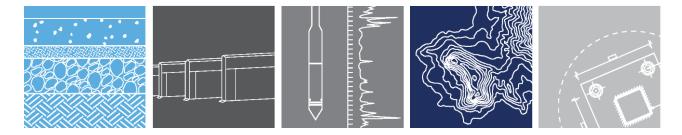
### Engineering Sustainability Designing Resilience





# **Development proposal**

# Tauroa Street, Raumanga, Whanāgrei

Project Number: Date created: Created by: Local Council: Legal Description: Total Area: 7630-015 22 February 2023 Finn Potter Whangārei District Council Lot 2 DP 352547 16.345ha

### Engineering Sustainability Designing Resilience

# Tauroa Street Location

# **Bus Stops**

Four bus stops are located within 150m of Tauroa Street

## State Highway 1

Less than 750 metres and 900 metres to Bunnings and shopping centre.

# Hospital

3km via road

## Supermarkets

500 metres from Proposed new supermarket off SH1

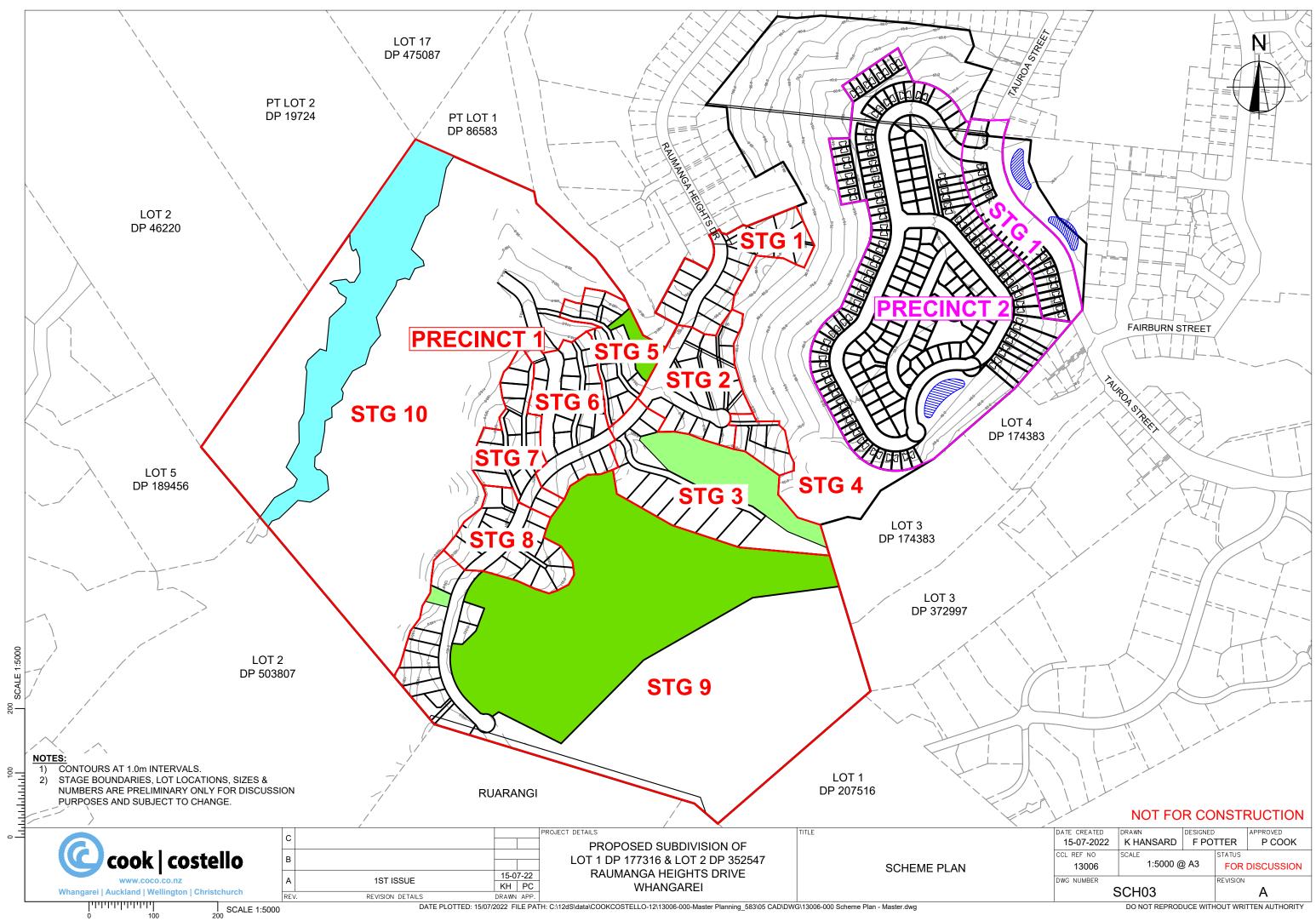
4 kilometres from the existing PAK'nSAVE

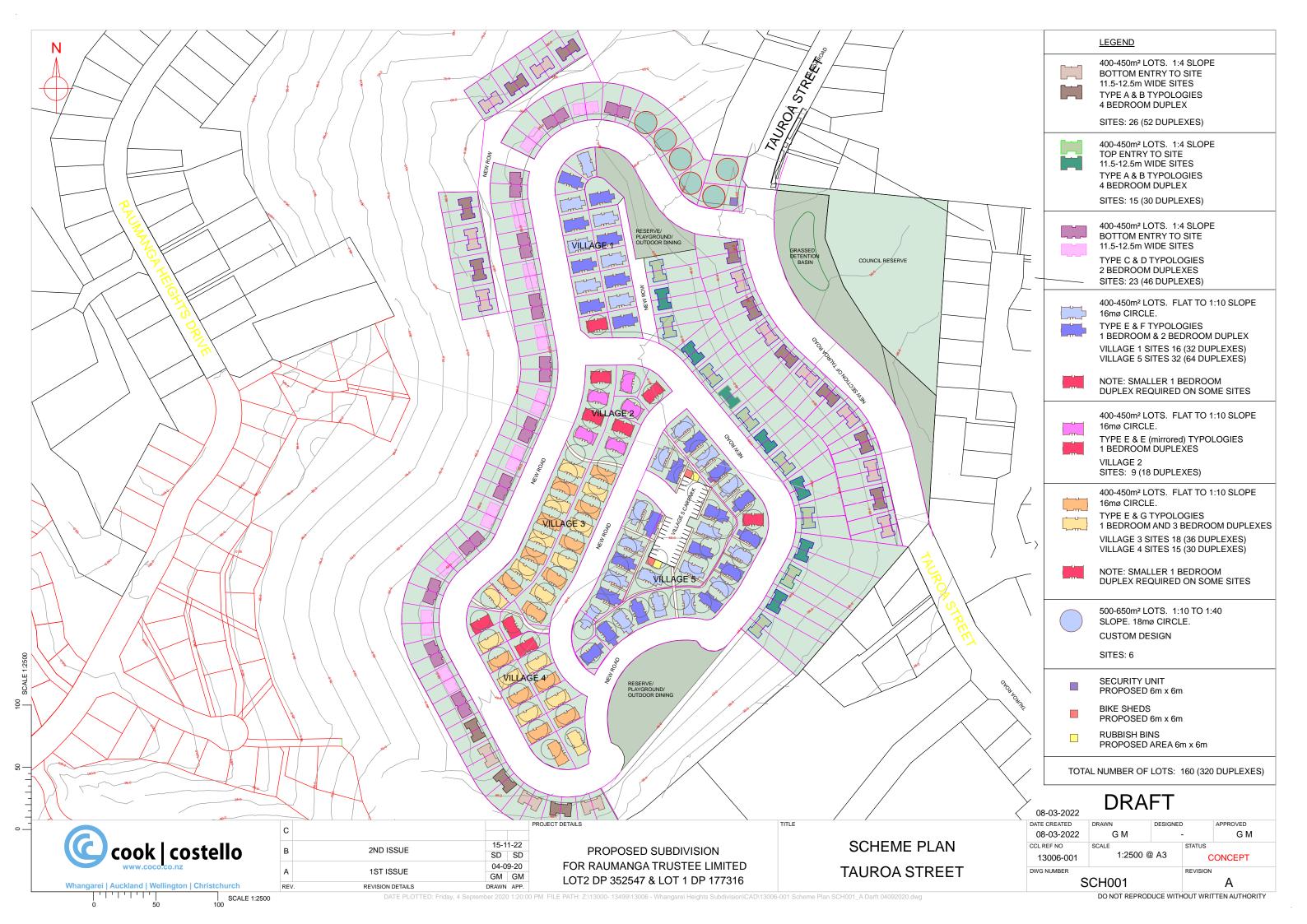
			WHANGAREI	
	AVENUES			
			PAK'nS	AVE Whangarei
		Whangārei		
		MORNINGSIDE		
Wor	ODHILL		Whangarei 😡	
RAHORA				
Hangarei Hospital				
Whangarei Hospital				
Whangarei Hospital				
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RAUMANGA				
🕞 Bus Stop 🕞 Bus Stop				
🙃 Development Site				
	l Large Superma			
Bus Stop				
Bus Stop				

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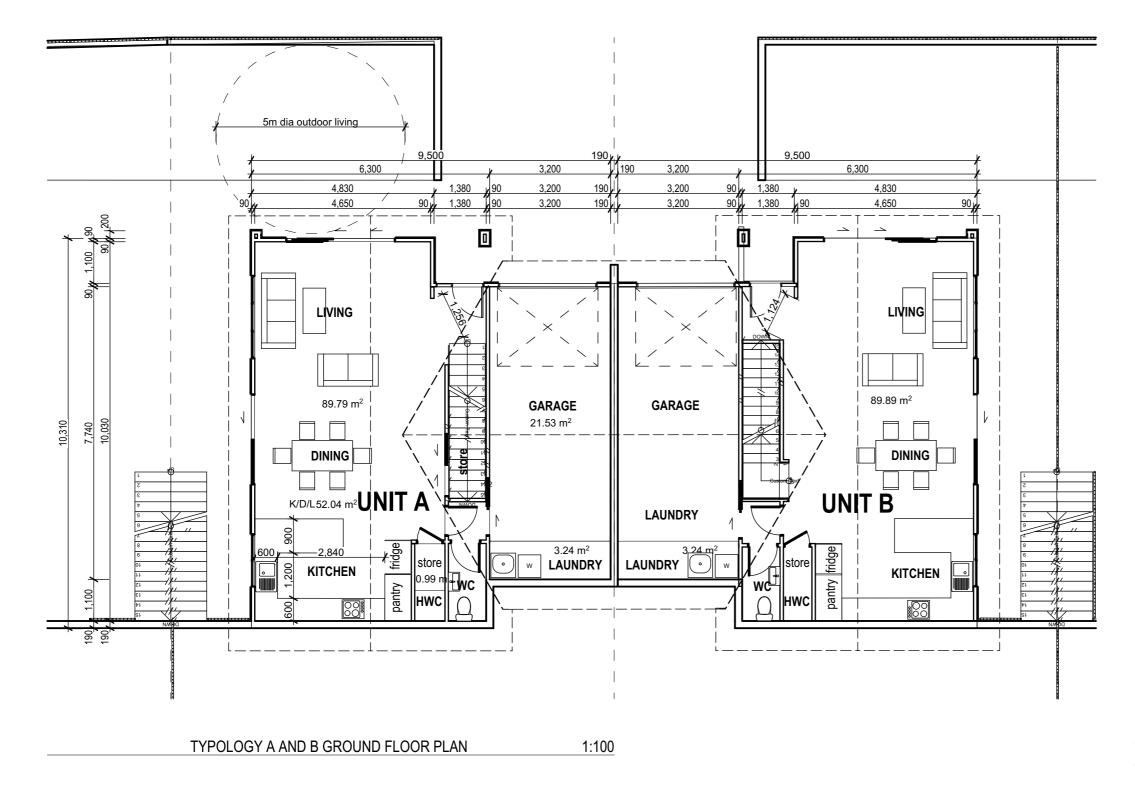
## GEOTECHNICAL | STRUCTURAL | LAND DEVELOPMENT | GEOPHYSICS













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LEGEND - Thermal Performance Requirements to 2022 codes

Construction	NZBC Zone 1 (mins)	Construction element R values
Roof	R6.6	tbc
Walls	R2.0	tbc
Slab	R1.5	tbc
Windows	R0.37	tbc

### HOMESTAR COMPLIANCE:

Note: For compliance of Homestar (version 5) the dwelling must be calculated using a energy and carbon calculator to establish minimum thermal requirements. The calculation provides an estimate of the space heating demand for the home assuming a heating temperature of 20°C 24/7.

Mandatory Minimums for 6 Homestar rating:

HC1 - The main living area must have an adequately sized heating system.

HC3 - All doors between conditioned space and garage must be fully sealed.

HC3 - All combustion appliances must be room sealed. HC4 - Windows must be thermally broken.

HC4 - All junctions between external walls, floors and roofs must be demonstrated to meet the minimum fRsi factors for the respective climate zone

HC4 -Ground vapour barrier must be installed to the ground below all suspended floors.

EF3: Maximum water consumption of 165 litres per person

per day EF4 - Maximum delivered electricity (kWh/m2/year) associated with operation energy (excluding appliances) based on the climate zone in which the home is located EF4: Maximum 4 kg.CO2-e/m2 onsite greenhouse gas emissions associated with space heating, hot water and refrigerants

HC1: Maximum predicted demand for space heating (kWh/m2/year) based on the climate zone in which the home is located

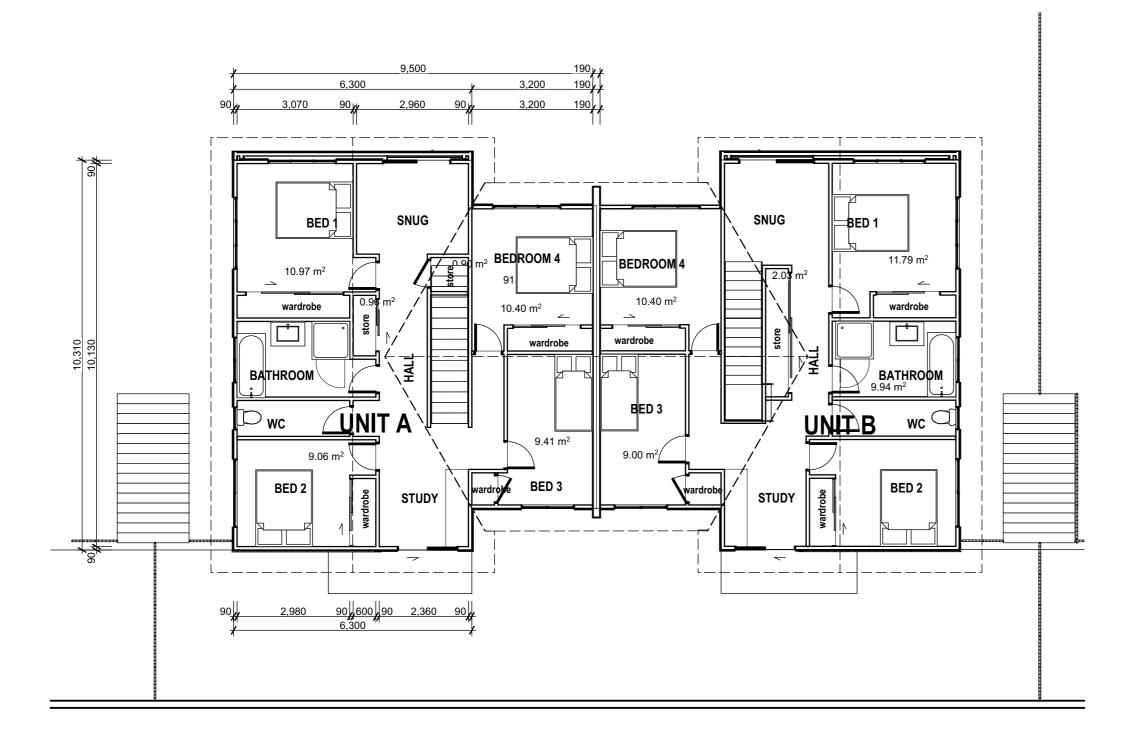
HC2: The home must be demonstrated to not exceed 25°C for more than 7% of the year or show compliance with CIBSE TM29

HC3: Continuous extract ventilation meeting the requirements must be installed as a minimum

### TYPOLOGY A AND B GROUND FLOOR AREA 4 Bedroom Units with single Garage: 90.0 m2

	DRAWN:	CCL REF. No.	DATE ISSUED:
	SD	13006-004	16.11.22
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FIRST FLOOR PLAN

RevID Transmittal Set Name

1:100



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	DETAILS	DEVELOPMENT PROPOSAL
		FOR RAUMANGA TRUST
		WHANGAREI HEIGHTS

TYPOLOGY A AND B FIRST FLOOR PLAN

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TITLE

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HC1: Maximum predicted demand for space heating (kWh/m2/year) based on the climate zone in which the home is located

HC2: The home must be demonstrated to not exceed 25°C for more than 7% of the year or show compliance with CIBSE TM29

HC3: Continuous extract ventilation meeting the requirements must be installed as a minimum

### **TYPOLOGY A AND B FIRST FLOOR AREA** 4 Bedroom Units with single Garage:

# 92.0 m2

### TOTAL FLOOR AREA:

182.0 m2

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EAST PERSPECTIVE



### NORTH/EAST PERSPECTIVE



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SOUTH PERSPECTIVE



PLAN



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		-	WHANGAREI HEIGHTS	
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LOGY A AND B PERSPECTIVES

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WEST PERSPECTIVE



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			DETAILS	DEVELOPMENT PROPOSAL			SD
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- DISCLAIMER

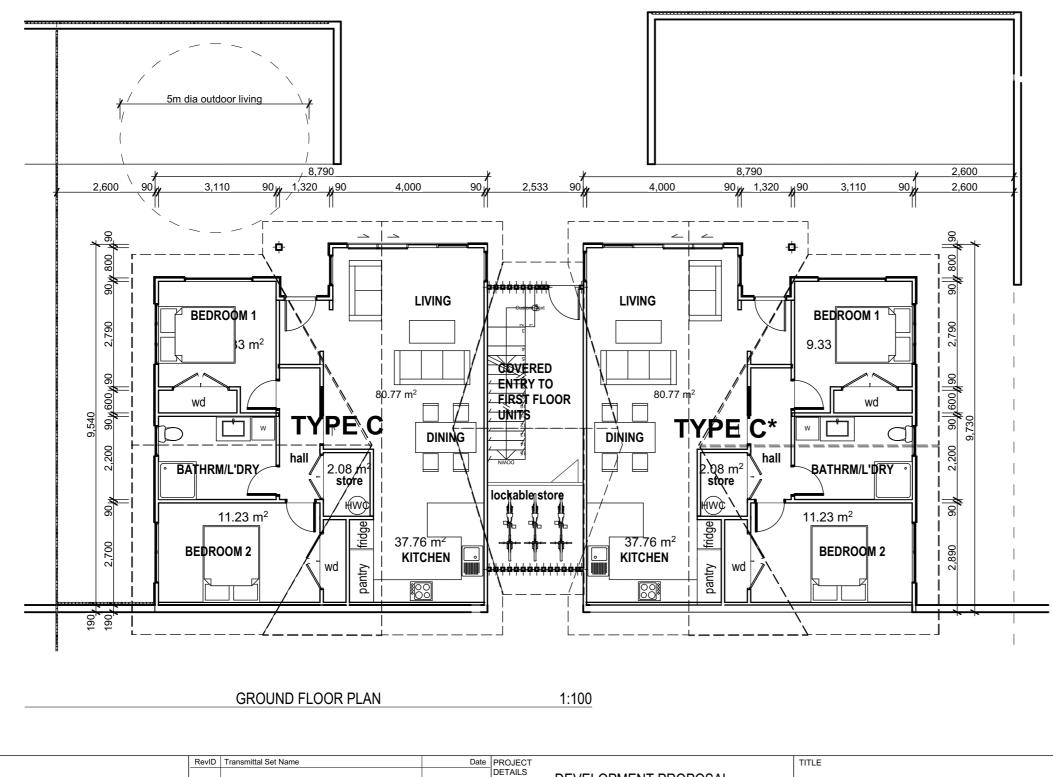
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DEVELOPMENT PROPOSAL

FOR RAUMANGA TRUST WHANGAREI HEIGHTS

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	Cook Costello					
LEGEND - Ther	mal Performa	nce Requirements to 2022				
codes						
Construction	NZBC	Construction element				
	Zone 1	R values				
	(mins)					
Roof	R6.6	tbc				
Walls	R2.0	tbc				
Slab	R1.5	tbc				
Windows	R0.37	tbc				
HOMESTAR CO	OMPLIANCE:					
Note: For compl	iance of Home	estar (version 5) the dwelling				
must be calculat	ed using a en	ergy and carbon calculator to				
		quirements. The calculation				
		pace heating demand for the				
home assuming	a heating ter	mperature of 20°C 24/7.				
Mandatory Minin	nums for 6 Ho	mestar rating.				
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HC3 - All doors between conditioned space and garage must						
be fully sealed.						
HC3 - All combustion appliances must be room sealed.						
HC4 - Windows	must be thern	nally broken.				
		xternal walls, floors and roofs				
		t the minimum fRsi factors for				
the respective cl		nust be installed to the ground				
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per day	ided floors. water consum	Ũ				

/ered electricity (kvvn/m2/year associated with operation energy (excluding appliances) based on the climate zone in which the home is located EF4: Maximum 4 kg.CO2-e/m2 onsite greenhouse gas emissions associated with space heating, hot water and refrigerants

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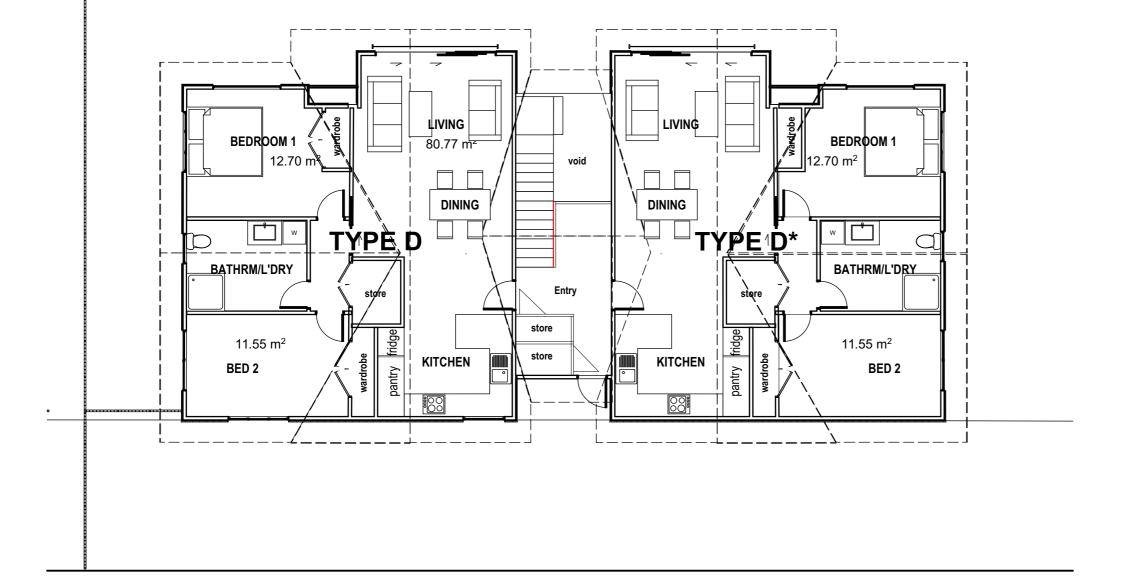
LIFEMARK COMPLIANCE: The ground floor units are designed to be easily adapted to comply wiht lifemark/universal design.

### TYPOLOGY C and C mirrored GROUND FLOOR AREA 2 BEDROOM UNITS: each 80.8 m2 \* indicates mirrored

TITLE	DRAWN: SD	CCL REF. No. 13006-004	DATE ISSUED: 16/11/2022
TYPOLOGY C AND C* GROUND FLOOR PLAN	REVIEWED: SD	SCALE: 1:100@ A3	DWG No:
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SECOND FLOOR PLAN





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LEGEND - Thermal Performance Requirements to 2022 codes

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HC2: The home must be demonstrated to not exceed 25°C for more than 7% of the year or show compliance with CIBSE TM29

HC3: Continuous extract ventilation meeting the requirements must be installed as a minimum

LIFEMARK COMPLIANCE: The ground floor units are designed to be easily adapted to comply wiht lifemark/universal design.

### TYPOLOGY D and D mirrored GROUND FLOOR AREA 2 BEDROOM UNITS: each 80.8 m2 \* indicates mirrored

	DRAWN:	CCL REF. No.	DATE ISSUED:
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4 x 2 BED UNIT PERSPECTIVE

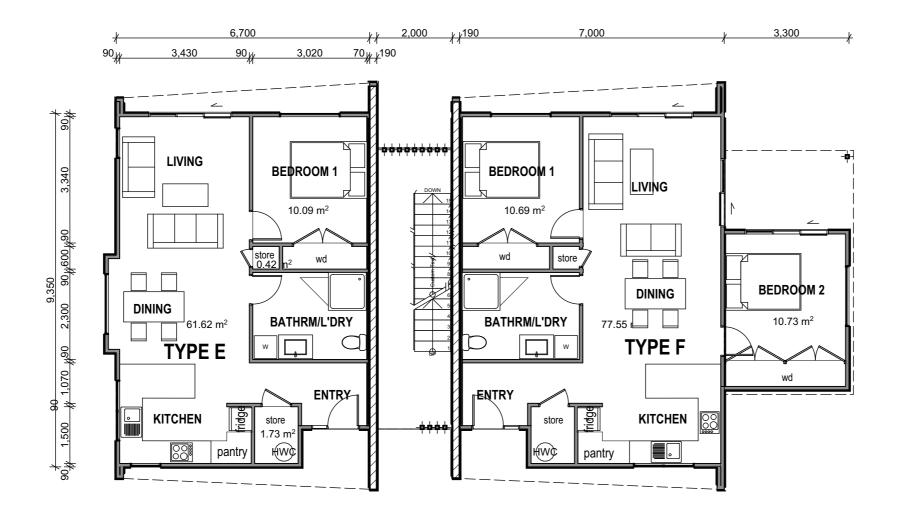


Date PROJECT DETAILS RevID Transmittal Set Name TITLE DEVELOPMENT PROPOSAL **TYPOLOGIES C AND D PERSPECTIVES** FOR RAUMANGA TRUST WHANGAREI HEIGHTS

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GROUND FLOOR 1:100



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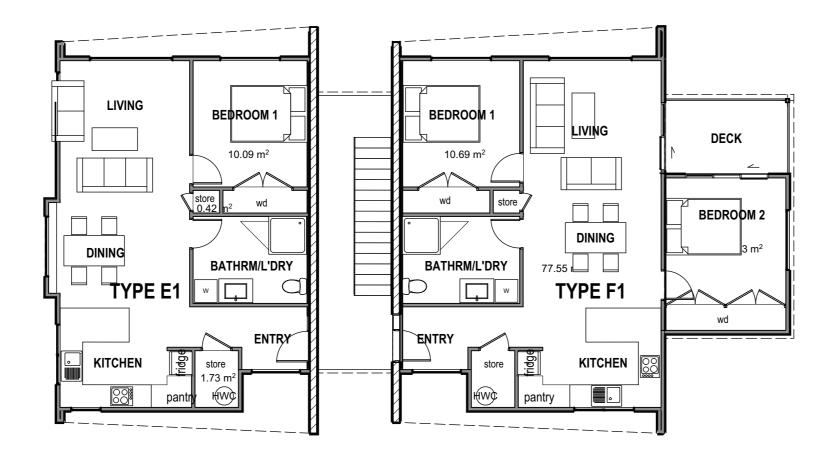
Construction         NZBC Zone 1 (mins)         Construction element R values           Roof         R6.6         tbc           Walls         R2.0         tbc           Slab         R1.5         tbc           Windows         R0.37         tbc           HOMESTAR COMPLIANCE:         Note: For compliance of Homestar (version 5) the dwelling must be calculated using a energy and carbon calculator to establish minimum thermal requirements. The calculation provides an estimate of the space heating demand for the home assuming a heating temperature of 20°C 24/7.           Mandatory Minimums for 6 Homestar rating:           HC1 - The main living area must have an adequately sized heating system.           HC3 - All combustion appliances must be room sealed.           HC4 - Windows must be thermally broken.           HC4 - All junctions between external walls, floors and roofs must be demonstrated to meet the minimum fRsi factors for the respective climate zone           HC4 - Ground vapour barrier must be installed to the ground below all suspended floors.           EF3: Maximum delivered electricity (kWh/m2/year) associated with operation energy (excluding appliances) based on the climate zone in which the home is located           EF4: Maximum 4 kg.CO2-e/m2 onsite greenhouse gas emissions associated with space heating, hot water and refrigerants           HC1: Maximum predicted demand for space heating (kWh/m2/year) based on the climate zone in which the home is located           HC2: The home must be demonstrated	property of Cool LEGEND - Therr codes		nce Requirements to 2022			
Roof         R6.6         tbc           Walls         R2.0         tbc           Slab         R1.5         tbc           Windows         R0.37         tbc           HOMESTAR COMPLIANCE:	Construction	Zone 1				
Windows       R0.37       tbc         HOMESTAR COMPLIANCE:         Note: For compliance of Homestar (version 5) the dwelling must be calculated using a energy and carbon calculator to establish minimum thermal requirements. The calculation provides an estimate of the space heating demand for the home assuming a heating temperature of 20°C 24/7.         Mandatory Minimums for 6 Homestar rating:         HC1 - The main living area must have an adequately sized heating system.         HC3 - All doors between conditioned space and garage must be fully sealed.         HC3 - All doors between conditioned space and garage must be fully sealed.         HC4 - Windows must be thermally broken.         HC4 - All junctions between external walls, floors and roofs must be demonstrated to meet the minimum fRsi factors for the respective climate zone         HC4 -Ground vapour barrier must be installed to the ground below all suspended floors.         EF3: Maximum delivered electricity (kWh/m2/year) associated with operation energy (excluding appliances) based on the climate zone in which the home is located         EF4 - Maximum 4 kg.CO2-e/m2 onsite greenhouse gas emissions associated with space heating, hot water and refrigerants         HC1: Maximum predicted demand for space heating (kWh/m2/year) based on the climate zone in which the home is located         EF4: Maximum predicted demand for space heating (kWh/m2/year) based on the climate zone in which the home is located         EF4: Maximum predicted demand for space heating (kWh/m2/year) based on the climate zone in which the home is locat	Walls	R6.6 R2.0	tbc			
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HC3: Continuous extract ventilation meeting the requirements	HC2: The home must be demonstrated to not exceed 25°C for more than 7% of the year or show compliance with CIBSE					
	HC3: Continuous extract ventilation meeting the requirements					

### TYPOLOGY E GROUND FLOOR AREA 1 Bedroom Unit: 61.6 m<sup>2</sup>

### TYPOLOGY F GROUND FLOOR AREA 2 Bedroom Unit: 77

77.6m<sup>2</sup>

	DRAWN:	CCL REF. No.	DATE ISSUED:
	SD	13006-004	11.10.2022
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,		nce Requirements to 2022		
Construction	NZBC Zone 1 (mins)	Construction element R values		
Roof Walls Slab	R6.6 R2.0 R1.5	tbc tbc tbc		
Windows	R0.37	tbc		
HOMESTAR CO				
Note: For compliance of Homestar (version 5) the dwelling must be calculated using a energy and carbon calculator to establish minimum thermal requirements. The calculation provides an estimate of the space heating demand for the home assuming a heating temperature of 20°C 24/7.				
Mandatory Minimums for 6 Homestar rating: HC1 - The main living area must have an adequately sized heating system. HC3 - All doors between conditioned space and garage must				
be fully sealed. HC3 - All combustion appliances must be room sealed. HC4 - Windows must be thermally broken. HC4 - All junctions between external walls, floors and roofs must be demonstrated to meet the minimum fRsi factors for				
the respective climate zone HC4 -Ground vapour barrier must be installed to the ground below all suspended floors. EF3: Maximum water consumption of 165 litres per person				
per day EF4 - Maximum delivered electricity (kWh/m2/year) associated with operation energy (excluding appliances) based on the climate zone in which the home is located EF4: Maximum 4 kg.CO2-e/m2 onsite greenhouse gas emissions associated with space heating, hot water and refrigerants				
HC1: Maximum predicted demand for space heating (kWh/m2/year) based on the climate zone in which the home is located				
HC2: The home must be demonstrated to not exceed 25°C for more than 7% of the year or show compliance with CIBSE TM29				
HC3: Continuous must be installed		lation meeting the requirements m		

**TYPOLOGY E1 FIRST FLOOR AREA** 1 Bedroom Unit: 61.6m<sup>2</sup> (Design similiar to Typology E with expection of Entry)

## TYPOLOGY F2 FIRST FLOOR AREA

### 2 Bedroom Unit:

77.6m<sup>2</sup> (Design similiar to Typology F with expection of Entry)

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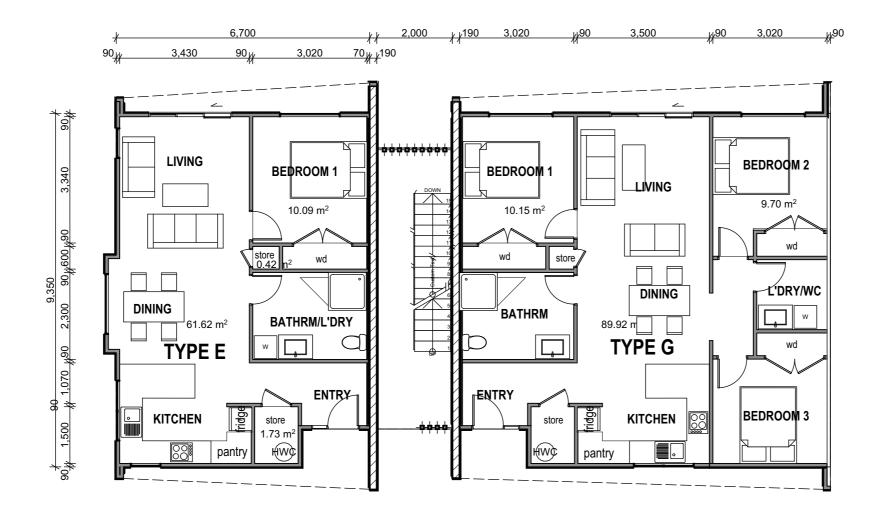
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				WHANGAREI HEIGHTS	

TYPOLOGIES E, E1, F, F1 PERSPECTIVES

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**GROUND FLOOR** 1:100



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### DISCLAIMER

- 1. Written dimensions take precedence.
- 2. These drawings shall be read in conjunction with relevant consultants, drawings and specifications.
- 3. Construction practice shall be in accordance with NZS 3604 and the NZ Building Code.
- The Contractor shall check and verify all dimensions on site. Any discrepancy shall be referred to Architectural Office of Cook Costello.
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LEGEND - Thermal Performance Requirements to 2022 codes

Construction	NZBC Zone 1 (mins)	Construction element R values
Roof	R6.6	tbc
Walls	R2.0	tbc
Slab	R1.5	tbc
Windows	R0.37	tbc

### HOMESTAR COMPLIANCE:

Note: For compliance of Homestar (version 5) the dwelling must be calculated using a energy and carbon calculator to establish minimum thermal requirements. The calculation provides an estimate of the space heating demand for the home assuming a heating temperature of 20°C 24/7.

Mandatory Minimums for 6 Homestar rating:

HC1 - The main living area must have an adequately sized heating system.

HC3 - All doors between conditioned space and garage must be fully sealed.

HC3 - All combustion appliances must be room sealed.

HC4 - Windows must be thermally broken.

HC4 - All junctions between external walls, floors and roofs must be demonstrated to meet the minimum fRsi factors for the respective climate zone

HC4 -Ground vapour barrier must be installed to the ground below all suspended floors.

EF3: Maximum water consumption of 165 litres per person

per day EF4 - Maximum delivered electricity (kWh/m2/year) associated with operation energy (excluding appliances) based on the climate zone in which the home is located EF4: Maximum 4 kg.CO2-e/m2 onsite greenhouse gas emissions associated with space heating, hot water and refrigerants

HC1: Maximum predicted demand for space heating (kWh/m2/year) based on the climate zone in which the home is located

HC2: The home must be demonstrated to not exceed 25°C for more than 7% of the year or show compliance with CIBSE TM29

HC3: Continuous extract ventilation meeting the requirements must be installed as a minimum

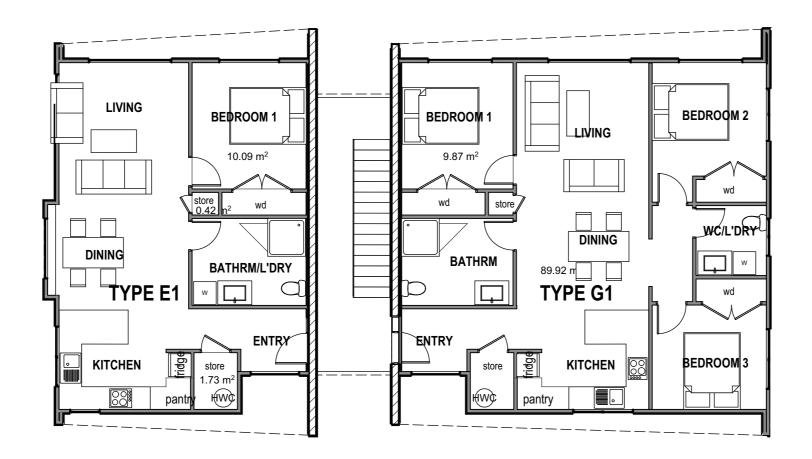
LIFEMARK COMPLIANCE: These units are designed to be easily adapted to comply with lifemark/universal design.

### **TYPOLOGY E GROUND FLOOR AREA** 1 Bedroom Unit: 61.6 m<sup>2</sup>

**TYPOLOGY G GROUND FLOOR AREA** 3 Bedroom Unit: 90.0m<sup>2</sup>

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FIRST FLOOR

1:100



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codes Construction	NZBC Zone 1	Construction element R values				
Roof Walls Slab Windows	(mins) R6.6 R2.0 R1.5 R0.37	tbc tbc tbc tbc				
HOMESTAR CO	OMPLIANCE:					
Note: For compliance of Homestar (version 5) the dwelling must be calculated using a energy and carbon calculator to establish minimum thermal requirements. The calculation provides an estimate of the space heating demand for the home assuming a heating temperature of 20°C 24/7. Mandatory Minimums for 6 Homestar rating: HC1 - The main living area must have an adequately sized heating system. HC3 - All doors between conditioned space and garage must be fully sealed. HC3 - All combustion appliances must be room sealed. HC4 - Windows must be thermally broken. HC4 - All junctions between external walls, floors and roofs						
must be demonstrated to meet the minimum fRsi factors for the respective climate zone HC4 -Ground vapour barrier must be installed to the ground below all suspended floors. EF3: Maximum water consumption of 165 litres per person						
per day EF4 - Maximum delivered electricity (kWh/m2/year) associated with operation energy (excluding appliances) based on the climate zone in which the home is located EF4: Maximum 4 kg.CO2-e/m2 onsite greenhouse gas emissions associated with space heating, hot water and refrigerants HC1: Maximum predicted demand for space heating (kWh/m2/year) based on the climate zone in which the home is located HC2: The home must be demonstrated to not exceed 25°C for						
more than 7% of the year or show compliance with CIBSE TM29						

HC3: Continuous extract ventilation meeting the requirements must be installed as a minimum

TYPOLOGY E1 FIRST FLOOR AREA1 Bedroom Unit:61.6m²(Design similiar to Typology E with exception of Entry)

### TYPOLOGY G1 FIRST FLOOR AREA

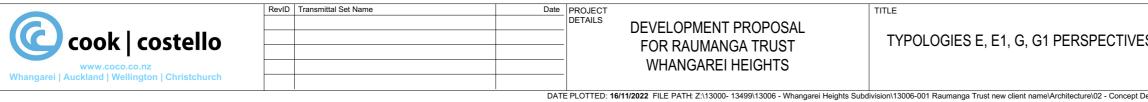
### 3 Bedroom Unit:

90.0m<sup>2</sup>

(Design similiar to Typology G with exception of Entry)

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