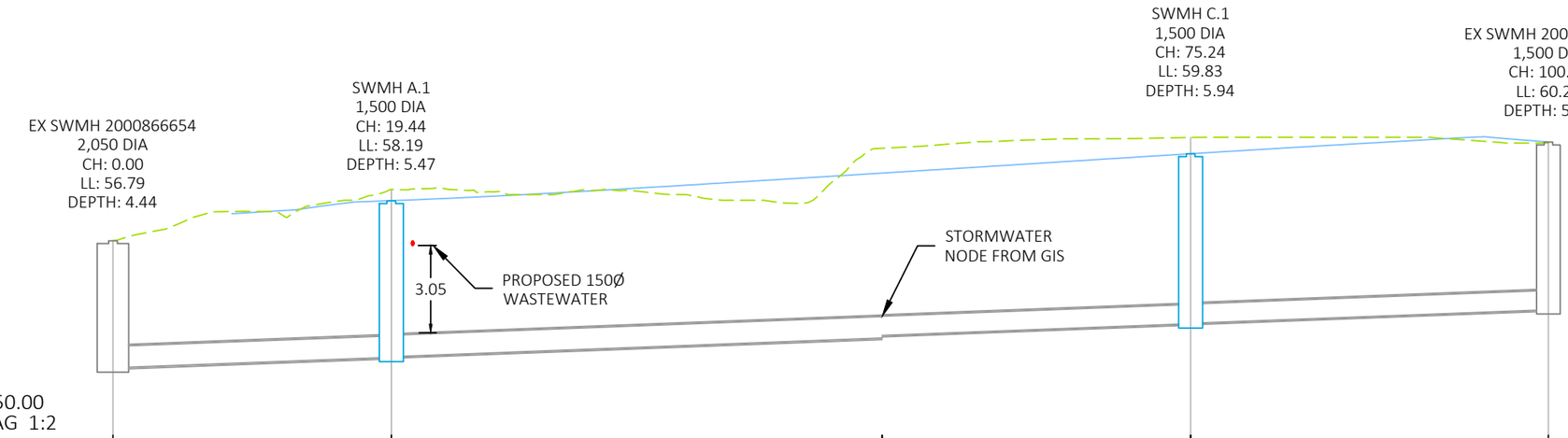
CLIENT: Windsor Park Community & multisport Hub INC

SITE: 496 East Coast Road, Mairangi Bay

TITLE: Proposed Stormwater Plan Part Plan 2/2

SCALE AT A3:	DRAWN:	CHECKED:
1:600	BT	PL
PROJECT NO:	DRAWING NO:	REVISION:
P23-077	402	A

PRINT DATE: 26/03/2024 4:49 pm



PIPE DETAILS (CL to CL LENGTHS)	EX 750Ø CONC 2D L: 19.44m @ 1.90%		EX 750Ø CONC 2D L: 34.26m @ 1.90%		EX 675Ø CONC 2D L: 21.54m @ 1.90%		EX 675Ø CONC 2D L: 24.98m @ 1.90%	
DESIGN LEVEL AT MH CL	56.79	58.19			59.83		60.23	
INVERT LEVEL	52.35	52.72	52.74	53.39	53.48	53.89	53.91	54.38
COVER	3.63	4.66	4.64	4.96	4.94	5.21	5.20	5.13
CHAINAGE	0.00	19.44			75.24		100.22	

DETAIL: - / 400 EXISTING STORMWATER LONG SECTION

SCALE: 1:400H, 1:200V(A3)

Notes:

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LEGEND

- EXISTING GROUND LEVEL
- PROPOSED FINISHED LEVEL
- PROPOSED HARDFILL BACKFILL
- PROPOSED DWELLING FOUNDATION

REV:	DESCRIPTION:	BY:	DATE:
A	FOR PLAN CHANGE	BT	26.03.24

STATUS: PLAN CHANGE

LANDWORKS CONSULTING
PO Box 65595, Mairangi Bay, Auckland 0754
www.landworks.co.nz
Email:peter@landworks.co.nz

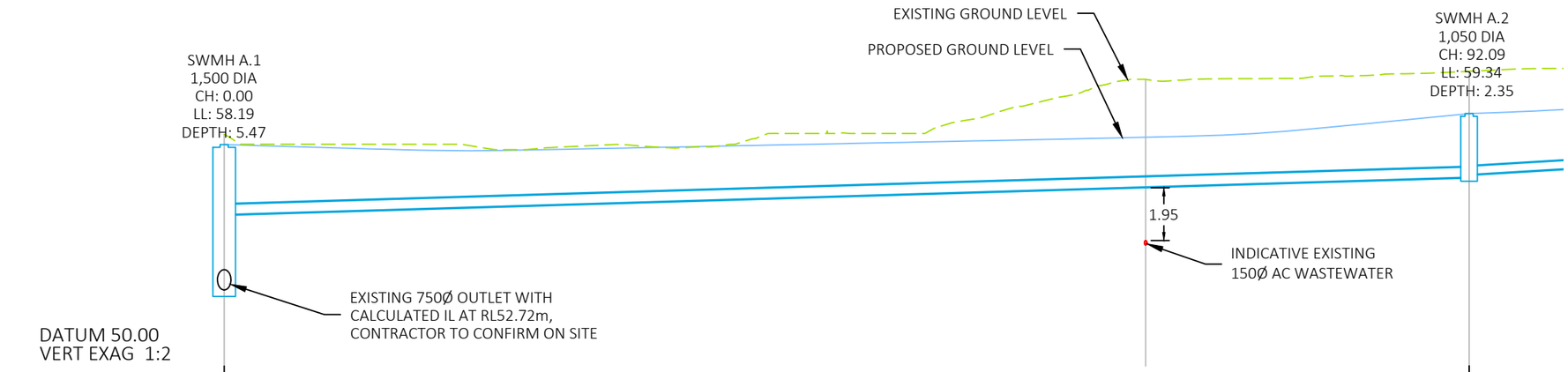
CLIENT: Windsor Park Community & multisport Hub INC

SITE: 496 East Coast Road, Mairangi Bay

TITLE: Existing Stormwater Long Section

SCALE AT A3:	DRAWN:	CHECKED:
As Shown	BT	PL
PROJECT NO:	DRAWING NO:	REVISION:
P23-077	410	A

PRINT DATE: 26/03/2024 4:49 pm

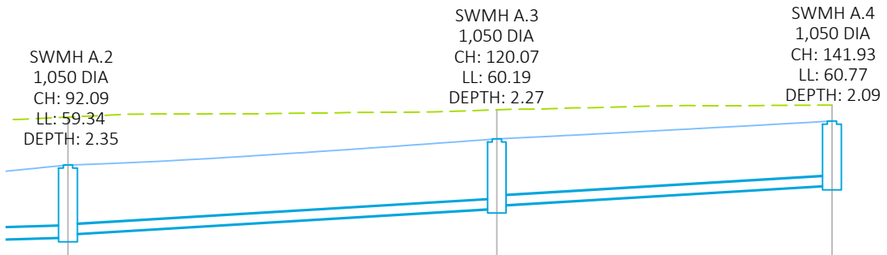


DATUM 50.00
VERT EXAG 1:2

PIPE DETAILS (CL to CL LENGTHS)	NEW 375Ø UPVC SN16 2D L: 92.09m @ 1.50%	
DESIGN LEVEL AT MH CL	58.19	59.34
INVERT LEVEL	55.60	56.98 / 57.08
COVER	2.18	1.95 / 1.92
CHAINAGE	19.44	92.09

DETAIL: - / 400 PROPOSED STORMWATER LONG SECTION - A

SCALE: 1:400H, 1:200V(A3)



	NEW 300Ø UPVC SN16 2D L: 27.98m @ 3.00%	NEW 300Ø UPVC SN16 2D L: 21.86m @ 3.00%
	59.34 / 60.19	60.77
	56.98 / 57.08 / 57.92	58.02 / 58.68
	1.95 / 1.92 / 1.93	1.83 / 1.75
	92.09 / 120.07	141.93

DETAIL: - / 400 PROPOSED STORMWATER LONG SECTION - A CONTINUED

SCALE: 1:400H, 1:200V(A3)

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LEGEND

- EXISTING GROUND LEVEL
- PROPOSED FINISHED LEVEL
- PROPOSED HARDFILL BACKFILL
- PROPOSED DWELLING FOUNDATION

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A	FOR PLAN CHANGE	BT	26.03.24

STATUS: PLAN CHANGE

LANDWORKS CONSULTING
PO Box 65595, Mairangi Bay, Auckland 0754
www.landworks.co.nz
Email:peter@landworks.co.nz

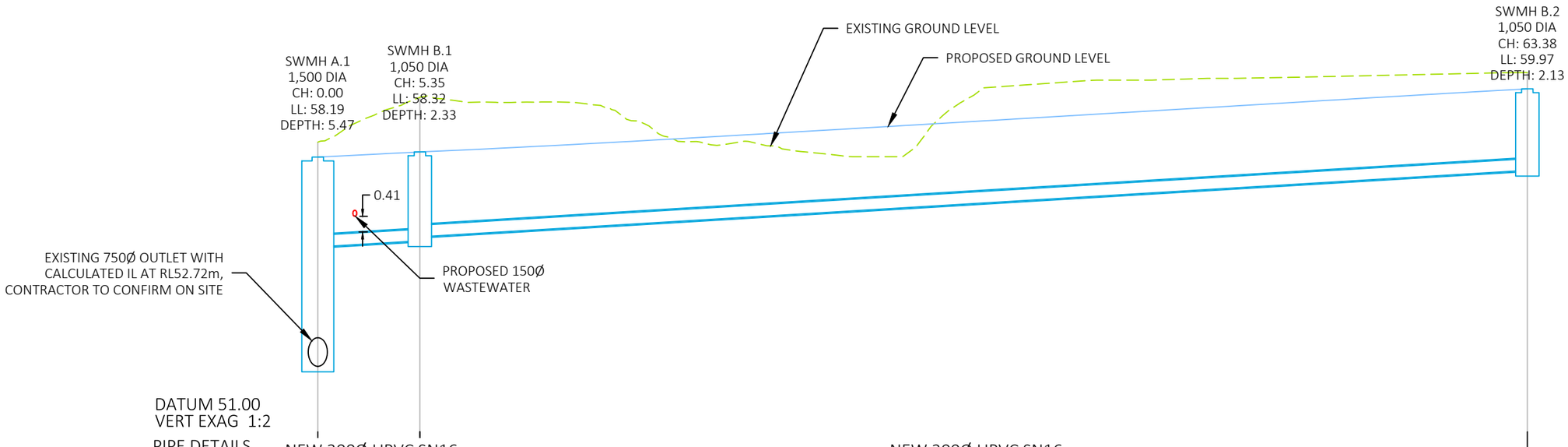
CLIENT: Windsor Park Community & multisport Hub INC

SITE: 496 East Coast Road, Mairangi Bay

TITLE: Proposed Stormwater Long Section - 1/3

SCALE AT A3:	DRAWN:	CHECKED:
As Shown	BT	PL
PROJECT NO:	DRAWING NO:	REVISION:
P23-077	411	A

PRINT DATE: 26/03/2024 4:49 pm



DESIGN LEVEL AT MH CL	58.19	58.32		59.97
INVERT LEVEL	55.84	56.00	56.10	57.84
COVER	2.01	1.99	1.89	1.80
CHAINAGE	19.44	5.35		63.38

DETAIL: - / 400 PROPOSED STORMWATER LONG SECTION - B

SCALE: 1:250H, 1:125V(A3)

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- PROPOSED DWELLING FOUNDATION

REV:	DESCRIPTION:	BY:	DATE:
A	FOR PLAN CHANGE	BT	26.03.24

STATUS: PLAN CHANGE

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Email:peter@landworks.co.nz

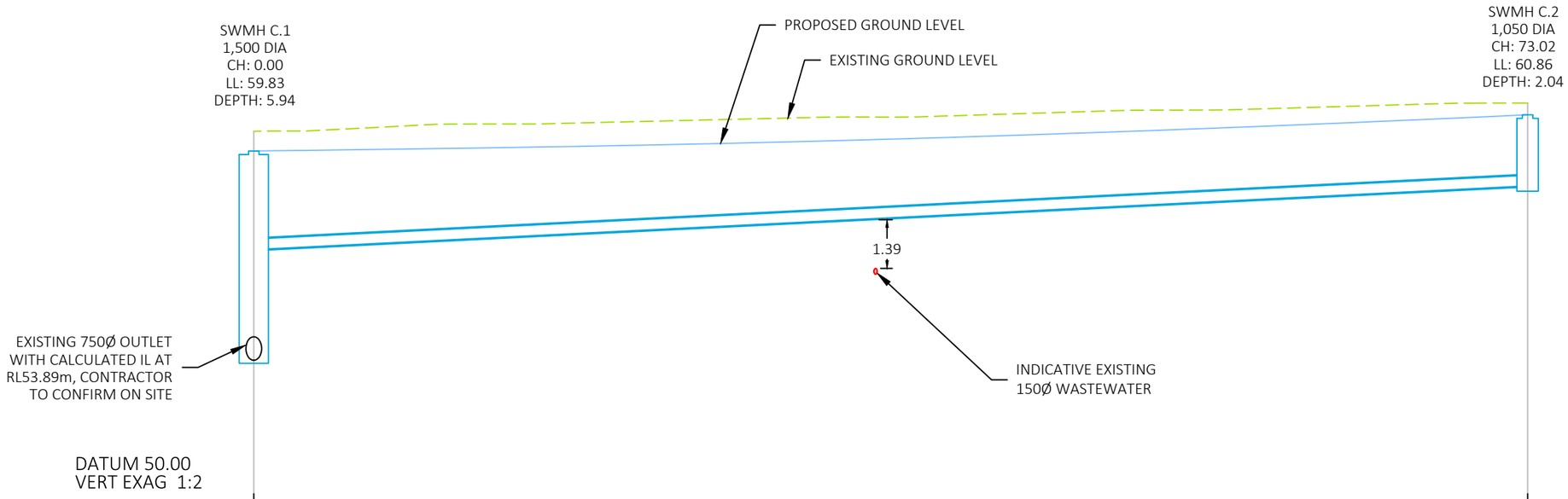
CLIENT: Windsor Park Community & multisport Hub INC

SITE: 496 East Coast Road, Mairangi Bay

TITLE: Proposed Stormwater Long Section - 2/3

SCALE AT A3:	DRAWN:	CHECKED:
As Shown	BT	PL
PROJECT NO:	DRAWING NO:	REVISION:
P23-077	412	A

PRINT DATE: 26/03/2024 4:49 pm



DATUM 50.00
VERT EXAG 1:2

PIPE DETAILS (CL to CL LENGTHS)	NEW 300Ø UPVC SN16 2D L: 73.02m @ 2.50%	
DESIGN LEVEL AT MH CL	59.83	60.86
INVERT LEVEL	57.00	58.83
COVER	2.49	1.70
CHAINAGE	75.24	73.02

DETAIL: - / 400 PROPOSED STORMWATER LONG SECTION - C

SCALE: 1:300H, 1:150V(A3)

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LEGEND

- EXISTING GROUND LEVEL
- PROPOSED FINISHED LEVEL
- PROPOSED HARDFILL BACKFILL
- PROPOSED DWELLING FOUNDATION

REV	DESCRIPTION	BY	DATE
A	FOR PLAN CHANGE	BT	26.03.24

STATUS: PLAN CHANGE

LANDWORKS CONSULTING
PO Box 65595, Mairangi Bay, Auckland 0754
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Email:peter@landworks.co.nz

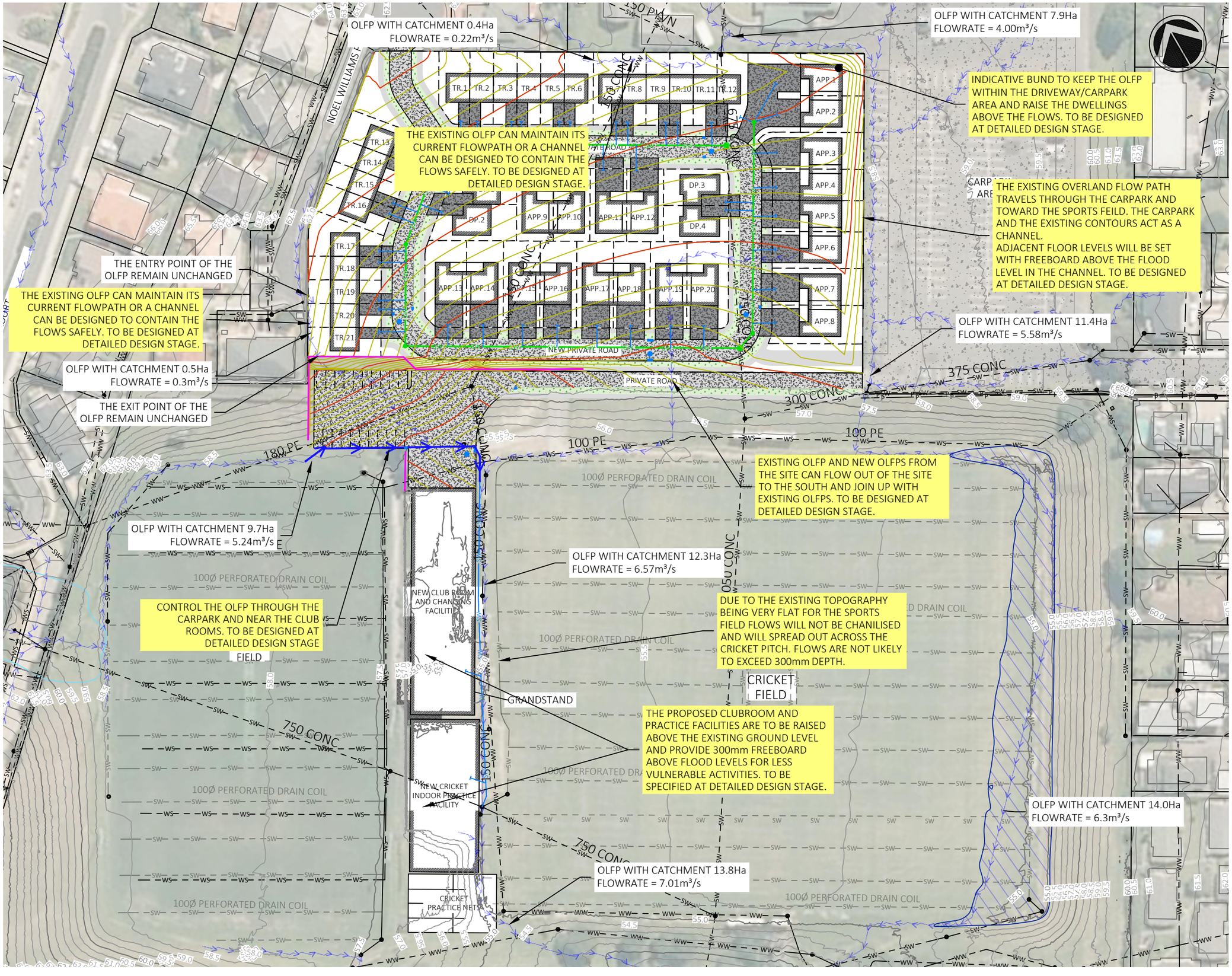
CLIENT: Windsor Park Community & multisport Hub INC

SITE: 496 East Coast Road, Mairangi Bay

TITLE: Proposed Stormwater Long Section - 3/3

SCALE AT A3:	DRAWN:	CHECKED:
As Shown	BT	PL
PROJECT NO:	DRAWING NO:	REVISION:
P23-077	413	A

PRINT DATE: 26/03/2024 4:49 pm



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LEGEND

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- PROPOSED DRIVEWAY (PERMEABLE PAVING)
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- PROPOSED DWELLING WITH EXTENT OF EAVES
- EXISTING PUBLIC STORMWATER
- EXISTING PUBLIC WASTEWATER
- EXISTING PUBLIC WATER SUPPLY
- EXISTING HYDRANT
- EXISTING POWER
- EXISTING GAS
- EXISTING TELEPHONE LINE
- EXISTING CONCRETE PAVE
- POST DEVELOPMENT OVERLAND FLOW PATH

REV:	DESCRIPTION:	BY:	DATE:
A	FOR PLAN CHANGE	BT	26.03.24

STATUS: PLAN CHANGE

LANDWORKS CONSULTING
PO Box 65595, Mairangi Bay, Auckland 0754
www.landworks.co.nz
Email:peter@landworks.co.nz

CLIENT: Windsor Park Community & multisport Hub INC

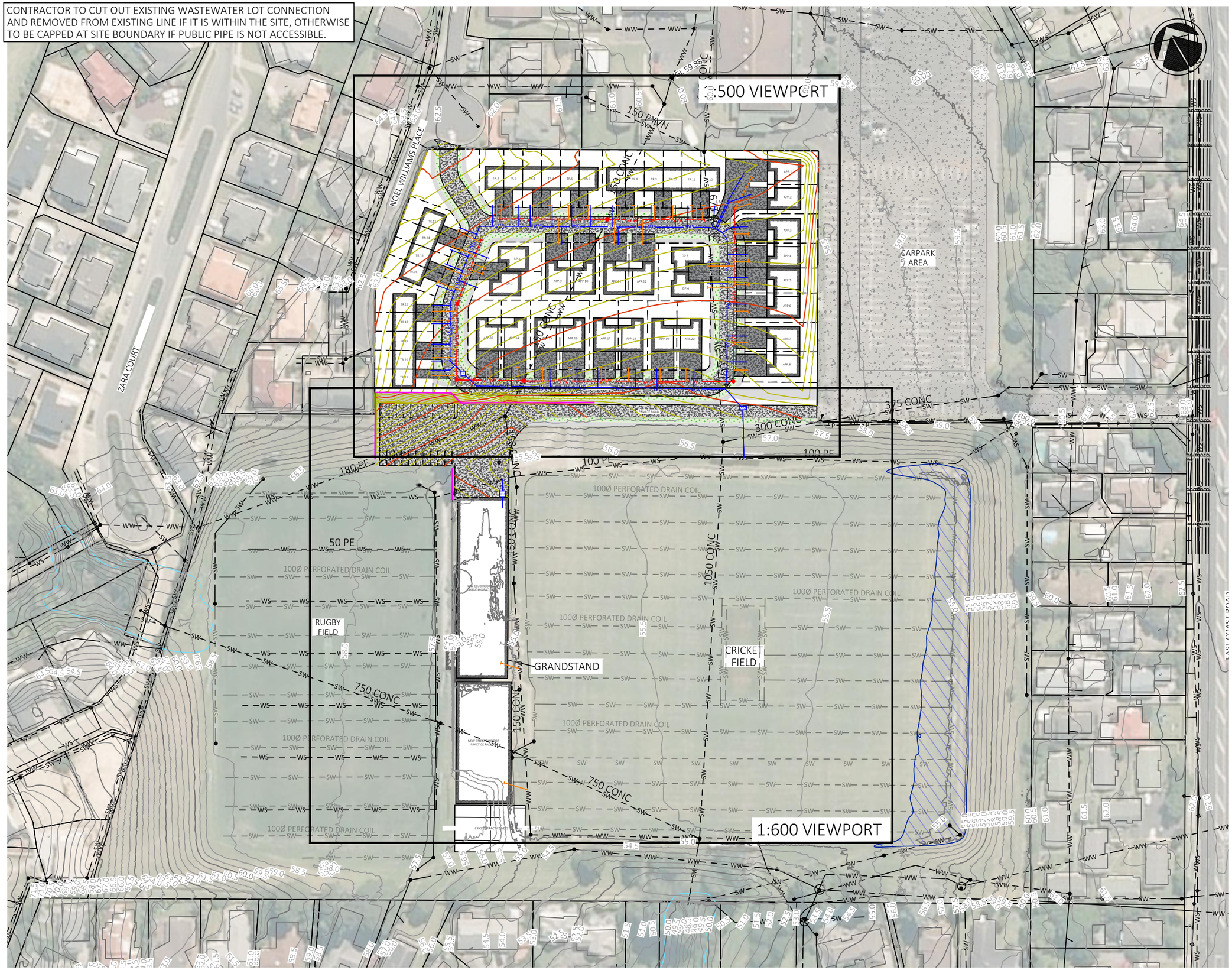
SITE: 496 East Coast Road, Mairangi Bay

TITLE: Proposed Overland Flow Path Plan

SCALE AT A3:	DRAWN:	CHECKED:
1:1000	BT	PL
PROJECT NO:	DRAWING NO:	REVISION:
P23-077	420	A

PRINT DATE: 27/03/2024 11:45 am

CONTRACTOR TO CUT OUT EXISTING WASTEWATER LOT CONNECTION AND REMOVED FROM EXISTING LINE IF IT IS WITHIN THE SITE, OTHERWISE TO BE CAPPED AT SITE BOUNDARY IF PUBLIC PIPE IS NOT ACCESSIBLE.



Notes:

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7. A WORKS OVER APPROVAL IS REQUIRED WITHIN 2 METRES OF A PUBLIC WATER OR WASTEWATER ASSET.

LEGEND

- EXISTING PROPERTY BOUNDARY
- SITE BOUNDARY
- PROPOSED LOT BOUNDARY
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED DRIVEWAY (CONCRETE PAVING)
- PROPOSED DRIVEWAY (PERMEABLE PAVING)
- PROPOSED RETAINING WALL
- PROPOSED DWELLING WITH EXTENT OF EAVES
- EXISTING PUBLIC STORMWATER
- EXISTING PUBLIC WASTEWATER
- EXISTING PUBLIC WATER SUPPLY
- EXISTING HYDRANT
- PROPOSED PUBLIC WASTEWATER
- PROPOSED PRIVATE WASTEWATER CONNECTION (100Ø uPVC SN16)
- WM — PROPOSED WATERMETER/ MANIFOLD METER BANK
- PROPOSED PRIVATE WATER CONNECTION - 20Ø PE SN8

A	FOR PLAN CHANGE	BT	26.03.24

REV:	DESCRIPTION:	BY:	DATE:

STATUS: PLAN CHANGE

LANDWORKS CONSULTING

PO Box 65595, Mairangi Bay, Auckland 0754
www.landworks.co.nz
Email:peter@landworks.co.nz

CLIENT: Windsor Park Community & multisport Hub INC

SITE: 496 East Coast Road, Mairangi Bay

TITLE: Proposed Wastewater and Water Supply Plan - Overall View

SCALE AT A3:	DRAWN:	CHECKED:
1:1250	BT	PL
PROJECT NO:	**DRAWING NO:**	**REVISION:**
P23-077	500	A

PRINT DATE: 26/03/2024 4:50 pm

CONTRACTOR TO CUT OUT EXISTING WASTEWATER LOT CONNECTION AND REMOVED FROM EXISTING LINE IF IT IS WITHIN THE SITE, OTHERWISE TO BE CAPPED AT SITE BOUNDARY IF PUBLIC PIPE IS NOT ACCESSIBLE.

EXISTING SWMH 2000677139
LL: RL61.25m(GIS)
IL: 59.50m (GIS)
DTI: 1.75m (GIS)

EXISTING WWMH 408039
LL: RL60.23m(SUR)
IL:RL57.65m(SUR)
DTI:2.58m(SUR)

EXISTING SWMH 2000124529
LL: RL60.21m(SUR)
IL: 54.38m (SUR)
DTI: 5.83m (GIS)

NOEL WILLIAMS PLACE

NEW END CAP D.1

NEW 1200Ø WWMH C.1

NEW END CAP C.2

NEW 150Ø uPVC SN16

NEW PRIVATE ROAD

PROP PRIVATE 125mmØ OD PE100 PN16

NEW 1050Ø WWMH B.2

NEW END CAP A.4

NEW 150Ø uPVC SN16

EXISTING WWMH 408032
NO DATA BURRIED, TO BE LOCATED FOR DETAILED DESIGN

NEW 1050Ø WWMH A.3

NEW 150Ø uPVC SN16

PROPOSED PRIVATE FIRE HYDRANT

NEW 150Ø uPVC SN16

NEW 150Ø uPVC SN16

NEW 1050Ø WWMH A.2

NEW 1200Ø WWMH A.1

PROP PRIVATE 125mmØ OD PE100 PN16

NEW 1050Ø WWMH B.1

WATER REQUIREMENTS TO BE SPECIFIED AT DETAILED DESIGN STAGE

EXISTING WWMH 389669
LL: RL58.85m(SUR)
IL:RL54.13m(SUR)
DTI:4.72m(SUR)

PRIVATE ROAD

EXISTING SWMH 2000866654
LL: RL56.71m(SUR)
IL: RL52.35m (SUR)
DTI: 4.36m (SUR)

30 PROPOSED BULK WATER METER FOR FIRE SUPPLY AMD DOMESTIC USE. WSL - POINT OF SUPPLY

TR.1 TR.2 TR.3 TR.4 TR.5 TR.6 TR.7 TR.8 TR.9 TR.10 TR.11 TR.12 TR.13 TR.14 TR.15 TR.16 TR.17 TR.18 TR.19 TR.20 TR.21

APP.1 APP.2 APP.3 APP.4 APP.5 APP.6 APP.7 APP.8 APP.9 APP.10 APP.11 APP.12 APP.13 APP.14 APP.15 APP.16 APP.17 APP.18 APP.19 APP.20

DP.1 DP.2 DP.3 DP.4

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LEGEND

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- PROPOSED DWELLING WITH EXTENT OF EAVES
- EXISTING PUBLIC STORMWATER
- EXISTING PUBLIC WASTEWATER
- EXISTING PUBLIC WATER SUPPLY
- EXISTING HYDRANT
- PROPOSED PUBLIC WASTEWATER
- PROPOSED PRIVATE WASTEWATER CONNECTION (100Ø uPVC SN16)
- PROPOSED WATERMETER/ MANIFOLD METER BANK
- PROPOSED PRIVATE WATER CONNECTION - 20Ø PE SN8

REV:	DESCRIPTION:	BY:	DATE:
A	FOR PLAN CHANGE	BT	26.03.24

STATUS: PLAN CHANGE

LANDWORKS CONSULTING
PO Box 65595, Mairangi Bay, Auckland 0754
www.landworks.co.nz
Email:peter@landworks.co.nz

CLIENT: Windsor Park Community & multisport Hub INC

SITE: 496 East Coast Road, Mairangi Bay

TITLE: Proposed Wastewater and Water Supply Part Plan - Sheet 1

SCALE AT A3:	DRAWN:	CHECKED:
1:500	BT	PL
PROJECT NO:	DRAWING NO:	REVISION:
P23-077	501	A

PRINT DATE: 26/03/2024 4:50 pm

CONTRACTOR TO CUT OUT EXISTING WASTEWATER LOT CONNECTION AND REMOVED FROM EXISTING LINE IF IT IS WITHIN THE SITE, OTHERWISE TO BE CAPPED AT SITE BOUNDARY IF PUBLIC PIPE IS NOT ACCESSIBLE.

NEW 1200Ø WWMH A.1

PROP PRIVATE 125mmØ OD PE100 PN16

WWMH B.1

PRIVATE ROAD

EXISTING WWMH 389669
LL: RL58.85m(SUR)
IL:RL54.13m(SUR)
DTI:4.72m(SUR)

PROPOSED BULK WATER METER FOR FIRE SUPPLY AMD DOMESTIC USE.
WSL - POINT OF SUPPLY

EXISTING WWMH 389670
LL: RL55.06m(GIS)
NOT FOUND

PROPOSED WATER METER FOR CLUBROOMS AND PRACTICE FACILITY

EXISTING WWMH 408034
LL: RL54.89m(SUR)
IL:RL53.84m (SUR)
DTI:1.05m (SUR)

NEW CLUB ROOMS & CHANGING FACILITIES

GRANDSTAND

NEW 150Ø CONNECTIONS TO THE PROPOSED CLUBROOMS AND PRACTIVE FACILITIES

NEW CRICKET INDOOR PRACTICE FACILITY

EXISTING WWMH 389640
LL:RL54.85m (SUR)
IL:RL53.36m (SUR)
DTI:1.47m (SUR)

CRICKET PRACTICE NETS

RUGBY FIELD

CRICKET FIELD

100Ø PERFORATED DRAIN COIL

100 PE

50 PE

180 PE

300 CONC

1050 CONC

750 CONC

150 CONC

Notes:

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LEGEND

- EXISTING PROPERTY BOUNDARY
- SITE BOUNDARY
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- EXISTING PUBLIC WATER SUPPLY
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A	FOR PLAN CHANGE	BT	26.03.24

REV:	DESCRIPTION:	BY:	DATE:

STATUS: PLAN CHANGE

LANDWORKS CONSULTING

PO Box 65595, Mairangi Bay, Auckland 0754
www.landworks.co.nz
Email:peter@landworks.co.nz

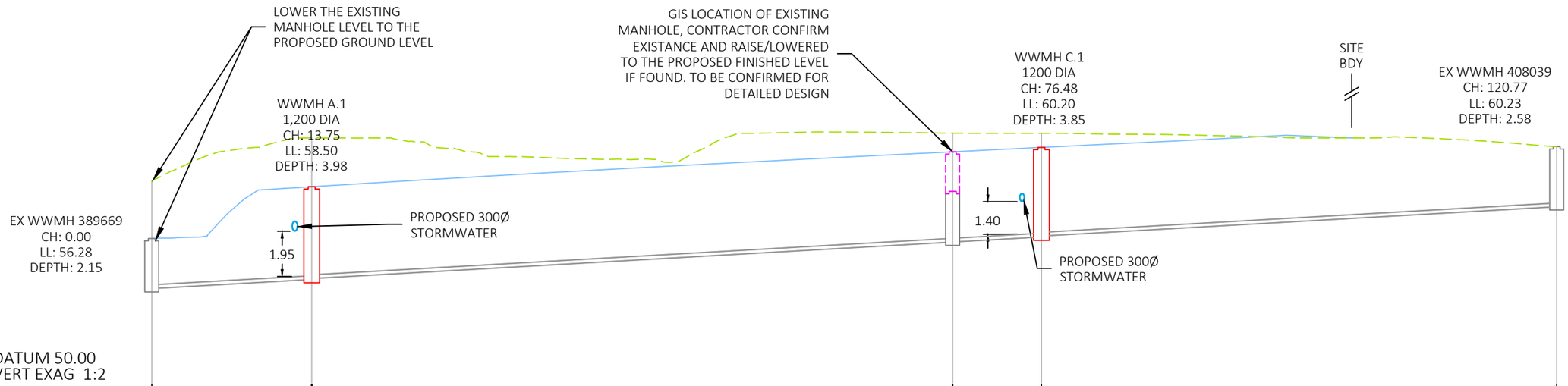
CLIENT: Windsor Park Community & multisport Hub INC

SITE: 496 East Coast Road, Mairangi Bay

TITLE: Proposed Wastewater and Water Supply Part Plan - Sheet 2

SCALE AT A3:	DRAWN:	CHECKED:
1:600	BT	PL
PROJECT NO:	**DRAWING NO:**	**REVISION:**
P23-077	502	A

PRINT DATE: 26/03/2024 4:50 pm



DATUM 50.00
VERT EXAG 1:2

PIPE DETAILS (CL to CL LENGTHS)	EX 150Ø CONC 2D L: 13.75m @ 2.85%		EX 150Ø CONC 2D L: 55.09m @ 2.85%		EX 150Ø CONC 2D L: 7.64m @ 2.85%		EX 150Ø CONC 2D L: 44.29m @ 2.85%	
DESIGN LEVEL AT MH CL	56.28	58.50	??		60.20		60.23	
INVERT LEVEL	54.13	54.52	54.56	56.13	56.13	56.35	56.39	57.65
COVER	1.99	3.82	3.78	3.71	3.71	3.69	3.65	2.42
CHAINAGE	0.00	13.75		68.84		76.48		120.77

DETAIL: - / 500 EXISTING WASTEWATER LONG SECTION
SCALE: 1:400H, 1:200V(A3)

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LEGEND
- EXISTING GROUND LEVEL
- PROPOSED FINISHED LEVEL
- PROPOSED HARDFILL BACKFILL
- PROPOSED DWELLING FOUNDATION

A	FOR PLAN CHANGE	BT	26.03.24

REV:	DESCRIPTION:	BY:	DATE:

STATUS: PLAN CHANGE

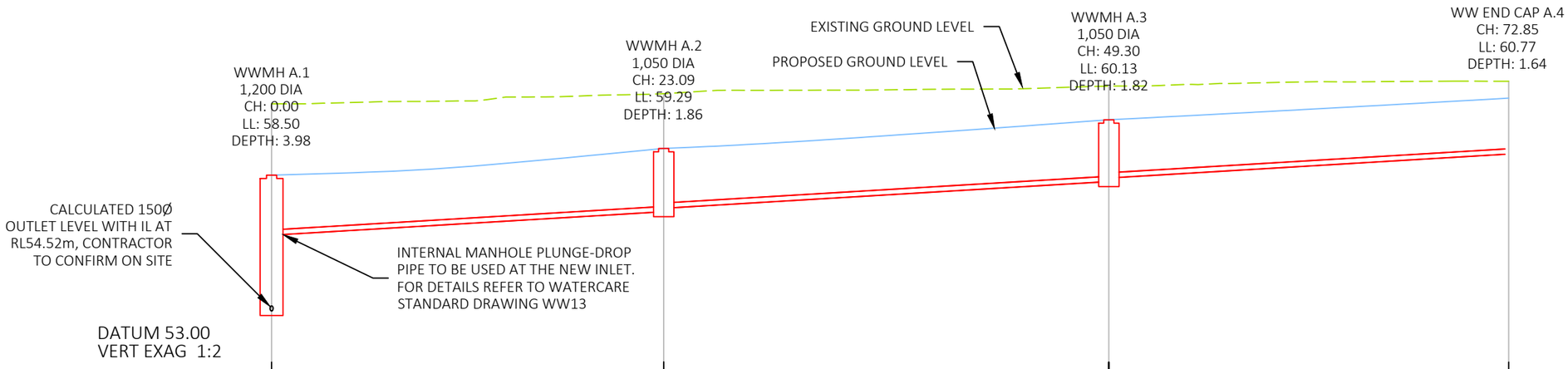
LANDWORKS CONSULTING
PO Box 65595, Mairangi Bay, Auckland 0754
www.landworks.co.nz
Email:peter@landworks.co.nz

CLIENT: Windsor Park Community & multisport Hub INC

SITE: 496 East Coast Road, Mairangi Bay

TITLE: Existing Wastewater Long Section

SCALE AT A3:	DRAWN:	CHECKED:
As Shown	BT	PL
PROJECT NO:	DRAWING NO:	REVISION:
P23-077	510	A



DATUM 53.00
VERT EXAG 1:2

PIPE DETAILS (CL to CL LENGTHS)	NEW 150Ø UPVC SN16 2D L: 23.09m @ 3.00%	NEW 150Ø UPVC SN16 2D L: 26.21m @ 3.00%	NEW 150Ø UPVC SN16 2D L: 23.55m @ 3.00%
DESIGN LEVEL AT MH CL	58.50 / 59.29	60.13	60.77
INVERT LEVEL	56.74 / 57.43	57.53 / 58.32	58.42 / 59.13
COVER	1.61 / 1.70	1.60 / 1.66	1.56 / 1.49
CHAINAGE	0.00 / 23.09	49.30	72.85

DETAIL: - / 500 PROPOSED WASTEWATER LONG SECTION - A
SCALE: 1:250H, 1:125V(A3)

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REV:	DESCRIPTION:	BY:	DATE:
A	FOR PLAN CHANGE	BT	26.03.24

STATUS: PLAN CHANGE

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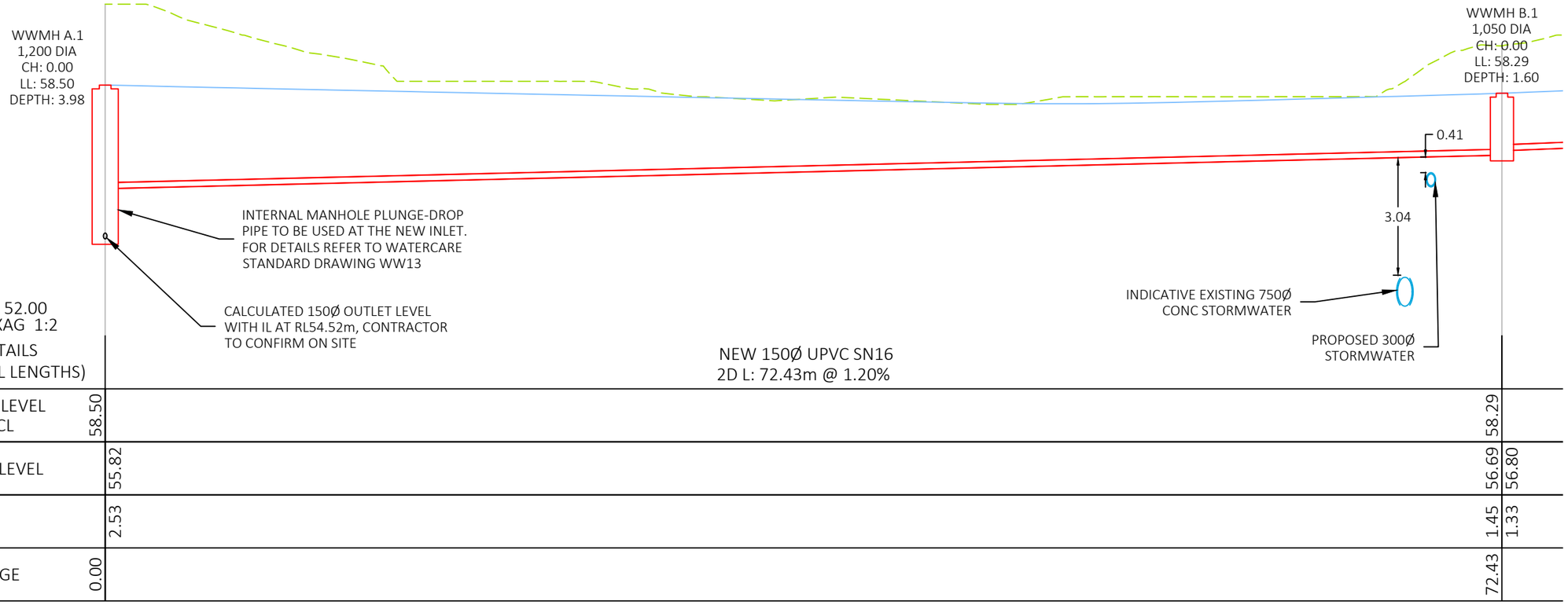
Email:peter@landworks.co.nz

CLIENT: Windsor Park Community & multisport Hub INC

SITE: 496 East Coast Road, Mairangi Bay

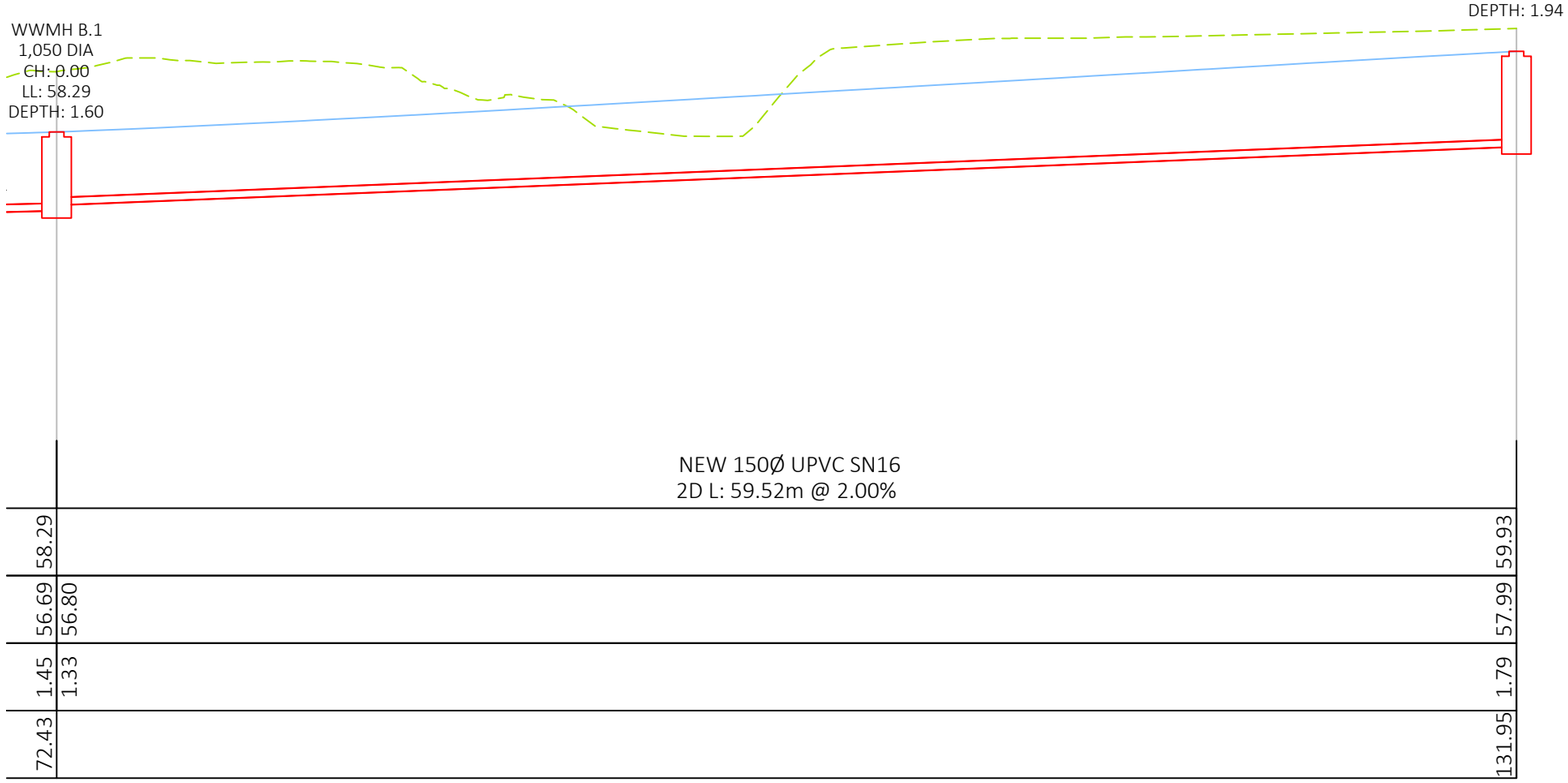
TITLE: Proposed Wastewater Long Section - 1/3

SCALE AT A3:	DRAWN:	CHECKED:
As Shown	BT	PL
PROJECT NO:	DRAWING NO:	REVISION:
P23-077	511	A



DETAIL: - / 500 PROPOSED WASTEWATER LONG SECTION - B

SCALE: 1:250H, 1:125V(A3)



DETAIL: - / 500 PROPOSED WASTEWATER LONG SECTION - B CONTINUED

SCALE: 1:250H, 1:125V(A3)

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- EXISTING GROUND LEVEL
- PROPOSED FINISHED LEVEL
- PROPOSED HARDFILL BACKFILL
- PROPOSED DWELLING FOUNDATION

REV:	DESCRIPTION:	BY:	DATE:
A	FOR PLAN CHANGE	BT	26.03.24

STATUS: PLAN CHANGE

LANDWORKS CONSULTING
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Email:peter@landworks.co.nz

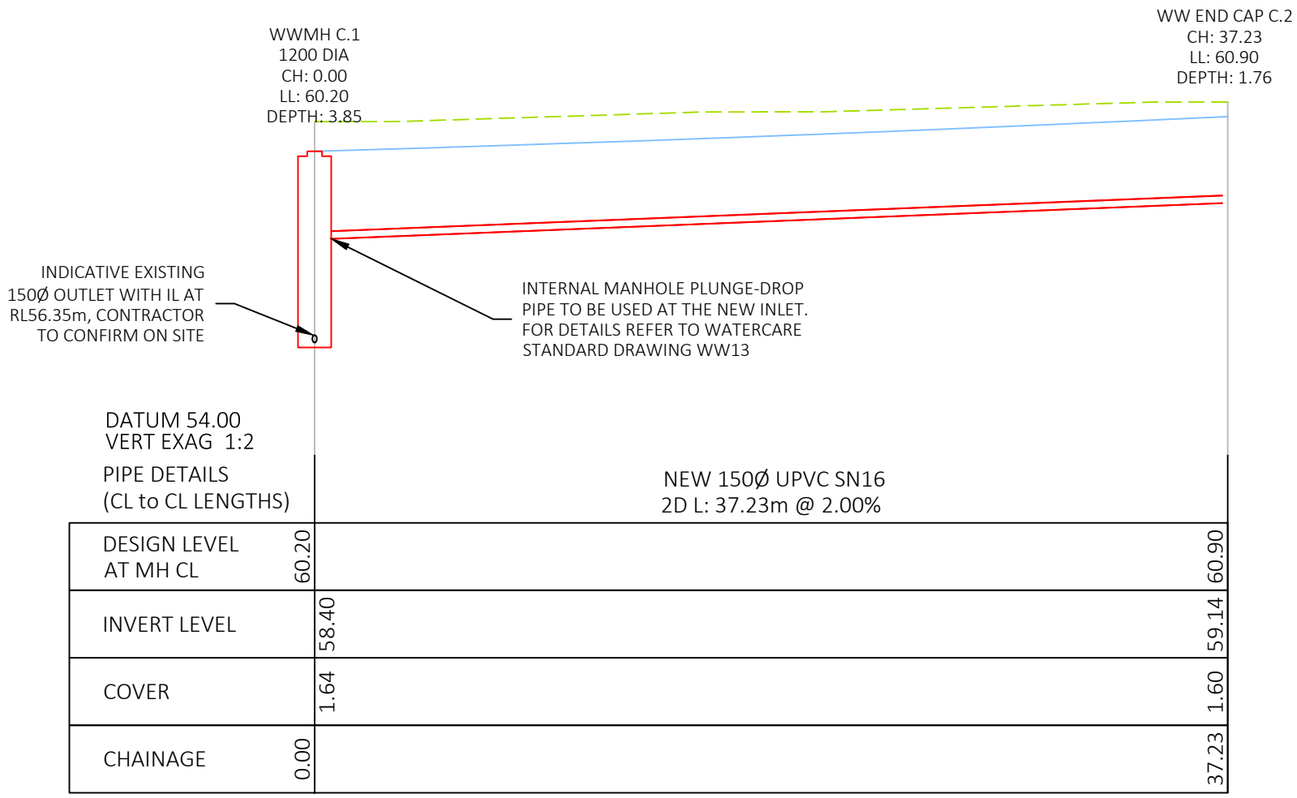
CLIENT: Windsor Park Community & multisport Hub INC

SITE: 496 East Coast Road, Mairangi Bay

TITLE: Proposed Wastewater Long Section - 2/3

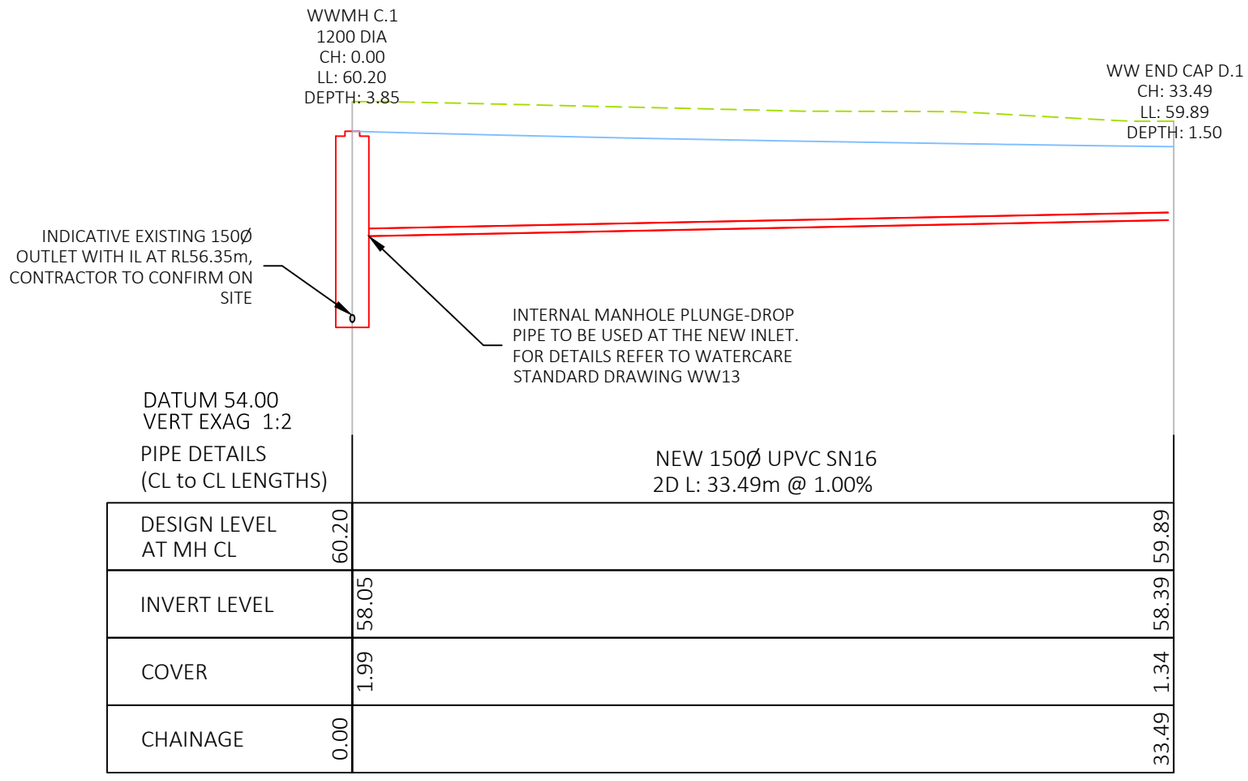
SCALE AT A3:	DRAWN:	CHECKED:
As Shown	BT	PL
PROJECT NO:	DRAWING NO:	REVISION:
P23-077	512	A

PRINT DATE: 26/03/2024 4:50 pm



DETAIL: - / 500 PROPOSED WASTEWATER LONG SECTION - C

SCALE: 1:250H, 1:125V(A3)



DETAIL: - / 500 PROPOSED WASTEWATER LONG SECTION - D

SCALE: 1:250H, 1:125V(A3)

Notes:

1. FOR INFORMATION PURPOSES ONLY WITH DATUM IN THE AUCKLAND 1946.

2. BOUNDARIES, SERVICES AND OTHER INFORMATION SHOWN IS INDICATIVE ONLY AND BASED ON TOPOGRAPHIC SURVEY FROM HAMPSON & ASSOCIATES LTD, RETRIEVED FEBRUARY 2024, AND AUCKLAND COUNCIL GIS DATA, RETRIEVED FEBRUARY 2024.

3. THE EXISTING SERVICES SHOWN ARE INDICATIVE ONLY. THE CONTRACTOR SHALL LOCATE, VERIFY & PROTECT ALL EXISTING UNDERGROUND & ABOVE GROUND SERVICES & OTHER FEATURES BEFORE STARTING WORKS AND FOR THE DURATION OF THE WORKS.

4. ALL WORKS AND STANDARD DETAILS SHALL COMPLY WITH THE FOLLOWING CODES OF PRACTICE:
   a. AUCKLAND COUNCIL CODE OF PRACTICE FOR LAND DEVELOPMENT AND SUBDIVISION, CHAPTER 4 STORMWATER, VERSION 3.0, DATED JAN 2022.
   b. WATERCARE, WATER AND WASTEWATER CODE OF PRACTICE FOR LAND DEVELOPMENT AND SUBDIVISION, VERSION 2.2, DATED NOV 2019.
   c. AUCKLAND TRANSPORT CODE OF PRACTICE, AS IS UPDATED ON THEIR WEBSITE HTTPS://AT.GOVT.NZ/ABOUT-US/AUCKLAND-TRANSPORT-CODE-OF-PRACTICE
   d. ANY CONDITIONS OF ASSOCIATED RESOURCE CONSENTS SHALL TAKE PRECEDENCE, AND SHALL BE COMPLIED WITH.

5. WASTEWATER 100mm SERVICE CONNECTIONS TO BE 1.7% min GRADE AND FOLLOWING WW15 OF WATERCARE'S STANDARD. Y (WYE)-JUNCTION SHALL BE USED ORDINARILY. TEE JUNCTIONS ARE NOT ALLOWED.

6. WATERCARE ENGINEERING QUALITY STANDARD DRAWINGS SHALL BE USED WHEREVER APPLICABLE FOR THE WORK. WSL COP VERSION 2019.

7. A WORKS OVER APPROVAL IS REQUIRED WITHIN 2 METRES OF A PUBLIC WATER OR WASTEWATER ASSET.

LEGEND

- EXISTING GROUND LEVEL
- PROPOSED FINISHED LEVEL
- PROPOSED HARDFILL BACKFILL
- PROPOSED DWELLING FOUNDATION

REV:	DESCRIPTION:	BY:	DATE:
A	FOR PLAN CHANGE	BT	26.03.24

STATUS: PLAN CHANGE

LANDWORKS CONSULTING
PO Box 65595, Mairangi Bay, Auckland 0754
www.landworks.co.nz
Email:peter@landworks.co.nz

CLIENT: Windsor Park Community & multisport Hub INC

SITE: 496 East Coast Road, Mairangi Bay

TITLE: Proposed Wastewater Long Section - 3/3

SCALE AT A3:	DRAWN:	CHECKED:
As Shown	BT	PL
PROJECT NO:	DRAWING NO:	REVISION:
P23-077	513	A

PRINT DATE: 26/03/2024 4:50 pm

APPENDIX B – GENERAL CALCULATIONS

LANDWORKS CONSULTING

CALCULATION SHEETS

PROJECT	496 East Coast Road
PROJECT NUMBER	P23-077
DATE	26/03/2024
AUTHOR	Peter Lowe

Contents:

PROJECT	496 East Coast Road
DATE	26/03/2024
AUTHOR	Peter Lowe

Wastewater and Water supply Assessment

Wastewater Flows	Pre development	Post Development	
Residential Catchment Area	89442	89442	m^2
Average lot size	400	400	
Number of dwellings	157	242	
Number of new Dwellings	0	85	
Number of occupants per dwelling	3.0	3.0	
Design population	470	725	p
Design Flow per person	180	180	l/p/d
Design ADWF (Ave Dry weather Flow)	0.978	1.510	L/s
Self Cleansing Peaking Factor	3.0	3.0	
Self Cleansing Design flow	2.93	4.53	L/s
Peak Design Peaking Factor	6.7	6.7	
Peak Design Flow	6.55	10.11	l/s
Increase in Flows		3.56	l/s

Pipe Capacity Check

Colebrook White Flows	Pre development	Post Development
Downstream manhole GIS ID	408020	408020
Downstream manhole RL (m)	52.74	52.74
Upstream manhole	389640	389640
Upstream manhole RL (m)	53.40	53.4
Distance between manholes	76.80	76.8
Pipe Gradient (m/m)	0.0086	0.0086
Pipe Diameter (mm)	150.00	150.00
Colebrook-White 'k'	0.60	0.60
Flow Velocity (m/s)	0.93	0.93
Pipe Capacity (L/s)	16	16
Pipe Capacity OK?	YES	YES

Residential Water Demand	Pre development	Post Development	
Number of dwellings	0.0	85.0	
Number of occupants per dwelling	3.0	3.0	
Design population	0	255	p
Design Flow per person	220	220	L/p/d
Average Daily Demand	0	56100	L/d
Average Demand	0.00	0.65	L/s
Daily Peaking Factor	2.0	2.0	
Peak Day Demand	0	112200	L/d
Hourly Peaking Factor	2.5	2.5	
Peak Hourly Demand	0	11687.5	L/h
Peak Residential Demand	0.00	3.25	L/s
Increase in Demand		3.25	l/s